



## AGENDA

### PLANNING AND ZONING COMMITTEE

Planning and Zoning Committee: January 16, 2025 at 7:00 PM  
Village Hall 740 Hillgrove Avenue, Western Springs, IL 60558

**A. Call to Order**

**B. Approval of Minutes**

1. January 9, 2025

**C. Public Comment**

**D. Considerations**

1. PC-2024-02 – A Comprehensive Plan Amendment to the Long-Range Land Use Map, Conditional Use for a Planned Development, Variations, and Subdivision - 5600 Wolf Road, McNaughton Development, LLC

**E. New Business**

**F. Other Business**

**G. Adjournment**

Individuals with disabilities who plan to attend / participate in this meeting and who require accommodations to allow them to observe and participate, or who have questions regarding accessibility of the meeting or facilities, are requested to contact Jill Izzo at 708-246-1800, extension 127.

Planning and Zoning Commission  
Village Board Room  
Thursday, January 9, 2025, 7:15 p.m.

**Present:** Chairman Phil Nawrocki  
Member Jim Tyrrell  
Ellen Baer, Village Manager  
Heather Valone, Community Development Director  
Jeff Koza, Director of Engineering Services  
Kelsey Fawell, Senior Planner  
Daisy Chavez, Assistant to the Village Manager  
Zed Francis, Hinsdale First United Methodist Church  
Matthew Klein, Klein & Assoc  
Peter Tortorello, Fairfield Properties

**Call to Order:** Chairman Nawrocki called the meeting to order at 7:16 pm.

**Approval of Minutes:** Member Tyrrell made a motion to approve the meeting minutes for November 7, 2024. Chairman Nawrocki seconded the motion to approve. A voice vote was conducted, and the minutes were approved with both Trustees voting aye.

**Public Comment:**  
There were no public comments.

**Timber Trails - 2025 Construction Observation Agreement with V3 Companies: Committee review, discussion, and recommendation**

Director Koza explained the Village is renewing the agreement with V3 for engineering services for the Timber Trails subdivision. Both Member Tyrrell and Chairman Nawrocki asked questions related to the item.

Chairman Nawrocki made motion to bring forward the Timber Trails - 2025 Construction Observation Agreement with V3 Companies to be discussed at the January 13 meeting for approval. Member Tyrrell seconded the motion. Director Valone then conducted a roll call, with Chairman Nawrocki responding "Aye" and Member Tyrrell also responding "Aye."

**5600 Wolf Road - Heritage Crossing Stormwater Review Assistance Agreement with Baxter & Woodman Consulting Engineers - Amendment #2: Committee review, discussion, and Recommendation**

Director Koza explained the Village is amending with Baxter and Woodman for engineering services related to the review of the 5600 Wolf Road land use application. Both Member Tyrrell asked Director Koza to clarify why the agreement included hourly rates rather than a total number. Director Koza stated that they mirrored other agreements that the Village has with consultants that list hourly rates for as needed work.



Chairman Nawrocki made motion to bring forward the 5600 Wolf Road - Heritage Crossing Stormwater Review Assistance Agreement with Baxter & Woodman Consulting Engineers - Amendment #2 to be discussed at the January 13 meeting for approval. Member Tyrrell seconded the motion. Director Valone then conducted a roll call, with Chairman Nawrocki responding "Aye" and Member Tyrrell also responding "Aye."

**PC-2024-04 – A Comprehensive Plan Amendment to the Long-Range Land Use Map and an Amendment to the Village Zoning Map at 917 Lawn Court: Committee review, discussion, and recommendation**

Senior Planner Fawell provided a summary of the application made by the property owner of 917 Lawn Court. The summary included the recommendation from the Plan Commission to approve the application. Director Valone stated that the Village had approved a resubdivision for this property in 2005 to allow the then property owner to construct a single family house.

Member Tyrrell made motion to bring forward the PC-2024-04 – A Comprehensive Plan Amendment to the Long-Range Land Use Map and an Amendment to the Village Zoning Map at 917 Lawn Court to be discussed at the January 13 meeting for approval. Chairman Nawrocki seconded the motion. Director Valone then conducted a roll call, with Chairman Nawrocki responding "Aye" and Member Tyrrell also responding "Aye."

**4300 Howard Avenue, First United Methodist Church, Hinsdale First United Methodist Church, Plat of Abrogation for a Public Sidewalk Easement and Dissolve a Conditional Use Permit: Committee review, discussion, and recommendation**

Director Valone introduced the item and welcomed Zed Francis, the applicant, to provide a summary. Mr. Francis' summary included history of the First United Methodist Church, as well as stating the intended future use of the property as single-family homes. Matt Klein, attorney for Hinsdale United Methodist Church, then spoke regarding the proposed site plan for the property as well as the public sidewalk easement on the property. Chairman Nawrocki asked Matt Klein what the timeline for the project was. Mr. Klein explained the expected permitting process, demolition, and improvements to 43rd Street. Trustee Tyrell questioned whether any of the existing church's building facade to be preserved. Mr. Klein explained it would be difficult to do given the age of the building and the desired project. Peter Torterello on the Applicant's team then spoke to the intention of marketing the three potential single-family lots. Attorney Jurusik asked if they intend to build the homes themselves. Mr. Torterello responded that the intention to build at least one home but cannot say for certain. Ms. Valone then provided a summary on the easement and future project. Attorney Jurusik did say the draft documents presented at the meeting may be minorly revised but such revisions will be presented throughout the process.

Chairman Nawrocki made motion to bring forward the 4300 Howard Avenue, First United Methodist Church, Hinsdale First United Methodist Church, Plat of Abrogation for a Public Sidewalk Easement and Dissolve a Conditional Use Permit to be discussed at the January 13 meeting for approval. Trustee Tyrell seconded the motion. Director Valone then conducted a roll call, with Chairman Nawrocki responding "Aye" and Member Tyrrell also responding "Aye."

### **Downtown Western Springs Market Assessment Update: Committee review, discussion, and recommendation**

Director Valone provided a presentation on the preliminary findings for the Downtown Market Assessment. Such findings included data pertaining to population and employment, business makeup, stakeholder interviewers, and a previous joint meeting of the Village Board and Economic Development Commission. Director Valone also stated next steps and timeline for the project. Member Tyrell, Chair Nawrocki, and President Rudolph asked questions on the presentation.

Trustee Tyrell made motion to bring forward the Downtown Western Springs Market Assessment Update to be discussed at the January 13 meeting for approval. Trustee Tyrell seconded the motion. Director Valone then conducted a roll call, with Chairman Nawrocki responding "Aye" and Member Tyrrell also responding "Aye."

### **New Business:**

#### **Pending Land Use Application, PC-2024-02 – A Comprehensive Plan Amendment to the Long-Range Land Use Map, Conditional Use for a Planned Development, Variations, and Subdivision – 5600 Wolf Road, McNaughton Development, LLC: Status Report**

Director Valone provided a summary of the application PC-2024-02 at 5600 Wolf Road and its process, as well as discussed the plans recommended for approval by the Plan Commission. Director Koza provided a summary of the existing and proposed stormwater facilities proposed on the site, and engineering components. Member Tyrell, Chair Nawrocki, and President Rudolph asked questions related to the application and site plan. Director Valone stated the application would formally appear before the Planning and Zoning Committee at their upcoming January 16 meeting.

**General updates and future meeting:** If there are eligible applications for review, the next Planning and Zoning meeting will be February 6 at 7:15pm.

**Other Business:** There is no other business to discuss this evening.

**Adjournment:** Trustee Tyrell made a motion to adjourn the meeting. Chairman Nawrocki seconded the motion. A voice vote was conducted with both Trustees voting aye. Meeting is adjourned at 8:58 p.m.



## AGENDA ITEM SUMMARY

### PLANNING AND ZONING COMMITTEE

Planning and Zoning Committee: January 16, 2025

#### AGENDA ITEM D.1.

**To:** Planning and Zoning Committee

**From:** Heather Valone, Director of Community Development , Kelsey Fawell, Senior Planner

**CC:** Ellen Baer, Village Manager, Michael Jurusik, Village Attorney, Casey Biernacki, Deputy Village Manager

**RE:** PC-2024-02 – A Comprehensive Plan Amendment to the Long-Range Land Use Map, Conditional Use for a Planned Development, Variations, and Subdivision - 5600 Wolf Road, McNaughton Development, LLC

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#### Recommendation

The Plan Commission is recommending approval of the application with conditions.

#### Summary

McNaughton Development, LLC (the “Applicant”) submitted an application for a comprehensive plan amendment, map amendment, conditional use permit for a planned development, variations, and subdivision for the property located at 5600 Wolf Rd (the “Subject Property”). The Subject Property is one of few sites in the Village zoned O-1 Limited Office District. The Applicant is seeking a comprehensive plan amendment and zoning map amendment to rezone the property to R4 Multiple-Family Residence District. This project also entails the request of the vacation of Village-owned Lawn Avenue right-of-way, immediately adjacent to the site.

The Applicant is proposing a development of 29 townhome units, comprised of nine buildings. There will be seven three-unit buildings and two four-unit buildings. Each unit will have a front-loading two-car attached garage, driveway, front and rear balconies, and rear patios. The Applicant proposes constructing a continuation of the existing Heritage Court to the southeast through the site to the development’s access driveway proposed along Wolf Road Heritage Court connects to 55th Street to the north. The existing Heritage Court is a private drive, maintained by the Heritage Springs Homeowner’s Association. An automatic gate will be separating the proposed development and Heritage Springs, access will only be granted to residents of the two developments. The gate will be constructed with an Opticom system that will allow access to emergency services. It should be noted that some Heritage Springs planned development approvals will need to be amended to adequately reflect the proposed Heritage Crossing development, if approved.

The Applicant’s request also includes variations/relief from the Village’s Development Control Ordinance (“DCO”), which are detailed in the below Table 1.

**Table 1**

| <b>Requested Zoning Relief</b>             |                                                                                                                                                                                                                                                        |                                                                                                                                                    |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Code Section</b>                        | <b>Requirement</b>                                                                                                                                                                                                                                     | <b>Proposed</b>                                                                                                                                    |
| 10-4-4(F)3a: Fences, Height Restrictions   | Rear & side yards: 6 ft.                                                                                                                                                                                                                               | 8 ft.                                                                                                                                              |
| 10-6-5(D): Minimum Development Parcel Size | 5 ac.                                                                                                                                                                                                                                                  | 2.76 ac.                                                                                                                                           |
| 10-6-5(E)(1): Minimum Front Yard           | 25 ft.                                                                                                                                                                                                                                                 | 7 ft.                                                                                                                                              |
| 10-6-5(E)(2): Minimum Corner Side Yard     | 25 ft.                                                                                                                                                                                                                                                 | 14.48 ft.                                                                                                                                          |
| 10-6-5(E)(3): Minimum Interior Side Yard   | 30 ft.                                                                                                                                                                                                                                                 | 6.67 ft.                                                                                                                                           |
| 10-6-5(E)(4): Minimum Rear Yard            | 30 ft.                                                                                                                                                                                                                                                 | 12.75 ft.                                                                                                                                          |
| 10-8-4(B)(1)(e): Maximum Building Height   | 35 ft.                                                                                                                                                                                                                                                 | 36.33 ft.                                                                                                                                          |
| 10-10-7: Street Design Criteria            | Pavement width of 27 ft.                                                                                                                                                                                                                               | 23 ft.                                                                                                                                             |
| 10-10-7: Street Design Criteria            | Minium horizontal curve radius of 150 ft.                                                                                                                                                                                                              | Less than 150 ft.                                                                                                                                  |
| 10-10-7: Street Design Criteria            | Minimum vertical curves 100 ft. in length                                                                                                                                                                                                              | 40 ft.                                                                                                                                             |
| 10-11-11(C)2: Detention                    | Streets are not to be used for the storage of excess stormwater, ponding depths shall not encroach more than 3' on the adjacent traffic lane and shall not remain flooded for more than 8 hours for any event less than or equal to the 100-year event | Allow for storage of 1.5 ft on the entire street width from the northern property line to a point roughly 36.5 ft. south along the Heritage Court. |

The application was heard by the Plan Commission on August 13, 2024, September 24, 2024, and November 18, 2024. Over 30 members of the public submitted public comment on the case. The Plan Commission continued the case both at their August and September meetings. At the August meeting, the Commission continued the application, requesting additional information on stormwater engineering information, as well as of changing the location of the main entrance to the development, which was originally proposed off Park Place to the south. At the September meeting, the application was continued, with the Commission requesting additional information on potential storage of stormwater in the proposed street and updating plans to reflect the proposed Wolf Road access. The Applicant revised the plans per the discussion of the Plan Commission and the public comments and submitted revised plans.

On November 18, 2024, the Plan Commission reviewed the revised plans and voted to recommend approval with conditions of application. The Plan Commission recommended the plans with a total of 73 conditions, some of which had multiple sub-requirements. Roughly half of the conditions were conditions that had been included in previous recommendations for planned developments. The remaining half were generally technical updates to the plans. The Applicant submitted revised plans (Attachment 1) that address the conditions recommended by the Plan Commission. The plans were reviewed by Village staff and consultants. Plan review comments from the Village's consulting engineer are included in Attachment 3. All outstanding comments from the Village's consulting landscape architect and traffic engineer have been addressed. However, the following conditions are still outstanding (*please note that the numbering / lettering matches the number / letter from Plan Commission Recommendation No.*

24-02):

## 1. General

The Plan Commission recommended 21 conditions that generally consisted of previous planned developments, updates to the declaration of covenants, conditions, and restrictions (the “CC&R”) for the development as a whole, and updates to the plans to remove inconsistencies. The Applicant has confirmed that they will comply with all conditions and those conditions that required updates to the plans have been made and submitted. The Applicant confirmed that changes will be made to the CC&R.

## 2. Engineering

The Plan Commission recommended 31 conditions related to the stormwater management and engineering. The majority of the conditions were technical updates to the engineering plans or hydraulic modeling. The Applicant has confirmed that they will comply with 14 conditions and those conditions that could be captured via plan updates have been made.

The following conditions are still outstanding:

g. The Applicant’s engineer shall submit to the Village, as part of the Village plan review and approval process, accurate calculations showing that the stormwater management system is able to manage bypass stormwater appropriately as determined by the Village Engineer.

h. The Applicant shall submit to the Village, as part of the Village plan review and approval process, accurate calculations that show that the rate of flow of the stormwater drainage bypass system is equal to or less than the current rate of all bypass flows (low flow and overland). This submittal must demonstrate that the bypass stormwater does not reach the Lawn Avenue Detention Basin faster than it currently does under the existing conditions.

i. The Village will not accept the twin 54” aluminum pipes that are proposed by the Applicant to be installed in the rear yard of Units 1 through 7. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated design plan that utilizes reinforced concrete pipes or precast reinforced concrete box culverts to convey the stormwater. The Applicant shall submit to the Village design calculations that demonstrate the proposed pipes meet all relevant design criteria for capacity and velocity of stormwater.

ii. All components of the stormwater bypass system (open channel and piping) are secured and not accessible to the public.

iii. The Applicant shall install infrastructure to ensure that the stormwater bypass system is not a danger to the public.

m. The Applicant shall submit to the Village, as part of the Village plan review and approval

process, a set of structural design plans sealed by an Illinois licensed structural engineer for the retaining walls.

n. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an O&M plan for the stormwater detention basins. The Applicant shall create an O&M plan for the stormwater detention basins and create a mechanism to fund all required maintenance activities for the establishment period of three (3) to five (5) years. A licensed / certified ecologist with experience in wetland basins shall produce this type of O&M plan for Village review and approval prior to the issuance of any site development permit.

o. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an exhibit showing that the street light photometrics conform with the Village Code for Village review prior to the issuance of any site development permit.

q. Since the structural design is not complete, it is not known if tiebacks or over excavation needed to construct the walls will be contained within the Property. Work needed to construct the new retaining walls cannot take place on private property unless temporary or permanent easements are acquired. Construction limits behind the retaining walls shall be identified and contained within the Property or copies of executed easements are to be provided prior to the issuance of any site development permit.

r. Neighboring properties cannot be flooded as a result of any interim construction conditions or activities by the Applicant that could occur if the old retaining wall is torn down and the new retaining wall is not yet complete. The development plans shall contain provisions that temporarily protect the west property line to a pre-project elevation. The development plans shall identify a stormwater management plan that the Applicant shall comply with to address stormwater management issues during the site development phase and construction phase of the Development.

s. The retaining wall design of the detention area between Units 20 and 21 shall be constructed and maintained to accommodate for overland flows that may occur if the twin 54" sewers are overwhelmed or not functioning properly

v. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a set of street lighting plans for the Development, which include all lighting conduits, cables, controllers, and service location. Also, these plans shall include light pole foundation and controller foundation details, and the street lighting plans shall be signed and sealed by an Illinois licensed structural engineer.

y. The Applicant's narrative report shall be updated and resubmitted to the Village with a section discussing the worst-case flooding scenario. This updated report shall include exhibits sent to Engineering on October 31, 2024, which illustrate stormwater storage in this worst-case scenario. The updated report shall clearly state there is a net increase in stormwater storage

despite the removal of the existing parking lot area and the back-filling of that parking lot area with soil as part of the site development work and lot grading work.

z. The proposed design of the dual culverts suggests a full-flowing velocity of 14 ft/s, well above the acceptable maximum velocity. The Applicant's next plan submittal shall contain documentation that confirms 11 ft/s is the maximum flow velocity through these culvert stormwater pipes.

aa. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a set of calculations for the riprap sizing at the outfall of the dual culverts. The current riprap gradation, shape and area do not appear to match the design provided by the Illinois Urban Manual. Furthermore, the detail provided (IL-610 on Sheet 6) is missing dimensions and shall be updated by the Applicant.

cc. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated Stormwater Management Report and HEC-HMS Model that includes:

iii. Clarification on the distinction between the nodes "Storage East of Wolf Road" and "Box Inlet East Side Wolf Rd". Pages 71 and 72 of the report show stage-storage tables for these nodes, but the areas for elevations 664.0 and 665.0 match for these two, suggesting some volume may be double-counted. Furthermore, the "Box Inlet-East Side Wolf Rd" node table differs significantly from that shown in the HEC-HMS model.

iv. Provide a set of HEC-HMS results that match the conservative scenario displayed in the inundation maps because: (i) The inundation maps provided are for the scenario where the Ashbrook Subdivision ponds are not modeled, and the 2-hour duration storm is the critical duration., (ii) However, the HEC-HMS results provided are for the scenario where the ponds are modeled, and the 1-hour duration is critical.

v. Revise the inundation maps to reflect flood elevations upstream of Basin "C". For example, the "Storage West Side Wolf Road" node has critical duration elevations in excess of 660, which need to be shown on the inundation maps. This would include surcharging inlets along the dual culverts under proposed conditions.

dd. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a written response to each of the initial plan review comments from the Village Engineer and Village's consulting engineer contained in Attachment 4 of the Village Staff Memo dated November 18, 2024.

ee. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a set of final engineering plans that include the location of all utilities and light poles that demonstrate there are no conflicts between utilities, light poles, and the proposed landscape areas.

Stormwater management is a key concern for this development, as the site receives

approximately 180 acres of offsite runoff from unincorporated areas to the east and south. The plans include an overall increase in stormwater storage capacity which is gained through the deepening and expansion of the existing Lawn Avenue detention basin, but the improvements will not solve the flooding issues in the Ridgewood Subdivision watershed. The developer's engineer is working on addressing the outstanding comments. Throughout the review process the Applicant has revised the plans to address stormwater concerns. The Engineering Services Department believes each of these conditions can be met.

### 3. Landscaping

The Plan Commission recommended three conditions related to landscaping. The Applicant has revised their plans to comply with the recommendations of the Plan Commission.

### 4. Rights-Of-Way, Road, and Traffic

The Plan Commission recommended 10 conditions related to the vehicular circulation system and abutting public streets. The Applicant revised the plans or confirmed acceptance of eight of the conditions. The remaining outstanding conditions are:

h. The Applicant shall submit to the Village, as part of the Village plan review and approval process, updated plans that:

ii. Convert the turnaround area north of Unit 15 to grasscrete or similar material. *Note that the engineering plans show the area as grasscrete, however the site / landscaping plans still show a paved area. The correction of this inconsistency would comply with the condition.*

i. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated version of the color site plan prepared by BSB Design (revised 11/5/2024) with the crosswalk shown perpendicular (not angled) to Heritage Court, consistent with the Final Engineering Plans for Heritage Crossing, prepared by DesignTek Engineering, Inc. (revised dated 11/4/2024).

j. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated Traffic Impact Study that:

vi. Provides a sight distance triangle analysis for the proposed subdivision sign adjacent to Wolf Road. The Applicant provided a sight distance, but it does not include the proposed sign design.

### 5. Signage

The Plan Commission recommended four conditions related to signage. The Applicant has revised their plans to comply with four of the recommendations of the Plan Commission. The outstanding condition is:



b. Provide information on any roadway vehicle traffic signage related to Heritage Court and other proposed subdivision signage type (private) for Village review for the Development for Village Board approval as part of its consideration of the planned development ordinance. All approved and required on-site parking restriction signage that pertains to the Development shall be installed and maintained by the Applicant, at its cost, or the Homeowner's Association, at its cost. *Note that the Applicant has revised the plans to include the location of the street sign, but the design of the sign has not been submitted.*

The remaining conditions listed above are technical in nature and can be addressed prior to permitting. The Plan Commission's recommendation is included in Attachment 4. Attachments 5 to 11 contain the draft ordinances and resolutions related to the proposed Heritage Crossing development. Attachments 12 to 13 contain the draft resolution and ordinance related to the required amendments to the Heritage Springs planned development.

#### Attachments

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1. Applicant Submittal Package - Applicant revised submittal package dated 12/13/24 and 12/17/24
2. Memorandum - Plan Commission Memorandum dated 11/15/2024 re: PC-2024-02 – A Comprehensive Plan Amendment to the Long-Range Land Use Map, Conditional Use for a Planned Development, Variations, and Subdivision (*attachments omitted but available on the Village website*)
3. Engineering Memorandum - Memorandum prepared by Corey Van Dyk, Baxter & Woodman, RE: 5600 Wolf Road Plan Development – Stormwater Review #5
4. Plan Commission Recommendation No. 24-02 - Application for a Comprehensive Plan Amendment to the Long-Range Land Use Map, Map Amendment, Conditional Use for a Planned Development, Exceptions/Variations to Village Development Control Ordinance ("DCO"), and Subdivision for the Construction, Operation, and Maintenance of a Townhome Subdivision Development at the 5600 Wolf Road Property (Heritage Crossing)

5. Draft Ordinance – An Ordinance Authorizing the Approval and Execution of a Final Plat of Heritage Crossing Resubdivision for the Proposed 29 Unit Heritage Crossing Townhome Development to be Constructed at 5600 South Wolf Road, Western Springs, Illinois by Applicant/Contract Purchaser McNaughton Development, LLC
6. Draft Ordinance – An Ordinance Authorizing the Approval and Execution of a Plat of Abrogation for Storm Sewer Easement and Public Utility Easement Located Within the Property Commonly Known as 5600 South Wolf Road, Western Springs, Illinois for the Construction of the Proposed 29 Unit Heritage Crossing Townhome Development by Applicant / Contract Purchaser McNaughton Development, LLC
7. Draft Ordinance – An Ordinance Approving a Map Amendment to Rezone the 5600 South Wolf Road Property, Western Springs, Illinois, from the O – Limited Office Zoning District to the R4 – Multiple-Family Residence District; Approving an Application for a Conditional Use Permit for a Planned Development for the Construction and Operation of the Proposed 29 Unit Heritage Crossing Townhome Development Located at the 5600 South Wolf Road Property, Including the Approval of the Combined Preliminary / Final Development Plans, Subject to Village Plan Review Process, and Approval of Certain Development Allowances, Exceptions and Variations from the Village Zoning Regulations, Including a Waiver of the Five (5) Acre Minimum Lot Area Requirement and a Reduction of Certain Planned Development Requirements
8. Draft Ordinance – An Ordinance Approving and Authorizing the Vacation of the 66.00 Feet by 225.00 Feet Portion of the Lawn Avenue Right-of-Way Adjacent to and West of the 5600 South Wolf Road Property Located in Western Springs, Illinois and Lot 5 and Lot 6 of Maxted Subdivision, and Approving a Plat of Vacation and Reservation of a Stormwater Drainage Easement (Applicant: McNaughton Development, LLC)
9. Draft Resolution – A Resolution Authorizing the Approval and Execution of Redevelopment and Maintenance Agreement by and Between the Village of Western Springs, Illinois and McNaughton Development, LLC for the Heritage Crossing Residential Townhome Development (5600 South Wolf Road, Western Springs, Illinois)
10. Draft Resolution – A Resolution Authorizing the Approval and Execution of an Agreement Made Between the Village of Western Springs and McNaughton

Development, LLC Regulating the Use of the Privately-Owned Heritage Court Street Right-of-Way, On-Street and Off-Street Parking Spaces and Emergency Turn-Around Areas, Other Paved or Unpaved Vehicle Access Driveways or Pathways, Parking of Motor Vehicles, and Control of Motor Vehicle Traffic Within the Heritage Crossing Subdivision Located at 5600 South Wolf Road in the Village of Western Springs, Cook County, Illinois

11. Draft Resolution – A Resolution Approving a Waiver of the Five (5) Acre Minimum Land Area Requirement Under Section 10-8-3 (Guidelines) of the Western Springs Village Code and the Reduction of Certain Planned Development Submission Materials Under Section 10-8-8 (Submittal Requirements) of the Western Springs Village Code as Requested by Applicant / Contract Purchaser McNaughton Development, LLC for Approval of a Conditional Use for a Planned Development to Construct the Proposed 29 Unit Heritage Crossing Townhome Development at the Property Commonly Known as 5600 South Wolf Road, Western Springs, Illinois
12. Draft Ordinance – An Ordinance Approving a Minor Amendment to the Conditional Use Permit for a Planned Development Issued for the Western Springs Townhomes Subdivision (the “Heritage Springs Subdivision”) Located South of 55<sup>th</sup> Street and West of Wolf Road in Western Springs, Illinois Relative to Construction of On-Street Parking Spaces within Heritage Court
13. Draft Resolution – A Resolution Authorizing the Approval and Execution of an Agreement Made Between the Village of Western Springs and Heritage Springs Owners Association Regulating the Use of the Privately-Owned Heritage Court Street Right-of-Way, On-Street and Off-Street Parking Spaces and Emergency Turn-Around Areas, Other Paved or Unpaved Vehicle Access Driveways or Pathways, Parking of Motor Vehicles, and Control of Motor Vehicle Traffic Within the Heritage Springs Subdivision Located at 5500 Heritage Court in the Village of Western Springs, Cook County, Illinois

### **Financial Impact**

None

### **Recommended Motion**

Motion to recommend the application, draft ordinances, and draft resolutions to the Village Board for discussion at the January 27, 2025 meeting.

### **Strategic Plan Alignment**

None

**File Attachments**

1. Applicant revised submittal package dated 12/13/24 and 12/17/24
2. Plan Commission Memorandum dated 11/15/2024 re: PC-2024-02
3. Memorandum prepared by Corey Van Dyk, Baxter & Woodman
4. Plan Commission Recommendation No. 24-02
5. Draft Ordinance
6. Draft Ordinance
7. Draft Ordinance
8. Draft Ordinance
9. Draft Resolution
10. Draft Resolution
11. Draft Resolution
12. Draft Ordinance
13. Draft Resolution





The drawings presented are illustrative of character and design intent only, and are subject to change based upon final design considerations (i.e. applicable codes, structural, and MEP design requirements, unit plan / floor plan changes, etc.)  
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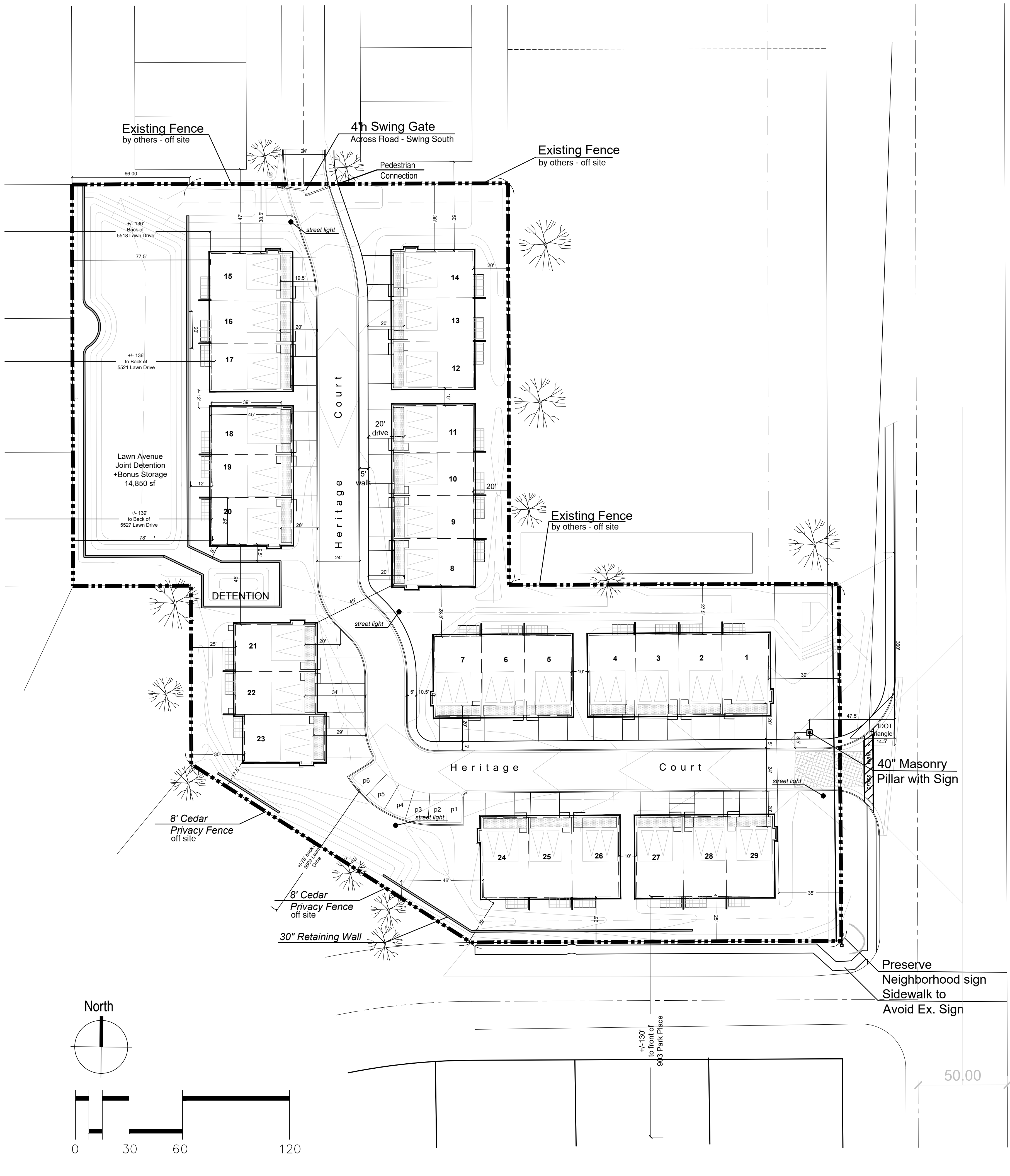
SITE PLAN  
Heritage Crossing  
Western Springs, Illinois

Revised: December 4, 2024



L0.01  
Site Plan















CONCEPT PLANT SCHEDULE

| SHADE TREE |                                                | Size      | Quant. |
|------------|------------------------------------------------|-----------|--------|
| AF         | Acer x freemanii 'Marmo' Red Maple             | 2.5" Cal. | 5      |
| CO         | Cercis Occidentalis / Hackberry                | 2.5" Cal. | 4      |
| GB         | Gingko biloba 'Autumn Gold' / Male var. Gingko | 2.5" Cal. | 2      |
| LT         | Liriodendron tulipifera / Tulip Poplar         | 2.5" Cal. | 3      |
| QB         | Quercus bicolor / Swamp White Oak              | 2.5" Cal. | 2      |
| QR         | Quercus rubrum / Red Oak                       | 2.5" Cal. | 6      |
| TA         | Tilia americana/Redmond Linden                 | 2.5" Cal. | 4      |

| ORNAMENTAL TREE |                                                   |           |    |
|-----------------|---------------------------------------------------|-----------|----|
| ACc             | Abies concolor / Concolor Fir                     | 6' Ht.    | 5  |
| Ac              | Amelanchier canadensis / Canadian Serviceberry    | 7' clump  | 17 |
| Cc              | Cercis canadensis / Eastern Redbud                | 1.5" Cal. | 27 |
| Cp              | Crataegus phaenopyrum/Washington Hawthorn         | 1.5" Cal. | 5  |
| Mp              | Malus x 'Prairiefire' / Prairiefire Crabapple     | 1.5" Cal. | 5  |
| Mf              | Malus floribunda / Flora Crab                     | 1.5" Cal. | 3  |
| Pg              | Picea glauca 'Densata' / Black Hills White Spruce | 6' Ht.    | 13 |
| Ps              | Pinus strobus / Eastern White pine                | 6' Ht     | 4  |

| SHRUBS |                                                              |         |    |
|--------|--------------------------------------------------------------|---------|----|
| cs     | Cornus sericea / Red Twig Dogwood                            | 5 gal.  | 74 |
| dn     | Deutzia x 'NCDX1' / Yuki Snowflake® Deutzia                  | 3 gal.  | 23 |
| ha     | Hydrangea arborescens 'Annabelle' / Annabelle Hydrangea      | 3 gal.  | 23 |
| hp     | Hydrangea paniculata 'Jane' / Little Lime® Panicle Hydrangea | 5 gal.  | 31 |
| hq     | Hydrangea quercifolia / Oak leaved Hydrangea                 | 5 gal.  | 6  |
| jc     | Juniperus chinensis 'Sea Green' / Sea Green Juniper          | 5 gal.  | 39 |
| po     | Physocarpus opulifolius 'Monlo' / Diabolo® Ninebark          | 3 gal.  | 14 |
| ra     | Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac            | 3 gal.  | 51 |
| rr     | Rosa rugosa 'Purple Pavement;'                               | 3 gal.  | 45 |
| sb     | Spiraea betulifolia 'Tor' / White Frost™ Birchleaf Spirea    | 3 gal.  | 34 |
| sm     | Syringa meyeri 'Palibin' / Dwarf Korean Lilac                | 3 gal.  | 29 |
| ta     | Thuja americana 'Dark Green' Dark American Arborvitae        | 10 gal. | 40 |
| ts     | Thuja smoragd 'Pyramidal' Arborvitae                         | 10 gal. | 26 |
| tm     | Taxus x media 'tautoni' / Tauton Yew                         | 5 gal.  | 47 |
| vc     | Viburnum carlesii 'Compactum' / Compact Koreanspice Viburnum | 3 gal.  | 7  |
| Vd     | Viburnum dentatum / Arrowwood Viburnum                       | 5 gal.  | 28 |
| wf     | Weigela florida 'Red Prince' / Red Prince Weigela            | 3 gal.  | 18 |

| ORNAMENTAL GRASS |                                                                 |        |    |
|------------------|-----------------------------------------------------------------|--------|----|
| ca               | Calamagrostis x acutiflora 'Karl Foerster' / Feather Reed Grass | 3 gal. | 27 |

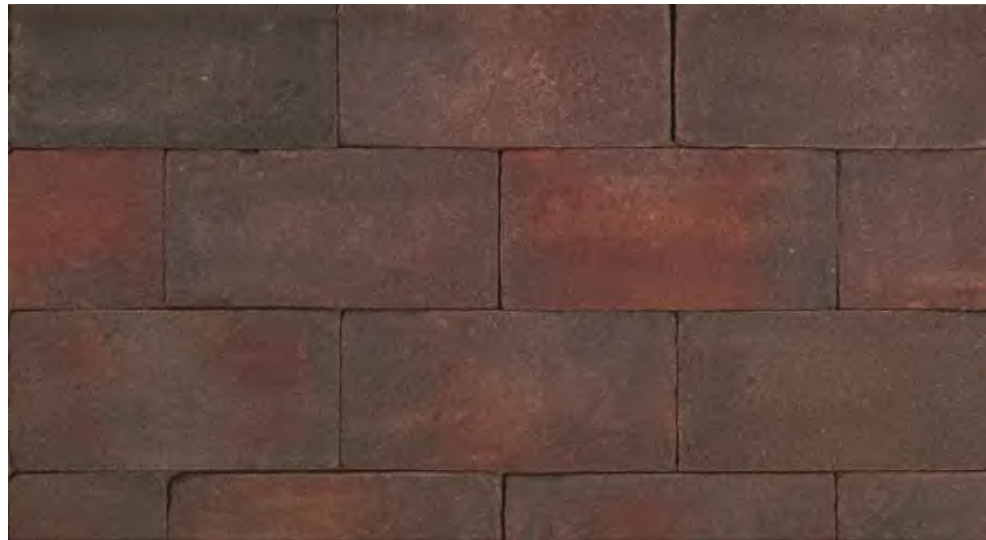
| SOD                                |  |  |           |
|------------------------------------|--|--|-----------|
| Poa pratensis / Kentucky Bluegrass |  |  | 28,500 sf |

| GROUNDCOVER/PERENNIALS                                   |       |    |  |
|----------------------------------------------------------|-------|----|--|
| Echinacea purpurea / Coneflower                          | 1 qt. | 25 |  |
| Hemerocallis x 'Mary Todd' / Mary Todd Daylily           | 1 qt. | 25 |  |
| Hosta x 'Guacamole' / Guacamole Hosta                    | 1 qt. | 25 |  |
| Hosta x 'Hadspen Blue' / Hadspen Blue Hosta              | 1 qt. | 25 |  |
| Monarda fistulosa / Bergamot                             | 1 qt. | 20 |  |
| Nepeta x faassenii 'Walker's Low' / Walker's Low Catmint | 1 qt. | 20 |  |
| Rudbeckia newmanii 'Summer Blaze' / Coneflower           | 1 qt. | 30 |  |

DETENTION BASIN  
\* See Accompanying Stormwater Basin Plan by Gary Weber and Associates

REFERENCE NOTES SCHEDULE

| SYMBOL | DESCRIPTION                                                                                 | QTY      |
|--------|---------------------------------------------------------------------------------------------|----------|
| 1      | Glen Gery Jamestown 3.5"x9.5" pavers                                                        | As Shown |
| 2      | 48"h x 28" square brick pillar with limestone cap & 4' Sign Post (Brick to match residence) |          |
| 3      | 96"h Vertical Cedar Fence with 4" horizontal cap                                            | AS       |
| 4      | Unilock Concord Wall in Granite Blend                                                       | AS       |
| 5      | Safety Gate                                                                                 | 1        |



1 - Jamestown Pavers



2 - Brick Sign Pillar



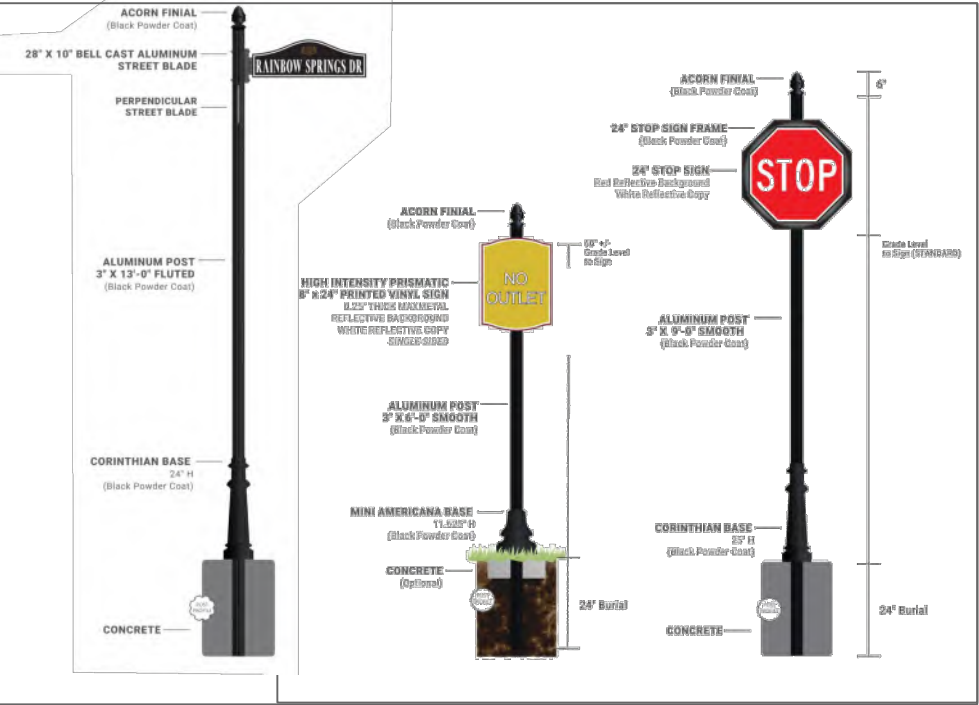
3 - Cedar Fence



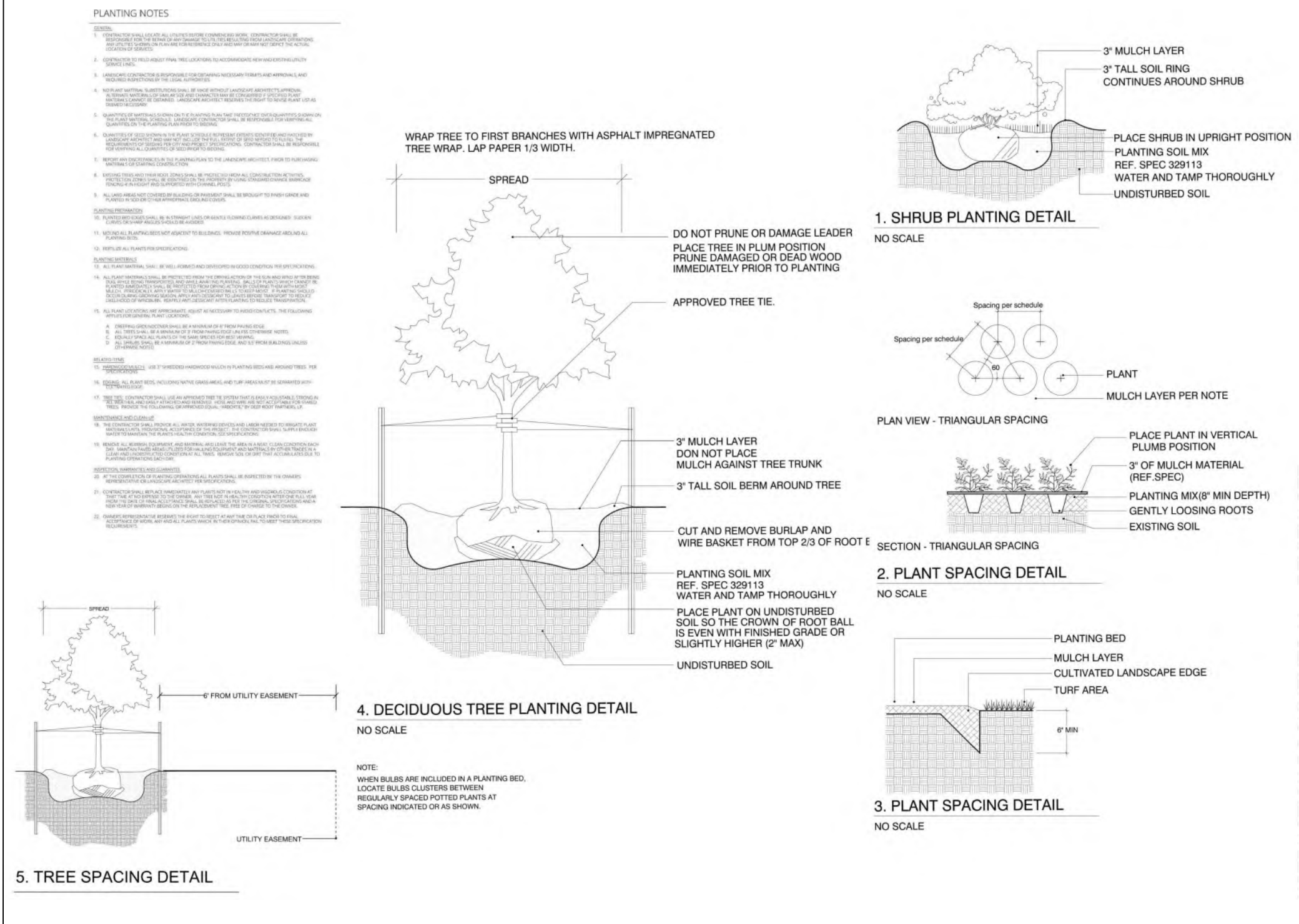
4 - Concord Retaining Wall



5 - Gate at North Access Drive



6 - Sign Examples



PLANT LIST  
Heritage Crossing  
Western Springs, Illinois

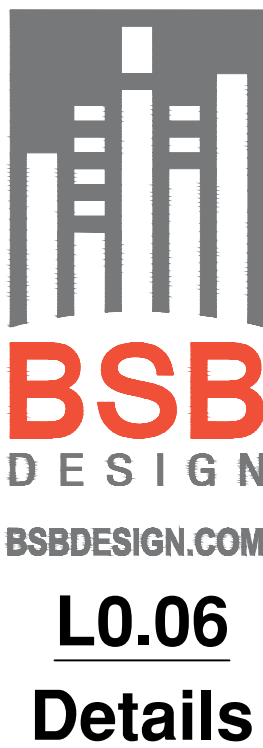
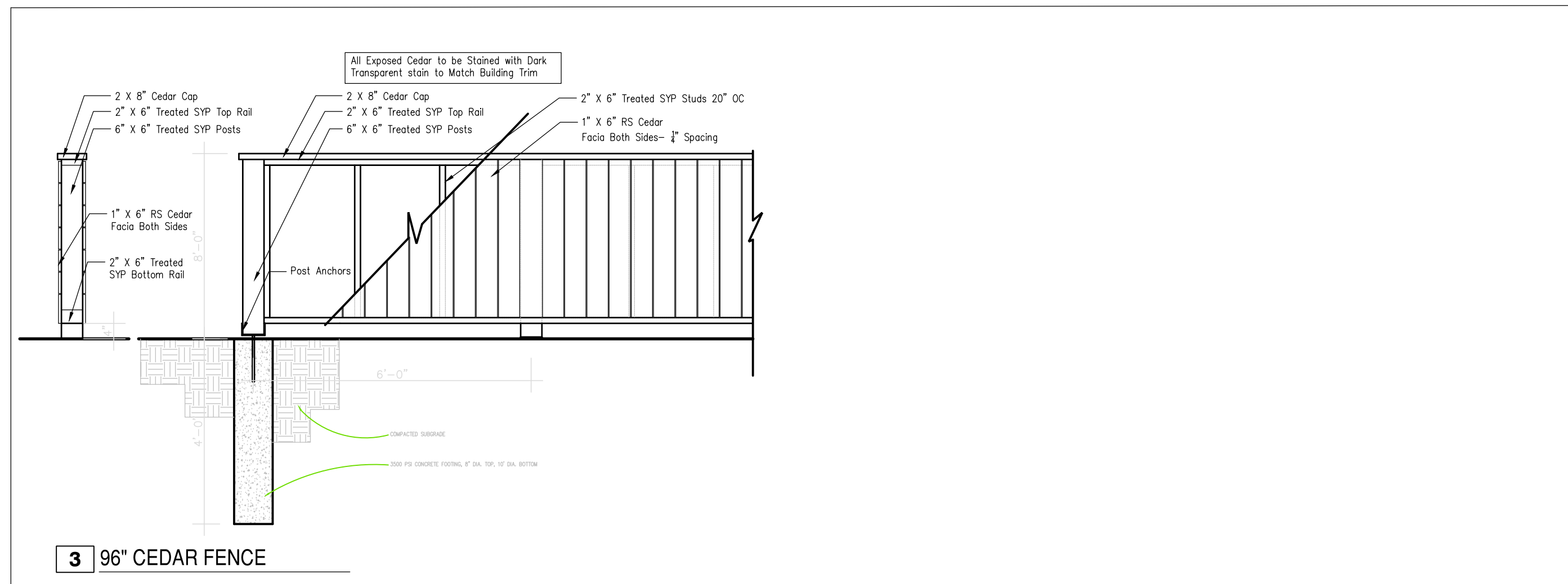
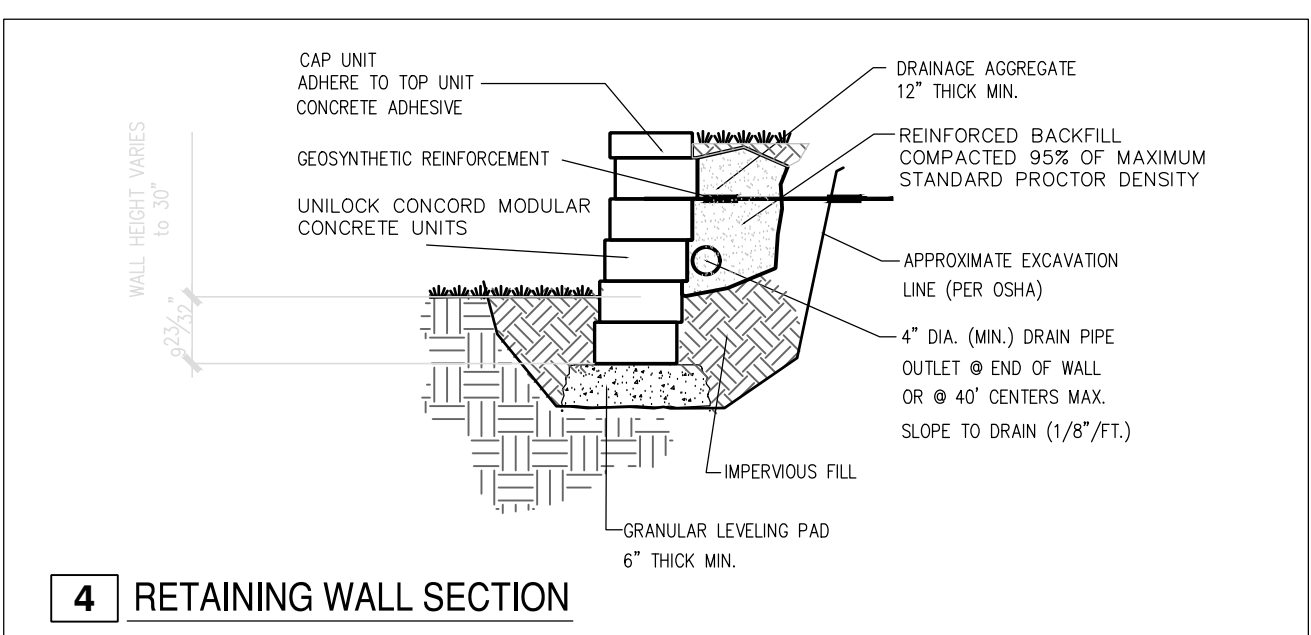


Plant List/  
Details

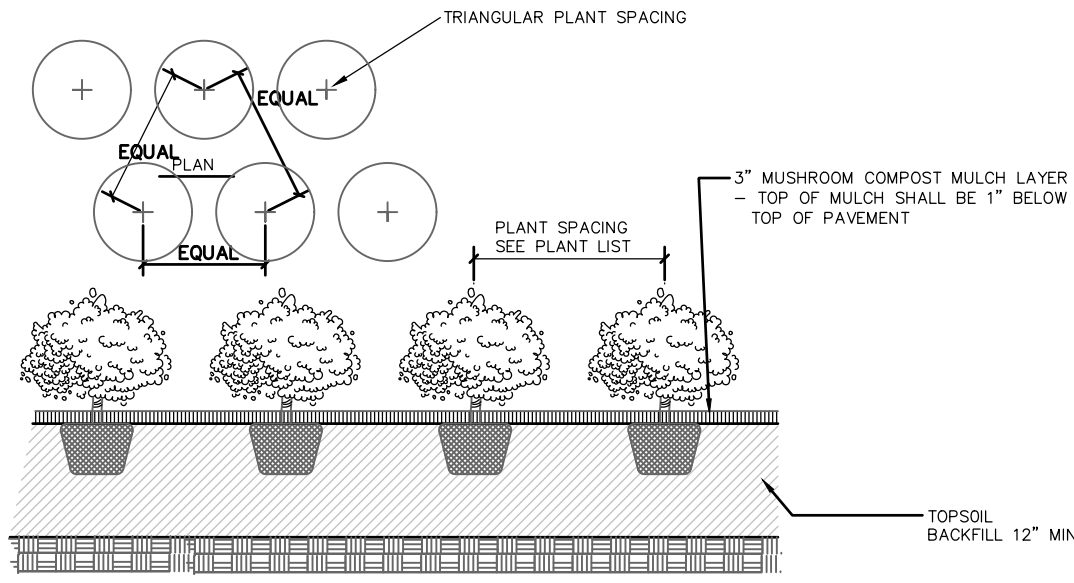
The drawings presented are illustrative of character and design intent only, and are subject to change based upon final design considerations (i.e. applicable codes, structural, and MEP design requirements, unit plan / floor plan changes, etc.)  
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Revised: December 4, 2024









**Heritage Crossing  
BSB Design  
Correction Letter 12/6/2024**

**General**

**7. The site plan must be updated to include all labels depicting all building setbacks.**

*Building setbacks have been added to L0.02-Dimensional Plan*

**9. Correct all inconsistencies between plats (ex. site plans showing seven guest parking spaces between units 23 and 24, whereas the engineering plans show six spaces)**

*All plan sheets have been revised to show six parking spaces per the engineering plan.*

**Landscaping**

Revise the landscaping plans to address all outstanding comments from the Village's consulting landscape architect.

**49. Include all utilities and light poles consistent with the information included in the Final Engineering plans. It is unclear if there are conflicts between utilities, light poles, and the proposed landscape.**

*Utilities and light poles have been added to L0.03 Planting Plan in order to illustrate no landscaping conflicts.*

**50. The revised landscape plan indicates to preserve the existing trees located behind the existing neighborhood sign. These existing evergreen trees are in poor condition and should be replaced with new plant material consistent with the adjacent proposed plantings.**

*Three new evergreen trees are illustrated behind the existing neighborhood sign on page L0.03 Planting Plan*

**51. Maples are not allowed in the public ROW per the Village Urban Forest Management Plan, they are an over-represented species within the Village. Replace with another species.**

*The maples have been replaced per pages L0.03 Planting Plan and L0.05 Plant List/ Details*

**52. Indicate Gingko biloba to be male species to avoid fruit production.**

*The Gingko have been noted as a male species per page L0.05 Plant List/ Details*



**53. Locate Catalpa speciosa away from sidewalks to avoid seed pods dropping on walkways.**

*The species of the trees have been changed pages L0.03 Planting Plan and L0.05 Plant List/Details*

**54. The specifications indicate a different native seed mix than the seed mixes indicated on the plans but does not list detail on species included. Clarify specification of seed mixes.**

*Native seed mix details and maintenance plan is now provided in a plan by Gary R. Weber & Associates pages L1.1 & L1.2*

### **Road & Traffic**

**59. A sidewalk along Park Pl. to the south connecting to the Wolf Rd. sidewalk to the east must be installed.**

*The Park Place sidewalk connecting to Wolf Road has been added to L0.01 Site Plan, L0.02-Dimensional Plan & L0.03 Planting Plan. The sidewalk has been configured to work around the existing subdivision sign*

**62. On the color site plan prepared by BSB Design (revised 11/5/2024), the crosswalk should be shown perpendicular (not angled) to Heritage Court, consistent with the Final Engineering Plans for Heritage Crossing, prepared by DesignTek Engineering and Surveying (revised 11/4/2024).**

*The crosswalk has been revised to be perpendicular on L0.01 Site Plan, L0.02-Dimensional Plan & L0.03 Planting Plan.*

**66. Provide a sight distance triangle analysis for the proposed subdivision sign adjacent to Wolf Rd.**

*Site distance triangle has been added to L0.02-Dimensional Plan*

**67. Provide information on any roadway signage related to street name and type (private) for review.**

*A detail for street signage has been added to L0.05 Plant List / Details figure # 6*



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# HERITAGE CROSSING

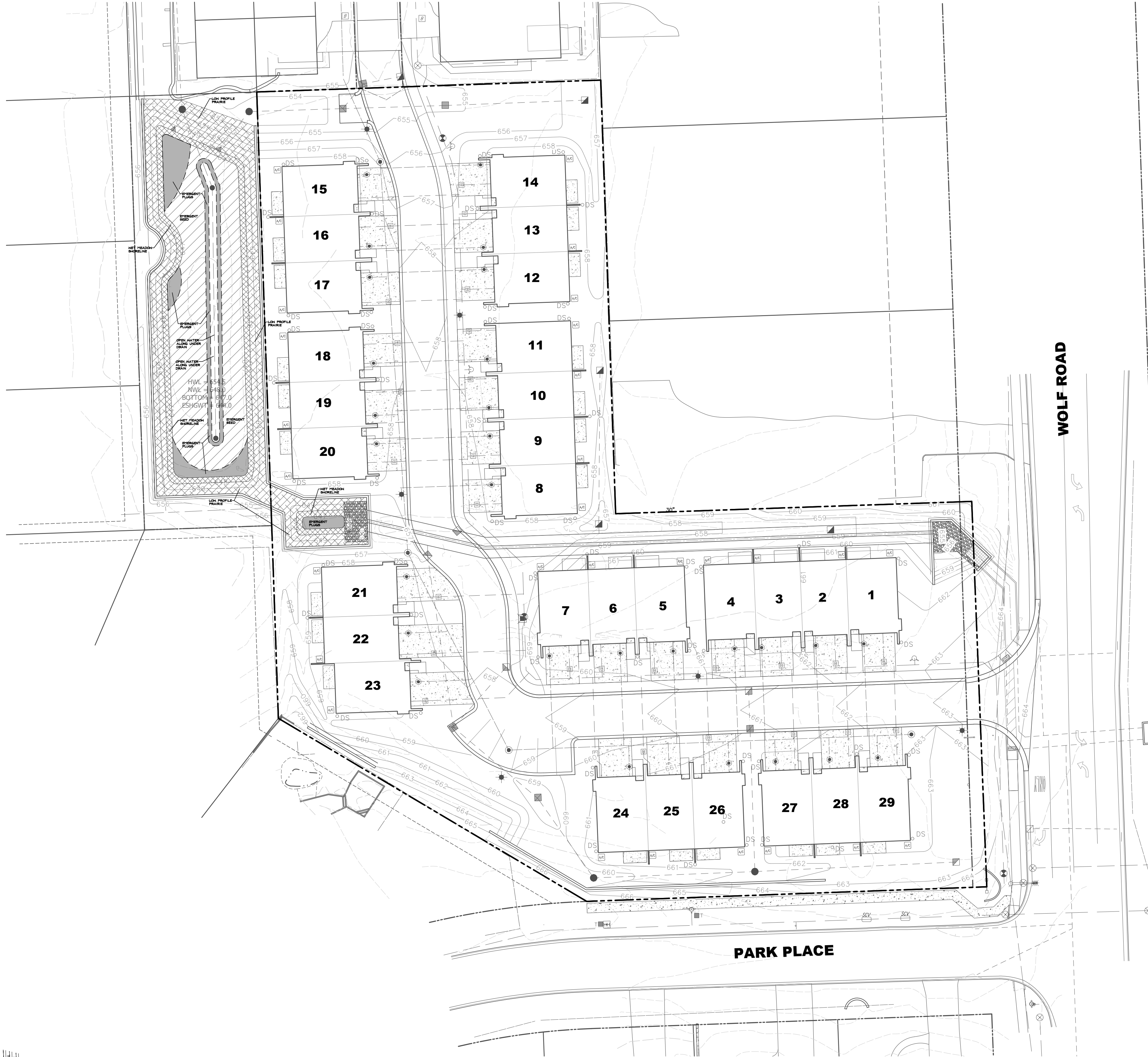
5600 SOUTH WOLF ROAD  
WESTERN SPRINGS, ILLINOIS

## NATIVE PLANTING PLAN

### REVISIONS

DATE 12.04.2024  
PROJECT NO. MT2426  
DRAWN TC  
CHECKED LP  
SHEET NO.

L1.1

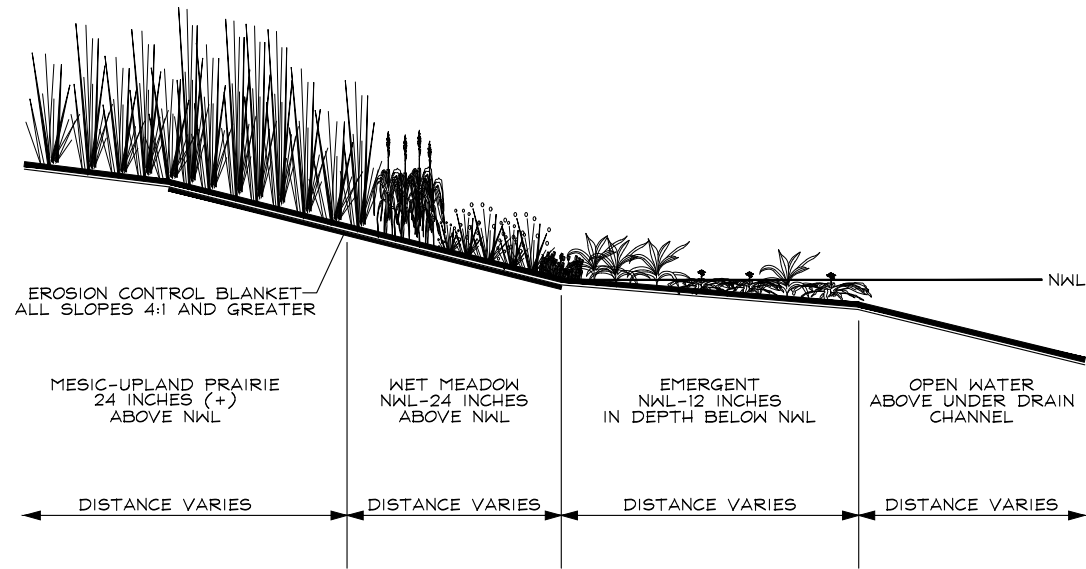


### NATIVE LEGEND

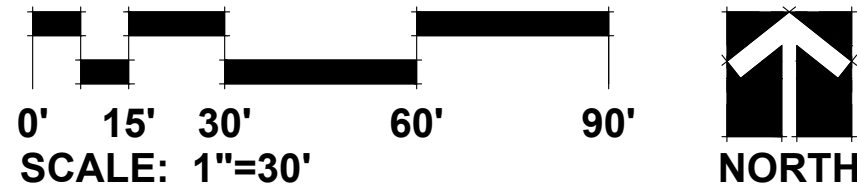
| Key | Qty.     | Description                  |
|-----|----------|------------------------------|
|     | 0.10 AC. | EMERGENT SEED MIX            |
|     | 0.04 AC. | EMERGENT PLUG MIX            |
|     | 0.04 AC. | WET MEADOW SEED MIX          |
|     | 0.10 AC. | LOW PROFILE PRAIRIE SEED MIX |

### GENERAL LANDSCAPE NOTES

- Contractor shall verify underground utility lines and is responsible for any damage.
- Contractor shall verify all existing conditions in the field prior to construction and shall notify landscape architect of any variance.
- Material quantities shown are for contractors convenience only. The Contractor must verify all material and supply sufficient materials to complete the job per plan.
- The landscape architect reserves the right to inspect plant materials either at place of growth or at site before planting, for compliance with requirements of variety, size and quality.
- Work shall conform to American Standard for Nursery Stock, State of Illinois Horticultural Standards, and Local Municipal requirements.
- Contractor shall secure and pay for all permits, fees, and inspections necessary for the proper execution of this work and comply with all codes applicable to this work.
- See General Conditions and Specifications for landscape work for additional requirements.



NATURALIZED STORMWATER BASIN SECTION  
NOT TO SCALE





LANDSCAPE WORK PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

The work shall consist of furnishing, transporting and installing all seeds, plants and other materials required for:

1. The establishment of naturalized detention basin planting areas as shown on Landscape Plan;
2. The provision of post-planting management as specified herein;
3. Any remedial operations necessary in conformance with the plans as specified in this document;
4. Permits which may be required.

1.2 QUALITY ASSURANCE

- A. Work shall conform to State of Illinois Horticultural Standards and local municipal requirements.
- B. Quality Control Procedures:
1. Ship landscape materials with certificates of inspection as required by governmental authorities. Comply with governing regulations applicable to landscape materials.
  2. Do not make substitutions. If specified landscape material is not obtainable, submit to Landscape Architect proof of non-availability and proposal for use of equivalent material.
  3. Analysis and Standards: Package standard products with manufacturers certified analysis.

1.3 SUBMITTALS

- C. Planting Schedule
- Submit three (3) copies of the proposed planting schedule showing dates for each type of planting
- D. Maintenance Instruction - Landscape Work
- Submit two (2) copies of typewritten instructions recommending procedures to be established by the Owner for the maintenance of landscape work for one full year. Submit prior to expiration of required maintenance periods.
- Instructions shall include: watering, fertilizing, spraying, mulching and pruning for plant material and trimming groundcover. Instructions for watering, fertilizing and mowing grass areas shall be provided ten (10) days prior to request for inspection for final acceptance. Landscape Architect shall receive copies of all instructions when issued.
- E. Submit two (2) copies of soil test of existing topsoil with recommendations for soil additive requirement to Landscape Architect for review and written approval.
- F. Submit two (2) samples of shredded hardwood bark mulch, erosion control blankets, and all other products and materials as specified on plans to Landscape Architect for review and written approval.
- G. Nursery packing lists indicating the species and quantities of material installed must be provided to the Owner and/or City upon request.

1.4 JOB CONDITIONS

- A. Examine and evaluate grades, soils and water levels. Observe the conditions under which work is to be performed and notify Landscape Architect of unsatisfactory conditions. Do not proceed with the work until unsatisfactory conditions have been corrected in an acceptable manner.
- B. Utilities: Review underground utility location maps and plans; notify local utility location service; demonstrate an awareness of utility locations; and certify acceptance of liability for the protection of utilities during course of work. Contractor shall be responsible for any damage to utilities or property.
- C. Excavation: When conditions detrimental to plant growth are encountered such as rubble fill, adverse drainage conditions or obstructions, notify Landscape Architect before planting.

1.5 GUARANTEES

- A. Guarantee seeded and sodded areas through the specified maintenance period and until final inspection.
- B. Guarantee trees, shrubs, groundcover and perennials for a period of one year after date of acceptance against defects including death and unsatisfactory growth, except for defects resulting from neglect by Owner, abuse or damage by others or unusual phenomena or incidents which are beyond Landscape Installer's control.
- C. Native Planting Area Performance Criteria

1<sup>st</sup> Full Growing Season: 90% of cover crop shall be established. There shall be no bare areas greater than two (2) square feet in seeded areas. At least 25% of vegetation coverage shall be native, non-invasive species. At least 50% of the emergent species, if planted as plugs shall be alive and apparent.

2<sup>nd</sup> Full Growing Season: All areas with the exception of emergent zones shall exhibit full vegetative cover. At least 50% of the vegetation coverage shall be native, non-invasive species.

3<sup>rd</sup> Full Growing Season: At least 75% of vegetation coverage shall be native, non-invasive species. Non-native species shall constitute no more than 25% relative arial coverage of the planted area. Invasive species for this project shall include the following: Ambrosia artemisiifolia & trifida (Common & Giant Ragweed), Cirsium arvense (Canada Thistle), Dipsacus laciniatus (Cut-leaved Teasel), Dipsacus sylvestris (Common Teasel), Lythrum salicaria (Purple Loosestrife), Melilotus sp. (Sweet Clover), Phalaris arundinacea (Reed Canary Grass), Phragmites australis (Giant Reed), Fallopia japonica (Japanese Knotweed), Rhamnus cathartica & frangula (Common & Glossy Buckthorn), Typha sp. (Broadleaf, Narrowleaf, and Hybrid Cattail).

LANDSCAPE WORK PART 2 - PLANT MATERIALS

2.1 NATIVE PLANTING MIXTURES

Provide fresh, clean, new crop of the species and proportions as specified. Native seed and live plant material shall be obtained from a reputable supplier (approved by Landscape Architect) that has collected from sources east of the Mississippi River within the same EPA Level III Ecoregion as the project site (Central Corn Belt Plains). Any material sourced from outside this ecoregion must be approved by the Landscape Architect prior to installation.

For each species, the amount of seed indicated on the specifications shall mean the total amount of pure live seed (PLS) per acre. Seed tags and PLS testing information shall be provided to the Landscape Architect prior to seeding.

It is the sole responsibility of the Native Landscape Contractor to provide approved seed that meets industry-standard PLS requirements.

2.2 PLANTING SOIL MIXTURE

Provide planting soil mixture consisting of clean uncompacted topsoil (stockpiled at site) for all planting pits, perennial, annual and groundcover areas. Topsoil shall be conditioned based on any recommendations resulting from the soil test in I.3.C.

2.3 EROSION CONTROL

- A. Native Areas Erosion Control Blanket: North American Green S150, or equivalent approved equal.
- B. Shoreline and Sloped Berm Areas Erosion Control Blanket: North American Green SC150, or equivalent approved equal. To be installed per manufacturer's recommendations.
- C. Refer to latest Engineering & Erosion Control Plans for any areas to receive permanent or long-term blanket installation.

LANDSCAPE WORK PART 3 - EXECUTION

3.1 PLANTING SCHEDULE

At least thirty (30) days prior to the beginning of work in each area, submit a planting schedule for approval by the Landscape Architect.

3.2 PLANTINGS

- A. Seeding Native Areas
1. The period for planting prairie seed shall be from April 1 to May 15 or November 1 to just before the first frost. Seeding outside of these timeframes must be approved by the landscape architect. Native seed planted outside of specified timeframes must have at least 60 days of growth prior to frost. Dormant seeding in winter is possible if soil conditions allow.
  2. The General Contractor and Native Landscape Contractor shall be responsible for performing all work necessary to achieve and maintain an acceptable seedbed prior to seeding. All areas must be properly prepared before seeding begins. Equipment having low unit pressure ground contact shall be utilized within the planting areas.
  3. If present, compacted soils shall be disked or raked prior to seeding. Remedial measures for the access area may, at the direction of the Wetland Consultant, involve ripping from 12 to 18 inches of the soil horizon prior to diskling.
  4. Prior to seeding, planting areas shall have at least twelve inches of clean un-compacted topsoil. Clumps, clods, stones over 2" diameter, roots and other extraneous matter shall be removed and disposed of legally off-site.
  5. Granular mycorrhizal inoculants shall be installed with the seed mix at a rate of 40lbs/ acre. Inoculant can be banded under seed, worked into seed or added into spray tanks. Native areas shall not receive fertilizer.
  6. Contractor shall be solely responsible for the proper handling and storage of the seed according to the best seed handling and storage practices, including fungicide treatments and stratification considerations. Owner shall make no compensation for damage to the seed because of improper storage, cleaning, threshing, or screening operations.
  7. Except where site conditions preclude their use, seeding shall be performed using a Truax drill, Truax Trillion seeder, or comparable equipment designed specifically for installation of native seed. For areas where site conditions preclude the use of specialized equipment, seed may be installed through hand broadcasting and followed by light raking. Hand broadcast seed shall be spread at twice the specified rate. Other methods of seed installation may be used with prior approval from the Landscape Architect.
  8. Prior to starting work, all seeding equipment shall be calibrated and adjusted to sow seeds at the proper seeding rate. In general, the optimum seeding depth is 0.25 inch below the soil surface. Areas where the seed has not been incorporated into the soil to the proper depth will not be accepted, and no compensation for materials or labor for the rejected work will be made by the Owner.
  9. Seeding and soil tracking/firming shall not be done during periods of rain, severe drought, high winds, excessive moisture, frozen ground, or other conditions that preclude satisfactory results.
  10. Wet mesic and emergent areas shall be planted, and seed allowed to germinate (if possible), prior to flooding with significant amounts of water. Any areas of significant permanent water located within the planting area will receive live plugs in lieu of seed.
  11. After the seeding operation is completed, install erosion control blanket per manufacturer's specifications.
  12. Emergent plugs shall be planted in natural groupings within designed areas containing saturated soils or shallow inundation. Plants within groupings shall be planted at 2 foot centers.
  13. Emergent plugs shall not be planted less than the specified rate and shall be protected with goose exclosures surrounding all natural groupings of plugs.

3.3 INITIAL MAINTENANCE

- A. Begin maintenance immediately after planting, continuing until final acceptance. A minimum of thirty (30) days.
- B. Maintain planted and seeded areas by watering, rolling/regrading, replanting and implementing erosion control as required to establish vegetation free of eroded or bare areas.
- C. Highlands Fescue and Native Planting areas are to be mowed only once per spring during the initial three year establishment period.

3.4 NATIVE LANDSCAPED AREAS  
CONTINUED MONITORING & MAINTENANCE

- A. Monitoring
- The Owner shall notify the County upon completion of plantings. The Owner's Environmental Specialist shall inspect the plantings and provide the County with a copy of the planting locations, species, and quantities for verification by the County.
- The Owner's Environmental Specialist shall inspect the plantings at least twice per year during the three-year term of the Establishment and Maintenance Cash Bond or Letter of Credit, to determine compliance with the minimum annual performance criteria (See I.3.C Guarantees). A monitoring report will be provided to the Village by January 31st following each inspection.
- B. Maintenance:
- First Season
- With the exception of the emergent area, native seeding areas should be mowed to a height of 6" to control annual nonnative and invasive species early in the growing season. Mowing, including weed whipping, should be conducted during prior to weed seed production. Mowing height and timing may need to be adjusted per target species. Small quantities of undesirable plant species, shall be controlled by hand pulling prior to the development and maturity of the plant. Hand removal shall include the removal of all above-ground and below-ground stems, roots and flower masses prior to development of seeds. Herbicide should be applied as necessary by a trained and licensed operator that is competent in the identification of native and nonnative herbaceous plants. Debris and litter shall be removed from the native areas and storm structures shall be inspected and maintained as necessary.

Second Season

Control of undesirable plant species during the second growing season shall consist primarily of precise herbicide application. Mowing and weed whipping shall be conducted as needed during the early growing season and as needed to a height of 6 to 8 inches to prevent annual weeds from producing seed. Debris and litter shall be removed from the native areas and storm structures shall be inspected and maintained as necessary.

Third, Fourth, and Fifth Years:

Seasonal mowing and herbicide will continue as above but should be reduced over time. Debris and litter shall be removed from the native areas and storm structures shall be inspected and maintained as necessary. At the completion of the third growing season (dependent on fuel availability; dominance of graminoid species; and favorable weather conditions), fire may be introduced to the planted areas as a management tool.

State and local permits shall be required prior to controlled burning. Burning shall be conducted by trained professionals experienced in managing smoke in urban environments. Prior to a controlled burn, surrounding property owners as well as local fire and police departments shall be notified. A burn plan detailing preferred wind direction and speed, location of fire breaks, and necessary personnel and equipment shall be prepared and utilized in planning and burn implementation.

The initial burn shall be dependent on fuel availability which is directly related to the quantity and quality of grasses contained within the plant matrix. Timing of the burn shall be determined based on results of the annual monitoring indicating species composition of the management area and other analysis of management goals. Generally, burns shall be scheduled from spring to fall on a rotational basis. Burn frequency shall also be dependent on the species composition within the management area. Generally, a new prairie restoration area shall be burned annually for two years after the second or third growing season after planting and then every 2-3 years thereafter, burning 50-75% of the area.

C. Long Term Wetland and Prairie Management/Maintenance

A final compliance report and Long-Term Operation and Maintenance Plan shall be submitted by the Developer/Owner's Environmental Specialist no less than 60 days prior to the expiration of any landscape Cash Bond or Letter of Credit posted for the native areas. Final acceptance and release shall be determined by the County/City/USACE upon inspection of the site to verify compliance.

The Long -Term Operation and Maintenance Plan shall be written to include guidelines and schedules for burning, mowing, application of herbicide, debris/litter removal and inspection schedule for storm structures and sediment removal.

3.5 CLEAN UP AND PROTECTION

- A. During landscape work, store materials and equipment where directed. Keep pavements clean and work areas and adjoining areas in an orderly condition.
- B. Protect landscape work and materials from damage due to landscape operations, operations by other trades and trespassers. Maintain protection during installation and maintenance periods. Treat, repair or replace damaged landscape work as directed by Landscape Architect.

3.6 INSPECTION AND ACCEPTANCE

- A. The Landscape Architect reserves the right to inspect seeds, plants, trees and shrubs either at place of growth or at site before planting for compliance with requirements for name, variety, size, quantity, quality and mix proportion.
- B. Supply written affidavit certifying composition of seed mixtures and integrity of plant materials with respect to species, variety and source.
- C. Notify the Landscape Architect within five (5) days after completing initial and/or supplemental plantings in each area.
- D. When the landscape work is completed, including maintenance, the Landscape Architect will, upon request, make a final inspection to determine acceptability. After final acceptance, the Owner will be responsible for maintenance.

Low Profile Prairie with Flowers Seed Mix

Upper basin slopes

| Botanical Name                       | Common Name                               | lbs / AC      |
|--------------------------------------|-------------------------------------------|---------------|
| <b>Grasses</b>                       |                                           |               |
| <i>Bouteloua curtipendula</i>        | Side Oats Grama                           | 8.000         |
| <i>Panicum virgatum</i>              | Prairie Switch Grass                      | 0.125         |
| <i>Elymus canadensis</i>             | Prairie Wild Rye                          | 1.000         |
| <i>Schizachyrium scoparium</i>       | Little Bluestem                           | 6.000         |
|                                      | <b>Total Grasses</b>                      | <b>15.125</b> |
| <b>Wildflowers/Broadleaves</b>       |                                           |               |
| <i>Allium cernuum</i>                | Nodding Wild Onion                        | 0.190         |
| <i>Amorpha canescens</i>             | Lead Plant                                | 0.125         |
| <i>Asclepias tuberosa</i>            | Butterflyweed                             | 0.500         |
| <i>Astragalus canadensis</i>         | Canada Milk Vetch                         | 0.063         |
| <i>Coreopsis palmata</i>             | Prairie Coreopsis                         | 0.025         |
| <i>Chamaecrista fasciculata</i>      | Partridge pea                             | 0.188         |
| <i>Echinacea pallida</i>             | Pale Purple Coneflower                    | 1.000         |
| <i>Echinacea purpurea</i>            | Purple Coneflower                         | 0.500         |
| <i>Eryngium yuccifolium</i>          | Rattlesnake Master                        | 0.125         |
| <i>Lespedeza capitata</i>            | Round-Headed Bush Clover                  | 0.125         |
| <i>Liatris aspera</i>                | Rough Blazing Star                        | 0.250         |
| <i>Liatris pycnostachya</i>          | Prairie Blazing Star                      | 0.188         |
| <i>Monarda fistulosa</i>             | Prairie Bergamot                          | 0.063         |
| <i>Parthenium integrifolium</i>      | Wild Quinine                              | 0.016         |
| <i>Penstemon digitalis</i>           | Foxglove Beard Tongue                     | 0.125         |
| <i>Petalostemum candidum</i>         | White Prairie Clover                      | 0.125         |
| <i>Petalostemum purpureum</i>        | Purple Prairie Clover                     | 0.156         |
| <i>Potentilla arguta</i>             | Prairie Cinquefoil                        | 0.031         |
| <i>Pycnanthemum tenuifolium</i>      | Slender Mountain Mint                     | 0.031         |
| <i>Ratibida pinnata</i>              | Yellow Coneflower                         | 0.125         |
| <i>Rudbeckia hirta</i>               | Black-Eyed Susan                          | 0.500         |
| <i>Rudbeckia subtomentosa</i>        | Sweet Black-Eyed Susan                    | 0.063         |
| <i>Rudbeckia triloba</i>             | Brown-eyed Susan                          | 0.500         |
| <i>Symphytotrichum laeve</i>         | Smooth Blue Aster                         | 0.063         |
| <i>Symphytotrichum novae-angliae</i> | New England Aster                         | 0.250         |
| <i>Tradescantia chiensis</i>         | Common Spiderwort                         | 0.063         |
| <i>Verbena stricta</i>               | Hoary Vervain                             | 0.125         |
| <i>Zizia aurea</i>                   | Golden Alexanders                         | 0.500         |
|                                      | <b>Total Forbs</b>                        | <b>6.015</b>  |
|                                      | <b>Total Low Profile Prairie Seed Mix</b> | <b>21.140</b> |

NATIVE SEED MIXES

Temporary Cover Crop

Cover crops shall be installed in all planting areas containing dry mesic, mesic, and wet mesic soils to, stabilize soils, and combat weed pressure during the germination and establishment of the native seeding area.

| Botanical Name                                     | Common Name                       | lbs / AC     |
|----------------------------------------------------|-----------------------------------|--------------|
| <b>Spring Cover Crop</b>                           |                                   |              |
| <i>Avena sativa</i>                                | Seed Oats                         | 30.000       |
| <b>Fall or Dormant Cover Crop</b>                  |                                   |              |
| <i>Avena sativa</i>                                | Seed Oats                         | 30.000       |
| <b>Emergent Plant Seed Mixture</b>                 |                                   |              |
| Stormwater basin bottoms from NWL to 12" below NWL |                                   |              |
| Botanical Name                                     | Common Name                       | lbs / AC     |
| <i>Acorus americanus</i>                           | Sweet Flag                        | 0.500        |
| <i>Alisma subcordatum</i>                          | Water Plantain                    | 1.250        |
| <i>Carex stricta</i>                               | Tussock Sedge                     | 0.060        |
| <i>Eleocharis obtusa</i>                           | Blunt Spike Rush                  | 0.250        |
| <i>Iris virginica shrevei</i>                      | Blue Flag                         | 0.500        |
| <i>Juncus effusus</i>                              | Common Rush                       | 0.500        |
| <i>Leersia oryzoides</i>                           | Rice Cut Grass                    | 1.250        |
| <i>Pontederia cordata</i>                          | Pickeral Weed                     | 0.250        |
| <i>Sagittaria latifolia</i>                        | Common Arrowhead                  | 1.250        |
| <i>Scirpus fluviatilis</i>                         | River Bulrush                     | 0.500        |
| <i>Scirpus cyperinus</i>                           | Wool Grass                        | 0.250        |
| <i>Schoenoplectus tabernaemontani</i>              | Softstem Bulrush                  | 0.500        |
| <i>Sparganium eurycarpum</i>                       | Bur Reed                          | 1.000        |
|                                                    | <b>Total Emergent Wetland Mix</b> | <b>8.060</b> |

Emergent Plant Plug Mixture

Stormwater basin bottoms in designated planting areas

| Botanical Name                        | Common Name                       | Plugs / AC. |
|---------------------------------------|-----------------------------------|-------------|
| <i>Alisma subcordatum</i>             | Water Plantain                    | 494         |
| <i>Eleocharis obtusa</i>              | Blunt Spike Rush                  | 494         |
| <i>Iris virginica shrevei</i>         | Blue Flag                         | 988         |
| <i>Juncus effusus</i>                 | Common Rush                       | 494         |
| <i>Pontederia cordata</i>             | Pickeral Weed                     | 988         |
| <i>Sagittaria latifolia</i>           | Common Arrowhead                  | 494         |
| <i>Scirpus fluviatilis</i>            | River Bulrush                     | 988         |
| <i>Scirpus cyperinus</i>              | Wool Grass                        | 494         |
| <i>Schoenoplectus tabernaemontani</i> | Softstem Bulrush                  | 988         |
| <i>Sparganium eurycarpum</i>          | Bur Reed                          | 988         |
|                                       | <b>Total Emergent Wetland Mix</b> | <b>7410</b> |

Wet Meadow Seed Mixture

Lower slopes of basin

| Botanical Name                       | Common Name                      | lbs / AC      |
|--------------------------------------|----------------------------------|---------------|
| <b>Grasses / Sedges</b>              |                                  |               |
| <i>Carex bebbii</i>                  | Bebbs Oval Sedge                 | 0.250         |
| <i>Carex bicknellii</i>              | Bicknells Sedge                  | 0.125         |
| <i>Carex brevior</i>                 | Plains Oval Sedge                | 0.250         |
| <i>Carex cristatella</i>             | Crested Oval Sedge               | 0.060         |
| <i>Carex molesta</i>                 | Field Oval Sedge                 | 0.250         |
| <i>Carex normalis</i>                | Spreading Oval Sedge             | 0.015         |
| <i>Carex scorparia</i>               | Pointed Broom Sedge              | 0.190         |
| <i>Carex stipata</i>                 | Common Fox Sedge                 | 0.060         |
| <i>Carex vulpinoidea</i>             | Brown Fox Sedge                  | 0.250         |
| <i>Elymus virginicus</i>             | Virginia Wild Rye                | 3.000         |
| <i>Glyceria striata</i>              | Fowl Manna Grass                 | 0.130         |
| <i>Juncus dudleyi</i>                | Dudleys Rush                     | 0.020         |
| <i>Juncus torreyi</i>                | Torreys Rush                     | 0.031         |
| <i>Panicum virgatum</i>              | Switch Grass                     | 3.000         |
| <i>Scirpus atrovirens</i>            | Dark Green Bulrush               | 0.060         |
| <i>Scirpus cyperinus</i>             | Wool Grass                       | 0.030         |
|                                      | <b>Total Grasses / Sedges</b>    | <b>7.721</b>  |
| <b>Wildflowers/Broadleaves</b>       |                                  |               |
| <i>Asclepias incarnata</i>           | Swamp Milkweed                   | 0.125         |
| <i>Bidens cernua</i>                 | Nodding Bur Marigold             | 0.190         |
| <i>Boltonia asteroides</i>           | False Aster                      | 0.031         |
| <i>Eupatorium perfoliatum</i>        | Common Boneset                   | 0.015         |
| <i>Euthamia graminifolia</i>         | Grassleaved Goldenrod            | 0.300         |
| <i>Helenium autumnale</i>            | Sneezeweed                       | 0.063         |
| <i>Hibiscus laevis</i>               | Halberd-leaved Rose Mallow       | 0.380         |
| <i>Iris virginica shrevei</i>        | Blue Flag Iris                   | 1.000         |
| <i>Lobelia siphilitica</i>           | Great Blue Lobelia               | 0.031         |
| <i>Mimulus ringens</i>               | Monkey Flower                    | 0.031         |
| <i>Physostegia virginiana</i>        | Obedient Plant                   | 0.031         |
| <i>Pycnanthemum virginianum</i>      | Common Mountain Mint             | 0.063         |
| <i>Solidago rigida</i>               | Stiff Goldenrod                  | 0.125         |
| <i>Symphytotrichum novae-angliae</i> | New England Aster                | 0.250         |
| <i>Vernonia fasciculata</i>          | Common Ironweed                  | 0.380         |
| <i>Verbena hastata</i>               | Blue Vervain                     | 0.380         |
| <i>Zizia aurea</i>                   | Golden Alexanders                | 0.500         |
|                                      | <b>Total Forbs</b>               | <b>3.895</b>  |
|                                      | <b>Total Wet Meadow Seed Mix</b> | <b>11.616</b> |

GRWA

GARY R. WEBER  
ASSOCIATES, INC.  
LAND PLANNING  
ECOLOGICAL CONSULTING  
LANDSCAPE ARCHITECTURE  
402 W. LIBERTY DRIVE  
WHEATON, ILLINOIS 60187  
PHONE: 630-668-7197  
www.grwainc.com

CIVIL ENGINEER

DESIGNTEK  
ENGINEERING, INC.  
9930 W 190TH STREET, SUITE L  
MOKENA, ILLINOIS 60448  
(708) 326-4961

HERITAGE CROSSING

5600 SOUTH WOLF ROAD  
WESTERN SPRINGS, ILLINOIS

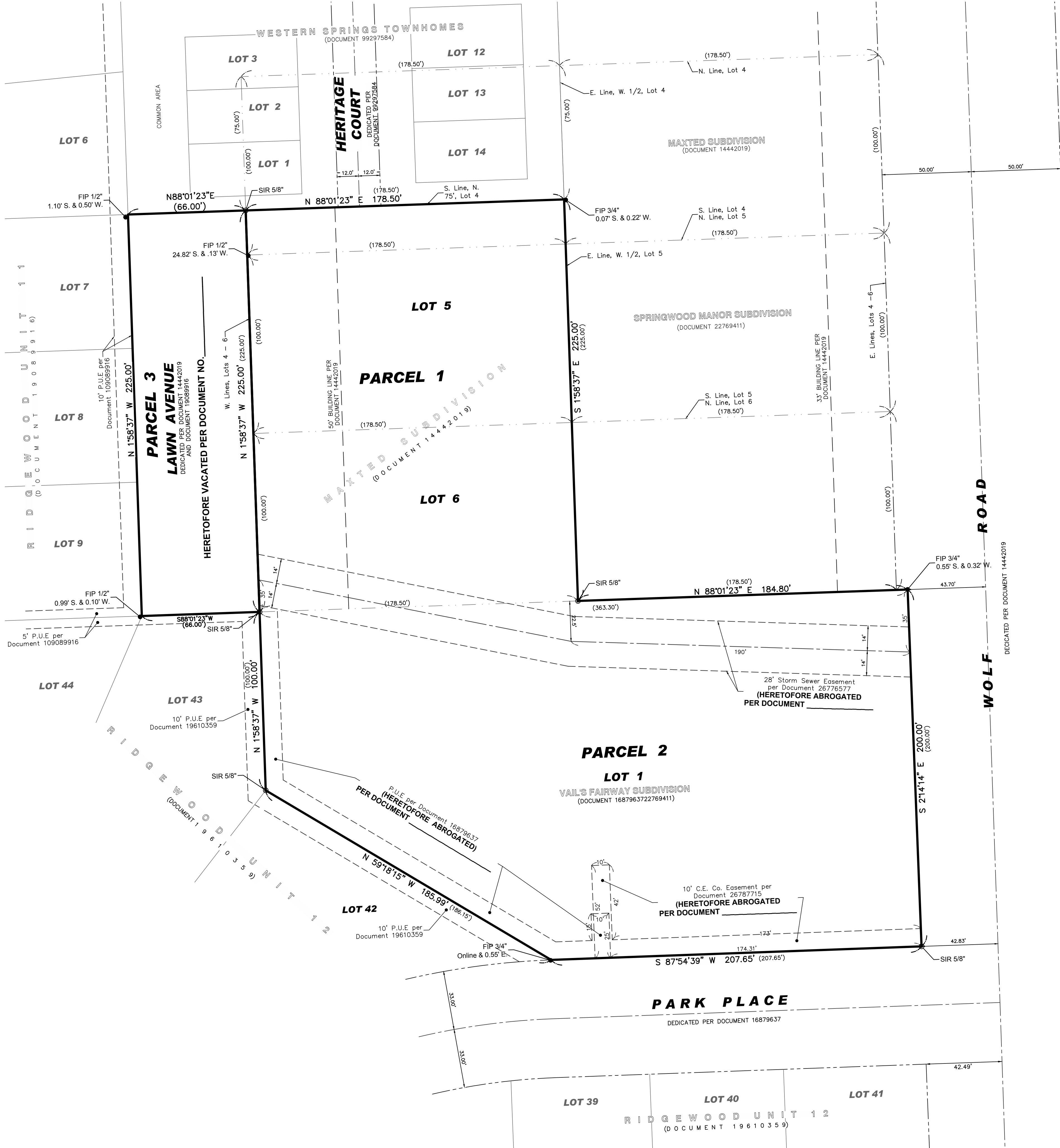
SPECIFICATIONS

|             |            |
|-------------|------------|
| REVISIONS   |            |
| DATE        | 12.04.2024 |
| PROJECT NO. | MT2426     |
| DRAWN       | TC         |
| CHECKED     | LP         |
| SHEET NO.   |            |



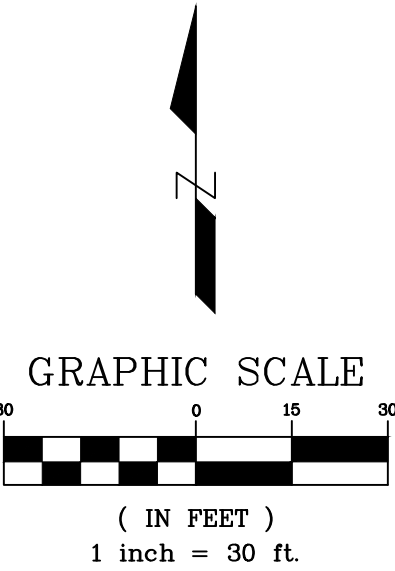
L1.2





# FINAL PLAT OF HERITAGE CROSSING

BEING A RESUBDIVISION OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 AND THAT PART OF LAWN AVENUE VACATED PER DOCUMENT \_\_\_\_\_ IN COOK COUNTY, ILLINOIS.



**BASIS OF BEARING**  
THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

**PARCEL IDENTIFICATION NUMBER**  
PARCEL ONE: 18-18-200-038-0000  
PARCEL TWO: 18-18-200-017-0000  
PARCEL THREE: UNKNOWN

**ADDRESSES**  
PARCEL 1: 1023 W. 55TH STREET  
WESTERN SPRINGS, IL 60558  
PARCEL 2: 5600 WOLF ROAD  
WESTERN SPRINGS, IL 60558

**EXISTING SITE DATA**  
AREA (PARCEL 1) = 40,163 SQ. FT. OR 0.92 ACRES  
AREA (PARCEL 2) = 64,996 SQ. FT. OR 1.49 ACRES  
AREA (PARCEL 3) = 14,850 SQ. FT. OR 0.34 ACRES  
GROSS AREA = 120,009 SQ. FT. OR 2.75 ACRES

**LEGEND**  
● FIP FOUND IRON PIPE  
○ SIR SET 5/8" IRON ROD  
— BOUNDARY LINE  
--- LOT LINE  
--- RIGHT-OF-WAY LINE  
--- CENTERLINE  
--- EXISTING EASEMENT LINE

**ABBREVIATIONS**  
FD. FOUND  
(###.##) RECORD DIMENSION  
###.## MEASURED DIMENSION  
FIP FOUND IRON PIPE  
P.U.E. PUBLIC UTILITY EASEMENT  
D.E. DRAINAGE EASEMENT  
B.S.L. BUILDING SETBACK LINE  
SQ. FT. SQUARE FEET  
N NORTH  
S SOUTH  
E EAST  
W WEST

ALL EXISTING EASEMENT ABROGATIONS WITHIN THE LEGALLY DESCRIBED PROPERTY HEREON, TOGETHER WITH THE LAWN AVENUE VACATION SHALL BE VIA SEPARATE DOCUMENTS

| REVISIONS |          | DESCRIPTION         |
|-----------|----------|---------------------|
| NO.       | DATE     |                     |
| 1         | 10/16/24 | LOT ACCESS GEOMETRY |
| 2         | 11/06/24 | LOT GEOMETRY        |
| 3         | 12/09/24 | VILLAGE COMMENTS    |
|           |          |                     |
|           |          |                     |
|           |          |                     |
|           |          |                     |
|           |          |                     |
|           |          |                     |
|           |          |                     |
|           |          |                     |
|           |          |                     |

McNAUGHTON DEVELOPMENT

FINAL PLAT  
FOR  
HERITAGE CROSSING  
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.  
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING  
9930 W. 190TH STREET, SUITE L  
MOKENA, ILLINOIS 60448  
(708) 326-4961  
FAX: (708) 326-4692  
IL PROF. LIC. NO.: 184-003740



| PROJECT INFORMATION |            |
|---------------------|------------|
| Project No.:        | 24-0001    |
| Scale:              | 1" = 30'   |
| Date:               | 07/10/2024 |
| Field Date:         | 04/17/2024 |
| Drawn By:           | SJL        |
| Checked By:         | SDD        |

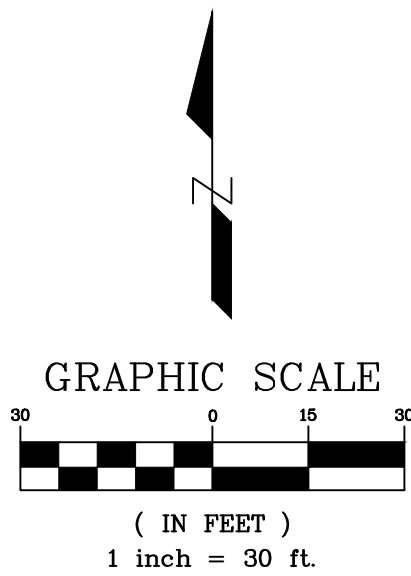
1  
OF  
4

EXISTING GEOMETRY



FINAL PLAT  
OF  
HERITAGE CROSSING

BEING A RESUBDIVISION OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 AND THAT PART OF LAWN AVENUE VACATED PER DOCUMENT \_\_\_\_\_ IN COOK COUNTY, ILLINOIS.



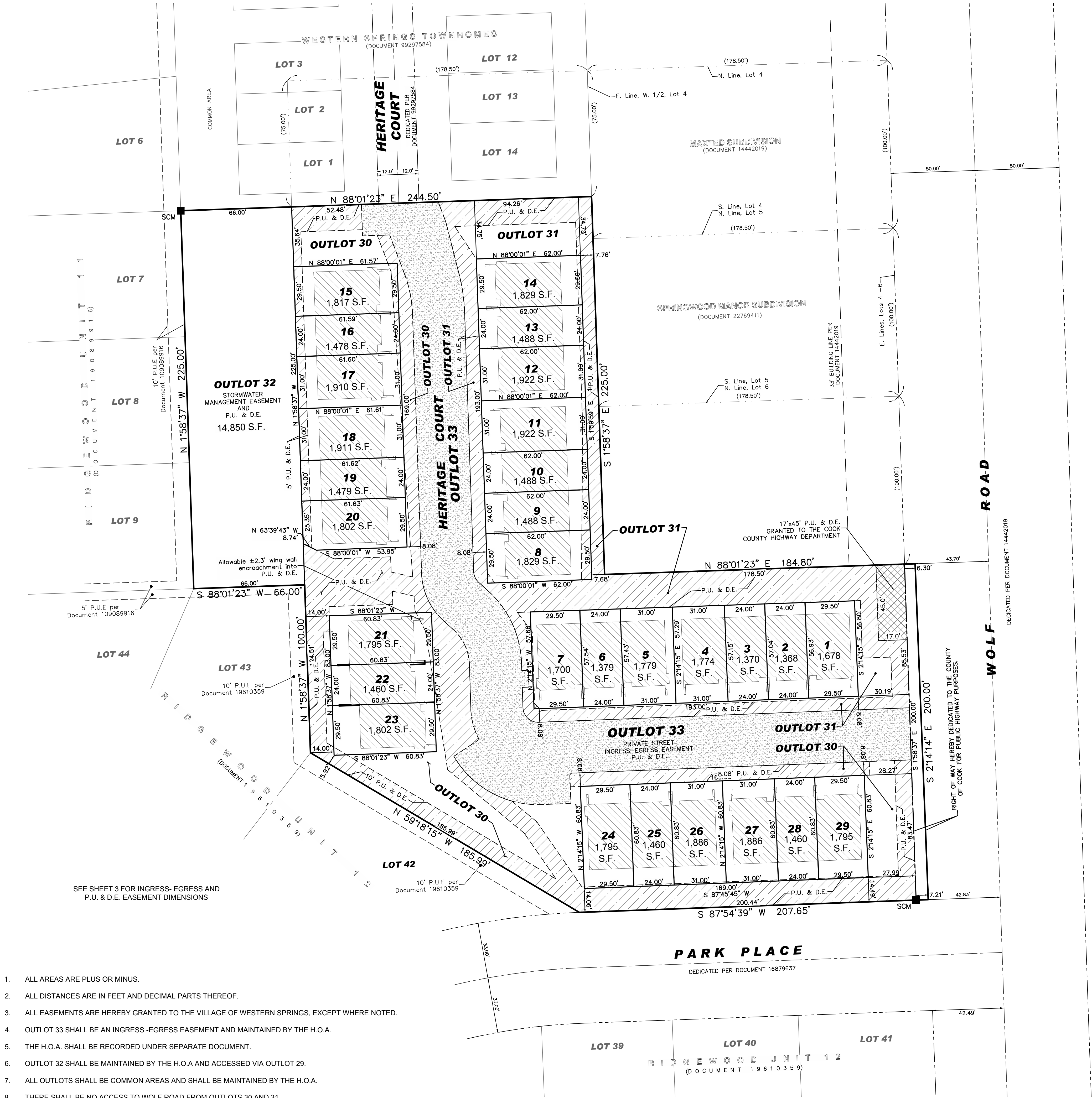
**BASIS OF BEARING**  
THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

**PARCEL IDENTIFICATION NUMBER**  
PARCEL ONE: 18-18-200-038-0000  
PARCEL TWO: 18-18-200-017-0000  
PARCEL THREE: UNKNOWN

**AREA SUMMARY**  
GROSS AREA: 120,009 SQ. FT. OR 2.75 AC.  
BUILDABLE LOTS 1-29: 48,839 SQ. FT. OR 1.18 AC.  
OUTLOT 30: 20,733 SQ. FT. OR 0.40 AC.  
OUTLOT 31: 14,952 SQ. FT. OR 0.43 AC.  
OUTLOT 32: 14,850 SQ. FT. OR 0.29 AC.  
OUTLOT 33: 19,393 SQ. FT. OR 0.34 AC.  
WOLF RD. DEDICATION: 1,351 SQ. FT. OR 0.03 AC.

| LEGEND               |                                    |
|----------------------|------------------------------------|
| ● FIP                | FOUND IRON PIPE                    |
| ○ SIP                | SET 1" x 24" IRON PIPE             |
| ■ SCM                | CONCRETE MONUMENT                  |
| —                    | BOUNDARY LINE                      |
| - - -                | LOT LINE                           |
| - · - · -            | RIGHT-OF-WAY LINE                  |
| - · - · -            | PROPOSED RIGHT-OF-WAY LINE         |
| - · - · -            | CENTERLINE                         |
| - · - · -            | EXISTING EASEMENT LINE             |
| - · - · -            | PROPOSED EASEMENT LINE             |
| [Hatched Box]        | PROPOSED BUILDING                  |
| [Dotted Box]         | P.U. & D.E.                        |
| [Cross-hatched Box]  | INGRESS-EGRESS EASEMENT            |
| [Diagonal Lines Box] | COOK COUNTY HWY. DEPT. P.U. & D.E. |

| ABBREVIATIONS |                               |   |       |
|---------------|-------------------------------|---|-------|
| FD.           | FOUND                         | N | NORTH |
| (###.##)      | RECORD DIMENSION              | S | SOUTH |
| ###.##        | MEASURED DIMENSION            | E | EAST  |
| FIP           | FOUND IRON PIPE               | W | WEST  |
| P.U.E.        | PUBLIC UTILITY EASEMENT       |   |       |
| D.E.          | DRAINAGE EASEMENT             |   |       |
| E.T.B.E.      | EXCEPTION TO BLANKET EASEMENT |   |       |
| B.S.L.        | BUILDING SETBACK LINE         |   |       |
| SQ. FT.       | SQUARE FEET                   |   |       |
| L             | ARC DIMENSION                 |   |       |
| R             | RADIUS DIMENSION              |   |       |
| CH            | CHORD BEARING/DISTANCE        |   |       |



- ALL AREAS ARE PLUS OR MINUS.
- ALL DISTANCES ARE IN FEET AND DECIMAL PARTS THEREOF.
- ALL EASEMENTS ARE HEREBY GRANTED TO THE VILLAGE OF WESTERN SPRINGS, EXCEPT WHERE NOTED.
- OUTLOT 33 SHALL BE AN INGRESS-EGRESS EASEMENT AND MAINTAINED BY THE H.O.A.
- THE H.O.A. SHALL BE RECORDED UNDER SEPARATE DOCUMENT.
- OUTLOT 32 SHALL BE MAINTAINED BY THE H.O.A AND ACCESSED VIA OUTLOT 29.
- ALL OUTLOTS SHALL BE COMMON AREAS AND SHALL BE MAINTAINED BY THE H.O.A.
- THERE SHALL BE NO ACCESS TO WOLF ROAD FROM OUTLOTS 30 AND 31.
- THERE SHALL BE NO ACCESS TO PARK PLACE FROM OUTLOT 30.

| REVISIONS |          |
|-----------|----------|
| NO.       | DATE     |
| 1         | 10/16/24 |
| 2         | 11/06/24 |
| 3         | 12/09/24 |

McNAUGHTON DEVELOPMENT

FINAL PLAT  
FOR  
HERITAGE CROSSING  
WESTERN SPRINGS, ILLINOIS

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MOKENA, ILLINOIS 60448  
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| PROJECT INFORMATION |            |
|---------------------|------------|
| Project No.:        | 24-0001    |
| Scale:              | 1" = 30'   |
| Date:               | 07/10/2024 |
| Field Date:         | 04/17/2024 |
| Drawn By:           | SJL        |
| Checked By:         | SDD        |

2  
OF  
4

PROPOSED GEOMETRY



FINAL PLAT  
OF  
HERITAGE CROSSING

BEING A RESUBDIVISION OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 AND THAT PART OF LAWN AVENUE VACATED PER DOCUMENT \_\_\_\_\_ IN COOK COUNTY, ILLINOIS.

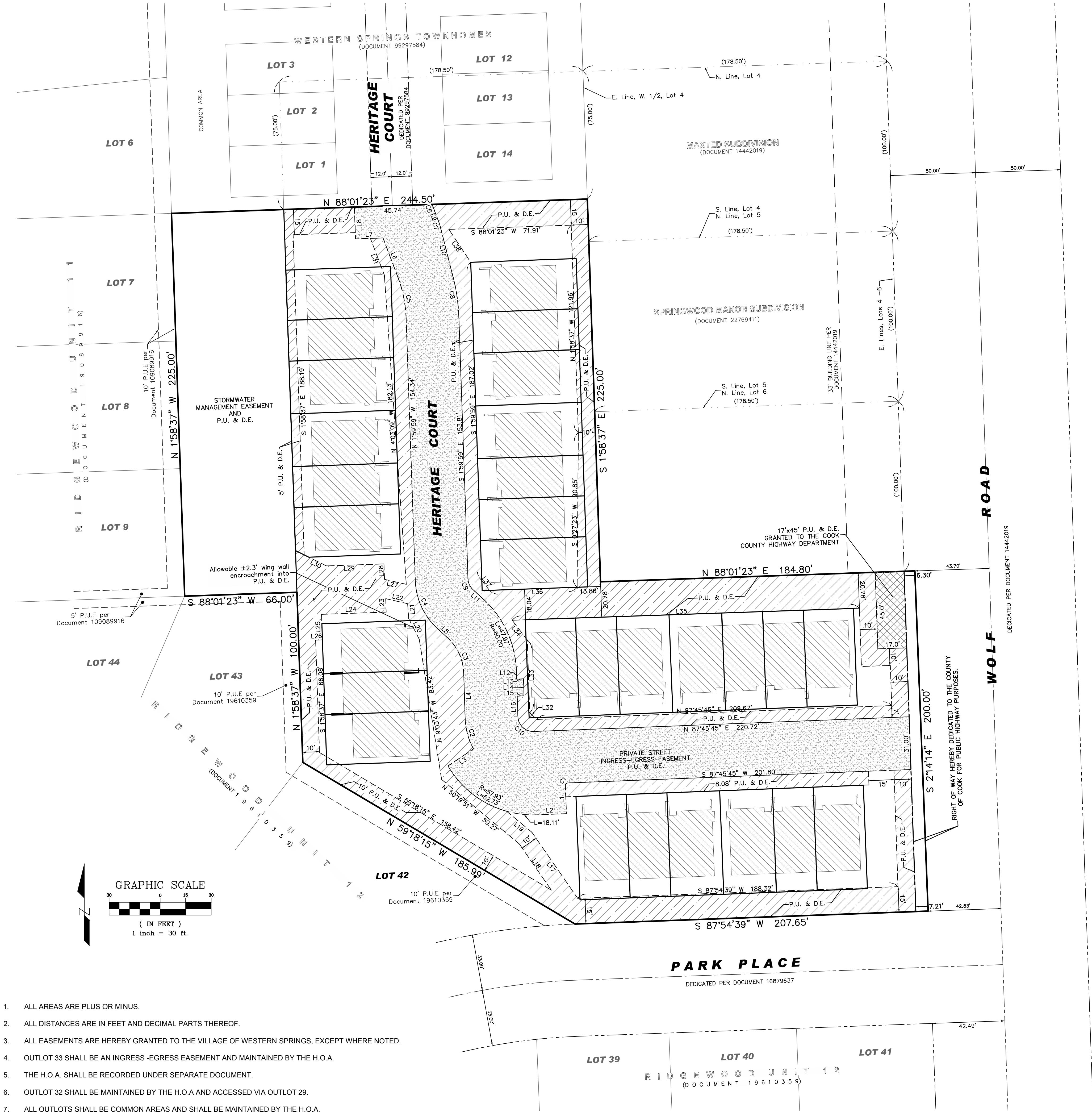
LEGEND

- FIP FOUND IRON PIPE
- SIP SET 1" x 24" IRON PIPE
- SCM CONCRETE MONUMENT
- BOUNDARY LINE
- LOT LINE
- RIGHT-OF-WAY LINE
- PROPOSED RIGHT-OF-WAY LINE
- CENTERLINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- ▨ PROPOSED BUILDING
- ▨ P.U. & D.E.
- ▨ INGRESS-EGRESS EASEMENT
- ▨ COOK COUNTY HWY. DEPT. P.U. & D.E.

| Parcel Line Table |        |               |
|-------------------|--------|---------------|
| Line #            | Length | Direction     |
| L1                | 16.50  | S02° 14' 15"E |
| L3                | 18.04  | N56° 16' 49"E |
| L4                | 26.84  | N01° 51' 56"W |
| L5                | 8.03   | N47° 40' 37"W |
| L6                | 24.41  | N20° 51' 06"W |
| L7                | 16.15  | S88° 10' 48"W |
| L8                | 18.67  | N01° 58' 35"W |
| L9                | 7.26   | S20° 53' 37"E |
| L10               | 27.84  | S14° 13' 17"E |
| L11               | 8.03   | S47° 40' 37"E |
| L12               | 4.76   | S01° 51' 56"E |
| L13               | 4.02   | N87° 58' 53"E |
| L14               | 10.00  | S01° 44' 56"E |
| L15               | 4.00   | S87° 58' 53"W |
| L16               | 12.07  | S01° 51' 56"E |
| L17               | 47.24  | N34° 43' 32"W |
| L18               | 33.09  | N34° 43' 32"W |
| L19               | 19.34  | N50° 19' 51"W |
| L20               | 13.60  | N27° 06' 22"W |
| L21               | 8.81   | N04° 03' 09"W |

| Parcel Line Table |        |               |
|-------------------|--------|---------------|
| Line #            | Length | Direction     |
| L22               | 13.22  | S77° 07' 24"E |
| L23               | 7.91   | N01° 58' 37"W |
| L24               | 38.00  | N88° 01' 23"E |
| L25               | 15.00  | S01° 58' 37"E |
| L26               | 4.00   | N88° 01' 23"E |
| L27               | 13.14  | N77° 07' 19"W |
| L28               | 9.06   | N01° 58' 37"W |
| L29               | 33.80  | S88° 01' 22"W |
| L30               | 14.63  | S63° 39' 43"E |
| L31               | 23.08  | S20° 51' 06"E |
| L32               | 5.78   | S47° 02' 19"E |
| L33               | 42.73  | S01° 52' 29"E |
| L34               | 14.62  | S37° 20' 25"E |
| L35               | 204.14 | N88° 01' 23"E |
| L36               | 51.58  | N88° 00' 01"E |
| L37               | 7.33   | N37° 20' 25"W |

| Curve Table |        |        |       |                 |              |
|-------------|--------|--------|-------|-----------------|--------------|
| Curve #     | Length | Radius | Delta | Chord Direction | Chord Length |
| C1          | 2.36   | 1.50   | 90.00 | S42° 45' 45"W   | 2.12         |
| C2          | 18.74  | 40.00  | 26.85 | N15° 17' 25"W   | 18.57        |
| C3          | 23.19  | 29.00  | 45.81 | N24° 46' 16"W   | 22.57        |
| C4          | 31.89  | 40.00  | 45.68 | N24° 50' 18"W   | 31.05        |
| C5          | 24.79  | 75.50  | 18.81 | N11° 22' 59"W   | 24.68        |
| C6          | 3.64   | 54.81  | 3.80  | S20° 01' 02"E   | 3.64         |
| C7          | 3.03   | 26.00  | 6.67  | S17° 33' 27"E   | 3.03         |
| C8          | 26.01  | 106.50 | 13.99 | S08° 59' 46"E   | 25.94        |
| C9          | 7.74   | 9.10   | 48.74 | S23° 11' 03"E   | 7.51         |
| C10         | 14.19  | 9.04   | 89.92 | S47° 02' 25"E   | 12.77        |



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- THERE SHALL BE NO ACCESS TO PARK PLACE FROM OUTLOT 30.

McNAUGHTON DEVELOPMENT

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WESTERN SPRINGS, ILLINOIS

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FAX: (708) 326-4692



PROJECT INFORMATION

Project No.: 24-0001  
Scale: 1" = 30'  
Date: 07/10/2024  
Field Date: 04/17/2024  
Drawn By: SLL  
Checked By: SDD

3  
OF  
4

EASEMENT DETAIL





|        |                        |  |  |        |          |
|--------|------------------------|--|--|--------|----------|
| Client | McNaughton Development |  |  |        |          |
| Name   | Heritage Crossing      |  |  | Number | 2024.139 |

|          |                                                   |         |           |          |            |
|----------|---------------------------------------------------|---------|-----------|----------|------------|
| Site     | Western Springs, IL                               |         | Designer  | mK       |            |
| Revision | 1                                                 | Created | 9/12/2024 | Modified | 12/16/2024 |
| Standard | National Concrete Masonry Association 3rd Edition |         |           |          |            |

- Note †: Total Facing quantity is based on using full-sized units only on bottom course and an even mix of defined facing sizes, as identified elsewhere in this report, on remaining courses of each Section. The use of corners, tapered or cut units is not reflected in this quantity.
- Note ‡: Infill values are calculated based on the average geogrid length in each Section. They do not account for anything beyond the reinforced zone (end of the geogrids). Actual infill values may be significantly higher.
- Note Δ: Face drain values do not include the drainage stone within block. Drainage stone within block is calculated based on the percentage hollow core of the wall unit selected. If the percentage hollow core is not defined then the drainage stone within block will not be calculated.
- Note §: Retained soil values are calculated based on the the entered Cut Angle. Actual retained soil values may be significantly higher.
- Note: The Toe Slope input is only used to establish the basic embedment depth based on the Design Criteria settings and provide a graphical representation of the toe conditions for export. The Toe Slope input does not account for reduced bearing capacity due to the sloping toe condition or the geometrical considerations of bench construction on embedment and wall height. User must perform separate analysis for bearing and stability on slopes and properly interpret grading for bench construction effects on wall height.

Quantities

| Wall      | Facing      | Wall/Cap Length [ft] | TOW Steps [#] | BOW Steps [#] | Facing Area [ft²] | Total Wall Area [ft²] |
|-----------|-------------|----------------------|---------------|---------------|-------------------|-----------------------|
| Wall No 1 | Diamond Pro | 604                  | 25            | 7             | 5115              | 5316                  |
| Wall No 2 | Diamond Pro | 79                   | 6             | 20            | 357               | 383                   |
| Wall No 3 | Diamond Pro | 183                  | 6             | 11            | 804               | 865                   |
| Wall No 4 | Diamond Pro | 42                   | 1             | 7             | 91                | 105                   |
|           |             | 908                  | 38            | 45            | 6368              | 6671                  |

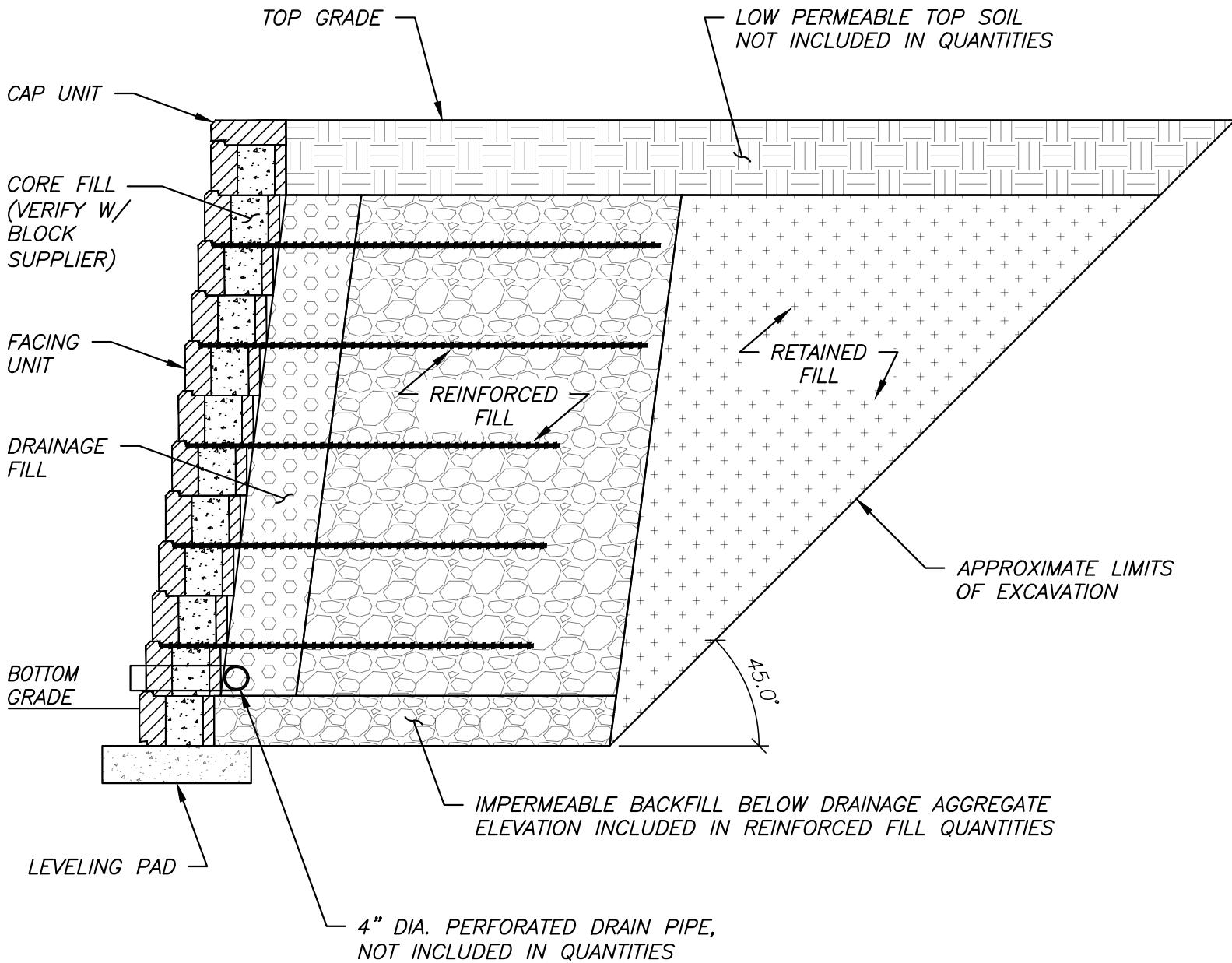
| Wall Unit   | Wall No 1 | Wall No 2 | Wall No 3 | Wall No 4 |
|-------------|-----------|-----------|-----------|-----------|
| Diamond Pro | 5,115     | 357       | 805       | 92        |

| Wall      | Leveling Pad [yd³] | Reinforced Fill [yd³] | Drainage Fill [yd³] | Core Fill [yd³] | Retained Fill [yd³] |
|-----------|--------------------|-----------------------|---------------------|-----------------|---------------------|
| Wall No 1 | 22                 | 961                   | 141                 | 85              | 886                 |
| Wall No 2 | 3                  | 44                    | 9                   | 6               | 40                  |
| Wall No 3 | 7                  | 97                    | 22                  | 13              | 88                  |
| Wall No 4 | 2                  | 8                     | 2                   | 2               | 6                   |
| Totals:   | 34                 | 1,109                 | 174                 | 106             | 1,020               |

Reinforcements

| Wall      | SGU60 [yd²] | SGU80 [yd²] | Geogrid Connectors |
|-----------|-------------|-------------|--------------------|
| Wall No 1 | 2,562       | 234         | 0                  |
| Wall No 2 | 131         | 0           | 0                  |
| Wall No 3 | 284         | 0           | 0                  |
| Wall No 4 | 19          | 0           | 0                  |
| Totals:   | 2,997       | 234         | 0                  |





## SEGMENTAL RETAINING WALL QUANTITIES LEGEND

SCALE: 1/2" = 1'-0"

### NOTE:

FACING AREA = AREA OF WALL NOT INCLUDING CAPS

TOTAL WALL AREA = INCLUDES CAPS

# **Project: 2024.139 - Heritage Crossing**

**Site: Western Springs, IL**

**Date: 12/16/2024**

**Wall: Wall No 1**



Project Summary

Quantities

|                              |           |
|------------------------------|-----------|
| Wall Length                  | 604.50 ft |
| Steps in Top of Wall         | 25        |
| Steps in Bottom of Wall      | 7         |
| Total Wall Area              | 5,316 ft² |
| Exposed Area (includes cap)  | 4,198 ft² |
| Embedded Area                | 1,119 ft² |
| Tallest Panel Height         | 10.33 ft  |
| Longest reinforcement length | 12.00 ft  |
| Base soil volume             | 22 yd³    |
| Infill soil volume ‡         | 961 yd³   |
| Retained soil volume §       | 886 yd³   |
| Gravity Face Drain           | 0 yd³     |
| Face Drain                   | 141 yd³   |
| Drainage stone within block  | 85 yd³    |
| Reinforcement                |           |
| SGU60 - SGU60                | 2,562 yd² |
| SGU80 - SGU80                | 234 yd²   |

- Note †:

Total Facing Unit quantity is based on using full-sized units only on bottom course and an even mix of defined facing sizes, as identified elsewhere in this report, on remaining courses of each Section. The use of corners, tapered or cut units is not reflected in this quantity.
- Note ‡:

Reinforced fill values are calculated based on the average geogrid length in each Section. They do not account for anything beyond the reinforced zone (end of the geogrids). Actual infill values may be significantly higher.
- Note Δ:

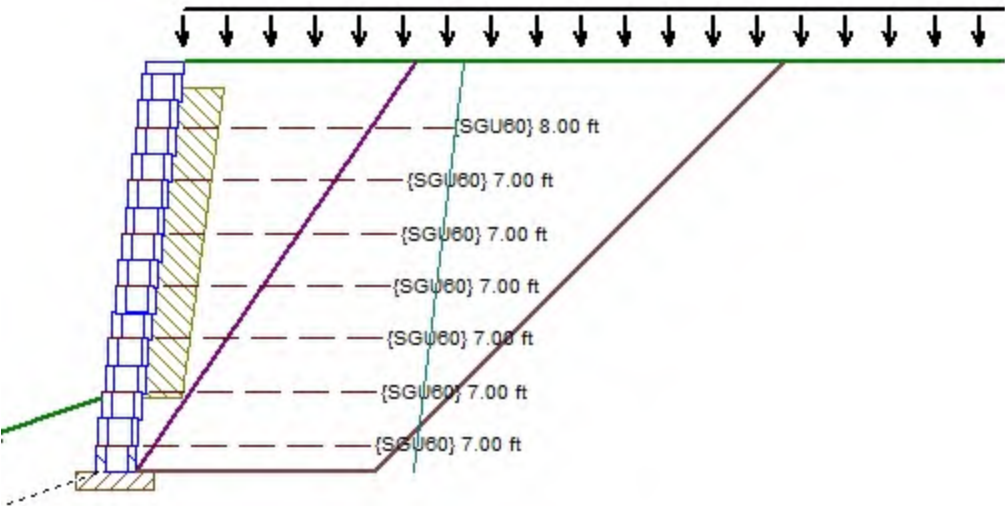
Drainage fill does not include the drainage stone within block. Core fill are calculated based on the percentage hollow core of the wall unit selected. If the percentage hollow core is not defined then the Core fill value within block will not be calculated.
- Note §:

Retained soil values are calculated based on the the entered Cut Angle. Actual retained soil values may be significantly higher.
- Note:

The Toe Slope input is only used to establish the basic embedment depth based on the Design Criteria settings and provide a graphical representation of the toe conditions for export. The Toe Slope input does not account for reduced bearing capacity due to the sloping toe condition or the geometrical considerations of bench construction on embedment and wall height. User must perform separate analysis for bearing and stability on slopes and properly interpret grading for bench construction effects on wall height.

Tallest Section

Section Height 10.33 ft





# **Project: 2024.139 - Heritage Crossing**

**Site: Western Springs, IL**

**Date: 12/16/2024**

**Wall: Wall No 2**

Project Summary

Quantities

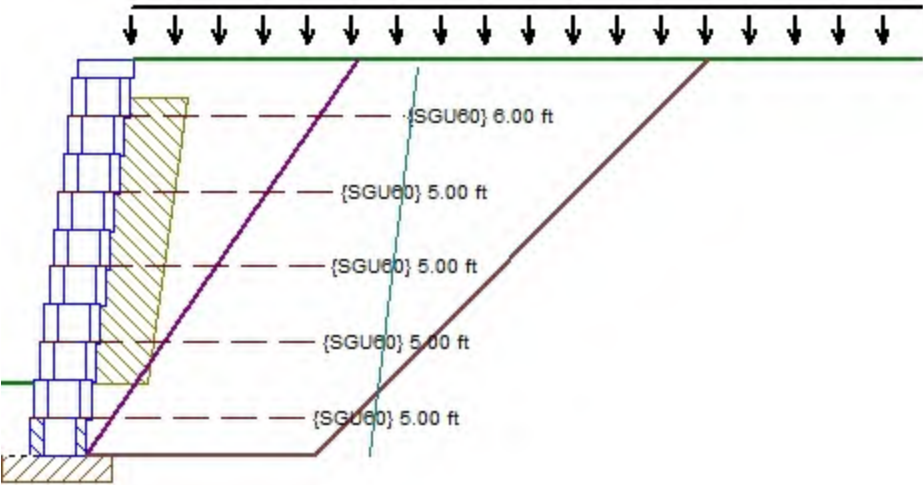
|                              |          |
|------------------------------|----------|
| Wall Length                  | 78.75 ft |
| Steps in Top of Wall         | 6        |
| Steps in Bottom of Wall      | 20       |
| Total Wall Area              | 383 ft²  |
| Exposed Area (includes cap)  | 290 ft²  |
| Embedded Area                | 93 ft²   |
| Tallest Panel Height         | 7.00 ft  |
| Longest reinforcement length | 6.00 ft  |
| Base soil volume             | 3 yd³    |
| Infill soil volume ‡         | 44 yd³   |
| Retained soil volume §       | 40 yd³   |
| Gravity Face Drain           | 0 yd³    |
| Face Drain                   | 9 yd³    |
| Drainage stone within block  | 6 yd³    |
| Reinforcement                |          |
| SGU60 - SGU60                | 131 yd²  |

- Note †: Total Facing Unit quantity is based on using full-sized units only on bottom course and an even mix of defined facing sizes, as identified elsewhere in this report, on remaining courses of each Section. The use of corners, tapered or cut units is not reflected in this quantity.
- Note ‡: Reinforced fill values are calculated based on the average geogrid length in each Section. They do not account for anything beyond the reinforced zone (end of the geogrids). Actual infill values may be significantly higher.
- Note Δ: Drainage fill does not include the drainage stone within block. Core fill are calculated based on the percentage hollow core of the wall unit selected. If the percentage hollow core is not defined then the Core fill value within block will not be calculated.
- Note §: Retained soil values are calculated based on the the entered Cut Angle. Actual retained soil values may be significantly higher.
- Note: The Toe Slope input is only used to establish the basic embedment depth based on the Design Criteria settings and provide a graphical representation of the toe conditions for export. The Toe Slope input does not account for reduced bearing capacity due to the sloping toe condition or the geometrical considerations of bench construction on embedment and wall height. User must perform separate analysis for bearing and stability on slopes and properly interpret grading for bench construction effects on wall height.



Tallest Section

Section Height 7.00 ft



# **Project: 2024.139 - Heritage Crossing**

**Site: Western Springs, IL**

**Date: 12/16/2024**

**Wall: Wall No 3**



Project Summary

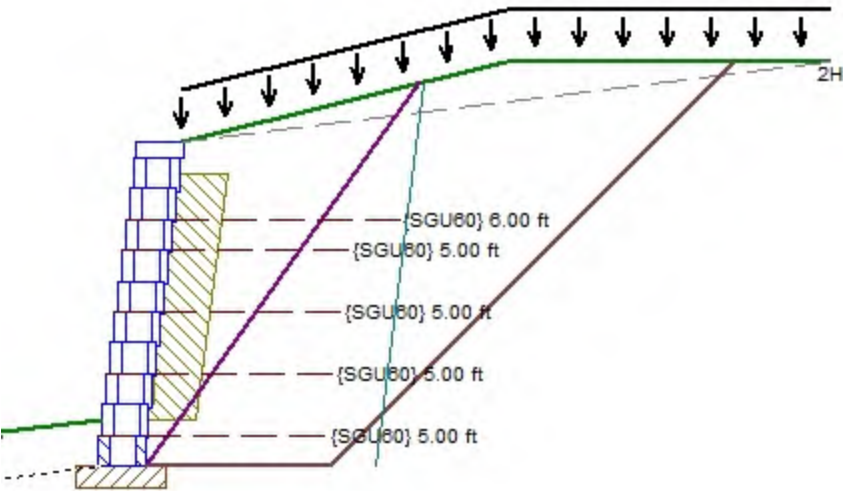
Quantities

|                              |           |
|------------------------------|-----------|
| Wall Length                  | 183.00 ft |
| Steps in Top of Wall         | 6         |
| Steps in Bottom of Wall      | 11        |
| Total Wall Area              | 865 ft²   |
| Exposed Area (includes cap)  | 727 ft²   |
| Embedded Area                | 138 ft²   |
| Tallest Panel Height         | 7.00 ft   |
| Longest reinforcement length | 6.00 ft   |
| Base soil volume             | 7 yd³     |
| Infill soil volume ‡         | 97 yd³    |
| Retained soil volume §       | 88 yd³    |
| Gravity Face Drain           | 0 yd³     |
| Face Drain                   | 22 yd³    |
| Drainage stone within block  | 13 yd³    |
| Reinforcement                |           |
| SGU60 - SGU60                | 284 yd²   |

- Note †:   Total Facing Unit quantity is based on using full-sized units only on bottom course and an even mix of defined facing sizes, as identified elsewhere in this report, on remaining courses of each Section. The use of corners, tapered or cut units is not reflected in this quantity.
- Note ‡:   Reinforced fill values are calculated based on the average geogrid length in each Section. They do not account for anything beyond the reinforced zone (end of the geogrids). Actual infill values may be significantly higher.
- Note Δ:   Drainage fill does not include the drainage stone within block. Core fill are calculated based on the percentage hollow core of the wall unit selected. If the percentage hollow core is not defined then the Core fill value within block will not be calculated.
- Note §:   Retained soil values are calculated based on the the entered Cut Angle. Actual retained soil values may be significantly higher.
- Note:   The Toe Slope input is only used to establish the basic embedment depth based on the Design Criteria settings and provide a graphical representation of the toe conditions for export. The Toe Slope input does not account for reduced bearing capacity due to the sloping toe condition or the geometrical considerations of bench construction on embedment and wall height. User must perform separate analysis for bearing and stability on slopes and properly interpret grading for bench construction effects on wall height.

Tallest Section

Section Height 7.00 ft





# **Project: 2024.139 - Heritage Crossing**

**Site: Western Springs, IL**

**Date: 12/16/2024**

**Wall: Wall No 4**

Project Summary

Quantities

|                              |          |
|------------------------------|----------|
| Wall Length                  | 42.00 ft |
| Steps in Top of Wall         | 1        |
| Steps in Bottom of Wall      | 7        |
| Total Wall Area              | 105 ft²  |
| Exposed Area (includes cap)  | 81 ft²   |
| Embedded Area                | 25 ft²   |
| Tallest Panel Height         | 3.67 ft  |
| Longest reinforcement length | 4.00 ft  |
| Base soil volume             | 2 yd³    |
| Infill soil volume ‡         | 8 yd³    |
| Retained soil volume §       | 6 yd³    |
| Gravity Face Drain           | 0 yd³    |
| Face Drain                   | 2 yd³    |
| Drainage stone within block  | 2 yd³    |

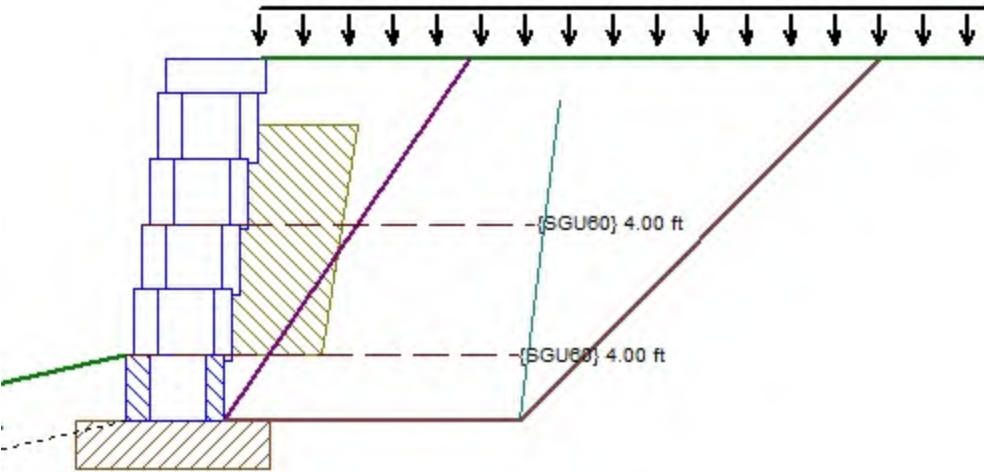
|               |        |
|---------------|--------|
| Reinforcement |        |
| SGU60 - SGU60 | 19 yd² |

- Note †:     Total Facing Unit quantity is based on using full-sized units only on bottom course and an even mix of defined facing sizes, as identified elsewhere in this report, on remaining courses of each Section. The use of corners, tapered or cut units is not reflected in this quantity.
- Note ‡:     Reinforced fill values are calculated based on the average geogrid length in each Section. They do not account for anything beyond the reinforced zone (end of the geogrids). Actual infill values may be significantly higher.
- Note Δ:     Drainage fill does not include the drainage stone within block. Core fill are calculated based on the percentage hollow core of the wall unit selected. If the percentage hollow core is not defined then the Core fill value within block will not be calculated.
- Note §:     Retained soil values are calculated based on the the entered Cut Angle. Actual retained soil values may be significantly higher.
- Note:       The Toe Slope input is only used to establish the basic embedment depth based on the Design Criteria settings and provide a graphical representation of the toe conditions for export. The Toe Slope input does not account for reduced bearing capacity due to the sloping toe condition or the geometrical considerations of bench construction on embedment and wall height. User must perform separate analysis for bearing and stability on slopes and properly interpret grading for bench construction effects on wall height.

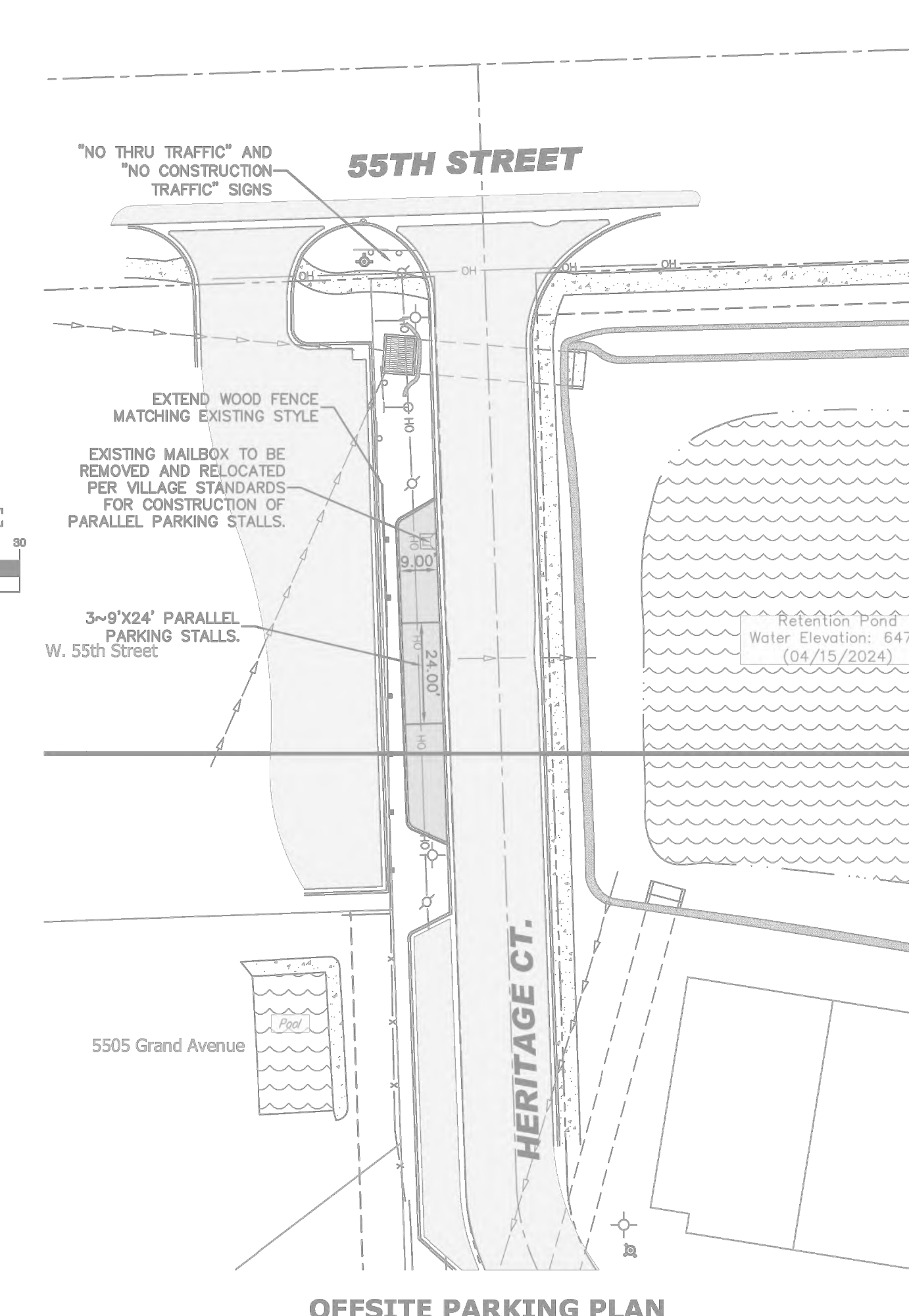
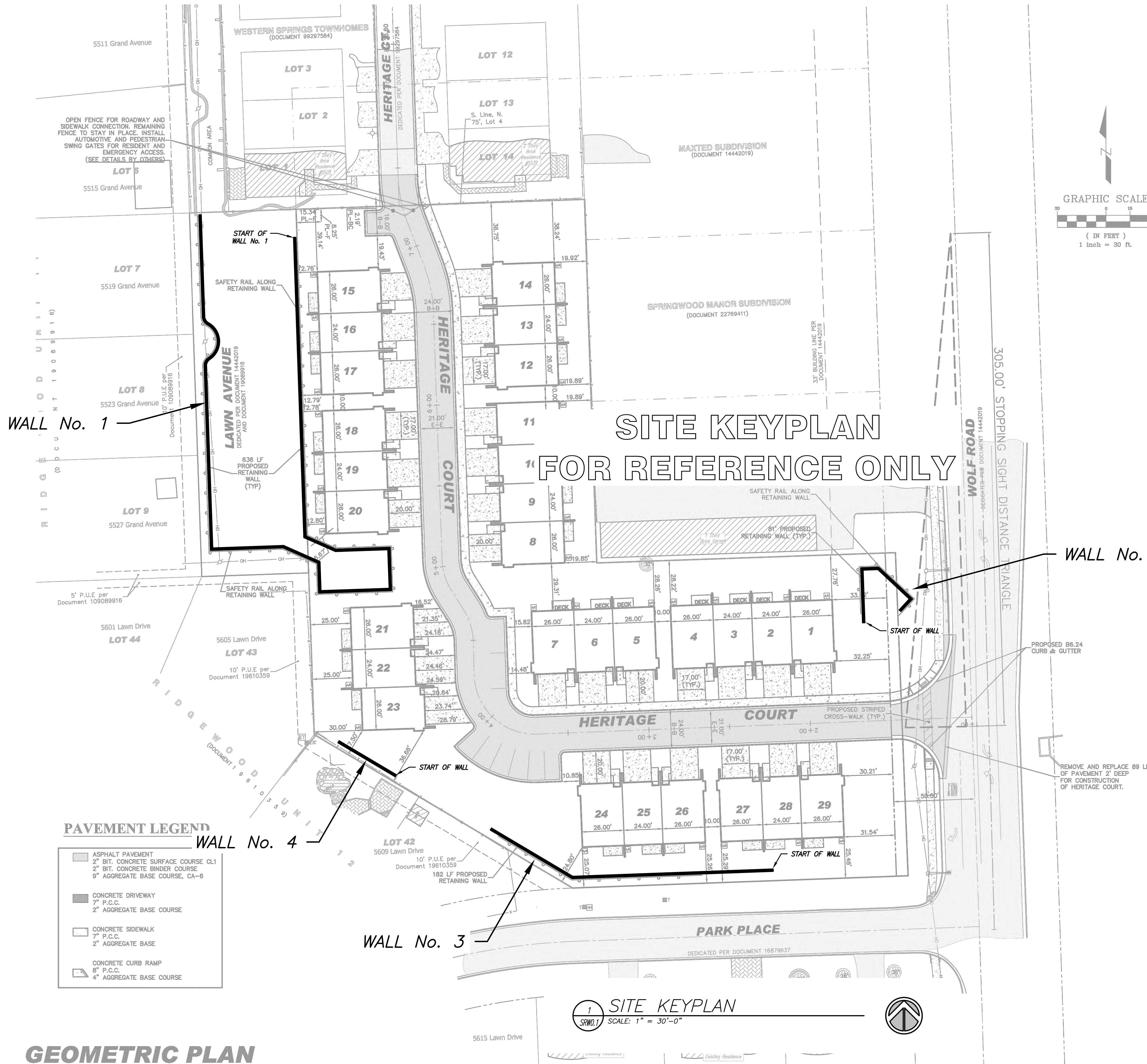


Tallest Section

Section Height 3.67 ft







- NOTES:
1. ANY ENCROACHMENT INTO EXISTING MAINLINE PAVEMENT FOR CONSTRUCTION OF CURB AND GUTTER SHALL REQUIRE THAT THE PAVEMENT BE MILLED 4 INCHES AND RESURFACED PURSUANT TO IDOT DISTRICT 1 MIX CHART REQUIREMENTS FOR ONE FULL LANE WIDTH AND A MINIMUM LENGTH OF 6 FEET.

PAVEMENT LEGEND

|  |                                     |
|--|-------------------------------------|
|  | ASPHALT PAVEMENT                    |
|  | 2" BIT. CONCRETE SURFACE COURSE CL1 |
|  | 2" BIT. CONCRETE BINDER COURSE      |
|  | 9" AGGREGATE BASE COURSE, CA-6      |
|  | CONCRETE DRIVEWAY                   |
|  | 7" P.C.C.                           |
|  | 2" AGGREGATE BASE COURSE            |
|  | CONCRETE CURB RAMP                  |
|  | 8" P.C.C.                           |
|  | 4" AGGREGATE BASE COURSE            |

GEOMETRIC PLAN

1 SITE KEYPLAN  
SCALE: 1" = 30'-0"

REVIEW  
NOT FOR C

| REVISIONS | Mark | Date | Description |
|-----------|------|------|-------------|
|           |      |      |             |
|           |      |      |             |
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|           |      |      |             |

READING ROCK  
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(630)964-8604 FAX:(613)874-2520

HERITAGE CROSSING  
SEGMENTAL RETAINING WALL(S)  
5600 S. WOLF RD.  
WESTERN SPRINGS, ILLINOIS 60558

VIRGIOLO & ASSOCIATES, LTD.  
STRUCTURAL ENGINEERS

24009 North Echo Lake Road  
Lake Zurich, IL 60047  
847.550.8411 Telephone  
847.307.8324 Facsimile

|                |              |
|----------------|--------------|
| Drawn          |              |
| Checked        | RSF          |
| Approved       | PGV          |
| Scale          | AS INDICATED |
| Sheet          | SRW0.1       |
| Date           | 12/16/2024   |
| Project Number | 2024.139     |



GENERAL STRUCTURAL NOTES

1. CODES AND STANDARDS
- 1.1. "DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS", LATEST EDITION BY THE NATIONAL CONCRETE MASONRY ASSOCIATION.
- 1.2. "SEGMENTAL RETAINING WALL INSTALLATION GUIDE", LATEST EDITION BY THE NATIONAL CONCRETE MASONRY ASSOCIATION.
- 1.3. "AB ENGINEERING MANUAL" BY ALLAN BLOCK
- 1.4. "COMMERCIAL INSTALLATION MANUAL FOR ALLAN BLOCK RETAINING WALLS" BY ALLAN BLOCK

2. LIVE LOADS
- 2.1. DEAD LOAD SURCHARGE 0 PSF
- 2.2. LIVE LOAD SURCHARGE 100 PSF
- 2.3. OPEN FENCE / HANDRAIL 50 PLF or 200 LB POINT AT 3'-6" A.F.G.

3. DESIGN CRITERIA
- 3.1. INTERNAL STABILITY FACTORS
- 3.1.1. FACTOR OF SAFETY AGAINST PULLOUT: 1.5
- 3.1.2. SOIL-GEOGRID INTERACTION COEFFICIENT: 0.90
- 3.1.3. PERCENT OF GEOGRID COVERAGE: 100%
- 3.2. EXTERNAL STABILITY FACTORS - REINFORCED WALL
- 3.2.1. FACTOR OF SAFETY AGAINST BASE SLIDING 1.5
- 3.2.2. FACTOR OF SAFETY AGAINST OVERTURNING: 2.0
- 3.2.3. FACTOR OF SAFETY FOR UNCERTAINTIES: 1.5

4. MATERIALS
- 4.1. SOIL PARAMETERS - SEE TABLE BELOW
- 4.2. GRADATION OF FILL MATERIALS
- 4.2.1. UNIT FILL / DRAINAGE AGGREGATE SHALL CONSIST OF COURSE GRAINED AGGREGATES, SEE TABLE BELOW.
- 4.2.2. REINFORCED BACKFILL
- 4.2.2.1. REINFORCED BACKFILL SHALL CONSIST OF GRANULAR MATERIAL (CA-7), pH 4.5 TO 9.0 PER AASHTO T289.
- 4.2.3. LEVELING PAD
- 4.2.3.1. THE LEVELING PAD SHALL BE SUITABLE, GRANULAR MATERIAL (CA-6).
- 4.3. MODULAR CONCRETE UNITS
- 4.3.1. THE SEGMENTAL RETAINING WALL UNITS ARE ANCHOR DIAMOND PRO UNITS.
- 4.4. GEOGRID REINFORCEMENT
- 4.4.1. GEOGRID REINFORCEMENT SHALL BE STRATAGRID SGU60 OR SG200 AS MANUFACTURED BY STRATA SYSTEMS INC.
- 4.5. FILTER FABRIC
- 4.5.1. FILTER FABRIC SHALL MEET OR EXCEED THE REQUIREMENTS OF AASHTO M288-06 FOR A GEOTEXTILE CLASS 3, WITH 50% OR GREATER ELONGATION ALLOWED. THE APPARENT OPENING SIZE SHALL BE 70 US SIEVE (0.212 MM). THE RETAINED STRENGTH AFTER 500 HRS OF UV EXPOSURE SHALL BE GREATER THAN 50%.
- 4.6. EMBANKMENT PROTECTION FABRIC
- 4.6.1. EMBANKMENT PROTECTION FABRIC SHALL BE A HIGH STRENGTH POLYPROPYLENE MONOFILAMENT MATERIAL DESIGNED TO MEET OR EXCEED NTPEP SPECIFICATIONS; STABILIZED AGAINST ULTRAVIOLET (UV) DEGRADATION AND TYPICALLY MEETS OR EXCEEDS THE VALUES IN THE TABLE BELOW. (EXAMPLE: TENCATE MIRAFI FW 402 OR SIMILAR)

5. CONSTRUCTION
- 5.1. GENERAL
- 5.1.1. THE SHOP / DESIGN DRAWINGS ARE BASED ON FINAL ENGINEERING PLANS FOR HERITAGE CROSSING, WESTERN SPRINGS, ILLINOIS AS PREPARED BY DEI DESIGNTEK ENGINEERING, INC., DATED 11/04/2024.
- 5.1.2. THE SOILS DATA NOTED IN THE TABLE BELOW ARE ASSUMED FOR DESIGN PURPOSES. THE OWNER OR OWNER'S REPRESENTATIVE IS RESPONSIBLE TO CONFIRM THE DATA NOTED ABOVE IS CORRECT PRIOR TO AND DURING CONSTRUCTION. VIRGILIO & ASSOCIATES SHALL BE NOTIFIED IF DIFFERING SOIL CONDITIONS ARE ENCOUNTERED.
- 5.1.3. THE PROJECT GEOTECHNICAL ENGINEER SHALL BE CONSULTED FOR INTERPRETATION OF SUBSURFACE CONDITIONS, SUITABILITY OF DESIGN PARAMETERS OR INTERPRETATION OF SUBSURFACE GROUNDWATER CONDITIONS.
- 5.1.4. THE RETAINING WALL DESIGN ONLY CONSIDERS EXTERNAL STABILITY FOR BASE SLIDING AND OVERTURNING. THE PROJECT GEOTECHNICAL ENGINEER SHALL REVIEW OTHER EXTERNAL STABILITY CONSIDERATIONS, INCLUDING BUT NOT LIMITED TO SETTLEMENT, BEARING CAPACITY AND GLOBAL STABILITY.
- 5.1.5. THE CONTRACTOR SHALL VERIFY ALL WALL ELEVATIONS, WALL STEPS, DIMENSIONS AND REQUIRED CLEARANCES ARE ACCURATE AND OBTAINABLE PRIOR TO COMMENCEMENT OF THE WORK. THE CONTRACTOR SHALL COORDINATE EXISTING CONSTRUCTION AND/OR ADJACENT CONSTRUCTION WITH OTHER TRADE CONTRACTORS AND WITH DESIGN DRAWINGS PREPARED BY OTHERS.
- 5.1.6. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING THE EXCAVATION.
- 5.1.7. VIRGILIO AND ASSOCIATES, LTD WILL NOT SUPERVISE, DIRECT, CONTROL OR HAVE AUTHORITY OVER OR BE RESPONSIBLE FOR CONTRACTOR'S MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION, OR THE SAFETY PRECAUTIONS AND PROGRAMS INCIDENT THERETO, OR FOR ANY FAILURE OF CONTRACTOR TO COMPLY WITH THE LAWS AND REGULATIONS APPLICABLE TO THE FURNISHING OR PERFORMANCE OF WORK.
- 5.1.8. ALL LOCAL, STATE, OSHA AND FEDERAL REGULATIONS AND PROCEDURES REGARDING SAFETY ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- 5.2. SOILS
- 5.2.1. FILL MATERIALS SHALL BE FREE FROM ORGANIC OR DELETERIOUS MATERIALS.
- 5.2.2. MATERIAL PASSING THE NO. 200 SIEVE SHALL NOT HAVE A LIQUID LIMIT GREATER THAN 30 NOR A PLASTICITY INDEX GREATER THAN 20 UNLESS APPROVED IN WRITING BY THE ENGINEER.
- 5.2.3. SOILS SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY IN A MAXIMUM OF 8" LIFTS.
- 5.2.4. OPEN GRADED FILL MATERIAL SHALL BE COMPACTED IN 8" LIFTS WITH A MINIMUM OF THREE (3) PASSES OF A VIBRATORY PLATE COMPACTOR AND TO A DENSITY THAT MEETS THE CRITERIA LISTED IN THE TABLE BELOW AND IS ACCEPTABLE TO THE SOILS TESTING TECHNICIAN.
- 5.2.5. BACKFILL USED FOR PIPE TRENCHES, BELOW A WALL, SHALL BE COMPACTED TO 98% STANDARD PROCTOR DENSITY.
- 5.2.6. FOUNDATION SOILS SHALL HAVE A MINIMUM ALLOWABLE BEARING CAPACITY OF 2,000 PSF.
- 5.3. MODULAR CONCRETE UNITS
- 5.3.1. SUBSTITUTION OF THE SEGMENTAL RETAINING WALL UNITS IS PROHIBITED. WALL INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- 5.4. GEOGRID REINFORCEMENT
- 5.4.1. SUBSTITUTION OF THE GEOGRID REINFORCEMENT IS PROHIBITED. GEOGRID SHALL BE INSTALLED WITH THE STRONG DIRECTION OF THE GRID PERPENDICULAR TO THE WALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

| SOIL PARAMETERS     |                      |                |          |             |
|---------------------|----------------------|----------------|----------|-------------|
|                     | SOIL TYPE            | FRICTION ANGLE | COHESION | UNIT WEIGHT |
| REINFORCED BACKFILL | GRANULAR (CA7)       | 34°            | 0 PSF    | 120 PCF     |
| RETAINED SOILS      | SITE SOILS (ASSUMED) | 28°            | 0 PSF    | 130 PCF     |
| FOUNDATION SOIL     | SITE SOILS (ASSUMED) | 28°            | 0 PSF    | 120 PCF     |

| UNIT FILL / DRAINAGE AGGREGATE |                 |
|--------------------------------|-----------------|
| U.S. SIEVE NUMBER              | PERCENT PASSING |
| 1 INCH                         | 100             |
| ¾ INCH                         | 75-100          |
| NO. 4                          | 0-60            |
| NO. 40                         | 0-50            |
| NO. 200                        | 0-5             |

| EMBANKMENT PROTECTION FABRIC SPECIFICATIONS  |                      |
|----------------------------------------------|----------------------|
| MECHANICAL PROPERTY                          | DETERMINATION METHOD |
| TENSILE STRENGTH = 200 LBS/INCH              | ASTM D-4595          |
| PUNCTURE STRENGTH = 675 LBS                  | ASTM D-6241          |
| APPARENT OPENING SIZE (AOS) = U.S. SIEVE #40 | ASTM D-4751          |
| TRAPEZOIDAL TEAR = 100 LBS                   | ASTM D-4533          |
| PERCENT OPEN AREA = 10%                      | COE-02215            |
| PERMITTIVITY = 2.1 cm/sec <sup>-1</sup>      | ASTM D-4491          |
| FLOW RATE = 145 gal/min/ft <sup>2</sup>      | ASTM D-4491          |

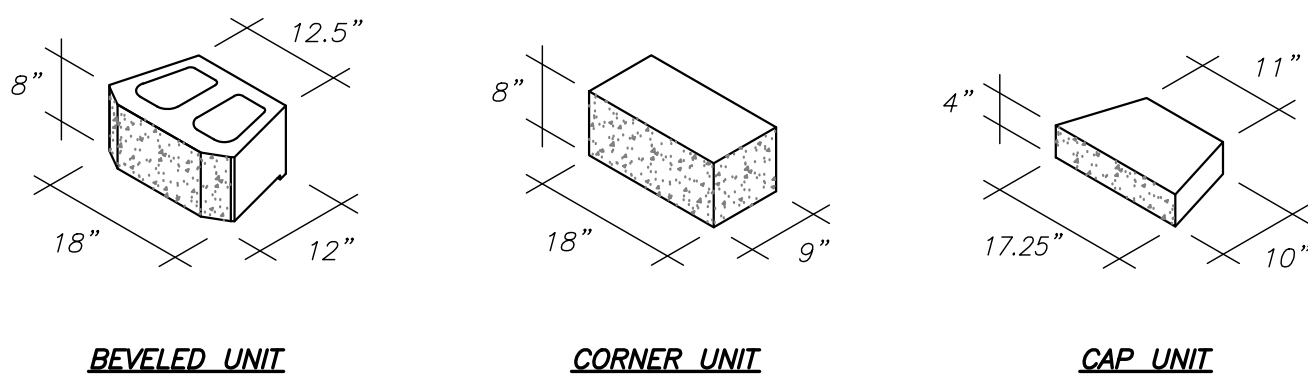
SEE SHEET SRW1.3 FOR  
TYPICAL REINFORCED  
RETAINING WALL SECTIONS

TYPICAL REINFORCED RETAINING WALL SECTION

SCALE: 1/2" = 1'-0"

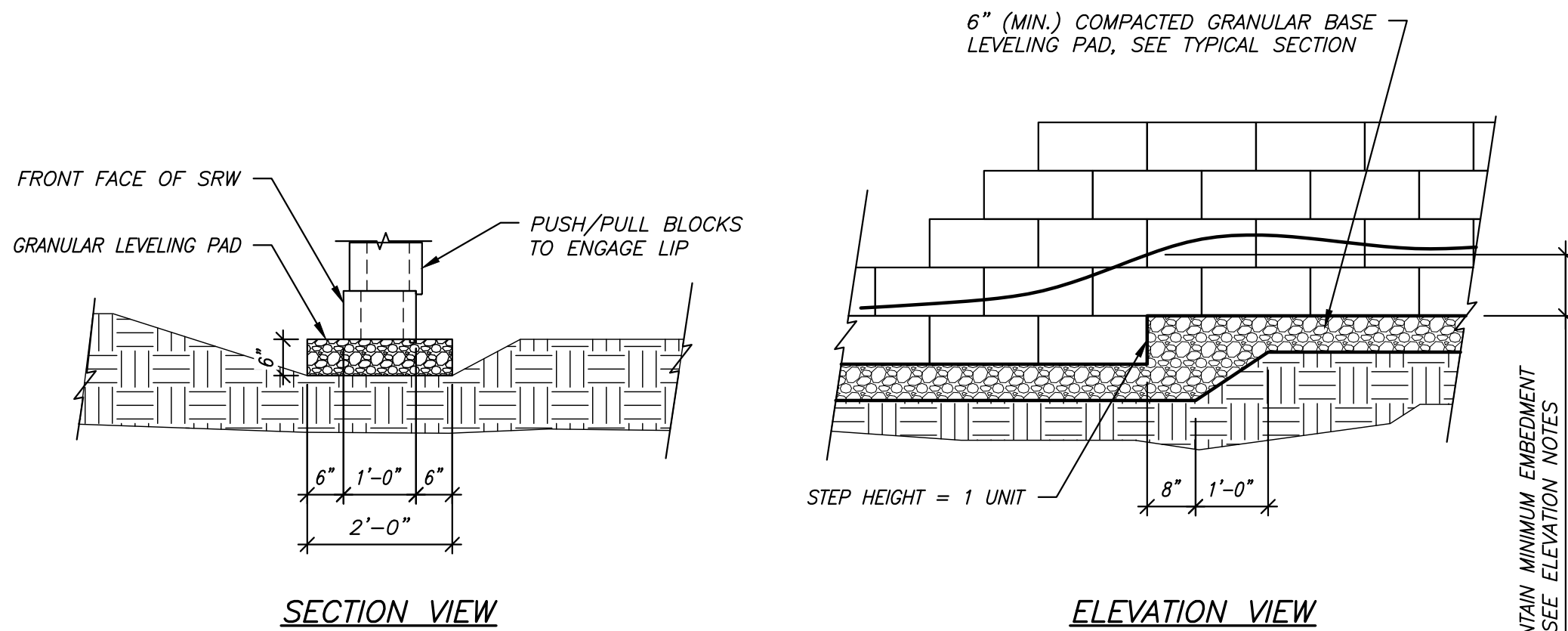
UNIT: ANCHOR DIAMOND PRO UNITS  
WALL BATTER: 7.130°

NOTE:  
VIRGILIO & ASSOCIATES, LTD. IS NOT RESPONSIBLE FOR CODE APPLICABILITY OF FENCE OR GUARDRAIL. DETERMINATION OF FENCE AND/OR GUARDRAIL REQUIREMENTS BY OTHERS.



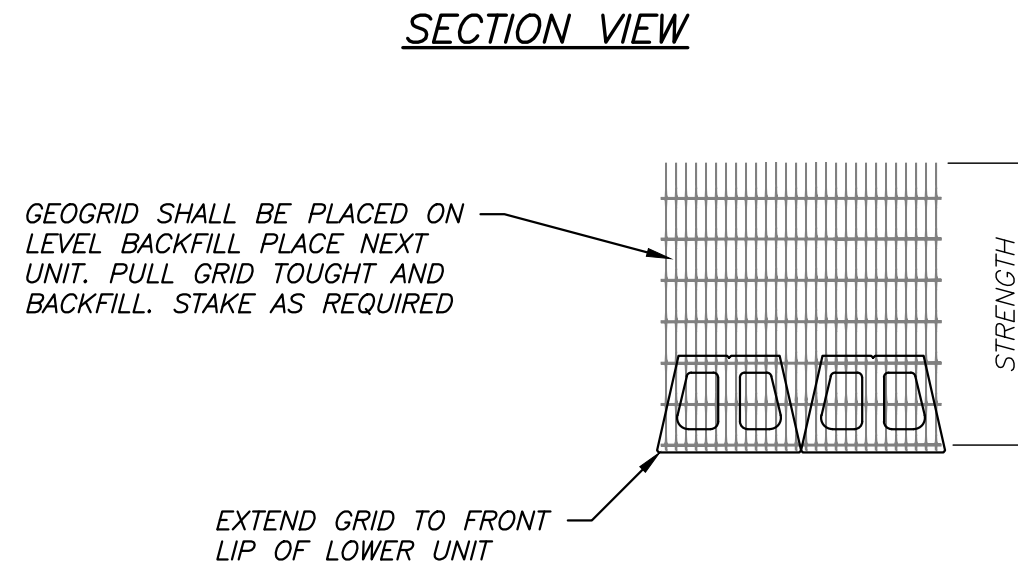
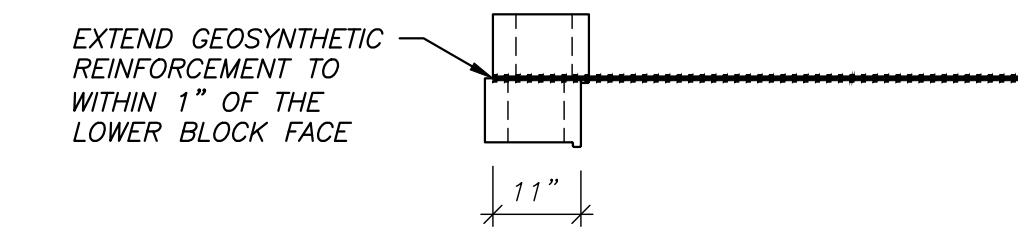
ANCHOR DIAMOND PRO  
ISOMETRIC BLOCK DETAILS

SCALE: 1/2" = 1'-0"



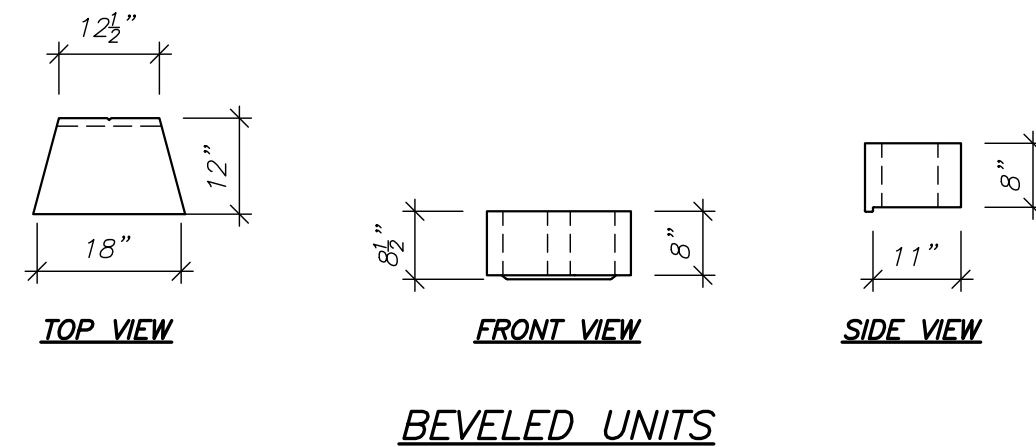
LEVELING PAD DETAIL

SCALE: 1/2" = 1'-0"



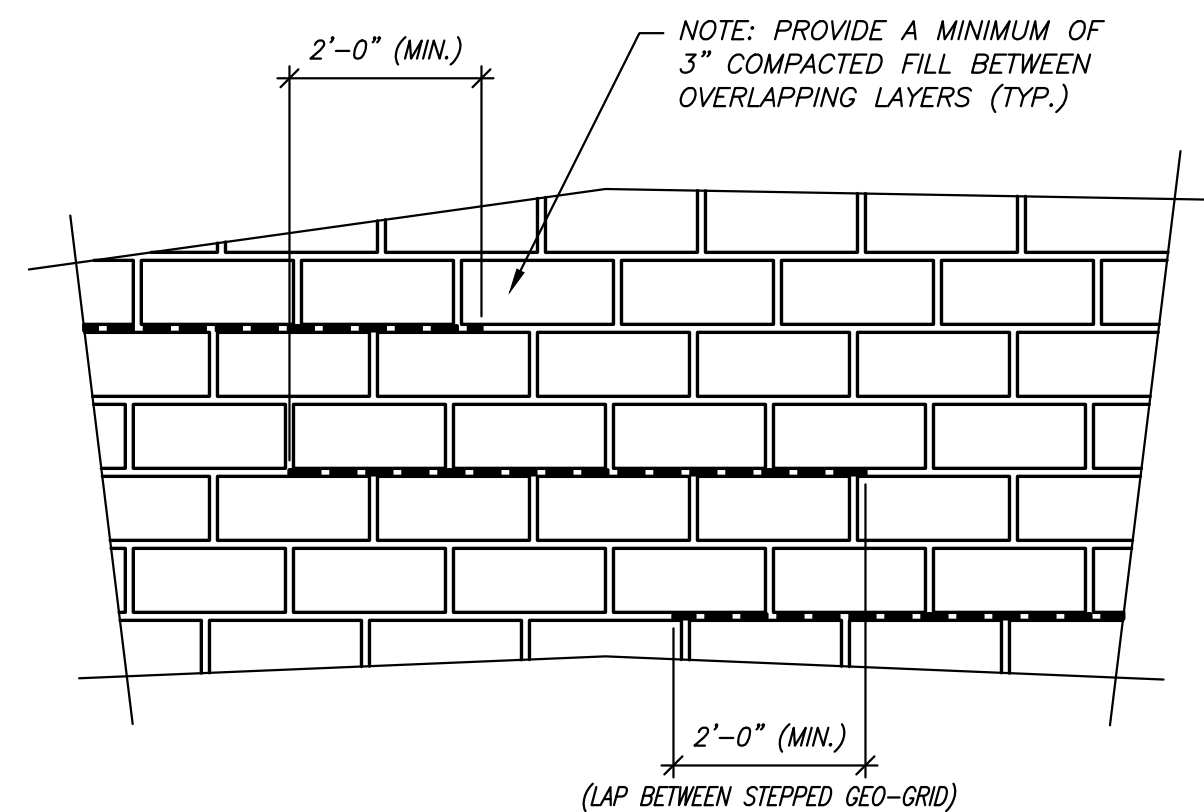
GRID CONNECTION DETAIL

SCALE: 1/2" = 1'-0"



ANCHOR DIAMOND PRO  
INDIVIDUAL BLOCK VIEWS

SCALE: 1/2" = 1'-0"



GEOGRID OVERLAP DETAIL

SCALE: 1/2" = 1'-0"

| REVISIONS |      |
|-----------|------|
| Mark      | Date |
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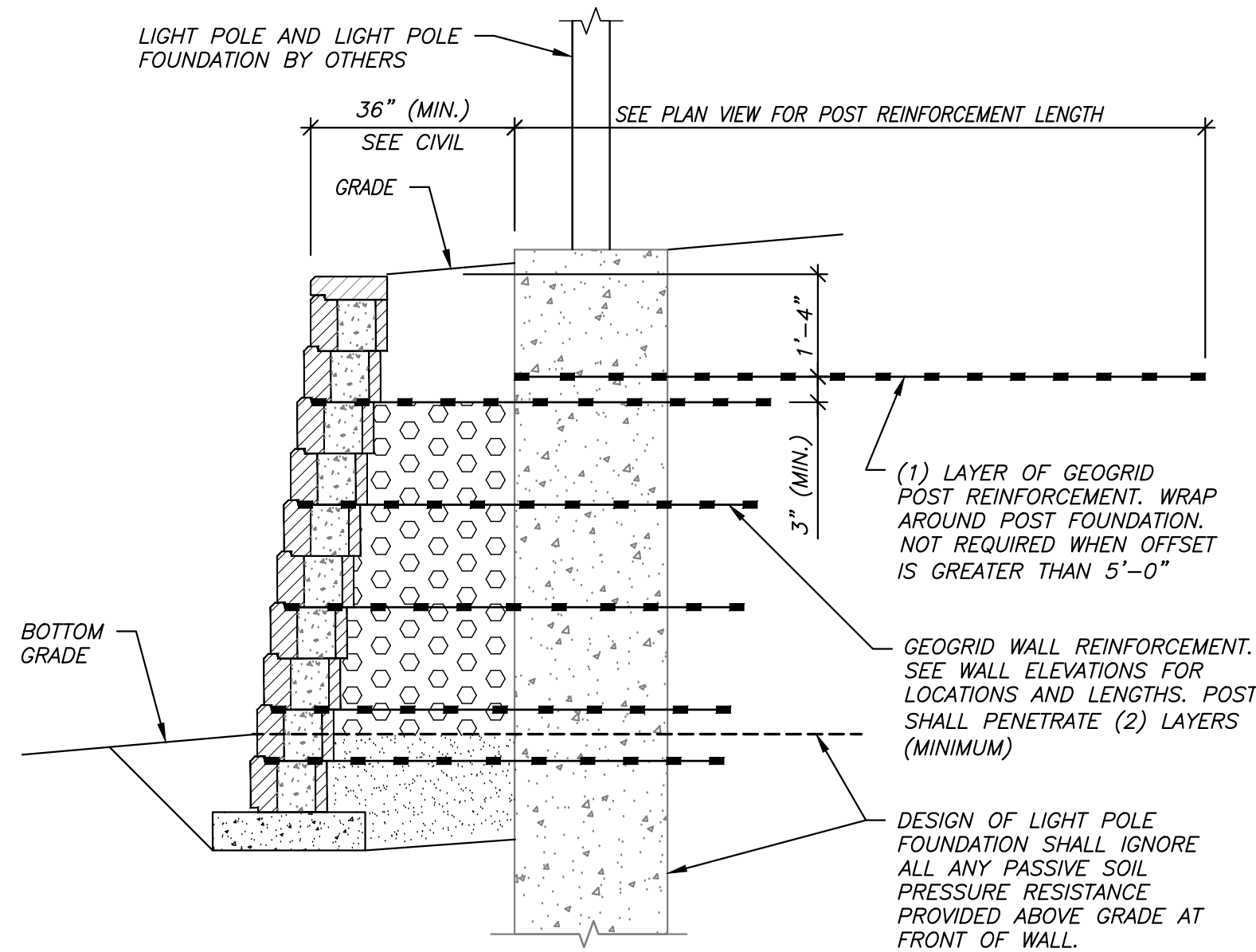
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(630) 984-8804 FAX: (613) 874-2520

HERITAGE CROSSING  
SEGMENTAL RETAINING WALL(S)  
5600 S. WOLF RD.  
WESTERN SPRINGS, ILLINOIS 60558

**VIRGILIO & ASSOCIATES, LTD.**  
STRUCTURAL ENGINEERS  
24069 North Echo Lake Road  
Lake Zurich, IL 60047  
847.550.8411 Telephone  
847.507.6324 Facsimile

Drawn: \_\_\_\_\_  
Checked: RSF  
Approved: PGV  
Scale: AS INDICATED  
Sheet: \_\_\_\_\_  
SRW1.1  
Date: 12/16/2024  
Project Number: 2024.139

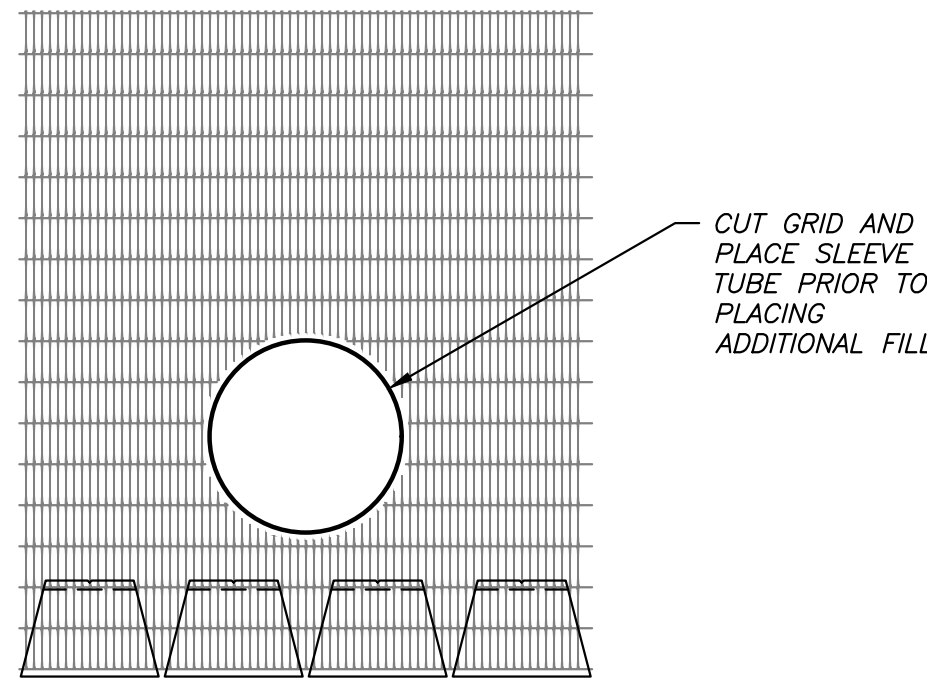




LIGHT POLE SECTION – GRID REINFORCEMENT  
SCALE: 1/2" = 1'-0"

CONTRACTOR/APPROVER NOTE:  
WALL DESIGN IS BASED ON THE FOLLOWING POST FOUNDATION SIZE:

- 24" DIAMETER (MINIMUM)
- EMBEDMENT BY OTHERS

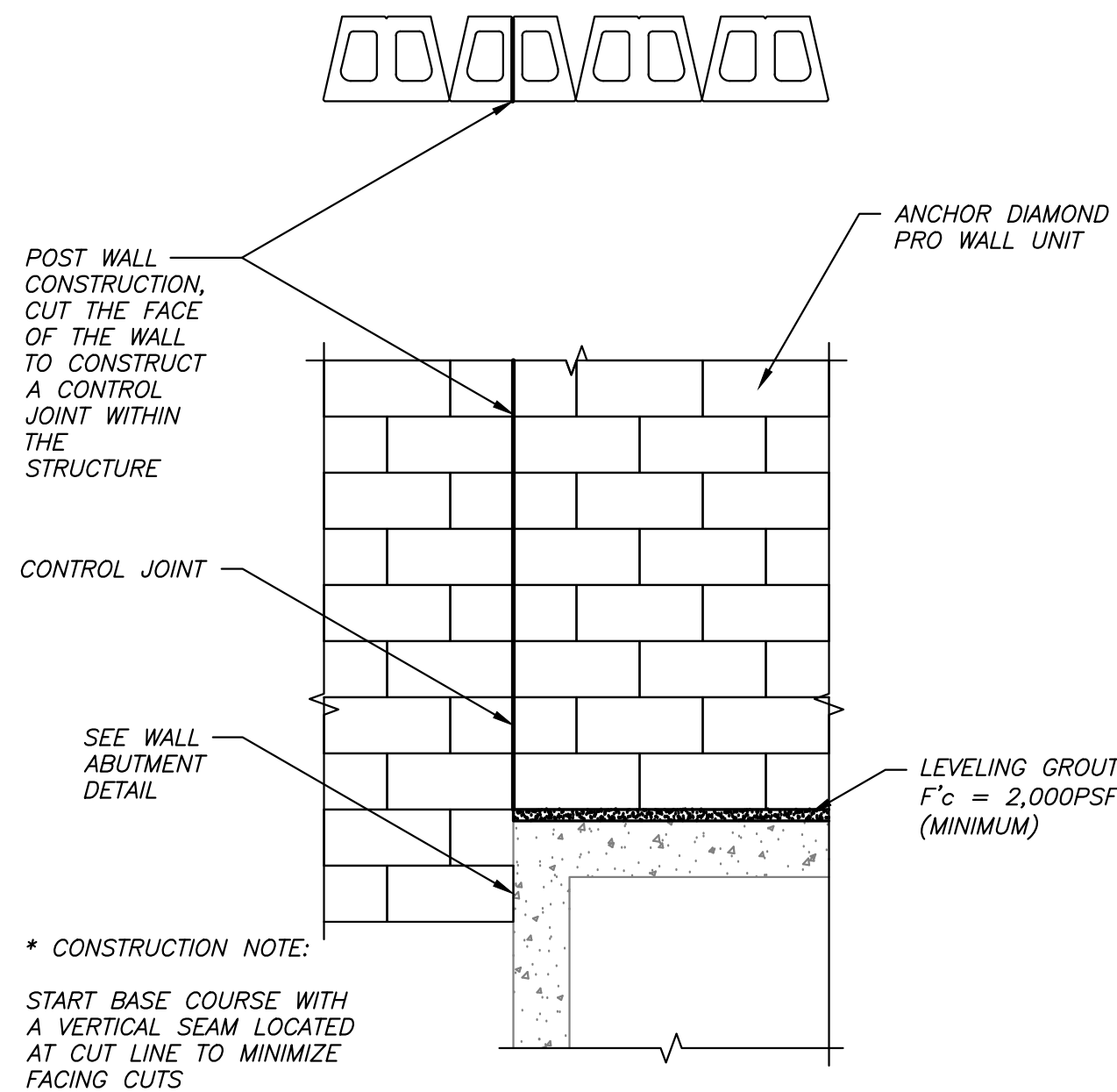


PLAN VIEW – WALL REINFORCEMENT

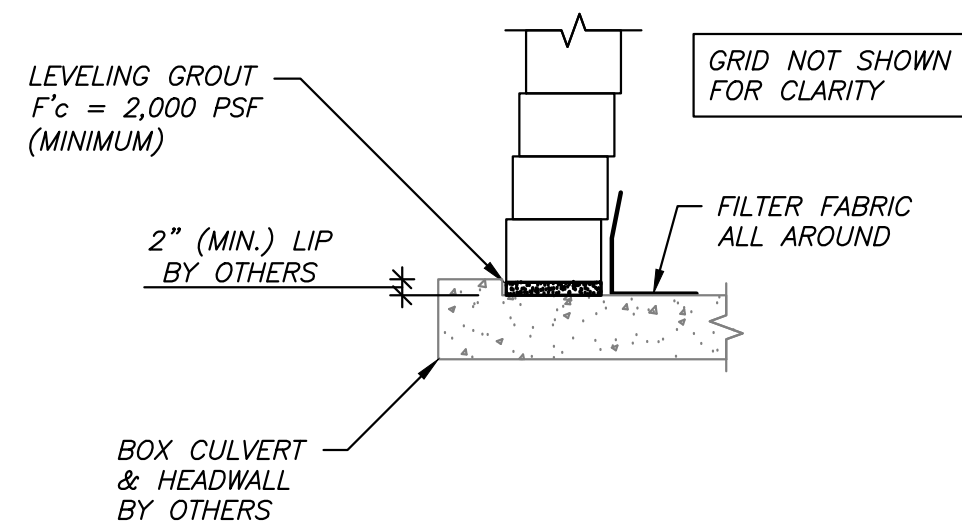
NOTE:  
CUT SUCCESSIVE LAYERS OF GEOGRID AROUND PROPOSED POST INSTALLATION POINTS. BACKFILL AND COMPACT AROUND FORM TUBE.

LIGHT POLE POST FOUNDATION DETAIL  
SCALE: 1/2" = 1'-0"

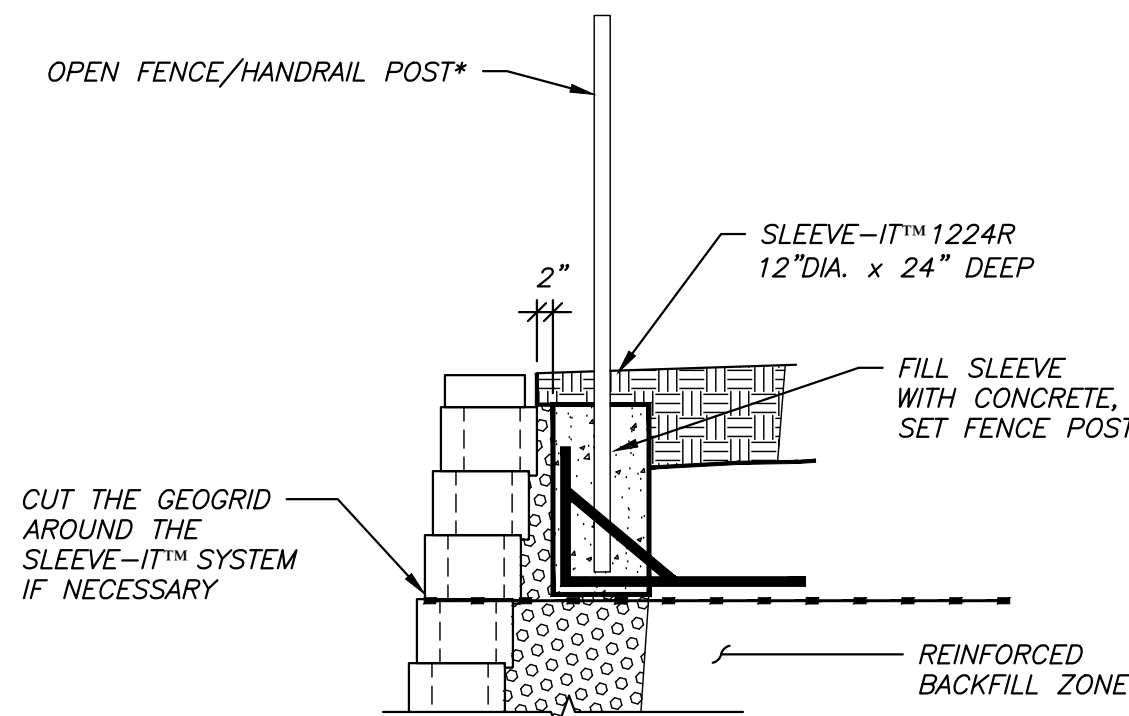
0 1' 2' 4'  
SCALE: 1/2" = 1'-0"



CONTROL JOINT DETAIL  
SCALE: 1/2" = 1'-0" (IF REQUIRED)

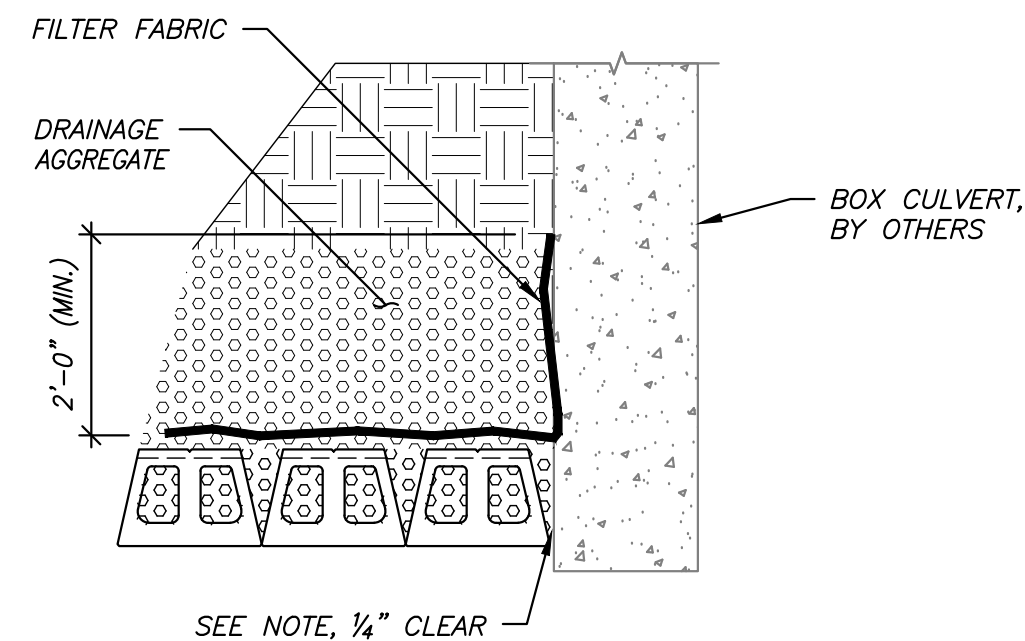


PRECAST BOX STRUCTURE – SECTION  
SCALE: 1/2" = 1'-0" (IF REQUIRED)



\*FENCING SYSTEMS APPROVED FOR USE WITH SLEEVE-IT™ 1224R ARE LIMITED TO THE FOLLOWING HEIGHTS: CHAIN LINK – UP TO 8FT, PRIVACY: UP TO 6FT (WOODEN, PVC, METAL). POST SIZE 4"x4" MAX.

SLEEVE-IT™  
OPEN FENCE / PEDESTRIAN GUARD SECTION  
SLEEVE-IT



NOTE:  
1. AT ABUTMENT, ALTERNATE FULL UNIT WITH HALF UNIT EVERY OTHER COURSE  
2. START AT FIXED POINTS AND WORK INTO MIDDLE PART OF WALL  
3. DO NOT ATTACH MODULAR UNITS TO OTHER STRUCTURES

WALL ABUTMENT DETAIL  
SCALE: 1/2" = 1'-0"

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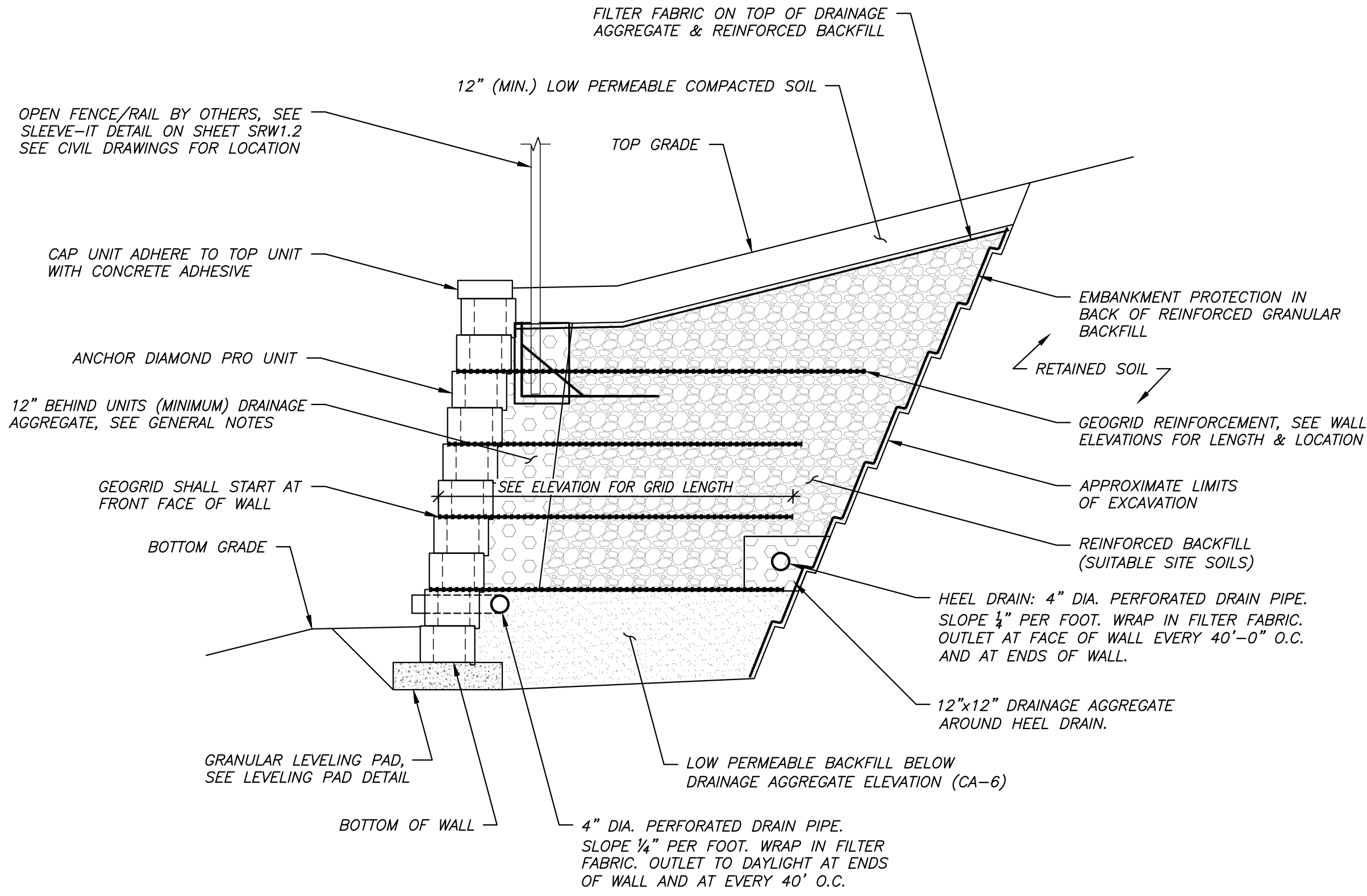
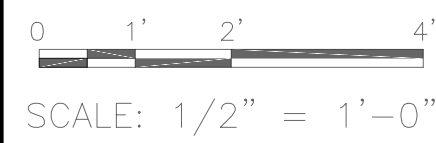
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| Date           | 12/16/2024   |
| Project Number | 2024.139     |





TYPICAL REINFORCED RETAINING WALL SECTION - 1

SCALE: 1/2" = 1'-0"

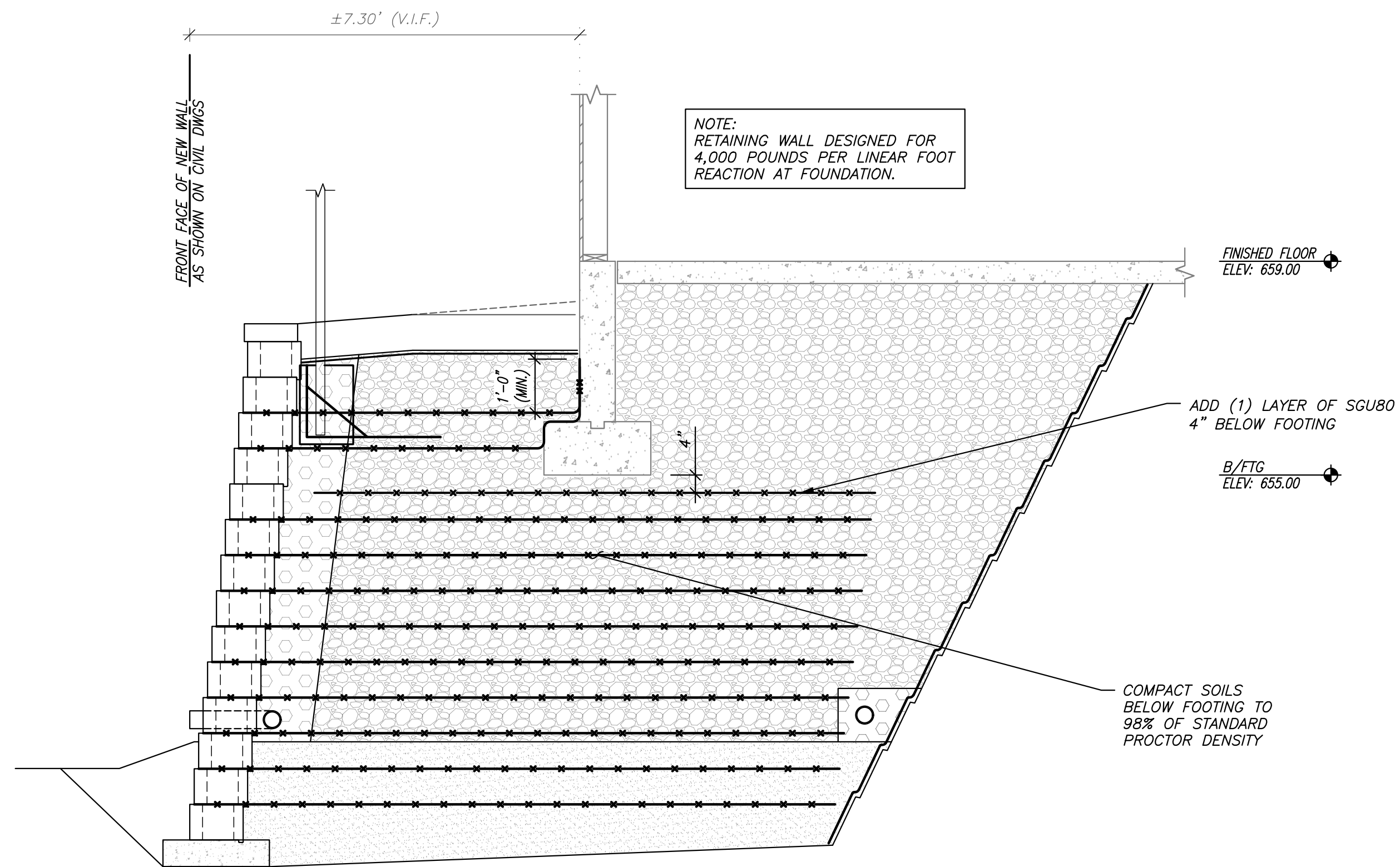
UNIT:

UNIT:  
WALL BATTER:

### ANCHOR DIAMOND PRO UNITS

7.13

**NOTE:**  
VIRGILIO & ASSOCIATES, LTD. IS NOT RESPONSIBLE FOR CODE APPLICABILITY OF FENCE OR GUARDRAIL. DETERMINATION OF FENCE AND/OR RAIL REQUIREMENTS BY OTHERS.



TYPICAL REINFORCED RETAINING WALL SECTION - 3

SCALE:  $1/2" = 1'-0"$

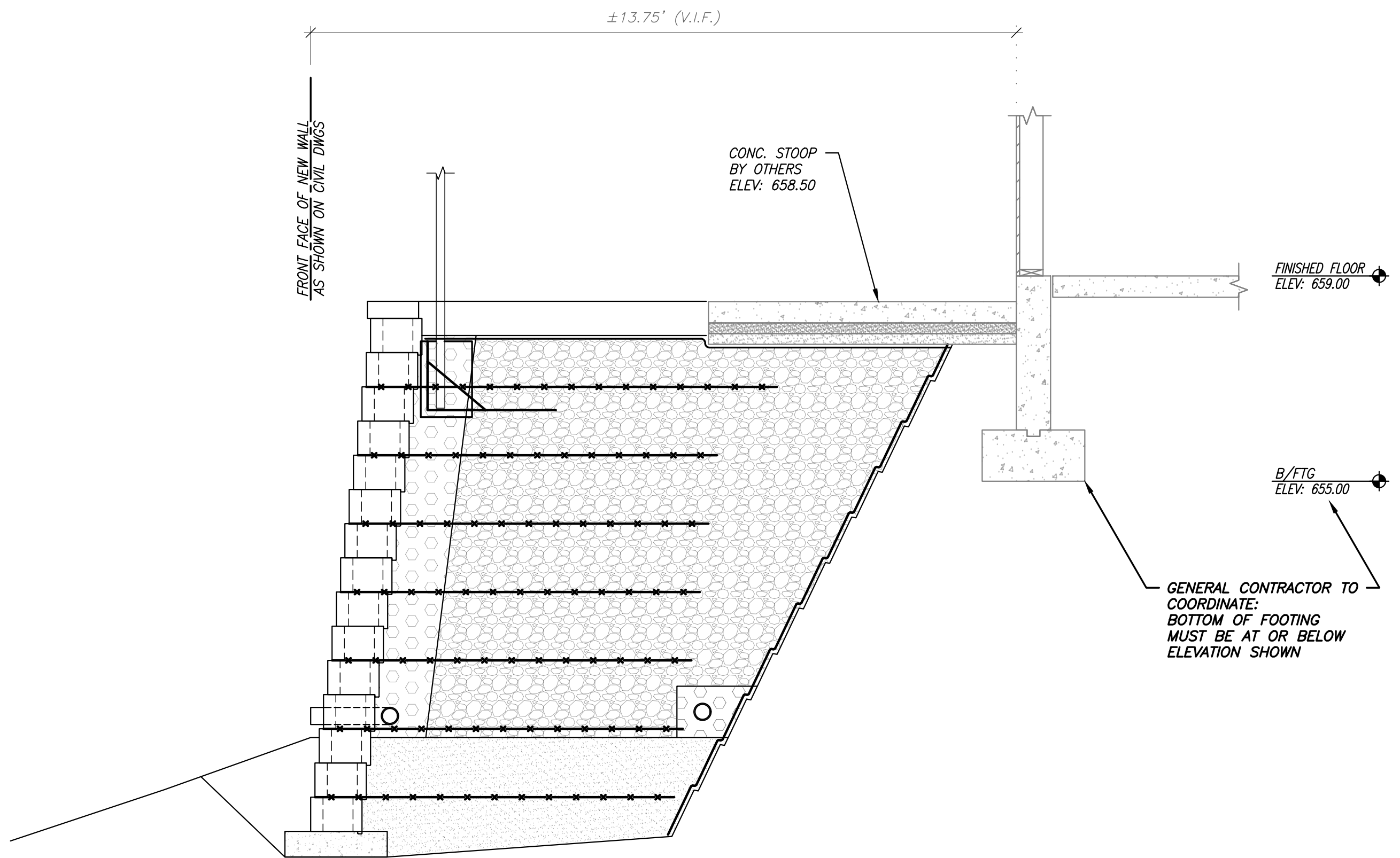
UNIT:

UNIT:  
WALL BATTER:

ANCHOR DIAMOND PRO UNITS

7.13°

NOTES:  
1. VIRGILIO & ASSOCIATES, LTD. IS NOT RESPONSIBLE FOR CODE APPLICABILITY OF FENCE OR GUARDRAIL. DETERMINATION OF FENCE AND/OR RAIL REQUIREMENTS BY OTHERS.  
2. REFER TO SECTION - 1 FOR ALL ADDITIONAL TYPICAL NOTES & DETAILS.



TYPICAL REINFORCED RETAINING WALL SECTION - 2

SCALE: 1/2" = 1'-0"

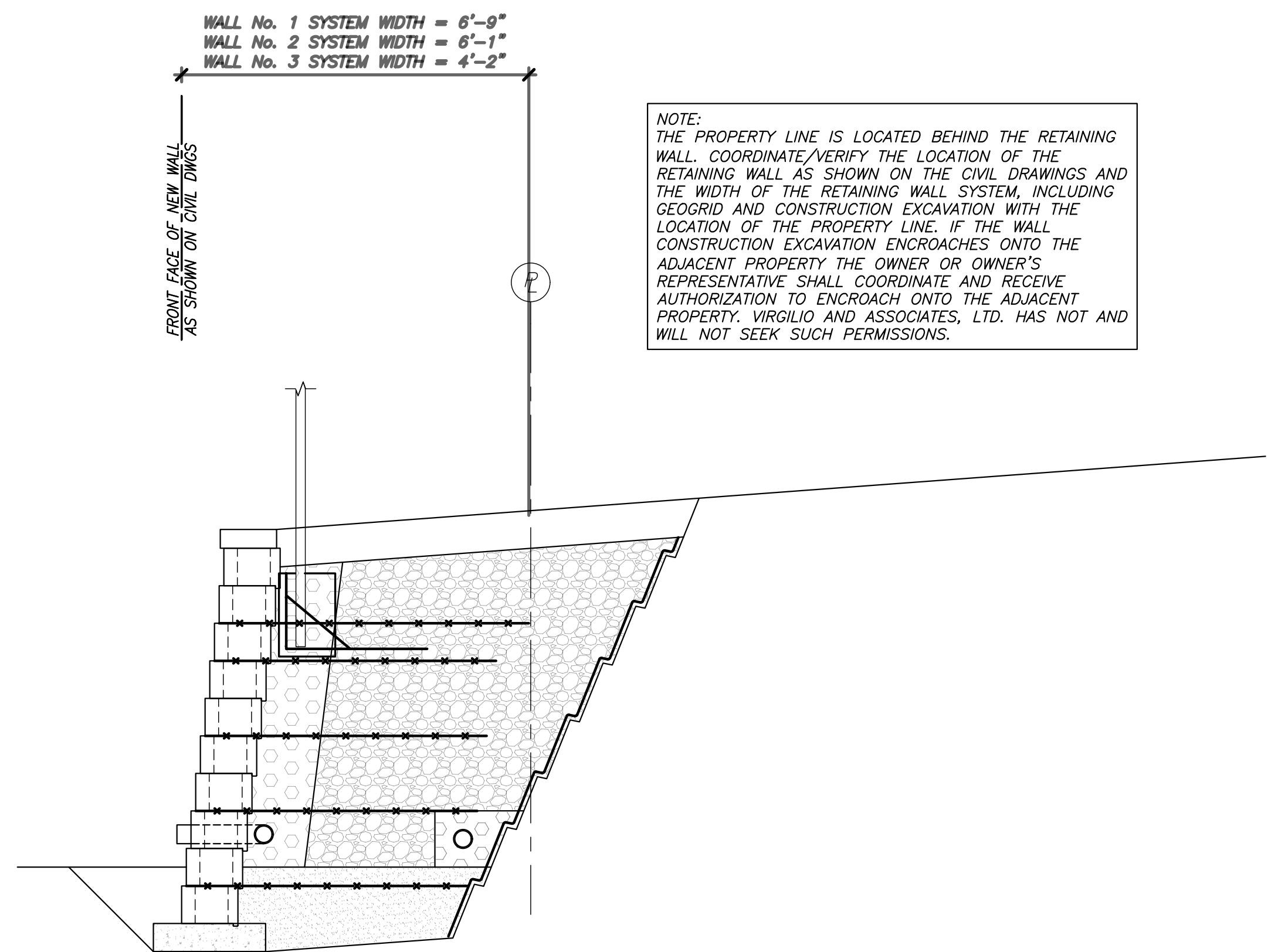
UNIT:

UNIT:  
WALL BATTER:

### ANCHOR DIAMOND PRO UNITS

7.13\*

**NOTES:**  
1. VIRGILIO & ASSOCIATES, LTD. IS NOT RESPONSIBLE FOR CODE APPLICABILITY OF FENCE OR GUARDRAIL. DETERMINATION OF FENCE AND/OR RAIL REQUIREMENTS BY OTHERS.  
2. REFER TO SECTION - 1 FOR ALL ADDITIONAL TYPICAL NOTES & DETAILS.



TYPICAL REINFORCED RETAINING WALL SECTION - 4

SCALE:  $1/2" = 1'-0"$

UNIT:

UNIT:  
WALL BATTER:

ANCHOR DIAMOND PRO UNITS

7.13\*

**NOTES:**  
1. VIRGILIO & ASSOCIATES, LTD. IS NOT RESPONSIBLE FOR CODE APPLICABILITY OF FENCE OR GUARDRAIL. DETERMINATION OF FENCE AND/OR RAIL REQUIREMENTS BY OTHERS.  
2. REFER TO SECTION - 1 FOR ALL ADDITIONAL TYPICAL NOTES & DETAILS.

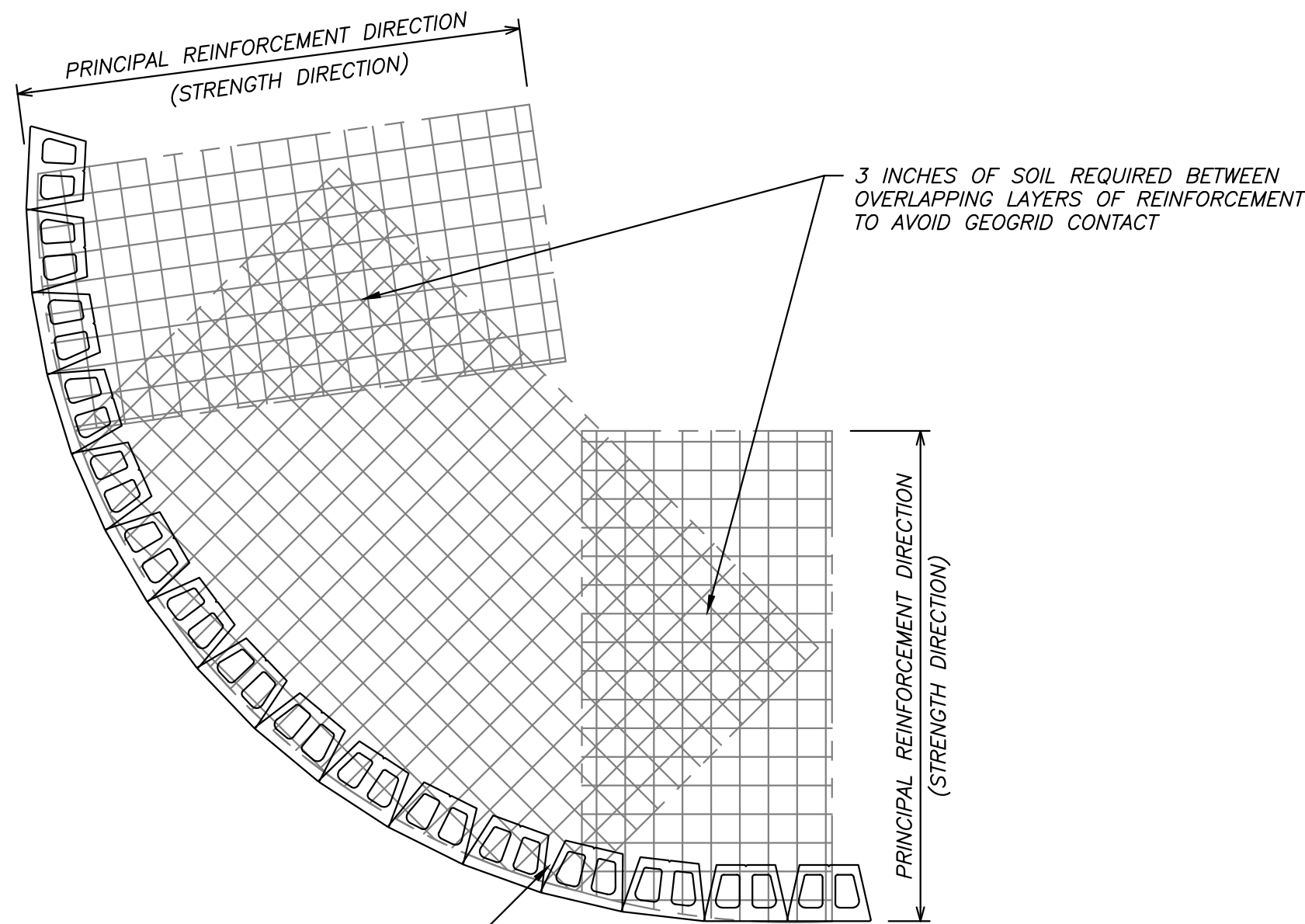
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| Project Number | 2024.139     |





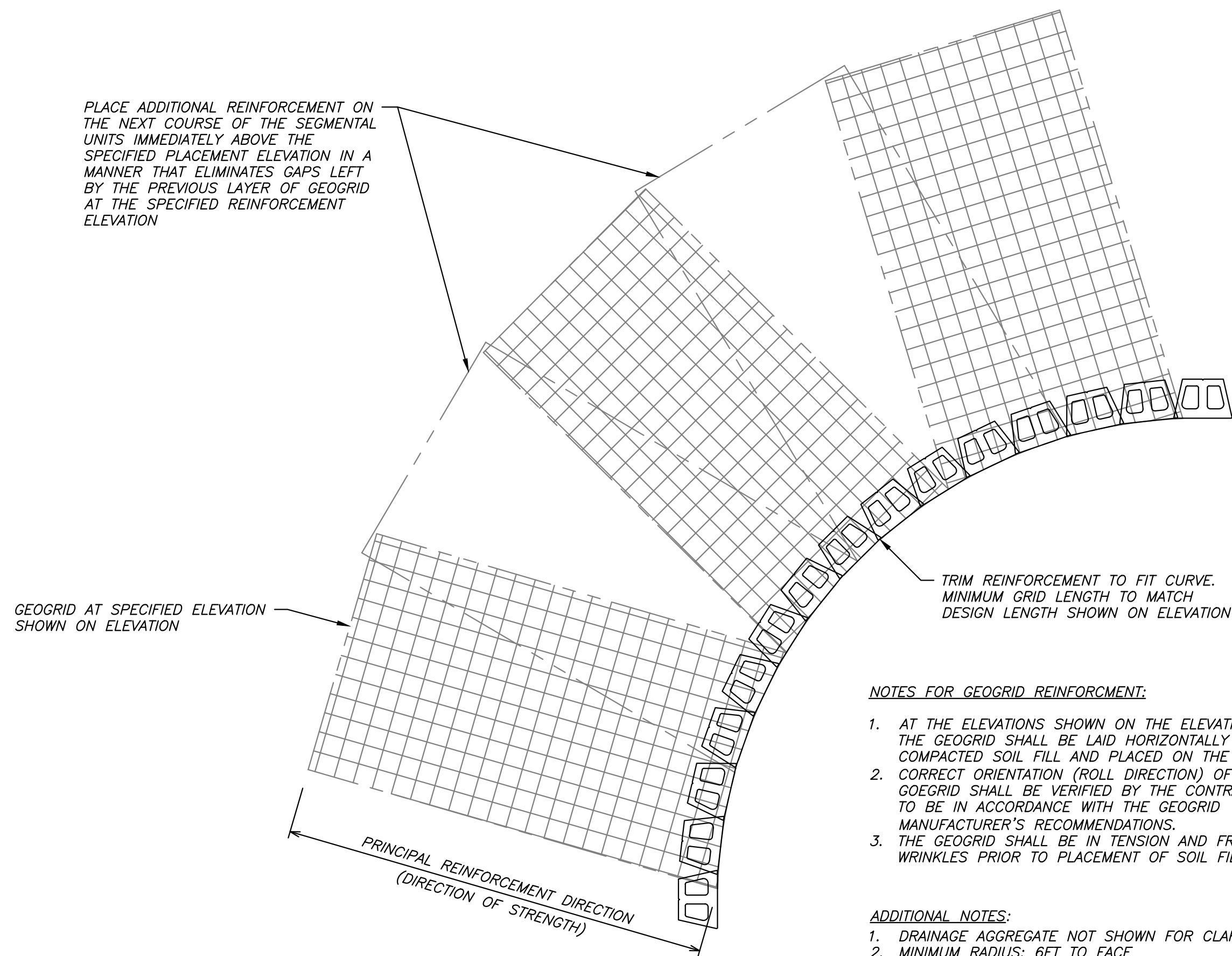
TRIM REINFORCEMENT TO FIT CURVE. MINIMUM GRID LENGTH TO MATCH DESIGN LENGTH SHOWN ON ELEVATION

### GEOGRID PLACEMENT – OUTSIDE CURVE

SCALE: 3/8" = 1'-0"

#### NOTES FOR GEOGRID REINFORCEMENT:

1. AT THE ELEVATIONS SHOWN ON THE ELEVATION, THE GEOGRID SHALL BE LAID HORIZONTALLY ON COMPACTED SOIL FILL AND PLACED ON THE UNITS.
2. CORRECT ORIENTATION (ROLL DIRECTION) OF THE GEOGRID SHALL BE VERIFIED BY THE CONTRACTOR TO BE IN ACCORDANCE WITH THE GEOGRID MANUFACTURER'S RECOMMENDATIONS.
3. THE GEOGRID SHALL BE IN TENSION AND FREE OF WRINKLES PRIOR TO PLACEMENT OF SOIL FILL.



#### NOTES FOR GEOGRID REINFORCEMENT:

1. AT THE ELEVATIONS SHOWN ON THE ELEVATION, THE GEOGRID SHALL BE LAID HORIZONTALLY ON COMPACTED SOIL FILL AND PLACED ON THE UNITS.
2. CORRECT ORIENTATION (ROLL DIRECTION) OF THE GEOGRID SHALL BE VERIFIED BY THE CONTRACTOR TO BE IN ACCORDANCE WITH THE GEOGRID MANUFACTURER'S RECOMMENDATIONS.
3. THE GEOGRID SHALL BE IN TENSION AND FREE OF WRINKLES PRIOR TO PLACEMENT OF SOIL FILL.

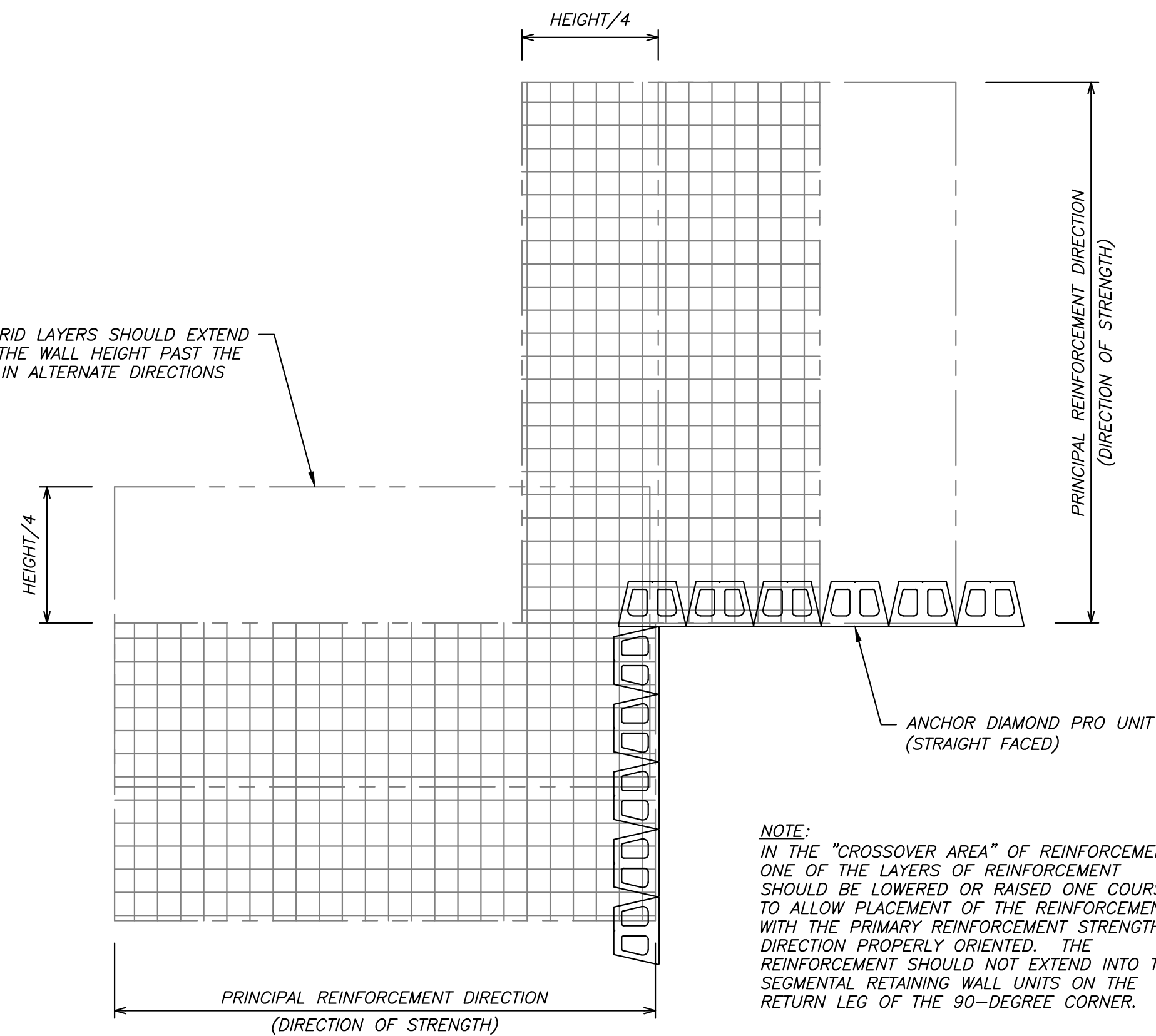
#### ADDITIONAL NOTES:

1. DRAINAGE AGGREGATE NOT SHOWN FOR CLARITY
2. MINIMUM RADIUS: 6FT TO FACE

### GEOGRID PLACEMENT – INSIDE CURVE

SCALE: 3/8" = 1'-0"

SUBSEQUENT GEOGRID LAYERS SHOULD EXTEND ONE QUARTER OF THE WALL HEIGHT PAST THE CORNER LOCATION IN ALTERNATE DIRECTIONS



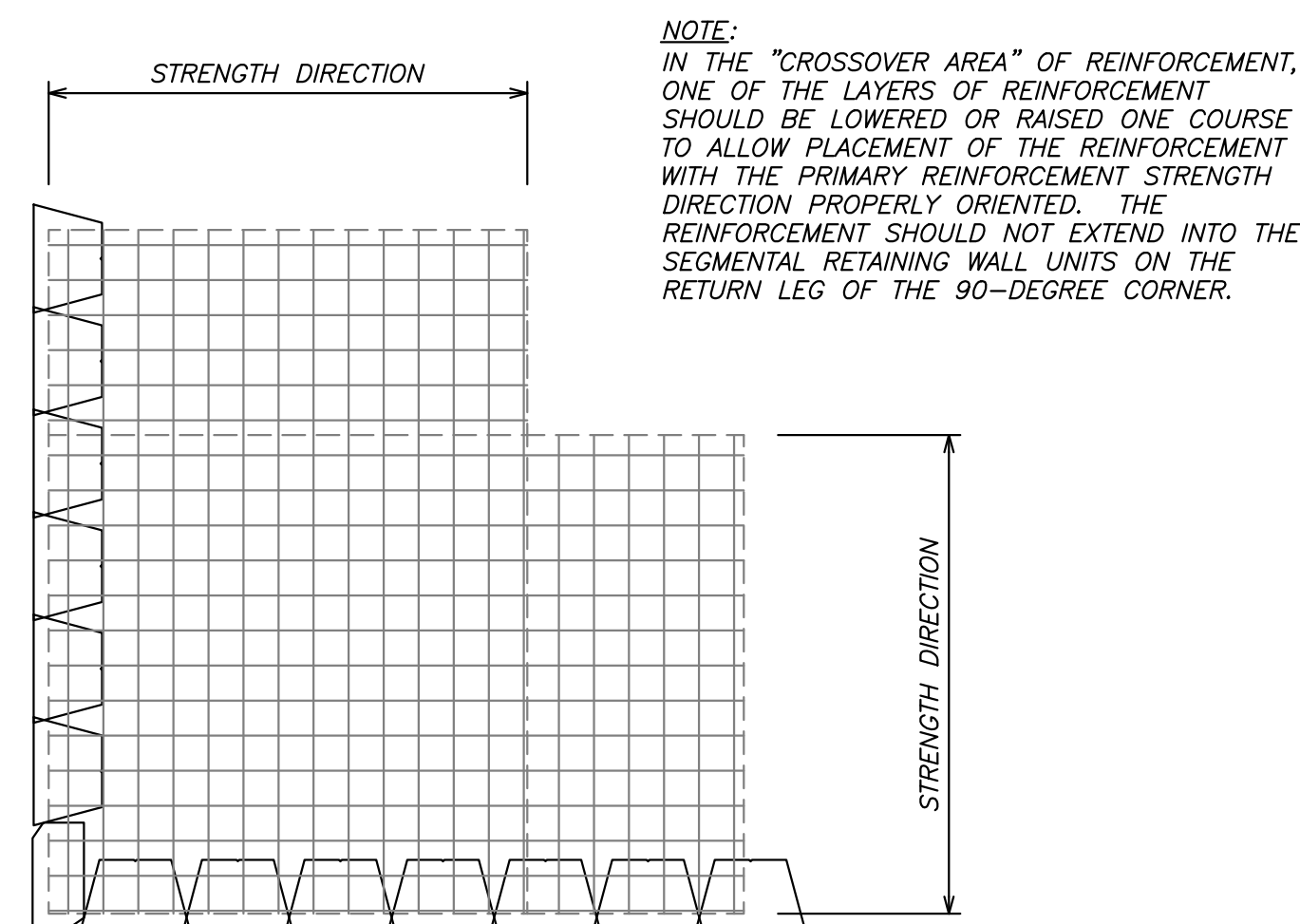
NOTE:  
IN THE "CROSSOVER AREA" OF REINFORCEMENT, ONE OF THE LAYERS OF REINFORCEMENT SHOULD BE LOWERED OR RAISED ONE COURSE TO ALLOW PLACEMENT OF THE REINFORCEMENT WITH THE PRIMARY REINFORCEMENT STRENGTH DIRECTION PROPERLY ORIENTED. THE REINFORCEMENT SHOULD NOT EXTEND INTO THE SEGMENTAL RETAINING WALL UNITS ON THE RETURN LEG OF THE 90-DEGREE CORNER.

### GEOGRID PLACEMENT – INSIDE CORNER

SCALE: 3/8" = 1'-0"

#### NOTES FOR GEOGRID REINFORCEMENT:

1. AT THE ELEVATIONS SHOWN ON THE ELEVATION, THE GEOGRID SHALL BE LAID HORIZONTALLY ON COMPACTED SOIL FILL AND PLACED ON THE UNITS.
2. CORRECT ORIENTATION (ROLL DIRECTION) OF THE GEOGRID SHALL BE VERIFIED BY THE CONTRACTOR TO BE IN ACCORDANCE WITH THE GEOGRID MANUFACTURER'S RECOMMENDATIONS.
3. THE GEOGRID SHALL BE IN TENSION AND FREE OF WRINKLES PRIOR TO PLACEMENT OF SOIL FILL.



### GEOGRID PLACEMENT – OUTSIDE CORNER

SCALE: 3/8" = 1'-0"

#### NOTES FOR GEOGRID REINFORCEMENT:

1. AT THE ELEVATIONS SHOWN ON THE ELEVATION, THE GEOGRID SHALL BE LAID HORIZONTALLY ON COMPACTED SOIL FILL AND PLACED ON THE UNITS.
2. CORRECT ORIENTATION (ROLL DIRECTION) OF THE GEOGRID SHALL BE VERIFIED BY THE CONTRACTOR TO BE IN ACCORDANCE WITH THE GEOGRID MANUFACTURER'S RECOMMENDATIONS.
3. THE GEOGRID SHALL BE IN TENSION AND FREE OF WRINKLES PRIOR TO PLACEMENT OF SOIL FILL.

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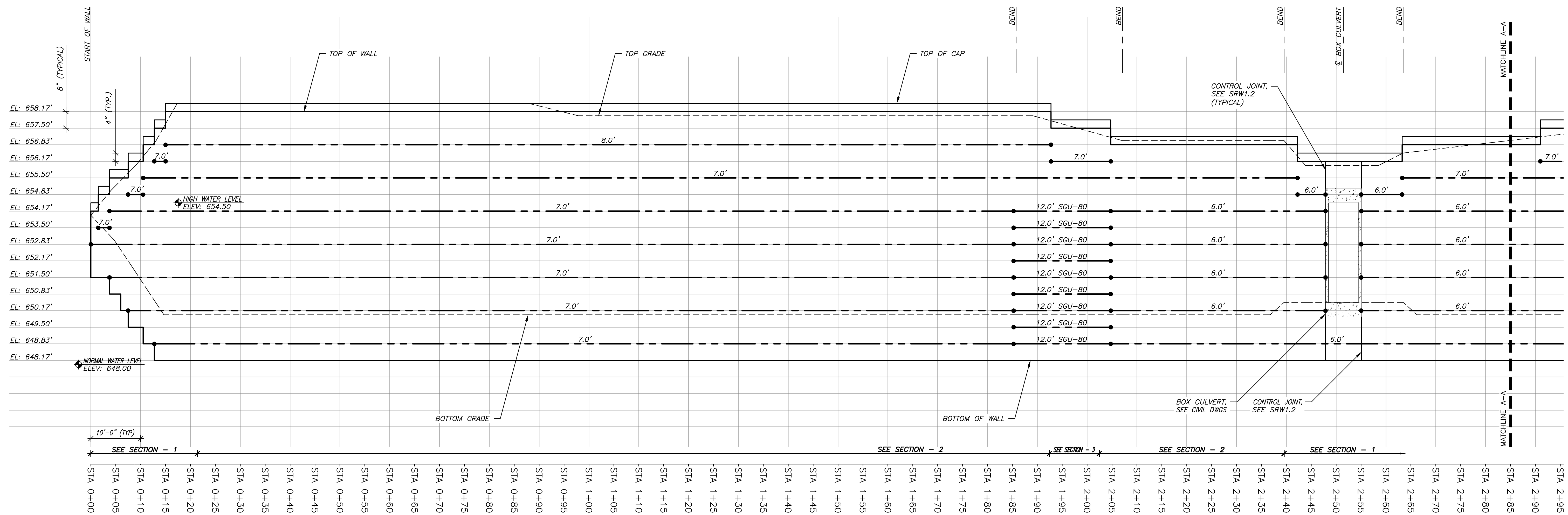
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| Date           | 12/16/2024   |
| Project Number | 2024.139     |





1 WALL No. 1 ELEVATION

SRW2.1A SCALE: VERTICAL: 1" = 2'-0" HORIZONTAL: 1" = 10'-0"

NOTES:

1. SEE ELEVATION FOR TYPICAL REINFORCED RETAINING WALL SECTION, AND SHEET SRW1.3
2. MINIMUM WALL EMBEDMENT = 1'-8" (20")
3. START OF WALL IS THE LEFT HAND SIDE OF WALL WHEN STANDING ON THE LOW SIDE OF THE WALL, FACING THE WALL.
4. SEE SRW1.2 & SRW1.4 FOR WALL DETAILS.

— DENOTES GEOGRID LENGTH

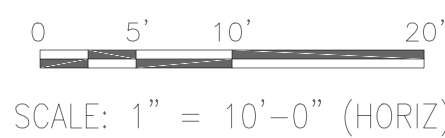
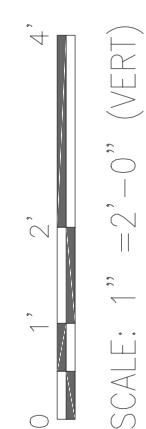
 $\bullet \text{---} \underline{\quad\quad} \text{---} \underline{x.x'} \text{---}$ 

$\angle$  DENOTES LOCATION & EXTENT OF GEOGRID



= INDICATES LOCATION AND HEIGHT OF NO-FINES CONCRETE

$t = x' - x''$  = INDICATES THICKNESS OF NO-FINES CONCRETE MASS + BLOCK DEPTH

[illegible]

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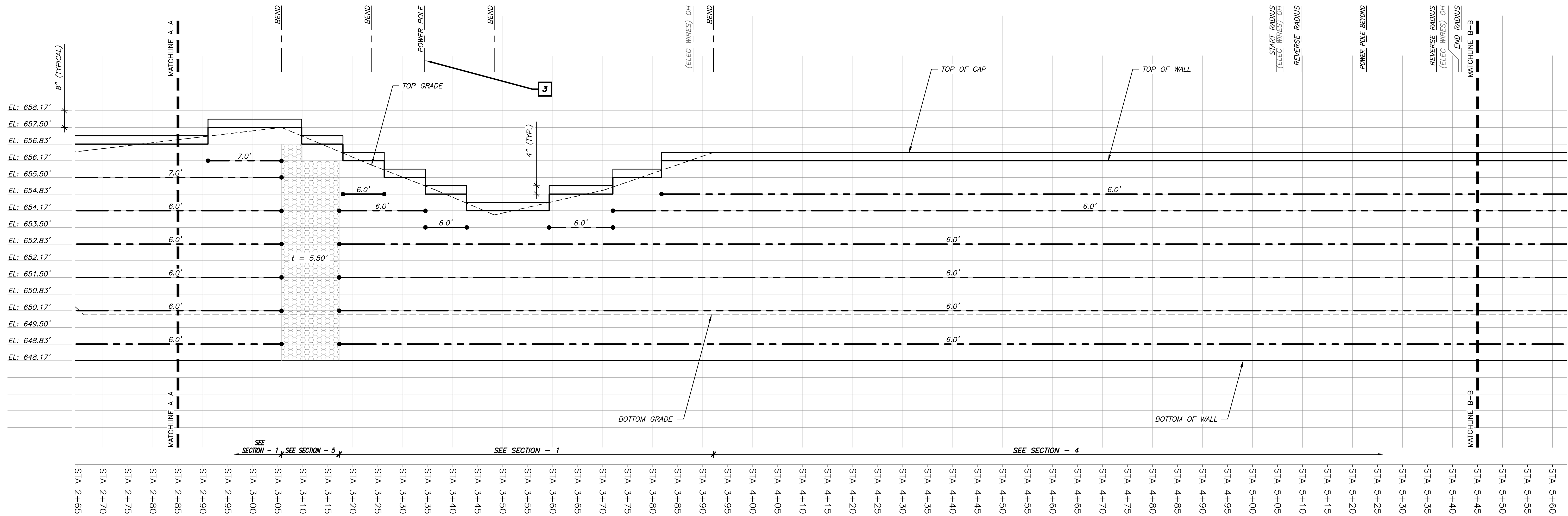
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SRW2.1A

Date 12/16/2024

Project Number  
2024.139

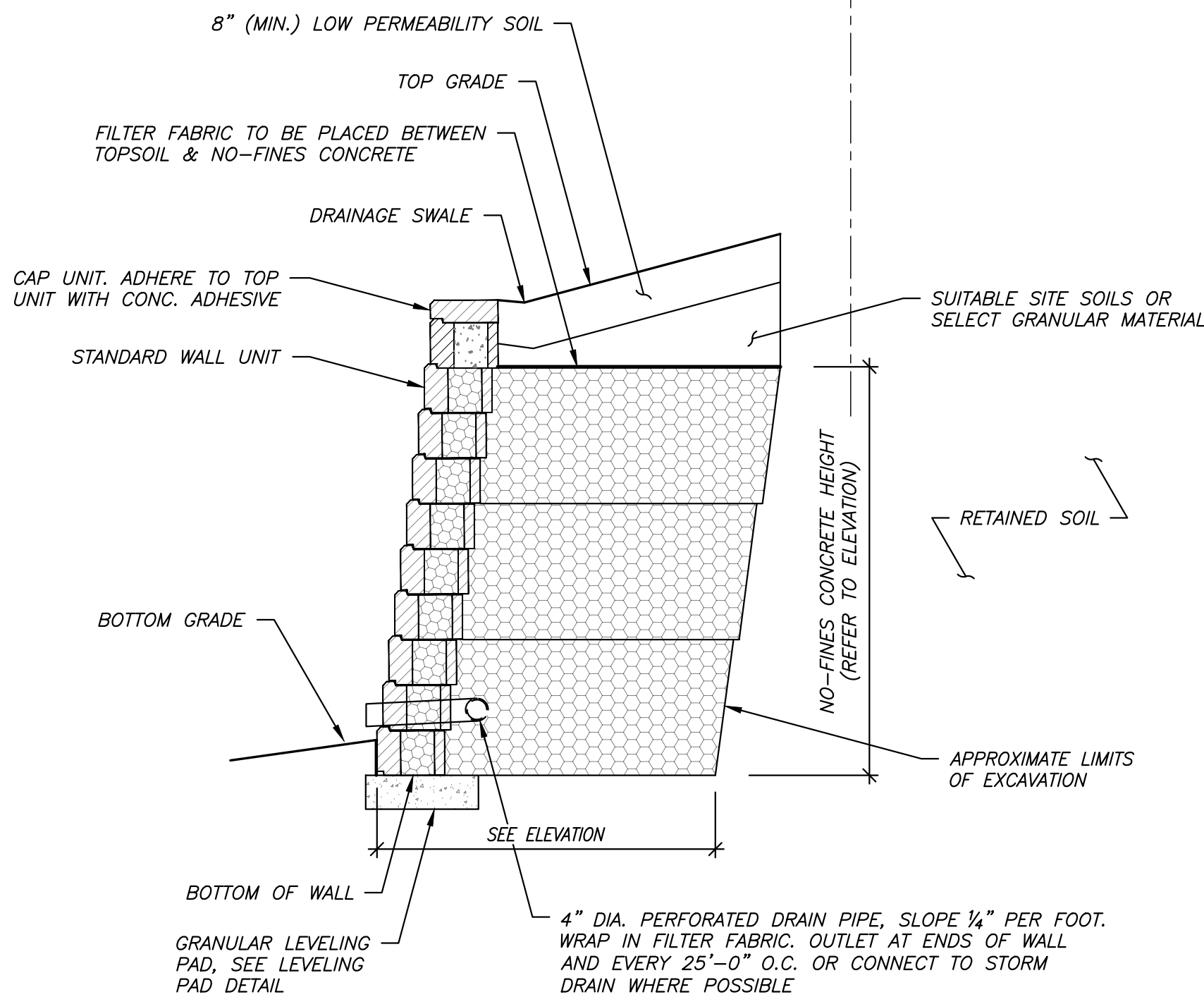




1 WALL No. 1 ELEVATION (CONTINUED)  
SCALE: VERTICAL: 1" = 2'-0" HORIZONTAL: 1" = 10'-0"

NOTES:  
1. SEE 1/SRW2.1A FOR ELEVATION NOTES

0 1' 2' 4'  
SCALE: 1/2" = 1'-0"

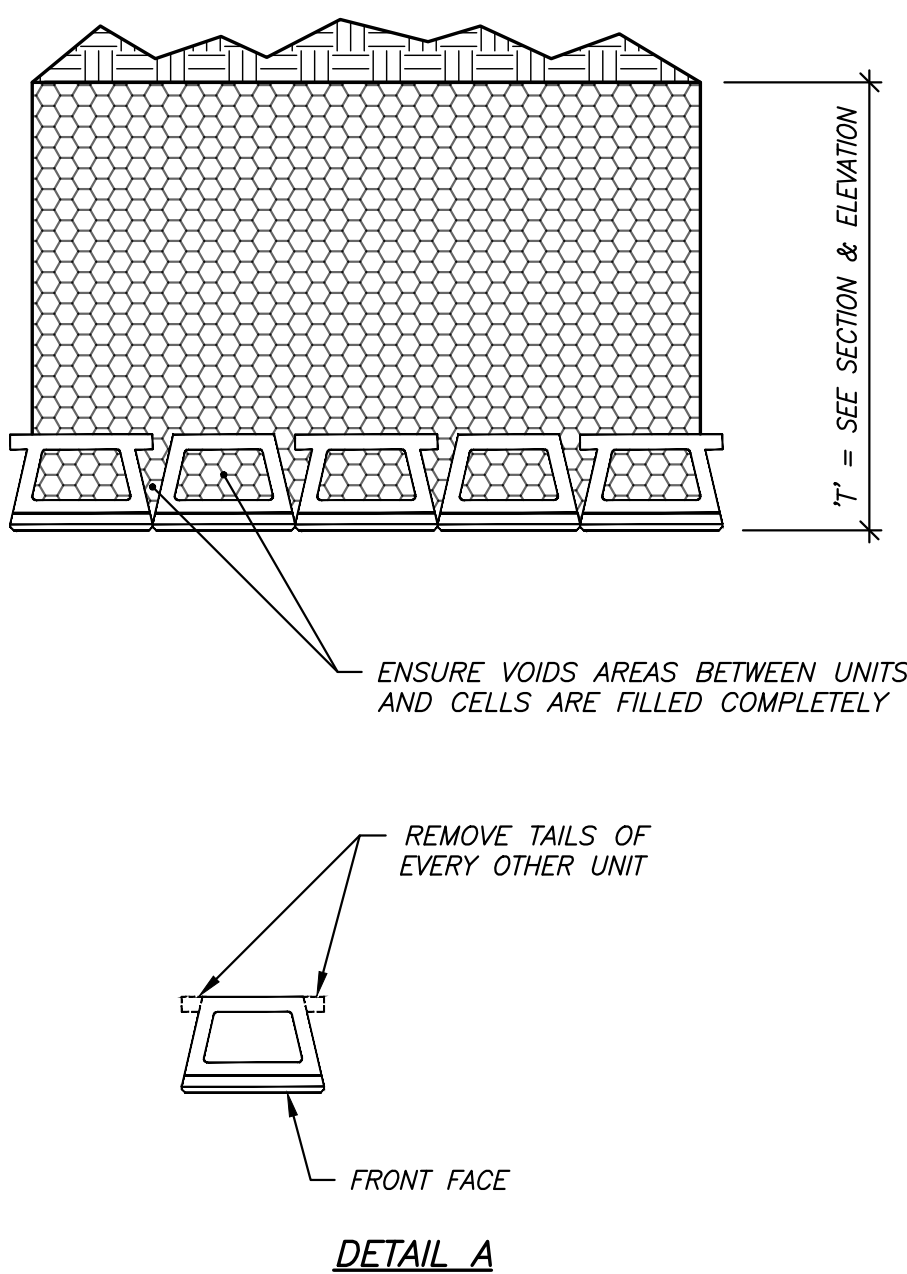


TYPICAL NO-FINES RETAINING WALL SECTION - 5

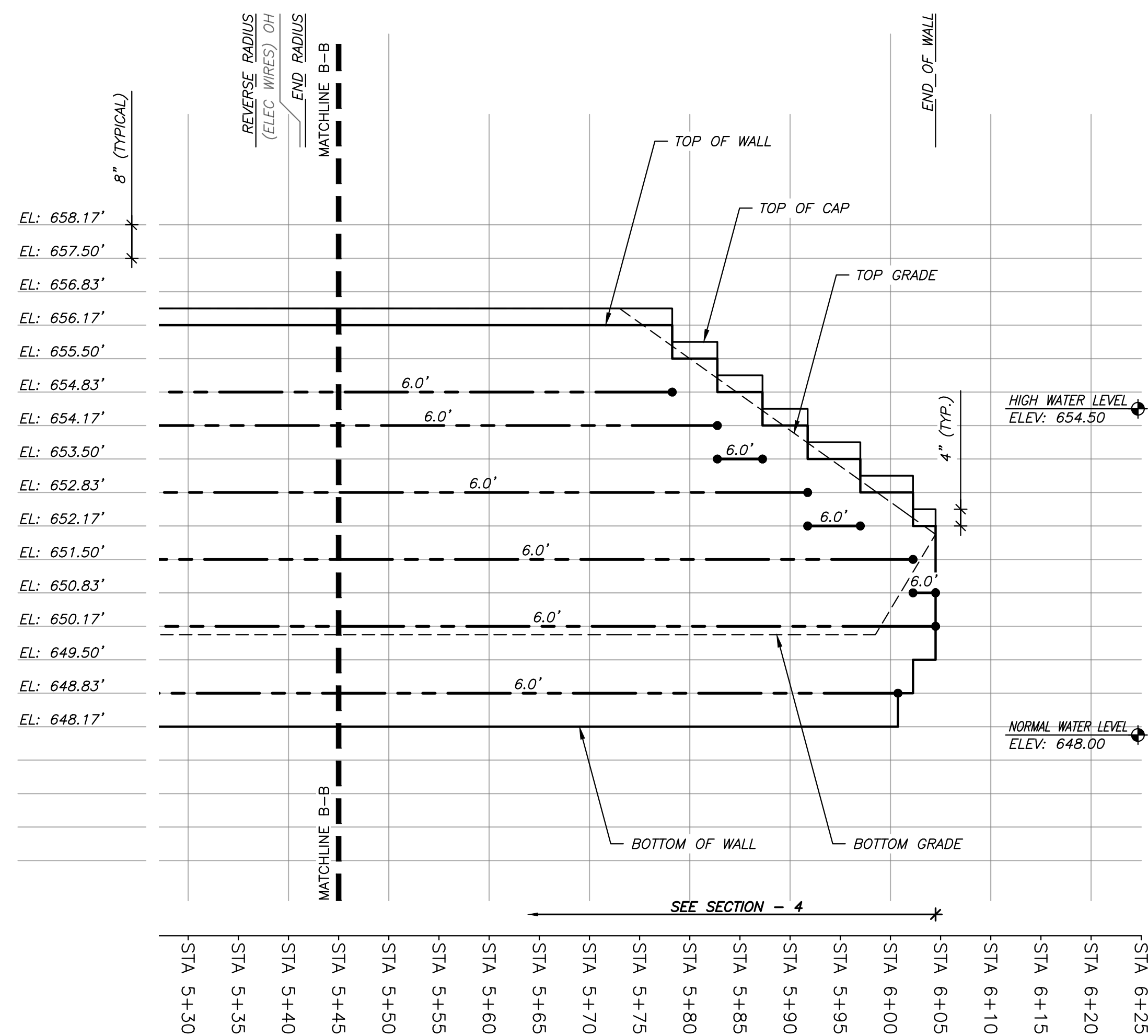
SCALE: 1/2" = 1'-0"

UNIT: WALL BATTER: 6.0°

NOTE:  
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NOTES:  
1. NO-FINES STRUCTURAL BACKFILL IS TO BE PLACED IN 8- TO 24-INCH (TYPICAL) LIFTS.  
2. NO-FINES STRUCTURAL BACKFILL MUST BE MANIPULATED INTO ALL VOIDS BETWEEN BLOCKS TO ENSURE ADEQUATE BOND BETWEEN BLOCK AND CONCRETE MASS.  
3. THE GEOGRID CAN BE LAID DIRECTLY ON THE COLD JOINT SURFACE WITH FRESH NO-FINES STRUCTURAL BACKFILL PLACED DIRECTLY ON TOP.



2 WALL No. 1 ELEVATION (CONTINUED)  
SCALE: VERTICAL: 1" = 2'-0" HORIZONTAL: 1" = 10'-0"

0 1' 2' 4'  
SCALE: 1" = 2'-0" (VERT)

0 5' 10' 20'  
SCALE: 1" = 10'-0" (HORIZ)

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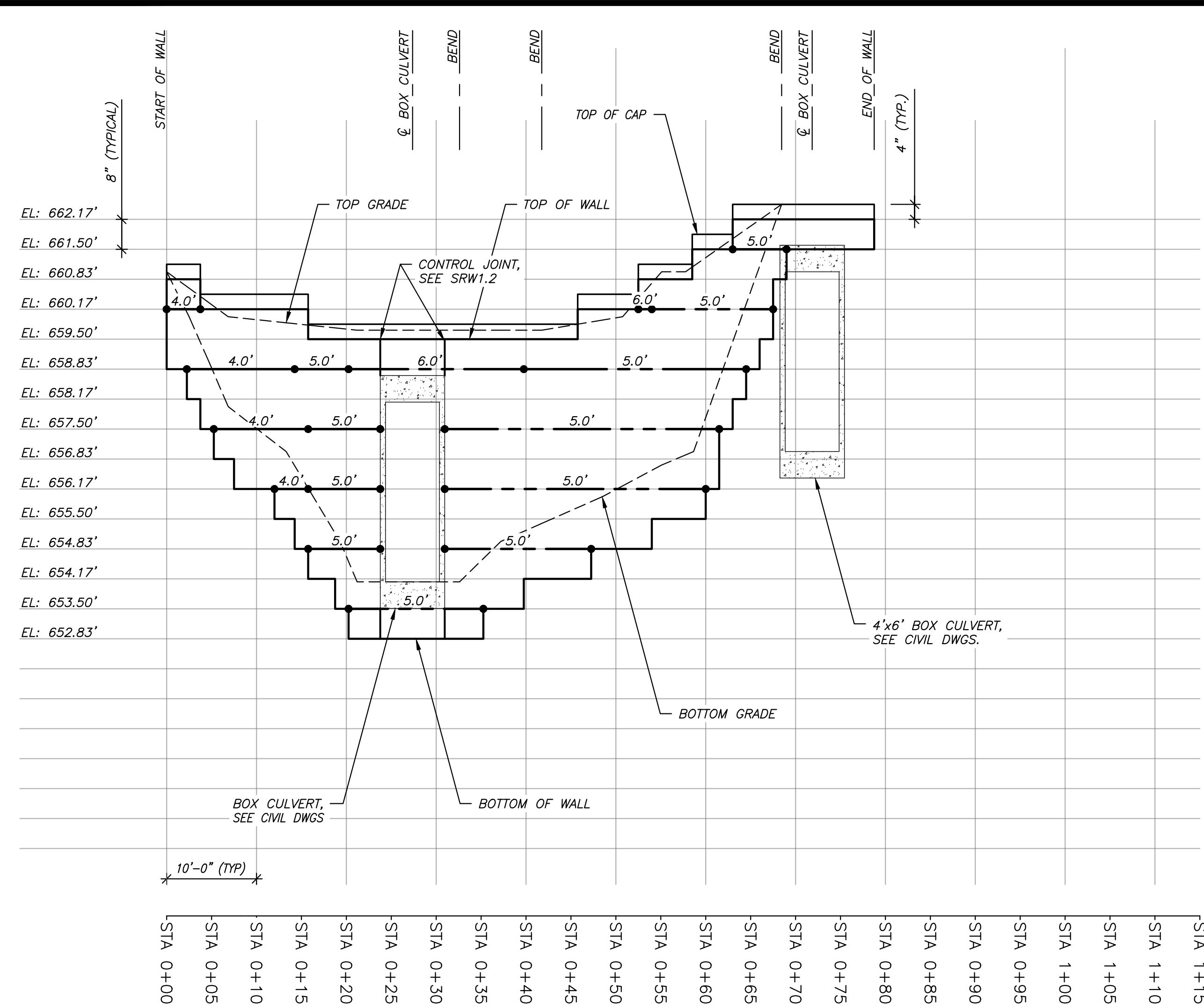
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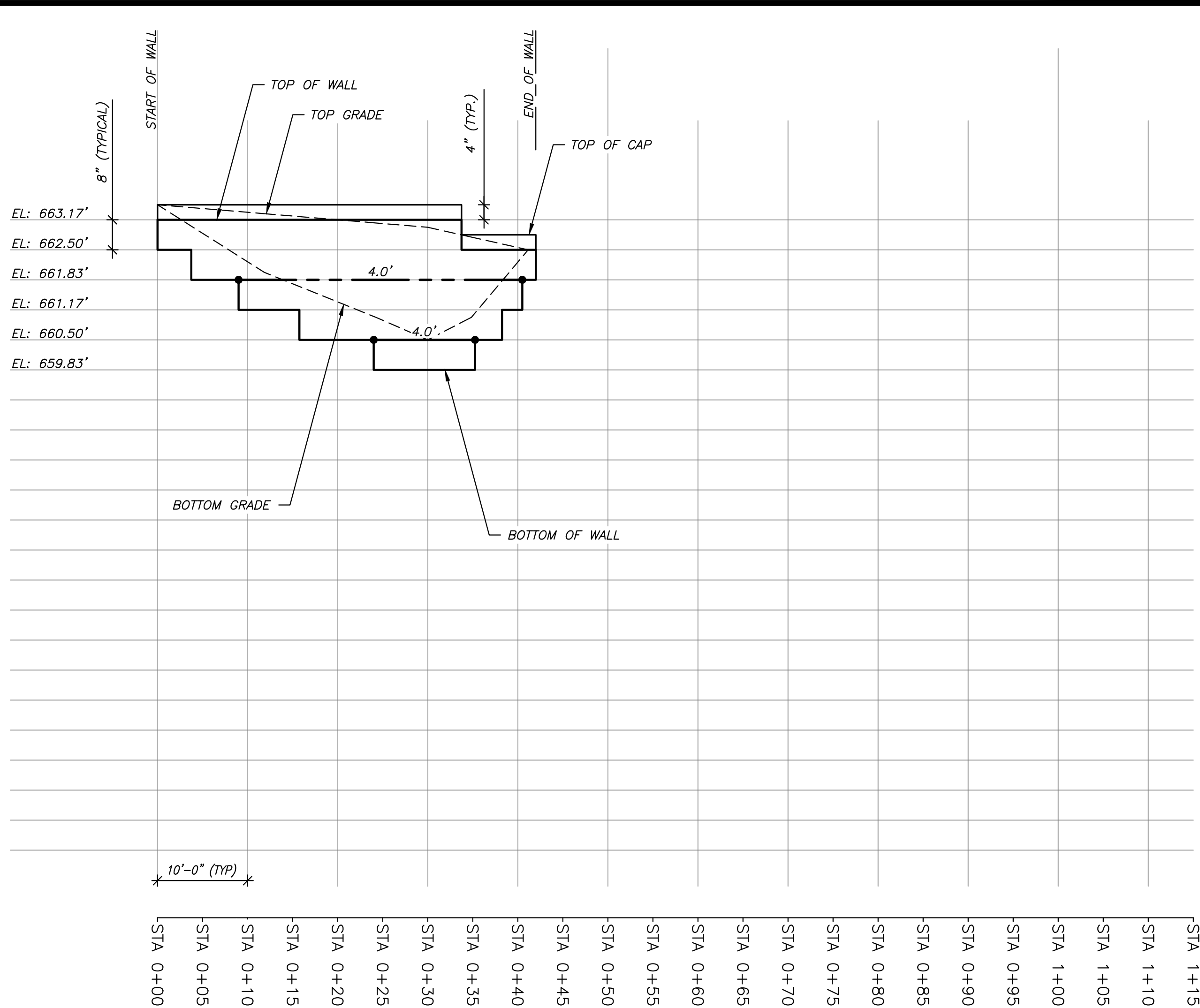
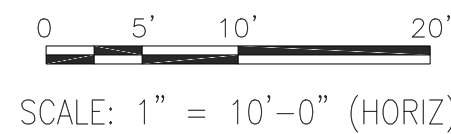
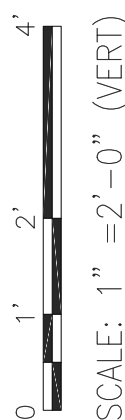
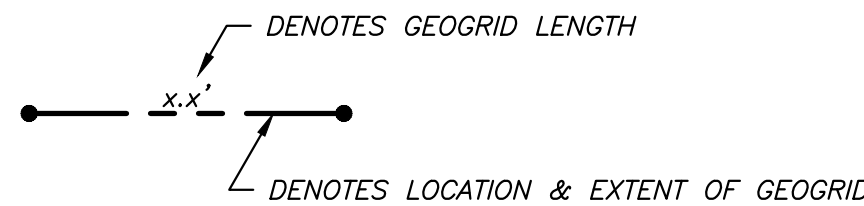
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| Project Number | 2024.139     |





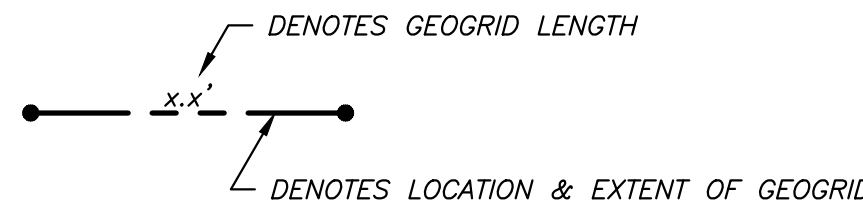
1 WALL No. 2 ELEVATION  
SCALE: VERTICAL: 1" = 2'-0" HORIZONTAL: 1" = 10'-0"

- NOTES:
1. SEE TYPICAL REINFORCED RETAINING WALL SECTION - 1, SHEET SRW1.3
  2. MINIMUM WALL EMBEDMENT = 1'-0"
  3. START OF WALL IS THE LEFT HAND SIDE OF WALL WHEN STANDING ON THE LOW SIDE OF THE WALL, FACING THE WALL.
  4. SEE SRW1.2 & SRW1.4 FOR WALL DETAILS.



2 WALL No. 4 ELEVATION  
SCALE: VERTICAL: 1" = 2'-0" HORIZONTAL: 1" = 10'-0"

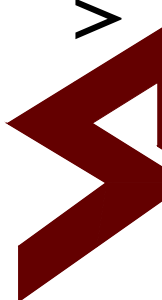
- NOTES:
1. SEE TYPICAL REINFORCED RETAINING WALL SECTION - 4, SHEET SRW1.3
  2. MINIMUM WALL EMBEDMENT = 0'-6"
  3. START OF WALL IS THE LEFT HAND SIDE OF WALL WHEN STANDING ON THE LOW SIDE OF THE WALL, FACING THE WALL.
  4. SEE SRW1.2 FOR WALL DETAILS.



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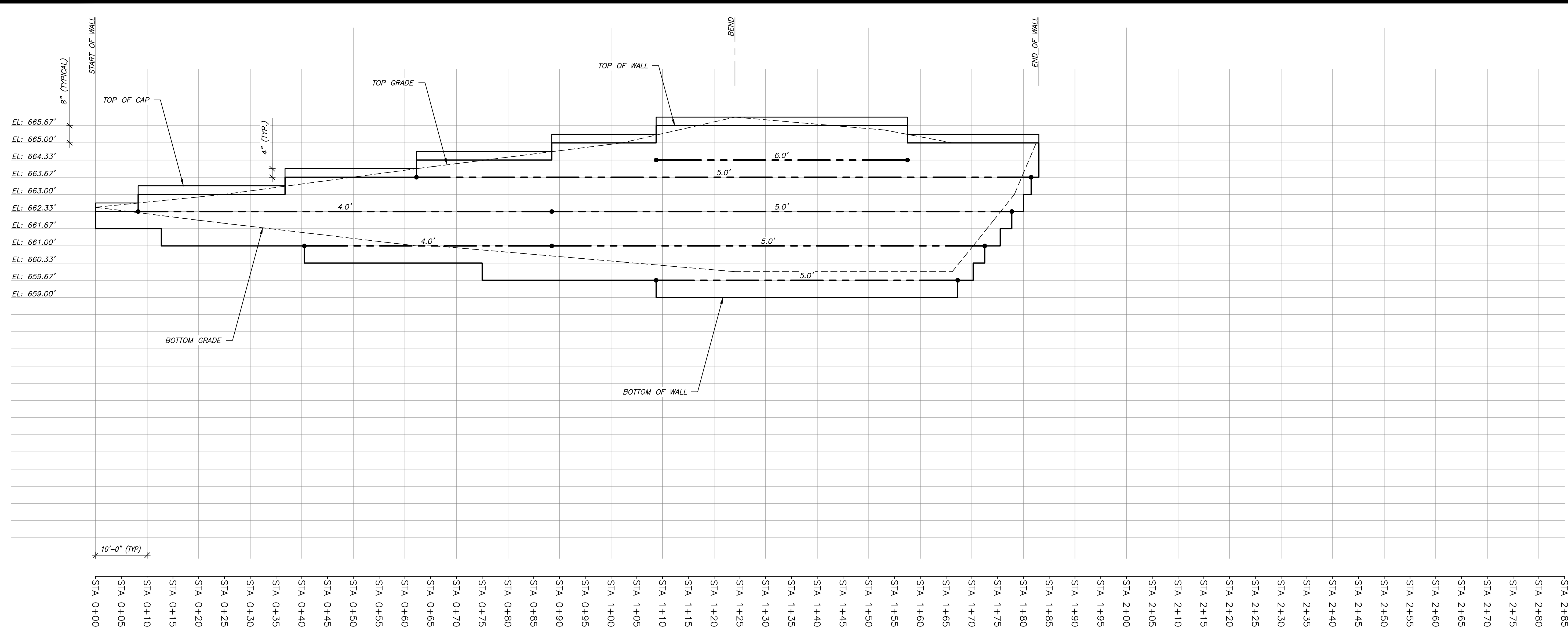
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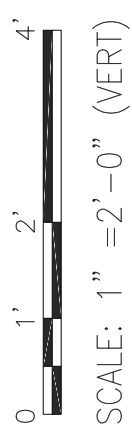
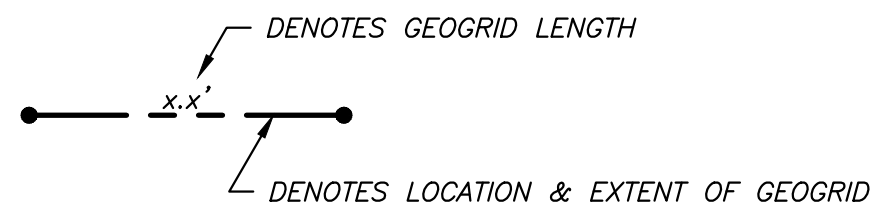
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| Project Number | 2024.139     |



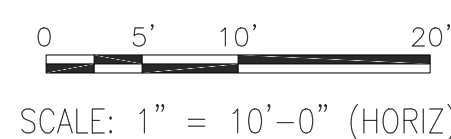


1 WALL No. 3 ELEVATION  
SRW2.3 SCALE: VERTICAL: 1" = 2'-0" HORIZONTAL: 1" = 10'-0"

- NOTES:
- SEE TYPICAL REINFORCED RETAINING WALL SECTIONS - 4, SHEET SRW1.3
  - MINIMUM WALL EMBEDMENT = 0'-6"
  - START OF WALL IS THE LEFT HAND SIDE OF WALL WHEN STANDING ON THE LOW SIDE OF THE WALL, FACING THE WALL.
  - SEE SRW1.2 & SRW1.4 FOR WALL DETAILS



SCALE: 1" = 2'-0" (VERT)

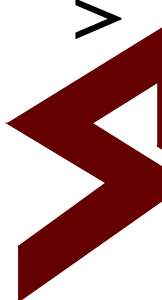


SCALE: 1" = 10'-0" (HORIZ)

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| Date           | 12/16/2024   |
| Project Number | 2024.139     |

STRUCTURAL CALCULATIONS FOR:  
SEGMENTAL RETAINING WALL(S)

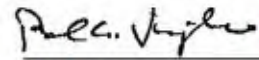
HERITAGE CROSSING  
5600 S. WOLF RD  
WESTERN SPRINGS, ILLINOIS 60558

December 16<sup>th</sup>, 2024

Drawings dated: 12/16/2024  
SRW0.1, SRW1.1, SRW1.2,  
SRW1.3, SRW1.4, SRW2.1A,  
SRW2.1B, SRW2.2, SRW2.3

CLIENT: McNaughton Development, LLC  
11S220 Jackson Street  
Burr Ridge, IL 60527



 12/16/2024  
Signature Date  
Expires 11/30/2026

PROJECT NUMBER: 2024.139



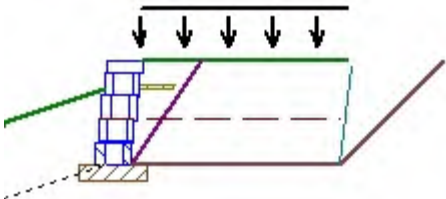
# **Project: 2024.139 - Heritage Crossing**

**Site: Western Springs, IL**

**Date: 12/16/2024**

**Wall: Wall No 1**

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #1 at Station 0.00                                |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 3.00    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 3.00 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 2.18 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSScs  | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

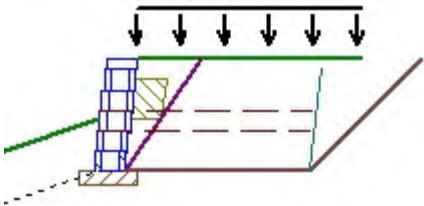
| External Static  |       | FS               |                           |
|------------------|-------|------------------|---------------------------|
| Bearing Capacity | 15.94 | Bearing Pressure | 440.36 lb/ft <sup>2</sup> |
| Overturning      | 35.49 | Max Eccentricity | 0.00 ft                   |
| Base Sliding     | 6.05  |                  |                           |
| Crest Toppling   | 1.88  |                  |                           |
| Internal Sliding | 24.29 |                  |                           |

| Internal Static |                | Internal Sliding |             | Pullout |      | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS   | FS                 | FS |
| 1               | 652.83         | SGU60            | 7.00        | 24.29   | 7.61 | 12.64              |    |

|               |                |       |             | Connection |
|---------------|----------------|-------|-------------|------------|
| Facing Static |                |       |             | Strength   |
| Layer         | Elevation [ft] | Rein. | Length [ft] | FS         |
| 1             | 652.83         | SGU60 | 7.00        | 7.92       |



|                        |                                                   |
|------------------------|---------------------------------------------------|
| Section                | #2 at Station 1.50                                |
| Report Date            | December 16, 2024                                 |
| Designer               | mK                                                |
| Design Standard        | National Concrete Masonry Association 3rd Edition |
| Design                 | Static                                            |
| Unit of Measure        | U.S./Imperial                                     |
| Selected Facing Unit   |                                                   |
| Licenser/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                  | Diamond Pro                                       |
| Seismic As             | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 3.67    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 3.67 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.70 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSScs  | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

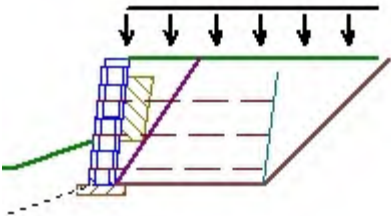
- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |       | FS               |                           |
|------------------|-------|------------------|---------------------------|
| Bearing Capacity | 13.52 | Bearing Pressure | 519.16 lb/ft <sup>2</sup> |
| Overturning      | 26.09 | Max Eccentricity | 0.00 ft                   |
| Base Sliding     | 5.28  |                  |                           |
| Crest Toppling   | 1.88  |                  |                           |
| Internal Sliding | 16.89 |                  |                           |

| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS                 | FS    |
| 2               | 653.50         | SGU60            | 7.00        | 24.29              | 24.13 |
| 1               | 652.83         | SGU60            | 7.00        | 16.89              | 14.48 |

| Facing Static |                | Connection Strength |             |
|---------------|----------------|---------------------|-------------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] |
| 2             | 653.50         | SGU60               | 7.00        |
| 1             | 652.83         | SGU60               | 7.00        |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #3 at Station 3.75                                |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 5.00    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 5.00 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.78 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |       | FS               |                           |
|------------------|-------|------------------|---------------------------|
| Bearing Capacity | 10.37 | Bearing Pressure | 676.78 lb/ft <sup>2</sup> |
| Overturning      | 15.99 | Max Eccentricity | 0.00 ft                   |
| Base Sliding     | 4.20  |                  |                           |
| Crest Toppling   | 1.88  |                  |                           |
| Internal Sliding | 8.69  |                  |                           |

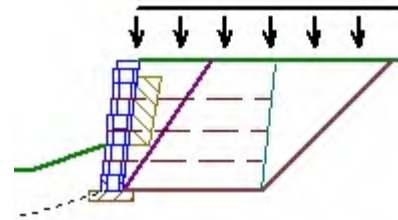
| Internal Static |                | Internal Sliding |             | Pullout |       | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|-------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS    | FS                 | FS |
| 3               | 654.17         | SGU60            | 7.00        | 24.29   | 8.99  | 18.96              |    |
| 2               | 652.83         | SGU60            | 7.00        | 12.88   | 17.43 | 17.31              |    |
| 1               | 651.50         | SGU60            | 7.00        | 8.69    | 21.53 | 12.84              |    |

|                     |                |       |             | Connection Strength |  |
|---------------------|----------------|-------|-------------|---------------------|--|
| Facing Static Layer | Elevation [ft] | Rein. | Length [ft] | FS                  |  |
| 3                   | 654.17         | SGU60 | 7.00        | 11.88               |  |
| 2                   | 652.83         | SGU60 | 7.00        | 11.22               |  |



| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 1                      | 651.50         | SGU60 | 7.00        | 8.61                   |

**Section** #4 at Station 6.00  
**Report Date** December 16, 2024  
**Designer** mk  
**Design Standard** National Concrete Masonry Association 3rd Edition  
**Design** Static  
**Unit of Measure** U.S./Imperial  
**Selected Facing Unit**  
**Licenser/Product Line:** Anchor Wall Systems, Inc.  
**Name:** Diamond Pro  
**Seismic As** N/A

**Soil Parameters**

| Soil Zone      | Soil Type | In Situ               |                                        |                                      |
|----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
|                |           | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)     | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)   | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f) | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)       | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)   | GP        | 38°                   | 125.02                                 | n/a                                  |

**Section Details**

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 5.67    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 5.67 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 2.00 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

**Minimum Factors of Safety**

| Reinforced External |                  |      | Value | Internal           |      |      | Value               | Facing | Value |
|---------------------|------------------|------|-------|--------------------|------|------|---------------------|--------|-------|
| FSSl                | Base Sliding     | 1.50 | FSSl  | Internal Sliding   | 1.50 | FSSc | Connection Strength | 1.50   |       |
| FSbc                | Bearing Capacity | 2.00 | FSpO  | Pullout            | 1.50 | FSsc | Facing Shear        | 1.50   |       |
| FSct                | Crest Toppling   | 1.50 | FSto  | Tensile Overstress | 1.50 |      |                     |        |       |
| FSot                | Overturning      | 2.00 |       |                    |      |      |                     |        |       |

**Reinforcements**

|                      |                |                                                                              |      |     |      |      |                |  |
|----------------------|----------------|------------------------------------------------------------------------------|------|-----|------|------|----------------|--|
| <b>SGU60 - SGU60</b> |                | <b>Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate</b> |      |     |      |      |                |  |
| Tult                 | 4,111.31 lb/ft | RFcr                                                                         | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid                 | 1.20           | Cds                                                                          | 0.90 | Ci  | 0.90 |      |                |  |

**Connection/Shear Properties**

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | lu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

**Analysis Results**

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |       | FS               |                           |
|------------------|-------|------------------|---------------------------|
| Bearing Capacity | 9.29  | Bearing Pressure | 755.59 lb/ft <sup>2</sup> |
| Overturning      | 13.08 | Max Eccentricity | 0.00 ft                   |
| Base Sliding     | 3.81  |                  |                           |
| Crest Toppling   | 1.88  |                  |                           |
| Internal Sliding | 8.69  |                  |                           |

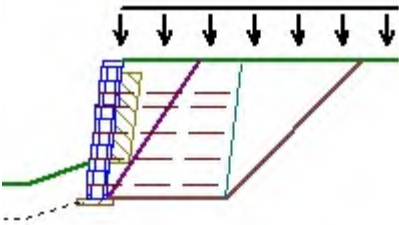
| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS                 | FS    |
| 3               | 654.17         | SGU60            | 7.00        | 24.29              | 18.96 |
| 2               | 652.83         | SGU60            | 7.00        | 12.88              | 17.31 |
| 1               | 651.50         | SGU60            | 7.00        | 8.69               | 8.04  |

| Facing Static |                | Connection Strength |             |
|---------------|----------------|---------------------|-------------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] |
| 3             | 654.17         | SGU60               | 7.00        |
| 2             | 652.83         | SGU60               | 7.00        |



| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 1                      | 651.50         | SGU60 | 7.00        | 5.39                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #5 at Station 7.50                                |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                   |
|-----------------|-----------|-----------------------|----------------------------------------|-----------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion Cf [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                               |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                               |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                              |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                               |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                               |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 7.00    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 7.00 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.76 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

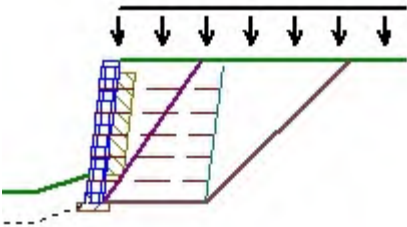
| External Static  |      | FS               |        |                    |
|------------------|------|------------------|--------|--------------------|
| Bearing Capacity | 7.58 | Bearing Pressure | 919.59 | lb/ft <sup>2</sup> |
| Overturning      | 9.27 | Max Eccentricity | 0.02   | ft                 |
| Base Sliding     | 3.22 |                  |        |                    |
| Crest Toppling   | 1.88 |                  |        |                    |
| Internal Sliding | 5.81 |                  |        |                    |

| Internal Static |                | Internal Sliding |             | Pullout |       | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|-------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS    | FS                 | FS |
| 5               | 654.83         | SGU60            | 7.00        | 24.29   | 8.35  | 24.13              |    |
| 4               | 654.17         | SGU60            | 7.00        | 16.89   | 14.45 | 26.54              |    |
| 3               | 652.83         | SGU60            | 7.00        | 10.39   | 15.38 | 14.74              |    |
| 2               | 651.50         | SGU60            | 7.00        | 7.46    | 19.09 | 11.37              |    |
| 1               | 650.17         | SGU60            | 7.00        | 5.81    | 22.69 | 9.26               |    |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 5                      | 654.83         | SGU60 | 7.00        | 15.11                  |
| 4                      | 654.17         | SGU60 | 7.00        | 16.92                  |
| 3                      | 652.83         | SGU60 | 7.00        | 9.72                   |
| 2                      | 651.50         | SGU60 | 7.00        | 7.75                   |
| 1                      | 650.17         | SGU60 | 7.00        | 6.51                   |



|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #6 at Station 10.50                               |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 8.33    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 8.33 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.74 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSScs  | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

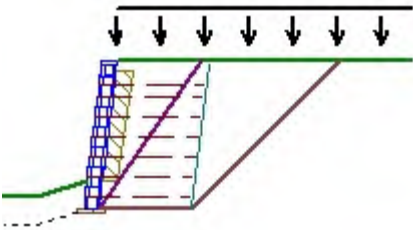
- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |      | FS               |         |                    |
|------------------|------|------------------|---------|--------------------|
| Bearing Capacity | 6.21 | Bearing Pressure | 1099.96 | lb/ft <sup>2</sup> |
| Overturning      | 6.95 | Max Eccentricity | 0.09    | ft                 |
| Base Sliding     | 2.78 |                  |         |                    |
| Crest Toppling   | 1.88 |                  |         |                    |
| Internal Sliding | 5.23 |                  |         |                    |

| Internal Static |                | Internal Sliding |             | Pullout |       | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|-------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS    | FS                 | FS |
| 5               | 655.50         | SGU60            | 7.00        | 24.29   | 4.95  | 18.96              |    |
| 4               | 654.17         | SGU60            | 7.00        | 12.88   | 10.79 | 17.31              |    |
| 3               | 652.83         | SGU60            | 7.00        | 8.69    | 14.41 | 12.84              |    |
| 2               | 651.50         | SGU60            | 7.00        | 6.53    | 17.94 | 10.21              |    |
| 1               | 650.17         | SGU60            | 7.00        | 5.23    | 13.70 | 5.42               |    |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |  |
|------------------------|----------------|-------|-------------|------------------------|--|
|                        |                |       |             | FS                     |  |
| 5                      | 655.50         | SGU60 | 7.00        | 11.88                  |  |
| 4                      | 654.17         | SGU60 | 7.00        | 11.22                  |  |
| 3                      | 652.83         | SGU60 | 7.00        | 8.61                   |  |
| 2                      | 651.50         | SGU60 | 7.00        | 7.07                   |  |
| 1                      | 650.17         | SGU60 | 7.00        | 3.87                   |  |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #7 at Station 12.75                               |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 9.67    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 9.67 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.83 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

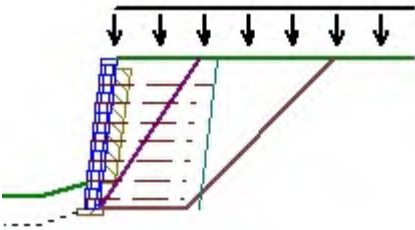
| External Static  |      | FS               |         |                    |
|------------------|------|------------------|---------|--------------------|
| Bearing Capacity | 5.13 | Bearing Pressure | 1296.61 | lb/ft <sup>2</sup> |
| Overturning      | 5.44 | Max Eccentricity | 0.18    | ft                 |
| Base Sliding     | 2.45 |                  |         |                    |
| Crest Toppling   | 1.88 |                  |         |                    |
| Internal Sliding | 4.02 |                  |         |                    |

| Internal Static |                | Internal Sliding |             | Pullout |       | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|-------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS    | FS                 | FS |
| 7               | 656.17         | SGU60            | 7.00        | 24.29   | 4.24  | 24.13              |    |
| 6               | 655.50         | SGU60            | 7.00        | 16.89   | 8.11  | 26.54              |    |
| 5               | 654.17         | SGU60            | 7.00        | 10.39   | 9.85  | 14.74              |    |
| 4               | 652.83         | SGU60            | 7.00        | 7.46    | 13.27 | 11.37              |    |
| 3               | 651.50         | SGU60            | 7.00        | 5.81    | 16.68 | 9.26               |    |
| 2               | 650.17         | SGU60            | 7.00        | 4.75    | 20.09 | 7.81               |    |
| 1               | 648.83         | SGU60            | 7.00        | 4.02    | 23.50 | 6.75               |    |



| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 7                      | 656.17         | SGU60 | 7.00        | 15.11                  |
| 6                      | 655.50         | SGU60 | 7.00        | 16.92                  |
| 5                      | 654.17         | SGU60 | 7.00        | 9.72                   |
| 4                      | 652.83         | SGU60 | 7.00        | 7.75                   |
| 3                      | 651.50         | SGU60 | 7.00        | 6.51                   |
| 2                      | 650.17         | SGU60 | 7.00        | 5.66                   |
| 1                      | 648.83         | SGU60 | 7.00        | 5.05                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #8 at Station 15.00                               |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |          |              |         |              |         |              |         |
|----------------|----------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 10.33    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 10.33 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.83 ft  | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| Fssl     | Base Sliding     | 1.50  | Fssl     | Internal Sliding   | 1.50  | FScs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpo     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

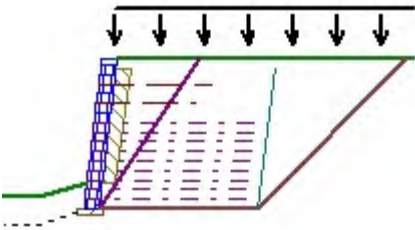
| External Static  |      | FS               |         |                    |
|------------------|------|------------------|---------|--------------------|
| Bearing Capacity | 4.66 | Bearing Pressure | 1402.75 | lb/ft <sup>2</sup> |
| Overturning      | 4.87 | Max Eccentricity | 0.24    | ft                 |
| Base Sliding     | 2.31 |                  |         |                    |
| Crest Toppling   | 1.88 |                  |         |                    |
| Internal Sliding | 3.73 |                  |         |                    |

| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS                 | FS    |
| 7               | 656.83         | SGU60            | 8.00        | 25.68              | 18.96 |
| 6               | 655.50         | SGU60            | 7.00        | 12.88              | 17.31 |
| 5               | 654.17         | SGU60            | 7.00        | 8.69               | 12.84 |
| 4               | 652.83         | SGU60            | 7.00        | 6.53               | 10.21 |
| 3               | 651.50         | SGU60            | 7.00        | 5.23               | 8.47  |
| 2               | 650.17         | SGU60            | 7.00        | 4.35               | 7.24  |
| 1               | 648.83         | SGU60            | 7.00        | 3.73               | 6.32  |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |  |
|------------------------|----------------|-------|-------------|------------------------|--|
|                        |                |       |             | FS                     |  |
| 7                      | 656.83         | SGU60 | 8.00        | 11.88                  |  |
| 6                      | 655.50         | SGU60 | 7.00        | 11.22                  |  |
| 5                      | 654.17         | SGU60 | 7.00        | 8.61                   |  |
| 4                      | 652.83         | SGU60 | 7.00        | 7.07                   |  |
| 3                      | 651.50         | SGU60 | 7.00        | 6.05                   |  |
| 2                      | 650.17         | SGU60 | 7.00        | 5.33                   |  |
| 1                      | 648.83         | SGU60 | 7.00        | 4.79                   |  |



|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #9 at Station 185.25                              |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |          |              |         |              |         |              |         |
|----------------|----------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 10.33    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 10.33 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.83 ft  | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSSc   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU80 - SGU80 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 5,481.74 lb/ft | RFcr                                                                  | 1.44 | RFd | 1.10 | LTDS | 2,883.91 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|                 |                |      |                |              |                |         |                |
|-----------------|----------------|------|----------------|--------------|----------------|---------|----------------|
| $\alpha$ cs1    | 1,245.04 lb/ft | IP-1 | 2,174.88 lb/ft | $\alpha$ cs2 | 2,290.68 lb/ft | IP-2    | 4,000.30 lb/ft |
| $\alpha$ cs max | 2,455.13 lb/ft | au   | 1,180.63 lb/ft | $\lambda$ u  | 45.00 lb/ft    | Vu(max) | 2,660.70 lb/ft |

SGU60 - SGU60 Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate

|      |                |      |      |     |      |      |                |
|------|----------------|------|------|-----|------|------|----------------|
| Tult | 4,111.31 lb/ft | RFcr | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid | 1.20           | Cds  | 0.90 | Ci  | 0.90 |      |                |

Connection/Shear Properties

|                 |                |      |                |              |                |         |                |
|-----------------|----------------|------|----------------|--------------|----------------|---------|----------------|
| $\alpha$ cs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | $\alpha$ cs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| $\alpha$ cs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | $\lambda$ u  | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

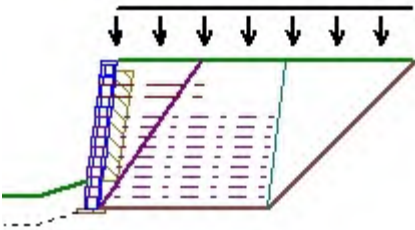
| External Static  |       | FS               |         |                    |
|------------------|-------|------------------|---------|--------------------|
| Bearing Capacity | 9.11  | Bearing Pressure | 1320.90 | lb/ft <sup>2</sup> |
| Overturning      | 13.43 | Max Eccentricity | 0.00    | ft                 |
| Base Sliding     | 3.97  |                  |         |                    |
| Crest Toppling   | 1.88  |                  |         |                    |
| Internal Sliding | 5.73  |                  |         |                    |

| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | Pullout FS         | FS    |
| 11              | 656.83         | SGU60            | 8.00        | 25.68              | 18.96 |

| Internal Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Internal<br>Sliding | Pullout | Tensile<br>Overstress |
|--------------------------|----------------|-------|-------------|---------------------|---------|-----------------------|
|                          |                |       |             | FS                  | FS      | FS                    |
| 10                       | 655.50         | SGU60 | 7.00        | 12.88               | 6.80    | 17.31                 |
| 9                        | 654.17         | SGU80 | 12.00       | 12.50               | 40.32   | 24.08                 |
| 8                        | 653.50         | SGU80 | 12.00       | 10.89               | 62.73   | 30.96                 |
| 7                        | 652.83         | SGU80 | 12.00       | 9.64                | 66.77   | 27.79                 |
| 6                        | 652.17         | SGU80 | 12.00       | 8.65                | 70.68   | 25.20                 |
| 5                        | 651.50         | SGU80 | 12.00       | 7.85                | 74.51   | 23.06                 |
| 4                        | 650.83         | SGU80 | 12.00       | 7.18                | 78.27   | 21.25                 |
| 3                        | 650.17         | SGU80 | 12.00       | 6.62                | 81.98   | 19.70                 |
| 2                        | 649.50         | SGU80 | 12.00       | 6.14                | 85.64   | 18.37                 |
| 1                        | 648.83         | SGU80 | 12.00       | 5.73                | 58.58   | 11.29                 |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 11                     | 656.83         | SGU60 | 8.00        | 11.88                  |
| 10                     | 655.50         | SGU60 | 7.00        | 11.22                  |
| 9                      | 654.17         | SGU80 | 12.00       | 12.48                  |
| 8                      | 653.50         | SGU80 | 12.00       | 16.46                  |
| 7                      | 652.83         | SGU80 | 12.00       | 15.15                  |
| 6                      | 652.17         | SGU80 | 12.00       | 14.07                  |
| 5                      | 651.50         | SGU80 | 12.00       | 13.18                  |
| 4                      | 650.83         | SGU80 | 12.00       | 12.43                  |
| 3                      | 650.17         | SGU80 | 12.00       | 11.79                  |
| 2                      | 649.50         | SGU80 | 12.00       | 11.24                  |
| 1                      | 648.83         | SGU80 | 12.00       | 7.06                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #10 at Station 192.75                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 9.67    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 9.67 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.83 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSSc   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU80 - SGU80 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 5,481.74 lb/ft | RFcr                                                                  | 1.44 | RFd | 1.10 | LTDS | 2,883.91 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | CI  | 0.90 |      |                |  |

Connection/Shear Properties

|                  |                |      |                |              |                |         |                |
|------------------|----------------|------|----------------|--------------|----------------|---------|----------------|
| $\alpha s_1$     | 1,245.04 lb/ft | IP-1 | 2,174.88 lb/ft | $\alpha s_2$ | 2,290.68 lb/ft | IP-2    | 4,000.30 lb/ft |
| $\alpha s_{max}$ | 2,455.13 lb/ft | au   | 1,180.63 lb/ft | $\lambda u$  | 45.00 lb/ft    | Vu(max) | 2,660.70 lb/ft |

SGU60 - SGU60

Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate

|      |                |      |      |     |      |      |                |
|------|----------------|------|------|-----|------|------|----------------|
| Tult | 4,111.31 lb/ft | RFcr | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid | 1.20           | Cds  | 0.90 | CI  | 0.90 |      |                |

Connection/Shear Properties

|                  |                |      |                |              |                |         |                |
|------------------|----------------|------|----------------|--------------|----------------|---------|----------------|
| $\alpha s_1$     | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | $\alpha s_2$ | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| $\alpha s_{max}$ | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | $\lambda u$  | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |       | FS               |         |                    |
|------------------|-------|------------------|---------|--------------------|
| Bearing Capacity | 9.69  | Bearing Pressure | 1241.60 | lb/ft <sup>2</sup> |
| Overturning      | 15.06 | Max Eccentricity | 0.00    | ft                 |
| Base Sliding     | 4.20  |                  |         |                    |
| Crest Toppling   | 1.88  |                  |         |                    |
| Internal Sliding | 6.14  |                  |         |                    |

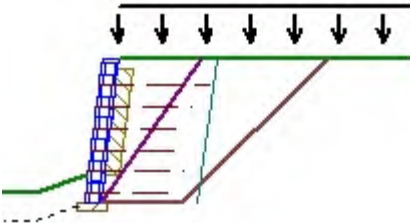
| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | Pullout FS         | FS    |
| 11              | 656.17         | SGU60            | 7.00        | 24.29              | 24.13 |



| Internal Static |                |       |             | Internal      | Pullout | Tensile          |
|-----------------|----------------|-------|-------------|---------------|---------|------------------|
| Layer           | Elevation [ft] | Rein. | Length [ft] | Sliding<br>FS | FS      | Overstress<br>FS |
| 10              | 655.50         | SGU60 | 7.00        | 16.89         | 8.11    | 26.54            |
| 9               | 654.17         | SGU80 | 12.00       | 14.69         | 39.37   | 27.79            |
| 8               | 653.50         | SGU80 | 12.00       | 12.50         | 61.38   | 34.96            |
| 7               | 652.83         | SGU80 | 12.00       | 10.89         | 65.64   | 30.96            |
| 6               | 652.17         | SGU80 | 12.00       | 9.64          | 69.73   | 27.79            |
| 5               | 651.50         | SGU80 | 12.00       | 8.65          | 73.68   | 25.20            |
| 4               | 650.83         | SGU80 | 12.00       | 7.85          | 77.54   | 23.06            |
| 3               | 650.17         | SGU80 | 12.00       | 7.18          | 81.33   | 21.25            |
| 2               | 649.50         | SGU80 | 12.00       | 6.62          | 85.06   | 19.70            |
| 1               | 648.83         | SGU80 | 12.00       | 6.14          | 58.18   | 12.04            |

| Facing Static |                |       |             | Connection     |
|---------------|----------------|-------|-------------|----------------|
| Layer         | Elevation [ft] | Rein. | Length [ft] | Strength<br>FS |
| 11            | 656.17         | SGU60 | 7.00        | 15.11          |
| 10            | 655.50         | SGU60 | 7.00        | 16.92          |
| 9             | 654.17         | SGU80 | 12.00       | 14.03          |
| 8             | 653.50         | SGU80 | 12.00       | 18.12          |
| 7             | 652.83         | SGU80 | 12.00       | 16.46          |
| 6             | 652.17         | SGU80 | 12.00       | 15.15          |
| 5             | 651.50         | SGU80 | 12.00       | 14.07          |
| 4             | 650.83         | SGU80 | 12.00       | 13.18          |
| 3             | 650.17         | SGU80 | 12.00       | 12.43          |
| 2             | 649.50         | SGU80 | 12.00       | 11.79          |
| 1             | 648.83         | SGU80 | 12.00       | 7.37           |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #11 at Station 204.75                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                   |
|-----------------|-----------|-----------------------|----------------------------------------|-----------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion Cf [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                               |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                               |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                              |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                               |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                               |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 9.00    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 9.00 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.83 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

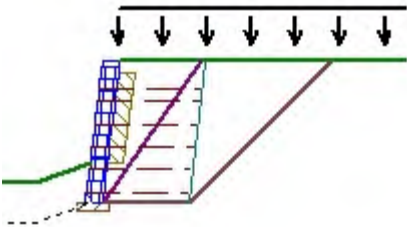
| External Static  |      | FS               |         |                    |
|------------------|------|------------------|---------|--------------------|
| Bearing Capacity | 4.43 | Bearing Pressure | 1246.33 | lb/ft <sup>2</sup> |
| Overturning      | 4.60 | Max Eccentricity | 0.24    | ft                 |
| Base Sliding     | 2.23 |                  |         |                    |
| Crest Toppling   | 1.88 |                  |         |                    |
| Internal Sliding | 3.90 |                  |         |                    |

| Internal Static |                | Internal Sliding |             | Pullout |       | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|-------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS    | FS                 | FS |
| 6               | 655.50         | SGU60            | 7.00        | 24.29   | 4.14  | 18.96              |    |
| 5               | 654.17         | SGU60            | 6.00        | 11.90   | 5.89  | 17.31              |    |
| 4               | 652.83         | SGU60            | 6.00        | 7.93    | 9.16  | 12.84              |    |
| 3               | 651.50         | SGU60            | 6.00        | 5.91    | 12.48 | 10.21              |    |
| 2               | 650.17         | SGU60            | 6.00        | 4.70    | 15.83 | 8.47               |    |
| 1               | 648.83         | SGU60            | 6.00        | 3.90    | 19.19 | 7.24               |    |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |  |
|------------------------|----------------|-------|-------------|------------------------|--|
|                        |                |       |             | FS                     |  |
| 6                      | 655.50         | SGU60 | 7.00        | 11.88                  |  |
| 5                      | 654.17         | SGU60 | 6.00        | 11.22                  |  |
| 4                      | 652.83         | SGU60 | 6.00        | 8.61                   |  |
| 3                      | 651.50         | SGU60 | 6.00        | 7.07                   |  |
| 2                      | 650.17         | SGU60 | 6.00        | 6.05                   |  |
| 1                      | 648.83         | SGU60 | 6.00        | 5.33                   |  |



|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #12 at Station 242.25                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |          |
|----------------|---------|--------------|---------|--------------|---------|--------------|----------|
| Section Height | 8.33    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0        |
| Design Height  | 8.33 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft  |
| Embedment      | 2.33 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 12.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSScs  | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

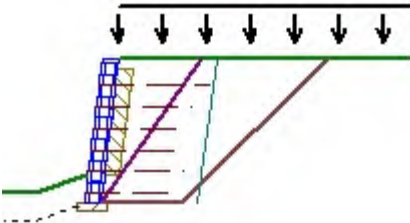
- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |      | FS               |         |                    |
|------------------|------|------------------|---------|--------------------|
| Bearing Capacity | 4.96 | Bearing Pressure | 1137.25 | lb/ft <sup>2</sup> |
| Overturning      | 5.21 | Max Eccentricity | 0.19    | ft                 |
| Base Sliding     | 2.38 |                  |         |                    |
| Crest Toppling   | 1.88 |                  |         |                    |
| Internal Sliding | 4.26 |                  |         |                    |

| Internal Static |                | Internal Sliding |             | Pullout |       | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|-------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS    | FS                 | FS |
| 6               | 654.83         | SGU60            | 6.00        | 22.89   | 3.53  | 24.13              |    |
| 5               | 654.17         | SGU60            | 6.00        | 15.73   | 7.02  | 26.54              |    |
| 4               | 652.83         | SGU60            | 6.00        | 9.53    | 8.90  | 14.74              |    |
| 3               | 651.50         | SGU60            | 6.00        | 6.78    | 12.27 | 11.37              |    |
| 2               | 650.17         | SGU60            | 6.00        | 5.24    | 15.65 | 9.26               |    |
| 1               | 648.83         | SGU60            | 6.00        | 4.26    | 19.04 | 7.81               |    |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 6                      | 654.83         | SGU60 | 6.00        | 15.11                  |
| 5                      | 654.17         | SGU60 | 6.00        | 16.92                  |
| 4                      | 652.83         | SGU60 | 6.00        | 9.72                   |
| 3                      | 651.50         | SGU60 | 6.00        | 7.75                   |
| 2                      | 650.17         | SGU60 | 6.00        | 6.51                   |
| 1                      | 648.83         | SGU60 | 6.00        | 5.66                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #13 at Station 263.25                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensors/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 9.00    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 9.00 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.83 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSScs  | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

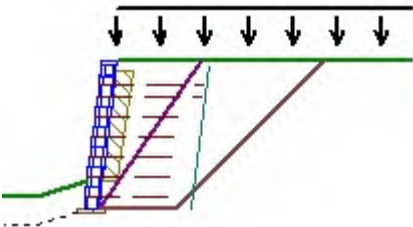
| External Static  |      | FS               |         |                    |
|------------------|------|------------------|---------|--------------------|
| Bearing Capacity | 4.43 | Bearing Pressure | 1246.33 | lb/ft <sup>2</sup> |
| Overturning      | 4.60 | Max Eccentricity | 0.24    | ft                 |
| Base Sliding     | 2.23 |                  |         |                    |
| Crest Toppling   | 1.88 |                  |         |                    |
| Internal Sliding | 3.90 |                  |         |                    |

| Internal Static |                | Internal Sliding |             | Pullout |       | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|-------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS    | FS                 | FS |
| 6               | 655.50         | SGU60            | 7.00        | 24.29   | 4.14  | 18.96              |    |
| 5               | 654.17         | SGU60            | 6.00        | 11.90   | 5.89  | 17.31              |    |
| 4               | 652.83         | SGU60            | 6.00        | 7.93    | 9.16  | 12.84              |    |
| 3               | 651.50         | SGU60            | 6.00        | 5.91    | 12.48 | 10.21              |    |
| 2               | 650.17         | SGU60            | 6.00        | 4.70    | 15.83 | 8.47               |    |
| 1               | 648.83         | SGU60            | 6.00        | 3.90    | 19.19 | 7.24               |    |



| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |  |
|------------------------|----------------|-------|-------------|------------------------|--|
|                        |                |       |             | FS                     |  |
| 6                      | 655.50         | SGU60 | 7.00        | 11.88                  |  |
| 5                      | 654.17         | SGU60 | 6.00        | 11.22                  |  |
| 4                      | 652.83         | SGU60 | 6.00        | 8.61                   |  |
| 3                      | 651.50         | SGU60 | 6.00        | 7.07                   |  |
| 2                      | 650.17         | SGU60 | 6.00        | 6.05                   |  |
| 1                      | 648.83         | SGU60 | 6.00        | 5.33                   |  |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #14 at Station 291.00                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 9.67    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 9.67 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.83 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

| Minimum Factors of Safety |                  |      |       |                    |      |      |                     |       |
|---------------------------|------------------|------|-------|--------------------|------|------|---------------------|-------|
| Reinforced                |                  |      |       |                    |      |      |                     |       |
| External                  |                  |      | Value | Internal           |      |      | Facing              | Value |
| FSSl                      | Base Sliding     | 1.50 | FSSl  | Internal Sliding   | 1.50 | FSCs | Connection Strength | 1.50  |
| FSbc                      | Bearing Capacity | 2.00 | FSpO  | Pullout            | 1.50 | FSsc | Facing Shear        | 1.50  |
| FSct                      | Crest Toppling   | 1.50 | FSto  | Tensile Overstress | 1.50 |      |                     |       |
| FSot                      | Overturning      | 2.00 |       |                    |      |      |                     |       |

| Reinforcements |                |                                                                       |      |     |      |      |                |
|----------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|
| SGU60 - SGU60  |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |
| Tult           | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid           | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |

| Connection/Shear Properties |                |      |                |      |                |         |                |
|-----------------------------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1                        | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max                     | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

\* Analysis does not include Vertical Forces

\* Embedment is not included in Bearing Capacity

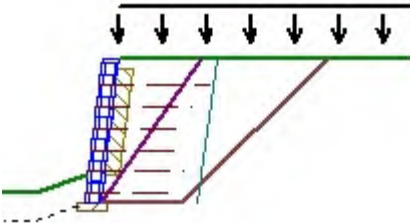
| External Static  |      | FS               |         |                    |
|------------------|------|------------------|---------|--------------------|
| Bearing Capacity | 3.96 | Bearing Pressure | 1363.38 | lb/ft <sup>2</sup> |
| Overturning      | 4.09 | Max Eccentricity | 0.31    | ft                 |
| Base Sliding     | 2.10 |                  |         |                    |
| Crest Toppling   | 1.88 |                  |         |                    |
| Internal Sliding | 3.59 |                  |         |                    |

| Internal Static |                | Internal Sliding |             |       | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|-------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS    | FS                 | FS    |
| 7               | 656.17         | SGU60            | 7.00        | 24.29 | 4.24               | 24.13 |
| 6               | 655.50         | SGU60            | 7.00        | 16.89 | 8.11               | 26.54 |
| 5               | 654.17         | SGU60            | 6.00        | 9.53  | 6.13               | 14.74 |
| 4               | 652.83         | SGU60            | 6.00        | 6.78  | 9.36               | 11.37 |
| 3               | 651.50         | SGU60            | 6.00        | 5.24  | 12.65              | 9.26  |
| 2               | 650.17         | SGU60            | 6.00        | 4.26  | 15.98              | 7.81  |
| 1               | 648.83         | SGU60            | 6.00        | 3.59  | 19.32              | 6.75  |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 7                      | 656.17         | SGU60 | 7.00        | 15.11                  |
| 6                      | 655.50         | SGU60 | 7.00        | 16.92                  |
| 5                      | 654.17         | SGU60 | 6.00        | 9.72                   |
| 4                      | 652.83         | SGU60 | 6.00        | 7.75                   |
| 3                      | 651.50         | SGU60 | 6.00        | 6.51                   |
| 2                      | 650.17         | SGU60 | 6.00        | 5.66                   |
| 1                      | 648.83         | SGU60 | 6.00        | 5.05                   |



|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #15 at Station 309.75                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensors/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 9.00    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 9.00 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.83 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

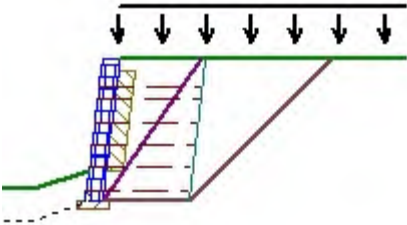
- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |      | FS               |         |                    |
|------------------|------|------------------|---------|--------------------|
| Bearing Capacity | 4.43 | Bearing Pressure | 1246.33 | lb/ft <sup>2</sup> |
| Overturning      | 4.60 | Max Eccentricity | 0.24    | ft                 |
| Base Sliding     | 2.23 |                  |         |                    |
| Crest Toppling   | 1.88 |                  |         |                    |
| Internal Sliding | 3.90 |                  |         |                    |

| Internal Static |                | Internal Sliding |             | Pullout |       | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|-------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS    | FS                 | FS |
| 6               | 655.50         | SGU60            | 7.00        | 24.29   | 4.14  | 18.96              |    |
| 5               | 654.17         | SGU60            | 6.00        | 11.90   | 5.89  | 17.31              |    |
| 4               | 652.83         | SGU60            | 6.00        | 7.93    | 9.16  | 12.84              |    |
| 3               | 651.50         | SGU60            | 6.00        | 5.91    | 12.48 | 10.21              |    |
| 2               | 650.17         | SGU60            | 6.00        | 4.70    | 15.83 | 8.47               |    |
| 1               | 648.83         | SGU60            | 6.00        | 3.90    | 19.19 | 7.24               |    |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |  |
|------------------------|----------------|-------|-------------|------------------------|--|
|                        |                |       |             | FS                     |  |
| 6                      | 655.50         | SGU60 | 7.00        | 11.88                  |  |
| 5                      | 654.17         | SGU60 | 6.00        | 11.22                  |  |
| 4                      | 652.83         | SGU60 | 6.00        | 8.61                   |  |
| 3                      | 651.50         | SGU60 | 6.00        | 7.07                   |  |
| 2                      | 650.17         | SGU60 | 6.00        | 6.05                   |  |
| 1                      | 648.83         | SGU60 | 6.00        | 5.33                   |  |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #16 at Station 318.00                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                   |
|-----------------|-----------|-----------------------|----------------------------------------|-----------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion Cf [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                               |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                               |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                              |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                               |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                               |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 8.33    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 8.33 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.83 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

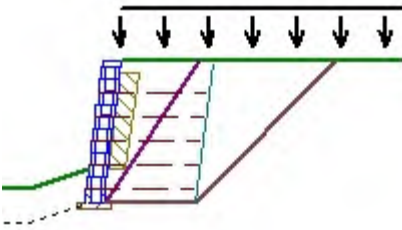
| External Static  |      | FS               |         |                    |
|------------------|------|------------------|---------|--------------------|
| Bearing Capacity | 4.96 | Bearing Pressure | 1137.25 | lb/ft <sup>2</sup> |
| Overturning      | 5.21 | Max Eccentricity | 0.19    | ft                 |
| Base Sliding     | 2.38 |                  |         |                    |
| Crest Toppling   | 1.88 |                  |         |                    |
| Internal Sliding | 4.26 |                  |         |                    |

| Internal Static |                | Internal Sliding |             | Pullout |       | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|-------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS    | FS                 | FS |
| 6               | 654.83         | SGU60            | 6.00        | 22.89   | 3.53  | 24.13              |    |
| 5               | 654.17         | SGU60            | 6.00        | 15.73   | 7.02  | 26.54              |    |
| 4               | 652.83         | SGU60            | 6.00        | 9.53    | 8.90  | 14.74              |    |
| 3               | 651.50         | SGU60            | 6.00        | 6.78    | 12.27 | 11.37              |    |
| 2               | 650.17         | SGU60            | 6.00        | 5.24    | 15.65 | 9.26               |    |
| 1               | 648.83         | SGU60            | 6.00        | 4.26    | 19.04 | 7.81               |    |



| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 6                      | 654.83         | SGU60 | 6.00        | 15.11                  |
| 5                      | 654.17         | SGU60 | 6.00        | 16.92                  |
| 4                      | 652.83         | SGU60 | 6.00        | 9.72                   |
| 3                      | 651.50         | SGU60 | 6.00        | 7.75                   |
| 2                      | 650.17         | SGU60 | 6.00        | 6.51                   |
| 1                      | 648.83         | SGU60 | 6.00        | 5.66                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #17 at Station 326.25                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 7.67    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 7.67 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.83 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

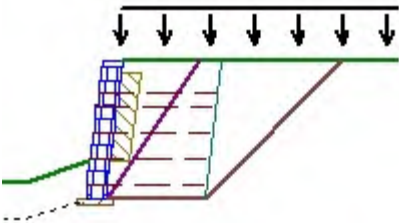
| External Static  |      | FS               |         |                    |
|------------------|------|------------------|---------|--------------------|
| Bearing Capacity | 5.55 | Bearing Pressure | 1034.91 | lb/ft <sup>2</sup> |
| Overturning      | 5.97 | Max Eccentricity | 0.14    | ft                 |
| Base Sliding     | 2.56 |                  |         |                    |
| Crest Toppling   | 1.88 |                  |         |                    |
| Internal Sliding | 4.70 |                  |         |                    |

| Internal Static |                | Internal Sliding |             | Pullout |       | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|-------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS    | FS                 | FS |
| 5               | 654.17         | SGU60            | 6.00        | 22.89   | 3.58  | 18.96              |    |
| 4               | 652.83         | SGU60            | 6.00        | 11.90   | 8.55  | 17.31              |    |
| 3               | 651.50         | SGU60            | 6.00        | 7.93    | 12.01 | 12.84              |    |
| 2               | 650.17         | SGU60            | 6.00        | 5.91    | 15.44 | 10.21              |    |
| 1               | 648.83         | SGU60            | 6.00        | 4.70    | 18.87 | 8.47               |    |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |  |
|------------------------|----------------|-------|-------------|------------------------|--|
|                        |                |       |             | FS                     |  |
| 5                      | 654.17         | SGU60 | 6.00        | 11.88                  |  |
| 4                      | 652.83         | SGU60 | 6.00        | 11.22                  |  |
| 3                      | 651.50         | SGU60 | 6.00        | 8.61                   |  |
| 2                      | 650.17         | SGU60 | 6.00        | 7.07                   |  |
| 1                      | 648.83         | SGU60 | 6.00        | 6.05                   |  |



|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #18 at Station 334.50                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 7.00    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 7.00 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.83 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

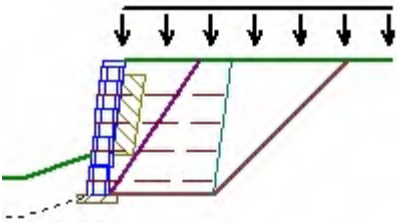
- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |      | FS               |        |                    |
|------------------|------|------------------|--------|--------------------|
| Bearing Capacity | 6.21 | Bearing Pressure | 938.26 | lb/ft <sup>2</sup> |
| Overturning      | 6.92 | Max Eccentricity | 0.09   | ft                 |
| Base Sliding     | 2.76 |                  |        |                    |
| Crest Toppling   | 1.88 |                  |        |                    |
| Internal Sliding | 5.24 |                  |        |                    |

| Internal Static |                | Internal Sliding |             | Pullout |       | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|-------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS    | FS                 | FS |
| 5               | 653.50         | SGU60            | 6.00        | 22.89   | 5.59  | 24.13              |    |
| 4               | 652.83         | SGU60            | 6.00        | 15.73   | 10.19 | 26.54              |    |
| 3               | 651.50         | SGU60            | 6.00        | 9.53    | 11.67 | 14.74              |    |
| 2               | 650.17         | SGU60            | 6.00        | 6.78    | 15.18 | 11.37              |    |
| 1               | 648.83         | SGU60            | 6.00        | 5.24    | 18.66 | 9.26               |    |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 5                      | 653.50         | SGU60 | 6.00        | 15.11                  |
| 4                      | 652.83         | SGU60 | 6.00        | 16.92                  |
| 3                      | 651.50         | SGU60 | 6.00        | 9.72                   |
| 2                      | 650.17         | SGU60 | 6.00        | 7.75                   |
| 1                      | 648.83         | SGU60 | 6.00        | 6.51                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #19 at Station 342.75                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 6.33    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 6.33 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.83 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | CI  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |      | FS               |        |                    |
|------------------|------|------------------|--------|--------------------|
| Bearing Capacity | 6.97 | Bearing Pressure | 846.37 | lb/ft <sup>2</sup> |
| Overturning      | 8.14 | Max Eccentricity | 0.06   | ft                 |
| Base Sliding     | 2.99 |                  |        |                    |
| Crest Toppling   | 1.88 |                  |        |                    |
| Internal Sliding | 5.91 |                  |        |                    |

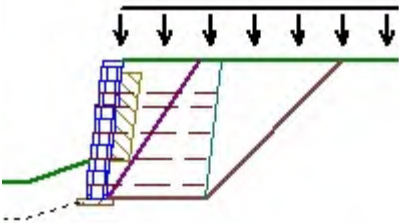
| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS                 | FS    |
| 4               | 652.83         | SGU60            | 6.00        | 22.89              | 18.96 |
| 3               | 651.50         | SGU60            | 6.00        | 11.90              | 17.31 |
| 2               | 650.17         | SGU60            | 6.00        | 7.93               | 12.84 |
| 1               | 648.83         | SGU60            | 6.00        | 5.91               | 10.21 |

| Facing Static |                | Connection Strength |             |
|---------------|----------------|---------------------|-------------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] |
| 4             | 652.83         | SGU60               | 6.00        |



| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 3                      | 651.50         | SGU60 | 6.00        | 11.22                  |
| 2                      | 650.17         | SGU60 | 6.00        | 8.61                   |
| 1                      | 648.83         | SGU60 | 6.00        | 7.07                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #20 at Station 359.25                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 7.00    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 7.00 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.83 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

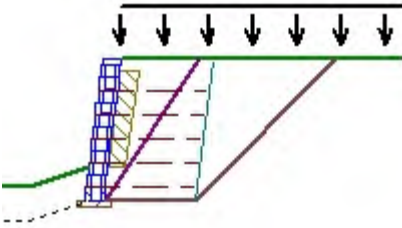
- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |      | FS               |        |                    |
|------------------|------|------------------|--------|--------------------|
| Bearing Capacity | 6.21 | Bearing Pressure | 938.26 | lb/ft <sup>2</sup> |
| Overturning      | 6.92 | Max Eccentricity | 0.09   | ft                 |
| Base Sliding     | 2.76 |                  |        |                    |
| Crest Toppling   | 1.88 |                  |        |                    |
| Internal Sliding | 5.24 |                  |        |                    |

| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS                 | FS    |
| 5               | 653.50         | SGU60            | 6.00        | 22.89              | 24.13 |
| 4               | 652.83         | SGU60            | 6.00        | 15.73              | 26.54 |
| 3               | 651.50         | SGU60            | 6.00        | 9.53               | 14.74 |
| 2               | 650.17         | SGU60            | 6.00        | 6.78               | 11.37 |
| 1               | 648.83         | SGU60            | 6.00        | 5.24               | 9.26  |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 5                      | 653.50         | SGU60 | 6.00        | 15.11                  |
| 4                      | 652.83         | SGU60 | 6.00        | 16.92                  |
| 3                      | 651.50         | SGU60 | 6.00        | 9.72                   |
| 2                      | 650.17         | SGU60 | 6.00        | 7.75                   |
| 1                      | 648.83         | SGU60 | 6.00        | 6.51                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #21 at Station 372.00                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 7.67    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 7.67 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.83 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

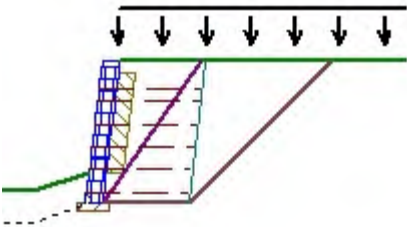
| External Static  |      | FS               |         |                    |
|------------------|------|------------------|---------|--------------------|
| Bearing Capacity | 5.55 | Bearing Pressure | 1034.91 | lb/ft <sup>2</sup> |
| Overturning      | 5.97 | Max Eccentricity | 0.14    | ft                 |
| Base Sliding     | 2.56 |                  |         |                    |
| Crest Toppling   | 1.88 |                  |         |                    |
| Internal Sliding | 4.70 |                  |         |                    |

| Internal Static |                | Internal Sliding |             | Pullout |       | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|-------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS    | FS                 | FS |
| 5               | 654.17         | SGU60            | 6.00        | 22.89   | 3.58  | 18.96              |    |
| 4               | 652.83         | SGU60            | 6.00        | 11.90   | 8.55  | 17.31              |    |
| 3               | 651.50         | SGU60            | 6.00        | 7.93    | 12.01 | 12.84              |    |
| 2               | 650.17         | SGU60            | 6.00        | 5.91    | 15.44 | 10.21              |    |
| 1               | 648.83         | SGU60            | 6.00        | 4.70    | 18.87 | 8.47               |    |



| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |  |
|------------------------|----------------|-------|-------------|------------------------|--|
|                        |                |       |             | FS                     |  |
| 5                      | 654.17         | SGU60 | 6.00        | 11.88                  |  |
| 4                      | 652.83         | SGU60 | 6.00        | 11.22                  |  |
| 3                      | 651.50         | SGU60 | 6.00        | 8.61                   |  |
| 2                      | 650.17         | SGU60 | 6.00        | 7.07                   |  |
| 1                      | 648.83         | SGU60 | 6.00        | 6.05                   |  |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #22 at Station 381.75                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 8.33    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 8.33 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.83 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

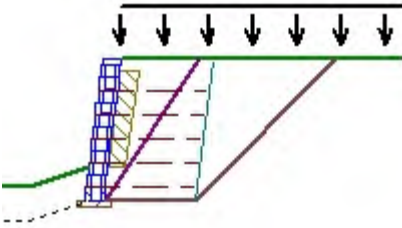
- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |      | FS               |         |                    |
|------------------|------|------------------|---------|--------------------|
| Bearing Capacity | 4.96 | Bearing Pressure | 1137.25 | lb/ft <sup>2</sup> |
| Overturning      | 5.21 | Max Eccentricity | 0.19    | ft                 |
| Base Sliding     | 2.38 |                  |         |                    |
| Crest Toppling   | 1.88 |                  |         |                    |
| Internal Sliding | 4.26 |                  |         |                    |

| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS                 | FS    |
| 6               | 654.83         | SGU60            | 6.00        | 22.89              | 24.13 |
| 5               | 654.17         | SGU60            | 6.00        | 15.73              | 26.54 |
| 4               | 652.83         | SGU60            | 6.00        | 9.53               | 14.74 |
| 3               | 651.50         | SGU60            | 6.00        | 6.78               | 11.37 |
| 2               | 650.17         | SGU60            | 6.00        | 5.24               | 9.26  |
| 1               | 648.83         | SGU60            | 6.00        | 4.26               | 7.81  |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 6                      | 654.83         | SGU60 | 6.00        | 15.11                  |
| 5                      | 654.17         | SGU60 | 6.00        | 16.92                  |
| 4                      | 652.83         | SGU60 | 6.00        | 9.72                   |
| 3                      | 651.50         | SGU60 | 6.00        | 7.75                   |
| 2                      | 650.17         | SGU60 | 6.00        | 6.51                   |
| 1                      | 648.83         | SGU60 | 6.00        | 5.66                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #23 at Station 578.25                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 7.67    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 7.67 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.83 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

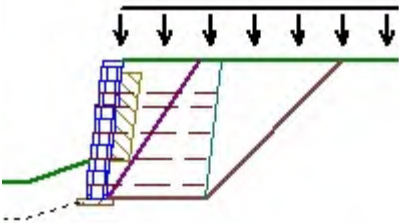
| External Static  |      | FS               |         |                    |
|------------------|------|------------------|---------|--------------------|
| Bearing Capacity | 5.55 | Bearing Pressure | 1034.91 | lb/ft <sup>2</sup> |
| Overturning      | 5.97 | Max Eccentricity | 0.14    | ft                 |
| Base Sliding     | 2.56 |                  |         |                    |
| Crest Toppling   | 1.88 |                  |         |                    |
| Internal Sliding | 4.70 |                  |         |                    |

| Internal Static |                | Internal Sliding |             | Pullout |       | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|-------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS    | FS                 | FS |
| 5               | 654.17         | SGU60            | 6.00        | 22.89   | 3.58  | 18.96              |    |
| 4               | 652.83         | SGU60            | 6.00        | 11.90   | 8.55  | 17.31              |    |
| 3               | 651.50         | SGU60            | 6.00        | 7.93    | 12.01 | 12.84              |    |
| 2               | 650.17         | SGU60            | 6.00        | 5.91    | 15.44 | 10.21              |    |
| 1               | 648.83         | SGU60            | 6.00        | 4.70    | 18.87 | 8.47               |    |



| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |  |
|------------------------|----------------|-------|-------------|------------------------|--|
|                        |                |       |             | FS                     |  |
| 5                      | 654.17         | SGU60 | 6.00        | 11.88                  |  |
| 4                      | 652.83         | SGU60 | 6.00        | 11.22                  |  |
| 3                      | 651.50         | SGU60 | 6.00        | 8.61                   |  |
| 2                      | 650.17         | SGU60 | 6.00        | 7.07                   |  |
| 1                      | 648.83         | SGU60 | 6.00        | 6.05                   |  |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #24 at Station 582.75                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 7.00    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 7.00 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.83 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

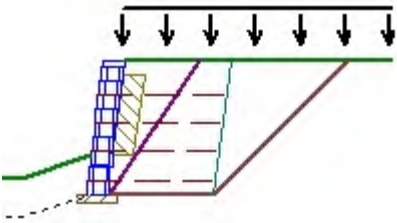
- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |      | FS               |                           |
|------------------|------|------------------|---------------------------|
| Bearing Capacity | 6.21 | Bearing Pressure | 938.26 lb/ft <sup>2</sup> |
| Overturning      | 6.92 | Max Eccentricity | 0.09 ft                   |
| Base Sliding     | 2.76 |                  |                           |
| Crest Toppling   | 1.88 |                  |                           |
| Internal Sliding | 5.24 |                  |                           |

| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS                 | FS    |
| 5               | 653.50         | SGU60            | 6.00        | 22.89              | 24.13 |
| 4               | 652.83         | SGU60            | 6.00        | 15.73              | 26.54 |
| 3               | 651.50         | SGU60            | 6.00        | 9.53               | 14.74 |
| 2               | 650.17         | SGU60            | 6.00        | 6.78               | 11.37 |
| 1               | 648.83         | SGU60            | 6.00        | 5.24               | 9.26  |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 5                      | 653.50         | SGU60 | 6.00        | 15.11                  |
| 4                      | 652.83         | SGU60 | 6.00        | 16.92                  |
| 3                      | 651.50         | SGU60 | 6.00        | 9.72                   |
| 2                      | 650.17         | SGU60 | 6.00        | 7.75                   |
| 1                      | 648.83         | SGU60 | 6.00        | 6.51                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #25 at Station 587.25                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 6.33    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 6.33 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.83 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

| Minimum Factors of Safety |                  |      |       |                    |      |      |                     |       |
|---------------------------|------------------|------|-------|--------------------|------|------|---------------------|-------|
| Reinforced                |                  |      |       |                    |      |      |                     |       |
| External                  |                  |      | Value | Internal           |      |      | Facing              | Value |
| FSSl                      | Base Sliding     | 1.50 | FSSl  | Internal Sliding   | 1.50 | FSCs | Connection Strength | 1.50  |
| FSbc                      | Bearing Capacity | 2.00 | FSpO  | Pullout            | 1.50 | FSsc | Facing Shear        | 1.50  |
| FSct                      | Crest Toppling   | 1.50 | FSto  | Tensile Overstress | 1.50 |      |                     |       |
| FSot                      | Overturning      | 2.00 |       |                    |      |      |                     |       |

| Reinforcements |                |                                                                       |      |     |      |      |                |
|----------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|
| SGU60 - SGU60  |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |
| Tult           | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid           | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |

| Connection/Shear Properties |                |      |                |      |                |         |                |
|-----------------------------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1                        | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max                     | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |      | FS               |        |                    |
|------------------|------|------------------|--------|--------------------|
| Bearing Capacity | 6.97 | Bearing Pressure | 846.37 | lb/ft <sup>2</sup> |
| Overturning      | 8.14 | Max Eccentricity | 0.06   | ft                 |
| Base Sliding     | 2.99 |                  |        |                    |
| Crest Toppling   | 1.88 |                  |        |                    |
| Internal Sliding | 5.91 |                  |        |                    |

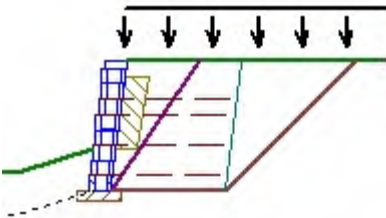
| Internal Static |                | Internal Sliding |             |       | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|-------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS    | FS                 | FS    |
| 4               | 652.83         | SGU60            | 6.00        | 22.89 | 5.20               | 18.96 |
| 3               | 651.50         | SGU60            | 6.00        | 11.90 | 11.20              | 17.31 |
| 2               | 650.17         | SGU60            | 6.00        | 7.93  | 14.86              | 12.84 |
| 1               | 648.83         | SGU60            | 6.00        | 5.91  | 18.40              | 10.21 |

| Facing Static |                | Connection Strength |             |       |
|---------------|----------------|---------------------|-------------|-------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] | FS    |
| 4             | 652.83         | SGU60               | 6.00        | 11.88 |



| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 3                      | 651.50         | SGU60 | 6.00        | 11.22                  |
| 2                      | 650.17         | SGU60 | 6.00        | 8.61                   |
| 1                      | 648.83         | SGU60 | 6.00        | 7.07                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #26 at Station 591.75                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 5.67    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 5.67 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.83 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

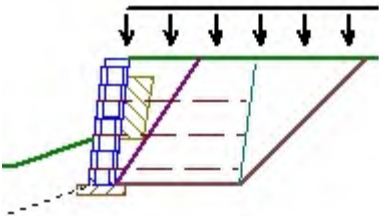
| External Static  |      | FS               |                           |
|------------------|------|------------------|---------------------------|
| Bearing Capacity | 7.86 | Bearing Pressure | 758.46 lb/ft <sup>2</sup> |
| Overturning      | 9.74 | Max Eccentricity | 0.03 ft                   |
| Base Sliding     | 3.27 |                  |                           |
| Crest Toppling   | 1.88 |                  |                           |
| Internal Sliding | 6.78 |                  |                           |

| Internal Static |                | Internal Sliding |             | Pullout |       | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|-------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS    | FS                 | FS |
| 4               | 652.17         | SGU60            | 6.00        | 22.89   | 7.65  | 24.13              |    |
| 3               | 651.50         | SGU60            | 6.00        | 15.73   | 13.36 | 26.54              |    |
| 2               | 650.17         | SGU60            | 6.00        | 9.53    | 14.43 | 14.74              |    |
| 1               | 648.83         | SGU60            | 6.00        | 6.78    | 18.10 | 11.37              |    |

|               |                |       |             | Connection |
|---------------|----------------|-------|-------------|------------|
| Facing Static |                |       |             | Strength   |
| Layer         | Elevation [ft] | Rein. | Length [ft] | FS         |
| 4             | 652.17         | SGU60 | 6.00        | 15.11      |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 3                      | 651.50         | SGU60 | 6.00        | 16.92                  |
| 2                      | 650.17         | SGU60 | 6.00        | 9.72                   |
| 1                      | 648.83         | SGU60 | 6.00        | 7.75                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #27 at Station 597.00                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 5.00    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 5.00 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.83 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid          | 1.20           | Cds                                                                   | 0.90 | CI  | 0.90 |      |                |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |       | FS               |                           |
|------------------|-------|------------------|---------------------------|
| Bearing Capacity | 8.92  | Bearing Pressure | 673.82 lb/ft <sup>2</sup> |
| Overturning      | 11.89 | Max Eccentricity | 0.00 ft                   |
| Base Sliding     | 3.60  |                  |                           |
| Crest Toppling   | 1.88  |                  |                           |
| Internal Sliding | 7.93  |                  |                           |

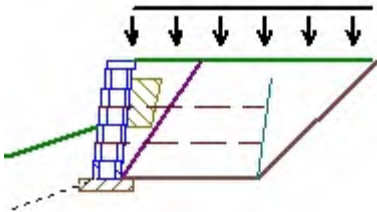
| Internal Static |                | Internal Sliding |             | Pullout |       | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|-------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS    | FS                 | FS |
| 3               | 651.50         | SGU60            | 6.00        | 22.89   | 6.82  | 18.96              |    |
| 2               | 650.17         | SGU60            | 6.00        | 11.90   | 13.86 | 17.31              |    |
| 1               | 648.83         | SGU60            | 6.00        | 7.93    | 17.71 | 12.84              |    |

| Facing Static |                |       |             | Connection Strength |  |
|---------------|----------------|-------|-------------|---------------------|--|
| Layer         | Elevation [ft] | Rein. | Length [ft] | FS                  |  |
| 3             | 651.50         | SGU60 | 6.00        | 11.88               |  |
| 2             | 650.17         | SGU60 | 6.00        | 11.22               |  |



| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 1                      | 648.83         | SGU60 | 6.00        | 8.61                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #28 at Station 600.75                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 4.33    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 4.33 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.92 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

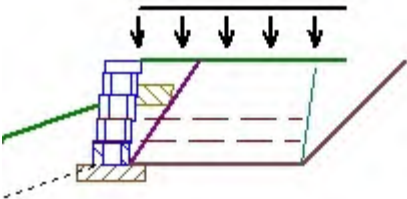
- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |       | FS               |        |                    |
|------------------|-------|------------------|--------|--------------------|
| Bearing Capacity | 10.13 | Bearing Pressure | 594.30 | lb/ft <sup>2</sup> |
| Overturning      | 14.91 | Max Eccentricity | 0.00   | ft                 |
| Base Sliding     | 4.01  |                  |        |                    |
| Crest Toppling   | 1.88  |                  |        |                    |
| Internal Sliding | 11.90 |                  |        |                    |

| Internal Static |                | Internal Sliding |             | Pullout |      | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS   | FS                 | FS |
| 2               | 651.50         | SGU60            | 6.00        | 22.89   | 7.63 | 18.96              |    |
| 1               | 650.17         | SGU60            | 6.00        | 11.90   | 9.32 | 10.62              |    |

| Facing Static |                | Connection Strength |             |       |
|---------------|----------------|---------------------|-------------|-------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] | FS    |
| 2             | 651.50         | SGU60               | 6.00        | 11.88 |
| 1             | 650.17         | SGU60               | 6.00        | 6.88  |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #29 at Station 602.25                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 3.00    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 3.00 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.75 ft | Wall Batter  | 7.13°   | Toe Slope    | 18.43°  | Toe Offset   | 9.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSScs  | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | CI  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |       | FS               |        |                    |
|------------------|-------|------------------|--------|--------------------|
| Bearing Capacity | 13.77 | Bearing Pressure | 437.08 | lb/ft <sup>2</sup> |
| Overturning      | 26.24 | Max Eccentricity | 0.00   | ft                 |
| Base Sliding     | 5.19  |                  |        |                    |
| Crest Toppling   | 1.88  |                  |        |                    |
| Internal Sliding | 15.73 |                  |        |                    |

| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS                 | FS    |
| 2               | 650.83         | SGU60            | 6.00        | 22.89              | 24.13 |
| 1               | 650.17         | SGU60            | 6.00        | 15.73              | 26.54 |

| Facing Static |                | Connection Strength |             |
|---------------|----------------|---------------------|-------------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] |
| 2             | 650.83         | SGU60               | 6.00        |
| 1             | 650.17         | SGU60               | 6.00        |

# **Project: 2024.139 - Heritage Crossing**

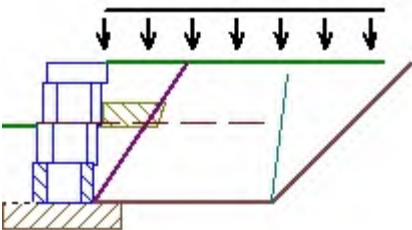
**Site: Western Springs, IL**

**Date: 12/16/2024**

**Wall: Wall No 2**



|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #1 at Station 0.00                                |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 2.33    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 2.33 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.27 ft | Wall Batter  | 7.13°   | Toe Slope    | 0.00°   | Toe Offset   | 0.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSScs  | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid          | 1.20           | Cds                                                                   | 0.90 | CI  | 0.90 |      |                |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

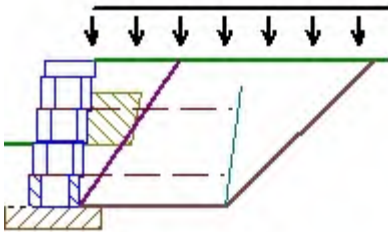
- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |       | FS               |                           |
|------------------|-------|------------------|---------------------------|
| Bearing Capacity | 11.33 | Bearing Pressure | 350.87 lb/ft <sup>2</sup> |
| Overturning      | 17.21 | Max Eccentricity | 0.02 ft                   |
| Base Sliding     | 4.05  |                  |                           |
| Crest Toppling   | 3.46  |                  |                           |
| Internal Sliding | 36.81 |                  |                           |

| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS                 | FS    |
| 1               | 660.17         | SGU60            | 4.00        | 36.81              | 18.96 |

| Facing Static |                | Connection Strength |             |
|---------------|----------------|---------------------|-------------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] |
| 1             | 660.17         | SGU60               | 4.00        |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #2 at Station 2.25                                |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 3.00    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 3.00 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.27 ft | Wall Batter  | 7.13°   | Toe Slope    | 0.00°   | Toe Offset   | 0.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSScs  | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSSc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

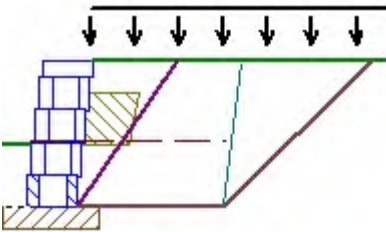
- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |       | FS               |        |                    |
|------------------|-------|------------------|--------|--------------------|
| Bearing Capacity | 9.11  | Bearing Pressure | 432.95 | lb/ft <sup>2</sup> |
| Overturning      | 11.93 | Max Eccentricity | 0.03   | ft                 |
| Base Sliding     | 3.46  |                  |        |                    |
| Crest Toppling   | 3.46  |                  |        |                    |
| Internal Sliding | 13.42 |                  |        |                    |

| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS                 | FS    |
| 2               | 660.17         | SGU60            | 4.00        | 36.81              | 31.85 |
| 1               | 658.83         | SGU60            | 4.00        | 13.42              | 20.95 |

| Facing Static |                | Connection Strength |             |
|---------------|----------------|---------------------|-------------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] |
| 2             | 660.17         | SGU60               | 4.00        |
| 1             | 658.83         | SGU60               | 4.00        |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #3 at Station 3.75                                |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 3.00    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 3.00 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.24 ft | Wall Batter  | 7.13°   | Toe Slope    | 0.00°   | Toe Offset   | 0.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSScs  | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSSc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | lu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

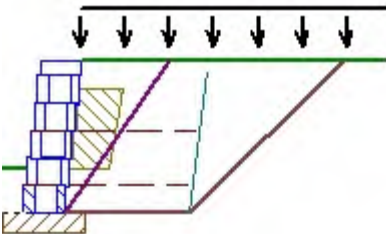
- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |       | FS               |                           |
|------------------|-------|------------------|---------------------------|
| Bearing Capacity | 9.11  | Bearing Pressure | 432.95 lb/ft <sup>2</sup> |
| Overturning      | 11.93 | Max Eccentricity | 0.03 ft                   |
| Base Sliding     | 3.46  |                  |                           |
| Crest Toppling   | 1.88  |                  |                           |
| Internal Sliding | 20.09 |                  |                           |

| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS                 | FS    |
| 1               | 658.83         | SGU60            | 4.00        | 20.09              | 12.64 |

| Facing Static |                | Connection Strength |             |
|---------------|----------------|---------------------|-------------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] |
| 1             | 658.83         | SGU60               | 4.00        |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #4 at Station 5.25                                |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 3.67    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 3.67 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.07 ft | Wall Batter  | 7.13°   | Toe Slope    | 0.00°   | Toe Offset   | 0.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSScs  | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

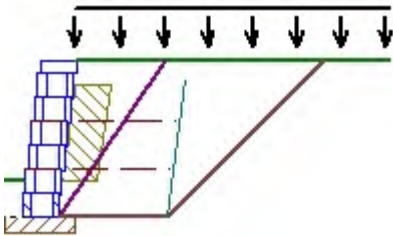
| External Static  |      | FS               |        |                    |
|------------------|------|------------------|--------|--------------------|
| Bearing Capacity | 7.50 | Bearing Pressure | 519.04 | lb/ft <sup>2</sup> |
| Overturning      | 8.84 | Max Eccentricity | 0.06   | ft                 |
| Base Sliding     | 3.02 |                  |        |                    |
| Crest Toppling   | 1.88 |                  |        |                    |
| Internal Sliding | 9.92 |                  |        |                    |

| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS                 | FS    |
| 2               | 658.83         | SGU60            | 4.00        | 20.09              | 18.96 |
| 1               | 657.50         | SGU60            | 4.00        | 9.92               | 17.31 |

| Facing Static |                | Connection Strength |             |
|---------------|----------------|---------------------|-------------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] |
| 2             | 658.83         | SGU60               | 4.00        |
| 1             | 657.50         | SGU60               | 4.00        |



|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #5 at Station 7.50                                |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 4.33    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 4.33 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.03 ft | Wall Batter  | 7.13°   | Toe Slope    | 0.00°   | Toe Offset   | 0.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSScs  | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

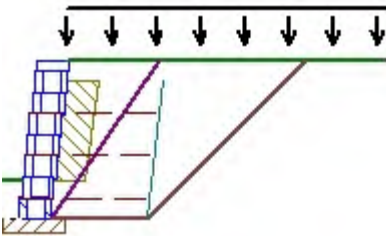
- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |      | FS               |        |                    |
|------------------|------|------------------|--------|--------------------|
| Bearing Capacity | 6.26 | Bearing Pressure | 610.65 | lb/ft <sup>2</sup> |
| Overturning      | 6.86 | Max Eccentricity | 0.10   | ft                 |
| Base Sliding     | 2.67 |                  |        |                    |
| Crest Toppling   | 1.88 |                  |        |                    |
| Internal Sliding | 9.92 |                  |        |                    |

| Internal Static |                | Internal Sliding |             | Pullout |      | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS   | FS                 | FS |
| 2               | 658.83         | SGU60            | 4.00        | 20.09   | 3.28 | 18.96              |    |
| 1               | 657.50         | SGU60            | 4.00        | 9.92    | 4.94 | 10.62              |    |

|               |                |       |             | Connection |
|---------------|----------------|-------|-------------|------------|
| Facing Static |                |       |             | Strength   |
| Layer         | Elevation [ft] | Rein. | Length [ft] | FS         |
| 2             | 658.83         | SGU60 | 4.00        | 11.88      |
| 1             | 657.50         | SGU60 | 4.00        | 6.88       |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #6 at Station 12.00                               |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 5.00    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 5.00 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.18 ft | Wall Batter  | 7.13°   | Toe Slope    | 0.00°   | Toe Offset   | 0.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

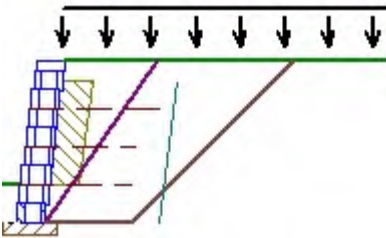
| External Static  |      | FS               |        |                    |
|------------------|------|------------------|--------|--------------------|
| Bearing Capacity | 5.25 | Bearing Pressure | 709.60 | lb/ft <sup>2</sup> |
| Overturning      | 5.50 | Max Eccentricity | 0.14   | ft                 |
| Base Sliding     | 2.40 |                  |        |                    |
| Crest Toppling   | 1.88 |                  |        |                    |
| Internal Sliding | 6.40 |                  |        |                    |

| Internal Static |                | Internal Sliding |             | Pullout |       | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|-------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS    | FS                 | FS |
| 3               | 658.83         | SGU60            | 4.00        | 20.09   | 2.47  | 18.96              |    |
| 2               | 657.50         | SGU60            | 4.00        | 9.92    | 6.72  | 17.31              |    |
| 1               | 656.17         | SGU60            | 4.00        | 6.40    | 10.05 | 12.84              |    |

| Facing Static |                | Connection Strength |             | FS    |    |
|---------------|----------------|---------------------|-------------|-------|----|
| Layer         | Elevation [ft] | Rein.               | Length [ft] | FS    | FS |
| 3             | 658.83         | SGU60               | 4.00        | 11.88 |    |
| 2             | 657.50         | SGU60               | 4.00        | 11.22 |    |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 1                      | 656.17         | SGU60 | 4.00        | 8.61                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #7 at Station 14.25                               |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 5.67    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 5.67 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.35 ft | Wall Batter  | 7.13°   | Toe Slope    | 0.00°   | Toe Offset   | 0.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |      | FS               |        |                    |
|------------------|------|------------------|--------|--------------------|
| Bearing Capacity | 4.42 | Bearing Pressure | 818.09 | lb/ft <sup>2</sup> |
| Overturning      | 4.53 | Max Eccentricity | 0.20   | ft                 |
| Base Sliding     | 2.18 |                  |        |                    |
| Crest Toppling   | 1.88 |                  |        |                    |
| Internal Sliding | 6.40 |                  |        |                    |

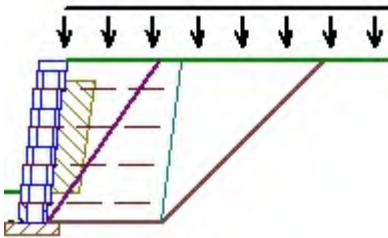
| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS                 | FS    |
| 3               | 658.83         | SGU60            | 5.00        | 21.49              | 18.96 |
| 2               | 657.50         | SGU60            | 4.00        | 9.92               | 17.31 |
| 1               | 656.17         | SGU60            | 4.00        | 6.40               | 8.04  |

| Facing Static |                | Connection Strength |             |
|---------------|----------------|---------------------|-------------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] |
| 3             | 658.83         | SGU60               | 5.00        |
| 2             | 657.50         | SGU60               | 4.00        |



| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 1                      | 656.17         | SGU60 | 4.00        | 5.39                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #8 at Station 15.75                               |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 5.67    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 5.67 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.02 ft | Wall Batter  | 7.13°   | Toe Slope    | 0.00°   | Toe Offset   | 0.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

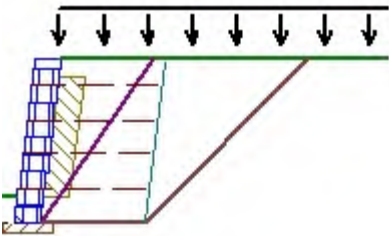
| External Static  |      | FS               |        |                    |
|------------------|------|------------------|--------|--------------------|
| Bearing Capacity | 6.22 | Bearing Pressure | 775.45 | lb/ft <sup>2</sup> |
| Overturning      | 6.89 | Max Eccentricity | 0.10   | ft                 |
| Base Sliding     | 2.72 |                  |        |                    |
| Crest Toppling   | 3.46 |                  |        |                    |
| Internal Sliding | 6.09 |                  |        |                    |

| Internal Static |                |       |             | Internal Sliding | Pullout | Tensile Overstress |
|-----------------|----------------|-------|-------------|------------------|---------|--------------------|
| Layer           | Elevation [ft] | Rein. | Length [ft] | FS               | FS      | FS                 |
| 4               | 658.83         | SGU60 | 5.00        | 38.58            | 3.05    | 31.85              |
| 3               | 657.50         | SGU60 | 5.00        | 14.57            | 7.19    | 20.95              |
| 2               | 656.17         | SGU60 | 5.00        | 8.67             | 10.72   | 14.74              |
| 1               | 654.83         | SGU60 | 5.00        | 6.09             | 14.19   | 11.37              |

| Facing Static |                |       |             | Connection Strength |
|---------------|----------------|-------|-------------|---------------------|
| Layer         | Elevation [ft] | Rein. | Length [ft] | FS                  |
| 4             | 658.83         | SGU60 | 5.00        | 19.60               |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 3                      | 657.50         | SGU60 | 5.00        | 13.36                  |
| 2                      | 656.17         | SGU60 | 5.00        | 9.72                   |
| 1                      | 654.83         | SGU60 | 5.00        | 7.75                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #9 at Station 18.75                               |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 6.33    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 6.33 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.05 ft | Wall Batter  | 7.13°   | Toe Slope    | 0.00°   | Toe Offset   | 0.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |      | FS               |        |                    |
|------------------|------|------------------|--------|--------------------|
| Bearing Capacity | 5.42 | Bearing Pressure | 873.04 | lb/ft <sup>2</sup> |
| Overturning      | 5.77 | Max Eccentricity | 0.14   | ft                 |
| Base Sliding     | 2.49 |                  |        |                    |
| Crest Toppling   | 3.46 |                  |        |                    |
| Internal Sliding | 6.09 |                  |        |                    |

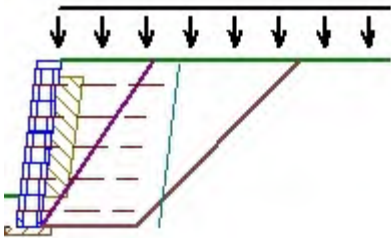
| Internal Static |                | Internal Sliding |             | Pullout |      | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS   | FS                 | FS |
| 4               | 658.83         | SGU60            | 5.00        | 38.58   | 2.24 | 31.85              |    |
| 3               | 657.50         | SGU60            | 5.00        | 14.57   | 5.94 | 20.95              |    |
| 2               | 656.17         | SGU60            | 5.00        | 8.67    | 9.33 | 14.74              |    |
| 1               | 654.83         | SGU60            | 5.00        | 6.09    | 8.03 | 7.17               |    |

| Facing Static |                | Connection Strength |             |       |
|---------------|----------------|---------------------|-------------|-------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] | FS    |
| 4             | 658.83         | SGU60               | 5.00        | 19.60 |



| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 3                      | 657.50         | SGU60 | 5.00        | 13.36                  |
| 2                      | 656.17         | SGU60 | 5.00        | 9.72                   |
| 1                      | 654.83         | SGU60 | 5.00        | 4.89                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #10 at Station 20.25                              |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 7.00    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 7.00 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.27 ft | Wall Batter  | 7.13°   | Toe Slope    | 0.00°   | Toe Offset   | 0.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FScs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |      | FS               |        |                    |
|------------------|------|------------------|--------|--------------------|
| Bearing Capacity | 4.73 | Bearing Pressure | 977.77 | lb/ft <sup>2</sup> |
| Overturning      | 4.92 | Max Eccentricity | 0.19   | ft                 |
| Base Sliding     | 2.30 |                  |        |                    |
| Crest Toppling   | 3.46 |                  |        |                    |
| Internal Sliding | 4.67 |                  |        |                    |

| Internal Static |                | Internal Sliding |             | Pullout |       | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|-------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS    | FS                 | FS |
| 5               | 658.83         | SGU60            | 6.00        | 40.34   | 3.61  | 31.85              |    |
| 4               | 657.50         | SGU60            | 5.00        | 14.57   | 4.68  | 20.95              |    |
| 3               | 656.17         | SGU60            | 5.00        | 8.67    | 7.95  | 14.74              |    |
| 2               | 654.83         | SGU60            | 5.00        | 6.09    | 11.27 | 11.37              |    |
| 1               | 653.50         | SGU60            | 5.00        | 4.67    | 14.63 | 9.26               |    |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |  |
|------------------------|----------------|-------|-------------|------------------------|--|
|                        |                |       |             | FS                     |  |
| 5                      | 658.83         | SGU60 | 6.00        | 19.60                  |  |
| 4                      | 657.50         | SGU60 | 5.00        | 13.36                  |  |
| 3                      | 656.17         | SGU60 | 5.00        | 9.72                   |  |
| 2                      | 654.83         | SGU60 | 5.00        | 7.75                   |  |
| 1                      | 653.50         | SGU60 | 5.00        | 6.51                   |  |

Section

Report Date

Designer

Design Standard

Design

Unit of Measure

Selected Facing Unit

Licensior/Product Line:

Name:

Seismic As

#11 at Station 32.25

December 16, 2024

mK

National Concrete Masonry Association 3rd Edition

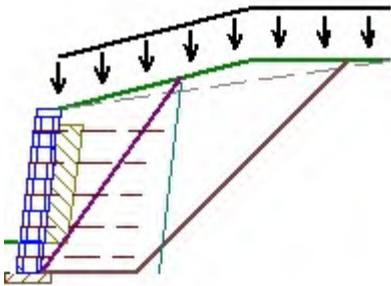
Static

U.S./Imperial

Anchor Wall Systems, Inc.

Diamond Pro

N/A



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 7.00    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 7.00 ft | Crest Offset | 8.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.27 ft | Wall Batter  | 7.13°   | Toe Slope    | 0.00°   | Toe Offset   | 0.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

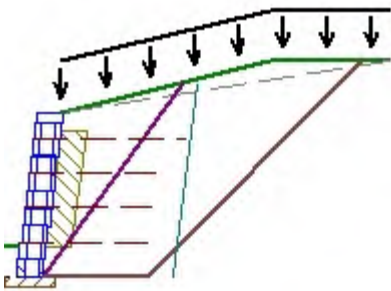
| External Static  |      | FS               |         |                    |
|------------------|------|------------------|---------|--------------------|
| Bearing Capacity | 3.75 | Bearing Pressure | 1132.83 | lb/ft <sup>2</sup> |
| Overturning      | 3.40 | Max Eccentricity | 0.38    | ft                 |
| Base Sliding     | 1.74 |                  |         |                    |
| Crest Toppling   | 2.79 |                  |         |                    |
| Internal Sliding | 3.39 |                  |         |                    |

| Internal Static |                |       |             | Internal Sliding | Pullout | Tensile Overstress |
|-----------------|----------------|-------|-------------|------------------|---------|--------------------|
| Layer           | Elevation [ft] | Rein. | Length [ft] | FS               | FS      | FS                 |
| 5               | 658.83         | SGU60 | 6.00        | 14.23            | 5.85    | 29.17              |
| 4               | 657.50         | SGU60 | 5.00        | 7.87             | 5.02    | 19.19              |
| 3               | 656.17         | SGU60 | 5.00        | 5.48             | 8.05    | 13.51              |
| 2               | 654.83         | SGU60 | 5.00        | 4.19             | 11.06   | 10.42              |
| 1               | 653.50         | SGU60 | 5.00        | 3.39             | 14.05   | 8.48               |



| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 5                      | 658.83         | SGU60 | 6.00        | 17.96                  |
| 4                      | 657.50         | SGU60 | 5.00        | 12.24                  |
| 3                      | 656.17         | SGU60 | 5.00        | 8.91                   |
| 2                      | 654.83         | SGU60 | 5.00        | 7.10                   |
| 1                      | 653.50         | SGU60 | 5.00        | 5.97                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #12 at Station 35.25                              |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 6.33    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 6.33 ft | Crest Offset | 8.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.12 ft | Wall Batter  | 7.13°   | Toe Slope    | 0.00°   | Toe Offset   | 0.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

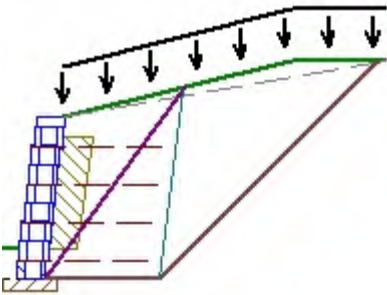
| External Static  |      | FS               |         |                    |
|------------------|------|------------------|---------|--------------------|
| Bearing Capacity | 4.40 | Bearing Pressure | 1003.02 | lb/ft <sup>2</sup> |
| Overturning      | 3.86 | Max Eccentricity | 0.30    | ft                 |
| Base Sliding     | 1.84 |                  |         |                    |
| Crest Toppling   | 2.79 |                  |         |                    |
| Internal Sliding | 4.16 |                  |         |                    |

| Internal Static |                |       |             | Internal Sliding |            | Tensile Overstress |       |
|-----------------|----------------|-------|-------------|------------------|------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein. | Length [ft] | FS               | Pullout FS | FS                 | FS    |
| 4               | 658.83         | SGU60 | 6.00        | 14.10            | 7.14       |                    | 28.88 |
| 3               | 657.50         | SGU60 | 5.00        | 7.80             | 6.40       |                    | 19.00 |
| 2               | 656.17         | SGU60 | 5.00        | 5.43             | 9.39       |                    | 13.37 |
| 1               | 654.83         | SGU60 | 5.00        | 4.16             | 7.79       |                    | 6.50  |

| Facing Static |                |       |             | Connection Strength |  |
|---------------|----------------|-------|-------------|---------------------|--|
| Layer         | Elevation [ft] | Rein. | Length [ft] | FS                  |  |
| 4             | 658.83         | SGU60 | 6.00        | 17.77               |  |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 3                      | 657.50         | SGU60 | 5.00        | 12.11                  |
| 2                      | 656.17         | SGU60 | 5.00        | 8.82                   |
| 1                      | 654.83         | SGU60 | 5.00        | 4.43                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #13 at Station 39.75                              |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ          |                    |                      |
|-----------------|-----------|------------------|--------------------|----------------------|
| Soil Zone       | Soil Type | Friction Angle φ | Density γ [lb/ft³] | Cohesion Cf [lb/ft²] |
| Infill (i)      | GRA       | 34°              | 120.00             | n/a                  |
| Retained (r)    | SSR       | 28°              | 130.00             | n/a                  |
| Foundation (f)  | SSF       | 28°              | 120.00             | 0.00                 |
| Base (b)        | GW        | 39°              | 140.02             | n/a                  |
| Drainage (d)    | GP        | 38°              | 125.02             | n/a                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 5.67    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 5.67 ft | Crest Offset | 8.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.06 ft | Wall Batter  | 7.13°   | Toe Slope    | 0.00°   | Toe Offset   | 0.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |      | FS               |        |        |
|------------------|------|------------------|--------|--------|
| Bearing Capacity | 5.15 | Bearing Pressure | 884.79 | lb/ft² |
| Overturning      | 4.42 | Max Eccentricity | 0.23   | ft     |
| Base Sliding     | 1.95 |                  |        |        |
| Crest Toppling   | 2.79 |                  |        |        |
| Internal Sliding | 4.11 |                  |        |        |

| Internal Static |                |       |             | Internal Sliding |            | Tensile Overstress |       |
|-----------------|----------------|-------|-------------|------------------|------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein. | Length [ft] | FS               | Pullout FS | FS                 | FS    |
| 4               | 658.83         | SGU60 | 5.00        | 13.39            | 4.20       |                    | 28.50 |
| 3               | 657.50         | SGU60 | 5.00        | 7.71             | 7.70       |                    | 18.75 |
| 2               | 656.17         | SGU60 | 5.00        | 5.37             | 10.64      |                    | 13.20 |
| 1               | 654.83         | SGU60 | 5.00        | 4.11             | 13.58      |                    | 10.18 |

| Facing Static |                |       |             | Connection Strength |  |
|---------------|----------------|-------|-------------|---------------------|--|
| Layer         | Elevation [ft] | Rein. | Length [ft] | FS                  |  |
| 4             | 658.83         | SGU60 | 5.00        | 17.54               |  |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 3                      | 657.50         | SGU60 | 5.00        | 11.95                  |
| 2                      | 656.17         | SGU60 | 5.00        | 8.70                   |
| 1                      | 654.83         | SGU60 | 5.00        | 6.94                   |



Section

Report Date

Designer

Design Standard

Design

Unit of Measure

Selected Facing Unit

Licensors/Product Line:

Name:

Seismic As

#14 at Station 45.75

December 16, 2024

mK

National Concrete Masonry Association 3rd Edition

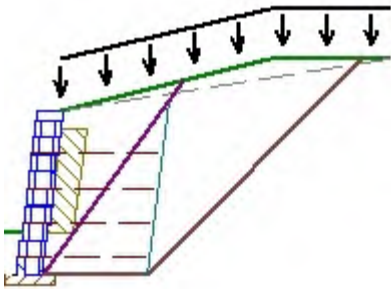
Static

U.S./Imperial

Anchor Wall Systems, Inc.

Diamond Pro

N/A



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 6.33    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 6.33 ft | Crest Offset | 8.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.59 ft | Wall Batter  | 7.13°   | Toe Slope    | 0.00°   | Toe Offset   | 0.00 ft |

| Minimum Factors of Safety |                  |      |       |                    |      |      |                     |       |
|---------------------------|------------------|------|-------|--------------------|------|------|---------------------|-------|
| Reinforced                |                  |      |       |                    |      |      |                     |       |
| External                  |                  |      | Value | Internal           |      |      | Facing              | Value |
| FSSl                      | Base Sliding     | 1.50 | FSSl  | Internal Sliding   | 1.50 | FSCs | Connection Strength | 1.50  |
| FSbc                      | Bearing Capacity | 2.00 | FSpO  | Pullout            | 1.50 | FSsc | Facing Shear        | 1.50  |
| FSct                      | Crest Toppling   | 1.50 | FSto  | Tensile Overstress | 1.50 |      |                     |       |
| FSot                      | Overturning      | 2.00 |       |                    |      |      |                     |       |

| Reinforcements |                |                                                                       |      |     |      |      |                |
|----------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|
| SGU60 - SGU60  |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |
| Tult           | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid           | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |

| Connection/Shear Properties |                |      |                |      |                |         |                |
|-----------------------------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1                        | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max                     | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

\* Analysis does not include Vertical Forces

\* Embedment is not included in Bearing Capacity

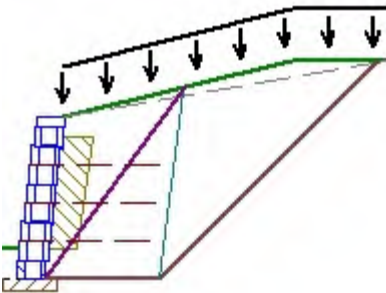
| External Static  |      | FS               |         |                    |
|------------------|------|------------------|---------|--------------------|
| Bearing Capacity | 4.40 | Bearing Pressure | 1003.02 | lb/ft <sup>2</sup> |
| Overturning      | 3.86 | Max Eccentricity | 0.30    | ft                 |
| Base Sliding     | 1.84 |                  |         |                    |
| Crest Toppling   | 1.52 |                  |         |                    |
| Internal Sliding | 3.72 |                  |         |                    |

| Internal Static |                |       |             | Internal Sliding | Pullout | Tensile Overstress |
|-----------------|----------------|-------|-------------|------------------|---------|--------------------|
| Layer           | Elevation [ft] | Rein. | Length [ft] | FS               | FS      | FS                 |
| 4               | 658.83         | SGU60 | 5.00        | 9.93             | 3.50    | 17.19              |
| 3               | 657.50         | SGU60 | 5.00        | 6.41             | 7.90    | 15.69              |
| 2               | 656.17         | SGU60 | 5.00        | 4.71             | 10.87   | 11.64              |
| 1               | 654.83         | SGU60 | 5.00        | 3.72             | 13.84   | 9.26               |

| Facing Static |                |       |             | Connection Strength |
|---------------|----------------|-------|-------------|---------------------|
| Layer         | Elevation [ft] | Rein. | Length [ft] | FS                  |
| 4             | 658.83         | SGU60 | 5.00        | 10.77               |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 3                      | 657.50         | SGU60 | 5.00        | 10.18                  |
| 2                      | 656.17         | SGU60 | 5.00        | 7.81                   |
| 1                      | 654.83         | SGU60 | 5.00        | 6.41                   |

|                        |                                                   |
|------------------------|---------------------------------------------------|
| Section                | #15 at Station 47.25                              |
| Report Date            | December 16, 2024                                 |
| Designer               | mK                                                |
| Design Standard        | National Concrete Masonry Association 3rd Edition |
| Design                 | Static                                            |
| Unit of Measure        | U.S./Imperial                                     |
| Selected Facing Unit   |                                                   |
| Licenser/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                  | Diamond Pro                                       |
| Seismic As             | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 5.67    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 5.67 ft | Crest Offset | 8.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.05 ft | Wall Batter  | 7.13°   | Toe Slope    | 0.00°   | Toe Offset   | 0.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

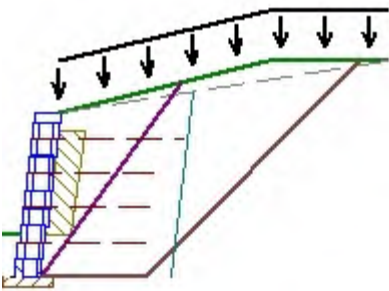
| External Static  |      | FS               |        |                    |
|------------------|------|------------------|--------|--------------------|
| Bearing Capacity | 5.15 | Bearing Pressure | 884.79 | lb/ft <sup>2</sup> |
| Overturning      | 4.42 | Max Eccentricity | 0.23   | ft                 |
| Base Sliding     | 1.95 |                  |        |                    |
| Crest Toppling   | 1.52 |                  |        |                    |
| Internal Sliding | 4.66 |                  |        |                    |

| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS                 | FS    |
| 3               | 658.83         | SGU60            | 5.00        | 9.81               | 16.97 |
| 2               | 657.50         | SGU60            | 5.00        | 6.34               | 15.49 |
| 1               | 656.17         | SGU60            | 5.00        | 4.66               | 7.20  |

| Facing Static |                | Connection Strength |             |
|---------------|----------------|---------------------|-------------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] |
| 3             | 658.83         | SGU60               | 5.00        |
| 2             | 657.50         | SGU60               | 5.00        |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 1                      | 656.17         | SGU60 | 5.00        | 4.83                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #16 at Station 52.50                              |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 6.33    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 6.33 ft | Crest Offset | 8.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.59 ft | Wall Batter  | 7.13°   | Toe Slope    | 0.00°   | Toe Offset   | 0.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid          | 1.20           | Cds                                                                   | 0.90 | CI  | 0.90 |      |                |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |      | FS               |         |                    |
|------------------|------|------------------|---------|--------------------|
| Bearing Capacity | 4.40 | Bearing Pressure | 1003.02 | lb/ft <sup>2</sup> |
| Overturning      | 3.86 | Max Eccentricity | 0.30    | ft                 |
| Base Sliding     | 1.84 |                  |         |                    |
| Crest Toppling   | 2.79 |                  |         |                    |
| Internal Sliding | 4.16 |                  |         |                    |

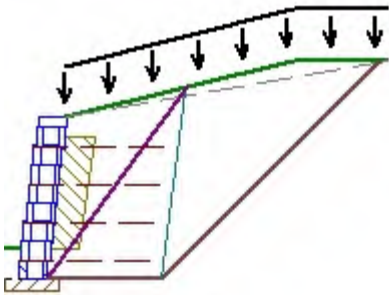
| Internal Static |                |       |             | Internal Sliding |            | Tensile Overstress |       |
|-----------------|----------------|-------|-------------|------------------|------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein. | Length [ft] | FS               | Pullout FS | FS                 | FS    |
| 4               | 660.17         | SGU60 | 6.00        | 14.10            | 7.14       |                    | 28.88 |
| 3               | 658.83         | SGU60 | 5.00        | 7.80             | 6.40       |                    | 19.00 |
| 2               | 657.50         | SGU60 | 5.00        | 5.43             | 9.39       |                    | 13.37 |
| 1               | 656.17         | SGU60 | 5.00        | 4.16             | 7.79       |                    | 6.50  |

| Facing Static |                |       |             | Connection Strength |  |
|---------------|----------------|-------|-------------|---------------------|--|
| Layer         | Elevation [ft] | Rein. | Length [ft] | FS                  |  |
| 4             | 660.17         | SGU60 | 6.00        | 17.77               |  |



| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 3                      | 658.83         | SGU60 | 5.00        | 12.11                  |
| 2                      | 657.50         | SGU60 | 5.00        | 8.82                   |
| 1                      | 656.17         | SGU60 | 5.00        | 4.43                   |

|                        |                                                   |
|------------------------|---------------------------------------------------|
| Section                | #17 at Station 54.00                              |
| Report Date            | December 16, 2024                                 |
| Designer               | mK                                                |
| Design Standard        | National Concrete Masonry Association 3rd Edition |
| Design                 | Static                                            |
| Unit of Measure        | U.S./Imperial                                     |
| Selected Facing Unit   |                                                   |
| Licenser/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                  | Diamond Pro                                       |
| Seismic As             | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 5.67    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 5.67 ft | Crest Offset | 8.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.08 ft | Wall Batter  | 7.13°   | Toe Slope    | 0.00°   | Toe Offset   | 0.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

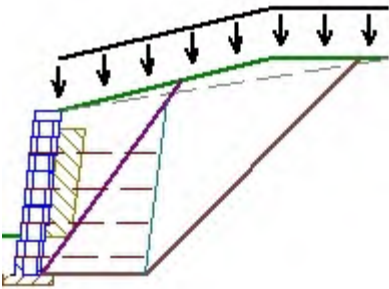
| External Static  |      | FS               |        |                    |
|------------------|------|------------------|--------|--------------------|
| Bearing Capacity | 5.15 | Bearing Pressure | 884.79 | lb/ft <sup>2</sup> |
| Overturning      | 4.42 | Max Eccentricity | 0.23   | ft                 |
| Base Sliding     | 1.95 |                  |        |                    |
| Crest Toppling   | 2.79 |                  |        |                    |
| Internal Sliding | 4.11 |                  |        |                    |

| Internal Static |                |       |             | Internal Sliding | Pullout | Tensile Overstress |
|-----------------|----------------|-------|-------------|------------------|---------|--------------------|
| Layer           | Elevation [ft] | Rein. | Length [ft] | FS               | FS      | FS                 |
| 4               | 660.17         | SGU60 | 5.00        | 13.39            | 4.20    | 28.50              |
| 3               | 658.83         | SGU60 | 5.00        | 7.71             | 7.70    | 18.75              |
| 2               | 657.50         | SGU60 | 5.00        | 5.37             | 10.64   | 13.20              |
| 1               | 656.17         | SGU60 | 5.00        | 4.11             | 13.58   | 10.18              |

| Facing Static |                |       |             | Connection Strength |
|---------------|----------------|-------|-------------|---------------------|
| Layer         | Elevation [ft] | Rein. | Length [ft] | FS                  |
| 4             | 660.17         | SGU60 | 5.00        | 17.54               |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 3                      | 658.83         | SGU60 | 5.00        | 11.95                  |
| 2                      | 657.50         | SGU60 | 5.00        | 8.70                   |
| 1                      | 656.17         | SGU60 | 5.00        | 6.94                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #18 at Station 58.50                              |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 6.33    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 6.33 ft | Crest Offset | 8.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.49 ft | Wall Batter  | 7.13°   | Toe Slope    | 0.00°   | Toe Offset   | 0.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |      | FS               |         |                    |
|------------------|------|------------------|---------|--------------------|
| Bearing Capacity | 4.40 | Bearing Pressure | 1003.02 | lb/ft <sup>2</sup> |
| Overturning      | 3.86 | Max Eccentricity | 0.30    | ft                 |
| Base Sliding     | 1.84 |                  |         |                    |
| Crest Toppling   | 1.52 |                  |         |                    |
| Internal Sliding | 3.72 |                  |         |                    |

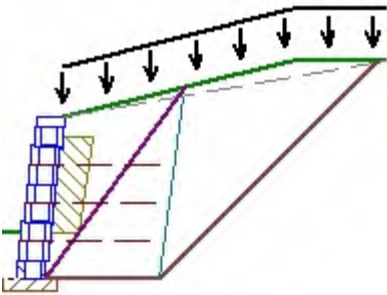
| Internal Static |                | Internal Sliding |             | Pullout |       | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|-------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS    | FS                 | FS |
| 4               | 660.17         | SGU60            | 5.00        | 9.93    | 3.50  | 17.19              |    |
| 3               | 658.83         | SGU60            | 5.00        | 6.41    | 7.90  | 15.69              |    |
| 2               | 657.50         | SGU60            | 5.00        | 4.71    | 10.87 | 11.64              |    |
| 1               | 656.17         | SGU60            | 5.00        | 3.72    | 13.84 | 9.26               |    |

| Facing Static |                | Connection Strength |             | FS    |    |
|---------------|----------------|---------------------|-------------|-------|----|
| Layer         | Elevation [ft] | Rein.               | Length [ft] | FS    | FS |
| 4             | 660.17         | SGU60               | 5.00        | 10.77 |    |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 3                      | 658.83         | SGU60 | 5.00        | 10.18                  |
| 2                      | 657.50         | SGU60 | 5.00        | 7.81                   |
| 1                      | 656.17         | SGU60 | 5.00        | 6.41                   |



|                        |                                                   |
|------------------------|---------------------------------------------------|
| Section                | #19 at Station 60.00                              |
| Report Date            | December 16, 2024                                 |
| Designer               | mK                                                |
| Design Standard        | National Concrete Masonry Association 3rd Edition |
| Design                 | Static                                            |
| Unit of Measure        | U.S./Imperial                                     |
| Selected Facing Unit   |                                                   |
| Licenser/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                  | Diamond Pro                                       |
| Seismic As             | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 5.67    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 5.67 ft | Crest Offset | 8.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.59 ft | Wall Batter  | 7.13°   | Toe Slope    | 0.00°   | Toe Offset   | 0.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

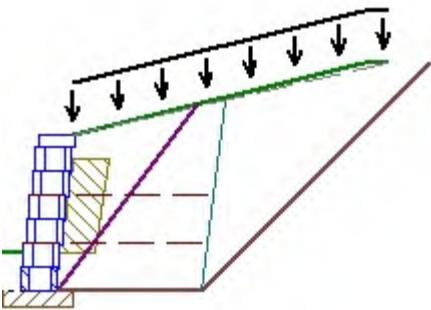
| External Static  |      | FS               |        |                    |
|------------------|------|------------------|--------|--------------------|
| Bearing Capacity | 5.15 | Bearing Pressure | 884.79 | lb/ft <sup>2</sup> |
| Overturning      | 4.42 | Max Eccentricity | 0.23   | ft                 |
| Base Sliding     | 1.95 |                  |        |                    |
| Crest Toppling   | 1.52 |                  |        |                    |
| Internal Sliding | 4.66 |                  |        |                    |

| Internal Static |                | Internal Sliding |             | Pullout |      | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS   | FS                 | FS |
| 3               | 660.17         | SGU60            | 5.00        | 9.81    | 4.45 | 16.97              |    |
| 2               | 658.83         | SGU60            | 5.00        | 6.34    | 9.17 | 15.49              |    |
| 1               | 657.50         | SGU60            | 5.00        | 4.66    | 7.58 | 7.20               |    |

| Facing Static |                | Connection Strength |             | FS    |    |
|---------------|----------------|---------------------|-------------|-------|----|
| Layer         | Elevation [ft] | Rein.               | Length [ft] | FS    | FS |
| 3             | 660.17         | SGU60               | 5.00        | 10.63 |    |
| 2             | 658.83         | SGU60               | 5.00        | 10.05 |    |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 1                      | 657.50         | SGU60 | 5.00        | 4.83                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #20 at Station 61.50                              |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 4.33    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 4.33 ft | Crest Offset | 8.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.10 ft | Wall Batter  | 7.13°   | Toe Slope    | 0.00°   | Toe Offset   | 0.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid          | 1.20           | Cds                                                                   | 0.90 | CI  | 0.90 |      |                |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

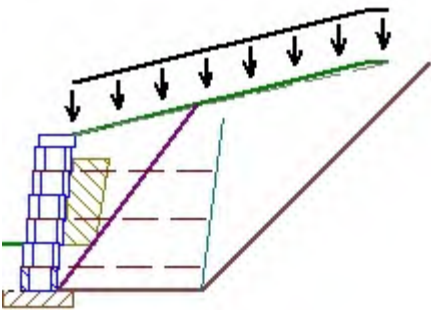
- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |      | FS               |                           |
|------------------|------|------------------|---------------------------|
| Bearing Capacity | 7.13 | Bearing Pressure | 674.45 lb/ft <sup>2</sup> |
| Overturning      | 6.01 | Max Eccentricity | 0.10 ft                   |
| Base Sliding     | 2.21 |                  |                           |
| Crest Toppling   | 1.52 |                  |                           |
| Internal Sliding | 6.13 |                  |                           |

| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS                 | FS    |
| 2               | 660.17         | SGU60            | 5.00        | 9.50               | 16.30 |
| 1               | 658.83         | SGU60            | 5.00        | 6.13               | 9.13  |

|                     |                |       |             | Connection Strength |  |
|---------------------|----------------|-------|-------------|---------------------|--|
| Facing Static Layer | Elevation [ft] | Rein. | Length [ft] | FS                  |  |
| 2                   | 660.17         | SGU60 | 5.00        | 10.21               |  |
| 1                   | 658.83         | SGU60 | 5.00        | 5.92                |  |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #21 at Station 63.00                              |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 4.33    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 4.33 ft | Crest Offset | 8.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.27 ft | Wall Batter  | 7.13°   | Toe Slope    | 0.00°   | Toe Offset   | 0.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid          | 1.20           | Cds                                                                   | 0.90 | CI  | 0.90 |      |                |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |      | FS               |                           |
|------------------|------|------------------|---------------------------|
| Bearing Capacity | 7.13 | Bearing Pressure | 674.45 lb/ft <sup>2</sup> |
| Overturning      | 6.01 | Max Eccentricity | 0.10 ft                   |
| Base Sliding     | 2.21 |                  |                           |
| Crest Toppling   | 2.79 |                  |                           |
| Internal Sliding | 5.20 |                  |                           |

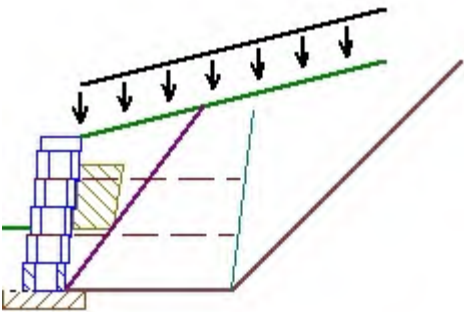
| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS                 | FS    |
| 3               | 661.50         | SGU60            | 5.00        | 12.96              | 27.38 |
| 2               | 660.17         | SGU60            | 5.00        | 7.47               | 18.01 |
| 1               | 658.83         | SGU60            | 5.00        | 5.20               | 12.67 |

| Facing Static |                | Connection Strength |             |
|---------------|----------------|---------------------|-------------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] |
| 3             | 661.50         | SGU60               | 5.00        |
| 2             | 660.17         | SGU60               | 5.00        |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 1                      | 658.83         | SGU60 | 5.00        | 8.36                   |



|                        |                                                   |
|------------------------|---------------------------------------------------|
| Section                | #22 at Station 64.50                              |
| Report Date            | December 16, 2024                                 |
| Designer               | mK                                                |
| Design Standard        | National Concrete Masonry Association 3rd Edition |
| Design                 | Static                                            |
| Unit of Measure        | U.S./Imperial                                     |
| Selected Facing Unit   |                                                   |
| Licenser/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                  | Diamond Pro                                       |
| Seismic As             | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 3.67    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 3.67 ft | Crest Offset | 8.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.45 ft | Wall Batter  | 7.13°   | Toe Slope    | 0.00°   | Toe Offset   | 0.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

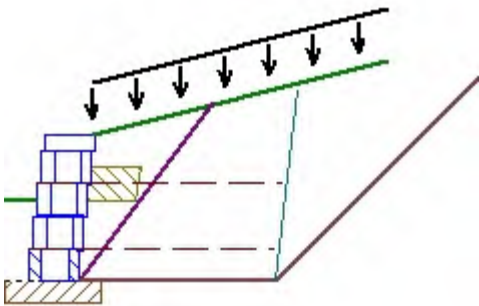
- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |      | FS               |                           |
|------------------|------|------------------|---------------------------|
| Bearing Capacity | 8.51 | Bearing Pressure | 579.00 lb/ft <sup>2</sup> |
| Overturning      | 7.15 | Max Eccentricity | 0.04 ft                   |
| Base Sliding     | 2.34 |                  |                           |
| Crest Toppling   | 2.79 |                  |                           |
| Internal Sliding | 7.28 |                  |                           |

| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS                 | FS    |
| 2               | 661.50         | SGU60            | 5.00        | 12.64              | 26.96 |
| 1               | 660.17         | SGU60            | 5.00        | 7.28               | 10.70 |

| Facing Static |                | Connection Strength |             |
|---------------|----------------|---------------------|-------------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] |
| 2             | 661.50         | SGU60               | 5.00        |
| 1             | 660.17         | SGU60               | 5.00        |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #23 at Station 66.00                              |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 3.00    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 3.00 ft | Crest Offset | 8.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.62 ft | Wall Batter  | 7.13°   | Toe Slope    | 0.00°   | Toe Offset   | 0.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

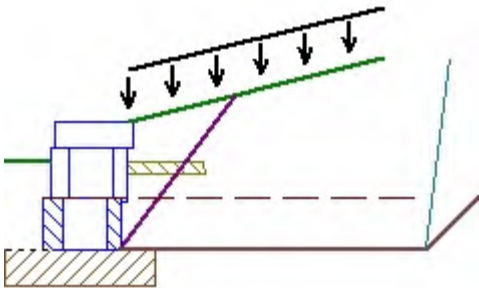
- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |       | FS               |                           |
|------------------|-------|------------------|---------------------------|
| Bearing Capacity | 10.23 | Bearing Pressure | 490.33 lb/ft <sup>2</sup> |
| Overturning      | 8.65  | Max Eccentricity | 0.00 ft                   |
| Base Sliding     | 2.48  |                  |                           |
| Crest Toppling   | 2.79  |                  |                           |
| Internal Sliding | 7.03  |                  |                           |

| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS                 | FS    |
| 2               | 661.50         | SGU60            | 5.00        | 12.20              | 26.96 |
| 1               | 660.17         | SGU60            | 5.00        | 7.03               | 17.74 |

| Facing Static |                | Connection Strength |             |
|---------------|----------------|---------------------|-------------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] |
| 2             | 661.50         | SGU60               | 5.00        |
| 1             | 660.17         | SGU60               | 5.00        |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #24 at Station 67.50                              |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 1.67    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 1.67 ft | Crest Offset | 8.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.13 ft | Wall Batter  | 7.13°   | Toe Slope    | 0.00°   | Toe Offset   | 0.00 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |       | FS               |               |
|------------------|-------|------------------|---------------|
| Bearing Capacity | 15.03 | Bearing Pressure | 333.66 lb/ft² |
| Overturning      | 15.01 | Max Eccentricity | 0.00 ft       |
| Base Sliding     | 2.97  |                  |               |
| Crest Toppling   | 2.79  |                  |               |
| Internal Sliding | 12.07 |                  |               |

| Internal Static |                | Internal Sliding |             | Pullout |       | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|---------|-------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS    | FS                 | FS    |
| 1               | 661.50         | SGU60            | 5.00        | 12.07   | 10.10 |                    | 26.96 |

| Facing Static |                | Connection Strength |             |       |
|---------------|----------------|---------------------|-------------|-------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] | FS    |
| 1             | 661.50         | SGU60               | 5.00        | 16.60 |

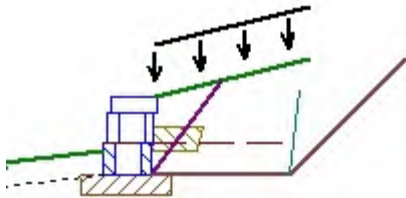
# **Project: 2024.139 - Heritage Crossing**

**Site: Western Springs, IL**

**Date: 12/16/2024**

**Wall: Wall No 3**

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #2 at Station 8.25                                |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 1.67    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 1.67 ft | Crest Offset | 7.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 0.51 ft | Wall Batter  | 7.13°   | Toe Slope    | 6.95°   | Toe Offset   | 4.10 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

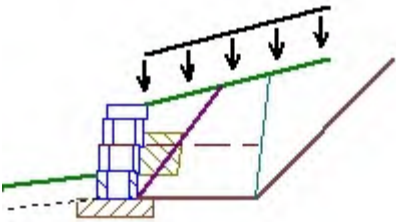
Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |                | FS               |             |                     |         |                    |    |
|------------------|----------------|------------------|-------------|---------------------|---------|--------------------|----|
| Bearing Capacity | 12.92          | Bearing Pressure | 310.45      | lb/ft <sup>2</sup>  |         |                    |    |
| Overturning      | 11.41          | Max Eccentricity | 0.00        | ft                  |         |                    |    |
| Base Sliding     | 2.61           |                  |             |                     |         |                    |    |
| Crest Toppling   | 2.79           |                  |             |                     |         |                    |    |
| Internal Sliding | 13.64          |                  |             |                     |         |                    |    |
| Internal Static  |                |                  |             | Internal Sliding    | Pullout | Tensile Overstress |    |
| Layer            | Elevation [ft] | Rein.            | Length [ft] | FS                  | FS      | FS                 | FS |
| 1                | 662.33         | SGU60            | 4.00        | 13.64               | 6.68    | 26.96              |    |
| Facing Static    |                |                  |             | Connection Strength |         |                    |    |
| Layer            | Elevation [ft] | Rein.            | Length [ft] | FS                  |         |                    |    |
| 1                | 662.33         | SGU60            | 4.00        | 16.60               |         |                    |    |



|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #3 at Station 12.75                               |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 2.33    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 2.33 ft | Crest Offset | 7.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 0.60 ft | Wall Batter  | 7.13°   | Toe Slope    | 6.95°   | Toe Offset   | 4.10 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSScs  | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

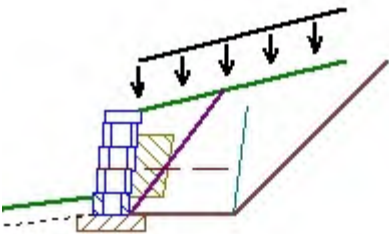
- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |       | FS               |                           |
|------------------|-------|------------------|---------------------------|
| Bearing Capacity | 10.13 | Bearing Pressure | 392.19 lb/ft <sup>2</sup> |
| Overturning      | 8.22  | Max Eccentricity | 0.02 ft                   |
| Base Sliding     | 2.34  |                  |                           |
| Crest Toppling   | 2.79  |                  |                           |
| Internal Sliding | 13.64 |                  |                           |

| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS                 | FS    |
| 1               | 662.33         | SGU60            | 4.00        | 13.64              | 16.05 |

| Facing Static |                | Connection Strength |             |
|---------------|----------------|---------------------|-------------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] |
| 1             | 662.33         | SGU60               | 4.00        |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #4 at Station 36.75                               |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 3.00    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 3.00 ft | Crest Offset | 7.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 0.51 ft | Wall Batter  | 7.13°   | Toe Slope    | 6.95°   | Toe Offset   | 4.10 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |                | FS               |             |                     |         |                    |
|------------------|----------------|------------------|-------------|---------------------|---------|--------------------|
| Bearing Capacity | 7.82           | Bearing Pressure | 489.04      | lb/ft²              |         |                    |
| Overturning      | 6.24           | Max Eccentricity | 0.09        | ft                  |         |                    |
| Base Sliding     | 2.11           |                  |             |                     |         |                    |
| Crest Toppling   | 1.52           |                  |             |                     |         |                    |
| Internal Sliding | 9.40           |                  |             |                     |         |                    |
|                  |                |                  |             |                     |         |                    |
| Internal Static  |                |                  |             | Internal Sliding    | Pullout | Tensile Overstress |
| Layer            | Elevation [ft] | Rein.            | Length [ft] | FS                  | FS      | FS                 |
| 1                | 662.33         | SGU60            | 4.00        | 9.40                | 3.33    | 10.70              |
|                  |                |                  |             |                     |         |                    |
| Facing Static    |                |                  |             | Connection Strength |         |                    |
| Layer            | Elevation [ft] | Rein.            | Length [ft] | FS                  |         |                    |
| 1                | 662.33         | SGU60            | 4.00        | 6.70                |         |                    |

Section

Report Date

Designer

Design Standard

Design

Unit of Measure

Selected Facing Unit

Licensors/Product Line:

Name:

Seismic As

#5 at Station 40.50

December 16, 2024

mK

National Concrete Masonry Association 3rd Edition

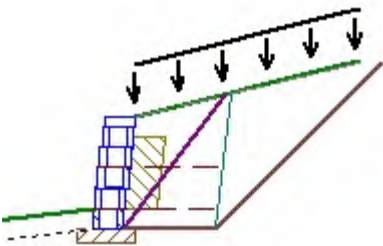
Static

U.S./Imperial

Anchor Wall Systems, Inc.

Diamond Pro

N/A



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 3.67    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 3.67 ft | Crest Offset | 7.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 0.67 ft | Wall Batter  | 7.13°   | Toe Slope    | 6.95°   | Toe Offset   | 4.10 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSScs  | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

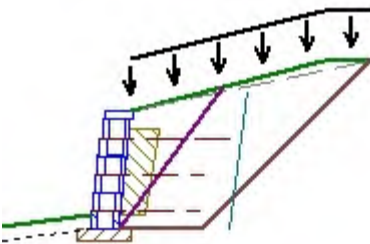
- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |      | FS               |        |                    |
|------------------|------|------------------|--------|--------------------|
| Bearing Capacity | 6.27 | Bearing Pressure | 590.18 | lb/ft <sup>2</sup> |
| Overturning      | 5.09 | Max Eccentricity | 0.16   | ft                 |
| Base Sliding     | 1.97 |                  |        |                    |
| Crest Toppling   | 1.52 |                  |        |                    |
| Internal Sliding | 5.86 |                  |        |                    |

| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS                 | FS    |
| 2               | 662.33         | SGU60            | 4.00        | 9.71               | 16.20 |
| 1               | 661.00         | SGU60            | 4.00        | 5.86               | 14.79 |

| Facing Static |                | Connection Strength |             |
|---------------|----------------|---------------------|-------------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] |
| 2             | 662.33         | SGU60               | 4.00        |
| 1             | 661.00         | SGU60               | 4.00        |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #6 at Station 62.25                               |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensors/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 4.33    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 4.33 ft | Crest Offset | 7.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 0.51 ft | Wall Batter  | 7.13°   | Toe Slope    | 6.95°   | Toe Offset   | 4.10 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSScs  | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSSc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | CI  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |      | FS               |        |                    |
|------------------|------|------------------|--------|--------------------|
| Bearing Capacity | 5.10 | Bearing Pressure | 699.61 | lb/ft <sup>2</sup> |
| Overturning      | 4.26 | Max Eccentricity | 0.22   | ft                 |
| Base Sliding     | 1.85 |                  |        |                    |
| Crest Toppling   | 2.79 |                  |        |                    |
| Internal Sliding | 5.00 |                  |        |                    |

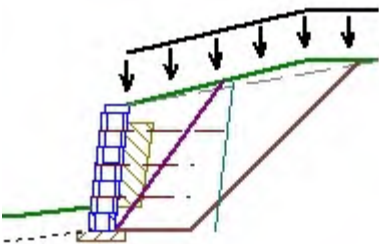
| Internal Static |                | Internal Sliding |             | Pullout |      | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS   | FS                 | FS |
| 3               | 663.67         | SGU60            | 5.00        | 15.15   | 6.49 | 27.98              |    |
| 2               | 662.33         | SGU60            | 4.00        | 7.55    | 6.26 | 18.41              |    |
| 1               | 661.00         | SGU60            | 4.00        | 5.00    | 9.18 | 12.95              |    |

| Facing Static |                | Connection Strength |             | FS    |    |
|---------------|----------------|---------------------|-------------|-------|----|
| Layer         | Elevation [ft] | Rein.               | Length [ft] | FS    | FS |
| 3             | 663.67         | SGU60               | 5.00        | 17.22 |    |
| 2             | 662.33         | SGU60               | 4.00        | 11.74 |    |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 1                      | 661.00         | SGU60 | 4.00        | 8.54                   |



|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #7 at Station 75.00                               |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensors/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 5.00    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 5.00 ft | Crest Offset | 7.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 0.94 ft | Wall Batter  | 7.13°   | Toe Slope    | 6.95°   | Toe Offset   | 4.10 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSScs  | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSSc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

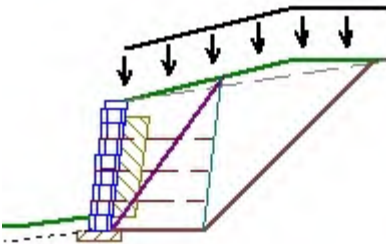
| External Static  |      | FS               |                           |
|------------------|------|------------------|---------------------------|
| Bearing Capacity | 4.17 | Bearing Pressure | 821.13 lb/ft <sup>2</sup> |
| Overturning      | 3.62 | Max Eccentricity | 0.29 ft                   |
| Base Sliding     | 1.73 |                  |                           |
| Crest Toppling   | 2.79 |                  |                           |
| Internal Sliding | 5.10 |                  |                           |

| Internal Static |                | Internal Sliding |             | Pullout |      | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS   | FS                 | FS |
| 3               | 663.67         | SGU60            | 5.00        | 15.47   | 5.49 | 28.53              |    |
| 2               | 662.33         | SGU60            | 4.00        | 7.71    | 5.08 | 18.77              |    |
| 1               | 661.00         | SGU60            | 4.00        | 5.10    | 4.98 | 8.20               |    |

| Facing Static |                |       |             | Connection |
|---------------|----------------|-------|-------------|------------|
| Layer         | Elevation [ft] | Rein. | Length [ft] | Strength   |
| 3             | 663.67         | SGU60 | 5.00        | FS         |
| 2             | 662.33         | SGU60 | 4.00        | 17.56      |
|               |                |       |             | 11.97      |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 1                      | 661.00         | SGU60 | 4.00        | 5.41                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #8 at Station 88.50                               |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 5.67    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 5.67 ft | Crest Offset | 7.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 0.60 ft | Wall Batter  | 7.13°   | Toe Slope    | 6.95°   | Toe Offset   | 4.10 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSScs  | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

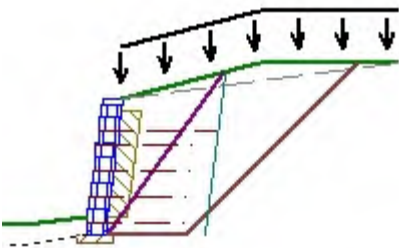
| External Static  |      | FS               |        |                    |
|------------------|------|------------------|--------|--------------------|
| Bearing Capacity | 5.24 | Bearing Pressure | 876.78 | lb/ft <sup>2</sup> |
| Overturning      | 4.56 | Max Eccentricity | 0.21   | ft                 |
| Base Sliding     | 2.02 |                  |        |                    |
| Crest Toppling   | 1.52 |                  |        |                    |
| Internal Sliding | 4.81 |                  |        |                    |

| Internal Static |                | Internal Sliding |             | Pullout |      | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS   | FS                 | FS |
| 3               | 663.67         | SGU60            | 5.00        | 10.13   | 4.59 | 17.23              |    |
| 2               | 662.33         | SGU60            | 5.00        | 6.54    | 9.38 | 15.73              |    |
| 1               | 661.00         | SGU60            | 5.00        | 4.81    | 7.72 | 7.31               |    |

| Facing Static |                | Connection Strength |             | FS    |    |
|---------------|----------------|---------------------|-------------|-------|----|
| Layer         | Elevation [ft] | Rein.               | Length [ft] | FS    | FS |
| 3             | 663.67         | SGU60               | 5.00        | 10.79 |    |
| 2             | 662.33         | SGU60               | 5.00        | 10.20 |    |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 1                      | 661.00         | SGU60 | 5.00        | 4.90                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #9 at Station 108.75                              |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 7.00    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 7.00 ft | Crest Offset | 7.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.00 ft | Wall Batter  | 7.13°   | Toe Slope    | 6.95°   | Toe Offset   | 4.10 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

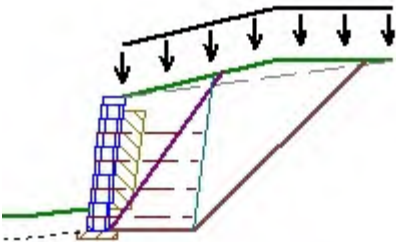
| External Static  |      | FS               |         |                    |
|------------------|------|------------------|---------|--------------------|
| Bearing Capacity | 3.83 | Bearing Pressure | 1121.09 | lb/ft <sup>2</sup> |
| Overturning      | 3.49 | Max Eccentricity | 0.36    | ft                 |
| Base Sliding     | 1.79 |                  |         |                    |
| Crest Toppling   | 1.52 |                  |         |                    |
| Internal Sliding | 3.48 |                  |         |                    |

| Internal Static |                | Internal Sliding |             | Pullout |       | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|-------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS    | FS                 | FS |
| 5               | 664.33         | SGU60            | 6.00        | 10.89   | 7.51  | 22.37              |    |
| 4               | 663.67         | SGU60            | 5.00        | 8.08    | 6.55  | 24.60              |    |
| 3               | 662.33         | SGU60            | 5.00        | 5.63    | 8.22  | 13.67              |    |
| 2               | 661.00         | SGU60            | 5.00        | 4.30    | 11.23 | 10.54              |    |
| 1               | 659.67         | SGU60            | 5.00        | 3.48    | 14.23 | 8.58               |    |



| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |  |
|------------------------|----------------|-------|-------------|------------------------|--|
|                        |                |       |             | FS                     |  |
| 5                      | 664.33         | SGU60 | 6.00        | 14.01                  |  |
| 4                      | 663.67         | SGU60 | 5.00        | 15.68                  |  |
| 3                      | 662.33         | SGU60 | 5.00        | 9.02                   |  |
| 2                      | 661.00         | SGU60 | 5.00        | 7.19                   |  |
| 1                      | 659.67         | SGU60 | 5.00        | 6.04                   |  |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #10 at Station 157.50                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensors/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 6.33    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 6.33 ft | Crest Offset | 7.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.00 ft | Wall Batter  | 7.13°   | Toe Slope    | 6.95°   | Toe Offset   | 4.10 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

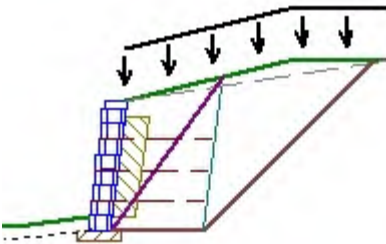
| External Static  |      | FS               |        |                    |
|------------------|------|------------------|--------|--------------------|
| Bearing Capacity | 4.48 | Bearing Pressure | 993.34 | lb/ft <sup>2</sup> |
| Overturning      | 3.97 | Max Eccentricity | 0.28   | ft                 |
| Base Sliding     | 1.90 |                  |        |                    |
| Crest Toppling   | 1.52 |                  |        |                    |
| Internal Sliding | 3.82 |                  |        |                    |

| Internal Static |                |       |             | Internal Sliding | Pullout | Tensile Overstress |
|-----------------|----------------|-------|-------------|------------------|---------|--------------------|
| Layer           | Elevation [ft] | Rein. | Length [ft] | FS               | FS      | FS                 |
| 4               | 663.67         | SGU60 | 5.00        | 10.21            | 3.63    | 17.42              |
| 3               | 662.33         | SGU60 | 5.00        | 6.59             | 8.08    | 15.91              |
| 2               | 661.00         | SGU60 | 5.00        | 4.85             | 11.06   | 11.80              |
| 1               | 659.67         | SGU60 | 5.00        | 3.82             | 14.04   | 9.38               |

| Facing Static |                |       |             | Connection Strength |
|---------------|----------------|-------|-------------|---------------------|
| Layer         | Elevation [ft] | Rein. | Length [ft] | FS                  |
| 4             | 663.67         | SGU60 | 5.00        | 10.91               |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 3                      | 662.33         | SGU60 | 5.00        | 10.32                  |
| 2                      | 661.00         | SGU60 | 5.00        | 7.91                   |
| 1                      | 659.67         | SGU60 | 5.00        | 6.50                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #11 at Station 167.25                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 5.67    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 5.67 ft | Crest Offset | 7.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 0.59 ft | Wall Batter  | 7.13°   | Toe Slope    | 6.95°   | Toe Offset   | 4.10 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |      | FS               |                           |
|------------------|------|------------------|---------------------------|
| Bearing Capacity | 5.24 | Bearing Pressure | 876.78 lb/ft <sup>2</sup> |
| Overturning      | 4.56 | Max Eccentricity | 0.21 ft                   |
| Base Sliding     | 2.02 |                  |                           |
| Crest Toppling   | 1.52 |                  |                           |
| Internal Sliding | 4.81 |                  |                           |

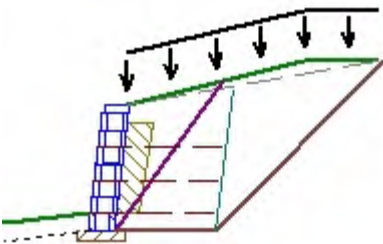
| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS                 | FS    |
| 3               | 663.67         | SGU60            | 5.00        | 10.13              | 17.23 |
| 2               | 662.33         | SGU60            | 5.00        | 6.54               | 15.73 |
| 1               | 661.00         | SGU60            | 5.00        | 4.81               | 7.31  |

| Facing Static |                | Connection Strength |             |
|---------------|----------------|---------------------|-------------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] |
| 3             | 663.67         | SGU60               | 5.00        |
| 2             | 662.33         | SGU60               | 5.00        |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 1                      | 661.00         | SGU60 | 5.00        | 4.90                   |



|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #12 at Station 170.25                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensors/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 5.00    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 5.00 ft | Crest Offset | 7.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 0.67 ft | Wall Batter  | 7.13°   | Toe Slope    | 6.95°   | Toe Offset   | 4.10 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSScs  | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSSc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid          | 1.20           | Cds                                                                   | 0.90 | CI  | 0.90 |      |                |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

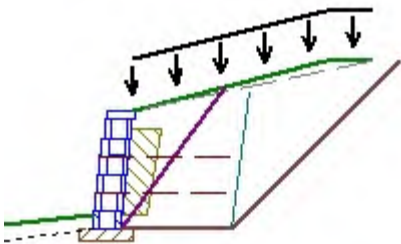
| External Static  |      | FS               |                           |
|------------------|------|------------------|---------------------------|
| Bearing Capacity | 6.15 | Bearing Pressure | 769.24 lb/ft <sup>2</sup> |
| Overturning      | 5.31 | Max Eccentricity | 0.14 ft                   |
| Base Sliding     | 2.15 |                  |                           |
| Crest Toppling   | 1.52 |                  |                           |
| Internal Sliding | 4.76 |                  |                           |

| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS                 | FS    |
| 3               | 663.67         | SGU60            | 5.00        | 10.03              | 16.98 |
| 2               | 662.33         | SGU60            | 5.00        | 6.48               | 15.51 |
| 1               | 661.00         | SGU60            | 5.00        | 4.76               | 11.50 |

| Facing Static |                | Connection Strength |             |
|---------------|----------------|---------------------|-------------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] |
| 3             | 663.67         | SGU60               | 5.00        |
| 2             | 662.33         | SGU60               | 5.00        |

| Facing Static<br>Layer | Elevation [ft] | Rein. | Length [ft] | Connection<br>Strength |
|------------------------|----------------|-------|-------------|------------------------|
|                        |                |       |             | FS                     |
| 1                      | 661.00         | SGU60 | 5.00        | 7.72                   |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #13 at Station 172.50                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 4.33    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 4.33 ft | Crest Offset | 7.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 0.56 ft | Wall Batter  | 7.13°   | Toe Slope    | 6.95°   | Toe Offset   | 4.10 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSScs  | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

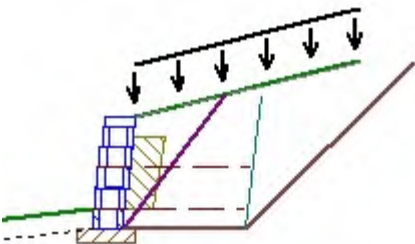
- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |      | FS               |        |                    |
|------------------|------|------------------|--------|--------------------|
| Bearing Capacity | 7.25 | Bearing Pressure | 668.95 | lb/ft <sup>2</sup> |
| Overturning      | 6.26 | Max Eccentricity | 0.08   | ft                 |
| Base Sliding     | 2.30 |                  |        |                    |
| Crest Toppling   | 1.52 |                  |        |                    |
| Internal Sliding | 6.40 |                  |        |                    |

| Internal Static |                | Internal Sliding |             | Pullout |      | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS   | FS                 | FS |
| 2               | 663.67         | SGU60            | 5.00        | 9.91    | 6.28 | 16.66              |    |
| 1               | 662.33         | SGU60            | 5.00        | 6.40    | 7.16 | 9.33               |    |

| Facing Static |                | Connection Strength |             |       |
|---------------|----------------|---------------------|-------------|-------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] | FS    |
| 2             | 663.67         | SGU60               | 5.00        | 10.43 |
| 1             | 662.33         | SGU60               | 5.00        | 6.05  |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #14 at Station 175.50                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensors/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 3.67    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 3.67 ft | Crest Offset | 7.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 0.65 ft | Wall Batter  | 7.13°   | Toe Slope    | 6.95°   | Toe Offset   | 4.10 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

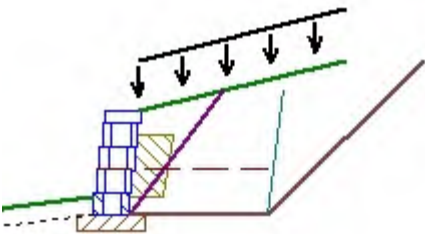
- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |      | FS               |        |                    |
|------------------|------|------------------|--------|--------------------|
| Bearing Capacity | 8.64 | Bearing Pressure | 574.43 | lb/ft <sup>2</sup> |
| Overturning      | 7.52 | Max Eccentricity | 0.03   | ft                 |
| Base Sliding     | 2.46 |                  |        |                    |
| Crest Toppling   | 1.52 |                  |        |                    |
| Internal Sliding | 6.29 |                  |        |                    |

| Internal Static |                | Internal Sliding |             | Pullout |       | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|-------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS    | FS                 | FS |
| 2               | 663.67         | SGU60            | 5.00        | 9.74    | 6.95  | 16.20              |    |
| 1               | 662.33         | SGU60            | 5.00        | 6.29    | 12.60 | 14.79              |    |

| Facing Static |                | Connection Strength |             |       |
|---------------|----------------|---------------------|-------------|-------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] | FS    |
| 2             | 663.67         | SGU60               | 5.00        | 10.15 |
| 1             | 662.33         | SGU60               | 5.00        | 9.59  |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #15 at Station 177.75                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensors/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 3.00    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 3.00 ft | Crest Offset | 7.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 0.54 ft | Wall Batter  | 7.13°   | Toe Slope    | 6.95°   | Toe Offset   | 4.10 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSScs  | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSSc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

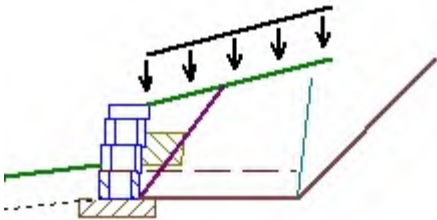
| External Static  |       | FS               |                           |
|------------------|-------|------------------|---------------------------|
| Bearing Capacity | 10.23 | Bearing Pressure | 490.33 lb/ft <sup>2</sup> |
| Overturning      | 9.20  | Max Eccentricity | 0.00 ft                   |
| Base Sliding     | 2.64  |                  |                           |
| Crest Toppling   | 1.52  |                  |                           |
| Internal Sliding | 9.52  |                  |                           |

| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS                 | FS    |
| 1               | 663.67         | SGU60            | 5.00        | 9.52               | 10.70 |

| Facing Static |                | Connection Strength |             |
|---------------|----------------|---------------------|-------------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] |
| 1             | 663.67         | SGU60               | 5.00        |



|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #16 at Station 180.00                             |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 2.33    | Back Slope   | 14.04°  | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 2.33 ft | Crest Offset | 7.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 0.82 ft | Wall Batter  | 7.13°   | Toe Slope    | 6.95°   | Toe Offset   | 4.10 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |       | FS               |        |        |
|------------------|-------|------------------|--------|--------|
| Bearing Capacity | 12.17 | Bearing Pressure | 412.00 | lb/ft² |
| Overturning      | 11.52 | Max Eccentricity | 0.00   | ft     |
| Base Sliding     | 2.80  |                  |        |        |
| Crest Toppling   | 1.52  |                  |        |        |
| Internal Sliding | 9.20  |                  |        |        |

|       |                |       |             | Internal Sliding | Pullout | Tensile Overstress |
|-------|----------------|-------|-------------|------------------|---------|--------------------|
| Layer | Elevation [ft] | Rein. | Length [ft] | FS               | FS      | FS                 |
| 1     | 663.67         | SGU60 | 5.00        | 9.20             | 8.56    | 16.05              |

|                     |                |       |             | Connection Strength |
|---------------------|----------------|-------|-------------|---------------------|
| Facing Static Layer | Elevation [ft] | Rein. | Length [ft] | FS                  |
| 1                   | 663.67         | SGU60 | 5.00        | 10.06               |

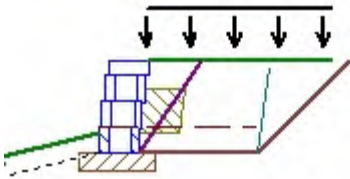
# **Project: 2024.139 - Heritage Crossing**

**Site: Western Springs, IL**

**Date: 12/16/2024**

**Wall: Wall No 4**

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #3 at Station 9.00                                |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |          |
|----------------|---------|--------------|---------|--------------|---------|--------------|----------|
| Section Height | 2.33    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0        |
| Design Height  | 2.33 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft  |
| Embedment      | 0.52 ft | Wall Batter  | 7.13°   | Toe Slope    | 13.34°  | Toe Offset   | 13.55 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSScs  | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

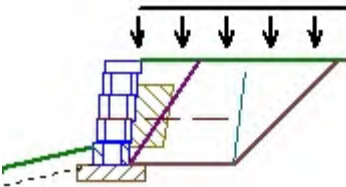
|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |                | FS                  |             |                    |      |                    |    |
|------------------|----------------|---------------------|-------------|--------------------|------|--------------------|----|
| Bearing Capacity | 11.33          | Bearing Pressure    | 350.87      | lb/ft <sup>2</sup> |      |                    |    |
| Overturning      | 17.21          | Max Eccentricity    | 0.02        | ft                 |      |                    |    |
| Base Sliding     | 4.05           |                     |             |                    |      |                    |    |
| Crest Toppling   | 1.88           |                     |             |                    |      |                    |    |
| Internal Sliding | 20.09          |                     |             |                    |      |                    |    |
| Internal Static  |                | Internal Sliding    |             | Pullout            |      | Tensile Overstress |    |
| Layer            | Elevation [ft] | Rein.               | Length [ft] | FS                 | FS   | FS                 | FS |
| 1                | 661.83         | SGU60               | 4.00        | 20.09              | 5.71 | 18.96              |    |
| Facing Static    |                | Connection Strength |             |                    |      |                    |    |
| Layer            | Elevation [ft] | Rein.               | Length [ft] | FS                 |      |                    |    |
| 1                | 661.83         | SGU60               | 4.00        | 11.88              |      |                    |    |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #4 at Station 15.75                               |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 3.00    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 3.00 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 0.52 ft | Wall Batter  | 7.13°   | Toe Slope    | 12.89°  | Toe Offset   | 6.78 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | CI  | 0.90 |      |                |  |

Connection/Shear Properties

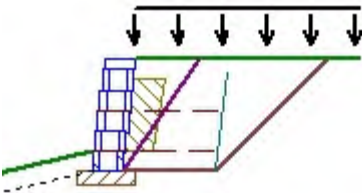
|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |                | FS               |             |                     |         |                    |
|------------------|----------------|------------------|-------------|---------------------|---------|--------------------|
| Bearing Capacity | 9.11           | Bearing Pressure | 432.95      | lb/ft²              |         |                    |
| Overturning      | 11.93          | Max Eccentricity | 0.03        | ft                  |         |                    |
| Base Sliding     | 3.46           |                  |             |                     |         |                    |
| Crest Toppling   | 1.88           |                  |             |                     |         |                    |
| Internal Sliding | 20.09          |                  |             |                     |         |                    |
|                  |                |                  |             |                     |         |                    |
| Internal Static  |                |                  |             | Internal Sliding    | Pullout | Tensile Overstress |
| Layer            | Elevation [ft] | Rein.            | Length [ft] | FS                  | FS      | FS                 |
| 1                | 661.83         | SGU60            | 4.00        | 20.09               | 3.27    | 12.64              |
|                  |                |                  |             |                     |         |                    |
| Facing Static    |                |                  |             | Connection Strength |         |                    |
| Layer            | Elevation [ft] | Rein.            | Length [ft] | FS                  |         |                    |
| 1                | 661.83         | SGU60            | 4.00        | 7.92                |         |                    |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #5 at Station 24.00                               |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensors/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 3.67    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 3.67 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 0.67 ft | Wall Batter  | 7.13°   | Toe Slope    | 12.86°  | Toe Offset   | 6.57 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSScs  | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSSc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

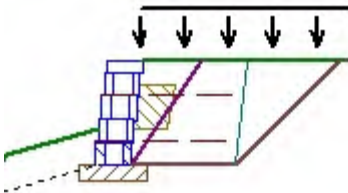
| External Static  |      | FS               |        |                    |
|------------------|------|------------------|--------|--------------------|
| Bearing Capacity | 7.50 | Bearing Pressure | 519.04 | lb/ft <sup>2</sup> |
| Overturning      | 8.84 | Max Eccentricity | 0.06   | ft                 |
| Base Sliding     | 3.02 |                  |        |                    |
| Crest Toppling   | 1.88 |                  |        |                    |
| Internal Sliding | 9.92 |                  |        |                    |

| Internal Static |                | Internal Sliding |             | Pullout |      | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS   | FS                 | FS |
| 2               | 661.83         | SGU60            | 4.00        | 20.09   | 4.09 | 18.96              |    |
| 1               | 660.50         | SGU60            | 4.00        | 9.92    | 9.38 | 17.31              |    |

| Facing Static |                | Connection Strength |             |       |
|---------------|----------------|---------------------|-------------|-------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] | FS    |
| 2             | 661.83         | SGU60               | 4.00        | 11.88 |
| 1             | 660.50         | SGU60               | 4.00        | 11.22 |



|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #6 at Station 33.75                               |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 3.00    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 3.00 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 1.05 ft | Wall Batter  | 7.13°   | Toe Slope    | 16.22°  | Toe Offset   | 9.14 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSScs  | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

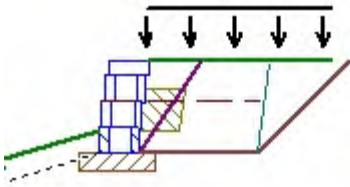
- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |       | FS               |        |                    |
|------------------|-------|------------------|--------|--------------------|
| Bearing Capacity | 9.11  | Bearing Pressure | 432.95 | lb/ft <sup>2</sup> |
| Overturning      | 11.93 | Max Eccentricity | 0.03   | ft                 |
| Base Sliding     | 3.46  |                  |        |                    |
| Crest Toppling   | 3.46  |                  |        |                    |
| Internal Sliding | 13.42 |                  |        |                    |

| Internal Static |                | Internal Sliding |             | Tensile Overstress |       |
|-----------------|----------------|------------------|-------------|--------------------|-------|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS                 | FS    |
| 2               | 661.83         | SGU60            | 4.00        | 36.81              | 31.85 |
| 1               | 660.50         | SGU60            | 4.00        | 13.42              | 20.95 |

| Facing Static |                | Connection Strength |             |
|---------------|----------------|---------------------|-------------|
| Layer         | Elevation [ft] | Rein.               | Length [ft] |
| 2             | 661.83         | SGU60               | 4.00        |
| 1             | 660.50         | SGU60               | 4.00        |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #7 at Station 35.25                               |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 2.33    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 2.33 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 0.60 ft | Wall Batter  | 7.13°   | Toe Slope    | 16.86°  | Toe Offset   | 9.90 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSScs  | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |
| RFid          | 1.20           | Cds                                                                   | 0.90 | CI  | 0.90 |      |                |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

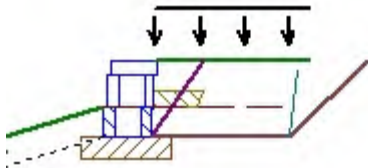
- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |       | FS               |                           |
|------------------|-------|------------------|---------------------------|
| Bearing Capacity | 11.33 | Bearing Pressure | 350.87 lb/ft <sup>2</sup> |
| Overturning      | 17.21 | Max Eccentricity | 0.02 ft                   |
| Base Sliding     | 4.05  |                  |                           |
| Crest Toppling   | 3.46  |                  |                           |
| Internal Sliding | 36.81 |                  |                           |

| Internal Static |                | Internal Sliding |             | Pullout |      | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS   | FS                 | FS |
| 1               | 661.83         | SGU60            | 4.00        | 36.81   | 2.94 | 18.96              |    |

|               |                |       |             | Connection |
|---------------|----------------|-------|-------------|------------|
| Facing Static |                |       |             | Strength   |
| Layer         | Elevation [ft] | Rein. | Length [ft] | FS         |
| 1             | 661.83         | SGU60 | 4.00        | 11.67      |

|                         |                                                   |
|-------------------------|---------------------------------------------------|
| Section                 | #8 at Station 38.25                               |
| Report Date             | December 16, 2024                                 |
| Designer                | mK                                                |
| Design Standard         | National Concrete Masonry Association 3rd Edition |
| Design                  | Static                                            |
| Unit of Measure         | U.S./Imperial                                     |
| Selected Facing Unit    |                                                   |
| Licensior/Product Line: | Anchor Wall Systems, Inc.                         |
| Name:                   | Diamond Pro                                       |
| Seismic As              | N/A                                               |



| Soil Parameters |           | In Situ               |                                        |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | n/a                                  |

|                |         |              |         |              |         |              |         |
|----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height | 1.67    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height  | 1.67 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment      | 0.64 ft | Wall Batter  | 7.13°   | Toe Slope    | 16.86°  | Toe Offset   | 9.90 ft |

Minimum Factors of Safety

Reinforced

| External |                  | Value | Internal |                    | Value | Facing |                     | Value |
|----------|------------------|-------|----------|--------------------|-------|--------|---------------------|-------|
| FSSl     | Base Sliding     | 1.50  | FSSl     | Internal Sliding   | 1.50  | FSCs   | Connection Strength | 1.50  |
| FSbc     | Bearing Capacity | 2.00  | FSpO     | Pullout            | 1.50  | FSsc   | Facing Shear        | 1.50  |
| FSct     | Crest Toppling   | 1.50  | FSto     | Tensile Overstress | 1.50  |        |                     |       |
| FSot     | Overturning      | 2.00  |          |                    |       |        |                     |       |

Reinforcements

|               |                |                                                                       |      |     |      |      |                |  |
|---------------|----------------|-----------------------------------------------------------------------|------|-----|------|------|----------------|--|
| SGU60 - SGU60 |                | Supplier: Strata Systems, Inc., Fill Type: 3/4"- gravels or aggregate |      |     |      |      |                |  |
| Tult          | 4,111.31 lb/ft | RFcr                                                                  | 1.47 | RFd | 1.10 | LTDS | 2,118.80 lb/ft |  |
| RFid          | 1.20           | Cds                                                                   | 0.90 | Ci  | 0.90 |      |                |  |

Connection/Shear Properties

|         |                |      |                |      |                |         |                |
|---------|----------------|------|----------------|------|----------------|---------|----------------|
| acs1    | 1,269.00 lb/ft | IP-1 | 1,887.00 lb/ft | acs2 | 1,820.00 lb/ft | IP-2    | 4,000.00 lb/ft |
| acs max | 2,068.00 lb/ft | au   | 1,180.97 lb/ft | λu   | 45.00 lb/ft    | Vu(max) | 2,660.97 lb/ft |

Analysis Results

- \* Analysis does not include Vertical Forces
- \* Embedment is not included in Bearing Capacity

| External Static  |       | FS               |        |                    |
|------------------|-------|------------------|--------|--------------------|
| Bearing Capacity | 14.69 | Bearing Pressure | 271.45 | lb/ft <sup>2</sup> |
| Overturning      | 27.58 | Max Eccentricity | 0.01   | ft                 |
| Base Sliding     | 4.90  |                  |        |                    |
| Crest Toppling   | 3.46  |                  |        |                    |
| Internal Sliding | 36.81 |                  |        |                    |

| Internal Static |                | Internal Sliding |             | Pullout |      | Tensile Overstress |    |
|-----------------|----------------|------------------|-------------|---------|------|--------------------|----|
| Layer           | Elevation [ft] | Rein.            | Length [ft] | FS      | FS   | FS                 | FS |
| 1               | 661.83         | SGU60            | 4.00        | 36.81   | 5.75 | 31.85              |    |

|               |                |       |             | Connection |
|---------------|----------------|-------|-------------|------------|
| Facing Static |                |       |             | Strength   |
| Layer         | Elevation [ft] | Rein. | Length [ft] | FS         |
| 1             | 661.83         | SGU60 | 4.00        | 19.60      |

Section

Report Date

Designer

Design Standard

Design

Unit of Measure

Selected Facing Unit

Licenser/Product Line:

Name:

Seismic As

#9 at Station 40.50

December 16, 2024

mK

National Concrete Masonry Association 3rd Edition

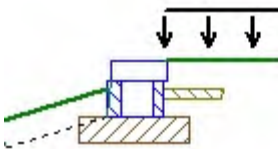
Static

U.S./Imperial

Anchor Wall Systems, Inc.

Diamond Pro

N/A



| Soil Parameters |           | In Situ               |                                        |                       |                                      |
|-----------------|-----------|-----------------------|----------------------------------------|-----------------------|--------------------------------------|
| Soil Zone       | Soil Type | Friction Angle $\phi$ | Density $\gamma$ [lb/ft <sup>3</sup> ] | Friction Factor $\mu$ | Cohesion $C_f$ [lb/ft <sup>2</sup> ] |
| Infill (i)      | GRA       | 34°                   | 120.00                                 | n/a                   | n/a                                  |
| Retained (r)    | SSR       | 28°                   | 130.00                                 | n/a                   | n/a                                  |
| Foundation (f)  | SSF       | 28°                   | 120.00                                 | 0.50                  | 0.00                                 |
| Base (b)        | GW        | 39°                   | 140.02                                 | 0.70                  | n/a                                  |
| Drainage (d)    | GP        | 38°                   | 125.02                                 | 0.70                  | n/a                                  |

| Section Details |         |              |         |              |         |              |         |
|-----------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Section Height  | 1.00    | Back Slope   | 0.00°   | LL Surcharge | 100     | DL Surcharge | 0       |
| Design Height   | 1.00 ft | Crest Offset | 0.00 ft | LL Offset    | 0.00 ft | DL Offset    | 0.00 ft |
| Embedment       | 0.51 ft | Wall Batter  | 7.13°   | Toe Slope    | 16.86°  | Toe Offset   | 9.90 ft |

| Minimum Factors of Safety |                  |       |          |                  |       |        |       |
|---------------------------|------------------|-------|----------|------------------|-------|--------|-------|
| Conventional              |                  |       |          |                  |       |        |       |
| External                  |                  | Value | Internal |                  | Value | Facing | Value |
| FSsl                      | Base Sliding     | 1.50  | FSsl     | Internal Sliding | 1.50  |        |       |
| FSbc                      | Bearing Capacity | 2.00  | FSsc     | Shear Capacity   | 1.50  |        |       |
| FSot                      | Overturning      | 1.50  |          |                  |       |        |       |

Analysis Results

\* Analysis does not include Vertical Forces

\* Embedment is not included in Bearing Capacity

| External Static  |       | FS               |                           |
|------------------|-------|------------------|---------------------------|
| Bearing Capacity | 11.93 | Bearing Pressure | 102.69 lb/ft <sup>2</sup> |
| Overturning      | 3.26  | Max Eccentricity | 0.14 ft                   |
| Base Sliding     | 1.54  |                  |                           |



| LEGEND   |          |
|----------|----------|
| EXISTING | PROPOSED |
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**LEGAL DESCRIPTION**

PARCEL 1: THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 2: LOT 1 IN VAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 IN COOK COUNTY, ILLINOIS.

**OWNER:**  
McNAUGHTON DEVELOPMENT  
11S220 JACKSON STREET  
SUITE #101  
BURR RIDGE, ILLINOIS 60527  
(630) 325-3400

**ENGINEER:**  
DESIGNTEK ENGINEERING, INC.  
9930 W. 190<sup>TH</sup> STREET, SUITE L  
MOKENA, ILLINOIS 60448  
(708) 326-4961

**SURVEYOR:**  
DESIGNTEK ENGINEERING, INC.  
9930 W. 190<sup>TH</sup> STREET, SUITE L  
MOKENA, ILLINOIS 60448  
(708) 326-4961

- NOTES:**
- THE EXACT LOCATION OF UNDERGROUND UTILITIES SUCH AS GAS, TELEPHONE, FIBER OPTIC, ELECTRIC, CABLE TV AND PIPE LINES ARE UNKNOWN. THE CONTRACTOR SHALL CONTACT JULIE (1-800-892-0123 OR 811) AND ALL OTHER UTILITY OWNERS WHICH ARE IN THE PROJECT LIMITS BEFORE COMMENCING EXCAVATION.
  - THE SUBSURFACE UTILITY QUALITY INFORMATION IN THIS PLAN IS LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI / ASCE 38-02 ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILTY DATA."

## SURFACE WATER DRAINAGE CERTIFICATE

STATE OF ILLINOIS)  
COUNTY OF WILL)

TO THE BEST OF OUR KNOWLEDGE AND BELIEF THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF THESE LOT IMPROVEMENTS OR ANY PART THEREOF, OR THAT IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, REASONABLE PROVISIONS HAVE BEEN MADE FOR THE COLLECTION AND DIVERSION OF SUCH WATERS INTO PUBLIC AREAS OR DRAINS WHICH THE OWNER HAS A RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL BE PLANNED FOR IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES SO AS TO REDUCE THE LIKELIHOOD OF DAMAGE TO THE ADJOINING PROPERTIES BECAUSE OF THE CONSTRUCTION OF THESE LOT IMPROVEMENTS.

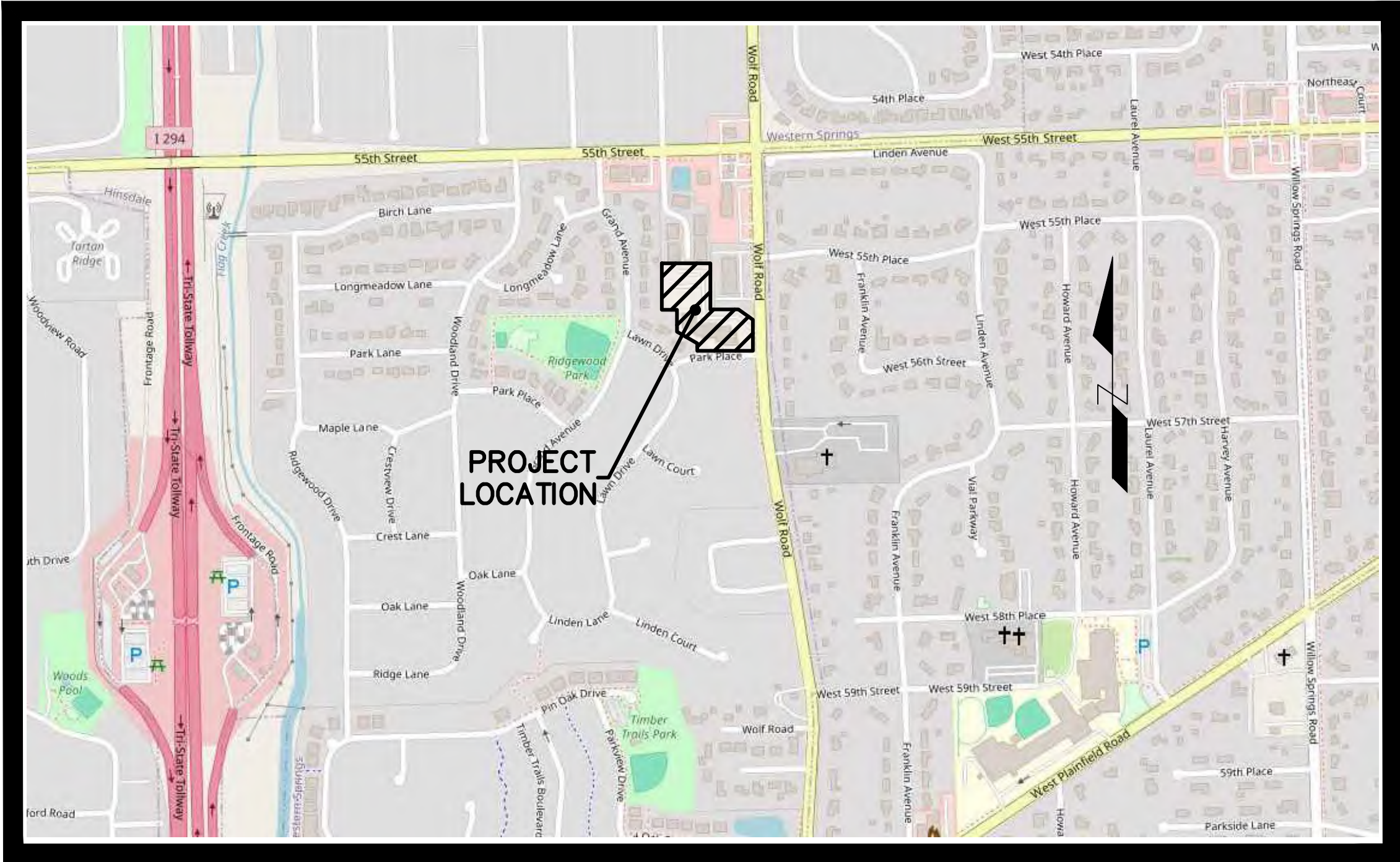
DATED 13TH DAY OF DECEMBER, 2024



Denise M. Vieth  
exp 11/30/2025

# FINAL ENGINEERING PLANS FOR HERITAGE CROSSING

## WESTERN SPRINGS, ILLINOIS



**LOCATION MAP**  
NOT TO SCALE

**BENCHMARKS**

BENCHMARK: (INITIAL) NGS PID: ME1716

BRASS DISK SET IN TOP OF CONCRETE MONUMENT LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF 55TH STREET AND WOLF ROAD. MONUMENT IS 80' NORTH OF THE CENTERLINE OF 55TH STREET AND 40' WEST OF THE CENTERLINE OF WOLF ROAD.

ELEVATION = 662.19' (NAVD 88)

BENCHMARK: (ON-SITE)

CROSS CUT IN TOP OF CURB LOCATED 47.71' SOUTH AND 3.55' EAST OF THE SOUTHEAST CORNER OF PARCEL 2 AS SHOWN HEREON.

ELEVATION = 665.70' (NAVD 88)

**TOPOGRAPHIC SURVEY AND BOUNDARY NOTES:**

THE TOPOGRAPHY AND BOUNDARY SHOWN HEREON WAS PREPARED BY WOLFPACK CONSULTING, LLC AND SUPPLIED BY THE CLIENT STATED HEREON.

**TOPOGRAPHIC SURVEY AND BOUNDARY NOTES:**

SUPPLEMENTAL TOPOGRAPHY SHOWN HEREON WAS PREPARED BY DESIGNTEK ENGINEERING, INC.

**SITE DATA**

AREA (PARCEL 1) = 40,163 SQ. FT. OR 0.92 ACRES  
AREA (PARCEL 2) = 64,996 SQ. FT. OR 1.49 ACRES  
TOTAL AREA = 105,159 SQ. FT. OR 2.41 ACRES

**BASIS OF BEARING**

THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

**PARCEL IDENTIFICATION NUMBER**

PARCEL ONE: 18-18-200-038-0000  
PARCEL TWO: 18-18-200-017-0000

| PERMIT TABLE                             |          |               |
|------------------------------------------|----------|---------------|
| AGENCY                                   | PERMIT # | APPROVAL DATE |
| MWRD                                     | XXXXXX   | XX-XX-24      |
| IEPA - WATER                             | XXXXXX   | XX-XX-24      |
| IEPA - SANITARY                          | XXXXXX   | XX-XX-24      |
| LOGRANGE HIGHLANDS - SANITARY SEWER MAIN | XXXXXX   | XX-XX-24      |
| NPDES AND APPROPRIATE SCD                | XXXXXX   | XX-XX-24      |
| CCDOH                                    | XXXXXX   | XX-XX-24      |

**Contact the Metropolitan Water Reclamation District of Greater Chicago 2 days before starting work.**

P (708) 588-4055  
E WMOJobStart@mwrdd.org

## INDEX OF PLAN SHEETS

- COVER SHEET
3. PROJECT SPECIFICATIONS, GENERAL NOTES & EXHIBITS
- EXISTING CONDITIONS & REMOVAL
- SOIL EROSION & SEDIMENT CONTROL PLAN , NOTES & SPECIFICATIONS.
- SOIL EROSION & SEDIMENT CONTROL DETAIL SHEET
- GEOMETRIC PLAN
- GRADING PLAN
- UTILITY PLAN
- UTILITY SERVICES PLAN
- PLAN & PROFILE
- INTERIM BY-PASS DRAINAGE SWALE PLAN
- 13-16. PROJECT CONSTRUCTION DETAILS
- 17-18. CROSS SECTION WOLF ROAD
- ADA INTERSECTION DETAILS
- WOLF ROAD DETAILS



CALL 1-800-892-0123 or 811  
AT LEAST 48 HOURS (2 WORKING DAYS) BEFORE YOU DIG  
WWW.ILLINOISICALL.COM

REVIEW SET  
NOT FOR CONSTRUCTION

| REVISIONS |           |
|-----------|-----------|
| NO.       | DATE      |
| 1         | 108-17-24 |
| 2         | 108-26-24 |
| 3         | 10-17-24  |
| 4         | 11-12-24  |
| 5         | 11-12-24  |
| 6         | 11-12-24  |
| 7         | 11-12-24  |
| 8         | 11-12-24  |
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| 12        | 11-12-24  |
| 13        | 11-12-24  |
| 14        | 11-12-24  |
| 15        | 11-12-24  |
| 16        | 11-12-24  |
| 17        | 11-12-24  |
| 18        | 11-12-24  |
| 19        | 11-12-24  |
| 20        | 11-12-24  |

**McNAUGHTON DEVELOPMENT**  
11S220 JACKSON ST. Ste. 101  
BURR RIDGE, ILLINOIS 60527  
(630) 325-3400

**FINAL ENGINEERING PLANS FOR HERITAGE CROSSING**  
5600 SOUTH WOLF ROAD  
WESTERN SPRINGS, ILLINOIS

**DESIGNTEK ENGINEERING, INC.**  
CONSULTING CIVIL ENGINEERING & LAND SURVEYING  
9930 W. 190TH STREET, SUITE L  
MOKENA, ILLINOIS 60448  
(708) 326-4961  
FAX: (708) 326-4962  
IL PROF. LIC. NO.: 184-003740



**PROJECT INFORMATION**

Project No.: 24-0001  
Scale: AS NOTED  
Date: MAY 22, 2024  
Design By: SDD  
Drawn By: DEI  
Checked By: SDD

1 OF 20

COVER SHEET



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| EARTHWORK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| <div>1. Topsoil Excavation Includes:<div>a. Excavation of topsoil and other structurally unsuitable materials within those areas that will require earth excavation or compacted earth fill material, in order to achieve the plan subgrade elevations. The amount of topsoil to be stripped shall be verified in the field by a soils engineer.</div><div>b. Placement of the excavated material in OWNER designated areas for future use within areas to be landscaped, and those areas not requiring structural fill material, shall be moderate.</div><div>c. Compaction of the excavated material where placed in areas not requiring structural fill material, shall be moderate.</div><div>d. Excess materials, if not utilized as fill or if not stockpiled for future landscaping, shall be completely removed from the construction site and disposed of by the CONTRACTOR.</div></div> <div>2. Earth Excavation Includes:<div>a. Excavation of earth and other materials which are suitable for use as structural fill. The excavation shall be to within a tolerance of 0.3 feet (+) of the plan subgrade elevations. The (+) tolerance within pavement areas shall be such that the earth material shall "balance" as part of the fine grading operation.</div><div>b. Placement of the earth and other suitable materials shall be within those areas requiring structural fill in order to achieve the plan subgrade elevations to within a tolerance of 0.3 feet (+). The fill material shall be placed in loose lifts that shall not exceed eight (8) inches in thickness, and the water content shall be adjusted in order to achieve the required compaction. Earth material may be placed within those portions of the building site not requiring structural fill, to within four (4) inches of the plan finished grade elevation. In areas requiring structural fill, however, the earth material shall not be placed over topsoil or other unsuitable materials unless specifically directed by a Soils Engineer with the concurrence of the OWNER.</div><div>c. Compaction of the earth and other suitable materials, shall be to at least 95% of the maximum dry density as determined by the Modified Proctor Test, ASTM D1557 laboratory procedure within proposed pavement areas and building areas, on rear yards abutting to the proposed lakes. Moderate compaction is required elsewhere. All fill shall be placed in 8" lifts, loose measure.</div><div>d. Excess materials, if not utilized as fill, shall be completely removed from the construction site and disposed of by the CONTRACTOR.</div></div> <div>3. Unsuitable Material<div>a. Unsuitable material shall be considered as material which is not suitable for the support of pavement and building construction, and is encountered below normal topsoil depths and the proposed subgrade elevation. The decision to remove said material, and to what extent, shall be made by a Soils Engineer with the concurrence of the OWNER in writing.</div></div> <div>4. General<div>The Grading CONTRACTOR shall:<div>a. Maintain proper site drainage at all times during the course of construction, and prevent storm water from running into or standing in excavated areas.</div><div>b. Spread and compact uniformly to the degree specified all excess trench spoil after completion of the underground improvements.</div><div>c. Scarify and compact to the degree specified the upper twelve (12) inches of the suitable subgrade material, in all areas that may be soft due to excess moisture content. This applies to cut areas as well as fill areas.</div><div>d. Provide water to add to dry material in order to adjust the moisture content for the purpose of achieving the specified compaction.</div></div></div> <div>5. Testing and Final Acceptance<div>a. The CONTRACTOR shall provide as a minimum, a fully loaded tri-axle dumptruck or similar equipment for proof rolling the pavement subgrade prior to the placement of the curb and gutter and the base material. In addition, the pavement aggregate base course shall also be proof rolled. The Village Engineer shall be notified 48 hours in advance of any proof roll.</div><div>b. Specific compaction testing may be required by the OWNER in selected fill areas. The CONTRACTOR shall bear the cost of any compaction testing which does not meet specification as well as the responsibility and cost for the necessary correction(s).</div><div>c. Approval of the pavement subgrade by the OWNER shall be required prior to the placement of the pavement materials.</div><div>d. The subgrade soil shall be tested by a professional geotechnical engineer at the developer's expense and shall have a minimum designated Illinois Bearing Ratio (IBR equal to three (3).</div><div>e. A soil investigation report shall be provided to the Village to verify the in situ IBR value. Payment structures with subgrade soil having an IBR value less than three (3) shall have an increased pavement structure as necessary to carry the design traffic loading.</div></div> <div>6. Method of Measurement<div>a. As-built measurements of earthwork for the purpose of payment shall not apply. The quantities shown in the engineer's "quantity estimate" shall be utilized unless said quantities are adjusted by mutual consent of the owner and contractor prior to the signing and acceptance of a contract.</div><div>b. The quantities as shown in the engineer's "quantity estimate" are those estimated by the engineer and are provided solely for the convenience of the contractor. The contractor by choosing to utilize these quantities in the preparation of his "lump sum" bid, also accepts their accuracy. The contractor is therefore encouraged to make his own independent earthwork calculation, and to visit the site prior to the preparation of his bid.</div><div>c. Prior to the removal of unsuitable material, the contractor shall notify the owner for authorization to remove said material. upon authorization and removal, the contractor shall request that the unsuitable material shall be field measured by the engineer in place.</div></div> <div>7. Basis of payment<div>a. Payment for all earthwork shall be "lump sum", the contractor shall provide unit prices for earthwork for the purpose of contract adjustment, if required.</div><div>b. Payment for the removal of unsuitable material shall be based on the quantities as field measured by the engineer. the contractor shall provide as part of his bid a unit price per cubic yard for the removal of unsuitable material. said unit price shall include the complete removal of the material, replacement with a suitable material obtained by the contractor from a borrow source, and compaction to the required specification.</div></div> |  | <div>1. The Underground CONTRACTOR Shall:<div>a. Adhere to the criteria for the separation between water mains and sanitary sewers, storm sewers, combined sewers, sewer services and septic fields according to the requirements stated in the IEPA Rules for Public Water Supplies (the formal citation is Title 35, Subtitle F, Chapter II, Parts 651–654). All sewer water main separations shall be constructed per the "Standard Specifications for Water and Sewer Main Construction in Illinois".</div><div>b. Be responsible to place on grade, and coordinate with other CONTRACTORS, all underground utility structure frames such as manholes, catch basins, and inlets.</div><div>c. Be aware of potential conflicts with existing utilities. The CONTRACTOR shall excavate around the existing utilities to determine their exact location and elevation prior to the construction of the proposed utility improvements. Should unforeseen conflicts be found, the CONTRACTOR shall contact the ENGINEER prior to constructing the proposed improvements.</div><div>d. Adjust or reconstruct any existing utility structure to the satisfaction of the utility owner. Adjustments and/or reconstructions not called for on the plans shall be considered incidental to the contract. No more than two adjusting rings within a min. of four inches (4") and a max. of twelve inches (12") of adjusting rings.</div><div>e. Provide poured concrete filets conforming to the shape of the pipe in all sanitary and storm manholes, and inlets.</div><div>f. Be responsible for maintaining the top of any utility trench at least three (3) feet away from any existing or proposed curb or pavement, in those instances where the trench runs parallel to said curb or pavement.</div><div>9. Be responsible for the dewatering of utility trenches during construction and providing the necessary trench bracing that may be required to assure safe working conditions.</div><div>h. Remove soft material that may be encountered at the pipe invert elevation to a depth of at least one (1) ft. below the bottom of the pipe, and backfill with compacted bedding material.</div><div>i. No damage to the road subgrade with excessive water saturation from hydrant flushing or from leaks in the water distribution system. The cost of repair for such damage shall be borne by the CONTRACTOR. Hoses should be used to direct the water from hydrant flushing into the storm sewer system (if available).</div><div>j. Repair any existing field drainage tile damaged during construction, and properly reroute and/or connect said tile to the nearest storm sewer outlet. All locations of encountered field drainage tile shall be properly indicated on the CONTRACTOR'S record drawing.</div><div>k. Furnish one (1) set of Record drawings to the ENGINEER upon completion of the sanitary sewers and water mains. Drawings (or table of locations) shall indicate the location of all sanitary sewer wyes (measured from the nearest downstream manhole), sewer stubs, water service along main and b-boxes. The CONTRACTOR shall also furnish linear distance along water main from appurtenances to appurtenance (valve vault to tee, tee to bend, etc.).</div><div>l. Be responsible for implementation of the "Soil Erosion and Sedimentation Control Measures" as applicable.</div><div>m. Maintain erosion control measures (straw bales and filter fabric) until grass is established.</div></div> <div>2. Method of Measurement<div>a. All sanitary sewer, storm sewer, and water main pipe shall be measured in the field after its installation. Payment shall be based on these field measurements.</div><div>b. All appurtenances such as manholes, catchbasins, inlets, valves and valve vaults, valve boxes, and fire hydrants, shall be paid for on the basis of in-place quantities.</div><div>c. Trench backfill material shall be measured by multiplying the as-constructed length of pipe (where applicable) by the average depth of the pipe by the "Payment Quantities per foot of Conduit" listed in Table 1, pg. 138 and "Typical Detail of Conduit Installation", pg. 137 of the Standard Specification for Sewer and Water in Illinois. If requested, the CONTRACTOR shall provide load tickets to the ENGINEER for verification of the trench backfill material delivered to the construction site. Load tickets for bedding material shall be submitted separately.</div></div> <div>3. Basis of Payment<div>a. All sanitary sewer, water main, and storm sewer pipe shall be paid for at the contract unit price per LINEAL FOOT. The price shall include the necessary labor and material for a complete in-place installation, as well as all incidental construction, testing, bedding material, and connections to existing utilities.</div><div>b. All appurtenances for the underground improvements shall be paid for at the contract unit price EACH, said price to include the necessary labor and material for a complete in-place installation. The price for manholes, inlets, and catchbasins shall also include the frame and grate and all incidental construction. The price for fire hydrants shall also include a six (6) inch valve and box, and all incidental construction.</div><div>c. Trench backfill material shall be paid for at the contract unit price per CUBIC YARD. Compaction must be made by mechanical methods.</div></div> <div>4. As-Built Water &amp; Sanitary Services<div>a. As-built locations shall be provided for all water and sanitary sewer stubs. They shall also be stamped on the curb.</div></div> <div>5. Structure Castings<div>a. Frames and lids (or grates) for sanitary, watermain and storm sewer structures shall be as indicated on the plans, and the cost of same shall be integrated into the representative structure costs. Each structure lid shall be cast with text identifying the type of structure (storm, sanitary, water).</div><div>b. Manhole castings shall be adjusted to finished grade using precast adjusting rings set on bitumastic material. All structures shall have no more than two adjusting rings w/ a min. of four inches (4") and a max. of twelve inches (12") of adjusting rings.</div><div>c. All frames shall be set on a mastic bed with all gaps tuck pointed.</div><div>d. All castings shall be made in the U.S.A. with U.S.A. materials.</div></div> <div>6. Trench Backfill<div>a. Bedding, haunching and the initial backfill shall consist of IDOT CA–7, CA–11 OR CA–19 aggregate. The initial backfill shall be placed to at least 12" above the pipe.</div><div>b. Final backfill of the trench shall be accomplished by careful replacement of the excavated material. Any pipe installed under or within a 45 degree angle of repose (1:1) from the top of pipe to the edge of pavement, driveway (when driveway location is known) or curb and gutter shall be backfilled to the top of the trench with compacted IDOT CA–7, CA–11 or CA–19 material.</div><div>c. Compaction shall be in achieved using 8" lifts (uncompacted) and mechanical compaction to 95% density. All costs for compaction and testing shall be paid for by the Developer or Contractor. Results shall be copied to the Village Engineer.</div></div> |  | <div>5. Wyes or Tees shall be provided on the new sanitary sewers for proposed building services.</div> <div>6. "Band Seal" or similar couplings shall be used when joining pipes of dissimilar materials.</div> <div>7. All sanitary structures shall have an external wrap, MAC or approved equal.</div> <div>8. Polyethylene encasement shall be provided for all DIP sanitary sewer in accordance with AWWA latest standards.</div> <div>9. Prior to pipe laying and jointing, the trench shall be sufficiently dewatered to maintain the water level in the trench at or below the base of the bedding. State / Federal permits, license agreements or other required approvals shall be obtained prior to dewatering.</div> <div>10. Where separation from water main cannot be maintained as required per Illinois specifications, the sanitary sewer shall be mechanical joint PVC pressure pipe meeting C–900 or C–905.</div> <div>11. Sewers shall be laid straight in both horizontal and vertical planes between manholes with a minimum cover of 4 feet.</div> <div>12. Sanitary sewers shall be located a minimum of 10 feet from any building and meet separation requirements of the Standard Specifications for Water and Sewer Main Construction in Illinois.</div> <div>13. Services shall be a minimum 6 inches and extend to the property line or beyond any utility located in the front yard of a lot being served (single-family development), or to within five (5) feet from the face of a proposed building being served (multi-family and commercial development). The termination points shall be clearly located with a green-topped 4 inch x 4 inch stake extending a minimum 3 feet above final grade. The service lines shall be connected to the sewer using a wye at the 10:00 and 2:00 positions. Service lines not immediately connected to the building to be served shall be tightly plugged, using a plug provided by the pipe manufacturer for such use.</div> <div>14. Testing and Final Acceptance<div>a. Sanitary sewer mains and services shall be tested for exfiltration of air under pressure and deflection for flexible thermoplastic pipe in accordance with the Standard Specifications for Water and Sewer Construction in Illinois prior to their final acceptance. Allowable testing limits shall be as described in the "Standard Specifications" unless the local requirements are more restrictive. Service stubs must be properly plugged and sealed and clearly located at their termination points prior to testing. All sewer mains, service lines and manholes shall be clean and free of debris prior to their final acceptance. Sanitary Sewer shall be inspected and tested in accordance with the local jurisdictional requirements for television inspection and reviewed by the Village Engineer. Two copies of all test results shall be provided to the Municipality.</div><div>b. Sanitary Manhole structures shall be tested, prior to acceptance, for watertightness by either of the following methods in conformance with the requirements specified: ASTM C 969: "Standard Practice for Infiltration and Exfiltration Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines." OR ASTM C 1244: "Standard Test Method for Concrete Sewer Manholes by the Negative Pressure (Vacuum) Test."</div><div>c. All public sanitary sewer extensions shall be internally video taped by remote camera. Tapes shall be in color using VHS or CD-ROM format and submitted with written reports to the Village Engineer for review and approval prior to acceptance of the sewer improvements by the Village.</div><div>d. LaGrange Highlands will be the agency responsible for sewer main acceptance.</div></div> |  | <div>11. Fire Hydrants<div>a. Fire Hydrants shall be Mueller super centurion 250. Factory painted safety red with 5–1/4 inch valve opening and shall be painted red.</div><div>b. The hydrant shall not be for a five foot (5') bury with mechanical joint shoe and have two 2–1/2 inch hose connections and one four and one-half inch (4–1/2") male pumper connection. Thread shall be National Standard.</div><div>c. The hydrant shall have a break-away traffic flange and connections.</div><div>d. All fire hydrants not in service shall be bagged.</div><div>e. Hydrants leads shall be six-inch (6") swivel anchoring coupling. Hydrant tees shall be used in lieu of swivel anchoring coupling pipe where required to meet plan locations.</div><div>f. The maximum distance between fire hydrants shall be 350 feet.</div><div>g. All fire hydrants shall be kept clear of obstructions within three (3) feet in all directions. This shall include posts, fences, vehicles, growth, trash, storage, and any other material or objects.</div><div>h. All fire hydrants to have a 10 pound anode bag attached to the hydrant.</div></div> <div>12. Pipe Cover and Separation<div>a. Cover over water pipes shall be a minimum of 5.5 feet.</div><div>b. Horizontal and vertical separation shall meet requirements of the "Standard Specifications for Water and Sewer Main Construction in Illinois." Locations requiring alternative materials are noted on the plans.</div></div> <div>13. Pipe Laying<div>a. The contractor shall keep the trench free from water while the water main is being placed and until the pipe joint has been sealed to the satisfaction of the Village Engineer.</div><div>b. Adequate provisions shall be made for the safety, storage, and protection of all water pipe prior to installation in the trench. Care shall be taken to prevent damage to the pipe castings, both inside and out. Provisions shall be made to keep the inside of the pipe clean throughout its storage period and to keep mud and/or other debris from being deposited therein. All pipe shall be thoroughly cleaned on the inside before laying of the pipe. Proper equipment shall be used for the safe handling, conveying, and laying of the pipe so as to prevent damage to water main materials and protective coatings and linings. Under no circumstances shall water main materials be dropped or dumped into the trench.</div><div>c. In making joints, all portions of the jointing materials and the socket and spigot ends of the joining pipe shall be wiped clean of all foreign materials. The adequate installation of the jointing shall be in accordance with the manufacturer's installation instructions. During construction, until jointing operations are complete, the open ends of all pipes shall at all times be protected and sealed with temporary watertight plugs.</div><div>d. During water main installation, to make a closure between two pipe ends, or between pipe end fittings, or between pipe end and valve, short lengths shall be used with proper connections or couplings. Repair sleeves shall not be used to make closures during new construction.</div><div>e. All pipe and trenching shall be viewed and approved by the Municipality prior to cover and backfill.</div><div>f. All bends of 22–1/2 degrees or greater, and all tees and plugs shall be thrust protected to prevent movement of the line under pressure. Thrust protection may also be attained by the use of a combination or retaining glands and threaded rods. All locations of thrust blocking or retaining glands/rods need to be marked on the as built drawing.</div></div> <div>14. Testing and Disinfection<div>a. Water main shall be tested in accordance with AWWA C–600 &amp; the local jurisdictional requirements prior to its final acceptance. A 24 hour system pressure test needs to be performed as per the Standard Specifications. The pressure and leakage tests and disinfection of the mains shall be as described in the "Standard Specifications" unless the local requirements are more restrictive. All valve vaults shall be clean and free of debris and water, and individual service boxes shall be visible and clearly located prior to their final acceptance.</div><div>b. The preferred point of application of the chlorinating agent shall be at the beginning of the pipeline extension or any valved section of it and through a corporation stop in the top of the newly laid pipe. The injector for delivering the chlorine gas into the pipe should be supplied from a tap on the pressure side of the gate valve controlling the flow into the pipeline extension.</div><div>c. Water from the existing distribution system or any other source of supply shall be controlled so as to flow slowly into the newly laid pipeline during the application of chlorine-gas. The rate of chlorine mixture flow shall be in such proportion to the rate of water entering the pipe that the chlorine dose applied to the water entering the newly laid pipe shall be at least fifty parts-per-million (50ppm), or enough to meet the requirements during the retention period.</div><div>d. Valves shall be manipulated so that the strong chlorine solution in the line being treated shall not flow back into the line supplying the water. The pipe section being chlorinated shall be kept at a lower pressure than the water system pressure.</div><div>e. Treated water shall be retained in the pipe long enough to destroy all spore-forming bacteria. This retention period shall be at least twenty-four (24) hours. After the chlorine-treated water has been retained for the required time, the chlorine residual at the pipe extremities and at other representative points shall be at least twenty five parts-per-million (25ppm).</div><div>f. In the process of chlorinating newly laid pipe, all valves or other appurtenances shall be operated while the pipeline is filled with the chlorinating agent.</div><div>9. After all mains have been pressure tested, they shall be disinfected and tested according to the requirements of the Standards for Disinfecting Water Mains, AWWA C–601 and C–651, and as required by this Section. All disinfection, as required by this Section, shall be performed by an independent firm exhibiting experience in the methods and techniques of this operation, and shall be approved by the Village Public Works Department. The contractor shall obtain two samples of water from the main for bacteriological testing. A second series of samples shall be collected no less than 24 hours after the first set of samples has been collected. The contractor and the Village will be furnished with copies of the bacteriological report for their records.</div></div> |  | <div>1. All storm sewer shall conform to the requirements of The Standard Specifications for Water and Sewer Main Construction in Illinois</div> <div>2. Storm sewers shall be reinforced concrete pipe conforming to ASTM C76 minimum Class III with O-ring joints conforming to ASTM C443.</div> <div>3. Bedding shall be minimum of 6" of CA–7.</div> <div>4. Minimum size shall be twelve inches (12").</div> <div>5. Storm Structures<div>a. Rear yard catch basins are not allowed.</div><div>b. All storm structures shall be precast reinforced concrete only.</div><div>c. All storm structures shall be set on a six-inch (6") CA–7 cushion.</div><div>d. All storm structures shall have no more than two adjusting rings within a minimum of four inches (4") and a maximum of twelve inches (12") of adjusting rings.</div><div>e. All lifting holes, joints between precast reinforced concrete sections, gaps between pipes and structures shall be tuckpointed with hydraulic cement.</div><div>f. Bitumastic material shall be placed between precast reinforced concrete sections.</div><div>g. All steps shall be fiberglass or neoprene coated.</div><div>h. All structure connections shall be concrete sewer pipe, ASTM C14 for extra strength pipe</div></div> <div>6. Storm sewer and all storm structures shall be clean and free of debris prior to their final acceptance. Storm Sewer shall be inspected and tested in accordance with the local jurisdictional requirements including television inspection for review by the Village Engineer.</div> <div>7. All flared end sections less than 48" (effective diameter) require grates in accordance with IDOT specifications.</div> <div>8. All castings shall be made in the USA with USA materials. Closed covers shall be stamped per Exhibit 2B. Open covers shall have the grates as specified in the plans.</div> |  |
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The Village of Western Springs is the agency responsible for the water main.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             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Fine Grading <div>a. Prior to the construction of the curb and gutter and the placement of the base material, the streets shall be fine graded to within 0.1 feet + of final subgrade elevation, to a point two (2) feet beyond the back of the proposed curb.</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
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All installations shall conform to the requirements of the Standard Specifications for Water and Sewer Main Construction in Illinois.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    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Curb and Gutter <div>a. The curb and gutter shall be the type as detailed on the Engineering Plans.</div> <div>b. The curbs shall be backfilled after their construction and prior to the placement of the base course.</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
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Material for main pipe and fittings shall be class 52 ductile iron pipe with poly wrap for the public water main per AWWA C–151, with mechanical and push-on joints complying with AWWA C–111.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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Pavement <div>a. The pavement materials shall be as detailed on the Engineering Plans. Thickness specified shall be considered to be the minimum compacted thickness.</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
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Material for the services shall be soft temper, Type K, copper water tubing, conforming to ASTM latest standard w/ compression fittings, unless otherwise noted on the plans.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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General. The Paving Contractor shall: <div>a. Repair any base course and binder course failures prior to the installation of the final bituminous concrete surface course.</div> <div>b. Sweep clean the binder course prior to the installation of the final bituminous concrete surface course. Excessive cleaning of the binder course that may be required, and is not the fault of the Paving CONTRACTOR, shall be paid for on a time and material basis by prior agreement with the OWNER.</div> <div>c. Permit the bituminous concrete binder course to weather one (1) winter season prior to the installation of the bituminous concrete surface course.</div> <div>d. Street signs &amp; Traffic signs.</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
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Sizes for main & service lines shall be as indicated on the Engineering Plan.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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Testing and Final Acceptance <div>a. Prior to the placement of the base course, the subgrade must pass a proof roll test to be approved by the local jurisdictional authority. The Village shall be contacted at least 2 business days in advance of the proof roll. (See "Testing and Final Acceptance for Earthwork")</div> <div>b. Prior to placement of the bituminous concrete surface course, the CONTRACTOR if requested by the OWNER, shall obtain specimens of the binder course with a core drill where directed by the ENGINEER, for the purpose of thickness verification. Coring shall be in accordance with the applicable provisions of ART.406.15 of the Standard Specification entitled "Standard Specifications for Road and Bridge Construction". The cost for obtaining cores, which meet or exceed the specification, shall be borne by the OWNER.</div> <div>c. Deficiencies in the bituminous concrete binder course shall be adjusted for by increasing the plan thickness of the surface course with no additional cost to the OWNER.</div> <div>d. A nuclear density test must be conducted on asphalt pavement in accordance with IDOT standards.</div> <div>e. Final acceptance of the total pavement installation shall be subject to the testing and checking requirements cited above.</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
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Connections to Village water system shall be made under full water service pressure. Unless noted on plans and Village approval granted for shutdown. Shutdown requests need to be made to municipal services department 4 days prior to desired shutdown date. Contractor required to distribute shutdown notices to any impacted customers 2 business days prior. Village to provide notice text. <div>a. Tapping sleeves shall include two piece bolted sleeve type with mechanical joints, Mueller–H615, or equal with joint accessories.</div> <div>b. Tapping valves shall include fully ported gate valves complying with AWWA C500 and mechanical joints type, Mueller–H667 or equal. Tapping valves shall be placed in precast concrete vaults.</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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Method of Measurement <div>a. Curb and Gutter, and base course shall be measured in the field by the CONTRACTOR. The quantities shall be submitted to the OWNER for verification.</div> <div>b. When requested by the OWNER, documentation for the installed base course, bituminous concrete binder, and surface, shall be submitted to the ENGINEER for verification. Deficiencies in total bituminous concrete pavement thickness shall be adjusted for in accordance with the requirements of the jurisdictional authority.</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
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The shut-off valve or curb stop for services shall be located as shown on the plans and shall be installed with a valve box of design approved by the Municipality. The termination point shall be clearly located with a blue-topped 4 inch x 4 inch stake extending a minimum of 3 feet above and below final grade.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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                                                                                                                                 |  | 7. Basis of Payment <div>a. Curb and Gutter will be paid for at the contract unit price per LINEAL FOOT.</div> <div>b. Prime Coat material will be paid for at the contract unit price per GALLON.</div> <div>c. Base Course will be paid for at the contract unit price per SQUARE YARD.</div> <div>d. Bituminous Concrete will be paid for at the contract unit price per SQUARE YARD.</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
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Valves: Mueller, Clow or equal mechanical joint, resilient wedge seat, cast iron, bronze-mounted, O-ring seal, bronze non-rising stems, gate valves. Valveshall open left and be tested to 500 psi with a 250 psi working pressure.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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Water services, where indicated on the "Quantity Estimate" as "long" or "short", shall include the necessary length of Type "K", copper water tube of the size shown on the plans, corporation stop, curb stop, and service box, and all necessary labor, tools, equipment, excavation & backfill, for a complete installation as shown on the Engineering plans. Trench backfill will be paid for separately, when required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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Valve Boxes <div>a. Valve boxes shall be adjustable, 3-piece cast iron, 5–1/4 inch shaft roadway-type and no-tilt drop cover with "WATER" cast into it.</div> <div>b. Valve box stabilizer of PVC manufactured by Valve Box Stabilizer, Inc. for six-inch (6") and eight-inch (8") valve boxes shall be provided.</div> <div>c. Valve box must have additional upward or downward travel when adjusted to finished grade.</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          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Valve Vaults <div>a. All valve vaults shall be precast reinforced concrete only.</div> <div>b. All valve vaults shall have no more than two adjusting rings with a minimum of four inches (4") and a maximum of twelve inches (12") of adjusting rings.</div> <div>c. All lifting holes, joints between precast reinforced concrete sections, rubber gaskets cast into concrete structures need to be water tight and shall be tuckpointed with hydraulic cement.</div> <div>d. All castings shall be set on bitumastic material.</div> <div>e. Bitumastic material shall be placed between precast reinforced concrete sections.</div> <div>f. All valve vaults shall have neoprene coated or fiberglass steps.</div> <div>g. Vaults and boxes shall not be allowed under streets, sidewalks or driveways.</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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GENERAL NOTES

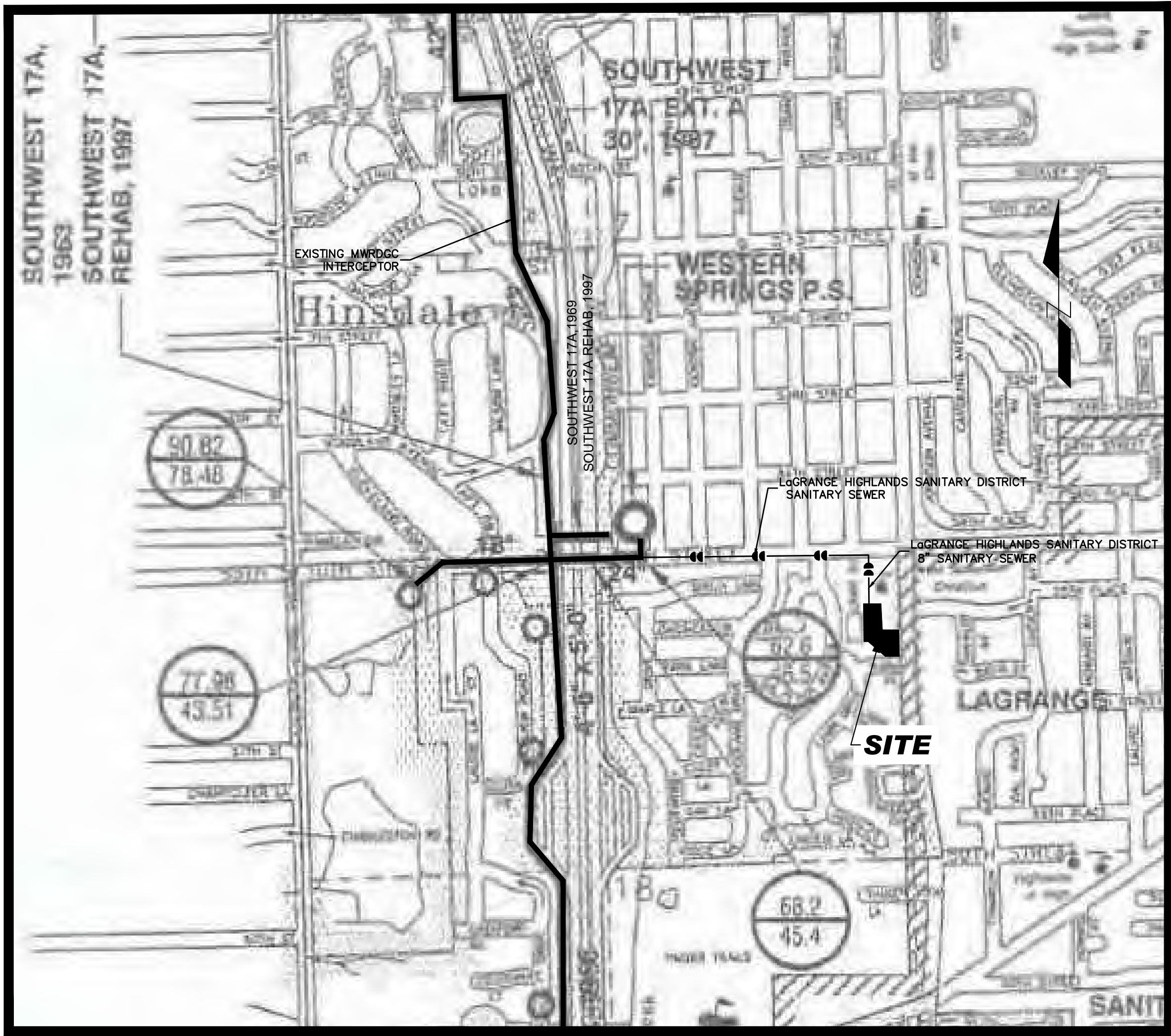
1. Definition of Terms
- a. The CONTRACTOR is the individual, firm, partnership or corporation contracting with the OWNER for performance of the prescribed work.
- b. The OWNER is the individual, firm, partnership or corporation having the authority to award the contract for the prescribed work.
- c. The ENGINEER, where specifically referred to in the Specifications shall be the OWNER'S representative.
2. All CONTRACTOR shall be responsible for the following, which shall also be incidental to the cost of construction:
- a. Examination of the Engineering Plans and Specifications and the existing site conditions prior to submitting a bid, and notifying the ENGINEER at once of any discrepancies.
- b. The obtaining of any necessary permits not previously applied for by the OWNER, and posting of the necessary bonds.
- c. The notification of the start of construction to the Village of WESTERN SPRINGS Public Services Dept., at (708) 246-8540, utility companies, and the ENGINEER at least two (2) working days prior to said start. All existing utilities must be staked prior to construction. All construction, including equipment startup, shall be between the hours of 7:00 a.m. to 8:00 p.m. weekdays, and 8:00 a.m. to 7:00 p.m. weekends and holidays.
- d. Calling attention to the OWNER of any errors or discrepancies, which may be suspected in lines and grades, which are established by the OWNER. The CONTRACTOR shall not proceed with the work until the lines and grades which are believed to be in error have been verified or corrected by the OWNER. Additional staking that may be required due to CONTRACTOR negligence shall be paid for by the CONTRACTOR.
- e. The providing of safe and healthful working conditions throughout the prosecution of the construction work. This shall include, but not be limited to: the removal of debris, the protecting of construction hazards with barricades and the keeping of public street pavements clean of construction dirt and debris.
- f. The restoration to the original condition or better of any areas that are damaged by the CONTRACTOR during construction.
- g. The testing of materials, if required by the OWNER and/or the Jurisdictional agencies.
- h. The guarantee of all materials and workmanship for a period of one (1) year upon final acceptance by the OWNER and other Jurisdictional agencies.
- i. Trees shall be installed a minimum of five (5) feet horizontally from sanitary sewers, sanitary services, watermains, and water services. Trees and light poles shall be installed a minimum of ten (10) feet horizontally from utility structures and appurtenances, including but not limited to manholes, valve vaults, valve boxes and fire hydrants.
- j. The contractor shall be responsible for implementation & maintenance of all soil erosion & sedimentation control measures throughout the entire project.
- k. Contractors are required to obtain applicable permits from the Municipality.
3. The OWNER shall be responsible for the following:
- a. Scheduling the necessary preconstruction meeting(s) with the Jurisdictional agencies at least two (2) working days prior to the commencement of work.
- b. Insurance certificates from all contractors, naming the Village of WESTERN SPRINGS as additional insured, prior to preconstruction meeting being set.
- c. Providing the CONTRACTOR with one (1) set of control line and grade stakes (at offsets mutually agreed upon) for the proper prosecution and control of the work.
- d. Applying for IEPA, IDOT, and all applicable County, Municipal and Sanitary District Permits. Other necessary permits shall be the responsibility of the CONTRACTOR.
4. The ENGINEER shall be responsible for the following:
- a. To periodically visit the construction site in order to better carry out the duties and responsibilities assigned by the OWNER and undertaken by the ENGINEER.
- b. The ENGINEER shall not, during such visits or as a result of such observations of the CONTRACTOR(s)' work in progress, supervise, direct or have control over the CONTRACTOR(s)' work nor shall the ENGINEER have authority over or responsibility for the means, methods, techniques, sequences or procedures of construction selected by the CONTRACTOR(s)', for safety precautions and programs incident to the work of the CONTRACTOR(s) or for any failure of the CONTRACTOR(s) to comply with laws, rules, regulations, ordinances, codes or orders applicable to the CONTRACTOR(s) furnishing and performing their work. Accordingly, the ENGINEER can neither guarantee the performance of the construction contracts by the CONTRACTOR(s) nor assume responsibility for the CONTRACTOR(s)' failure to furnish and perform their work in accordance with the Contract Documents.
5. Except where modified by the contract documents, all work proposed herein shall be in accordance with the following specifications, which are hereby made a part hereof:
- a. "Standard Specifications for Road and Bridge Construction", and "Supplemental Specifications and Recurring Special Provisions", latest edition, prepared by the Illinois Department of Transportation (IDOT Standard Specifications).
- b. Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition, as adopted by the Illinois Society of Professional Engineers, et al.
- c. Illinois Urban Manual, latest edition.
- d. Village of WESTERN SPRINGS Codes and Ordinances, current edition when these plans were approved.
- e. American With Disabilities Act, Standards for Accessible Design, latest ed.
6. In the event of a conflict between statements, which apply to the construction work, the OWNER should contact the Public Works Director for direction.

MWRD SPECIFICATIONS

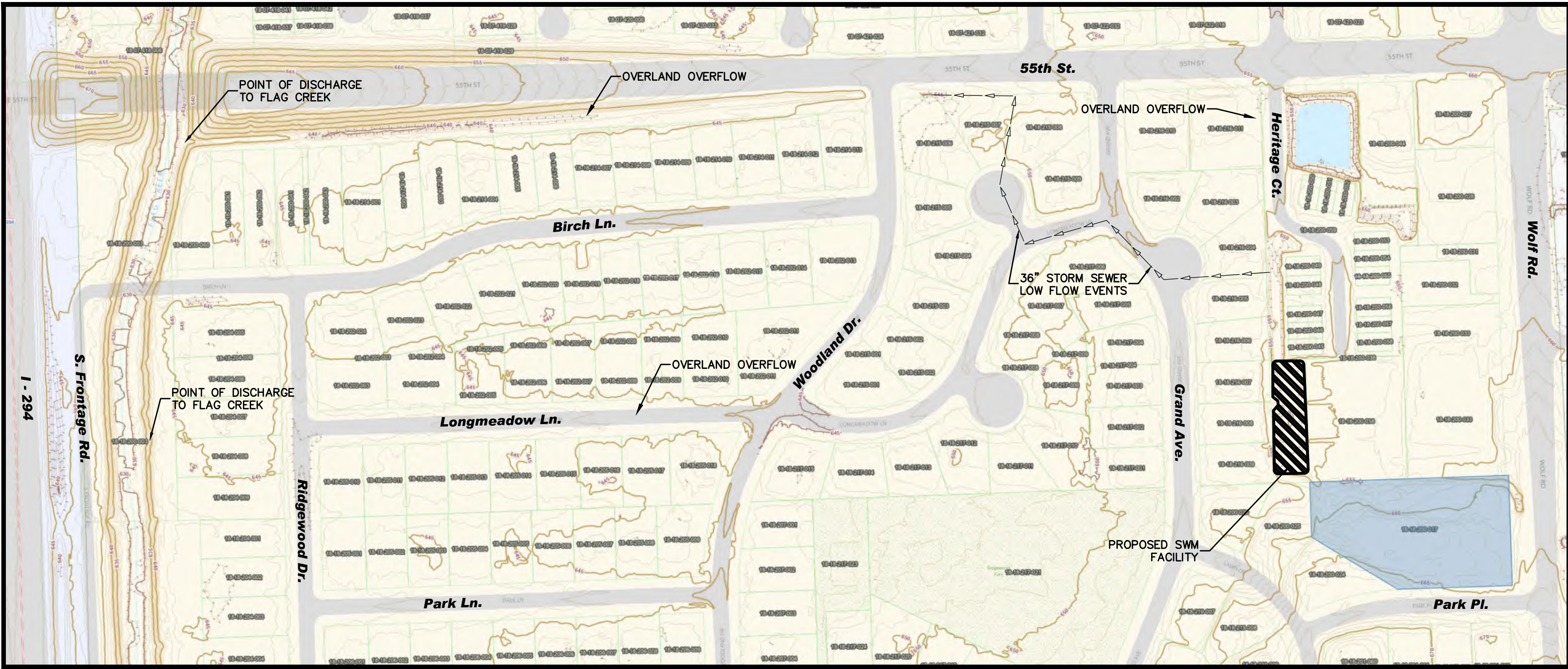
- A. Referenced Specifications
1. All construction shall be in accordance with the applicable sections of the following, except as modified herein or on the plans:
- a. Standard Specifications for Road and Bridge Construction (latest edition), by the Illinois Department of Transportation (IDOT SS) for all improvements except sanitary sewer and water main construction;
- b. Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition (SSWS) for sanitary sewer and water main construction;
- c. Village of WESTERN SPRINGS municipal code (latest edition);
- d. The Metropolitan Water Reclamation District of Greater Chicago (MWRD) Watershed Management Ordinance and Technical Guidance Manual (latest edition);
- e. In case of conflict between the applicable ordinances noted, the more stringent shall take precedence and shall control all construction.
- B. Notifications
1. The MWRD local sewer systems section field office must be notified at least two (2) working days prior to the commencement of any work (call 708-585-4055).
2. The Village of WESTERN SPRINGS Engineering Department and Public Works must be notified at least 24 hours prior to the start of construction and prior to each phase of work. Contractor shall determine items requiring inspection prior to start of construction or each work phase.
3. The Contractor shall notify all utility companies prior to beginning construction for the exact locations of utilities and for their protection during construction. If existing utilities are encountered that conflict with new construction, immediately notify the engineer so that the conflict can be resolved. call J.U.I.L.I.E. at 1-800-892-0123.
- C. General Notes
1. All elevations shown on plans reference the north american vertical datum of 1988 (NAVD88). Conversion factor is XXXX ft.
2. MWRD, the Municipality and the Owner or Owner's Representative shall have the authority to inspect, approve, and reject the construction improvements.
3. The Contractor(s) shall indemnify the Owner, Engineer, Municipality, MWRD, and their Agents, from all liability involved with the construction, installation, or testing of this work on the project.
4. The proposed improvements must be constructed in accordance with the engineering plans as approved by mwrD and the municipality unless changes are approved by MWRD, the Municipality, or authorized agent. Any changes in length, location or alignment shall be shown in red. All wyes or bends shall be located from the downstream manhole. All valves, B-Boxes, tees or bends shall be tied to a fire hydrant.
5. The location of various underground utilities which are shown on the plans are for information only and represent the best knowledge of the Engineer. Verify locations and elevations prior to beginning the construction operations.
6. Any existing pavement, sidewalk, driveway, etc., damaged during construction operations and not called for to be removed shall be replaced at the expense of the Contractor.
7. Material and compaction testing shall be performed in accordance with the requirements of the Municipality, MWRD, and Owner.
8. The Underground Contractor shall make all necessary arrangements to notify all inspection agencies.
9. All new and existing utility structures on site and in areas disturbed during construction shall be adjusted to finish grade prior to final inspection.
10. Record drawings shall be kept by the Contractor and submitted to the Engineer as soon as underground improvements are completed. Final payments to the Contractor shall be held until they are received. Any changes in length, location or alignment shall be shown in red. All wyes or bends shall be located from the downstream manhole. All valves, B-Boxes, tees or bends shall be tied to a fire hydrant.
- D. Sanitary Sewer
1. The Contractor shall take measures to prevent any polluted water, such as ground and surface water, from entering the existing sanitary sewers.
2. A water-tight plug shall be installed in the downstream sewer pipe at the point of sewer connection prior to commencing any sewer construction, the plug shall remain in place until removal is authorized by the Municipality and/or MWRD after the sewers have been tested and accepted.
3. Discharging any unpolluted water into the sanitary sewer system for the purpose of sewer flushing or lines for the deflection test shall be prohibited without prior approval from the Municipality or MWRD.
4. All sanitary sewer construction shall be in accordance with the Standard Specifications for Water and Sewer Main Construction in Illinois (latest edition).
5. All floor drains shall discharge to the sanitary sewer system.
6. All downspouts and footing drains shall discharge to the storm sewer system.
7. All sanitary sewer pipe materials and joints (and storm sewer pipe materials and joints in a combined sewer area) shall conform to the following:
- | Pipe Material                    | Pipe Specifications                                                      | Joint Specifications                                               |
|----------------------------------|--------------------------------------------------------------------------|--------------------------------------------------------------------|
| Vitrified Clay Pipe              | ASTM C-700                                                               | ASTM C-425                                                         |
| Reinforced Concrete Sewer Pipe   | ASTM C-76                                                                | ASTM C-443                                                         |
| Cast Iron Soil Pipe              | ASTM A-74                                                                | ASTM C-564                                                         |
| Ductile Iron Pipe                | ANSI A21.51                                                              | ANSI A21.11                                                        |
| Polyvinyl Chloride (PVC) Pipe    | 6-inch to 15-inch Diameter SDR 26<br>18-inch to 27-inch Diameter F-DY=46 | ASTM D-3212<br>ASTM D-3212, F-477 (gasketed)                       |
| High Density Polyethylene (HDPE) | ASTM D-3350<br>ASTM D-3035                                               | ASTM D-3261, F-2620 (heat fusion)<br>ASTM D-3212, F-477 (gasketed) |
| Water Main Quality PVC           | 4-inch to 12-inch<br>14-inch to 48-inch                                  | ASTM D-3139<br>AWWA C900<br>ASTM D-3139<br>AWWA C905               |
- The following materials are allowed on a qualified basis subject to District review and approval prior to use. A special condition will be added to the permit when the pipe material below is used for sewer construction or a connection is made.
- | Pipe Material                  | Pipe Specification | Joint Specification |
|--------------------------------|--------------------|---------------------|
| Polypropylene (PP) Pipe        |                    |                     |
| 12-inch to 24-inch Double Wall | ASTM F-2736        | ASTM D-3212, F-477  |
| 30-inch to 60-inch Triple Wall | ASTM F-2764        | ASTM D-3212, F-477  |
8. All sanitary sewer construction (and storm sewer construction in combined sewer areas), shall be constructed with a minimum bedding thickness of 1" in size with thickness equal to 4" the outside diameter of the sewer pipe, but not less than four (4) inches or more than eight (8) inches. Material shall be CA-7, CA-11 or CA-13 and shall be extended at least 12" above the top of the pipe when using PVC.
9. Non-shear flexible-type couplings shall be used in the connection of sewer pipes of dissimilar pipe materials.
10. All manholes shall be provided with bolted, watertight covers. Sanitary lids shall be constructed with a concealed pickhole and watertight gasket with the word "sanitary" cast into the lid.
11. When connecting to an existing sewer main by means other than an existing wye, tee, or an existing manhole, one of the following methods shall be used:
- a. A circular saw-cut of sewer main by proper tools ("shower-Tap" machine or similar) and proper installation of hubwe saddle or hub-tee saddle.
- b. Remove an entire section of pipe (breaking only the top of one bell) and replace with a wye or tee branch section.
- c. With pipe cutter, neatly and accurately cut out desired length of pipe for insertion of proper fitting, using "band seal" or similar couplings to hold it firmly in place.
12. Whenever a sanitary/combined sewer crosses under a watermain, the minimum vertical distance from the top of the sewer to the bottom of the watermain shall be 18 inches. Furthermore, a minimum horizontal distance of 10 feet between sanitary/combined sewers and watermains shall be maintained unless: the sewer is laid in a separate trench, keeping a minimum 18" vertical separation; or the sewer is laid in the same trench with the watermain located at the opposite side on a bench of undisturbed earth, keeping a minimum 18" vertical separation. If either the vertical or horizontal distances described above cannot be maintained, or the sewer crosses above the watermain, the sewer shall be constructed to water main standards or it shall be encased with a water main quality carrier pipe with ends sealed.
13. All existing septic systems shall be abandoned. Abandoned tanks shall be filled with a granular material or removed.
14. All sanitary manholes, (and storm manholes in combined sewer areas), shall have a minimum inside diameter of 48 inches, and shall be cast in place or pre-cast reinforced concrete.
15. All sanitary manholes, (and storm manholes in combined sewer areas), shall have precast rubber boots that conform to ASTM C-923 for all pipe connections. Precast sections shall consist of modified groove tongue and rubber gasket type joints.
16. All abandoned sanitary sewers shall be plugged at both ends with at least 2 feet long non-shrink concrete or mortar plug.
17. Except for foundation/footing drains provided to protect buildings, or perforated pipes associated with volume control facilities, drain tiles/field tiles/underdrains/perforated pipes are not allowed to be connected to or tributary to combined sewers, sanitary sewers, or storm sewers tributary to combined sewers in combined sewer areas. Construction of new facilities of this type is prohibited; and all existing drain tiles and perforated pipes encountered within the project area shall be plugged or removed, and shall not be connected to combined sewers, sanitary sewers, or storm sewers tributary to combined sewers.
18. A backflow preventer is required for all detention basins tributary to combined sewers. Required backflow preventers shall be inspected and exercised annually by the property owner to ensure proper operation, and any necessary maintenance shall be performed to ensure functionality. In the event of a sewer surcharge into an open detention basin tributary to combined sewers, the permittee shall ensure that clean up and wash out of sewage takes place within 48 hours of the storm event.

MWRD SPECIFICATIONS CONT'D

- E. Erosion and Sediment Control
1. The contractor shall install the erosion and sediment control devices as shown on the approved erosion and sediment control plan.
2. Erosion and sediment control practices shall be functional prior to hydrologic disturbance of the site.
3. All design criteria, specifications, and installation of erosion and sediment control practices shall be in accordance with the Illinois urban manual.
4. A copy of the approved erosion and sediment control plan shall be maintained on the site at all times.
5. Inspections and documentation shall be performed, at a minimum:
- a. Upon completion of initial erosion and sediment control measures, prior to any soil disturbance.
- b. Once every seven (7) calendar days and within 24 hours of the end of a storm event with greater than 0.5 inch of rainfall or liquid equivalent precipitation.
6. Soil disturbance shall be conducted in such a manner as to minimize erosion. If stripping, clearing, grading, or landscaping are to be done in phases, the co-permittee shall plan for appropriate soil erosion and sediment control measures.
7. A stabilized mat of crushed stone meeting the standards of the Illinois urban manual shall be installed at any point where traffic will be entering or leaving a construction site. Sediment or soil reaching an improved public right-of-way, street, alley or parking area shall be removed by scraping or street cleaning as accumulations warrant and transported to a controlled sediment disposal area.
8. Concrete washout facilities shall be constructed in accordance with the Illinois Urban Manual and shall be installed prior to any on site construction activities involving concrete.
9. Mortar washout facilities shall be constructed in addition to concrete washout facilities for any brick and mortar building envelope construction activities.
10. Temporary diversions shall be constructed as necessary to direct all runoff from hydrologically disturbed areas to an appropriate sediment trap or basin. Volume control facilities shall not be used as temporary sediment basins.
11. Disturbed areas of the site where construction activities have temporarily or permanently ceased shall be stabilized with temporary or permanent measures within seven (7) days.
12. All flood protection areas and volume control facilities shall, at a minimum, be protected with a double-row of silt fence (or equivalent).
13. Volume control facilities shall not be constructed until all of the contributing drainage area has been stabilized.
14. Soil stockpiles shall, at a minimum, be protected with perimeter sediment controls. Soil stockpiles shall not be placed in flood protection areas or their buffers.
15. Earthen embankment side slopes shall be stabilized with appropriate erosion control blanket.
16. Storm sewers that are or will be functioning during construction shall be protected by appropriate sediment control measures.
17. The contractor shall either remove or replace any existing drain tiles and incorporate them into the drainage plan for the development. Drain tiles cannot be tributary to a sanitary or combined sewer. Drain tiles allowed in combined sewer area for green infrastructure practices.
18. If dewatering services are used, adjoining properties and discharge locations shall be protected from erosion and sedimentation. Dewatering systems should be inspected daily during operational periods. The site inspector must be present at the commencement of dewatering activities.
19. The contractor shall be responsible for trench dewatering and excavation for the installation of sanitary sewers, storm sewers, watermains as well as their services and other appurtenances. Any trench dewatering, which contains sediment shall pass through a sediment settling pond or equally effective sediment control device. Alternatives may include dewatering into a sump pit, filter bag or existing vegetated upslope area. sediment laden waters shall not be discharge to waterways, flood protection areas or the combined sewer system.
20. All permanent erosion control practices shall be initiated within seven (7) days following the completion of soil disturbing activities.
21. All erosion and sediment control measures shall be maintained and repaired as needed on a year-round basis during construction and any periods of construction shutdown until permanent stabilization is achieved.
22. All temporary erosion and sediment control measures shall be removed within thirty (30) days after permanent site stabilization.
23. The erosion and sediment control measures shown on the plans are the minimum requirements. additional measures may be required, as directed by the Engineer, Site Inspector, or MWRD.



SANITARY ROUTING EXHIBIT



STORM ROUTING EXHIBIT

REVIEW SET  
NOT FOR CONSTRUCTION

| REVISIONS |          | DESCRIPTION                | BY  |
|-----------|----------|----------------------------|-----|
| NO.       | DATE     |                            |     |
| 1         | 08-17-24 | PER LAGRANGE HIGHLANDS SD  | DNV |
| 2         | 08-26-24 | PER WESTERN SPRINGS REVIEW | SD  |
| 3         | 10-17-24 | PER VILLAGE REVIEW         | SD  |
| 4         | 11-04-24 | PER CDOOTH REVIEW          | DNV |
| 5         | 12-12-24 | PER VILLAGE REVIEW         | DNV |

McNAUGHTON DEVELOPMENT  
11S220 JACKSON ST. Ste. 101  
BURR RIDGE, ILLINOIS 60527  
(630) 325-3400

FINAL ENGINEERING PLANS  
FOR  
HERITAGE CROSSING  
5600 SOUTH WOLF ROAD  
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.  
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING  
9930 W. 190TH STREET, SUITE L  
MOKENA, ILLINOIS 60448  
(708) 326-4961  
FAX: (708) 326-4962

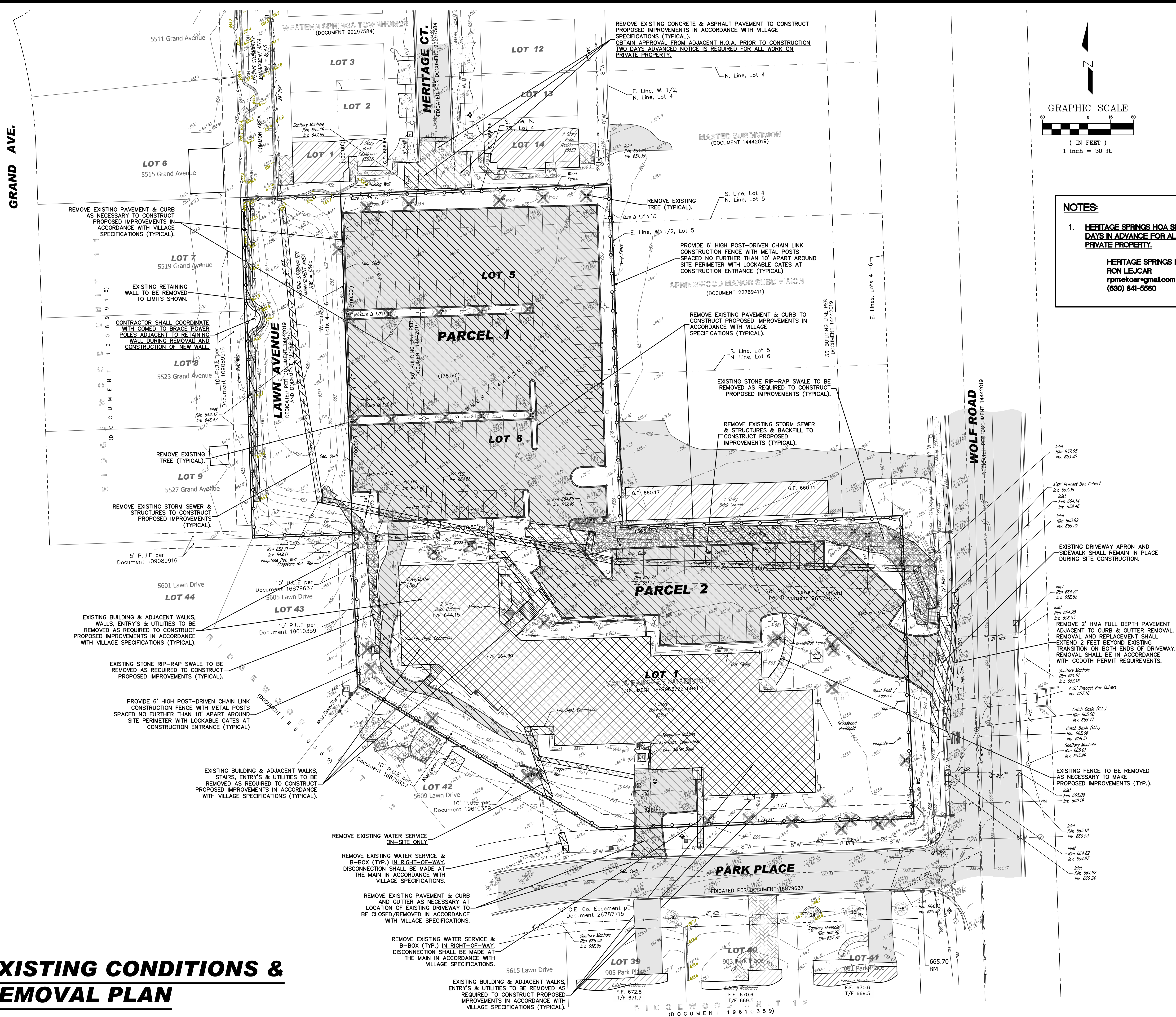
IL PROF. LIC. NO.: 184-003740



| PROJECT INFORMATION |              |
|---------------------|--------------|
| Project No.:        | 24-0001      |
| Scale:              | NONE         |
| Date:               | MAY 22, 2024 |
| Design By:          | SD           |
| Drawn By:           | DEI          |
| Checked By:         | SD           |

3  
OF  
20





| REVIEWS |          |                             |
|---------|----------|-----------------------------|
| NO.     | DATE     | DESCRIPTION                 |
| 1       | 06-17-24 | PER LAGRANGE, HIGHLANDS SD  |
| 2       | 06-26-24 | PER WESTERN, SPRINGS REVIEW |
| 3       | 07-04-24 | PER CROOK, CROOK REVIEW     |
| 4       | 11-04-24 | PER CROOK REVIEW            |
| 5       | 12-12-24 | PER VILLAGE REVIEW          |
| 6       |          |                             |
| 7       |          |                             |
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McNAUGHTON DEVELOPMENT  
115220 JACKSON ST. Ste. 101  
BURR RIDGE, ILLINOIS 60527  
(630) 325-3400

FINAL ENGINEERING PLANS  
FOR  
HERITAGE CROSSING  
5600 SOUTH WOLF ROAD  
WESTERN SPRINGS, ILLINOIS

**DESIGNTEK ENGINEERING, INC.**  
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING

100 W. 190TH STREET, SUITE L  
MOKENA, ILLINOIS 60448  
(708) 326-4961

FAX: (708) 326-4962



## PROJECT INFORMATION

|                      |
|----------------------|
| Project No.: 24-0001 |
| Scale: 1" = 30'      |
| Date: MAY 22, 2024   |
| Design By: SDD       |
| Drawn By: DEI        |
| Checked By: SDS      |

4

OF

20

## EXISTING CONDITIONS AND REMOVAL PLAN



EROSION CONTROL & SEDIMENTATION NOTES

1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS IN THE ILLINOIS URBAN MANUAL, LATEST EDITION, AND ALL OTHER AUTHORITIES HAVING JURISDICTION.
2. THE APPLICANT AND/OR CONTRACTOR IS RESPONSIBLE FOR INSURING THE OBTAINED PERMIT WITH THE COMPLETED SWPPP IS POSTED ON SITE IN A PROMINENT LOCATION BEFORE COMMENCEMENT OF ANY WORK ON SITE AND SHALL CONTACT THE VILLAGE AT LEAST 2 WORKING DAYS BEFORE THE START OF CONSTRUCTION, INSTALLATION OF SEDIMENT AND EROSION MEASURES AND COMPLETION OF FINAL LANDSCAPING.
3. THE VILLAGE SHALL BE PROVIDED WITH A COPY OF THE IEPA LETTER OF NOTIFICATION OF COVERAGE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
4. THE DEVELOPER IS RESPONSIBLE FOR HAVING THE SWPPP AND A STAMPED AND SIGNED COPY OF THE APPROVED SOIL EROSION AND SEDIMENT CONTROL PLAN ON SITE AT ALL TIMES AND BE PRESENTED WHEN REQUESTED BY ANY AUTHORIZED AGENCY.
5. THE DEVELOPER SHALL INSPECT THE SOIL EROSION AND SEDIMENT CONTROL PRACTICES EVERY SEVEN (7) DAYS AND AFTER 0.5" OR MORE RAINFALL. IMMEDIATE REPAIR SHALL BE MADE OF ANY DAMAGED EROSION CONTROL ELEMENTS THROUGHOUT THE CONSTRUCTION OF THE PROJECT.
6. ALL CONSTRUCTION TRAFFIC SHALL ENTER SITE ONLY AT PROPOSED STABILIZED CONSTRUCTION ENTRANCE(S) AS SHOWN ON PLANS.
7. ALL DIRT, MUD, OR DEBRIS THAT REACHES THE PUBLIC ROADS SHALL BE CLEANED IMMEDIATELY BY THE CONTRACTOR.
8. TECHNIQUES SHALL BE EMPLOYED TO PREVENT THE BLOWING OF DUST OR SEDIMENT FROM THE SITE.
9. SILT FENCE, SILT BASINS, AND STABILIZED CONSTRUCTION ENTRANCE(S) SHALL BE CONSTRUCTED AS DETICATED ON THE FINAL ENGINEERING PLANS PRIOR TO THE START OF CONSTRUCTION AND SHALL REMAIN IN PLAN UNTIL THE DISTURBED AREA IS STABILIZED. IN ADDITION, SILT FENCE SHALL BE PROVIDED FOR AREAS DRAINING 200' AND GREATER IN ACCORDANCE WITH NRCS CODE 920.
10. SCHEDULE OF CONTROL MEASURE IMPLEMENTATION:  
A. CONSTRUCT THE APPLICABLE PORTIONS OF THE EROSION AND SEDIMENTATION CONTROLS PRIOR TO SITE CLEARING.  
B. CONTROL SITE DEVELOPMENT IN ACCORDANCE WITH THE SPECIFICATIONS.  
C. MAINTAIN INLET PROTECTION, CONSTRUCTION TRAFFIC SURFACES, CLEANING OF STORM STRUCTURES AND THE LIKE ON A REGULAR BASIS AFTER EACH HEAVY RAIN OR AS OTHERWISE REQUIRED.
11. THE ESTIMATED CONSTRUCTION SCHEDULE IS AS FOLLOWS:  
DEMOLITION WINTER 2025  
MASS EARTHWORK SPRING 2025  
TEMPORARY BASIN STABILIZATION SPRING 2025  
UNDERGROUND IMPROVEMENTS SPRING/SUMMER 2025  
ROADWAY (CURB & PAVEMENT) SUMMER 2025  
BUILDING CONSTRUCTION SUMMER 2025  
FINAL GRADING SUMMER 2025  
BASIN STABILIZATION SUMMER 2025  
FINAL LANDSCAPING SUMMER 2025  
THE ENTIRE SITE MUST BE STABILIZED, USING A HEAVY MULCH LAYER OR ANOTHER METHOD AT THE CLOSE OF THE CONSTRUCTION SEASON.
12. DISTURBED AREAS WITHIN ALL PUBLIC R.O.W.'S SHALL BE RESTORED W/ 6" MIN. TOPSOIL & SOD. RESTORATION SHALL OCCUR IMMEDIATELY AFTER COMPLETION OF CONSTRUCTION, WEATHER PERMITTING. ALL OTHER DISTURBED AREAS SHALL BE RESTORED WITH 4" TOPSOIL & SEED.
13. STRAW BALES ARE NOT PERMITTED IN AREAS OF CONCENTRATED FLOW. ROCK CHECK DAMS SHALL BE USED IN THESE AREAS. TECHNIQUES THAT DIVERT UPLAND RUNOFF PAST DISTURBED SLOPES SHALL BE EMPLOYED.
14. THE PROTECTION OF THE OPEN LID DRAINAGE STRUCTURES SHALL BE CONSTRUCTED AS SPECIFIED IN DETAILS. ALL OPEN LID DRAINAGE STRUCTURES LOCATED IN YARD AREAS AND THE SEDIMENTATION BASIN MUST BE PROTECTED PER INLET PROTECTION DETAILS UNTIL SUCH A TIME THAT THE LANDSCAPING IS IN PLACE AND EFFECTIVELY PREVENTING POTENTIAL SILTATION OF THESE STRUCTURES. ALL OPEN LID DRAINAGE STRUCTURES IN PAVED AREAS SHALL HAVE FILTER BASKETS INSTALLED UNDER THE LIDS. IN THE EVENT THE GRAVEL BASE IS NOT IN PLACE UPON INSTALLATION, INLET PROTECTION SHALL BE PROVIDED AS INDICATED PER INLET PROTECTION DETAIL.
15. EROSION CONTROL BLANKET (ECB) SHALL BE INSTALLED TO ALL DISTURBED AREAS WITH SLOPES EQUAL TO OR STEEPER THAN 5H:1V AND IN CRITICAL AREAS (EX: DETENTION BASIN PERIMETERS, STREAMBANKS, BERMS, ETC.) IMMEDIATELY UPON FINAL GRADING. S175 NORTH AMERICAN GREEN (OR SIMILAR) ECB SHALL BE USED. ECB WITH GREEN DYE IS NOT ACCEPTABLE.
16. SOIL STOCKPILES SHALL BE STABILIZED OR COVERED AT THE END OF EACH WORKDAY. STOCKPILES TO REMAIN IN PLACE FOR 14 DAYS OR MORE SHALL RECEIVE TEMPORARY SEEDING.
17. DURING DEWATER OPERATIONS, WATER WILL BE PUMPED INTO SEDIMENT BASINS OR SILT TRAPS. DEWATERING DIRECTLY INTO FIELD TILES OR STORMWATER STRUCTURES IS PROHIBITED.
18. AN INCIDENT OF NON-COMPLIANCE (ION) MUST BE COMPLETED AND SUBMITTED BY THE OWNER TO THE IEPA AND COPIED TO THE VILLAGE IF, AT ANY TIME, AN EROSION OR SEDIMENT CONTROL DEVICE FAILS.
19. A NOTICE OF TERMINATION (NOT) SHALL BE COMPLETED BY THE OWNER IN COMPLIANCE WITH THE NPDES PHASE II REQUIREMENTS WHEN ALL PERMANENT EROSION CONTROL MEASURES ARE IN PLACE WITH A 70% ESTABLISHED RATE OF VEGETATION. THE NOTICE OF TERMINATION SHALL BE SENT TO THE IEPA AND THE VILLAGE.
20. THE CONTRACTOR SHALL TAKE THE NECESSARY STEPS TO CONTROL WASTE SUCH AS DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, LITTER AND SANITARY WASTE AT THE CONSTRUCTION SITE THAT MAY CAUSE ADVERSE IMPACTS TO WATER QUALITY.

EROSION CONTROL LEGEND

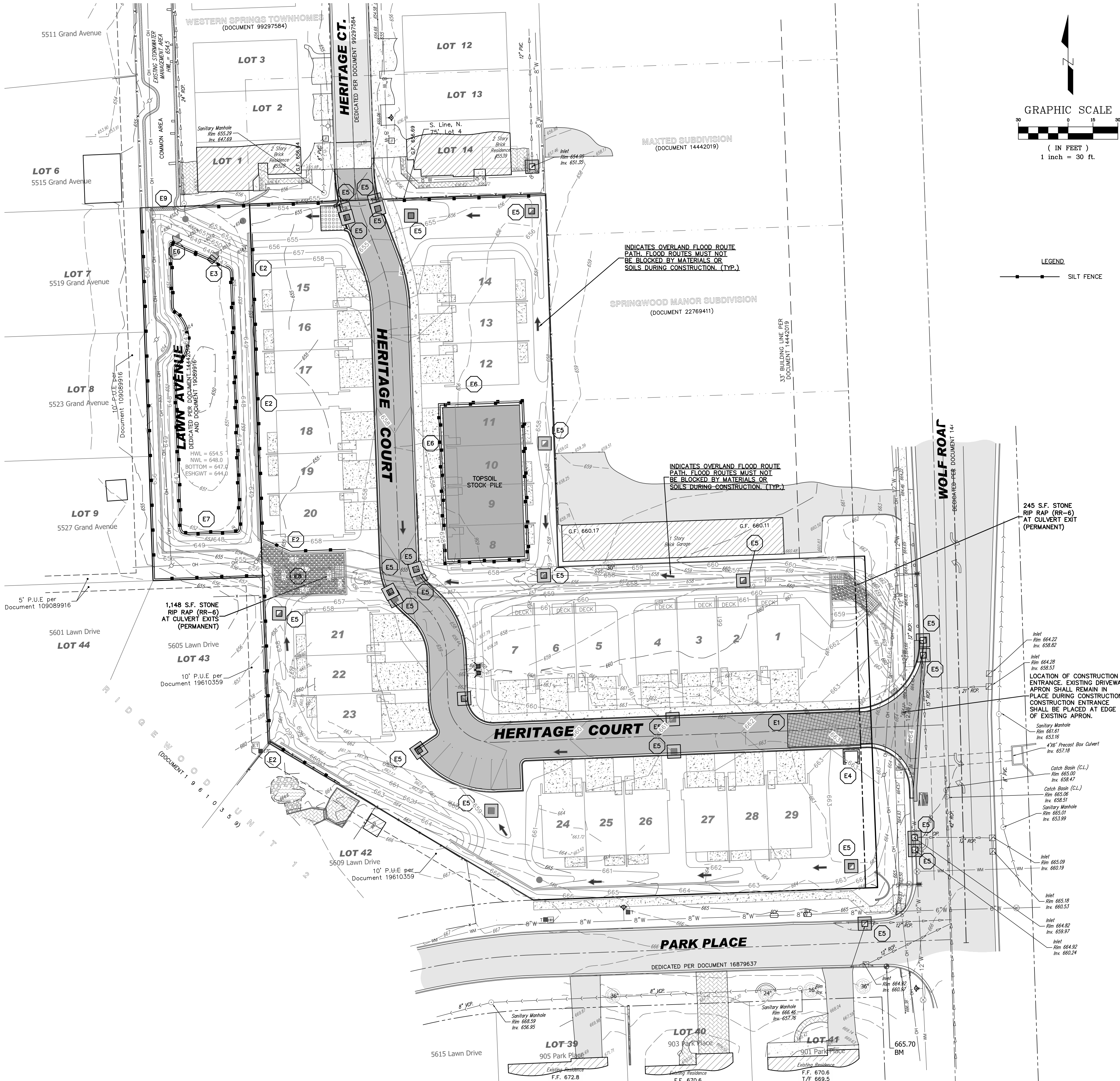
- CONSTRUCTION ENTRANCE PER NRCS SPECIFICATIONS
- SILT FENCE PER NRCS SPECIFICATIONS
- CULVERT / FES PROTECTION PER OR EQUIVALENT TO NRCS SPECIFICATIONS AND STANDARD DRAWING NO. IL-610
- CONCRETE WASHOUT AREA
- INLET PROTECTION PER OR EQUIVALENT TO NRCS SPECIFICATIONS
- CULVERT / FES PROTECTION PER OR EQUIVALENT TO NRCS SPECIFICATIONS AND STANDARD DRAWING NO. IL-508SF
- DOUBLE ROW OF SILT FENCE PER NRCS SPECIFICATIONS
- SEDIMENT FOREBAY (SEE MWRD DETAIL SHEET XX)
- ROLLED EROSION CONTROL

| STABILIZATION TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| PERMANENT SEEDING  |     |     | A   |     |     | *   | *   |     |     |     |     |     |
| DORMANT SEEDING    | B   |     |     |     |     |     |     |     |     |     | B   |     |
| TEMPORARY SEEDING  |     |     | C   |     |     | *   | D*  |     |     |     |     |     |
| SODDING            |     |     | E** |     |     |     |     |     |     |     |     |     |
| MULCHING           | F   |     |     |     |     |     |     |     |     |     |     |     |

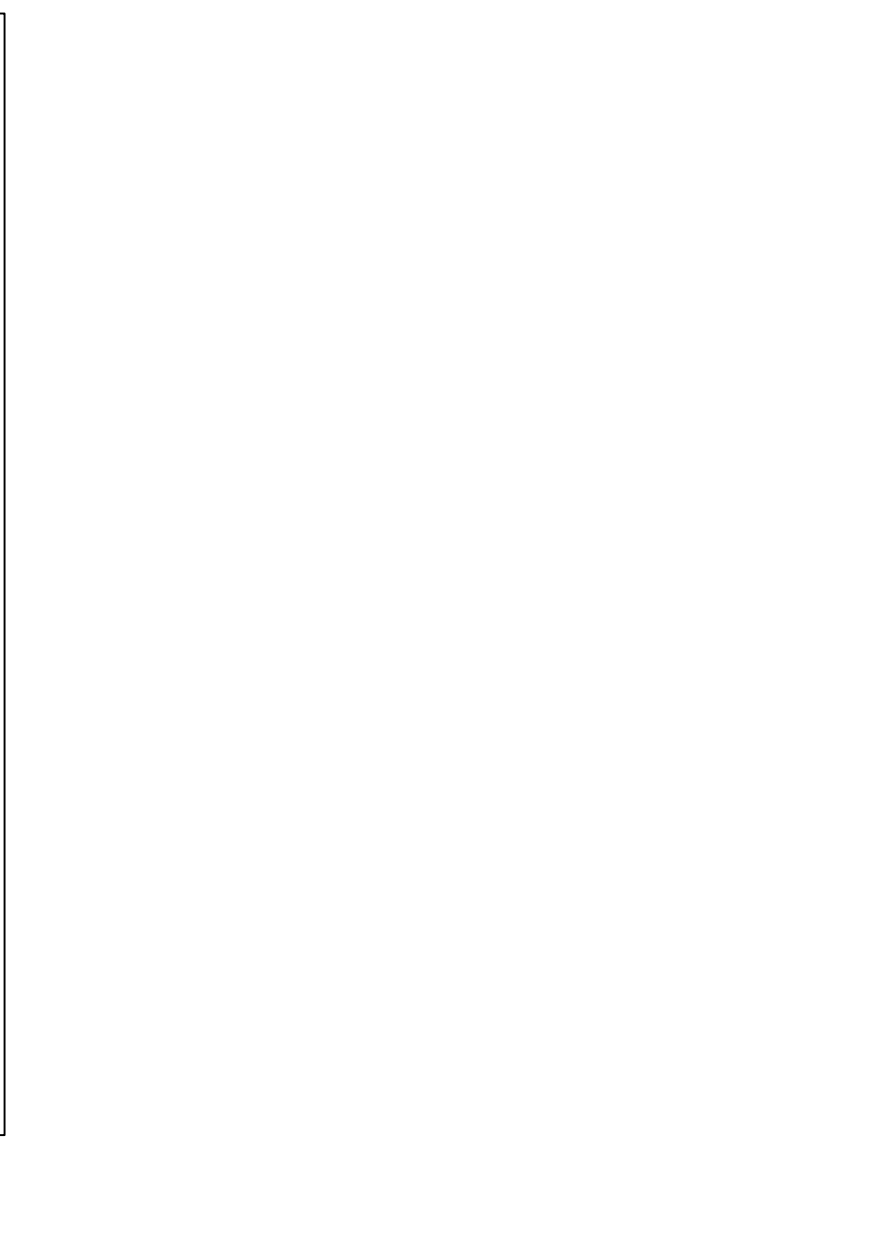
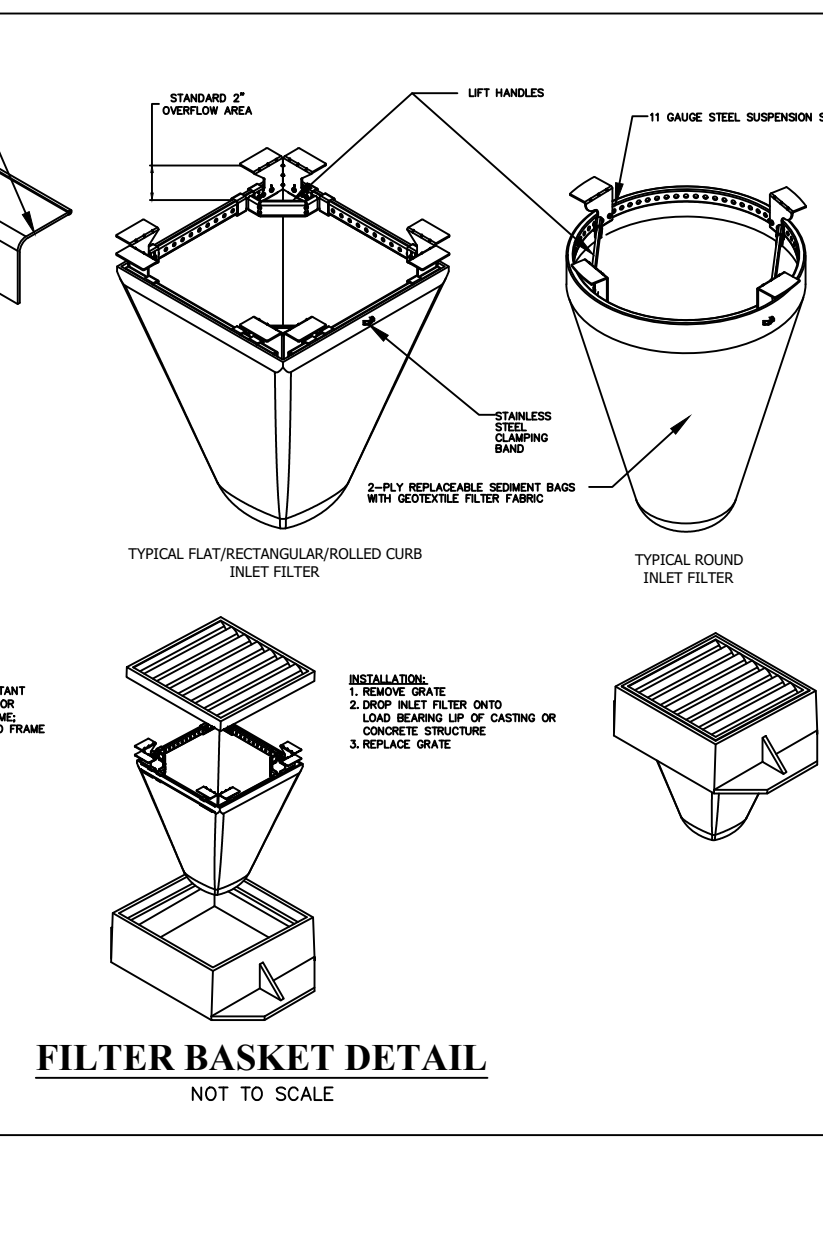
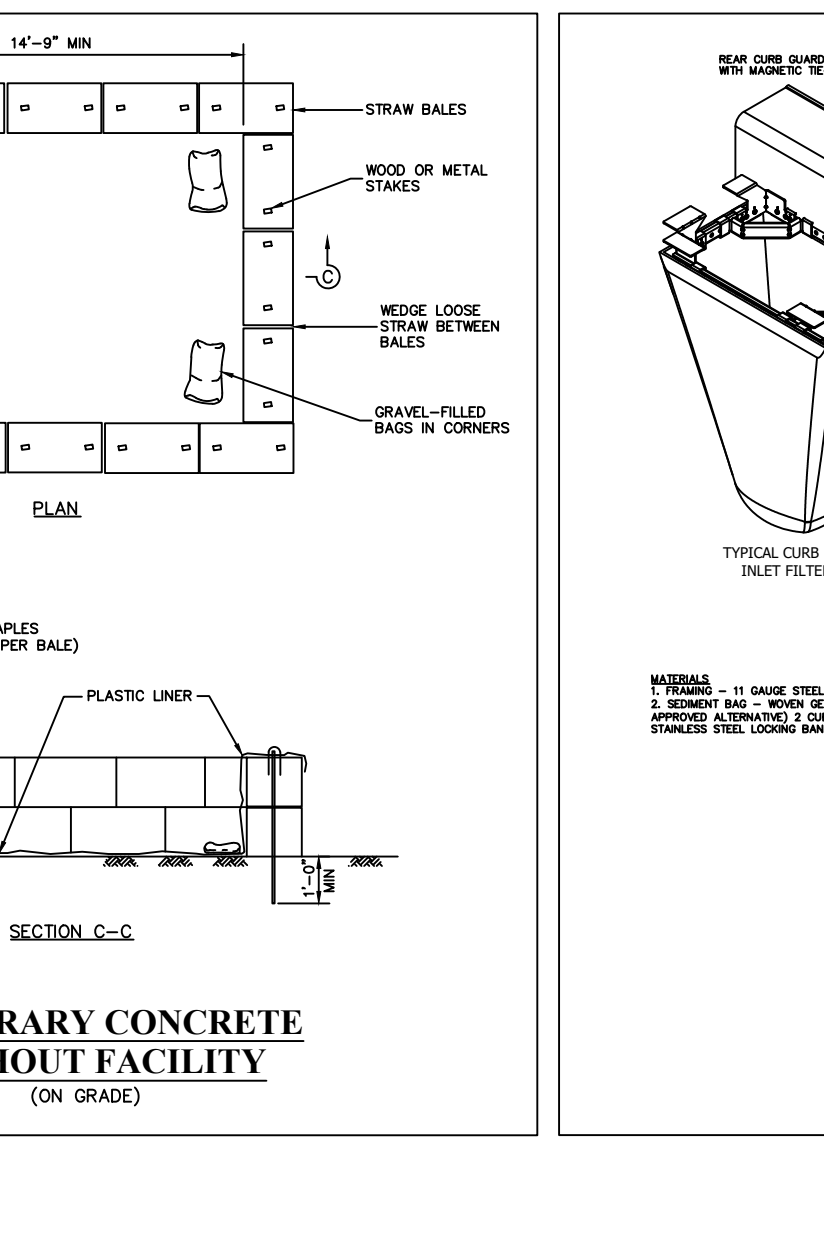
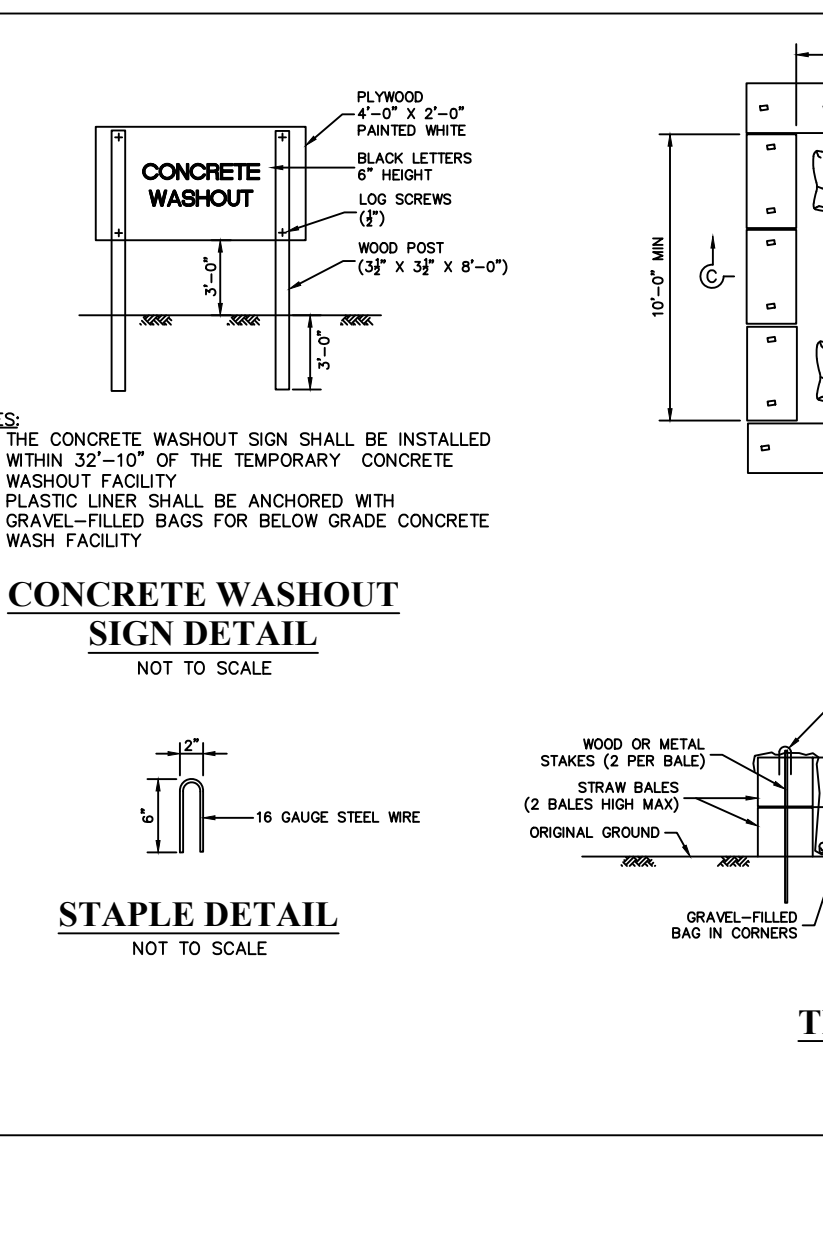
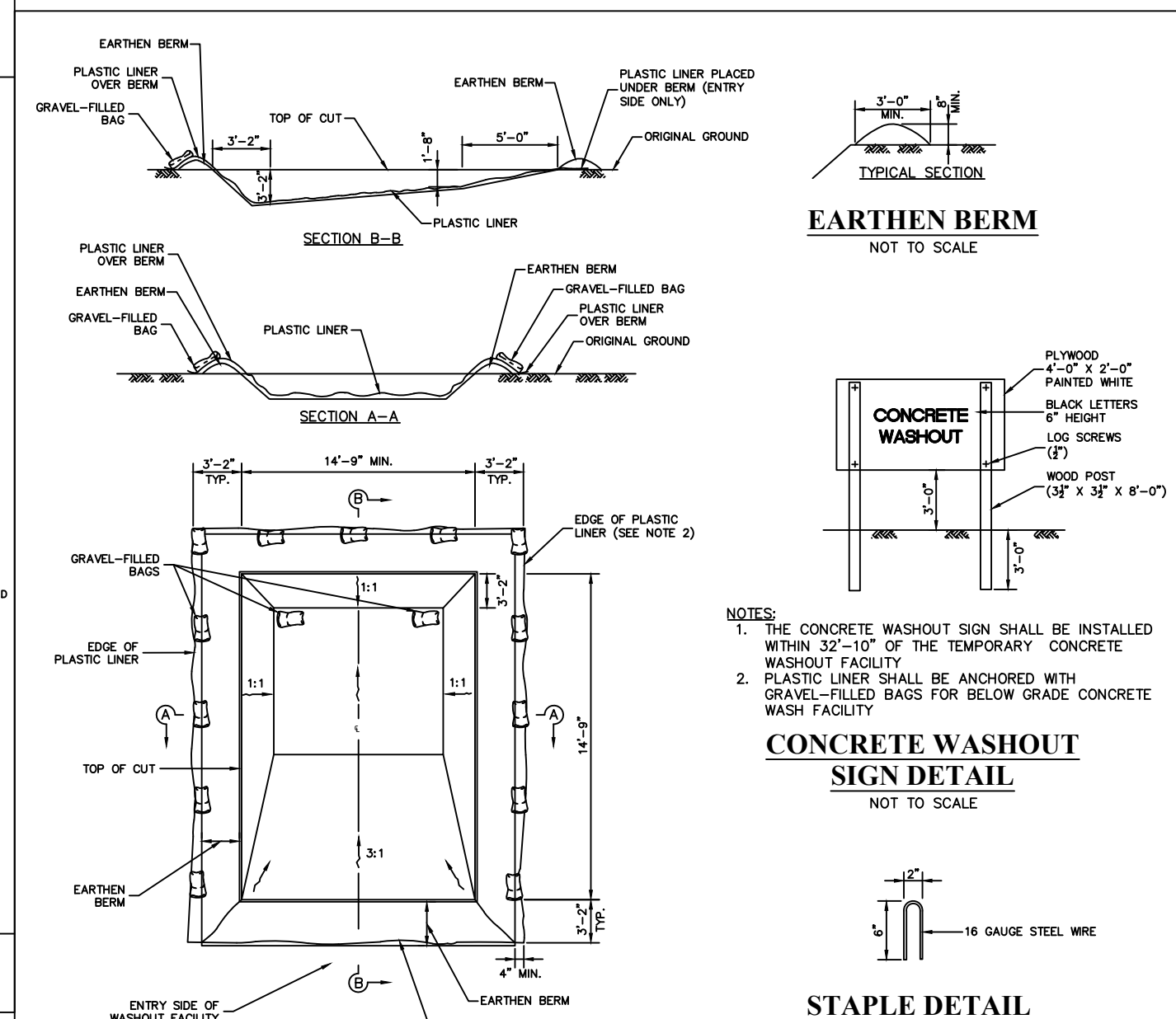
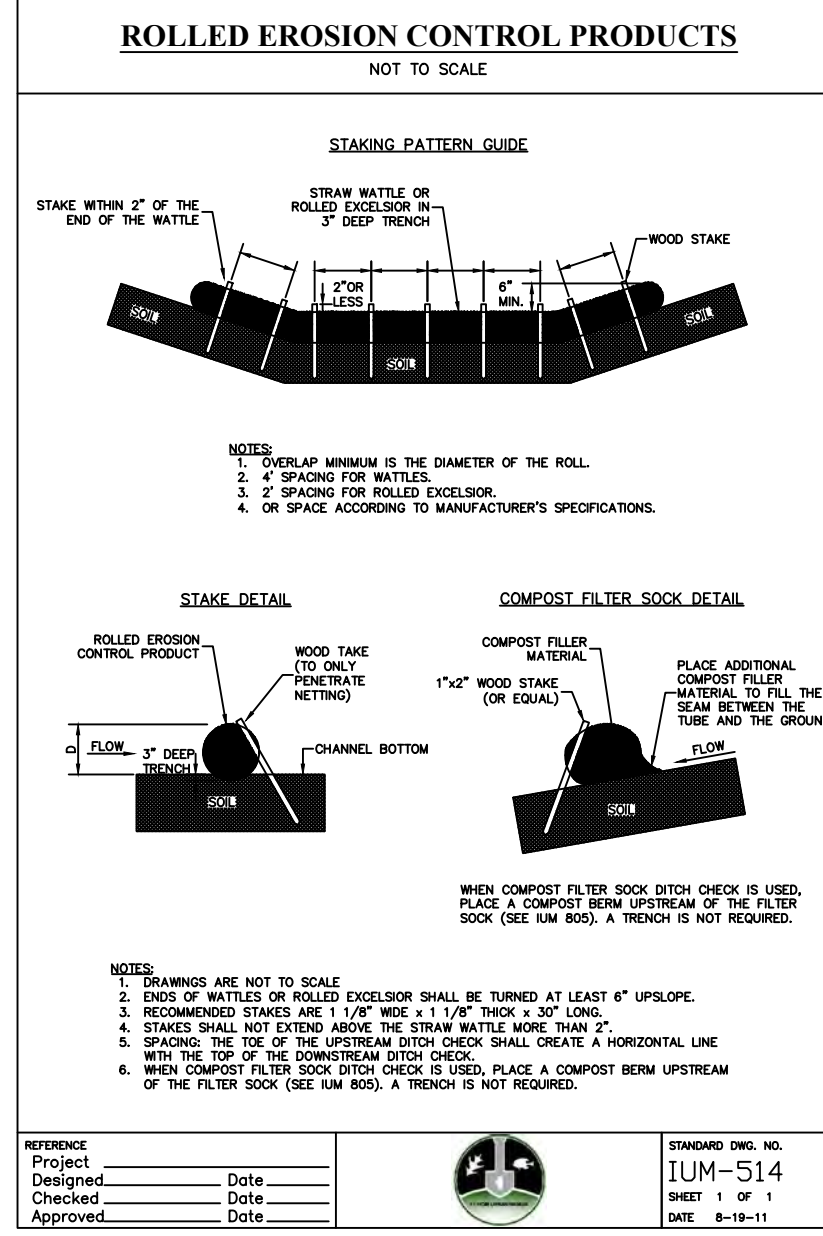
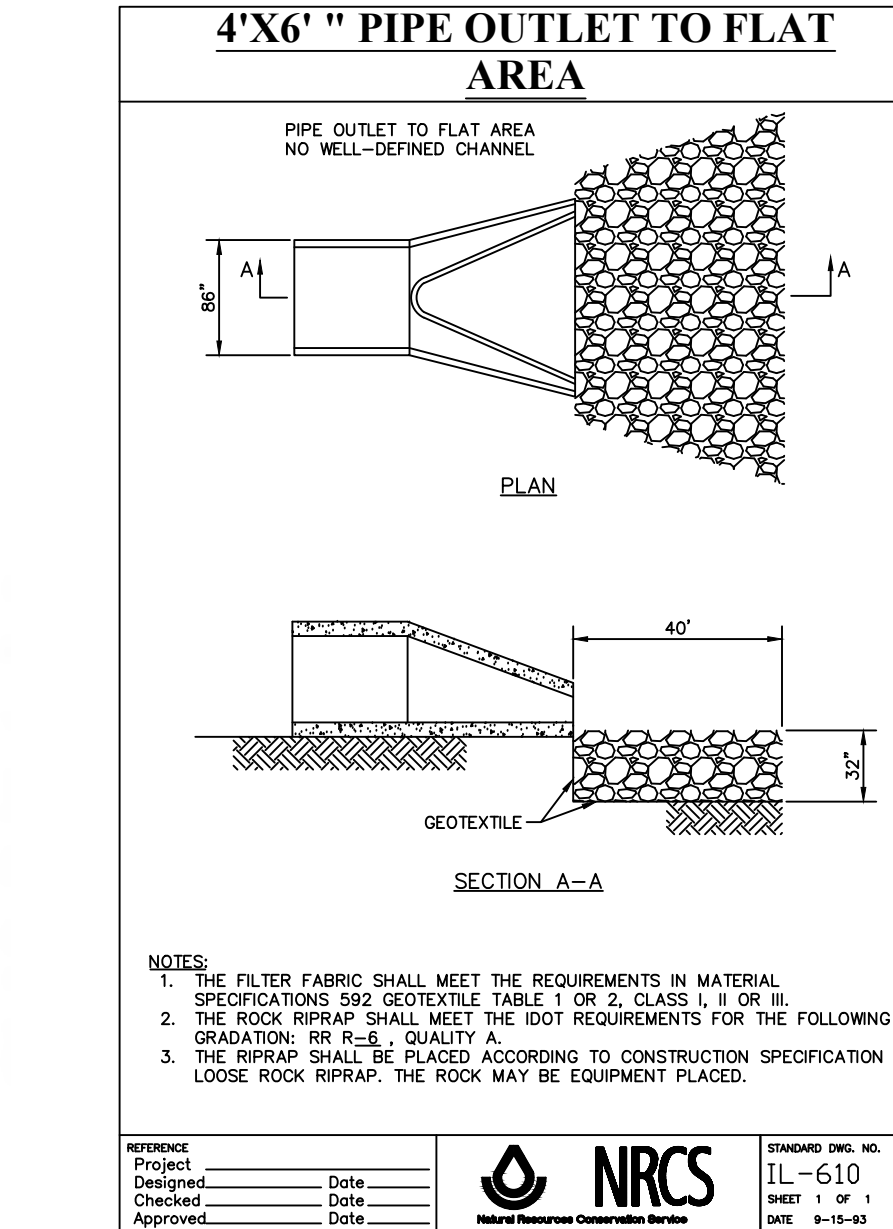
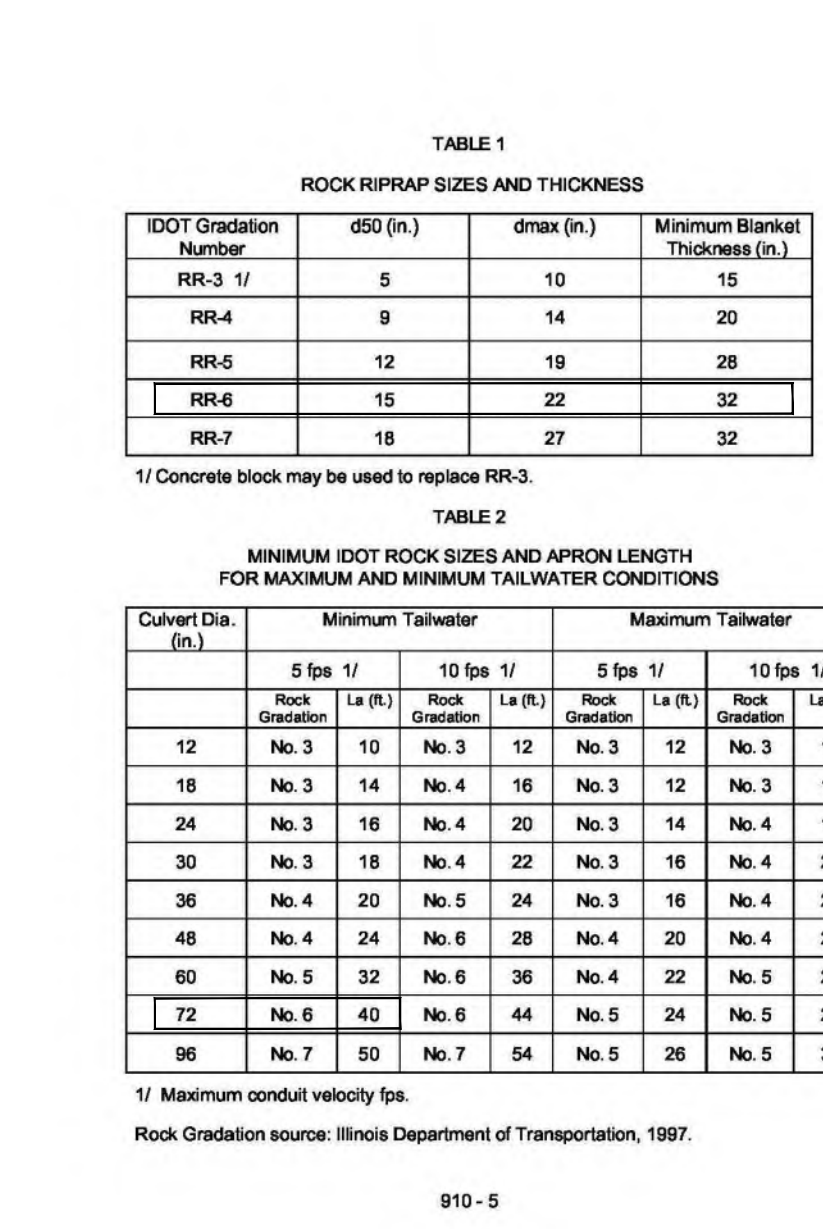
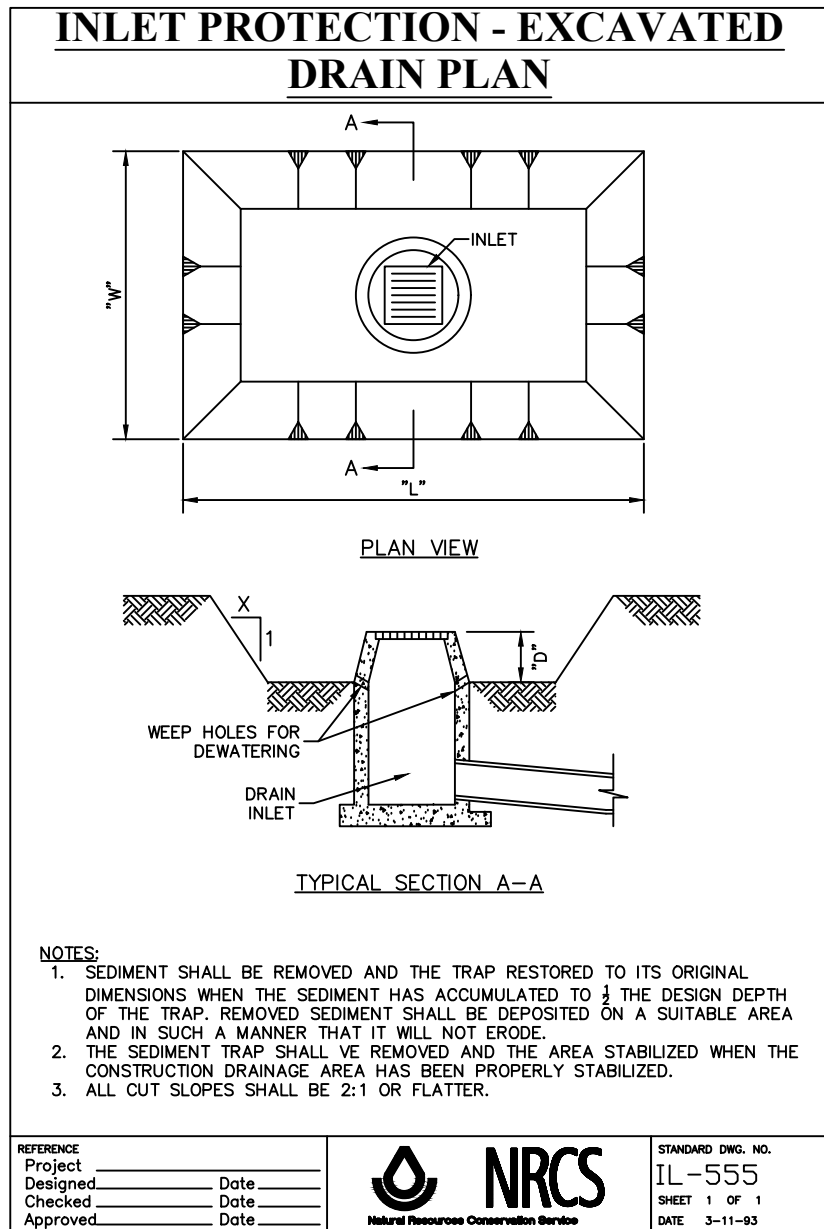
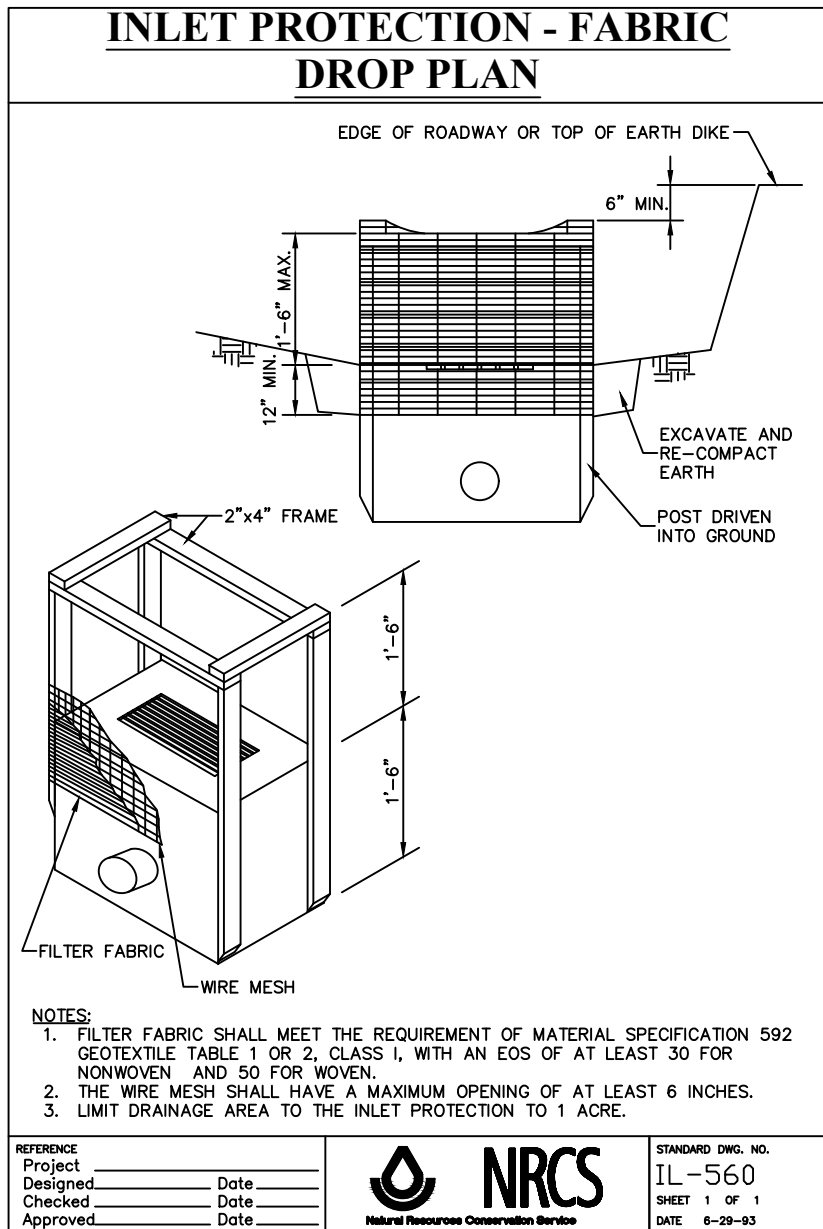
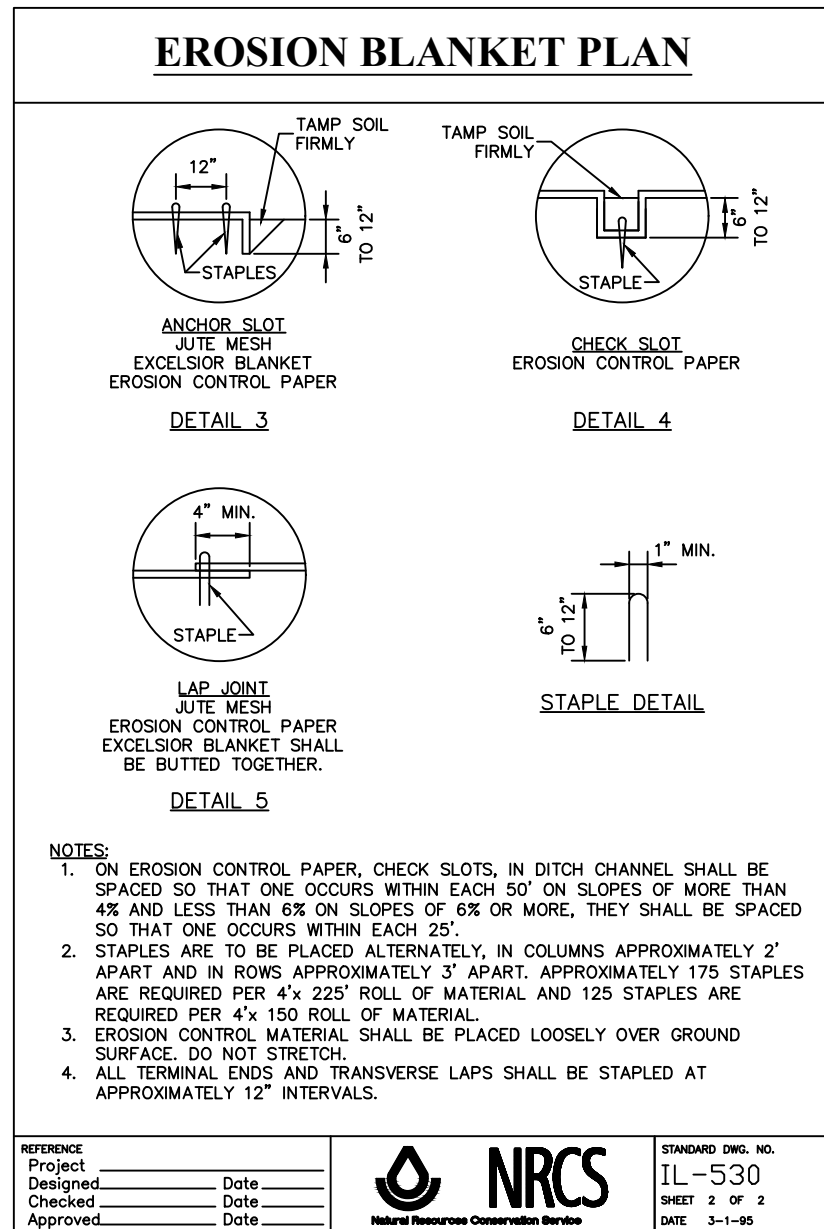
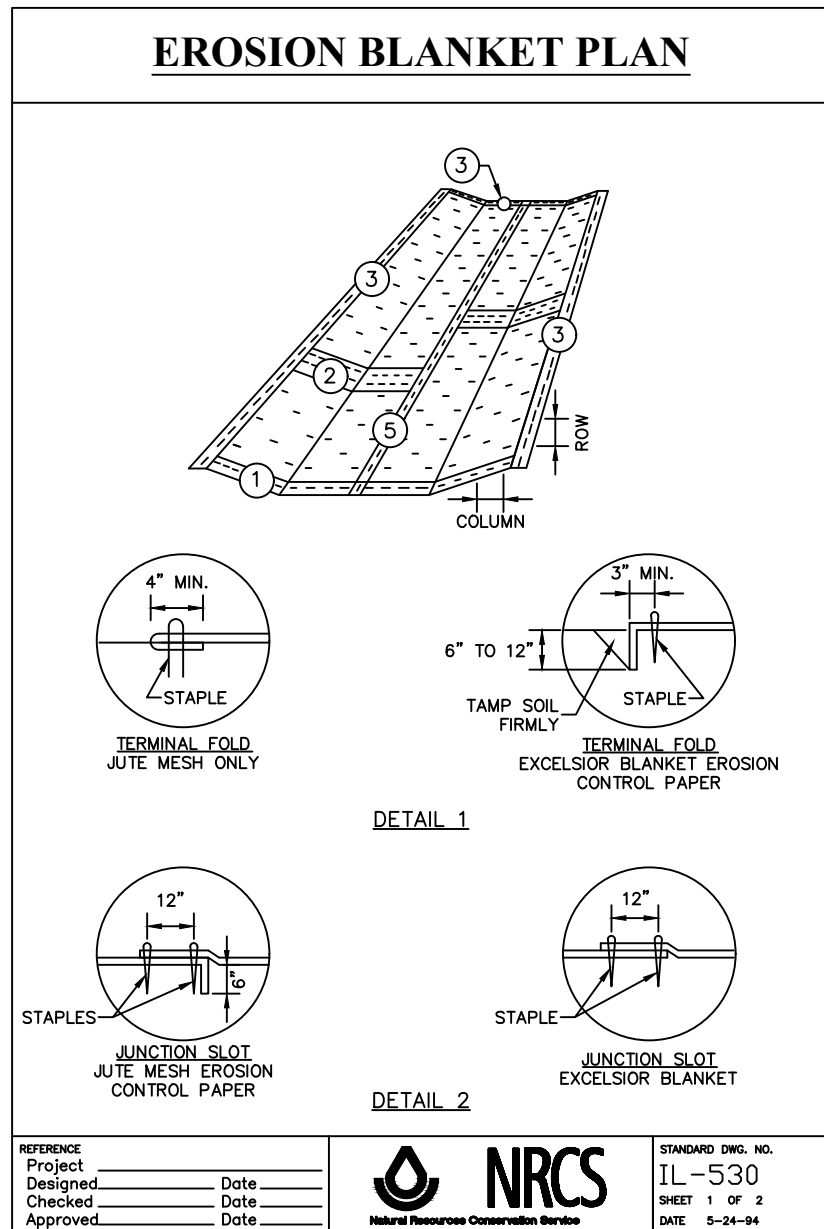
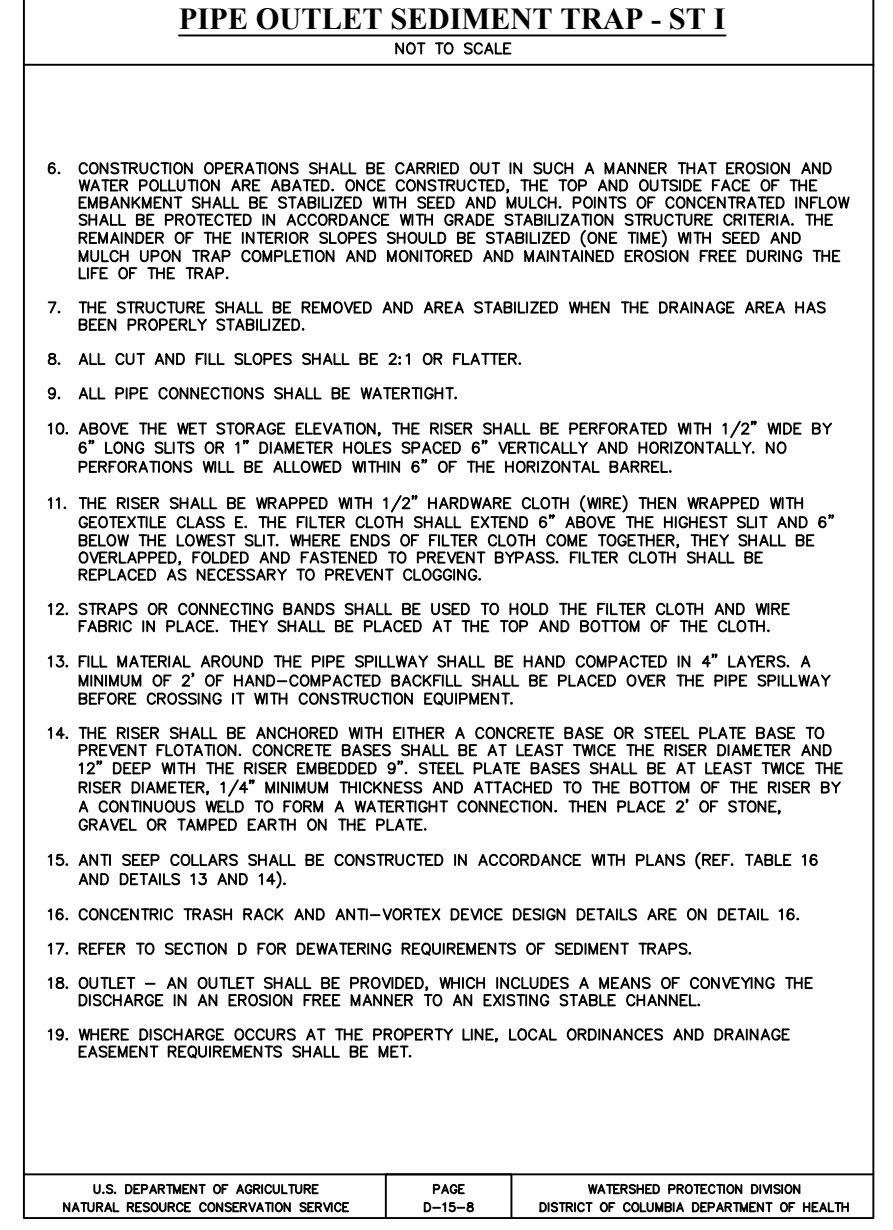
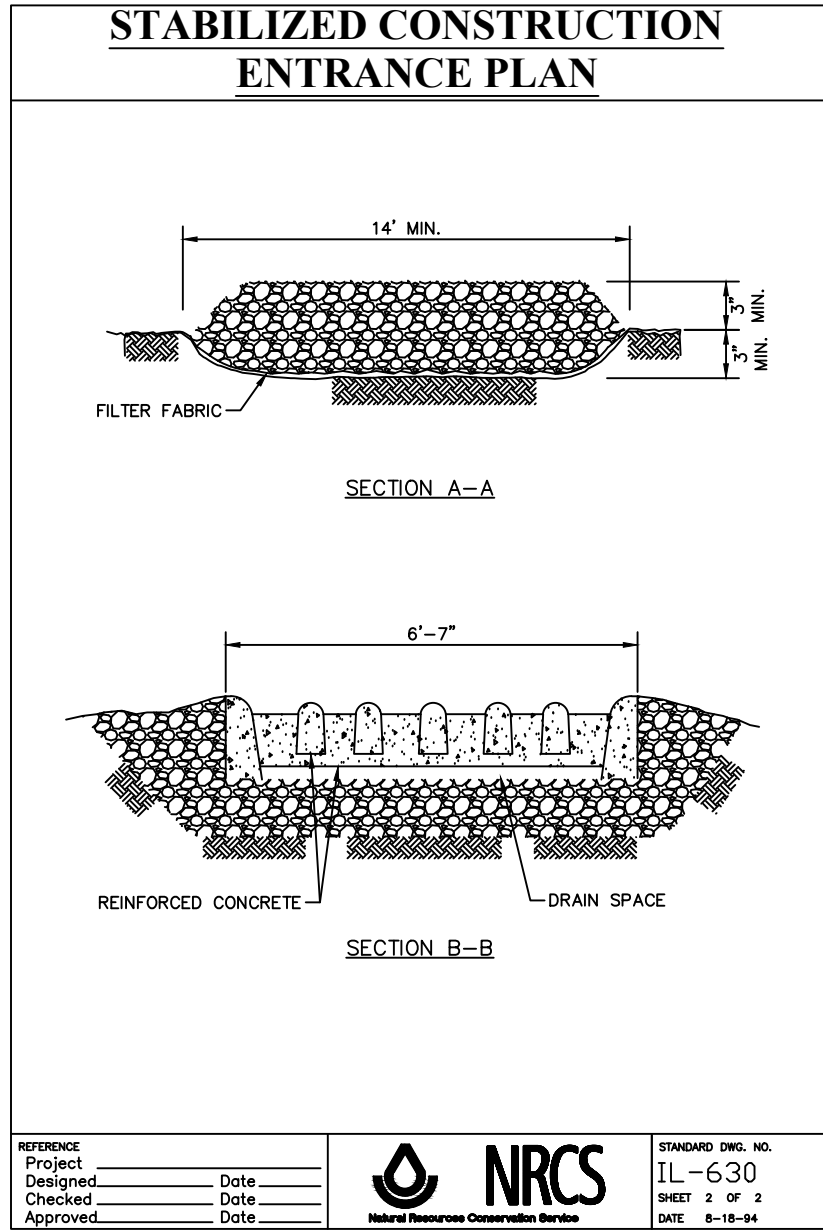
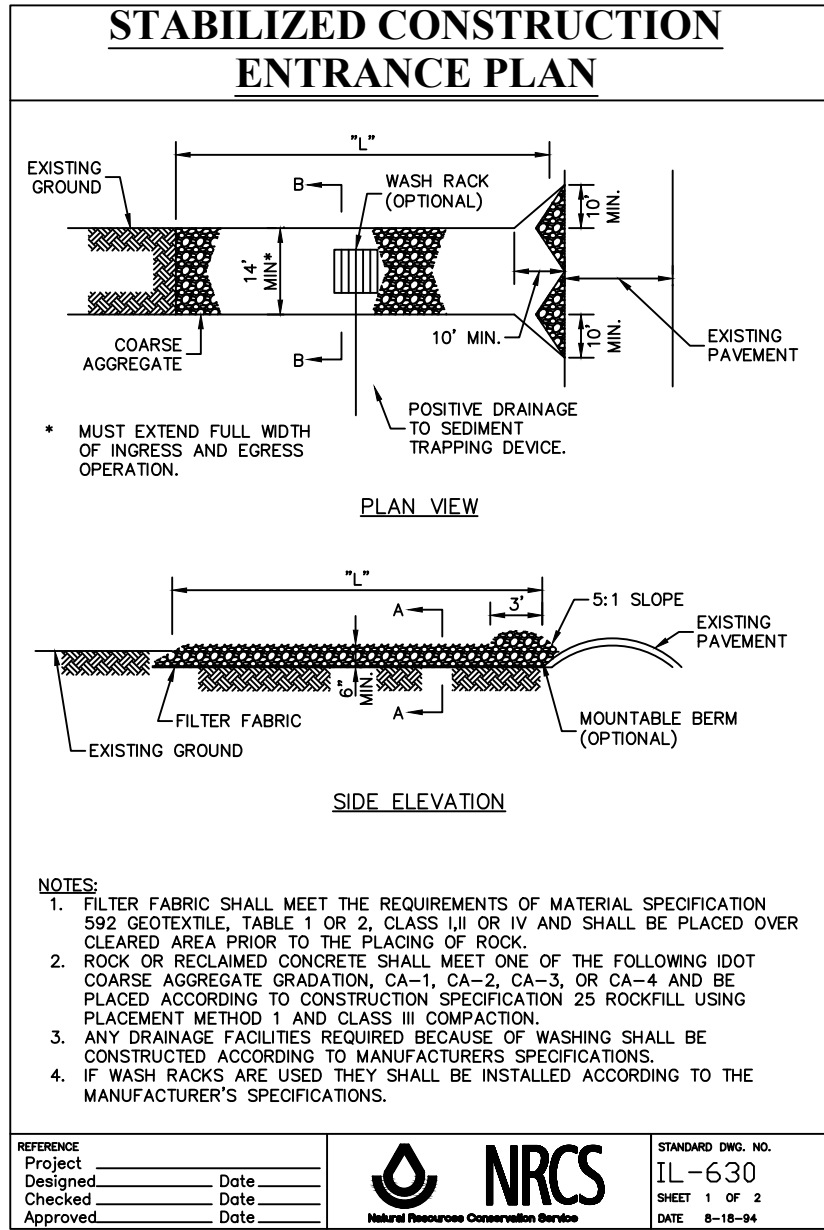
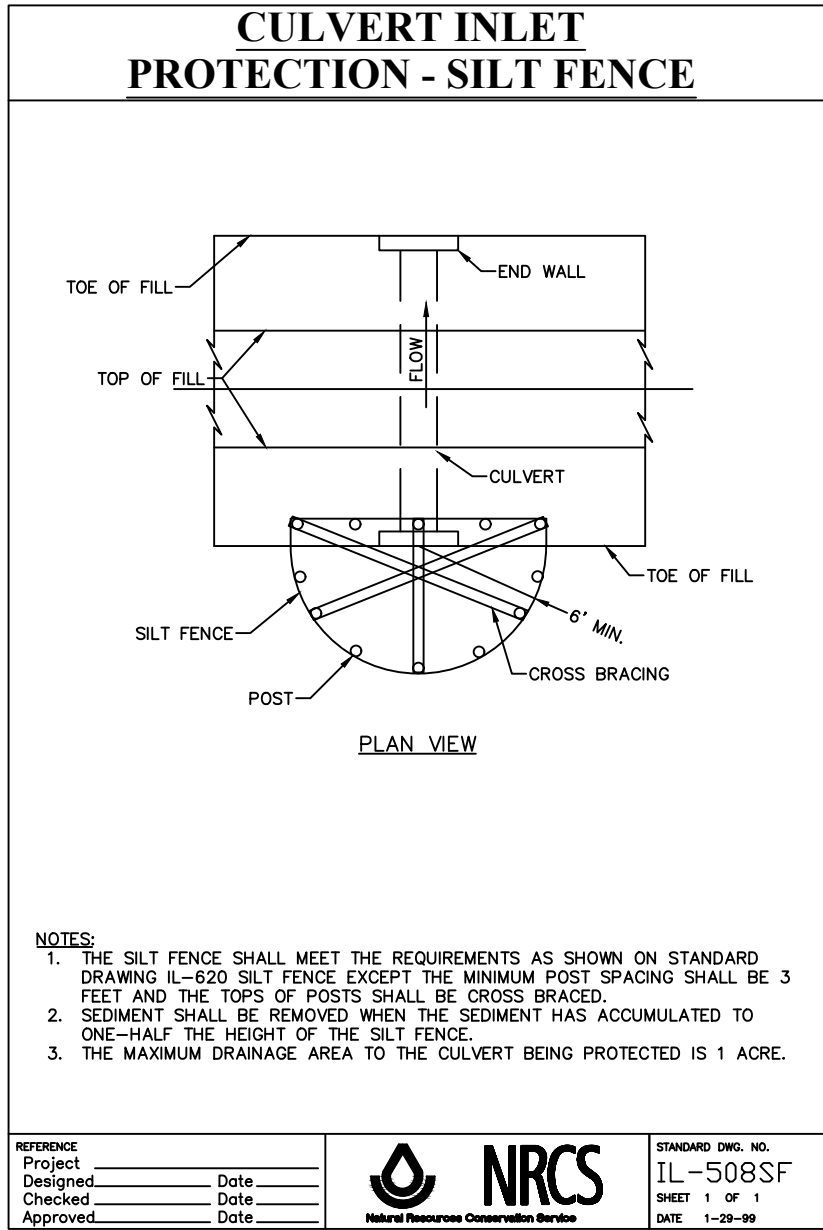
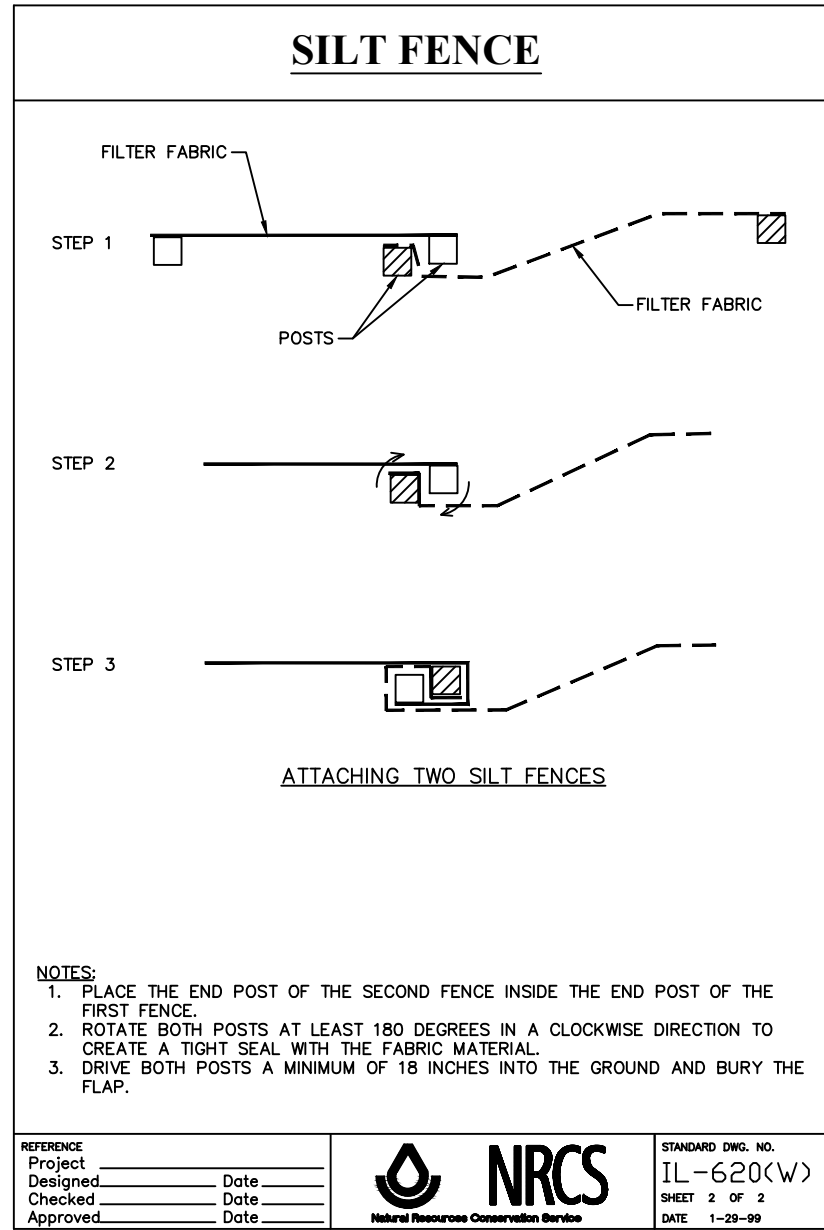
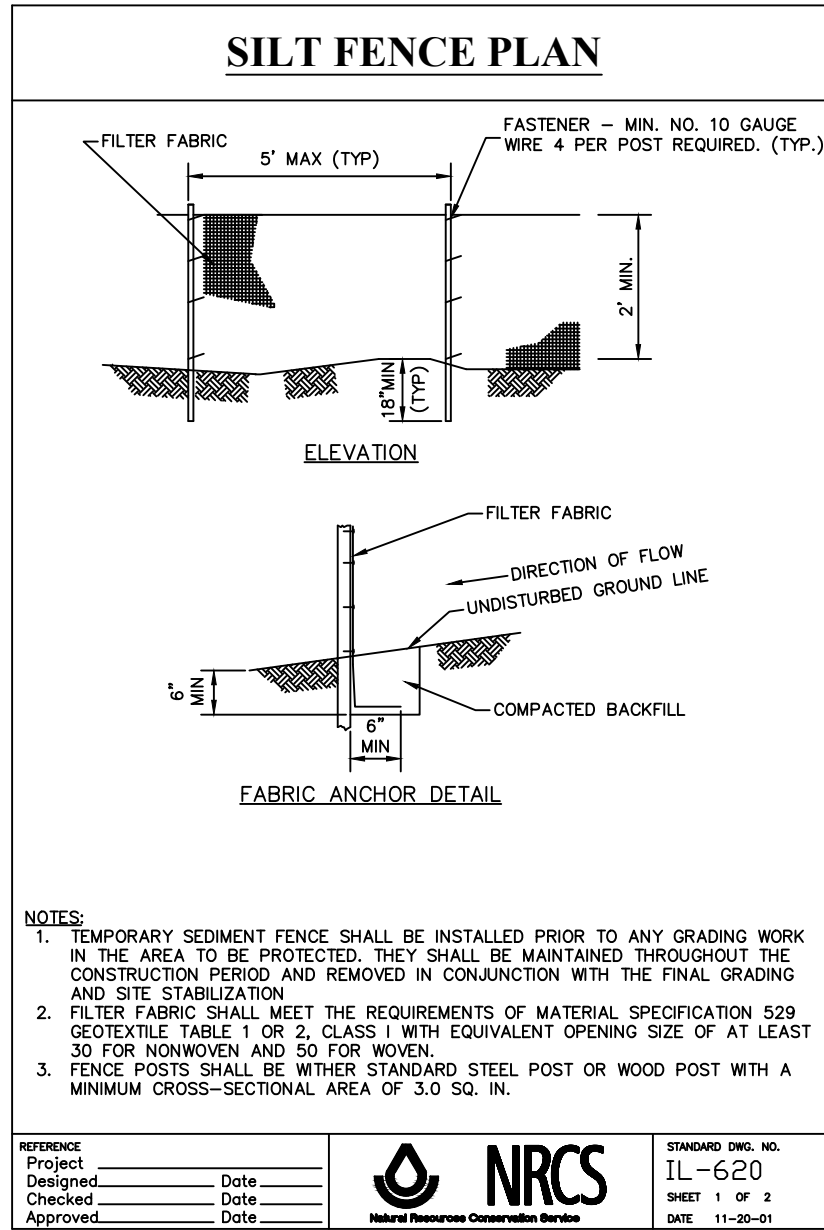
- A. KENTUCKY BLUEGRASS  
90 LBS/AC MIXED WITH  
PERENNIAL RYEGRASS 30  
LBS/AC
- B. KENTUCKY BLUEGRASS  
135 LBS/AC MIXED WITH  
PERENNIAL RYEGRASS 45  
LBS/AC + 2 TONS  
STRAW MULCH/AC
- C. SPRING OATS 100 LBS/AC
- D. WHEAT OR CEREAL RYE 150  
LBS/AC
- E. SOD
- F. STRAW MULCH 2 TONS/AC

- \* IRRIGATION NEEDED DURING JUNE AND JULY.
- \*\* IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD

SOIL PROTECTION CHART







**McNAUGHTON DEVELOPMENT**  
11S220 JACKSON ST. Ste. 101  
BURR RIDGE, ILLINOIS 60527  
(630) 325-3400

**FINAL ENGINEERING PLANS FOR**  
HERITAGE CROSSING  
5600 SOUTH WOLF ROAD  
WESTERN SPRINGS, ILLINOIS

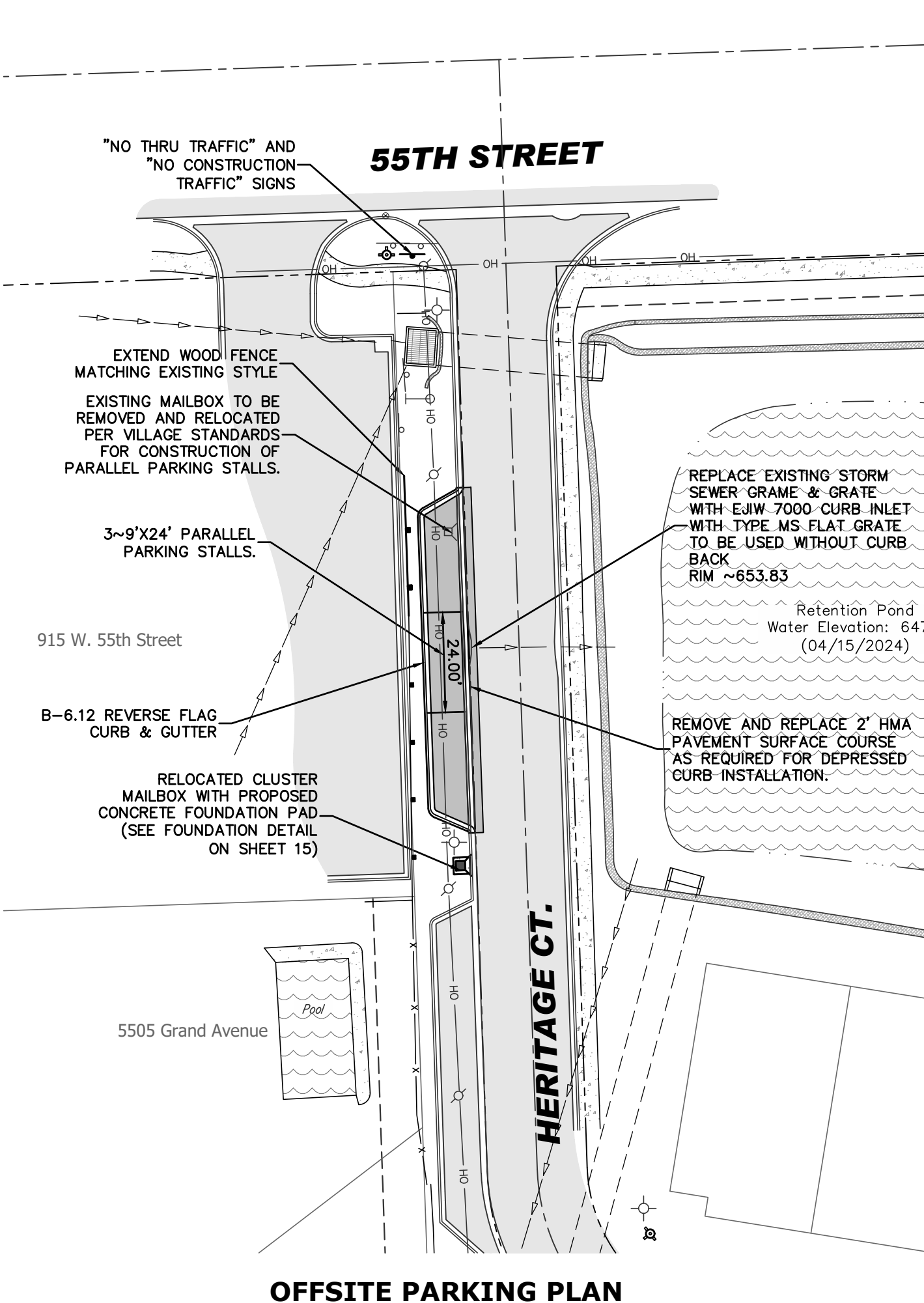
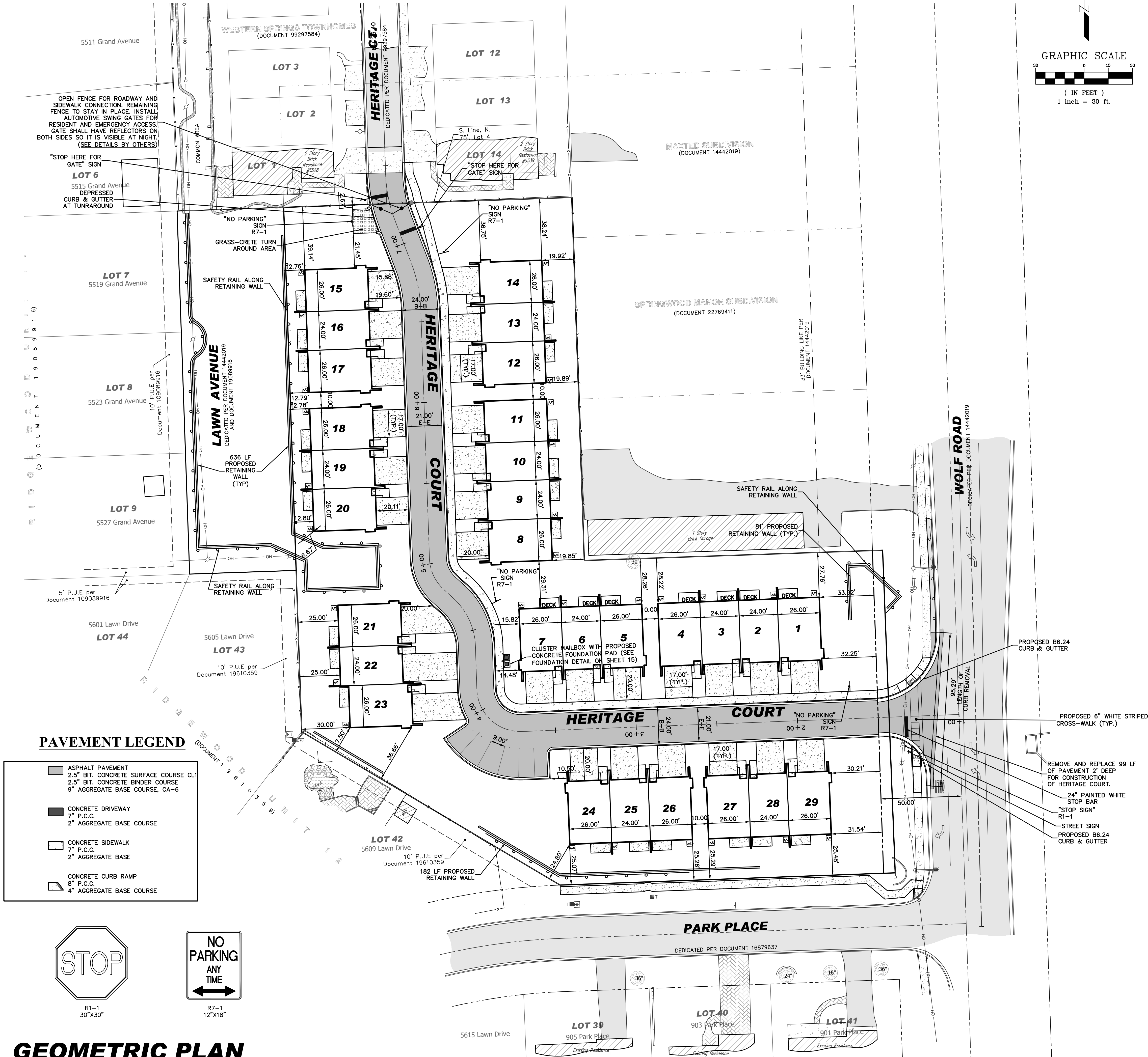
**DESIGNTEK ENGINEERING, INC.**  
CONSULTING CIVIL ENGINEERING & LAND SURVEYING  
9930 W. 190TH STREET, SUITE L  
MOKENA, ILLINOIS 60448  
(708) 326-4961  
FAX: (708) 326-4962  
IL PROF. LIC. NO.: 184-003740

**DEI**

Project No.: 24-0001  
Scale: 1" = 30'  
Date: MAY 22, 2024  
Design By: SDD  
Drawn By: DEI  
Checked By: SDD

6 OF 20





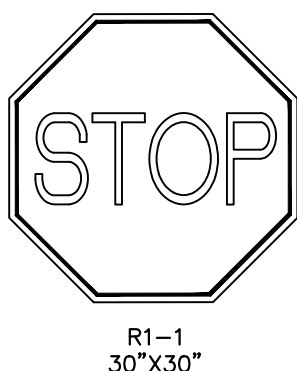
NOTES:

1. ANY ENCROACHMENT INTO EXISTING MAINLINE PAVEMENT FOR CONSTRUCTION OF CURB AND GUTTER SHALL REQUIRE THAT THE PAVEMENT BE MILLED 4 INCHES AND RESURFACED PURSUANT TO IDOT DISTRICT 1 MIX CHART REQUIREMENTS FOR ONE FULL LANE WIDTH AND A MINIMUM LENGTH OF 6 FEET.

| SITE DATA                    |                         |
|------------------------------|-------------------------|
| LOT AREA:                    | 105,159 S.F. (2.41 AC)  |
| EXISTING COVERAGE:           |                         |
| 2 STORY BRICK BLDG:          | 20,030 S.F.             |
| PARKING LOT (INCL. CURB):    | 45,730 S.F.             |
| CONCRETE WALKS:              | 1,125 S.F.              |
| LOADING DOCK DRIVE:          | 1,372 S.F.              |
| ASPHALT WALK:                | 1,465 S.F.              |
| RIP-RAP SWALES:              | 3,077 S.F.              |
| TOTAL EXISTING IMPERVIOUS    | = 72,799 S.F. (1.67 AC) |
| PROPOSED:                    |                         |
| HERITAGE COURT (INCL. CURB): | 15,902 S.F.             |
| SEWAGE:                      | 3,530 S.F.              |
| MAILBOX PEDESTALS:           | 32 S.F.                 |
| G.C. TURN AROUND:            | 207 S.F.                |
| FOUNDATIONS:                 | 29,549 S.F.             |
| FRONT PORCHES:               | 290 S.F.                |
| FRONT WALKS & STEPS:         | 1,888 S.F.              |
| REAR PATIOS:                 | 2,316 S.F.              |
| REAR DECKS:                  | 504 S.F.                |
| DRIVEWAYS:                   | 11,123 S.F.             |
| TOTAL PROPOSED IMPERVIOUS    | = 65,341 S.F. (1.50 AC) |

PAVEMENT LEGEND

|  |                                                                                                                                 |
|--|---------------------------------------------------------------------------------------------------------------------------------|
|  | ASPHALT PAVEMENT<br>2.5" BIT. CONCRETE SURFACE COURSE CL1<br>2.5" BIT. CONCRETE BINDER COURSE<br>9" AGGREGATE BASE COURSE, CA-6 |
|  | CONCRETE DRIVEWAY<br>7" P.C.C.<br>2" AGGREGATE BASE COURSE                                                                      |
|  | CONCRETE SIDEWALK<br>7" P.C.C.<br>2" AGGREGATE BASE                                                                             |
|  | CONCRETE CURB RAMP<br>8" P.C.C.<br>4" AGGREGATE BASE COURSE                                                                     |



GEOMETRIC PLAN

REVIEW SET  
NOT FOR CONSTRUCTION

7 OF 20

McNAUGHTON DEVELOPMENT  
11S220 JACKSON ST. Ste. 101  
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(630) 325-3400

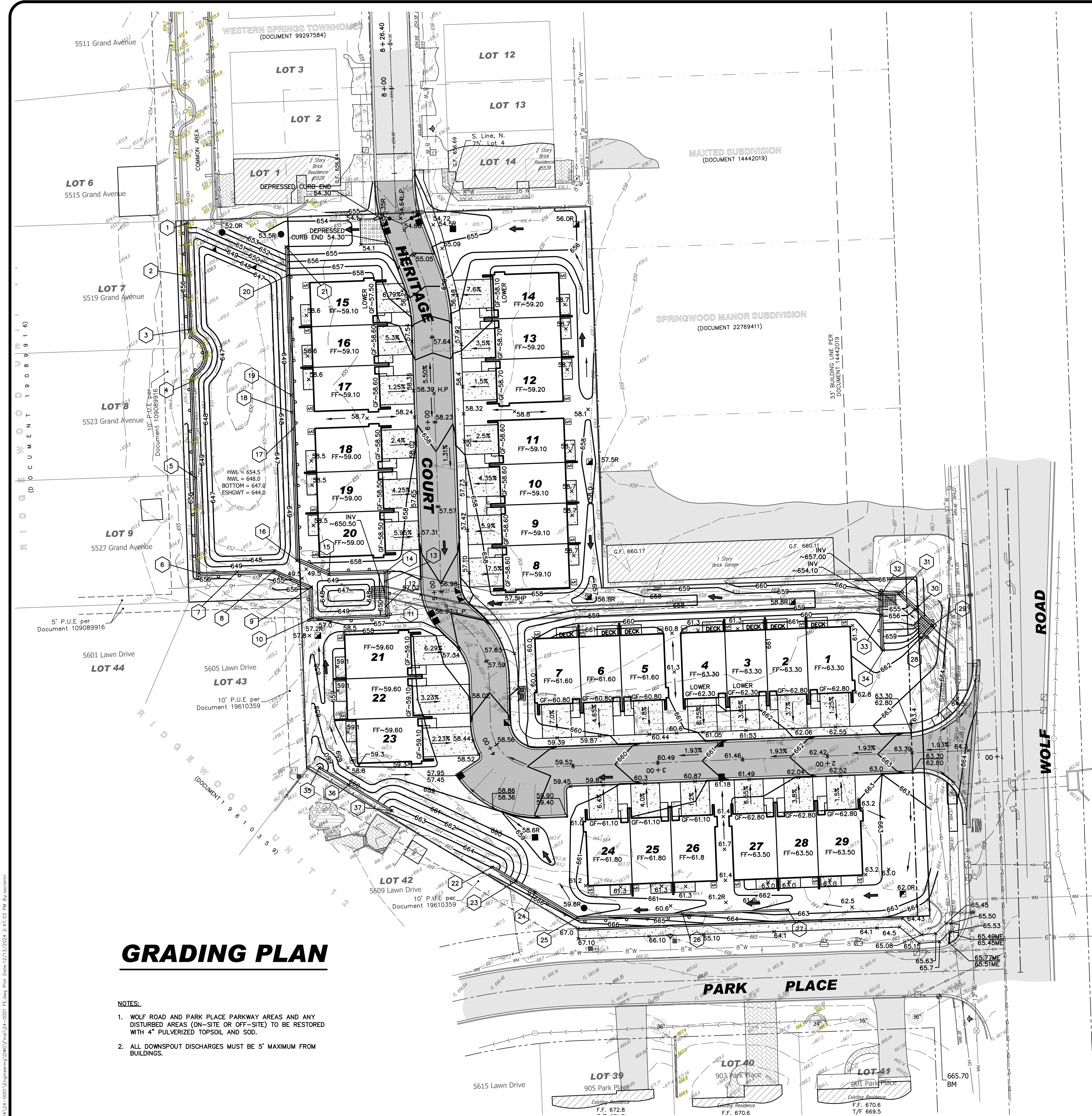
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PROJECT INFORMATION  
Project No.: 24-0001  
Scale: 1" = 30'  
Date: MAY 22, 2024  
Design By: SDD  
Drawn By: DEI  
Checked By: SDD

| REVISIONS |          | DESCRIPTION                | BY  |
|-----------|----------|----------------------------|-----|
| NO.       | DATE     |                            |     |
| 1         | 08-17-24 | PER LAGRANGE-HIGHLANDS SDD | DNV |
| 2         | 08-26-24 | PER WESTERN SPRINGS REVIEW | SDD |
| 3         | 10-17-24 | PER VILLAGE REVIEW         | SDD |
| 4         | 11-04-24 | PER CDDH REVIEW            | DNV |
| 5         | 12-12-24 | PER VILLAGE REVIEW         | DNV |

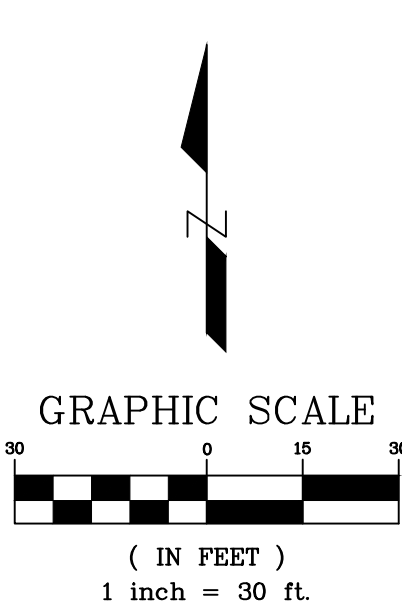




## GRADING PLAN

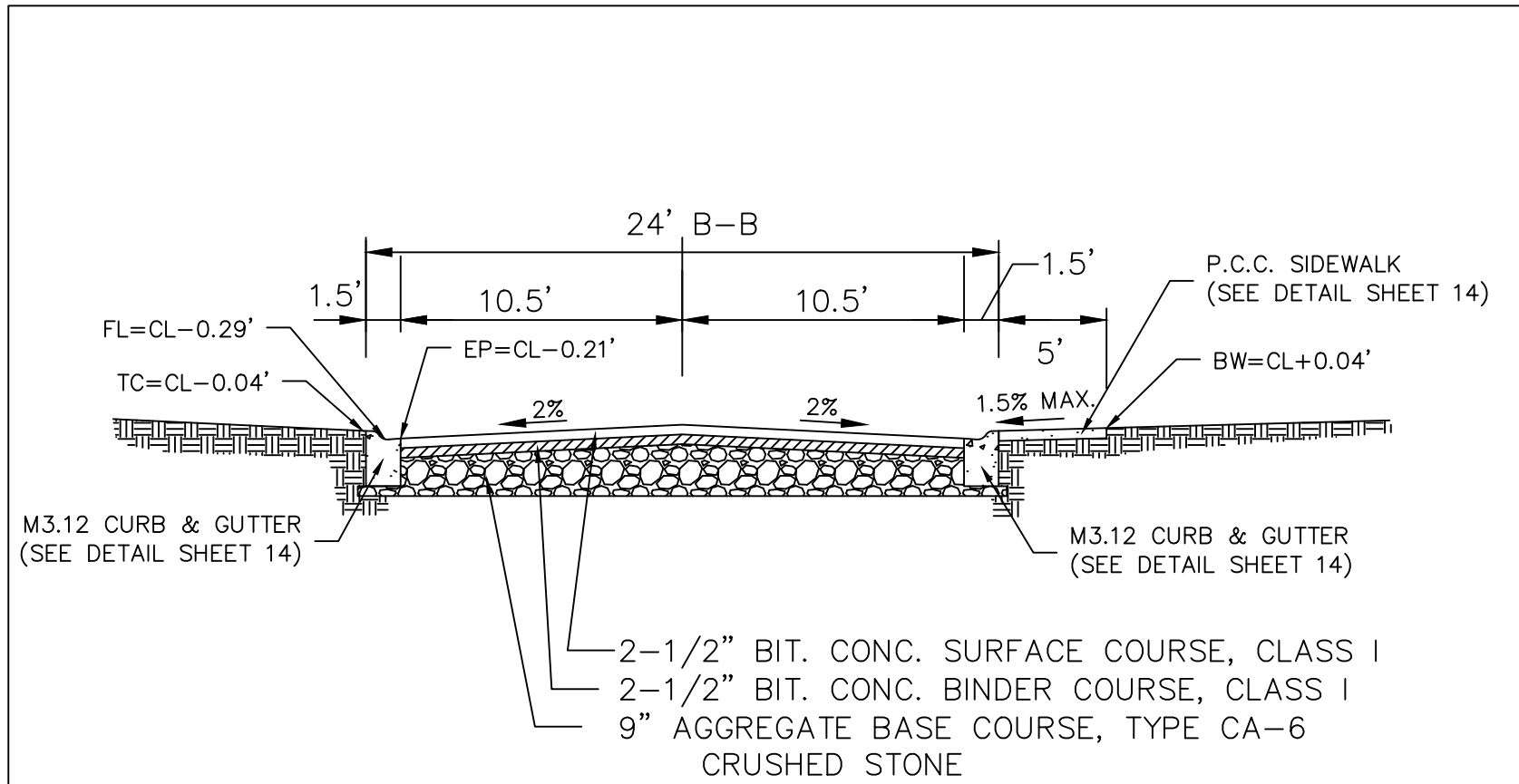
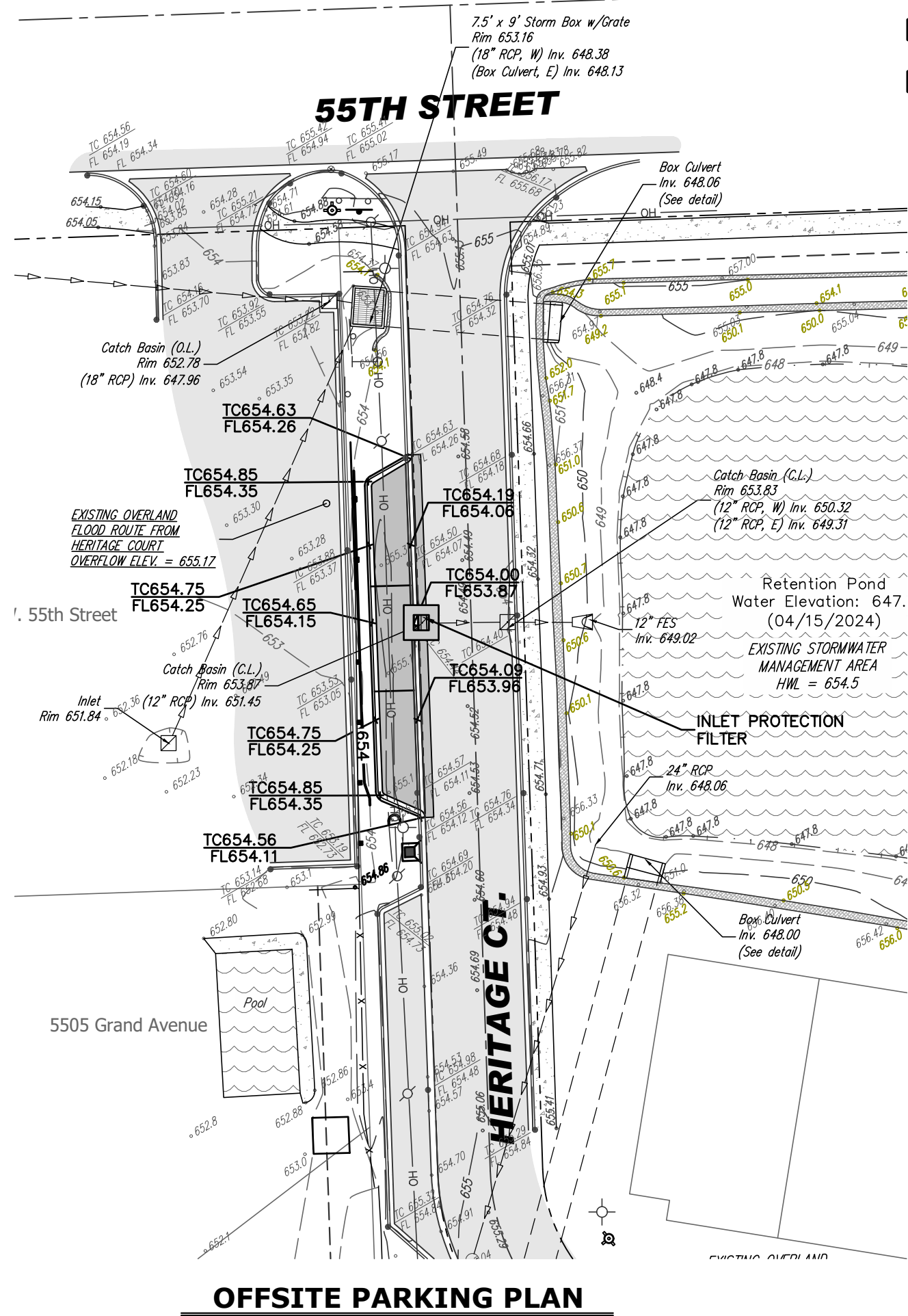
### NOTES:

1. WOLF ROAD AND PARK PLACE PARKWAY AREAS AND ANY DISTURBED AREAS (ON-SITE OR OFF-SITE) TO BE RESTORED WITH 4" PULVERIZED TOPSOIL AND SOD.
2. ALL DOWNSPOUT DISCHARGES MUST BE 5' MAXIMUM FROM BUILDINGS.



### RETAINING WALL

|    |                                         |    |                        |    |                        |
|----|-----------------------------------------|----|------------------------|----|------------------------|
| 1  | TW~656.00<br>BW~652.00<br>EX TW~655.99  | 12 | TW~656.00<br>BW~650.50 | 23 | TW~665.00<br>BW~660.00 |
| 2  | TW~656.50<br>BW~650.00<br>EX TW~655.98  | 13 | TW~656.00<br>BW~650.50 | 24 | TW~655.00<br>BW~660.00 |
| 3  | TW~656.50<br>BW~650.00<br>EX TW~656.26  | 14 | TW~657.00<br>BW~650.50 | 25 | TW~666.00<br>BW~660.00 |
| 4  | TW~656.50<br>BW~650.00<br>EX TW~656.25  | 15 | TW~657.00<br>BW~650.50 | 26 | TW~664.00<br>BW~661.00 |
| 5  | TW~656.50<br>BW~650.00<br>EX TW~656.16  | 16 | TW~658.00<br>BW~650.00 | 27 | TW~662.50<br>BW~662.50 |
| 6  | TW~656.50<br>BW~650.00<br>EX GND~656.00 | 17 | TW~658.00<br>BW~650.00 | 28 | TW~662.50<br>BW~662.50 |
| 7  | TW~655.00<br>BW~650.00                  | 18 | TW~658.00<br>BW~650.00 | 29 | TW~662.50<br>BW~662.50 |
| 8  | TW~654.00<br>BW~650.00                  | 19 | TW~656.50<br>BW~650.00 | 30 | TW~661.00<br>BW~650.00 |
| 9  | TW~656.00<br>BW~650.00                  | 20 | TW~658.50<br>BW~650.00 | 31 | TW~660.00<br>BW~654.50 |
| 10 | TW~657.50<br>BW~65000                   | 21 | TW~654.00<br>BW~654.00 | 32 | TW~660.00<br>BW~654.50 |
| 11 | TW~656.50<br>BW~650.50                  | 22 | TW~665.00<br>BW~665.00 | 33 | TW~660.00<br>BW~656.00 |
|    |                                         |    |                        | 34 | TW~661.00<br>BW~661.00 |
|    |                                         |    |                        | 35 | TW~662.50<br>BW~662.50 |
|    |                                         |    |                        | 36 | TW~663.00<br>BW~660.50 |
|    |                                         |    |                        | 37 | TW~663.50<br>BW~663.50 |



REVIEW SET  
NOT FOR CONSTRUCTION

| REVISIONS |  | NO.      | DATE                        | DESCRIPTION |
|-----------|--|----------|-----------------------------|-------------|
| 1         |  | 08-17-24 | PER LARRANGE - HIGHLANDS SD | SD          |
| 2         |  | 08-26-24 | PER WESTERN SPRINGS REVIEW  | SD          |
| 3         |  | 10-17-24 | PER VILLAGE REVIEW          | SD          |
| 4         |  | 11-04-24 | PER CDOOTH REVIEW           | DMV         |
| 5         |  | 12-12-24 | PER VILLAGE REVIEW          | DMV         |

McNAUGHTON DEVELOPMENT  
11S220 JACKSON ST. Ste. 101  
BURR RIDGE, ILLINOIS 60527  
(630) 325-3400

FINAL ENGINEERING PLANS  
FOR  
HERITAGE CROSSING  
5600 SOUTH WOLF ROAD  
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.  
CONSULTING CIVIL ENGINEERING & LAND SURVEYING  
9930 W. 190TH STREET, SUITE L  
MOKENA, ILLINOIS 60448  
(708) 326-4961  
FAX: (708) 326-4962



### PROJECT INFORMATION

Project No.: 24-0001  
Scale: 1" = 30'  
Date: MAY 22, 2024  
Design By: SDD  
Drawn By: DEI  
Checked By: SDD

8  
OF  
20

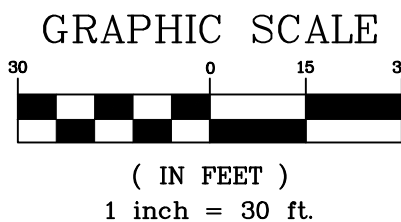


# UTILITY PLAN

## NOTES:

- ALL PIPE LENGTHS ARE APPROXIMATE. THOSE WHICH INCLUDE A FLARED END SECTION ARE TO THE END OF THE SECTION.
- UNDERGROUND UTILITIES SHALL RECEIVE FULL DEPTH TRENCH BACKFILL WHERE INDICATED PER UNDERGROUND UTILITIES SPECIFICATIONS ON SHEET 2.

■ TRENCH BACKFILL



## WATER VALVE VAULTS

- 8" VALVE IN 60" VAULT  
RIM 657.00
- 8" VALVE IN 60" VAULT  
RIM 658.00
- 8" PRESSURE CONNECTION IN  
60" VAULT  
RIM 665.00

## FIRE HYDRANTS

- FIRE HYDRANT ASSEMBLY  
GRADE RING 662.90
- FIRE HYDRANT ASSEMBLY  
GRADE RING 660.00
- FIRE HYDRANT ASSEMBLY  
GRADE RING 658.20
- FIRE HYDRANT ASSEMBLY  
GRADE RING 656.50

## STORM SEWER STRUCTURES

- |                                                                                            |                                                                           |                                                                             |
|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| A1 12" FES W/ GRATE<br>INV 648.00                                                          | C1 CONNECT TO 4'X6' BOX<br>CULVERT<br>INV 653.65 (N, 12")                 | D8 48" DIA. M.H., O.L.<br>RIM 660.93 (FL)<br>INV 657.73 (N&W, 12")          |
| A2 48" DIA. M.H., C.L.<br>RIM 653.50<br>INV 650.30 (E, 12")<br>INV 649.00 (SW, 12")        | C2 24" DIA. INLET<br>RIM 656.80<br>INV 653.70 (S, 12")                    | D9 24" DIA. INLET<br>RIM 660.93 (FL)<br>INV 657.93 (S, 12")                 |
| A3 48" DIA. CATCHBASIN, O.L.<br>RIM 657.50<br>INV 651.09 (W&E, 12")<br>INV 651.30 (N, 12") | C3 24" DIA. INLET<br>RIM 657.50<br>INV 654.50 (S, 12")                    | D10 24" DIA. INLET<br>RIM 658.02 (FL)<br>INV 655.02 (S, 12")                |
| A3q 24" DIA. INLET<br>RIM 654.35 (FL)<br>INV 651.35 (N, 12")                               | D1 CONNECT TO 4'X6' BOX<br>CULVERT<br>INV ~653.05 (S, 15")                | E1 24" PVC RISER<br>RIM 658.80                                              |
| A4 48" DIA. M.H., O.L.<br>RIM 654.37 (FL)<br>INV 651.29 (N,W&E 12")                        | D2 48" DIA. CATCHBASIN<br>RIM 656.68 (FL)<br>INV 653.13 (SW, 15")         | F1 CONNECT TO 4'X6' BOX<br>CULVERT<br>INV 653.10 (N, 12")                   |
| A4q 24" DIA. INLET<br>RIM 654.37 (FL)<br>INV 651.35 (S 12")                                | D3 60" DIA. M.H., O.L.<br>RIM 659.60 (FL)<br>INV 653.20 (NW&E, 15")       | F2 24" DIA. INLET<br>RIM 656.99 (FL)<br>INV 653.13 (N&S, 12")               |
| A5 48" DIA. M.H., O.L.<br>RIM 654.50 (E&W, 12")<br>INV 651.50 (E&W, 12")                   | D4 72" DIA. M.H., O.L.<br>RIM 659.60 (NW, 15")<br>INV 654.45 (NE&SE, 12") | F3 24" DIA. INLET<br>RIM 656.69 (FL)<br>INV 653.18 (S, 12")                 |
| A6 24" DIA. INLET<br>RIM 653.00 (W 12")                                                    | D5 48" DIA. M.H., C.L.<br>RIM 659.60 (NW&E, 12")                          | G1 CONNECT TO 4'X6' BOX<br>CULVERT<br>INV 653.24 (N, 12")                   |
|                                                                                            | D6 48" DIA. M.H., C.L.<br>RIM 659.60 (NW&E, 12")                          | G2 24" DIA. INLET<br>RIM 657.20<br>INV 654.20 (N, 12")                      |
|                                                                                            | D7 24" DIA. INLET<br>RIM 662.00<br>INV 659.00 (W, 12")                    | H1 24" FES W/ GRATE<br>INV 648.00                                           |
|                                                                                            |                                                                           | H2 48" DIA. M.H., C.L.<br>EX INV 646.34 (N, 24")<br>PR INV 646.34 (SW, 24") |

## STORM SEWER GRATES

ROADWAY: EJV 75252 & EJV 7525M  
GRASS: EJV 6527  
(UNLESS OTHERWISE NOTED ON PLANS)

## UTILITY CROSSING INFORMATION

- MAINTAIN 18" MINIMUM VERTICAL SEPARATION BETWEEN WATERMAIN AND STORM/SANITARY SEWERS.
- DEPTHS OF EXISTING WM ARE ASSUMED AND MUST BE FIELD VERIFIED PRIOR TO START OF CONSTRUCTION.
- WHEN THE WM CROSSES BELOW A SEWER, THE SEWER MUST BE CONSTRUCTED WITH WM QUALITY PIPE & JOINTS THAT COMPLY WITH 35 IAC 653.119 OR ELSE EITHER PIPE MUST BE INSTALLED IN A CASING. THE PROTECTION MUST EXTEND ON EACH SIDE OF THE CROSSING UNTIL THE NORMAL DISTANCE FROM THE WM TO THE SEWER IS AT LEAST 10 FEET. IN ADDITION, THE WM MUST BE LOCATED AT LEAST 18 INCHES BELOW THE SEWER. THIS 18 INCHES IS A STRUCTURAL PROTECTION TO PREVENT THE SEWER FROM SETTLING AND BREAKING THE WM.
- WHEN THE WM CROSSES ABOVE A SEWER AND IT IS NOT 18 INCHES ABOVE THE CROWN OF THE SEWER WHERE THE PIPE CROSSES, THE SEWER MUST BE CONSTRUCTED WITH WM QUALITY PIPE & JOINTS (COMPLIANCE SAME AS ABOVE) OR A CASING PIPE CAN BE INSTALLED AROUND THE WM OR THE SEWER. THE CASING PIPE MUST BE A MATERIAL THAT IS APPROVED FOR USE AS WM. CONCRETE IS NOT AN ACCEPTABLE ENCASEMENT.
- WHEN THE ENCASEMENT OPTION IS USED, IT SHALL BE ONE CONTINUAL SECTION (NO JOINTS).

| ID | BOTTOM OF PIPE | TOP OF PIPE | VERTICAL SEPARATION | CROSSING INFO.                                     |
|----|----------------|-------------|---------------------|----------------------------------------------------|
| 1  | 650.83         | 648.47      | 2.36'               | STORM OVER SANITARY                                |
| 2  | 651.24         | 649.18      | 2.06'               | STORM OVER WATERMAIN (STORM SEWER TO BE C900 PIPE) |
| 3  | 650.20         | 649.37      | 0.83'               | STORM OVER SANITARY                                |
| 4  | 650.83         | 649.30      | 1.53'               | STORM OVER WATERMAIN (LOWER AND ENCASE WATERMAIN)  |
| 5  | 653.39         | 649.55      | 3.84'               | STORM OVER SANITARY                                |
| 6  | 654.58         | 649.75      | 4.83'               | STORM OVER SANITARY                                |
| 7  | 654.76         | 649.83      | 4.93'               | STORM OVER SANITARY                                |

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## SANITARY STRUCTURES

- EX. 48" M.H., C.L.  
EX. RIM 655.29  
PR. INV 647.69
- 48" M.H., C.L.  
RIM 656.00  
INV 647.90
- 48" M.H., C.L.  
RIM 657.00  
INV 648.71
- 48" M.H., C.L.  
RIM 656.90  
INV 649.17
- 48" M.H., C.L.  
RIM 663.10  
INV 650.01

| NO. | DATE     | REVISIONS | DESCRIPTION                 |
|-----|----------|-----------|-----------------------------|
| 1   | 08-17-24 | 1         | PER LARRANGE - HIGHLANDS SD |
| 2   | 08-26-24 | 2         | PER WESTERN SPRINGS REVIEW  |
| 3   | 10-17-24 | 3         | PER VILLAGE REVIEW          |
| 4   | 11-04-24 | 4         | PER CDOOTH REVIEW           |
| 5   | 12-12-24 | 5         | PER VILLAGE REVIEW          |

McNAUGHTON DEVELOPMENT  
11S220 JACKSON ST. Ste. 101  
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FINAL ENGINEERING PLANS  
FOR  
HERITAGE CROSSING  
5600 SOUTH WOLF ROAD  
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.  
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING  
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(708) 326-4961  
FAX: (708) 326-4962  
IL PROF. LIC. NO.: 184-003740



## PROJECT INFORMATION

Project No.: 24-0001  
Scale: 1" = 30'  
Date: MAY 22, 2024  
Design By: SDD  
Drawn By: DEI  
Checked By: SDD

9  
OF  
20

UTILITY PLAN

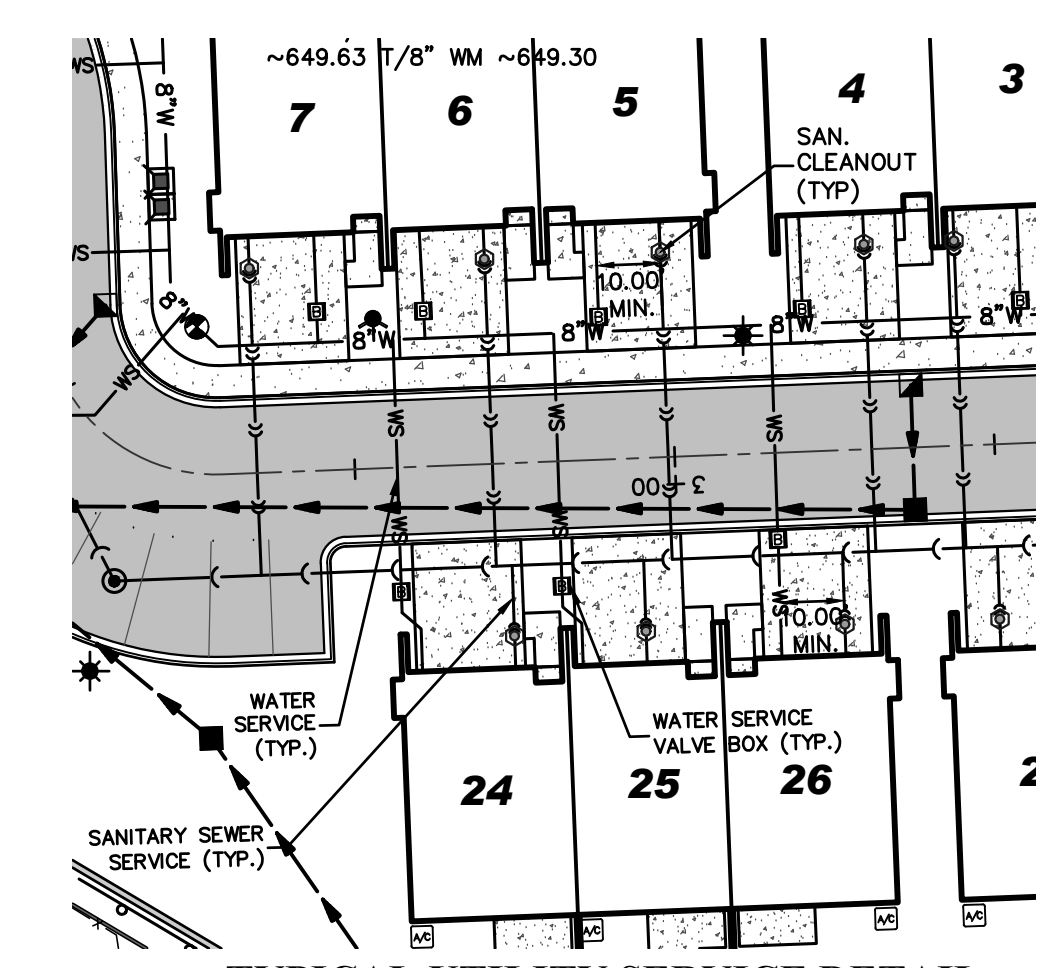
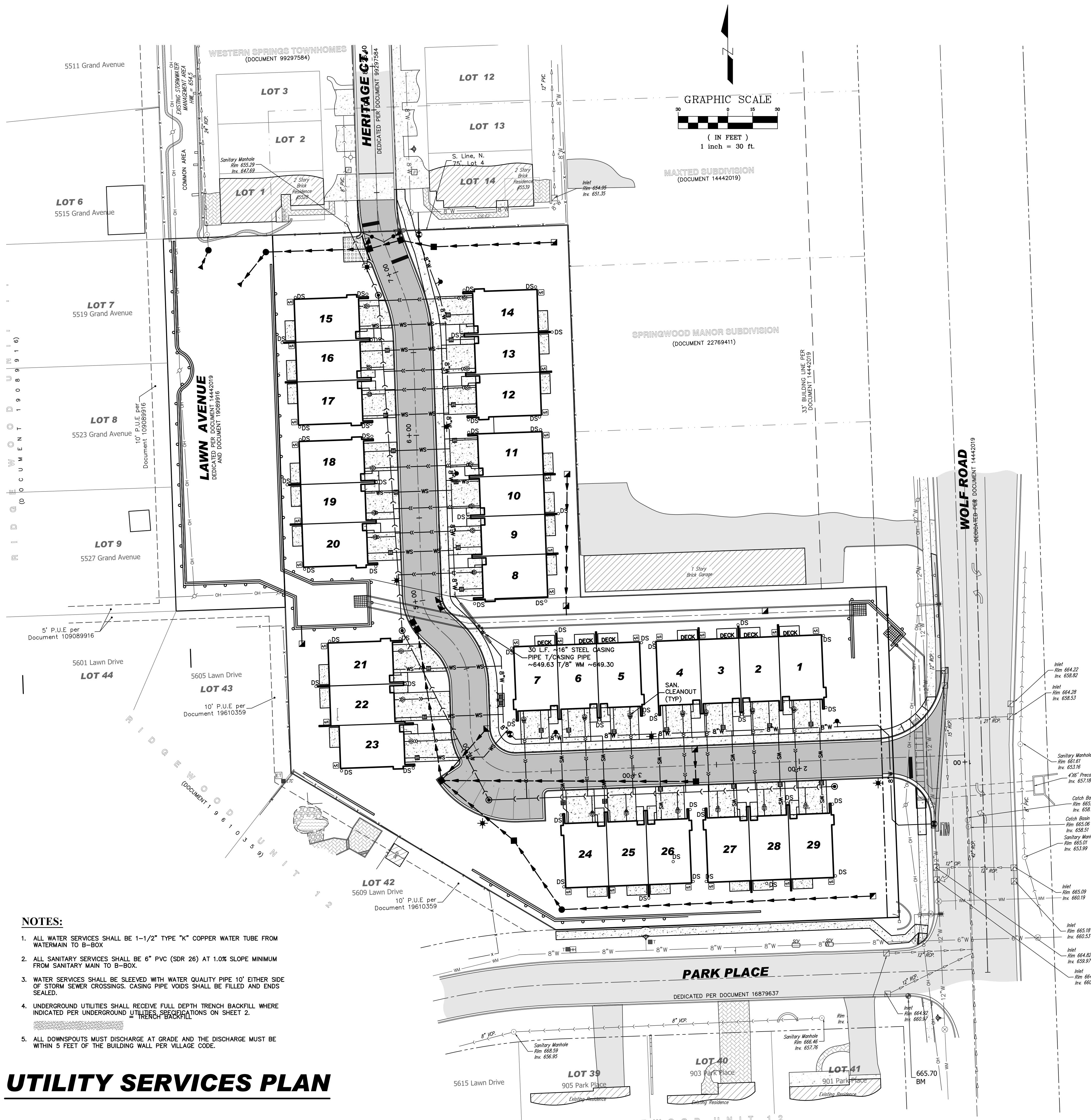


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NOTES:

- ALL WATER SERVICES SHALL BE 1-1/2" TYPE "K" COPPER WATER TUBE FROM WATERMAIN TO B-BOX.
- ALL SANITARY SERVICES SHALL BE 6" PVC (SDR 26) AT 1.0% SLOPE MINIMUM FROM SANITARY MAIN TO B-BOX.
- WATER SERVICES SHALL BE SLEEVED WITH WATER QUALITY PIPE 10' EITHER SIDE OF STORM SEWER CROSSINGS. CASING PIPE VOIDS SHALL BE FILLED AND ENDS SEALED.
- UNDERGROUND UTILITIES SHALL RECEIVE FULL DEPTH TRENCH BACKFILL WHERE INDICATED PER UNDERGROUND UTILITIES SPECIFICATIONS ON SHEET 2.  
= TRENCH BACKFILL
- ALL DOWNSPOUTS MUST DISCHARGE AT GRADE AND THE DISCHARGE MUST BE WITHIN 5 FEET OF THE BUILDING WALL PER VILLAGE CODE.

UTILITY SERVICES PLAN



REVIEW SET  
NOT FOR  
CONSTRUCTION

| REVISIONS |          |                            |
|-----------|----------|----------------------------|
| NO.       | DATE     | DESCRIPTION                |
| 1         | 08-17-24 | PER LAGRANGE-HIGHLANDS SDD |
| 2         | 08-26-24 | PER WESTERN SPRINGS REVIEW |
| 3         | 10-17-24 | PER VILLAGE REVIEW         |
| 4         | 11-04-24 | PER CDOOTH REVIEW          |
| 5         | 12-12-24 | PER VILLAGE REVIEW         |

| PROJECT INFORMATION  |  |
|----------------------|--|
| Project No.: 24-0001 |  |
| Scale: 1" = 30'      |  |
| Date: MAY 22 2024    |  |
| Design By: SDD       |  |
| Drawn By: DEI        |  |
| Checked By: SDD      |  |

DESIGNTEK ENGINEERING, INC.  
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IL PROF. LIC. NO.: 184-003740

**DEI**

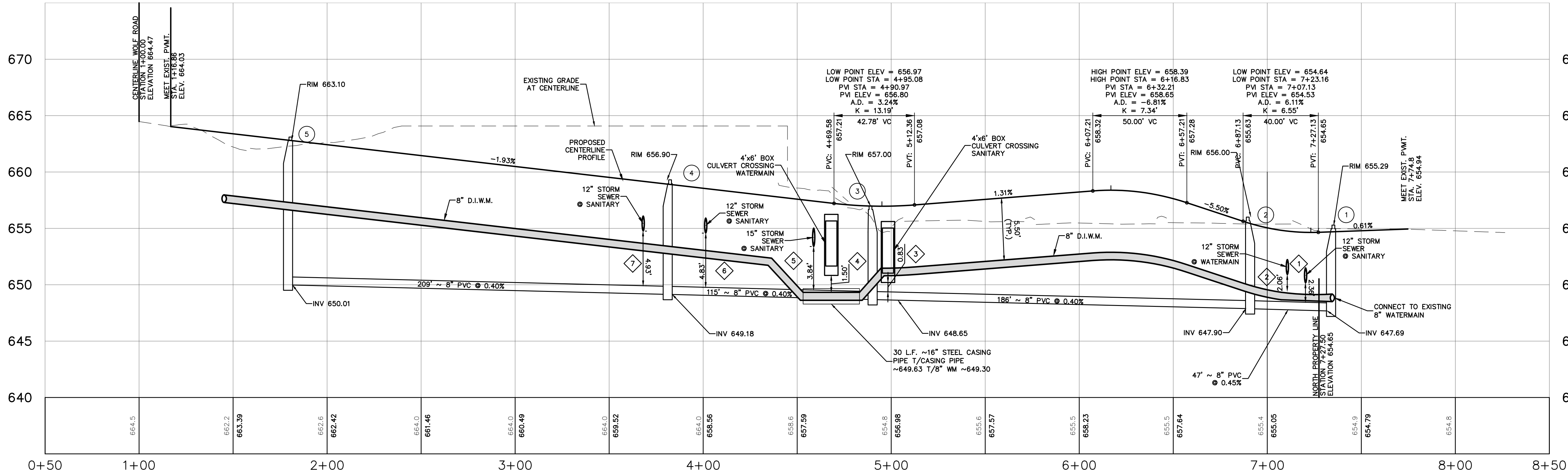
McNAUGHTON DEVELOPMENT  
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FINAL ENGINEERING PLANS  
FOR  
HERITAGE CROSSING  
5600 SOUTH WOLF ROAD  
WESTERN SPRINGS, ILLINOIS

UTILITY SERVICES PLAN

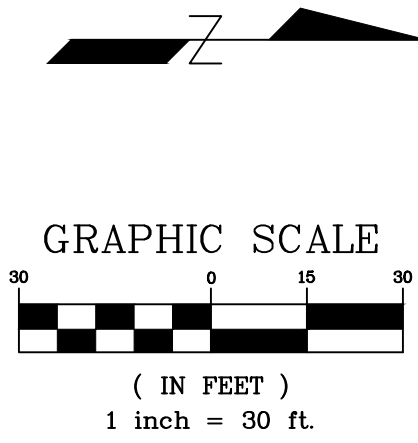
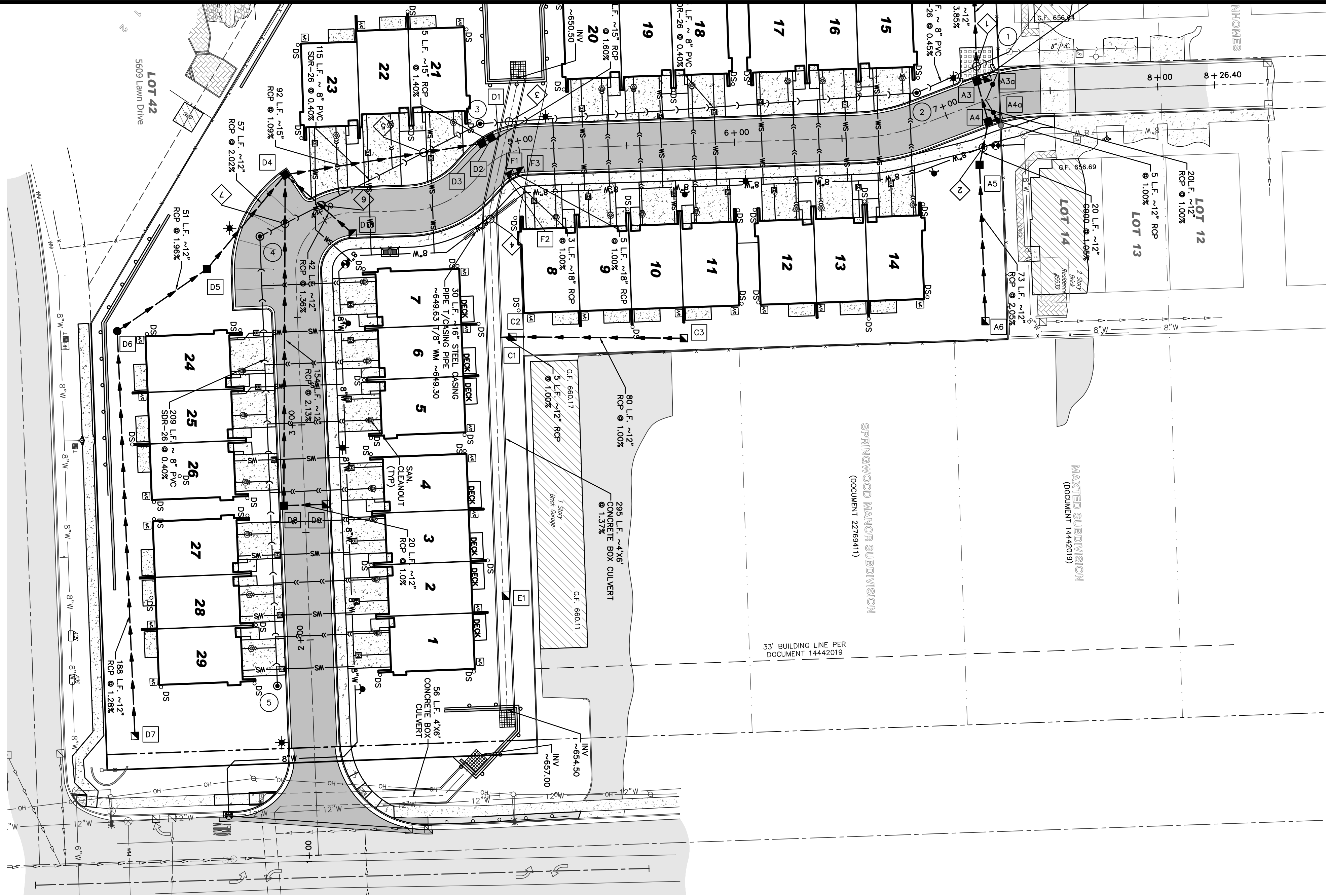


**HERITAGE COURT**  
STATION: 0+50.00 TO 8+50.00



PROFILE SCALE  
H: 1" = 30'  
V: 1" = 5'

REVIEW SET  
NOT FOR  
CONSTRUCTION



| REVISIONS |          |                             |
|-----------|----------|-----------------------------|
| NO.       | DATE     | DESCRIPTION                 |
| 1         | 08-17-24 | PER LARRANGE - HIGHLANDS SD |
| 2         | 08-26-24 | PER WESTERN SPRINGS REVIEW  |
| 3         | 10-17-24 | PER VILLAGE REVIEW          |
| 4         | 11-04-24 | PER CDOOTH REVIEW           |
| 5         | 12-12-24 | PER VILLAGE REVIEW          |

McNAUGHTON DEVELOPMENT  
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FINAL ENGINEERING PLANS  
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HERITAGE CROSSING  
5600 SOUTH WOLF ROAD  
WESTERN SPRINGS, ILLINOIS

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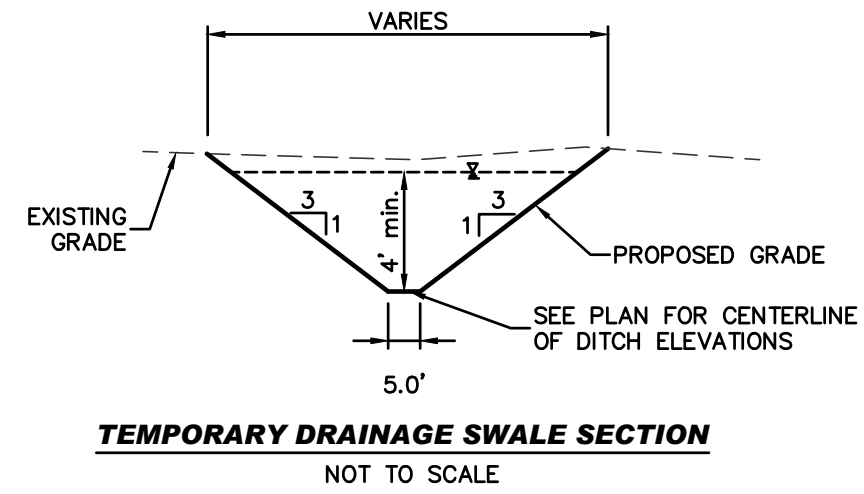
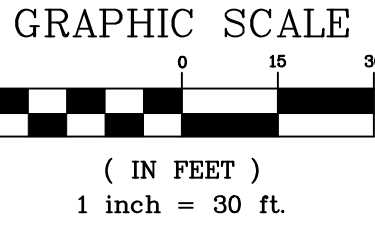


| PROJECT INFORMATION |              |
|---------------------|--------------|
| Project No.:        | 24-0001      |
| Scale:              | AS SHOWN     |
| Date:               | MAY 22, 2024 |
| Design By:          | SDD          |
| Drawn By:           | DEI          |
| Checked By:         | SDD          |

11  
OF  
20

HERITAGE COURT PLAN & PROFILE 1+00 TO 8+50





| REVISIONS |          |                           |
|-----------|----------|---------------------------|
| NO.       | DATE     | DESCRIPTION               |
| 1         | 06-17-24 | PER LAGRANGE-HIGHLANDS SD |
| 2         | 06-19-24 | PER LAGRANGE-HIGHLANDS SD |
| 3         | 06-19-24 | PER VILLAGE REVIEW        |
| 4         | 10-01-24 | PER COODTH REVIEW         |
| 5         | 12-12-24 | PER VILLAGE REVIEW        |

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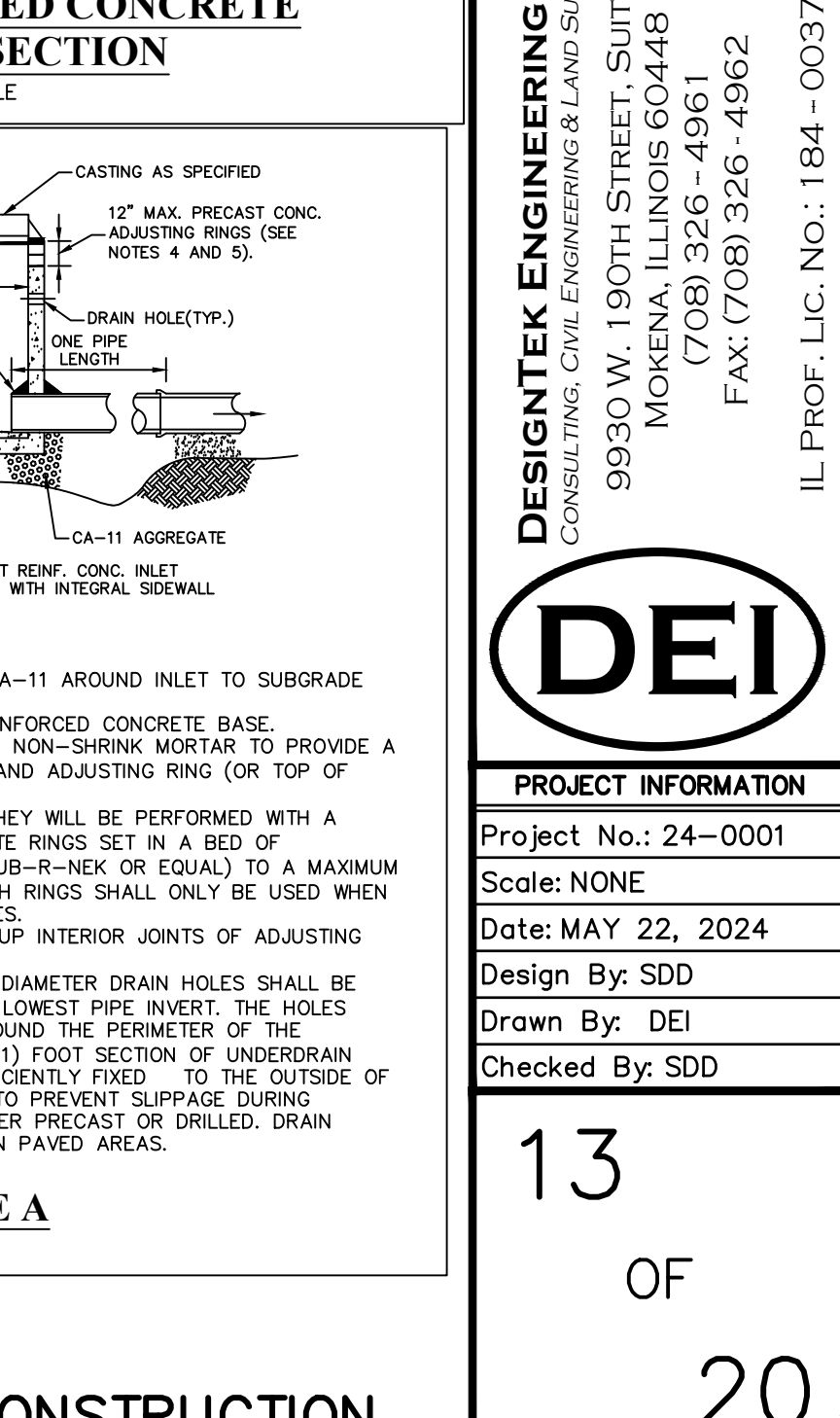
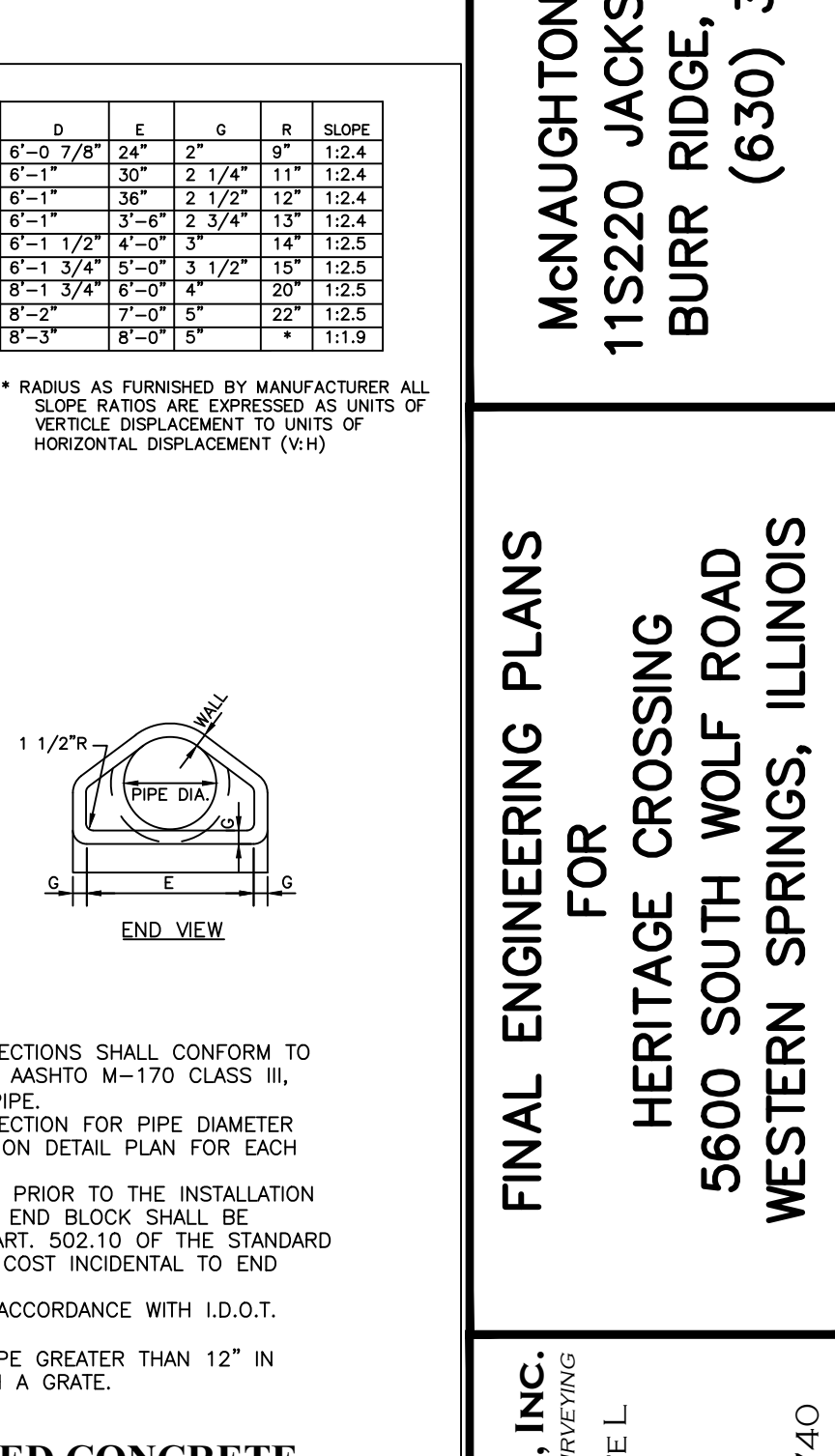
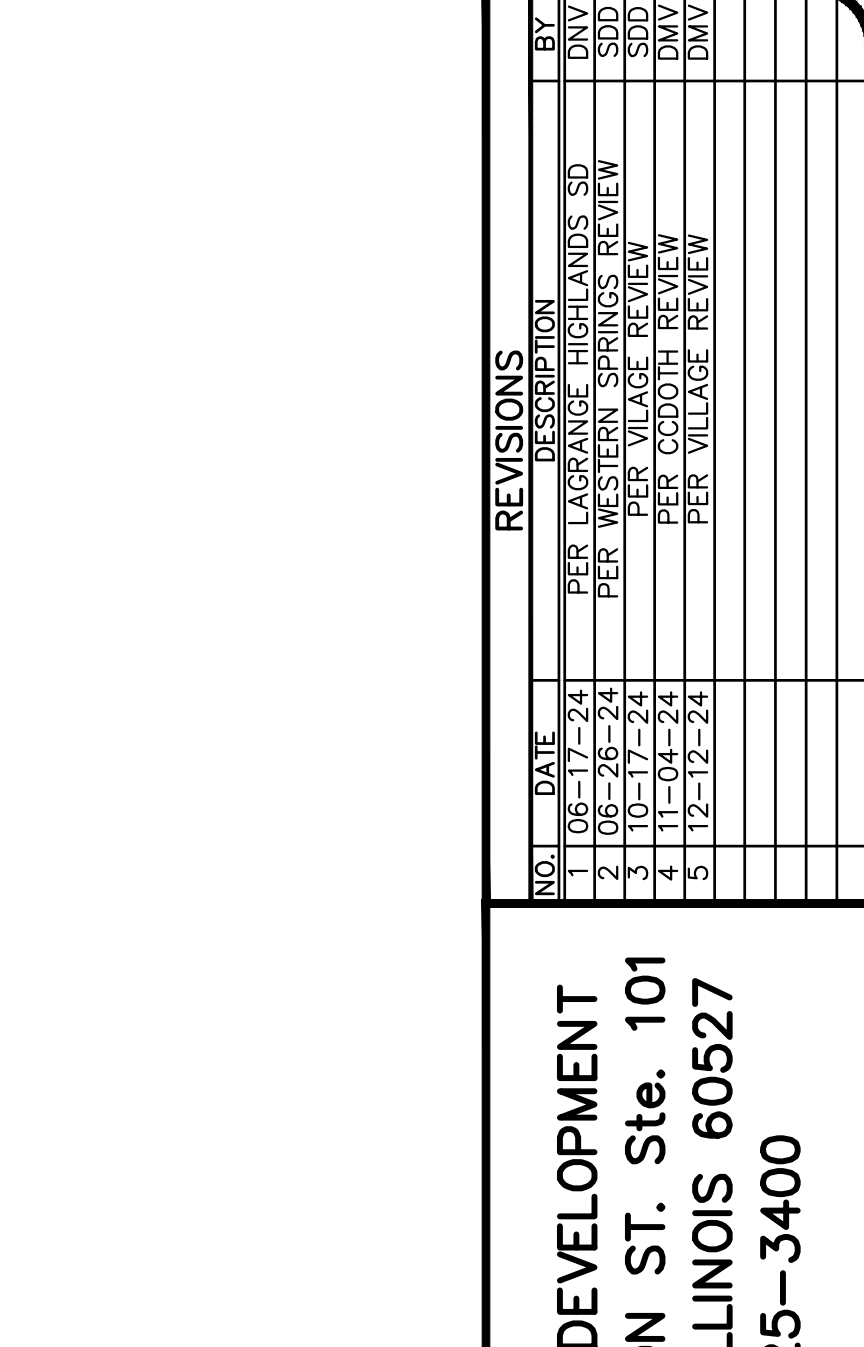
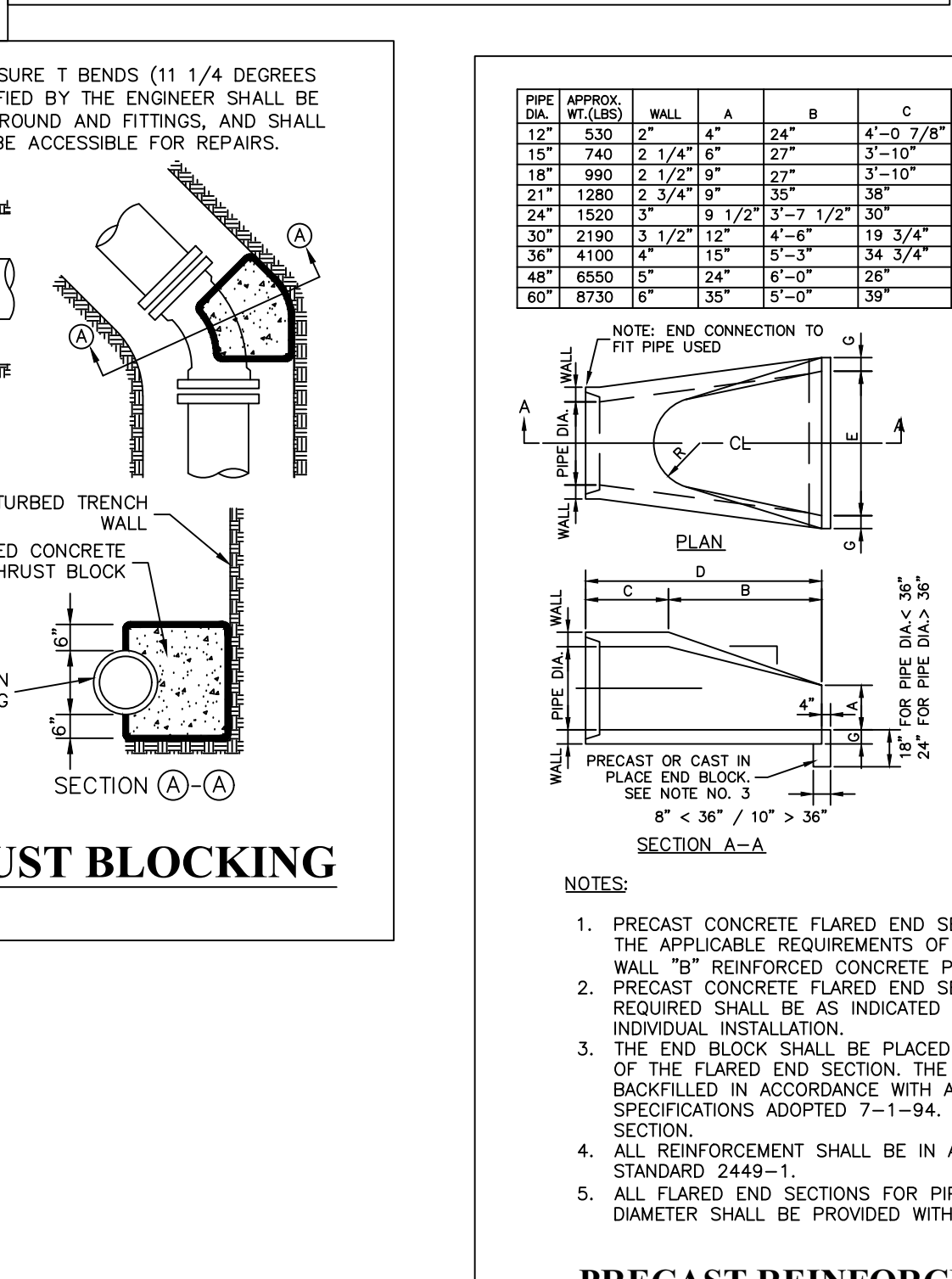
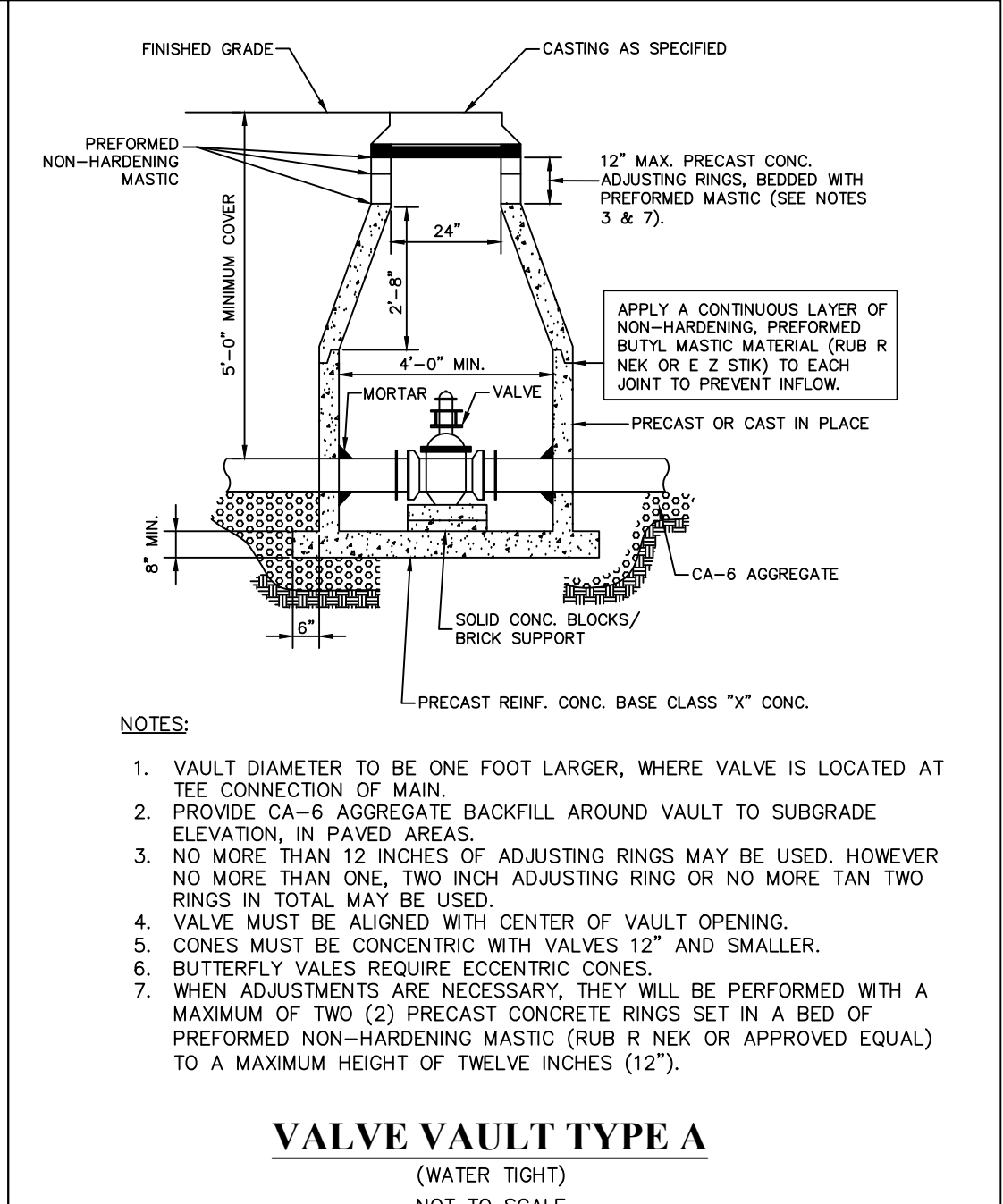
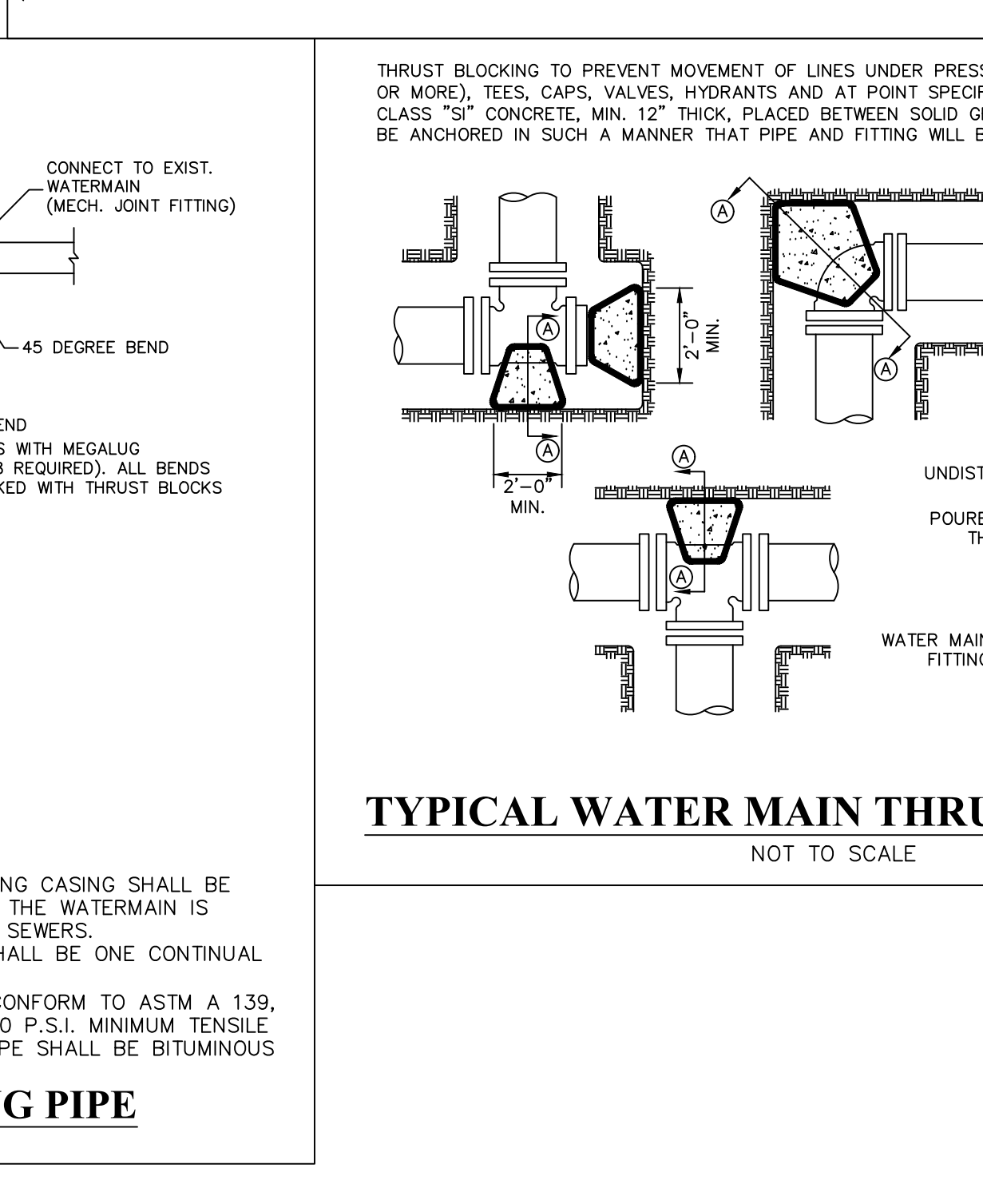
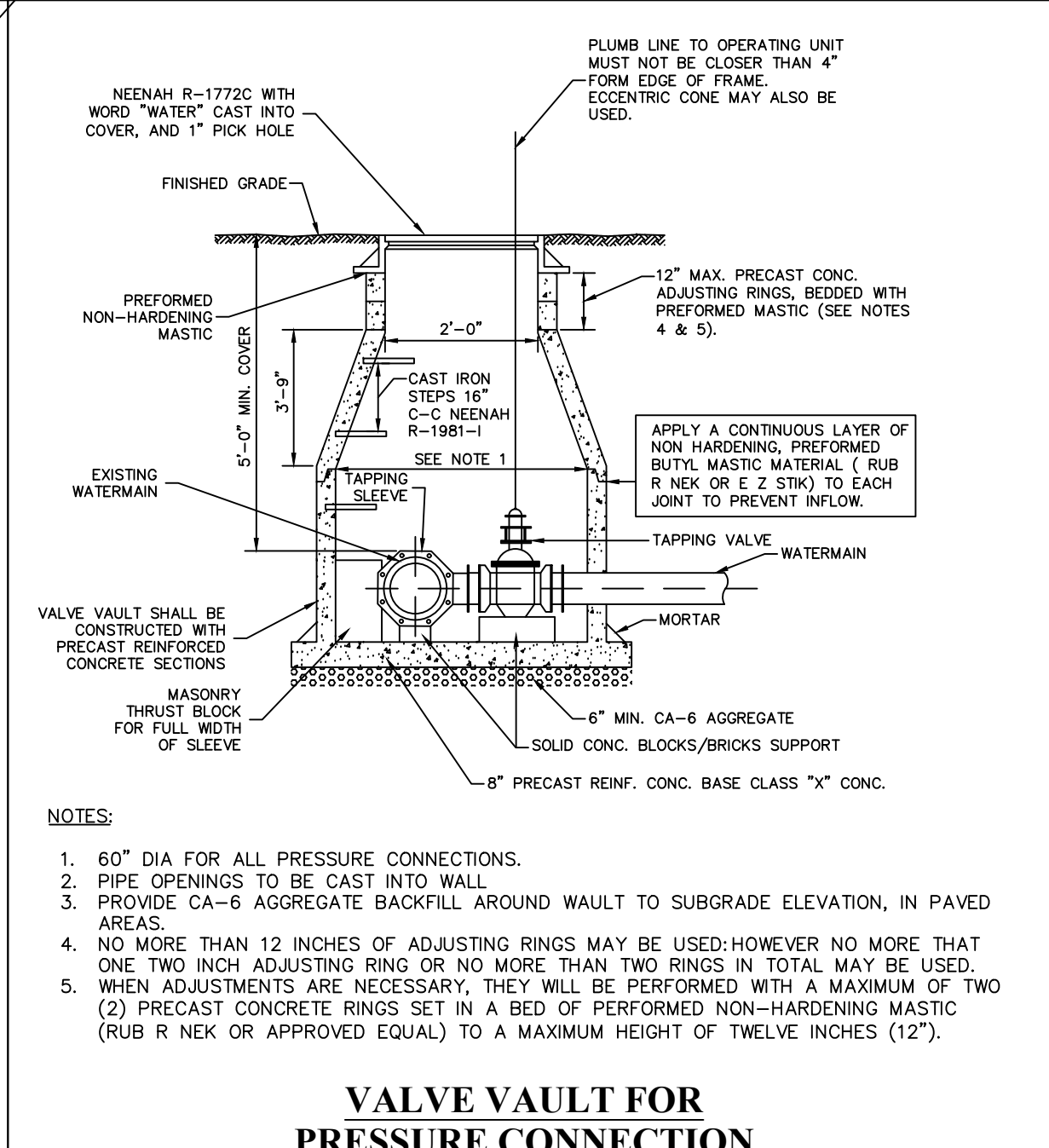
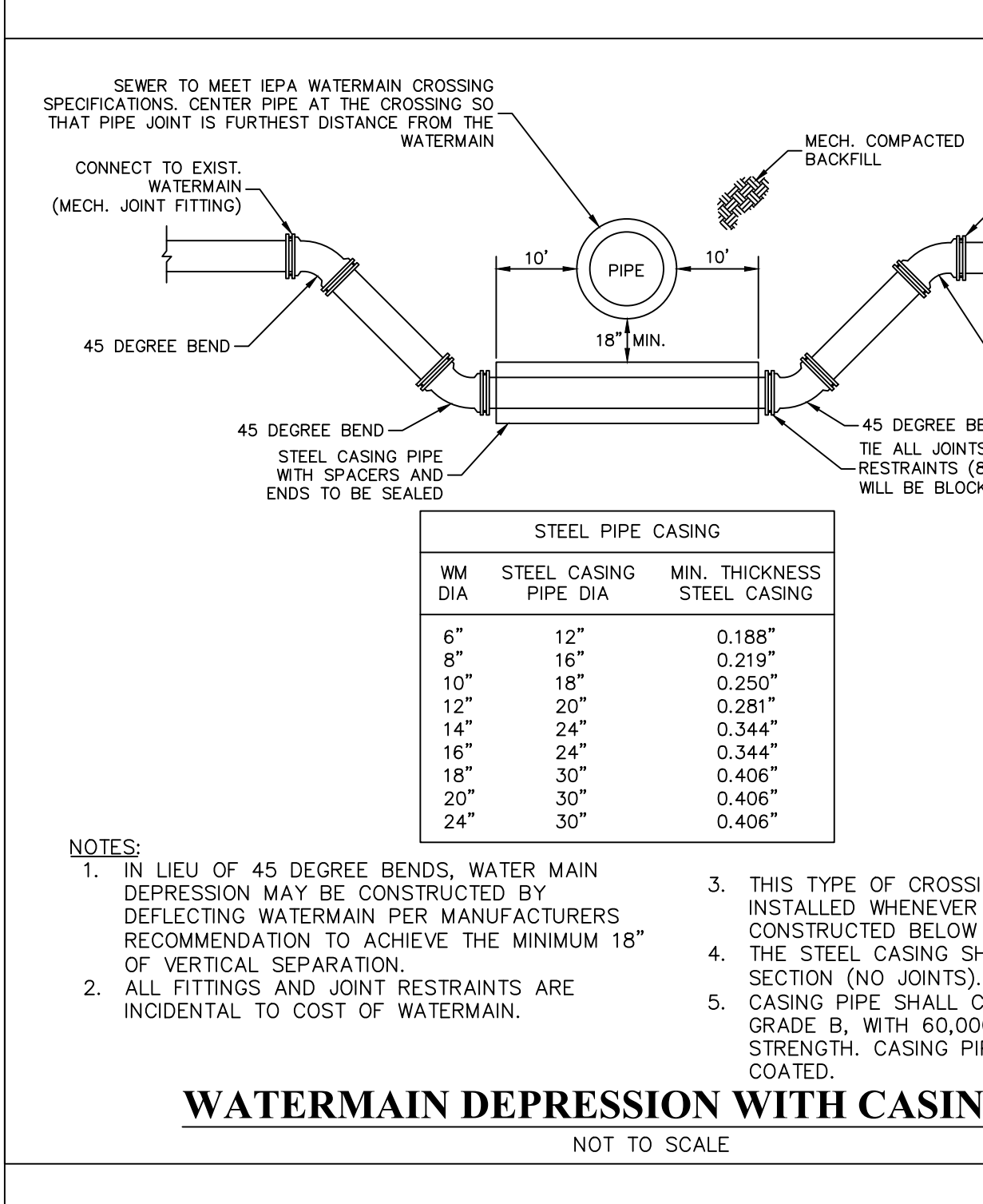
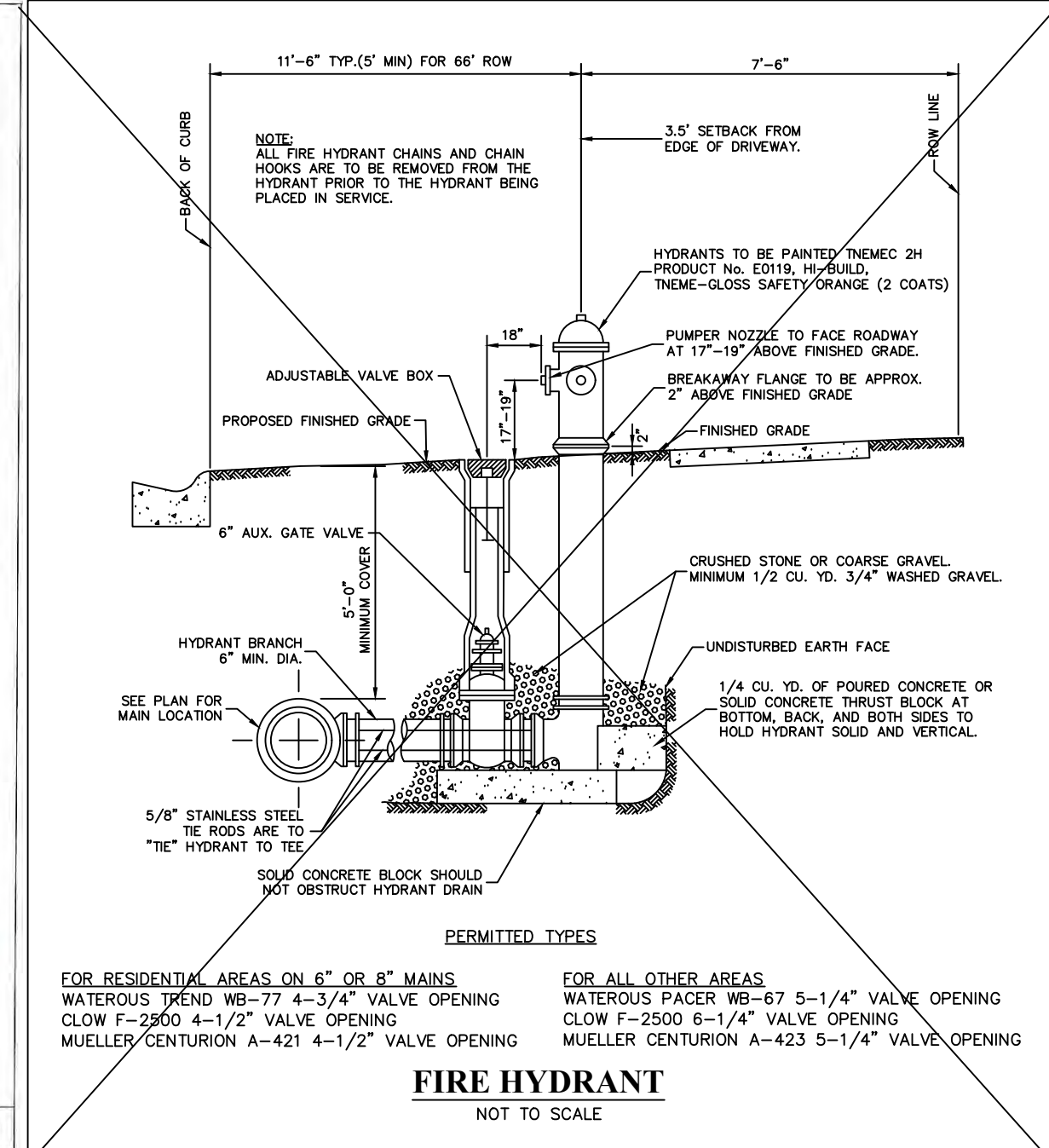
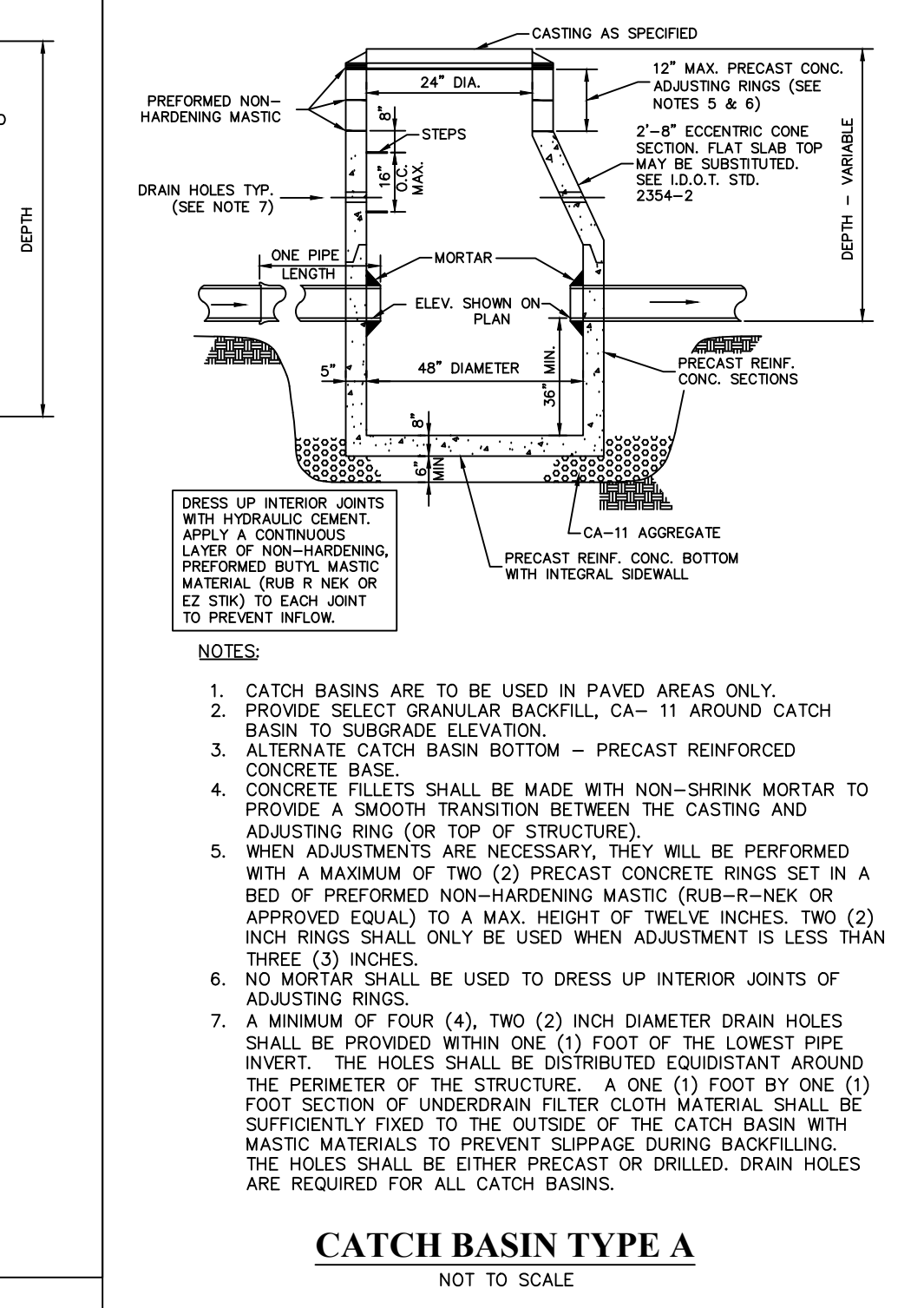
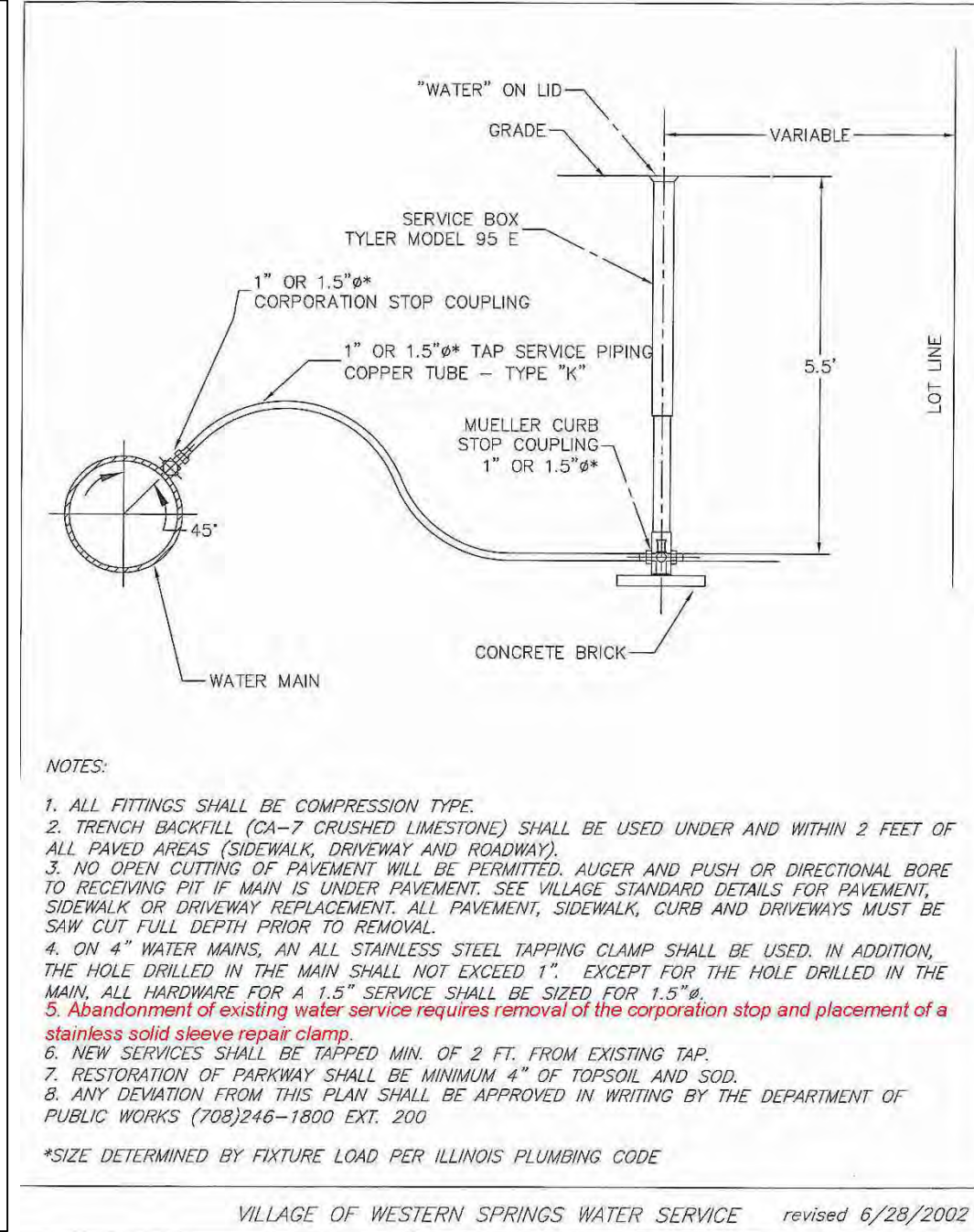
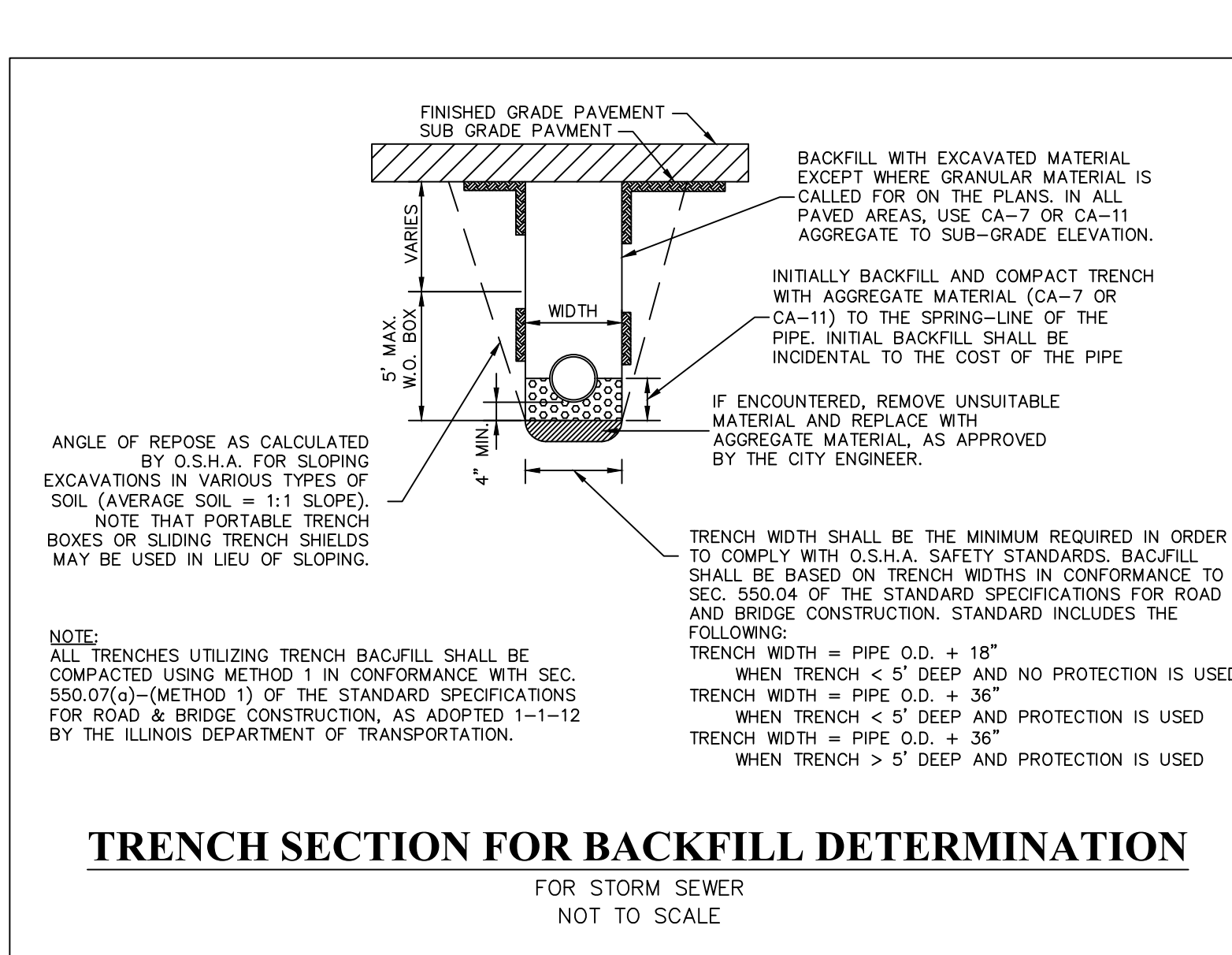
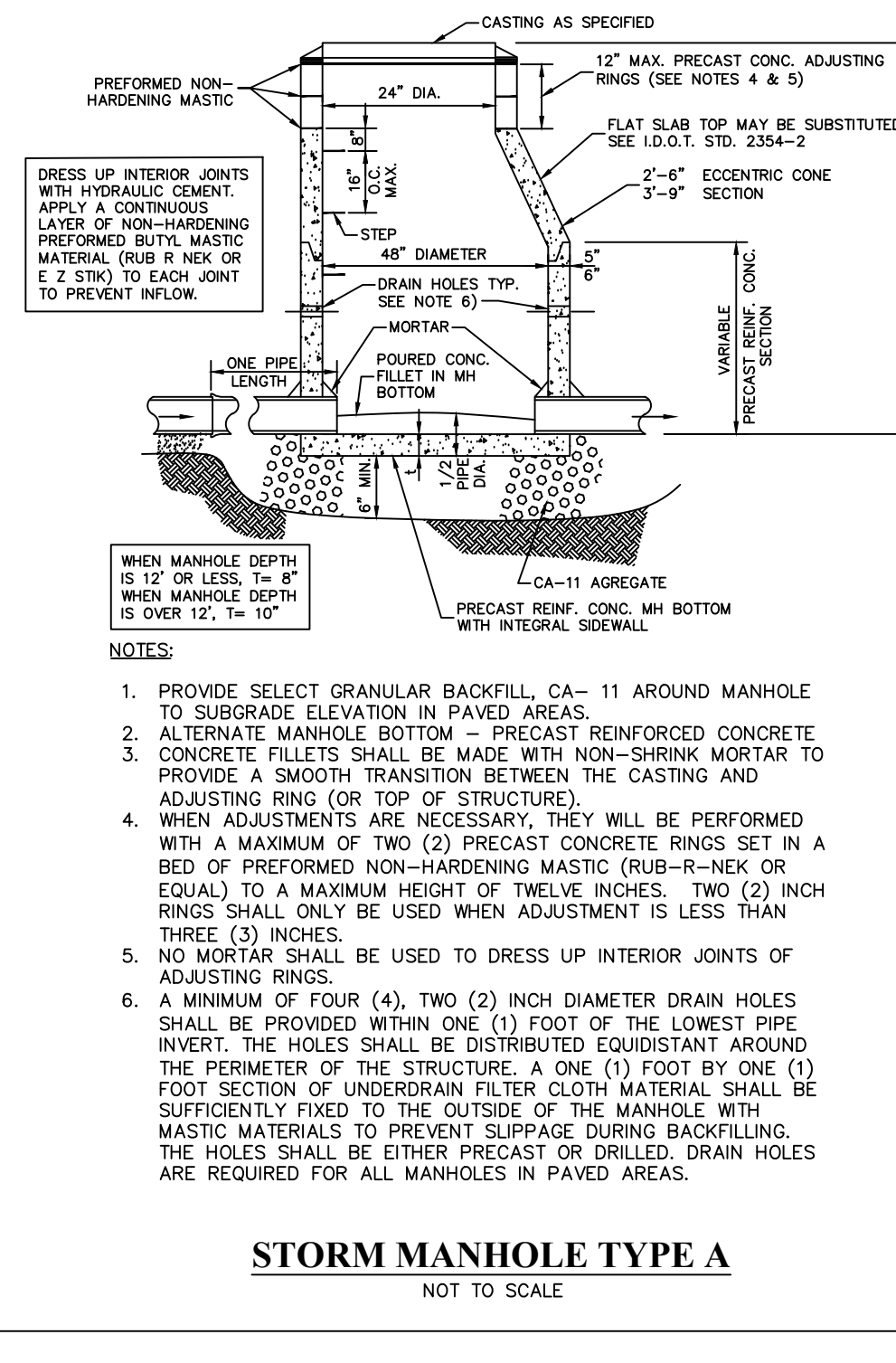
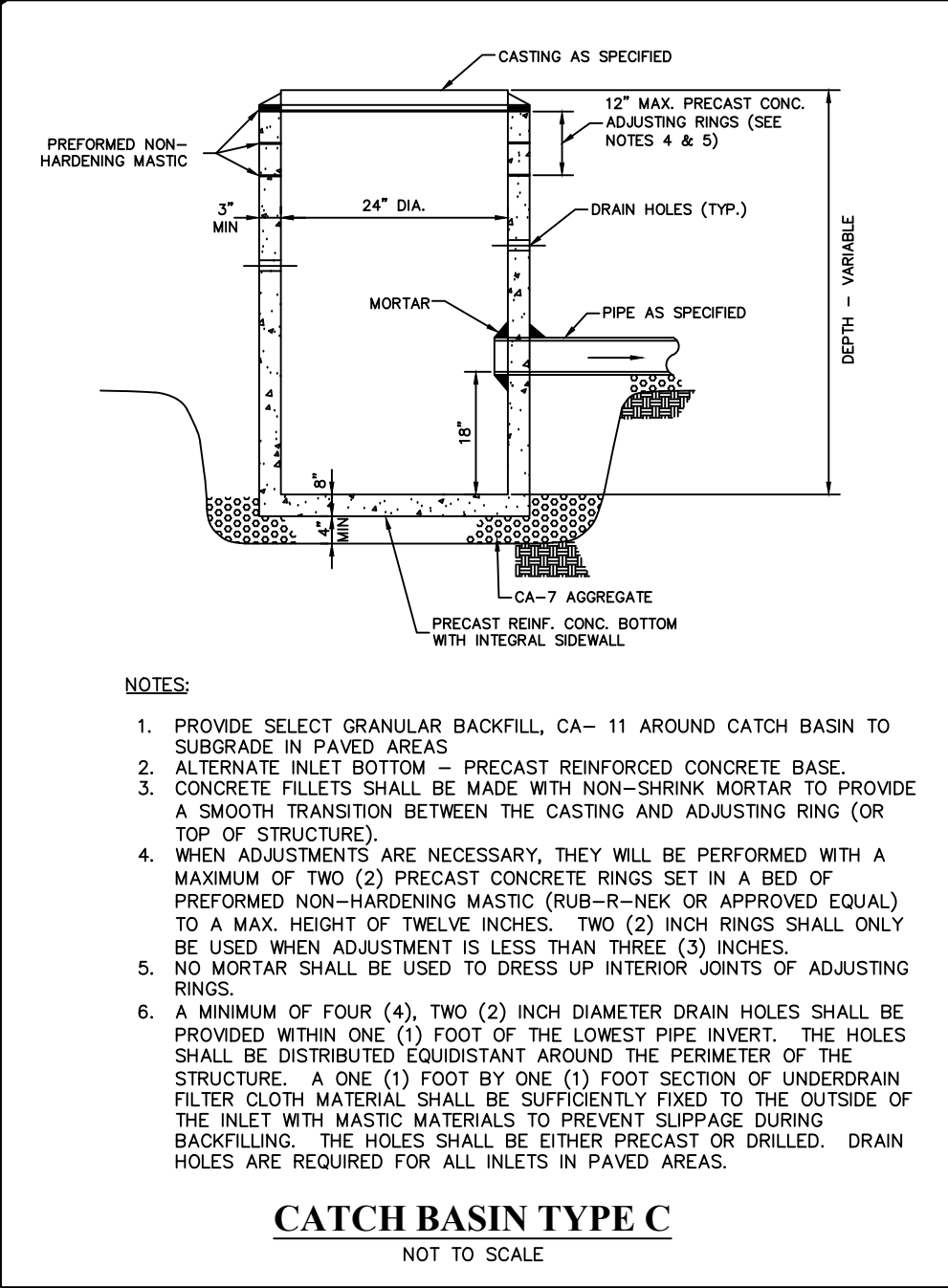
| PROJECT INFORMATION  |
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| Project No.: 24-0001 |
| Scale: 1" = 30'      |
| Date: MAY 22, 2024   |
| Design By: SDD       |
| Drawn By: DEI        |
| Checked By: SDS      |

REVIEW SET  
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# INTERIM BY-PASS DRAINAGE SWALE PLAN



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DESIGNTEK ENGINEERING, INC.  
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IL PROF. LIC. NO.: 184-003740

PROJECT INFORMATION  
Project No.: 24-0001  
Scale: NONE  
Date: MAY 22, 2024  
Design By: SDD  
Drawn By: DEI  
Checked By: SDD

13 OF 20

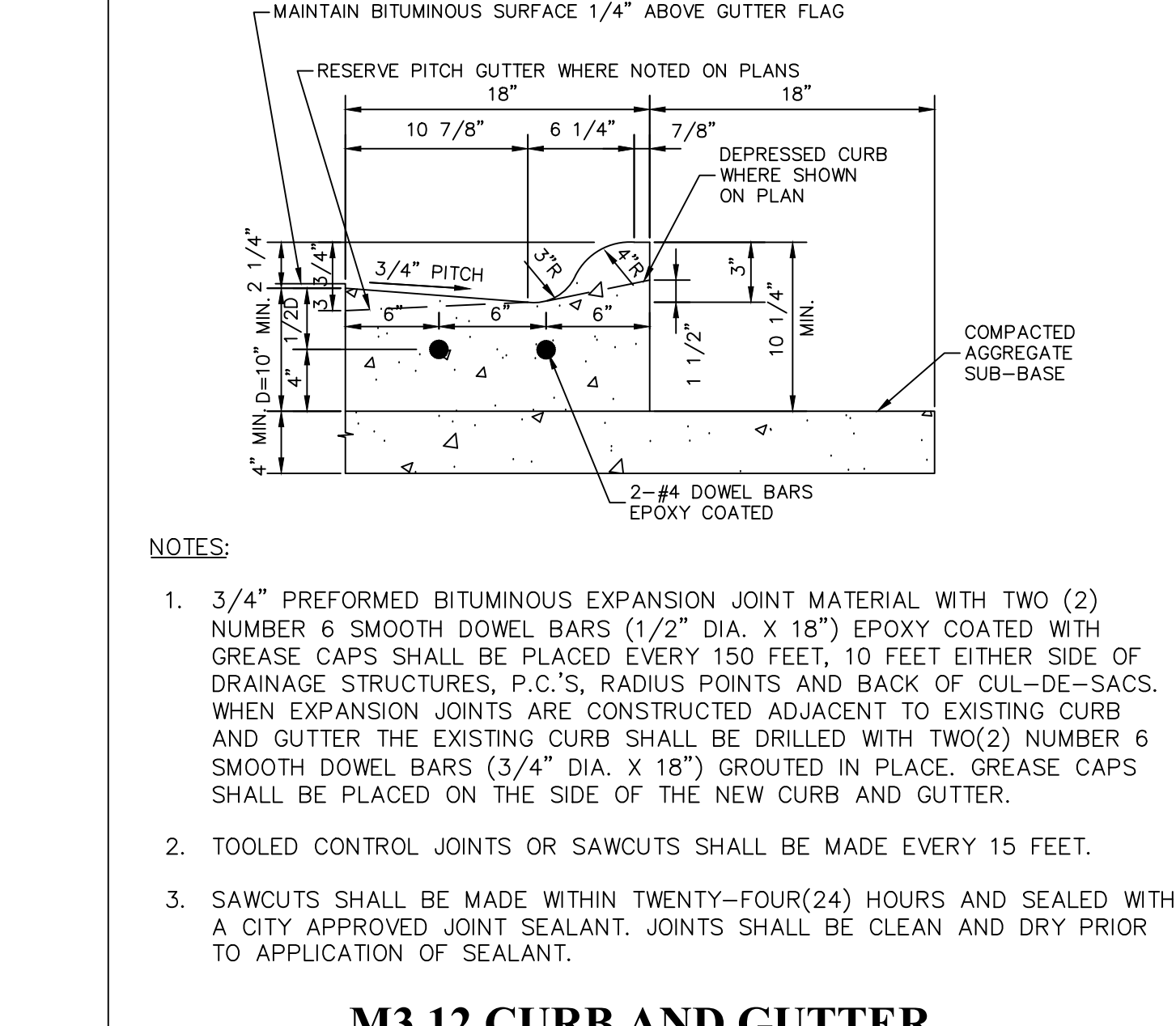
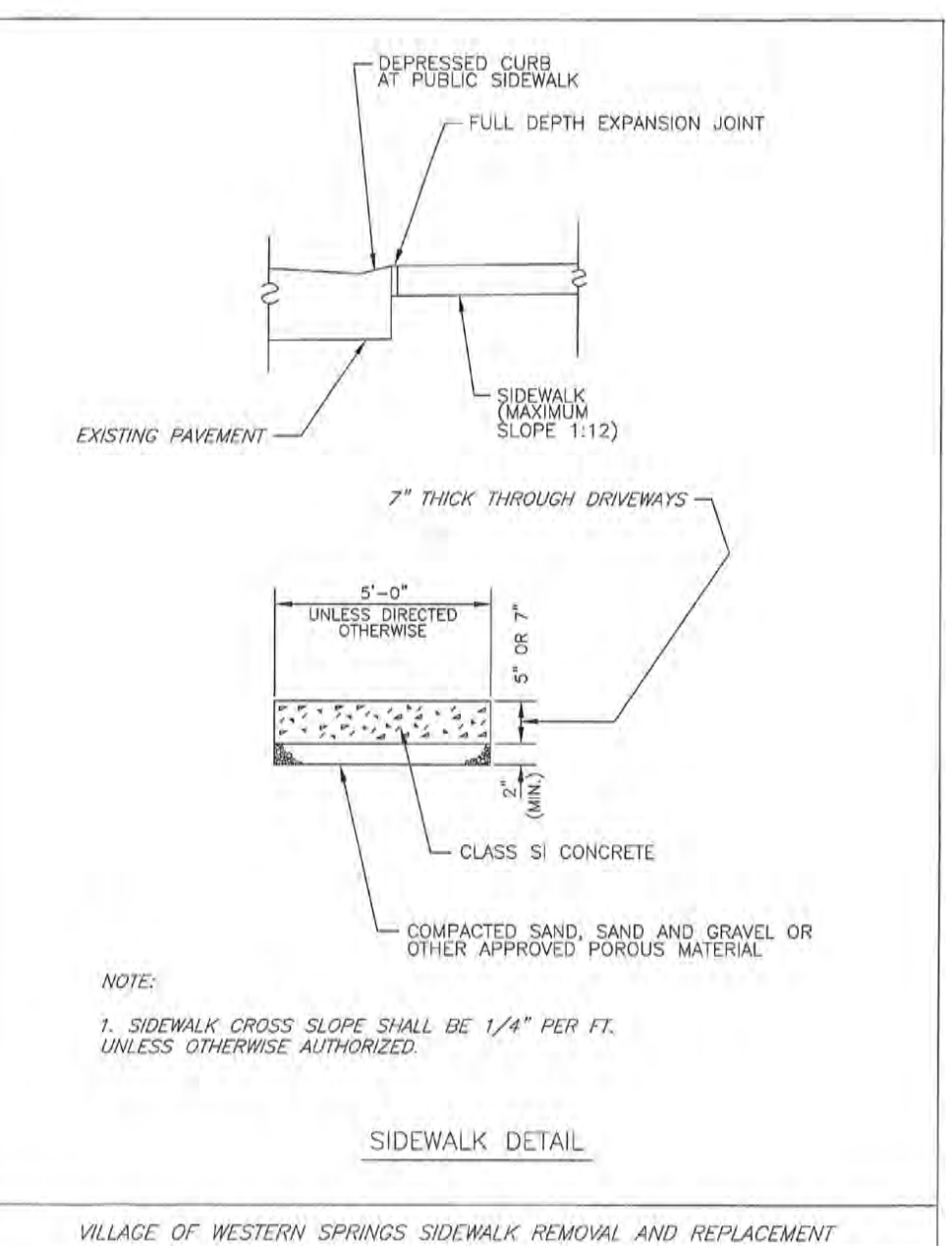
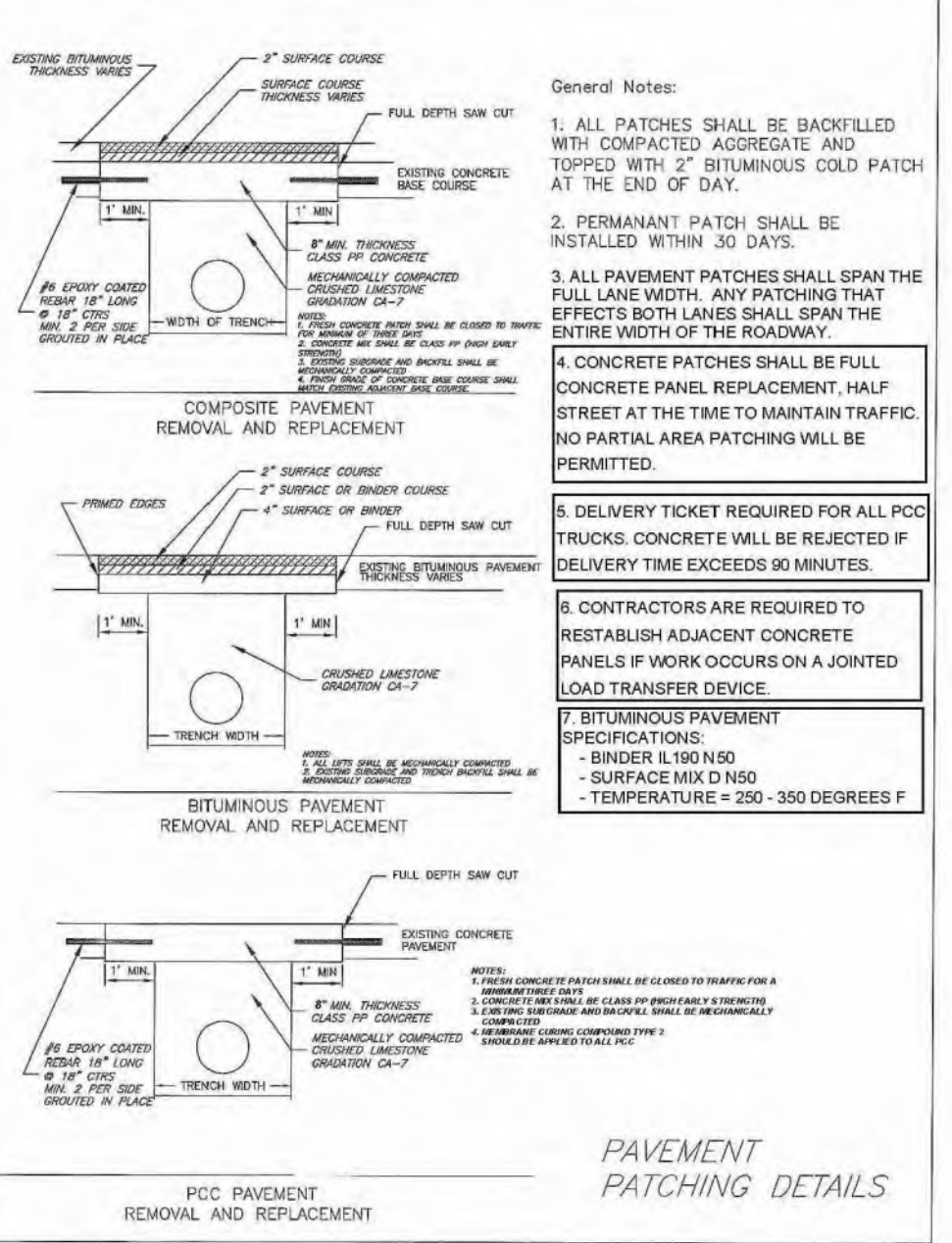
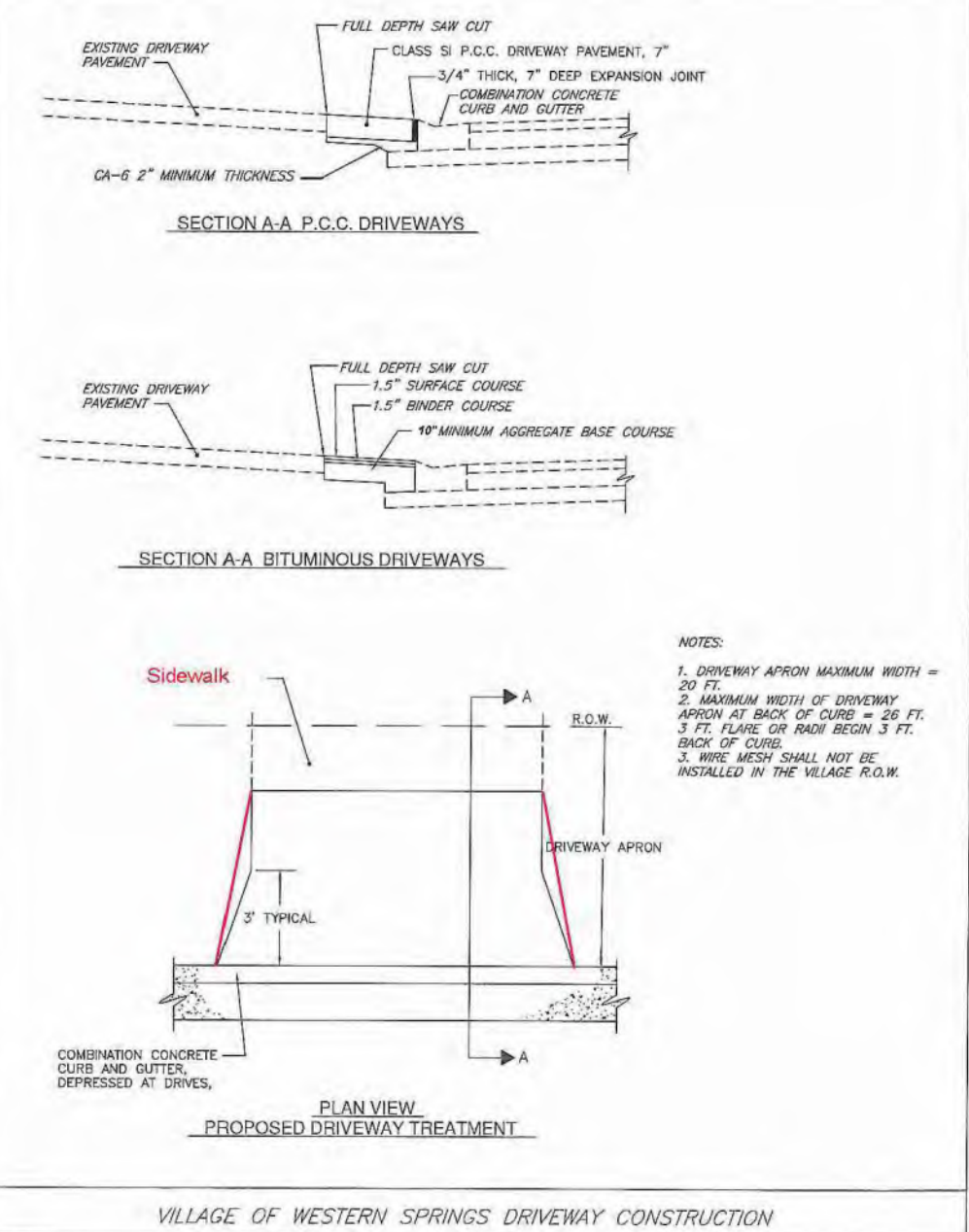
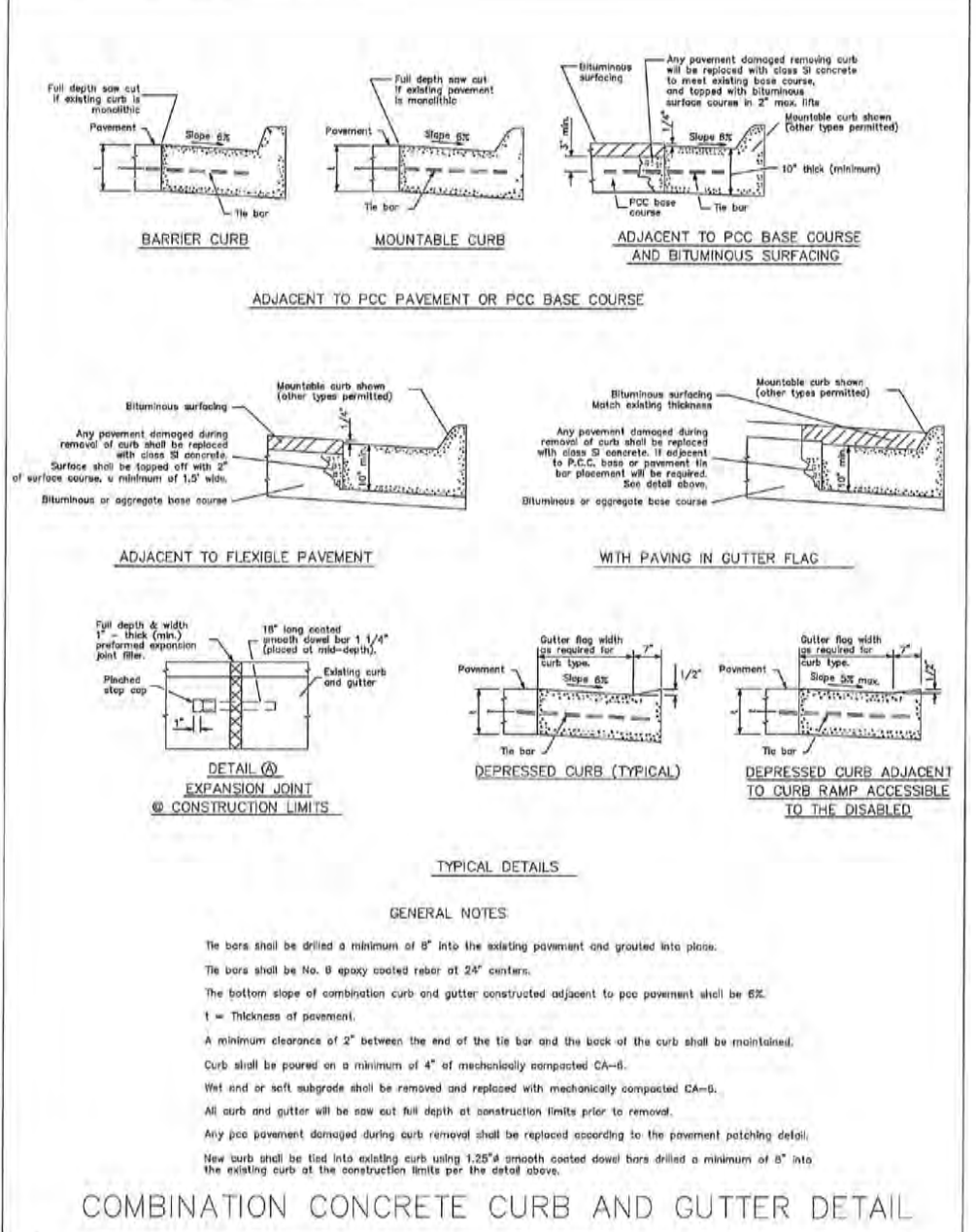
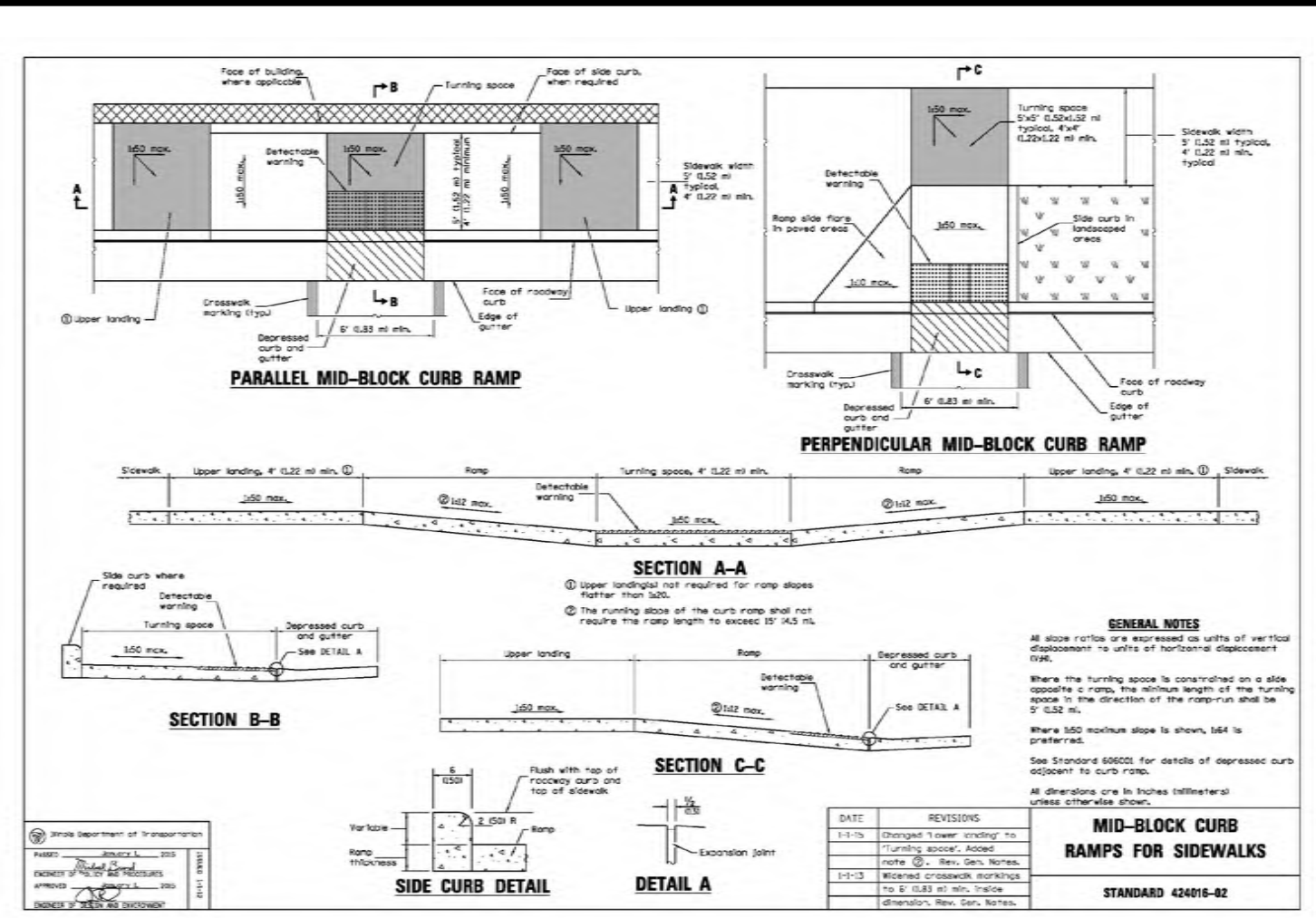
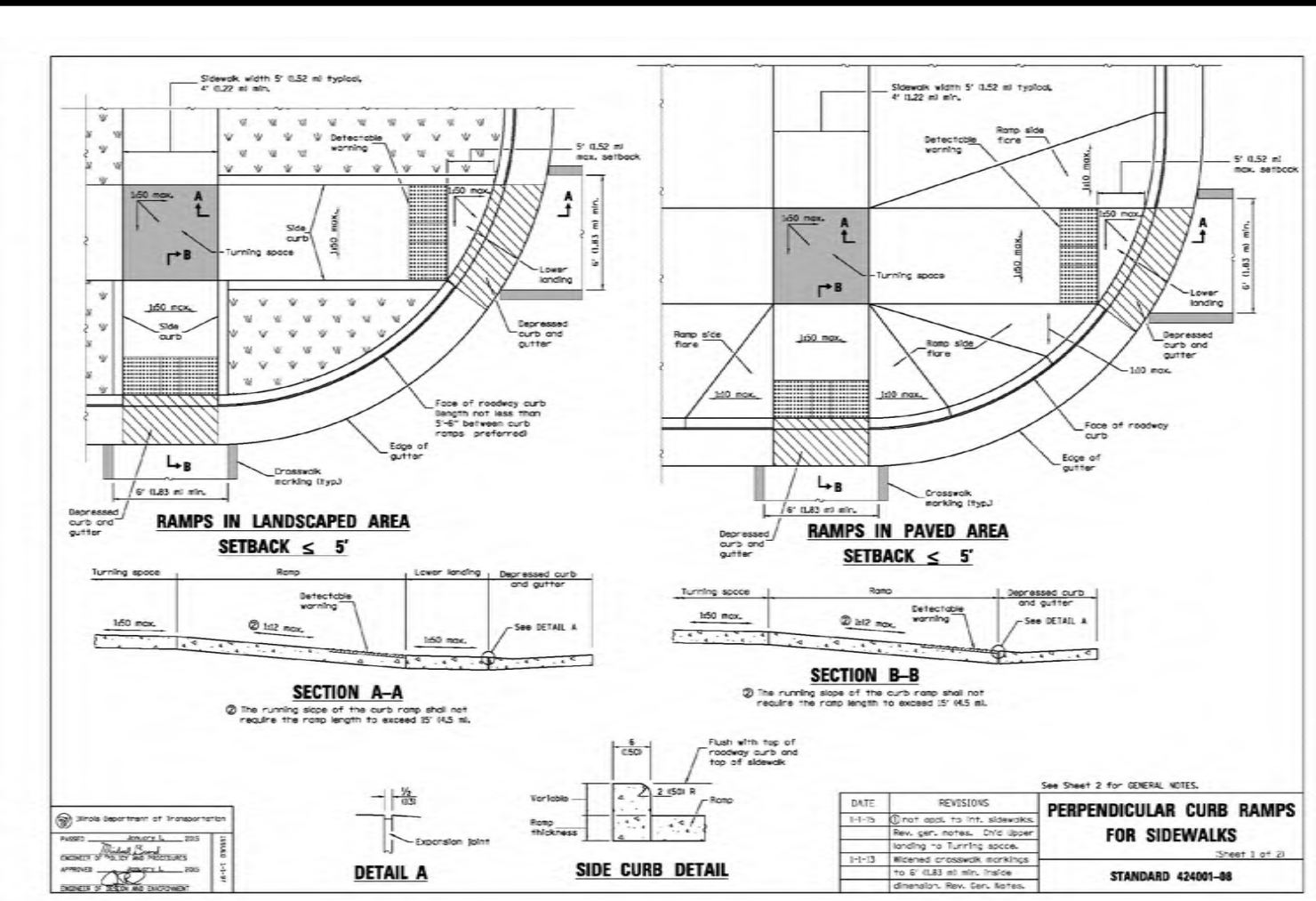
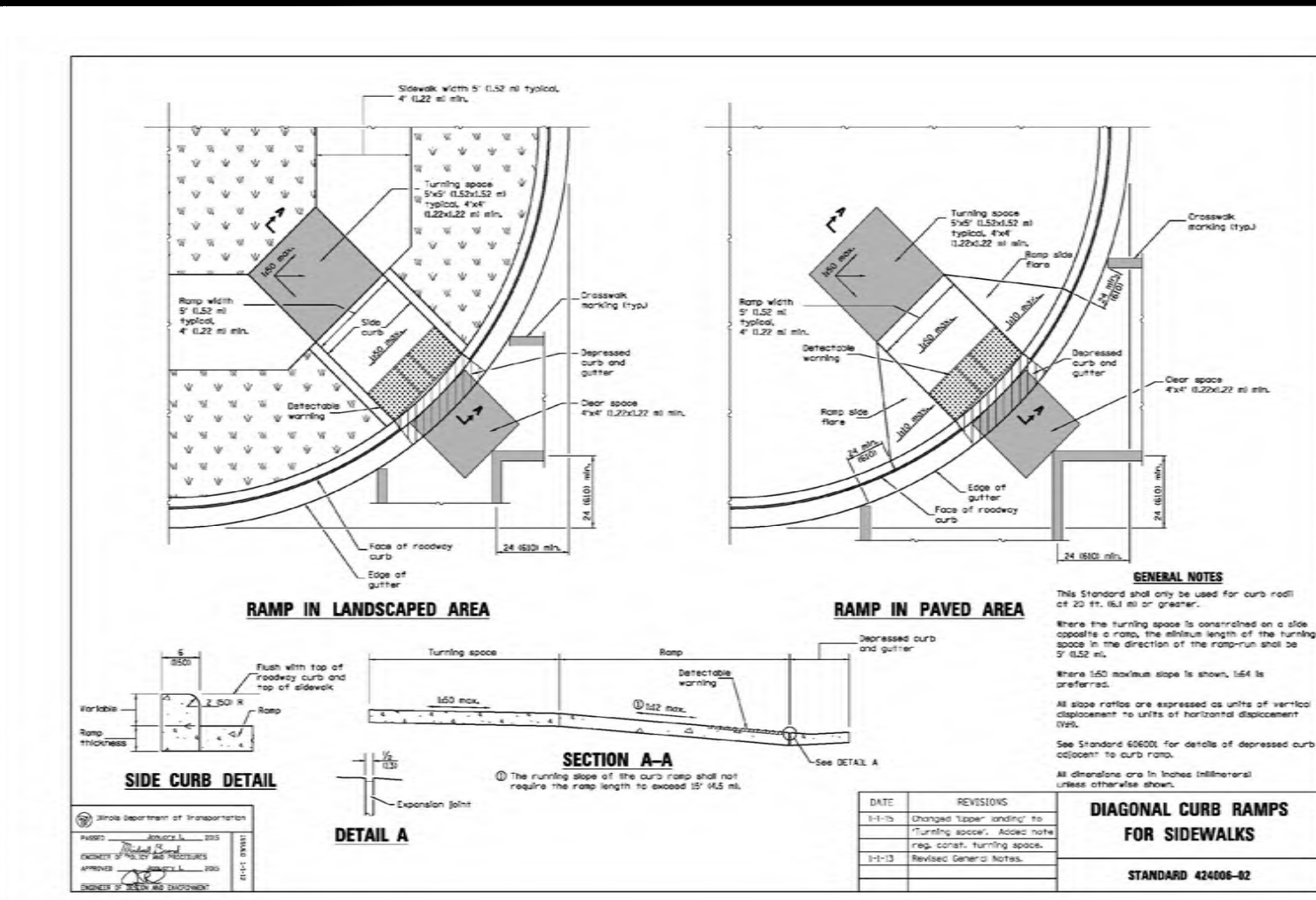
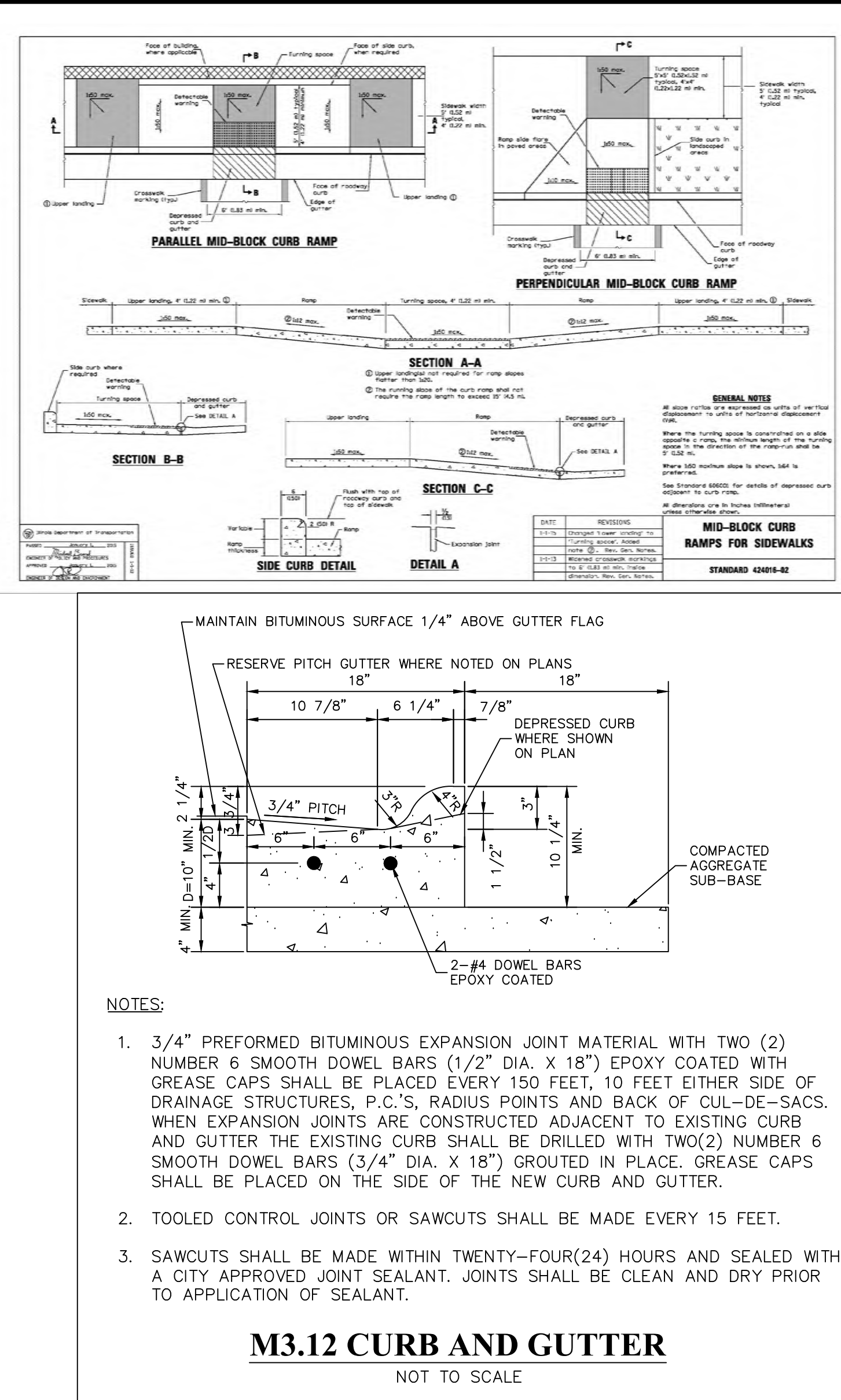
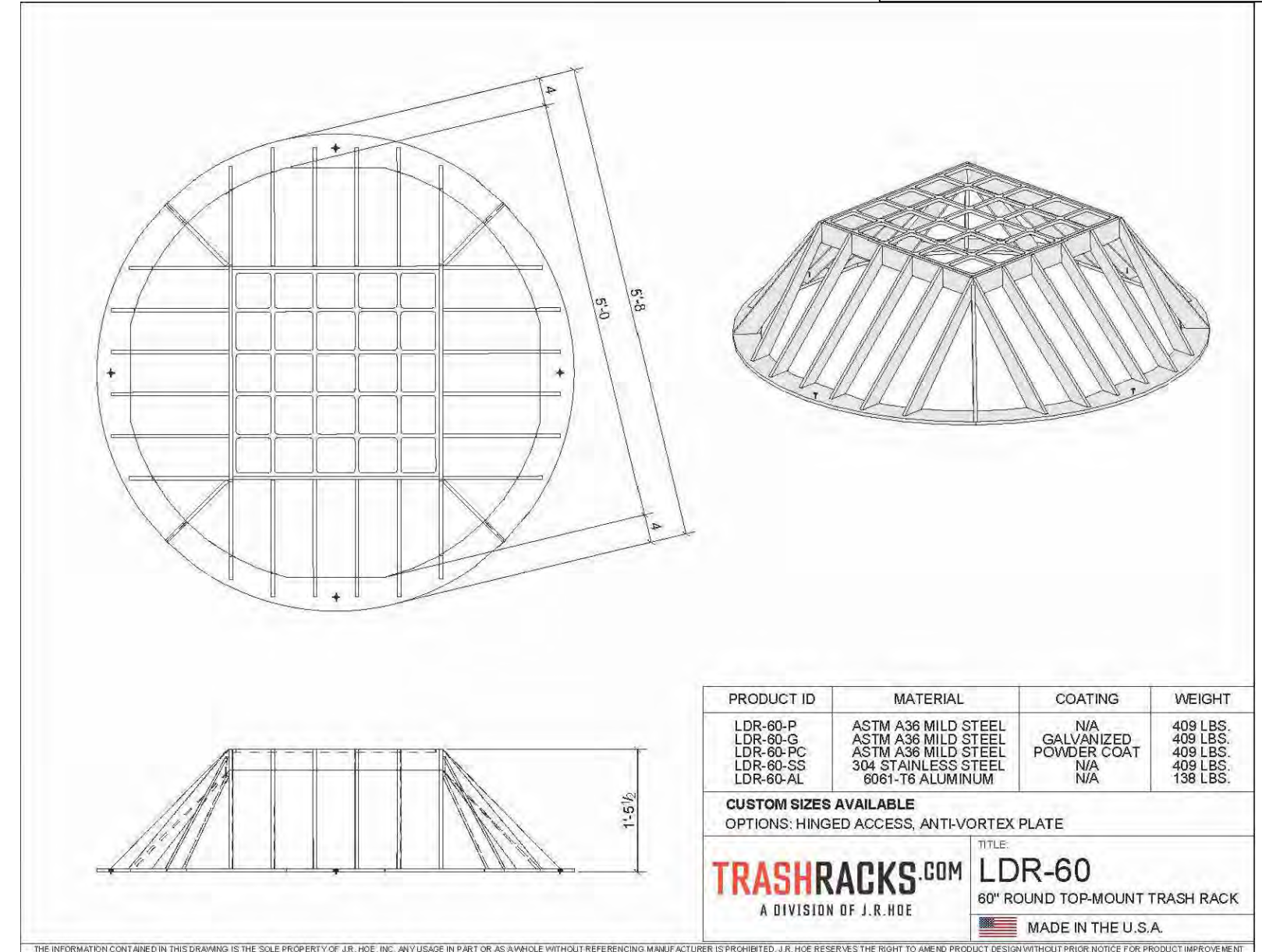
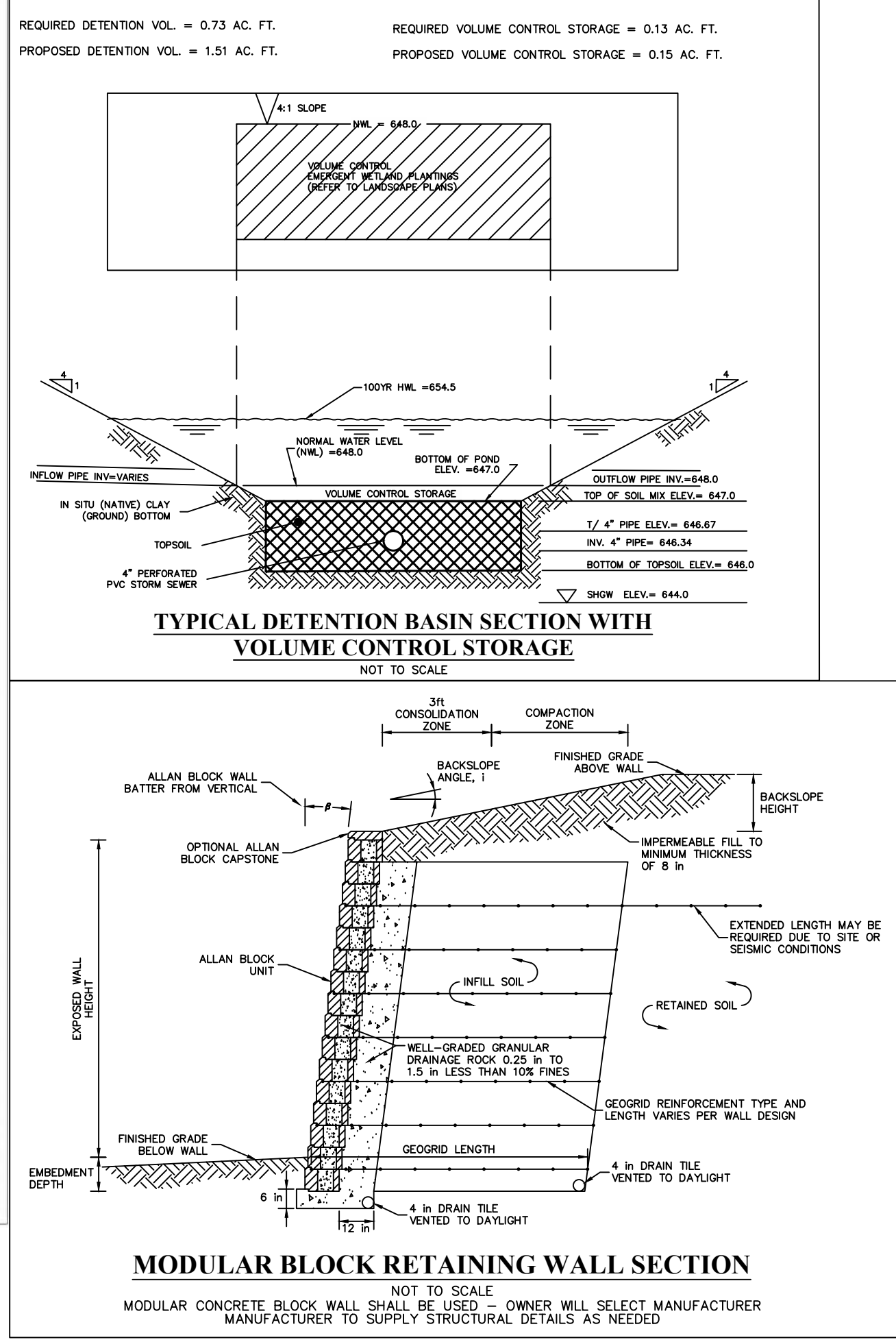
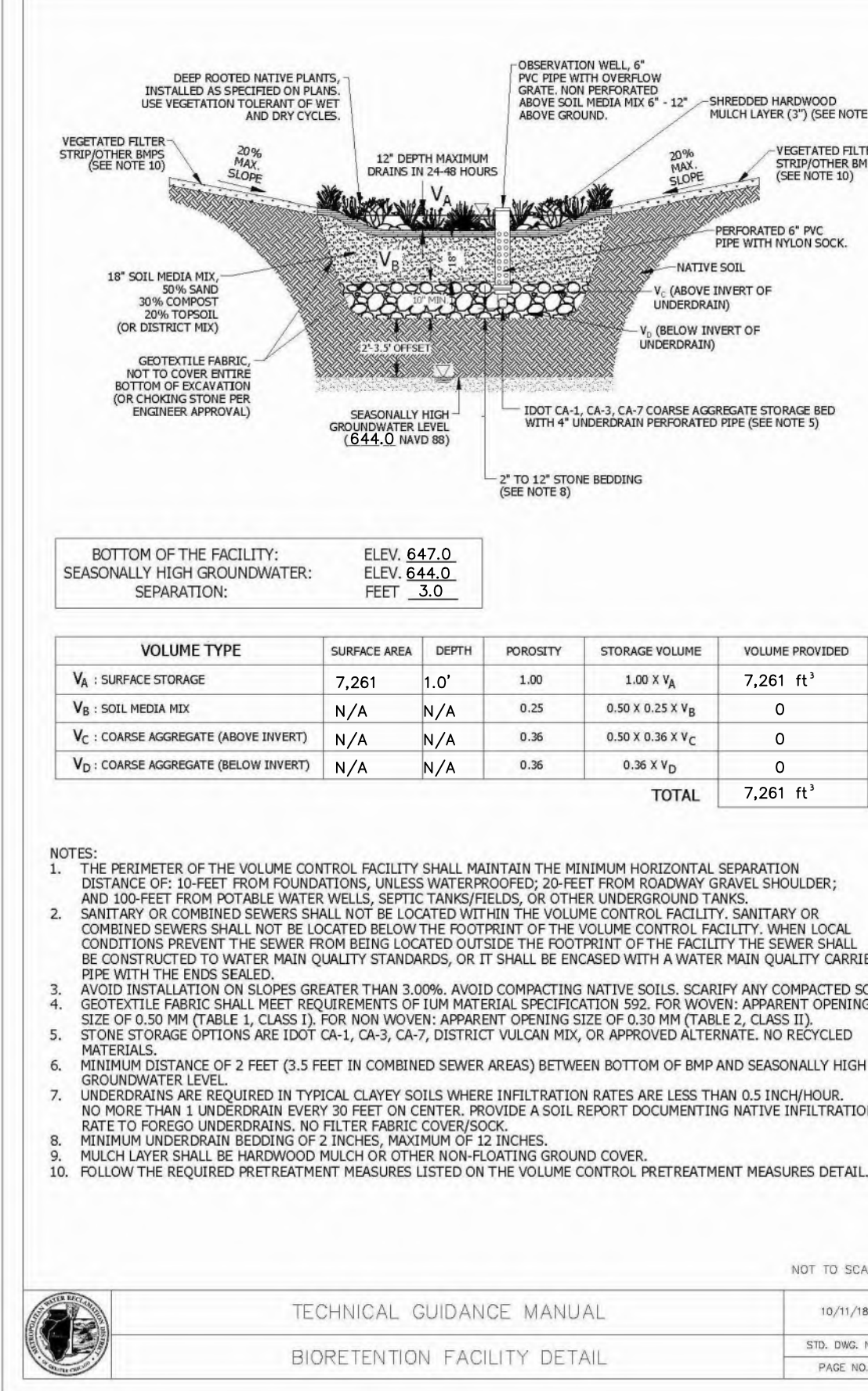
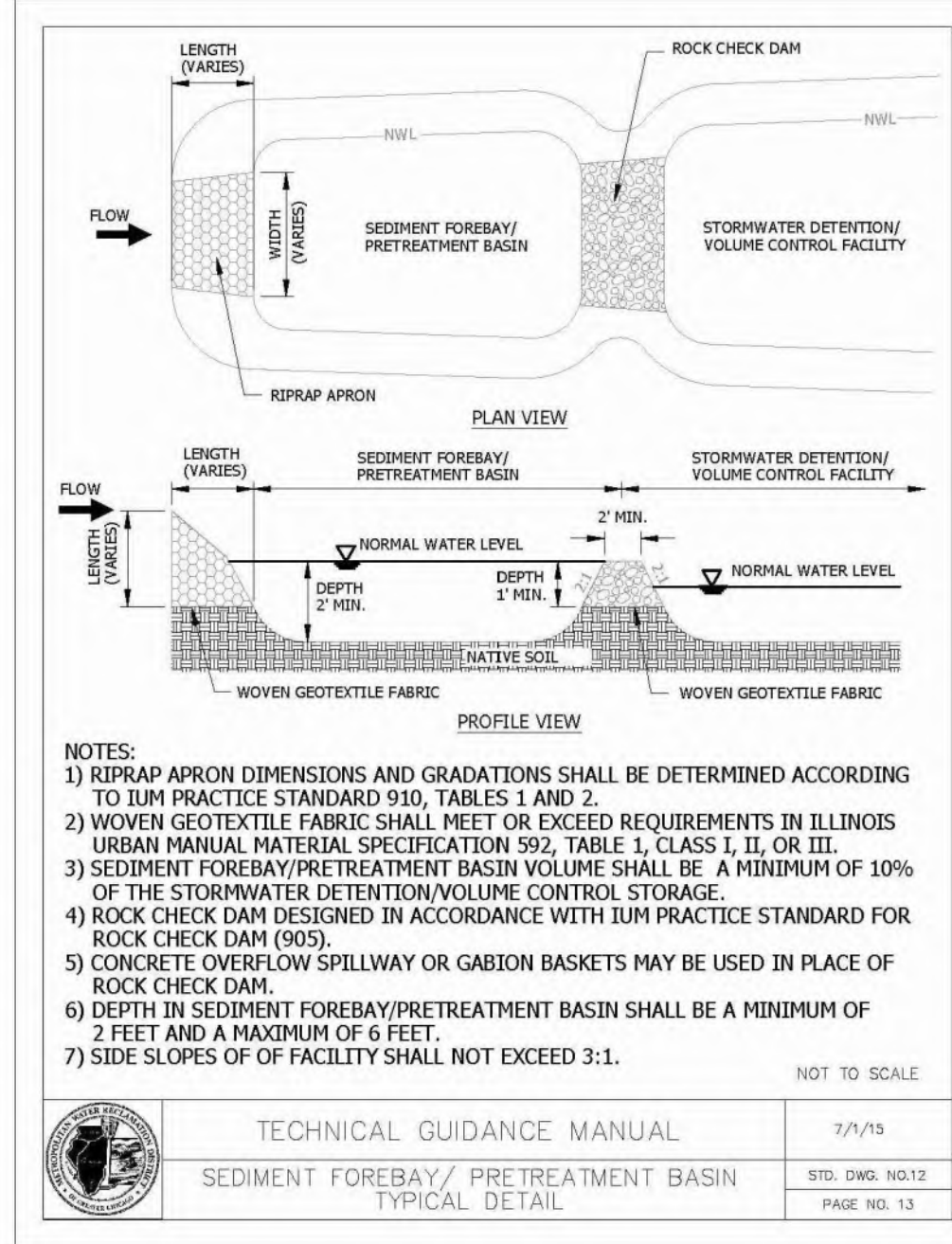
PROJECT DETAILS

McNAUGHTON DEVELOPMENT  
11S220 JACKSON ST. Ste. 101  
BURR RIDGE, ILLINOIS 60527  
(630) 325-3400

FINAL ENGINEERING PLANS  
FOR  
HERITAGE CROSSING  
5600 SOUTH WOLF ROAD  
WESTERN SPRINGS, ILLINOIS

REVISIONS  
NO. DATE DESCRIPTION  
1 08-17-24 PER LARGANCE/HIGHLANDS SD  
2 08-26-24 PER WESTERN SPRINGS REVIEW  
3 10-17-24 PER VILLAGE REVIEW  
4 11-04-24 PER CLOTH REVIEW  
5 12-12-24 PER VILLAGE REVIEW











**vital® Cluster Box Unit - Type III**

**FRONT VIEW**

**SIDE VIEW**

**PEDESTAL**

**PEDESTAL BASE BOLT PATTERN**

**DOOR CHART**

| DOOR TYPE      | DIMENSION (HEIGHT x WIDTH) |
|----------------|----------------------------|
| TENANT         | 2-3/8" x 22-7/8" x 16"     |
| TOP PARCEL     | 10-1/4" x 12-1/2" x 16"    |
| 1ST PARCEL     | 13-3/4" x 12-1/2" x 16"    |
| OUTGOING SLANT | 20-3/4" x 11-1/4"          |

**NOTES:**

- This unit is approved for USPS and private applications.
- Decorative mailbox accessories sold separately and are USPS Approved products.
- Pedestal should be installed with included Rubber Pad; mounting hardware not included, refer to installation manual for recommendations.
- Florence T<sup>®</sup> series CBU is Officially Licensed by USPS: License#CDSEQ-06-B-0012

**REDUCED**

**vital® CLUSTER BOX UNIT**

**Budget Mailboxes**  
Not a Mailbox. Not a Pedestal. **ASB**

Website Stores LLC  
PO Box 20338, Panama City Beach, FL 32417  
www.budgetmailboxes.com • (844) 767-5008

**MOORE** 1570-16 **REV** A  
**SCALE** NONE **LATE REV DATE** 9/26/2012  
**DRAWING NUMBER** 1570-16CS **DRAWN BY** AFB

1. The FIRE STROBE 2000 signal is received optically by light of night. The range varies with the ambient light and intensity of the strobe emitter. A typical range varies from 150 feet to 500 feet. The detector will not allow false operation with unwanted signals from radio interference and/or flashing headlights of loud sounds.
2. The acquisition time from the emitter light source to the discriminate module is approximately 5 seconds.
3. The FIRE STROBE 2000 is widely used for security /electronic gate closure. It can be used for firehouse garage doors and other related access needed by emergency vehicles. This emergency-vehicle strobe detector provides rapid access to any gated community that has been serviced by the fire and emergency department from the OFFICER'S STROBE SYSTEM.
4. Complete installation instructions are provided with the FIRE STROBE 2000 for simple hook-up of the unit to interface with your gate or access control. Two dry contact relays are also provided for bi-directional operation where needed.
5. The prototype assembly is typically mounted 8 feet to 10 feet above the street level and is aimed for optimal strobe signal. (A total of 12 of (2) prototype assemblies may be used.) A 12 VDC power supply is provided with the FIRE STROBE 2000 system.
6. Testing can be accomplished with the optional fire strobe transmitter tester. This FIRE STROBE 2000 transmitter will enable a trouphouse of signals from the transmitter to be received by the unit. This is a hand-held transmitter which operates via 9-volt battery.
7. Frequency 14.035 MHz, 15.25 Hz for civil use.
8. The FIRE STROBE 2000 is for OFFICER's emitter, suitable for use in police vehicles. 140-170 ft. range, 100% digital.
9. The FIRE STROBE 2000 is fully compatible with the OFFICER's alarm control system.
10. Now with software-driven programmes for door-to-door canvassing, vehicle mounted strobes, this unit is to be used only for the operation described above.
11. The strobe acquisition time is 5 seconds.
12. The PC board configuration is mounted in the enclosed 8" x 8" x 4" tamper-tight NEMA-3 box.
13. The weight is approximately seven pounds.
14. The power requirements are 12/24 volts AC/DC non-polarity conscious, approximately 1 watt draw.

- To **AVOID** damaging gas, power or other underground utility lines, contact underground utility locating companies **BEFORE** digging more than 18 inches (46 cm) deep.
- ALWAYS wear protective gloves and eye protection when changing the battery or working around the battery compartment.

## Installation Tips

### Do's

- Weld a horizontal bar across entire gate on any installation for strength. Make sure that the operator is mounted level or it will not function properly.
- Make sure there is slack in the operator cable.

### Don'ts

- DO NOT install upside down.
- DO NOT install level to pedestrians or any area that may expose the bottom of operator to water.
- DO NOT install on uphill or downhill gates.

- DO NOT install on ANY pedestrian passageways, doorways, or gates.
- DO NOT over-tighten the operator cable. Doing this will cause the wire to eventually break.
- DO NOT weld the operator on just a few pickets, or they could bend.

### Large Metal Control Box

The control box **MUST** be mounted within 5 ft (1.5 m) of the gate operator. Mount the control box as high as possible for best weather reception. Make sure the control box is level.

**NOTE:** The Large Metal Solar Control Box Model 30.50.ARCORCITA does not have electrical outlets or the expansion bracket shown in the images.

#### Wall or Column Mount

1. Open the control box. The control box door may be removed by opening the door 90°. Lift the door from the hinges and set aside until the installation is complete.
2. Remove the tamper assembly from the control box by loosening the T-nut screws and filling the assembly up and out.
3. Use tripod bolts located at 4 corners of the control box and knock out using a screwdriver and hammer.
4. Secure the control box to mounting surface using the provided screws (6).

**Post Mount**

**NOTE:** The post mount option is not recommended for the 35AN battery application.

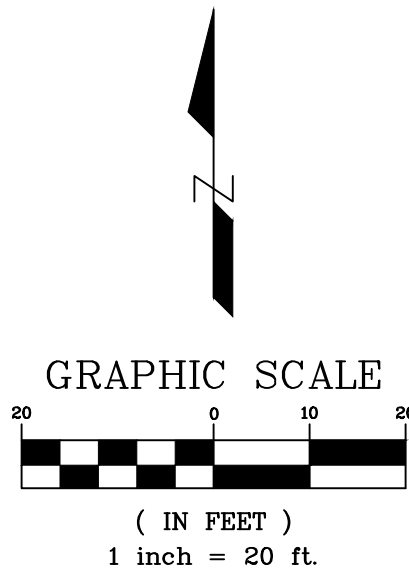
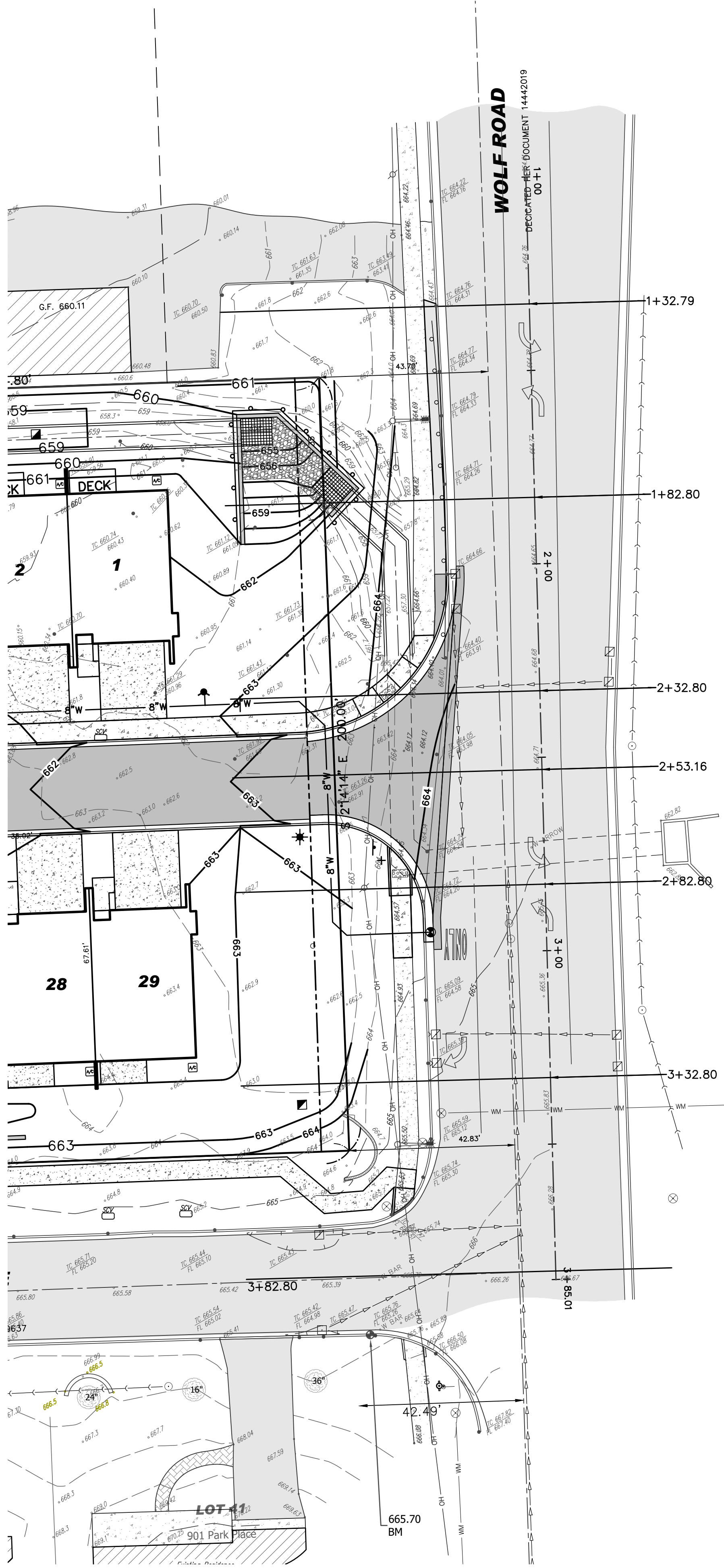
1. Open the control box. The control box door may be removed by opening the door 90°. Lift the door from the hinges and set aside until the installation is complete.
2. The control box can be mounted to a post with 1/2" bolts (refer to chart). The knock out not recommended is 3/8" diameter 1/2" high. Select center mounting location (top and bottom) and knock out using a screwdriver and hammer.
3. Secure the control box to mounting surface with U-bolts and rubber washers (not provided) to ensure a watertight seal.

| TYPE AND SIZE           | 1/2" BOLT SPACING |
|-------------------------|-------------------|
| Standard 2" Round Pipe  | 3'-0"             |
| Standard 4" Square Post | 4"                |
| Standard 6" Square Post | 6"                |

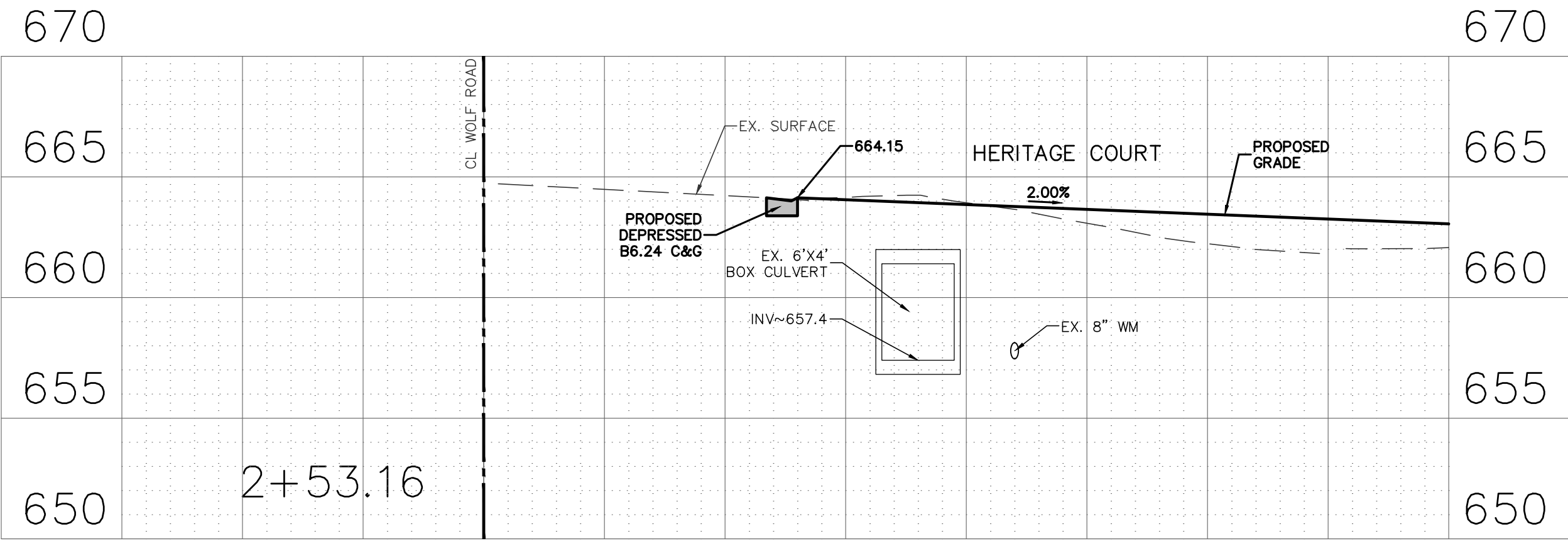
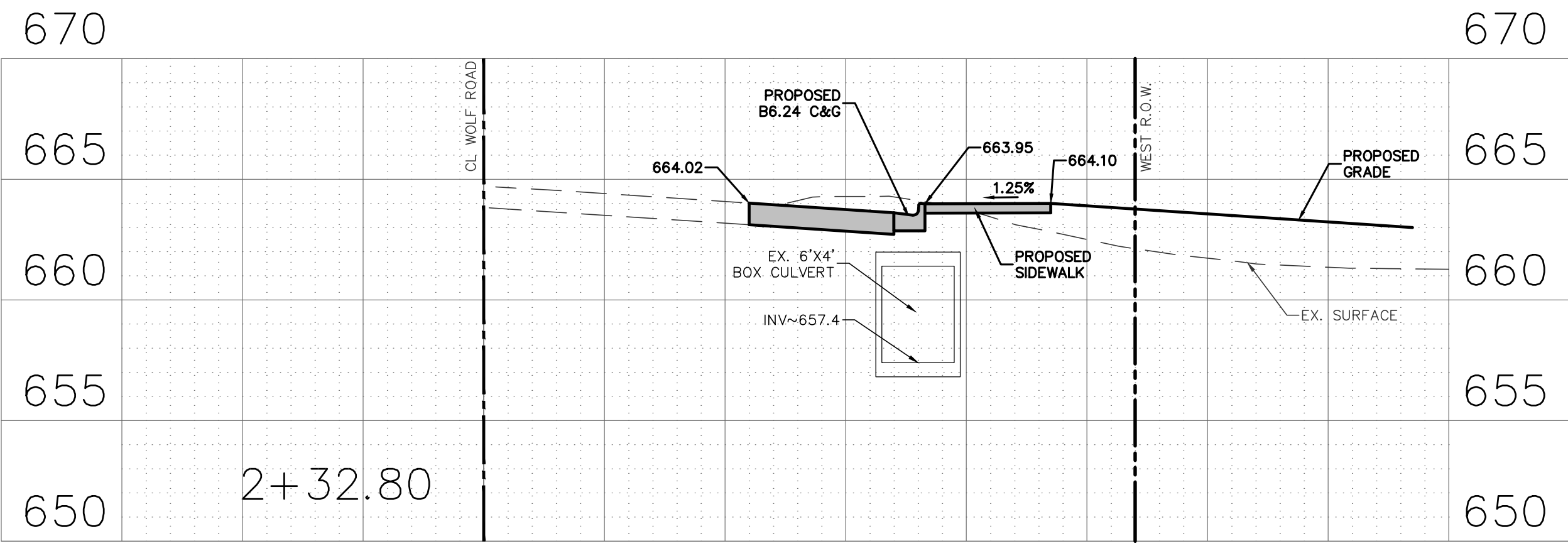
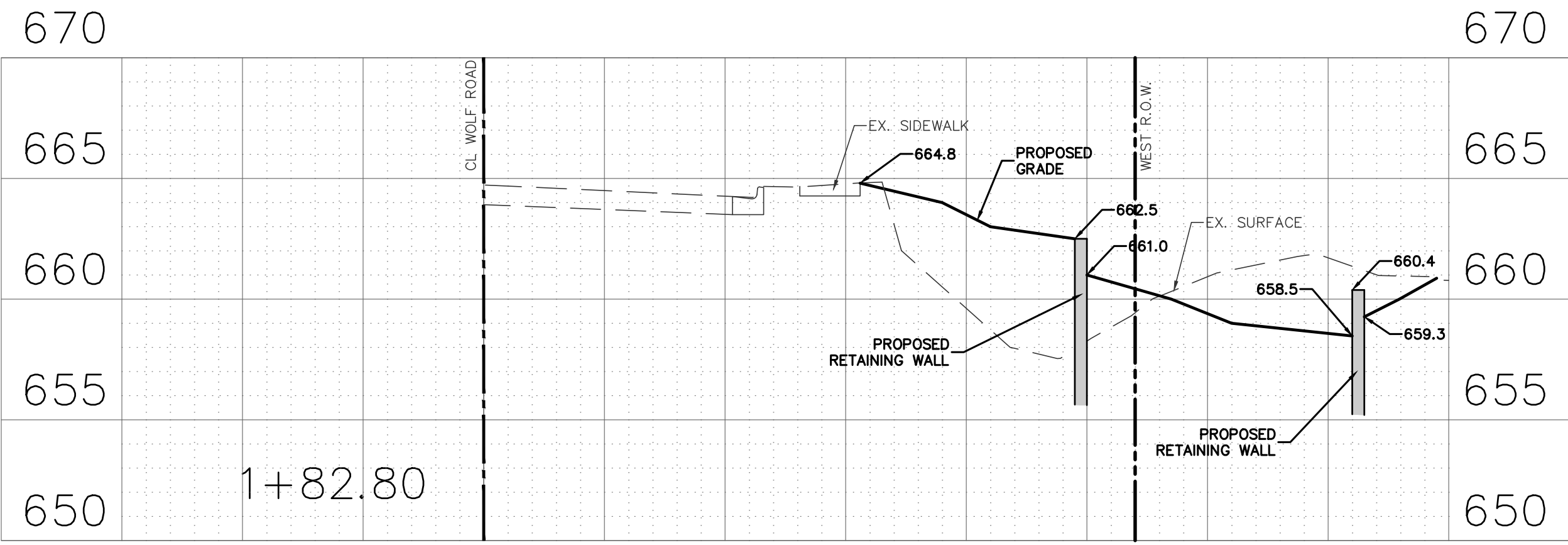
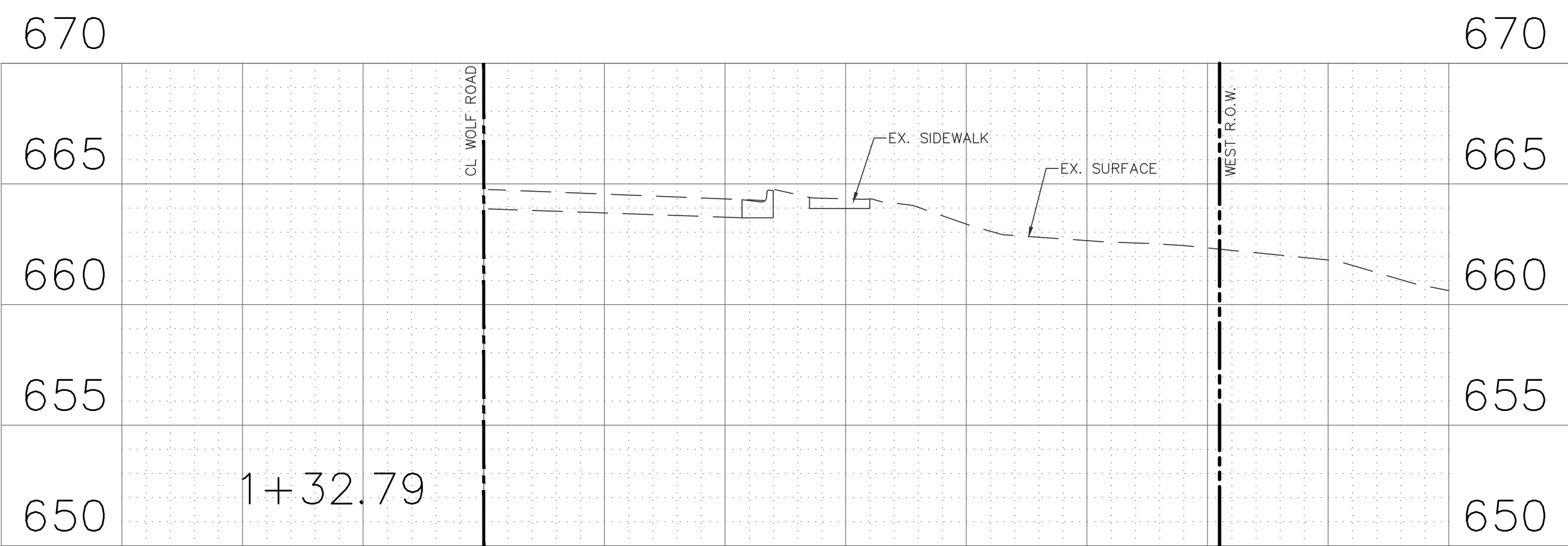
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| <b>DEI</b>           | <b>DESIGNTEK ENGINEERING, INC.</b><br>CONSULTING, CIVIL ENGINEERING & LAND SURVEYING<br><br>9930 W. 190TH STREET, SUITE L<br>MOKENA, ILLINOIS 60448<br>(708) 326-4961<br>FAX: (708) 326-4962<br><br>IL PROF. LIC. NO.: 184-003740 | <p><b>FINAL ENGINEERING PLANS<br/>FOR<br/>HERITAGE CROSSING<br/>5600 SOUTH WOLF ROAD<br/>WESTERN SPRINGS, ILLINOIS</b></p> | <p><b>McNAUGHTON DEVELOPMENT<br/>11S220 JACKSON ST. Ste. 101<br/>BURR RIDGE, ILLINOIS 60527<br/>(630) 325-3400</b></p> | <p style="font-size: 2em; margin: 0;">16</p> <p style="margin: 0;">OF</p> <p style="font-size: 2em; margin: 0;">20</p> |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| PROJECT INFORMATION  |                                                                                                                                                                                                                                   |                                                                                                                            |                                                                                                                        |                                                                                                                        |
| Project No.: 24-0001 |                                                                                                                                                                                                                                   |                                                                                                                            |                                                                                                                        |                                                                                                                        |
| Scale: NONE          |                                                                                                                                                                                                                                   |                                                                                                                            |                                                                                                                        |                                                                                                                        |
| Date: MAY 22, 2024   |                                                                                                                                                                                                                                   |                                                                                                                            |                                                                                                                        |                                                                                                                        |
| Design By: SDD       |                                                                                                                                                                                                                                   |                                                                                                                            |                                                                                                                        |                                                                                                                        |
| Drawn By: DEI        |                                                                                                                                                                                                                                   |                                                                                                                            |                                                                                                                        |                                                                                                                        |
| Checked By: SDD      |                                                                                                                                                                                                                                   |                                                                                                                            |                                                                                                                        |                                                                                                                        |





CROSS-SECTION SCALE  
H: 1" = 10'  
V: 1" = 5'



| REVISIONS |          | DESCRIPTION                | BY  |
|-----------|----------|----------------------------|-----|
| NO.       | DATE     |                            |     |
| 1         | 08-17-24 | PER LAGRANGE-HIGHLANDS SD  | DMV |
| 2         | 08-26-24 | PER WESTERN SPRINGS REVIEW | SDD |
| 3         | 10-17-24 | PER VILLAGE REVIEW         | SDD |
| 4         | 11-04-24 | PER CCOOTH REVIEW          | DMV |
| 5         | 12-12-24 | PER VILLAGE REVIEW         | DMV |
|           |          |                            |     |
|           |          |                            |     |
|           |          |                            |     |
|           |          |                            |     |

McNAUGHTON DEVELOPMENT  
11S220 JACKSON ST. Ste. 101  
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FINAL ENGINEERING PLANS  
FOR  
HERITAGE CROSSING  
5600 SOUTH WOLF ROAD  
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.  
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING  
9930 W. 190TH STREET, SUITE L  
MOKENA, ILLINOIS 60448  
(708) 326-4961  
FAX: (708) 326-4962  
IL PROF. LIC. NO.: 184-003740



| PROJECT INFORMATION  |  |
|----------------------|--|
| Project No.: 24-0001 |  |
| Scale: AS SHOWN      |  |
| Date: DATE           |  |
| Design By: SDD       |  |
| Drawn By: DJB        |  |
| Checked By: SDD      |  |

17  
OF  
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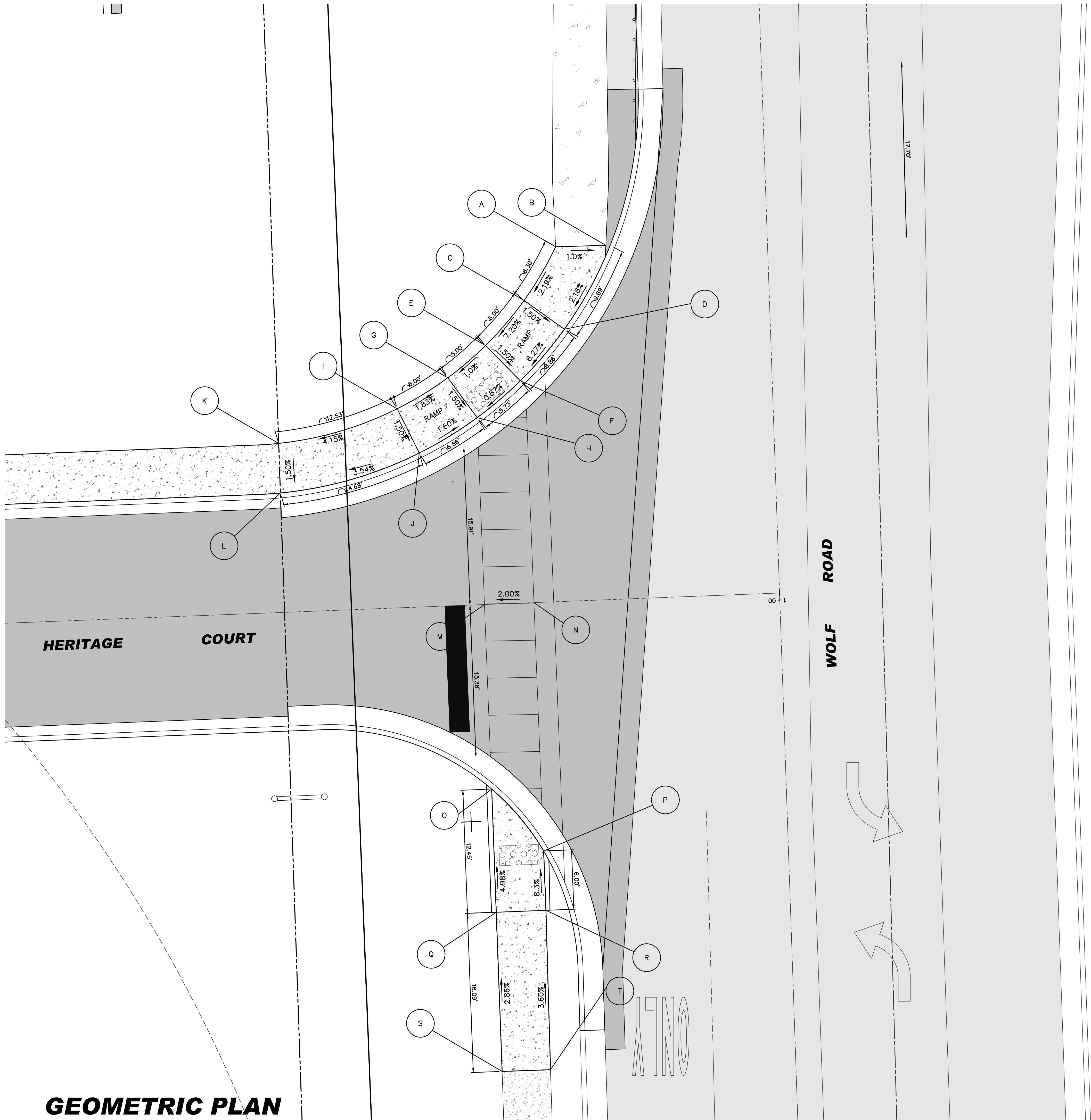
CROSS SECTIONS STA. 1+32.79 TO 2+53.16







GEOMETRIC PLAN

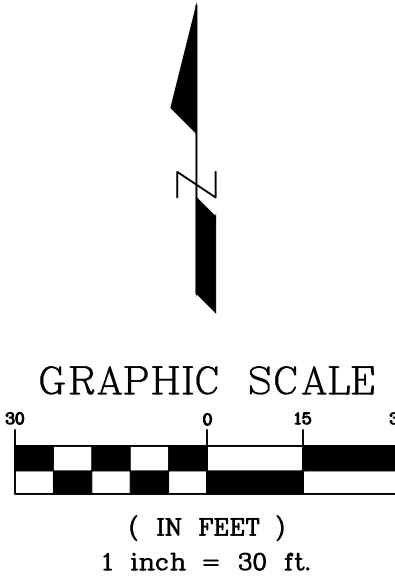


|   | STATION | OFFSET    | ELEV.    |
|---|---------|-----------|----------|
| A | 2+17.70 | 32.03' R. | 664.47ME |
| B | 2+17.70 | 26.96' R. | 664.42ME |
| C | 2+23.03 | 33.37' R. | 664.28   |
| D | 2+26.03 | 31.40' R. | 664.21   |
| E | 2+27.48 | 39.38' R. | 663.85   |
| F | 2+31.14 | 35.97' R. | 663.78   |
| G | 2+30.63 | 43.28' R. | 663.78   |
| H | 2+34.74 | 40.42' R. | 663.71   |
| I | 2+33.62 | 48.48' R. | 663.89   |
| J | 2+38.14 | 46.37' R. | 663.82   |
| K | 2+36.79 | 60.53' R. | 663.37   |
| L | 2+41.80 | 60.50' R. | 663.30   |
| M | 2+53.63 | 40.21' R. | 664.15   |
| N | 2+53.57 | 35.20' R. | 664.05   |
| O | 2+72.59 | 39.99' R. | 663.69   |
| P | 2+78.55 | 34.99' R. | 663.81   |
| Q | 2+84.61 | 39.84' R. | 664.31   |
| R | 2+84.56 | 34.93' R. | 664.31   |
| S | 3+00.83 | 39.71' R. | 694.77ME |
| T | 3+00.79 | 34.82' R. | 664.89ME |

PAVEMENT LEGEND

|  |                                                                                                                                   |
|--|-----------------------------------------------------------------------------------------------------------------------------------|
|  | ASPHALT PAVEMENT<br>2.5" BIT. CONCRETE SURFACE COURSE, CL-1<br>2.5" BIT. CONCRETE BINDER COURSE<br>9" AGGREGATE BASE COURSE, CA-6 |
|  | CONCRETE DRIVEWAY<br>7" P.C.C.<br>2" AGGREGATE BASE COURSE                                                                        |
|  | CONCRETE SIDEWALK<br>7" P.C.C.<br>2" AGGREGATE BASE                                                                               |
|  | CONCRETE CURB RAMP<br>8" P.C.C.<br>4" AGGREGATE BASE COURSE                                                                       |

REVIEW SET  
NOT FOR CONSTRUCTION



| REVISIONS |          | DESCRIPTION                | BY  |
|-----------|----------|----------------------------|-----|
| NO.       | DATE     |                            |     |
| 1         | 08-17-24 | PER LAGRANGE-HIGHLANDS SD  | DMV |
| 2         | 08-26-24 | PER WESTERN SPRINGS REVIEW | SDD |
| 3         | 10-17-24 | PER VILLAGE REVIEW         | SDD |
| 4         | 11-04-24 | PER CDOOTH REVIEW          | DMV |
| 5         | 12-12-24 | PER VILLAGE REVIEW         | DMV |

McNAUGHTON DEVELOPMENT  
11S220 JACKSON ST. Ste. 101  
BURR RIDGE, ILLINOIS 60527  
(630) 325-3400

FINAL ENGINEERING PLANS  
FOR  
HERITAGE CROSSING  
5600 SOUTH WOLF ROAD  
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.  
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING  
9930 W. 190TH STREET, SUITE L  
MOKENA, ILLINOIS 60448  
(708) 326-4961  
FAX: (708) 326-4962  
IL PROF. LIC. NO.: 184-003740

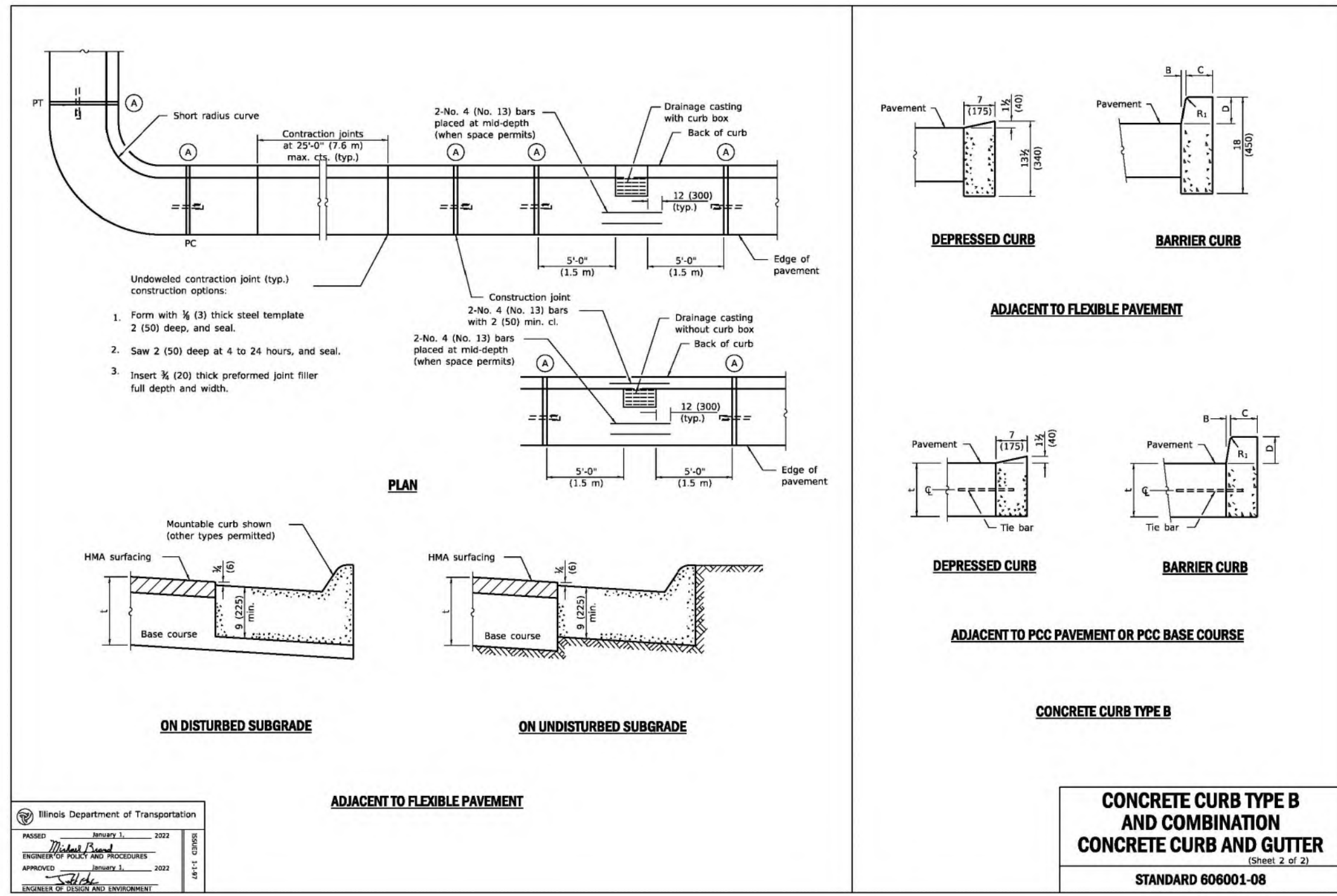
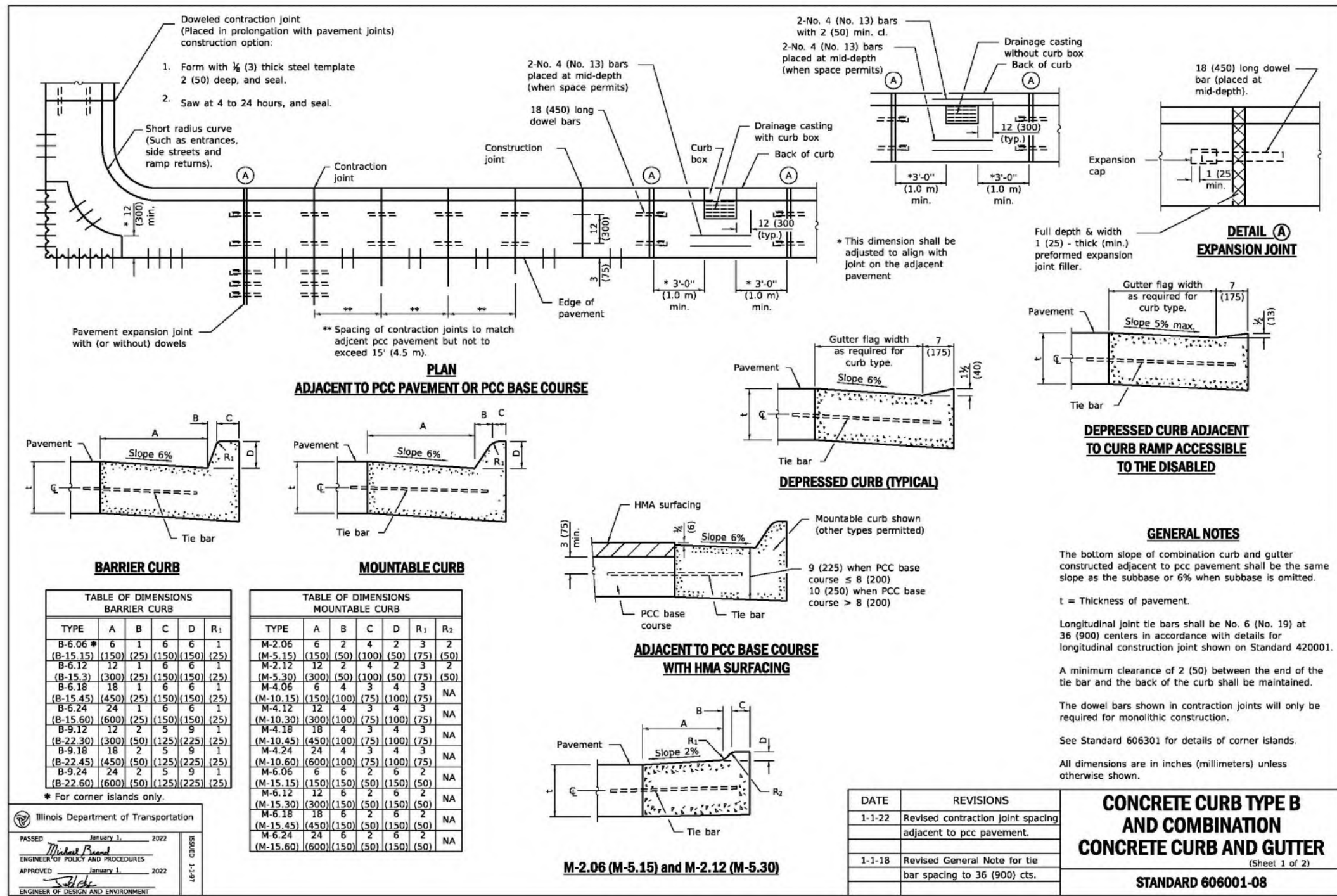


| PROJECT INFORMATION |              |
|---------------------|--------------|
| Project No.:        | 24-0001      |
| Scale:              | 1" = 30'     |
| Date:               | MAY 22, 2024 |
| Design By:          | SDD          |
| Drawn By:           | DEI          |
| Checked By:         | SDD          |

19  
OF  
20

ADA DETAIL





**SPECIAL PROVISION FOR DETECTABLE WARNINGS (SPECIAL)**

Effective: 10/01/18 (Modification of DOT 01 Special Provision for Detectable Warnings (Special) in City of Chicago)  
Revised: 4/13/21 (added Galvanized and Stainless Steel material options)

**Description:**

Work under this item shall consist of installing cast iron or steel detectable warning tiles as shown on the plans. Work shall be performed according to Section 424 of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, except as herein modified.

**Materials:**

Detectable warning tiles shall be of uniform quality, and free of surface defects. The detectable warnings shall be constructed out of one of the following:

- 1) Cast iron meeting requirements of ASTM A 48 Class 30 or better.
- 2) Galvanized steel – 10 gauge, G90 galvanization or better
- 3) Stainless steel – 10 gauge or better

The dome size and spacing of the detectable warnings shall meet all requirements of sections R305.1.1 and R305.1.2 of PROWAG.

The color of the detectable warning tiles is to be approved by the Engineer unless otherwise specified in the plans and comply with the requirements of section R305.1.3 of PROWAG.

If a concrete border is required for installation of the detectable warnings, it shall comply with section R305.2 of PROWAG.

**Responsibility of the Contractor:**

The contractor shall verify all dimensions with the product manufacturer. If using radial units, the contractor shall verify that the radius of the detectable warnings supplied by the manufacturer matches that of the curb radius.

The contractor shall ensure that the supplied detectable warnings allow placement of the rows of domes that are aligned parallel with the path of travel. Where detectable warnings are radial, dome orientation is not significant.

The contractor shall ensure a maximum vertical transition of 1/4" between the edge of the detectable warnings and adjacent concrete.

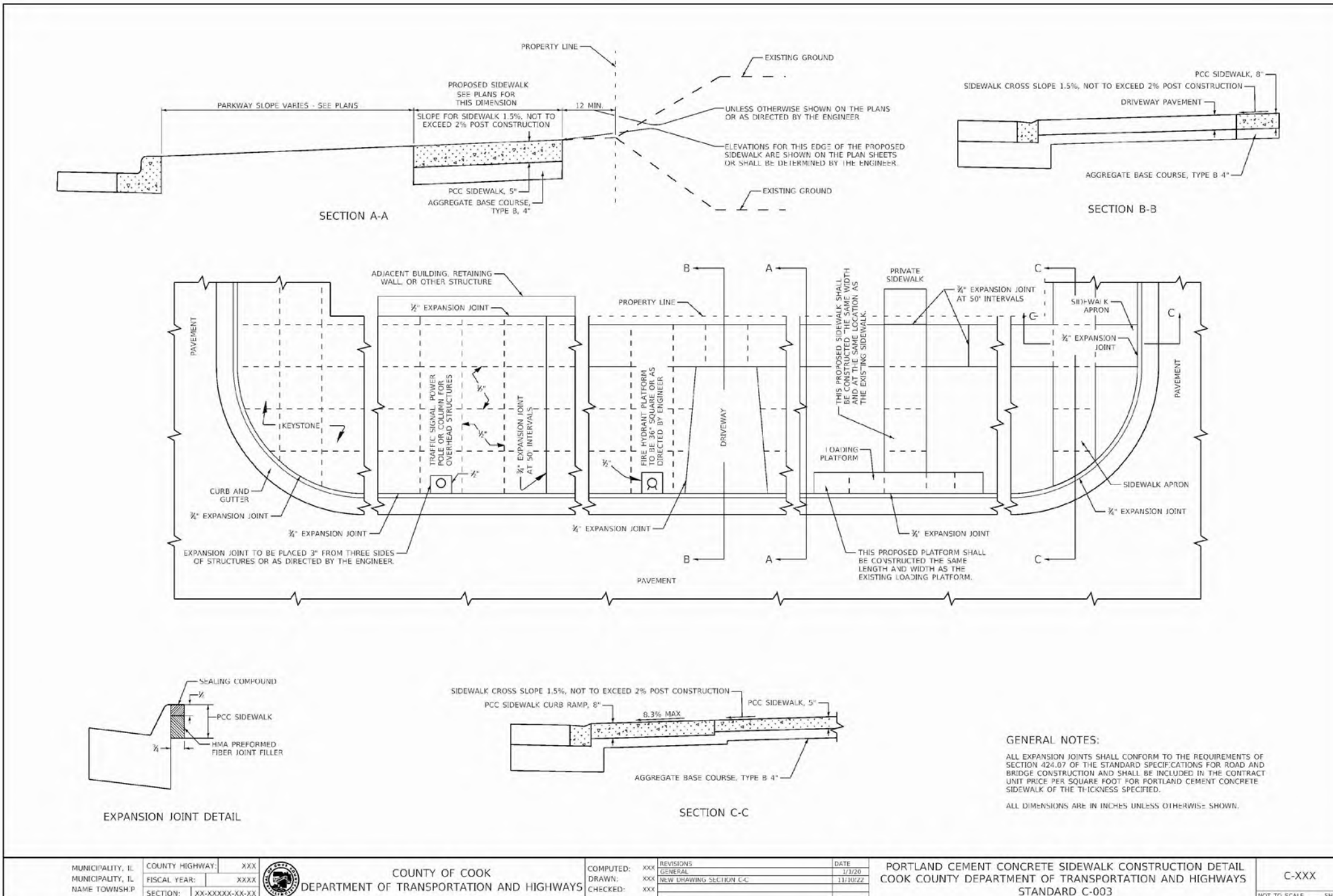
**Measurement and Payment:**

This work will be paid for at the contract unit price per square foot for DETECTABLE WARNINGS (SPECIAL).

325 (C)  
Detectable Warnings (Special), Cast Iron or Steel

Page 1

April 13, 2021  
1 Page(s) Total



| REVISIONS |          | DESCRIPTION                | BY  |
|-----------|----------|----------------------------|-----|
| NO.       | DATE     |                            |     |
| 1         | 08-17-24 | PER LARGAN, HIGHLANDS SD   | DMV |
| 2         | 08-26-24 | PER WESTERN SPRINGS REVIEW | SDD |
| 3         | 10-17-24 | PER VILLAGE REVIEW         | DMV |
| 4         | 11-04-24 | PER CDDH REVIEW            | DMV |
| 5         | 12-12-24 | PER VILLAGE REVIEW         | DMV |

McNAUGHTON DEVELOPMENT  
11S220 JACKSON ST. Ste. 101  
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IL PROF. LIC. NO.: 184-003740



PROJECT INFORMATION  
Project No.: 24-0001  
Scale: AS SHOWN  
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Design By: SDD  
Drawn By: DJB  
Checked By: SDD

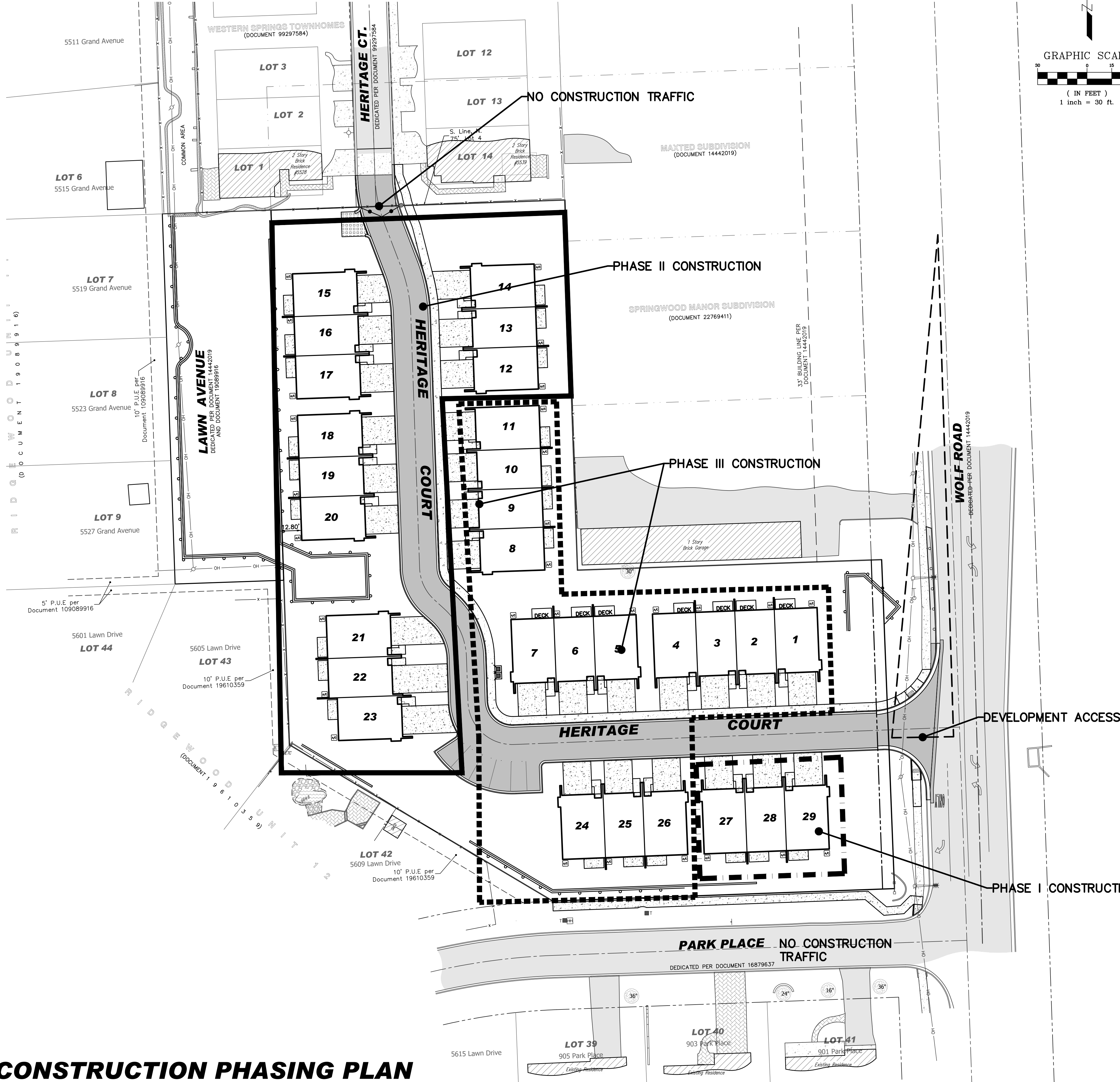
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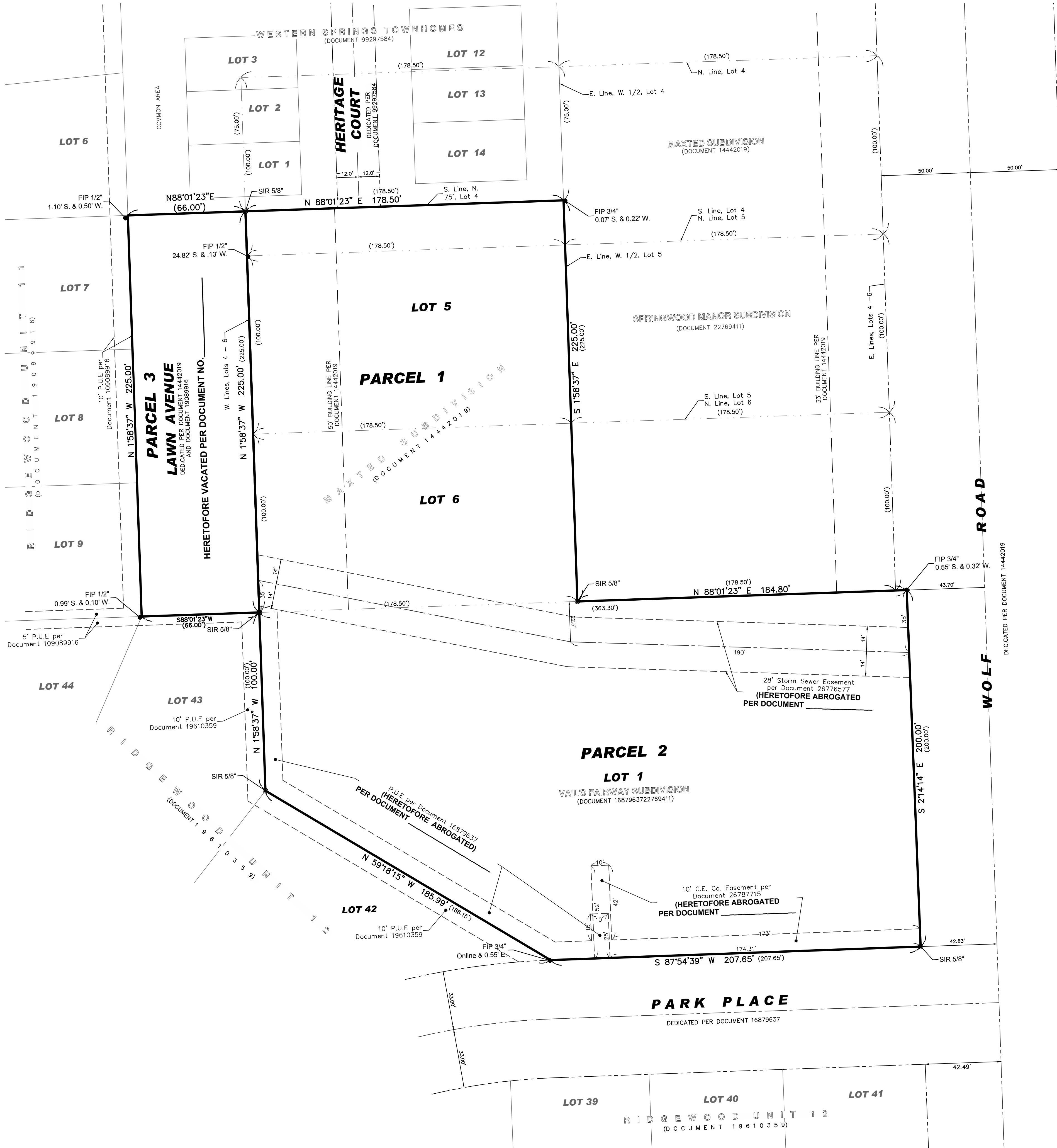
CONSTRUCTION PHASING PLAN



- Heritage Crossing, Western Springs  
Construction, Staging, Restoration, Routing and Phase Plan
- Construction Schedule**
- Building demolition & site clearing of parking lot – 1/13/025 – 2/7/2025
  - Site development work - 2/9/2025 – 4/18/2025
    - Removal of existing storm sewer
    - Pond excavation and site grading
    - Commence construction on model home building Units #26 - # 28
    - Installation of new underground utilities – sanitary sewer, storm sewer and water main
    - Retaining wall construction
    - Site grading
    - Paving
    - Park Place sidewalk installation
  - Commence construction on Units # 12 thru # 23 - 4/21/2025
  - Landscape – 5/5/2025 – 6/20/2025
    - Native planting pond bottom / trees and shrubs
    - Fence replacement neighbors southwest of the site
    - Entry-way landscaping
    - Installation of access gate at the existing Heritage Court
    - Common area landscaping to be complete with surrounding rowhome units
  - Model Grand Opening - 9/5/2025
  - Commence construction on Units # 1 thru # 11 & # 24 thru #26 – 1/5/2026
  - Close out sales - 12/31/2026
- Construction Staging**
- Black dirt stockpile Units # 8 - # 11
  - Temporary construction material staging Units # 5 - # 7
- Site Restoration**
- Heritage Springs upon the completion of the Heritage Court connection and additional parking space spots 5/5/2025 – 6/20/2025
  - Wolf Road CCHD right-of-way upon the completion of the roadway connection and sidewalk 6/20/2025 – 8/1/2025
  - Park Place right-of-way upon the completion of the public sidewalk 6/20/2025 – 8/1/2025
- Routing**
- All construction traffic will access and leave the property via the subdivision entrance at Wolf Road.
  - Access to and from 55th Street via the existing Heritage Court is prohibited.
  - Access to and from Park Place is prohibited
- Phasing**
- All development work shall be completed in a single phase of work
  - To promote an orderly development of the site construction of the units will be completed in three phases according to the dates reference above
    - Phase I Model Building Units #27 - # 29
    - North & West Buildings Units # 12 thru # 23
    - East & South Buildings Units # 1 thru # 11 & # 24 thru #26
- Cleaning, Refuse and Safety**
- Street clearing of mud, stone and construction debris daily as needed but by the end of the work day
  - Weekly storm sewer inspection during construction
  - Refuse container (dumpster) provided at each three-wide or four-wide building
  - Port-a-toilet one per every four units under construction
  - Posted “No Trespassing” upon units
  - Construction fencing per ordinance

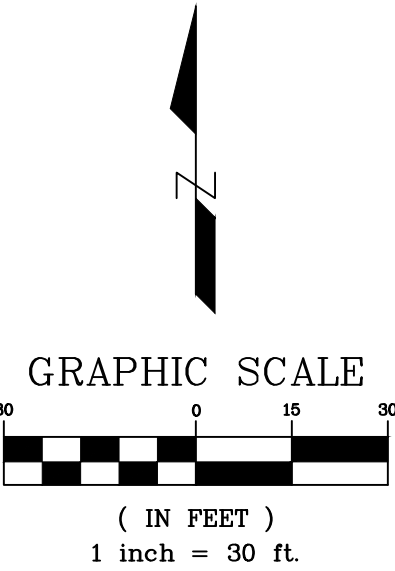
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|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------|--|
| DESIGNTek ENGINEERING, INC.<br>CONSULTING, CIVIL ENGINEERING & LAND SURVEYING<br>9930 W. 190TH STREET, SUITE L<br>MOKENA, ILLINOIS 60448<br>(708) 326 - 4961<br>FAX: (708) 326 - 4962<br><br>IL PROF. LIC. No.: 184 - 003740 |  | FINAL ENGINEERING PLANS<br>FOR<br>HERITAGE CROSSING<br>5600 SOUTH WOLF ROAD<br>WESTERN SPRINGS, ILLINOIS |  | McNAUGHTON DEVELOPMENT<br>115220 JACKSON ST. Ste. 101<br>BURR RIDGE, ILLINOIS 60527<br>(630) 325-3400 |  |
| <div>DEI</div>                                                                                                                                                                                                               |  |                                                                                                          |  |                                                                                                       |  |
| PROJECT INFORMATION                                                                                                                                                                                                          |  |                                                                                                          |  |                                                                                                       |  |
| Project No.: 24-0001                                                                                                                                                                                                         |  |                                                                                                          |  |                                                                                                       |  |
| Scale: 1" = 30'                                                                                                                                                                                                              |  |                                                                                                          |  |                                                                                                       |  |
| Date: 12/13/2024                                                                                                                                                                                                             |  |                                                                                                          |  |                                                                                                       |  |
| Design By: SDD                                                                                                                                                                                                               |  |                                                                                                          |  |                                                                                                       |  |
| Drawn By: DEI                                                                                                                                                                                                                |  |                                                                                                          |  |                                                                                                       |  |
| Checked By: SDD                                                                                                                                                                                                              |  |                                                                                                          |  |                                                                                                       |  |
| 1 OF 1                                                                                                                                                                                                                       |  |                                                                                                          |  |                                                                                                       |  |





# FINAL PLAT OF HERITAGE CROSSING

BEING A RESUBDIVISION OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 AND THAT PART OF LAWN AVENUE VACATED PER DOCUMENT \_\_\_\_\_ IN COOK COUNTY, ILLINOIS.



**BASIS OF BEARING**  
THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

**PARCEL IDENTIFICATION NUMBER**  
PARCEL ONE: 18-18-200-038-0000  
PARCEL TWO: 18-18-200-017-0000  
PARCEL THREE: UNKNOWN

**ADDRESSES**  
PARCEL 1: 1023 W. 55TH STREET  
WESTERN SPRINGS, IL 60558  
PARCEL 2: 5600 WOLF ROAD  
WESTERN SPRINGS, IL 60558

**EXISTING SITE DATA**  
AREA (PARCEL 1) = 40,163 SQ. FT. OR 0.92 ACRES  
AREA (PARCEL 2) = 64,996 SQ. FT. OR 1.49 ACRES  
AREA (PARCEL 3) = 14,850 SQ. FT. OR 0.34 ACRES  
GROSS AREA = 120,009 SQ. FT. OR 2.75 ACRES

**LEGEND**  
● FIP FOUND IRON PIPE  
○ SIR SET 5/8" IRON ROD  
— BOUNDARY LINE  
--- LOT LINE  
--- RIGHT-OF-WAY LINE  
--- CENTERLINE  
--- EXISTING EASEMENT LINE

**ABBREVIATIONS**  
FD. FOUND  
(###.##) RECORD DIMENSION  
###.## MEASURED DIMENSION  
FIP FOUND IRON PIPE  
P.U.E. PUBLIC UTILITY EASEMENT  
D.E. DRAINAGE EASEMENT  
B.S.L. BUILDING SETBACK LINE  
SQ. FT. SQUARE FEET  
N NORTH  
S SOUTH  
E EAST  
W WEST

ALL EXISTING EASEMENT ABROGATIONS WITHIN THE LEGALLY DESCRIBED PROPERTY HEREON, TOGETHER WITH THE LAWN AVENUE VACATION SHALL BE VIA SEPARATE DOCUMENTS

| REVISIONS |          | DESCRIPTION         |
|-----------|----------|---------------------|
| NO.       | DATE     |                     |
| 1         | 10/16/24 | LOT ACCESS GEOMETRY |
| 2         | 11/06/24 | LOT GEOMETRY        |
| 3         | 12/09/24 | VILLAGE COMMENTS    |
|           |          |                     |
|           |          |                     |
|           |          |                     |
|           |          |                     |
|           |          |                     |
|           |          |                     |
|           |          |                     |
|           |          |                     |

McNAUGHTON DEVELOPMENT

FINAL PLAT  
FOR  
HERITAGE CROSSING  
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.  
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING  
9930 W. 190TH STREET, SUITE L  
MOKENA, ILLINOIS 60448  
(708) 326-4961  
FAX: (708) 326-4692  
IL PROF. LIC. NO.: 184-003740



| PROJECT INFORMATION |            |
|---------------------|------------|
| Project No.:        | 24-0001    |
| Scale:              | 1" = 30'   |
| Date:               | 07/10/2024 |
| Field Date:         | 04/17/2024 |
| Drawn By:           | SJL        |
| Checked By:         | SDD        |

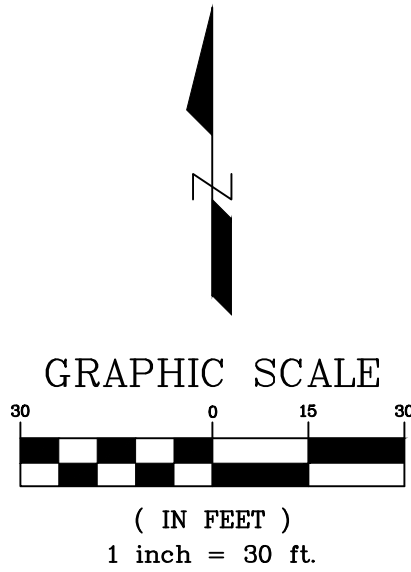
1  
OF  
4

EXISTING GEOMETRY



FINAL PLAT  
OF  
HERITAGE CROSSING

BEING A RESUBDIVISION OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 AND THAT PART OF LAWN AVENUE VACATED PER DOCUMENT \_\_\_\_\_ IN COOK COUNTY, ILLINOIS.



**BASIS OF BEARING**  
THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

**PARCEL IDENTIFICATION NUMBER**  
PARCEL ONE: 18-18-200-038-0000  
PARCEL TWO: 18-18-200-017-0000  
PARCEL THREE: UNKNOWN

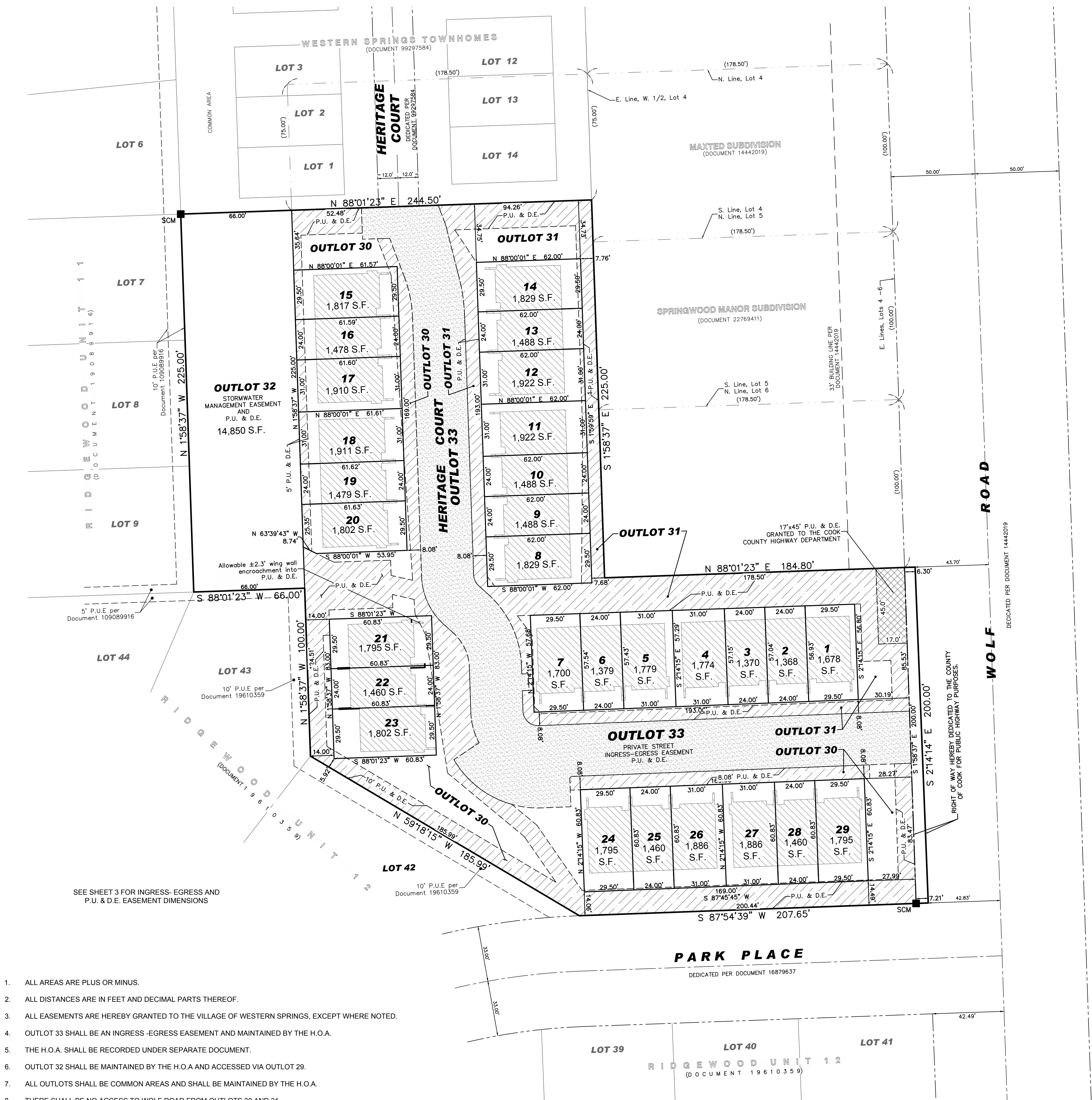
**AREA SUMMARY**  
GROSS AREA: 120,009 SQ. FT. OR 2.75 AC.  
BUILDABLE LOTS 1-29: 48,839 SQ. FT. OR 1.18 AC.  
OUTLOT 30: 20,733 SQ. FT. OR 0.40 AC.  
OUTLOT 31: 14,952 SQ. FT. OR 0.43 AC.  
OUTLOT 32: 14,850 SQ. FT. OR 0.29 AC.  
OUTLOT 33: 19,393 SQ. FT. OR 0.34 AC.  
WOLF RD. DEDICATION: 1,351 SQ. FT. OR 0.03 AC.

LEGEND

|     |     |                                    |
|-----|-----|------------------------------------|
| ●   | FIP | FOUND IRON PIPE                    |
| ○   | SIP | SET 1" x 24" IRON PIPE             |
| ■   | SCM | CONCRETE MONUMENT                  |
| --- |     | BOUNDARY LINE                      |
| --- |     | LOT LINE                           |
| --- |     | RIGHT-OF-WAY LINE                  |
| --- |     | PROPOSED RIGHT-OF-WAY LINE         |
| --- |     | CENTERLINE                         |
| --- |     | EXISTING EASEMENT LINE             |
| --- |     | PROPOSED EASEMENT LINE             |
| --- |     | PROPOSED BUILDING                  |
| --- |     | P.U. & D.E.                        |
| --- |     | INGRESS-EGRESS EASEMENT            |
| --- |     | COOK COUNTY HWY. DEPT. P.U. & D.E. |

ABBREVIATIONS

|          |                               |   |       |
|----------|-------------------------------|---|-------|
| FD.      | FOUND                         | N | NORTH |
| (###.##) | RECORD DIMENSION              | S | SOUTH |
| ###.##   | MEASURED DIMENSION            | E | EAST  |
| FIP      | FOUND IRON PIPE               | W | WEST  |
| P.U.E.   | PUBLIC UTILITY EASEMENT       |   |       |
| D.E.     | DRAINAGE EASEMENT             |   |       |
| E.T.B.E. | EXCEPTION TO BLANKET EASEMENT |   |       |
| B.S.L.   | BUILDING SETBACK LINE         |   |       |
| SQ. FT.  | SQUARE FEET                   |   |       |
| L        | ARC DIMENSION                 |   |       |
| R        | RADIUS DIMENSION              |   |       |
| CH       | CHORD BEARING/DISTANCE        |   |       |



- ALL AREAS ARE PLUS OR MINUS.
- ALL DISTANCES ARE IN FEET AND DECIMAL PARTS THEREOF.
- ALL EASEMENTS ARE HEREBY GRANTED TO THE VILLAGE OF WESTERN SPRINGS, EXCEPT WHERE NOTED.
- OUTLOT 33 SHALL BE AN INGRESS-EGRESS EASEMENT AND MAINTAINED BY THE H.O.A.
- THE H.O.A. SHALL BE RECORDED UNDER SEPARATE DOCUMENT.
- OUTLOT 32 SHALL BE MAINTAINED BY THE H.O.A. AND ACCESSED VIA OUTLOT 29.
- ALL OUTLOTS SHALL BE COMMON AREAS AND SHALL BE MAINTAINED BY THE H.O.A.
- THERE SHALL BE NO ACCESS TO WOLF ROAD FROM OUTLOTS 30 AND 31.
- THERE SHALL BE NO ACCESS TO PARK PLACE FROM OUTLOT 30.

REVISIONS

| NO. | DATE     | DESCRIPTION         | BY  |
|-----|----------|---------------------|-----|
| 1   | 10/16/24 | LOT ACCESS GEOMETRY | SJL |
| 2   | 11/06/24 | LOT GEOMETRY        | SJL |
| 3   | 12/09/24 | VILLAGE COMMENTS    | SJL |

McNAUGHTON DEVELOPMENT

FINAL PLAT  
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HERITAGE CROSSING  
WESTERN SPRINGS, ILLINOIS

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MOKENA, ILLINOIS 60448  
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FAX: (708) 326-4692



PROJECT INFORMATION

|              |            |
|--------------|------------|
| Project No.: | 24-0001    |
| Scale:       | 1" = 30'   |
| Date:        | 07/10/2024 |
| Field Date:  | 04/17/2024 |
| Drawn By:    | SJL        |
| Checked By:  | SDD        |

2  
OF  
4

PROPOSED GEOMETRY



FINAL PLAT  
OF  
HERITAGE CROSSING

BEING A RESUBDIVISION OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 AND THAT PART OF LAWN AVENUE VACATED PER DOCUMENT \_\_\_\_\_ IN COOK COUNTY, ILLINOIS.

LEGEND

- FIP FOUND IRON PIPE
- SIP SET 1" x 24" IRON PIPE
- SCM CONCRETE MONUMENT
- BOUNDARY LINE
- LOT LINE
- - - RIGHT-OF-WAY LINE
- - - PROPOSED RIGHT-OF-WAY LINE
- - - CENTERLINE
- - - EXISTING EASEMENT LINE
- - - PROPOSED EASEMENT LINE
- ▨ PROPOSED BUILDING
- ▨ P.U. & D.E.
- ▨ INGRESS-EGRESS EASEMENT
- ▨ COOK COUNTY HWY. DEPT. P.U. & D.E.

| Parcel Line Table |        |               |
|-------------------|--------|---------------|
| Line #            | Length | Direction     |
| L1                | 16.50  | S02° 14' 15"E |
| L3                | 18.04  | N56° 16' 49"E |
| L4                | 26.84  | N01° 51' 56"W |
| L5                | 8.03   | N47° 40' 37"W |
| L6                | 24.41  | N20° 51' 06"W |
| L7                | 16.15  | S88° 10' 48"W |
| L8                | 18.67  | N01° 58' 35"W |
| L9                | 7.26   | S20° 53' 37"E |
| L10               | 27.84  | S14° 13' 17"E |
| L11               | 8.03   | S47° 40' 37"E |
| L12               | 4.76   | S01° 51' 56"E |
| L13               | 4.02   | N87° 58' 53"E |
| L14               | 10.00  | S01° 44' 56"E |
| L15               | 4.00   | S87° 58' 53"W |
| L16               | 12.07  | S01° 51' 56"E |
| L17               | 47.24  | N34° 43' 32"W |
| L18               | 33.09  | N34° 43' 32"W |
| L19               | 19.34  | N50° 19' 51"W |
| L20               | 13.60  | N27° 06' 22"W |
| L21               | 8.81   | N04° 03' 09"W |

| Parcel Line Table |        |               |
|-------------------|--------|---------------|
| Line #            | Length | Direction     |
| L22               | 13.22  | S77° 07' 24"E |
| L23               | 7.91   | N01° 58' 37"W |
| L24               | 38.00  | N88° 01' 23"E |
| L25               | 15.00  | S01° 58' 37"E |
| L26               | 4.00   | N88° 01' 23"E |
| L27               | 13.14  | N77° 07' 19"W |
| L28               | 9.06   | N01° 58' 37"W |
| L29               | 33.80  | S88° 01' 22"W |
| L30               | 14.63  | S63° 39' 43"E |
| L31               | 23.08  | S20° 51' 06"E |
| L32               | 5.78   | S47° 02' 19"E |
| L33               | 42.73  | S01° 52' 29"E |
| L34               | 14.62  | S37° 20' 25"E |
| L35               | 204.14 | N88° 01' 23"E |
| L36               | 51.58  | N88° 00' 01"E |
| L37               | 7.33   | N37° 20' 25"W |

| Curve Table |        |        |       |                 |              |
|-------------|--------|--------|-------|-----------------|--------------|
| Curve #     | Length | Radius | Delta | Chord Direction | Chord Length |
| C1          | 2.36   | 1.50   | 90.00 | S42° 45' 45"W   | 2.12         |
| C2          | 18.74  | 40.00  | 26.85 | N15° 17' 25"W   | 18.57        |
| C3          | 23.19  | 29.00  | 45.81 | N24° 46' 16"W   | 22.57        |
| C4          | 31.89  | 40.00  | 45.68 | N24° 50' 18"W   | 31.05        |
| C5          | 24.79  | 75.50  | 18.81 | N11° 22' 59"W   | 24.68        |
| C6          | 3.64   | 54.81  | 3.80  | S20° 01' 02"E   | 3.64         |
| C7          | 3.03   | 26.00  | 6.67  | S17° 33' 27"E   | 3.03         |
| C8          | 26.01  | 106.50 | 13.99 | S08° 59' 46"E   | 25.94        |
| C9          | 7.74   | 9.10   | 48.74 | S23° 11' 03"E   | 7.51         |
| C10         | 14.19  | 9.04   | 89.92 | S47° 02' 25"E   | 12.77        |



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McNAUGHTON DEVELOPMENT

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WESTERN SPRINGS, ILLINOIS

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PROJECT INFORMATION

Project No.: 24-0001  
Scale: 1" = 30'  
Date: 07/10/2024  
Field Date: 04/17/2024  
Drawn By: SJL  
Checked By: SDD

3  
OF  
4

EASEMENT DETAIL



PARCEL IDENTIFICATION NUMBER

PARCEL ONE: 18-18-200-038-0000  
PARCEL TWO: 18-18-200-017-0000  
PARCEL THREE: UNKNOWN

OWNER CERTIFICATE

STATE OF ILLINOIS }  
COUNTY OF COOK } SS

THIS IS TO CERTIFY THAT THE UNDERSIGNED IS THE SOLE OWNER OF RECORD OF THE FOLLOWING DESCRIBED LAND, AND HAS CAUSED THE SAME TO BE SURVEYED AND SUBDIVIDED, AS SHOWN ON THIS PLAT OF SUBDIVISION, FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED:

THE UNDERSIGNED FURTHER CERTIFIES THAT THERE ARE NO UNPAID DEFERRED INSTALLMENTS OF OUTSTANDING UNPAID SPECIAL ASSESSMENTS AFFECTING THE LAND DESCRIBED AND SHOWN ON THIS SUBDIVISION PLAT OR, IF ANY OF SAID INSTALLMENTS ARE NOT PAID, THEN SUCH INSTALLMENTS HAVE BEEN DIVIDED IN ACCORDANCE WITH THE SUBDIVISION AND APPROVED BY THE COURT WHICH CONFIRMED THE SPECIAL ASSESSMENT AND THE PROPER COLLECTOR OF ANY SUCH SPECIAL ASSESSMENT HAS SO CERTIFIED SUCH DIVISION ON THE FACE OF THE SUBDIVISION PLAT.

THIS IS TO CERTIFY THAT THE UNDERSIGNED, IS THE SOLE OWNER OF RECORD OF THE FOLLOWING DESCRIBED LAND, AND HEREBY CERTIFIES THAT THE SUBJECT PROPERTY IS LOCATED WITH THE FOLLOWING SCHOOL DISTRICTS:

ELEMENTARY: 106 (LA GRANGE HIGHLAND) HIGH SCHOOL: 204 (LYONS TOWNSHIP HIGH SCHOOL)

BY: McNAUGHTON DEVELOPMENT LLC, AN ILLINOIS LIMITED LIABILITY COMPANY

BY: \_\_\_\_\_  
MANAGER

ADDRESS: 115220 JACKSON STREET, SUITE #101, BURR RIDGE, ILLINOIS 60527

NOTARY PUBLIC CERTIFICATE

STATE OF ILLINOIS }  
COUNTY OF COOK } SS

I, \_\_\_\_\_, A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY

CERTIFY THAT \_\_\_\_\_ OF McNAUGHTON DEVELOPMENT, LLC, AN ILLINOIS LIMITED LIABILITY COMPANY, WHO IS PERSONALLY KNOWN TO ME TO BE THE SAME PERSON WHOSE NAME IS SUBSCRIBED TO THIS SUBDIVISION PLAT AS OWNER, AS SUCH MANAGER OF McNAUGHTON DEVELOPMENT LLC, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT HE SIGNED THIS SUBDIVISION PLAT AS HIS FREE AND VOLUNTARY ACT, AND AS THE FREE AND VOLUNTARY ACT OF SAID COMPANY OR OTHER ENTITY, FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND SEAL THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, A.D. 20\_\_\_\_

NOTARY PUBLIC

PLAN COMMISSION CERTIFICATE

STATE OF ILLINOIS }  
COUNTY OF COOK } SS

I, \_\_\_\_\_, CHAIRMAN OF THE VILLAGE OF WESTERN SPRINGS PLAN COMMISSION, SO CERTIFY THAT

ON THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, A.D., 20\_\_\_\_, THIS PLAT OF SUBDIVISION WAS DULY APPROVED BY THE PLAN COMMISSION OF THE VILLAGE OF WESTERN SPRINGS.

BY: \_\_\_\_\_ ATTEST: \_\_\_\_\_  
CHAIRMAN SECRETARY

VILLAGE TREASURER CERTIFICATION

STATE OF ILLINOIS }  
COUNTY OF COOK } SS

I, \_\_\_\_\_, COLLECTOR FOR THE VILLAGE OF WESTERN SPRINGS, DO HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THERE ARE NO DELINQUENT OR UNPAID CURRENT FORFEITED SPECIAL ASSESSMENTS OR ANY DEFERRED INSTALLMENTS THEREOF, THAT HAVE BEEN APPORTIONED AGAINST THE TRACT LAND LAND INCLUDED IN THIS PLAT.

DATED AT WESTERN SPRINGS, COOK COUNTY, ILLINOIS, THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, A.D., 20\_\_\_\_

VILLAGE TREASURER

VILLAGE BOARD CERTIFICATE

STATE OF ILLINOIS }  
COUNTY OF COOK } SS

APPROVED BY THE PRESIDENT AND THE VILLAGE BOARD OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, IN

ACCORDANCE WITH SUBDIVISION REGULATIONS AT A MEETING HELD THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, A.D. 20\_\_\_\_

BY: \_\_\_\_\_ ATTEST: \_\_\_\_\_  
VILLAGE PRESIDENT VILLAGE CLERK

IMPROVEMENTS CERTIFICATE

STATE OF ILLINOIS }  
COUNTY OF COOK } SS

I, \_\_\_\_\_, VILLAGE CLERK OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, HEREBY CERTIFY THAT THIS PLAT WAS PRESENTED TO AND BY RESOLUTION DULY APPROVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF SAID

VILLAGE AT ITS MEETING HELD ON THE \_\_\_\_\_ DAY OF \_\_\_\_\_, A.D. 20\_\_\_\_, AND THAT REQUIRED BOND OR OTHER GUARANTEES HAS BEEN POSTED FOR THE COMPLETION OF THE IMPROVEMENTS REQUIRED BY THE REGULATIONS OF SAID VILLAGE.

BY: \_\_\_\_\_  
VILLAGE CLERK

LAGRANGE HIGHLANDS SANITARY DISTRICT CERTIFICATE

STATE OF ILLINOIS }  
COUNTY OF COOK } SS

I, \_\_\_\_\_, SUPERVISOR OF THE LAGRANGE HIGHLANDS SANITARY DISTRICT, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT OR UNPAID CURRENT OR FORFEITED SPECIAL ASSESSMENTS, OR ANY DEFERRED INSTALLMENTS OF ANY OUTSTANDING UNPAID SPECIAL ASSESSMENTS WHICH HAVE NOT BEEN DIVIDED IN ACCORDANCE WITH THE PROPOSED SUBDIVISION AND DULY APPROVED BY THE COURT THAT CONFIRMED THE SPECIAL ASSESSMENT.

DATED AT \_\_\_\_\_ COOK COUNTY, ILLINOIS, THIS \_\_\_\_ DAY OF \_\_\_\_\_, A.D., 20\_\_\_\_

SUPERVISOR

FINAL PLAT OF HERITAGE CROSSING

BEING A RESUBDIVISION OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 AND THAT PART OF LAWN AVENUE VACATED PER DOCUMENT \_\_\_\_\_ IN COOK COUNTY, ILLINOIS.

SURFACE WATER STATEMENT

To the best of our knowledge and belief, the drainage of surface waters will not be changed by the construction of this subdivision or any part thereof, or, if such surface water drainage will be changed, reasonable provision has been made for collection and diversion of such surface waters into public areas, or drains which the owner has a right to use, and that such surface waters will be planned for in accordance with generally accepted engineering practices so as to reduce the likelihood of damage to the adjoining property because of the construction of this subdivision.

Owner Professional Engineer

Printed Name Printed Name

VILLAGE ENGINEER'S CERTIFICATE

STATE OF ILLINOIS }  
COUNTY OF COOK } SS

I, \_\_\_\_\_, VILLAGE ENGINEER OF THE VILLAGE OF WESTERN SPRINGS, ILLINOIS, HEREBY CERTIFY THAT THE LAND IMPROVEMENTS DESCRIBED IN THE PLAT, AND THE PLANS AND SPECIFICATIONS THEREFORE, MEET THE MINIMUM REQUIREMENTS OF SAID VILLAGE AND HAVE BEEN APPROVED BY ALL PUBLIC AUTHORITIES HAVING JURISDICTION THEREOF.

DATED AT WESTERN SPRINGS, COOK COUNTY, ILLINOIS THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_

VILLAGE ENGINEER

REGISTRATION NUMBER \_\_\_\_\_

COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS CERTIFICATE

THIS PLAT HAS BEEN APPROVED BY THE COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS WITH RESPECT TO ROADWAY ACCESS PURSUANT TO 765 ILCS 205/2. HOWEVER, A HIGHWAY PERMIT, CONFORMING TO THE STANDARDS OF THE COOK COUNTY HIGHWAY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS IS REQUIRED BY THE OWNER OF THE PROPERTY FOR THIS ACCESS.

DATED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, A.D. 20\_\_\_\_

SUPERINTENDENT OF TRANSPORTATION AND HIGHWAYS COOK COUNTY, ILLINOIS

RESPONSIBILITY OF H.O.A., VILLAGE OF WESTERN SPRINGS AND LAGRANGE HIGHLANDS SANITARY DISTRICT

The Homeowners Association (H.O.A.) shall be responsible for maintenance of all landscaping areas within all Lots and Outlots within the subdivision, together with all improvements within the ingress-egress easement, and all storm sewers and structures. The individual homeowners shall be responsible for all sanitary and water services from the public sanitary service connections and B-Bases to the constructed buildings. The Village of Western Springs shall be responsible for all watermain and structures attached thereto. The LaGrange Highlands Sanitary District shall maintain the sanitary sewer and all structures attached thereto. The Homeowners Association shall maintain those specified areas and features described above in a manner consistent with the plans approved by the Village of Western Springs (Village) and the standards typical of private property maintenance throughout the community. In the event the Owners fail to properly maintain these areas, the Village shall, upon seventy-two (72) hours prior notice to the H.O.A., have the right, but not the duty, to perform, or have performed on its behalf, any maintenance work to or upon the specified areas and features. In the event of an emergency situation, as determined by the Village, the seventy-two (72) hours prior notice requirement set forth above shall not apply, and the Village shall have the right, but not the duty, to proceed without notice to the H.O.A.

In the event the Village shall perform, or have performed on its behalf, any maintenance work of the specified areas or features, the cost of such work shall, upon recodation of Notice of Lien with the Recorder of Deeds of Cook County, Illinois, constitute a lien against the assets of the property owners and against each and every lot within the subdivision. The cost of the work incurred by the Village shall include all expenses and costs associated with the performance of such work including, but not limited to, reasonable engineering, consulting and attorneys' fees related to the planning and actual performance of the work.

PRIVATE INGRESS - EGRESS PROVISIONS

An easement for ingress and egress over and across the Property for the benefit of the Owner(s) of Subdivision and/or Lots, their heirs, successors, assigns, guests and invitees, as more particularly bounded and described on the Plat. This easement shall be perpetual and shall run with the land.

The Homeowners Association (H.O.A.) shall be responsible for maintenance of all improvements within said ingress and egress areas within the subdivision. The Homeowners Association shall maintain those specified areas and features described above in a manner consistent with the plans approved by the Village of Western Springs (Village) and the standards typical of private property maintenance throughout the community. In the event the Owners fail to properly maintain these areas, the Village shall, upon seventy-two (72) hours prior notice to the H.O.A., have the right, but not the duty, to perform, or have performed on its behalf, any maintenance work to or upon the specified areas and features. In the event of an emergency situation, as determined by the Village, the seventy-two (72) hours prior notice requirement set forth above shall not apply, and the City shall have the right, but not the duty, to proceed without notice to the H.O.A.

In the event the Village shall perform, or have performed on its behalf, any maintenance work of the specified areas or features, the cost of such work shall, upon recodation of Notice of Lien with the Recorder of Deeds of Cook County, Illinois, constitute a lien against the assets of the property owners and against each and every lot within the subdivision. The cost of the work incurred by the Village shall include all expenses and costs associated with the performance of such work including, but not limited to, reasonable engineering, consulting and attorneys' fees related to the planning and actual performance of the work.

STORMWATER MANAGEMENT EASEMENT

Declarant hereby reserves and grants to the Village of Western Springs (Village) easements in, over, under, through, and upon those areas designated on the Plat as "Stormwater Water Management Easement" for purposes of providing adequate stormwater drainage control together with reasonable access thereto. Said easements shall be perpetual and shall run with the land and shall be binding upon the declarant, its successors, heirs, executors and assigns. To ensure the integrity of the stormwater facilities, no obstruction shall be placed, nor alterations made, including alterations in the final topographical grading plan which in any manner impeded or diminish stormwater drainage of detention in, over, under, through or upon said easement areas. In the event such obstruction or alterations are found to exist, the Village shall, upon seventy-two (72) hours prior notice to the property owner, have the right, but not the duty, to perform, or have performed on its behalf, the removal of said obstruction or alterations or to perform other repair, alteration or replacement as may reasonably be necessary to ensure that adequate stormwater storage, storm drainage, detention and retention facilities and appurtenances thereto remain fully operational and that the condition of said drainage easement complies with all applicable Village codes. In the event of an emergency situation, as determined by the Village, the seventy-two (72) hours prior notice requirement set forth above shall not apply, and the Village shall have the right, but not the duty, to proceed without notice to the property owner.

In the event the Village shall perform, or have performed on its behalf, removal of any obstruction or alteration to or upon the stormwater facilities drainage easement, as set forth in this easement, the cost of such work shall, upon recodation of Notice of Lien with the Recorder of Deeds of Cook County, Illinois, constitute a lien against the assets of the property owner which caused such obstruction or alteration. The cost of the work incurred by the Village shall include all expenses and costs associated with the performance of such work including, but not limited to, reasonable engineering, consulting and attorneys' fees related to the planning and actual performance of the work.

Send all future tax bills to:

McNAUGHTON DEVELOPMENT, LLC  
115220 JACKSON STREET, SUITE #101  
BURR RIDGE, ILLINOIS 60527

Submitted by:

McNAUGHTON DEVELOPMENT, LLC  
115220 JACKSON STREET, SUITE #101  
BURR RIDGE, ILLINOIS 60527

Return the original Mylar to:

DESIGNTEK ENGINEERING, INC.  
9930 W. 190TH STREET, SUITE L  
MOKENA, ILLINOIS 60448

COMED COMPANY AND AT & T CORPORATION

An easement for serving the subdivision and other property with electric and communication service is hereby reserved for and granted to COMED COMPANY and AT & T CORPORATION, their respective licensees, successors, and assigns, jointly and severally, to construct, operate, jointly and severally, to reconstruct, replace, supplement, relocate and remove, from time to time, poles, guys, anchors, wires, cables, conduits, manholes, transformers, pedestals, equipment cabinets or other facilities used in connection with overhead and underground transmission and distribution of electricity, communications, sounds and signals in, over, under, across, along and upon the surface of the property shown within the dashed or dotted lines (or similar designation) on the plat and marked Public Utility & Drainage Easement, or P.U. & D.E. designation), the property designated in the Declaration of Condominium and/or on this plat as "Common Elements", and the property designated on the plat as "common area or areas", and the property designated on the plat for streets and alleys, whether public or private, together with the rights to install required service connections over or under the surface of each lot and common area or areas to serve improvements thereon, or on adjacent lots, and common area or areas, the right to cut, trim or remove trees, bushes, roots and saplings and to clear obstructions from the surface and subsurface as may be reasonably required incident to the rights herein given, and the right to enter upon the subdivided property for all such purposes. Obstructions shall not be placed over Grantees' facilities or in, upon or over the property within the dashed or dotted lines (or similar designation) marked "Easement", "Utility Easement", "Public Utility Easement", "P.U.E." (or similar designation) without the prior written consent of Grantees. After installation of any such facilities, the grade of the subdivided property shall not be altered in a manner so as to interfere with the proper operation and maintenance thereof.

The term "Common Elements" shall have the meaning set forth for such term in the "Condominium Property Act", Chapter 765 ILCS 605/2, as amended from time to time.

The term "common area or areas" is defined as a lot, parcel or area of real property, the beneficial use and enjoyment of which is reserved in whole or as an appurtenance to the separately owned lots, parcels or areas within the planned development, even though such be otherwise designated on the plat by terms such as "outlots", "common elements", "open space", "open area", "common ground", "parking" and "common area". The term "common area or areas" and "Common Elements" include real property surfaced with interior driveways and walkways, but excludes real property physically occupied by a building, Service Business District or structures such as a pool, retention pond or mechanical equipment. Relocation of facilities will be done by Grantees at cost of the Grantor/Lot Owner, upon written request.

NICOR CORPORATION / NICOR GAS COMPANY PROVISIONS

An easement is hereby reserved for and granted to NICOR GAS COMPANY OF ILLINOIS, its successors and assigns, in all platted "easement" areas, streets, alleys, other public ways and places shown on this plat, said easement to be for the installation, maintenance, relocation, renewal and removal of gas mains and appurtenances for the purpose of serving all areas shown on this plat as well as other property, whether or not contiguous thereto. No buildings or other structures shall be constructed or erected in any such "easement" areas, streets, alleys, or other public ways or places nor shall any other use be made thereof which will interfere with the easements reserved and granted hereby.

PUBLIC UTILITY AND DRAINAGE EASEMENT PROVISIONS

An easement is hereby reserved and granted to the Village of Western Springs (Village), LaGrange Highlands Sanitary District and their successors and assigns over all areas designated "Public Utility and Drainage Easement" and those areas designated "P.U. & D.E." on the plat, to construct, reconstruct, repair, inspect, maintain and operate various transmissions, distribution, and collection systems, including but not limited to water lines, sanitary sewers and storm sewers, together with any and all necessary valve vaults fire hydrants, manholes, catch basins, connections, appliances and other structures and appurtenances as may be deemed necessary by said Village, over, upon, along, under and through the surface of the property shown on the plat, together with the right of access for necessary labor, materials and equipment to do any of the above work.

The right is also granted to cut down, trim or remove, without obligation to restore or replace any obstruction, including but not limited to trees, shrubs, other plants, structures or improvements on the easement that interfere with the operation of such lines and sewers. No permanent buildings or structures shall be placed on said easement, but some may be used for gardens, landscape areas, and other purposes that do not then or later interfere with the aforesaid uses or rights. Where an easement is used for both sewer and other utilities, the other utility installation shall be subject to the ordinance of the Village of Western Springs and to Village approval as to design and location.

Perpetual easements are hereby reserved for and granted to the Village of Western Springs and other governmental authorities having jurisdiction of the land, over the entire easement area for ingress, egress, and the performance of municipal and other governmental services including water, storm and sanitary sewer service and maintenance and emergency and routine police, fire, and other public safety related services.

COMCAST COMMUNICATIONS PROVISIONS

An easement is hereby reserved and granted to COMCAST COMMUNICATIONS CORPORATION, operating within the Village of Western Springs, it's successors and assigns, jointly and severally, for the installation, maintenance, relocation, renewal and removal of communication and broadcast signal systems in, under, across, along and upon the surface of the property shown on the plat and designated as "Public Utility and Drainage Easement" or "P.U. & D.E." and the property designated on the plat for streets and alleys as required to provide the planned unit development and other property, whether or not contiguous thereto, with communication and broadcast TV services, together with the right to install required service connections for each lot. No buildings or other obstructions shall be constructed or erected in any such "Public Utility and Drainage Easement" or "P.U. & D.E." areas, without the prior written consent of grantees. Nor shall any other use be made thereof which will interfere with the easements reserved and granted hereby.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS }  
COUNTY OF WILL } SS

THIS IS TO CERTIFY THAT I, STEVEN J. LAUB, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, NO. 035-003160, HAVE SURVEYED AND SUBDIVIDED THE FOLLOWING DESCRIBED PROPERTY:

PARCEL 1: THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 2: LOT 1 IN WAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 IN COOK COUNTY, ILLINOIS.

PARCEL 3: THAT PART OF THE 66 FEET WIDE LAWN AVENUE, LYING SOUTH OF THE NORTH LINE OF WESTERN SPRINGS TOWNHOMES, RECORDED MARCH 29, 1999, AS DOCUMENT NO. 99297584, LYING NORTH OF THE SOUTH LINE OF RIDGEWOOD UNIT 12, RECORDED OCTOBER 8, 1965, AS DOCUMENT NO. 19610359, LYING WEST OF THE EAST LINE OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

AS SHOWN BY THE ANNEXED PLAT WHICH IS A CORRECT REPRESENTATION OF SAID SURVEY AND SUBDIVISION.

I FURTHER CERTIFY THAT THIS SUBDIVISION LIES WITHIN THE CORPORATE LIMITS OF THE VILLAGE OF WESTERN SPRINGS, ILLINOIS, WHICH HAS ADOPTED A MUNICIPAL PLAN AND IS EXERCISING SPECIAL POWERS AUTHORIZED BY ARTICLE 11, DIVISION 12 OF THE ILLINOIS MUNICIPAL CODE, AS NOW AND HEREAFTER AMENDED AND THAT ALL REGULATIONS ENACTED BY THE VILLAGE OF WESTERN SPRINGS RELATIVE TO PLATS AND SUBDIVISIONS HAVE BEEN COMPLIED WITH IN THE PREPARATION OF THIS PLAT.

I FURTHER CERTIFY THAT IRON PIPE 1" x 24" WILL BE SET AT ALL LOT CORNERS, BLOCK CORNERS, POINTS OF CURVE, EXCEPT WHERE CONCRETE MONUMENTS ARE INDICATED, AND THAT THE PLAT HEREON DRAWN CORRECTLY REPRESENTS SAID SURVEY AND SUBDIVISION.

I FURTHER CERTIFY THAT THE SUBJECT PROPERTY LIES WITHIN ZONE "X" (AREAS OF MINIMAL FLOODING) AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S (FEMA) FLOOD INSURANCE RATE MAP (FIRM) OF THE VILLAGE OF WESTERN SPRINGS, ILLINOIS, MAP NUMBER 17031C04674, EFFECTIVE DATE ON AUGUST 19, 2008.

DIMENSIONS ARE GIVEN IN FEET AND DECIMAL PARTS THEREOF AND ARE CORRECTED TO A TEMPERATURE OF 68 DEGREES FAHRENHEIT.

ALL CURVE LENGTHS SHOWN ARE ARC DIMENSIONS.

GIVEN UNDER MY HAND AND SEAL AT MOKENA, ILLINOIS, THIS 10th DAY OF \_\_\_\_\_, JULY, A.D., 2024.

STEVEN J. LAUB  
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. #035-003160  
LICENSE EXPIRES ON NOVEMBER 30, 2026

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

RESERVED FOR: COOK COUNTY RECORDER

COOK COUNTY CLERK STAMP

McNAUGHTON DEVELOPMENT

FINAL PLAT FOR HERITAGE CROSSING WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.  
CONSULTING, CIVIL, ENGINEERING & LAND SURVEYING  
9930 W. 190TH STREET, SUITE L  
MOKENA, ILLINOIS 60448  
(708) 326-4961  
FAX: (708) 326-4692

DEI

PROJECT INFORMATION

Project No.: 24-0001  
Scale: N/A  
Date: 07/10/2024  
Field Date: 04/17/2024  
Drawn By: SJL  
Checked By: SDD

4 OF 4

CERTIFICATIONS

IL PROF. LIC. No.: 184-003740



December 13, 2024  
Project No. 24-0001

Jeff Koza, P.E.  
Village Engineer  
Village of Western Springs  
740 Hillgrove Avenue  
Western Springs, Illinois 60558

**Re: Heritage Crossing – Staff Review Letter #3  
5600 Wolf Road, Western Springs, IL 60558**

Dear Mr. Koza,

On behalf of our client, McNaughton Development we are submitting the enclosed Final documents for your review and approval.

The Final Plan set, Final Plan and Stormwater Management Report have been revised according to the review letter by Baxter and Woodman, dated November 14, 2024 and the Village Staff, dated November 15, 2024, the following is an item-by-item response to those comments:

**Baxter & Woodman Comments**

**Engineering Plans**

1. Based on our calculations, and assuming the Contech pipes have a similar Manning's n to RCP, the design of the dual culverts suggests a full-flowing velocity of 14 ft/s, well above the acceptable maximum velocity. Provide documentation that 11 ft/s is the maximum flow velocity through these pipes.  
**Response: The twin culverts have been revised to a single 4'x6' box culvert. Under the worst-case scenario, the pipe has a full flowing velocity of 15 ft/s. This does not account for the loss in velocity as the flow exits the Wolf Road culvert, flows across the proposed rip rap and enters the bypass system. The velocity was checked for the 10-year critical duration storm and the 2-year critical duration. See enclosed bypass pipe calculations.**
2. Provide calculations for the riprap sizing at the outfall of the dual culverts. The riprap gradation, shape and area do not appear to match the design provided by the Illinois Urban Manual. Furthermore, the detail provided (IL-610 on Sheet 6) is missing dimensions.  
**Response: Rip rap sizing calculations have been added to Sheet 6 of the plans.**
3. Prior to final approval, the retaining wall design shall be reviewed, signed, and sealed by an Illinois-registered Structural Engineer.  
**Response: Acknowledged.**
4. The silt fence protecting the pond shall be revised to be double rowed per section 5.3.4.2 of the WMO.  
**Response: A double row of silt fence has been added around the volume control area in the detention basin.**
5. Clarify the erosion control legend on Sheet 5; there are three instances of E6, and E7 is missing despite being shown on the plan.  
**Response: The legend on the soil erosion control plan has been revised.**



6. Provide clarification of note on Sheet 5 regarding the construction entrance at the intersection of Heritage Court and Park Place, as the proposed Park Place access has been eliminated.

**Response:** The location of the construction entrance has been revised and all notes regarding an entrance on Park Place have been removed.

7. A spot elevation at the northwest corner of Unit 7 appears to be several feet higher than the 658 contour adjacent to it. Please clarify the elevation at this location.

**Response:** The grading at the northwest corner of Unit 7 has been revised.

8. Provide grading near the property line north of Unit 14 to prevent overland flow from continuing onto the Heritage Springs property.

**Response:** The grading north of Unit 14 has been revised.

9. Provide a pavement cross-section or spot grades to ensure proper drainage at the offsite parking stalls in Heritage Springs (Sheet 7).

**Response:** A grading plan for the off-site parking area has been added to Sheet 8.

### **Stormwater Management Report and HEC-HMS Model**

1. The Stormwater Management Report's narrative should be revised to include discussion of modeling results, reference and discuss the supporting modeling documentation, and include the inundation maps.

**Response:** Stormwater Management Report will be forthcoming.

2. The HEC-HMS files provided indicate that the discharge curves for all basins are turned off in both existing and proposed scenarios. Additionally, many of the nodes do not have discharge functions defined. Clarify how the discharge flows are defined between basins.

**Response:** Outflow structure method is utilized not discharge flow.

3. Clarify the distinction between the nodes "Storage East of Wolf Road" and "Box Inlet-East Side Wolf Rd". Pages 71 and 72 of the report show stage-storage tables for these nodes, but the areas for elevations 664.0 and 665.0 match for these two, suggesting some volume may be double-counted. Furthermore, the "Box Inlet-East Side Wolf Rd" node table differs significantly from that shown in the HEC-HMS model.

**Response:** "Storage East of Wolf Road" is the storage volume behind and upstream of the outlet control structure on the east side of Wolf Road per the County GIS contours. "Box Inlet East Side Wolf Road" is the storage volume within the flood control box inlet to account for storage of flow over and into the grate on top of the box structure.

4. The inundation maps provided are for the scenario where the Ashbrook Subdivision ponds are not modeled, and the 2-hour duration storm is the critical duration. However, the HEC-HMS results provided are for the scenario where the ponds are modeled, and the 1-hour duration is critical. Please provide HEC-HMS results that match the conservative scenario displayed in the inundation maps.

**Response:** The HEC HMS models for the conservative scenario are enclosed in the stormwater report. An inundation map was created for the revised model with the upstream ponds.

5. The inundation maps should reflect flood elevations upstream of Basin "C". For example, the "Storage West Side Wolf Road" node has critical duration elevations in excess of 660, which need to be shown on the inundation maps. This would include surcharging inlets along the dual culverts under proposed conditions.

**Response:** Stormwater Management Report will be forthcoming.

### **Village Comments Exhibit 1**

#### **Engineering**

10. Written confirmation from Heritage Springs establishing access rights must be submitted prior to Village Board consideration. It is acknowledged that this item is being worked on and will be provided when completed.

**Response:** Confirmation will be forwarded upon receipt.

11. Location of safety rail on top of the retaining walls is shown on geometric plan, but detail and structural design and calculations for the safety rail are still needed to ensure the rail is adequate and meets applicable codes.

Reasons: The safety rail is designed as part of the retaining wall plans.

12. New sidewalks are still required along the Wolf Rd. and Park Pl. frontage per Village code. Place replacement Wolf Road sidewalk along entire property frontage. Placement must be as far from road as practical but will defer to Cook County Highway Department as they will review placement and issue the permit for the work. On Park Place, place the sidewalk one foot inside the public right of way along the southern edge of the development. Sidewalk shall dead end at west termini. All new sidewalk shall comply with IDOT and ADA standards for slopes. The northwest corner of Park Place and Wolf Road sidewalk ramp shall be removed and replaced.

Response: The sidewalk along Wolf Road has not been replaced. We are waiting on CCDOTH for guidance. A sidewalk has been added along Park Place.

13. The placement of sidewalk on Park Pl. will require the movement of the Ridgewood subdivision sign. The relocation of the sign must be addressed with the next plan submittal. Provide Ridgewood Civic Association approval of the sign design and sign placement.

Response: The proposed sidewalk on Park Place was routed around the existing subdivision sign. The existing sign will remain in place.

14. The Applicant' engineer must provide accurate calculations showing the bypass system is adequate to handle all bypass flows.

Response: The bypass culvert has been sized to carry the peak discharge flow. See Stormwater calculations included herein.

15. The Applicant must provide accurate calculations that show the rate of flow of the bypass system is equal to or less than the current rate of all bypass flows (low flow and overland). This will ensure bypass stormwater does not reach the detention basin faster than it currently does under the existing conditions.

Response: See revised Stormwater Management Report calculations included herein.

16. The Village will not accept the twin 54" aluminum pipes that are proposed. Reinforced concrete pipes or precast reinforced concrete box culverts shall be used.

Response: The twin 54" aluminum pipes have been replaced a 4'x6' concrete box culvert, which matches the upstream culvert beneath Wolf Road.

17. A detailed operation and maintenance plan is required for the enclosed bypass system. Provide this operations and maintenance plan for Village review. It will be must to be incorporated into the final plat and the declaration document.

Response: Upon approval of the final engineering plans an O&M plan for the bypass system will be provided.

18. The end section of the bypass pipes need to be designed in a way that prevents access inside the pipes by unauthorized persons. The end section should be designed to prevent this from happening while at the same time not becoming a maintenance problem with debris collection.

Response: Flared end sections with grates have been added to both ends of the concrete box culvert.

19. Wetland plantings plan is required to be used with the volume control retention system needed to be designed by a licensed / certified ecologist and reviewed by the Village prior to the issuance of any site development permit. This plan must also include a maintenance plan

Response: A wetland plantings plan is included herein.

20. Structural design plans and licensed structural engineer seal for the retaining wall is required. The developer indicated they are being worked on and will be provided when available.

Response: Structural Design plans for the retaining wall are included herein.

21. An operations and maintenance plan is needed for the detention basin. The developer shall create an O&M plan for the basin and create a mechanism to fund all required maintenance activities for the establishment period of three to five years. A licensed/ certified ecologist with experience in wetland basins must produce this type of O&M plan for Village review and approve prior to the issuance of any site development permit.

Response: An O&M plan is included as part of the Native Planting Plan.

22. An exhibit showing the street light photometrics conform with Village Code for Village review prior to the issuance of any site development permit.  
**Response: A Photometric Plan is included herein.**
23. The plans have been updated to show new retaining walls along the west edge of the Lawn Avenue Detention Basin which will require the removal of the existing walls. However, the structural design of this new wall and the other proposed walls are not complete and not provided. Complete wall details, elevations, and signoff by a licensed Structural Engineer is required.  
**Response: Retaining wall plans have been completed by a structural engineer and are included herein.**
24. Since the structural design is not complete it is not known if tiebacks or over excavation needed to construct the walls will be contained within the development property. Work needed to construct the new walls cannot take place on private property unless temporary or permanent easements are acquired. Construction limits behind the walls must be identified and contained within your property or copies of executed easements are to be provided prior to the issuance of any site development permit.  
**Response: Proposed wall to meet existing wall elevations but is offset horizontally to allow for construction of onsite tie backs as required by structural engineer.**
25. Neighboring properties to the west cannot be flooded as a result of interim construction condition that could occur if the old wall is torn down and the new wall is not yet complete. The plans must have provisions in place to temporarily protect the west property line to a pre-project elevation. The plans must identify a plan to address this issue.  
**Response: The proposed wall will be constructed as the existing wall is removed to protect the west property line.**
26. The new and old walls appear to be misaligned at the northwest corner of the property. Clarify intent.  
**Response: Proposed wall to meet existing wall elevations but is offset horizontally to allow for construction of onsite tie backs as required by structural engineer.**
27. The wall design of the detention area between units 20 and 21 must accommodate for overland flows that may occur if the twin 54" sewers are overwhelmed.  
**Response: See retaining wall plans by structural engineer.**
28. Replace the existing flat grate that is prone to clogging with a vaulted frame and grate. A vaulted grate will be much less prone to clogging and will improve performance and reliability of both development's stormwater management systems.  
**Response: A new vaulted frame and grate has been proposed to replace the existing flat top grate. See Trash Racks detail on Sheet 14.**
29. The plans show inlets proposed to be located on Heritage Springs property. These inlets need to be moved south so they are contained on Heritage Crossing's property. The roadway vertical curve needs to be adjusted so the low point is moved south so the inlets are placed on Heritage Crossing property.  
**Response: The vertical curve at the north property line has been adjusted so that the low point and storm inlets are located on our property.**
30. Secure the bypass ditch area between the Wolf Road culvert and the twin bypass culverts.  
**Response: Flared end sections have been added to the bypass pipe to ensure that they are safe.**
31. Street lighting plans are absent. Plans need to include all lighting conduits, cables, controllers, and service location. Also, a light pole foundation and controller foundation details are needed, and they need to be signed and sealed by a structural engineer.  
**Response: See lighting plan prepared by others.**
32. The narrative needs a section discussing the development of the HEC HMS modeling and results.  
**Response: The narrative of the Stormwater Management report has been revised.**
33. Discuss how the hydraulic modeling impacted the subdivision grading plan.  
**Response:**
34. Provide in narrative discussion on the worst-case flooding scenario. Include exhibits sent to Engineering on 10/31/24 which illustrate stormwater storage in this worst- case



scenario. Report should clearly state there is a net increase in stormwater storage despite the filling of the existing parking lot area.

**Response: Stormwater Management Report will be forthcoming.**

35. Based on our calculations, and assuming the Contech pipes have a similar Manning's n to RCP, the design of the dual culverts suggests a full-flowing velocity of 14 ft/s, well above the acceptable maximum velocity. Provide documentation that 11 ft/s is the maximum flow velocity through these pipes.

**Response: The twin culverts have been revised to a single 4'x6' box culvert. Under the worst-case scenario, the pipe has a full flowing velocity of 15 ft/s. This does not account for the loss in velocity as the flow exits the Wolf Road culvert, flows across the proposed rip rap and enters the bypass system. The velocity was checked for the 10-year critical duration storm and the 2-year critical duration. See enclosed bypass pipe calculations.**

36. Provide calculations for the riprap sizing at the outfall of the dual culverts. The riprap gradation, shape and area do not appear to match the design provided by the Illinois Urban Manual. Furthermore, the detail provided (IL-610 on Sheet 6) is missing dimensions.

**Response: Rip rap calculations have been added to Sheet 6 of the plans.**

37. A fire hydrant spacing, and coverage exhibit was requested to confirm compliance with Village Code. It has not yet been provided.

**Response: A fire hydrant coverage plan has been completed and is included herein.**

38. Provide grading near the property line north of Unit 14 to prevent overland flow from continuing onto the Heritage Springs property.

**Response: The grading at the north property line has been revised to prevent the overland flow from continuing onto Heritage Springs.**

39. Prior comments on the proposed gate have not yet been addressed. In addition to the prior comments, design of gate shall ensure gate electrical and control equipment is elevated one foot above flood elevation. Gate must work at all times.

**Response: Proposed gate design by others.**

40. Relocate the depressional area from Heritage Springs to Heritage Crossing.

**Response: The vertical curve has been revised on Heritage Court so that the low point occurs on the Heritage Crossing site.**

41. Adjust the location of the inlets directly under the proposed gate to be fully located on Heritage Springs.

**Response: The vertical curve has been revised under the proposed gate. The inlets have been moved onto the Heritage Crossing site.**

42. Stormwater Management Report and HEC-HMS Model. The Stormwater Management Report's narrative should be revised to include discussion of modeling results, reference and discuss the supporting modeling documentation, and include the inundation maps.

**Response: The narrative for the Stormwater Management Report has been revised accordingly.**

43. The HEC-HMS files provided indicate that the discharge curves for all basins are turned off in both existing and proposed scenarios. Additionally, many of the nodes do not have discharge functions defined. Clarify how the discharge flows are defined between basins.

**Response: Stormwater Management Report will be forthcoming.**

44. Stormwater Management Report and HEC-HMS Model. Clarify the distinction between the nodes "Storage East of Wolf Road" and "Box Inlet East Side Wolf Rd." Pages 71 and 72 of the report show stage-storage tables for these nodes, but the areas for elevations 664.0 and 665.0 match for these two, suggesting some volume may be double-counted. Furthermore, the "Box Inlet-East Side Wolf Rd" node table differs significantly from that shown in the HEC-HMS model.

**Response: "Storage East of Wolf Road" is the storage volume behind and upstream of the outlet control structure on the east side of Wolf Road per the County GIS contours. "Box Inlet East Side Wolf Road" is the storage volume within the flood control box inlet to account for storage of flow over and into the grate on top of box structure.**

45. Stormwater Management Report and HEC-HMS Model. The inundation maps provided are for the scenario where the Ashbrook Subdivision ponds are not modeled, and the 2-hour duration storm is the critical duration.  
**Response: Stormwater Management Report will be forthcoming.**
46. However, the HEC-HMS results provided are for the scenario where the ponds are modeled, and the 1-hour duration is critical. Please provide HEC-HMS results that match the conservative scenario displayed in the inundation maps.  
**Response: Stormwater Management Report will be forthcoming.**
47. The inundation maps should reflect flood elevations upstream of Basin "C." For example, the "Storage West Side Wolf Road" node has critical duration elevations in excess of 660, which need to be shown on the inundation maps. This would include surcharging inlets along the dual culverts under proposed conditions  
**Response: Stormwater Management Report will be forthcoming.**
48. All comments from the Village Engineer and Village's consulting engineer contained in Attachment 4 must be addressed.  
**Response: Acknowledged.**

#### Road and Traffic

55. The two parallel parking spaces should be removed on the east side of Heritage Court.  
**Response: The two parallel parking spaces have been removed from the plans.**
56. Revise all applicable plans related to the correct number of guest parking spaces between units 23 and 24.  
**Response: Plans have been revised accordingly.**
57. Vehicles parked in the driveway of units 8, 15, and 21 may not overhang the curb.  
**Response: Acknowledged.**
58. The Opticom sensor shall be taller than the proposed fence/gate. Design and details must be submitted for review and approval by the Village's Director of Fire and EMS before any permit is issued for site development.  
**Response: Details for the proposed gate and sensor have been added to Sheet 16 of the plans.**
59. A sidewalk along Park Pl. to the south connecting to the Wolf Rd. sidewalk to the east must be installed.  
**Response: Sidewalk has been added along Park Place.**
60. Revise all applicable plans to convert the turnaround area north of unit 15 to grasscrete or similar material.  
**Response: The turnaround has been revised to grasscrete see detail on Sheet 16.**
61. Submit AutoTURN analysis for the turnaround area north of unit 15 to verify vehicle turnaround.  
**Response: The pad at the north end of Heritage Court has been revised to a grasscrete pad per comment 60, Exhibit 1. The curb has been depressed in this area and a no parking sign has been added to the pad. An autoturn was completed showing that a delivery truck would not be able to make the traditional 3-point turn. The client has chosen to leave the pad size and location as is because Heritage Springs does not have a turnaround for deliveries.**
62. On the color site plan prepared by BSB Design (revised 11/5/2024), the crosswalk should be shown perpendicular (not angled) to Heritage Court, consistent with the Final Engineering Plans for Heritage Crossing, prepared by DesignTek Engineering and Surveying (revised 11/4/2024).  
**Response: The Final Engineering Plans have been revised to show the crosswalk striping to be parallel.**
63. Update the Traffic Impact Study to reflect the proposed 29 rather than 28 dwelling units.  
**Response: The Traffic Impact Study has been revised and included herein.**
64. Clarify if Figure 5B in the Traff Impact Study summarizes the September 2024 pedestrian count data or the original March 2024 count data. The higher volume counted in September should be presented in the TIS.  
**Response: The Traffic Impact Study has been revised and included herein**

65. Figure 7 does not match the trip generation presented in Table 3 in the Traffic Impact Study. Please update according.

Response: The Traffic Impact Study has been revised and included herein

### **Signage**

66. Provide a sight distance triangle analysis for the proposed subdivision sign adjacent to Wolf Rd.

Response: A sight distance analysis was completed as part of the traffic impact study.

67. Provide information on any roadway signage related to street name and type (private) for review.

Response: A street sign has been added to the intersection of Heritage Court and Wolf Road.

### **Attachment 3**

#### **Outstanding Review Comments from Prior Submittals**

16. Item remains outstanding. The Village will not approve the plans without proof of the access rights from Heritage Springs established. Understood this item is being worked on and will be provided when completed.

Response: The proof of access will be forwarded upon receipt.

17. No apparent changes made to interim bypass swale plan. Second review comments were for the most part not addressed. Please respond to the review comments.

Response: The bypass swale plan has been revised to include erosion control measures to prevent muddy water. Temporary culverts have been added to allow construction traffic to access the north half of the property. See enclosed calculations for the channel capacity.

28. Location of safety rail on top of the retaining walls is shown on geometric plan, but a detail and structural design and calculations for the safety rail are still needed to ensure the rail is adequate and meets applicable codes.

Response: A detail for the safety fence is included on Sheet 16 of the plans. The fence design will be incorporated as a part of the retaining wall design.

37. During heavy rain events the stormwater will fill up the Lawn Avenue basin and leave the site northward flowing in the existing channel. The comment was seeking erosion and sediment control for the interim condition while the basin is not established which is when sediment would be prone to leaving the site. An aggregate check dam or some means of sediment control is appropriate and needs to be added to the erosion control plans. Please implement erosion control measures to ensure best management practices are in place to stop the migration of sediment offsite.

Response: Rolled erosion control has been placed at the north property line to collect sediment during heavy rainfall events during construction.

44. Add Site Coverage Data for the existing and proposed conditions as previously requested.

Response: A site coverage table has been added to the Geometric Plan Sheet 7.

45. New sidewalks are still required along the Wolf Road and Park Place frontage per Village code. Place replacement Wolf Road sidewalk along entire property frontage. Village prefers placement as far from road as practical but will defer to Cook County Highway Department as they will review placement and issue the permit for the work. On Park Place, place the sidewalk 1 foot inside the public right of way along the southern edge of the development. Sidewalk shall dead end at west termini. All new sidewalk shall comply with IDOT and ADA standards for slopes. The northwest corner of Park Place and Wolf Road sidewalk ramp shall be removed and replaced.

Response: New sidewalk has been added along Park Place. The plans for the Wolf Road connection are still under review. We are waiting for direction from CCDOTH on the required sidewalk improvements.

48. Related to comment 45, the placement of sidewalk on Park Place will require the movement of the Ridgewood subdivision sign. Original comment still applies. Address



the comments with the next plan submittal. Provide Ridgewood Civic Association approval of the sign design and sign placement.

**Response: The proposed sidewalk on Park Place has been routed around the existing subdivision sign. The sign will remain in place.**

57. Comment withdrawn. Engineering still recommends that the new sidewalk be 6 ft in width to meet IDOT design standards for sidewalk placed at the back of curb. The Developer is seeking to implement a 5 foot sidewalk with the one foot width being utilized to maximize the living unit space. Since the existing Heritage Springs development has a 5 foot carriage walk and the Village is not aware of any reported problems with the 5 foot width sidewalk and given the street will be a very low volume street generally only used by residents, their guests and deliver services, Engineering will accept the proposed 5 foot sidewalk width for the proposed sidewalk as it has been in service for the similar development to the north for years without any known issues.

**Response: Acknowledged.**

72. Prior comments on the proposed gate have not yet been addressed. In addition to the prior comments, design of gate shall ensure gate electrical and control equipment is elevated one foot above flood elevation. Gate must work at all times.

**Response: Gate design Plans are included herein/forthcoming.**

78. A fire hydrant spacing and coverage exhibit was requested to confirm compliance with Village Code. It has not yet been provided.

**Response: A fire hydrant spacing and coverage exhibit is included herein.**

85. Structural design plans and licensed structural engineer seal for the retaining wall is required. The developer indicated they are being worked on and will be provided when available.

**Response: The retaining wall design plans are included herein.**

- 02-06 The offsite parking stalls being constructed on Heritage Estates HOA property also need either a temporary easement or an agreement from the HOA allowing the work. I could not locate proposed grading plan for this new parking area in the plan set. How is drainage being handled? It appears the existing west curblane of the street is barrier curb in this location so that curb and gutter will need to be removed and possibly (depending on proposed grading) need to be replaced with depressed curb and gutter. Any removal and replacement of curb and gutter will require a 2 foot HMA surface pavement patch as well. Show the new proposed location of the mailbox on the plans. Include a detail for the mailbox foundation. Perhaps a detail was included in the original subdivision plans. The mailbox needs to be installed in accordance with the United States Post Office regulations for height and offset from road. *(Prior comment either not addressed or acknowledged by developer's engineer so it remains outstanding)*

**Response: A proposed grading plan for the offsite parking stalls is located on Sheet 8. The mailbox has been relocated, the curb has been noted to be depressed and the 2 feet of HMA pavement patch notes. A detail for the mailbox foundation is located on Sheet 16 of the plans.**

- 02-07 Stormwater Management – Bypass flow management: We provided comment on the first review indicating the preference for an open channel bypass system. After much discussion and internal review, the Village can accept a closed (piped) bypass system if the following conditions are met:

- a. The developer's engineer must provide accurate calculations showing the bypass system is adequate to handle all bypass flows. The Baxter & Woodman review discusses this as well.

**Response: Calculations have been completed to demonstrate that the bypass system is adequate to manage all bypass flows.**

- b. They must provide accurate calculations that show the rate of flow of the bypass system is equal to or less than the current rate of all bypass flows (low flow and overland). This will ensure bypass stormwater does not reach the detention basin faster than it currently does under the existing conditions.

Response: Calculations have been completed to demonstrate that the bypass system is adequate to manage all bypass flows.

- c. Village acknowledges design of culvert at Wolf Road is ongoing with Cook County Highway Department.
- d. The Village will not accept the twin 54" aluminum pipes that are proposed. Reinforced concrete pipes or precast reinforced concrete box culverts shall be used.

Response: The twin 54" culverts have been replaced with a 4'x6' concrete box culvert. This matches the existing culvert size just upstream of the site.

- e. A detailed operations and maintenance plan is required for the enclosed bypass system. Provide this operations and maintenance plan for Village review. It will be required to be placed on the final plat and the declaration document.

Response: An O&M plan for the bypass system will be submitted upon final engineering approval.

- f. The end section of the bypass pipes need to be designed in a way that prevents access inside the pipes by young children. On a recent Village storm sewer project involving the installation of 66" storm sewer on multiple occasions young kids entered under the standard IDOT grate that was installed in the end section and were found to be playing inside the sewer system. This is a serious safety concern. The end section should be designed to prevent this from happening while at the same time not becoming a maintenance problem with debris collection.

Response: Both ends of the bypass pipe have been designed to include flared end sections with grates.

02-10 Stormwater Management – Volume control wetland plantings: The first review comments provided identified that the Village was requiring that the wetland plantings to be used with the volume control retention system needed to be designed by a person or firm that is competent in this field. Past experience has shown that ideally an ecologist with experience designing these type of facilities is the best person for the job. The developer's engineering responded indicating that landscaping plans have been provided with the submittal. Included with this submittal is Exhibit H – Landscaping plan. The landscaping plan only calls for a wetland planting mix to be placed on the bottom and another wetland mix to be placed on the side slopes of the basin. I do not believe this design to be adequate based on my past experience with these types of facilities. The landscaping plan shall be designed by a firm with experience with these types of installations. Ideally the design would have a variety of species and utilize a mix of plugs and seed mixes. Due to the presence of volume control retention that will likely be slow to infiltrate and a basin that does not have positive slope towards the basin outlet there is risk the bottom of the basin will quickly turn into disrepair. Shallow water that heats up quickly (the volume control is typically less than 2 feet in depth) combined with fertilizers used by landscapers in the area may lead to algae blooms and unsightliness. It is important to the long-term success of the development that the wetland plant design be done correctly. The design or a supplement report needs to address unsightliness concerns that may arise if the shallow water does not infiltrate quickly enough.

UPDATE: Developer's engineer advised in disposition letter that the developer is consulting with a senior ecologist to design the planting plan. Comment will remain outstanding until the updated planting plan is completed.

Response: A Native Plantings Plan for the volume control area is included herein.

02-11 Stormwater Management – Detention Basin Maintenance and Operational plan: An operations and maintenance plan is needed for the detention basin. Typically, wetland planted basins require significant maintenance the first 3 years to ensure the plantings establish properly. For Village infrastructure projects with wetland plantings the Village holds the contractor to a 3 year maintenance program. The developer shall create an O&M plan for the basin and create a mechanism to

fund all required maintenance activities for the first 3 years. An ecologist with experience in wetland basins can produce this type of O&M plan.

*UPDATE: Developer's engineer advised in disposition letter that the developer is consulting with a senior ecologist to design the planting plan. They advised they will also develop an O&M plan. Comment will remain outstanding until the O&M plan is completed*

**Response: An operations and maintenance plan for wetland plantings is included as Sheet 2 of the Native Plantings Plan.**

- 02-15 Provide an exhibit showing the street light photometrics conform with Village Code. Provide a table comparing Village Code to what is proposed.

**Response: A Photometric Plan is included herein.**

- 02-19 MWRD Permit application - On sheet MW1 it appears the Stormwater Summary table has a mistake.

The required detention volume and provided volume numbers are in the wrong spots. Correct the table. *(Comment will remain to ensure when it comes time to submit the MWRD permit application that the permit information submitted is correct)*

**Response: Acknowledged.**

- 02-20 MWRD Permit application - On sheet MW1, there is a summary of responsibilities at the top right of the page. It mentions the Village of Western Springs taking ownership of the "dedicated areas." The Village will not be taking ownership of any property in this subdivision. We'll have easement rights and will maintain the water main but we aren't taking deed of any parcels within this development. Also, the LaGrange Highlands should be called out as the owner of the sanitary sewer main. The Lawn Avenue basin area should be included in the area total. This page needs to be updated. *(Comment will remain to ensure when it comes time to submit the MWRD permit application that the permit information submitted is correct)*

**Response: The permit application has been revised to remove the Village from taking ownership of any property. LaGrange Highlands has been called out as the owner of the sanitary sewer.**

### **Third Review Comments**

#### **Select Final Engineering Plan Comments (see plan markup for all comments):**

03-1. The development is seeking several variations from Village Code, Title 10 - Development Control Ordinance, Chapter 10 Subdivisions. The requested variations appear to generally be acceptable especially considering that the street is to be a privately owned and maintained street and that several of these variation requests were previously granted to the existing subdivision to the north of the development.

a. 10-10-7 Street Design Criteria

i. Pavement Width – Code requires 27 ft street width from face of curb to face of curb. The development proposes 23 feet.

ii. The proposed horizontal curve is less than the minimum 150 foot radius and includes reserve horizontal curves that don't meet Code.

iii. The proposed vertical curves are to be a minimum of 100 feet in length but the plans show 50 feet length vertical curves

b. 10-11-11 C. 2. – States streets are not to be used for Streets are not to be used for the storage of excess stormwater, ponding depths shall not encroach more than three feet (3') on the adjacent traffic lane and shall not remain flooded for more than eight (8) hours for any event less than or equal to the 100-year event. The proposed design does have street flooding across the full width of the roadway at the north end of the development, however this condition is unavoidable as the proposed roadway is to connect to the existing development roadway that is lower in elevation and currently floods during flooding events. The site plan grading has been revised since the previous submittal to ensure that driveway access to each



unit is maintained during a flooding event so all owners will be able to exit to Wolf Road during a flooding event. Overall it is Engineering Services opinion the street connection to the existing development is a positive for the new and existing developments so granting a variation for this condition would be appropriate.

**Response: Acknowledged.**

03-2. Sheet 7 of 19 – New retaining walls

- a. The plans have been updated to show new retaining walls along the west edge of the Lawn Avenue Detention Basin which will require the removal of the existing walls. However the structural design of this new wall and the other proposed walls are not complete and not provided. Complete wall details, elevations, and signoff by a licensed Structural Engineer is required.

**Response: Retaining wall plans designed by a structural engineer have been completed and are included herein.**

- b. Since the structural design is not complete it is not known if tiebacks or over excavation needed to construct the walls will be contained within the development property. Work needed to construct the new walls cannot take place on private property unless temporary or permanent easements are acquired. Construction limits behind the walls must be identified and contained within your property or copies of executed easements are to be provided.

**Response: Proposed wall to meet existing wall elevations but is offset horizontally to allow for construction of onsite tie backs as required by structural engineer.**

- c. Neighboring properties to the west cannot be flooded as a result of an interim construction condition that could occur if the old wall is torn down and the new wall is not yet complete. The plans must have provisions in place to temporarily protect the west property line to a pre-project elevation. The plans must identify a plan to address this issue.

**Response: The existing retaining wall will be removed in sections and the proposed wall be built at the same time to protect the property to the west.**

- d. The new and old walls appear to be misaligned at the northwest corner of the property. Clarify intent.

**Response: Proposed wall to meet existing wall elevations but is offset horizontally to allow for construction of onsite tie backs as required by structural engineer.**

03-3. Sheet 7 of 19 – Geometric comments

- a. Identify location of mailboxes on the plan. Village Code 10-10-15 states: *"Mailboxes shall be installed at such locations as recommended by the Plan Commission and approved by the Village Board, in conformance with the standards of the United States Postal Service."*

**Response: The location of the proposed mailboxes has been added to the plans. Details for the mailboxes and foundations are located on sheet 16.**

- b. Demonstrate the proposed turn around pad located at the north end of the development is adequate for delivery trucks to turn around and head out of the development. The placement is right next to the gate which would appear to make a traditional 3 point turn not possible for a truck. Provide autoturn exhibits showing the turn around works for a standard delivery truck. The pad will also need to be signed for no parking.

**Response: The pad at the north end of Heritage Court has been revised to a grasscrete pad per comment 60, Exhibit 1. The curb has been depressed in this area and a no parking sign has been added to the pad. An autoturn was completed showing that a delivery truck would not be able to make the traditional 3-point turn. The client has chosen to leave the pad size and location as is because Heritage Springs does not have a turnaround for deliveries.**

- c. The designated on-street parking spots provided adjacent to unit 7 do not work. The southern spot encroaches into the travel lane on a tight horizontal curve. These parking spots should be eliminated from the plans.

Response: The on-street parking spots have been removed from the plans.

- d. Restrict parking on the horizontal curve that is located near STA 4+00. Parked cars on east side would present a safety issue as they would block the northbound travel lane forcing traffic into oncoming travel lane and the parked cars could present a sightline issue as you head west into the curve due to the tight radius horizontal curve.

Response: "No Parking Signs" have been added to the north and east sides of Heritage Court.

#### 03-4. Sheet 8 of 19 – Grading Plan Comments

- a. The wall design of the detention area between units 20 and 21 must accommodate for overland flows that may occur if the twin 54" sewers are overwhelmed.

Response: The grade from the back of curb drains from east to west and the wall is lower than the back of curb. This will allow the overland flow to discharge directly into the detention basin.

- b. Re-evaluate grading near unit 23. See plan comments

Response: The grading around Unit 23 has been revised.

- c. Discuss layout of this detention area and the proximity to the roadway. The detention area should be maximized and placed as close to the roadway as possible as long as safety of the roadway users is maintained.

Response: The detention basin has a buffer from the proposed roadway to ensure safety if a vehicle was to unexpectedly leave the roadway. The buffer allows for the vehicle to recover or stop prior to falling in the stormwater storage area.

- d. Evaluate if placement of bypass piping can be moved further north away from the units. Repair work would require a large excavation that could compromise nearby patios or decks. Even a few feet northward would help.

Response: The bypass sewer was revised from the twin pipes to a 4'x6' concrete box culvert. This revision shrunk the footprint of the pipe and shifted it north away from the buildings.

#### 03-5. Sheet 9 of 19 – Utility Plan

- a. Per Heritage Springs HOA request, replace the existing flat grate that is prone to clogging with a vaulted frame and grate. A vaulted grate will be much less prone to clogging and will improve performance and reliability of both development's stormwater management systems.

Response: The frame and grate for the flat structure in Heritage Springs has been proposed to be a vaulted grate. See Trash Racks detail on Sheet 14.

- b. The plans show inlets proposed to be located on Heritage Springs property. These inlets need to be moved south so they are contained on Heritage Crossing's property. The roadway vertical curve needs to be adjusted so the low point is moved south so the inlets are placed on Heritage Crossing property.

Response: The vertical curve has been revised to move the low point onto Heritage Crossing property. The inlets have been relocated.

- c. Best Management Practice to place 2 inlets at low points in Roadway profiles. Recommend adding inlets at the two vertical curve low points for best long-term performance.

Response: Dual inlets have been added to both sides of the street at the low points in the site.

- d. Secure the bypass ditch area between the Wolf Road culvert and the twin bypass culverts.

Response: Flared end sections with grates have been added to both ends of the bypass pipe to secure it.

- e. Best Management Practices would place the proposed storm sewer mainline in a more accessible area. It is not recommended to run the storm sewer main between units 26 and 27 as currently shown.

**Response: The proposed storm sewer between units 26 and 27 has been relocated to run along Heritage Court.**

- f. Street lighting plans are absent. Plans need to include all lighting conduits, cables, controllers, and service location. Also, a light pole foundation and controller foundation details are needed and they need to be signed and sealed by a structural engineer.

**Response: A streetlighting plan has been completed by others and included herein.**

Select Final Plat Comments (see plat markup for all comments):

03-6. Village Code for Final Plat requirements was reviewed (10-10-3-F.). Several signature blocks need to be added. See marked up plat for a listing of missing signature blocks.

**Response: Missing signature blocks added.**

03-7. Easement rights are needed for LaGrange Highlands Sanitary Sewer District. Multiple sections of the plat text need to be updated to reflect their inclusion.

**Response: LaGrange Highlands Sanitary Sewer District added to easement provisions and certificate added.**

03-8. The plat appears to give a blanket easements over all outlots for utility companies. Have utilities prepared plans for the subdivision? Typically utility easements in the Village are five feet along side yards and rear yards. It would be advisable to try and contain utility mains within a defined corridor. This is what Code would appear to require as well (10-10-12).

**Response: Blanket easement eliminated, individual easements created and shown on separate sheet.**

Select Final Stormwater Management Plan Comments (see markup for all comments)

03-9. The narrative needs a section discussing the development of the HEC HMS modeling and results.

**Response: Stormwater Management Report will be forthcoming.**

03-10. Discuss how the hydraulic modeling impacted the subdivision grading plan.

**Response: The narrative in the Stormwater Management Report has been revised accordingly.**

**Response: Stormwater Management Report will be forthcoming.**

03-11. Provide in narrative discussion on the worst-case flooding scenario. Include exhibits sent to Engineering on 10/31/24 which illustrate stormwater storage in this worst-case scenario. Report should clearly state there is a net increase in stormwater storage despite the filling of the existing parking lot area.

**Response: The narrative in the Stormwater Management Report has been revised accordingly.**

03-12. Baxter & Woodman has completed their review. The comments are enclosed. Please address the comments with the next submittal.

**Response: Acknowledged.**

### **Developer Request to Vacate Lawn Avenue**

03-13. Engineering Services reviewed the October 10, 2024 email received from the developer in which the developer states their case for receiving the Lawn Avenue Detention property at no cost from the Village through vacation. The village has a right of way disposal policy which sets the price for private acquisition of Village Right of Way. The Policy does give the Village Board ability to waive all or part of the fees if it is warranted to do so. As a part of the proposed development, the developer is proposing to rebuild the basin so it can be deepened and made to store more stormwater. Their



current calculations indicate the basin capacity will effectively be doubled from 0.729 acre-ft to a proposed 1.64 acre-ft. Their cost estimate for the expected costs incurred to increase the detention basin's capacity appear to be reasonable. Engineering Services believes the increase in detention storage is a benefit to the Village and thus it would be appropriate to consider a waiver of the sale price for the right of way.

Response: Acknowledged.

#### **Final Engineering Plan Mark-Up Comments**

##### **Sheet 4**

1. Add note indicating 2 days advanced notice required for all work on private property. Provide contact for HOW on Plans.

Response: Note 1 has been added to Sheet 4.

2. CCDOTH provided you with plans showing the low-flow pipe runs to and is connected to the flared end section depict this existing storm sewer accurately per their plans.

Response: The location of the low flow pipe was not confirmed in the field. The approximate location has been added to the plans per the CCDOTH plans. The pipe will be removed during construction to allow for the extension of the box culvert.

3. Need to include provisions to ensure pedestrian walkway on Wolf Road remains open while construction activities are occurring. There is no sidewalk on the other side of Wolf Road. It's not safe to just close the sidewalk and leave pedestrians no where to walk around the construction work. Can't have pedestrians walking in wolf Road.

How will pedestrian access be maintained while the sidewalk is being removed and replaced? Provide details and language to ensure pedestrian access through the site in Wolf road right of way is maintained at all times.

Response: The existing sidewalk will remain in place during site construction. The construction entrance will utilize the existing apron and the gravel will be placed west of the existing apron.

4. Add callout for this disconnect too.

Response: A disconnect note has been added to the water service.

5. Callout 2' HMA full depth pavement patch adjacent to curb and gutter R&R removal. C&R R7R is required not "as necessary" should extend 2 feet past existing transition on both ends of the driveway. Callout dimension of C&G R&R on plans.

Response: A note has been added to the pavement removal area on Sheet 4. The curb removal dimension has been added to Sheet 7.

6. This note appears to make the removal of the existing storm optional work. It's required. Remove as necessary language.

Response: The storm sewer removal note has been revised accordingly.

7. You'll need to coordinate with ComEd to brace the power poles that are adjacent to the basin for the interim condition where the existing wall is removed and before the new wall is constructed and back filled. – Add note.

Response: A note has been added to Sheet 4.

8. Need to indicate somewhere that his manhole and new pond outlet flared end section needs to be installed immediately after the existing low flow pipe is removed. Temp grading and sediment control measures needed to grade existing basin to new outlet pipe for interim condition.

Response: A note has been added to Utility Plan Sheet 8 about immediate installation of proposed end section and manhole. Erosion control measures can be found on Sheet 6.

##### **Sheet 5**

9. Identify overflow paths on this plan sheet with note indication that must not be blocked by materials or soils, there is the bypass glow in tip of the bypass storm sewers and the swales near north side of property.

Response: Overflow paths are indicated on the plan and a note has been added that the flow paths must not be blocked.

10. Suggest keeping existing apron in place during mass grading and underground work. Place rock entrance at end of existing apron.

Response: The existing apron will be left in place during construction. The proposed rock entrance will be placed at the end of the existing apron.

11. Based on existing grades and the fact the basin retaining wall is being R&R silt fence is needed as marked in red along the property limits.  
**Response: Silt fence has been added to the locations noted on the mark up.**
12. Include 10/11/24 construction schedule in plans/ It has more detail than note 11.  
 Topsoil stockpile location conflicts with planned initial construction of units 8 thru 20 as detailed in 10/11/24 schedule and sequencing documents.  
**Response: A construction phasing plan has been completed. The plan includes the construction schedule noted above. The construction schedule indicates that the stockpile shall be located on units 8-11. The plans show this location.**
13. Basin stabilization needs to be immediately after grading is completed or temporary stabilization needs to be called out on these plans.  
**Response: Basin stabilization is indicated immediately after final grading on the estimated construction schedule. See Phasing for more detailed construction schedule. Temporary basin stabilization has been added to the construction schedule on Sheet 5.**
14. Update dates. No work will begin until 2025 based on the current status of the project.  
**Response: The construction schedule dates have been revised.**
15. Aggregate check dam or some means to try and capture sediment before it flows northward during heavy rain events while pond is in progress and unsterilized. BMP can't worsen flooding.  
**Response: Rolled erosion control has been added at the north property line to capture sediment before entering into Heritage Springs.**

## **Sheet 7**

16. Remove separate Sidewalk gates.  
 Move sidewalk away from street creating a parkway near the gate. Then the gate can open without impeding the sidewalk. With revised unit placement there is open space to move sidewalk away from roadway here and better accommodate the gate. Add stop here for gate signs and stop bars on both sides of gate.  
 Gate shall have reflectors on both sides so it is visible at night.  
**Response: The sidewalk gate has been removed from the plans. The sidewalk has been moved away from the street near the gate. Stop bars and "Stop here for Gate" signs have been added to the plan.**
17. Turnaround a good idea, but with gate presence a 3-point turn isn't practical. Turn around needs to be moved south away from the gate so it can be usable. Confirm with autoturn that it is usable for delivery trucks.  
**Response: The pad at the north end of Heritage Court has been revised to a grasscrete pad per comment 60, Exhibit 1. The curb has been depressed in this area and a no parking sign has been added to the pad. An autoturn was completed showing that a delivery truck would not be able to make the traditional 3-point turn. The client has chosen to leave the pad size and location as is because Heritage Springs does not have a turnaround for deliveries.**
18. Grades needed to confirm design fits existing topography. Not much room between back of curb and property lines.  
 Existing curb and gutter needs to be replaced with depressed curb and gutter placed.  
**Response: Grades have been added to the offsite parking stalls on Sheet 8. The curb and gutter have been revised to be depressed curb and gutter on Sheet 7.**
19. Turn off on final plans.  
**Response: The site distance triangle has been turned off the final engineering plans.**
20. Village preference would be to remove existing guardrail and chain-link fence if it is safe to do so. CCDOTH will determine whether this is feasible.  
**Response: Acknowledged.**
21. Add signs on this plan sheet, stop sign at Wolf, multiple no parking this side signs for whatever side is going to be no parking. Stop here for gate signs.  
 Include detail for a street sign at Wolf Road. The village uses vertical concrete pillars with retroreflective sign panels green background and white text (an example can be viewed just south of the Development at Park Place and Wolf)  
 Clarify which side of street is no parking. Show no parking signs on plans.  
 Identify location of mailboxes and show on plan. Include mailbox detail and foundation detail.

- Response: Stop signs have been added at Wolf Road and at the stop bars for the gate. No parking signs have been added to the north and east side of Heritage Court. Mailboxes have been added to the plans and details have been added to Sheet 16.
22. Regular white 6" crosswalk, not diagonal lines  
Show stop bar.  
Response: The crosswalk has been revised to show perpendicular lines and a stop bar has been added.
23. These parking spots do not work. The south one is encroaching on the adjacent travel lane. Remove them.  
From the unit 7 driveway to 25gt north of the PR of the horizontal curve shall be marked as no parking on the east or north side of the street. Parking can't be allowed as it would present sight-distance challenges if parked cars were blocking the travel lane. Show signage on plans.  
Response: The parking stalls have been removed adjacent to Unit 7. The entire length of Heritage Court on the north and east sides has been designated as no parking.
24. Same comment on walls and need to contain all work in your property.  
Response: All retaining wall construction will be located on site. If structural engineer wall design requires a wall to be set back to ensure construction with the property the plan will be adjusted accordingly.
25. Dimension 9 ft width at start of stalls.  
Response: The parking stall width has been dimensioned on the plans.
26. New 11-6-4 plans reduce stormwater storage here. Confirm loss of storage is accurately represented in storm water report.  
Response: See stormwater report enclosed herein.
27. ConEd poles may need bracing when old wall is removed and new wall not yet build.  
Response: Note has been added to Sheet 4 to coordinate with ComEd on bracing of poles during wall construction.
28. Top of basin retaining wall is higher than ground at property line along west side of the property. In the interim condition if the wall is removed and the new wall is not installed, what will protect the neighboring properties should a flood event occur? A temporary flood wall is needed with a top of wall elevation equal to the same elevation as the existing basin retaining wall. Cannot have these properties flooded due to a construction sequencing issue.  
The wall is not designed. But is over excavation is needed to construct the wall or install tiebacks, these items cannot extend onto neighboring properties unless a construction easement is obtained. The limits of excavation needed to construct the wall need to be clearly delineated on these plans to ensure all work is contained within the property.  
The new wall height must at a minimum match existing top of wall elevation and must not extend too high such that new negative flooding impacts to existing townhomes occur. Provide a comparison table indicating the existing top of wall elevation and proposed top of wall elevation at each spot elevation location on Sheet 8.  
Response: The proposed retaining wall will be built in segments. The existing retaining wall will be removed where the proposed wall is under construction. A temporary floodwall will not be required. The proposed retaining wall location has been pulled off the west property line per recommendation by the structural engineer to allow for room for over excavation and tiebacks. Existing wall elevations have been added to the retaining wall table on Sheet 8.
29. Dimension substandard driveway length.  
Response: Driveway lengths have been added to Sheet 7.
30. Gate details need to be in this plan set.  
Response: Gate details have been added to Sheet 16 of the plans.
31. Why is new retaining wall misaligned with existing the wall.  
Response: The proposed retaining wall location has been pulled off the west property line per recommendation by the structural engineer to allow for room for over excavation and tiebacks.

#### **Sheet 8**

32. Nee sidewalk grades every 25 feet on both edges of proposed sidewalk. Sidewalk shall be 1.5% cross slope max.



- Response: Spot grades have been added to the back of walk at the center of each driveway. Adding spots on both sides of the walk would make the plans illegible. The typical section detail on the sheet clearly indicates that sidewalks shall be constructed at a 1.5% cross slope.
33. Callout depressed C&G limits at each driveway. Need to ensure sidewalk is ADA compliant through driveways.  
Sidewalk shall be 7" through driveways.  
Callout 1.5% max slope sidewalk cross slope on the sheet.  
Response: The proposed curb and gutter for the site is a mountable curb; therefore, it does not need to be depressed. The sidewalk detail on Sheet 14 indicates that the thickness shall be 7" in driveways. The typical section on this sheet indicates a max sidewalk cross slope of 1.5%.
34. This area needs to remain open. Can't have homeowners or the HOA putting stuff here and changing grade. Do declarations clearly state that nothing may be placed in the outlots?  
Response: Language has been added to the Final Plat and will be part of the CCR's for the HOA.
35. Can bypass pipes be shifted northward away from the units? If repairs to sewer are ever needed, the excavation required could compromise the decks or patios. Even shifting a few feet would be an improvement.  
Response: The bypass pipe was revised from 2~54" culverts to a 4'x6' concrete box culvert. This made the footprint for the bypass pipe smaller and shifted it away from the house.
36. Why are all callouts rotated this way? Please rotate the callouts 90 degrees clockwise.  
Response: The plans have been revised so all callouts are rotated properly.
37. Confirm that the pavement design is adequate for the anticipated traffic volumes and that the pavement was designed with a 20-year design life.  
Response: A pavement design was calculated for the 20-year design life. See IDOT pavement design worksheet included herein. Sheet 8 has been revised to reflect the revised pavement design.
38. Grading here is challenging to construct. Likely will end up just sending runoff towards unit 23. It would appear FF of unit 23 could be raised to prevent condition where yard is higher than FF elevation. Only 3" difference per plan on grade at edge of slab and tip of slab if a yard CB is added could drop grades along wall further and get rid of somewhat steep side yard slopes along wall south of unit 23.  
Response: The grading around unit 23 has been revised.
39. Swale to outlet over top of wall? Better for wall long term if swale terminates at a CB and outlet pipe goes through bottom of wall.  
Response: A catch basin has been added to the swale to collect runoff before it over tops the wall.
40. Wall design here should accommodate overland bypass flows coming from the east. Depress curb and gutter if roadway where bypass flows would flow too.  
Response: The bypass pipe has been sized to carry the flow from the critical duration storm. The overland flood route would only carry the flow from that storm if the bypass pipe failed.

## **Sheet 9**

41. Per Heritage Springs HOA request and to improve functionality of the existing system, replace the existing flat storm manhole grate with a vaulted grate that will be less prone to clogging than the existing flat grate.  
Response: A new vaulted grate has been proposed for the existing flat top structure in Heritage Springs. See Sheet 14 for Trash Racks detail.
42. Clarify that connection shall be cut in tee. Should be able to isolate without having to shut anyone off.  
Response: A note has been added calling out that the installation shall be a cut in tee.
43. Adjust roadway vertical curve so that these inlets are located on your property and not the other subdivision property. These are your responsibility to maintain.  
Also, best practice for roadway low points has dual inlets on both sides of the street. Incorporate a second 2 ft inlet on both sides of the street at the low point.

- Response: The vertical curve has been revised to move the inlets to our property. A second inlet has been added at the low point.
44. What is the status of the public utilities? Will no mains for phone, cable, gas, and power be needed? The Village has not received any permits from utility companies for this project. Separate Village utility permits will need to be obtained from the Village to construct the new utilities.  
Response: The public utilities have not been contacted yet because the plans have not been finalized. The permits with the utility companies will be forwarded upon receipt.
45. Move valve closer to connection point. Otherwise not means to pressure test the new installed main. If less than 20 feet can live with swabbing and no pressure test. Place valve near property line. Hydrant location is fine as proposed assuming coverage is adequate (provide hydrant coverage exhibit is a prior comment)  
Response: The valve was moved closer to the property line, as requested.
46. Callout water main material on this page.  
Response: The watermain material has been added to the plan.
47. The Village has advised developer on each review the proposed aluminum pipe is not acceptable. Use appropriate class of RCP.  
Concrete pipe riser of for inlets.  
Response: The aluminum pipe has been revised to be a concrete box culvert. Inlets have been revised to concrete pipe riser.
48. Show proposed privacy fence somewhere in plans if desired?  
Response: We are eliminating all the fencing we proposed on our site. The only fencing we are doing is the replacement of the fences at 5605 & 5609 Lawn.
49. The safety of this open-channel flow area needs to be more thoroughly thought about. A fence with locked gate for access is needed around the entire open channel section.  
Response: Flared end sections with grates have been added to both ends of the box culvert to prevent bystanders from going into the system.
50. Provide a street lighting plan sheet. Show each light pole, conduits, cables, controller, service location, etc. Need light pole foundation detail. Detail needs to be signed by a structural engineer.  
Response: Lighting details have been added to Sheet 15 of the plans.
51. Bad idea long term to run in tiny side yard. Difficult for equipment to access. Recommend placement in street middle of south/westbound lane.  
Response: The storm sewer has been relocated from the side yard to the street.
52. Plans callout D1 and F1 as PVC riser structures. These structures must be rated for traffic loading. Concrete structures meeting IFOT specifications shall be used. Roadway low point should align with overland flow bypass plan. Recommend placement of 2 structures at the low point.  
Callout precast wyes for blind tie ins to barge diameter storm sewer.  
Response: All storm structures at the low points have been revised to be concrete. A second inlet has been added to each side of the street at the low point. A wye connection is no longer needed as the bypass pipe has been revised to a concrete box culvert.
53. 0% underdrain should extend to this area too.  
Response: The underdrain has been extended to the southeast corner of the detention basin.
54. Provide inverts for 0% slope underdrain at each cleanout.  
Response: Inverts have been added at each cleanout connected to the underdrain.

#### **Sheet 10**

55. Add note that all downspouts must discharge at grade and the discharge must be within 5 ft of the building wall per Village Code.  
Response: Note 5 has been added to Sheet 10.
56. Once parking spots are removed re-align water main so crossing is near perpendicular under the storm culverts. Watermain shall be in steel casing pipe that is appropriately sized with spacers and filled with pea gravel or other suitable material to fill void in casing pipe. Provide details for this work.  
Response: A 16" steel casing pipe has been called out at the crossing with the box culvert. The details have been added to Sheet 13 of the plans.

57. Sanitary sewer cleanout detail is missing. Include in detail sheet should be rated for traffic loading since they are all in driveways.  
**Response: A traffic rated sanitary cleanout detail has been added to Sheet 15.**
58. Keep WM just outside County ROW. Better to keep it away from roadway culvert and power poles.  
**Response: The proposed watermain has been relocated outside of the ROW.**
59. PC to 12" south of culvert. Valve on new 8 in PC vault. Connection min 10 ft from culvert, preferable if 12" water main is back up at normal depth.  
**Response: A pressure connection has been added to the connection to the existing 12" watermain. The connection has been placed 15 feet from the existing culvert.**
60. Casing pipe void to be filled and ends sealed.  
**Response: Note 3 on Sheet 10 has been revised.**
61. Sanitary manhole needs to be moved.  
**Response: The sanitary manhole has been relocated away for the storm bypass pipe.**

#### **Sheet 11**

62. Callout each pipe w/ material and type.  
**Response: Pipe materials and types have been added to the profile.**
63. Callout 5.5 ft depth minimum.  
**Response: Watermain minimum depth has been added to the profile.**
64. No sump on sanitary manholes. Provide bench detail too.  
**Response: The sanitary manholes do not have sumps in them. The manhole symbol is accounting for the bottom of the manhole concrete thickness. The bench is included on the sanitary manhole detail on Sheet 15.**

#### **Sheet 12**

65. How will trucks and equipment cross over this swale to get to north side?  
Need temp stabilization of ditch called out on plan.  
When is the ditch removed? After the bypass pipes are fully installed? Construction sequencing would be helpful given the complicated nature of the stormwater system.  
**Response: The existing rip rap from the existing swale will be used in the temporary swale. A note stating this is on Sheet 12. Rolled erosion control has also been added to the swale to collect sediment. Temporary culverts have been added to allow construction traffic to cross the interim swale while the bypass system is under construction. The bypass system will be installed upon completion of the detention basin.**

#### **Sheet 13**

66. Spec. Specific casing pipe material and class.  
Provide casing spacer detail.  
I assume the bypass sewer will go in first.  
**Response: See Sheet 13 for casing pipe material and class. A casing spacer detail has also been added to Sheet 13.**

#### **Sheet 14**

67. Add two continuous #4 bats, epoxy coated. Curb thickness (D) 10" min.  
**Response: The Curb and Gutter detail has been revised accordingly.**

#### **Sheet 15**

68. Note should indicate all services shall be a factory wye. No field cutting or the main to make a service connection will be allowed.  
**Response: Note 5 has been added to the sanitary service riser detail.**
69. Village requires CA-7 not CA-6.  
**Response: The note on the trench section detail indicates that CA-7 is required.**



Dennis M. Vick

### **Final Plat Mark-up Comments**

#### **Sheet 1**

1. Why are only these lots hatched?  
**Response: Building hatching amended.**
2. Not in legend. What is this for? Appears to be for storm sewer but uses outdated alignment. Should contain structures on both ends of bypass pipe.  
**Response: P.U. & D.E. easements and hatching added to plat and legend.**

3. Culvert end section extends onto your property. Cook County to maintain or HOA to maintain? Not practical to split maintenance based on where property line bisects culvert and retaining walls maintenance needs to be clearly outlined on this plat with easement rights added for Cook County Highways if applicable.  
**Response: Separate P.U. & D.E. created and granted to C.C.H.D.**
4. Separate plat for County DOT vacation?  
**Response: Do not need a separate plat for dedicating right of way to Cook County. Added Cook County signature block on Sheet 4.**
5. LaGrange Highlands Sanitary District will need easement rights to access the sewer main.  
Confirm all water main is located within the easement.  
Re-number outlots now that you added a unit back. Start with 30  
Parking area should be in ingress-egress easements.  
Provide all documents that are indicated as (separate document) that this plat is calling on.  
**Response: All comments within the rectangular outline in the lower left corner of the sheet addressed. McNaughton to provide missing documents.**

## **Sheet 2**

6. In accordance with Village Code 10-10-3-f.2-c-(3), the following signature blocks need to be added:  
(F) the village engineer as to approval of the required engineering drawings  
**Response: Signature block added.**  
(G) The county clerk as to unpaid taxes  
**Response: County Clerk does not need a certificate. Cook County stamps the plat.**  
(H) Modify the Village Clerk and Village Board signature blocks to have a language that states acceptance of all easements rights  
**Response: No Changes per email dated 12/13/2024**  
(J) State of Illinois chief highway engineer when the subdivision includes or is adjacent to a state highway or local highway authority when property involves access to all other roadways.  
**Response: Cook County Highway Department certificate added.**  
In this case the local authority would be the Cook County Highway Department.  
(K) Local department of health if property is not connected to public sewer system  
In this case the owner of the public sewer system would be the LaGrange Highlands Sanitary District.  
**Response: LaGrange Highlands Sanitary Sewer District addressed in easement provisions, certificate added.**  
(L) Mortgagee's consent to all easements, dedications and other rights granted or reserved to the Village and other third parties.  
**Response:**  
**Response: No mortgage on the property**
7. List items village (water main) and highlands sanitary (sewer main) are responsible for, and all others are HOA. Water service lines and box HOW or individual unit.  
**Response: Responsibility of the H.O.A. addressed.**
8. I don't see this ETBE callout on any linework. Only saw in legend and the 3 units hatched.  
**Response: Blanket Easement provisions eliminated, and P.U. & D.E. provisions added.**
9. LaGrange Highlands Sanitary District needs to be listed.  
**Response:**
10. There are PU and DE shown but then this blanket easement appears to give carte blanche to utilities to place their facilities wherever in the outlots. Should utilities be contained to certain areas within the outlots so you don't end up with chaos?  
Village code calls for 5 ft utility easement along rear and side yard property lines.  
**Response: Blanket easement provisions have been removed from the plat.**
11. Need language about not interfering with surface drainage swales, overland flow routes, drainage structures and pipes, etc. We can't have homeowners disturbing drainage patterns with landscaping work.  
**Response: See PUDE provisions.**

12. This needs to cover all outlots as stormwater management infrastructure exists on each outlot.  
**Response: Stormwater Management Easement provisions not amended. Waiting for a response from client.**
13. Dormant SSA would be a better tool than a lien on and HOA.  
**Response: Stormwater Management Easement provisions not amended. Waiting for a response from client.**
14. Reference declaration document as that will have maintenance responsibilities for stormwater and other items not listed on the plat.  
**Response: Stormwater Management Easement provisions not amended. Waiting for a response from client**
15. Update date to 2026 or whatever renewal is.  
**Response: 10. Surveyor's license expiration date updated**
16. LaGrange Highlands Sanitary needs to be here.  
**Response: Certificate added to plat.**

If you have any questions or need additional information, please contact me at 708-326-4961 x228 or [dvieth@dtekcorp.com](mailto:dvieth@dtekcorp.com). Thank you.

Sincerely,  
DESIGNTEK ENGINEERING, INC.



Denise M. Vieth, P.E.  
Project Engineer

Encl.

Cc : John Barry – McNaughton Development – (via email)  
File

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**Heritage Crossing  
General Plan Resubmittal Responses  
December 13, 2024**

**General**

**1. The Applicant shall comply with all of the applicable federal, state, county, local and special district laws, ordinances and regulations, including the provisions of the Village's Municipal Code, relative to the construction and maintenance of the Development, except as otherwise modified by Village approvals.**

*Agreed. With this submittal we would request that the village engineer sign-off on our MWRD application.*

**2. The Applicant shall revise Declaration of Covenants, Conditions and Restrictions for the homeowner's association in accordance with comments provided by the Village Attorney (Attachment 8) and shall file the Declaration with the Cook County Clerk's Office, Recording Department prior to the sale of any portion of the Property to any other person. The Declaration shall require that at the closing of each dwelling unit, the Applicant shall allocate \$600.00 (or an amount equal to three (3) months' Community Assessment) and pay said amount into a "Capital Reserve" fund, as defined and required by the Declaration, for maintenance reserve account for the benefit of and use of the homeowner's association for maintenance purposes consistent with the Declaration.**

*Agreed.*

**3. Prior to the issuance of a building or development permit, the Applicant shall submit a construction schedule, routing, construction staging, restoration plan and phasing plan with map and plan exhibits, which are in conformance with the final set of Village approved engineering and construction plans for the Development. These plans shall identify construction access routes, temporary detours, regular street cleaning intervals and refuse removal and other appropriate safety, restricted access and "good neighbor" practices. Standard Village construction hours shall apply except as otherwise permitted by the Village Manager.**

*Agreed. This plan is part of the revised DesignTek Engineering submittal*

**4. Update Plat of Abrogation, Plat of Subdivision, and Plat of Vacation per the comments of the Village Engineer and Village Attorney (Attachment 9).**

*Refer to the DesignTek Correction Letter*

**5. The Applicant's proposes to maintain the current Wolf Road access point as the primary point of ingress and egress for the Development, subject to Cook County approval of certain Wolf Road right-of-way modifications (i.e., required Project-related reconfiguration work to Wolf Road that may include a deceleration / turning lane) and**

**modifications to the existing drainage culvert improvements that will allow it to construct the Development consistent with the current Site Plan. The Village's consideration of approval of the Development is conditioned on Cook County's approval of the current Wolf Road access point as the primary point of ingress and egress for the Development based on the current Site Plan and the Applicant's agreement to abide by the conditions of approval required of the Applicant by Cook County relative to the Wolf Road right-of-way modifications and modifications to the existing drainage culvert improvements. The Applicant, at its cost, shall be responsible for entering into all easements, maintenance agreements and other binding documents with Cook County and completing the Wolf Road right-of-way modifications and any modifications to the existing drainage culvert improvements. Other than the Village's plan review process, the Village shall not be obligated to participate in the Cook County required Wolf Road right-of-way modifications and modifications to the existing drainage culvert improvements that are necessary to construct the Development under the current Site Plan. That will allow it to construct the Development consistent with the current Site Plan. In the event Cook County's does not approve of the current Wolf Road access point as the primary point of ingress and egress for the Development, the Applicant will have to petition for an amendment to the planned development ordinance and present a revised Site Plan with a modified point of ingress and egress for the Development for review and consideration by the Plan Commission at a public hearing and then review and consideration by the Village Board.**

*As of the time of this resubmittal the Cook County Highway Department has not issued a full review on our proposed access request. That full review is expected within the week. It is known that the Highway Department will be requesting that the village accept the maintenance of the new 4 x6 concrete through the site.*

*In the event that the Highway Department does not approve the Wolf Road access the Applicant acknowledges that it will have to petition for an amendment to the planned development ordinance.*

**6. Prior to the issuance of a building or development permit, the Applicant shall enter into a Maintenance and Development Agreement with the Village, as prepared by the Village Attorney and approved by the Village Board, which includes conditions for the construction and long-term maintenance of the Development consisting generally of the following items:**

- a. Prior to the issuance of a building or development permit, the posting of an irrevocable letter of credit or other form of security with the Village to secure the completion of the required SSA Maintained Improvements and the landscape improvements for the Development (the "Developer" Security"). The Developer Security shall be in a form acceptable to the Village Attorney and of a dollar amount to be determined by the Village Engineer and shall be managed by the Village in accordance with Subsection 10-10-19(2) (Land Dedications and Completion, Maintenance and Acceptance of Improvements; Posting of a Bond, Cash, or Other Securities) of the Municipal Code;**

*Agreed. However, the applicant is requesting a demolition permit for the existing building prior to this instance.*

- b. The posting of a two-year maintenance bond (performance and payment bond) for the SSA Maintained Improvements and the landscape improvements;**

*Agreed.*

- c. Prior to the issuance of a building or development permit, the submittal of construction access plans for the Development requiring the Applicant and all of its employees, consultants and development and construction crews to use Wolf Road as the primary point of ingress and egress until the required Project-related reconfiguration work to Wolf Road and the drainage culvert area is commenced. The alternate point of ingress and egress to the Development will be 55th Street and the existing Heritage Court within the Heritage Springs Subdivision;**

*Agreed.*

- d. The Applicant shall either enter into a private tow company contract to enforce the community parking spaces with the Development or enter into a private parking / private street enforcement agreement with the Village that will allow for the posting of appropriate parking regulation signs and vehicle speed signs to enable Village police officers to issue parking tickets and traffic citations to enforce the parking and traffic regulations of Heritage Court;**

*Agreed.*

- e. At the request of the Applicant and the homeowners association for Heritage Springs Subdivision, the Village will consider approving an amendment to the planned development ordinance granted for Heritage Springs Subdivision to allow for additional on-street parking spaces and the operation of the swing gate and such other requested amendments that are necessitated by the Development and the Village will also consider entering into a private parking / private street enforcement agreement that will allow for the posting of appropriate parking regulation signs and vehicle speed signs to enable Village police officers to issue parking tickets and traffic citations to enforce the parking and traffic regulations of Heritage Court within the Heritage Springs Subdivision;**

*Agreed.*

- f. Prior to the issuance of a building or development permit, the submittal to the Village of a fully executed agreement with Cook County for perpetual maintenance of the Project-related roadway structures and all infrastructure improvements within the portion of the Wolf Road right-of-way, as required by Cook County;**



*Agreed. As of the time of this resubmittal the Cook County Highway Department has not issued a full review on our proposed access request. That full review is expected within the week. It is known that the Highway Department will be requesting that the village accept the maintenance of the new 4 x6 concrete through the site.*

*The applicant is requesting a demolition permit for the existing building prior to this instance.*

- g. Per Section 10-11-11 (Stormwater Management Requirements For All Developments)(F) of the DCO, prior to obtaining any type of building or site development permit for the Project, the Applicant shall execute and enter into a stormwater management facilities maintenance agreement (“stormwater maintenance agreement”) with the Village, as prepared by the Village Attorney and approved by the Village Board, relative to the stormwater drainage facilities located on the Property, which facilities shall be the responsibility of the Applicant and its successor owners (i.e., the Association). Within the stormwater maintenance agreement, the Applicant shall guarantee that the Applicant and all of the successor owners of the Property will maintain the stormwater management facilities and the stormwater drainage system and provide to the Village periodic written reports on stormwater management facilities monitoring and maintenance. The stormwater maintenance agreement shall also specifically authorize representatives of the Village to enter onto the Property for the purpose of inspections of the stormwater drainage system. Such agreement shall be recorded with the CCCORD. The stormwater maintenance agreement shall include a schedule for regular maintenance of each aspect of the Property's stormwater drainage system and shall provide for access to the system for inspection by authorized personnel of the Village. The stormwater maintenance agreement shall also stipulate that if the appropriate authorized personnel of the Village notify the property owner in writing of maintenance problems which require correction, the property owner shall make such corrections within thirty (30) calendar days of such notification. If the corrections are not made within this time period, the Village may have the necessary work completed and assess the cost to the property owner.**

*Agreed however, as of this date the Highway Department will be requesting that the village accept the maintenance of the new 4 x6 concrete through the site.*

- h. Revised the declarations to exclude charcoal grills on the proposed balconies.**

*Agreed. We have submitted a previous draft of changes to the covenants requested by the village attorney with some notes. Upon confirmation on those notes we can add this comment to the covenants.*

- 7. The site plan must be updated to include all labels depicting all building setbacks.**

*Refer to BSB Correction Letter of 12/6/2024*

**8. The individual dwelling units and platted lots within the Development shall not be permitted to request variations from the Village's Municipal Code that are unique and specific to the individual dwelling unit and lot owner. Amendments to the planned development ordinance that are not unique and specific to an individual dwelling unit and a specific lot owner may be applied for and presented to the Village in accordance with the applicable provisions of the Municipal Code.**

*Agreed.*

**9. Correct all inconsistencies between plats (ex. site plans showing seven guest parking spaces between units 23 and 24, whereas the engineering plans show six spaces).**

*Refer to BSB Correction Letter of 12/6/2024*

### **Engineering**

**10. Written confirmation from Heritage Springs establishing access rights must be submitted prior to Village Board consideration. It is acknowledged that this item is being worked on and will be provided when completed.**

*Access agreement with Heritage Springs is included in this submittal.*

**11. Location of safety rail on top of the retaining walls is shown on geometric plan, but a detail and structural design and calculations for the safety rail are still needed to ensure the rail is adequate and meets applicable codes.**

*Rail location and detail are included on the structural engineering drawing*

**12. New sidewalks are still required along the Wolf Rd. and Park Pl. frontage per Village code. Place replacement Wolf Road sidewalk along entire property frontage. Placement must be as far from road as practical but will defer to Cook County Highway Department as they will review placement and issue the permit for the work. On Park Place, place the sidewalk one foot inside the public right of way along the southern edge of the development. Sidewalk shall dead end at west terminus. All new sidewalk shall comply with IDOT and ADA standards for slopes. The northwest corner of Park Place and Wolf Road sidewalk ramp shall be removed and replaced.**

*As of the time of this resubmittal the Cook County Highway Department has not issued a full review on our proposed access request. That full review is expected within the week. The Park Place sidewalk has been added to both the DesignTek and BSB plans. It is proposed along the right-of-way line but reconfigured around the existing subdivision sign.*

**13. The placement of sidewalk on Park Pl. will require the movement of the Ridgewood subdivision sign. The relocation of the sign must be addressed with the next plan submittal. Provide Ridgewood Civic Association approval of the sign design and sign placement.**

*The Park Place sidewalk has been added to both the DesignTek and BSB plans. It is proposed along the right-of-way line but reconfigured around the existing subdivision sign.*

**14. The Applicant' engineer must provide accurate calculations showing the bypass system is adequate to handle all bypass flows.**

*Refer to the DesignTek Correction Letter*

**15. The Applicant must provide accurate calculations that show the rate of flow of the bypass system is equal to or less than the current rate of all bypass flows (low flow and overland). This will ensure bypass stormwater does not reach the detention basin faster than it currently does under the existing conditions.**

*Refer to the DesignTek Correction Letter*

**16. The Village will not accept the twin 54" aluminum pipes that are proposed. Reinforced concrete pipes or precast reinforced concrete box culverts shall be used.**

*Refer to the DesignTek Correction Letter*

**17. A detailed operations and maintenance plan is required for the enclosed bypass system. Provide this operations and maintenance plan for Village review. It will be must to be incorporated into the final plat and the declaration document.**

*Refer to the DesignTek Correction Letter.*

*As of the time of this resubmittal the Cook County Highway Department has not issued a full review on our proposed access request. That full review is expected within the week. It is known that the Highway Department will be requesting that the village accept the maintenance of the new 4 x6 concrete through the site.*

**18. The end section of the bypass pipes need to be designed in a way that prevents access inside the pipes by unauthorized persons. The end section should be designed to prevent this from happening while at the same time not becoming a maintenance problem with debris collection.**

*Refer to the DesignTek Correction Letter.*

**19. Wetland plantings plan is required to be used with the volume control retention system needed to be designed by a licensed / certified ecologist and reviewed by the Village prior to the issuance of any site development permit. This plan must also include a maintenance plan**

*Native seed mix details and maintenance plan is now provided in a plan by Gary R. Weber & Associates pages L1.1 & L1.2*



**20. Structural design plans and licensed structural engineer seal for the retaining wall is required. The developer indicated they are being worked on and will be provided when available.**

*Structural engineering plans for the retaining wall by Virgilio & Associates are included in this submittal*

**21. An operations and maintenance plan is needed for the detention basin. The developer shall create an O&M plan for the basin and create a mechanism to fund all required maintenance activities for the establishment period of three to five years. A licensed/ certified ecologist with experience in wetland basins must produce this type of O&M plan for Village review and approve prior to the issuance of any site development permit.**

*Wetland maintenance plan is now provided in a plan by Gary R. Weber & Associates pages L1.1 & L1.2*

**22. Provide an exhibit showing the street light photometrics conform with Village Code for Village review prior to the issuance of any site development permit.**

*A photometric plan including pole foundation details and conduit details are provided within the DesignTek submittal plans*

**23. The plans have been updated to show new retaining walls along the west edge of the Lawn Avenue Detention Basin which will require the removal of the existing walls. However, the structural design of this new wall and the other proposed walls are not complete and not provided. Complete wall details, elevations, and signoff by a licensed Structural Engineer is required.**

*The existing west wall along the detention basin is being replaced per the structural engineering plans by Virgilio & Associates which are included in this submittal*

**24. Since the structural design is not complete it is not known if tiebacks or over excavation needed to construct the walls will be contained within the development property. Work needed to construct the new walls cannot take place on private property unless temporary or permanent easements are acquired. Construction limits behind the walls must be identified and contained within your property or copies of executed easements are to be provided prior to the issuance of any site development permit.**

*Tiebacks and excavation of walls to remain onsite per the structural engineering plans by Virgilio & Associates which are included in this submittal*

**25. Neighboring properties to the west cannot be flooded as a result of an interim construction condition that could occur if the old wall is torn down and the new wall is not**

**yet complete. The plans must have provisions in place to temporarily protect the west property line to a pre-project elevation. The plans must identify a plan to address this issue.**

*Refer to the DesignTek Correction Letter.*

**26. The new and old walls appear to be misaligned at the northwest corner of the property. Clarify intent.**

*Refer to the DesignTek Correction Letter.*

**27. The wall design of the detention area between units 20 and 21 must accommodate for overland flows that may occur if the twin 54” sewers are overwhelmed.**

*Refer to the DesignTek Correction Letter.*

**28. Replace the existing flat grate that is prone to clogging with a vaulted frame and grate. A vaulted grate will be much less prone to clogging and will improve performance and reliability of both development’s stormwater management systems.**

*Refer to the DesignTek Correction Letter.*

**29. The plans show inlets proposed to be located on Heritage Springs property. These inlets need to be moved south so they are contained on Heritage Crossing’s property. The roadway vertical curve needs to be adjusted so the low point is moved south so the inlets are placed on Heritage Crossing property.**

*Refer to the DesignTek Correction Letter.*

**30. Secure the bypass ditch area between the Wolf Road culvert and the twin bypass culverts.**

*Refer to the DesignTek Correction Letter*

**31. Street lighting plans are absent. Plans need to include all lighting conduits, cables, controllers, and service location. Also, a light pole foundation and controller foundation details are needed, and they need to be signed and sealed by a structural engineer.**

*A photometric plan including pole foundation details and conduit details are provided within the DesignTek submittal plans*

*Refer to the DesignTek Correction Letter*

**32. The narrative needs a section discussing the development of the HEC HMS modeling and results.**

*Refer to the DesignTek Correction Letter*

**33. Discuss how the hydraulic modeling impacted the subdivision grading plan.**

*Refer to the DesignTek Correction Letter*

**34. Provide in narrative discussion on the worst-case flooding scenario. Include exhibits sent to Engineering on 10/31/24 which illustrate stormwater storage in this worst-case scenario. Report should clearly state there is a net increase in stormwater storage despite the filling of the existing parking lot area.**

*Refer to the DesignTek Correction Letter*

**35. Based on our calculations, and assuming the Contech pipes have a similar Manning's n to RCP, the design of the dual culverts suggests a full-flowing velocity of 14 ft/s, well above the acceptable maximum velocity. Provide documentation that 11 ft/s is the maximum flow velocity through these pipes.**

*Refer to the DesignTek Correction Letter*

**36. Provide calculations for the riprap sizing at the outfall of the dual culverts. The riprap gradation, shape and area do not appear to match the design provided by the Illinois Urban Manual. Furthermore, the detail provided (IL-610 on Sheet 6) is missing dimensions.**

*Refer to the DesignTek Correction Letter*

**37. A fire hydrant spacing, and coverage exhibit was requested to confirm compliance with Village Code. It has not yet been provided.**

*Refer to the DesignTek Correction Letter*

**38. Provide grading near the property line north of Unit 14 to prevent overland flow from continuing onto the Heritage Springs property.**

*Refer to the DesignTek Correction Letter*

**39. Prior comments on the proposed gate have not yet been addressed. In addition to the prior comments, design of gate shall ensure gate electrical and control equipment is elevated one foot above flood elevation. Gate must work at all times.**

*Detail on the gate equipment have been added to the DesignTek plan and note in the Correction Letter*

**40. Relocate the depressional area from Heritage Springs to Heritage Crossing.**



*Refer to the DesignTek Correction Letter*

**41. Adjust the location of the inlets directly under the proposed gate to be fully located on Heritage Springs.**

*Refer to the DesignTek Correction Letter*

**42. Stormwater Management Report and HEC-HMS Model. The Stormwater Management Report's narrative should be revised to include discussion of modeling results, reference and discuss the supporting modeling documentation, and include the inundation maps.**

*Refer to the DesignTek Correction Letter*

**43. The HEC-HMS files provided indicate that the discharge curves for all basins are turned off in both existing and proposed scenarios. Additionally, many of the nodes do not have discharge functions defined. Clarify how the discharge flows are defined between basins.**

*Refer to the DesignTek Correction Letter*

**44. Stormwater Management Report and HEC-HMS Model. Clarify the distinction between the nodes "Storage East of Wolf Road" and "Box Inlet East Side Wolf Rd". Pages 71 and 72 of the report show stage-storage tables for these nodes, but the areas for elevations 664.0 and 665.0 match for these two, suggesting some volume may be double-counted. Furthermore, the "Box Inlet-East Side Wolf Rd" node table differs significantly from that shown in the HEC-HMS model.**

*Refer to the DesignTek Correction Letter*

**45. Stormwater Management Report and HEC-HMS Model. The inundation maps provided are for the scenario where the Ashbrook Subdivision ponds are not modeled, and the 2-hour duration storm is the critical duration.**

*Refer to the DesignTek Correction Letter*

**46. However, the HEC-HMS results provided are for the scenario where the ponds are modeled, and the 1-hour duration is critical. Please provide HEC-HMS results that match the conservative scenario displayed in the inundation maps.**

*Refer to the DesignTek Correction Letter*

**47. The inundation maps should reflect flood elevations upstream of Basin "C". For example, the "Storage West Side Wolf Road" node has critical duration elevations in excess of 660, which need to be shown on the inundation maps. This would include surcharging inlets along the dual culverts under proposed conditions**

*Refer to the DesignTek Correction Letter*

**48. All comments from the Village Engineer and Village's consulting engineer contained in Attachment 4 must be addressed**

*Refer to the DesignTek Correction Letter*

### **Landscaping**

*Responses to Items # 49 - # 54 refer to BSB Correction Letter of 12/6/2024*

**49. Include all utilities and light poles consistent with the information included in the Final Engineering plans. It is unclear if there are conflicts between utilities, light poles, and the proposed landscape.**

**50. The revised landscape plan indicates to preserve the existing trees located behind the existing neighborhood sign. These existing evergreen trees are in poor condition and should be replaced with new plant material consistent with the adjacent proposed plantings.**

**51. Maples are not allowed in the public ROW per the Village Urban Forest Management Plan, they are an over-represented species within the Village. Replace with another species.**

**52. Indicate Gingko biloba to be male species to avoid fruit production.**

**53. Locate Catalpa speciosa away from sidewalks to avoid seed pods dropping on walkways.**

**54. The specifications indicate a different native seed mix than the seed mixes indicated on the plans but does not list detail on species included. Clarify specification of seed mixes.**

*Native seed mix details are now provided in a plan by Gary R. Weber & Associates pages L1.1 & L1.2*

### **Road and Traffic**

**55. The two parallel parking spaces should be removed on the east side of Heritage Court.**

*DesignTek and BSB Design plans reflect the elimination of the parallel parking spaces*

**56. Revise all applicable plans related to the correct number of guest parking spaces between units 23 and 24.**

*DesignTek and BSB Design plans reflect the same number of parking spaces between Units # 23 & # 24*

**57. Vehicles parked in the driveway of units 8, 15, and 21 may not overhang the curb.**

*Refer to the DesignTek Correction Letter*

**58. The Opticom sensor shall be taller than the proposed fence/gate. Design and details must be submitted for review and approval by the Village's Director of Fire and EMS before any permit is issued for site development.**

*Detail has been added to the DesignTek plan.*

*Refer to the DesignTek Correction Letter*

**59. A sidewalk along Park Pl. to the south connecting to the Wolf Rd. sidewalk to the east must be installed.**

*The Park Place sidewalk has been added to both the DesignTek and BSB plans. It is proposed along the right-of-way line but reconfigured around the existing subdivision sign.*

**60. Revise all applicable plans to convert the turnaround area north of unit 15 to grasscrete or similar material.**

*Detail has been added to the DesignTek plan.*

*Refer to the DesignTek Correction Letter*

**61. Submit AutoTURN analysis for the turnaround area north of unit 15 to verify vehicle turnaround.**

*Detail has been added to the DesignTek plan.*

*Refer to the DesignTek Correction Letter*

**62. On the color site plan prepared by BSB Design (revised 11/5/2024), the crosswalk should be shown perpendicular (not angled) to Heritage Court, consistent with the Final Engineering Plans for Heritage Crossing, prepared by DesignTek Engineering and Surveying (revised 11/4/2024).**

*Refer to BSB Correction Letter of 12/6/2024*

**63. Update the Traffic Impact Study to reflect the proposed 29 rather than 28 dwelling units.**

*Refer to the KLOA Correction Letter 11/25/2024*



**64. Clarify if Figure 5B in the Traff Impact Study summarizes the September 2024 pedestrian count data or the original March 2024 count data. The higher volume counted in September should be presented in the TIS.**

*Refer to the KLOA Correction Letter 11/25/2024*

**65. Figure 7 does not match the trip generation presented in Table 3 in the Traffic Impact Study. Please update according.**

*Refer to the KLOA Correction Letter 11/25/2024*

### **Signage**

**66. Provide a sight distance triangle analysis for the proposed subdivision sign adjacent to Wolf Rd.**

*Refer to BSB Correction Letter of 12/6/2024*

**67. Provide information on any roadway signage related to street name and type (private) for review.**

*Refer to BSB Correction Letter of 12/6/2024*

## DEVELOPMENT AGREEMENT

THIS DEVELOPMENT AGREEMENT entered into this 30<sup>th</sup> day of April, 2024 by and between McNaughton Development LLC, a Illinois limited liability company, the developer of the proposed Heritage Crossing development, or nominee, ("Developer") and Heritage Owners Association, Inc., an Illinois not-for-profit corporation ("Association") Collectively, Developer and the Association shall be referred to as (the "Parties"). This Development Agreement ("the Agreement") expresses the entire agreement between the Parties with respect to improvements the Developer is willing to make to the existing private street owned by the Association known as Heritage Court and its extension through the proposed Heritage Crossing development. All prior understandings, negotiations, agreements and discussions are expressly merged herein and superseded hereby.

The Association hereby authorizes access to the Heritage Court to the Developer and the future homeowners of Heritage Crossing under the following conditions and with the following improvements to be completed by the Developer.

**Storm Water Management:** The Developer, at its expense, shall modify the existing Lawn Avenue detention area by adding retaining walls, increase the depth and size of the existing pond, modify the existing storm sewer and restore the landscaping to the south of the Association's development. The proposed changes, which may or may not directly benefit the Association's existing storm water system, shall not impose any additional burden on the Association's existing storm water system. Developer shall present its final development plans to the Association's engineer for review and comment and shall make its own engineer available to the Association's engineer. The final storm water modifications are subject to the review and approval of the Metropolitan Reclamation District and the Village of Western Springs. Upon completion of the improvements the future maintenance responsibilities for the Lawn Avenue detention area will be borne by the Developer and its successors. For the avoidance of doubt, the Association shall have no obligations whatsoever with respect to the Lawn Avenue detention area, including, but not limited to maintenance, repair, restoration or financial contribution obligations.

**Sanitary Sewer:** The Developer, at its sole cost and expense, shall connect to and perform any adjustments and restoration as required as it connects to the existing sewer structure. Any third party fees, including but not limited to any impact and recapture fees, as it relates to the Developer's site, shall be paid by the Developer.

**Existing Heritage Court:** The Developer, at its sole cost and expense, shall make the following improvements to Heritage Court:

1. Remove the existing wood privacy fence to the south of the existing street terminus.
2. Replace the existing concrete pad within the path of the carriage walk and roadway with an extended walk, asphalt street and concrete curbing.
3. Create between two to three new additional asphalt paved parking spaces along the west side of Heritage Court between the existing mailbox and the street light to the south of that mailbox.
4. Contribute to the Association for the eventual grinding and resurfacing of

the street.

5. Provide additional landscape plantings and an irrigation line opposite of the new parking spaces on the east side of Heritage Court.
6. Extend the cedar fence north as hedge removal will expose the street to the neighboring parking lot.

Complete any landscape restoration necessary due to work performed by the Developer. Developer shall present its final development plans to the Association's engineer for review and shall make its own engineer available to the Association's engineer. The final roadway modifications are subject to the review and approval of the Village of Western Springs. Improvements noted under # 1, 2, 3 & 5 shall be completed with the extension of Heritage Court. The contribution to the Association's roadway reserves shall be made on or before the Village of Western Springs records the final plat of subdivision for Heritage Crossing.

**Development Gate:** The Developer, at its sole cost and expense, shall install new private street sign along 55<sup>th</sup> Street and an automated swing or slide gate with a wrought iron appearance (the "Gate") on that portion of Heritage Court located on the Heritage Crossing Development between the Association and the Heritage Crossing development in the approximate location of the existing Heritage Court terminus. In the event that a swing gate is utilized, the Gate shall be designed to open onto the Heritage Crossing development. The Gate will allow access to the fully extended Heritage Court between 55<sup>th</sup> Street and Park Place to the existing Association residents, the future residents of Heritage Crossing and all of the successors of both developments. The Developer, at its sole cost and expense, shall provide the Association's members remote devices for the operation of the Gate. Construction traffic will not be permitted north of the Gate under any circumstances. The Developer shall take reasonable measures to ensure that no construction traffic will take place on Heritage Court, including the installation of signage, a temporary fence or other suitable barrier. The future association for the Heritage Crossing development will have the full responsibility of maintenance and repair of the Gate, at its sole cost and expense. The signage to be installed along 55<sup>th</sup> Street will identify Heritage Court as a "No Outlet / Private Street". The final signage and Gate designs are subject to the approval of the Village of Western Springs. For the avoidance of doubt, the Association shall have no obligation whatsoever with respect to the Gate including, but not limited to maintenance, repair, restoration or financial contribution obligations. The Developer shall indemnify and hold the Association harmless from any claims arising in relation to the Gate and other work conducted by the Developer on the Association property.

**Developer Reimbursement:** The Developer will reimburse the Association for legal and engineering expenses incurred by the Association in connection with the review of this Agreement and the review of the Developer engineering plans. This reimbursement is estimated to be . To the extent the Association's legal and engineering expenses exceed this estimated amount, the Association shall endeavor to keep the Developer informed of its estimated expenses. The obligation of the Developer to reimburse the Association is independent of the other agreements herein, is effective upon the parties execution of this Agreement and shall apply whether the Developer proceeds with the Heritage Crossings development or not.

**Association Approval:** The Developer will provide the Association with final storm



water designs, roadway geometric plans and fencing illustrations (the "Plans") at the time they are submitted to the Village of Western Springs. Within two weeks after the Association receives notice that the Village of Western Springs has tentatively approved the Plans, the Association shall have its engineer review the plans and the Association shall call a special Association Board meeting to review and approve the Plans.

**Easement Documents:** The Developer shall prepare and the Association shall grant easements to the Developer and its successors for the use of the existing Heritage Court for access for ingress and egress. The Developer shall prepare easement documentation granting the Association and its members the right of access for ingress and egress over the extended Heritage Court through to Park Place. The Association and The Developer shall also prepare and the Association shall grant blanket temporary construction easements in favor of the Developer so it might complete its work related to Heritage Court. All easement documentation shall be prepared and recorded at the sole cost and expense of the Developer.

**Future HOA Cooperation:** The Association and the Developer's future homeowner's association will use their best efforts to utilize the same snow removal company and share the expense of clearing the existing and newly extended Heritage Court. The hiring of that service or any future changes shall be mutually approved by both the Association and the Developer's future association. The Association shall pay 35% of the snow removal on the street and the Heritage Crossing development shall pay 65% of the snow removal on the street. This percentage is based on the number of units within each development. The associations will bear the responsibility of their own driveway clearing. This cost-sharing agreement will be memorialized in the Easement documents.

Any future changes to the Gate shall be reviewed and mutually approved by both the Association and the Developer's future association

**Developer Contingency:** The storm water redevelopment, roadway work and contribution and the development gate improvements are contingent on the Village of Western Springs approving a final plat of subdivision that is suitable to the Developer's uses.

**Association Contingency:** The Association's obligations hereunder are contingent upon the following:

1. the Association's approval of the storm water redevelopment plan;
2. The Association's approval of the Easement Documentation;
3. the Village of Western Springs approval of the new parking spaces on the Association's property; and
4. The Village of Western Springs' approval of the transfer of the maintenance obligations for the Lawn Avenue detention area from the Association to the Developer and the Heritage Crossing association (as applicable).

This Development Agreement shall be signed by the Association and last by the Developer who

shall affix the date on which he signs this Development Agreement on Page 1 hereof which date shall be the effective date of this Development Agreement.

This Agreement shall be governed by Illinois law. Any dispute regarding this Agreement shall be resolved in courts located in Cook County, Illinois. The prevailing party shall be entitled to an award of reasonable attorneys fees and court costs.

MCNAUGHTON DEVELOPMENT, LLC,  
an Illinois limited liability company

By:   
Its: MEMBER

HERITAGE OWNERS ASSOCIATION, INC.,  
an Illinois not for profit corporation

By: Don Lyons  
Its: President, Heritage Springs Owners Association Board



November 25, 2024

Mr. John Barry  
McNaughton Development  
11S220 Jackson Street, Suite 101  
Burr Ridge, Illinois 60527

Re: Proposed Heritage Crossing  
Western Springs, Illinois

Dear John:

Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) has received the Village of Western Springs latest comments regarding the above-referenced development and offers the following responses.

**Village of Western Springs Comments**

- **Update the Traffic Impact Study to reflect the proposed 29 rather than 28 dwelling units.**

The traffic study has been updated to reflect the proposed 29 dwelling units.

- **Clarify if Figure 5B in the Traffic Impact Study summarizes the September 2024 pedestrian count data or the original March 2024 count data. The higher volume counted in September should be presented in the TIS.**

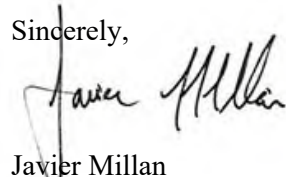
As stated on page 7 of the traffic impact study, the Village's pedestrian count data yielded a higher pedestrian volume than the KLOA, Inc. counts and, as such, the Village's collected pedestrian volumes were utilized in the evaluation. Figure 5B and the capacity analyses show the higher pedestrian volumes.

- **Figure 7 does not match the trip generation presented in Table 3 in the Traffic Impact Study. Please update accordingly.**

Figure 7 has been revised to reflect the trip generation presented in Table 3. Please see the revised traffic impact study.

If you have any questions or require further information, please let me know.

Sincerely,



Javier Millan  
Principal

Enc.

# Traffic Impact Study

## Proposed Residential Development

Western Springs, Illinois



Prepared For:



July 9, 2024 – Revised November 25, 2024

# 1. Introduction

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed residential development to be located in Western Springs, Illinois. The site, which currently contains a medical office building, is located in the northwest corner of the intersection of Wolf Road (Cook County Highway W22) with Park Place. As proposed, the site will be redeveloped with a residential development consisting of 29 townhome units. Access to the development will be provided via a full-movement access drive off Wolf Road at approximately the same location of the existing access drive serving the medical office building. A gated access will be provided on Heritage Court, only allowing cross-access between the proposed development and the existing Heritage Court townhomes.

The purpose of this study was to examine background traffic conditions, assess the impact that the proposed development will have on traffic conditions in the area, and determine if any additional roadway or access improvements are necessary to accommodate traffic generated by the proposed development. **Figure 1** shows the location of the site in relation to the area roadway system. **Figure 2** shows an aerial view of the site.

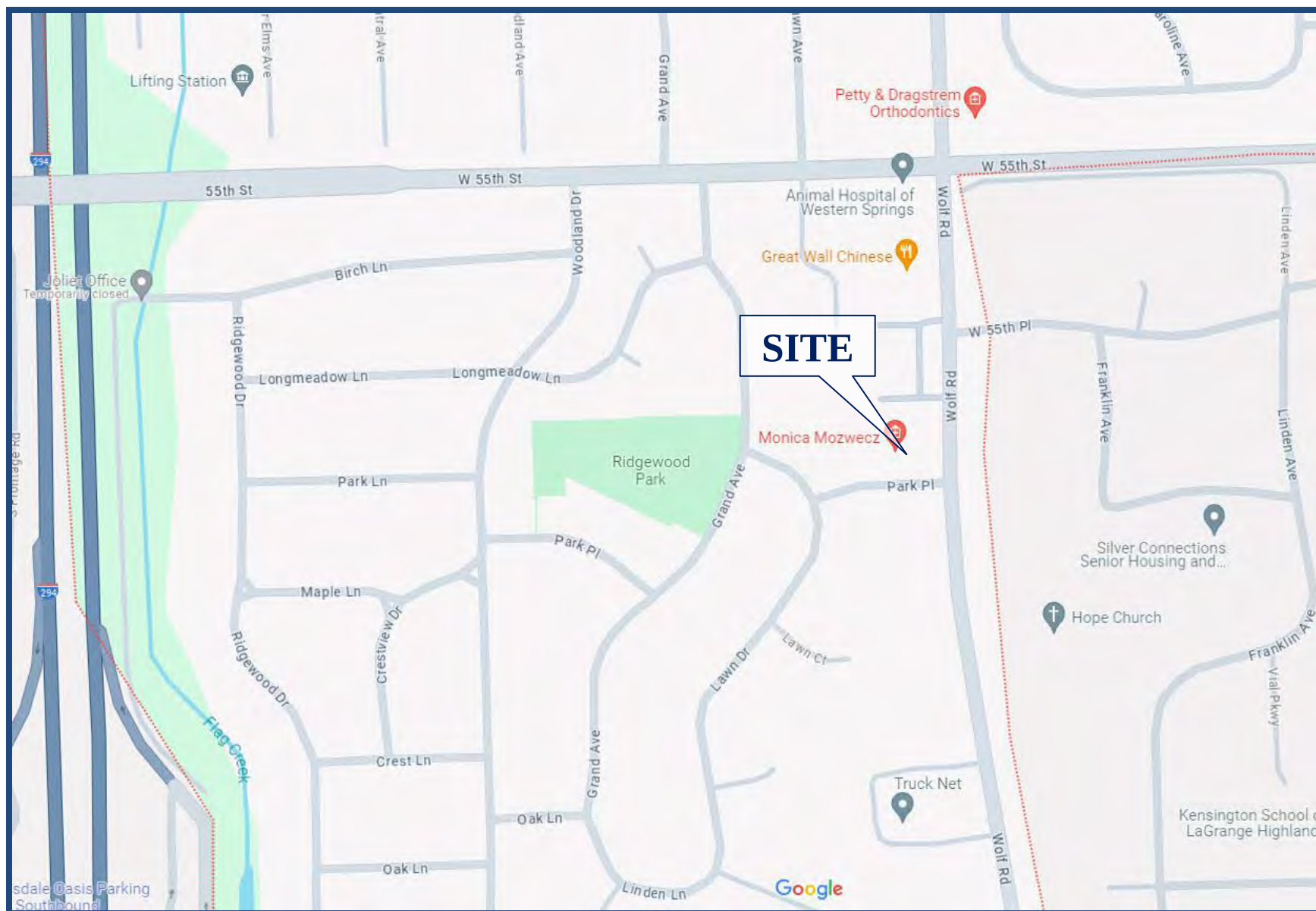
The sections of this report present the following:

- Existing roadway conditions
- A description of the proposed development
- Directional distribution of the development traffic
- Vehicle trip generation for the development
- Future traffic conditions including access to the development
- Traffic analyses for the weekday morning and weekday evening peak hours
- Recommendations with respect to adequacy of the site access and adjacent roadway system

Traffic capacity analyses were conducted for the weekday morning and weekday afternoon/evening peak hours for the following conditions:

1. Existing Traffic Conditions – Analyzes the capacity of the existing roadway system using peak hour traffic volumes from traffic counts conducted in 2024.
2. Year 2030 No-Build Conditions – Analyzes the capacity of the existing roadway system using existing traffic volumes increased by an ambient area growth factor not attributable to any particular development.
3. Year 2030 Total Projected Conditions – Analyzes the capacity of the future roadway system using the projected traffic volumes that include the Year 2030 no-build volumes and the traffic estimated to be generated by the proposed development.





## Site Location

*Proposed Residential Development  
Western Springs, Illinois*

**Figure 1**





**Aerial View of Site**

**Figure 2**

*Proposed Residential Development  
Western Springs, Illinois*

## 2. Existing Conditions

Existing transportation conditions in the vicinity of the site were documented based on field visits conducted by KLOA, Inc. in order to obtain a database for projecting future conditions. The following provides a description of the geographical location of the site, physical characteristics of the area roadway system including lane usage and traffic control devices, and existing peak hour traffic volumes.

### Site Location

The site, which currently contains a medical office building, is generally bounded by Springwood Manor condominiums and the Western Springs Heritage Townhomes to the north and single-family homes (Ridgewood of Western Springs) to the west and south. Wolf Road borders the site to the east. Land uses in the vicinity of the site are primarily residential in all directions.

### Existing Roadway System Characteristics

The characteristics of the existing roadways near the development are described below and illustrated in **Figure 3**.

*Wolf Road (Cook County Highway W22)* is a north-south minor arterial roadway that provides one lane in each direction divided by a striped median. At its unsignalized intersection with Park Place, Wolf Road provides an exclusive left-turn lane and a through lane on the northbound approach. The southbound approach provides a through lane and an exclusive right-turn lane. Wolf Road is under the jurisdiction of the Cook County Division of Transportation and Highways (CCDOTH), is not designated as a Strategic Regional Arterial (SRA), and has a posted speed limit of 35 miles per hour. According to the Illinois Department of Transportation (IDOT), Wolf Road carries an annual average daily traffic (AADT) volume of 9,150 vehicles (IDOT - 2022).

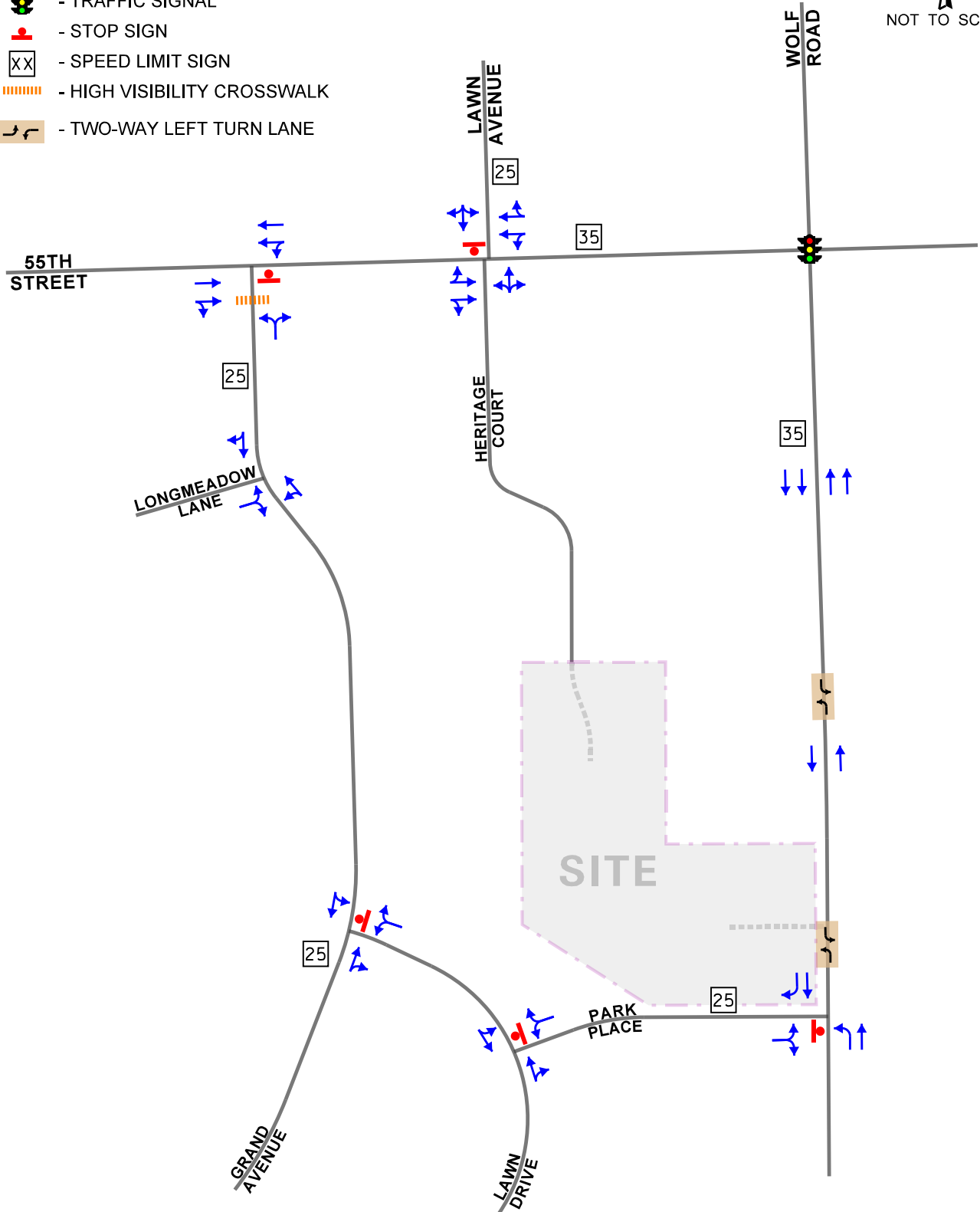
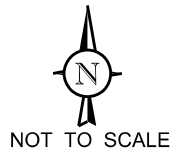
*Park Place* is an east-west local roadway that provides one lane in each direction. At its unsignalized intersection with Wolf Road, Park Place is under stop sign control and provides a shared left-turn/right-turn lane on the eastbound approach. At its unsignalized intersection with Lawn Drive, Park Place is under stop sign control and provides a shared left/right-turn lane on the westbound approach. Park Place is under the jurisdiction of the Village of Western Springs and has a posted speed limit of 25 miles per hour.

*55<sup>th</sup> Street* is an east-west minor arterial that provides two lanes in each direction divided by a painted median. No exclusive turn lanes are provided on 55<sup>th</sup> Street at its unsignalized intersection with Heritage Court/Lawn Avenue. However, it is important to note that eastbound and westbound left-turn movements are accommodated by the painted median. No exclusive turn lanes are provided on 55<sup>th</sup> Street at its unsignalized intersection with Grand Avenue. 55<sup>th</sup> Street has a posted speed limit of 35mph, carries an AADT volume of 16,600 vehicles (IDOT – 2022), and is under IDOT's jurisdiction.



# LEGEND

-  - TRAVEL LANE
-  - TRAFFIC SIGNAL
-  - STOP SIGN
-  - SPEED LIMIT SIGN
-  - HIGH VISIBILITY CROSSWALK
-  - TWO-WAY LEFT TURN LANE



Heritage Crossings  
Western Springs, Illinois

Existing Roadway Characteristics

*Heritage Court* is a north-south two-lane private road that serves the Western Springs Heritage townhomes and is aligned opposite Lawn Avenue. At its unsignalized intersection with 55<sup>th</sup> Street, Heritage Court provides a shared left/right-turn lane under stop sign control.

*Grand Avenue* is a local north-south two-lane roadway serving the Ridgewood of Western Springs subdivision. At its unsignalized intersection with 55<sup>th</sup> Street, Grand Avenue provides a shared left/right-turn lane under stop sign control. No exclusive turn lanes are provided at its unsignalized intersection with Lawn Drive. Grand Avenue has a posted speed limit of 25 mph and is under the jurisdiction of the Village of Western Springs.

*Longmeadow Lane* is an east-west two-lane local roadway. No traffic control is provided at its unsignalized intersection with Grand Avenue. Longmeadow Lane is under the jurisdiction of the Village of Western Springs.

## Pedestrian Facilities

Based on our field visits, no sidewalks are provided along Park Place or any of the roads within the Ridgewood of Western Springs subdivision. However, a sidewalk is provided along the west side of Wolf Road. A north-south standard style crosswalk is provided on Park Place at its intersection with Wolf Road. Furthermore, a midblock east-west pedestrian high visibility crosswalk is provided on Wolf Road at its intersection with 59<sup>th</sup> Street. This mid-block pedestrian also provides rapid flashing beacons with proper signage. Additionally, push buttons are provided at each side of the roadway and advance signage is provided to vehicles to be aware of the upcoming crossing.

## Existing Traffic Volumes

In order to determine current traffic conditions within the study area, KLOA, Inc. conducted peak period traffic counts utilizing Miovision Scout Collection Units at the following intersections:

- Wolf Road with Park Place
- Park Place with Lawn Drive
- 55<sup>th</sup> Street with Heritage Court
- 55<sup>th</sup> Street with Grand Avenue
- Grand Avenue with Longmeadow Lane
- Grand Avenue with Lawn Drive

The traffic counts were conducted on Thursday, March 21, 2024 and on Tuesday, April 2, 2024, during the weekday morning (7:00 A.M. to 9:00 A.M.) and weekday afternoon/evening (4:00 P.M. to 6:00 P.M.) peak periods. The results of the traffic counts show that the peak hours of traffic generally occur between 7:30 A.M. and 8:30 A.M. during the weekday morning peak period and between 4:15 P.M. and 5:15 P.M. during the weekday evening peak period. Copies of the traffic count summary sheets are included in the Appendix. The existing traffic volumes are illustrated in **Figure 4A**. **Figure 4B** shows the existing pedestrian and bicycle traffic volumes.

It is important to note that LaGrange Highlands Elementary School is located approximately 0.4 miles southeast of the intersection of Wolf Road with Park Place. Based on a review of the District 106 student calendar, all schools were in session when the traffic counts were conducted. Furthermore, the LaGrange Highlands Elementary School arrival is between 8:10 A.M. and 8:20 A.M. with class starting at 8:25 A.M. Upon further review of their website, the school's regular dismissal time is at 3:15 P.M. In order to determine the peak traffic and pedestrian volumes during the dismissal time, an additional traffic count was conducted at the intersection of Wolf Road with Park Place during the 3:00 P.M. to 4:00 P.M. hour.

Furthermore, in September 2024, the Village of Western Springs conducted an additional pedestrian count (walking, bicycle, scooter, etc.) for the west leg of the intersection of Wolf Road with Park Place. These volumes, which yielded a higher pedestrian volume than the March 2024 counts conducted by KLOA, Inc. were utilized for the purposes of this evaluation.

**Figure 5A** shows the existing school peak traffic volumes while **Figure 5B** shows the existing school peak pedestrian and bicycle traffic volumes.



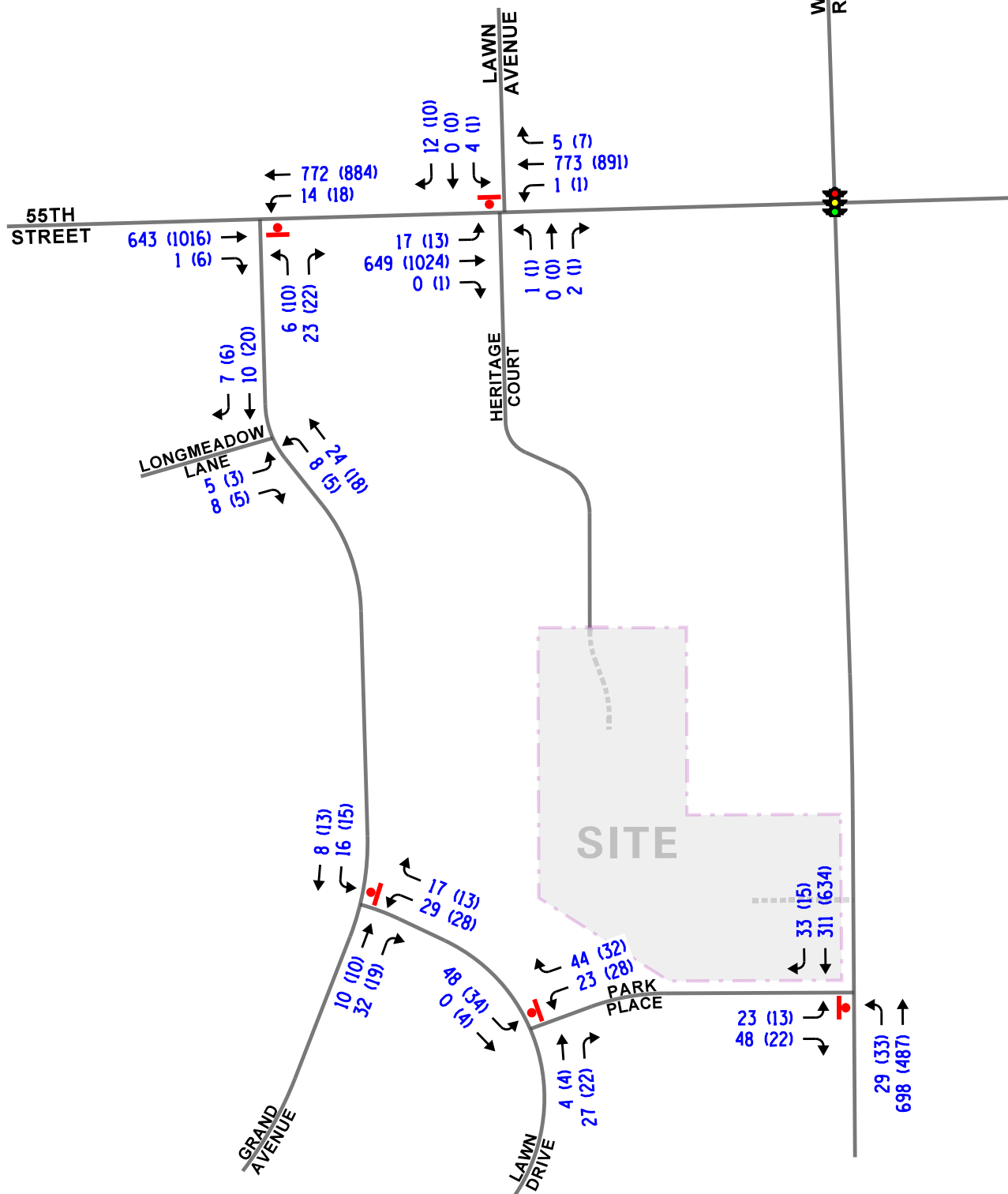
LEGEND

00 - AM PEAK HOUR (7:30-8:30 AM)

(00) - PM PEAK HOUR (4:15-5:15 PM)



NOT TO SCALE



Heritage Crossings  
Western Springs, Illinois

Existing Traffic Volumes

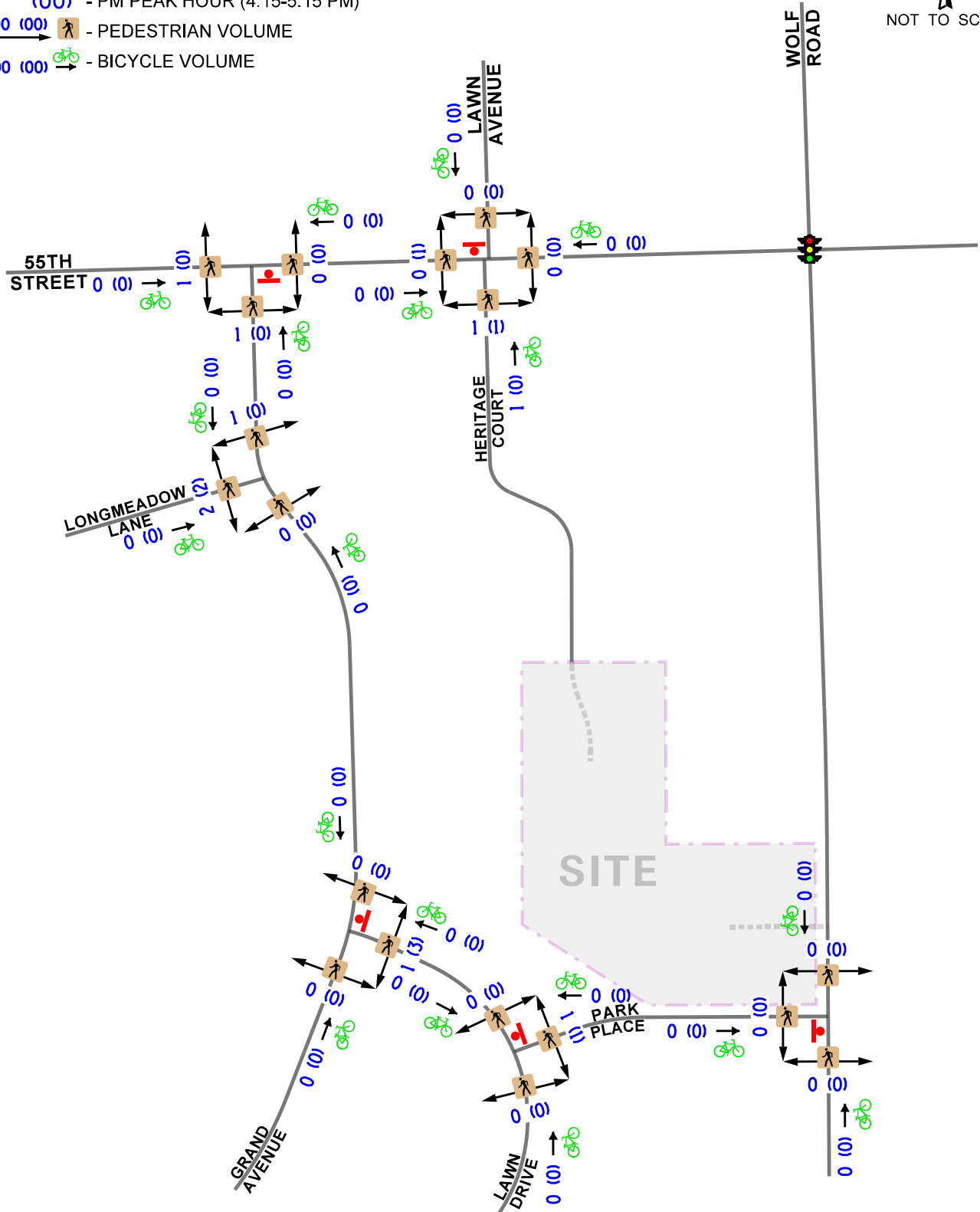
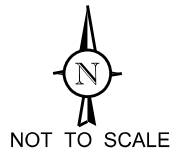


Job No: 24-068

Figure: 4A

# LEGEND

- 00 - AM PEAK HOUR (7:30-8:30 AM)
- (00) - PM PEAK HOUR (4:15-5:15 PM)
- 00 (00) [pedestrian icon] - PEDESTRIAN VOLUME
- 00 (00) [bicycle icon] - BICYCLE VOLUME

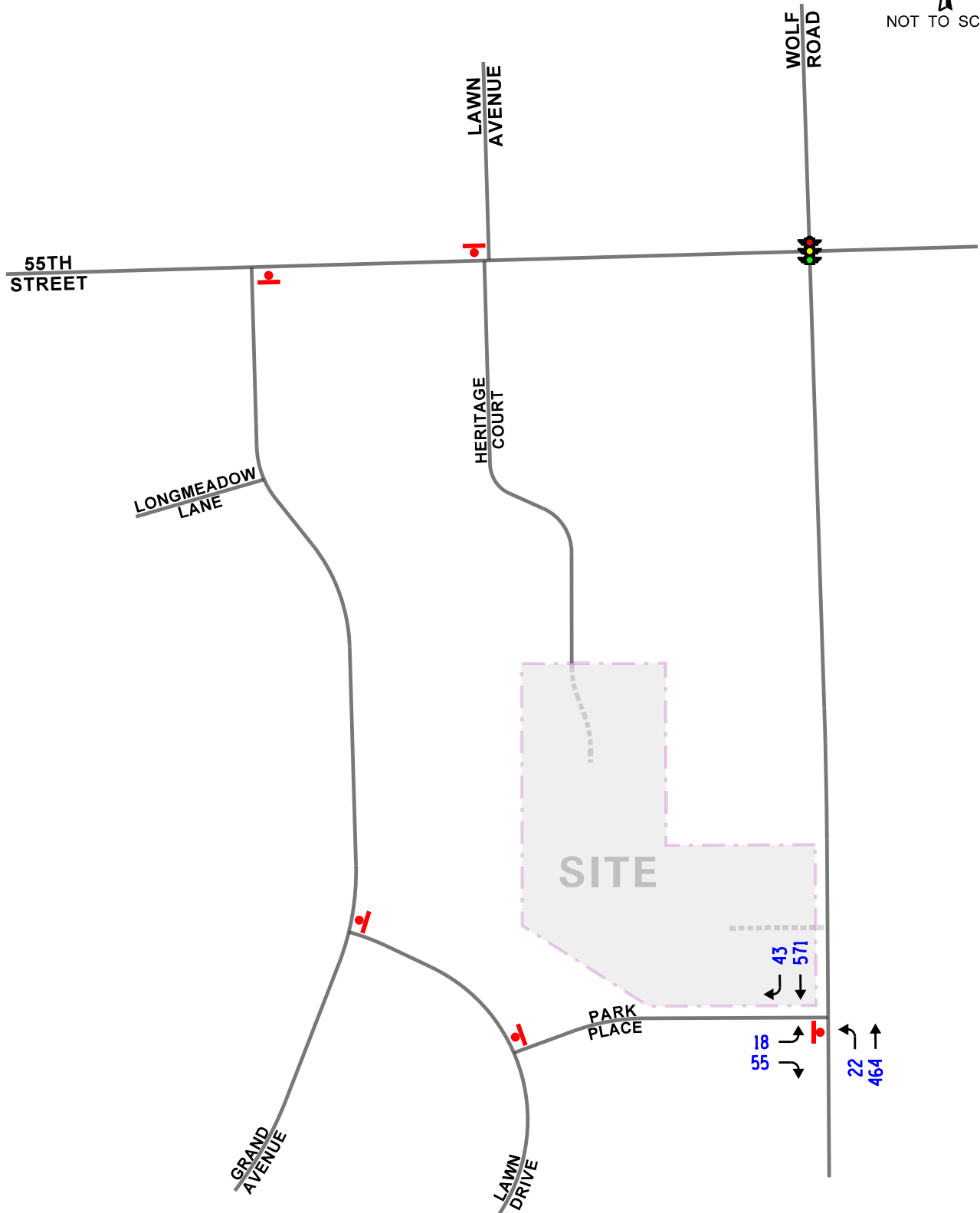
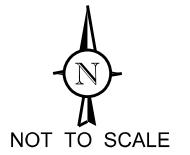


Heritage Crossings  
Western Springs, Illinois

Existing Pedestrian and Bicycle  
Traffic Volumes

LEGEND

00 - AFTERNOON PEAK HOUR (3:00-4:00 PM)



Heritage Crossings  
Western Springs, Illinois

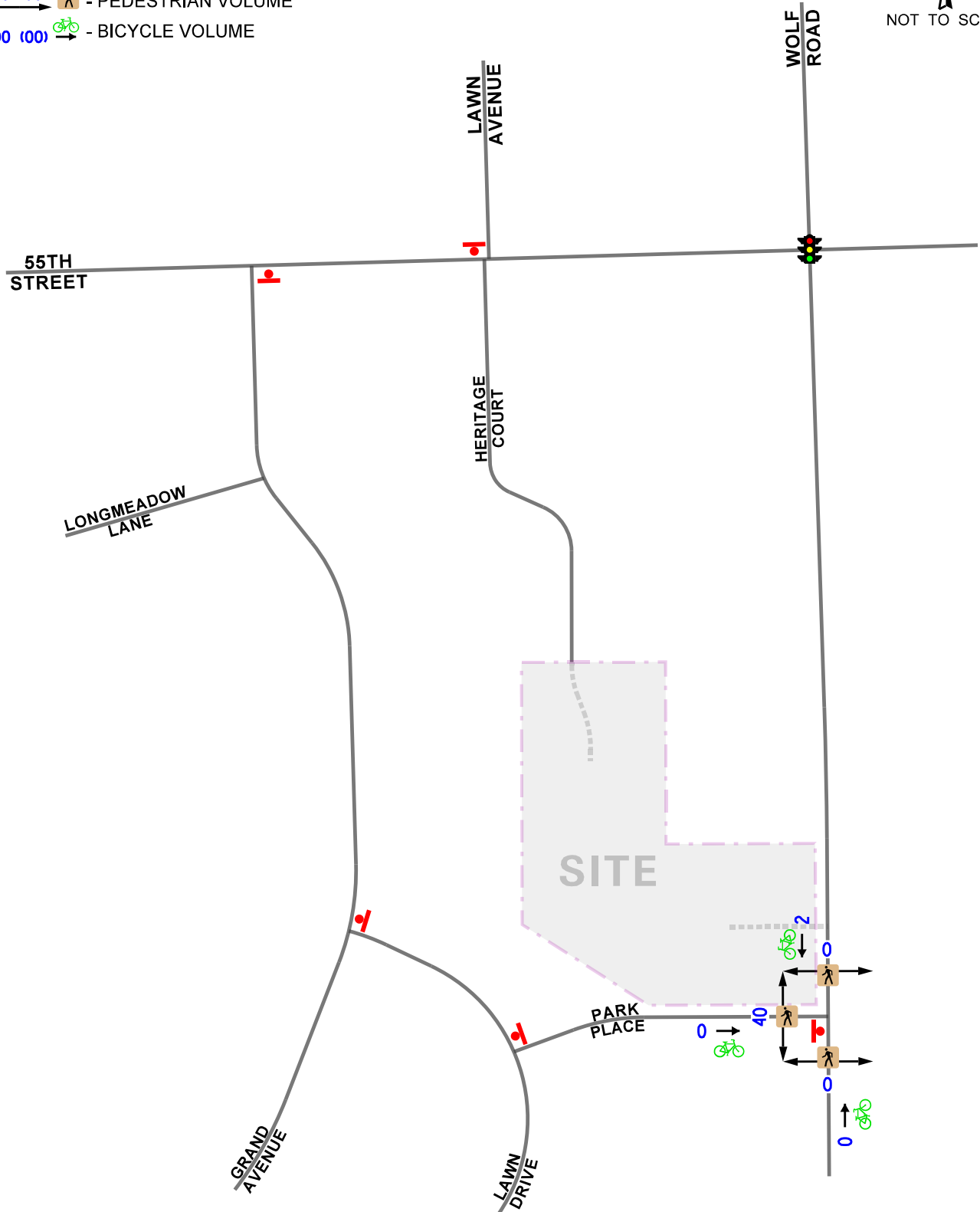
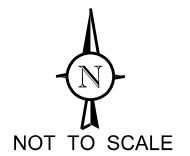
Existing Traffic Volumes  
(Afternoon Peak Hour)

**KLOA**  
Kenig, Lindgren, O'Hara, Aboona, Inc.  
Job No: 24-068 Figure: 5A



# LEGEND

- 00 - AFTERNOON PEAK HOUR (3:00-4:00 PM)
- 00 (00) [pedestrian icon] - PEDESTRIAN VOLUME
- 00 (00) [bicycle icon] - BICYCLE VOLUME



## Crash Data Summary

KLOA, Inc. obtained accident data for the most recent available past five years (2018 to 2022) for the study area intersections. A summary of the crash data at the intersections of Wolf Road with Park Place and 55<sup>th</sup> Street with Grand Avenue is shown in **Tables 1** and **2**. No fatalities were reported at any of the studied intersections during the review period.

Table 1  
WOLF ROAD WITH PARK PLACE  
CRASH SUMMARY

| Year           | Type of Crash Frequency |            |          |          |           |                |          |                |
|----------------|-------------------------|------------|----------|----------|-----------|----------------|----------|----------------|
|                | Angle                   | Pedestrian | Object   | Rear End | Sideswipe | Turning        | Other    | Total          |
| 2018           | 0                       | 0          | 0        | 0        | 0         | 1              | 0        | 1              |
| 2019           | 0                       | 0          | 0        | 0        | 0         | 0              | 0        | 0              |
| 2020           | 0                       | 0          | 0        | 0        | 0         | 0              | 0        | 0              |
| 2021           | 0                       | 0          | 0        | 0        | 0         | 0              | 0        | 0              |
| 2022           | 0                       | 0          | 0        | 0        | 0         | 0              | 0        | 0              |
| <b>Total</b>   | <b>0</b>                | <b>0</b>   | <b>0</b> | <b>0</b> | <b>0</b>  | <b>1</b>       | <b>0</b> | <b>1</b>       |
| <b>Average</b> | <b>0</b>                | <b>0</b>   | <b>0</b> | <b>0</b> | <b>0</b>  | <b>&lt;1.0</b> | <b>0</b> | <b>&lt;1.0</b> |

Table 2  
55<sup>th</sup> STREET WITH GRAND AVENUE  
CRASH SUMMARY

| Year           | Type of Crash Frequency |            |          |                |                |                |          |            |
|----------------|-------------------------|------------|----------|----------------|----------------|----------------|----------|------------|
|                | Angle                   | Pedestrian | Object   | Rear End       | Sideswipe      | Turning        | Other    | Total      |
| 2018           | 0                       | 0          | 0        | 2              | 1              | 0              | 0        | 3          |
| 2019           | 0                       | 0          | 0        | 1              | 0              | 0              | 0        | 1          |
| 2020           | 0                       | 0          | 0        | 0              | 0              | 1              | 0        | 1          |
| 2021           | 0                       | 0          | 0        | 1              | 0              | 0              | 0        | 1          |
| 2022           | 0                       | 0          | 0        | 0              | 0              | 0              | 0        | 0          |
| <b>Total</b>   | <b>0</b>                | <b>0</b>   | <b>0</b> | <b>4</b>       | <b>1</b>       | <b>1</b>       | <b>0</b> | <b>6</b>   |
| <b>Average</b> | <b>0</b>                | <b>0</b>   | <b>0</b> | <b>&lt;1.0</b> | <b>&lt;1.0</b> | <b>&lt;1.0</b> | <b>0</b> | <b>1.2</b> |

### 3. Traffic Characteristics of the Proposed Development

In order to properly evaluate future traffic conditions in the surrounding area, it was necessary to determine the traffic characteristics of the proposed development, including the directional distribution and volumes of traffic that it will generate.

#### Proposed Site and Development Plan

As proposed, the site will be redeveloped with a residential development consisting of 29 townhome units. Access to the development will be provided via a proposed full-movement access drive on Wolf Road to be located at approximately the same location of the existing full access drive serving the medical office building, approximately 130 feet north of Park Place's centerline. The access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control. The existing access drive on Wolf Road will be eliminated. A gated access to the north with Heritage Court will also be provided. This access will only provide accessibility to the proposed development and to the existing Heritage townhomes and will be controlled via a clicker that will be provided to residents of both developments. A copy of the preliminary site plan is included in the Appendix.

#### Directional Distribution

The directions from which residents will approach and depart the site were estimated based on existing travel patterns, as determined from the traffic counts. **Figure 6** illustrates the directional distribution of the development-generated traffic. Figure 6 also shows the distance, in feet, between the existing and proposed access intersections.

#### Peak Hour Traffic Volumes

The number of peak hour trips (vehicles, bicycles and pedestrians) estimated to be generated by the proposed residential development was based on trip generation rates contained in *Trip Generation Manual*, 11<sup>th</sup> Edition, published by the Institute of Transportation Engineers (ITE). The "Single-Family Attached Housing" (Land-Use Code 215) rates were used to determine the traffic to be generated by the development. **Table 3** shows the weekday morning, weekday afternoon and weekday evening peak hour traffic, pedestrian, and bicycle trips to be generated by the proposed residential development as well as the daily total traffic volumes. It is important to note that the weekday afternoon peak hour volumes were estimated based on the time-of-day distribution Excel data provided within the *Trip Generation Manual* Appendices. Copies of the trip generation graphs and the hourly distribution Excel sheet are included in the Appendix.

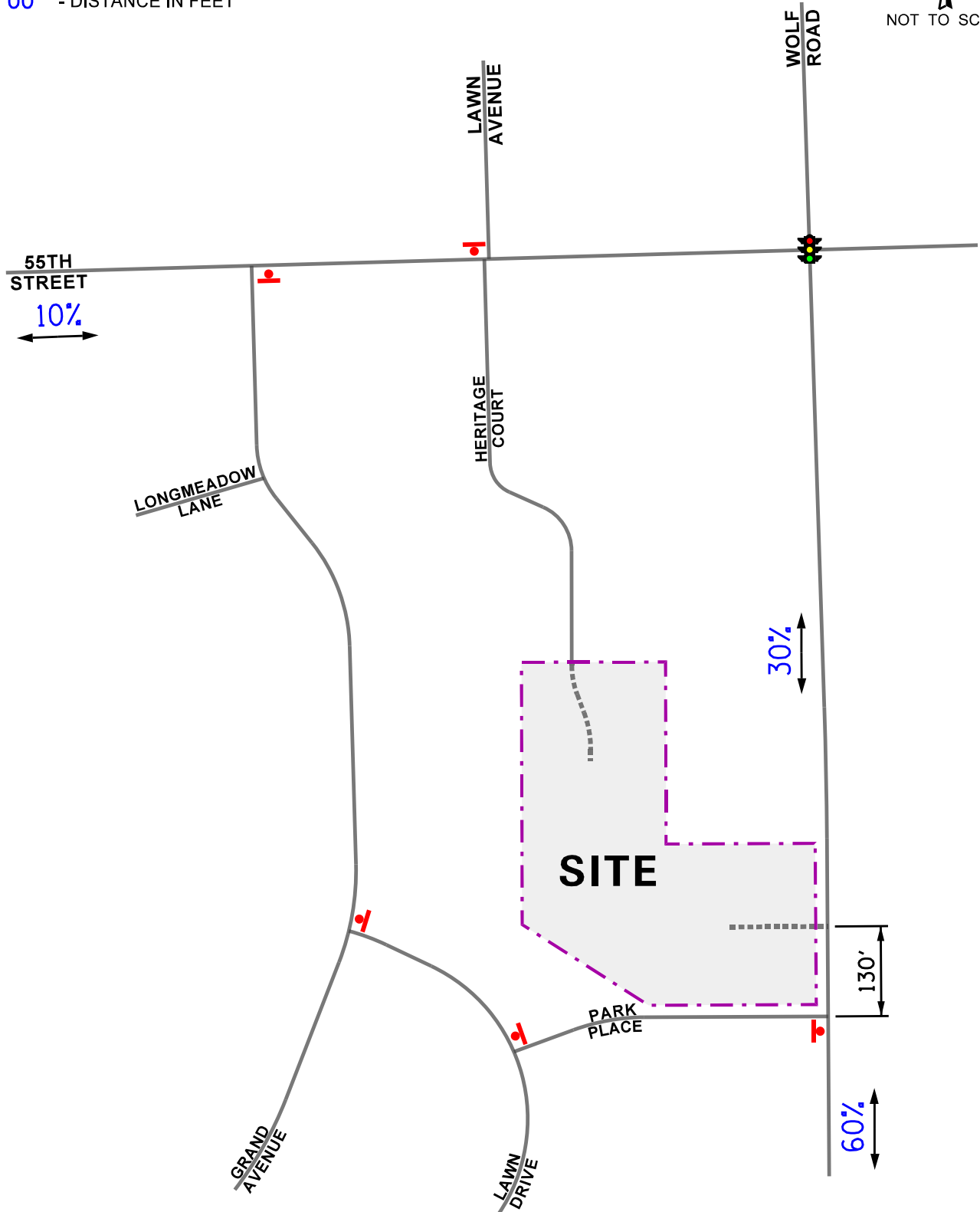
LEGEND

00% - PERCENT DISTRIBUTION

00' - DISTANCE IN FEET



NOT TO SCALE



Heritage Crossings  
Western Springs, Illinois

Directional Distribution



Job No: 24-068

Figure: 6



Table 3

## PROJECTED DEVELOPMENT-GENERATED TRAFFIC VOLUMES

| ITE<br>Land-<br>Use<br>Code                                                                           | Type/Size                | Weekday Morning<br>Peak Hour |     |       | Weekday Afternoon<br>Peak Hour |     |       | Weekday Evening<br>Peak Hour |     |       | Daily Trips |     |       |
|-------------------------------------------------------------------------------------------------------|--------------------------|------------------------------|-----|-------|--------------------------------|-----|-------|------------------------------|-----|-------|-------------|-----|-------|
|                                                                                                       |                          | In                           | Out | Total | In                             | Out | Total | In                           | Out | Total | In          | Out | Total |
| 215                                                                                                   | Townhomes (29 Units)     | 3                            | 11  | 14    | 9                              | 5   | 14    | 10                           | 7   | 17    | 105         | 105 | 210   |
|                                                                                                       | Pedestrians <sup>1</sup> | 1                            | 2   | 3     | 3                              | 3   | 6     | 3                            | 3   | 6     | N/A         | N/A | N/A   |
|                                                                                                       | Bikes <sup>1</sup>       | --                           | --  | --    | --                             | 1   | 1     | --                           | 1   | 1     | N/A         | N/A | N/A   |
| 1 – Pedestrian and bicycle trip generation was assumed to be the same as during the evening peak hour |                          |                              |     |       |                                |     |       |                              |     |       |             |     |       |

## Trip Generation Comparison

As previously mentioned, the site currently contains a medical office building. The existing medical office building is approximately 21,536 square feet in size of which only 1,200 square feet are currently being utilized.

Given that the current zoning allows for both medical office and professional office uses, the volume of traffic that was generated by the full occupancy of the building assuming half of it as medical office and the other half as professional office and that of the proposed development during the weekday morning, afternoon, evening peak hours and on a daily basis was estimated based on the following trip rates published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11<sup>th</sup> Edition:

- Medical-Dental Office Building (Land-Use Code 720)
- General Office Building (Land-Use Code 710)
- Single-Family Attached Housing (Land-Use Code 215)

**Table 4** shows a comparison of what the full occupancy of the medical office building was generating and what the proposed rowhomes would generate.

As can be seen, the proposed development will generate substantially less traffic than what the full occupancy of the previous land use was generating. Therefore, the proposed development will have a lower traffic impact than the previous land use.

Table 4

## TRIP GENERATION COMPARISON

| ITE<br>Land-<br>Use<br>Code | Type/Size                                | Weekday Morning<br>Peak Hour |           |            | Weekday Afternoon<br>Peak Hour |            |            | Weekday Evening<br>Peak Hour |            |            | Daily Trips |             |             |
|-----------------------------|------------------------------------------|------------------------------|-----------|------------|--------------------------------|------------|------------|------------------------------|------------|------------|-------------|-------------|-------------|
|                             |                                          | In                           | Out       | Total      | In                             | Out        | Total      | In                           | Out        | Total      | In          | Out         | Total       |
| 720                         | Medical Office Building<br>(10,768 s.f.) | 26                           | 6         | 32         | 16                             | 18         | 34         | 12                           | 29         | 41         | 177         | 178         | 355         |
| 710                         | General Office Building<br>(10,768 s.f.) | 22                           | 3         | 25         | 6                              | 7          | 13         | 4                            | 22         | 26         | 83          | 84          | 167         |
| 215                         | Townhomes (29 units)                     | 3                            | 11        | 14         | 9                              | 5          | 14         | 10                           | 7          | 17         | 105         | 105         | 210         |
|                             | <b>Difference</b>                        | <b>-45</b>                   | <b>+2</b> | <b>-43</b> | <b>-13</b>                     | <b>-20</b> | <b>-33</b> | <b>-6</b>                    | <b>-44</b> | <b>-50</b> | <b>-155</b> | <b>-157</b> | <b>-312</b> |

## 4. Projected Traffic Conditions

The total projected traffic volumes include the existing traffic volumes, increase in background traffic due to growth, and the traffic estimated to be generated by the proposed subject development.

### Development Traffic Assignment

The estimated weekday morning and evening peak hour traffic volumes that will be generated by the proposed development were assigned to the roadway system in accordance with the previously described directional distribution (Figure 6). The traffic assignment for the development is illustrated in **Figure 7**. The re-assignment of the Heritage Court townhomes to take into account the proposed connection between the proposed development and the existing townhomes is illustrated in **Figure A** in the Appendix.

### Background (No-Build) Traffic Conditions

The existing traffic volumes (Figure 4) were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). Based on Average Daily Traffic (ADT) projections provided by the Chicago Metropolitan Agency for Planning (CMAP), the existing traffic volumes were increased by an annually compounded growth rate of 0.4 percent per year for six years (buildout year plus five years) for a total of approximately 2.5 percent to project Year 2030 background conditions. **Figure 8** illustrates the Year 2030 no-build conditions. A copy of the CMAP 2050 projections letter is included in the Appendix.

### Total Projected Traffic Volumes

The development-generated traffic (Figure 6) was added to the Year 2030 no-build traffic volumes (Figure 7) to determine the Year 2030 total projected traffic volumes, shown in **Figure 9**. The Year 2030 total projected traffic volumes for the weekday afternoon peak hour is illustrated in **Figure B** in the Appendix.

The total projected traffic volumes also include the existing turning movements to and from the medical office building and in order to provide a conservative analysis, these vehicles were not removed from the area roadway system or the traffic volumes at other study area intersections.



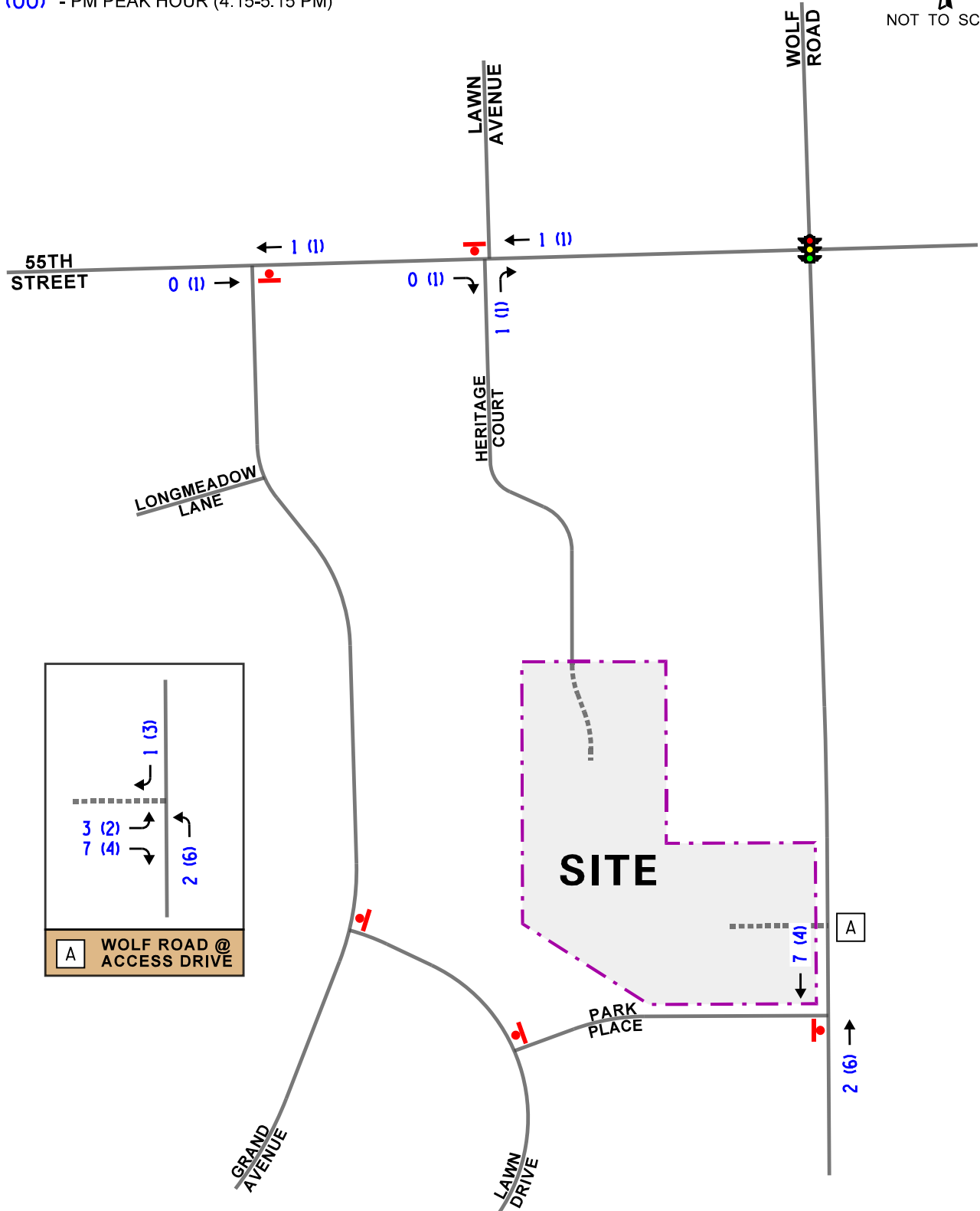
LEGEND

00 - AM PEAK HOUR (7:30-8:30 AM)

(00) - PM PEAK HOUR (4:15-5:15 PM)



NOT TO SCALE



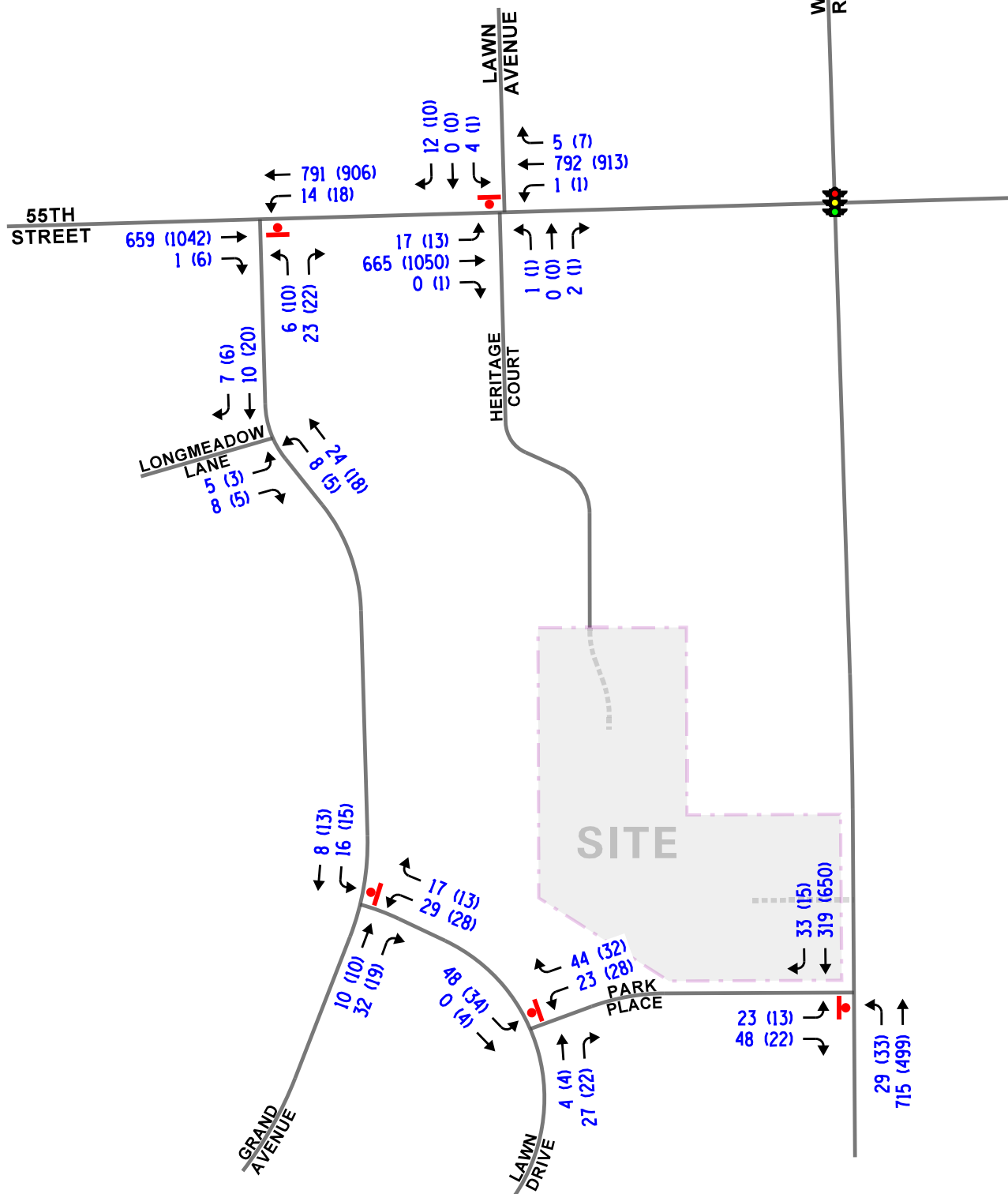
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(00) - PM PEAK HOUR (4:15-5:15 PM)



NOT TO SCALE



Heritage Crossings  
Western Springs, Illinois

Year 2030 No-Build Traffic Volumes



Job No: 24-068

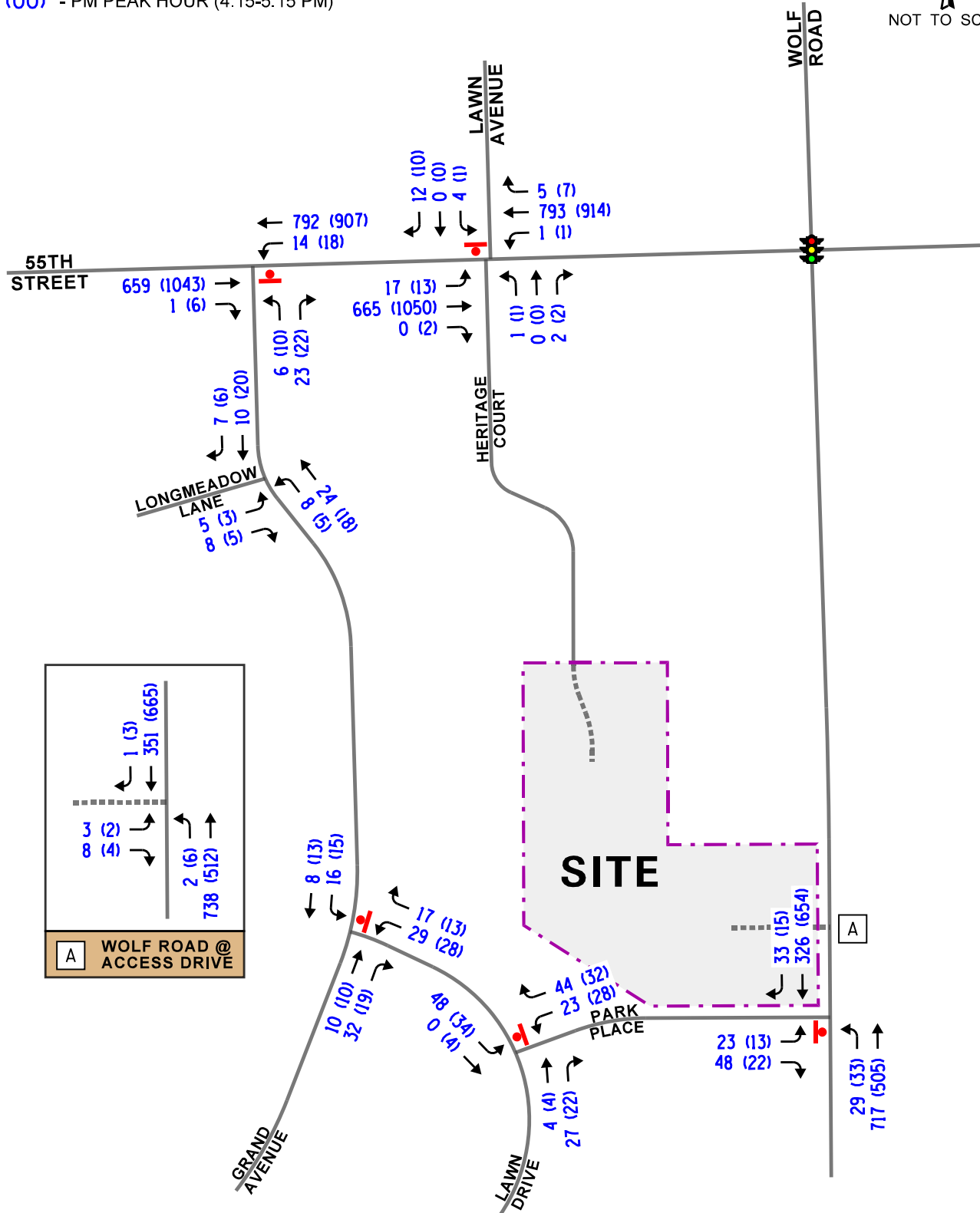
Figure: 8

# LEGEND

- 00 - AM PEAK HOUR (7:30-8:30 AM)
- (00) - PM PEAK HOUR (4:15-5:15 PM)



NOT TO SCALE



Heritage Crossings  
Western Springs, Illinois

Year 2030 Total Traffic Volumes



Job No: 24-068

Figure: 9

## 5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning and weekday evening peak hours. The analysis includes conducting capacity analyses to determine how well the roadway system and access drives are projected to operate and whether any roadway improvements or modifications are required.

### Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning and weekday evening peak hours for the existing, Year 2030 no-build, and Year 2030 total projected traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM)*, 7<sup>th</sup> Edition and analyzed using Synchro/SimTraffic 12 software.

The analyses for the unsignalized intersections determine the average control delay to vehicles at an intersection. Control delay is the elapsed time from a vehicle joining the queue at a stop sign (includes the time required to decelerate to a stop) until its departure from the stop sign and resumption of free flow speed. The methodology analyzes each intersection approach controlled by a stop sign and considers traffic volumes on all approaches and lane characteristics.

The ability of an intersection to accommodate traffic flow is expressed in terms of level of service, which is assigned a letter from A to F based on the average control delay experienced by vehicles passing through the intersection. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are included in the Appendix of this report.

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the existing, Year 2030 no-build, and Year 2030 total projected conditions are presented in **Tables 5** through **7**. A discussion of each intersection follows. Summary sheets for the capacity analyses are included in the Appendix.



Table 5

## CAPACITY ANALYSIS RESULTS – EXISTING CONDITIONS – UNSIGNALIZED

| Intersection                                                  | Weekday Morning Peak Hour |       | Weekday Evening Peak Hour |       |
|---------------------------------------------------------------|---------------------------|-------|---------------------------|-------|
|                                                               | LOS                       | Delay | LOS                       | Delay |
| <b>Wolf Road with Park Place</b>                              |                           |       |                           |       |
| • Eastbound Approach                                          | C                         | 16.7  | C                         | 20.6  |
| • Northbound Left Turn                                        | A                         | 8.2   | A                         | 9.3   |
| <b>55<sup>th</sup> Street with Grand Avenue</b>               |                           |       |                           |       |
| • Westbound Left/Through                                      | A                         | 9.3   | B                         | 10.8  |
| • Northbound Approach                                         | B                         | 14.1  | D                         | 25.5  |
| <b>55<sup>th</sup> Street with Lawn Avenue/Heritage Court</b> |                           |       |                           |       |
| • Eastbound Left Turn                                         | A                         | 8.5   | A                         | 8.8   |
| • Westbound Left Turn                                         | A                         | 8.9   | B                         | 10.5  |
| • Northbound Approach                                         | B                         | 13.0  | B                         | 13.0  |
| • Southbound Approach                                         | B                         | 12.0  | B                         | 11.5  |
| <b>Grand Avenue with Longmeadow Lane</b>                      |                           |       |                           |       |
| • Eastbound Approach                                          | A                         | 8.6   | A                         | 8.6   |
| • Northbound Left/Through                                     | A                         | 7.3   | A                         | 7.3   |
| <b>Grand Avenue with Lawn Drive</b>                           |                           |       |                           |       |
| • Westbound Approach                                          | A                         | 8.9   | A                         | 9.0   |
| • Southbound Left/Through                                     | A                         | 7.3   | A                         | 7.3   |
| <b>Lawn Drive with Park Place</b>                             |                           |       |                           |       |
| • Westbound Approach                                          | A                         | 9.0   | A                         | 9.0   |
| • Southbound Left/Through                                     | A                         | 7.3   | A                         | 7.3   |
| LOS = Level of Service<br>Delay is Measured in Seconds        |                           |       |                           |       |

Table 5A

## CAPACITY ANALYSIS RESULTS – EXISTING CONDITIONS – UNSIGNALIZED

| Intersection                                           | Weekday Afternoon<br>Peak Hour |       |
|--------------------------------------------------------|--------------------------------|-------|
|                                                        | LOS                            | Delay |
| <b>Wolf Road with Park Place</b>                       |                                |       |
| • Eastbound Approach                                   | C                              | 18.8  |
| • Northbound Left Turn                                 | A                              | 9.3   |
| LOS = Level of Service<br>Delay is Measured in Seconds |                                |       |

Table 6

## CAPACITY ANALYSIS RESULTS – 2030 NO-BUILD CONDITIONS – UNSIGNALIZED

| Intersection                                                  | Weekday Morning Peak Hour |       | Weekday Evening Peak Hour |       |
|---------------------------------------------------------------|---------------------------|-------|---------------------------|-------|
|                                                               | LOS                       | Delay | LOS                       | Delay |
| <b>Wolf Road with Park Place</b>                              |                           |       |                           |       |
| • Eastbound Approach                                          | C                         | 17.1  | C                         | 21.3  |
| • Northbound Left Turn                                        | A                         | 8.2   | A                         | 9.3   |
| <b>55<sup>th</sup> Street with Grand Avenue</b>               |                           |       |                           |       |
| • Westbound Left/Through                                      | A                         | 9.4   | B                         | 10.9  |
| • Northbound Approach                                         | B                         | 14.4  | D                         | 26.8  |
| <b>55<sup>th</sup> Street with Lawn Avenue/Heritage Court</b> |                           |       |                           |       |
| • Eastbound Left Turn                                         | A                         | 8.6   | A                         | 8.9   |
| • Westbound Left Turn                                         | A                         | 9.0   | B                         | 10.7  |
| • Northbound Approach                                         | B                         | 13.3  | B                         | 13.3  |
| • Southbound Approach                                         | B                         | 12.3  | B                         | 11.7  |
| <b>Grand Avenue with Longmeadow Lane</b>                      |                           |       |                           |       |
| • Eastbound Approach                                          | A                         | 8.6   | A                         | 8.6   |
| • Northbound Left/Through                                     | A                         | 7.3   | A                         | 7.3   |
| <b>Grand Avenue with Lawn Drive</b>                           |                           |       |                           |       |
| • Westbound Approach                                          | A                         | 8.9   | A                         | 8.9   |
| • Southbound Left/Through                                     | A                         | 7.3   | A                         | 7.3   |
| <b>Lawn Drive with Park Place</b>                             |                           |       |                           |       |
| • Westbound Approach                                          | A                         | 9.0   | A                         | 9.0   |
| • Southbound Left/Through                                     | A                         | 7.3   | A                         | 7.3   |
| LOS = Level of Service<br>Delay is Measured in Seconds        |                           |       |                           |       |

Table 7

CAPACITY ANALYSIS RESULTS – 2030 TOTAL PROJECTED CONDITIONS  
UNSIGNALIZED

| Intersection                                                  | Weekday Morning Peak Hour |       | Weekday Evening Peak Hour |       |
|---------------------------------------------------------------|---------------------------|-------|---------------------------|-------|
|                                                               | LOS                       | Delay | LOS                       | Delay |
| <b>Wolf Road with Park Place</b>                              |                           |       |                           |       |
| • Eastbound Approach                                          | C                         | 17.3  | C                         | 21.5  |
| • Northbound Left Turn                                        | A                         | 8.2   | A                         | 9.3   |
| <b>55<sup>th</sup> Street with Grand Avenue</b>               |                           |       |                           |       |
| • Westbound Left/Through                                      | A                         | 9.4   | B                         | 10.9  |
| • Northbound Approach                                         | B                         | 14.4  | D                         | 26.8  |
| <b>55<sup>th</sup> Street with Lawn Avenue/Heritage Court</b> |                           |       |                           |       |
| • Eastbound Left Turn                                         | A                         | 8.6   | A                         | 8.9   |
| • Westbound Left Turn                                         | A                         | 9.0   | B                         | 10.7  |
| • Northbound Approach                                         | B                         | 13.3  | C                         | 21.6  |
| • Southbound Approach                                         | B                         | 12.3  | B                         | 11.7  |
| <b>Grand Avenue with Longmeadow Lane</b>                      |                           |       |                           |       |
| • Eastbound Approach                                          | A                         | 8.6   | A                         | 8.6   |
| • Northbound Left/Through                                     | A                         | 7.3   | A                         | 7.3   |
| <b>Grand Avenue with Lawn Drive</b>                           |                           |       |                           |       |
| • Westbound Approach                                          | A                         | 8.9   | A                         | 8.9   |
| • Southbound Left/Through                                     | A                         | 7.3   | A                         | 7.3   |
| <b>Lawn Drive with Park Place</b>                             |                           |       |                           |       |
| • Westbound Approach                                          | A                         | 9.0   | A                         | 9.0   |
| • Southbound Left/Through                                     | A                         | 7.3   | A                         | 7.3   |
| <b>Wolf Road with Access Drive</b>                            |                           |       |                           |       |
| • Eastbound Approach                                          | B                         | 13.5  | C                         | 17.0  |
| • Northbound Left Turn                                        | A                         | 8.0   | A                         | 9.0   |
| LOS = Level of Service<br>Delay is Measured in Seconds        |                           |       |                           |       |



Table 7A  
CAPACITY ANALYSIS RESULTS – 2030 TOTAL PROJECTED CONDITIONS  
UNSIGNALIZED

| Intersection                                           | Weekday Afternoon<br>Peak Hour |       |
|--------------------------------------------------------|--------------------------------|-------|
|                                                        | LOS                            | Delay |
| <b>Wolf Road with Park Place</b>                       |                                |       |
| • Eastbound Approach                                   | C                              | 19.8  |
| • Northbound Left Turn                                 | A                              | 9.4   |
| <b>Wolf Road with Access Drive</b>                     |                                |       |
| • Eastbound Approach                                   | C                              | 16.8  |
| • Northbound Left Turn                                 | A                              | 8.9   |
| LOS = Level of Service<br>Delay is Measured in Seconds |                                |       |

## Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identifies any roadway and traffic control improvements necessary to accommodate the development-generated traffic.

### *Wolf Road with Park Place*

The results of the capacity analyses indicate that the eastbound approach operates at Level of Service (LOS) C during the weekday morning, afternoon and weekday evening peak hours while the northbound left-turn movement operates at LOS A during all three peak hours. Based on the peak hour turning movement counts, Park Place is estimated to carry 1,250 – 1,300 daily trips. As stated in the publication titled *Residential Streets*, 3<sup>rd</sup> Edition published by the Urban Land Institute (ULI), the National Association of Home Builders (NAHB), the American Society of Civil Engineers (ASCE) and ITE, the average daily traffic volumes for a residential collector are typically greater than 1,500 vehicles. As such the road is operating below its typical design threshold.

Under Year 2030 no-build and total projected conditions, the eastbound approach and the northbound left-turn movement are projected to operate at the same existing levels of service during all three peak hours with increases in delay of less than two seconds. The 95<sup>th</sup> percentile queue for the eastbound approach is projected to be approximately one to two vehicles and will not extend back to the location of the proposed access drive. The 95<sup>th</sup> percentile queue for the northbound left-turn movement is projected to be approximately one vehicle and can be accommodated by the existing left-turn lane. As such, Park Place and its intersection with Wolf Road have sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

### *55<sup>th</sup> Street with Grand Avenue*

The results of the capacity analyses indicate that the westbound left-turn/through movement operates at LOS A during the weekday morning peak hour and LOS B during the weekday evening peak hour. The northbound approach operates at LOS B during the weekday morning peak hour and LOS D during the weekday evening peak hour.

Under Year 2030 no-build and total projected conditions, all the approaches and their critical movements are projected to operate at the same existing levels of service during both peak hours with increases in delay of less than three seconds. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

### *55<sup>th</sup> Street with Heritage Court/Lawn Avenue*

The results of the capacity analyses indicate that the northbound and southbound approaches currently operate at LOS B during the weekday morning and weekday evening peak hours. The eastbound and westbound left-turn movements operate at LOS B or better during both peak hours.

Under Year 2030 no-build and total projected conditions, the northbound and southbound approaches will operate at LOS B during the weekday morning and weekday evening peak hours except for the northbound approach that is projected to operate at LOS C during the weekday evening peak hour under projected conditions. The eastbound and westbound left-turn movements are projected to operate at LOS A during the weekday morning peak hour and LOS B during the weekday evening peak hour with increases in delay of less than one second. It should be noted that based on the peak hour turning movement counts at this intersection, Heritage Court is estimated to carry approximately 40 to 50 daily trips and is anticipated to carry the same amount of daily traffic given the proposed connection to the south with the proposed development. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

#### *Grand Avenue with Longmeadow Lane*

The results of the capacity analyses indicate that the eastbound approach and the northbound left-turn/through movement currently operates at LOS A during the weekday morning and weekday evening peak hours and will continue to do so under Year 2030 no-build and total projected conditions with minimal increases in delay. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

#### *Grand Avenue with Lawn Drive*

The results of the capacity analyses indicate that the westbound approach and the southbound left-turn/through movement currently operates at LOS A during the weekday morning and weekday evening peak hours and will continue to do so under Year 2030 no-build and total projected conditions with minimal increases in delay. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

#### *Lawn Drive with Park Place*

The results of the capacity analyses indicate that the westbound approach and the southbound left-turn/through movement currently operates at LOS A during the weekday morning and weekday evening peak hours and will continue to do so under Year 2030 no-build and total projected conditions with minimal increases in delay. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

#### *Wolf Road with Proposed Access Drive*

As proposed, a full-movement access drive will be provided on Wolf Road at approximately the same location as the existing full access drive serving the medical office building, approximately 130 feet north of Park Place's centerline. The access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control. It is important to note that Wolf Road provides a two-way left-turn lane at the location of this access drive. As such, the analysis assumed a short (40-foot) exclusive left-turn lane.

#### *Proposed Residential Development Western Springs, Illinois*

Under Year 2030 total projected conditions, outbound movements from the access drive are projected to operate at LOS B and C during the weekday morning and weekday evening peak hours, respectively. The northbound left-turn movement will operate at LOS A. Furthermore, the 95<sup>th</sup> percentile queue for the northbound left turn is projected to be one vehicle, which will not interrupt the traffic flow on Wolf Road. As such, the proposed access drive will be sufficient to accommodate the traffic projected to be generated by the proposed development and will ensure efficient and flexible access is provided.

### *Sight Distance Evaluation*

In order to determine if sufficient sight distance is provided along Wolf Road for a vehicle stopped at the access drive, a sight distance study was performed for the intersection of Wolf Road with the existing access drive. While intersection sight distance is desirable, *A Policy on Geometric Design of Highways and Streets* (Green Book) published by the American Association of State Highway and Transportation Officials (AASHTO) indicates that, at a minimum, the location of a side road or access road must meet the minimum stopping sight distance requirements.

As previously indicated, Wolf Road has a posted speed limit of 35 mph. It is important to note that per the Illinois Department of Transportation (IDOT) Bureau of Design and Environment (BDE) Manual design procedures, the intersection sight distance is obtained by providing clear sight triangles. Furthermore and as stated in the Manual, “The length of leg along the minor road is based on two parts. The first is the location of the driver’s eye on the minor road. The distance is not wholly based on the location of the stop bar, but instead through research on how far away from through traffic the stopping motorist feels comfortable, even potentially after a two-stop process (stop at stop bar, then pull up and stop at a safe spot closer to the edge of pavement that maximizes sight lines). This distance is typically assumed to be 14.4 feet from the edge of the major road traveled way, but can be increased due to site specific issues”.

The minimum stopping sight distance required along Wolf Road for a posted 35 mph speed limit (design speed of 40 mph) based on IDOT’s BDE Manual and the *Bureau of Design and Environment (BDE) Manual* and the *A Policy on Geometric Design of Highways and Streets* (Green Book) published by the American Association of State Highway and Transportation Officials (AASHTO) is 305 feet.

As part of the proposed plans, the culvert will be reworked and the existing chain link fence will be moved further back west (For additional details, please refer to Design Tek Engineering, Inc. engineering plans). Based on Exhibit A (see Appendix), the location of the access drive meets the minimum stopping sight distance requirements for the posted speed limit. While the access drive is within the influence of the southbound right-turn lane taper, it is important to note that this is an existing access drive that was approved in the past and has been operating for many years with higher traffic volumes than what the proposed development will generate.



## 6. Conclusion

Based on the preceding analyses and recommendations, the following conclusions have been made:

- As proposed, the site will be redeveloped with a residential development consisting of 29 townhome units.
- Access to the development will be provided via a full-movement access drive on Wolf Road at approximately the same location as the existing full access drive serving the medical office building, approximately 130 feet north of Park Place's centerline. The access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control.
- The existing chain-link fence will be relocated further west and adequate sight distance will be provided at the full access drive's intersection with Wolf Road.
- A gated connection to the north with Heritage Court will be provided. This connection will only provide accessibility to the proposed development and the existing Heritage Townhomes and will be controlled via a clicker that will be provided to residents of both developments.
- The area roadway system generally has sufficient reserve capacity to accommodate the traffic to be generated by the proposed development and no additional roadway improvements or traffic control modifications are required.
- The proposed access system will be adequate in accommodating the traffic projected to be generated by the proposed development and will ensure efficient and flexible access will be provided.
- As part of the proposed plans, the existing chain link fence around the culvert will be moved further back west and as such, the location of the access drive will meet the minimum stopping sight distance requirements for the posted speed limit.

# Appendix

Traffic Count Summary Sheets

Site Plan

ITE Trip Generation Graphs

Figure A

CMAP Projections Letter

Figure B

Level of Service Table

Capacity Analysis Summary Sheets

Exhibit A – Available Sight Distance

## Traffic Count Summary Sheets

# Grand Avenue with 55th Street TMC - TMC

Thu Mar 21, 2024

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 1165723, Location: 41.789777, -87.900514



Provided by: Kenig Lindgren O'Hara Aboona, Inc.

9575 W. Higgins Rd., Suite 400,  
Rosemont, IL, 60018, US

| Leg Direction               | 55th Street Westbound |       |    |       |      | Grand Avenue Northbound |       |    |       |      | 55th Street Eastbound |       |    |       |      |       |
|-----------------------------|-----------------------|-------|----|-------|------|-------------------------|-------|----|-------|------|-----------------------|-------|----|-------|------|-------|
| Time                        | T                     | L     | U  | App   | Ped* | R                       | L     | U  | App   | Ped* | R                     | T     | U  | App   | Ped* | Int   |
| 2024-03-21 7:00AM           | 154                   | 4     | 0  | 158   | 0    | 6                       | 3     | 0  | 9     | 0    | 0                     | 157   | 0  | 157   | 0    | 324   |
| 7:15AM                      | 188                   | 2     | 0  | 190   | 0    | 5                       | 1     | 0  | 6     | 0    | 0                     | 180   | 0  | 180   | 0    | 376   |
| 7:30AM                      | 185                   | 6     | 0  | 191   | 0    | 7                       | 1     | 0  | 8     | 1    | 1                     | 164   | 0  | 165   | 1    | 364   |
| 7:45AM                      | 162                   | 2     | 0  | 164   | 0    | 5                       | 1     | 0  | 6     | 0    | 0                     | 135   | 0  | 135   | 0    | 305   |
| Hourly Total                | 689                   | 14    | 0  | 703   | 0    | 23                      | 6     | 0  | 29    | 1    | 1                     | 636   | 0  | 637   | 1    | 1369  |
| 8:00AM                      | 122                   | 1     | 0  | 123   | 0    | 3                       | 1     | 0  | 4     | 0    | 2                     | 119   | 0  | 121   | 0    | 248   |
| 8:15AM                      | 126                   | 3     | 0  | 129   | 0    | 5                       | 2     | 0  | 7     | 0    | 2                     | 117   | 0  | 119   | 0    | 255   |
| 8:30AM                      | 102                   | 7     | 0  | 109   | 0    | 4                       | 2     | 0  | 6     | 0    | 1                     | 120   | 0  | 121   | 0    | 236   |
| 8:45AM                      | 121                   | 0     | 0  | 121   | 0    | 7                       | 1     | 0  | 8     | 0    | 0                     | 104   | 0  | 104   | 0    | 233   |
| Hourly Total                | 471                   | 11    | 0  | 482   | 0    | 19                      | 6     | 0  | 25    | 0    | 5                     | 460   | 0  | 465   | 0    | 972   |
| 4:00PM                      | 212                   | 3     | 0  | 215   | 0    | 8                       | 3     | 0  | 11    | 0    | 3                     | 266   | 0  | 269   | 0    | 495   |
| 4:15PM                      | 233                   | 6     | 0  | 239   | 0    | 4                       | 3     | 0  | 7     | 0    | 2                     | 277   | 0  | 279   | 0    | 525   |
| 4:30PM                      | 263                   | 5     | 0  | 268   | 0    | 3                       | 3     | 0  | 6     | 0    | 1                     | 215   | 0  | 216   | 0    | 490   |
| 4:45PM                      | 226                   | 4     | 0  | 230   | 0    | 7                       | 1     | 0  | 8     | 0    | 0                     | 210   | 0  | 210   | 0    | 448   |
| Hourly Total                | 934                   | 18    | 0  | 952   | 0    | 22                      | 10    | 0  | 32    | 0    | 6                     | 968   | 0  | 974   | 0    | 1958  |
| 5:00PM                      | 171                   | 6     | 0  | 177   | 0    | 1                       | 1     | 0  | 2     | 2    | 1                     | 174   | 0  | 175   | 2    | 354   |
| 5:15PM                      | 149                   | 7     | 0  | 156   | 0    | 9                       | 3     | 0  | 12    | 0    | 8                     | 154   | 0  | 162   | 0    | 330   |
| 5:30PM                      | 134                   | 6     | 0  | 140   | 0    | 4                       | 3     | 0  | 7     | 0    | 1                     | 165   | 0  | 166   | 0    | 313   |
| 5:45PM                      | 124                   | 2     | 0  | 126   | 0    | 4                       | 2     | 0  | 6     | 0    | 3                     | 143   | 0  | 146   | 0    | 278   |
| Hourly Total                | 578                   | 21    | 0  | 599   | 0    | 18                      | 9     | 0  | 27    | 2    | 13                    | 636   | 0  | 649   | 2    | 1275  |
| <b>Total</b>                | 2672                  | 64    | 0  | 2736  | 0    | 82                      | 31    | 0  | 113   | 3    | 25                    | 2700  | 0  | 2725  | 3    | 5574  |
| <b>% Approach</b>           | 97.7%                 | 2.3%  | 0% | -     | -    | 72.6%                   | 27.4% | 0% | -     | -    | 0.9%                  | 99.1% | 0% | -     | -    | -     |
| <b>% Total</b>              | 47.9%                 | 1.1%  | 0% | 49.1% | -    | 1.5%                    | 0.6%  | 0% | 2.0%  | -    | 0.4%                  | 48.4% | 0% | 48.9% | -    | -     |
| <b>Lights</b>               | 2617                  | 63    | 0  | 2680  | -    | 80                      | 30    | 0  | 110   | -    | 25                    | 2643  | 0  | 2668  | -    | 5458  |
| <b>% Lights</b>             | 97.9%                 | 98.4% | 0% | 98.0% | -    | 97.6%                   | 96.8% | 0% | 97.3% | -    | 100%                  | 97.9% | 0% | 97.9% | -    | 97.9% |
| <b>Single-Unit Trucks</b>   | 33                    | 1     | 0  | 34    | -    | 2                       | 0     | 0  | 2     | -    | 0                     | 37    | 0  | 37    | -    | 73    |
| <b>% Single-Unit Trucks</b> | 1.2%                  | 1.6%  | 0% | 1.2%  | -    | 2.4%                    | 0%    | 0% | 1.8%  | -    | 0%                    | 1.4%  | 0% | 1.4%  | -    | 1.3%  |
| <b>Articulated Trucks</b>   | 19                    | 0     | 0  | 19    | -    | 0                       | 0     | 0  | 0     | -    | 0                     | 16    | 0  | 16    | -    | 35    |
| <b>% Articulated Trucks</b> | 0.7%                  | 0%    | 0% | 0.7%  | -    | 0%                      | 0%    | 0% | 0%    | -    | 0%                    | 0.6%  | 0% | 0.6%  | -    | 0.6%  |
| <b>Buses</b>                | 3                     | 0     | 0  | 3     | -    | 0                       | 0     | 0  | 0     | -    | 0                     | 4     | 0  | 4     | -    | 7     |
| <b>% Buses</b>              | 0.1%                  | 0%    | 0% | 0.1%  | -    | 0%                      | 0%    | 0% | 0%    | -    | 0%                    | 0.1%  | 0% | 0.1%  | -    | 0.1%  |
| <b>Bicycles on Road</b>     | 0                     | 0     | 0  | 0     | -    | 0                       | 1     | 0  | 1     | -    | 0                     | 0     | 0  | 0     | -    | 1     |
| <b>% Bicycles on Road</b>   | 0%                    | 0%    | 0% | 0%    | -    | 0%                      | 3.2%  | 0% | 0.9%  | -    | 0%                    | 0%    | 0% | 0%    | -    | 0%    |
| <b>Pedestrians</b>          | -                     | -     | -  | -     | 0    | -                       | -     | -  | -     | 3    | -                     | -     | -  | -     | 3    |       |
| <b>% Pedestrians</b>        | -                     | -     | -  | -     | -    | -                       | -     | -  | -     | 100% | -                     | -     | -  | -     | 100% | -     |

\* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn



# Grand Avenue with 55th Street TMC - TMC

Thu Mar 21, 2024

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

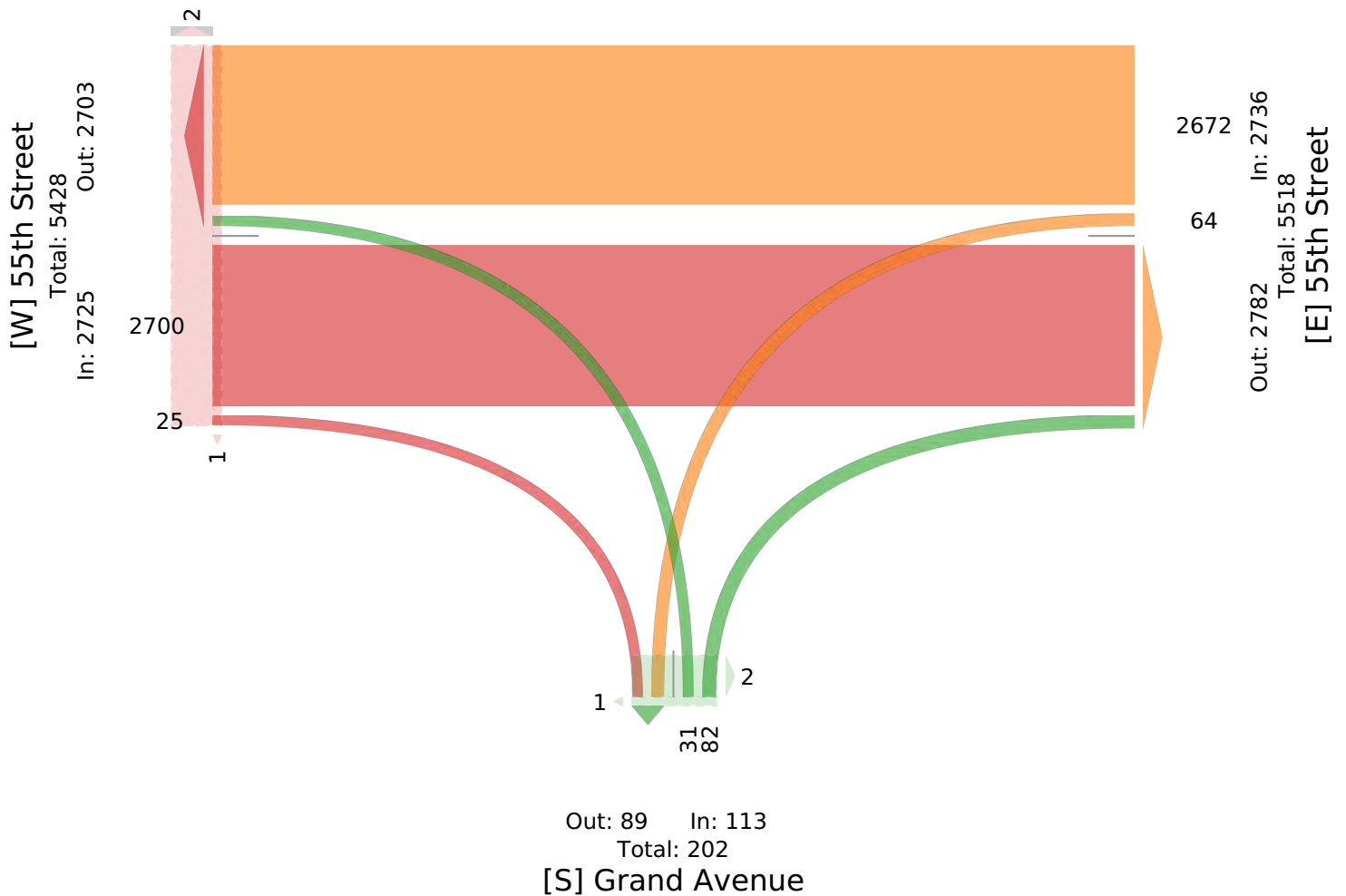
All Movements

ID: 1165723, Location: 41.789777, -87.900514



Provided by: Kenig Lindgren O'Hara Aboona, Inc.

9575 W. Higgins Rd., Suite 400,  
Rosemont, IL, 60018, US



# Grand Avenue with 55th Street TMC - TMC

Thu Mar 21, 2024

AM Peak (7 AM - 8 AM)

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 1165723, Location: 41.789777, -87.900514



Provided by: Kenig Lindgren O'Hara Aboona, Inc.

9575 W. Higgins Rd., Suite 400,  
Rosemont, IL, 60018, US

| Leg Direction               | 55th Street Westbound |       |    |       |      | Grand Avenue Northbound |       |    |       |      | 55th Street Eastbound |       |    |       |      |       |
|-----------------------------|-----------------------|-------|----|-------|------|-------------------------|-------|----|-------|------|-----------------------|-------|----|-------|------|-------|
| Time                        | T                     | L     | U  | App   | Ped* | R                       | L     | U  | App   | Ped* | R                     | T     | U  | App   | Ped* | Int   |
| 2024-03-21 7:00AM           | 154                   | 4     | 0  | 158   | 0    | 6                       | 3     | 0  | 9     | 0    | 0                     | 157   | 0  | 157   | 0    | 324   |
| 7:15AM                      | 188                   | 2     | 0  | 190   | 0    | 5                       | 1     | 0  | 6     | 0    | 0                     | 180   | 0  | 180   | 0    | 376   |
| 7:30AM                      | 185                   | 6     | 0  | 191   | 0    | 7                       | 1     | 0  | 8     | 1    | 1                     | 164   | 0  | 165   | 1    | 364   |
| 7:45AM                      | 162                   | 2     | 0  | 164   | 0    | 5                       | 1     | 0  | 6     | 0    | 0                     | 135   | 0  | 135   | 0    | 305   |
| <b>Total</b>                | 689                   | 14    | 0  | 703   | 0    | 23                      | 6     | 0  | 29    | 1    | 1                     | 636   | 0  | 637   | 1    | 1369  |
| <b>% Approach</b>           | 98.0%                 | 2.0%  | 0% | -     | -    | 79.3%                   | 20.7% | 0% | -     | -    | 0.2%                  | 99.8% | 0% | -     | -    | -     |
| <b>% Total</b>              | 50.3%                 | 1.0%  | 0% | 51.4% | -    | 1.7%                    | 0.4%  | 0% | 2.1%  | -    | 0.1%                  | 46.5% | 0% | 46.5% | -    | -     |
| <b>PHF</b>                  | 0.916                 | 0.583 | -  | 0.920 | -    | 0.821                   | 0.500 | -  | 0.806 | -    | 0.250                 | 0.883 | -  | 0.885 | -    | 0.910 |
| <b>Lights</b>               | 659                   | 13    | 0  | 672   | -    | 23                      | 6     | 0  | 29    | -    | 1                     | 618   | 0  | 619   | -    | 1320  |
| <b>% Lights</b>             | 95.6%                 | 92.9% | 0% | 95.6% | -    | 100%                    | 100%  | 0% | 100%  | -    | 100%                  | 97.2% | 0% | 97.2% | -    | 96.4% |
| <b>Single-Unit Trucks</b>   | 16                    | 1     | 0  | 17    | -    | 0                       | 0     | 0  | 0     | -    | 0                     | 11    | 0  | 11    | -    | 28    |
| <b>% Single-Unit Trucks</b> | 2.3%                  | 7.1%  | 0% | 2.4%  | -    | 0%                      | 0%    | 0% | 0%    | -    | 0%                    | 1.7%  | 0% | 1.7%  | -    | 2.0%  |
| <b>Articulated Trucks</b>   | 13                    | 0     | 0  | 13    | -    | 0                       | 0     | 0  | 0     | -    | 0                     | 5     | 0  | 5     | -    | 18    |
| <b>% Articulated Trucks</b> | 1.9%                  | 0%    | 0% | 1.8%  | -    | 0%                      | 0%    | 0% | 0%    | -    | 0%                    | 0.8%  | 0% | 0.8%  | -    | 1.3%  |
| <b>Buses</b>                | 1                     | 0     | 0  | 1     | -    | 0                       | 0     | 0  | 0     | -    | 0                     | 2     | 0  | 2     | -    | 3     |
| <b>% Buses</b>              | 0.1%                  | 0%    | 0% | 0.1%  | -    | 0%                      | 0%    | 0% | 0%    | -    | 0%                    | 0.3%  | 0% | 0.3%  | -    | 0.2%  |
| <b>Bicycles on Road</b>     | 0                     | 0     | 0  | 0     | -    | 0                       | 0     | 0  | 0     | -    | 0                     | 0     | 0  | 0     | -    | 0     |
| <b>% Bicycles on Road</b>   | 0%                    | 0%    | 0% | 0%    | -    | 0%                      | 0%    | 0% | 0%    | -    | 0%                    | 0%    | 0% | 0%    | -    | 0%    |
| <b>Pedestrians</b>          | -                     | -     | -  | -     | 0    | -                       | -     | -  | -     | 1    | -                     | -     | -  | -     | -    | 1     |
| <b>% Pedestrians</b>        | -                     | -     | -  | -     | -    | -                       | -     | -  | -     | 100% | -                     | -     | -  | -     | -    | 100%  |

\* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

# Grand Avenue with 55th Street TMC - TMC

Thu Mar 21, 2024

AM Peak (7 AM - 8 AM)

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

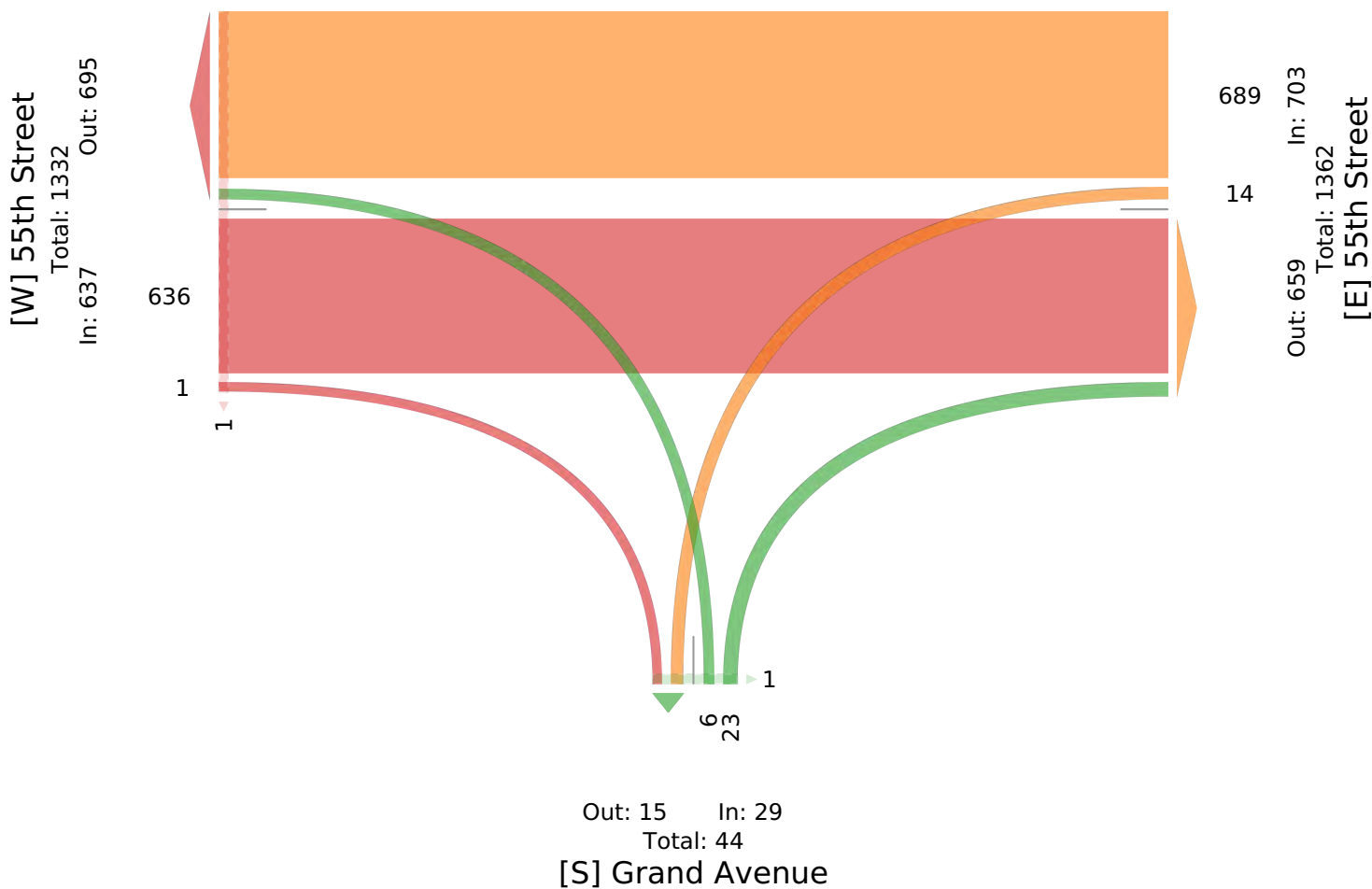
All Movements

ID: 1165723, Location: 41.789777, -87.900514



Provided by: Kenig Lindgren O'Hara Aboona, Inc.

9575 W. Higgins Rd., Suite 400,  
Rosemont, IL, 60018, US



# Grand Avenue with 55th Street TMC - TMC

Thu Mar 21, 2024

PM Peak (4 PM - 5 PM) - Overall Peak Hour

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 1165723, Location: 41.789777, -87.900514



Provided by: Kenig Lindgren O'Hara Aboona, Inc.

9575 W. Higgins Rd., Suite 400,  
Rosemont, IL, 60018, US

| Leg Direction               | 55th Street Westbound |       |    |       |      | Grand Avenue Northbound |       |    |       |      | 55th Street Eastbound |       |    |       |      |       |
|-----------------------------|-----------------------|-------|----|-------|------|-------------------------|-------|----|-------|------|-----------------------|-------|----|-------|------|-------|
| Time                        | T                     | L     | U  | App   | Ped* | R                       | L     | U  | App   | Ped* | R                     | T     | U  | App   | Ped* | Int   |
| 2024-03-21 4:00PM           | 212                   | 3     | 0  | 215   | 0    | 8                       | 3     | 0  | 11    | 0    | 3                     | 266   | 0  | 269   | 0    | 495   |
| 4:15PM                      | 233                   | 6     | 0  | 239   | 0    | 4                       | 3     | 0  | 7     | 0    | 2                     | 277   | 0  | 279   | 0    | 525   |
| 4:30PM                      | 263                   | 5     | 0  | 268   | 0    | 3                       | 3     | 0  | 6     | 0    | 1                     | 215   | 0  | 216   | 0    | 490   |
| 4:45PM                      | 226                   | 4     | 0  | 230   | 0    | 7                       | 1     | 0  | 8     | 0    | 0                     | 210   | 0  | 210   | 0    | 448   |
| <b>Total</b>                | 934                   | 18    | 0  | 952   | 0    | 22                      | 10    | 0  | 32    | 0    | 6                     | 968   | 0  | 974   | 0    | 1958  |
| <b>% Approach</b>           | 98.1%                 | 1.9%  | 0% | -     | -    | 68.8%                   | 31.3% | 0% | -     | -    | 0.6%                  | 99.4% | 0% | -     | -    | -     |
| <b>% Total</b>              | 47.7%                 | 0.9%  | 0% | 48.6% | -    | 1.1%                    | 0.5%  | 0% | 1.6%  | -    | 0.3%                  | 49.4% | 0% | 49.7% | -    | -     |
| <b>PHF</b>                  | 0.888                 | 0.750 | -  | 0.888 | -    | 0.688                   | 0.833 | -  | 0.727 | -    | 0.500                 | 0.874 | -  | 0.873 | -    | 0.932 |
| <b>Lights</b>               | 927                   | 18    | 0  | 945   | -    | 21                      | 10    | 0  | 31    | -    | 6                     | 950   | 0  | 956   | -    | 1932  |
| <b>% Lights</b>             | 99.3%                 | 100%  | 0% | 99.3% | -    | 95.5%                   | 100%  | 0% | 96.9% | -    | 100%                  | 98.1% | 0% | 98.2% | -    | 98.7% |
| <b>Single-Unit Trucks</b>   | 6                     | 0     | 0  | 6     | -    | 1                       | 0     | 0  | 1     | -    | 0                     | 6     | 0  | 6     | -    | 13    |
| <b>% Single-Unit Trucks</b> | 0.6%                  | 0%    | 0% | 0.6%  | -    | 4.5%                    | 0%    | 0% | 3.1%  | -    | 0%                    | 0.6%  | 0% | 0.6%  | -    | 0.7%  |
| <b>Articulated Trucks</b>   | 1                     | 0     | 0  | 1     | -    | 0                       | 0     | 0  | 0     | -    | 0                     | 10    | 0  | 10    | -    | 11    |
| <b>% Articulated Trucks</b> | 0.1%                  | 0%    | 0% | 0.1%  | -    | 0%                      | 0%    | 0% | 0%    | -    | 0%                    | 1.0%  | 0% | 1.0%  | -    | 0.6%  |
| <b>Buses</b>                | 0                     | 0     | 0  | 0     | -    | 0                       | 0     | 0  | 0     | -    | 0                     | 2     | 0  | 2     | -    | 2     |
| <b>% Buses</b>              | 0%                    | 0%    | 0% | 0%    | -    | 0%                      | 0%    | 0% | 0%    | -    | 0%                    | 0.2%  | 0% | 0.2%  | -    | 0.1%  |
| <b>Bicycles on Road</b>     | 0                     | 0     | 0  | 0     | -    | 0                       | 0     | 0  | 0     | -    | 0                     | 0     | 0  | 0     | -    | 0     |
| <b>% Bicycles on Road</b>   | 0%                    | 0%    | 0% | 0%    | -    | 0%                      | 0%    | 0% | 0%    | -    | 0%                    | 0%    | 0% | 0%    | -    | 0%    |
| <b>Pedestrians</b>          | -                     | -     | -  | -     | 0    | -                       | -     | -  | -     | 0    | -                     | -     | -  | -     | 0    | -     |
| <b>% Pedestrians</b>        | -                     | -     | -  | -     | -    | -                       | -     | -  | -     | -    | -                     | -     | -  | -     | -    | -     |

\* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn



# Grand Avenue with 55th Street TMC - TMC

Thu Mar 21, 2024

PM Peak (4 PM - 5 PM) - Overall Peak Hour

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

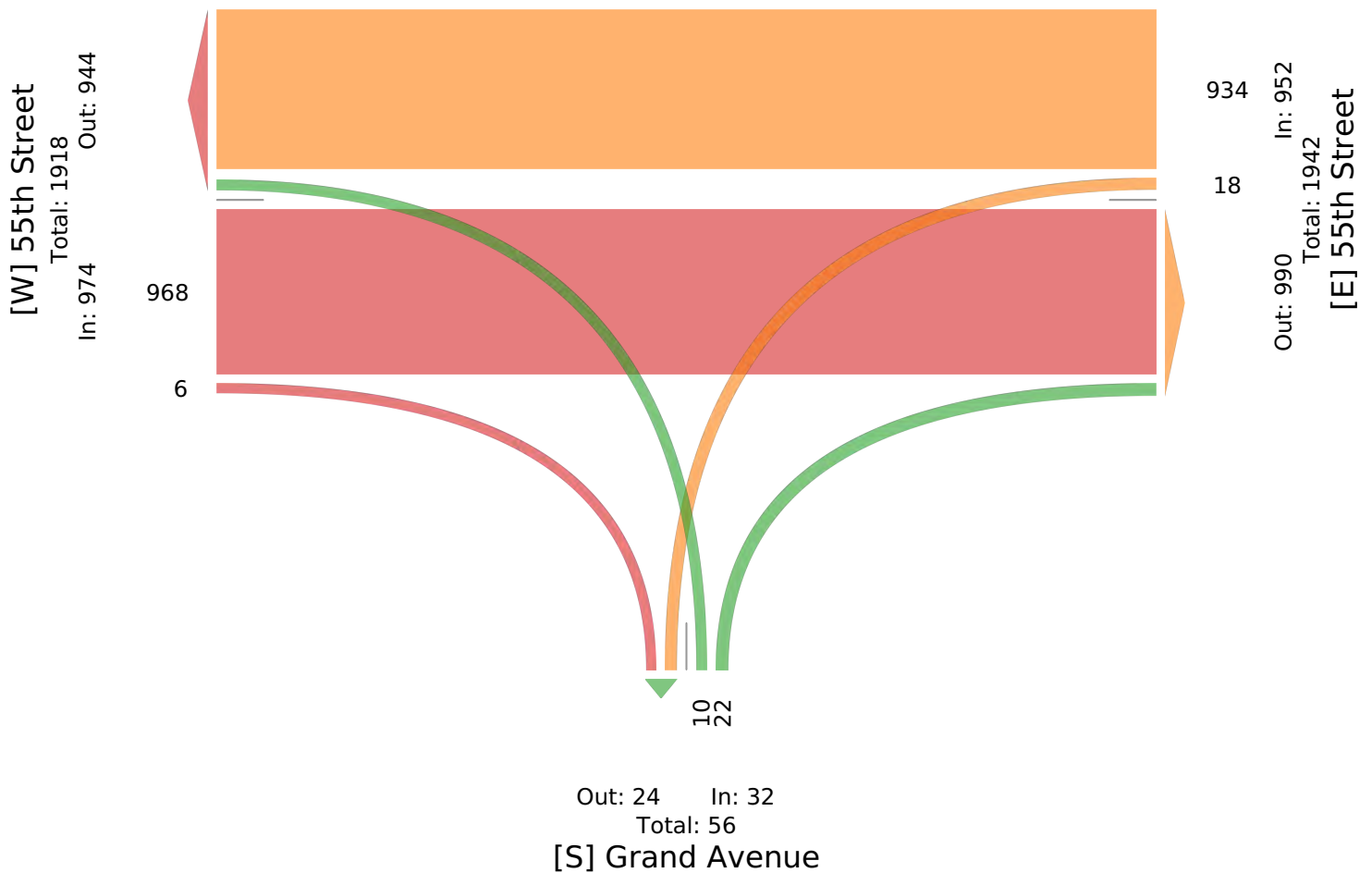
All Movements

ID: 1165723, Location: 41.789777, -87.900514



Provided by: Kenig Lindgren O'Hara Aboona, Inc.

9575 W. Higgins Rd., Suite 400,  
Rosemont, IL, 60018, US



# Heritage Court with 55th Street TMC - TMC

Thu Mar 21, 2024

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 1165722, Location: 41.789795, -87.899384



Provided by: Kenig Lindgren O'Hara Aboona, Inc.

9575 W. Higgins Rd., Suite 400,  
Rosemont, IL, 60018, US

| Leg Direction               | Lawn Avenue Southbound |    |       |    |       |      | 55th Street Westbound |       |      |    |       |      | Heritage Avenue Northbound |      |       |    |      |      | 55th Street Eastbound |       |      |      |       |      |       |
|-----------------------------|------------------------|----|-------|----|-------|------|-----------------------|-------|------|----|-------|------|----------------------------|------|-------|----|------|------|-----------------------|-------|------|------|-------|------|-------|
| Time                        | R                      | T  | L     | U  | App   | Ped* | R                     | T     | L    | U  | App   | Ped* | R                          | T    | L     | U  | App  | Ped* | R                     | T     | L    | U    | App   | Ped* | Int   |
| 2024-03-21 7:00AM           | 1                      | 0  | 0     | 0  | 1     | 0    | 2                     | 132   | 0    | 0  | 134   | 0    | 1                          | 0    | 1     | 0  | 2    | 0    | 0                     | 125   | 1    | 0    | 126   | 0    | 263   |
| 7:15AM                      | 6                      | 0  | 1     | 0  | 7     | 0    | 3                     | 154   | 0    | 0  | 157   | 0    | 0                          | 0    | 1     | 0  | 1    | 0    | 0                     | 187   | 2    | 0    | 189   | 0    | 354   |
| 7:30AM                      | 4                      | 0  | 0     | 0  | 4     | 0    | 0                     | 174   | 0    | 0  | 174   | 0    | 0                          | 0    | 2     | 0  | 2    | 0    | 1                     | 185   | 2    | 0    | 188   | 0    | 368   |
| 7:45AM                      | 1                      | 0  | 1     | 0  | 2     | 0    | 2                     | 225   | 0    | 0  | 227   | 0    | 2                          | 0    | 0     | 0  | 2    | 0    | 0                     | 147   | 3    | 0    | 150   | 0    | 381   |
| Hourly Total                | 12                     | 0  | 2     | 0  | 14    | 0    | 7                     | 685   | 0    | 0  | 692   | 0    | 3                          | 0    | 4     | 0  | 7    | 0    | 1                     | 644   | 8    | 0    | 653   | 0    | 1366  |
| 8:00AM                      | 2                      | 0  | 1     | 0  | 3     | 0    | 3                     | 167   | 1    | 0  | 171   | 0    | 0                          | 0    | 1     | 0  | 1    | 0    | 0                     | 159   | 4    | 0    | 163   | 0    | 338   |
| 8:15AM                      | 4                      | 0  | 1     | 0  | 5     | 0    | 0                     | 186   | 0    | 0  | 186   | 0    | 0                          | 0    | 0     | 0  | 0    | 1    | 0                     | 182   | 3    | 0    | 185   | 0    | 376   |
| 8:30AM                      | 5                      | 0  | 1     | 0  | 6     | 0    | 0                     | 195   | 0    | 0  | 195   | 0    | 0                          | 0    | 0     | 0  | 0    | 0    | 0                     | 161   | 7    | 0    | 168   | 0    | 369   |
| 8:45AM                      | 1                      | 0  | 1     | 0  | 2     | 0    | 2                     | 163   | 0    | 0  | 165   | 0    | 0                          | 0    | 0     | 0  | 0    | 0    | 0                     | 139   | 2    | 0    | 141   | 0    | 308   |
| Hourly Total                | 12                     | 0  | 4     | 0  | 16    | 0    | 5                     | 711   | 1    | 0  | 717   | 0    | 0                          | 0    | 1     | 0  | 1    | 1    | 0                     | 641   | 16   | 0    | 657   | 0    | 1391  |
| 4:00PM                      | 5                      | 0  | 4     | 0  | 9     | 0    | 2                     | 210   | 1    | 0  | 213   | 0    | 0                          | 0    | 0     | 0  | 0    | 0    | 1                     | 252   | 3    | 0    | 256   | 0    | 478   |
| 4:15PM                      | 1                      | 0  | 0     | 0  | 1     | 0    | 1                     | 190   | 0    | 0  | 191   | 0    | 0                          | 1    | 0     | 0  | 1    | 0    | 0                     | 246   | 6    | 0    | 252   | 1    | 445   |
| 4:30PM                      | 6                      | 0  | 0     | 0  | 6     | 0    | 2                     | 227   | 0    | 0  | 229   | 0    | 1                          | 0    | 0     | 0  | 1    | 0    | 0                     | 235   | 2    | 0    | 237   | 0    | 473   |
| 4:45PM                      | 1                      | 0  | 1     | 0  | 2     | 0    | 1                     | 238   | 1    | 0  | 240   | 0    | 0                          | 0    | 0     | 0  | 0    | 0    | 0                     | 243   | 2    | 0    | 245   | 0    | 487   |
| Hourly Total                | 13                     | 0  | 5     | 0  | 18    | 0    | 6                     | 865   | 2    | 0  | 873   | 0    | 1                          | 1    | 0     | 0  | 2    | 0    | 1                     | 976   | 13   | 0    | 990   | 1    | 1883  |
| 5:00PM                      | 2                      | 0  | 0     | 0  | 2     | 0    | 2                     | 202   | 0    | 0  | 204   | 0    | 0                          | 0    | 1     | 0  | 1    | 1    | 1                     | 268   | 3    | 0    | 272   | 1    | 479   |
| 5:15PM                      | 1                      | 0  | 0     | 0  | 1     | 0    | 2                     | 224   | 0    | 0  | 226   | 0    | 0                          | 0    | 0     | 0  | 0    | 0    | 0                     | 278   | 6    | 1    | 285   | 0    | 512   |
| 5:30PM                      | 2                      | 0  | 0     | 0  | 2     | 0    | 2                     | 245   | 0    | 0  | 247   | 0    | 0                          | 0    | 0     | 0  | 0    | 0    | 0                     | 218   | 1    | 0    | 219   | 0    | 468   |
| 5:45PM                      | 2                      | 0  | 0     | 0  | 2     | 1    | 1                     | 228   | 0    | 0  | 229   | 0    | 0                          | 0    | 0     | 0  | 0    | 2    | 0                     | 220   | 0    | 0    | 220   | 0    | 451   |
| Hourly Total                | 7                      | 0  | 0     | 0  | 7     | 1    | 7                     | 899   | 0    | 0  | 906   | 0    | 0                          | 0    | 1     | 0  | 1    | 3    | 1                     | 984   | 10   | 1    | 996   | 1    | 1910  |
| <b>Total</b>                | 44                     | 0  | 11    | 0  | 55    | 1    | 25                    | 3160  | 3    | 0  | 3188  | 0    | 4                          | 1    | 6     | 0  | 11   | 4    | 3                     | 3245  | 47   | 1    | 3296  | 2    | 6550  |
| <b>% Approach</b>           | 80.0%                  | 0% | 20.0% | 0% | -     | -    | 0.8%                  | 99.1% | 0.1% | 0% | -     | -    | 36.4%                      | 9.1% | 54.5% | 0% | -    | -    | 0.1%                  | 98.5% | 1.4% | 0%   | -     | -    | -     |
| <b>% Total</b>              | 0.7%                   | 0% | 0.2%  | 0% | 0.8%  | -    | 0.4%                  | 48.2% | 0%   | 0% | 48.7% | -    | 0.1%                       | 0%   | 0.1%  | 0% | 0.2% | -    | 0%                    | 49.5% | 0.7% | 0%   | 50.3% | -    | -     |
| <b>Lights</b>               | 44                     | 0  | 10    | 0  | 54    | -    | 24                    | 3100  | 3    | 0  | 3127  | -    | 4                          | 1    | 6     | 0  | 11   | -    | 3                     | 3181  | 47   | 1    | 3232  | -    | 6424  |
| <b>% Lights</b>             | 100%                   | 0% | 90.9% | 0% | 98.2% | -    | 96.0%                 | 98.1% | 100% | 0% | 98.1% | -    | 100%                       | 100% | 100%  | 0% | 100% | -    | 100%                  | 98.0% | 100% | 100% | 98.1% | -    | 98.1% |
| <b>Single-Unit Trucks</b>   | 0                      | 0  | 1     | 0  | 1     | -    | 1                     | 45    | 0    | 0  | 46    | -    | 0                          | 0    | 0     | 0  | 0    | -    | 0                     | 32    | 0    | 0    | 32    | -    | 79    |
| <b>% Single-Unit Trucks</b> | 0%                     | 0% | 9.1%  | 0% | 1.8%  | -    | 4.0%                  | 1.4%  | 0%   | 0% | 1.4%  | -    | 0%                         | 0%   | 0%    | 0% | 0%   | -    | 0%                    | 1.0%  | 0%   | 0%   | 1.0%  | -    | 1.2%  |
| <b>Articulated Trucks</b>   | 0                      | 0  | 0     | 0  | 0     | -    | 0                     | 12    | 0    | 0  | 12    | -    | 0                          | 0    | 0     | 0  | 0    | -    | 0                     | 26    | 0    | 0    | 26    | -    | 38    |
| <b>% Articulated Trucks</b> | 0%                     | 0% | 0%    | 0% | 0%    | -    | 0%                    | 0.4%  | 0%   | 0% | 0.4%  | -    | 0%                         | 0%   | 0%    | 0% | 0%   | -    | 0%                    | 0.8%  | 0%   | 0%   | 0.8%  | -    | 0.6%  |
| <b>Buses</b>                | 0                      | 0  | 0     | 0  | 0     | -    | 0                     | 3     | 0    | 0  | 3     | -    | 0                          | 0    | 0     | 0  | 0    | -    | 0                     | 6     | 0    | 0    | 6     | -    | 9     |
| <b>% Buses</b>              | 0%                     | 0% | 0%    | 0% | 0%    | -    | 0%                    | 0.1%  | 0%   | 0% | 0.1%  | -    | 0%                         | 0%   | 0%    | 0% | 0%   | -    | 0%                    | 0.2%  | 0%   | 0%   | 0.2%  | -    | 0.1%  |
| <b>Bicycles on Road</b>     | 0                      | 0  | 0     | 0  | 0     | -    | 0                     | 0     | 0    | 0  | 0     | -    | 0                          | 0    | 0     | 0  | 0    | -    | 0                     | 0     | 0    | 0    | 0     | -    | 0     |
| <b>% Bicycles on Road</b>   | 0%                     | 0% | 0%    | 0% | 0%    | -    | 0%                    | 0%    | 0%   | 0% | 0%    | -    | 0%                         | 0%   | 0%    | 0% | 0%   | -    | 0%                    | 0%    | 0%   | 0%   | 0%    | -    | 0%    |
| <b>Pedestrians</b>          | -                      | -  | -     | -  | -     | 1    | -                     | -     | -    | -  | -     | 0    | -                          | -    | -     | -  | -    | 4    | -                     | -     | -    | -    | -     | 2    |       |
| <b>% Pedestrians</b>        | -                      | -  | -     | -  | -     | 100% | -                     | -     | -    | -  | -     | -    | -                          | -    | -     | -  | -    | 100% | -                     | -     | -    | -    | -     | 100% | -     |

\* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

# Hertage Court with 55th Street TMC - TMC

Thu Mar 21, 2024

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 1165722, Location: 41.789795, -87.899384



Provided by: Kenig Lindgren O'Hara Aboona, Inc.

9575 W. Higgins Rd., Suite 400,  
Rosemont, IL, 60018, US

## [N] Lawn Avenue

Total: 128

In: 55 Out: 73

44  
11

1

## [W] 55th Street

Total: 6507  
In: 3296 Out: 3211

1  
47

3245

3

1

25

3160

3

Out: 3260 In: 3188

Total: 6448

## [E] 55th Street

2

6  
14

2

Out: 6 In: 11

Total: 17

## [S] Heritage Avenue

# Heritage Court with 55th Street TMC - TMC

Thu Mar 21, 2024

AM Peak (7:45 AM - 8:45 AM)

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 1165722, Location: 41.789795, -87.899384



Provided by: Kenig Lindgren O'Hara Aboona, Inc.

9575 W. Higgins Rd., Suite 400,  
Rosemont, IL, 60018, US

| Leg Direction               | Lawn Avenue Southbound |    |       |    |       |      | 55th Street Westbound |       |       |    |       |      | Heritage Avenue Northbound |    |       |    |       |      | 55th Street Eastbound |       |       |    |       |      |       |
|-----------------------------|------------------------|----|-------|----|-------|------|-----------------------|-------|-------|----|-------|------|----------------------------|----|-------|----|-------|------|-----------------------|-------|-------|----|-------|------|-------|
| Time                        | R                      | T  | L     | U  | App   | Ped* | R                     | T     | L     | U  | App   | Ped* | R                          | T  | L     | U  | App   | Ped* | R                     | T     | L     | U  | App   | Ped* | Int   |
| 2024-03-21 7:45AM           | 1                      | 0  | 1     | 0  | 2     | 0    | 2                     | 225   | 0     | 0  | 227   | 0    | 2                          | 0  | 0     | 0  | 2     | 0    | 0                     | 147   | 3     | 0  | 150   | 0    | 381   |
| 8:00AM                      | 2                      | 0  | 1     | 0  | 3     | 0    | 3                     | 167   | 1     | 0  | 171   | 0    | 0                          | 0  | 1     | 0  | 1     | 0    | 0                     | 159   | 4     | 0  | 163   | 0    | 338   |
| 8:15AM                      | 4                      | 0  | 1     | 0  | 5     | 0    | 0                     | 186   | 0     | 0  | 186   | 0    | 0                          | 0  | 0     | 0  | 0     | 1    | 0                     | 182   | 3     | 0  | 185   | 0    | 376   |
| 8:30AM                      | 5                      | 0  | 1     | 0  | 6     | 0    | 0                     | 195   | 0     | 0  | 195   | 0    | 0                          | 0  | 0     | 0  | 0     | 0    | 0                     | 161   | 7     | 0  | 168   | 0    | 369   |
| <b>Total</b>                | 12                     | 0  | 4     | 0  | 16    | 0    | 5                     | 773   | 1     | 0  | 779   | 0    | 2                          | 0  | 1     | 0  | 3     | 1    | 0                     | 649   | 17    | 0  | 666   | 0    | 1464  |
| <b>% Approach</b>           | 75.0%                  | 0% | 25.0% | 0% | -     | -    | 0.6%                  | 99.2% | 0.1%  | 0% | -     | -    | 66.7%                      | 0% | 33.3% | 0% | -     | -    | 0%                    | 97.4% | 2.6%  | 0% | -     | -    | -     |
| <b>% Total</b>              | 0.8%                   | 0% | 0.3%  | 0% | 1.1%  | -    | 0.3%                  | 52.8% | 0.1%  | 0% | 53.2% | -    | 0.1%                       | 0% | 0.1%  | 0% | 0.2%  | -    | 0%                    | 44.3% | 1.2%  | 0% | 45.5% | -    | -     |
| <b>PHF</b>                  | 0.600                  | -  | 1.000 | -  | 0.667 | -    | 0.417                 | 0.859 | 0.250 | -  | 0.858 | -    | 0.250                      | -  | 0.250 | -  | 0.375 | -    | -                     | 0.891 | 0.607 | -  | 0.900 | -    | 0.961 |
| <b>Lights</b>               | 12                     | 0  | 4     | 0  | 16    | -    | 4                     | 746   | 1     | 0  | 751   | -    | 2                          | 0  | 1     | 0  | 3     | -    | 0                     | 634   | 17    | 0  | 651   | -    | 1421  |
| <b>% Lights</b>             | 100%                   | 0% | 100%  | 0% | 100%  | -    | 80.0%                 | 96.5% | 100%  | 0% | 96.4% | -    | 100%                       | 0% | 100%  | 0% | 100%  | -    | 0%                    | 97.7% | 100%  | 0% | 97.7% | -    | 97.1% |
| <b>Single-Unit Trucks</b>   | 0                      | 0  | 0     | 0  | 0     | -    | 1                     | 22    | 0     | 0  | 23    | -    | 0                          | 0  | 0     | 0  | 0     | -    | 0                     | 9     | 0     | 0  | 9     | -    | 32    |
| <b>% Single-Unit Trucks</b> | 0%                     | 0% | 0%    | 0% | 0%    | -    | 20.0%                 | 2.8%  | 0%    | 0% | 3.0%  | -    | 0%                         | 0% | 0%    | 0% | 0%    | -    | 0%                    | 1.4%  | 0%    | 0% | 1.4%  | -    | 2.2%  |
| <b>Articulated Trucks</b>   | 0                      | 0  | 0     | 0  | 0     | -    | 0                     | 4     | 0     | 0  | 4     | -    | 0                          | 0  | 0     | 0  | 0     | -    | 0                     | 5     | 0     | 0  | 5     | -    | 9     |
| <b>% Articulated Trucks</b> | 0%                     | 0% | 0%    | 0% | 0%    | -    | 0%                    | 0.5%  | 0%    | 0% | 0.5%  | -    | 0%                         | 0% | 0%    | 0% | 0%    | -    | 0%                    | 0.8%  | 0%    | 0% | 0.8%  | -    | 0.6%  |
| <b>Buses</b>                | 0                      | 0  | 0     | 0  | 0     | -    | 0                     | 1     | 0     | 0  | 1     | -    | 0                          | 0  | 0     | 0  | 0     | -    | 0                     | 1     | 0     | 0  | 1     | -    | 2     |
| <b>% Buses</b>              | 0%                     | 0% | 0%    | 0% | 0%    | -    | 0%                    | 0.1%  | 0%    | 0% | 0.1%  | -    | 0%                         | 0% | 0%    | 0% | 0%    | -    | 0%                    | 0.2%  | 0%    | 0% | 0.2%  | -    | 0.1%  |
| <b>Bicycles on Road</b>     | 0                      | 0  | 0     | 0  | 0     | -    | 0                     | 0     | 0     | 0  | 0     | -    | 0                          | 0  | 0     | 0  | 0     | -    | 0                     | 0     | 0     | 0  | 0     | -    | 0     |
| <b>% Bicycles on Road</b>   | 0%                     | 0% | 0%    | 0% | 0%    | -    | 0%                    | 0%    | 0%    | 0% | 0%    | -    | 0%                         | 0% | 0%    | 0% | 0%    | -    | 0%                    | 0%    | 0%    | 0% | 0%    | -    | 0%    |
| <b>Pedestrians</b>          | -                      | -  | -     | -  | -     | 0    | -                     | -     | -     | -  | -     | 0    | -                          | -  | -     | -  | -     | 1    | -                     | -     | -     | -  | -     | 0    | -     |
| <b>% Pedestrians</b>        | -                      | -  | -     | -  | -     | -    | -                     | -     | -     | -  | -     | -    | -                          | -  | -     | -  | -     | 100% | -                     | -     | -     | -  | -     | -    | -     |

\* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn



# Hertage Court with 55th Street TMC - TMC

Thu Mar 21, 2024

AM Peak (7:45 AM - 8:45 AM)

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians,  
Bicycles on Road)

All Movements

ID: 1165722, Location: 41.789795, -87.899384



Provided by: Kenig Lindgren O'Hara Aboona,  
Inc.

9575 W. Higgins Rd., Suite 400,  
Rosemont, IL, 60018, US

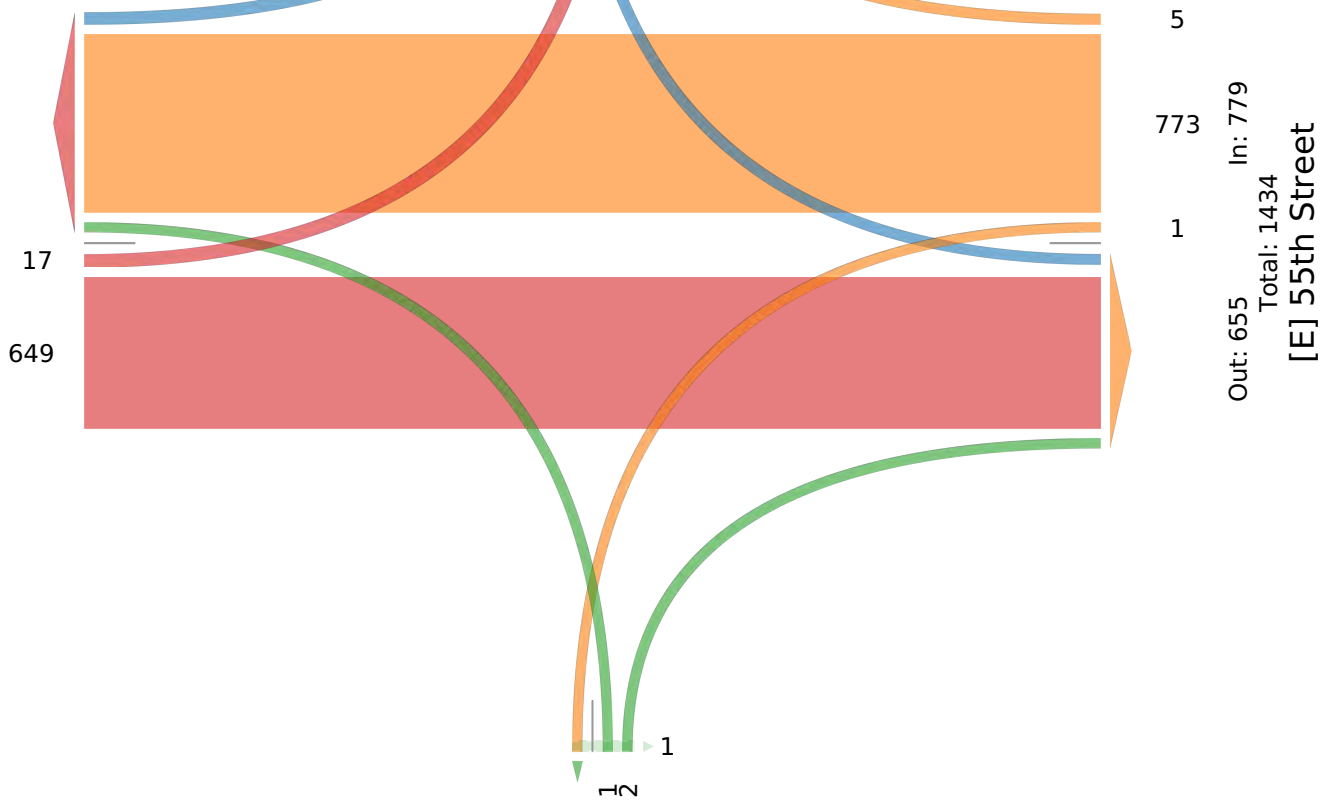
## [N] Lawn Avenue

Total: 38

In: 16 Out: 22

12  
4

[W] 55th Street  
Total: 1452  
In: 666 Out: 786



Out: 1 In: 3  
Total: 4

## [S] Heritage Avenue

# Heritage Court with 55th Street TMC - TMC

Thu Mar 21, 2024

PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 1165722, Location: 41.789795, -87.899384



Provided by: Kenig Lindgren O'Hara Aboona, Inc.

9575 W. Higgins Rd., Suite 400,  
Rosemont, IL, 60018, US

| Leg Direction               | Lawn Avenue Southbound |    |       |    |       |      | 55th Street Westbound |       |       |    |       |      | Heritage Avenue Northbound |    |       |    |       |       | 55th Street Eastbound |       |       |       |       |       |       |
|-----------------------------|------------------------|----|-------|----|-------|------|-----------------------|-------|-------|----|-------|------|----------------------------|----|-------|----|-------|-------|-----------------------|-------|-------|-------|-------|-------|-------|
| Time                        | R                      | T  | L     | U  | App   | Ped* | R                     | T     | L     | U  | App   | Ped* | R                          | T  | L     | U  | App   | Ped*  | R                     | T     | L     | U     | App   | Ped*  | Int   |
| 2024-03-21 4:30PM           | 6                      | 0  | 0     | 0  | 6     | 0    | 2                     | 227   | 0     | 0  | 229   | 0    | 1                          | 0  | 0     | 0  | 1     | 0     | 0                     | 235   | 2     | 0     | 237   | 0     | 473   |
| 4:45PM                      | 1                      | 0  | 1     | 0  | 2     | 0    | 1                     | 238   | 1     | 0  | 240   | 0    | 0                          | 0  | 0     | 0  | 0     | 0     | 0                     | 243   | 2     | 0     | 245   | 0     | 487   |
| 5:00PM                      | 2                      | 0  | 0     | 0  | 2     | 0    | 2                     | 202   | 0     | 0  | 204   | 0    | 0                          | 0  | 1     | 0  | 1     | 1     | 1                     | 268   | 3     | 0     | 272   | 1     | 479   |
| 5:15PM                      | 1                      | 0  | 0     | 0  | 1     | 0    | 2                     | 224   | 0     | 0  | 226   | 0    | 0                          | 0  | 0     | 0  | 0     | 0     | 0                     | 278   | 6     | 1     | 285   | 0     | 512   |
| <b>Total</b>                | 10                     | 0  | 1     | 0  | 11    | 0    | 7                     | 891   | 1     | 0  | 899   | 0    | 1                          | 0  | 1     | 0  | 2     | 1     | 1                     | 1024  | 13    | 1     | 1039  | 1     | 1951  |
| <b>% Approach</b>           | 90.9%                  | 0% | 9.1%  | 0% | -     | -    | 0.8%                  | 99.1% | 0.1%  | 0% | -     | -    | 50.0%                      | 0% | 50.0% | 0% | -     | -     | 0.1%                  | 98.6% | 1.3%  | 0.1%  | -     | -     | -     |
| <b>% Total</b>              | 0.5%                   | 0% | 0.1%  | 0% | 0.6%  | -    | 0.4%                  | 45.7% | 0.1%  | 0% | 46.1% | -    | 0.1%                       | 0% | 0.1%  | 0% | 0.1%  | -     | 0.1%                  | 52.5% | 0.7%  | 0.1%  | 53.3% | -     | -     |
| <b>PHF</b>                  | 0.417                  | -  | 0.250 | -  | 0.458 | -    | 0.875                 | 0.936 | 0.250 | -  | 0.936 | -    | 0.250                      | -  | 0.250 | -  | 0.500 | -     | 0.250                 | 0.921 | 0.542 | 0.250 | 0.911 | -     | 0.953 |
| <b>Lights</b>               | 10                     | 0  | 0     | 0  | 10    | -    | 7                     | 888   | 1     | 0  | 896   | -    | 1                          | 0  | 1     | 0  | 2     | -     | 1                     | 1002  | 13    | 1     | 1017  | -     | 1925  |
| <b>% Lights</b>             | 100%                   | 0% | 0%    | 0% | 90.9% | -    | 100%                  | 99.7% | 100%  | 0% | 99.7% | -    | 100%                       | 0% | 100%  | 0% | 100%  | -     | 100%                  | 97.9% | 100%  | 100%  | 97.9% | -     | 98.7% |
| <b>Single-Unit Trucks</b>   | 0                      | 0  | 1     | 0  | 1     | -    | 0                     | 3     | 0     | 0  | 3     | -    | 0                          | 0  | 0     | 0  | 0     | -     | 0                     | 8     | 0     | 0     | 8     | -     | 12    |
| <b>% Single-Unit Trucks</b> | 0%                     | 0% | 100%  | 0% | 9.1%  | -    | 0%                    | 0.3%  | 0%    | 0% | 0.3%  | -    | 0%                         | 0% | 0%    | 0% | 0%    | -     | 0%                    | 0.8%  | 0%    | 0%    | 0.8%  | -     | 0.6%  |
| <b>Articulated Trucks</b>   | 0                      | 0  | 0     | 0  | 0     | -    | 0                     | 0     | 0     | 0  | 0     | -    | 0                          | 0  | 0     | 0  | 0     | -     | 0                     | 12    | 0     | 0     | 12    | -     | 12    |
| <b>% Articulated Trucks</b> | 0%                     | 0% | 0%    | 0% | 0%    | -    | 0%                    | 0%    | 0%    | 0% | 0%    | -    | 0%                         | 0% | 0%    | 0% | 0%    | -     | 0%                    | 1.2%  | 0%    | 0%    | 1.2%  | -     | 0.6%  |
| <b>Buses</b>                | 0                      | 0  | 0     | 0  | 0     | -    | 0                     | 0     | 0     | 0  | 0     | -    | 0                          | 0  | 0     | 0  | 0     | -     | 0                     | 2     | 0     | 0     | 2     | -     | 2     |
| <b>% Buses</b>              | 0%                     | 0% | 0%    | 0% | 0%    | -    | 0%                    | 0%    | 0%    | 0% | 0%    | -    | 0%                         | 0% | 0%    | 0% | 0%    | -     | 0%                    | 0.2%  | 0%    | 0%    | 0.2%  | -     | 0.1%  |
| <b>Bicycles on Road</b>     | 0                      | 0  | 0     | 0  | 0     | -    | 0                     | 0     | 0     | 0  | 0     | -    | 0                          | 0  | 0     | 0  | 0     | -     | 0                     | 0     | 0     | 0     | 0     | -     | 0     |
| <b>% Bicycles on Road</b>   | 0%                     | 0% | 0%    | 0% | 0%    | -    | 0%                    | 0%    | 0%    | 0% | 0%    | -    | 0%                         | 0% | 0%    | 0% | 0%    | -     | 0%                    | 0%    | 0%    | 0%    | 0%    | -     | 0%    |
| <b>Pedestrians</b>          | -                      | -  | -     | -  | -     | 0    | -                     | -     | -     | -  | -     | 0    | -                          | -  | -     | -  | -     | 1     | -                     | -     | -     | -     | -     | 1     |       |
| <b>% Pedestrians</b>        | -                      | -  | -     | -  | -     | -    | -                     | -     | -     | -  | -     | -    | -                          | -  | -     | -  | -     | -100% | -                     | -     | -     | -     | -     | -100% | -     |

\* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

# Hertage Court with 55th Street TMC - TMC

Thu Mar 21, 2024

PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 1165722, Location: 41.789795, -87.899384



Provided by: Kenig Lindgren O'Hara Aboona, Inc.

9575 W. Higgins Rd., Suite 400,  
Rosemont, IL, 60018, US

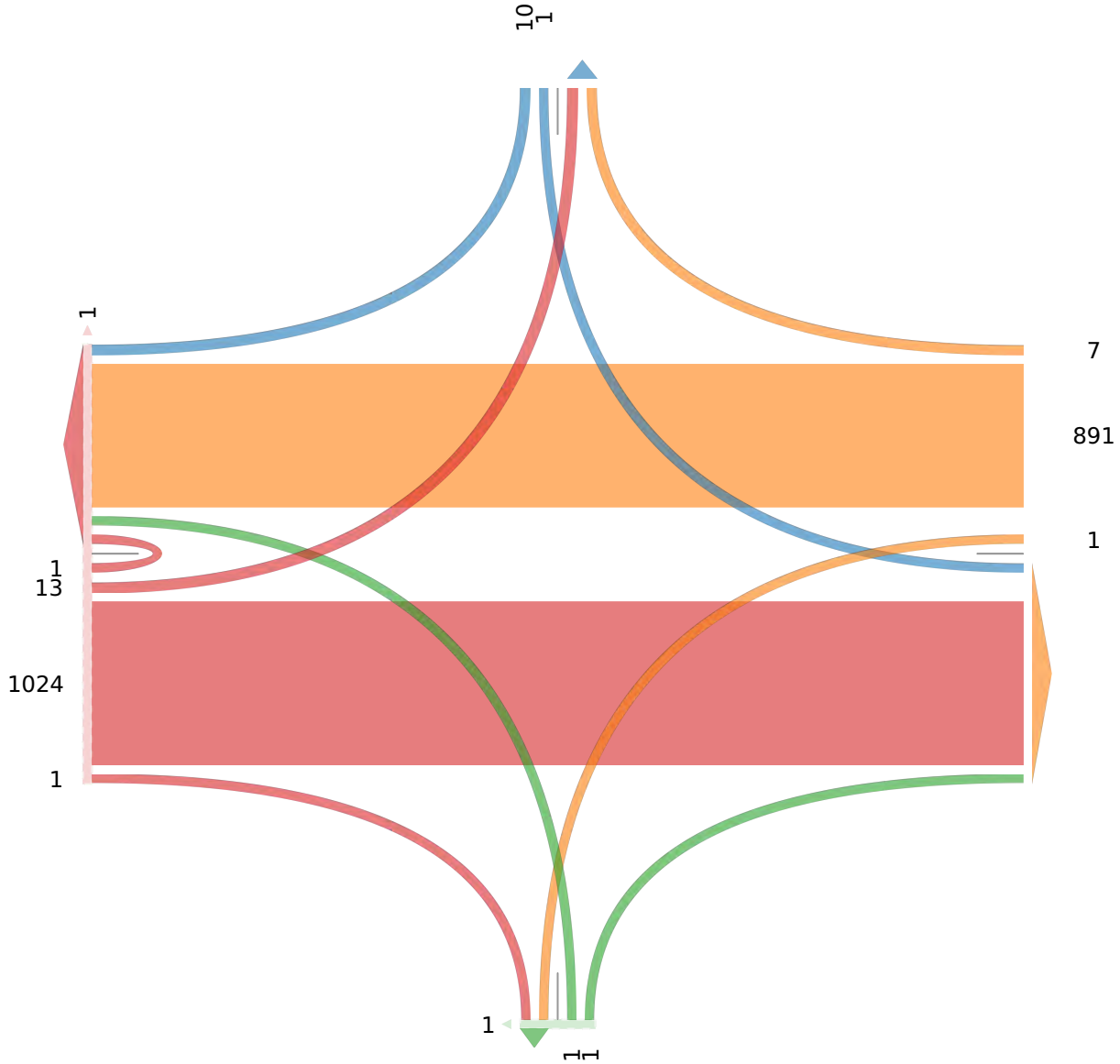
## [N] Lawn Avenue

Total: 31

In: 11 Out: 20

10  
1

[W] 55th Street  
Total: 1942  
In: 1039 Out: 903



Out: 1026 In: 899  
Total: 1925  
[E] 55th Street

Out: 2 In: 2  
Total: 4

## [S] Heritage Avenue

**TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - by Mvmt**

Int# 1 grand/longmeadow

| Begin Time | N-Approach |    |    | E-Approach |    |    | S-Approach |    |    | W-Approach |    |    | Int Total |
|------------|------------|----|----|------------|----|----|------------|----|----|------------|----|----|-----------|
|            | RT         | TH | LT | RT         | TH | LT | RT         | TH | LT | RT         | TH | LT |           |
| 700        | 0          | 4  | 0  | 0          | 0  | 0  | 0          | 4  | 0  | 0          | 0  | 1  | 9         |
| 715        | 0          | 1  | 0  | 0          | 0  | 0  | 0          | 10 | 0  | 2          | 0  | 5  | 18        |
| 730        | 0          | 5  | 0  | 0          | 0  | 0  | 0          | 4  | 1  | 2          | 0  | 1  | 13        |
| 745        | 2          | 2  | 0  | 0          | 0  | 0  | 0          | 8  | 2  | 1          | 0  | 1  | 16        |
| 800        | 0          | 2  | 0  | 0          | 0  | 0  | 0          | 3  | 2  | 5          | 0  | 1  | 13        |
| 815        | 2          | 5  | 0  | 0          | 0  | 0  | 0          | 7  | 3  | 1          | 0  | 1  | 19        |
| 830        | 3          | 1  | 0  | 0          | 0  | 0  | 0          | 6  | 1  | 1          | 0  | 2  | 14        |
| 845        | 0          | 2  | 0  | 0          | 0  | 0  | 0          | 3  | 1  | 0          | 0  | 0  | 6         |
| 1600       | 2          | 4  | 0  | 0          | 0  | 0  | 0          | 3  | 1  | 1          | 0  | 1  | 12        |
| 1615       | 0          | 4  | 0  | 0          | 0  | 0  | 0          | 6  | 4  | 3          | 0  | 0  | 17        |
| 1630       | 1          | 5  | 0  | 0          | 0  | 0  | 0          | 0  | 1  | 1          | 0  | 4  | 12        |
| 1645       | 1          | 5  | 0  | 0          | 0  | 0  | 0          | 4  | 1  | 1          | 0  | 2  | 14        |
| 1700       | 1          | 3  | 0  | 0          | 0  | 0  | 0          | 2  | 2  | 2          | 0  | 0  | 10        |
| 1715       | 0          | 9  | 0  | 0          | 0  | 0  | 0          | 8  | 2  | 1          | 0  | 0  | 20        |
| 1730       | 4          | 11 | 0  | 0          | 0  | 0  | 0          | 4  | 0  | 1          | 0  | 1  | 21        |
| 1745       | 1          | 5  | 0  | 0          | 0  | 0  | 0          | 3  | 2  | 1          | 0  | 1  | 13        |
| Total      | 17         | 68 | 0  | 0          | 0  | 0  | 0          | 75 | 23 | 23         | 0  | 21 | 227       |

**TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - Totals**

Int# 1 grand/longmeadow

| Begin Time | Approach Totals |   |    |    | Exit Totals |   |    |    | Int Total |
|------------|-----------------|---|----|----|-------------|---|----|----|-----------|
|            | N               | E | S  | W  | N           | E | S  | W  |           |
| 700        | 4               | 0 | 4  | 1  | 5           | 0 | 4  | 0  | 9         |
| 715        | 1               | 0 | 10 | 7  | 15          | 0 | 3  | 0  | 18        |
| 730        | 5               | 0 | 5  | 3  | 5           | 0 | 7  | 1  | 13        |
| 745        | 4               | 0 | 10 | 2  | 9           | 0 | 3  | 4  | 16        |
| 800        | 2               | 0 | 5  | 6  | 4           | 0 | 7  | 2  | 13        |
| 815        | 7               | 0 | 10 | 2  | 8           | 0 | 6  | 5  | 19        |
| 830        | 4               | 0 | 7  | 3  | 8           | 0 | 2  | 4  | 14        |
| 845        | 2               | 0 | 4  | 0  | 3           | 0 | 2  | 1  | 6         |
| 1600       | 6               | 0 | 4  | 2  | 4           | 0 | 5  | 3  | 12        |
| 1615       | 4               | 0 | 10 | 3  | 6           | 0 | 7  | 4  | 17        |
| 1630       | 6               | 0 | 1  | 5  | 4           | 0 | 6  | 2  | 12        |
| 1645       | 6               | 0 | 5  | 3  | 6           | 0 | 6  | 2  | 14        |
| 1700       | 4               | 0 | 4  | 2  | 2           | 0 | 5  | 3  | 10        |
| 1715       | 9               | 0 | 10 | 1  | 8           | 0 | 10 | 2  | 20        |
| 1730       | 15              | 0 | 4  | 2  | 5           | 0 | 12 | 4  | 21        |
| 1745       | 6               | 0 | 5  | 2  | 4           | 0 | 6  | 3  | 13        |
| Total      | 85              | 0 | 98 | 44 | 96          | 0 | 91 | 40 | 227       |



**TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: by Movement**

Int# 1 grand/longmeadow

| Begin Time | N-Approach |    |    | E-Approach |    |    | S-Approach |    |    | W-Approach |    |    | Int Total |
|------------|------------|----|----|------------|----|----|------------|----|----|------------|----|----|-----------|
|            | RT         | TH | LT | RT         | TH | LT | RT         | TH | LT | RT         | TH | LT |           |
| 700        | 0          | 16 | 0  | 0          | 0  | 0  | 0          | 16 | 0  | 0          | 0  | 4  | 36        |
| 715        | 0          | 4  | 0  | 0          | 0  | 0  | 0          | 40 | 0  | 8          | 0  | 20 | 72        |
| 730        | 0          | 20 | 0  | 0          | 0  | 0  | 0          | 16 | 4  | 8          | 0  | 4  | 52        |
| 745        | 8          | 8  | 0  | 0          | 0  | 0  | 0          | 32 | 8  | 4          | 0  | 4  | 64        |
| 800        | 0          | 8  | 0  | 0          | 0  | 0  | 0          | 12 | 8  | 20         | 0  | 4  | 52        |
| 815        | 8          | 20 | 0  | 0          | 0  | 0  | 0          | 28 | 12 | 4          | 0  | 4  | 76        |
| 830        | 12         | 4  | 0  | 0          | 0  | 0  | 0          | 24 | 4  | 4          | 0  | 8  | 56        |
| 845        | 0          | 8  | 0  | 0          | 0  | 0  | 0          | 12 | 4  | 0          | 0  | 0  | 24        |
| 1600       | 8          | 16 | 0  | 0          | 0  | 0  | 0          | 12 | 4  | 4          | 0  | 4  | 48        |
| 1615       | 0          | 16 | 0  | 0          | 0  | 0  | 0          | 24 | 16 | 12         | 0  | 0  | 68        |
| 1630       | 4          | 20 | 0  | 0          | 0  | 0  | 0          | 0  | 4  | 4          | 0  | 16 | 48        |
| 1645       | 4          | 20 | 0  | 0          | 0  | 0  | 0          | 16 | 4  | 4          | 0  | 8  | 56        |
| 1700       | 4          | 12 | 0  | 0          | 0  | 0  | 0          | 8  | 8  | 8          | 0  | 0  | 40        |
| 1715       | 0          | 36 | 0  | 0          | 0  | 0  | 0          | 32 | 8  | 4          | 0  | 0  | 80        |
| 1730       | 16         | 44 | 0  | 0          | 0  | 0  | 0          | 16 | 0  | 4          | 0  | 4  | 84        |
| 1745       | 4          | 20 | 0  | 0          | 0  | 0  | 0          | 12 | 8  | 4          | 0  | 4  | 52        |

**TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: Appr/Exit Totals**

Int# 1 grand/longmeadow

| Begin Time | Approach Totals |   |    |    | Exit Totals |   |    |    | Int Total |
|------------|-----------------|---|----|----|-------------|---|----|----|-----------|
|            | N               | E | S  | W  | N           | E | S  | W  |           |
| 700        | 16              | 0 | 16 | 4  | 20          | 0 | 16 | 0  | 36        |
| 715        | 4               | 0 | 40 | 28 | 60          | 0 | 12 | 0  | 72        |
| 730        | 20              | 0 | 20 | 12 | 20          | 0 | 28 | 4  | 52        |
| 745        | 16              | 0 | 40 | 8  | 36          | 0 | 12 | 16 | 64        |
| 800        | 8               | 0 | 20 | 24 | 16          | 0 | 28 | 8  | 52        |
| 815        | 28              | 0 | 40 | 8  | 32          | 0 | 24 | 20 | 76        |
| 830        | 16              | 0 | 28 | 12 | 32          | 0 | 8  | 16 | 56        |
| 845        | 8               | 0 | 16 | 0  | 12          | 0 | 8  | 4  | 24        |
| 1600       | 24              | 0 | 16 | 8  | 16          | 0 | 20 | 12 | 48        |
| 1615       | 16              | 0 | 40 | 12 | 24          | 0 | 28 | 16 | 68        |
| 1630       | 24              | 0 | 4  | 20 | 16          | 0 | 24 | 8  | 48        |
| 1645       | 24              | 0 | 20 | 12 | 24          | 0 | 24 | 8  | 56        |
| 1700       | 16              | 0 | 16 | 8  | 8           | 0 | 20 | 12 | 40        |
| 1715       | 36              | 0 | 40 | 4  | 32          | 0 | 40 | 8  | 80        |
| 1730       | 60              | 0 | 16 | 8  | 20          | 0 | 48 | 16 | 84        |
| 1745       | 24              | 0 | 20 | 8  | 16          | 0 | 24 | 12 | 52        |

**TEAPAC[Ver 9.50.02] - 60-Minute Volumes: by Movement**

Int# 1 grand/longmeadow

| Begin Time | N-Approach |    |    | E-Approach |    |    | S-Approach |    |    | W-Approach |    |    | Int Total |
|------------|------------|----|----|------------|----|----|------------|----|----|------------|----|----|-----------|
|            | RT         | TH | LT | RT         | TH | LT | RT         | TH | LT | RT         | TH | LT |           |
| 700        | 2          | 12 | 0  | 0          | 0  | 0  | 0          | 26 | 3  | 5          | 0  | 8  | 56        |
| 715        | 2          | 10 | 0  | 0          | 0  | 0  | 0          | 25 | 5  | 10         | 0  | 8  | 60        |
| 730        | 4          | 14 | 0  | 0          | 0  | 0  | 0          | 22 | 8  | 9          | 0  | 4  | 61        |
| 745        | 7          | 10 | 0  | 0          | 0  | 0  | 0          | 24 | 8  | 8          | 0  | 5  | 62        |
| 800        | 5          | 10 | 0  | 0          | 0  | 0  | 0          | 19 | 7  | 7          | 0  | 4  | 52        |
| 815        | 5          | 8  | 0  | 0          | 0  | 0  | 0          | 16 | 5  | 2          | 0  | 3  | 39*       |
| 830        | 3          | 3  | 0  | 0          | 0  | 0  | 0          | 9  | 2  | 1          | 0  | 2  | 20*       |
| 845        | 0          | 2  | 0  | 0          | 0  | 0  | 0          | 3  | 1  | 0          | 0  | 0  | 6*        |
| 1600       | 4          | 18 | 0  | 0          | 0  | 0  | 0          | 13 | 7  | 6          | 0  | 7  | 55        |
| 1615       | 3          | 17 | 0  | 0          | 0  | 0  | 0          | 12 | 8  | 7          | 0  | 6  | 53        |
| 1630       | 3          | 22 | 0  | 0          | 0  | 0  | 0          | 14 | 6  | 5          | 0  | 6  | 56        |
| 1645       | 6          | 28 | 0  | 0          | 0  | 0  | 0          | 18 | 5  | 5          | 0  | 3  | 65        |
| 1700       | 6          | 28 | 0  | 0          | 0  | 0  | 0          | 17 | 6  | 5          | 0  | 2  | 64        |
| 1715       | 5          | 25 | 0  | 0          | 0  | 0  | 0          | 15 | 4  | 3          | 0  | 2  | 54*       |
| 1730       | 5          | 16 | 0  | 0          | 0  | 0  | 0          | 7  | 2  | 2          | 0  | 2  | 34*       |
| 1745       | 1          | 5  | 0  | 0          | 0  | 0  | 0          | 3  | 2  | 1          | 0  | 1  | 13*       |

**TEAPAC[Ver 9.50.02] - 60-Minute Volumes: Appr/Exit Totals**

Int# 1 grand/longmeadow

| Begin Time | Approach Totals |   |    |    | Exit Totals |   |    |    | Int Total |
|------------|-----------------|---|----|----|-------------|---|----|----|-----------|
|            | N               | E | S  | W  | N           | E | S  | W  |           |
| 700        | 14              | 0 | 29 | 13 | 34          | 0 | 17 | 5  | 56        |
| 715        | 12              | 0 | 30 | 18 | 33          | 0 | 20 | 7  | 60        |
| 730        | 18              | 0 | 30 | 13 | 26          | 0 | 23 | 12 | 61        |
| 745        | 17              | 0 | 32 | 13 | 29          | 0 | 18 | 15 | 62        |
| 800        | 15              | 0 | 26 | 11 | 23          | 0 | 17 | 12 | 52        |
| 815        | 13              | 0 | 21 | 5  | 19          | 0 | 10 | 10 | 39*       |
| 830        | 6               | 0 | 11 | 3  | 11          | 0 | 4  | 5  | 20*       |
| 845        | 2               | 0 | 4  | 0  | 3           | 0 | 2  | 1  | 6*        |
| 1600       | 22              | 0 | 20 | 13 | 20          | 0 | 24 | 11 | 55        |
| 1615       | 20              | 0 | 20 | 13 | 18          | 0 | 24 | 11 | 53        |
| 1630       | 25              | 0 | 20 | 11 | 20          | 0 | 27 | 9  | 56        |
| 1645       | 34              | 0 | 23 | 8  | 21          | 0 | 33 | 11 | 65        |
| 1700       | 34              | 0 | 23 | 7  | 19          | 0 | 33 | 12 | 64        |
| 1715       | 30              | 0 | 19 | 5  | 17          | 0 | 28 | 9  | 54*       |
| 1730       | 21              | 0 | 9  | 4  | 9           | 0 | 18 | 7  | 34*       |
| 1745       | 6               | 0 | 5  | 2  | 4           | 0 | 6  | 3  | 13*       |

**TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - by Mvmt**

Int# 3 lawn/grand

| Begin Time | N-Approach |    |    | E-Approach |    |    | S-Approach |    |    | W-Approach |    |    | Int Total |
|------------|------------|----|----|------------|----|----|------------|----|----|------------|----|----|-----------|
|            | RT         | TH | LT | RT         | TH | LT | RT         | TH | LT | RT         | TH | LT |           |
| 700        | 0          | 0  | 2  | 0          | 0  | 1  | 1          | 2  | 0  | 0          | 0  | 0  | 6         |
| 715        | 0          | 0  | 2  | 2          | 0  | 2  | 4          | 5  | 0  | 0          | 0  | 0  | 15        |
| 730        | 0          | 3  | 3  | 4          | 0  | 5  | 3          | 2  | 0  | 0          | 0  | 0  | 20        |
| 745        | 0          | 0  | 3  | 7          | 0  | 4  | 2          | 3  | 0  | 0          | 0  | 0  | 19        |
| 800        | 0          | 0  | 8  | 3          | 0  | 5  | 17         | 2  | 0  | 0          | 0  | 0  | 35        |
| 815        | 0          | 5  | 2  | 3          | 0  | 15 | 10         | 3  | 0  | 0          | 0  | 0  | 38        |
| 830        | 0          | 0  | 2  | 4          | 0  | 1  | 3          | 3  | 0  | 0          | 0  | 0  | 13        |
| 845        | 0          | 1  | 0  | 2          | 0  | 2  | 2          | 1  | 0  | 0          | 0  | 0  | 8         |
| 1600       | 0          | 2  | 4  | 3          | 0  | 4  | 6          | 2  | 0  | 0          | 0  | 0  | 21        |
| 1615       | 0          | 1  | 3  | 4          | 0  | 5  | 3          | 1  | 0  | 0          | 0  | 0  | 17        |
| 1630       | 0          | 3  | 3  | 3          | 0  | 2  | 4          | 1  | 0  | 0          | 0  | 0  | 16        |
| 1645       | 0          | 1  | 5  | 2          | 0  | 4  | 4          | 2  | 0  | 0          | 0  | 0  | 18        |
| 1700       | 0          | 2  | 3  | 5          | 0  | 7  | 6          | 1  | 0  | 0          | 0  | 0  | 24        |
| 1715       | 0          | 6  | 4  | 4          | 0  | 6  | 3          | 5  | 0  | 0          | 0  | 0  | 28        |
| 1730       | 0          | 3  | 5  | 1          | 0  | 7  | 6          | 2  | 0  | 0          | 0  | 0  | 24        |
| 1745       | 0          | 2  | 3  | 3          | 0  | 8  | 4          | 2  | 0  | 0          | 0  | 0  | 22        |
| Total      | 0          | 29 | 52 | 50         | 0  | 78 | 78         | 37 | 0  | 0          | 0  | 0  | 324       |

**TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - Totals**

Int# 3 lawn/grand

| Begin Time | Approach Totals |     |     |   | Exit Totals |     |     |   | Int Total |
|------------|-----------------|-----|-----|---|-------------|-----|-----|---|-----------|
|            | N               | E   | S   | W | N           | E   | S   | W |           |
| 700        | 2               | 1   | 3   | 0 | 2           | 3   | 1   | 0 | 6         |
| 715        | 2               | 4   | 9   | 0 | 7           | 6   | 2   | 0 | 15        |
| 730        | 6               | 9   | 5   | 0 | 6           | 6   | 8   | 0 | 20        |
| 745        | 3               | 11  | 5   | 0 | 10          | 5   | 4   | 0 | 19        |
| 800        | 8               | 8   | 19  | 0 | 5           | 25  | 5   | 0 | 35        |
| 815        | 7               | 18  | 13  | 0 | 6           | 12  | 20  | 0 | 38        |
| 830        | 2               | 5   | 6   | 0 | 7           | 5   | 1   | 0 | 13        |
| 845        | 1               | 4   | 3   | 0 | 3           | 2   | 3   | 0 | 8         |
| 1600       | 6               | 7   | 8   | 0 | 5           | 10  | 6   | 0 | 21        |
| 1615       | 4               | 9   | 4   | 0 | 5           | 6   | 6   | 0 | 17        |
| 1630       | 6               | 5   | 5   | 0 | 4           | 7   | 5   | 0 | 16        |
| 1645       | 6               | 6   | 6   | 0 | 4           | 9   | 5   | 0 | 18        |
| 1700       | 5               | 12  | 7   | 0 | 6           | 9   | 9   | 0 | 24        |
| 1715       | 10              | 10  | 8   | 0 | 9           | 7   | 12  | 0 | 28        |
| 1730       | 8               | 8   | 8   | 0 | 3           | 11  | 10  | 0 | 24        |
| 1745       | 5               | 11  | 6   | 0 | 5           | 7   | 10  | 0 | 22        |
| Total      | 81              | 128 | 115 | 0 | 87          | 130 | 107 | 0 | 324       |

**TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: by Movement**

Int# 3 lawn/grand

| Begin Time | N-Approach |    |    | E-Approach |    |    | S-Approach |    |    | W-Approach |    |    | Int Total |
|------------|------------|----|----|------------|----|----|------------|----|----|------------|----|----|-----------|
|            | RT         | TH | LT | RT         | TH | LT | RT         | TH | LT | RT         | TH | LT |           |
| 700        | 0          | 0  | 8  | 0          | 0  | 4  | 4          | 8  | 0  | 0          | 0  | 0  | 24        |
| 715        | 0          | 0  | 8  | 8          | 0  | 8  | 16         | 20 | 0  | 0          | 0  | 0  | 60        |
| 730        | 0          | 12 | 12 | 16         | 0  | 20 | 12         | 8  | 0  | 0          | 0  | 0  | 80        |
| 745        | 0          | 0  | 12 | 28         | 0  | 16 | 8          | 12 | 0  | 0          | 0  | 0  | 76        |
| 800        | 0          | 0  | 32 | 12         | 0  | 20 | 68         | 8  | 0  | 0          | 0  | 0  | 140       |
| 815        | 0          | 20 | 8  | 12         | 0  | 60 | 40         | 12 | 0  | 0          | 0  | 0  | 152       |
| 830        | 0          | 0  | 8  | 16         | 0  | 4  | 12         | 12 | 0  | 0          | 0  | 0  | 52        |
| 845        | 0          | 4  | 0  | 8          | 0  | 8  | 8          | 4  | 0  | 0          | 0  | 0  | 32        |
| 1600       | 0          | 8  | 16 | 12         | 0  | 16 | 24         | 8  | 0  | 0          | 0  | 0  | 84        |
| 1615       | 0          | 4  | 12 | 16         | 0  | 20 | 12         | 4  | 0  | 0          | 0  | 0  | 68        |
| 1630       | 0          | 12 | 12 | 12         | 0  | 8  | 16         | 4  | 0  | 0          | 0  | 0  | 64        |
| 1645       | 0          | 4  | 20 | 8          | 0  | 16 | 16         | 8  | 0  | 0          | 0  | 0  | 72        |
| 1700       | 0          | 8  | 12 | 20         | 0  | 28 | 24         | 4  | 0  | 0          | 0  | 0  | 96        |
| 1715       | 0          | 24 | 16 | 16         | 0  | 24 | 12         | 20 | 0  | 0          | 0  | 0  | 112       |
| 1730       | 0          | 12 | 20 | 4          | 0  | 28 | 24         | 8  | 0  | 0          | 0  | 0  | 96        |
| 1745       | 0          | 8  | 12 | 12         | 0  | 32 | 16         | 8  | 0  | 0          | 0  | 0  | 88        |

**TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: Appr/Exit Totals**

Int# 3 lawn/grand

| Begin Time | Approach Totals |    |    |   | Exit Totals |     |    |   | Int Total |
|------------|-----------------|----|----|---|-------------|-----|----|---|-----------|
|            | N               | E  | S  | W | N           | E   | S  | W |           |
| 700        | 8               | 4  | 12 | 0 | 8           | 12  | 4  | 0 | 24        |
| 715        | 8               | 16 | 36 | 0 | 28          | 24  | 8  | 0 | 60        |
| 730        | 24              | 36 | 20 | 0 | 24          | 24  | 32 | 0 | 80        |
| 745        | 12              | 44 | 20 | 0 | 40          | 20  | 16 | 0 | 76        |
| 800        | 32              | 32 | 76 | 0 | 20          | 100 | 20 | 0 | 140       |
| 815        | 28              | 72 | 52 | 0 | 24          | 48  | 80 | 0 | 152       |
| 830        | 8               | 20 | 24 | 0 | 28          | 20  | 4  | 0 | 52        |
| 845        | 4               | 16 | 12 | 0 | 12          | 8   | 12 | 0 | 32        |
| 1600       | 24              | 28 | 32 | 0 | 20          | 40  | 24 | 0 | 84        |
| 1615       | 16              | 36 | 16 | 0 | 20          | 24  | 24 | 0 | 68        |
| 1630       | 24              | 20 | 20 | 0 | 16          | 28  | 20 | 0 | 64        |
| 1645       | 24              | 24 | 24 | 0 | 16          | 36  | 20 | 0 | 72        |
| 1700       | 20              | 48 | 28 | 0 | 24          | 36  | 36 | 0 | 96        |
| 1715       | 40              | 40 | 32 | 0 | 36          | 28  | 48 | 0 | 112       |
| 1730       | 32              | 32 | 32 | 0 | 12          | 44  | 40 | 0 | 96        |
| 1745       | 20              | 44 | 24 | 0 | 20          | 28  | 40 | 0 | 88        |



**TEAPAC[Ver 9.50.02] - 60-Minute Volumes: by Movement**

Int# 3 lawn/grand

| Begin Time | N-Approach |    |    | E-Approach |    |    | S-Approach |    |    | W-Approach |    |    | Int Total |
|------------|------------|----|----|------------|----|----|------------|----|----|------------|----|----|-----------|
|            | RT         | TH | LT | RT         | TH | LT | RT         | TH | LT | RT         | TH | LT |           |
| 700        | 0          | 3  | 10 | 13         | 0  | 12 | 10         | 12 | 0  | 0          | 0  | 0  | 60        |
| 715        | 0          | 3  | 16 | 16         | 0  | 16 | 26         | 12 | 0  | 0          | 0  | 0  | 89        |
| 730        | 0          | 8  | 16 | 17         | 0  | 29 | 32         | 10 | 0  | 0          | 0  | 0  | 112       |
| 745        | 0          | 5  | 15 | 17         | 0  | 25 | 32         | 11 | 0  | 0          | 0  | 0  | 105       |
| 800        | 0          | 6  | 12 | 12         | 0  | 23 | 32         | 9  | 0  | 0          | 0  | 0  | 94        |
| 815        | 0          | 6  | 4  | 9          | 0  | 18 | 15         | 7  | 0  | 0          | 0  | 0  | 59*       |
| 830        | 0          | 1  | 2  | 6          | 0  | 3  | 5          | 4  | 0  | 0          | 0  | 0  | 21*       |
| 845        | 0          | 1  | 0  | 2          | 0  | 2  | 2          | 1  | 0  | 0          | 0  | 0  | 8*        |
| 1600       | 0          | 7  | 15 | 12         | 0  | 15 | 17         | 6  | 0  | 0          | 0  | 0  | 72        |
| 1615       | 0          | 7  | 14 | 14         | 0  | 18 | 17         | 5  | 0  | 0          | 0  | 0  | 75        |
| 1630       | 0          | 12 | 15 | 14         | 0  | 19 | 17         | 9  | 0  | 0          | 0  | 0  | 86        |
| 1645       | 0          | 12 | 17 | 12         | 0  | 24 | 19         | 10 | 0  | 0          | 0  | 0  | 94        |
| 1700       | 0          | 13 | 15 | 13         | 0  | 28 | 19         | 10 | 0  | 0          | 0  | 0  | 98        |
| 1715       | 0          | 11 | 12 | 8          | 0  | 21 | 13         | 9  | 0  | 0          | 0  | 0  | 74*       |
| 1730       | 0          | 5  | 8  | 4          | 0  | 15 | 10         | 4  | 0  | 0          | 0  | 0  | 46*       |
| 1745       | 0          | 2  | 3  | 3          | 0  | 8  | 4          | 2  | 0  | 0          | 0  | 0  | 22*       |

**TEAPAC[Ver 9.50.02] - 60-Minute Volumes: Appr/Exit Totals**

Int# 3 lawn/grand

| Begin Time | Approach Totals |    |    |   | Exit Totals |    |    |   | Int Total |
|------------|-----------------|----|----|---|-------------|----|----|---|-----------|
|            | N               | E  | S  | W | N           | E  | S  | W |           |
| 700        | 13              | 25 | 22 | 0 | 25          | 20 | 15 | 0 | 60        |
| 715        | 19              | 32 | 38 | 0 | 28          | 42 | 19 | 0 | 89        |
| 730        | 24              | 46 | 42 | 0 | 27          | 48 | 37 | 0 | 112       |
| 745        | 20              | 42 | 43 | 0 | 28          | 47 | 30 | 0 | 105       |
| 800        | 18              | 35 | 41 | 0 | 21          | 44 | 29 | 0 | 94        |
| 815        | 10              | 27 | 22 | 0 | 16          | 19 | 24 | 0 | 59*       |
| 830        | 3               | 9  | 9  | 0 | 10          | 7  | 4  | 0 | 21*       |
| 845        | 1               | 4  | 3  | 0 | 3           | 2  | 3  | 0 | 8*        |
| 1600       | 22              | 27 | 23 | 0 | 18          | 32 | 22 | 0 | 72        |
| 1615       | 21              | 32 | 22 | 0 | 19          | 31 | 25 | 0 | 75        |
| 1630       | 27              | 33 | 26 | 0 | 23          | 32 | 31 | 0 | 86        |
| 1645       | 29              | 36 | 29 | 0 | 22          | 36 | 36 | 0 | 94        |
| 1700       | 28              | 41 | 29 | 0 | 23          | 34 | 41 | 0 | 98        |
| 1715       | 23              | 29 | 22 | 0 | 17          | 25 | 32 | 0 | 74*       |
| 1730       | 13              | 19 | 14 | 0 | 8           | 18 | 20 | 0 | 46*       |
| 1745       | 5               | 11 | 6  | 0 | 5           | 7  | 10 | 0 | 22*       |

**TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - by Mvmt**

Int# 2 lawn/parkplace

| Begin Time | N-Approach |    |     | E-Approach |    |    | S-Approach |    |    | W-Approach |    |    | Int Total |
|------------|------------|----|-----|------------|----|----|------------|----|----|------------|----|----|-----------|
|            | RT         | TH | LT  | RT         | TH | LT | RT         | TH | LT | RT         | TH | LT |           |
| 700        | 0          | 0  | 3   | 1          | 0  | 4  | 4          | 0  | 0  | 0          | 0  | 0  | 12        |
| 715        | 0          | 0  | 5   | 2          | 0  | 2  | 5          | 2  | 0  | 0          | 0  | 0  | 16        |
| 730        | 0          | 0  | 7   | 9          | 0  | 7  | 3          | 0  | 0  | 0          | 0  | 0  | 26        |
| 745        | 0          | 0  | 4   | 8          | 0  | 4  | 3          | 2  | 0  | 0          | 0  | 0  | 21        |
| 800        | 0          | 0  | 25  | 8          | 0  | 5  | 13         | 1  | 0  | 0          | 0  | 0  | 52        |
| 815        | 0          | 0  | 12  | 19         | 0  | 7  | 8          | 1  | 0  | 0          | 0  | 0  | 47        |
| 830        | 0          | 1  | 4   | 3          | 0  | 4  | 7          | 2  | 0  | 0          | 0  | 0  | 21        |
| 845        | 0          | 0  | 2   | 3          | 0  | 4  | 2          | 1  | 0  | 0          | 0  | 0  | 12        |
| 1600       | 0          | 1  | 10  | 7          | 0  | 8  | 4          | 0  | 0  | 0          | 0  | 0  | 30        |
| 1615       | 0          | 1  | 5   | 8          | 0  | 4  | 5          | 1  | 0  | 0          | 0  | 0  | 24        |
| 1630       | 0          | 2  | 5   | 4          | 0  | 3  | 3          | 0  | 0  | 0          | 0  | 0  | 17        |
| 1645       | 0          | 1  | 10  | 6          | 0  | 6  | 5          | 0  | 0  | 0          | 0  | 0  | 28        |
| 1700       | 0          | 1  | 8   | 10         | 0  | 7  | 4          | 2  | 0  | 0          | 0  | 0  | 32        |
| 1715       | 0          | 1  | 6   | 9          | 0  | 8  | 6          | 1  | 0  | 0          | 0  | 0  | 31        |
| 1730       | 0          | 1  | 10  | 7          | 0  | 7  | 7          | 1  | 0  | 0          | 0  | 0  | 33        |
| 1745       | 0          | 0  | 6   | 10         | 0  | 5  | 3          | 1  | 0  | 0          | 0  | 0  | 25        |
| Total      | 0          | 9  | 122 | 114        | 0  | 85 | 82         | 15 | 0  | 0          | 0  | 0  | 427       |

**TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - Totals**

Int# 2 lawn/parkplace

| Begin Time | Approach Totals |     |    |   | Exit Totals |     |    |   | Int Total |
|------------|-----------------|-----|----|---|-------------|-----|----|---|-----------|
|            | N               | E   | S  | W | N           | E   | S  | W |           |
| 700        | 3               | 5   | 4  | 0 | 1           | 7   | 4  | 0 | 12        |
| 715        | 5               | 4   | 7  | 0 | 4           | 10  | 2  | 0 | 16        |
| 730        | 7               | 16  | 3  | 0 | 9           | 10  | 7  | 0 | 26        |
| 745        | 4               | 12  | 5  | 0 | 10          | 7   | 4  | 0 | 21        |
| 800        | 25              | 13  | 14 | 0 | 9           | 38  | 5  | 0 | 52        |
| 815        | 12              | 26  | 9  | 0 | 20          | 20  | 7  | 0 | 47        |
| 830        | 5               | 7   | 9  | 0 | 5           | 11  | 5  | 0 | 21        |
| 845        | 2               | 7   | 3  | 0 | 4           | 4   | 4  | 0 | 12        |
| 1600       | 11              | 15  | 4  | 0 | 7           | 14  | 9  | 0 | 30        |
| 1615       | 6               | 12  | 6  | 0 | 9           | 10  | 5  | 0 | 24        |
| 1630       | 7               | 7   | 3  | 0 | 4           | 8   | 5  | 0 | 17        |
| 1645       | 11              | 12  | 5  | 0 | 6           | 15  | 7  | 0 | 28        |
| 1700       | 9               | 17  | 6  | 0 | 12          | 12  | 8  | 0 | 32        |
| 1715       | 7               | 17  | 7  | 0 | 10          | 12  | 9  | 0 | 31        |
| 1730       | 11              | 14  | 8  | 0 | 8           | 17  | 8  | 0 | 33        |
| 1745       | 6               | 15  | 4  | 0 | 11          | 9   | 5  | 0 | 25        |
| Total      | 131             | 199 | 97 | 0 | 129         | 204 | 94 | 0 | 427       |

**TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: by Movement**

Int# 2 lawn/parkplace

| Begin Time | N-Approach |    |     | E-Approach |    |    | S-Approach |    |    | W-Approach |    |    | Int Total |
|------------|------------|----|-----|------------|----|----|------------|----|----|------------|----|----|-----------|
|            | RT         | TH | LT  | RT         | TH | LT | RT         | TH | LT | RT         | TH | LT |           |
| 700        | 0          | 0  | 12  | 4          | 0  | 16 | 16         | 0  | 0  | 0          | 0  | 0  | 48        |
| 715        | 0          | 0  | 20  | 8          | 0  | 8  | 20         | 8  | 0  | 0          | 0  | 0  | 64        |
| 730        | 0          | 0  | 28  | 36         | 0  | 28 | 12         | 0  | 0  | 0          | 0  | 0  | 104       |
| 745        | 0          | 0  | 16  | 32         | 0  | 16 | 12         | 8  | 0  | 0          | 0  | 0  | 84        |
| 800        | 0          | 0  | 100 | 32         | 0  | 20 | 52         | 4  | 0  | 0          | 0  | 0  | 208       |
| 815        | 0          | 0  | 48  | 76         | 0  | 28 | 32         | 4  | 0  | 0          | 0  | 0  | 188       |
| 830        | 0          | 4  | 16  | 12         | 0  | 16 | 28         | 8  | 0  | 0          | 0  | 0  | 84        |
| 845        | 0          | 0  | 8   | 12         | 0  | 16 | 8          | 4  | 0  | 0          | 0  | 0  | 48        |
| 1600       | 0          | 4  | 40  | 28         | 0  | 32 | 16         | 0  | 0  | 0          | 0  | 0  | 120       |
| 1615       | 0          | 4  | 20  | 32         | 0  | 16 | 20         | 4  | 0  | 0          | 0  | 0  | 96        |
| 1630       | 0          | 8  | 20  | 16         | 0  | 12 | 12         | 0  | 0  | 0          | 0  | 0  | 68        |
| 1645       | 0          | 4  | 40  | 24         | 0  | 24 | 20         | 0  | 0  | 0          | 0  | 0  | 112       |
| 1700       | 0          | 4  | 32  | 40         | 0  | 28 | 16         | 8  | 0  | 0          | 0  | 0  | 128       |
| 1715       | 0          | 4  | 24  | 36         | 0  | 32 | 24         | 4  | 0  | 0          | 0  | 0  | 124       |
| 1730       | 0          | 4  | 40  | 28         | 0  | 28 | 28         | 4  | 0  | 0          | 0  | 0  | 132       |
| 1745       | 0          | 0  | 24  | 40         | 0  | 20 | 12         | 4  | 0  | 0          | 0  | 0  | 100       |

**TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: Appr/Exit Totals**

Int# 2 lawn/parkplace

| Begin Time | Approach Totals |     |    |   | Exit Totals |     |    |   | Int Total |
|------------|-----------------|-----|----|---|-------------|-----|----|---|-----------|
|            | N               | E   | S  | W | N           | E   | S  | W |           |
| 700        | 12              | 20  | 16 | 0 | 4           | 28  | 16 | 0 | 48        |
| 715        | 20              | 16  | 28 | 0 | 16          | 40  | 8  | 0 | 64        |
| 730        | 28              | 64  | 12 | 0 | 36          | 40  | 28 | 0 | 104       |
| 745        | 16              | 48  | 20 | 0 | 40          | 28  | 16 | 0 | 84        |
| 800        | 100             | 52  | 56 | 0 | 36          | 152 | 20 | 0 | 208       |
| 815        | 48              | 104 | 36 | 0 | 80          | 80  | 28 | 0 | 188       |
| 830        | 20              | 28  | 36 | 0 | 20          | 44  | 20 | 0 | 84        |
| 845        | 8               | 28  | 12 | 0 | 16          | 16  | 16 | 0 | 48        |
| 1600       | 44              | 60  | 16 | 0 | 28          | 56  | 36 | 0 | 120       |
| 1615       | 24              | 48  | 24 | 0 | 36          | 40  | 20 | 0 | 96        |
| 1630       | 28              | 28  | 12 | 0 | 16          | 32  | 20 | 0 | 68        |
| 1645       | 44              | 48  | 20 | 0 | 24          | 60  | 28 | 0 | 112       |
| 1700       | 36              | 68  | 24 | 0 | 48          | 48  | 32 | 0 | 128       |
| 1715       | 28              | 68  | 28 | 0 | 40          | 48  | 36 | 0 | 124       |
| 1730       | 44              | 56  | 32 | 0 | 32          | 68  | 32 | 0 | 132       |
| 1745       | 24              | 60  | 16 | 0 | 44          | 36  | 20 | 0 | 100       |

**TEAPAC[Ver 9.50.02] - 60-Minute Volumes: by Movement**

Int# 2 lawn/parkplace

| Begin Time | N-Approach |    |    | E-Approach |    |    | S-Approach |    |    | W-Approach |    |    | Int Total |
|------------|------------|----|----|------------|----|----|------------|----|----|------------|----|----|-----------|
|            | RT         | TH | LT | RT         | TH | LT | RT         | TH | LT | RT         | TH | LT |           |
| 700        | 0          | 0  | 19 | 20         | 0  | 17 | 15         | 4  | 0  | 0          | 0  | 0  | 75        |
| 715        | 0          | 0  | 41 | 27         | 0  | 18 | 24         | 5  | 0  | 0          | 0  | 0  | 115       |
| 730        | 0          | 0  | 48 | 44         | 0  | 23 | 27         | 4  | 0  | 0          | 0  | 0  | 146       |
| 745        | 0          | 1  | 45 | 38         | 0  | 20 | 31         | 6  | 0  | 0          | 0  | 0  | 141       |
| 800        | 0          | 1  | 43 | 33         | 0  | 20 | 30         | 5  | 0  | 0          | 0  | 0  | 132       |
| 815        | 0          | 1  | 18 | 25         | 0  | 15 | 17         | 4  | 0  | 0          | 0  | 0  | 80*       |
| 830        | 0          | 1  | 6  | 6          | 0  | 8  | 9          | 3  | 0  | 0          | 0  | 0  | 33*       |
| 845        | 0          | 0  | 2  | 3          | 0  | 4  | 2          | 1  | 0  | 0          | 0  | 0  | 12*       |
| 1600       | 0          | 5  | 30 | 25         | 0  | 21 | 17         | 1  | 0  | 0          | 0  | 0  | 99        |
| 1615       | 0          | 5  | 28 | 28         | 0  | 20 | 17         | 3  | 0  | 0          | 0  | 0  | 101       |
| 1630       | 0          | 5  | 29 | 29         | 0  | 24 | 18         | 3  | 0  | 0          | 0  | 0  | 108       |
| 1645       | 0          | 4  | 34 | 32         | 0  | 28 | 22         | 4  | 0  | 0          | 0  | 0  | 124       |
| 1700       | 0          | 3  | 30 | 36         | 0  | 27 | 20         | 5  | 0  | 0          | 0  | 0  | 121       |
| 1715       | 0          | 2  | 22 | 26         | 0  | 20 | 16         | 3  | 0  | 0          | 0  | 0  | 89*       |
| 1730       | 0          | 1  | 16 | 17         | 0  | 12 | 10         | 2  | 0  | 0          | 0  | 0  | 58*       |
| 1745       | 0          | 0  | 6  | 10         | 0  | 5  | 3          | 1  | 0  | 0          | 0  | 0  | 25*       |

**TEAPAC[Ver 9.50.02] - 60-Minute Volumes: Appr/Exit Totals**

Int# 2 lawn/parkplace

| Begin Time | Approach Totals |    |    |   | Exit Totals |    |    |   | Int Total |
|------------|-----------------|----|----|---|-------------|----|----|---|-----------|
|            | N               | E  | S  | W | N           | E  | S  | W |           |
| 700        | 19              | 37 | 19 | 0 | 24          | 34 | 17 | 0 | 75        |
| 715        | 41              | 45 | 29 | 0 | 32          | 65 | 18 | 0 | 115       |
| 730        | 48              | 67 | 31 | 0 | 48          | 75 | 23 | 0 | 146       |
| 745        | 46              | 58 | 37 | 0 | 44          | 76 | 21 | 0 | 141       |
| 800        | 44              | 53 | 35 | 0 | 38          | 73 | 21 | 0 | 132       |
| 815        | 19              | 40 | 21 | 0 | 29          | 35 | 16 | 0 | 80*       |
| 830        | 7               | 14 | 12 | 0 | 9           | 15 | 9  | 0 | 33*       |
| 845        | 2               | 7  | 3  | 0 | 4           | 4  | 4  | 0 | 12*       |
| 1600       | 35              | 46 | 18 | 0 | 26          | 47 | 26 | 0 | 99        |
| 1615       | 33              | 48 | 20 | 0 | 31          | 45 | 25 | 0 | 101       |
| 1630       | 34              | 53 | 21 | 0 | 32          | 47 | 29 | 0 | 108       |
| 1645       | 38              | 60 | 26 | 0 | 36          | 56 | 32 | 0 | 124       |
| 1700       | 33              | 63 | 25 | 0 | 41          | 50 | 30 | 0 | 121       |
| 1715       | 24              | 46 | 19 | 0 | 29          | 38 | 22 | 0 | 89*       |
| 1730       | 17              | 29 | 12 | 0 | 19          | 26 | 13 | 0 | 58*       |
| 1745       | 6               | 15 | 4  | 0 | 11          | 9  | 5  | 0 | 25*       |



**TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - by Mvmt**

Int# 4 wolf/park

| Begin Time | N-Approach |     |    | E-Approach |    |    | S-Approach |     |    | W-Approach |    |    | Int Total |
|------------|------------|-----|----|------------|----|----|------------|-----|----|------------|----|----|-----------|
|            | RT         | TH  | LT | RT         | TH | LT | RT         | TH  | LT | RT         | TH | LT |           |
| 1500       | 5          | 102 | 0  | 0          | 0  | 0  | 0          | 151 | 3  | 13         | 0  | 7  | 281       |
| 1515       | 22         | 181 | 0  | 0          | 0  | 0  | 0          | 97  | 6  | 5          | 0  | 1  | 312       |
| 1530       | 11         | 158 | 0  | 0          | 0  | 0  | 0          | 100 | 9  | 21         | 0  | 5  | 304       |
| 1545       | 5          | 130 | 0  | 0          | 0  | 0  | 0          | 116 | 4  | 16         | 0  | 5  | 276       |
| Total      | 43         | 571 | 0  | 0          | 0  | 0  | 0          | 464 | 22 | 55         | 0  | 18 | 1173      |

**TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - Totals**

Int# 4 wolf/park

| Begin Time | Approach Totals |   |     |    | Exit Totals |   |     |    | Int Total |
|------------|-----------------|---|-----|----|-------------|---|-----|----|-----------|
|            | N               | E | S   | W  | N           | E | S   | W  |           |
| 1500       | 107             | 0 | 154 | 20 | 158         | 0 | 115 | 8  | 281       |
| 1515       | 203             | 0 | 103 | 6  | 98          | 0 | 186 | 28 | 312       |
| 1530       | 169             | 0 | 109 | 26 | 105         | 0 | 179 | 20 | 304       |
| 1545       | 135             | 0 | 120 | 21 | 121         | 0 | 146 | 9  | 276       |
| Total      | 614             | 0 | 486 | 73 | 482         | 0 | 626 | 65 | 1173      |

**TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: by Movement**

Int# 4 wolf/park

| Begin Time | N-Approach |     |    | E-Approach |    |    | S-Approach |     |    | W-Approach |    |    | Int Total |
|------------|------------|-----|----|------------|----|----|------------|-----|----|------------|----|----|-----------|
|            | RT         | TH  | LT | RT         | TH | LT | RT         | TH  | LT | RT         | TH | LT |           |
| 1500       | 20         | 408 | 0  | 0          | 0  | 0  | 0          | 604 | 12 | 52         | 0  | 28 | 1124      |
| 1515       | 88         | 724 | 0  | 0          | 0  | 0  | 0          | 388 | 24 | 20         | 0  | 4  | 1248      |
| 1530       | 44         | 632 | 0  | 0          | 0  | 0  | 0          | 400 | 36 | 84         | 0  | 20 | 1216      |
| 1545       | 20         | 520 | 0  | 0          | 0  | 0  | 0          | 464 | 16 | 64         | 0  | 20 | 1104      |

**TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: Appr/Exit Totals**

Int# 4 wolf/park

| Begin Time | Approach Totals |   |     |     | Exit Totals |   |     |     | Int Total |
|------------|-----------------|---|-----|-----|-------------|---|-----|-----|-----------|
|            | N               | E | S   | W   | N           | E | S   | W   |           |
| 1500       | 428             | 0 | 616 | 80  | 632         | 0 | 460 | 32  | 1124      |
| 1515       | 812             | 0 | 412 | 24  | 392         | 0 | 744 | 112 | 1248      |
| 1530       | 676             | 0 | 436 | 104 | 420         | 0 | 716 | 80  | 1216      |
| 1545       | 540             | 0 | 480 | 84  | 484         | 0 | 584 | 36  | 1104      |

**TEAPAC[Ver 9.50.02] - 60-Minute Volumes: by Movement**

Int# 4 wolf/park

| Begin Time | N-Approach |     |    | E-Approach |    |    | S-Approach |     |    | W-Approach |    |    | Int Total |
|------------|------------|-----|----|------------|----|----|------------|-----|----|------------|----|----|-----------|
|            | RT         | TH  | LT | RT         | TH | LT | RT         | TH  | LT | RT         | TH | LT |           |
| 1500       | 43         | 571 | 0  | 0          | 0  | 0  | 0          | 464 | 22 | 55         | 0  | 18 | 1173      |
| 1515       | 38         | 469 | 0  | 0          | 0  | 0  | 0          | 313 | 19 | 42         | 0  | 11 | 892*      |
| 1530       | 16         | 288 | 0  | 0          | 0  | 0  | 0          | 216 | 13 | 37         | 0  | 10 | 580*      |
| 1545       | 5          | 130 | 0  | 0          | 0  | 0  | 0          | 116 | 4  | 16         | 0  | 5  | 276*      |

**TEAPAC[Ver 9.50.02] - 60-Minute Volumes: Appr/Exit Totals**

Int# 4 wolf/park

| Begin Time | Approach Totals |   |     |    | Exit Totals |   |     |    | Int Total |
|------------|-----------------|---|-----|----|-------------|---|-----|----|-----------|
|            | N               | E | S   | W  | N           | E | S   | W  |           |
| 1500       | 614             | 0 | 486 | 73 | 482         | 0 | 626 | 65 | 1173      |
| 1515       | 507             | 0 | 332 | 53 | 324         | 0 | 511 | 57 | 892*      |
| 1530       | 304             | 0 | 229 | 47 | 226         | 0 | 325 | 29 | 580*      |
| 1545       | 135             | 0 | 120 | 21 | 121         | 0 | 146 | 9  | 276*      |

# Wolf Road with Park Place TMC - TMC

Thu Mar 21, 2024

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 1165720, Location: 41.787076, -87.897662



Provided by: Kenig Lindgren O'Hara Aboona, Inc.

9575 W. Higgins Rd., Suite 400,  
Rosemont, IL, 60018, US

| Leg Direction               | Wolf Road Southbound |       |    |       |      | Wolf Road Northbound |       |    |       |      | Park Place Eastbound |       |    |      |      |       |
|-----------------------------|----------------------|-------|----|-------|------|----------------------|-------|----|-------|------|----------------------|-------|----|------|------|-------|
| Time                        | R                    | T     | U  | App   | Ped* | T                    | L     | U  | App   | Ped* | R                    | L     | U  | App  | Ped* | Int   |
| 2024-03-21 7:00AM           | 0                    | 50    | 0  | 50    | 0    | 118                  | 0     | 0  | 118   | 0    | 4                    | 6     | 0  | 10   | 0    | 178   |
| 7:15AM                      | 3                    | 69    | 0  | 72    | 0    | 170                  | 4     | 0  | 174   | 0    | 8                    | 7     | 0  | 15   | 0    | 261   |
| 7:30AM                      | 8                    | 78    | 0  | 86    | 0    | 217                  | 6     | 0  | 223   | 0    | 8                    | 4     | 0  | 12   | 0    | 321   |
| 7:45AM                      | 9                    | 95    | 0  | 104   | 0    | 153                  | 7     | 0  | 160   | 0    | 6                    | 3     | 0  | 9    | 0    | 273   |
| Hourly Total                | 20                   | 292   | 0  | 312   | 0    | 658                  | 17    | 0  | 675   | 0    | 26                   | 20    | 0  | 46   | 0    | 1033  |
| 8:00AM                      | 5                    | 62    | 0  | 67    | 0    | 160                  | 5     | 0  | 165   | 0    | 27                   | 8     | 0  | 35   | 0    | 267   |
| 8:15AM                      | 11                   | 76    | 0  | 87    | 0    | 168                  | 11    | 0  | 179   | 0    | 7                    | 8     | 0  | 15   | 0    | 281   |
| 8:30AM                      | 7                    | 101   | 0  | 108   | 0    | 145                  | 3     | 0  | 148   | 0    | 5                    | 2     | 0  | 7    | 0    | 263   |
| 8:45AM                      | 4                    | 78    | 0  | 82    | 0    | 115                  | 2     | 0  | 117   | 0    | 4                    | 1     | 0  | 5    | 0    | 204   |
| Hourly Total                | 27                   | 317   | 0  | 344   | 0    | 588                  | 21    | 0  | 609   | 0    | 43                   | 19    | 0  | 62   | 0    | 1015  |
| 4:00PM                      | 2                    | 144   | 0  | 146   | 0    | 136                  | 11    | 0  | 147   | 0    | 12                   | 2     | 0  | 14   | 0    | 307   |
| 4:15PM                      | 1                    | 153   | 0  | 154   | 0    | 125                  | 7     | 0  | 132   | 0    | 5                    | 4     | 0  | 9    | 0    | 295   |
| 4:30PM                      | 8                    | 140   | 0  | 148   | 0    | 131                  | 4     | 0  | 135   | 0    | 7                    | 5     | 0  | 12   | 0    | 295   |
| 4:45PM                      | 3                    | 129   | 0  | 132   | 0    | 124                  | 13    | 0  | 137   | 0    | 4                    | 1     | 0  | 5    | 0    | 274   |
| Hourly Total                | 14                   | 566   | 0  | 580   | 0    | 516                  | 35    | 0  | 551   | 0    | 28                   | 12    | 0  | 40   | 0    | 1171  |
| 5:00PM                      | 3                    | 212   | 0  | 215   | 0    | 107                  | 9     | 0  | 116   | 0    | 6                    | 3     | 0  | 9    | 0    | 340   |
| 5:15PM                      | 7                    | 164   | 0  | 171   | 0    | 98                   | 4     | 0  | 102   | 0    | 4                    | 6     | 0  | 10   | 1    | 283   |
| 5:30PM                      | 11                   | 141   | 0  | 152   | 0    | 100                  | 7     | 0  | 107   | 0    | 5                    | 2     | 0  | 7    | 2    | 266   |
| 5:45PM                      | 4                    | 128   | 0  | 132   | 0    | 106                  | 4     | 0  | 110   | 0    | 6                    | 3     | 0  | 9    | 2    | 251   |
| Hourly Total                | 25                   | 645   | 0  | 670   | 0    | 411                  | 24    | 0  | 435   | 0    | 21                   | 14    | 0  | 35   | 5    | 1140  |
| <b>Total</b>                | 86                   | 1820  | 0  | 1906  | 0    | 2173                 | 97    | 0  | 2270  | 0    | 118                  | 65    | 0  | 183  | 5    | 4359  |
| <b>% Approach</b>           | 4.5%                 | 95.5% | 0% | -     | -    | 95.7%                | 4.3%  | 0% | -     | -    | 64.5%                | 35.5% | 0% | -    | -    | -     |
| <b>% Total</b>              | 2.0%                 | 41.8% | 0% | 43.7% | -    | 49.9%                | 2.2%  | 0% | 52.1% | -    | 2.7%                 | 1.5%  | 0% | 4.2% | -    | -     |
| <b>Lights</b>               | 85                   | 1787  | 0  | 1872  | -    | 2126                 | 94    | 0  | 2220  | -    | 118                  | 65    | 0  | 183  | -    | 4275  |
| <b>% Lights</b>             | 98.8%                | 98.2% | 0% | 98.2% | -    | 97.8%                | 96.9% | 0% | 97.8% | -    | 100%                 | 100%  | 0% | 100% | -    | 98.1% |
| <b>Single-Unit Trucks</b>   | 0                    | 18    | 0  | 18    | -    | 32                   | 3     | 0  | 35    | -    | 0                    | 0     | 0  | 0    | -    | 53    |
| <b>% Single-Unit Trucks</b> | 0%                   | 1.0%  | 0% | 0.9%  | -    | 1.5%                 | 3.1%  | 0% | 1.5%  | -    | 0%                   | 0%    | 0% | 0%   | -    | 1.2%  |
| <b>Articulated Trucks</b>   | 1                    | 4     | 0  | 5     | -    | 7                    | 0     | 0  | 7     | -    | 0                    | 0     | 0  | 0    | -    | 12    |
| <b>% Articulated Trucks</b> | 1.2%                 | 0.2%  | 0% | 0.3%  | -    | 0.3%                 | 0%    | 0% | 0.3%  | -    | 0%                   | 0%    | 0% | 0%   | -    | 0.3%  |
| <b>Buses</b>                | 0                    | 11    | 0  | 11    | -    | 8                    | 0     | 0  | 8     | -    | 0                    | 0     | 0  | 0    | -    | 19    |
| <b>% Buses</b>              | 0%                   | 0.6%  | 0% | 0.6%  | -    | 0.4%                 | 0%    | 0% | 0.4%  | -    | 0%                   | 0%    | 0% | 0%   | -    | 0.4%  |
| <b>Bicycles on Road</b>     | 0                    | 0     | 0  | 0     | -    | 0                    | 0     | 0  | 0     | -    | 0                    | 0     | 0  | 0    | -    | 0     |
| <b>% Bicycles on Road</b>   | 0%                   | 0%    | 0% | 0%    | -    | 0%                   | 0%    | 0% | 0%    | -    | 0%                   | 0%    | 0% | 0%   | -    | 0%    |
| <b>Pedestrians</b>          | -                    | -     | -  | -     | 0    | -                    | -     | -  | -     | 0    | -                    | -     | -  | -    | 5    |       |
| <b>% Pedestrians</b>        | -                    | -     | -  | -     | -    | -                    | -     | -  | -     | -    | -                    | -     | -  | -    | 100% | -     |

\* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

# Wolf Road with Park Place TMC - TMC

Thu Mar 21, 2024

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 1165720, Location: 41.787076, -87.897662



Provided by: Kenig Lindgren O'Hara Aboona, Inc.

9575 W. Higgins Rd., Suite 400,  
Rosemont, IL, 60018, US

## [N] Wolf Road

Total: 4144

In: 1906

Out: 2238

86

1820

## [W] Park Place

Total: 366

In: 183 Out: 183

3  
65  
118  
2

97

2173

Out: 1938

In: 2270

Total: 4208

## [S] Wolf Road



# Wolf Road with Park Place TMC - TMC

Thu Mar 21, 2024

AM Peak (7:30 AM - 8:30 AM)

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 1165720, Location: 41.787076, -87.897662



Provided by: Kenig Lindgren O'Hara Aboona, Inc.

9575 W. Higgins Rd., Suite 400,  
Rosemont, IL, 60018, US

| Leg Direction               | Wolf Road Southbound |            |          |              |          | Wolf Road Northbound |           |          |              |          | Park Place Eastbound |           |          |              |          |             |
|-----------------------------|----------------------|------------|----------|--------------|----------|----------------------|-----------|----------|--------------|----------|----------------------|-----------|----------|--------------|----------|-------------|
| Time                        | R                    | T          | U        | App          | Ped*     | T                    | L         | U        | App          | Ped*     | R                    | L         | U        | App          | Ped*     | Int         |
| 2024-03-21 7:30AM           | 8                    | 78         | 0        | 86           | 0        | 217                  | 6         | 0        | 223          | 0        | 8                    | 4         | 0        | 12           | 0        | 321         |
| 7:45AM                      | 9                    | 95         | 0        | 104          | 0        | 153                  | 7         | 0        | 160          | 0        | 6                    | 3         | 0        | 9            | 0        | 273         |
| 8:00AM                      | 5                    | 62         | 0        | 67           | 0        | 160                  | 5         | 0        | 165          | 0        | 27                   | 8         | 0        | 35           | 0        | 267         |
| 8:15AM                      | 11                   | 76         | 0        | 87           | 0        | 168                  | 11        | 0        | 179          | 0        | 7                    | 8         | 0        | 15           | 0        | 281         |
| <b>Total</b>                | <b>33</b>            | <b>311</b> | <b>0</b> | <b>344</b>   | <b>0</b> | <b>698</b>           | <b>29</b> | <b>0</b> | <b>727</b>   | <b>0</b> | <b>48</b>            | <b>23</b> | <b>0</b> | <b>71</b>    | <b>0</b> | <b>1142</b> |
| <b>% Approach</b>           | 9.6%                 | 90.4%      | 0%       | -            | -        | 96.0%                | 4.0%      | 0%       | -            | -        | 67.6%                | 32.4%     | 0%       | -            | -        | -           |
| <b>% Total</b>              | 2.9%                 | 27.2%      | 0%       | <b>30.1%</b> | -        | 61.1%                | 2.5%      | 0%       | <b>63.7%</b> | -        | 4.2%                 | 2.0%      | 0%       | <b>6.2%</b>  | -        | -           |
| <b>PHF</b>                  | 0.750                | 0.818      | -        | <b>0.827</b> | -        | 0.804                | 0.659     | -        | <b>0.815</b> | -        | 0.444                | 0.719     | -        | <b>0.507</b> | -        | 0.889       |
| <b>Lights</b>               | 32                   | 308        | 0        | <b>340</b>   | -        | 670                  | 28        | 0        | <b>698</b>   | -        | 48                   | 23        | 0        | <b>71</b>    | -        | 1109        |
| <b>% Lights</b>             | 97.0%                | 99.0%      | 0%       | <b>98.8%</b> | -        | 96.0%                | 96.6%     | 0%       | <b>96.0%</b> | -        | 100%                 | 100%      | 0%       | <b>100%</b>  | -        | 97.1%       |
| <b>Single-Unit Trucks</b>   | 0                    | 2          | 0        | <b>2</b>     | -        | 19                   | 1         | 0        | <b>20</b>    | -        | 0                    | 0         | 0        | <b>0</b>     | -        | 22          |
| <b>% Single-Unit Trucks</b> | 0%                   | 0.6%       | 0%       | <b>0.6%</b>  | -        | 2.7%                 | 3.4%      | 0%       | <b>2.8%</b>  | -        | 0%                   | 0%        | 0%       | <b>0%</b>    | -        | 1.9%        |
| <b>Articulated Trucks</b>   | 1                    | 0          | 0        | <b>1</b>     | -        | 6                    | 0         | 0        | <b>6</b>     | -        | 0                    | 0         | 0        | <b>0</b>     | -        | 7           |
| <b>% Articulated Trucks</b> | 3.0%                 | 0%         | 0%       | <b>0.3%</b>  | -        | 0.9%                 | 0%        | 0%       | <b>0.8%</b>  | -        | 0%                   | 0%        | 0%       | <b>0%</b>    | -        | 0.6%        |
| <b>Buses</b>                | 0                    | 1          | 0        | <b>1</b>     | -        | 3                    | 0         | 0        | <b>3</b>     | -        | 0                    | 0         | 0        | <b>0</b>     | -        | 4           |
| <b>% Buses</b>              | 0%                   | 0.3%       | 0%       | <b>0.3%</b>  | -        | 0.4%                 | 0%        | 0%       | <b>0.4%</b>  | -        | 0%                   | 0%        | 0%       | <b>0%</b>    | -        | 0.4%        |
| <b>Bicycles on Road</b>     | 0                    | 0          | 0        | <b>0</b>     | -        | 0                    | 0         | 0        | <b>0</b>     | -        | 0                    | 0         | 0        | <b>0</b>     | -        | 0           |
| <b>% Bicycles on Road</b>   | 0%                   | 0%         | 0%       | <b>0%</b>    | -        | 0%                   | 0%        | 0%       | <b>0%</b>    | -        | 0%                   | 0%        | 0%       | <b>0%</b>    | -        | 0%          |
| <b>Pedestrians</b>          | -                    | -          | -        | -            | 0        | -                    | -         | -        | -            | 0        | -                    | -         | -        | -            | 0        | -           |
| <b>% Pedestrians</b>        | -                    | -          | -        | -            | -        | -                    | -         | -        | -            | -        | -                    | -         | -        | -            | -        | -           |

\* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

# Wolf Road with Park Place TMC - TMC

Thu Mar 21, 2024

AM Peak (7:30 AM - 8:30 AM)

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 1165720, Location: 41.787076, -87.897662



Provided by: Kenig Lindgren O'Hara Aboona, Inc.

9575 W. Higgins Rd., Suite 400,  
Rosemont, IL, 60018, US

## [N] Wolf Road

Total: 1065

In: 344

Out: 721

33

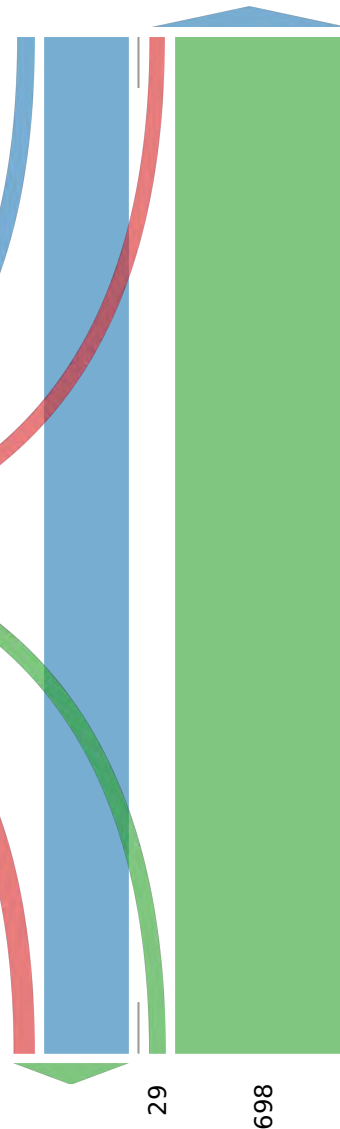
311

## [W] Park Place

Total: 133

In: 71 Out: 62

23  
48



Out: 359

In: 727

Total: 1086

## [S] Wolf Road

# Wolf Road with Park Place TMC - TMC

Thu Mar 21, 2024

PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 1165720, Location: 41.787076, -87.897662



Provided by: Kenig Lindgren O'Hara Aboona, Inc.

9575 W. Higgins Rd., Suite 400,  
Rosemont, IL, 60018, US

| Leg Direction               | Wolf Road Southbound |       |    |       |      | Wolf Road Northbound |       |    |       |      | Park Place Eastbound |       |    |       |      |       |
|-----------------------------|----------------------|-------|----|-------|------|----------------------|-------|----|-------|------|----------------------|-------|----|-------|------|-------|
| Time                        | R                    | T     | U  | App   | Ped* | T                    | L     | U  | App   | Ped* | R                    | L     | U  | App   | Ped* | Int   |
| 2024-03-21 4:15PM           | 1                    | 153   | 0  | 154   | 0    | 125                  | 7     | 0  | 132   | 0    | 5                    | 4     | 0  | 9     | 0    | 295   |
| 4:30PM                      | 8                    | 140   | 0  | 148   | 0    | 131                  | 4     | 0  | 135   | 0    | 7                    | 5     | 0  | 12    | 0    | 295   |
| 4:45PM                      | 3                    | 129   | 0  | 132   | 0    | 124                  | 13    | 0  | 137   | 0    | 4                    | 1     | 0  | 5     | 0    | 274   |
| 5:00PM                      | 3                    | 212   | 0  | 215   | 0    | 107                  | 9     | 0  | 116   | 0    | 6                    | 3     | 0  | 9     | 0    | 340   |
| <b>Total</b>                | 15                   | 634   | 0  | 649   | 0    | 487                  | 33    | 0  | 520   | 0    | 22                   | 13    | 0  | 35    | 0    | 1204  |
| <b>% Approach</b>           | 2.3%                 | 97.7% | 0% | -     | -    | 93.7%                | 6.3%  | 0% | -     | -    | 62.9%                | 37.1% | 0% | -     | -    | -     |
| <b>% Total</b>              | 1.2%                 | 52.7% | 0% | 53.9% | -    | 40.4%                | 2.7%  | 0% | 43.2% | -    | 1.8%                 | 1.1%  | 0% | 2.9%  | -    | -     |
| <b>PHF</b>                  | 0.469                | 0.748 | -  | 0.755 | -    | 0.929                | 0.635 | -  | 0.949 | -    | 0.786                | 0.650 | -  | 0.729 | -    | 0.885 |
| <b>Lights</b>               | 15                   | 615   | 0  | 630   | -    | 486                  | 33    | 0  | 519   | -    | 22                   | 13    | 0  | 35    | -    | 1184  |
| <b>% Lights</b>             | 100%                 | 97.0% | 0% | 97.1% | -    | 99.8%                | 100%  | 0% | 99.8% | -    | 100%                 | 100%  | 0% | 100%  | -    | 98.3% |
| <b>Single-Unit Trucks</b>   | 0                    | 10    | 0  | 10    | -    | 1                    | 0     | 0  | 1     | -    | 0                    | 0     | 0  | 0     | -    | 11    |
| <b>% Single-Unit Trucks</b> | 0%                   | 1.6%  | 0% | 1.5%  | -    | 0.2%                 | 0%    | 0% | 0.2%  | -    | 0%                   | 0%    | 0% | 0%    | -    | 0.9%  |
| <b>Articulated Trucks</b>   | 0                    | 3     | 0  | 3     | -    | 0                    | 0     | 0  | 0     | -    | 0                    | 0     | 0  | 0     | -    | 3     |
| <b>% Articulated Trucks</b> | 0%                   | 0.5%  | 0% | 0.5%  | -    | 0%                   | 0%    | 0% | 0%    | -    | 0%                   | 0%    | 0% | 0%    | -    | 0.2%  |
| <b>Buses</b>                | 0                    | 6     | 0  | 6     | -    | 0                    | 0     | 0  | 0     | -    | 0                    | 0     | 0  | 0     | -    | 6     |
| <b>% Buses</b>              | 0%                   | 0.9%  | 0% | 0.9%  | -    | 0%                   | 0%    | 0% | 0%    | -    | 0%                   | 0%    | 0% | 0%    | -    | 0.5%  |
| <b>Bicycles on Road</b>     | 0                    | 0     | 0  | 0     | -    | 0                    | 0     | 0  | 0     | -    | 0                    | 0     | 0  | 0     | -    | 0     |
| <b>% Bicycles on Road</b>   | 0%                   | 0%    | 0% | 0%    | -    | 0%                   | 0%    | 0% | 0%    | -    | 0%                   | 0%    | 0% | 0%    | -    | 0%    |
| <b>Pedestrians</b>          | -                    | -     | -  | -     | 0    | -                    | -     | -  | -     | 0    | -                    | -     | -  | -     | 0    | -     |
| <b>% Pedestrians</b>        | -                    | -     | -  | -     | -    | -                    | -     | -  | -     | -    | -                    | -     | -  | -     | -    | -     |

\* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

# Wolf Road with Park Place TMC - TMC

Thu Mar 21, 2024

PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 1165720, Location: 41.787076, -87.897662



Provided by: Kenig Lindgren O'Hara Aboona, Inc.

9575 W. Higgins Rd., Suite 400,  
Rosemont, IL, 60018, US

## [N] Wolf Road

Total: 1149

In: 649

Out: 500

15

634

## [W] Park Place

Total: 83

In: 35 Out: 48

13  
22

33

487

Out: 656

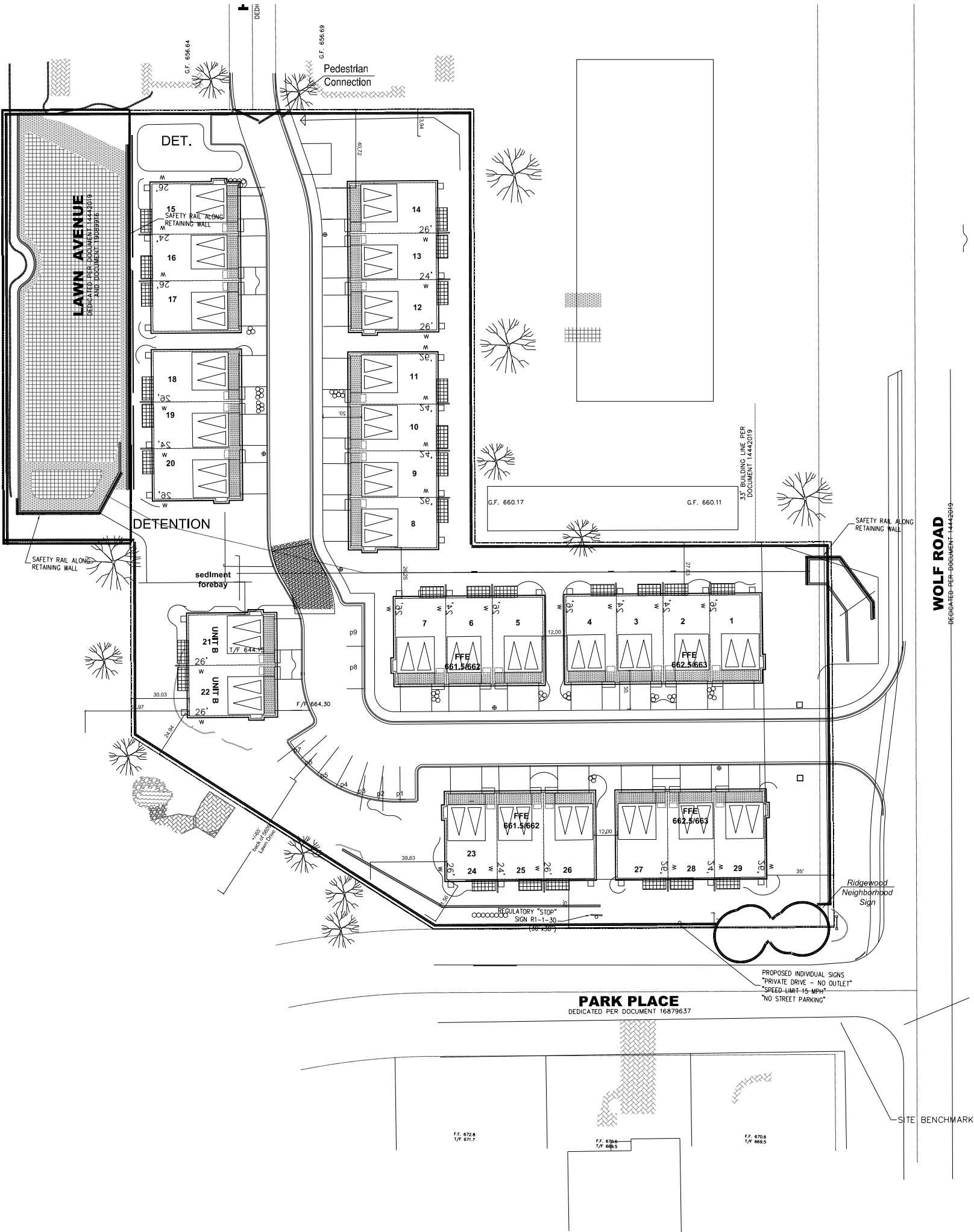
In: 520

Total: 1176

## [S] Wolf Road



## Site Plan



13 Unit A  
16 Unit B  
12 Unit C  
58 garage spaces  
58 driveway  
11 Guest spaces

## ITE Trip Generation Graphs

# Single-Family Attached Housing (215)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,  
One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 46

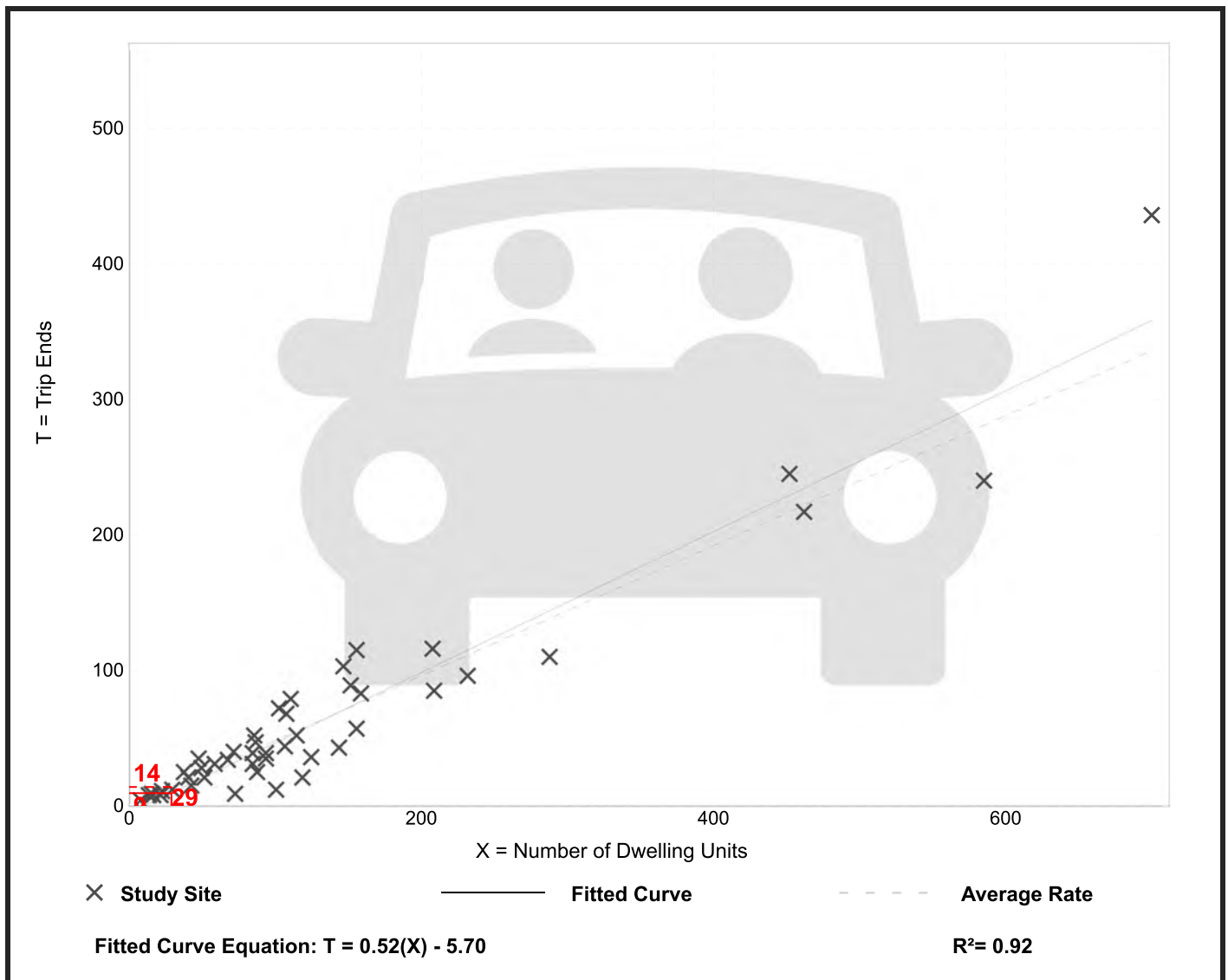
Avg. Num. of Dwelling Units: 135

Directional Distribution: 25% entering, 75% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.48         | 0.12 - 0.74    | 0.14               |

## Data Plot and Equation





# Single-Family Attached Housing (215)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,  
Peak Hour of Adjacent Street Traffic,  
One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 51

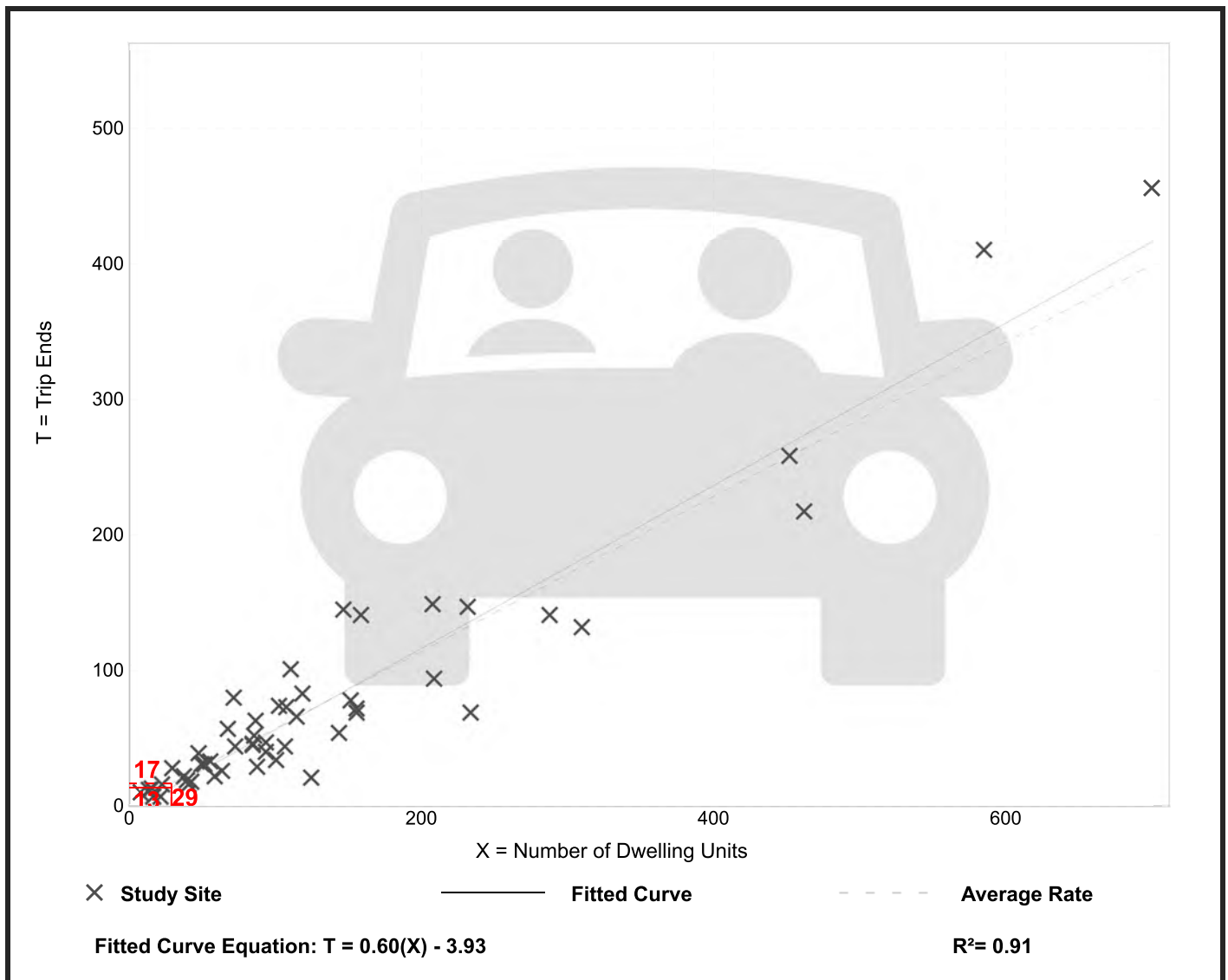
Avg. Num. of Dwelling Units: 136

Directional Distribution: 59% entering, 41% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.57         | 0.17 - 1.25    | 0.18               |

## Data Plot and Equation



# Single-Family Attached Housing (215)

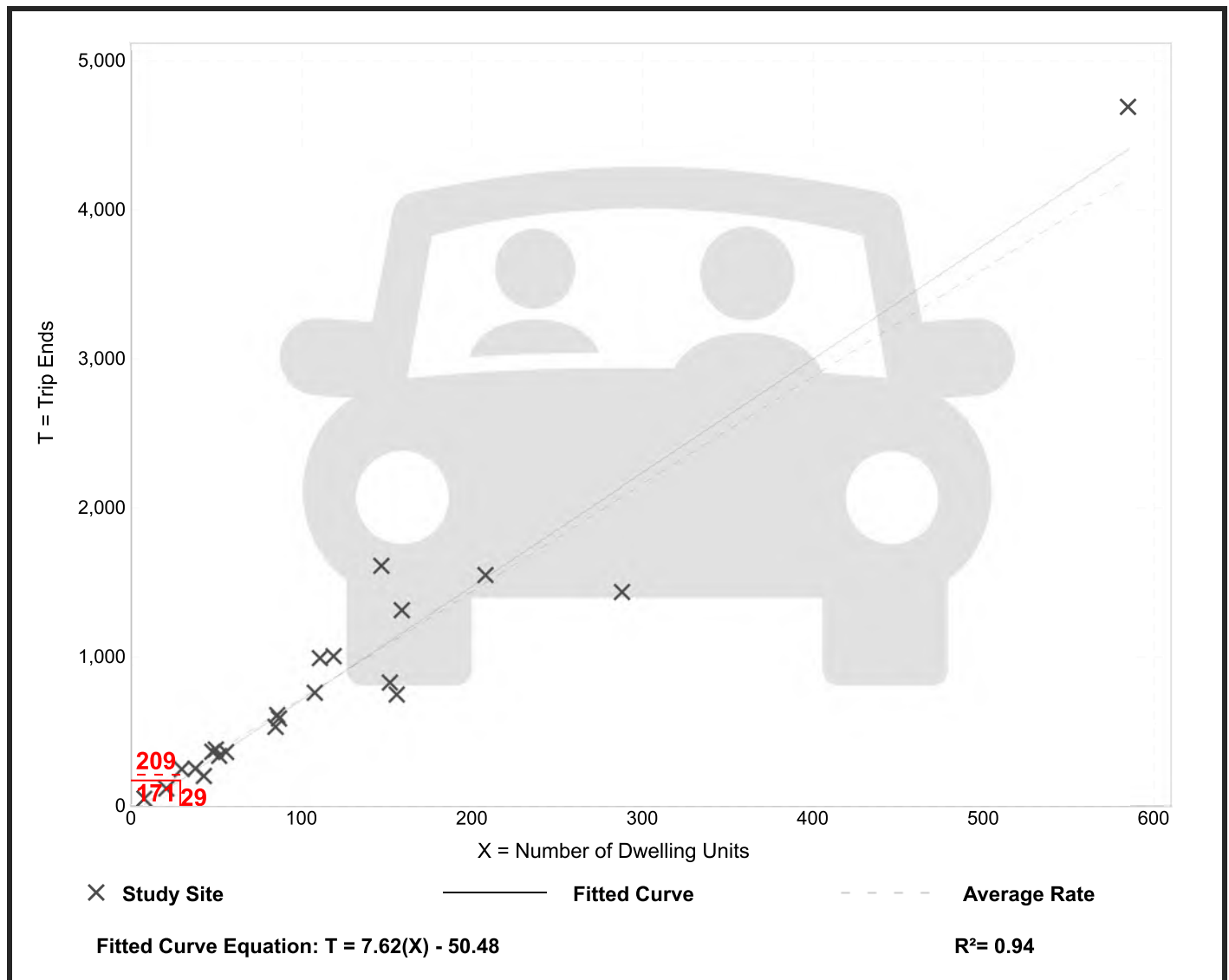
Vehicle Trip Ends vs: Dwelling Units  
On a: Weekday

Setting/Location: General Urban/Suburban  
Number of Studies: 22  
Avg. Num. of Dwelling Units: 120  
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 7.20         | 4.70 - 10.97   | 1.61               |

## Data Plot and Equation



# Single-Family Attached Housing (215)

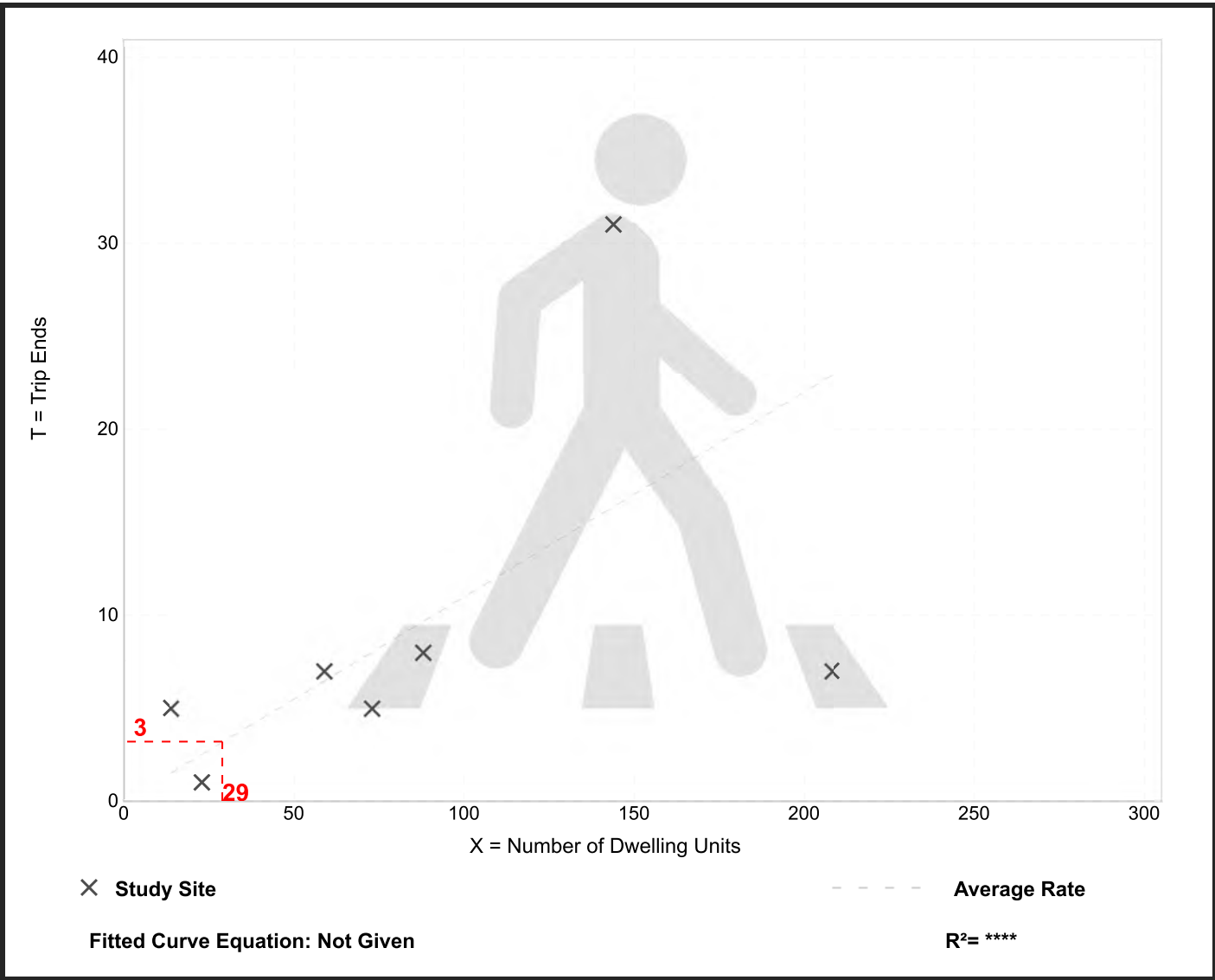
Walk Trip Ends vs: Dwelling Units  
On a: Weekday,  
Peak Hour of Adjacent Street Traffic,  
One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban  
Number of Studies: 7  
Avg. Num. of Dwelling Units: 87  
Directional Distribution: 21% entering, 79% exiting

## Walk Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.11         | 0.03 - 0.36    | 0.09               |

## Data Plot and Equation



# Single-Family Attached Housing (215)

Walk Trip Ends vs: Dwelling Units

On a: Weekday,  
Peak Hour of Adjacent Street Traffic,  
One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 7

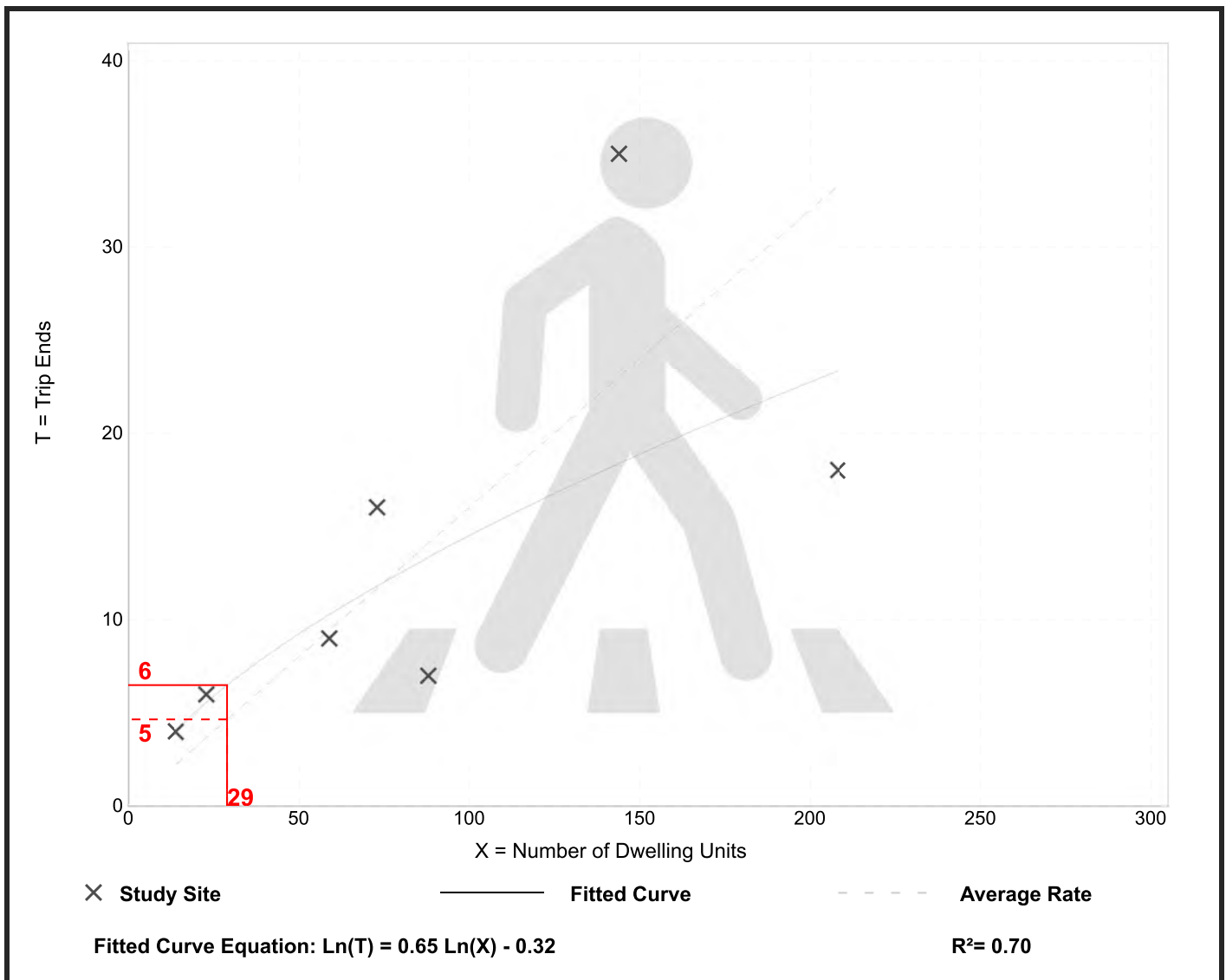
Avg. Num. of Dwelling Units: 87

Directional Distribution: 53% entering, 47% exiting

## Walk Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.16         | 0.08 - 0.29    | 0.08               |

## Data Plot and Equation





## Hourly Distribution of Entering and Exiting Vehicle Trips by Land Use

Source: ITE *Trip Generation Manual*, 11th Edition

|                  |                                |          |         |
|------------------|--------------------------------|----------|---------|
| Land Use Code    | 215                            |          |         |
| Land Use         | Single-Family Attached Housing |          |         |
| Setting          | General Urban/Suburban         |          |         |
| Time Period      | Weekday                        |          |         |
| # Data Sites     | 7                              |          |         |
|                  | % of 24-Hour Vehicle Trips     |          |         |
| Time             | Total                          | Entering | Exiting |
| 12:00 - 1:00 AM  | 0.5%                           | 0.7%     | 0.3%    |
| 1:00 - 2:00 AM   | 0.2%                           | 0.4%     | 0.1%    |
| 2:00 - 3:00 AM   | 0.3%                           | 0.2%     | 0.3%    |
| 3:00 - 4:00 AM   | 0.3%                           | 0.3%     | 0.4%    |
| 4:00 - 5:00 AM   | 0.7%                           | 0.4%     | 1.0%    |
| 5:00 - 6:00 AM   | 1.4%                           | 0.1%     | 2.6%    |
| 6:00 - 7:00 AM   | 3.5%                           | 1.1%     | 5.8%    |
| 7:00 - 8:00 AM   | 7.9%                           | 2.7%     | 13.2%   |
| 8:00 - 9:00 AM   | 6.6%                           | 3.8%     | 9.3%    |
| 9:00 - 10:00 AM  | 5.3%                           | 3.7%     | 6.9%    |
| 10:00 - 11:00 AM | 4.1%                           | 4.0%     | 4.3%    |
| 11:00 - 12:00 PM | 5.3%                           | 4.8%     | 5.7%    |
| 12:00 - 1:00 PM  | 5.2%                           | 5.4%     | 5.1%    |
| 1:00 - 2:00 PM   | 4.7%                           | 4.5%     | 4.8%    |
| 2:00 - 3:00 PM   | 5.8%                           | 5.5%     | 6.0%    |
| 3:00 - 4:00 PM   | 6.5%                           | 8.2%     | 4.8%    |
| 4:00 - 5:00 PM   | 7.5%                           | 9.8%     | 5.1%    |
| 5:00 - 6:00 PM   | 9.4%                           | 12.1%    | 6.8%    |
| 6:00 - 7:00 PM   | 8.2%                           | 9.8%     | 6.6%    |
| 7:00 - 8:00 PM   | 5.9%                           | 7.3%     | 4.5%    |
| 8:00 - 9:00 PM   | 4.7%                           | 5.9%     | 3.5%    |
| 9:00 - 10:00 PM  | 3.0%                           | 4.8%     | 1.3%    |
| 10:00 - 11:00 PM | 2.0%                           | 3.0%     | 1.1%    |
| 11:00 - 12:00 AM | 0.9%                           | 1.5%     | 0.4%    |

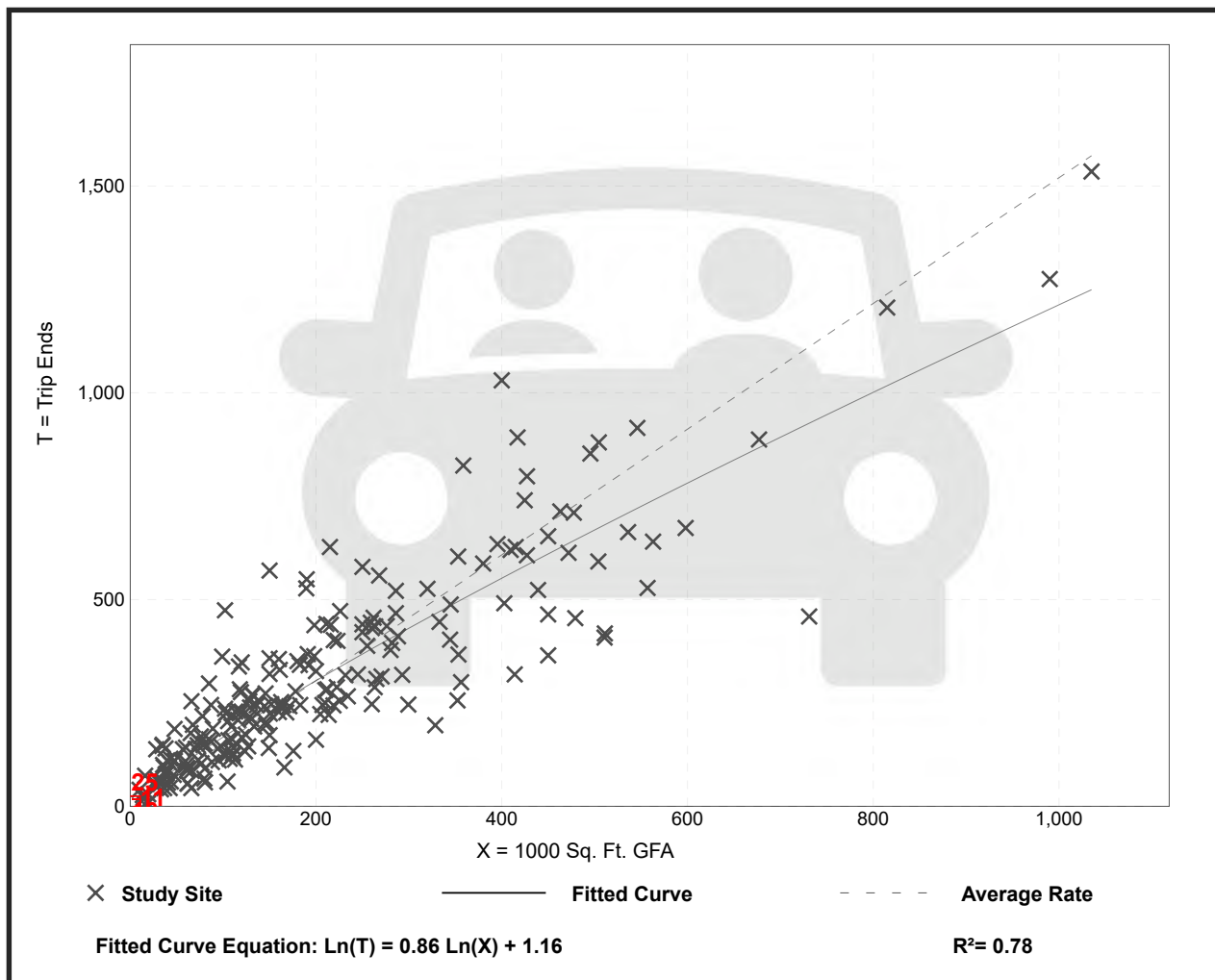
# General Office Building (710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA  
 On a: Weekday,  
 Peak Hour of Adjacent Street Traffic,  
 One Hour Between 7 and 9 a.m.  
 Setting/Location: General Urban/Suburban  
 Number of Studies: 221  
 Avg. 1000 Sq. Ft. GFA: 201  
 Directional Distribution: 88% entering, 12% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 1.52         | 0.32 - 4.93    | 0.58               |

## Data Plot and Equation



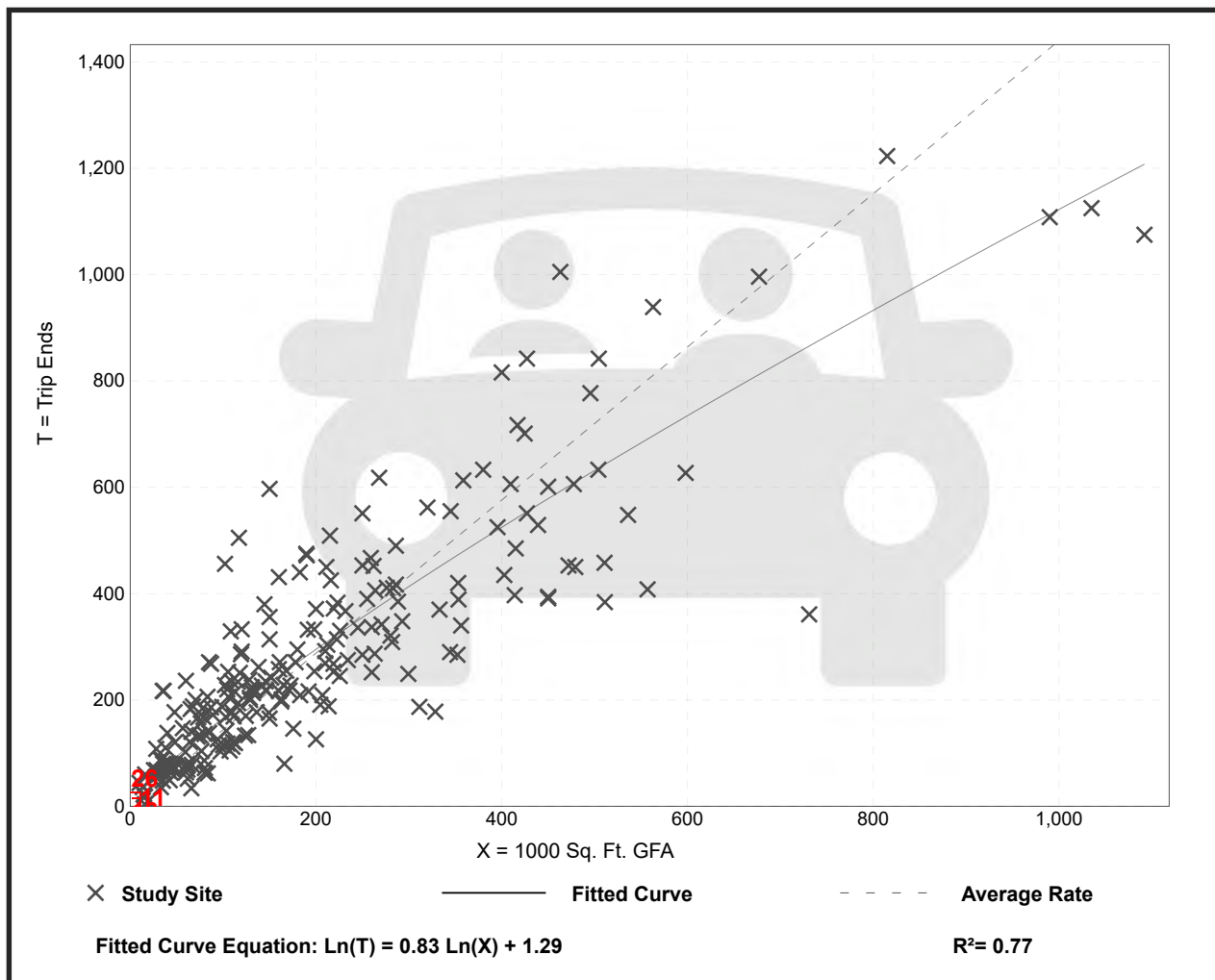
# General Office Building (710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA  
 On a: Weekday,  
 Peak Hour of Adjacent Street Traffic,  
 One Hour Between 4 and 6 p.m.  
 Setting/Location: General Urban/Suburban  
 Number of Studies: 232  
 Avg. 1000 Sq. Ft. GFA: 199  
 Directional Distribution: 17% entering, 83% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 1.44         | 0.26 - 6.20    | 0.60               |

## Data Plot and Equation



# General Office Building (710)

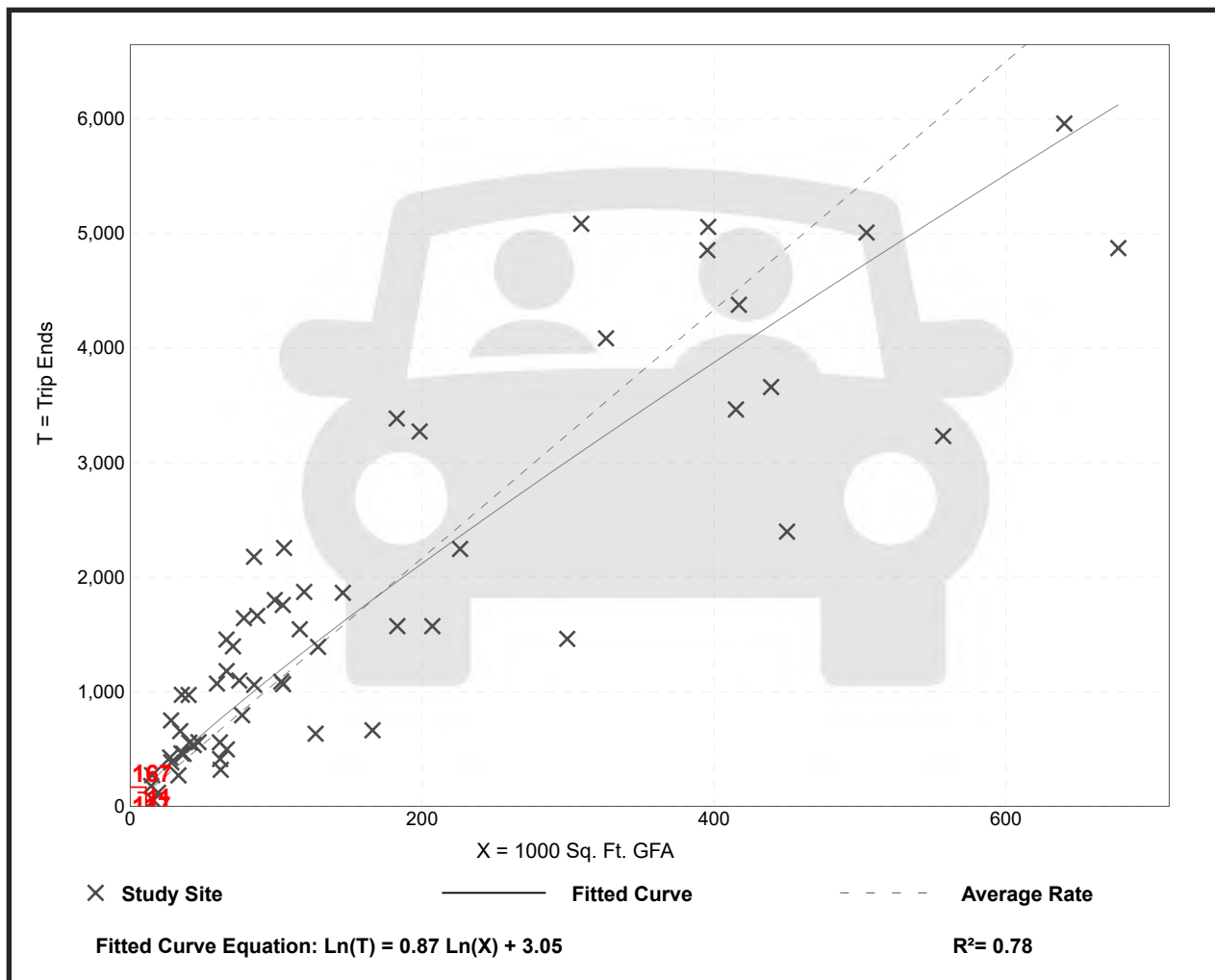
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA  
On a: Weekday

Setting/Location: General Urban/Suburban  
Number of Studies: 59  
Avg. 1000 Sq. Ft. GFA: 163  
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 10.84        | 3.27 - 27.56   | 4.76               |

## Data Plot and Equation





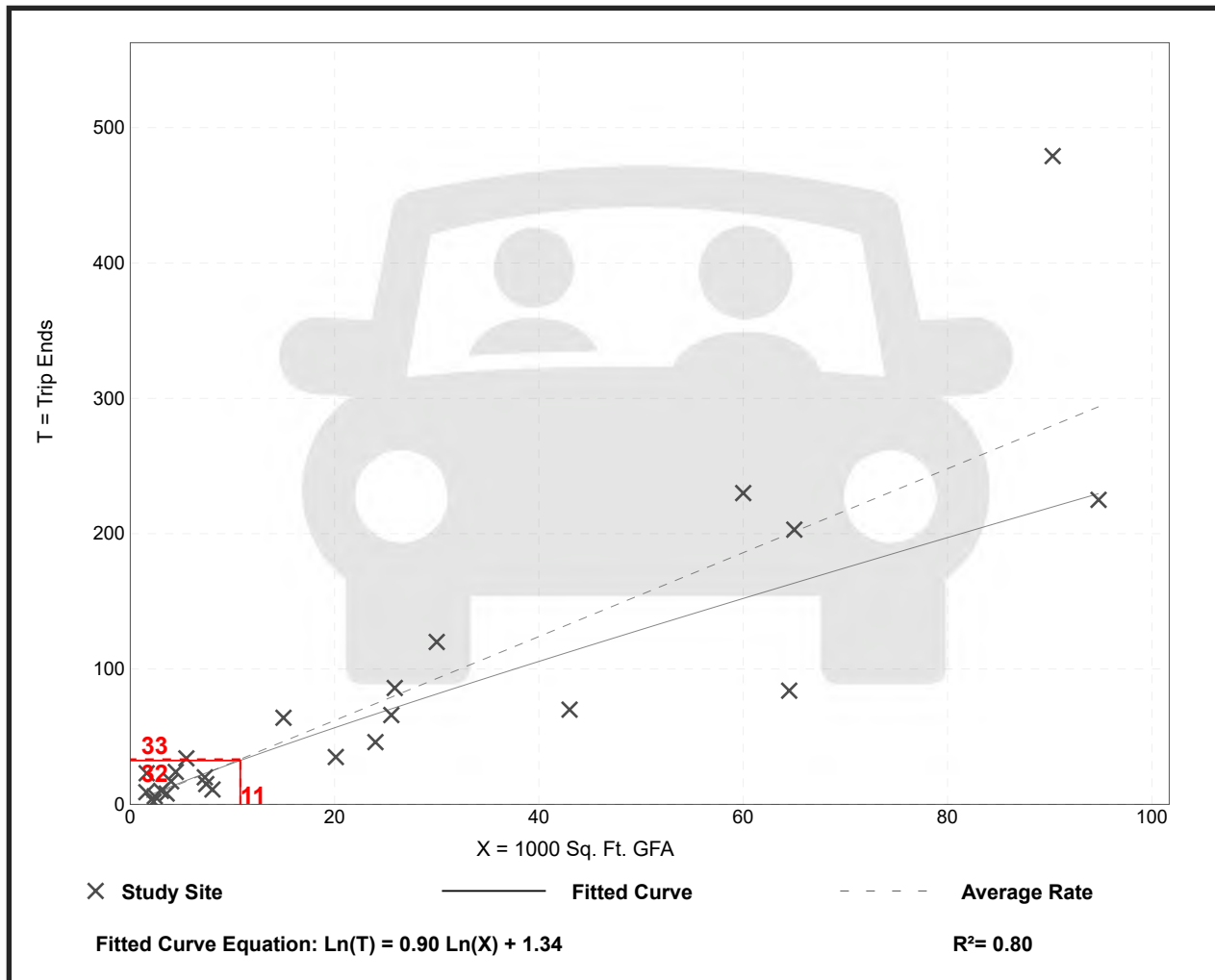
# Medical-Dental Office Building - Stand-Alone (720)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA  
 On a: Weekday,  
 Peak Hour of Adjacent Street Traffic,  
 One Hour Between 7 and 9 a.m.  
 Setting/Location: General Urban/Suburban  
 Number of Studies: 24  
 Avg. 1000 Sq. Ft. GFA: 25  
 Directional Distribution: 79% entering, 21% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 3.10         | 0.87 - 14.30   | 1.49               |

## Data Plot and Equation



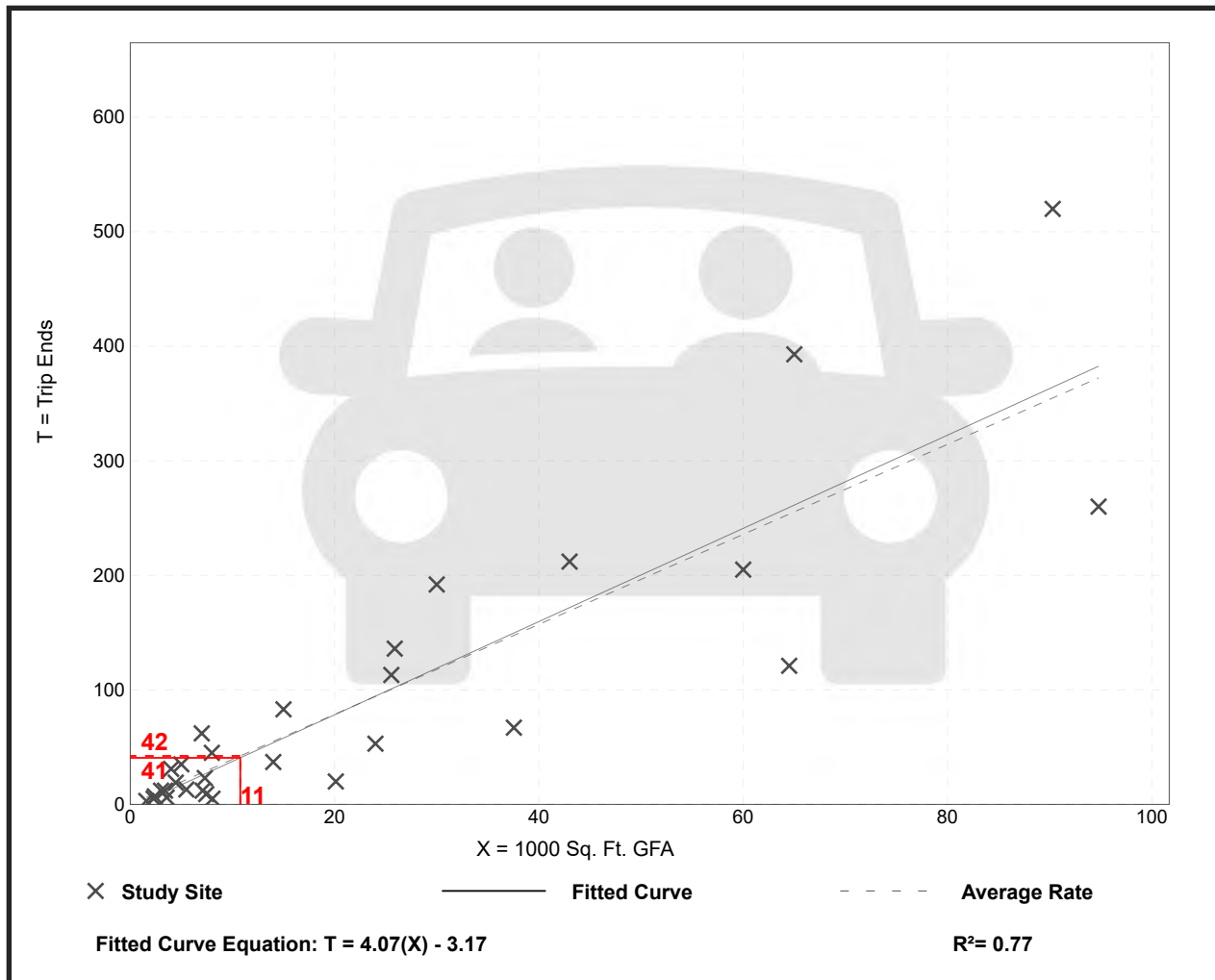
# Medical-Dental Office Building - Stand-Alone (720)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA  
 On a: Weekday,  
 Peak Hour of Adjacent Street Traffic,  
 One Hour Between 4 and 6 p.m.  
 Setting/Location: General Urban/Suburban  
 Number of Studies: 30  
 Avg. 1000 Sq. Ft. GFA: 23  
 Directional Distribution: 30% entering, 70% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 3.93         | 0.62 - 8.86    | 1.86               |

## Data Plot and Equation



# Medical-Dental Office Building - Stand-Alone (720)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA  
On a: Weekday

Setting/Location: General Urban/Suburban  
Number of Studies: 18  
Avg. 1000 Sq. Ft. GFA: 15  
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 36.00        | 14.52 - 100.75 | 13.38              |

## Data Plot and Equation

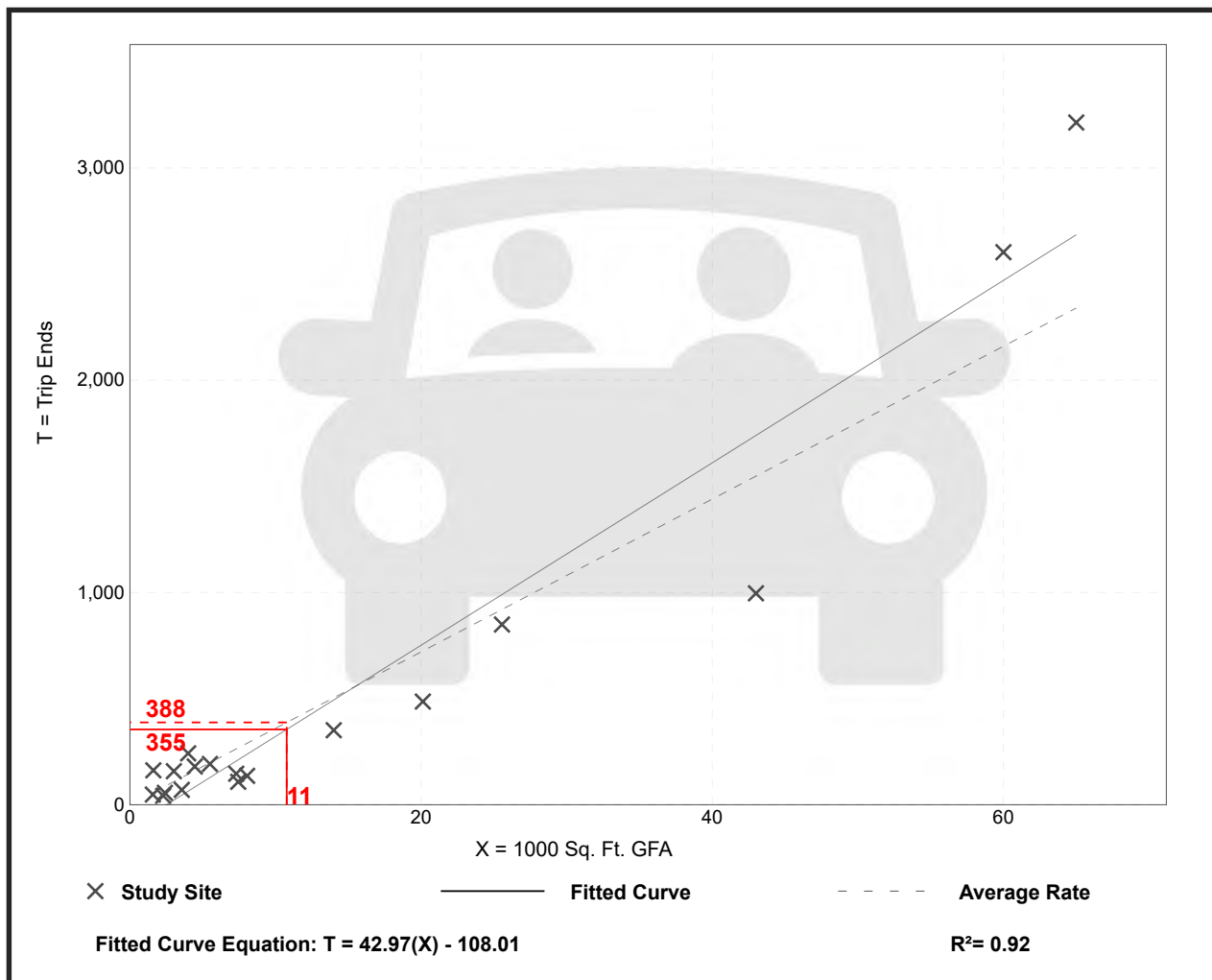
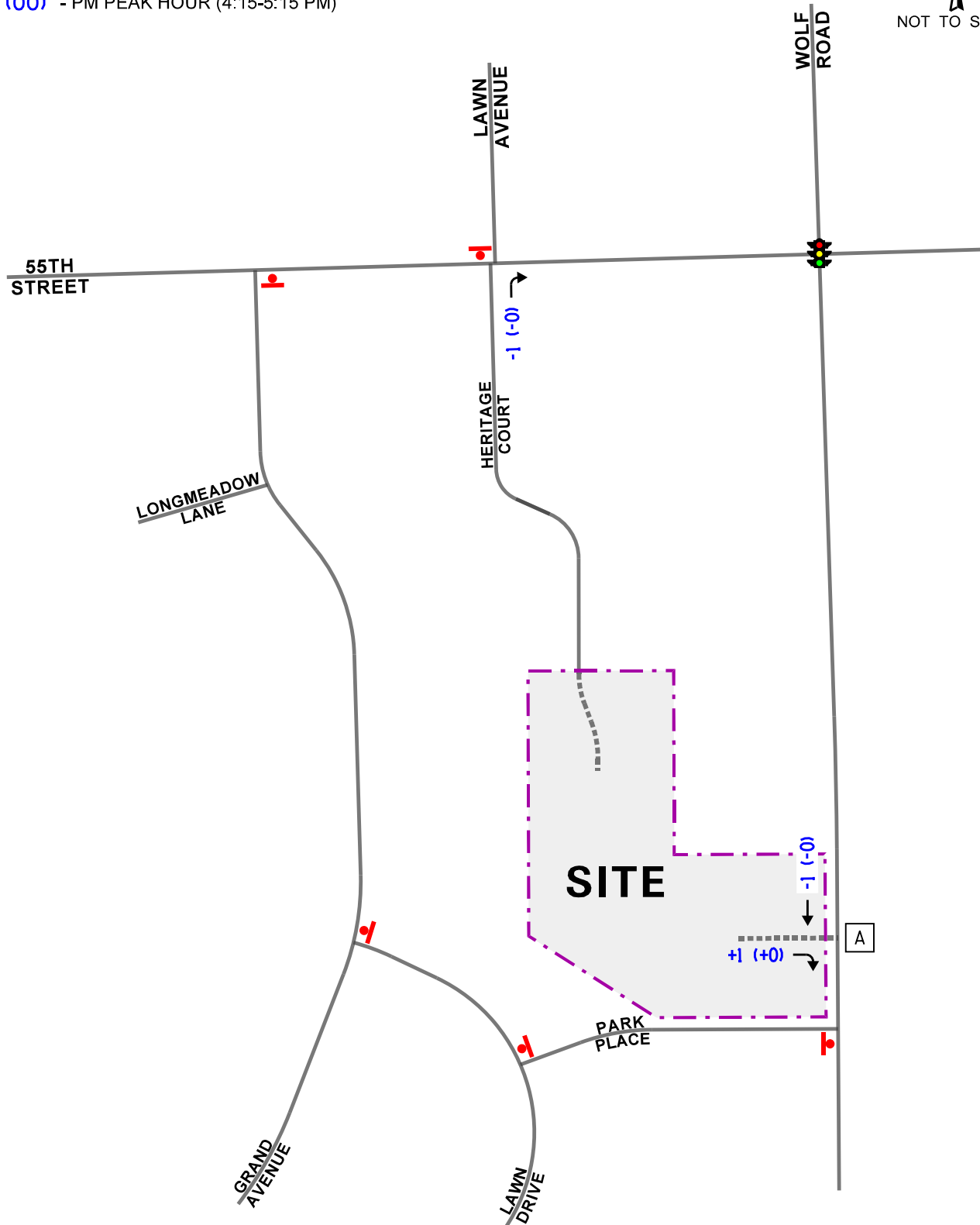
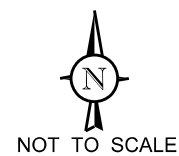


Figure A



00 - AM PEAK HOUR (7:30-8:30 AM)  
(00) - PM PEAK HOUR (4:15-5:15 PM)



Heritage Court Townhomes Reassignment

**KLOA**  
Kenig, Lindgren, O'Hara, Aboona, Inc.

Job No: 24-068      Figure: A

## CMAP Projections Letter



March 6, 2024

Ryan May  
Project Coordinator  
Kenig, Lindgren, O'Hara and Aboona, Inc.  
9575 West Higgins Road  
Suite 400  
Rosemont, IL 60018

***Subject: 55th Street @ Wolf Road \ Heritage Court \ Grand Avenue***  
IDOT

Dear Ms. May:

In response to a request made on your behalf and dated March 5, 2024, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

| ROAD SEGMENT            | Current ADT | Year 2050 ADT |
|-------------------------|-------------|---------------|
| Wolf Rd, at 55th St     | 9,150       | 10,200        |
| 55th St, at Wolf Rd     | 16,600      | 18,500        |
| Heritage Ct, at 55th St | 375         | 410           |
| Grand Ave, at 55th St   | 2,800       | 3,100         |

Traffic projections are developed using existing ADT data provided in the request letter and the results from the December 2023 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2050 socioeconomic projections and assumes the implementation of the ON TO 2050 Comprehensive Regional Plan for the Northeastern Illinois area. The provision of this data in support of your request does not constitute a CMAP endorsement of the proposed development or any subsequent developments.

If you have any questions, please call me at (312) 386-8806 or email me at [jrodriguez@cmap.illinois.gov](mailto:jrodriguez@cmap.illinois.gov)

Jose Rodriguez, PTP, AICP  
Senior Planner, Research & Analysis

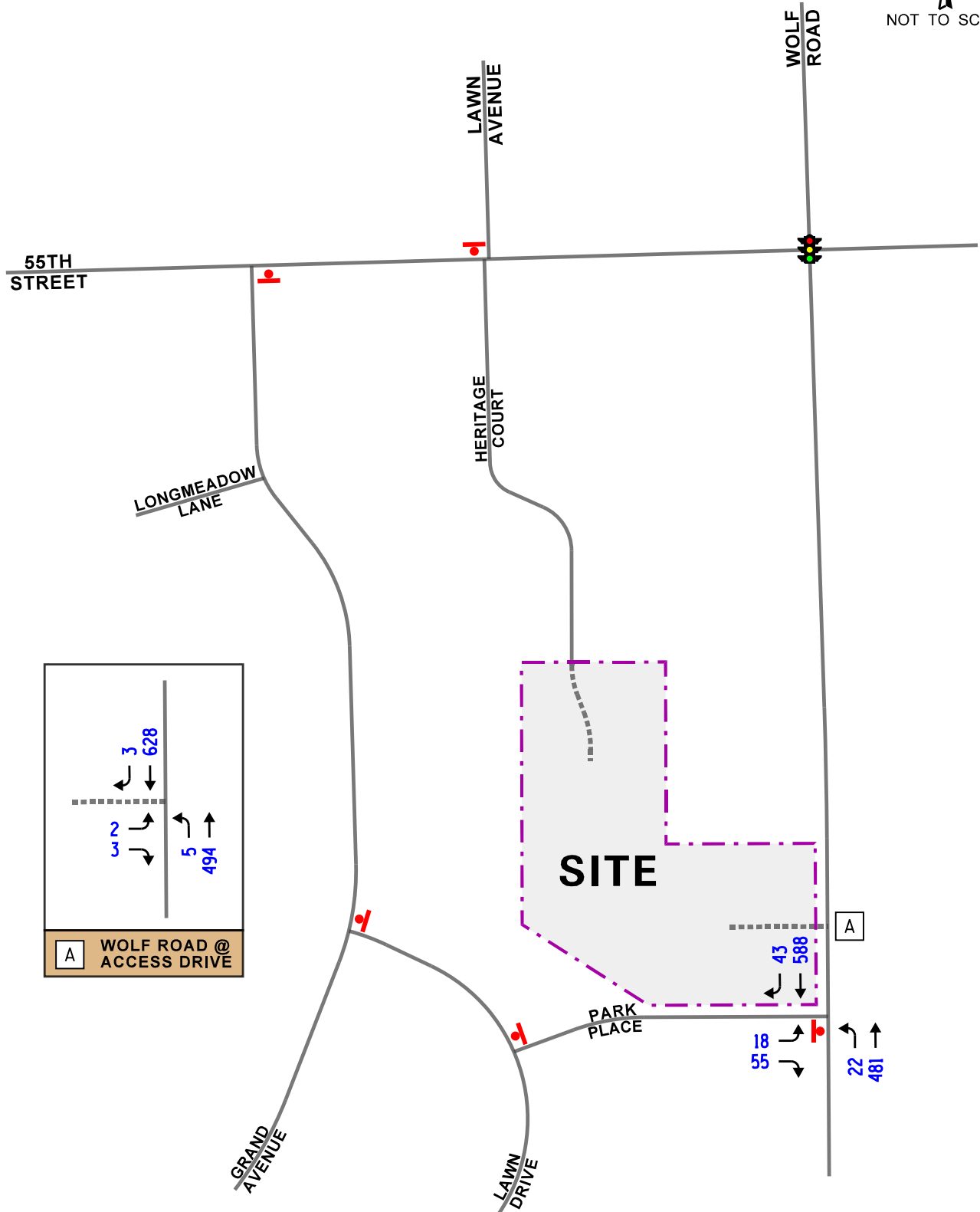
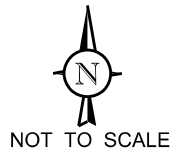
cc: Rios (IDOT)  
2024\_TrafficForecasts\WesternSprings\ck-32-24\ck-32-24.docx

Figure B



LEGEND

00 - AFTERNOON PEAK HOUR (3:00-4:00 PM)



Heritage Crossings  
Western Springs, Illinois

Year 2030 Total Traffic Volumes  
(Afternoon Peak Hour)

**KLOA**  
Kenig, Lindgren, O'Hara, Aboona, Inc.  
Job No: 24-068 Figure: B

## Level of Service Table

## LEVEL OF SERVICE CRITERIA

| Signalized Intersections                                          |                                                                                                                                                                                                                                                                                          |                                             |
|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| Level of Service                                                  | Interpretation                                                                                                                                                                                                                                                                           | Average Control Delay (seconds per vehicle) |
| A                                                                 | Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.                                                                                                                                                            | $\leq 10$                                   |
| B                                                                 | Good progression, with more vehicles stopping than for Level of Service A.                                                                                                                                                                                                               | $> 10 - 20$                                 |
| C                                                                 | Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping. | $> 20 - 35$                                 |
| D                                                                 | The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.                                                                                                             | $> 35 - 55$                                 |
| E                                                                 | Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.                                                                                                                                                   | $> 55 - 80$                                 |
| F                                                                 | The volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.                                                                                                                                                  | $> 80$                                      |
| Unsignalized Intersections                                        |                                                                                                                                                                                                                                                                                          |                                             |
| Level of Service                                                  |                                                                                                                                                                                                                                                                                          | Average Total Delay (sec/veh)               |
| A                                                                 |                                                                                                                                                                                                                                                                                          | 0 - 10                                      |
| B                                                                 |                                                                                                                                                                                                                                                                                          | $> 10 - 15$                                 |
| C                                                                 |                                                                                                                                                                                                                                                                                          | $> 15 - 25$                                 |
| D                                                                 |                                                                                                                                                                                                                                                                                          | $> 25 - 35$                                 |
| E                                                                 |                                                                                                                                                                                                                                                                                          | $> 35 - 50$                                 |
| F                                                                 |                                                                                                                                                                                                                                                                                          | $> 50$                                      |
| Source: <i>Highway Capacity Manual</i> , 6 <sup>th</sup> Edition. |                                                                                                                                                                                                                                                                                          |                                             |

Capacity Analysis Summary Sheets  
Weekday Morning Peak Hour – Existing Conditions



HCM 7th TWSC  
3: Grand Avenue & 55th Street

04/17/2024

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑   |      |      | ↑↑   | ↑↑   |      |
| Traffic Vol, veh/h       | 643  | 1    | 14   | 772  | 6    | 23   |
| Future Vol, veh/h        | 643  | 1    | 14   | 772  | 6    | 23   |
| Conflicting Peds, #/hr   | 0    | 1    | 1    | 0    | 1    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 91   | 91   | 91   | 91   | 91   | 91   |
| Heavy Vehicles, %        | 3    | 0    | 7    | 4    | 0    | 0    |
| Mvmt Flow                | 707  | 1    | 15   | 848  | 7    | 25   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |      |
|----------------------|--------|--------|--------|---|------|
| Conflicting Flow All | 0      | 0      | 709    | 0 | 1164 |
| Stage 1              | -      | -      | -      | - | 708  |
| Stage 2              | -      | -      | -      | - | 456  |
| Critical Hdwy        | -      | -      | 4.24   | - | 6.8  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.8  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.8  |
| Follow-up Hdwy       | -      | -      | 2.27   | - | 3.5  |
| Pot Cap-1 Maneuver   | -      | -      | 854    | - | 191  |
| Stage 1              | -      | -      | -      | - | 455  |
| Stage 2              | -      | -      | -      | - | 611  |
| Platoon blocked, %   | -      | -      | -      | - | -    |
| Mov Cap-1 Maneuver   | -      | -      | 853    | - | 186  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 186  |
| Stage 1              | -      | -      | -      | - | 454  |
| Stage 2              | -      | -      | -      | - | 596  |

| Approach               | EB | WB   | NB   |
|------------------------|----|------|------|
| HCM Control Delay, s/v | 0  | 0.37 | 14.1 |
| HCM LOS                |    |      | B    |

| Minor Lane/Major Mvmt     | NBLn1 | EBT | EBR | WBL   | WBT |
|---------------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)          | 427   | -   | -   | 64    | -   |
| HCM Lane V/C Ratio        | 0.075 | -   | -   | 0.018 | -   |
| HCM Control Delay (s/veh) | 14.1  | -   | -   | 9.3   | 0.2 |
| HCM Lane LOS              | B     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh)     | 0.2   | -   | -   | 0.1   | -   |

HCM 7th TWSC  
4: Grand Avenue & Longmeadow Lane

04/17/2024

| Intersection             |                                                                                   |      |      |                                                                                   |                                                                                   |      |
|--------------------------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 2.7                                                                               |      |      |                                                                                   |                                                                                   |      |
| Movement                 | EBL                                                                               | EBR  | NBL  | NBT                                                                               | SBT                                                                               | SBR  |
| Lane Configurations      |  |      |      |  |  |      |
| Traffic Vol, veh/h       | 5                                                                                 | 8    | 8    | 24                                                                                | 10                                                                                | 7    |
| Future Vol, veh/h        | 5                                                                                 | 8    | 8    | 24                                                                                | 10                                                                                | 7    |
| Conflicting Peds, #/hr   | 1                                                                                 | 0    | 2    | 0                                                                                 | 0                                                                                 | 2    |
| Sign Control             | Stop                                                                              | Stop | Free | Free                                                                              | Free                                                                              | Free |
| RT Channelized           | -                                                                                 | None | -    | None                                                                              | -                                                                                 | None |
| Storage Length           | 0                                                                                 | -    | -    | -                                                                                 | -                                                                                 | -    |
| Veh in Median Storage, # | 0                                                                                 | -    | -    | 0                                                                                 | 0                                                                                 | -    |
| Grade, %                 | 0                                                                                 | -    | -    | 0                                                                                 | 0                                                                                 | -    |
| Peak Hour Factor         | 92                                                                                | 92   | 92   | 92                                                                                | 92                                                                                | 92   |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 0    | 0                                                                                 | 0                                                                                 | 0    |
| Mvmt Flow                | 5                                                                                 | 9    | 9    | 26                                                                                | 11                                                                                | 8    |

| Major/Minor          | Minor2 | Major1 |      | Major2 |   |   |
|----------------------|--------|--------|------|--------|---|---|
| Conflicting Flow All | 61     | 17     | 20   | 0      | - | 0 |
| Stage 1              | 17     | -      | -    | -      | - | - |
| Stage 2              | 44     | -      | -    | -      | - | - |
| Critical Hdwy        | 6.4    | 6.2    | 4.1  | -      | - | - |
| Critical Hdwy Stg 1  | 5.4    | -      | -    | -      | - | - |
| Critical Hdwy Stg 2  | 5.4    | -      | -    | -      | - | - |
| Follow-up Hdwy       | 3.5    | 3.3    | 2.2  | -      | - | - |
| Pot Cap-1 Maneuver   | 950    | 1068   | 1609 | -      | - | - |
| Stage 1              | 1011   | -      | -    | -      | - | - |
| Stage 2              | 983    | -      | -    | -      | - | - |
| Platoon blocked, %   |        |        |      | -      | - | - |
| Mov Cap-1 Maneuver   | 941    | 1066   | 1606 | -      | - | - |
| Mov Cap-2 Maneuver   | 941    | -      | -    | -      | - | - |
| Stage 1              | 1004   | -      | -    | -      | - | - |
| Stage 2              | 981    | -      | -    | -      | - | - |

| Approach               | EB  | NB   | SB |
|------------------------|-----|------|----|
| HCM Control Delay, s/v | 8.6 | 1.81 | 0  |
| HCM LOS                | A   |      |    |

| Minor Lane/Major Mvmt     | NBL   | NBT | EBLn1 | SBT | SBR |
|---------------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)          | 450   | -   | 1014  | -   | -   |
| HCM Lane V/C Ratio        | 0.005 | -   | 0.014 | -   | -   |
| HCM Control Delay (s/veh) | 7.3   | 0   | 8.6   | -   | -   |
| HCM Lane LOS              | A     | A   | A     | -   | -   |
| HCM 95th %tile Q(veh)     | 0     | -   | 0     | -   | -   |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↔    |      |      | ↔    |      |      | ↔    |      |      | ↔    |      |
| Traffic Vol, veh/h       | 17   | 649  | 0    | 1    | 773  | 5    | 1    | 0    | 2    | 4    | 0    | 12   |
| Future Vol, veh/h        | 17   | 649  | 0    | 1    | 773  | 5    | 1    | 0    | 2    | 4    | 0    | 12   |
| Conflicting Peds, #/hr   | 1    | 0    | 0    | 0    | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 96   | 96   | 96   | 96   | 96   | 96   | 96   | 96   | 96   | 96   | 96   | 96   |
| Heavy Vehicles, %        | 0    | 2    | 0    | 0    | 3    | 20   | 0    | 0    | 0    | 0    | 0    | 0    |
| Mvmt Flow                | 18   | 676  | 0    | 1    | 805  | 5    | 1    | 0    | 2    | 4    | 0    | 13   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |      |     | Minor2 |      |      |
|----------------------|--------|---|---|--------|---|---|--------|------|-----|--------|------|------|
| Conflicting Flow All | 811    | 0 | 0 | 676    | 0 | 0 | 1116   | 1525 | 338 | 1184   | 1522 | 406  |
| Stage 1              | -      | - | - | -      | - | - | 711    | 711  | -   | 811    | 811  | -    |
| Stage 2              | -      | - | - | -      | - | - | 405    | 814  | -   | 373    | 711  | -    |
| Critical Hdwy        | 4.1    | - | - | 4.1    | - | - | 7.5    | 6.5  | 6.9 | 7.5    | 6.5  | 6.9  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.5    | 5.5  | -   | 6.5    | 5.5  | -    |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.5    | 5.5  | -   | 6.5    | 5.5  | -    |
| Follow-up Hdwy       | 2.2    | - | - | 2.2    | - | - | 3.5    | 4    | 3.3 | 3.5    | 4    | 3.3  |
| Pot Cap-1 Maneuver   | 1046   | - | - | 925    | - | - | *287   | 158  | 664 | 249    | 159  | *875 |
| Stage 1              | -      | - | - | -      | - | - | *394   | 439  | -   | 576    | 553  | -    |
| Stage 2              | -      | - | - | -      | - | - | *825   | 551  | -   | 625    | 439  | -    |
| Platoon blocked, %   | 0      | - | - | -      | - | - | 0      | 0    | -   | 0      | 0    | 0    |
| Mov Cap-1 Maneuver   | 1045   | - | - | 925    | - | - | *277   | 154  | 664 | 243    | 155  | *874 |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | *277   | 154  | -   | 243    | 155  | -    |
| Stage 1              | -      | - | - | -      | - | - | *386   | 430  | -   | 575    | 552  | -    |
| Stage 2              | -      | - | - | -      | - | - | *812   | 550  | -   | 610    | 430  | -    |

| Approach               | EB   | WB   | NB    | SB    |
|------------------------|------|------|-------|-------|
| HCM Control Delay, s/v | 0.38 | 0.02 | 13.01 | 12.02 |
| HCM LOS                |      |      | B     | B     |

| Minor Lane/Major Mvmt     | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|---------------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)          | 453   | 92    | -   | -   | 5     | -   | -   | 530   |
| HCM Lane V/C Ratio        | 0.007 | 0.017 | -   | -   | 0.001 | -   | -   | 0.031 |
| HCM Control Delay (s/veh) | 13    | 8.5   | 0.2 | -   | 8.9   | 0   | -   | 12    |
| HCM Lane LOS              | B     | A     | A   | -   | A     | A   | -   | B     |
| HCM 95th %tile Q(veh)     | 0     | 0.1   | -   | -   | 0     | -   | -   | 0.1   |

| Notes                      |                        |                            |                                |
|----------------------------|------------------------|----------------------------|--------------------------------|
| ~: Volume exceeds capacity | \$: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

HCM 7th TWSC  
10: Wolf Road & Park Place

04/17/2024

| Intersection             |                                                                                   |      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 1.2                                                                               |      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Movement                 | EBL                                                                               | EBR  | NBL                                                                               | NBT                                                                               | SBT                                                                               | SBR                                                                               |
| Lane Configurations      |  |      |  |  |  |  |
| Traffic Vol, veh/h       | 23                                                                                | 48   | 29                                                                                | 698                                                                               | 311                                                                               | 33                                                                                |
| Future Vol, veh/h        | 23                                                                                | 48   | 29                                                                                | 698                                                                               | 311                                                                               | 33                                                                                |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                              |
| RT Channelized           | -                                                                                 | None | -                                                                                 | None                                                                              | -                                                                                 | None                                                                              |
| Storage Length           | 0                                                                                 | -    | 145                                                                               | -                                                                                 | -                                                                                 | 75                                                                                |
| Veh in Median Storage, # | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | 0                                                                                 | -                                                                                 |
| Grade, %                 | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | 0                                                                                 | -                                                                                 |
| Peak Hour Factor         | 89                                                                                | 89   | 89                                                                                | 89                                                                                | 89                                                                                | 89                                                                                |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 3                                                                                 | 4                                                                                 | 1                                                                                 | 3                                                                                 |
| Mvmt Flow                | 26                                                                                | 54   | 33                                                                                | 784                                                                               | 349                                                                               | 37                                                                                |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1199   | 349    | 387    | 0 | - | 0 |
| Stage 1              | 349    | -      | -      | - | - | - |
| Stage 2              | 849    | -      | -      | - | - | - |
| Critical Hdwy        | 6.4    | 6.2    | 4.13   | - | - | - |
| Critical Hdwy Stg 1  | 5.4    | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.4    | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.5    | 3.3    | 2.227  | - | - | - |
| Pot Cap-1 Maneuver   | 207    | 698    | 1167   | - | - | - |
| Stage 1              | 718    | -      | -      | - | - | - |
| Stage 2              | 423    | -      | -      | - | - | - |
| Platoon blocked, %   |        |        |        | - | - | - |
| Mov Cap-1 Maneuver   | 201    | 698    | 1167   | - | - | - |
| Mov Cap-2 Maneuver   | 201    | -      | -      | - | - | - |
| Stage 1              | 698    | -      | -      | - | - | - |
| Stage 2              | 423    | -      | -      | - | - | - |

| Approach                    | EB | NB   | SB |
|-----------------------------|----|------|----|
| HCM Control Delay, s/v16.68 |    | 0.33 | 0  |
| HCM LOS                     | C  |      |    |

| Minor Lane/Major Mvmt     | NBL   | NBT | EBLn1 | SBT | SBR |
|---------------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)          | 1167  | -   | 388   | -   | -   |
| HCM Lane V/C Ratio        | 0.028 | -   | 0.206 | -   | -   |
| HCM Control Delay (s/veh) | 8.2   | -   | 16.7  | -   | -   |
| HCM Lane LOS              | A     | -   | C     | -   | -   |
| HCM 95th %tile Q(veh)     | 0.1   | -   | 0.8   | -   | -   |



HCM 7th TWSC  
12: Lawn Drive & Park Place

04/17/2024

| Intersection              |                                                                                   |          |                                                                                   |        |      |                                                                                   |
|---------------------------|-----------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------|--------|------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh          | 6.5                                                                               |          |                                                                                   |        |      |                                                                                   |
| Movement                  | WBL                                                                               | WBR      | NBT                                                                               | NBR    | SBL  | SBT                                                                               |
| Lane Configurations       |  |          |  |        |      |  |
| Traffic Vol, veh/h        | 23                                                                                | 44       | 4                                                                                 | 27     | 48   | 0                                                                                 |
| Future Vol, veh/h         | 23                                                                                | 44       | 4                                                                                 | 27     | 48   | 0                                                                                 |
| Conflicting Peds, #/hr    | 0                                                                                 | 0        | 0                                                                                 | 1      | 1    | 0                                                                                 |
| Sign Control              | Stop                                                                              | Stop     | Free                                                                              | Free   | Free | Free                                                                              |
| RT Channelized            | -                                                                                 | None     | -                                                                                 | None   | -    | None                                                                              |
| Storage Length            | 0                                                                                 | -        | -                                                                                 | -      | -    | -                                                                                 |
| Veh in Median Storage, #  | 0                                                                                 | -        | 0                                                                                 | -      | -    | 0                                                                                 |
| Grade, %                  | 0                                                                                 | -        | 0                                                                                 | -      | -    | 0                                                                                 |
| Peak Hour Factor          | 92                                                                                | 92       | 92                                                                                | 92     | 92   | 92                                                                                |
| Heavy Vehicles, %         | 0                                                                                 | 0        | 0                                                                                 | 0      | 0    | 0                                                                                 |
| Mvmt Flow                 | 25                                                                                | 48       | 4                                                                                 | 29     | 52   | 0                                                                                 |
| Major/Minor               | Minor1                                                                            | Major1   |                                                                                   | Major2 |      |                                                                                   |
| Conflicting Flow All      | 124                                                                               | 20       | 0                                                                                 | 0      | 35   | 0                                                                                 |
| Stage 1                   | 20                                                                                | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 2                   | 104                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Critical Hdwy             | 6.4                                                                               | 6.2      | -                                                                                 | -      | 4.1  | -                                                                                 |
| Critical Hdwy Stg 1       | 5.4                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Critical Hdwy Stg 2       | 5.4                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Follow-up Hdwy            | 3.5                                                                               | 3.3      | -                                                                                 | -      | 2.2  | -                                                                                 |
| Pot Cap-1 Maneuver        | 875                                                                               | 1064     | -                                                                                 | -      | 1590 | -                                                                                 |
| Stage 1                   | 1008                                                                              | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 2                   | 925                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Platoon blocked, %        |                                                                                   |          | -                                                                                 | -      |      | -                                                                                 |
| Mov Cap-1 Maneuver        | 846                                                                               | 1063     | -                                                                                 | -      | 1588 | -                                                                                 |
| Mov Cap-2 Maneuver        | 846                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 1                   | 1007                                                                              | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 2                   | 895                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Approach                  | WB                                                                                | NB       |                                                                                   | SB     |      |                                                                                   |
| HCM Control Delay, s/v    | 8.98                                                                              | 0        |                                                                                   | 7.34   |      |                                                                                   |
| HCM LOS                   | A                                                                                 |          |                                                                                   |        |      |                                                                                   |
| Minor Lane/Major Mvmt     | NBT                                                                               | NBRWBLn1 | SBL                                                                               | SBT    |      |                                                                                   |
| Capacity (veh/h)          | -                                                                                 | -        | 977                                                                               | 1588   | -    |                                                                                   |
| HCM Lane V/C Ratio        | -                                                                                 | -        | 0.075                                                                             | 0.033  | -    |                                                                                   |
| HCM Control Delay (s/veh) | -                                                                                 | -        | 9                                                                                 | 7.3    | 0    |                                                                                   |
| HCM Lane LOS              | -                                                                                 | -        | A                                                                                 | A      | A    |                                                                                   |
| HCM 95th %tile Q(veh)     | -                                                                                 | -        | 0.2                                                                               | 0.1    | -    |                                                                                   |

HCM 7th TWSC  
15: Grand Avenue & Lawn Drive

04/17/2024

| Intersection              |                                                                                   |          |                                                                                   |        |      |                                                                                   |
|---------------------------|-----------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------|--------|------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh          | 4.7                                                                               |          |                                                                                   |        |      |                                                                                   |
| Movement                  | WBL                                                                               | WBR      | NBT                                                                               | NBR    | SBL  | SBT                                                                               |
| Lane Configurations       |  |          |  |        |      |  |
| Traffic Vol, veh/h        | 29                                                                                | 17       | 10                                                                                | 32     | 16   | 8                                                                                 |
| Future Vol, veh/h         | 29                                                                                | 17       | 10                                                                                | 32     | 16   | 8                                                                                 |
| Conflicting Peds, #/hr    | 0                                                                                 | 0        | 0                                                                                 | 0      | 0    | 0                                                                                 |
| Sign Control              | Stop                                                                              | Stop     | Free                                                                              | Free   | Free | Free                                                                              |
| RT Channelized            | -                                                                                 | None     | -                                                                                 | None   | -    | None                                                                              |
| Storage Length            | 0                                                                                 | -        | -                                                                                 | -      | -    | -                                                                                 |
| Veh in Median Storage, #  | 0                                                                                 | -        | 0                                                                                 | -      | -    | 0                                                                                 |
| Grade, %                  | 0                                                                                 | -        | 0                                                                                 | -      | -    | 0                                                                                 |
| Peak Hour Factor          | 92                                                                                | 92       | 92                                                                                | 92     | 92   | 92                                                                                |
| Heavy Vehicles, %         | 0                                                                                 | 0        | 0                                                                                 | 0      | 0    | 0                                                                                 |
| Mvmt Flow                 | 32                                                                                | 18       | 11                                                                                | 35     | 17   | 9                                                                                 |
| Major/Minor               | Minor1                                                                            | Major1   |                                                                                   | Major2 |      |                                                                                   |
| Conflicting Flow All      | 72                                                                                | 28       | 0                                                                                 | 0      | 46   | 0                                                                                 |
| Stage 1                   | 28                                                                                | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 2                   | 43                                                                                | -        | -                                                                                 | -      | -    | -                                                                                 |
| Critical Hdwy             | 6.4                                                                               | 6.2      | -                                                                                 | -      | 4.1  | -                                                                                 |
| Critical Hdwy Stg 1       | 5.4                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Critical Hdwy Stg 2       | 5.4                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Follow-up Hdwy            | 3.5                                                                               | 3.3      | -                                                                                 | -      | 2.2  | -                                                                                 |
| Pot Cap-1 Maneuver        | 937                                                                               | 1053     | -                                                                                 | -      | 1575 | -                                                                                 |
| Stage 1                   | 999                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 2                   | 984                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Platoon blocked, %        |                                                                                   |          | -                                                                                 | -      |      | -                                                                                 |
| Mov Cap-1 Maneuver        | 927                                                                               | 1053     | -                                                                                 | -      | 1575 | -                                                                                 |
| Mov Cap-2 Maneuver        | 927                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 1                   | 999                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 2                   | 973                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Approach                  | WB                                                                                | NB       |                                                                                   | SB     |      |                                                                                   |
| HCM Control Delay, s/v    | 8.91                                                                              | 0        |                                                                                   | 4.87   |      |                                                                                   |
| HCM LOS                   | A                                                                                 |          |                                                                                   |        |      |                                                                                   |
| Minor Lane/Major Mvmt     | NBT                                                                               | NBRWBLn1 |                                                                                   | SBL    | SBT  |                                                                                   |
| Capacity (veh/h)          | -                                                                                 | - 970    |                                                                                   | 1200   | -    |                                                                                   |
| HCM Lane V/C Ratio        | -                                                                                 | - 0.052  |                                                                                   | 0.011  | -    |                                                                                   |
| HCM Control Delay (s/veh) | -                                                                                 | - 8.9    |                                                                                   | 7.3    | 0    |                                                                                   |
| HCM Lane LOS              | -                                                                                 | - A      |                                                                                   | A      | A    |                                                                                   |
| HCM 95th %tile Q(veh)     | -                                                                                 | - 0.2    |                                                                                   | 0      | -    |                                                                                   |

Capacity Analysis Summary Sheets  
Weekday Evening Peak Hour – Existing Conditions

HCM 7th TWSC  
3: Grand Avenue & 55th Street

04/17/2024

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.7  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑   |      |      | ↑↑   | ↑↑   |      |
| Traffic Vol, veh/h       | 1016 | 6    | 18   | 884  | 10   | 22   |
| Future Vol, veh/h        | 1016 | 6    | 18   | 884  | 10   | 22   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 93   | 93   | 93   | 93   | 93   | 93   |
| Heavy Vehicles, %        | 2    | 0    | 0    | 2    | 0    | 0    |
| Mvmt Flow                | 1092 | 6    | 19   | 951  | 11   | 24   |

| Major/Minor          | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0      | 0      | 1099   |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 4.1    | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 2.2    | -      |
| Pot Cap-1 Maneuver   | -      | 643    | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | -      | 643    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach               | EB | WB   | NB   |
|------------------------|----|------|------|
| HCM Control Delay, s/v | 0  | 0.63 | 25.5 |
| HCM LOS                |    |      | D    |

| Minor Lane/Major Mvmt     | NBLn1 | EBT | EBR | WBL  | WBT |
|---------------------------|-------|-----|-----|------|-----|
| Capacity (veh/h)          | 210   | -   | -   | 72   | -   |
| HCM Lane V/C Ratio        | 0.164 | -   | -   | 0.03 | -   |
| HCM Control Delay (s/veh) | 25.5  | -   | -   | 10.8 | 0.4 |
| HCM Lane LOS              | D     | -   | -   | B    | A   |
| HCM 95th %tile Q(veh)     | 0.6   | -   | -   | 0.1  | -   |



HCM 7th TWSC  
4: Grand Avenue & Longmeadow Lane

04/17/2024

| Intersection             |                                                                                   |      |      |                                                                                   |                                                                                   |      |
|--------------------------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 1.8                                                                               |      |      |                                                                                   |                                                                                   |      |
| Movement                 | EBL                                                                               | EBR  | NBL  | NBT                                                                               | SBT                                                                               | SBR  |
| Lane Configurations      |  |      |      |  |  |      |
| Traffic Vol, veh/h       | 3                                                                                 | 5    | 5    | 18                                                                                | 20                                                                                | 6    |
| Future Vol, veh/h        | 3                                                                                 | 5    | 5    | 18                                                                                | 20                                                                                | 6    |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 2    | 0                                                                                 | 0                                                                                 | 2    |
| Sign Control             | Stop                                                                              | Stop | Free | Free                                                                              | Free                                                                              | Free |
| RT Channelized           | -                                                                                 | None | -    | None                                                                              | -                                                                                 | None |
| Storage Length           | 0                                                                                 | -    | -    | -                                                                                 | -                                                                                 | -    |
| Veh in Median Storage, # | 0                                                                                 | -    | -    | 0                                                                                 | 0                                                                                 | -    |
| Grade, %                 | 0                                                                                 | -    | -    | 0                                                                                 | 0                                                                                 | -    |
| Peak Hour Factor         | 92                                                                                | 92   | 92   | 92                                                                                | 92                                                                                | 92   |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 0    | 0                                                                                 | 0                                                                                 | 0    |
| Mvmt Flow                | 3                                                                                 | 5    | 5    | 20                                                                                | 22                                                                                | 7    |

| Major/Minor          | Minor2 | Major1 |      | Major2 |   |   |
|----------------------|--------|--------|------|--------|---|---|
| Conflicting Flow All | 57     | 27     | 30   | 0      | - | 0 |
| Stage 1              | 27     | -      | -    | -      | - | - |
| Stage 2              | 30     | -      | -    | -      | - | - |
| Critical Hdwy        | 6.4    | 6.2    | 4.1  | -      | - | - |
| Critical Hdwy Stg 1  | 5.4    | -      | -    | -      | - | - |
| Critical Hdwy Stg 2  | 5.4    | -      | -    | -      | - | - |
| Follow-up Hdwy       | 3.5    | 3.3    | 2.2  | -      | - | - |
| Pot Cap-1 Maneuver   | 955    | 1054   | 1596 | -      | - | - |
| Stage 1              | 1001   | -      | -    | -      | - | - |
| Stage 2              | 997    | -      | -    | -      | - | - |
| Platoon blocked, %   |        |        |      | -      | - | - |
| Mov Cap-1 Maneuver   | 948    | 1052   | 1593 | -      | - | - |
| Mov Cap-2 Maneuver   | 948    | -      | -    | -      | - | - |
| Stage 1              | 995    | -      | -    | -      | - | - |
| Stage 2              | 995    | -      | -    | -      | - | - |

| Approach               | EB   | NB   | SB |
|------------------------|------|------|----|
| HCM Control Delay, s/v | 8.59 | 1.58 | 0  |
| HCM LOS                | A    |      |    |

| Minor Lane/Major Mvmt     | NBL   | NBT | EBLn1 | SBT | SBR |
|---------------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)          | 391   | -   | 1011  | -   | -   |
| HCM Lane V/C Ratio        | 0.003 | -   | 0.009 | -   | -   |
| HCM Control Delay (s/veh) | 7.3   | 0   | 8.6   | -   | -   |
| HCM Lane LOS              | A     | A   | A     | -   | -   |
| HCM 95th %tile Q(veh)     | 0     | -   | 0     | -   | -   |

## Intersection

Int Delay, s/veh 0.3

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      |      | ↔    |      |      | ↔    |      |      | ↔    |      |      | ↔    |      |
| Traffic Vol, veh/h       | 13   | 1024 | 1    | 1    | 891  | 7    | 1    | 0    | 1    | 1    | 0    | 10   |
| Future Vol, veh/h        | 13   | 1024 | 1    | 1    | 891  | 7    | 1    | 0    | 1    | 1    | 0    | 10   |
| Conflicting Peds, #/hr   | 0    | 0    | 1    | 1    | 0    | 0    | 1    | 0    | 0    | 0    | 0    | 1    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 0    | 2    | 0    | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Mvmt Flow                | 14   | 1078 | 1    | 1    | 938  | 7    | 1    | 0    | 1    | 1    | 0    | 11   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |      |     | Minor2 |      |      |
|----------------------|--------|---|---|--------|---|---|--------|------|-----|--------|------|------|
| Conflicting Flow All | 945    | 0 | 0 | 1080   | 0 | 0 | 1579   | 2054 | 540 | 1510   | 2051 | 474  |
| Stage 1              | -      | - | - | -      | - | - | 1107   | 1107 | -   | 944    | 944  | -    |
| Stage 2              | -      | - | - | -      | - | - | 472    | 947  | -   | 566    | 1107 | -    |
| Critical Hdwy        | 4.1    | - | - | 4.1    | - | - | 7.5    | 6.5  | 6.9 | 7.5    | 6.5  | 6.9  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.5    | 5.5  | -   | 6.5    | 5.5  | -    |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.5    | 5.5  | -   | 6.5    | 5.5  | -    |
| Follow-up Hdwy       | 2.2    | - | - | 2.2    | - | - | 3.5    | 4    | 3.3 | 3.5    | 4    | 3.3  |
| Pot Cap-1 Maneuver   | 959    | - | - | 653    | - | - | *120   | 65   | 491 | 140    | 65   | *836 |
| Stage 1              | -      | - | - | -      | - | - | *228   | 288  | -   | 516    | 504  | -    |
| Stage 2              | -      | - | - | -      | - | - | *789   | 502  | -   | 481    | 288  | -    |
| Platoon blocked, %   | 0      | - | - | -      | - | - | 0      | 0    | -   | 0      | 0    | 0    |
| Mov Cap-1 Maneuver   | 959    | - | - | 653    | - | - | *116   | 63   | 490 | 136    | 64   | *836 |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | *116   | 63   | -   | 136    | 64   | -    |
| Stage 1              | -      | - | - | -      | - | - | *223   | 282  | -   | 515    | 503  | -    |
| Stage 2              | -      | - | - | -      | - | - | *776   | 500  | -   | 470    | 282  | -    |

| Approach               | EB   |  |  | WB   |  |  | NB    |  |  | SB    |  |  |
|------------------------|------|--|--|------|--|--|-------|--|--|-------|--|--|
| HCM Control Delay, s/v | 0.28 |  |  | 0.03 |  |  | 24.45 |  |  | 11.45 |  |  |
| HCM LOS                |      |  |  |      |  |  | C     |  |  | B     |  |  |

| Minor Lane/Major Mvmt     | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|---------------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)          | 187   | 45    | -   | -   | 4     | -   | -   | 570   |
| HCM Lane V/C Ratio        | 0.011 | 0.014 | -   | -   | 0.002 | -   | -   | 0.02  |
| HCM Control Delay (s/veh) | 24.4  | 8.8   | 0.2 | -   | 10.5  | 0   | -   | 11.5  |
| HCM Lane LOS              | C     | A     | A   | -   | B     | A   | -   | B     |
| HCM 95th %tile Q(veh)     | 0     | 0     | -   | -   | 0     | -   | -   | 0.1   |

## Notes

~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

HCM 7th TWSC  
10: Wolf Road & Park Place

04/17/2024

| Intersection             |                                                                                   |      |                                                                                   |                                                                                   |                                                                                    |                                                                                     |
|--------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Int Delay, s/veh         | 0.9                                                                               |      |                                                                                   |                                                                                   |                                                                                    |                                                                                     |
| Movement                 | EBL                                                                               | EBR  | NBL                                                                               | NBT                                                                               | SBT                                                                                | SBR                                                                                 |
| Lane Configurations      |  |      |  |  |  |  |
| Traffic Vol, veh/h       | 13                                                                                | 22   | 33                                                                                | 487                                                                               | 634                                                                                | 15                                                                                  |
| Future Vol, veh/h        | 13                                                                                | 22   | 33                                                                                | 487                                                                               | 634                                                                                | 15                                                                                  |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   |
| Sign Control             | Stop                                                                              | Stop | Free                                                                              | Free                                                                              | Free                                                                               | Free                                                                                |
| RT Channelized           | -                                                                                 | None | -                                                                                 | None                                                                              | -                                                                                  | None                                                                                |
| Storage Length           | 0                                                                                 | -    | 145                                                                               | -                                                                                 | -                                                                                  | 75                                                                                  |
| Veh in Median Storage, # | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | 0                                                                                  | -                                                                                   |
| Grade, %                 | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | 0                                                                                  | -                                                                                   |
| Peak Hour Factor         | 89                                                                                | 89   | 89                                                                                | 89                                                                                | 89                                                                                 | 89                                                                                  |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 0                                                                                 | 1                                                                                 | 3                                                                                  | 0                                                                                   |
| Mvmt Flow                | 15                                                                                | 25   | 37                                                                                | 547                                                                               | 712                                                                                | 17                                                                                  |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1334   | 712    | 729    | 0 | - | 0 |
| Stage 1              | 712    | -      | -      | - | - | - |
| Stage 2              | 621    | -      | -      | - | - | - |
| Critical Hdwy        | 6.4    | 6.2    | 4.1    | - | - | - |
| Critical Hdwy Stg 1  | 5.4    | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.4    | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.5    | 3.3    | 2.2    | - | - | - |
| Pot Cap-1 Maneuver   | 171    | 436    | 884    | - | - | - |
| Stage 1              | 490    | -      | -      | - | - | - |
| Stage 2              | 540    | -      | -      | - | - | - |
| Platoon blocked, %   |        |        |        | - | - | - |
| Mov Cap-1 Maneuver   | 164    | 436    | 884    | - | - | - |
| Mov Cap-2 Maneuver   | 164    | -      | -      | - | - | - |
| Stage 1              | 469    | -      | -      | - | - | - |
| Stage 2              | 540    | -      | -      | - | - | - |

| Approach               | EB   | NB   | SB |
|------------------------|------|------|----|
| HCM Control Delay, s/v | 20.6 | 0.59 | 0  |
| HCM LOS                | C    |      |    |

| Minor Lane/Major Mvmt     | NBL   | NBT | EBLn1 | SBT | SBR |
|---------------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)          | 884   | -   | 270   | -   | -   |
| HCM Lane V/C Ratio        | 0.042 | -   | 0.146 | -   | -   |
| HCM Control Delay (s/veh) | 9.3   | -   | 20.6  | -   | -   |
| HCM Lane LOS              | A     | -   | C     | -   | -   |
| HCM 95th %tile Q(veh)     | 0.1   | -   | 0.5   | -   | -   |

HCM 7th TWSC  
12: Lawn Drive & Park Place

04/17/2024

| Intersection              |                                                                                   |          |                                                                                   |        |      |                                                                                   |
|---------------------------|-----------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------|--------|------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh          | 6.3                                                                               |          |                                                                                   |        |      |                                                                                   |
| Movement                  | WBL                                                                               | WBR      | NBT                                                                               | NBR    | SBL  | SBT                                                                               |
| Lane Configurations       |  |          |  |        |      |  |
| Traffic Vol, veh/h        | 28                                                                                | 32       | 4                                                                                 | 22     | 34   | 4                                                                                 |
| Future Vol, veh/h         | 28                                                                                | 32       | 4                                                                                 | 22     | 34   | 4                                                                                 |
| Conflicting Peds, #/hr    | 0                                                                                 | 0        | 0                                                                                 | 1      | 1    | 0                                                                                 |
| Sign Control              | Stop                                                                              | Stop     | Free                                                                              | Free   | Free | Free                                                                              |
| RT Channelized            | -                                                                                 | None     | -                                                                                 | None   | -    | None                                                                              |
| Storage Length            | 0                                                                                 | -        | -                                                                                 | -      | -    | -                                                                                 |
| Veh in Median Storage, #  | 0                                                                                 | -        | 0                                                                                 | -      | -    | 0                                                                                 |
| Grade, %                  | 0                                                                                 | -        | 0                                                                                 | -      | -    | 0                                                                                 |
| Peak Hour Factor          | 92                                                                                | 92       | 92                                                                                | 92     | 92   | 92                                                                                |
| Heavy Vehicles, %         | 0                                                                                 | 0        | 0                                                                                 | 0      | 0    | 0                                                                                 |
| Mvmt Flow                 | 30                                                                                | 35       | 4                                                                                 | 24     | 37   | 4                                                                                 |
| Major/Minor               | Minor1                                                                            | Major1   |                                                                                   | Major2 |      |                                                                                   |
| Conflicting Flow All      | 96                                                                                | 17       | 0                                                                                 | 0      | 29   | 0                                                                                 |
| Stage 1                   | 17                                                                                | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 2                   | 78                                                                                | -        | -                                                                                 | -      | -    | -                                                                                 |
| Critical Hdwy             | 6.4                                                                               | 6.2      | -                                                                                 | -      | 4.1  | -                                                                                 |
| Critical Hdwy Stg 1       | 5.4                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Critical Hdwy Stg 2       | 5.4                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Follow-up Hdwy            | 3.5                                                                               | 3.3      | -                                                                                 | -      | 2.2  | -                                                                                 |
| Pot Cap-1 Maneuver        | 909                                                                               | 1067     | -                                                                                 | -      | 1597 | -                                                                                 |
| Stage 1                   | 1011                                                                              | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 2                   | 950                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Platoon blocked, %        |                                                                                   |          | -                                                                                 | -      |      | -                                                                                 |
| Mov Cap-1 Maneuver        | 887                                                                               | 1066     | -                                                                                 | -      | 1595 | -                                                                                 |
| Mov Cap-2 Maneuver        | 887                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 1                   | 1010                                                                              | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 2                   | 928                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Approach                  | WB                                                                                | NB       |                                                                                   | SB     |      |                                                                                   |
| HCM Control Delay, s/v    | 8.96                                                                              | 0        |                                                                                   | 6.54   |      |                                                                                   |
| HCM LOS                   | A                                                                                 |          |                                                                                   |        |      |                                                                                   |
| Minor Lane/Major Mvmt     | NBT                                                                               | NBRWBLn1 | SBL                                                                               | SBT    |      |                                                                                   |
| Capacity (veh/h)          | -                                                                                 | -        | 974                                                                               | 1592   | -    |                                                                                   |
| HCM Lane V/C Ratio        | -                                                                                 | -        | 0.067                                                                             | 0.023  | -    |                                                                                   |
| HCM Control Delay (s/veh) | -                                                                                 | -        | 9                                                                                 | 7.3    | 0    |                                                                                   |
| HCM Lane LOS              | -                                                                                 | -        | A                                                                                 | A      | A    |                                                                                   |
| HCM 95th %tile Q(veh)     | -                                                                                 | -        | 0.2                                                                               | 0.1    | -    |                                                                                   |



HCM 7th TWSC  
15: Grand Avenue & Lawn Drive

04/17/2024

| Intersection              |                                                                                   |          |                                                                                   |        |      |                                                                                   |
|---------------------------|-----------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------|--------|------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh          | 4.8                                                                               |          |                                                                                   |        |      |                                                                                   |
| Movement                  | WBL                                                                               | WBR      | NBT                                                                               | NBR    | SBL  | SBT                                                                               |
| Lane Configurations       |  |          |  |        |      |  |
| Traffic Vol, veh/h        | 28                                                                                | 13       | 10                                                                                | 19     | 15   | 13                                                                                |
| Future Vol, veh/h         | 28                                                                                | 13       | 10                                                                                | 19     | 15   | 13                                                                                |
| Conflicting Peds, #/hr    | 0                                                                                 | 0        | 0                                                                                 | 3      | 3    | 0                                                                                 |
| Sign Control              | Stop                                                                              | Stop     | Free                                                                              | Free   | Free | Free                                                                              |
| RT Channelized            | -                                                                                 | None     | -                                                                                 | None   | -    | None                                                                              |
| Storage Length            | 0                                                                                 | -        | -                                                                                 | -      | -    | -                                                                                 |
| Veh in Median Storage, #  | 0                                                                                 | -        | 0                                                                                 | -      | -    | 0                                                                                 |
| Grade, %                  | 0                                                                                 | -        | 0                                                                                 | -      | -    | 0                                                                                 |
| Peak Hour Factor          | 92                                                                                | 92       | 92                                                                                | 92     | 92   | 92                                                                                |
| Heavy Vehicles, %         | 0                                                                                 | 0        | 0                                                                                 | 0      | 0    | 0                                                                                 |
| Mvmt Flow                 | 30                                                                                | 14       | 11                                                                                | 21     | 16   | 14                                                                                |
| Major/Minor               | Minor1                                                                            | Major1   |                                                                                   | Major2 |      |                                                                                   |
| Conflicting Flow All      | 71                                                                                | 24       | 0                                                                                 | 0      | 35   | 0                                                                                 |
| Stage 1                   | 24                                                                                | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 2                   | 47                                                                                | -        | -                                                                                 | -      | -    | -                                                                                 |
| Critical Hdwy             | 6.4                                                                               | 6.2      | -                                                                                 | -      | 4.1  | -                                                                                 |
| Critical Hdwy Stg 1       | 5.4                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Critical Hdwy Stg 2       | 5.4                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Follow-up Hdwy            | 3.5                                                                               | 3.3      | -                                                                                 | -      | 2.2  | -                                                                                 |
| Pot Cap-1 Maneuver        | 938                                                                               | 1058     | -                                                                                 | -      | 1590 | -                                                                                 |
| Stage 1                   | 1004                                                                              | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 2                   | 981                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Platoon blocked, %        |                                                                                   |          | -                                                                                 | -      |      | -                                                                                 |
| Mov Cap-1 Maneuver        | 926                                                                               | 1055     | -                                                                                 | -      | 1585 | -                                                                                 |
| Mov Cap-2 Maneuver        | 926                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 1                   | 1001                                                                              | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 2                   | 971                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Approach                  | WB                                                                                | NB       |                                                                                   | SB     |      |                                                                                   |
| HCM Control Delay, s/v    | 8.92                                                                              | 0        |                                                                                   | 3.91   |      |                                                                                   |
| HCM LOS                   | A                                                                                 |          |                                                                                   |        |      |                                                                                   |
| Minor Lane/Major Mvmt     | NBT                                                                               | NBRWBLn1 |                                                                                   | SBL    | SBT  |                                                                                   |
| Capacity (veh/h)          | -                                                                                 | - 963    |                                                                                   | 964    | -    |                                                                                   |
| HCM Lane V/C Ratio        | -                                                                                 | - 0.046  |                                                                                   | 0.01   | -    |                                                                                   |
| HCM Control Delay (s/veh) | -                                                                                 | - 8.9    |                                                                                   | 7.3    | 0    |                                                                                   |
| HCM Lane LOS              | -                                                                                 | - A      |                                                                                   | A      | A    |                                                                                   |
| HCM 95th %tile Q(veh)     | -                                                                                 | - 0.1    |                                                                                   | 0      | -    |                                                                                   |

HCM 7th TWSC  
10: Wolf Road & Park Place

11/06/2024

| Intersection             |                                                                                   |      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 1.3                                                                               |      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Movement                 | EBL                                                                               | EBR  | NBL                                                                               | NBT                                                                               | SBT                                                                               | SBR                                                                               |
| Lane Configurations      |  |      |  |  |  |  |
| Traffic Vol, veh/h       | 18                                                                                | 55   | 22                                                                                | 464                                                                               | 571                                                                               | 43                                                                                |
| Future Vol, veh/h        | 18                                                                                | 55   | 22                                                                                | 464                                                                               | 571                                                                               | 43                                                                                |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 40                                                                                | 0                                                                                 | 0                                                                                 | 40                                                                                |
| Sign Control             | Stop                                                                              | Stop | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                              |
| RT Channelized           | -                                                                                 | None | -                                                                                 | None                                                                              | -                                                                                 | None                                                                              |
| Storage Length           | 0                                                                                 | -    | 145                                                                               | -                                                                                 | -                                                                                 | 75                                                                                |
| Veh in Median Storage, # | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | 0                                                                                 | -                                                                                 |
| Grade, %                 | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | 0                                                                                 | -                                                                                 |
| Peak Hour Factor         | 94                                                                                | 94   | 94                                                                                | 94                                                                                | 94                                                                                | 94                                                                                |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 3                                                                                 | 4                                                                                 | 1                                                                                 | 3                                                                                 |
| Mvmt Flow                | 19                                                                                | 59   | 23                                                                                | 494                                                                               | 607                                                                               | 46                                                                                |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 1188   | 647    | 693    | 0 | - | 0 |
| Stage 1              | 647    | -      | -      | - | - | - |
| Stage 2              | 540    | -      | -      | - | - | - |
| Critical Hdwy        | 6.4    | 6.2    | 4.13   | - | - | - |
| Critical Hdwy Stg 1  | 5.4    | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.4    | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.5    | 3.3    | 2.227  | - | - | - |
| Pot Cap-1 Maneuver   | 210    | 474    | 897    | - | - | - |
| Stage 1              | 525    | -      | -      | - | - | - |
| Stage 2              | 588    | -      | -      | - | - | - |
| Platoon blocked, %   |        |        |        | - | - | - |
| Mov Cap-1 Maneuver   | 189    | 456    | 863    | - | - | - |
| Mov Cap-2 Maneuver   | 189    | -      | -      | - | - | - |
| Stage 1              | 491    | -      | -      | - | - | - |
| Stage 2              | 565    | -      | -      | - | - | - |

| Approach               | EB    | NB   | SB |
|------------------------|-------|------|----|
| HCM Control Delay, s/v | 18.79 | 0.42 | 0  |
| HCM LOS                | C     |      |    |

| Minor Lane/Major Mvmt     | NBL   | NBT | EBLn1 | SBT | SBR |
|---------------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)          | 863   | -   | 338   | -   | -   |
| HCM Lane V/C Ratio        | 0.027 | -   | 0.23  | -   | -   |
| HCM Control Delay (s/veh) | 9.3   | -   | 18.8  | -   | -   |
| HCM Lane LOS              | A     | -   | C     | -   | -   |
| HCM 95th %tile Q(veh)     | 0.1   | -   | 0.9   | -   | -   |

Capacity Analysis Summary Sheets  
Weekday Morning Peak Hour – No-Build Conditions

HCM 7th TWSC  
3: Grand Avenue & 55th Street

04/17/2024

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑   |      |      | ↑↑   | ↑↑   |      |
| Traffic Vol, veh/h       | 659  | 1    | 14   | 791  | 6    | 23   |
| Future Vol, veh/h        | 659  | 1    | 14   | 791  | 6    | 23   |
| Conflicting Peds, #/hr   | 0    | 1    | 1    | 0    | 1    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 91   | 91   | 91   | 91   | 91   | 91   |
| Heavy Vehicles, %        | 3    | 0    | 7    | 4    | 0    | 0    |
| Mvmt Flow                | 724  | 1    | 15   | 869  | 7    | 25   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |      |
|----------------------|--------|--------|--------|---|------|
| Conflicting Flow All | 0      | 0      | 726    | 0 | 1192 |
| Stage 1              | -      | -      | -      | - | 726  |
| Stage 2              | -      | -      | -      | - | 466  |
| Critical Hdwy        | -      | -      | 4.24   | - | 6.8  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.8  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.8  |
| Follow-up Hdwy       | -      | -      | 2.27   | - | 3.5  |
| Pot Cap-1 Maneuver   | -      | -      | 840    | - | 183  |
| Stage 1              | -      | -      | -      | - | 445  |
| Stage 2              | -      | -      | -      | - | 603  |
| Platoon blocked, %   | -      | -      | -      | - | -    |
| Mov Cap-1 Maneuver   | -      | -      | 840    | - | 178  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 178  |
| Stage 1              | -      | -      | -      | - | 445  |
| Stage 2              | -      | -      | -      | - | 588  |

| Approach               | EB | WB   | NB    |
|------------------------|----|------|-------|
| HCM Control Delay, s/v | 0  | 0.38 | 14.37 |
| HCM LOS                |    |      | B     |

| Minor Lane/Major Mvmt     | NBLn1 | EBT | EBR | WBL   | WBT |
|---------------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)          | 416   | -   | -   | 63    | -   |
| HCM Lane V/C Ratio        | 0.077 | -   | -   | 0.018 | -   |
| HCM Control Delay (s/veh) | 14.4  | -   | -   | 9.4   | 0.2 |
| HCM Lane LOS              | B     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh)     | 0.2   | -   | -   | 0.1   | -   |



# HCM 7th TWSC

## 4: Grand Avenue & Longmeadow Lane

04/17/2024

| Intersection             |                                                                                   |      |      |                                                                                   |                                                                                   |      |
|--------------------------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 2.7                                                                               |      |      |                                                                                   |                                                                                   |      |
| Movement                 | EBL                                                                               | EBR  | NBL  | NBT                                                                               | SBT                                                                               | SBR  |
| Lane Configurations      |  |      |      |  |  |      |
| Traffic Vol, veh/h       | 5                                                                                 | 8    | 8    | 24                                                                                | 10                                                                                | 7    |
| Future Vol, veh/h        | 5                                                                                 | 8    | 8    | 24                                                                                | 10                                                                                | 7    |
| Conflicting Peds, #/hr   | 1                                                                                 | 0    | 2    | 0                                                                                 | 0                                                                                 | 2    |
| Sign Control             | Stop                                                                              | Stop | Free | Free                                                                              | Free                                                                              | Free |
| RT Channelized           | -                                                                                 | None | -    | None                                                                              | -                                                                                 | None |
| Storage Length           | 0                                                                                 | -    | -    | -                                                                                 | -                                                                                 | -    |
| Veh in Median Storage, # | 0                                                                                 | -    | -    | 0                                                                                 | 0                                                                                 | -    |
| Grade, %                 | 0                                                                                 | -    | -    | 0                                                                                 | 0                                                                                 | -    |
| Peak Hour Factor         | 92                                                                                | 92   | 92   | 92                                                                                | 92                                                                                | 92   |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 0    | 0                                                                                 | 0                                                                                 | 0    |
| Mvmt Flow                | 5                                                                                 | 9    | 9    | 26                                                                                | 11                                                                                | 8    |

| Major/Minor          | Minor2 | Major1 |      | Major2 |   |   |
|----------------------|--------|--------|------|--------|---|---|
| Conflicting Flow All | 61     | 17     | 20   | 0      | - | 0 |
| Stage 1              | 17     | -      | -    | -      | - | - |
| Stage 2              | 44     | -      | -    | -      | - | - |
| Critical Hdwy        | 6.4    | 6.2    | 4.1  | -      | - | - |
| Critical Hdwy Stg 1  | 5.4    | -      | -    | -      | - | - |
| Critical Hdwy Stg 2  | 5.4    | -      | -    | -      | - | - |
| Follow-up Hdwy       | 3.5    | 3.3    | 2.2  | -      | - | - |
| Pot Cap-1 Maneuver   | 950    | 1068   | 1609 | -      | - | - |
| Stage 1              | 1011   | -      | -    | -      | - | - |
| Stage 2              | 983    | -      | -    | -      | - | - |
| Platoon blocked, %   |        |        |      | -      | - | - |
| Mov Cap-1 Maneuver   | 941    | 1066   | 1606 | -      | - | - |
| Mov Cap-2 Maneuver   | 941    | -      | -    | -      | - | - |
| Stage 1              | 1004   | -      | -    | -      | - | - |
| Stage 2              | 981    | -      | -    | -      | - | - |

| Approach               | EB  | NB   | SB |
|------------------------|-----|------|----|
| HCM Control Delay, s/v | 8.6 | 1.81 | 0  |
| HCM LOS                | A   |      |    |

| Minor Lane/Major Mvmt     | NBL   | NBT | EBLn1 | SBT | SBR |
|---------------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)          | 450   | -   | 1014  | -   | -   |
| HCM Lane V/C Ratio        | 0.005 | -   | 0.014 | -   | -   |
| HCM Control Delay (s/veh) | 7.3   | 0   | 8.6   | -   | -   |
| HCM Lane LOS              | A     | A   | A     | -   | -   |
| HCM 95th %tile Q(veh)     | 0     | -   | 0     | -   | -   |

## Intersection

Int Delay, s/veh 0.3

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      |      | ↔    |      |      | ↔    |      |      | ↔    |      |      | ↔    |      |
| Traffic Vol, veh/h       | 17   | 665  | 0    | 1    | 792  | 5    | 1    | 0    | 2    | 4    | 0    | 12   |
| Future Vol, veh/h        | 17   | 665  | 0    | 1    | 792  | 5    | 1    | 0    | 2    | 4    | 0    | 12   |
| Conflicting Peds, #/hr   | 1    | 0    | 0    | 0    | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 96   | 96   | 96   | 96   | 96   | 96   | 96   | 96   | 96   | 96   | 96   | 96   |
| Heavy Vehicles, %        | 0    | 2    | 0    | 0    | 3    | 20   | 0    | 0    | 0    | 0    | 0    | 0    |
| Mvmt Flow                | 18   | 693  | 0    | 1    | 825  | 5    | 1    | 0    | 2    | 4    | 0    | 13   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |      |     | Minor2 |      |      |
|----------------------|--------|---|---|--------|---|---|--------|------|-----|--------|------|------|
| Conflicting Flow All | 831    | 0 | 0 | 693    | 0 | 0 | 1143   | 1561 | 346 | 1212   | 1559 | 416  |
| Stage 1              | -      | - | - | -      | - | - | 728    | 728  | -   | 831    | 831  | -    |
| Stage 2              | -      | - | - | -      | - | - | 415    | 833  | -   | 382    | 728  | -    |
| Critical Hdwy        | 4.1    | - | - | 4.1    | - | - | 7.5    | 6.5  | 6.9 | 7.5    | 6.5  | 6.9  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.5    | 5.5  | -   | 6.5    | 5.5  | -    |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.5    | 5.5  | -   | 6.5    | 5.5  | -    |
| Follow-up Hdwy       | 2.2    | - | - | 2.2    | - | - | 3.5    | 4    | 3.3 | 3.5    | 4    | 3.3  |
| Pot Cap-1 Maneuver   | 1024   | - | - | 912    | - | - | *272   | 148  | 656 | 235    | 149  | *875 |
| Stage 1              | -      | - | - | -      | - | - | *385   | 432  | -   | 557    | 539  | -    |
| Stage 2              | -      | - | - | -      | - | - | *825   | 538  | -   | 618    | 432  | -    |
| Platoon blocked, %   | 0      | - | - | -      | - | - | 0      | 0    | -   | 0      | 0    | 0    |
| Mov Cap-1 Maneuver   | 1024   | - | - | 912    | - | - | *262   | 145  | 656 | 229    | 146  | *874 |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | *262   | 145  | -   | 229    | 146  | -    |
| Stage 1              | -      | - | - | -      | - | - | *377   | 422  | -   | 556    | 538  | -    |
| Stage 2              | -      | - | - | -      | - | - | *812   | 536  | -   | 603    | 422  | -    |

| Approach               | EB   | WB   | NB    | SB    |
|------------------------|------|------|-------|-------|
| HCM Control Delay, s/v | 0.38 | 0.02 | 13.31 | 12.26 |
| HCM LOS                |      |      | B     | B     |

| Minor Lane/Major Mvmt     | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|---------------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)          | 437   | 90    | -   | -   | 4     | -   | -   | 513   |
| HCM Lane V/C Ratio        | 0.007 | 0.017 | -   | -   | 0.001 | -   | -   | 0.033 |
| HCM Control Delay (s/veh) | 13.3  | 8.6   | 0.2 | -   | 9     | 0   | -   | 12.3  |
| HCM Lane LOS              | B     | A     | A   | -   | A     | A   | -   | B     |
| HCM 95th %tile Q(veh)     | 0     | 0.1   | -   | -   | 0     | -   | -   | 0.1   |

## Notes

~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

HCM 7th TWSC  
10: Wolf Road & Park Place

04/17/2024

| Intersection             |                                                                                   |      |                                                                                   |                                                                                   |                                                                                    |                                                                                     |
|--------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Int Delay, s/veh         | 1.2                                                                               |      |                                                                                   |                                                                                   |                                                                                    |                                                                                     |
| Movement                 | EBL                                                                               | EBR  | NBL                                                                               | NBT                                                                               | SBT                                                                                | SBR                                                                                 |
| Lane Configurations      |  |      |  |  |  |  |
| Traffic Vol, veh/h       | 23                                                                                | 48   | 29                                                                                | 715                                                                               | 319                                                                                | 33                                                                                  |
| Future Vol, veh/h        | 23                                                                                | 48   | 29                                                                                | 715                                                                               | 319                                                                                | 33                                                                                  |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   |
| Sign Control             | Stop                                                                              | Stop | Free                                                                              | Free                                                                              | Free                                                                               | Free                                                                                |
| RT Channelized           | -                                                                                 | None | -                                                                                 | None                                                                              | -                                                                                  | None                                                                                |
| Storage Length           | 0                                                                                 | -    | 145                                                                               | -                                                                                 | -                                                                                  | 75                                                                                  |
| Veh in Median Storage, # | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | 0                                                                                  | -                                                                                   |
| Grade, %                 | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | 0                                                                                  | -                                                                                   |
| Peak Hour Factor         | 89                                                                                | 89   | 89                                                                                | 89                                                                                | 89                                                                                 | 89                                                                                  |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 3                                                                                 | 4                                                                                 | 1                                                                                  | 3                                                                                   |
| Mvmt Flow                | 26                                                                                | 54   | 33                                                                                | 803                                                                               | 358                                                                                | 37                                                                                  |

| Major/Minor          | Minor2 | Major1 |       | Major2 |   |   |
|----------------------|--------|--------|-------|--------|---|---|
| Conflicting Flow All | 1227   | 358    | 396   | 0      | - | 0 |
| Stage 1              | 358    | -      | -     | -      | - | - |
| Stage 2              | 869    | -      | -     | -      | - | - |
| Critical Hdwy        | 6.4    | 6.2    | 4.13  | -      | - | - |
| Critical Hdwy Stg 1  | 5.4    | -      | -     | -      | - | - |
| Critical Hdwy Stg 2  | 5.4    | -      | -     | -      | - | - |
| Follow-up Hdwy       | 3.5    | 3.3    | 2.227 | -      | - | - |
| Pot Cap-1 Maneuver   | 199    | 690    | 1158  | -      | - | - |
| Stage 1              | 712    | -      | -     | -      | - | - |
| Stage 2              | 414    | -      | -     | -      | - | - |
| Platoon blocked, %   |        |        |       | -      | - | - |
| Mov Cap-1 Maneuver   | 193    | 690    | 1158  | -      | - | - |
| Mov Cap-2 Maneuver   | 193    | -      | -     | -      | - | - |
| Stage 1              | 692    | -      | -     | -      | - | - |
| Stage 2              | 414    | -      | -     | -      | - | - |

| Approach                    | EB | NB   | SB |
|-----------------------------|----|------|----|
| HCM Control Delay, s/v17.11 |    | 0.32 | 0  |
| HCM LOS                     | C  |      |    |

| Minor Lane/Major Mvmt     | NBL   | NBT | EBLn1 | SBT | SBR |
|---------------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)          | 1158  | -   | 377   | -   | -   |
| HCM Lane V/C Ratio        | 0.028 | -   | 0.212 | -   | -   |
| HCM Control Delay (s/veh) | 8.2   | -   | 17.1  | -   | -   |
| HCM Lane LOS              | A     | -   | C     | -   | -   |
| HCM 95th %tile Q(veh)     | 0.1   | -   | 0.8   | -   | -   |

HCM 7th TWSC  
12: Lawn Drive & Park Place

04/17/2024

| Intersection             |                                                                                   |      |                                                                                   |      |      |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 6.5                                                                               |      |                                                                                   |      |      |                                                                                   |
| Movement                 | WBL                                                                               | WBR  | NBT                                                                               | NBR  | SBL  | SBT                                                                               |
| Lane Configurations      |  |      |  |      |      |  |
| Traffic Vol, veh/h       | 23                                                                                | 44   | 4                                                                                 | 27   | 48   | 0                                                                                 |
| Future Vol, veh/h        | 23                                                                                | 44   | 4                                                                                 | 27   | 48   | 0                                                                                 |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 0                                                                                 | 1    | 1    | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop | Free                                                                              | Free | Free | Free                                                                              |
| RT Channelized           | -                                                                                 | None | -                                                                                 | None | -    | None                                                                              |
| Storage Length           | 0                                                                                 | -    | -                                                                                 | -    | -    | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92   | 92                                                                                | 92   | 92   | 92                                                                                |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 0                                                                                 | 0    | 0    | 0                                                                                 |
| Mvmt Flow                | 25                                                                                | 48   | 4                                                                                 | 29   | 52   | 0                                                                                 |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 124    | 20     | 0      |
| Stage 1              | 20     | -      | -      |
| Stage 2              | 104    | -      | -      |
| Critical Hdwy        | 6.4    | 6.2    | -      |
| Critical Hdwy Stg 1  | 5.4    | -      | -      |
| Critical Hdwy Stg 2  | 5.4    | -      | -      |
| Follow-up Hdwy       | 3.5    | 3.3    | -      |
| Pot Cap-1 Maneuver   | 875    | 1064   | -      |
| Stage 1              | 1008   | -      | -      |
| Stage 2              | 925    | -      | -      |
| Platoon blocked, %   |        | -      | -      |
| Mov Cap-1 Maneuver   | 846    | 1063   | -      |
| Mov Cap-2 Maneuver   | 846    | -      | -      |
| Stage 1              | 1007   | -      | -      |
| Stage 2              | 895    | -      | -      |

| Approach               | WB   | NB | SB   |
|------------------------|------|----|------|
| HCM Control Delay, s/v | 8.98 | 0  | 7.34 |
| HCM LOS                | A    |    |      |

| Minor Lane/Major Mvmt     | NBT | NBRWBLn1 | SBL   | SBT   |
|---------------------------|-----|----------|-------|-------|
| Capacity (veh/h)          | -   | -        | 977   | 1588  |
| HCM Lane V/C Ratio        | -   | -        | 0.075 | 0.033 |
| HCM Control Delay (s/veh) | -   | -        | 9     | 7.3   |
| HCM Lane LOS              | -   | -        | A     | A     |
| HCM 95th %tile Q(veh)     | -   | -        | 0.2   | 0.1   |



HCM 7th TWSC  
15: Grand Avenue & Lawn Drive

04/17/2024

| Intersection              |                                                                                   |          |                                                                                   |        |      |                                                                                   |
|---------------------------|-----------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------|--------|------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh          | 4.7                                                                               |          |                                                                                   |        |      |                                                                                   |
| Movement                  | WBL                                                                               | WBR      | NBT                                                                               | NBR    | SBL  | SBT                                                                               |
| Lane Configurations       |  |          |  |        |      |  |
| Traffic Vol, veh/h        | 29                                                                                | 17       | 10                                                                                | 32     | 16   | 8                                                                                 |
| Future Vol, veh/h         | 29                                                                                | 17       | 10                                                                                | 32     | 16   | 8                                                                                 |
| Conflicting Peds, #/hr    | 0                                                                                 | 0        | 0                                                                                 | 0      | 0    | 0                                                                                 |
| Sign Control              | Stop                                                                              | Stop     | Free                                                                              | Free   | Free | Free                                                                              |
| RT Channelized            | -                                                                                 | None     | -                                                                                 | None   | -    | None                                                                              |
| Storage Length            | 0                                                                                 | -        | -                                                                                 | -      | -    | -                                                                                 |
| Veh in Median Storage, #  | 0                                                                                 | -        | 0                                                                                 | -      | -    | 0                                                                                 |
| Grade, %                  | 0                                                                                 | -        | 0                                                                                 | -      | -    | 0                                                                                 |
| Peak Hour Factor          | 92                                                                                | 92       | 92                                                                                | 92     | 92   | 92                                                                                |
| Heavy Vehicles, %         | 0                                                                                 | 0        | 0                                                                                 | 0      | 0    | 0                                                                                 |
| Mvmt Flow                 | 32                                                                                | 18       | 11                                                                                | 35     | 17   | 9                                                                                 |
| Major/Minor               | Minor1                                                                            | Major1   |                                                                                   | Major2 |      |                                                                                   |
| Conflicting Flow All      | 72                                                                                | 28       | 0                                                                                 | 0      | 46   | 0                                                                                 |
| Stage 1                   | 28                                                                                | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 2                   | 43                                                                                | -        | -                                                                                 | -      | -    | -                                                                                 |
| Critical Hdwy             | 6.4                                                                               | 6.2      | -                                                                                 | -      | 4.1  | -                                                                                 |
| Critical Hdwy Stg 1       | 5.4                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Critical Hdwy Stg 2       | 5.4                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Follow-up Hdwy            | 3.5                                                                               | 3.3      | -                                                                                 | -      | 2.2  | -                                                                                 |
| Pot Cap-1 Maneuver        | 937                                                                               | 1053     | -                                                                                 | -      | 1575 | -                                                                                 |
| Stage 1                   | 999                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 2                   | 984                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Platoon blocked, %        |                                                                                   |          | -                                                                                 | -      |      | -                                                                                 |
| Mov Cap-1 Maneuver        | 927                                                                               | 1053     | -                                                                                 | -      | 1575 | -                                                                                 |
| Mov Cap-2 Maneuver        | 927                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 1                   | 999                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 2                   | 973                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Approach                  | WB                                                                                | NB       |                                                                                   | SB     |      |                                                                                   |
| HCM Control Delay, s/v    | 8.91                                                                              | 0        |                                                                                   | 4.87   |      |                                                                                   |
| HCM LOS                   | A                                                                                 |          |                                                                                   |        |      |                                                                                   |
| Minor Lane/Major Mvmt     | NBT                                                                               | NBRWBLn1 |                                                                                   | SBL    | SBT  |                                                                                   |
| Capacity (veh/h)          | -                                                                                 | - 970    |                                                                                   | 1200   | -    |                                                                                   |
| HCM Lane V/C Ratio        | -                                                                                 | - 0.052  |                                                                                   | 0.011  | -    |                                                                                   |
| HCM Control Delay (s/veh) | -                                                                                 | - 8.9    |                                                                                   | 7.3    | 0    |                                                                                   |
| HCM Lane LOS              | -                                                                                 | - A      |                                                                                   | A      | A    |                                                                                   |
| HCM 95th %tile Q(veh)     | -                                                                                 | - 0.2    |                                                                                   | 0      | -    |                                                                                   |

Capacity Analysis Summary Sheets  
Weekday Evening Peak Hour – No-Build Conditions

HCM 7th TWSC  
3: Grand Avenue & 55th Street

04/17/2024

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.7  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑   |      |      | ↑↑   | ↑↑   |      |
| Traffic Vol, veh/h       | 1042 | 6    | 18   | 906  | 10   | 22   |
| Future Vol, veh/h        | 1042 | 6    | 18   | 906  | 10   | 22   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 93   | 93   | 93   | 93   | 93   | 93   |
| Heavy Vehicles, %        | 2    | 0    | 0    | 2    | 0    | 0    |
| Mvmt Flow                | 1120 | 6    | 19   | 974  | 11   | 24   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |      |     |
|----------------------|--------|--------|--------|---|------|-----|
| Conflicting Flow All | 0      | 0      | 1127   | 0 | 1649 | 563 |
| Stage 1              | -      | -      | -      | - | 1124 | -   |
| Stage 2              | -      | -      | -      | - | 526  | -   |
| Critical Hdwy        | -      | -      | 4.1    | - | 6.8  | 6.9 |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.8  | -   |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.8  | -   |
| Follow-up Hdwy       | -      | -      | 2.2    | - | 3.5  | 3.3 |
| Pot Cap-1 Maneuver   | -      | -      | 627    | - | 92   | 474 |
| Stage 1              | -      | -      | -      | - | 277  | -   |
| Stage 2              | -      | -      | -      | - | 563  | -   |
| Platoon blocked, %   | -      | -      | -      | - | -    | -   |
| Mov Cap-1 Maneuver   | -      | -      | 627    | - | 88   | 474 |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 88   | -   |
| Stage 1              | -      | -      | -      | - | 277  | -   |
| Stage 2              | -      | -      | -      | - | 539  | -   |

| Approach               | EB | WB   | NB    |
|------------------------|----|------|-------|
| HCM Control Delay, s/v | 0  | 0.65 | 26.77 |
| HCM LOS                |    |      | D     |

| Minor Lane/Major Mvmt     | NBLn1 | EBT | EBR | WBL   | WBT |
|---------------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)          | 199   | -   | -   | 70    | -   |
| HCM Lane V/C Ratio        | 0.172 | -   | -   | 0.031 | -   |
| HCM Control Delay (s/veh) | 26.8  | -   | -   | 10.9  | 0.4 |
| HCM Lane LOS              | D     | -   | -   | B     | A   |
| HCM 95th %tile Q(veh)     | 0.6   | -   | -   | 0.1   | -   |

# HCM 7th TWSC

## 4: Grand Avenue & Longmeadow Lane

04/17/2024

| Intersection             |                                                                                   |      |      |                                                                                   |                                                                                   |      |
|--------------------------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 1.8                                                                               |      |      |                                                                                   |                                                                                   |      |
| Movement                 | EBL                                                                               | EBR  | NBL  | NBT                                                                               | SBT                                                                               | SBR  |
| Lane Configurations      |  |      |      |  |  |      |
| Traffic Vol, veh/h       | 3                                                                                 | 5    | 5    | 18                                                                                | 20                                                                                | 6    |
| Future Vol, veh/h        | 3                                                                                 | 5    | 5    | 18                                                                                | 20                                                                                | 6    |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 2    | 0                                                                                 | 0                                                                                 | 2    |
| Sign Control             | Stop                                                                              | Stop | Free | Free                                                                              | Free                                                                              | Free |
| RT Channelized           | -                                                                                 | None | -    | None                                                                              | -                                                                                 | None |
| Storage Length           | 0                                                                                 | -    | -    | -                                                                                 | -                                                                                 | -    |
| Veh in Median Storage, # | 0                                                                                 | -    | -    | 0                                                                                 | 0                                                                                 | -    |
| Grade, %                 | 0                                                                                 | -    | -    | 0                                                                                 | 0                                                                                 | -    |
| Peak Hour Factor         | 92                                                                                | 92   | 92   | 92                                                                                | 92                                                                                | 92   |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 0    | 0                                                                                 | 0                                                                                 | 0    |
| Mvmt Flow                | 3                                                                                 | 5    | 5    | 20                                                                                | 22                                                                                | 7    |

| Major/Minor          | Minor2 | Major1 |      | Major2 |   |   |
|----------------------|--------|--------|------|--------|---|---|
| Conflicting Flow All | 57     | 27     | 30   | 0      | - | 0 |
| Stage 1              | 27     | -      | -    | -      | - | - |
| Stage 2              | 30     | -      | -    | -      | - | - |
| Critical Hdwy        | 6.4    | 6.2    | 4.1  | -      | - | - |
| Critical Hdwy Stg 1  | 5.4    | -      | -    | -      | - | - |
| Critical Hdwy Stg 2  | 5.4    | -      | -    | -      | - | - |
| Follow-up Hdwy       | 3.5    | 3.3    | 2.2  | -      | - | - |
| Pot Cap-1 Maneuver   | 955    | 1054   | 1596 | -      | - | - |
| Stage 1              | 1001   | -      | -    | -      | - | - |
| Stage 2              | 997    | -      | -    | -      | - | - |
| Platoon blocked, %   |        |        |      | -      | - | - |
| Mov Cap-1 Maneuver   | 948    | 1052   | 1593 | -      | - | - |
| Mov Cap-2 Maneuver   | 948    | -      | -    | -      | - | - |
| Stage 1              | 995    | -      | -    | -      | - | - |
| Stage 2              | 995    | -      | -    | -      | - | - |

| Approach               | EB   | NB   | SB |
|------------------------|------|------|----|
| HCM Control Delay, s/v | 8.59 | 1.58 | 0  |
| HCM LOS                | A    |      |    |

| Minor Lane/Major Mvmt     | NBL   | NBT | EBLn1 | SBT | SBR |
|---------------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)          | 391   | -   | 1011  | -   | -   |
| HCM Lane V/C Ratio        | 0.003 | -   | 0.009 | -   | -   |
| HCM Control Delay (s/veh) | 7.3   | 0   | 8.6   | -   | -   |
| HCM Lane LOS              | A     | A   | A     | -   | -   |
| HCM 95th %tile Q(veh)     | 0     | -   | 0     | -   | -   |



| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↔    |      |      | ↔    |      |      | ↔    |      |      | ↔    |      |
| Traffic Vol, veh/h       | 13   | 1050 | 1    | 1    | 913  | 7    | 1    | 0    | 1    | 1    | 0    | 10   |
| Future Vol, veh/h        | 13   | 1050 | 1    | 1    | 913  | 7    | 1    | 0    | 1    | 1    | 0    | 10   |
| Conflicting Peds, #/hr   | 0    | 0    | 1    | 1    | 0    | 0    | 1    | 0    | 0    | 0    | 0    | 1    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 0    | 2    | 0    | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Mvmt Flow                | 14   | 1105 | 1    | 1    | 961  | 7    | 1    | 0    | 1    | 1    | 0    | 11   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |      |     | Minor2 |      |      |
|----------------------|--------|---|---|--------|---|---|--------|------|-----|--------|------|------|
| Conflicting Flow All | 968    | 0 | 0 | 1107   | 0 | 0 | 1618   | 2105 | 554 | 1547   | 2102 | 485  |
| Stage 1              | -      | - | - | -      | - | - | 1134   | 1134 | -   | 967    | 967  | -    |
| Stage 2              | -      | - | - | -      | - | - | 484    | 971  | -   | 580    | 1135 | -    |
| Critical Hdwy        | 4.1    | - | - | 4.1    | - | - | 7.5    | 6.5  | 6.9 | 7.5    | 6.5  | 6.9  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.5    | 5.5  | -   | 6.5    | 5.5  | -    |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.5    | 5.5  | -   | 6.5    | 5.5  | -    |
| Follow-up Hdwy       | 2.2    | - | - | 2.2    | - | - | 3.5    | 4    | 3.3 | 3.5    | 4    | 3.3  |
| Pot Cap-1 Maneuver   | 935    | - | - | 638    | - | - | *110   | 59   | 481 | 129    | 59   | *836 |
| Stage 1              | -      | - | - | -      | - | - | *219   | 280  | -   | 496    | 489  | -    |
| Stage 2              | -      | - | - | -      | - | - | *789   | 487  | -   | 472    | 280  | -    |
| Platoon blocked, %   | 0      | - | - | -      | - | - | 0      | 0    | -   | 0      | 0    | 0    |
| Mov Cap-1 Maneuver   | 935    | - | - | 637    | - | - | *106   | 58   | 481 | 126    | 58   | *836 |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | *106   | 58   | -   | 126    | 58   | -    |
| Stage 1              | -      | - | - | -      | - | - | *214   | 274  | -   | 495    | 488  | -    |
| Stage 2              | -      | - | - | -      | - | - | *776   | 485  | -   | 461    | 274  | -    |

| Approach               | EB   | WB   | NB    | SB    |
|------------------------|------|------|-------|-------|
| HCM Control Delay, s/v | 0.29 | 0.04 | 25.97 | 11.66 |
| HCM LOS                |      |      | D     | B     |

| Minor Lane/Major Mvmt     | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|---------------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)          | 174   | 44    | -   | -   | 4     | -   | -   | 552   |
| HCM Lane V/C Ratio        | 0.012 | 0.015 | -   | -   | 0.002 | -   | -   | 0.021 |
| HCM Control Delay (s/veh) | 26    | 8.9   | 0.2 | -   | 10.7  | 0   | -   | 11.7  |
| HCM Lane LOS              | D     | A     | A   | -   | B     | A   | -   | B     |
| HCM 95th %tile Q(veh)     | 0     | 0     | -   | -   | 0     | -   | -   | 0.1   |

| Notes                      |                        |                            |                                |
|----------------------------|------------------------|----------------------------|--------------------------------|
| ~: Volume exceeds capacity | \$: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

HCM 7th TWSC  
10: Wolf Road & Park Place

04/17/2024

| Intersection             |                                                                                   |      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 0.9                                                                               |      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Movement                 | EBL                                                                               | EBR  | NBL                                                                               | NBT                                                                               | SBT                                                                               | SBR                                                                               |
| Lane Configurations      |  |      |  |  |  |  |
| Traffic Vol, veh/h       | 13                                                                                | 22   | 33                                                                                | 499                                                                               | 650                                                                               | 15                                                                                |
| Future Vol, veh/h        | 13                                                                                | 22   | 33                                                                                | 499                                                                               | 650                                                                               | 15                                                                                |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                              |
| RT Channelized           | -                                                                                 | None | -                                                                                 | None                                                                              | -                                                                                 | None                                                                              |
| Storage Length           | 0                                                                                 | -    | 145                                                                               | -                                                                                 | -                                                                                 | 75                                                                                |
| Veh in Median Storage, # | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | 0                                                                                 | -                                                                                 |
| Grade, %                 | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | 0                                                                                 | -                                                                                 |
| Peak Hour Factor         | 89                                                                                | 89   | 89                                                                                | 89                                                                                | 89                                                                                | 89                                                                                |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 0                                                                                 | 1                                                                                 | 3                                                                                 | 0                                                                                 |
| Mvmt Flow                | 15                                                                                | 25   | 37                                                                                | 561                                                                               | 730                                                                               | 17                                                                                |

| Major/Minor          | Minor2 | Major1 |     | Major2 |   |   |
|----------------------|--------|--------|-----|--------|---|---|
| Conflicting Flow All | 1365   | 730    | 747 | 0      | - | 0 |
| Stage 1              | 730    | -      | -   | -      | - | - |
| Stage 2              | 635    | -      | -   | -      | - | - |
| Critical Hdwy        | 6.4    | 6.2    | 4.1 | -      | - | - |
| Critical Hdwy Stg 1  | 5.4    | -      | -   | -      | - | - |
| Critical Hdwy Stg 2  | 5.4    | -      | -   | -      | - | - |
| Follow-up Hdwy       | 3.5    | 3.3    | 2.2 | -      | - | - |
| Pot Cap-1 Maneuver   | 164    | 425    | 870 | -      | - | - |
| Stage 1              | 480    | -      | -   | -      | - | - |
| Stage 2              | 532    | -      | -   | -      | - | - |
| Platoon blocked, %   |        |        |     | -      | - | - |
| Mov Cap-1 Maneuver   | 157    | 425    | 870 | -      | - | - |
| Mov Cap-2 Maneuver   | 157    | -      | -   | -      | - | - |
| Stage 1              | 460    | -      | -   | -      | - | - |
| Stage 2              | 532    | -      | -   | -      | - | - |

| Approach                    | EB | NB   | SB |
|-----------------------------|----|------|----|
| HCM Control Delay, s/v21.28 |    | 0.58 | 0  |
| HCM LOS                     | C  |      |    |

| Minor Lane/Major Mvmt     | NBL   | NBT | EBLn1 | SBT | SBR |
|---------------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)          | 870   | -   | 260   | -   | -   |
| HCM Lane V/C Ratio        | 0.043 | -   | 0.151 | -   | -   |
| HCM Control Delay (s/veh) | 9.3   | -   | 21.3  | -   | -   |
| HCM Lane LOS              | A     | -   | C     | -   | -   |
| HCM 95th %tile Q(veh)     | 0.1   | -   | 0.5   | -   | -   |

HCM 7th TWSC  
12: Lawn Drive & Park Place

04/17/2024

| Intersection             |                                                                                   |      |                                                                                   |      |      |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 6.3                                                                               |      |                                                                                   |      |      |                                                                                   |
| Movement                 | WBL                                                                               | WBR  | NBT                                                                               | NBR  | SBL  | SBT                                                                               |
| Lane Configurations      |  |      |  |      |      |  |
| Traffic Vol, veh/h       | 28                                                                                | 32   | 4                                                                                 | 22   | 34   | 4                                                                                 |
| Future Vol, veh/h        | 28                                                                                | 32   | 4                                                                                 | 22   | 34   | 4                                                                                 |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 0                                                                                 | 1    | 1    | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop | Free                                                                              | Free | Free | Free                                                                              |
| RT Channelized           | -                                                                                 | None | -                                                                                 | None | -    | None                                                                              |
| Storage Length           | 0                                                                                 | -    | -                                                                                 | -    | -    | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92   | 92                                                                                | 92   | 92   | 92                                                                                |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 0                                                                                 | 0    | 0    | 0                                                                                 |
| Mvmt Flow                | 30                                                                                | 35   | 4                                                                                 | 24   | 37   | 4                                                                                 |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 96     | 17     | 0      |
| Stage 1              | 17     | -      | -      |
| Stage 2              | 78     | -      | -      |
| Critical Hdwy        | 6.4    | 6.2    | -      |
| Critical Hdwy Stg 1  | 5.4    | -      | -      |
| Critical Hdwy Stg 2  | 5.4    | -      | -      |
| Follow-up Hdwy       | 3.5    | 3.3    | -      |
| Pot Cap-1 Maneuver   | 909    | 1067   | -      |
| Stage 1              | 1011   | -      | -      |
| Stage 2              | 950    | -      | -      |
| Platoon blocked, %   |        | -      | -      |
| Mov Cap-1 Maneuver   | 887    | 1066   | -      |
| Mov Cap-2 Maneuver   | 887    | -      | -      |
| Stage 1              | 1010   | -      | -      |
| Stage 2              | 928    | -      | -      |

| Approach               | WB   | NB | SB   |
|------------------------|------|----|------|
| HCM Control Delay, s/v | 8.96 | 0  | 6.54 |
| HCM LOS                | A    |    |      |

| Minor Lane/Major Mvmt     | NBT | NBRWBLn1 | SBL   | SBT   |
|---------------------------|-----|----------|-------|-------|
| Capacity (veh/h)          | -   | -        | 974   | 1592  |
| HCM Lane V/C Ratio        | -   | -        | 0.067 | 0.023 |
| HCM Control Delay (s/veh) | -   | -        | 9     | 7.3   |
| HCM Lane LOS              | -   | -        | A     | A     |
| HCM 95th %tile Q(veh)     | -   | -        | 0.2   | 0.1   |

HCM 7th TWSC  
15: Grand Avenue & Lawn Drive

04/17/2024

| Intersection              |                                                                                   |          |                                                                                   |        |      |                                                                                   |
|---------------------------|-----------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------|--------|------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh          | 4.8                                                                               |          |                                                                                   |        |      |                                                                                   |
| Movement                  | WBL                                                                               | WBR      | NBT                                                                               | NBR    | SBL  | SBT                                                                               |
| Lane Configurations       |  |          |  |        |      |  |
| Traffic Vol, veh/h        | 28                                                                                | 13       | 10                                                                                | 19     | 15   | 13                                                                                |
| Future Vol, veh/h         | 28                                                                                | 13       | 10                                                                                | 19     | 15   | 13                                                                                |
| Conflicting Peds, #/hr    | 0                                                                                 | 0        | 0                                                                                 | 3      | 3    | 0                                                                                 |
| Sign Control              | Stop                                                                              | Stop     | Free                                                                              | Free   | Free | Free                                                                              |
| RT Channelized            | -                                                                                 | None     | -                                                                                 | None   | -    | None                                                                              |
| Storage Length            | 0                                                                                 | -        | -                                                                                 | -      | -    | -                                                                                 |
| Veh in Median Storage, #  | 0                                                                                 | -        | 0                                                                                 | -      | -    | 0                                                                                 |
| Grade, %                  | 0                                                                                 | -        | 0                                                                                 | -      | -    | 0                                                                                 |
| Peak Hour Factor          | 92                                                                                | 92       | 92                                                                                | 92     | 92   | 92                                                                                |
| Heavy Vehicles, %         | 0                                                                                 | 0        | 0                                                                                 | 0      | 0    | 0                                                                                 |
| Mvmt Flow                 | 30                                                                                | 14       | 11                                                                                | 21     | 16   | 14                                                                                |
| Major/Minor               | Minor1                                                                            | Major1   |                                                                                   | Major2 |      |                                                                                   |
| Conflicting Flow All      | 71                                                                                | 24       | 0                                                                                 | 0      | 35   | 0                                                                                 |
| Stage 1                   | 24                                                                                | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 2                   | 47                                                                                | -        | -                                                                                 | -      | -    | -                                                                                 |
| Critical Hdwy             | 6.4                                                                               | 6.2      | -                                                                                 | -      | 4.1  | -                                                                                 |
| Critical Hdwy Stg 1       | 5.4                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Critical Hdwy Stg 2       | 5.4                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Follow-up Hdwy            | 3.5                                                                               | 3.3      | -                                                                                 | -      | 2.2  | -                                                                                 |
| Pot Cap-1 Maneuver        | 938                                                                               | 1058     | -                                                                                 | -      | 1590 | -                                                                                 |
| Stage 1                   | 1004                                                                              | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 2                   | 981                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Platoon blocked, %        |                                                                                   |          | -                                                                                 | -      |      | -                                                                                 |
| Mov Cap-1 Maneuver        | 926                                                                               | 1055     | -                                                                                 | -      | 1585 | -                                                                                 |
| Mov Cap-2 Maneuver        | 926                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 1                   | 1001                                                                              | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 2                   | 971                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Approach                  | WB                                                                                | NB       |                                                                                   | SB     |      |                                                                                   |
| HCM Control Delay, s/v    | 8.92                                                                              | 0        |                                                                                   | 3.91   |      |                                                                                   |
| HCM LOS                   | A                                                                                 |          |                                                                                   |        |      |                                                                                   |
| Minor Lane/Major Mvmt     | NBT                                                                               | NBRWBLn1 |                                                                                   | SBL    | SBT  |                                                                                   |
| Capacity (veh/h)          | -                                                                                 | - 963    |                                                                                   | 964    | -    |                                                                                   |
| HCM Lane V/C Ratio        | -                                                                                 | - 0.046  |                                                                                   | 0.01   | -    |                                                                                   |
| HCM Control Delay (s/veh) | -                                                                                 | - 8.9    |                                                                                   | 7.3    | 0    |                                                                                   |
| HCM Lane LOS              | -                                                                                 | - A      |                                                                                   | A      | A    |                                                                                   |
| HCM 95th %tile Q(veh)     | -                                                                                 | - 0.1    |                                                                                   | 0      | -    |                                                                                   |



Capacity Analysis Summary Sheets  
Weekday Morning Peak Hour – Projected Conditions

HCM 7th TWSC  
3: Grand Avenue & 55th Street

10/14/2024

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑   |      |      | ↑↑   | ↑↑   |      |
| Traffic Vol, veh/h       | 659  | 1    | 14   | 792  | 6    | 23   |
| Future Vol, veh/h        | 659  | 1    | 14   | 792  | 6    | 23   |
| Conflicting Peds, #/hr   | 0    | 1    | 1    | 0    | 1    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 91   | 91   | 91   | 91   | 91   | 91   |
| Heavy Vehicles, %        | 3    | 0    | 7    | 4    | 0    | 0    |
| Mvmt Flow                | 724  | 1    | 15   | 870  | 7    | 25   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |      |
|----------------------|--------|--------|--------|---|------|
| Conflicting Flow All | 0      | 0      | 726    | 0 | 1193 |
| Stage 1              | -      | -      | -      | - | 726  |
| Stage 2              | -      | -      | -      | - | 467  |
| Critical Hdwy        | -      | -      | 4.24   | - | 6.8  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.8  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.8  |
| Follow-up Hdwy       | -      | -      | 2.27   | - | 3.5  |
| Pot Cap-1 Maneuver   | -      | -      | 840    | - | 183  |
| Stage 1              | -      | -      | -      | - | 445  |
| Stage 2              | -      | -      | -      | - | 603  |
| Platoon blocked, %   | -      | -      | -      | - | -    |
| Mov Cap-1 Maneuver   | -      | -      | 840    | - | 178  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 178  |
| Stage 1              | -      | -      | -      | - | 445  |
| Stage 2              | -      | -      | -      | - | 588  |

| Approach               | EB | WB   | NB    |
|------------------------|----|------|-------|
| HCM Control Delay, s/v | 0  | 0.38 | 14.38 |
| HCM LOS                |    |      | B     |

| Minor Lane/Major Mvmt     | NBLn1 | EBT | EBR | WBL   | WBT |
|---------------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)          | 416   | -   | -   | 63    | -   |
| HCM Lane V/C Ratio        | 0.077 | -   | -   | 0.018 | -   |
| HCM Control Delay (s/veh) | 14.4  | -   | -   | 9.4   | 0.2 |
| HCM Lane LOS              | B     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh)     | 0.2   | -   | -   | 0.1   | -   |

HCM 7th TWSC  
4: Grand Avenue & Longmeadow Lane

10/14/2024

| Intersection             |                                                                                   |      |      |                                                                                   |                                                                                   |      |
|--------------------------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 2.7                                                                               |      |      |                                                                                   |                                                                                   |      |
| Movement                 | EBL                                                                               | EBR  | NBL  | NBT                                                                               | SBT                                                                               | SBR  |
| Lane Configurations      |  |      |      |  |  |      |
| Traffic Vol, veh/h       | 5                                                                                 | 8    | 8    | 24                                                                                | 10                                                                                | 7    |
| Future Vol, veh/h        | 5                                                                                 | 8    | 8    | 24                                                                                | 10                                                                                | 7    |
| Conflicting Peds, #/hr   | 1                                                                                 | 0    | 2    | 0                                                                                 | 0                                                                                 | 2    |
| Sign Control             | Stop                                                                              | Stop | Free | Free                                                                              | Free                                                                              | Free |
| RT Channelized           | -                                                                                 | None | -    | None                                                                              | -                                                                                 | None |
| Storage Length           | 0                                                                                 | -    | -    | -                                                                                 | -                                                                                 | -    |
| Veh in Median Storage, # | 0                                                                                 | -    | -    | 0                                                                                 | 0                                                                                 | -    |
| Grade, %                 | 0                                                                                 | -    | -    | 0                                                                                 | 0                                                                                 | -    |
| Peak Hour Factor         | 92                                                                                | 92   | 92   | 92                                                                                | 92                                                                                | 92   |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 0    | 0                                                                                 | 0                                                                                 | 0    |
| Mvmt Flow                | 5                                                                                 | 9    | 9    | 26                                                                                | 11                                                                                | 8    |

| Major/Minor          | Minor2 | Major1 |      | Major2 |   |   |
|----------------------|--------|--------|------|--------|---|---|
| Conflicting Flow All | 61     | 17     | 20   | 0      | - | 0 |
| Stage 1              | 17     | -      | -    | -      | - | - |
| Stage 2              | 44     | -      | -    | -      | - | - |
| Critical Hdwy        | 6.4    | 6.2    | 4.1  | -      | - | - |
| Critical Hdwy Stg 1  | 5.4    | -      | -    | -      | - | - |
| Critical Hdwy Stg 2  | 5.4    | -      | -    | -      | - | - |
| Follow-up Hdwy       | 3.5    | 3.3    | 2.2  | -      | - | - |
| Pot Cap-1 Maneuver   | 950    | 1068   | 1609 | -      | - | - |
| Stage 1              | 1011   | -      | -    | -      | - | - |
| Stage 2              | 983    | -      | -    | -      | - | - |
| Platoon blocked, %   |        |        |      | -      | - | - |
| Mov Cap-1 Maneuver   | 941    | 1066   | 1606 | -      | - | - |
| Mov Cap-2 Maneuver   | 941    | -      | -    | -      | - | - |
| Stage 1              | 1004   | -      | -    | -      | - | - |
| Stage 2              | 981    | -      | -    | -      | - | - |

| Approach               | EB  | NB   | SB |
|------------------------|-----|------|----|
| HCM Control Delay, s/v | 8.6 | 1.81 | 0  |
| HCM LOS                | A   |      |    |

| Minor Lane/Major Mvmt     | NBL   | NBT | EBLn1 | SBT | SBR |
|---------------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)          | 450   | -   | 1014  | -   | -   |
| HCM Lane V/C Ratio        | 0.005 | -   | 0.014 | -   | -   |
| HCM Control Delay (s/veh) | 7.3   | 0   | 8.6   | -   | -   |
| HCM Lane LOS              | A     | A   | A     | -   | -   |
| HCM 95th %tile Q(veh)     | 0     | -   | 0     | -   | -   |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↔    |      |      | ↔    |      |      | ↔    |      |      | ↔    |      |
| Traffic Vol, veh/h       | 17   | 665  | 0    | 1    | 793  | 5    | 1    | 0    | 2    | 4    | 0    | 12   |
| Future Vol, veh/h        | 17   | 665  | 0    | 1    | 793  | 5    | 1    | 0    | 2    | 4    | 0    | 12   |
| Conflicting Peds, #/hr   | 1    | 0    | 0    | 0    | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 96   | 96   | 96   | 96   | 96   | 96   | 96   | 96   | 96   | 96   | 96   | 96   |
| Heavy Vehicles, %        | 0    | 2    | 0    | 0    | 3    | 20   | 0    | 0    | 0    | 0    | 0    | 0    |
| Mvmt Flow                | 18   | 693  | 0    | 1    | 826  | 5    | 1    | 0    | 2    | 4    | 0    | 13   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |      |     | Minor2 |      |      |
|----------------------|--------|---|---|--------|---|---|--------|------|-----|--------|------|------|
| Conflicting Flow All | 832    | 0 | 0 | 693    | 0 | 0 | 1143   | 1562 | 346 | 1214   | 1560 | 417  |
| Stage 1              | -      | - | - | -      | - | - | 728    | 728  | -   | 832    | 832  | -    |
| Stage 2              | -      | - | - | -      | - | - | 415    | 834  | -   | 382    | 728  | -    |
| Critical Hdwy        | 4.1    | - | - | 4.1    | - | - | 7.5    | 6.5  | 6.9 | 7.5    | 6.5  | 6.9  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.5    | 5.5  | -   | 6.5    | 5.5  | -    |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.5    | 5.5  | -   | 6.5    | 5.5  | -    |
| Follow-up Hdwy       | 2.2    | - | - | 2.2    | - | - | 3.5    | 4    | 3.3 | 3.5    | 4    | 3.3  |
| Pot Cap-1 Maneuver   | 1023   | - | - | 912    | - | - | *271   | 148  | 656 | 235    | 149  | *875 |
| Stage 1              | -      | - | - | -      | - | - | *385   | 432  | -   | 556    | 539  | -    |
| Stage 2              | -      | - | - | -      | - | - | *825   | 537  | -   | 618    | 432  | -    |
| Platoon blocked, %   | 0      | - | - | -      | - | - | 0      | 0    | -   | 0      | 0    | 0    |
| Mov Cap-1 Maneuver   | 1022   | - | - | 912    | - | - | *261   | 145  | 656 | 228    | 145  | *874 |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | *261   | 145  | -   | 228    | 145  | -    |
| Stage 1              | -      | - | - | -      | - | - | *377   | 422  | -   | 555    | 537  | -    |
| Stage 2              | -      | - | - | -      | - | - | *812   | 536  | -   | 603    | 422  | -    |

| Approach               | EB   | WB   | NB    | SB    |
|------------------------|------|------|-------|-------|
| HCM Control Delay, s/v | 0.38 | 0.02 | 13.31 | 12.27 |
| HCM LOS                |      |      | B     | B     |

| Minor Lane/Major Mvmt     | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|---------------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)          | 436   | 90    | -   | -   | 4     | -   | -   | 512   |
| HCM Lane V/C Ratio        | 0.007 | 0.017 | -   | -   | 0.001 | -   | -   | 0.033 |
| HCM Control Delay (s/veh) | 13.3  | 8.6   | 0.2 | -   | 9     | 0   | -   | 12.3  |
| HCM Lane LOS              | B     | A     | A   | -   | A     | A   | -   | B     |
| HCM 95th %tile Q(veh)     | 0     | 0.1   | -   | -   | 0     | -   | -   | 0.1   |

| Notes                      |                        |                            |                                |
|----------------------------|------------------------|----------------------------|--------------------------------|
| ~: Volume exceeds capacity | \$: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |



HCM 7th TWSC  
10: Wolf Road & Park Place

10/14/2024

| Intersection             |                                                                                   |      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 1.2                                                                               |      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Movement                 | EBL                                                                               | EBR  | NBL                                                                               | NBT                                                                               | SBT                                                                               | SBR                                                                               |
| Lane Configurations      |  |      |  |  |  |  |
| Traffic Vol, veh/h       | 23                                                                                | 48   | 29                                                                                | 717                                                                               | 326                                                                               | 33                                                                                |
| Future Vol, veh/h        | 23                                                                                | 48   | 29                                                                                | 717                                                                               | 326                                                                               | 33                                                                                |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                              |
| RT Channelized           | -                                                                                 | None | -                                                                                 | None                                                                              | -                                                                                 | None                                                                              |
| Storage Length           | 0                                                                                 | -    | 145                                                                               | -                                                                                 | -                                                                                 | 75                                                                                |
| Veh in Median Storage, # | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | 0                                                                                 | -                                                                                 |
| Grade, %                 | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | 0                                                                                 | -                                                                                 |
| Peak Hour Factor         | 89                                                                                | 89   | 89                                                                                | 89                                                                                | 89                                                                                | 89                                                                                |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 3                                                                                 | 4                                                                                 | 1                                                                                 | 3                                                                                 |
| Mvmt Flow                | 26                                                                                | 54   | 33                                                                                | 806                                                                               | 366                                                                               | 37                                                                                |

| Major/Minor          | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1237   | 366    | 403    |
| Stage 1              | 366    | -      | -      |
| Stage 2              | 871    | -      | -      |
| Critical Hdwy        | 6.4    | 6.2    | 4.13   |
| Critical Hdwy Stg 1  | 5.4    | -      | -      |
| Critical Hdwy Stg 2  | 5.4    | -      | -      |
| Follow-up Hdwy       | 3.5    | 3.3    | 2.227  |
| Pot Cap-1 Maneuver   | 196    | 683    | 1150   |
| Stage 1              | 706    | -      | -      |
| Stage 2              | 413    | -      | -      |
| Platoon blocked, %   |        |        |        |
| Mov Cap-1 Maneuver   | 191    | 683    | 1150   |
| Mov Cap-2 Maneuver   | 191    | -      | -      |
| Stage 1              | 686    | -      | -      |
| Stage 2              | 413    | -      | -      |

| Approach                    | EB | NB   | SB |
|-----------------------------|----|------|----|
| HCM Control Delay, s/v17.31 |    | 0.32 | 0  |
| HCM LOS                     | C  |      |    |

| Minor Lane/Major Mvmt     | NBL   | NBT | EBLn1 | SBT | SBR |
|---------------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)          | 1150  | -   | 372   | -   | -   |
| HCM Lane V/C Ratio        | 0.028 | -   | 0.215 | -   | -   |
| HCM Control Delay (s/veh) | 8.2   | -   | 17.3  | -   | -   |
| HCM Lane LOS              | A     | -   | C     | -   | -   |
| HCM 95th %tile Q(veh)     | 0.1   | -   | 0.8   | -   | -   |

HCM 7th TWSC  
11: Wolf Road & Access Drive

10/14/2024

| Intersection             |                                                                                   |      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 0.1                                                                               |      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Movement                 | EBL                                                                               | EBR  | NBL                                                                               | NBT                                                                               | SBT                                                                               | SBR                                                                               |
| Lane Configurations      |  |      |  |  |  |  |
| Traffic Vol, veh/h       | 3                                                                                 | 8    | 2                                                                                 | 738                                                                               | 351                                                                               | 1                                                                                 |
| Future Vol, veh/h        | 3                                                                                 | 8    | 2                                                                                 | 738                                                                               | 351                                                                               | 1                                                                                 |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                              |
| RT Channelized           | -                                                                                 | None | -                                                                                 | None                                                                              | -                                                                                 | None                                                                              |
| Storage Length           | 0                                                                                 | -    | 40                                                                                | -                                                                                 | -                                                                                 | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | 0                                                                                 | -                                                                                 |
| Grade, %                 | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | 0                                                                                 | -                                                                                 |
| Peak Hour Factor         | 95                                                                                | 95   | 95                                                                                | 95                                                                                | 95                                                                                | 95                                                                                |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 0                                                                                 | 4                                                                                 | 1                                                                                 | 0                                                                                 |
| Mvmt Flow                | 3                                                                                 | 8    | 2                                                                                 | 777                                                                               | 369                                                                               | 1                                                                                 |

| Major/Minor          | Minor2 | Major1 |      | Major2 |   |   |
|----------------------|--------|--------|------|--------|---|---|
| Conflicting Flow All | 1151   | 370    | 371  | 0      | - | 0 |
| Stage 1              | 370    | -      | -    | -      | - | - |
| Stage 2              | 781    | -      | -    | -      | - | - |
| Critical Hdwy        | 6.4    | 6.2    | 4.1  | -      | - | - |
| Critical Hdwy Stg 1  | 5.4    | -      | -    | -      | - | - |
| Critical Hdwy Stg 2  | 5.4    | -      | -    | -      | - | - |
| Follow-up Hdwy       | 3.5    | 3.3    | 2.2  | -      | - | - |
| Pot Cap-1 Maneuver   | 221    | 680    | 1199 | -      | - | - |
| Stage 1              | 703    | -      | -    | -      | - | - |
| Stage 2              | 455    | -      | -    | -      | - | - |
| Platoon blocked, %   |        |        |      | -      | - | - |
| Mov Cap-1 Maneuver   | 220    | 680    | 1199 | -      | - | - |
| Mov Cap-2 Maneuver   | 220    | -      | -    | -      | - | - |
| Stage 1              | 702    | -      | -    | -      | - | - |
| Stage 2              | 455    | -      | -    | -      | - | - |

| Approach                    | EB | NB   | SB |
|-----------------------------|----|------|----|
| HCM Control Delay, s/v13.53 |    | 0.02 | 0  |
| HCM LOS                     | B  |      |    |

| Minor Lane/Major Mvmt     | NBL   | NBT | EBLn1 | SBT | SBR |
|---------------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)          | 1199  | -   | 434   | -   | -   |
| HCM Lane V/C Ratio        | 0.002 | -   | 0.027 | -   | -   |
| HCM Control Delay (s/veh) | 8     | -   | 13.5  | -   | -   |
| HCM Lane LOS              | A     | -   | B     | -   | -   |
| HCM 95th %tile Q(veh)     | 0     | -   | 0.1   | -   | -   |

HCM 7th TWSC  
12: Lawn Drive & Park Place

10/14/2024

| Intersection              |                                                                                   |          |                                                                                   |        |       |                                                                                   |
|---------------------------|-----------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------|--------|-------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh          | 6.5                                                                               |          |                                                                                   |        |       |                                                                                   |
| Movement                  | WBL                                                                               | WBR      | NBT                                                                               | NBR    | SBL   | SBT                                                                               |
| Lane Configurations       |  |          |  |        |       |  |
| Traffic Vol, veh/h        | 23                                                                                | 44       | 4                                                                                 | 27     | 48    | 0                                                                                 |
| Future Vol, veh/h         | 23                                                                                | 44       | 4                                                                                 | 27     | 48    | 0                                                                                 |
| Conflicting Peds, #/hr    | 0                                                                                 | 0        | 0                                                                                 | 1      | 1     | 0                                                                                 |
| Sign Control              | Stop                                                                              | Stop     | Free                                                                              | Free   | Free  | Free                                                                              |
| RT Channelized            | -                                                                                 | None     | -                                                                                 | None   | -     | None                                                                              |
| Storage Length            | 0                                                                                 | -        | -                                                                                 | -      | -     | -                                                                                 |
| Veh in Median Storage, #  | 0                                                                                 | -        | 0                                                                                 | -      | -     | 0                                                                                 |
| Grade, %                  | 0                                                                                 | -        | 0                                                                                 | -      | -     | 0                                                                                 |
| Peak Hour Factor          | 92                                                                                | 92       | 92                                                                                | 92     | 92    | 92                                                                                |
| Heavy Vehicles, %         | 0                                                                                 | 0        | 0                                                                                 | 0      | 0     | 0                                                                                 |
| Mvmt Flow                 | 25                                                                                | 48       | 4                                                                                 | 29     | 52    | 0                                                                                 |
| Major/Minor               | Minor1                                                                            | Major1   |                                                                                   | Major2 |       |                                                                                   |
| Conflicting Flow All      | 124                                                                               | 20       | 0                                                                                 | 0      | 35    | 0                                                                                 |
| Stage 1                   | 20                                                                                | -        | -                                                                                 | -      | -     | -                                                                                 |
| Stage 2                   | 104                                                                               | -        | -                                                                                 | -      | -     | -                                                                                 |
| Critical Hdwy             | 6.4                                                                               | 6.2      | -                                                                                 | -      | 4.1   | -                                                                                 |
| Critical Hdwy Stg 1       | 5.4                                                                               | -        | -                                                                                 | -      | -     | -                                                                                 |
| Critical Hdwy Stg 2       | 5.4                                                                               | -        | -                                                                                 | -      | -     | -                                                                                 |
| Follow-up Hdwy            | 3.5                                                                               | 3.3      | -                                                                                 | -      | 2.2   | -                                                                                 |
| Pot Cap-1 Maneuver        | 875                                                                               | 1064     | -                                                                                 | -      | 1590  | -                                                                                 |
| Stage 1                   | 1008                                                                              | -        | -                                                                                 | -      | -     | -                                                                                 |
| Stage 2                   | 925                                                                               | -        | -                                                                                 | -      | -     | -                                                                                 |
| Platoon blocked, %        |                                                                                   |          | -                                                                                 | -      |       | -                                                                                 |
| Mov Cap-1 Maneuver        | 846                                                                               | 1063     | -                                                                                 | -      | 1588  | -                                                                                 |
| Mov Cap-2 Maneuver        | 846                                                                               | -        | -                                                                                 | -      | -     | -                                                                                 |
| Stage 1                   | 1007                                                                              | -        | -                                                                                 | -      | -     | -                                                                                 |
| Stage 2                   | 895                                                                               | -        | -                                                                                 | -      | -     | -                                                                                 |
| Approach                  | WB                                                                                | NB       |                                                                                   | SB     |       |                                                                                   |
| HCM Control Delay, s/v    | 8.98                                                                              | 0        |                                                                                   | 7.34   |       |                                                                                   |
| HCM LOS                   | A                                                                                 |          |                                                                                   |        |       |                                                                                   |
| Minor Lane/Major Mvmt     | NBT                                                                               | NBRWBLn1 |                                                                                   | SBL    | SBT   |                                                                                   |
| Capacity (veh/h)          | -                                                                                 | -        |                                                                                   | 977    | 1588  |                                                                                   |
| HCM Lane V/C Ratio        | -                                                                                 | -        |                                                                                   | 0.075  | 0.033 |                                                                                   |
| HCM Control Delay (s/veh) | -                                                                                 | -        |                                                                                   | 9      | 7.3   |                                                                                   |
| HCM Lane LOS              | -                                                                                 | -        |                                                                                   | A      | A     |                                                                                   |
| HCM 95th %tile Q(veh)     | -                                                                                 | -        |                                                                                   | 0.2    | 0.1   |                                                                                   |

HCM 7th TWSC  
15: Grand Avenue & Lawn Drive

10/14/2024

| Intersection              |                                                                                   |          |                                                                                   |        |      |                                                                                   |
|---------------------------|-----------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------|--------|------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh          | 4.7                                                                               |          |                                                                                   |        |      |                                                                                   |
| Movement                  | WBL                                                                               | WBR      | NBT                                                                               | NBR    | SBL  | SBT                                                                               |
| Lane Configurations       |  |          |  |        |      |  |
| Traffic Vol, veh/h        | 29                                                                                | 17       | 10                                                                                | 32     | 16   | 8                                                                                 |
| Future Vol, veh/h         | 29                                                                                | 17       | 10                                                                                | 32     | 16   | 8                                                                                 |
| Conflicting Peds, #/hr    | 0                                                                                 | 0        | 0                                                                                 | 0      | 0    | 0                                                                                 |
| Sign Control              | Stop                                                                              | Stop     | Free                                                                              | Free   | Free | Free                                                                              |
| RT Channelized            | -                                                                                 | None     | -                                                                                 | None   | -    | None                                                                              |
| Storage Length            | 0                                                                                 | -        | -                                                                                 | -      | -    | -                                                                                 |
| Veh in Median Storage, #  | 0                                                                                 | -        | 0                                                                                 | -      | -    | 0                                                                                 |
| Grade, %                  | 0                                                                                 | -        | 0                                                                                 | -      | -    | 0                                                                                 |
| Peak Hour Factor          | 92                                                                                | 92       | 92                                                                                | 92     | 92   | 92                                                                                |
| Heavy Vehicles, %         | 0                                                                                 | 0        | 0                                                                                 | 0      | 0    | 0                                                                                 |
| Mvmt Flow                 | 32                                                                                | 18       | 11                                                                                | 35     | 17   | 9                                                                                 |
| Major/Minor               | Minor1                                                                            | Major1   |                                                                                   | Major2 |      |                                                                                   |
| Conflicting Flow All      | 72                                                                                | 28       | 0                                                                                 | 0      | 46   | 0                                                                                 |
| Stage 1                   | 28                                                                                | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 2                   | 43                                                                                | -        | -                                                                                 | -      | -    | -                                                                                 |
| Critical Hdwy             | 6.4                                                                               | 6.2      | -                                                                                 | -      | 4.1  | -                                                                                 |
| Critical Hdwy Stg 1       | 5.4                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Critical Hdwy Stg 2       | 5.4                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Follow-up Hdwy            | 3.5                                                                               | 3.3      | -                                                                                 | -      | 2.2  | -                                                                                 |
| Pot Cap-1 Maneuver        | 937                                                                               | 1053     | -                                                                                 | -      | 1575 | -                                                                                 |
| Stage 1                   | 999                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 2                   | 984                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Platoon blocked, %        |                                                                                   |          | -                                                                                 | -      |      | -                                                                                 |
| Mov Cap-1 Maneuver        | 927                                                                               | 1053     | -                                                                                 | -      | 1575 | -                                                                                 |
| Mov Cap-2 Maneuver        | 927                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 1                   | 999                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Stage 2                   | 973                                                                               | -        | -                                                                                 | -      | -    | -                                                                                 |
| Approach                  | WB                                                                                | NB       |                                                                                   | SB     |      |                                                                                   |
| HCM Control Delay, s/v    | 8.91                                                                              | 0        |                                                                                   | 4.87   |      |                                                                                   |
| HCM LOS                   | A                                                                                 |          |                                                                                   |        |      |                                                                                   |
| Minor Lane/Major Mvmt     | NBT                                                                               | NBRWBLn1 |                                                                                   | SBL    | SBT  |                                                                                   |
| Capacity (veh/h)          | -                                                                                 | - 970    |                                                                                   | 1200   | -    |                                                                                   |
| HCM Lane V/C Ratio        | -                                                                                 | - 0.052  |                                                                                   | 0.011  | -    |                                                                                   |
| HCM Control Delay (s/veh) | -                                                                                 | - 8.9    |                                                                                   | 7.3    | 0    |                                                                                   |
| HCM Lane LOS              | -                                                                                 | - A      |                                                                                   | A      | A    |                                                                                   |
| HCM 95th %tile Q(veh)     | -                                                                                 | - 0.2    |                                                                                   | 0      | -    |                                                                                   |



Capacity Analysis Summary Sheets  
Weekday Evening Peak Hour – Projected Conditions

HCM 7th TWSC  
3: Grand Avenue & 55th Street

10/14/2024

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.7  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑↑   |      |      | ↑↑   | ↑↑   |      |
| Traffic Vol, veh/h       | 1043 | 6    | 18   | 907  | 10   | 22   |
| Future Vol, veh/h        | 1043 | 6    | 18   | 907  | 10   | 22   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 93   | 93   | 93   | 93   | 93   | 93   |
| Heavy Vehicles, %        | 2    | 0    | 0    | 2    | 0    | 0    |
| Mvmt Flow                | 1122 | 6    | 19   | 975  | 11   | 24   |

| Major/Minor          | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0      | 0      | 1128   |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | -      | 4.1    |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | -      | 2.2    |
| Pot Cap-1 Maneuver   | -      | -      | 627    |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | -      | -      | 627    |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach               | EB | WB   | NB    |
|------------------------|----|------|-------|
| HCM Control Delay, s/v | 0  | 0.65 | 26.82 |
| HCM LOS                |    |      | D     |

| Minor Lane/Major Mvmt     | NBLn1 | EBT | EBR | WBL   | WBT |
|---------------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)          | 199   | -   | -   | 70    | -   |
| HCM Lane V/C Ratio        | 0.173 | -   | -   | 0.031 | -   |
| HCM Control Delay (s/veh) | 26.8  | -   | -   | 10.9  | 0.4 |
| HCM Lane LOS              | D     | -   | -   | B     | A   |
| HCM 95th %tile Q(veh)     | 0.6   | -   | -   | 0.1   | -   |

HCM 7th TWSC  
4: Grand Avenue & Longmeadow Lane

10/14/2024

| Intersection             |                                                                                   |      |      |                                                                                   |                                                                                   |      |
|--------------------------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 1.8                                                                               |      |      |                                                                                   |                                                                                   |      |
| Movement                 | EBL                                                                               | EBR  | NBL  | NBT                                                                               | SBT                                                                               | SBR  |
| Lane Configurations      |  |      |      |  |  |      |
| Traffic Vol, veh/h       | 3                                                                                 | 5    | 5    | 18                                                                                | 20                                                                                | 6    |
| Future Vol, veh/h        | 3                                                                                 | 5    | 5    | 18                                                                                | 20                                                                                | 6    |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 2    | 0                                                                                 | 0                                                                                 | 2    |
| Sign Control             | Stop                                                                              | Stop | Free | Free                                                                              | Free                                                                              | Free |
| RT Channelized           | -                                                                                 | None | -    | None                                                                              | -                                                                                 | None |
| Storage Length           | 0                                                                                 | -    | -    | -                                                                                 | -                                                                                 | -    |
| Veh in Median Storage, # | 0                                                                                 | -    | -    | 0                                                                                 | 0                                                                                 | -    |
| Grade, %                 | 0                                                                                 | -    | -    | 0                                                                                 | 0                                                                                 | -    |
| Peak Hour Factor         | 92                                                                                | 92   | 92   | 92                                                                                | 92                                                                                | 92   |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 0    | 0                                                                                 | 0                                                                                 | 0    |
| Mvmt Flow                | 3                                                                                 | 5    | 5    | 20                                                                                | 22                                                                                | 7    |

| Major/Minor          | Minor2 | Major1 |      | Major2 |   |   |
|----------------------|--------|--------|------|--------|---|---|
| Conflicting Flow All | 57     | 27     | 30   | 0      | - | 0 |
| Stage 1              | 27     | -      | -    | -      | - | - |
| Stage 2              | 30     | -      | -    | -      | - | - |
| Critical Hdwy        | 6.4    | 6.2    | 4.1  | -      | - | - |
| Critical Hdwy Stg 1  | 5.4    | -      | -    | -      | - | - |
| Critical Hdwy Stg 2  | 5.4    | -      | -    | -      | - | - |
| Follow-up Hdwy       | 3.5    | 3.3    | 2.2  | -      | - | - |
| Pot Cap-1 Maneuver   | 955    | 1054   | 1596 | -      | - | - |
| Stage 1              | 1001   | -      | -    | -      | - | - |
| Stage 2              | 997    | -      | -    | -      | - | - |
| Platoon blocked, %   |        |        |      | -      | - | - |
| Mov Cap-1 Maneuver   | 948    | 1052   | 1593 | -      | - | - |
| Mov Cap-2 Maneuver   | 948    | -      | -    | -      | - | - |
| Stage 1              | 995    | -      | -    | -      | - | - |
| Stage 2              | 995    | -      | -    | -      | - | - |

| Approach               | EB   | NB   | SB |
|------------------------|------|------|----|
| HCM Control Delay, s/v | 8.59 | 1.58 | 0  |
| HCM LOS                | A    |      |    |

| Minor Lane/Major Mvmt     | NBL   | NBT | EBLn1 | SBT | SBR |
|---------------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)          | 391   | -   | 1011  | -   | -   |
| HCM Lane V/C Ratio        | 0.003 | -   | 0.009 | -   | -   |
| HCM Control Delay (s/veh) | 7.3   | 0   | 8.6   | -   | -   |
| HCM Lane LOS              | A     | A   | A     | -   | -   |
| HCM 95th %tile Q(veh)     | 0     | -   | 0     | -   | -   |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↔    |      |      | ↔    |      |      | ↔    |      |      | ↔    |      |
| Traffic Vol, veh/h       | 13   | 1050 | 2    | 1    | 914  | 7    | 1    | 0    | 2    | 1    | 0    | 10   |
| Future Vol, veh/h        | 13   | 1050 | 2    | 1    | 914  | 7    | 1    | 0    | 2    | 1    | 0    | 10   |
| Conflicting Peds, #/hr   | 0    | 0    | 1    | 1    | 0    | 0    | 1    | 0    | 0    | 0    | 0    | 1    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 0    | 2    | 0    | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Mvmt Flow                | 14   | 1105 | 2    | 1    | 962  | 7    | 1    | 0    | 2    | 1    | 0    | 11   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |      |     | Minor2 |      |      |
|----------------------|--------|---|---|--------|---|---|--------|------|-----|--------|------|------|
| Conflicting Flow All | 969    | 0 | 0 | 1108   | 0 | 0 | 1619   | 2106 | 555 | 1548   | 2104 | 486  |
| Stage 1              | -      | - | - | -      | - | - | 1135   | 1135 | -   | 968    | 968  | -    |
| Stage 2              | -      | - | - | -      | - | - | 484    | 972  | -   | 580    | 1136 | -    |
| Critical Hdwy        | 4.1    | - | - | 4.1    | - | - | 7.5    | 6.5  | 6.9 | 7.5    | 6.5  | 6.9  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.5    | 5.5  | -   | 6.5    | 5.5  | -    |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.5    | 5.5  | -   | 6.5    | 5.5  | -    |
| Follow-up Hdwy       | 2.2    | - | - | 2.2    | - | - | 3.5    | 4    | 3.3 | 3.5    | 4    | 3.3  |
| Pot Cap-1 Maneuver   | 934    | - | - | 637    | - | - | *110   | 59   | 481 | 129    | 59   | *836 |
| Stage 1              | -      | - | - | -      | - | - | *219   | 280  | -   | 495    | 488  | -    |
| Stage 2              | -      | - | - | -      | - | - | *789   | 486  | -   | 472    | 279  | -    |
| Platoon blocked, %   | 0      | - | - | -      | - | - | 0      | 0    | -   | 0      | 0    | 0    |
| Mov Cap-1 Maneuver   | 934    | - | - | 637    | - | - | *106   | 58   | 480 | 125    | 58   | *836 |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | *106   | 58   | -   | 125    | 58   | -    |
| Stage 1              | -      | - | - | -      | - | - | *214   | 274  | -   | 494    | 487  | -    |
| Stage 2              | -      | - | - | -      | - | - | *776   | 485  | -   | 460    | 273  | -    |

| Approach               | EB   | WB   | NB    | SB    |
|------------------------|------|------|-------|-------|
| HCM Control Delay, s/v | 0.29 | 0.04 | 21.57 | 11.68 |
| HCM LOS                |      |      | C     | B     |

| Minor Lane/Major Mvmt     | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|---------------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)          | 220   | 44    | -   | -   | 4     | -   | -   | 551   |
| HCM Lane V/C Ratio        | 0.014 | 0.015 | -   | -   | 0.002 | -   | -   | 0.021 |
| HCM Control Delay (s/veh) | 21.6  | 8.9   | 0.2 | -   | 10.7  | 0   | -   | 11.7  |
| HCM Lane LOS              | C     | A     | A   | -   | B     | A   | -   | B     |
| HCM 95th %tile Q(veh)     | 0     | 0     | -   | -   | 0     | -   | -   | 0.1   |

| Notes                      |                        |                            |                                |
|----------------------------|------------------------|----------------------------|--------------------------------|
| ~: Volume exceeds capacity | \$: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |



HCM 7th TWSC  
10: Wolf Road & Park Place

10/14/2024

| Intersection             |                                                                                   |      |                                                                                   |                                                                                   |                                                                                    |                                                                                     |
|--------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Int Delay, s/veh         | 0.9                                                                               |      |                                                                                   |                                                                                   |                                                                                    |                                                                                     |
| Movement                 | EBL                                                                               | EBR  | NBL                                                                               | NBT                                                                               | SBT                                                                                | SBR                                                                                 |
| Lane Configurations      |  |      |  |  |  |  |
| Traffic Vol, veh/h       | 13                                                                                | 22   | 33                                                                                | 505                                                                               | 654                                                                                | 15                                                                                  |
| Future Vol, veh/h        | 13                                                                                | 22   | 33                                                                                | 505                                                                               | 654                                                                                | 15                                                                                  |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   |
| Sign Control             | Stop                                                                              | Stop | Free                                                                              | Free                                                                              | Free                                                                               | Free                                                                                |
| RT Channelized           | -                                                                                 | None | -                                                                                 | None                                                                              | -                                                                                  | None                                                                                |
| Storage Length           | 0                                                                                 | -    | 145                                                                               | -                                                                                 | -                                                                                  | 75                                                                                  |
| Veh in Median Storage, # | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | 0                                                                                  | -                                                                                   |
| Grade, %                 | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | 0                                                                                  | -                                                                                   |
| Peak Hour Factor         | 89                                                                                | 89   | 89                                                                                | 89                                                                                | 89                                                                                 | 89                                                                                  |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 0                                                                                 | 1                                                                                 | 3                                                                                  | 0                                                                                   |
| Mvmt Flow                | 15                                                                                | 25   | 37                                                                                | 567                                                                               | 735                                                                                | 17                                                                                  |

| Major/Minor          | Minor2 | Major1 |     | Major2 |   |   |
|----------------------|--------|--------|-----|--------|---|---|
| Conflicting Flow All | 1376   | 735    | 752 | 0      | - | 0 |
| Stage 1              | 735    | -      | -   | -      | - | - |
| Stage 2              | 642    | -      | -   | -      | - | - |
| Critical Hdwy        | 6.4    | 6.2    | 4.1 | -      | - | - |
| Critical Hdwy Stg 1  | 5.4    | -      | -   | -      | - | - |
| Critical Hdwy Stg 2  | 5.4    | -      | -   | -      | - | - |
| Follow-up Hdwy       | 3.5    | 3.3    | 2.2 | -      | - | - |
| Pot Cap-1 Maneuver   | 162    | 423    | 867 | -      | - | - |
| Stage 1              | 478    | -      | -   | -      | - | - |
| Stage 2              | 528    | -      | -   | -      | - | - |
| Platoon blocked, %   |        |        |     | -      | - | - |
| Mov Cap-1 Maneuver   | 155    | 423    | 867 | -      | - | - |
| Mov Cap-2 Maneuver   | 155    | -      | -   | -      | - | - |
| Stage 1              | 458    | -      | -   | -      | - | - |
| Stage 2              | 528    | -      | -   | -      | - | - |

| Approach                    | EB | NB   | SB |
|-----------------------------|----|------|----|
| HCM Control Delay, s/v21.51 |    | 0.57 | 0  |
| HCM LOS                     | C  |      |    |

| Minor Lane/Major Mvmt     | NBL   | NBT | EBLn1 | SBT | SBR |
|---------------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)          | 867   | -   | 257   | -   | -   |
| HCM Lane V/C Ratio        | 0.043 | -   | 0.153 | -   | -   |
| HCM Control Delay (s/veh) | 9.3   | -   | 21.5  | -   | -   |
| HCM Lane LOS              | A     | -   | C     | -   | -   |
| HCM 95th %tile Q(veh)     | 0.1   | -   | 0.5   | -   | -   |

HCM 7th TWSC  
11: Wolf Road & Access Drive

10/14/2024

| Intersection             |                                                                                   |      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 0.1                                                                               |      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Movement                 | EBL                                                                               | EBR  | NBL                                                                               | NBT                                                                               | SBT                                                                               | SBR                                                                               |
| Lane Configurations      |  |      |  |  |  |  |
| Traffic Vol, veh/h       | 2                                                                                 | 4    | 6                                                                                 | 512                                                                               | 665                                                                               | 3                                                                                 |
| Future Vol, veh/h        | 2                                                                                 | 4    | 6                                                                                 | 512                                                                               | 665                                                                               | 3                                                                                 |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                              |
| RT Channelized           | -                                                                                 | None | -                                                                                 | None                                                                              | -                                                                                 | None                                                                              |
| Storage Length           | 0                                                                                 | -    | 40                                                                                | -                                                                                 | -                                                                                 | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | 0                                                                                 | -                                                                                 |
| Grade, %                 | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | 0                                                                                 | -                                                                                 |
| Peak Hour Factor         | 95                                                                                | 95   | 95                                                                                | 95                                                                                | 95                                                                                | 95                                                                                |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 0                                                                                 | 1                                                                                 | 3                                                                                 | 0                                                                                 |
| Mvmt Flow                | 2                                                                                 | 4    | 6                                                                                 | 539                                                                               | 700                                                                               | 3                                                                                 |

| Major/Minor          | Minor2 | Major1 |     | Major2 |   |   |
|----------------------|--------|--------|-----|--------|---|---|
| Conflicting Flow All | 1253   | 702    | 703 | 0      | - | 0 |
| Stage 1              | 702    | -      | -   | -      | - | - |
| Stage 2              | 552    | -      | -   | -      | - | - |
| Critical Hdwy        | 6.4    | 6.2    | 4.1 | -      | - | - |
| Critical Hdwy Stg 1  | 5.4    | -      | -   | -      | - | - |
| Critical Hdwy Stg 2  | 5.4    | -      | -   | -      | - | - |
| Follow-up Hdwy       | 3.5    | 3.3    | 2.2 | -      | - | - |
| Pot Cap-1 Maneuver   | 192    | 442    | 904 | -      | - | - |
| Stage 1              | 495    | -      | -   | -      | - | - |
| Stage 2              | 581    | -      | -   | -      | - | - |
| Platoon blocked, %   |        |        |     | -      | - | - |
| Mov Cap-1 Maneuver   | 190    | 442    | 904 | -      | - | - |
| Mov Cap-2 Maneuver   | 190    | -      | -   | -      | - | - |
| Stage 1              | 492    | -      | -   | -      | - | - |
| Stage 2              | 581    | -      | -   | -      | - | - |

| Approach                    | EB | NB  | SB |
|-----------------------------|----|-----|----|
| HCM Control Delay, s/v16.98 |    | 0.1 | 0  |
| HCM LOS                     | C  |     |    |

| Minor Lane/Major Mvmt     | NBL   | NBT | EBLn1 | SBT | SBR |
|---------------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)          | 904   | -   | 307   | -   | -   |
| HCM Lane V/C Ratio        | 0.007 | -   | 0.021 | -   | -   |
| HCM Control Delay (s/veh) | 9     | -   | 17    | -   | -   |
| HCM Lane LOS              | A     | -   | C     | -   | -   |
| HCM 95th %tile Q(veh)     | 0     | -   | 0.1   | -   | -   |

HCM 7th TWSC  
12: Lawn Drive & Park Place

10/14/2024

| Intersection              |                                                                                   |          |                                                                                   |       |      |                                                                                   |
|---------------------------|-----------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------|-------|------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh          | 6.3                                                                               |          |                                                                                   |       |      |                                                                                   |
| Movement                  | WBL                                                                               | WBR      | NBT                                                                               | NBR   | SBL  | SBT                                                                               |
| Lane Configurations       |  |          |  |       |      |  |
| Traffic Vol, veh/h        | 28                                                                                | 32       | 4                                                                                 | 22    | 34   | 4                                                                                 |
| Future Vol, veh/h         | 28                                                                                | 32       | 4                                                                                 | 22    | 34   | 4                                                                                 |
| Conflicting Peds, #/hr    | 0                                                                                 | 0        | 0                                                                                 | 1     | 1    | 0                                                                                 |
| Sign Control              | Stop                                                                              | Stop     | Free                                                                              | Free  | Free | Free                                                                              |
| RT Channelized            | -                                                                                 | None     | -                                                                                 | None  | -    | None                                                                              |
| Storage Length            | 0                                                                                 | -        | -                                                                                 | -     | -    | -                                                                                 |
| Veh in Median Storage, #  | 0                                                                                 | -        | 0                                                                                 | -     | -    | 0                                                                                 |
| Grade, %                  | 0                                                                                 | -        | 0                                                                                 | -     | -    | 0                                                                                 |
| Peak Hour Factor          | 92                                                                                | 92       | 92                                                                                | 92    | 92   | 92                                                                                |
| Heavy Vehicles, %         | 0                                                                                 | 0        | 0                                                                                 | 0     | 0    | 0                                                                                 |
| Mvmt Flow                 | 30                                                                                | 35       | 4                                                                                 | 24    | 37   | 4                                                                                 |
| Major/Minor               | Minor1                                                                            | Major1   | Major2                                                                            |       |      |                                                                                   |
| Conflicting Flow All      | 96                                                                                | 17       | 0                                                                                 | 0     | 29   | 0                                                                                 |
| Stage 1                   | 17                                                                                | -        | -                                                                                 | -     | -    | -                                                                                 |
| Stage 2                   | 78                                                                                | -        | -                                                                                 | -     | -    | -                                                                                 |
| Critical Hdwy             | 6.4                                                                               | 6.2      | -                                                                                 | -     | 4.1  | -                                                                                 |
| Critical Hdwy Stg 1       | 5.4                                                                               | -        | -                                                                                 | -     | -    | -                                                                                 |
| Critical Hdwy Stg 2       | 5.4                                                                               | -        | -                                                                                 | -     | -    | -                                                                                 |
| Follow-up Hdwy            | 3.5                                                                               | 3.3      | -                                                                                 | -     | 2.2  | -                                                                                 |
| Pot Cap-1 Maneuver        | 909                                                                               | 1067     | -                                                                                 | -     | 1597 | -                                                                                 |
| Stage 1                   | 1011                                                                              | -        | -                                                                                 | -     | -    | -                                                                                 |
| Stage 2                   | 950                                                                               | -        | -                                                                                 | -     | -    | -                                                                                 |
| Platoon blocked, %        |                                                                                   |          | -                                                                                 | -     |      | -                                                                                 |
| Mov Cap-1 Maneuver        | 887                                                                               | 1066     | -                                                                                 | -     | 1595 | -                                                                                 |
| Mov Cap-2 Maneuver        | 887                                                                               | -        | -                                                                                 | -     | -    | -                                                                                 |
| Stage 1                   | 1010                                                                              | -        | -                                                                                 | -     | -    | -                                                                                 |
| Stage 2                   | 928                                                                               | -        | -                                                                                 | -     | -    | -                                                                                 |
| Approach                  | WB                                                                                | NB       | SB                                                                                |       |      |                                                                                   |
| HCM Control Delay, s/v    | 8.96                                                                              | 0        | 6.54                                                                              |       |      |                                                                                   |
| HCM LOS                   | A                                                                                 |          |                                                                                   |       |      |                                                                                   |
| Minor Lane/Major Mvmt     | NBT                                                                               | NBRWBLn1 | SBL                                                                               | SBT   |      |                                                                                   |
| Capacity (veh/h)          | -                                                                                 | -        | 974                                                                               | 1592  | -    |                                                                                   |
| HCM Lane V/C Ratio        | -                                                                                 | -        | 0.067                                                                             | 0.023 | -    |                                                                                   |
| HCM Control Delay (s/veh) | -                                                                                 | -        | 9                                                                                 | 7.3   | 0    |                                                                                   |
| HCM Lane LOS              | -                                                                                 | -        | A                                                                                 | A     | A    |                                                                                   |
| HCM 95th %tile Q(veh)     | -                                                                                 | -        | 0.2                                                                               | 0.1   | -    |                                                                                   |

HCM 7th TWSC  
15: Grand Avenue & Lawn Drive

10/14/2024

| Intersection             |                                                                                   |      |                                                                                   |      |      |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 4.8                                                                               |      |                                                                                   |      |      |                                                                                   |
| Movement                 | WBL                                                                               | WBR  | NBT                                                                               | NBR  | SBL  | SBT                                                                               |
| Lane Configurations      |  |      |  |      |      |  |
| Traffic Vol, veh/h       | 28                                                                                | 13   | 10                                                                                | 19   | 15   | 13                                                                                |
| Future Vol, veh/h        | 28                                                                                | 13   | 10                                                                                | 19   | 15   | 13                                                                                |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 0                                                                                 | 3    | 3    | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop | Free                                                                              | Free | Free | Free                                                                              |
| RT Channelized           | -                                                                                 | None | -                                                                                 | None | -    | None                                                                              |
| Storage Length           | 0                                                                                 | -    | -                                                                                 | -    | -    | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92   | 92                                                                                | 92   | 92   | 92                                                                                |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 0                                                                                 | 0    | 0    | 0                                                                                 |
| Mvmt Flow                | 30                                                                                | 14   | 11                                                                                | 21   | 16   | 14                                                                                |

| Major/Minor          | Minor1 | Major1 | Major2 |   |      |
|----------------------|--------|--------|--------|---|------|
| Conflicting Flow All | 71     | 24     | 0      | 0 | 35   |
| Stage 1              | 24     | -      | -      | - | -    |
| Stage 2              | 47     | -      | -      | - | -    |
| Critical Hdwy        | 6.4    | 6.2    | -      | - | 4.1  |
| Critical Hdwy Stg 1  | 5.4    | -      | -      | - | -    |
| Critical Hdwy Stg 2  | 5.4    | -      | -      | - | -    |
| Follow-up Hdwy       | 3.5    | 3.3    | -      | - | 2.2  |
| Pot Cap-1 Maneuver   | 938    | 1058   | -      | - | 1590 |
| Stage 1              | 1004   | -      | -      | - | -    |
| Stage 2              | 981    | -      | -      | - | -    |
| Platoon blocked, %   |        |        | -      | - | -    |
| Mov Cap-1 Maneuver   | 926    | 1055   | -      | - | 1585 |
| Mov Cap-2 Maneuver   | 926    | -      | -      | - | -    |
| Stage 1              | 1001   | -      | -      | - | -    |
| Stage 2              | 971    | -      | -      | - | -    |

| Approach               | WB   | NB | SB   |
|------------------------|------|----|------|
| HCM Control Delay, s/v | 8.92 | 0  | 3.91 |
| HCM LOS                | A    |    |      |

| Minor Lane/Major Mvmt     | NBT | NBRWBLn1 | SBL   | SBT  |
|---------------------------|-----|----------|-------|------|
| Capacity (veh/h)          | -   | -        | 963   | 964  |
| HCM Lane V/C Ratio        | -   | -        | 0.046 | 0.01 |
| HCM Control Delay (s/veh) | -   | -        | 8.9   | 7.3  |
| HCM Lane LOS              | -   | -        | A     | A    |
| HCM 95th %tile Q(veh)     | -   | -        | 0.1   | 0    |



HCM 7th TWSC  
10: Wolf Road & Park Place

11/25/2024

| Intersection             |                                                                                   |      |                                                                                   |                                                                                   |                                                                                   |                                                                                    |
|--------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Int Delay, s/veh         | 1.4                                                                               |      |                                                                                   |                                                                                   |                                                                                   |                                                                                    |
| Movement                 | EBL                                                                               | EBR  | NBL                                                                               | NBT                                                                               | SBT                                                                               | SBR                                                                                |
| Lane Configurations      |  |      |  |  |  |  |
| Traffic Vol, veh/h       | 18                                                                                | 55   | 22                                                                                | 481                                                                               | 588                                                                               | 43                                                                                 |
| Future Vol, veh/h        | 18                                                                                | 55   | 22                                                                                | 481                                                                               | 588                                                                               | 43                                                                                 |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 46                                                                                | 0                                                                                 | 0                                                                                 | 46                                                                                 |
| Sign Control             | Stop                                                                              | Stop | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                               |
| RT Channelized           | -                                                                                 | None | -                                                                                 | None                                                                              | -                                                                                 | None                                                                               |
| Storage Length           | 0                                                                                 | -    | 145                                                                               | -                                                                                 | -                                                                                 | 75                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | 0                                                                                 | -                                                                                  |
| Grade, %                 | 0                                                                                 | -    | -                                                                                 | 0                                                                                 | 0                                                                                 | -                                                                                  |
| Peak Hour Factor         | 94                                                                                | 94   | 94                                                                                | 94                                                                                | 94                                                                                | 94                                                                                 |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 3                                                                                 | 4                                                                                 | 1                                                                                 | 3                                                                                  |
| Mvmt Flow                | 19                                                                                | 59   | 23                                                                                | 512                                                                               | 626                                                                               | 46                                                                                 |

| Major/Minor          | Minor2 | Major1 |       | Major2 |   |   |
|----------------------|--------|--------|-------|--------|---|---|
| Conflicting Flow All | 1230   | 672    | 717   | 0      | - | 0 |
| Stage 1              | 672    | -      | -     | -      | - | - |
| Stage 2              | 559    | -      | -     | -      | - | - |
| Critical Hdwy        | 6.4    | 6.2    | 4.13  | -      | - | - |
| Critical Hdwy Stg 1  | 5.4    | -      | -     | -      | - | - |
| Critical Hdwy Stg 2  | 5.4    | -      | -     | -      | - | - |
| Follow-up Hdwy       | 3.5    | 3.3    | 2.227 | -      | - | - |
| Pot Cap-1 Maneuver   | 198    | 460    | 879   | -      | - | - |
| Stage 1              | 512    | -      | -     | -      | - | - |
| Stage 2              | 577    | -      | -     | -      | - | - |
| Platoon blocked, %   |        |        |       | -      | - | - |
| Mov Cap-1 Maneuver   | 176    | 439    | 841   | -      | - | - |
| Mov Cap-2 Maneuver   | 176    | -      | -     | -      | - | - |
| Stage 1              | 475    | -      | -     | -      | - | - |
| Stage 2              | 551    | -      | -     | -      | - | - |

| Approach               | EB    | NB   | SB |
|------------------------|-------|------|----|
| HCM Control Delay, s/v | 19.76 | 0.41 | 0  |
| HCM LOS                | C     |      |    |

| Minor Lane/Major Mvmt     | NBL   | NBT | EBLn1 | SBT | SBR |
|---------------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)          | 841   | -   | 321   | -   | -   |
| HCM Lane V/C Ratio        | 0.028 | -   | 0.242 | -   | -   |
| HCM Control Delay (s/veh) | 9.4   | -   | 19.8  | -   | -   |
| HCM Lane LOS              | A     | -   | C     | -   | -   |
| HCM 95th %tile Q(veh)     | 0.1   | -   | 0.9   | -   | -   |

**Intersection**

Int Delay, s/veh 0.1

**Movement** EBL EBR NBL NBT SBT SBRLane Configurations 

Traffic Vol, veh/h 2 3 5 494 628 3

Future Vol, veh/h 2 3 5 494 628 3

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 0 - 40 - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 95 95 95 95 95 95

Heavy Vehicles, % 0 0 0 4 1 0

Mvmt Flow 2 3 5 520 661 3

**Major/Minor** Minor2 Major1 Major2

Conflicting Flow All 1193 663 664 0 - 0

Stage 1 663 - - - - -

Stage 2 531 - - - - -

Critical Hdwy 6.4 6.2 4.1 - - -

Critical Hdwy Stg 1 5.4 - - - - -

Critical Hdwy Stg 2 5.4 - - - - -

Follow-up Hdwy 3.5 3.3 2.2 - - -

Pot Cap-1 Maneuver 208 465 934 - - -

Stage 1 516 - - - - -

Stage 2 594 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 207 465 934 - - -

Mov Cap-2 Maneuver 207 - - - - -

Stage 1 513 - - - - -

Stage 2 594 - - - - -

**Approach** EB NB SB

HCM Control Delay, s/v 16.8 0.09 0

HCM LOS C

**Minor Lane/Major Mvmt** NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 934 - 310 - -

HCM Lane V/C Ratio 0.006 - 0.017 - -

HCM Control Delay (s/veh) 8.9 - 16.8 - -

HCM Lane LOS A - C - -

HCM 95th %tile Q(veh) 0 - 0.1 - -

## Exhibit A – Available Sight Distance





IDOT BDE MANUAL - CHAPTER 31

$$SSD = 1.47 Vt + 1.075 \frac{V^2}{a}$$

where: SSD = Stopping Sight Distance, ft (m)  
V = design speed, mph (km/h)  
t = brake time, 2.5 seconds  
a = driver deceleration, ft/s<sup>2</sup> (m/s<sup>2</sup>)

$$305 = 1.47 \ 40(2.5) + 1.075 \left( \frac{1600}{11.2} \right)$$





## Plan Commission Memorandum

11/15/2024

To: Plan Commission

From: Kelsey Fawell, Senior Planner  
Heather Valone, AICP, Director of Community Development

CC: Ellen Baer, Village Manager  
Mike Jurusik, Village Attorney

RE: PC-2024-02 - A Comprehensive Plan Amendment to the Long-Range Land Use Map, Conditional Use for a Planned Development, Variations, and Subdivision

### **Application Description**

McNaughton Development, LLC (the "Applicant") submitted an application requesting a comprehensive plan amendment, map amendment, conditional use permit for a planned development, variations, and subdivision for the subject property located at 5600 Wolf Rd. (the "Subject Property") (Figure 1). The project proposes the redevelopment of the existing multi-tenant office building and parking facilities to a townhome planned development.



Figure 1



### **Subject Property History**

The Subject Property has been owned by Casey and Fran Gaik (collectively, the "Property Owners") since March 1980. Mr. and Mrs. Gaik purchased the Subject Property from Timothy Christian School which operated on the Subject Property as a private religious school. The Property Owners requested a rezoning of the Subject Property from A - Single Family Residence District to O - Limited Office District in 1981. The Village denied the rezoning request. As a result, the Subject Property Owners filed suit against the Village. The legal proceedings resulted in a judgement that required the Village to rezone the Subject Property to the O - Limited Office District. The Property Owners operated their medical billing company at the Subject Property until they sold their business. The Property Owners now rent the building to office uses. As indicated in the application the Property Owners have experienced challenges in re-tenanting and are now contracted with the Applicant to sell the Subject Property.

### **Existing Conditions, Zoning and Comprehensive Land Use Plan (CLUP)**

The roughly 2.42-acre site is located at 5600 Wolf Rd. and is bounded by townhomes on the north (Heritage Springs), Park Pl. on the south, Wolf Rd. on the east, and single-family houses on the west. The Subject Property is currently developed with a multi-tenant office building and associated parking facilities. Access to the site is currently provided via Wolf Rd., which is under the jurisdiction of Cook County Department of Transportation and Highways (CCDOTH). The Subject Property is zoned O - Limited Office and is one a few properties within the Village with such zoning classification. Heritage Springs is a townhome development zoned R4 - Multiple-Family (R4 District) to the north of the Subject Property, that was granted a planned development in 1995. The properties to the west, southwest, and south of the Subject Property are A - Single Family Residence (Ridgewood Subdivision).

An existing detention basin abuts the northwest corner of the Subject Property. The detention basin is located within the Village's right-of-way (ROW) (the "Lawn Ave. ROW). The Lawn Ave. ROW directly adjacent to the Subject Property is 66 ft. by 225 ft. (14,850 sq ft. or 0.34 ac.). The detention basin is part of the stormwater management system for Heritage Springs and as such is maintained by Heritage Springs [it should be noted the Lawn Ave. ROW is included within the scope of the application made by the Applicant].

The Subject Property is a flag lot, which means that the lot extends past and behind the lot lines of the adjacent property. In being so, the Subject Property abuts both A Single-Family Residence and R4 District and is adjacent to unincorporated Cook County single-family residences. The Subject Property is identified as Office per the Village's 2003 CLUP. This long range land use designation is characterized as a commercial area consisting of low-rise (one to two story) office buildings, usually on separate parcels, and with dedicated parking.

### **Application Background and Summary**

The Application was first heard by the Plan Commission on August 13, 2024, and continued to September 24, 2024 (Attachment 1) and November 18, 2024. The original plans proposed eight townhome buildings on the Subject Property, for a total of 29 dwelling units. Access to the development was originally proposed off Park Pl. to the south. The Applicant submitted a revised plans on October 18, 2024, for 28 dwelling units and vehicular access via Wolf Rd. The Applicant submitted further revised plans on November 6, 2024, (Attachment 2) The Applicant's revised their plans, now propose nine townhome buildings, for a total of 29 units.

The buildings are as follows: seven three-units and two four-units. Each unit will feature a front-loading two-car attached garage and driveway. Most driveway widths range from about 19 to 20 ft., with units 8, 15, and 21 being the outliers with driveway depths of less than the minimum required length of 19 ft. Units 8, 15, and 21 only have sufficient area to park one vehicle on the driveway rather than two vehicles. The proposed buildings include front and rear balconies, and rear patio. The Applicant proposes constructing a continuation of Heritage Ct. to the southeast through the site to the development's access driveway proposed along Wolf Rd. Heritage Ct. connects to 55<sup>th</sup> St. to the north. The existing Heritage Ct. is a private road to the north of the Subject Property owned and maintained by the Heritage Springs Homeowner's Association. The Applicant's plans indicate the new portion will match the existing road's width. An automatic gate will be separating the proposed development from existing Heritage Springs to the north. Access via the gate will only be granted to residents of both developments with clicker-access and emergency services. The Applicant states in the application that the gate will be improved with an Opticom system that will give emergency services access similar to the systems on streetlights.

In addition to the deviations from Code sought in conjunction with a planned development, The Applicant is requesting approval of the following waivers:

1. A waiver of the 5 acre minimum land area requirement under Section 10-8-3 (Guidelines) of the DCO.
2. Reduction of certain planned development submission materials under Section 10-8-8 (Submittal Requirements) of the DCO (Subsection 10-8-8(B.4.d.)) The Applicant is seeking a waiver from the required site lighting plan and financial information submittals.

The Applicant held a community meeting for properties within 250 ft. of the Subject Property on July 23, 2024. The Applicant elected to hold this meeting to introduce the development to the surrounding properties and receive feedback on the proposal in advance of the August 13, 2024, public hearing.

### **Building and Site Design**

The Applicant is proposing a development only comprised of townhomes. As described above there are nine townhome buildings that are either three or four units. Three Three-unit buildings are proposed on the southern and western boundaries of the site that are directly abutting single family residences in the Ridgewood Subdivision. Along the eastern boundary, the Applicant is proposing two three-unit buildings and two four-unit buildings along the northeastern side adjacent to the condominium building addressed 5580 Wolf Rd. Each townhome unit consists of two car garages with full width driveways, most of which that are a minimum length of 19 ft. Units 8, 15, and 21 the northwesternmost unit, has a proposed driveway lengths less than the required 19 ft., meaning only a single car at a time can be parked on the driveway. All townhome units have two outdoor areas in the form of at-grade patios in the rear of the buildings and covered balconies on the second story (referred to in the application materials as "middle level deck". The units are proposed with three bedrooms. The Applicant states in the application materials that more than half of the units can accommodate elevators. The Applicant also states in the application that the base purchase prices range is \$ 800,000 to \$850,000.

The Applicant is proposing exterior materials that are generally considered higher quality. The submitted materials board indicates the use of brick veneer, fiber cement board, asphalt shingles for the majority of the building elevations. Standing seam metal roofs are proposed for the bay windows and Juliet balconies. Various architectural accents are proposed such as corbels, columns, soldier brick courses, and banding board. Vinyl doors and windows are also proposed. The Applicant proposes varying the locations of certain façade materials amongst homes within the same building. Units within the same building are proposed to have varying color doors from one another.

The private road is proposed to cut through the site, with four buildings on the northeast side and five buildings on the southeast side. A sidewalk five feet in width is proposed along the east side of the street, which will lead out to Wolf Rd. and connect to the existing sidewalk heading north on Wolf Rd. The Applicant has not yet indicated whether on-street parking will be allowed, but six guest parking spaces are located in the southwest corner of the site adjacent to the roadway and an additional two parallel spaces are proposed slightly to the north of the other guest spaces. A vehicle turnaround area is proposed immediately south of the gate separating the Subject Property from Heritage Springs to the north.

### **Engineering**

Please see the memorandums prepared by the Village Engineer (Attachments 3 and 4) for a detailed discussion of the Applicant's stormwater management proposal and other engineering related improvements.

### **Approval Standards**

The requests that comprise the Application are required to comply with standards with the Village's DCO. Each type of request and its accompanying standards are detailed below.

#### **A. Comprehensive Plan Amendment to the Long-Range Land Use Map Standards**

Goals and objectives set forth in Section (10-1-2: PURPOSE AND INTENT) of the DCO:

- a. To promote the orderly and beneficial development of the Village of Western Springs in accordance with the village's official land use plan.**
- b. To promote the public health, safety, morals, comfort and general welfare of the citizens of the Village of Western Springs.**
- c. To protect the character and stability of residential, business and industrial areas.**
- d. To provide for orderly growth and development; to afford adequate facilities for the safe, convenient, and efficient means for the traffic circulation of its population; and to safeguard the public against flood damage.**
- e. To provide adequate light, air, privacy and convenience of access to Subject Property.**

- f. To divide the Village of Western Springs into districts of such number, shape, area and of such different classes, according to the use of land and buildings and the intensity of such use, as may be deemed best suited to carry out the purposes of this ordinance.**
- g. To prohibit locations and uses of buildings or structures and uses of land that are incompatible with the type of development planned for specified zoning districts in the Village of Western Springs.**
- h. To regulate and restrict the location and use of buildings, structures and land for trade, industry, residence, and other uses, and to regulate and restrict the intensity of such uses.**
- i. To prescribe reasonable rules and regulations governing the subdivision and platting of land; the preparation of plats; the location, width, and course of streets and highways; the installation of utilities, street pavements, and other essential improvements; and the necessary public grounds for schools, parks, playgrounds, and other public open spaces.**
- j. To prevent additions to and alterations or remodeling to existing buildings or structures in such a way as to avoid the restrictions and limitations lawfully imposed hereunder.**
- k. To protect against fire, explosions, noxious fumes and other dangers.**
- l. To fix reasonable standards to which buildings and structures shall conform.**
- m. To provide for the gradual elimination of those uses that would not now be permitted in the districts in which they are located and are adversely affecting the orderly and beneficial development of the Village of Western Springs.**
- n. To define and limit the powers and duties of administrative officers and bodies as provided herein.**
- o. To prescribe penalties for the violation of and methods for the enforcement of the provisions of this ordinance or any amendment thereto.**

The Subject Property is notably one of the few sites designated O - Limited Office within the Village. The Village's future land use map designation is Office. The future land use district is described as commercial areas consisting of low-rise (one to two story) office buildings, usually on separate parcels and with dedicated parking. The Subject Property is adjacent to designated residential uses: to the north is multiple-family (Heritage Springs townhomes and residential condominium building), to the south and west is single-family residential, while to the east (across Wolf Rd.) is unincorporated Cook County residential.

The Subject Property is currently underutilized, per the Application documents that state the office building has only been partially occupied in recent years. The



Comprehensive Plan Amendment would allow for continuation of residential redevelopment, one that connects to the planned development Heritage Springs (via Heritage Ct.) to the north. The Development Plans propose the construction of a new portion continuation of Heritage Court, as a private street, within the Property to the south, which will only be available to residents of both the Heritage Springs Subdivision and the Heritage Crossing Subdivision to potentially minimize traffic through the single-family neighborhood immediately east of the Property. A vehicular turnaround area is proposed immediately south of the gate in the event vehicles do attempt to cut through the development and dead end at the gate. AutoTURN analysis is needed for the turnaround area to verify it can be utilized for passenger vehicles. Attachment 5 contains the Village's consulting traffic engineer's (Kimley Horn) review of the submitted traffic study. Recommendations include removal of the two proposed parallel guest parking spaces due to poor visibility and the use of grasscrete or other material to discourage the use as parking spaces. A public sidewalk within the Park Pl. ROW is also recommended.

**B. Map Amendment Standards**

The Plan Commission considered each of the seven (7) standards set forth in DCO; Chapter 3 (Administrative Bodies and Procedures); Subsection 10-3-12(F)(1) (Map Amendments) of the DCO and found as follows:

**a. Existing uses of property within the general area of the Subject Property in question.**

The Subject Property is currently zoned O - Limited Office District and is immediately surrounded by single and multi-family residential uses, as follows:

- (a) North of the Subject Property; R4 District: townhomes (Heritage Springs);
- (b) South of the Subject Property: A - Single-Family Residence District; single family houses;
- (c) East of the Subject Property: Single-Family Residence District Unincorporated Cook County): single family houses; and
- (d) West of the Subject Property A - Single-Family Residence District; single family houses.

**b. The zoning classification of Subject Property within the general area of the Subject Property in question.**

The properties in the general area are mostly single-family residential zoning districts with an R4 District property to the north, as listed in the previous standard. The neighboring property to the north, the Heritage Springs Subdivision, was granting a rezoning, conditional use, and planned development for the construction of 14 townhome units, two stormwater detention facilities, a private road, with curb and gutter and drainage improvements, sidewalks and accompanying utilities in 1995. The Property was previously zoned A - Single Family Residence and C-2 Community Shopping Center District. This development predated the Village's Comprehensive Plan which was adopted in 2003.

**c. The suitability of the property in question to the uses permitted under the existing zoning classification.**

Prior to 1982, the Subject Property had been zoned single-family similar to that of adjacent properties to the north (prior to Heritage Springs conditional use permit for planned development), south, and west. The Subject Property was designated such zoning classification upon annexation into the Village. While the surroundings area has not experienced significant use change and is slated to remain residential within the 2003 Comp Plan.

The Subject Property is undersized in terms of dwelling unit per acre requirement. However, with the inclusion of the Lawn Avenue ROW Area, the combined property exceeds the minimum lot area required by Section 10-6-5(C)(2) of the DCO. The Applicant has sought a waiver from the Planned Development standard for minimum total lot size (five (5) acres). The Applicant is seeking variations from the R4 District requirements. Please see section Sections "D. Exceptions from Applicable District Regulations" and "E. Variations from Applicable District Regulations" below for a discussion of the requested zoning relief under the planned development regulations.

**d. The trend of development, if any, in the general area of the Subject Property in question, including changes if any, which have taken place in its present zoning classification.**

The recent trend of development in the general area of the Subject Property has remained the same for decades, consisting of mostly house renovations, additions, and tear downs for new construction of single-family residences. Most of the surrounding residential neighborhoods were subdivided prior to 1990, while the existing Heritage Springs townhome development was constructed in the late 1990's into the early 2000's to the north of the Subject Property as a multiple-family development. There is also another multiple-family building with detached, dedicated parking garage buildings serving the units immediately to north of the Subject Property (5580 Wolf Rd. Spring Manor Condo Association). The Subject Property was rezoned to allow for office uses in the 1980s and has remained consistent with the existing condition for more than 30 years. As the years have progressed, the occupancy of the office building has been decreasing.

**e. The suitability of the property in question for permitted uses listed in the proposed zoning classification.**

The zoning of the Subject Property prior to 1980's was for single family residential uses.

**f. The compatibility of the surrounding Subject Property with the permitted uses listed in the proposed zoning classification.**

The surrounding properties all have either A or R4 residential zoning.

**g. The objectives of the current comprehensive plan for the Village and the impact of the proposed amendment on the said objectives.**

The objectives of the current Comprehensive Plan for the Village will be met by the potential granting of the map amendment, and it will not have a negative impact on the objectives. Please see responses within Section A 'Comprehensive Plan Amendment to the Long-Range Land Use Map Standards' for additional information pertaining to official goals and objectives of the Comprehensive Plan. Development of the Subject Property, as proposed by the Applicant, will result in the elimination of an aging and underutilized office building.

**C. Conditional Use Permit Standards** The Plan Commission has considered each of the seven standards set forth in Title 10 (DCO); Chapter 3 (Administrative Bodies and Procedures); Subsection 10-3-14 (G) (Conditional Uses: Standards) of the Village Code and finds as follows: Under the R4 District, the Development is classified as a permitted conditional use for a planned development.

**1. That the establishment, maintenance or operation of the conditional use will not be detrimental to or endanger the public health, safety, morals, comfort or general welfare.**

The Applicant states in the application materials that the establishment, maintenance or operation of the development will not be detrimental to or endanger the public health, safety, morals, comfort or general welfare. The proposed residential development will enhance the community by being more in context with the surrounding residential uses. The proposed number of dwelling units will not generate enough traffic to become a detriment to the public. The Applicant submitted a Traffic Impact Study based on the current site plan confirmation that demonstrates the proposed impacts. The Traffic Impact Study includes the current street and access via Wolf Rd.; however, the unit count must be updated to 29 units. The previously submitted Traffic Impact Study although for the previous site plan did include 29 units. As such the correction to the current Traffic Impact Study is unlikely to show significantly different results. The Traffic Impact Study also includes information on pedestrians and bicycles in the immediate vicinity. The new residential use should provide a safe environment for residents of the Subject Property though the installation of a sidewalk within the development and within the Wolf Rd. ROW. Based on the submitted Traffic Impact Study pedestrian and bicycle counts, staff recommends the Applicant install a sidewalk to the south of the Subject Property, along Park Pl. A sidewalk along Park Pl. would reduce the number of pedestrian and vehicle interactions within proximity to the Subject Property and the intersection of Wolf Rd and Park Pl. The recommendation would further the application's ability to meet this standard. Attachment 5 contains the Village's consulting traffic engineer's review of the submitted traffic study.

**2. That the conditional use will not be injurious to the uses and enjoyment in the immediate vicinity for the purposes already permitted, nor substantially**

**diminish and impair property values within the neighborhood in which it is to be located.**

The Applicant states in the application materials that the establishment, maintenance or operation of the development will not be detrimental to or endanger the public health, safety, morals, comfort or general welfare. The proposed residential project is more compatible with the surrounding residential uses than the existing office building. The proposed development will generate less traffic than the existing office zoning.

The Applicant is proposing to provide a stormwater management system that exceeds the minimum requirements 10-11 of the DCO. The Applicant is required to provide volume control and accept the natural flow of storm water from the La Grange Highlands area. The Applicant is not required to provide stormwater detention on the site as the size of the Subject Property is below the three-acre threshold. The Applicant is proposing to provide stormwater detention by improving the existing stormwater detention basin in the Lawn Ave. ROW. The basin is proposed to be deepened to gain added stormwater storage. The Applicant's calculations show the detention basin's capacity will essentially be doubled as compared to the current conditions. They show an increase in storage in the basin from the existing 0.729 acre-ft to 1.64 acre-ft in the proposed condition. The amount of stormwater that enters the Village from the La Grange Highlands poses issues for Subject Property and many properties that are downstream. The Applicant is requesting a variation from the Village's stormwater requirements to allow standing water in the street during major rain events. The Applicant has redesigned the site from the originally proposed plans to relocate the townhomes further from the standing water. Although the proposed Project will not solve the stormwater issues in the area, it will provide incremental benefits and not further burden the issue.

The Applicant states in the application materials that the extension of Heritage Ct. provides access for emergency vehicles to access both existing Heritage Springs and the proposed Heritage Crossing development. The existing Heritage Ct. terminuses at the shared Subject Property line to the north with the Subject Property. The existing private street is only 24 ft. wide and does not provide a suitable turnaround area for the Village's Fire Department ladder truck. There is, however, a turnaround area for passenger vehicles. The proposed extension of Heritage Ct. and the access for emergency vehicles via the proposed Opticom system will improve emergency services access to the existing development. Staff recommendations include ensuring the gate and Opticom system are high enough off the ground, so they are not impacted by water flooding during major rain events.

- 3. That the establishment of the conditional use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.**

The other adjacent properties are fully developed and those that are occupied are being used for permitted uses within their respective zoning districts. In the case of Heritage Springs to the north, it was granted a conditional use for a planned development in August 1995. The redevelopment of the Subject Property for townhouses is consistent with the trend of development for the properties along the north and west sides of the Subject Property that are within the Village. The Subject Property was zoned for residential use prior to the rezoning to the O - Limited Office District.

**4. That adequate public utilities, access roads, drainage and/or necessary facilities have been or will be provided.**

The Project proposes construction and continuation of Heritage Ct. to the north of the Subject Property, connected via an automatic gate only accessed by residents of both Subject Property and Heritage Springs, as well as emergency services. The Project proposes main access entrance from Wolf Rd. to the east. A five-foot sidewalk is proposed on the east side of Heritage Ct., and along Wolf Rd. to the south of the access entrance into the development.

The Development proposes to connect to the Village's existing watermain system which is adjacent to the Subject Property within Heritage Ct. The sanitary sewer system will be provided by the La Grange Highlands Sanitary District, which has service jurisdiction over the Subject Property. The Applicant has provided written confirmation that the La Grange Highlands Sanitary District can provide sanitary service to the project. The Village contracted with a consultant (HR Green) that found the Village's water system does have capacity to provide water utilities to the development.

As indicated above, the Applicant is complying with the Village's requirements for stormwater management. The development also complies with the regional stormwater management authority, the Metropolitan Water Reclamation District of the Greater Chicago Area (MWRDGC) requirements. The Applicant is also proposing to exceed the stormwater manage requirements by providing stormwater detention within the Lawn Ave. ROW. The Applicant is requesting a variation from the stormwater requirements related to storage of water in the street. It should be noted that Heritage Springs to the north experiences standing water in the streets during major rain events today.

**5. That adequate measures have been or will be taken to provide ingress or egress so designed as to minimize traffic congestion in the public streets.**

The Applicant proposes the construction and continuation of privately owned Heritage Ct. throughout the Development in order to connect the new roadway to the existing portion of Heritage Ct. to north of the Subject Property that serves Heritage Springs. The connection of the new portion of Heritage Ct. to the existing portion of Heritage Ct. will be managed by an automatic gate only accessed by residents of both Heritage Crossing and Heritage Springs, as well as Village public safety and emergency service vehicles. A vehicular turnaround area immediately



to the south of the gate, for passenger vehicles, is proposed. The project proposes a main access entrance from Wolf Rd. along its east boundary line. A five-foot sidewalk is proposed on the east side of Heritage Ct. The Applicant has provided a traffic study that states there is sufficient ingress and egress and undue burden on the surrounding roadway system. The plans indicate eight guest parking spaces. Six spaces are proposed between unit numbers 23 and 24 per the engineering plans. It should be noted that the site plans prepared by BSB Design show seven parking spaces on the southwest side of the proposed street. Whereas the engineering plans show six parking spaces. This inconsistency should be corrected. The remaining two parking spaces are separate from the other seven pull-in spaces and are designed as parallel to the street. These two spaces are located generally adjacent unit numbers seven and eight. Due to poor visibility, the Village's Traffic Consultant is recommending removal of those two spaces.

**6. That the proposed conditional use is not contrary to the objectives of the current Comprehensive Plan for the Village.**

The Village's future land use map designates this property as Office. Please see responses within Section A 'Comprehensive Plan Amendment to the Long-Range Land Use Map Standards' for additional information pertaining to official goals and objectives of the Comprehensive Plan.

**7. That the conditional use shall, in all other respects, conform to the applicable regulations of the district in which it is located, except as such regulations may, in each instance, be modified pursuant to the recommendations of the Plan Commission and approved by the Village Board.**

The Applicant states in the submitted application materials that construction of the proposed development will conform to the applicable regulations of the R4 District, except for the zoning relief to certain regulations as requested from certain R4 District requirements. See Section E "Exceptions from Applicable District Regulations" and Section F "Variations from Applicable District Regulations" below for discussion of the requested exemptions and variations.

**D. Guidelines for Planned Developments:** The following guidelines (DCO Section 10-8-3) will be used by the Plan Commission and Village Board to evaluate the suitability of proposed planned developments. These guidelines represent sound planning principles which the Village thinks should be incorporated into planned developments. However, it is not intended that each and every one of these guidelines be rigidly conformed to, provided that just cause for any departure from these guidelines is demonstrated.

**A. The planned development should be compatible with the character of the underlying zoning district in which it is located.**

As indicated above, the surrounding properties to the west and south of the Subject Property are zoned A Single-Family Residence and improved with single family houses. The properties to the east are unincorporated Cook County single

family houses. The properties to the north and northeast are zoned R4 and improved with townhouses and condominiums respectively.

**B. The planned development should be consistent with the official planning policies and the Official Land Use Plan of the Village.**

The Applicant is requesting a Map Amendment and Amendment to the Official Future Land Use Map.

**C. The planned development should preserve the value of the surrounding residential area.**

The proposed development would remove the existing office building use and replace it with townhouses similar to the neighboring property to the north. The Applicant submitted fiscal impact projections showing that the development will positively impact all taxing districts and generate impact fees. The Director of Finance reviewed the submitted information and found the information to be reasonable (Attachment 6). The Applicant is requesting a waiver from the market study submittal. However, the Applicant has submitted data on other townhouse developments in Western Springs to demonstrate the market demand for the housing type and base cost.

**D. Any unusual physical, topographical or historical features of the site of the planned development which are of importance to the people of the area or the community should be preserved.**

The Subject Property is a land locked parcel that has remained in the existing condition for several decades. The shape of the parcel is also atypical. There is no historical significance to the existing office building and its retention and continued use as an office building, which has been mostly vacant for years, is not of importance to the people of the area or the community. As indicated in above, the property receives a significant amount of stormwater from the neighboring unincorporated Cook County properties. The Applicant is proposing to raise the grade of the site two feet in order to match where the Heritage Court roadway connects with the Subject Property line to the north.

**E. The minimum area of a planned development should be five (5) acres.**

The Applicant is seeking a waiver from this requirement. The property with the inclusion of the Lawn Ave. ROW does meet the minimum lot area requirement per the R4 District. Recent planned developments (Field Park 17 Ogden Ave. townhomes, Foxford Station) have been granted waivers from this guideline.

**F. Yards along the periphery of a planned development should be compatible with the yards of the adjacent properties.**

Table 1 below provides a comparison of the required yards for the neighboring properties and the requested yards:

Table 1

| Zoning District                           | Minimum Yards               |                                                            |                                                 |           |
|-------------------------------------------|-----------------------------|------------------------------------------------------------|-------------------------------------------------|-----------|
|                                           | Front                       | Interior Side                                              | Corner Side                                     | Rear      |
| A Single-Family                           | 50 ft. or the block average | 10% of lot width for one side and 10 ft. on the other side | 15 ft. or block average for reverse corner lots | 35 ft.    |
| R4 Multiple-Family                        | 25 ft.                      | 25 ft.                                                     | 30 ft.                                          | 30 ft.    |
| R4 Planned Development (Heritage Springs) | 20 ft.                      | 8.2 ft.                                                    | 20 ft.                                          | 20 ft.    |
| Requested                                 | 7 ft.                       | 6.67 ft.                                                   | 14.42 ft.                                       | 12.75 ft. |

The

Applicant has provided a landscaping plan that shows perimeter landscaping and a fencing around the property to screen the development from the surrounding properties. Attachment 7 contains the Village's consulting landscape architect's (Hitchcock Design Group) review of the submitted landscaping plans. Recommendations include shifting location of and verification of certain tree species to provide for a more enhanced pedestrian experience throughout the development.

**E. Exceptions from Applicable District Regulations:** The Plan Commission considered each of the five (5) below standards set forth in Title 10 (DCO); Chapter 8 (Planned Developments); Subsection 10-8-4(B)(1) (Site Design Regulations) of the Municipal Code and finds that the exceptions from the applicable R4 District regulations are needed to help achieve the intended benefits of a planned development. The exceptions from the applicable R4 District regulations may be authorized because:

- a. **Such exceptions are solely for the purpose of promoting a better development that will be beneficial to the residents or occupants of the planned development as well as those of surrounding properties.**
- b. **In residential planned developments, the maximum number of dwelling units allowed shall not exceed by more than forty percent (40%) of the number of dwelling units permitted in the underlying zoning district.**
- c. **The area of open space provided in a planned development shall be at least twenty-five percent (25%) more than that required in the underlying zoning district.**
- d. **Along the periphery of such planned developments, yards shall be provided as required by the regulations of the underlying zoning district.**

- e. Building height shall not exceed thirty-five feet (35') except that utilization of a building existing on the site which is taller than thirty-five feet (35') shall be permitted.**

A variation to the DCO has been requested so that the Development can meet this exception condition. The variation is proposed as:

The Applicant has stated in the submitted application materials that the development will be consistent with the standards above as the development is promoting a more desirable development that has incremental benefits to the neighboring properties. The development with the inclusion of the Lawn Ave. ROW will meet the minimum lot area of the R4 District. The Applicant's plans show that the proposed open space will be increased over the existing condition. The R4 District has no minimum requirement for open space. The Applicant is seeking variations from the yard and height requirements. Similar to a recent townhome planned development approval, the Applicant is seeking the following variations from height and front and corner side yards regulations:

"Building height shall comply with the Zoning District regulations approved by the Village for the planned development, except that a variation of not more than 9% above the maximum height of buildings and structures may be allowed as part of the approval of a planned development"

"Along the periphery of such planned developments, setback yards shall be provided as required by the regulations of the underlying zoning district, except that, in the R4 - Multiple-Family Residence Zoning District, variations of not more than sixty-one percent (65%) to the front yard regulation and the corner side yard regulation may be allowed as part of the approval of the planned development"

Although the Applicant is seeking a variation from the planned development height standard, the same variation from the R4 district height requirements would not be needed. Under the R4 District, the two-family buildings have a height restriction of 35 ft. or two and a half stories, whichever is less (DCO Section 10-5-5(G)(1)). Multiple-Family dwellings not exceeding six units have a height restriction of 40 ft. or three stories whichever is less. If the Applicant was not seeking a planned development a variation for the building height would not be needed.

- F. Variations from Applicable District Regulations:** Standards - The Plan Commission considered each of the five (5) standards set forth in Title 10 (DCO); Chapter 3 (Administrative Bodies and Procedures); Subsection 10-3-12(F)(2) (Text Amendments) of the Municipal Code and finds as follows:

- a. The degree to which the proposed variation has general applicability within the Village at large and is not intended to benefit specific Subject Property.**

- b. The consistency of the proposed variation with the objectives of this Ordinance and the intent of the applicable zoning district regulations.**
- c. The degree, if any, to which the proposed amendment would create nonconformity.**
- d. The consistency of the proposed amendment with the Comprehensive Plan.**
- e. The degree, if any, to which the proposed amendment contradicts Village policy as established in previous rulings on petitions involving similar circumstances.**

The intent of a planned development (DCO Section 10-8-2) is to afford greater choice in the types of development available to the public by allowing a development that would not be possible under the strict application of the other requirements of the DCO. Planned developments generally provide relief from more than one requirement in order to provide a better design or additional public benefits. The Applicant has indicated in the application that the additional stormwater detention, landscaping, and architecture are proposed to offset the proposed variation requests and additional design benefits. architectural plans

The Applicant is requesting the following exceptions from the DCO a listed in Table 2:

**Table 2**

| Code Section                              | Requirement | Original  | Proposed  |
|-------------------------------------------|-------------|-----------|-----------|
| 10-6-5(D) Minimum Development Parcel Size | 5 ac.       | 2.76 ac   | 2.76 ac.  |
| 10-6-5(E)(1): Minimum Front Yard          | 25 ft.      | 14 ft.    | 7 ft.     |
| 10-6-5(E)(2): Minimum Corner Side Yard    | 25 ft.      | 11.5 ft.  | 14.48 ft. |
| 10-6-5(E)(3): Minimum Interior Side Yard  | 30 ft.      | 8 ft.     | 6.67 ft.  |
| 10-6-5(E)(4): Minimum Rear Yard           | 30 ft.      | 14 ft.    | 12.75 ft. |
| 10-8-4(B)(1) (e) Maximum Building Height  | 35 ft.      | 37.83 ft. | 36.33 ft. |

The Applicant is requesting relief from the required front yard, minimum interior side yard, and rear yard due size and design of individual lots of the development. As the homes are proposed to encroach, the development's proposed accessory structures also require relief: a/c units, balconies, patios, bay windows. The Applicant has indicated no additional accessory structures will be permitted to encroach within the required yards.

Table 3 provides comparable information on relevant previously approved planned developments that include townhomes:



Table 3

| Development Description | Minimum Yards |                                                                                       |             |           | Development Parcel Size (ac.) | Height (ft.)         |
|-------------------------|---------------|---------------------------------------------------------------------------------------|-------------|-----------|-------------------------------|----------------------|
|                         | Front         | Interior Side                                                                         | Corner Side | Rear      |                               |                      |
| Heritage Springs        | 20 ft.        | 8.2 ft.                                                                               | 20 ft.      | 20 ft.    | 2.53                          | Estimation 2 stories |
| Timber Trails           | 25 ft.        | 10% or 10 ft., whichever is lesser on one side and 10 ft. to 25 ft. between buildings | 20 ft.      | 30 ft.    | 105.91*                       | 30                   |
| 17 Ogden Ave.           | 15 ft.        | 15 ft.                                                                                | 15 ft.      | 30 ft.    | 0.32                          | 36                   |
| Requested               | 7 ft.         | 6.67 ft.                                                                              | 14.48 ft.   | 12,75 ft. | 2.76                          | 36.33                |

\* Includes both single family and townhome acreage.

The development is seeking several variations from the DCO Chapter 10 Subdivisions. The requested variations appear to generally be acceptable given that the street is to be a privately owned and maintained street and that several of these variation requests were previously granted to Heritage Springs.

#### 10-10-7 Street Design Criteria

- ii. Pavement Width - Code requires 27 ft street width from face of curb to face of curb. The development proposes 23 feet.
- iii. The proposed horizontal curve is less than the minimum 150 foot radius and includes reserve horizontal curves that don't meet Code.
- iv. The proposed vertical curves are to be a minimum of 100 feet in length, but the plans show 50 feet length vertical curves.

Section 10-11-11 C. 2, streets are not to be used for the storage of excess stormwater, ponding depths shall not encroach more than three feet (3') on the adjacent traffic lane and shall not remain flooded for more than eight (8) hours for any event less than or equal to the 100-year event. The proposed design does have street flooding across the full width of the roadway at the north end of the development, however this condition is unavoidable as the proposed roadway is to connect to the existing development roadway that is lower in elevation and currently floods during flooding events. The site plan grading has been revised since the previous submittal to ensure that driveway access to each unit is maintained during a flooding event so all owners will be able to exit to Wolf Road during a flooding event. Overall, it is staff's opinion the street connection to the existing development is a positive for the new and existing developments so granting a variation for this condition would be appropriate.

The Applicant is requesting a variation from the Village related to the installation of public sidewalk within the Park Pl. right-of-way. This is a variation from Village Code 8-2-1 which requires all new development to install sidewalk within rights-of-way that front on public streets. Staff is not recommending approval of this variation.

### **Public Comment**

As of the writing of this staff report, staff has received a number of comments on the application from the neighboring residents. Attachment 11 contains all comments received since the last Plan Commission meeting on September 24. Any additional written comments received after the transmittal of the Plan Commission packet will either be provided by email prior to the meeting or given to members at the meeting.

### **Conclusion**

The Applicant is proposed to convert the existing office site to a townhome development that will continue the existing private Heritage Ct. roadway. The application includes a request to amend the Village's future land use map and zoning map consistent with the request made by the neighboring property to the north. As stated in the application materials the Applicant is seeking a conditional use for a planned development to construct a development that is consistent with other developments in the Village and due to the challenges to reoccupy the site for office uses and infill nature of the Subject Property. The Applicant is also seeking relief from the DCO as part of a planned development.

The Plan Commission has a number of options in recommending approval or denial of the requested comprehensive plan amendment to the long-range land use map, zoning map amendment, conditional use permit for a planned development, variations, and subdivision:

1. Approval as presented for substantial conformity with the provisions of the DCO.
2. Approval as above with modifications to be accepted by the Applicant.
3. Denial of the plans as presented for failure to be in substantial conformity with the DCO.

Staff is recommending approval of the application with conditions. Upon review of the application, should the Plan Commission determine that the standards for comprehensive plan amendments to the long-range land use map, map amendments, conditional use permits, planned development guidelines and exceptions, variations, and subdivisions have been met, then staff suggests that the Plan Commission recommend the application to the Village Board with the following conditions:

### **General**

1. The Applicant shall comply with all of the applicable federal, state, county, local and special district laws, ordinances and regulations, including the provisions of the Village's Municipal Code, relative to the construction and maintenance of the Development, except as otherwise modified by Village approvals.
2. The Applicant shall revise Declaration of Covenants, Conditions and Restrictions for the homeowner's association in accordance with comments provided by the Village Attorney (Attachment 8) and shall file the Declaration with the Cook County Clerk's Office, Recording Department prior to the sale of any portion of the Property to any other person. The Declaration shall require that at the closing of each dwelling unit,

the Applicant shall allocate \$600.00 (or an amount equal to three (3) months' Community Assessment) and pay said amount into a "Capital Reserve" fund, as defined and required by the Declaration, for maintenance reserve account for the benefit of and use of the homeowner's association for maintenance purposes consistent with the Declaration.

3. Prior to the issuance of a building or development permit, the Applicant shall submit a construction schedule, routing, construction staging, restoration plan and phasing plan with map and plan exhibits, which are in conformance with the final set of Village approved engineering and construction plans for the Development. These plans shall identify construction access routes, temporary detours, regular street cleaning intervals and refuse removal and other appropriate safety, restricted access and "good neighbor" practices. Standard Village construction hours shall apply except as otherwise permitted by the Village Manager.
4. Update Plat of Abrogation, Plat of Subdivision, and Plat of Vacation per the comments of the Village Engineer and Village Attorney (Attachment 9).
5. The Applicant's proposes to maintain the current Wolf Road access point as the primary point of ingress and egress for the Development, subject to Cook County approval of certain Wolf Road right-of-way modifications (i.e., required Project-related reconfiguration work to Wolf Road that may include a deceleration / turning lane) and modifications to the existing drainage culvert improvements that will allow it to construct the Development consistent with the current Site Plan. The Village's consideration of approval of the Development is conditioned on Cook County's approval of the current Wolf Road access point as the primary point of ingress and egress for the Development based on the current Site Plan and the Applicant's agreement to abide by the conditions of approval required of the Applicant by Cook County relative to the Wolf Road right-of-way modifications and modifications to the existing drainage culvert improvements. The Applicant, at its cost, shall be responsible for entering into all easements, maintenance agreements and other binding documents with Cook County and completing the Wolf Road right-of-way modifications and any modifications to the existing drainage culvert improvements. Other than the Village's plan review process, the Village shall not be obligated to participate in the Cook County required Wolf Road right-of-way modifications and modifications to the existing drainage culvert improvements that are necessary to construct the Development under the current Site Plan. That will allow it to construct the Development consistent with the current Site Plan. In the event Cook County's does not approve of the current Wolf Road access point as the primary point of ingress and egress for the Development, the Applicant will have to petition for an amendment to the planned development ordinance and present a revised Site Plan with a modified point of ingress and egress for the Development for review and consideration by the Plan Commission at a public hearing and then review and consideration by the Village Board.
6. Prior to the issuance of a building or development permit, the Applicant shall enter into a Maintenance and Development Agreement with the Village, as prepared by the Village Attorney and approved by the Village Board, which includes conditions

for the construction and long-term maintenance of the Development consisting generally of the following items:

- a. Prior to the issuance of a building or development permit, the posting of an irrevocable letter of credit or other form of security with the Village to secure the completion of the required SSA Maintained Improvements and the landscape improvements for the Development (the "Developer" Security"). The Developer Security shall be in a form acceptable to the Village Attorney and of a dollar amount to be determined by the Village Engineer and shall be managed by the Village in accordance with Subsection 10-10-19(2) (Land Dedications and Completion, Maintenance and Acceptance of Improvements; Posting of a Bond, Cash, or Other Securities) of the Municipal Code;
- b. The posting of a two-year maintenance bond (performance and payment bond) for the SSA Maintained Improvements and the landscape improvements;
- c. Prior to the issuance of a building or development permit, the submittal of construction access plans for the Development requiring the Applicant and all of its employees, consultants and development and construction crews to use Wolf Road as the primary point of ingress and egress until the required Project-related reconfiguration work to Wolf Road and the drainage culvert area is commenced. The alternate point of ingress and egress to the Development will be 55th Street and the existing Heritage Court within the Heritage Springs Subdivision;
- d. The Applicant shall either enter into a private tow company contract to enforce the community parking spaces with the Development or enter into a private parking / private street enforcement agreement with the Village that will allow for the posting of appropriate parking regulation signs and vehicle speed signs to enable Village police officers to issue parking tickets and traffic citations to enforce the parking and traffic regulations of Heritage Court;
- e. At the request of the Applicant and the homeowners association for Heritage Springs Subdivision, the Village will consider approving an amendment to the planned development ordinance granted for Heritage Springs Subdivision to allow for additional on-street parking spaces and the operation of the swing gate and such other requested amendments that are necessitated by the Development and the Village will also consider entering into a private parking / private street enforcement agreement that will allow for the posting of appropriate parking regulation signs and vehicle speed signs to enable Village police officers to issue parking tickets and traffic citations to enforce the parking and traffic regulations of Heritage Court within the Heritage Springs Subdivision;
- f. Prior to the issuance of a building or development permit, the submittal to the Village of a fully executed agreement with Cook County for perpetual maintenance of the Project-related roadway structures and all infrastructure improvements within the portion of the Wolf Road right-of-way, as required by Cook County;

- g. Per Section 10-11-11 (Stormwater Management Requirements For All Developments)(F) of the DCO, prior to obtaining any type of building or site development permit for the Project, the Applicant shall execute and enter into a stormwater management facilities maintenance agreement ("stormwater maintenance agreement") with the Village, as prepared by the Village Attorney and approved by the Village Board, relative to the stormwater drainage facilities located on the Property, which facilities shall be the responsibility of the Applicant and its successor owners (i.e., the Association). Within the stormwater maintenance agreement, the Applicant shall guarantee that the Applicant and all of the successor owners of the Property will maintain the stormwater management facilities and the stormwater drainage system and provide to the Village periodic written reports on stormwater management facilities monitoring and maintenance. The stormwater maintenance agreement shall also specifically authorize representatives of the Village to enter onto the Property for the purpose of inspections of the stormwater drainage system. Such agreement shall be recorded with the CCCORD. The stormwater maintenance agreement shall include a schedule for regular maintenance of each aspect of the Property's stormwater drainage system and shall provide for access to the system for inspection by authorized personnel of the Village. The stormwater maintenance agreement shall also stipulate that if the appropriate authorized personnel of the Village notify the property owner in writing of maintenance problems which require correction, the property owner shall make such corrections within thirty (30) calendar days of such notification. If the corrections are not made within this time period, the Village may have the necessary work completed and assess the cost to the property owner.
  - h. Revised the declarations to exclude charcoal grills on the proposed balconies.
- 7. The site plan must be updated to include all labels depicting all building setbacks.
  - 8. The individual dwelling units and platted lots within the Development shall not be permitted to request variations from the Village's Municipal Code that are unique and specific to the individual dwelling unit and lot owner. Amendments to the planned development ordinance that are not unique and specific to an individual dwelling unit and a specific lot owner may be applied for and presented to the Village in accordance with the applicable provisions of the Municipal Code.
  - 9. Correct all inconsistencies between plats (ex. site plans showing seven guest parking spaces between units 23 and 24, whereas the engineering plans show six spaces).

#### Engineering

Revise the engineering plans per the Village Engineer and consulting engineer's comments per Attachment 4.

- 10. Written confirmation from Heritage Springs establishing access rights must be submitted prior to Village Board consideration. It is acknowledged that this item is being worked on and will be provided when completed.



11. Location of safety rail on top of the retaining walls is shown on geometric plan, but a detail and structural design and calculations for the safety rail are still needed to ensure the rail is adequate and meets applicable codes.
12. New sidewalks are still required along the Wolf Rd. and Park Pl. frontage per Village code. Place replacement Wolf Road sidewalk along entire property frontage. Placement must be as far from road as practical but will defer to Cook County Highway Department as they will review placement and issue the permit for the work. On Park Place, place the sidewalk one foot inside the public right of way along the southern edge of the development. Sidewalk shall dead end at west termini. All new sidewalk shall comply with IDOT and ADA standards for slopes. The northwest corner of Park Place and Wolf Road sidewalk ramp shall be removed and replaced.
13. The placement of sidewalk on Park Pl. will require the movement of the Ridgewood subdivision sign. The relocation of the sign must be addressed with the next plan submittal. Provide Ridgewood Civic Association approval of the sign design and sign placement.
14. The Applicant' engineer must provide accurate calculations showing the bypass system is adequate to handle all bypass flows.
15. The Applicant must provide accurate calculations that show the rate of flow of the bypass system is equal to or less than the current rate of all bypass flows (low flow and overland). This will ensure bypass stormwater does not reach the detention basin faster than it currently does under the existing conditions.
16. The Village will not accept the twin 54" aluminum pipes that are proposed. Reinforced concrete pipes or precast reinforced concrete box culverts shall be used.
17. A detailed operations and maintenance plan is required for the enclosed bypass system. Provide this operations and maintenance plan for Village review. It will be must to be incorporated into the final plat and the declaration document.
18. The end section of the bypass pipes need to be designed in a way that prevents access inside the pipes by unauthorized persons. The end section should be designed to prevent this from happening while at the same time not becoming a maintenance problem with debris collection.
19. Wetland plantings plan is required to be used with the volume control retention system needed to be designed by a licensed / certified ecologist and reviewed by the Village prior to the issuance of any site development permit. This plan must also include a maintenance plan
20. Structural design plans and licensed structural engineer seal for the retaining wall is required. The developer indicated they are being worked on and will be provided when available.
21. An operations and maintenance plan is needed for the detention basin. The developer shall create an O&M plan for the basin and create a mechanism to fund all

required maintenance activities for the establishment period of three to five years. A licensed/ certified ecologist with experience in wetland basins must produce this type of O&M plan for Village review and approve prior to the issuance of any site development permit.

22. Provide an exhibit showing the street light photometrics conform with Village Code for Village review prior to the issuance of any site development permit.
23. The plans have been updated to show new retaining walls along the west edge of the Lawn Avenue Detention Basin which will require the removal of the existing walls. However, the structural design of this new wall and the other proposed walls are not complete and not provided. Complete wall details, elevations, and signoff by a licensed Structural Engineer is required.
24. Since the structural design is not complete it is not known if tiebacks or over excavation needed to construct the walls will be contained within the development property. Work needed to construct the new walls cannot take place on private property unless temporary or permanent easements are acquired. Construction limits behind the walls must be identified and contained within your property or copies of executed easements are to be provided prior to the issuance of any site development permit.
25. Neighboring properties to the west cannot be flooded as a result of an interim construction condition that could occur if the old wall is torn down and the new wall is not yet complete. The plans must have provisions in place to temporarily protect the west property line to a pre-project elevation. The plans must identify a plan to address this issue.
26. The new and old walls appear to be misaligned at the northwest corner of the property. Clarify intent.
27. The wall design of the detention area between units 20 and 21 must accommodate for overland flows that may occur if the twin 54" sewers are overwhelmed.
28. Replace the existing flat grate that is prone to clogging with a vaulted frame and grate. A vaulted grate will be much less prone to clogging and will improve performance and reliability of both development's stormwater management systems.
29. The plans show inlets proposed to be located on Heritage Springs property. These inlets need to be moved south so they are contained on Heritage Crossing's property. The roadway vertical curve needs to be adjusted so the low point is moved south so the inlets are placed on Heritage Crossing property.
30. Secure the bypass ditch area between the Wolf Road culvert and the twin bypass culverts.
31. Street lighting plans are absent. Plans need to include all lighting conduits, cables, controllers, and service location. Also, a light pole foundation and controller

foundation details are needed, and they need to be signed and sealed by a structural engineer.

32. The narrative needs a section discussing the development of the HEC HMS modeling and results.
33. Discuss how the hydraulic modeling impacted the subdivision grading plan.
34. Provide in narrative discussion on the worst-case flooding scenario. Include exhibits sent to Engineering on 10/31/24 which illustrate stormwater storage in this worst-case scenario. Report should clearly state there is a net increase in stormwater storage despite the filling of the existing parking lot area.
35. Based on our calculations, and assuming the Contech pipes have a similar Manning's  $n$  to RCP, the design of the dual culverts suggests a full-flowing velocity of 14 ft/s, well above the acceptable maximum velocity. Provide documentation that 11 ft/s is the maximum flow velocity through these pipes.
36. Provide calculations for the riprap sizing at the outfall of the dual culverts. The riprap gradation, shape and area do not appear to match the design provided by the Illinois Urban Manual. Furthermore, the detail provided (IL-610 on Sheet 6) is missing dimensions.
37. A fire hydrant spacing, and coverage exhibit was requested to confirm compliance with Village Code. It has not yet been provided.
38. Provide grading near the property line north of Unit 14 to prevent overland flow from continuing onto the Heritage Springs property.
39. Prior comments on the proposed gate have not yet been addressed. In addition to the prior comments, design of gate shall ensure gate electrical and control equipment is elevated one foot above flood elevation. Gate must work at all times.
40. Relocate the depressional area from Heritage Springs to Heritage Crossing.
41. Adjust the location of the inlets directly under the proposed gate to be fully located on Heritage Springs.
42. Stormwater Management Report and HEC-HMS Model. The Stormwater Management Report's narrative should be revised to include discussion of modeling results, reference and discuss the supporting modeling documentation, and include the inundation maps.
43. The HEC-HMS files provided indicate that the discharge curves for all basins are turned off in both existing and proposed scenarios. Additionally, many of the nodes do not have discharge functions defined. Clarify how the discharge flows are defined between basins.

44. Stormwater Management Report and HEC-HMS Model. Clarify the distinction between the nodes "Storage East of Wolf Road" and "Box InletEast Side Wolf Rd". Pages 71 and 72 of the report show stage-storage tables for these nodes, but the areas for elevations 664.0 and 665.0 match for these two, suggesting some volume may be double-counted. Furthermore, the "Box Inlet-East Side Wolf Rd" node table differs significantly from that shown in the HEC-HMS model.
45. Stormwater Management Report and HEC-HMS Model. The inundation maps provided are for the scenario where the Ashbrook Subdivision ponds are not modeled, and the 2-hour duration storm is the critical duration.
46. However, the HEC-HMS results provided are for the scenario where the ponds are modeled, and the 1-hour duration is critical. Please provide HEC-HMS results that match the conservative scenario displayed in the inundation maps.
47. The inundation maps should reflect flood elevations upstream of Basin "C". For example, the "Storage West Side Wolf Road" node has critical duration elevations in excess of 660, which need to be shown on the inundation maps. This would include surcharging inlets along the dual culverts under proposed conditions
48. All comments from the Village Engineer and Village's consulting engineer contained in Attachment 4 must be addressed

#### Landscaping

Revise the landscaping plans to address all outstanding comments from the Village's consulting landscape architect's review memorandum dated 11/5/2024 (Attachment 7).

49. Include all utilities and light poles consistent with the information included in the Final Engineering plans. It is unclear if there are conflicts between utilities, light poles, and the proposed landscape.
50. The revised landscape plan indicates to preserve the existing trees located behind the existing neighborhood sign. These existing evergreen trees are in poor condition and should be replaced with new plant material consistent with the adjacent proposed plantings.
51. Maples are not allowed in the public ROW per the Village Urban Forest Management Plan, they are an over-represented species within the Village. Replace with another species.
52. Indicate Gingko biloba to be male species to avoid fruit production.
53. Locate Catalpa speciosa away from sidewalks to avoid seed pods dropping on walkways.
54. The specifications indicate a different native seed mix than the seed mixes indicated on the plans but does not list detail on species included. Clarify specification of seed mixes.

### Road and Traffic

Revise the plans and Traffic Impact Study to address all outstanding comments from the Village's consulting traffic engineer's review memorandum dated 11/13/2024 (Attachment 5).

55. The two parallel parking spaces should be removed on the east side of Heritage Court.
56. Revise all applicable plans related to the correct number of guest parking spaces between units 23 and 24.
57. Vehicles parked in the driveway of units 8, 15, and 21 may not overhang the curb.
58. The Opticom sensor shall be taller than the proposed fence/gate. Design and details must be submitted for review and approval by the Village's Director of Fire and EMS before any permit is issued for site development.
59. A sidewalk along Park Pl. to the south connecting to the Wolf Rd. sidewalk to the east must be installed.
60. Revise all applicable plans to convert the turnaround area north of unit 15 to grasscrete or similar material.
61. Submit AutoTURN analysis for the turnaround area north of unit 15 to verify vehicle turnaround.
62. On the color site plan prepared by BSB Design (revised 11/5/2024), the crosswalk should be shown perpendicular (not angled) to Heritage Court, consistent with the Final Engineering Plans for Heritage Crossing, prepared by DesignTek Engineering and Surveying (revised 11/4/2024).
63. Update the Traffic Impact Study to reflect the proposed 29 rather than 28 dwelling units.
64. Clarify if Figure 5B in the Traff Impact Study summarizes the September 2024 pedestrian count data or the original March 2024 count data. The higher volume counted in September should be presented in the TIS.
65. Figure 7 does not match the trip generation presented in Table 3 in the Traffic Impact Study. Please update according.

### Signage

66. Provide a sight distance triangle analysis for the proposed subdivision sign adjacent to Wolf Rd.



67. Provide information on any roadway signage related to street name and type (private) for review.

Attachment 10 contains a draft recommendation to facilitate the discussion.

## **Attachments**

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1. Memorandum prepared by Kelsey Fawell and Heather Valone RE: PC-2024-02 - A Comprehensive Plan Amendment to the Long-Range Land Use Map, Conditional Use for a Planned Development, Variations, and Subdivision dated 9/20/2024 (*Attachments omitted, but available on the [Village's website](#)*)
2. Applicant submittal package
3. Memorandum prepared by Jeff Koza RE: 5600 Wolf Road Site Development - Heritage Crossing -Engineering Update for November 18, 2024, Plan Commission Meeting dated 11/15/24
4. Memorandum prepared by Jeff Koza RE: Zoning Application Review: Heritage Crossing 5600 Wolf Rd. Development Engineering Services - Review 03 dated 11/14/2024 with attachments
5. Memorandum prepared by Rory Fancier, Kimley Horn, Subject: Heritage Crossing - Traffic Review Resubmittal 5600 Wolf Rd. Western Springs, Illinois dated 11/13/2024
6. Memorandum prepared by John Mastandona RE: Zoning Application Review: 5600 Wolf Rd. - Finance dated 11/15/2024
7. Memorandum prepared by Tim King, Hitchcock Design Group, RE: 5600 Wolf Rd. - Heritage Crossing Landscaping Submittal Review #4 dated 11/7/2024
8. Declaration of Covenants, Conditions and Restrictions for: Heritage Crossing Townhome Association of Western Springs - a McNaughton Development, Inc. Subdivision Redline prepared by Mike Jurusik, Village Attorney dated 11/15/2024
9. Redline and Mark-ups of Plat of Abrogation, Subdivision and Vacation Prepared by Jeff Koza, Village Engineer and Mike Jurusik, Village Attorney.
10. Draft: Plan Commission Recommendation No. 24-02 Application for a Comprehensive Plan Amendment to the Long-Range Land Use Map, Map Amendment, Conditional Use for a Planned Development, Exceptions / Variations to Village Development Control Ordinance ("DCO"), and Subdivision for the Construction, Operation, and Maintenance of a Townhome Subdivision Development at the 5600 Wolf Road Property (Heritage Crossing)
11. Public comments

January 3, 2025

Mr. Jefferey Koza, PE, CFM  
Director of Engineering Services  
Village of Western Springs  
740 Hillgrove Avenue  
Western Springs, Illinois 60558

***Subject: 5600 Wolf Road Plan Development – Stormwater Review #5***

Dear Mr. Koza,

In accordance with your instructions, we have completed an office review of the following documents:

- Final Engineering Plans for Heritage Crossing, prepared by DesignTek Engineering, Inc. and dated May 22, 2024 with revision 5 dated December 12, 2024
- Revised Stormwater Report, prepared by DesignTek Engineering, Inc. and dated December 13, 2024
- HEC-HMS files and results associated with H&H analysis

We have the following comments for the developer:

**Engineering Plans**

1. The slope of the box culvert shall be revised to reduce the velocity to 10 ft/s or less.
2. The apron length for the box culvert outlet is sized for a 5 ft/s discharge. This distance shall be extended or the velocity decreased, per Table 2 as included in the planset.
3. Provide details for the inlet and outlet structures and grates for the box culvert.
4. Prior to final approval, the retaining wall design shall be reviewed, signed and sealed by an Illinois-registered Structural Engineer.

**Stormwater Management Report and HEC-HMS Model**

1. It appears there is double-counting of volume between the Box Inlet and Storage nodes east of Wolf Road at elevation 663 and higher. While it is acknowledged that the two nodes are hydrologically linked, the volume should either be split between the two nodes and included only in one of them to more accurately reflect the available volume east of Wolf Road.
2. The inundation maps still appear to be incomplete. The results provided give flood elevations higher than 660.3 at “Storage West of Wolf Rd” for both existing and proposed conditions. For the existing conditions map, there doesn’t seem to be any inundation above the 655 elevation associated with Basin “C”. For the proposed conditions, it seems there should be additional inundation, interpolated between the modeled nodes: for example, behind units 8-14 due to surcharging inlets. Please also include callouts for water surface elevations at various points.

Please provide subsequent submittals with an itemized response to our comments.

Our review did not include field verification of existing conditions, elevations, grades and/or topography as shown on the plan, and we disclaim responsibility for any errors or omissions. The developer and its engineer are not relieved of any responsibility for the correctness of the existing field conditions because of our review and the subsequent approval of the plans and specifications by the Village.

If you have any questions or need any additional information, please contact us.

Sincerely,

Corey Van Dyk, P.E., CFM

BAXTER & WOODMAN, INC.  
CONSULTING ENGINEERS

**REPORT AND RECOMMENDATION NO. 24-02**

**PLAN COMMISSIONERS PRESENT:** Peter Glimco, Peter Hanson, Michele Johann and Patrick Turner.

**ABSENT:** Jocelyn Brumbaugh, Ryan DeProsperis and Steve Winegar.

**OTHER:** None.

**DATE:** November 18, 2024

**FINDINGS AND RECOMMENDATIONS TO THE VILLAGE PRESIDENT  
AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS**

**RE:** PC-2024-02: Application for a Comprehensive Plan Amendment to the Long-Range Land Use Map, Map Amendment, Conditional Use for a Planned Development, Exceptions / Variations to Village Development Control Ordinance (“DCO”), and Subdivision for the Construction, Operation, and Maintenance of a Townhome Subdivision Development at the 5600 Wolf Road Property (Heritage Crossing)

**APPROVAL** of a Map Amendment to Rezone the Below Described Property from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence District to Construct a Townhome Development Referred to as “Heritage Crossing” (the “Project” or “Development”). [During the November 18, 2024 Public Hearing, a Motion to Approve this component of the Zoning Relief was made by Commissioner Hanson and seconded by Commissioner Turner and the Motion passed with four (4) affirmative yes votes and zero (0) negative votes voiced by the Commissioners present at the Hearing.]

**APPROVAL** of a Conditional Use Permit for a Planned Development with Exceptions from District Regulations (Applicable Only to the Development) in Accordance with Chapter 8 (Planned Developments) of the DCO to Construct the Development. [During the November 18, 2024 Public Hearing, a Motion to Approve this component of the Zoning Relief was made by Commissioner Hanson and seconded by Commissioner Turner and the Motion passed with four (4) affirmative yes votes and zero (0) negative votes voiced by the Commissioners present at the Hearing.]

**APPROVAL** of Variations from District Regulations Applicable Only to the Development, Except as Noted:

- **Variations from Section 10-10-7 (Street Design Criteria):** Pavement Width – Required twenty-seven feet (27’) street width from face of curb to face of curb. The Applicant is requesting twenty-four feet (24’). Required horizontal curve minimum one hundred fifty foot (150’) radius. The Applicant is requesting less than one hundred fifty feet (150’). The required vertical curves minimum of one hundred feet (100’). The Applicant is requesting fifty feet (50’).
- **Variation from Section 8-2-1 (Inspections Required):** “The following regulation shall apply to platted subdivisions that already exist within the village and that have some public sidewalks serving residences already constructed therein. As part of any new construction, tear down development, subdivision, planned development or an

addition or renovation to an existing residence or commercial building, a concrete sidewalk shall be installed by the property owner in the public right of way along the street frontage of the property extending from lot line to lot line where a sidewalk does not currently exist or if a sidewalk already exists and is in poor condition, as determined by the director of municipal services, or his designee, the sidewalk or portions thereof shall be replaced as part of the construction project. The village engineer shall designate the location and grade of the sidewalk. The property owner shall be responsible for the cost of the installation of the concrete sidewalk or any replacement portions of the existing sidewalk. In the case of a corner lot, the sidewalk shall be installed in the public right of way along both street frontages of the property and shall extend from lot line to lot line. As an alternative to concrete sidewalks, sidewalks installed in the public right of way may be constructed of brick pavers or similar materials when authorized by the village board as part of a planned development. No person shall construct, rebuild, repair or remove any sidewalks on any public street or right of way in the village without first obtaining a building permit and an inspection from the department of municipal services.” The Applicant is requesting to waive the sidewalk requirement along the north side frontage of Park Place. NOTE: The Plan Commission recommended denial of the Applicant’s request to waive the sidewalk requirement along the north side frontage of Park Place and recommended that the Park Place sidewalk be installed.

- Variation from Subsection 10-11-11 (C)(2) (Stormwater Management Requirements For All Developments; Detention; Streets): “Streets are not to be used for the storage of excess stormwater, ponding depths shall not encroach more than three feet (3’) on the adjacent traffic lane and shall not remain flooded for more than eight (8) hours for any event less than or equal to the 100-year event.” The portion of the north end of Heritage Court (a private street) between the north lot line of the Property to a point approximately forty feet (40’) south of the north lot line of the Property, which is not intended to be used for primary ingress and egress vehicle access to the Property, has been designed to temporarily hold stormwater during certain infrequent rain events to facilitate the movement of excess stormwater from the Property to the on-site stormwater detention basins and to draw stormwater off of the remainder of Heritage Court and away from the private driveways of northerly dwelling units so that there is no ponding of stormwater in front of the dwelling units.
- Exception from Subsection 10-8-4(B)(1)(d) (Exceptions From District Regulations; Site Design Regulations; Exceptions From District Regulations) of the DCO to provide: “Along the periphery of such planned developments, set back yards shall be provided as required by the regulations of the underlying zoning district, except that, in the R4 - Multiple-Family Residence Zoning District, variations of not more than sixty-one percent (61%) (seven (7) feet) to the front yard regulation and the corner side yard regulation may be allowed as part of the approval of the planned development.”
- Exception from Subsection 10-8-4(B)(1)(e) (Exceptions From District Regulations; Site Design Regulations; Exceptions From District Regulations) of the DCO to provide: “Building height shall comply with the Zoning District regulations approved by the Village for the planned development, except that a variation of not more than nine percent (9%) (36.25 feet) above the maximum height of buildings and structures may be allowed as part of the approval of a planned development.”
- Exceptions (Text Amendments / Variations) from requirements of Section 10-6-5 (R4 - Multiple-Family Residence District) regulations, including:
  - Subsection 10-6-5(D): Minimum Development Parcel Size: Required: five (5) acres (217,800 square feet) and Requested: 2.76 acres



- Subsection 10-6-5(E)(1): Minimum Yards Requirements: Front Yard: Required: Twenty-five feet (25') and Requested: seven feet (7')
- Subsection 10-6-5(E)(2): Minimum Yards Requirements: Corner Side Yard: Required: Twenty-five feet (25') and Requested: Fourteen and five inches-and-a-half feet (14.42')
- Subsection 10-6-5(E)(3): Minimum Yards Requirements: Interior Side Yard: Required: Thirty feet (30') and Requested: six feet and eight inches (6.67')
- Subsection 10-6-5(E)(4): Minimum Yards Requirements: Rear Yard: Required: Thirty feet (30') and Requested: Twelve feet and nine inches (12.75')

[During the November 18, 2024 Public Hearing, a Motion to Approve these components of the Zoning Relief, except for the denial of the Applicant's variation request to avoid installation of the required sidewalk along the north side frontage of Park Place, was made by Commissioner Hanson and seconded by Commissioner Johann and the Motion passed with four (4) affirmative yes votes and zero (0) negative votes voiced by the Commissioners present at the Hearing.]

**APPROVAL of a Combined Preliminary Plan / Final Plan for the Development Subject to Compliance with Plan Review Requirements of Section 10-8-5(C) (Final Plan) of the DCO.** [During the November 18, 2024 Public Hearing, a Motion to Approve this component of the Zoning Relief was made by Commissioner Johann and seconded by Commissioner Turner and the Motion passed with four (4) affirmative yes votes and zero (0) negative votes voiced by the Commissioners present at the Hearing.]

**APPROVAL of a Final Plat of Subdivision to Construct a Twenty-Nine Unit Townhome Development Referred to as the Final Plat of Heritage Crossing, as Part of a Village Conditional Use Permit for a Planned Development in Accordance with Chapter 8 (Planned Developments) of the Village's DCO of a Combined Preliminary Plan / Final Plan for the Development Subject to Compliance with Plan Review Requirements of Section 10-8-5(C) (Final Plan) of the DCO.** [During the November 18, 2024 Public Hearing, a Motion to Approve this component of the Zoning Relief was made by Commissioner Turner and seconded by Commissioner Johann and the Motion passed with four (4) affirmative yes votes and zero (0) negative votes voiced by the Commissioners present at the Hearing.]

**APPROVAL of a waiver of the 5-acre minimum land area requirement under Section 10-8-3 (Guidelines) of the DCO and the reduction of certain planned development submission materials under Section 10-8-8 (Submittal Requirements) of the DCO (Subsection 10-8-8(B.4.d.)).** [During the November 18, 2024 Public Hearing, a Motion to Approve this component of the Zoning Relief was made by Commissioner Turner and seconded by Commissioner Johann and the Motion passed with four (4) affirmative yes votes and zero (0) negative votes voiced by the Commissioners present at the Hearing.]

**APPROVAL of vacation of a portion of the dedicated Lawn Avenue right-of-way ("Lawn Avenue ROW Area"), generally described as the approximate 225.00 foot (north to south) by 66.00 foot (east to west) parcel and located west of and adjacent to the south 25.00 feet of Lot 4 and Lots 5 and 6 of Maxted's Subdivision with assigned P.I.N. 18-18-200-001-0000, for purposes of incorporation into the planned development.** [During the November 18, 2024 Public Hearing, a Motion to Approve this component of the Zoning Relief was made by Commissioner Johann and seconded by Commissioner Hanson and the Motion passed with four (4) affirmative yes votes and zero (0) negative votes voiced by the Commissioners present at the Hearing.]

|                        |                                                                                                                                   |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| <b>Applicant:</b>      | <b>McNaughton Development, LLC</b>                                                                                                |
| <b>Property Owner:</b> | <b>Casey and Fran Gaik</b>                                                                                                        |
| <b>Property:</b>       | <b>5600 Wolf Road, Western Springs, Illinois 60558</b>                                                                            |
| <b>Current Zoning:</b> | <b>O – Limited Office Zoning District</b>                                                                                         |
| <b>Lot Size:</b>       | <b>105,158.93 SF or 2.414 AC [without the Lawn Avenue ROW Area]<br/>120,008.93 SF or 2.755 AC [with the Lawn Avenue ROW Area]</b> |

## I. BACKGROUND FACTS

1. On May 23, 2024, McNaughton Development, LLC (the “Applicant”), the contract purchaser and prospective developer of the real property commonly known as 5600 South Wolf Road, Western Springs, Illinois (“Property”), filed a General Information Application for Land Use and Development in the Village with supporting documents (the “Application”) for the rezoning and redevelopment of the Property. Casey and Fran Gaik (the “Property Owner”) are the fee simple title owners of the Property and have submitted a written authorization to the Village of Western Springs (“Village”) that allowed the Applicant to file the Application for the redevelopment of the Property as a twenty-nine (29) unit residential townhome development (the “Development” or “Project”).

2. The Applicant submitted the Application and supporting documents, along with updates to such documents, to petition for approval of all necessary zoning relief in accordance with the applicable provisions of the Village’s Municipal Code and the DCO in order to construct, operate and maintain the Development consisting of nine (9) townhome buildings with unit counts of either three-units or four-units. Each dwelling unit will have a balcony, a rear patio, and an attached, front-loaded garage with a driveway accessed by a private street through the Development. The Development will have off-street community parking spaces, possible on street-parking, sidewalks, stormwater detention basins, open space and streetlights. The Applicant proposes to extend private Heritage Court to the southeast through the Property to the Development’s access driveway proposed along Wolf Road. The existing portion of Heritage Court, a private road, currently services only the Heritage Springs Townhome Development, connects to 55th Street to the north of the Property and is maintained by the Heritage Springs Homeowner’s Association. The Applicant’s plans indicate that the new portion of Heritage Court will match the existing road’s width. An automatic gate will separate the Development from the existing Heritage Springs Subdivision to the north. Vehicle access between the adjacent subdivisions will be controlled by a swing gate and gate access will only be granted to residents of both subdivisions with clicker-access and Village emergency service vehicles. The swing gate will be improved with an Opticom system that will give Village emergency service vehicles access similar to the systems on streetlights. The “Requested Zoning Relief” is set forth in the Application, as amended by the Applicant, and consists of those exceptions and variations enumerated in **Sections 4 and 5** below. The Property is legally described in the Application. The proposed Development is commonly referred to as Heritage Crossing.

3. The Application consists of information supporting the Requested Zoning Relief, a description of the proposed improvements to be constructed as part of the Project, and the proposed Design Plans, copies of which are incorporated by reference into this Report and Recommendation as **Group Exhibit “A”** and made a part hereof.

4. The Plan Commission recommends that the President and Board of Trustees of the Village of Western Springs consider approving the following Requested Zoning Relief from certain DCO submittal requirements for planned developments for this Project:

- a. Waiver of the 5 acre minimum land area requirement under Section 10-8-3 (Guidelines) of the DCO.

- b. Reduction of certain planned development submission materials under Section 10-8-8 (Submittal Requirements) of the DCO (a) DCO Subsection 10-8-8(B)(3)(g): site lighting plan, and (b) DCO Subsection 10-8-8(B)(4)(d): Market study (financial information) prepared by a qualified, independent market research firm.
5. The remaining Requested Zoning Relief necessary for the Applicant to construct the Development consists of:
- a. A conditional use permit for a planned development in accordance with Chapter 3 (Conditional Uses) and Chapter 8 (Planned Developments) of the DCO.
  - b. A single stage Final Plan review and approval process (i.e., a combined Preliminary Plan / Final Plan approval) for the Development per Subsection 10-8-8(C) of the DCO, provided that the Petitioner complies with the submittal and plan review requirements of Section 10-8-5(C) (Final Plan) of the DCO.
  - c. A Comprehensive Plan Amendment to the Long-Range Land Use Map that reclassifies the Property from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence Zoning District.
  - d. A map amendment to re-zone the Property from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence Zoning District.
  - e. Exception (Variations) from Subsection 10-8-4(B)(1)(d) (Exceptions From District Regulations; Site Design Regulations; Exceptions From District Regulations) of the DCO applicable only to the Development to provide: “Along the periphery of such planned developments, set back yards shall be provided as required by the regulations of the underlying zoning district, except that in the R4 - Multiple-Family Residence Zoning District variations of not more than 61% to the front yard regulation and the corner side yard regulation may be allowed as part of the approval of the planned development.”
  - f. Exception (Variations) from Subsection 10-8-4(B)(1)(e) (Exceptions From District Regulations; Site Design Regulations; Exceptions From District Regulations) of the DCO to provide: “Building height shall comply with the Zoning District regulations approved by the Village for the planned development, except that a variation of not more than 9% above the maximum height of buildings and structures may be allowed as part of the approval of a planned development.”
  - g. Exceptions (Text Amendments / Variations) from requirements of Section 10-6-5 (R4 - Multiple-Family Residence District) regulations, including:
    - i. Subsection 10-6-5(D): Minimum Development Parcel Size: Required: five (5) acres (217,800 square feet); and Requested: 2.76 acres;
    - ii. Subsection 10-6-5(E)(1): Minimum Yards Requirements: Front Yard: Required: Twenty-five feet (25'); and Requested: Seven Feet (7');
    - iii. Subsection 10-6-5(E)(2): Minimum Yards Requirements: Corner Side Yard: Required: Twenty-five feet (25'); and Requested: fourteen feet and five inches (14.42');
    - iv. Subsection 10-6-5(E)(3): Minimum Yards Requirements: Interior Side Yard: Required: Thirty feet (30'); and Requested: six feet and eight inches (6.67');
    - v. Subsection 10-6-5(E)(4): Minimum Yards Requirements: Rear Yard: Required: Thirty feet (30'); and Requested: Twelve feet and nine inches (12.75'); and
    - vi. Any additional exception(s) or variation(s) identified at the Public Hearing from the other use, bulk and site design requirements contained in the DCO that are necessary to permit the construction of the Development and allow the above Property to be used for its intended purposes in accordance with the filed petition shall also be considered for Village approval.

- h. Variation from Subsection 10-11-11 (C)(2) (Stormwater Management Requirements For All Developments; Detention; Streets) of the DCO to allow the portion of the north end of Heritage Court (a private street) between the north lot line of the Property to a point approximately forty feet (40') south of the north lot line of the Property, which is not intended to be used for primary ingress and egress vehicle access to the Property, to be designed and constructed to temporarily hold stormwater during certain infrequent rain events to facilitate the movement of excess stormwater from the Property to the on-site stormwater detention basins and to draw stormwater off of the remainder Heritage Court and away from the private driveways of northerly dwelling units so that there is no ponding of stormwater in front of the dwelling units.

6. The Village's Official Land Use Plan, adopted by Ordinance No. 03-2226 dated February 24, 2003, was amended in 2021 in order to allow for the redevelopment of the 17 West Ogden Avenue Property with a higher density residential development. The Land Use Plan Amendment was approved on June 28, 2021, with the passage of Ordinance No. 21-3046. Similar to the Village's approval of the 17 West Ogden Avenue development, the proposed rezoning of the Property from O – Limited Office Zoning District to the R4 - Multiple-Family Residence District, with a conditional use permit for a planned development overlay approval, will follow the guidelines as set forth in Subsection 10-5-2(A)(6) (Purpose Statements) of the DCO:

"R4 - Multi-Family Residence District: This district is intended to provide for a multiple-family residential environment of moderate density. The R4 district is intended to accommodate existing apartment buildings which have developed over time within the village. While this district will be applied to existing multi-family development built on a lot by lot basis, it is intended that new multi-family dwelling units shall be constructed as part of a planned development. (Ord. 01-2158, 1-22-2001)"

7. Based on the regulations set forth in the Village's DCO, the Requested Zoning Relief has to be considered by the Plan Commission at a public hearing and then the Village Board must consider approval of the Requested Zoning Relief.

8. As a supplement to its Application, the Applicant provided the following revised or supplemental documents:

- a. On July 12, 2024, a set of revised or supplemental documents were filed.
- b. On July 24, 2024, revised or supplemental documents were filed.
- c. On August 1, 2024, a set of revised or supplemental documents were filed.
- d. On August 26, 2024, a set of revised or supplemental documents were filed.
- e. On September 10, 2024, a set of revised or supplemental documents were filed.
- f. On September 16, 2024, a set of revised or supplemental documents were filed.
- g. On September 20, 2024, a set of revised or supplemental documents were filed.
- h. On September 24, 2024, a set of revised or supplemental documents were filed.
- i. On September 25, 2024, a set of revised or supplemental documents were filed.
- j. On October 3, 2024, a set of revised or supplemental documents were filed.
- k. On October 18, 2024, a set of revised or supplemental documents were filed.
- l. On October 22, 2024, a set of revised or supplemental documents were filed.
- m. On October 24, 2024, a set of revised or supplemental documents were filed.
- n. On November 6, 2024, a set of revised or supplemental documents were filed.

9. Pursuant to notice published and posted as required by State law and the Western Springs Municipal Code, on August 13, 2024, the Plan Commission opened and conducted a public hearing to consider the Requested Zoning Relief.

10. The public hearing was continued to September 24, 2024 and November 18, 2024 and, during those additional public hearing sessions, further testimony and documents prepared by the Applicant, the Village and Interested Parties were presented to and considered by the Plan Commission (collectively the “Public Hearing”).

11. At the Public Hearing, the Plan Commission considered and accepted into the public record written and oral testimony, including documents that were marked as exhibits for identification purposes, which were submitted and/or presented by the Applicant and the Applicant’s representatives, Village Attorney Michael Marrs and Michael Jurusik, the Interested Parties, the Community Development Director (Heather Valone), the Senior Planner (Kelsey Fawell), other Village staff and the public. All of the written and oral testimony, exhibits and a transcript of the Public Hearing are incorporated in and made a part of this Recommendation. Each of the documents accepted into the record and identified by an exhibit number are identified below:

- A. The Application with its attachments (incorporated by reference as **Group Exhibit “A”**).
- B. The Public Hearing Notice, the Newspaper Publisher's Certificate dated **July 18, 2024**, the Affidavit of Mailing of Public Hearing Notice and Newspaper Publication dated **August 7, 2024** submitted by Heather Valone, the Affidavit of Posting of Signage for Public Hearing dated **August 7, 2024** and prepared and executed by Village Building Official Robert Schmidt confirming that the required mailing, publications and sign postings of the Public Hearing Notice to surrounding Property owners and taxpayers of record were performed in accordance with State law (incorporated by reference as **Group Exhibit “B”**).
- C. Village Staff Memorandums dated **August 9, 2024, September 20, 2024 and November 15, 2024**, and prepared by Community Development Director Heather Valone and Senior Planner Kelsey Fawell (“Village Staff Memos”) (incorporated by reference as **Group Exhibit “C”**).
- D. The Village’s Official Land Use Plan adopted by Ordinance No. 03-2226 dated February 24, 2003, as amended (incorporated by reference as **Group Exhibit “D”**).
- E. The Official Zoning Map of the Village (incorporated by reference as **Group Exhibit “D”**).
- F. The Western Springs Municipal Code, including the Development Control Ordinance (“DCO”) (incorporated by reference as **Group Exhibit “D”**).
- G. The transcripts of the August 13, 2024, September 24, 2024 and November 18, 2024 sessions of the Public Hearing prepared by a court reporter (Robin Chimniak) (incorporated by reference as **Group Exhibit “E”** and retained on file with the Community Development Department).
- H. Additional documents submitted to the Plan Commission during the Public Hearing (each being incorporated by reference into this Recommendation and retained on file with the Community Development Department), consisting of:
  - Village Supplemental Materials (**Group Exhibit “C”** and **Exhibit “F”**): Village Staff Memos and Outlot 31, 32, and 33 Stormwater Detention Figure. The figure provides labels of common areas for clarification related to the stormwater management facilities.
  - Materials Submitted by Interested Parties (**Group Exhibit “G”**):
    - Emails dated July 22, 2024 and November 15, 2024 (three page) and prepared by Marie Raffl (incorporated by reference as **Group Exhibit “G-1”**).
    - Emails dated July 21, 2024, August 15, 2024 and September 22, 2024 (13 total pages) and prepared by Ron Lejcar (incorporated by reference as **Group Exhibit**



"G-2").

- Emails and letter dated July 17, 2024, August 26, 2024, September 16, 2024, October 8, 2024 and November 14, 2024, (seven total pages) and prepared by Deborah David (incorporated by reference as Group Exhibit "G-3").
- Email dated July 24, 2024 (three pages) and prepared by Casey Burch (incorporated by reference as Group Exhibit "G-4").
- Emails dated July 24, 2024 and September 23, 2024 (four total pages) and prepared by Claudia Kelly (incorporated by reference as Group Exhibit "G-5").
- Email dated July 24, 2024 (one page) and prepared by Conner Stout (incorporated by reference as Group Exhibit "G-6").
- Letter / Email dated July 24, 2024, August 15, 2024 and September 25, 2024 (nine total pages) and prepared by Daniel Lombard (incorporated by reference as Group Exhibit "G-7").
- Emails dated July 24, 2024 and August 14, 2024 (three total pages) and prepared by Michele Manley (incorporated by reference as Group Exhibit "G-8").
- Email dated July 24, 2024 (one page) and prepared by Rebecca Plunkett (incorporated by reference as Group Exhibit "G-9").
- Email dated July 23, 2024 (two pages) and prepared by Sandra Munizzo (incorporated by reference as Group Exhibit "G-10").
- Email dated August 5, 2024 (one page) and prepared by Rachel Muldowney (incorporated by reference as Group Exhibit "G-11").
- Email dated August 6, 2024 (one page) and prepared by Vickey Van Alphen (incorporated by reference as Group Exhibit "G-12").
- Email dated August 6, 2024 (one page) and prepared by Robin Polich (incorporated by reference as Group Exhibit "G-13").
- Email dated August 10, 2024 (two pages) and prepared by Lauren Stoltz (incorporated by reference as Group Exhibit "G-14").
- Emails dated August 12, 2024 and September 23, 2024 (two total pages) and prepared by Jim and Dianne Kaiser (incorporated by reference as Group Exhibit "G-15").
- Emails dated August 12, 2024, September 17, 2024 and November 12, 2024 (seven total pages) and prepared by George Rodgers (incorporated by reference as Group Exhibit "G-16").
- Email dated August 13, 2024 (two pages) and prepared by John and Cathy Grundke (incorporated by reference as Group Exhibit "G-17").
- Emails dated August 13, 2024 and September 24, 2024 (two total pages) and prepared by Diana MacGillis (incorporated by reference as Group Exhibit "G-18").
- Email dated August 13, 2024 (two pages) and prepared by Doug Stoltz (incorporated by reference as Group Exhibit "G-19").
- Email dated August 13, 2024 (one page) and prepared by Tara Reynolds (incorporated by reference as Group Exhibit "G-20").
- Emails dated August 13, 2024 and September 24, 2024 (two total pages) and prepared by Jamie Macander (incorporated by reference as Group Exhibit "G-21").
- Email dated August 13, 2024 (one page) and prepared by Tracy Vedok (incorporated by reference as Group Exhibit "G-22").
- Email dated August 14, 2024 (one page) and prepared by Jennifer Dixon (incorporated by reference as Group Exhibit "G-23").
- Email dated August 14, 2024 (one page) and prepared by Aimee Hojnicky (incorporated by reference as Group Exhibit "G-24").

- Emails dated July 24, 2024, and August 15, 2024 (five total pages) and prepared by Berry Allen (incorporated by reference as Group Exhibit "G-25").
- Letter dated August 15, 2024 (two pages) and prepared by Casey and Frances Gaik (incorporated by reference as Group Exhibit "G-26").
- Email dated August 15, 2024 (one page) and prepared by Kim and Chris Fronk (incorporated by reference as Group Exhibit "G-27").
- Email dated August 16, 2024 (one page) and prepared by Kate Fus (incorporated by reference as Group Exhibit "G-28").
- Email dated August 28, 2024 (four pages) and prepared by Renee Rowley (incorporated by reference as Group Exhibit "G-29").
- Email dated September 24, 2024 (two pages) and prepared by Springwood Manor Condo Association (incorporated by reference as Group Exhibit "G-30").
- Letter dated September 24, 2024 (four pages) and prepared by Amanda Nawrocki (incorporated by reference as Group Exhibit "G-31").
- Email dated July 24, 2024 (one page) and prepared by Cathy Barten (incorporated by reference as Group Exhibit "G-32").

12. Copies of all the Exhibits identified in this Recommendation are on file with the Village's Department of Community Development and are incorporated by reference in this Recommendation.

13. The Village's Code Officer, Community Development Director Heather Valone, has submitted the Village Staff Memo, which reviews the Application, the applicable provisions of the DCO and the Requested Zoning Relief, and concludes that the Project meets the applicable DCO provisions for purposes of conducting the Public Hearing and consideration of approval of the Requested Zoning Relief. See, Group Exhibit "C".

14. Subject to the Requested Zoning Relief, the Application and other submittals by the Applicant conform to the applicable requirements of the Western Springs Municipal Code, including Chapter 3 (Administrative Bodies and Procedures), Subsection 11 (Variations) and Subsection 14 (Conditional Uses) of the DCO.

## **II. FINDINGS OF FACT**

Based upon the information contained in the Application, all the documents received into the record and the testimony heard during the Public Hearing, the Plan Commission makes the following findings of fact relative to its recommendation to the Village Board regarding the Requested Zoning Relief:

### **A. Comprehensive Plan Amendment to the Long-Range Land Use Map Standards**

- a. The Development Plans are presented as an amendment to the Village's existing 2003 Land Use Plan to amend the Property's Long Range Land Use from its current designation of O – Limited Office Zoning District to the R4 - Multiple-Family Residence District, with a conditional use permit for a planned development overlay approval, in order to allow for the construction and operation of the Development. Once the Property is rezoned, it will expand the types of other possible adaptive uses that could be developed on the Property under the R4 - Multiple-Family Residence District classification, if the Development is not constructed, subject to Village approval of another conditional use permit for a planned development.

- b. The Development Plans provide development options that are consistent and compatible with the permitted uses or permitted conditional uses of the R4 - Multiple-Family Residence District.
- c. In regard to the goals and objectives set forth in Section (10-1-2: PURPOSE AND INTENT) of the DCO, the Plan Commission **finds** that the requested Comprehensive Plan Amendment meets the following criteria:
  - A. **To promote the orderly and beneficial development of the Village of Western Springs in accordance with the village's official land use plan.**
  - B. **To promote the public health, safety, morals, comfort and general welfare of the citizens of the Village of Western Springs.**
  - C. **To protect the character and stability of residential, business and industrial areas.**
  - D. **To provide for orderly growth and development; to afford adequate facilities for the safe, convenient, and efficient means for the traffic circulation of its population; and to safeguard the public against flood damage.**
  - E. **To provide adequate light, air, privacy and convenience of access to Property.**
  - F. **To divide the Village of Western Springs into districts of such number, shape, area and of such different classes, according to the use of land and buildings and the intensity of such use, as may be deemed best suited to carry out the purposes of this ordinance.**
  - G. **To prohibit locations and uses of buildings or structures and uses of land that are incompatible with the type of development planned for specified zoning districts in the Village of Western Springs.**
  - H. **To regulate and restrict the location and use of buildings, structures and land for trade, industry, residence, and other uses, and to regulate and restrict the intensity of such uses.**
  - I. **To prescribe reasonable rules and regulations governing the subdivision and platting of land; the preparation of plats; the location, width, and course of streets and highways; the installation of utilities, street pavements, and other essential improvements; and the necessary public grounds for schools, parks, playgrounds, and other public open spaces.**
  - J. **To prevent additions to and alterations or remodeling to existing buildings or structures in such a way as to avoid the restrictions and limitations lawfully imposed hereunder.**
  - K. **To protect against fire, explosions, noxious fumes and other dangers.**
  - L. **To fix reasonable standards to which buildings and structures shall conform.**

- M. To provide for the gradual elimination of those uses that would not now be permitted in the districts in which they are located and are adversely affecting the orderly and beneficial development of the Village of Western Springs.**
- N. To define and limit the powers and duties of administrative officers and bodies as provided herein.**
- O. To prescribe penalties for the violation of and methods for the enforcement of the provisions of this ordinance or any amendment thereto.**

The Property is notably one of the few sites designated O - Limited Office Zoning District within the Village. The Village's future land use map designation is Office. The future land use district is described as commercial areas consisting of low-rise (one to two story) office buildings, usually on separate parcels and with dedicated parking. The Subject Property is adjacent to designated residential uses: to the north is multiple-family (Heritage Springs townhomes and residential condominium building), to the south and west is single-family residential, while to the east (across Wolf Road) is unincorporated Cook County residential.

The Property is currently underutilized, per the Application documents that state the office building has only been partially occupied in recent years. The Comprehensive Plan Amendment would allow for continuation of residential redevelopment, one that connects to the planned development Heritage Springs (via Heritage Court) to the north. The Development Plans propose the construction of a new portion continuation of Heritage Court, as a private street, within the Property to the south, which will only be available to residents of both the Heritage Springs Subdivision and the Heritage Crossing Subdivision to potentially minimize traffic through the single-family neighborhood immediately east of the Property. A vehicular turnaround area is proposed immediately south of the gate in the event vehicles do attempt to cut through the development and dead end at the gate. An AutoTURN analysis is needed for the turnaround area to verify it can be utilized for passenger vehicles. Attachment 5 of the village staff memorandum dated November 15, 2024 contains the Village's consulting traffic engineer's (Kimley Horn) review of the submitted traffic study, which includes recommendations for removal of the two (2) proposed parallel guest parking spaces due to poor visibility and the use of grasscrete or other material to discourage the use as parking spaces. A public sidewalk within the north side right-of-way of Park Place is also recommended.

## **B. Map Amendment Standards**

The Plan Commission considered each of the seven (7) standards set forth in Chapter 3 (Administrative Bodies and Procedures); Subsection 10-3-12(F)(1) (Map Amendments) of the DCO and found as follows:

### **a. Existing uses of Property within the general area of the Property in question.**

The Property is currently zoned O – Limited Office Zoning District and is immediately surrounded by single and multi-family residential uses, as follows: (a) North of the Property: Zoning: SFA - Single-Family Attached and Land Use: Heritage Springs; (b) South of the Property: Zoning: A – Single-Family Residence District and Land Use: Single Family; (c) East of the Property: Zoning: Single-Family Residence District Unincorporated Cook County) and Land Use: Single Family. See, Village Zoning Map attached as **Exhibit "D"**; and

(d) Zoning: R3 - Two-Family Residence District and Land Use: Two-Family. The proposed new Zoning District classification and land use of R4 – Multiple-Family Residence District (DCO 10-6-5) for a multi-building townhome redevelopment **meets** this standard.

**b. The zoning classification of Property within the general area of the Property in question.**

The properties in the general area are mostly single-family residential zoning districts with an R4 – Multiple-Family Residence District property to the north, as listed in the previous standard. See, Village Zoning Map attached as **Exhibit “D”**. The neighboring property to the north, the Heritage Springs Subdivision, was granted a rezoning, conditional use, and planned development for the construction of fourteen (14) townhome units, two (2) stormwater detention facilities, a private road, with curb and gutter and drainage improvements, sidewalks and accompanying utilities in 1995. The Property was previously zoned A - Single Family Residence and C-2 Community Shopping Center District. This development predated the Village’s Comprehensive Plan which was adopted in 2003. The properties in the general area are mostly classified under single- or multiple-family residential zoning districts as listed in the previous standard. See, Village Zoning Map attached as **Exhibit “D”**.

**c. The suitability of the Property in question to the uses permitted under the existing zoning classification.**

The Property is suitable for the proposed conditional use listed within the R4 – Multiple-Family Residence District:

Prior to 1982, the Property had been zoned single-family, similar to that of adjacent properties to the north (prior to Heritage Springs conditional use permit for planned development), south and west. The Property was designated such zoning classification upon annexation into the Village. The surrounding area has not experienced significant use change and is slated to remain residential within the 2003 Comprehensive Plan.

The Property is undersized in terms of dwelling unit per acre requirement. However, with the inclusion of the Lawn Avenue ROW Area, the combined property exceeds the minimum lot area required by Section 10-6-5(C)(2) of the DCO. The Applicant has sought a waiver from the Planned Development standard for minimum total lot size (five (5) acres). The Applicant is seeking variations from the R4 – Multiple-Family Residence District requirements. Please see Sections “D. Exceptions from Applicable District Regulations” and “E. Variations from Applicable District Regulations” below for a discussion of the Requested Zoning Relief under the planned development regulations.

**d. The trend of development, if any, in the general area of the Property in question, including changes if any, which have taken place in its present zoning classification.**

The recent trend of development in the general area of the Property has remained the same for decades, consisting of mostly home renovations, additions, and tear down and new construction of single-family residences. Most of the surrounding residential neighborhoods were subdivided prior to 1990, while there is an existing townhome development known as “Heritage Springs Subdivision” that was constructed in the late 1990s into the early 2000s to the north of the Property as a multiple-family development.



There is also another multi-family building with detached, dedicated parking garage buildings serving the units immediately to the north of the Property. The Property was rezoned to allow for office uses in the 1980s and has remained consistent with the existing condition for more than thirty (30) years. As the years have progressed, the occupancy of the office building has been decreasing.

**e. The suitability of the Property in question for permitted uses listed in the proposed zoning classification.**

The Property is suitable for the proposed conditional use as a planned development listed within the R4 – Multiple-Family Residence District: Multiple-family dwellings not exceeding six (6) dwelling units per building; however, the Property is undersized in terms of dwelling unit per acre requirement, without the inclusion of the Lawn Avenue ROW Area, and, if the Lawn Avenue ROW Area is not added to the Development site, the Applicant has requested a variation from this requirement. With the inclusion of the Lawn Avenue ROW Area as part of the Development site, this variation is not required. The zoning of the Property prior to the 1980s was for single family residential uses.

**f. The compatibility of the surrounding Property with the permitted uses listed in the proposed zoning classification.**

The surrounding Property is compatible with the permitted uses and conditional uses listed in the R4 – Multiple-Family Residence District, being residential and multi-family in nature. The surrounding properties all have either A - Single-Family Residence or R4 - Multiple-Family Residence District zoning.

**g. The objectives of the current comprehensive plan for the Village and the impact of the proposed amendment on the said objectives.**

The objectives of the current Comprehensive Plan for the Village **will** be met by this Map Amendment and it will **not have** a negative impact on the objectives. Please see responses within Section A 'Comprehensive Plan Amendment to the Long-Range Land Use Map Standards' for additional information pertaining to official goals and objectives of the Comprehensive Plan. Development of the Property, as proposed by the Applicant, will result in the elimination of an aging and underutilized office building.

**C. Conditional Use Permit Standards**

The Plan Commission has considered each of the seven standards set forth in Chapter 3 (Administrative Bodies and Procedures); Subsection 10-3-14 (Conditional Uses) of the DCO and finds as follows:

**1. That the establishment, maintenance or operation of the conditional use will not be detrimental to or endanger the public health, safety, morals, comfort or general welfare.**

The Plan Commission finds that the establishment, maintenance or operation of the Development **will not** be detrimental to or endanger the public health, safety, morals, comfort or general welfare. In fact, the proposed residential Project **will** enhance the community by being more in context with the surrounding residential uses. The proposed

number of dwelling units **will not** generate enough traffic to become a detriment to the public. The new residential use **should** provide a safer environment for pedestrians within proximity to the Property through the installation of sidewalks within the Park Place and Wolf Road rights-of-way. The new residential use should provide a safe environment for residents of the Subject Property through the installation of a sidewalk within the development and within the Wolf Road ROW. Based on the submitted Traffic Impact Study pedestrian and bicycle counts, Village staff recommends that the Applicant install a sidewalk to the south of the Subject Property, along the north side of Park Place. A sidewalk along Park Place would reduce the number of pedestrian and vehicle interactions within the proximity of the Subject Property and the intersection of Wolf Road and Park Place. The recommendation **would** further the application's ability to meet this standard. The Applicant has submitted the following supporting documents relative to this standard: Traffic Impact Study prepared by KLOA dated November 6, 2024, and Cook County Highway Department Transmittal prepared by KLOA dated August 26, 2024.

2. **That the conditional use will not be injurious to the uses and enjoyment in the immediate vicinity for the purposes already permitted, nor substantially diminish and impair property values within the neighborhood in which it is to be located.**

The Plan Commission finds that the establishment, maintenance or operation of the Development **will not** be detrimental to or endanger the public health, safety, morals, comfort or general welfare. The proposed residential project is more compatible with the surrounding residential uses than the existing office building. The proposed development **will** generate less traffic than the existing office use(s). The new residential use is proposed to include sidewalks within the Wolf Road rights-of-way that **will** provide an enhanced pedestrian experience.

The Development will include a stormwater management system that exceeds the minimum requirements of Section 10-11-11 (Stormwater Management Requirements For All Developments) of the DCO. The Applicant is required to provide volume control and accept the natural flow of stormwater from the La Grange Highlands area. The Applicant is not required to provide stormwater detention on the site, as the size of the Property is below the three-acre threshold. However, the Applicant is proposing to acquire fee simple title ownership of the existing stormwater detention basin within the Lawn Avenue ROW Area ("Lawn Avenue Detention Basin") from the Village, by a right-of-way vacation transaction, and then agrees to expand the size and capacity of the Lawn Avenue Detention Basin and also agrees to construct and maintain new stormwater detention basin areas on Outlot 31 and Outlot 33, referred to as the "Outlot 31 Detention Basin" and the "Outlot 33 Detention Basin". The Applicant's calculations show the detention basin's capacity will essentially be doubled as compared to the current conditions. They show an increase in storage in the basin from the existing 0.729 acre-foot to 1.64 acre-foot in the proposed condition. The amount of stormwater that enters the Village from the La Grange Highlands area poses issues for the Property and for many properties that are downstream. Although the proposed Project will not solve the stormwater issues in the area, it **will** provide incremental stormwater drainage benefits and not further burden the stormwater drainage issues.

The Applicant's construction of the new extension of Heritage Court within the Property and its connection to the south terminus of the existing Heritage Court, which serves the Heritage Springs Subdivision, will provide enhanced emergency vehicle access to the

Heritage Springs Subdivision and the proposed Heritage Crossing Subdivision. The existing Heritage Court currently terminates at the shared property line on the north side of the Property. The existing Heritage Court, a private street, is only twenty-four (24) feet wide and does not provide a suitable turnaround area for the Village's Fire Department ladder truck. The proposed extension of Heritage Court and the access for emergency vehicles via the proposed swing gate operated by an Opticom sensor **will** improve emergency services access for both the existing Heritage Springs Subdivision and the proposed Heritage Crossing Subdivision.

**3. That the establishment of the conditional use will not impede the normal and orderly development and improvement of the surrounding Property for uses permitted in the district.**

The other adjacent properties are fully developed and those that are occupied are being used for permitted uses within their respective zoning districts. In the case of the Heritage Springs Subdivision to the north, it was granted a conditional use for a planned development in August 1995. The redevelopment of the Property for townhouses is consistent with the trend of development for the properties along the north, northeast and west sides of the Property that are within the Village. The Property was zoned for residential use prior to the rezoning of the Property to the O – Limited Office Zoning District.

**4. That adequate public utilities, access roads, drainage and/or necessary facilities have been or will be provided.**

The Project proposes construction and continuation of Heritage Court to the north of the Property, connected via an automatic gate only accessed by residents of both the existing Heritage Springs Subdivision and the proposed Heritage Crossing Subdivision as well as emergency services. The Project proposes main access entrance (ingress and egress) from Wolf Road on the east side of the Property. A five (5) foot sidewalk is proposed on the east side of Heritage Court, and along Wolf Road to the south of the access entrance into the Development.

The Development proposes to connect to the Village's existing water main system, which is located adjacent to the Property within the Heritage Springs Subdivision. The sanitary sewer system will be provided by the La Grange Highlands Sanitary District, which has service jurisdiction over the Property. The Applicant has provided written confirmation that the La Grange Highlands Sanitary District can provide sanitary service to the Project. The Village contracted with a consultant (HR Green Engineering) that found the Village's water system has adequate capacity to provide potable water service and fire suppression service to the Development.

As indicated above, the Applicant agrees to comply with the Village's requirements for stormwater management. The Development shall comply with the requirements of the regional stormwater management authority, the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC). The Applicant also proposes to exceed the stormwater management requirements within the Property by expanding the size and capacity of the Lawn Avenue Detention Basin and by constructing and maintaining the Outlot 31 Detention Basin and the Outlot 33 Detention Basin.

5. **That adequate measures have been or will be taken to provide ingress or egress so designed as to minimize traffic congestion in the public streets.**

The Applicant proposes the construction and continuation of privately owned Heritage Court throughout the Development in order to connect the new roadway to the existing portion of Heritage Court to north of the Property that serves the Heritage Springs Subdivision. The connection of the new portion of Heritage Court to the existing portion of Heritage Court will be managed by an automatic gate only accessed by residents of both the Heritage Crossing Subdivision and the Heritage Springs Subdivision, as well as Village public safety and emergency service vehicles. The Project proposes a main access entrance from Wolf Road along its east boundary line. A five-foot sidewalk is proposed on the east side of Heritage Court, and along Wolf Road to the south of the access entrance into the Development. The Applicant has provided a traffic study for the Project and **has** demonstrated that there is sufficient ingress and egress to the Development and there will not be an undue burden on the surrounding roadway system.

6. **That the proposed conditional use is not contrary to the objectives of the current Comprehensive Plan for the Village.**

The construction and operation of the Development **will not** be contrary to the objectives of the current Land Use Plan, as amended by the Village in **2021** and as further amended as part of the Requested Zoning Relief of the Applicant. The proposed redevelopment of the Property by the Applicant is contrary to the objectives of the current Comprehensive Plan, but will not be contrary to the proposed amended Comprehensive Plan, per the amendment to allow for the multi-family residential development of the Property as requested in the Application. The Village's Future Land Use Map designates this Property as Office, but an amendment to that Map is part of the Applicant's Requested Zoning Relief. Please see responses within Section A 'Comprehensive Plan Amendment to the Long-Range Land Use Map Standards' for additional information pertaining to official goals and objectives of the Comprehensive Plan.

7. **That the conditional use shall, in all other respects, conform to the applicable regulations of the district in which it is located, except as such regulations may, in each instance, be modified pursuant to the recommendations of the Plan Commission and approved by the Village Board.**

The construction of the Development **will** conform to the applicable regulations of the R4 - Multiple-Family Residence District, except for the Requested Zoning Relief to certain regulations as requested herein and may be modified pursuant to the recommendations of the Plan Commission and approved by the Village Board. The Requested Zoning Relief is enumerated in Sections D, E and F below.

- D. **Guidelines for Planned Developments:** The following guidelines (Section 10-8-3 of the DCO) are used by the Plan Commission and the Village Board to evaluate the suitability of proposed planned developments. These guidelines represent sound planning principles which the Village thinks should be incorporated into planned developments. However, it is not intended that each and every one of these guidelines be rigidly conformed to, provided that just cause for any departure from these guidelines is demonstrated.

**A. The planned development should be compatible with the character of the underlying zoning district in which it is located.**

The surrounding properties to the west and south of the Property are zoned under the A - Single-Family Residential District classification and improved with single family houses. The properties to the east are unincorporated Cook County single family houses. The properties to the north and northeast are zoned R4 – Multiple-Family Residence District classification and improved with townhouses and condominiums respectively. The Plan Commission **finds** that the proposed planned development will be compatible with the character of the underlying zoning district, the proposed R4 – Multiple-Family Residence District classification, if the Map Amendment (rezoning) is approved by the Village Board.

**B. The planned development should be consistent with the official planning policies and the Official Land Use Plan of the Village.**

The Applicant is requesting a Map Amendment and Amendment to the Official Future Land Use Map. The Plan Commission **finds** that the proposed planned development will be consistent with the official planning policies and the Official Land Use Plan of the Village if the Amendment to the Official Future Land Use Map and the Map Amendment (rezoning) is approved by the Village Board.

**C. The planned development should preserve the value of the surrounding residential area.**

The proposed Development would remove the existing office building use and replace it with townhouses similar to the neighboring property to the north. The Applicant submitted fiscal impact projections showing that the Development will positively impact all taxing districts and generate impact fees. While the Applicant has requested a waiver from the market study submittal, the Applicant has submitted data on other townhouse developments in Western Springs to demonstrate the market demand for the housing type and base cost. The Plan Commission **finds** that the proposed planned development will preserve the value of the surrounding residential area.

**D. Any unusual physical, topographical or historical features of the site of the planned development which are of importance to the people of the area or the community should be preserved.**

The Property is a land locked parcel that has remained in the existing condition for several decades. The shape of the parcel is also atypical. There is no historical significance to the existing office building, and its retention and continued use as an office building, which has been mostly vacant for years, is not of importance to the people of the area or the community. As indicated in the Application, the Property receives a significant amount of stormwater from the neighboring unincorporated Cook County properties. The redevelopment of the Property with enhancements to the stormwater drainage



detention area **is** important to the residents and property owners in the area and the community.

**E. The minimum area of a planned development should be five (5) acres.**

The Applicant is seeking a waiver from the five (5) acre minimum area guideline. The Property, with the inclusion of the Lawn Avenue ROW area, meets the minimum lot area requirement of the R4 – Multiple-Family Residence District regulations. The most recent planned developments (Field Park 17 Ogden Avenue Townhomes and Foxford Station) have been granted waivers from this guideline.

**F. Yards along the periphery of a planned development should be compatible with the yards of the adjacent properties.**

The Plan Commission **finds** that the yards along the periphery of the proposed planned development area are compatible with the yards of the adjacent properties. The Applicant has provided a landscaping plan that shows perimeter landscaping and a fencing around the Property to screen the Development from the surrounding properties.

**E. Exceptions from Applicable District Regulations:**

The Plan Commission considered each of the five (5) below standards set forth in Chapter 8 (Planned Developments); Subsection 10-8-4(B)(1) (Site Design Regulations) of the DCO and **finds** that the exceptions from the applicable R4 – Multiple-Family Residence District Regulations are needed to help achieve the intended benefits of a planned development. The exceptions from the applicable R4 – Multiple-Family Residence District Regulations may be authorized because:

- a. **Such exceptions are solely for the purpose of promoting an improved development that will be beneficial to the residents or occupants of the planned development as well as those of surrounding properties.** The Development **meets** this exception condition.
- b. **In residential planned developments, the maximum number of dwelling units allowed shall not exceed by more than forty percent (40%) of the number of dwelling units permitted in the underlying zoning district.** The Development **meets** this exception condition.
- c. **The area of open space provided in a planned development shall be at least twenty-five percent (25%) more than that required in the underlying zoning district.** This exception condition does not apply to R4 - Multiple-Family Residence District Regulations.
- d. **Along the periphery of such planned developments, yards shall be provided as required by the regulations of the underlying zoning district.** A text amendment to the DCO has been requested so that the Development can meet this exception condition.

- e. Building height shall comply with the Zoning District regulations approved by the Village for the planned development, except that a variation of not more than nine percent (9%) above the maximum height of buildings and structures may be allowed as part of the approval of a planned development.

**F. Requested Variations from Applicable District Regulations: Standards**

The Plan Commission considered each of the five (5) standards set forth in Chapter 3 (Administrative Bodies and Procedures); Subsection 10-3-12(F)(2) (Text Amendments) of the DCO and finds as follows that the Application **meets** the following standards:

- a. **The degree to which the proposed amendment has general applicability within the Village at large and is not intended to benefit specific Property.**
- b. **The consistency of the proposed amendment with the objectives of this Ordinance and the intent of the applicable zoning district regulations.**
- c. **The degree, if any, to which the proposed amendment would create nonconformity.**
- d. **The consistency of the proposed amendment with the Comprehensive Plan.**
- e. **The degree, if any, to which the proposed amendment contradicts Village policy as established in previous rulings on petitions involving similar circumstances.**

The intent of a planned development (Section 10-8-2 of the DCO) is to afford greater choice in the types of development available to the public by allowing a development that would not be possible under the strict application of the other requirements of the DCO. Planned developments generally provide relief from more than one requirement in order to provide an improved design or additional public benefits. The Applicant has indicated in the Application that the additional stormwater detention, landscaping, and architecture are proposed to offset the proposed variation requests and additional design benefits and architectural plans.

The Applicant is requesting relief from the required front yard, minimum interior side yard, and rear yard due to the size and design of individual lots of the development. As the homes are proposed to encroach, the Development's proposed accessory structures also require zoning relief: a/c units, balconies, patios, bay windows. The Applicant has indicated no additional accessory structures will be permitted to encroach within the required yards.

**III. OTHER REQUESTED RELIEF:**

- A. The Plan Commission considered each of the eleven (11) standards set forth in Chapter 11 (Stormwater Management Requirements For All Developments); Subsection 10-11-14 (Variances) of the DCO and finds that the Application **meets** the following standards in order to approve a variation to Subsection 10-11-11 (C)(2) (Stormwater Management Requirements For All Developments; Detention; Streets):
  - a. **Danger that materials may be swept into other lands to the injury of others;**
  - b. **Danger to life and property due to flooding or erosion damage;**
  - c. **Susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;**

- d. Importance of the services provided by the proposed facility to the community;**
- e. Necessity to the facility of a waterfront location, where applicable;**
- f. Availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;**
- g. Compatibility of the proposed use with existing and anticipated development;**
- h. Relationship of the proposed use of the Comprehensive Plan and Floodplain Management Program of that area;**
- i. Safety of access to the property in times of flood for ordinary and emergency vehicles;**
- j. Expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site; and**
- k. Costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges.**

While it is acknowledged that Subsection 10-11-11 (C)(2) (Stormwater Management Requirements For All Developments; Detention; Streets) of the DCO states that “[s]treets are not to be used for the storage of excess stormwater, ponding depths shall not encroach more than three feet (3’) on the adjacent traffic lane and shall not remain flooded for more than eight (8) hours for any event less than or equal to the 100-year event.” Even so, the Applicant’s proposed Development, which is now based on the Site Plan revised as of November 5, 2024, provides for an expansion of the size and capacity of the existing Lawn Avenue Detention Basin as well as the construction and maintenance of the Outlot 31 Detention Basin and the Outlot 33 Detention Basin. Moreover, the Applicant plans to construct a portion of the north end of Heritage Court (a private street) between the north lot line of the Property to a point approximately forty feet (40.00’) south of the north lot line of the Property, which is not intended to be used for primary ingress and egress vehicle access to the Property, to temporarily hold stormwater in certain infrequent rain events to facilitate the movement of excess stormwater from the Property to the on-site stormwater detention basins and to draw stormwater off of the remainder of Heritage Court and away from the private driveways of northerly dwelling units so that there is no ponding of stormwater in front of the dwelling units.

- B. The Applicant’s current Site Plan proposes the vacation of the Lawn Avenue ROW Area, with fee simple title being conveyed to the Applicant so that it will hold title to the Lawn Avenue Detention Basin. The proposed vacation of the Lawn Avenue ROW Area is subject to the approval of five (5) of the six (6) Village Trustees per the Illinois Vacation Statute (65 ILCS 5/11-91), and this area is an integral part of the Development because it allows for the Applicant to expand the size and capacity of the Lawn Avenue Detention Basin and to construct the Outlot 31 Detention Basin and the Outlot 33 Detention Basin. Per the Village’s Right-Of-Way Disposal Policy (“ROW Policy”), the Village Board may grant deviations, exceptions or variations from this Policy under the appropriate circumstances, provided such deviation, exemption or variation is approved by a three-fourths vote of the corporate authorities and, in the case of a proposed residential planned development, the Village Board “reserves the right to set a price for the sale of such right-of-way based on: (1) the fair market value of the property; or (2) on the benefits (as documented in the public record by the Village Board) which will accrue to the Village as a result of the vacation and the incorporation of the vacated right-of-way into the Development” (Sections A and B of the ROW Policy). In lieu of paying the fair market value assigned to the Lawn Avenue ROW Area as set forth in the ROW Policy (which equals \$408,375.00), the Applicant has requested that the Village Board approve the vacation of the Lawn Ave ROW Area in exchange for the Applicant completing equivalent “like-kind, like value” improvements consisting of the enhanced stormwater drainage improvements to the Lawn Avenue Detention Basin and the construction of the Outlot 31 Detention Basin and the Outlot 33 Detention Basin at an estimated construction cost of

\$505,729.00 based on the Lawn Avenue Detention Pond Budget, attached as **Exhibit “H”**. Because this Application involves a proposed residential planned development, the Plan Commission finds that it is appropriate for the Village Board to grant the following deviations, exceptions or variations from the ROW Policy: (1) to offer the Lawn Avenue ROW Area for sale only to the Applicant for purposes of its incorporation into the Development to provide for enhanced stormwater drainage facilities, and to not offer the Lawn Avenue ROW Area to all adjacent property owners for purposes of submitting competing purchase proposals; and (2) to vacate and convey title to the Lawn Avenue ROW Area to the Applicant, at no cost, in exchange for the construction of enhanced stormwater drainage improvements to the Lawn Avenue Detention Basin and the construction of the Outlot 31 Detention Basin and the Outlot 33 Detention Basin provided that the final actual, documented construction costs are approximately \$505,729.00, as confirmed by the Village Engineer. As part of the Village’s construction inspection and post-construction approval process of the enhanced and newly constructed stormwater drainage facilities, including the Lawn Avenue Detention Basin, the Outlot 31 Detention Basin and the Outlot 33 Detention Basin, within five (5) business days of any written request for Development-related documents from the Village, the Applicant shall provide the Village with true and accurate copies of expenditure summaries, as prepared and certified by the Applicant, with appropriate supporting documentation (i.e., construction escrow statements, paid invoices, proof of payment to contractors, subcontractors, suppliers, executed lien waivers, contractor’s sworn statement and affidavit, lender financing statements, lender progress payments and evidence of wire transfers, etc.), as deemed reasonably necessary by the Village (i.e., Village Manager, Village Engineer or Village Attorney) to verify the actual incurred costs of the enhancements to and construction of those stormwater drainage facilities. If the actual cost of the construction of the stormwater drainage improvements is less than the fair market value assigned to the Lawn Avenue ROW Area as set forth in the ROW Policy (\$408,375.00), the Applicant shall pay to the Village the dollar amount that represents the difference between the actual cost of the construction of the stormwater drainage improvements and the fair market value assigned to the Lawn Avenue ROW Area (\$408,375.00) upon written demand of the Village. If, after acquiring title to the Lawn Avenue ROW Area, the Applicant, or its successors-in-interests, successor owners, assignees or transferees, do not construct the Development or do not complete the enhanced stormwater drainage improvements to the Lawn Avenue Detention Basin and the construction of the Outlot 31 Detention Basin and the Outlot 33 Detention Basin, as shown on the Village-approved Development Plans, the Applicant or its successors-in-interest, successor owners, assignees or transferees shall be obligated to pay the Village an amount equal to \$408,375.00 plus all of the incurred reimbursable costs and fees that are payable to the Village under the ROW Policy (e.g., engineering, legal, survey fees and 10% administrative fees, etc.) upon written demand of the Village. In the event the Village does not approve of the vacation of the Lawn Avenue ROW Area, the Applicant will have to petition for an amendment to the planned development ordinance and present a revised Site Plan for review and consideration by the Plan Commission at a public hearing, and then review and consideration by the Village Board.

#### **IV. RECOMMENDATIONS**

Subject to Section V (Conditions) set forth below, the Plan Commission recommends **APPROVAL** of the Application and the Requested Zoning Relief as follows:

#### **V. CONDITIONS**

The recommendation of **APPROVAL** of the Applicant's request for the issuance of a conditional use permit for a planned development for the Project ("Conditional Use Permit for Planned Development") is conditioned upon and subject to the following conditions:

1. General

- a. The Applicant shall comply with all of the applicable federal, state, county, local and special district laws, ordinances and regulations, including the provisions of the Village's Municipal Code, relative to the construction and maintenance of the Development, except as otherwise modified by Village approvals.
- b. The uses generally approved for this Conditional Use Permit for Planned Development for the Development are limited to residential uses and uses ancillary to the foregoing uses. Such ancillary uses shall comply with the requirements for accessory uses established under the DCO. The approval of the Conditional Use Permit for Planned Development for the Development does not authorize the Applicant or any other tenant or occupant to use the Property without applying for and obtaining any required temporary use permit, conditional use permit, or any other Village or other governmental approval. Such specific use approval shall be obtained by the Applicant, tenant or occupant of the Property before commencing such use.
- c. In regard to the construction, operation and maintenance of the Development, these conditions shall be the only conditional use and planned development conditions applicable to that use of the Property, unless amended by mutual agreement of the Applicant and the Village, or unless amended by ordinance approved by the Village Board after the required public hearing.
- d. The Applicant shall pay the required impact fees (i.e., school site / school improvement impact fee; and park and recreation site impact fee) to the Village in lieu of land dedication, as calculated by the Village, in accordance with the formula set forth in Section 10-10-14 of the DCO, at the time it applies for a site development permit or a building permit (whichever occurs first).
- e. In the event that the Applicant does not obtain a site development permit or a building permit and commence and actively perform construction of the Development within twelve (12) months of the approval of the Conditional Use Permit for Planned Development for this Project, the Conditional Use Permit for Planned Development for this Project shall expire in accordance with Section 10-3-14(L) of the DCO, unless the 12-month period is extended by approval of an ordinance by the President and Board of Trustees of the Village. Any extension of the above 12-month period to avoid an expiration of the Conditional Use Permit for Planned Development for this Project shall be approved by an ordinance passed by the President and Board of Trustees of the Village, in their discretion. Approval of such an extension does not require a public hearing, but such ordinance must be approved by the President and Board of Trustees of the Village at a public meeting in accordance with the Open Meetings Act. The Applicant shall use all commercially reasonable efforts to secure all necessary governmental permits needed to complete the Development and to actively and diligently pursue completion of the Development. The Applicant shall use all commercially reasonable efforts to hire an adequate number of experienced contractors, subcontractors and other skilled labor, and provide for adequate



equipment and building materials to ensure that construction of the Development is actively and diligently pursued.

- f. The Applicant shall revise the Declaration of Covenants, Conditions and Restrictions for the Homeowners Association (the "Declaration") in accordance with comments provided by the Village Attorney and shall file the Declaration with the Cook County Clerk's Office, Recording Division ("CCCORD") prior to the sale of any portion of the Property to any other person. The Declaration shall require that, at the closing of each dwelling unit, the Applicant shall allocate \$600.00 (or an amount equal to three (3) months' Community Assessment) and pay said amount into a "Capital Reserve" fund, as defined and required by the Declaration, for the maintenance reserve account for the benefit of and use of the Homeowners Association for maintenance purposes consistent with the Declaration. In addition, the Declaration shall provide for adequate building reserve funds to pay for operating expenses (insurance, building maintenance and cleaning vendors, utilities, security) and short-term and long-term maintenance, repair and replacement expenses for the exterior and interior of the building and its common areas, and also contain all necessary cross access easements for driveway use and garage access for the benefit of each of the dwelling units as well as common area easements for use, repair, replacement and maintenance of common areas and common elements (driveway, fencing, landscaping, roof and exterior building materials) of the building.
- g. The Village and the Applicant shall execute the Final Plat of Heritage Crossing and the Declaration, which shall be filed against title to the above-described property with the CCCORD. The Plat shall be filed by the Village, at the Developer's cost, along with a certified copy of the Ordinance approving the Development. The Declaration shall be filed by the Developer, at its cost, with the CCCORD after the townhome units are constructed but prior to the sale and conveyance of legal title to any townhome. The Declaration shall contain provisions that are enforceable against the Applicant, and any successor owners, property managers, associations, lessees, licensees, transferees, receivers or successors in interest, which, in part, provides for the future installation, maintenance, repair and replacement of all stormwater management and other drainage structures, public utilities, water and sewer mains and related structures, including without limitation fire hydrants, driveway and parking lot improvements, parking lot and landscape lighting, and landscaping and retaining wall improvements. The Plat and the Declaration shall be in a form and content approved by the Village Engineer and the Village Attorney. The Plat and the Declaration shall impose on the Applicant, and any successor owners, lessees, licensees, transferees, receivers or successors in interest, at their cost, the obligation and responsibility of performing all future maintenance, repair and replacement work in regard to the above-described development improvements as reasonably deemed necessary by the Director of Code Enforcement and the Village Engineer in order to comply with the Village Code, as amended, and shall grant to the Village a non-exclusive easement for entry upon and access to all parts of the Property, for purposes of providing the Village with the right but not the obligation to perform such maintenance, repair and replacement work, in its sole, reasonable discretion, along with the right to recover the cost of such work directly from the owners, successor owners or successors in interest or to lien the property and take all other action provided for in 65 ILCS 5/11-31-2, as amended, or similar applicable law, including any law contained in the Illinois Municipal Code, as amended. The Applicant, and any successor owners, property managers, associations,

lessees, licensees, transferees, receivers or successors in interest, at their cost, shall repair pavement, concrete, landscaped areas or other areas damaged by the Village if the Village performs such future installation, maintenance, repair and replacement work.

- h. Prior to the issuance of a building or development permit, the Applicant shall submit a construction schedule, routing, construction staging, restoration plan and phasing plan with map and plan exhibits, which are in conformance with the final set of Village approved engineering and construction plans for the Development. These plans shall identify construction access routes, temporary detours, regular street cleaning intervals and refuse removal, and other appropriate safety, restricted access and “good neighbor” practices. Standard Village construction hours shall apply, except as otherwise permitted by the Village Manager.
- i. Prior to the issuance of a building or development permit, the Applicant shall enter into a Maintenance and Development Agreement with the Village, as prepared by the Village Attorney and approved by the Village Board, which includes conditions for the construction and long-term maintenance of the Development, consisting generally of the following items:
  - i. The posting of an irrevocable letter of credit or other form of security with the Village to secure the completion of the required SSA Maintained Improvements and the landscape improvements for the Development (the “Developer Security”). The Developer Security shall be in a form acceptable to the Village Attorney and of a dollar amount to be determined by the Village Engineer and shall be managed by the Village in accordance with Subsection 10-10-19(2) (Land Dedications and Completion, Maintenance and Acceptance of Improvements; Posting of a Bond, Cash, or Other Securities) of the Municipal Code;
  - ii. The posting of a two-year maintenance bond (performance and payment bond) for the SSA Maintained Improvements and the landscape improvements;
  - iii. The submittal of construction access plans for the Development requiring the Applicant and all of its employees, consultants and development and construction crews to use Wolf Road as the sole point of ingress and egress to the Development. It is the Applicant’s responsibility to ensure that access to the site is maintained during all Development construction activities;
  - iv. The Applicant shall either enter into a private tow company contract to enforce the community parking spaces with the Development or enter into a private parking / private street enforcement agreement with the Village that will allow for the posting of appropriate parking regulation signs and vehicle speed signs to enable Village police officers to issue parking tickets and traffic citations to enforce the parking and traffic regulations of Heritage Court within the Heritage Crossing Subdivision;
  - v. At the request of the Applicant and the Homeowners Association for Heritage Springs Subdivision, the Village will consider approving an amendment to the planned development ordinance granted for the Heritage Springs Subdivision to

allow for additional on-street parking spaces and the operation of the swing gate and such other requested amendments that are necessitated by the Development, and the Village will also consider entering into a private parking / private street enforcement agreement that will allow for the posting of appropriate parking regulation signs and vehicle speed signs to enable Village police officers to issue parking tickets and traffic citations to enforce the parking and traffic regulations of Heritage Court within the Heritage Springs Subdivision;

- vi. Prior to the issuance of a building or development permit, the submittal to the Village of a fully executed agreement with Cook County for perpetual maintenance of the Project-related roadway structures and all infrastructure improvements within the portion of the Wolf Road right-of-way, as required by Cook County;
- vii. Per Section 10-11-11 (Stormwater Management Requirements For All Developments) of the DCO, prior to obtaining any type of building or site development permit for the Project, the Applicant shall execute and enter into a stormwater management facilities maintenance agreement ("stormwater maintenance agreement") with the Village, as prepared by the Village Attorney and approved by the Village Board, relative to the stormwater drainage facilities located on the Property, which facilities shall be the responsibility of the Applicant and its successor owners (i.e., the Homeowners Association). Within the stormwater maintenance agreement, the Applicant shall guarantee that the Applicant and all of the successor owners of the Property will maintain the stormwater management facilities and the stormwater drainage system and provide to the Village periodic written reports on the stormwater management facilities' monitoring and maintenance. The stormwater maintenance agreement shall also specifically authorize representatives of the Village to enter onto the Property for the purpose of inspections of the stormwater drainage system. Such agreement shall be recorded with the CCCORD. The stormwater maintenance agreement shall include a schedule for regular maintenance of each aspect of the Property's stormwater drainage system and shall provide for access to the system for inspection by authorized personnel of the Village. The stormwater maintenance agreement shall also stipulate that, if the appropriate authorized personnel of the Village notify the property owner in writing of maintenance problems which require correction, the property owner shall make such corrections within thirty (30) calendar days of such notification. If the corrections are not made within this time period, the Village may have the necessary work completed and assess the cost to the property owner.
- viii. Revise the Declaration to exclude/prohibit charcoal grills on the proposed balconies.
- j. Prior to the sale of any portion of the Property by the Developer or the issuance of any occupancy permits for the Development, the Developer shall participate in good faith in the formation process, and not object to the formation, of a dormant "Special Service Area" ("SSA") to be established by the Village, at the Developer's cost, pursuant to 35 ILCS 200/27-5, *et seq.* The SSA shall govern the Property for the purpose of ensuring, as and when appropriate, the maintenance, repair and replacement of the "SSA Maintained Improvements". The SSA Maintained Improvements shall include those public and privately-owned and developed improvements within the Development or

within utility easements outside of the Property that are necessary to support and serve some or all of the Development including, but not limited to, new or the replacement, maintenance, extension or upsizing of existing public or private stormwater detention and drainage facilities, including the Lawn Avenue Detention Basin, the Outlot 31 Detention Basin and the Outlot 33 Detention Basin (each detention basin shall be privately-owned and maintained by the Homeowners Association), privately-owned Heritage Court, the Heritage Court Gate Access Improvements and its Opticom sensor system, other roads or pathways, drive aisles, curbs, light poles and light fixtures for roads, sidewalk and pedestrian pathways, and access drives, sanitary sewer mains and service lines and other sanitary sewer system facilities and equipment (i.e., lift stations), water mains and service lines and other water system facilities and equipment (i.e., pump and/or booster stations, vaults, generators, water storage tank or tower), and electric, telecommunications, cable and gas service lines and facilities.

- k. The individual dwelling units and platted lots within the Development shall not be permitted to request variations from the Village's Municipal Code that are unique and specific to the individual dwelling unit and lot owner. Amendments to the planned development ordinance that are not unique and specific to an individual dwelling unit and a specific lot owner may be applied for and presented to the Village in accordance with the applicable provisions of the Municipal Code.
- l. The Site Plan (revision date November 5, 2024) shall be updated to include all labels depicting all building setbacks.
- m. The residential buildings must comply with the architecture approved by the Village's Planned Development Ordinance.
- n. The exterior of the newly constructed buildings and other above grade structures of the Project shall be constructed primarily of high quality brick, brick veneer that is a minimum of three-fourths inches and individually adhered, stone, masonry, architectural-faced concrete block, stamped concrete panels, cement fiber board (i.e., Hardies or LP cement board products), architectural metals, and synthetic architectural products to provide a high quality aesthetic appearance. Sidewalks and pedestrian pathways shall be constructed of concrete. Vinyl siding shall not be permitted. Exterior Insulation and Finish Systems (EIFS) materials (i.e., Dry-vit materials) shall not be permitted. The Applicant agrees to take all commercially reasonable steps to ensure that the building design, building materials and exterior color schemes of the proposed building and its related landscaping are designed to blend in and complement the adjacent residential uses.
- o. The Applicant shall prepare and submit to the Village final versions of the Plat of Heritage Crossing Subdivision, the Plat of Abrogation for Storm Sewer Easement and Public Utility Easement, and the Plat of Vacation of Public Right-of-Way that have been revised to address the review comments of the Village Engineer and the Village Attorney. The Plat of Heritage Crossing Subdivision shall be revised to specifically identify all terms and conditions associated with the road and driveway usage and maintenance, including cleanliness standards, snow removal and other required reasonable terms. These Plats, and any other plats that may be required for this Development, are subject to approval by the Village Board (or the Trustees), and, if

approved, then said Plats will be filed with the CCCORD, by the Village Attorney, at the Applicant's cost prior to the sale of any dwelling unit.

- p. In accordance with Subsection 9-1A-1 (Plan Review Deposits and Fees) and Subsection 9-1B-5: (Additional Deposit Required) of the Municipal Code, within five (5) business days of Village Board approval of the Requested Zoning Relief, the Applicant shall provide to the Village a developer-reimbursable costs / plan review escrow deposit of \$58,000.00 to defray the Village's cost of plan reviews and payment of other developer-reimbursable costs incurred by the Village relative to the processing of the Application and the plan reviews by the Village staff and Village consultants of the development plans submitted for development permit approval. The developer-reimbursable costs / plan review escrow deposit shall always maintain a positive cash balance of not less than \$10,000.00 and the Applicant shall provide the Village with additional funds to replenish the escrow within five (5) business days upon written demand from the Village.
- q. Submit to the Village, as part of the Village plan review and approval process, updated plats that correct all inconsistencies between prior submitted plats (e.g., site plans showing seven (7) guest parking spaces between Units 23 and 24, whereas the engineering plans show six (6) spaces).
- r. Once the Property is rezoned from its current designation of O – Limited Office Zoning District to the R4 - Multiple-Family Residence District, with a conditional use permit for planned development overlay approval, to allow for the construction and operation of the Development, it will expand the types of other possible adaptive uses that could be developed on the Property under the R4 - Multiple-Family Residence District classification, if the Development is not constructed, subject to Village approval of another conditional use permit for a planned development after the conducting of the required public hearing.
- s. The conditional use permit for planned development ordinance and its conditions shall be covenants of record that run with the land and shall be placed in a recordable format, acceptable to the Village Attorney, and then recorded by the Village against title to the Property with the Cook County Clerk's Office – Recording Division, at the Applicant's cost.
- t. The approval of the Requested Zoning Relief is subject to the Developer purchasing the Property from the Property Owner.
- u. Execution by the Applicant of the ACKNOWLEDGMENT Page that is part of the conditional use permit for planned development ordinance.

## 2. Engineering

- a. The Applicant, at its cost, shall install a new eight inch (8.00") ductile iron watermain and new fire hydrants to service the Development. The Developer shall obtain an IEPA permit for the new watermain. The Village, at the Applicant's cost, shall have a water system engineering inspection performed and an assessment report prepared by a licensed professional water system engineer to verify the condition and capacity of the existing adjacent water main located in the Heritage Springs Subdivision and to provide



a recommendation for the sizing of the water main that will service the Development. The Applicant, at its cost, shall be responsible for any repairs and/or replacement related to its connection to and extension of the existing water main that are determined by the water system engineer to be necessary to provide adequate water main and service line connections to the Development.

- b. The Applicant shall be responsible to pay for any damage to any public improvements caused by any activities related to the Development. The Village will be the sole arbiter of determining if the damage was caused by the Applicant's actions. Within seven (7) calendar days of inspecting any damage, the Village will notify the Applicant in writing and define the scope of the damage and expected repairs. The Village and the Applicant will discuss whether the damage is to be repaired by the Applicant or if the estimated costs of repairs are paid to the Village.
- c. Per Section 10-11-11 (Stormwater Management Requirements For All Developments) of the DCO, prior to obtaining a certificate of occupancy for any dwelling unit within the Project, the Applicant shall file and maintain with the Village a current performance and payment bond in the amount of \$100,000.00 for maintenance of the stormwater drainage system. The Village shall be a beneficiary and obligee of the bond. The bond shall be replaced by the Applicant or its successor owners with a new bond prior to its expiration.
- d. The existing drainage pattern for the Property will not be altered by the construction of the Development, the stormwater drainage system, the landscaping or any of the related improvements.
- e. The Applicant, at its cost, shall use commercially reasonable efforts to cause any overhead electric service wires and other utility wires for the Development to be buried to enhance the aesthetics of the neighborhood.
- f. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated geometric plan that shows not only the location of a safety rail on top of the retaining walls, as shown on the current geometric plan, but also contains a detailed and structural design and calculations for the safety rail, which are needed to ensure the rail is adequate and meets applicable codes.
- g. The Applicant's engineer shall submit to the Village, as part of the Village plan review and approval process, accurate calculations showing that the stormwater management system is able to manage bypass stormwater appropriately as determined by the Village Engineer.
- h. The Applicant shall submit to the Village, as part of the Village plan review and approval process, accurate calculations that show that the rate of flow of the stormwater drainage bypass system is equal to or less than the current rate of all bypass flows (low flow and overland). This submittal must demonstrate that the bypass stormwater does not reach the Lawn Avenue Detention Basin faster than it currently does under the existing conditions.
- i. The Village will not accept the twin 54" aluminum pipes that are proposed by the Applicant to be installed in the rear yard of Units 1 through 7. The Applicant shall submit

to the Village, as part of the Village plan review and approval process, an updated design plan that utilizes reinforced concrete pipes or precast reinforced concrete box culverts to convey the stormwater. The Applicant shall submit to the Village design calculations that demonstrate the proposed pipes meet all relevant design criteria for capacity and velocity of stormwater.

- j. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a detailed operations and maintenance (“O&M”) plan for the enclosed stormwater drainage bypass system. The O&M plan is required to be incorporated into the final plat of subdivision, the Declaration, and the Maintenance and Development Agreement.
- k. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated design plan that shows:
  - i. The end section of the stormwater drainage bypass pipes are designed in a way that prevents access inside the pipes by unauthorized persons. The end section shall be designed to prevent this from happening, while at the same time not becoming a maintenance problem with debris collection.
  - ii. All components of the stormwater bypass system (open channel and piping) are secured and not accessible to the public.
  - iii. The Applicant shall install infrastructure to ensure that the stormwater bypass system is not a danger to the public.
- l. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a wetland plantings plan for the stormwater basins to be used with the volume control retention system needed to be designed by a licensed / certified ecologist and reviewed by the Village prior to the issuance of any site development permit. This plan must also include a maintenance plan.
- m. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a set of structural design plans sealed by an Illinois licensed structural engineer for the retaining walls.
- n. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an O&M plan for the stormwater detention basins. The Applicant shall create an O&M plan for the stormwater detention basins and create a mechanism to fund all required maintenance activities for the establishment period of three (3) to five (5) years. A licensed / certified ecologist with experience in wetland basins shall produce this type of O&M plan for Village review and approval prior to the issuance of any site development permit.
- o. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an exhibit showing that the street light photometrics conform with the Village Code for Village review prior to the issuance of any site development permit.
- p. The plans have been updated to show new retaining walls along the west edge of the Lawn Avenue Detention Basin which will require the removal of the existing walls.

However, the structural design of this new retaining wall and the other proposed retaining walls are not complete and are not provided. The Applicant shall submit to the Village, as part of the Village plan review and approval process, complete retaining wall details, elevations, and signoff approval by an Illinois licensed structural engineer.

- q. Since the structural design is not complete, it is not known if tiebacks or over excavation needed to construct the walls will be contained within the Property. Work needed to construct the new retaining walls cannot take place on private property unless temporary or permanent easements are acquired. Construction limits behind the retaining walls shall be identified and contained within the Property or copies of executed easements are to be provided prior to the issuance of any site development permit.
- r. Neighboring properties cannot be flooded as a result of any interim construction conditions or activities by the Applicant that could occur if the old retaining wall is torn down and the new retaining wall is not yet complete. The development plans shall contain provisions that temporarily protect the west property line to a pre-project elevation. The development plans shall identify a stormwater management plan that the Applicant shall comply with to address stormwater management issues during the site development phase and construction phase of the Development.
- s. The retaining wall design of the detention area between Units 20 and 21 shall be constructed and maintained to accommodate for overland flows that may occur if the twin 54" sewers are overwhelmed or not functioning properly
- t. Replace the existing flat grate that is part of the existing Heritage Springs stormwater system, which is prone to clogging, with a vaulted frame and grate. A vaulted grate will be much less prone to clogging and will improve performance and reliability of both developments' stormwater management systems.
- u. The plans show inlets proposed to be located on the Heritage Springs property. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated plan that relocates the inlets to the south so they are located on the Heritage Crossing's property and adjusts the location of the inlets directly under the proposed swing gate to be fully located on Heritage Crossing property. The plans also need to be updated so that the Heritage Court roadway vertical curve is adjusted so the low point is moved south, which will result in the inlets being placed on the Heritage Crossing property and relocate the depressional area from Heritage Springs to Heritage Crossing.
- v. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a set of street lighting plans for the Development, which include all lighting conduits, cables, controllers, and service location. Also, these plans shall include light pole foundation and controller foundation details, and the street lighting plans shall be signed and sealed by an Illinois licensed structural engineer.
- w. The Applicant's narrative report shall be updated and resubmitted to the Village with a section discussing the development of the HEC-HMS modeling and results.

- x. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a report that discusses how the hydraulic modeling impacted the subdivision grading plan.
- y. The Applicant's narrative report shall be updated and resubmitted to the Village with a section discussing the worst-case flooding scenario. This updated report shall include exhibits sent to Engineering on October 31, 2024, which illustrate stormwater storage in this worst-case scenario. The updated report shall clearly state there is a net increase in stormwater storage despite the removal of the existing parking lot area and the back-filling of that parking lot area with soil as part of the site development work and lot grading work.
- z. The proposed design of the dual culverts suggests a full-flowing velocity of 14 ft/s, well above the acceptable maximum velocity. The Applicant's next plan submittal shall contain documentation that confirms 11 ft/s is the maximum flow velocity through these culvert stormwater pipes.
- aa. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a set of calculations for the riprap sizing at the outfall of the dual culverts. The current riprap gradation, shape and area do not appear to match the design provided by the Illinois Urban Manual. Furthermore, the detail provided (IL-610 on Sheet 6) is missing dimensions and shall be updated by the Applicant.
- bb. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated grading plan for the Property line north of Unit 14 that demonstrates that the final re-grading of the area will prevent overland flow from continuing onto the Heritage Springs property.
- cc. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated Stormwater Management Report and HEC-HMS Model that includes:
  - i. An updated Stormwater Management Report's narrative revised to include a discussion of modeling results, reference and a discussion of the supporting modeling documentation, and also shall include a set of inundation maps.
  - ii. Clarification on how the discharge flows are defined between stormwater detention basins. The HEC-HMS files provided indicate that the discharge curves for all stormwater detention basins are turned off in both existing and proposed scenarios. Additionally, many of the nodes do not have discharge functions defined.
  - iii. Clarification on the distinction between the nodes "Storage East of Wolf Road" and "Box Inlet East Side Wolf Rd". Pages 71 and 72 of the report show stage-storage tables for these nodes, but the areas for elevations 664.0 and 665.0 match for these two, suggesting some volume may be double-counted. Furthermore, the "Box Inlet-East Side Wolf Rd" node table differs significantly from that shown in the HEC-HMS model.

- iv. Provide a set of HEC-HMS results that match the conservative scenario displayed in the inundation maps because: (i) The inundation maps provided are for the scenario where the Ashbrook Subdivision ponds are not modeled, and the 2-hour duration storm is the critical duration., (ii) However, the HEC-HMS results provided are for the scenario where the ponds are modeled, and the 1-hour duration is critical.
- v. Revise the inundation maps to reflect flood elevations upstream of Basin "C". For example, the "Storage West Side Wolf Road" node has critical duration elevations in excess of 660, which need to be shown on the inundation maps. This would include surcharging inlets along the dual culverts under proposed conditions.
- dd. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a written response to each of the initial plan review comments from the Village Engineer and Village's consulting engineer contained in Attachment 4 of the Village Staff Memo dated November 18, 2024.
- ee. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a set of final engineering plans that include the location of all utilities and light poles that demonstrate there are no conflicts between utilities, light poles, and the proposed landscape areas.

### 3. Landscaping

- a. The landscaping plans shall be revised to address all outstanding comments from the Village's consulting landscape architect's review memorandum dated November 5, 2024.
- b. The Applicant (and any successor owners, property managers, property associations), at its cost, shall be required to maintain each building façade and long-term lawn and landscape maintenance of the green spaces for the Development, which obligations shall be set forth in a combined Property Maintenance Plan / Landscaping Plan for the Village's plan review approval and final Village Board approval. Maintenance standards, tree replacement standards and other appropriate landscaping standards shall be part of the Applicant's Property Maintenance Plan / Landscape Plan for the Project, and the Applicant shall comply with the obligations and standards contained in the Property Maintenance Plan.
- c. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a set of revised landscape plans that:
  - i. Require the replacement of the existing evergreen trees located behind the existing neighborhood sign, as these existing trees are in poor condition and should be replaced with new plant material consistent with the adjacent proposed plantings.
  - ii. Replace the proposed maple trees, which are not allowed in the public rights-of-way per the Village's Urban Forest Management Plan, with another tree species.
  - iii. Indicate Gingko Biloba trees shall be of the male species to avoid fruit production.



- iv. Locate *Catalpa speciosa* away from sidewalks to avoid seed pods dropping on walkways.
- v. Clarify specification of grass seed mixes within the detention areas to correct inconsistencies between the landscape plan pages and the specification.

#### 4. Right-Of-Way, Road, and Traffic

- a. The Applicant proposes to maintain the current Wolf Road access point as the primary point of ingress and egress for the Development, subject to Cook County Department of Transportation and Highways approval of certain Wolf Road right-of-way modifications (i.e., required Project-related reconfiguration work to Wolf Road that may include a deceleration / turning lane) and modifications to the existing drainage culvert improvements that will allow it to construct the Development consistent with the current Site Plan. The Village's consideration of approval of the Development is conditioned on the Cook County Department of Transportation and Highways' approval of the current Wolf Road access point as the primary point of ingress and egress for the Development based on the current Site Plan and the Applicant's agreement to abide by the conditions of approval required of the Applicant by the Cook County Department of Transportation and Highways relative to the Wolf Road right-of-way modifications and modifications to the existing drainage culvert improvements. The Applicant, at its cost, shall be responsible for entering into all easements, maintenance agreements and other binding documents with the Cook County Department of Transportation and Highways, and completing the Wolf Road right-of-way modifications and any modifications to the existing drainage culvert improvements. Other than the Village's plan review process, the Village shall not be obligated to participate in the Cook County Department of Transportation and Highways' required Wolf Road right-of-way modifications and modifications to the existing drainage culvert improvements that are necessary to construct the Development under the current Site Plan and that will allow the Applicant to construct the Development consistent with the current Site Plan. In the event the Cook County Department of Transportation and Highways does not approve of the current Wolf Road access point as the primary point of ingress and egress for the Development, the Applicant will have to petition for an amendment to the planned development ordinance and present a revised Site Plan with a modified point of ingress and egress for the Development for review and consideration by the Plan Commission at a public hearing and then review and consideration by the Village Board.
- b. The Applicant, at its cost, shall construct a fence and swing gate across Heritage Court at the north lot line where the new Heritage Court meets the existing Heritage Court that serves the Heritage Springs Subdivision. The swing gate shall be operated by an Opticom sensor that shall be taller than the proposed fence/gate. The design of the swing gate shall ensure that gate electrical and control equipment is elevated one foot (1.0') above flood elevation. The swing gate must work at all times and shall have a battery backup system capable of operating the gate for at least 24 hours after loss of power to ensure operation during power outages. The swing gate must have appropriate sensors on both sides to ensure the gate can operate in either direction for emergency vehicles. Design plans, operational details, and loss of power procedure for the swing gate and the Opticom system must be submitted by the Applicant for review and approval by the Village's Director of Fire and EMS before any permit is issued for

site development. The Applicant shall enter into an operations and maintenance agreement with the Homeowners Association for the Heritage Springs Subdivision relative to the swing gate and the Opticom sensor(s).

- c. Vehicles parked in the driveway of Units 8, 15 and 21 may not overhang the curb or the sidewalk (if present).
- d. Prior to the issuance of any occupancy permits for the Development, Illinois Accessibility Code compliant sidewalks within the Development and along the entire property frontage that is adjacent to both Wolf Road and Park Place shall be installed by the Applicant, at its cost
- e. New sidewalks installed by the Applicant are required along the west side of Wolf Road and the north side of Park Place frontage per the Village Code. Replacement of existing sidewalks along the west side of Wolf Road along the entire property frontage is required by the Applicant. Placement of sidewalks must be as far from the paved roadways as practical, but the Village will defer to the Cook County Department of Transportation and Highways, as they will review and approve sidewalk placement and issue the permit for the work. On Park Place, placement of the sidewalk shall be one foot (1.0') inside the public right-of-way along the southern edge of the Development and the sidewalk shall dead end at west termini point. All new sidewalks shall comply with IDOT and Illinois Accessibility Code standards for slopes. The northwest corner of the Park Place and Wolf Road sidewalk ramp shall be removed and replaced by the Applicant.
- f. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a report that addresses fire hydrant spacing and provides a coverage exhibit as requested by the Village to confirm compliance with the Village Code.
- g. As part of the Maintenance and Development Agreement and the Declaration, the Applicant and the Heritage Crossing Homeowners Association shall be obligated to maintain the swing gate on a regular basis and to repair the swing gate, as needed, to ensure that the swing gate operates at all times.
- h. The Applicant shall submit to the Village, as part of the Village plan review and approval process, updated plans that:
  - i. Remove the two (2) parallel parking spaces from the east side of Heritage Court.
  - ii. Convert the turnaround area north of Unit 15 to grasscrete or similar material.
- i. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated version of the color site plan prepared by BSB Design (revised November 5, 2024) with the crosswalk shown perpendicular (not angled) to Heritage Court, consistent with the Final Engineering Plans for Heritage Crossing, prepared by DesignTek Engineering, Inc. (revised November 4, 2024).
- j. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated Traffic Impact Study that:

- i. Reflects the proposed 29 rather than 28 dwelling units.
- ii. Clarifies if Figure 5B in the Traffic Impact Study summarizes the September 2024 pedestrian count data or the original March 2024 count data. The higher volume counted in September 2024 should be presented in the TIS.
- iii. Corrects Figure 7, which does not match the trip generation presented in Table 3 in the Traffic Impact Study.
- iv. Provides a sight distance triangle analysis for the proposed subdivision sign adjacent to Wolf Road.
- v. Provides an AutoTURN analysis for the turnaround area north of Unit 15 to verify vehicle turnaround.

#### 5. Signage

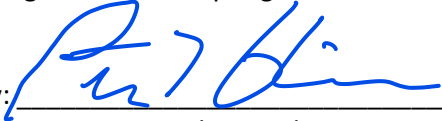
- a. Provide detailed plans related to the proposed development signage for Heritage Crossing (lighting, dimensions, materials, etc.) for the Development for Village Board approval as part of its consideration of the planned development ordinance.
- b. Provide information on any roadway vehicle traffic signage related to Heritage Court and other proposed subdivision signage type (private) for Village review for the Development for Village Board approval as part of its consideration of the planned development ordinance. All approved and required on-site parking restriction signage that pertains to the Development shall be installed and maintained by the Applicant, at its cost, or the Homeowners Association, at its cost.
- c. Provide for the Ridgewood monument sign, in its current location, or in an alternate location in close proximity to its current location, as agreed upon by the Ridgewood Subdivision Civic Association and Cook County. If the Ridgewood monument sign remains in its current location, the Developer, at its cost, shall provide to the Ridgewood Subdivision Civic Association an easement over the portion of the Property that the sign is partially located on and shall also obtain a dedication or easement over a portion of the Cook County-owned Wolf Road right-of-way that the sign is partially located on. If the sign is relocated, the Developer, at its cost, will make the required legal arrangements (i.e., easement agreement or land dedication) with either the Ridgewood Subdivision Civic Association or Cook County, or both, to provide for the long-term placement and maintenance of the monument sign.
- d. The placement of the sidewalk on Park Place will require the movement of the Ridgewood subdivision sign. The relocation of the subdivision sign must be addressed by the Applicant as part of the Village plan review and approval process. The Applicant is required to provide the written approval from the Ridgewood Civic Association of the subdivision sign design and sign placement.

**Motion to APPROVE this Western Springs Plan Commission Recommendation PC-2024-02: Application for a Comprehensive Plan Amendment to the Long-Range Land Use Map, Map Amendment, Conditional Use for a Planned Development, Exceptions / Variations to Village Development Control Ordinance (“DCO”), and Subdivision for the Construction, Operation, and Maintenance of a Townhome**

**Subdivision Development at the 5600 Wolf Road Property (Heritage Crossing), subject to the conditions stated above in Section V (Conditions) and the refinements to those conditions which were agreed to by the Commissioners during the November 18, 2024 Public Hearing, which are incorporated herein, made by Commissioner Turner; seconded by Commissioner Hanson (Votes in Favor of Motion: Peter Glimco, Peter Hanson, Michele Johann and Patrick Turner; Votes Not in Favor of Motion: None; and Absent from Meeting / Voting: Jocelyn Brumbaugh, Ryan DeProsperis and Steve Winegar).**

**APPROVED** by a vote of the Members of the Plan Commission on this 18th day of November, 2024.

Village of Western Springs Plan Commission

By:   
Peter Glimco, Chair

**Exhibit List**

**From Public Hearing for Approval of a Comprehensive Plan Amendment  
to the Long-Range Land Use Map, Map Amendment, Conditional Use for a Planned Development,  
and Subdivision for the Construction, Operation, and Maintenance  
of a Townhome Subdivision Development at the 5600 Wolf Road Property  
(Heritage Crossing)**

**Group Exhibit "A"**

listing by title of each of the Application's supporting documents and submittals  
(on file with the Community Development Department)



**Group Exhibit "A"**

General Information Application prepared by McNaughton Development, LLC dated 7/11/2024  
Re: Heritage Crossing / 5600 Wolf Road prepared by McNaughton Development, LLC dated 7/12/2024  
Heritage Crossing Submittal Letter prepared by McNaughton Development, LLC dated 7/12/2024  
Application for Development Approval and Zoning Relief prepared by McNaughton Development, LLC dated 7/12/2024  
Site Location Map and Photos prepared by McNaughton Development, LLC submitted 5/23/2024  
Alta Survey prepared by Wolf Pack Consulting, LLC dated 12/2/2024  
Final Plat of Subdivision prepared by DesignTek Engineering, Inc. revised dated 11/6/2024  
Zoning Exhibit prepared by BSB Design dated 7/12/2024  
Concept Plan prepared by BSB Design dated 11/5/2024  
Character Elevations and Building Perspectives prepared by BSB Design dated 11/6/2024  
Digital Material Board prepared by BSB Design dated 11/6/2024  
Conceptual Floor Plans prepared by BSB Design dated 11/6/2024  
Landscape Plan prepared by BSB Design dated 11/5/2024  
Traffic Impact Study prepared by KLOA dated 11/6/2024  
Cook County Highway Department Transmittal prepared by Cook County Highway Department dated 9/19/2024  
Site Engineering Plans prepared by DesignTek Engineering, Inc. revised dated 11/4/2024  
Stormwater Management Report prepared by DesignTek Engineering, Inc. revised dated 11/6/2024  
Fiscal Impact Study prepared by McNaughton Development, LLC dated 8/5/2024  
Land Dedication Valuations for School & Park prepared by McNaughton Development, LLC dated 8/5/2024  
McNaughton Development Past Projects prepared by McNaughton Development, LLC submitted date 5/23/2024  
Professional Opinion of Project Value prepared by DesignTek Engineering, Inc. submitted date 10/10/2024  
Market Comparable Field Park Place prepared by McNaughton Development, LLC submitted date 7/12/2024  
Ownership Authorization for Zoning Letter prepared by Casey and Fran Gaik dated 5/8/2024  
Declaration of Covenants, Conditions and Restrictions for: Heritage Crossing Townhome Association Of Western Springs - a McNaughton Development, Inc. Subdivision prepared by McNaughton Development dated 7/9/2024  
McNaughton Development LLC Corporate Disclosure submitted 7/12/2024  
Real Estate Sales Agreement submitted 7/12/2024  
Cook County Highway Department Transmittal prepared by KLOA dated 8/26/2024  
Plat of Abrogation for Storm Sewer Easement and Public Utility Easement prepared by DesignTek Engineering Inc. dated 10/15/2024  
Plat of Vacation for Lawn Avenue prepared by DesignTek Engineering Inc. dated 7/10/2024  
Existing Flooding Conditions Exhibit prepared by DesignTek Engineering Inc. dated 9/5/2024  
Proposed Flooding Exhibit Conditions prepared by DesignTek Engineering Inc. dated 9/5/2024  
Fire Strobe 2000 prepared by Access Products, Inc. submitted 11/6/2024

**Group Exhibit "B"**

**The Public Hearing Notice, the Newspaper Publisher's Certificate dated July 18, 2024,  
the Affidavit of Mailing of Public Hearing Notice and Newspaper Publication  
dated August 7, 2024 submitted by Heather Valone,  
the Affidavit of Posting of Signage for Public Hearing dated August 7, 2024  
(attached)**

**Group Exhibit "C"**

**Village Staff Memorandums dated August 9, 2024, September 20, 2024, and November 15, 2024,  
and prepared by Community Development Director Heather Valone and Senior Planner Kelsey Fawell  
("Village Staff Memos")  
(attached)**

**Group Exhibit "D"**

**The Village's Official Land Use Plan and Official Village Zoning Map  
(on file with the Community Development Department)**

**Exhibit "E"**

**Transcripts of the August 13, 2024, September 24, 2024, and November 18, 2024 Sessions of the Public  
Hearing  
(attached OR on file with the CD Dept.)**

**Group Exhibit "F"**

**Village Supplemental Materials  
(attached OR on file with the CD Dept.)**

**Group Exhibit "G"**

**Materials Submitted by Interested Parties  
(attached)**

**Exhibit "H"**

**Lawn Avenue Detention Pond Budget  
(attached OR on file with the CD Dept.)**

ORDINANCE NO. 25- \_\_\_\_\_  
 VOTE: \_\_\_\_\_  
 AYES: \_\_\_\_\_  
 NAYS: \_\_\_\_\_  
 ABSENT: \_\_\_\_\_  
 ABSTAIN: \_\_\_\_\_  
 DATE: February 10, 2025.  
 OTHER: Published in pamphlet form.

AN ORDINANCE AUTHORIZING THE APPROVAL  
 AND EXECUTION OF A FINAL PLAT OF HERITAGE  
 CROSSING RESUBDIVISION FOR THE PROPOSED  
 29 UNIT HERITAGE CROSSING TOWNHOME  
 DEVELOPMENT TO BE CONSTRUCTED AT 5600  
 SOUTH WOLF ROAD, WESTERN SPRINGS,  
 ILLINOIS BY APPLICANT / CONTRACT  
 PURCHASER MCNAUGHTON DEVELOPMENT,  
 LLC.

**WHEREAS**, McNaughton Development, LLC, with its principal business office located at 11S220 Jackson Street, Burr Ridge, Illinois 60527 ("Applicant"), is the contract purchaser and prospective developer of the real property commonly known as 5600 South Wolf Road, Western Springs, Illinois ("Property"). Casey and Fran Gaik (collectively the "Property Owner") are the fee simple title owners of the Property and have submitted a written authorization to the Village of Western Springs ("Village") that allowed the Applicant to file with the Village a completed "General Information Application for Land Use and Development in the Village" form with supporting documents (the "Application") for the redevelopment of the Property as a twenty-nine (29) unit residential townhome development (the "Development"). The Property Owner has further executed a "Written Consent and Waiver" to allow McNaughton Development, LLC to enter into this Agreement, a copy of which is on file with the Community Development Department and is incorporated herein by reference and made a part hereof; and

**WHEREAS**, in 2024, the Applicant submitted the Application to the Village requesting approval of a conditional use permit for a planned development, a map amendment, an amendment to the Village's Comprehensive Land Use Plan, a plat of consolidation, a plat of abrogation for storm sewer easement and public utility easement, a plat of right-of-way vacation relating to a sixty-six (66.00) foot by two hundred twenty-five (225.00) foot portion of Lawn Avenue, which is utilized as a stormwater detention basin, certain development allowances, exceptions and variations, and other zoning relief as noted below in accordance with the applicable provisions of the Village's Development Control Ordinance ("DCO"), in order to construct the Development, which is commonly referred to as the Heritage Crossing Subdivision or the Heritage Crossing Townhome Development. A copy of the Application is on file with the Village's Community Development Department and is incorporated herein by reference; and

**WHEREAS**, the proposed Development consists of nine (9) townhome buildings with unit counts of either three-units or four-units. Each dwelling unit will have a balcony, a rear patio, and an attached, front-loaded garage with a driveway accessed by a private street through the Development. The Development will have off-street community parking spaces, possible on street-parking, sidewalks, an expanded stormwater detention basin system and stormwater management facilities, open space, landscaped areas and streetlights. The Applicant proposes to extend private Heritage Court to the southeast through the Property to the Development's access driveway proposed along Wolf Road. The existing portion of Heritage Court, a private road, currently services only the Heritage Springs Townhome Development, connects to 55th Street to the north of the Property and is maintained by the Heritage Springs Homeowner's Association. The Applicant's plans indicate that the new portion of Heritage Court will match the existing road's width. An automatic gate will separate the Development from the existing Heritage Springs Subdivision to the north. Vehicle access between the adjacent

subdivisions will be controlled by a swing gate and gate access will only be granted to residents of both subdivisions with clicker-access and Village emergency service vehicles. The swing gate will be improved with an Opticom system that will give Village emergency service vehicles access similar to the systems on streetlights. The Developer agrees to accept title to a sixty-six (66.00) foot by two hundred twenty-five (225.00) foot portion of Lawn Avenue (the "ROW Parcel") that will be vacated by the passage of a vacation ordinance and a plat of right-of-way vacation and retention of stormwater facility easement by the Village for purposes of incorporation into the Property and the Development so that the Developer can construct an expanded stormwater detention basin system as part of the construction of the Development; and

**WHEREAS**, based on the Application submitted by the Applicant, the Village conducted a public hearing relative to certain zoning relief requested by the Applicant in order to construct the Development, pursuant to prior notice, postings and newspaper publication as required by the applicable provisions of State law, including the Illinois Open Meetings Act, 5 ILCS 120/ and Division 11-13 of the Illinois Municipal Code (65 ILCS 5/ 11-13), and the applicable provisions of the DCO (the "Public Hearing"). The Public Hearing was conducted by the Village Plan Commission and commenced on August 13, 2024 and concluded November 18, 2024. The Village Plan Commission issued Recommendation No. PC-2024-02 on November 18, 2024 that favorably recommended approval of the zoning relief contained in the Application, including a Comprehensive Plan Amendment to the Long-Range Land Use Map, a Map Amendment (Rezoning of the Property from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence District), a Conditional Use for a Planned Development, and Exceptions / Variations to the Village Development Control Ordinance ("DCO"), and a Subdivision approval for the construction, operation, and maintenance of a Townhome Subdivision Development referred to as "Heritage Crossing", and a single stage Final Plan review and approval process (i.e., a combined Preliminary Plan / Final Plan approval) for the Development per Subsection 10-8-8(C) of the DCO, provided that the Applicant complies with the submittal and plan review requirements of Section 10-8-5(C) (Final Plan) of the DCO, subject to certain stated conditions of approval (the "Development Zoning Relief"). A copy of Plan Commission Recommendation No. 24-02 is incorporated herein by reference and is on file with the Community Development Department; and

**WHEREAS**, after completion of the required public hearing before the Village Plan Commission, on February 10, 202, 5 with the passage of Ordinance No. 25-\_\_\_\_\_, the President and Board of Trustees of the Village of Western Springs ("Corporate Authorities") granted approval of the Development Zoning Relief (the "Approval Ordinance"); and

**WHEREAS**, pursuant to Subsection 10-10-3(F) (Procedures And Requirements For Subdivision Approval; Final Plat) of the DCO and Section 11-15-1 of the Illinois Municipal Code (65 ILCS 5/11-15-1) (Approval of Maps and Plats; Prerequisite to Recording), the Applicant is not allowed to subdivide or develop the Property until a final plat (excluding an administratively approved plat of consolidation) has been reviewed by the Western Springs Plan Commission ("Plan Commission") for its compliance with the applicable DCO provisions, subject to the Village Board approved variations, and has been reviewed and approved by the Village Board; and

**WHEREAS**, as part of the Village-approved single stage Final Plan review and approval process (i.e., a combined Preliminary Plan / Final Plan approval) for the Project per Subsection 10-8-8(C) of the DCO, the Applicant filed with the Village a "Final Plat of Heritage Crossing Resubdivision", that was prepared by DesignTek Engineering, Inc. with a latest revision date of **November 4, 2024** ("Plat"), for Village review and approval in accordance with the applicable provisions of the DCO. The Plat has been

reviewed and revised as part of the Village plan review process. A copy of the Plat is attached hereto as **Exhibit "A"** and made a part hereof; and

**WHEREAS**, at open public meetings held on January 9, 2025 and January 16, 2025, the Village's Planning and Zoning Committee ("Committee") reviewed the Plat and Plan Commission Recommendation No. 24-02 and received input from the Village staff and provided an opportunity for public input on the Plat, and then the Committee voted to recommend the Village Board **approve / not approve / consider** the Plat; and

**WHEREAS**, at open public meetings held on January 13, 2025, January 27, 2025 and February 10, 2025, the Village Board discussed the Plat and Plan Commission Recommendation No. 24-02 and the Committee's recommendation, and received input from the Village staff and provided an opportunity for public input on the Plat. At the **February 10, 2025** public meeting, the Village Board considered the findings and recommendations of the Plan Commission and the Committee, the input from the Village staff and the public, and agreed to **approve / deny** the Plat; and

**WHEREAS**, in accordance with the authority set forth in the applicable provisions of the DCO and the applicable provisions of the Illinois Municipal Code (65 ILCS 5/), including 65 ILCS 5/11-15-1, and the contracting powers set forth at Article VII (Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) of the Constitution of the State of Illinois of 1970, the Village President and Board of Trustees of the Village of Western Springs find that the **approval / denial** of this Ordinance and the Plat is protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners, local businesses and the general public.

**BE IT ORDAINED BY THE VILLAGE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:**

**SECTION 1: Incorporation.** Each Whereas paragraph above is incorporated by reference into this Section 1 and made a part hereof as material and operative provisions of this Ordinance.

**SECTION 2: Approval and Execution of Plat.** The Village President and Board of Trustees of the Village of Western Springs approve and authorize the execution of the attached "Final Plat of Heritage Crossing Resubdivision" that was prepared by **DesignTek Engineering, Inc. with a latest revision date of November 4, 2024** ("Plat"), substantially in the form attached hereto **Exhibit "A"**. The Village Board further authorizes and directs the Village President, the Village Clerk, the Village Plan Commission Chairperson, the Village Treasurer, the Village Engineer as and the Village Attorney, or their designees, and any other Village officials, as needed, to execute the final version of the Plat, which may contain certain non-substantive and non-financial modifications that are approved by the Village Attorney, and such other documents as are necessary to fulfill the Village's obligations under this Ordinance.

**SECTION 3: Delivery of Executed Plat for Filing With the Cook County Clerk's Office, Recording Division.** After approval of this Ordinance, certified copies of this Ordinance and a fully executed original of the attached Plat shall be filed by the Village, at the Applicant's cost, with the Cook County Clerk's Office, Recording Division. Thereafter, the Village shall provide the Applicant with Cook County Clerk's Office, Recording Division filed-stamped copies of this Ordinance and the Plat for purposes of record retention and compliance with the terms of this Ordinance.



**SECTION 4: Repealer; Severability.** Any ordinance, or portion thereof, in conflict with this Ordinance is repealed to the extent of such conflict, and the text of this Ordinance shall control and govern. Each Section, paragraph, clause and provision of this Ordinance is separable, and if any such Section, paragraph, clause or provision is held unconstitutional or invalid for any reason, such decision shall not affect the remainder of this Ordinance, nor any portion hereof, other than that part affected by such decision.

**SECTION 5: Termination of Ordinance for Failure of Developer to Acquire Title to the Property.** This validity of this Ordinance is subject to the Developer purchasing the Property from the Property Owner. In the event the Developer does not purchase the Property from the Property Owner, upon written notice delivered to the Village Manager of the termination of the real estate purchase contract entered into between the Property Owner and the Developer, this Ordinance shall automatically terminate without further action by the Corporate Authorities of the Village and shall be void and unenforceable. If the Developer does not purchase the Property, the Developer agrees to waive all claims, causes of action and damages of any kind that could be filed against the Village arising out of or related to the termination of this Ordinance. The Developer is required to provide written notice to the Village within five (5) calendar days of the termination of the real estate purchase contract.

**SECTION 6: Effective Date.** This Ordinance shall be in full force and effect from and after its passage, approval and publication as provided by State law.

**PASSED** by the Village President and Board of Trustees of the Village of Western Springs, Cook County, Illinois, on a roll call vote at a Regular Meeting thereof, held on the Special Meeting thereof, held on the 10th day of February, 2025, and approved by me as Village President, and attested by the Village Clerk on the same day.

\_\_\_\_\_  
Heidi Rudolph, Village President

**ATTEST:**

\_\_\_\_\_  
Edward Tymick, Village Clerk

This Ordinance was published by me in pamphlet form on the 10th day of February, 2025.

\_\_\_\_\_  
Edward Tymick, Village Clerk

**Exhibit "A"**

**Final Plat of Heritage Crossing Resubdivision prepared by  
DesignTek Engineering, Inc. with a latest revision date of November 4, 2024**

(attached)

Draft

STATE OF ILLINOIS     )  
                                      ) SS  
COUNTY OF C O O K    )

**CLERK'S CERTIFICATE**

I, Edward Tymick, Village Clerk of the Village of Western Springs, Cook County, Illinois, certify that the attached document is a true and correct copy of the Ordinance now on file in my office, entitled:

**ORDINANCE NO. 25-\_\_\_\_\_**

**AN ORDINANCE AUTHORIZING THE APPROVAL AND EXECUTION OF  
A FINAL PLAT OF HERITAGE CROSSING RESUBDIVISION  
FOR THE PROPOSED 29 UNIT HERITAGE CROSSING TOWNHOME DEVELOPMENT  
TO BE CONSTRUCTED AT 5600 SOUTH WOLF ROAD, WESTERN SPRINGS, ILLINOIS  
BY APPLICANT / CONTRACT PURCHASER MCNAUGHTON DEVELOPMENT, LLC**

which was passed by a roll call vote of the Village President and Board of Trustees of the Village of Western Springs at a Special Meeting thereof, held on the 10th day of February, 2025, at which meeting a quorum was present, and approved by the Village President of the Village of Western Springs on the 10th day of February, 2025.

I further certify that the vote on the question of the passage of the Ordinance by the Village President and Board of Trustees of the Village of Western Springs was taken by the Ayes and Nays and recorded in the Journal of Proceedings of the Village President and Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

**AYES:**\_\_\_\_\_

**NAYS:**\_\_\_\_\_

**ABSENT:**\_\_\_\_\_

I do further certify that the original Ordinance, of which the attached is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

**IN WITNESS WHEREOF**, I have hereunto set my hand and affixed the seal of the Village of Western Springs this 10th day of February, 2025.

\_\_\_\_\_  
Edward Tymick, Village Clerk

ORDINANCE NO. 25- \_\_\_\_\_  
 VOTE: \_\_\_\_\_  
 AYES: \_\_\_\_\_  
 NAYS: \_\_\_\_\_  
 ABSENT: \_\_\_\_\_  
 ABSTAIN: \_\_\_\_\_  
 DATE: February 10, 2025.  
 OTHER: Published in pamphlet form.

AN ORDINANCE AUTHORIZING THE APPROVAL  
 AND EXECUTION OF A PLAT OF ABROGATION  
 FOR STORM SEWER EASEMENT AND PUBLIC  
 UTILITY EASEMENT LOCATED WITHIN THE  
 PROPERTY COMMONLY KNOWN AS 5600  
 SOUTH WOLF ROAD, WESTERN SPRINGS,  
 ILLINOIS FOR THE CONSTRUCTION OF THE  
 PROPOSED 29 UNIT HERITAGE CROSSING  
 TOWNHOME DEVELOPMENT BY APPLICANT /  
 CONTRACT PURCHASER MCNAUGHTON  
 DEVELOPMENT, LLC.

**WHEREAS**, McNaughton Development, LLC, with its principal business office located at 115220 Jackson Street, Burr Ridge, Illinois 60527 ("Applicant"), is the contract purchaser and prospective developer of the real property commonly known as 5600 South Wolf Road, Western Springs, Illinois ("Property"). Casey and Fran Gaik (collectively the "Property Owner") are the fee simple title owners of the Property and have submitted a written authorization to the Village of Western Springs ("Village") that allowed the Applicant to file with the Village a completed "General Information Application for Land Use and Development in the Village" form with supporting documents (the "Application") for the redevelopment of the Property as a twenty-nine (29) unit residential townhome development (the "Development"). The Property Owner has further executed a "Written Consent and Waiver" to allow McNaughton Development, LLC to enter into this Agreement, a copy of which is on file with the Community Development Department and is incorporated herein by reference and made a part hereof; and

**WHEREAS**, in 2024, the Applicant submitted the Application to the Village requesting approval of a conditional use permit for a planned development, a map amendment, an amendment to the Village's Comprehensive Land Use Plan, a plat of consolidation, a plat of abrogation for storm sewer easement and public utility easement, a plat of vacation relating to a portion of Lawn Avenue, which is utilized as a stormwater detention basin, certain development allowances, exceptions and variations, and other zoning relief as noted below in accordance with the applicable provisions of the Village's Development Control Ordinance ("DCO"), in order to construct the Development, which is commonly referred to as the Heritage Crossing Subdivision or the Heritage Crossing Townhome Development. A copy of the Application is on file with the Village's Community Development Department and is incorporated herein by reference; and

**WHEREAS**, the proposed Development consists of nine (9) townhome buildings with unit counts of either three-units or four-units. Each dwelling unit will have a balcony, a rear patio, and an attached, front-loaded garage with a driveway accessed by a private street through the Development. The Development will have off-street community parking spaces, possible on street-parking, sidewalks, an expanded stormwater detention basin system and stormwater management facilities and other private and public infrastructure, open space, landscaped areas and streetlights. The Applicant proposes to extend private Heritage Court to the southeast through the Property to the Development's access driveway proposed along Wolf Road. The existing portion of Heritage Court, a private road, currently services only the Heritage Springs Townhome Development, connects to 55th Street to the north of the Property and is maintained by the Heritage Springs Homeowner's Association. The Applicant's plans indicate that the new portion of Heritage Court will match the existing road's width. An automatic gate will separate the Development from the existing Heritage Springs Subdivision to the north. Vehicle access between the adjacent subdivisions will be controlled by a swing gate and gate access will only be granted to residents of both subdivisions with clicker-access and Village emergency service vehicles. The

swing gate will be improved with an Opticom system that will give Village emergency service vehicles access similar to the systems on streetlights. The Developer agrees to accept title to a sixty-six (66.00) foot by two hundred twenty-five (225.00) foot portion of Lawn Avenue (the "ROW Parcel") that will be vacated by the passage of a vacation ordinance and a plat of right-of-way vacation and retention of stormwater facility easement by the Village for purposes of incorporation into the Property and the Development so that the Developer can construct an expanded stormwater detention basin system as part of the construction of the Development; and

**WHEREAS**, based on the Application submitted by the Applicant, the Village conducted a public hearing relative to certain zoning relief requested by the Applicant in order to construct the Development, pursuant to prior notice, postings and newspaper publication as required by the applicable provisions of State law, including the Illinois Open Meetings Act, 5 ILCS 120/ and Division 11-13 of the Illinois Municipal Code (65 ILCS 5/ 11-13), and the applicable provisions of the DCO (the "Public Hearing"). The Public Hearing was conducted by the Village Plan Commission and commenced on August 13, 2024 and concluded November 18, 2024. The Village Plan Commission issued Recommendation No. PC-2024-02 on November 18, 2024 that favorably recommended approval of the zoning relief contained in the Application, including a Comprehensive Plan Amendment to the Long-Range Land Use Map, a Map Amendment (Rezoning of the Property from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence District), a Conditional Use for a Planned Development, and Exceptions / Variations to the Village Development Control Ordinance ("DCO"), and a Subdivision approval for the construction, operation, and maintenance of a Townhome Subdivision Development referred to as "Heritage Crossing", and a single stage Final Plan review and approval process (i.e., a combined Preliminary Plan / Final Plan approval) for the Development per Subsection 10-8-8(C) of the DCO, provided that the Applicant complies with the submittal and plan review requirements of Section 10-8-5(C) (Final Plan) of the DCO, subject to certain stated conditions of approval (the "Development Zoning Relief"). A copy of Plan Commission Recommendation No. 24-02 is incorporated herein by reference and is on file with the Community Development Department; and

**WHEREAS**, after completion of the required public hearing before the Village Plan Commission, on February 10, 2025 with the passage of **Ordinance No. 25-**, the President and Board of Trustees of the Village of Western Springs ("Corporate Authorities") granted approval the Development Zoning Relief; and

**WHEREAS**, pursuant to Subsection 10-10-3(F) (Procedures And Requirements For Subdivision Approval; Final Plat) of the DCO and Section 11-12-8, Section 11-12-12 and Section 11-15-1 of the Illinois Municipal Code (65 ILCS 5/11-12-8; 11-12-12 and 11-15-1) (Approval of Maps and Plats; Prerequisite to Recording), the Applicant has filed with the Village for its approval a Plat of Abrogation For Storm Sewer Easement And Public Utility Easement prepared by DesignTek Engineering, Inc. with a **latest revision date of November 4, 2024** ("Plat"), which abrogates the easements imposed on the Property as legally described on the attached Plat. A copy of the Plat is attached hereto as **Exhibit "A"** and made a part hereof; and

**WHEREAS**, the Applicant desires to have the Plat approved by the Village prior to the Village's approval of the Applicant's "Final Plat of Heritage Crossing Resubdivision", that was prepared by DesignTek Engineering, Inc. with a latest revision date of **November 4, 2024** ("Plat of Subdivision"), which has been submitted to the Village for its review and approval in accordance with the applicable provisions of the DCO; and

**WHEREAS**, at open public meetings held on January 9, 2025 and January 16, 2025, the Village's Planning and Zoning Committee ("Committee") reviewed the Plat and Plan Commission



Recommendation No. 24-02 and received input from the Village staff and provided an opportunity for public input on the Plat, and then the Committee voted to recommend that the Village Board **approve / not approve / consider** the Plat by the Village Board; and

**WHEREAS**, at open public meetings held on January 13, 2025, January 27, 2025 and February 10, 2025, the Village Board discussed the Plat and Plan Commission Recommendation No. 24-02 and the Committee's recommendation, and received input from the Village staff and provided an opportunity for public input on the Plat. At the **February 10, 2025** public meeting, the Village Board considered the findings and recommendations of the Plan Commission and the Committee, and the input from the Village staff and the public, and agreed to **approve / deny** the Plat; and

**WHEREAS**, in accordance with the authority set forth in the applicable provisions of the DCO and the applicable provisions of the Illinois Municipal Code (65 ILCS 5/), including 65 ILCS 5/11-15-1, and the contracting powers set forth at Article VII (Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) of the Constitution of the State of Illinois of 1970, the Village President and Board of Trustees of the Village of Western Springs find that the **approval / denial** of this Ordinance and the Plat is protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners, local businesses and the general public.

**BE IT ORDAINED BY THE VILLAGE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:**

**SECTION 1: Incorporation.** Each Whereas paragraph above is incorporated by reference into this Section 1 and made a part hereof as material and operative provisions of this Ordinance.

**SECTION 2: Approval and Execution of Plat.** The Village President and Board of Trustees of the Village of Western Springs approve and authorize the execution of the attached "Plat of Abrogation For Storm Sewer Easement And Public Utility Easement" that was prepared by **DesignTek Engineering, Inc. with a latest revision date of November 4, 2024** ("Plat"), substantially in the form attached hereto as **Exhibit "A"**. The Village Board further authorizes and directs the Village President, the Village Clerk, the Village Plan Commission Chairperson, the Village Treasurer, the Village Engineer and the Village Attorney, or their designees, and any other Village officials, as needed, to execute the final version of the Plat, which may contain certain non-substantive and non-financial modifications that are approved by the Village Attorney, and such other documents as are necessary to fulfill the Village's obligations under this Ordinance.

**SECTION 3: Delivery of Executed Plat for Filing With the Cook County Clerk's Office, Recording Division.** After approval of this Ordinance, certified copies of this Ordinance and a fully executed original of the attached Plat shall be filed by the Village, at the Applicant's cost, with the Cook County Clerk's Office, Recording Division. Thereafter, the Village shall provide the Applicant with Cook County Clerk's Office, Recording Division filed-stamped copies of this Ordinance and the Plat for purposes of record retention and compliance with the terms of this Ordinance.

**SECTION 4: Repealer; Severability.** Any ordinance, or portion thereof, in conflict with this Ordinance is repealed to the extent of such conflict, and the text of this Ordinance shall control and govern. Each Section, paragraph, clause and provision of this Ordinance is separable, and if any such Section, paragraph, clause or provision is held unconstitutional or invalid for any reason, such decision shall not affect the remainder of this Ordinance, nor any portion hereof, other than that part affected by such decision.

**SECTION 5: Termination of Ordinance for Failure of Developer to Acquire Title to the Property.**

This validity of this Ordinance is subject to the Developer purchasing the Property from the Property Owner. In the event the Developer does not purchase the Property from the Property Owner, upon written notice delivered to the Village Manager of the termination of the real estate purchase contract entered into between the Property Owner and the Developer, this Ordinance shall automatically terminate without further action by the Corporate Authorities of the Village and shall be void and unenforceable. If the Developer does not purchase the Property, the Developer agrees to waive all claims, causes of action and damages of any kind that the Developer could file against the Village arising out of or related to the termination of this Ordinance. The Developer is required to provide written notice to the Village within five (5) calendar days of the termination of the real estate purchase contract.

**SECTION 6: Effective Date.** This Ordinance shall be in full force and effect from and after its passage, approval and publication as provided by State law.

**PASSED** by the Village President and Board of Trustees of the Village of Western Springs, Cook County, Illinois, on a roll call vote at Special Meeting thereof, held on the 10th day of February, 2025, and approved by me as Village President, and attested by the Village Clerk on the same day.

---

Heidi Rudolph, Village President

**ATTEST:**

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Edward Tymick, Village Clerk

This Ordinance was published by me in pamphlet form on the 10th day of February, 2025.

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Edward Tymick, Village Clerk

**Exhibit "A"**

**Plat of Abrogation For Storm Sewer Easement And Public Utility Easement  
prepared by DesignTek Engineering, Inc.  
with a latest revision date of **November 4, 2024****

(attached)

Draft

STATE OF ILLINOIS     )  
                                      ) SS  
COUNTY OF C O O K    )

**CLERK'S CERTIFICATE**

I, Edward Tymick, Village Clerk of the Village of Western Springs, Cook County, Illinois, certify that the attached document is a true and correct copy of the Ordinance now on file in my office, entitled:

**ORDINANCE NO. 25-\_\_\_\_\_**

**AN ORDINANCE AUTHORIZING THE APPROVAL AND EXECUTION OF A PLAT OF ABROGATION FOR STORM SEWER EASEMENT AND PUBLIC UTILITY EASEMENT LOCATED WITHIN THE PROPERTY COMMONLY KNOWN AS 5600 SOUTH WOLF ROAD WESTERN SPRINGS, ILLINOIS FOR THE CONSTRUCTION OF THE PROPOSED 29 UNIT HERITAGE CROSSING TOWNHOME DEVELOPMENT BY APPLICANT / CONTRACT PURCHASER MCNAUGHTON DEVELOPMENT, LLC**

which was passed by a roll call vote of the Village President and Board of Trustees of the Village of Western Springs at a Special Meeting thereof, held on the 10th day of February, 2025, at which meeting a quorum was present, and approved by the Village President of the Village of Western Springs on the 10th day of February, 2025.

I further certify that the vote on the question of the passage of the Ordinance by the Village President and Board of Trustees of the Village of Western Springs was taken by the Ayes and Nays and recorded in the Journal of Proceedings of the Village President and Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

**AYES:** \_\_\_\_\_

**NAYS:** \_\_\_\_\_

**ABSENT:** \_\_\_\_\_

I do further certify that the original Ordinance, of which the attached is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

**IN WITNESS WHEREOF**, I have hereunto set my hand and affixed the seal of the Village of Western Springs this 10th day of February, 2025.

\_\_\_\_\_  
Edward Tymick, Village Clerk

## Attachment 7.

**ORDINANCE NO. 25-\_\_**  
**VOTE:** \_\_\_\_\_  
**AYES:** \_\_\_\_\_  
**NAYS:** \_\_\_\_\_  
**ABSENT:** \_\_\_\_\_  
**ABSTAIN:** \_\_\_\_\_  
**DATE:** February 10, 2025.  
**OTHER:** Published in Pamphlet Form.

**AN ORDINANCE APPROVING A MAP  
AMENDMENT TO REZONE THE 5600 SOUTH  
WOLF ROAD PROPERTY, WESTERN  
SPRINGS, ILLINOIS, FROM THE O – LIMITED  
OFFICE ZONING DISTRICT TO THE R4 -  
MULTIPLE-FAMILY RESIDENCE DISTRICT;  
APPROVING AN APPLICATION FOR A  
CONDITIONAL USE PERMIT FOR A  
PLANNED DEVELOPMENT FOR THE  
CONSTRUCTION AND OPERATION OF THE  
PROPOSED 29 UNIT HERITAGE CROSSING  
TOWNHOME DEVELOPMENT LOCATED AT  
THE 5600 SOUTH WOLF ROAD PROPERTY,  
INCLUDING THE APPROVAL OF THE  
COMBINED PRELIMINARY / FINAL  
DEVELOPMENT PLANS, SUBJECT TO  
VILLAGE PLAN REVIEW PROCESS, AND  
APPROVAL OF CERTAIN DEVELOPMENT  
ALLOWANCES, EXCEPTIONS AND  
VARIATIONS FROM THE VILLAGE ZONING  
REGULATIONS, INCLUDING A WAIVER OF  
THE FIVE (5) ACRE MINIMUM LOT AREA  
REQUIREMENT AND A REDUCTION OF  
CERTAIN PLANNED DEVELOPMENT  
SUBMISSION REQUIREMENTS.**

**WHEREAS**, McNaughton Development, LLC, with its principal business office located at 11S220 Jackson Street, Burr Ridge, Illinois 60527 (“Applicant”), is the contract purchaser and prospective developer of the real property commonly known as 5600 South Wolf Road, Western Springs, Illinois (“Property”). Casey and Fran Gaik (collectively the “Property Owner”) are the fee simple title owners of the Property and have submitted a written authorization to the Village of Western Springs (“Village”) that allowed the Applicant to file with the Village a completed “General Information Application for Land Use and Development in the Village” form with supporting documents (the “Application”) for the redevelopment of the Property as a twenty-nine (29) unit residential townhome development (the “Development”). The Property Owner has further executed a “Written Consent and Waiver” to allow McNaughton Development, LLC to enter into this Agreement, a copy of which is on file with the Community Development Department and is incorporated herein by reference and made a part hereof; and

**WHEREAS**, in 2024, the Applicant submitted the Application to the Village requesting approval of a conditional use permit for a planned development, a map amendment, an amendment to the Village’s Comprehensive Land Use Plan, a plat of consolidation, a plat of abrogation for storm sewer easement and public utility easement, a plat of vacation relating to a portion of Lawn Avenue, which is utilized as a stormwater detention basin, certain development allowances, exceptions and variations, and other zoning relief as noted below in accordance with the applicable provisions of the Village’s Development Control Ordinance (“DCO”), in order to construct the Development, which is commonly referred to as the Heritage Crossing Subdivision or the Heritage Crossing Townhome Development. A



copy of the Application is on file with the Village's Community Development Department and is incorporated herein by reference; and

**WHEREAS**, the proposed Development consists of nine (9) townhome buildings with unit counts of either three-units or four-units. Each dwelling unit will have a balcony, a rear patio, and an attached, front-loaded garage with a driveway accessed by a private street through the Development. The Development will have off-street community parking spaces, possible on street-parking, sidewalks, an expanded stormwater detention basin system and stormwater management facilities and other private and public infrastructure, open space, landscaped areas and streetlights. The Applicant proposes to extend private Heritage Court to the southeast through the Property to the Development's access driveway proposed along Wolf Road. The existing portion of Heritage Court, a private road, currently services only the Heritage Springs Townhome Development, connects to 55th Street to the north of the Property and is maintained by the Heritage Springs Homeowner's Association. The Applicant's plans indicate that the new portion of Heritage Court will match the existing road's width. An automatic gate will separate the Development from the existing Heritage Springs Subdivision to the north. Vehicle access between the adjacent subdivisions will be controlled by a swing gate and gate access will only be granted to residents of both subdivisions with clicker-access and Village emergency service vehicles. The swing gate will be improved with an Opticom system that will give Village emergency service vehicles access similar to the systems on streetlights. The Developer agrees to accept title to a sixty-six (66.00) foot by two hundred twenty-five (225.00) foot portion of Lawn Avenue (the "ROW Parcel") that will be vacated by the passage of a vacation ordinance and a plat of right-of-way vacation and retention of stormwater facility easement by the Village for purposes of incorporation into the Property and the Development so that the Developer can construct an expanded stormwater detention basin system as part of the construction of the Development; and

**WHEREAS**, as part of the Application and its Exhibits, the Applicant requested one-stage final approval of the submitted "Development Plans" for the Development, which have been revised by the Developer since their initial filing and which are listed at the end of this Ordinance as part of **Group Exhibit "1"** and made a part hereof. The Application and other documents that comprise **Group Exhibit "1"** are on file with the Village Clerk's Office and the Community Development Department and are incorporated by reference into this Ordinance and made a part hereof. The Applicant shall submit a set of "Final Development Plans" (i.e., architectural plans and engineering plans) for Village staff review and Village Engineer review prior to those Plans being considered for final approval by the President and Board of Trustees of the Village (the "Corporate Authorities") at a public meeting in order for the Developer to be eligible to receive a site development permit or building permit to commence site work on the Property or construction of the Development; and

**WHEREAS**, the Property is legally described as follows:

PARCEL 1: THE WEST ½ OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) OF THE NORTH EAST ¼ OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 2: LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTH EAST ¼ OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN,

ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 IN COOK COUNTY, ILLINOIS.

Legal Description for the Lawn Avenue ROW Parcel is as follows:

THAT PART OF THE 66 FEET WIDE LAWN AVENUE, LYING SOUTH OF THE NORTH LINE OF WESTERN SPRINGS TOWNHOMES, RECORDED MARCH 29, 1999, AS DOCUMENT NO. 99297584, LYING NORTH OF THE SOUTH LINE OF RIDGEWOOD UNIT 12, RECORDED OCTOBER 6, 1965, AS DOCUMENT NO. 19610359, LYING WEST OF THE EAST LINE OF THE WEST ½ OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION, RECORDED NOVEMBER 13, 1948, AS DOCUMENT NO. 14442019, AND LYING EAST OF THE WEST LINE OF RIDGEWOOD UNIT NO. 11, RECORDED APRIL 3, 1964, AS DOCUMENT NO. 19089916, IN THE EAST HALF OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS.

Common Address: 5600 South Wolf Road, Western Springs, Illinois

P.I.N.S: Parcel 1: 18-18-200-017-0000, Parcel 2: 18-18-200-038-0000 and Parcel 3: 18-18-200-001-0000 (Lawn Avenue ROW Parcel); and

**WHEREAS**, with the passage of Resolution No. 25-\_\_\_\_\_ on February 10, 2025, the Corporate Authorities of the Village approved the following relief from certain DCO submittal requirements for planned developments for this Development:

- a. Waiver of the five (5) acre minimum land area requirement for planned developments.
- b. Waiver of the submittal requirement of a "Market Study" prepared by a qualified, independent market research firm per Subsection 10-8-8(B)(4)(d) of the DCO. This waiver is supported by the fact that the Applicant has submitted a report with supporting market and financial data relative to other recent, active townhouse developments in the Village to demonstrate the market demand for the housing type and base cost.
- c. Waiver of the submittal requirement of a "Site lighting plan" per Subsection 10-8-8(B)(3)(g) of the DCO, due to the relatively small size of the Development. There will be site lighting details and specifications provided by the Applicant; and

**WHEREAS**, the remaining zoning relief necessary for the Applicant to construct the Development is set forth in Section 3 below of this Ordinance; and

**WHEREAS**, a public hearing has been conducted by the Western Springs Plan Commission relative to the Application during public meetings held on August 13, 2024, September 24, 2024 and November 18, 2024, as required by the applicable provisions of State law, including the Illinois Open Meetings Act, 5 ILCS 120/ and Division 11-13 of the Illinois Municipal Code (65 ILCS 5/ 11-13), and the applicable provisions of the DCO (the "Public Hearing"). Prior to conducting the Public Hearing, a notice of Public Hearing was published in a newspaper, a "zoning application pending" sign was posted at the Property, a notice of Public Hearing was mailed to those persons who are required to be mailed the

notice in compliance with applicable State law and the DCO, and separate agendas for each of the Plan Commission meetings where the Public Hearing sessions were held were posted as required by the Open Meetings Act; and

**WHEREAS**, at the November 18, 2024, Public Hearing session, the Western Springs Plan Commission, after finding that sufficient evidence was presented at the Public Hearing to conclude that the applicable standards relating to the requested zoning relief were met, passed a motion approving Report and Recommendation No. 24-02, which recommended approval of the zoning relief needed for the Applicant to construct the Development, subject to certain conditions related to the Development (See, Section V (Conditions) of Report and Recommendation No. 24-02). A copy of Report and Recommendation No. 24-02 is on file with the Village Clerk's Office and is incorporated into this Ordinance by reference; and

**WHEREAS**, at open public meetings held on January 9, 2025 and January 16, 2025, the Village's Planning and Zoning Committee ("Committee") reviewed and discussed the proposed Heritage Crossing Townhome Development and Plan Commission Report and Recommendation No. 24-02 and this Ordinance, and received input from the Village staff on the matter, and provided an opportunity for public input on the matter. At its January 16, 2025 meeting, the Committee recommended that the Corporate Authorities of Village **approve / not approve / consider** the Development and this Ordinance; and

**WHEREAS**, the Village Board, at open public meetings held on January 13, 2025, January 27, 2025 and February 10, 2025, reviewed and discussed the Applicant's Application and its request for zoning relief, the findings, recommendations and conditions of the Plan Commission as set forth in Report and Recommendation No. 24-02, received input from Village staff and provided an opportunity for public input. At the **February 10, 2025** public meeting, the Village Board considered the findings, recommendations and conditions of the Plan Commission as set forth in Report and Recommendation No. 24-02 and, with the passage of this Ordinance, the Village Board, after finding that sufficient evidence was presented at the Public Hearing to conclude that the applicable standards relating to the requested zoning relief were met, then accepted, adopted and approved the findings, recommendations and conditions set forth in Report and Recommendation No. 24-02, subject to the approvals and conditions of this Ordinance; and

**WHEREAS**, in accordance with the authority granted by Sections 11-13-1 and 11-13-1.1 of the Illinois Municipal Code (65 ILCS 5/11-13-1 and 11-13-1.1) and the applicable provisions of the DCO, the Village President and Board of Trustees of the Village of Western Springs approve the zoning relief, as requested by the Applicant, relative to the issuance of the Conditional Use Permit for a Planned Development for the construction, operation and maintenance of the Development, subject to the Village-approved zoning relief contained in Section 2 below and the conditions contained in Section 3 below in this Ordinance.

**BE IT ORDAINED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:**

**SECTION 1. Incorporation.** The above recitals are incorporated by reference into Section 1 of this Ordinance as material terms and provisions.

**SECTION 2. Approval of Requested Zoning Relief.** Pursuant to the applicable provisions of Title 10 (Development Control Ordinance) of the Western Springs Municipal Code, the President and Board of Trustees approve the following zoning relief and development approvals relative to the Property in order to allow the construction and operation of the Development under a Conditional Use Permit for Planned Development, subject to the conditions set forth in Section 4 below:

- A. Approval of a conditional use permit for a planned development in accordance with Chapter 3 (Conditional Uses) and Chapter 8 (Planned Developments) of the DCO to construct the Development, subject to the requested exceptions, variations and zoning relief from the DCO regulations;
- B. A waiver of the five (5) acre minimum land area requirement under Section 10-8-3 (Guidelines) of the DCO;
- C. Reduction of certain planned development submission materials under Section 10-8-8 (Submittal Requirements) of the DCO as set forth below; approval of a single stage Final Plan review and approval process (i.e., a combined Preliminary Plan / Final Plan approval) for the Development per Subsection 10-8-8(C) of the DCO, provided that the Applicant complies with the submittal and plan review requirements of Section 10-8-5(C) (Final Plan) of the DCO, subject to the reduction in the submittal requirements and other exceptions authorized by this Ordinance;
- D. A Comprehensive Plan Amendment to the Long-Range Land Use Map that reclassifies the Property from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence District;
- E. A map amendment to re-zone the Property and the Lawn Avenue ROW Parcel from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence District;
- F. An Exception (Variations) from Subsection 10-8-4(B)(1)(d) (Exceptions From District Regulations; Site Design Regulations; Exceptions From District Regulations) of the DCO applicable only to the Development to provide: “Along the periphery of such planned developments, set back yards shall be provided as required by the regulations of the underlying zoning district, except that in the R4 - Multiple-Family Residence District variations of not more than 61% to the front yard regulation and the corner side yard regulation may be allowed as part of the approval of the planned development.”;
- G. An Exception (Variations) from Subsection 10-8-4(B)(1)(e) (Exceptions From District Regulations; Site Design Regulations; Exceptions From District Regulations) of the DCO to provide: “Building height shall comply with the Zoning District regulations approved by the Village for the planned development, except that a variation of not more than 9% above the maximum height of buildings and structures may be allowed as part of the approval of a planned development.”;
- H. Exceptions (Text Amendments / Variations) from requirements of Section 10-6-5 (R4 - Multiple-Family Residence District) regulations, including:
  - i. Subsection 10-6-5(D): Minimum Development Parcel Size: Required: five (5) acres (217,800 square feet); and Requested: 2.76 acres;
  - ii. Subsection 10-6-5(E)(1): Minimum Yards Requirements: Front Yard: Required: Twenty-five feet (25'); and Requested: Seven Feet (7');
  - iii. Subsection 10-6-5(E)(2): Minimum Yards Requirements: Corner Side Yard: Required: Twenty-five feet (25'); and Requested: fourteen feet and five inches (14.42');
  - iv. Subsection 10-6-5(E)(3): Minimum Yards Requirements: Interior Side Yard: Required: Thirty feet (30'); and Requested: six feet and eight inches (6.67');

- v. Subsection 10-6-5(E)(4): Minimum Yards Requirements: Rear Yard: Required: Thirty feet (30'); and Requested: Twelve feet and nine inches (12.75'); and
- vi. Any additional exception(s) or variation(s) identified at the Public Hearing from the other use, bulk and site design requirements contained in the DCO that are necessary to permit the construction of the Development and allow the above Property to be used for its intended purposes in accordance with the filed Application shall also be considered for Village approval; and
- I. A variation from Subsection 10-11-11 (C)(2) (Stormwater Management Requirements For All Developments; Detention; Streets) of the DCO to allow the portion of the north end of Heritage Court (a private street) between the north lot line of the Property to a point approximately forty feet (40') south of the north lot line of the Property, which is not intended to be used for primary ingress and egress vehicle access to the Property, to be designed and constructed to temporarily hold stormwater during certain infrequent rain events to facilitate the movement of excess stormwater from the Property to the on-site stormwater detention basins and to draw stormwater off of the remainder of Heritage Court and away from the private driveways of northerly dwelling units so that there is no ponding of stormwater in front of the dwelling units. The standards for consideration and approval of the proposed map amendment and text amendments are set forth in Section 10-3-12 (Amendments) of the DCO; and

**SECTION 3. Conditions of Approval of Requested Zoning Relief.** The above zoning relief and development approvals granted for the Development as contained in Section 2 above are subject to the following conditions:

- 1. General
  - a. The Applicant shall comply with all of the applicable federal, state, county, local and special district laws, ordinances and regulations, including the provisions of the Village's Municipal Code, relative to the construction and maintenance of the Development, except as otherwise modified by Village approvals.
  - b. The uses generally approved for this Conditional Use Permit for Planned Development for the Development are limited to residential uses and uses ancillary to the foregoing uses. Such ancillary uses shall comply with the requirements for accessory uses established under the DCO. The approval of the Conditional Use Permit for Planned Development for the Development does not authorize the Applicant or any other tenant or occupant to use the Property without applying for and obtaining any required temporary use permit, conditional use permit, or any other Village or other governmental approval. Such specific use approval shall be obtained by the Applicant, tenant or occupant of the Property before commencing such use.
  - c. In regard to the construction, operation and maintenance of the Development, these conditions shall be the only conditional use and planned development conditions applicable to that use of the Property, unless amended by mutual agreement of the Applicant and the Village, or unless amended by ordinance approved by the Village Board after the required public hearing.



- d. The Applicant shall pay the required impact fees (i.e., school site / school improvement impact fee; and park and recreation site impact fee) to the Village in lieu of land dedication, as calculated by the Village, in accordance with the formula set forth in Section 10-10-14 of the DCO, at the time it applies for a site development permit or a building permit (whichever occurs first).
- e. In the event that the Applicant does not obtain a site development permit or a building permit and commence and actively perform construction of the Development within twelve (12) months of the approval of the Conditional Use Permit for Planned Development for this Project, the Conditional Use Permit for Planned Development for this Project shall expire in accordance with Section 10-3-14(L) of the DCO, unless the 12-month period is extended by approval of an ordinance by the President and Board of Trustees of the Village. Any extension of the above 12-month period to avoid an expiration of the Conditional Use Permit for Planned Development for this Project shall be approved by an ordinance passed by the President and Board of Trustees of the Village, in their discretion. Approval of such an extension does not require a public hearing, but such ordinance must be approved by the President and Board of Trustees of the Village at a public meeting in accordance with the Open Meetings Act. The Applicant shall use all commercially reasonable efforts to secure all necessary governmental permits needed to complete the Development and to actively and diligently pursue completion of the Development. The Applicant shall use all commercially reasonable efforts to hire an adequate number of experienced contractors, subcontractors and other skilled labor, and provide for adequate equipment and building materials to ensure that construction of the Development is actively and diligently pursued.
- f. The Applicant shall revise the Declaration of Covenants, Conditions and Restrictions for the Homeowners Association (the "Declaration") in accordance with comments provided by the Village Attorney and shall file the Declaration with the Cook County Clerk's Office, Recording Division ("CCCORD") prior to the sale of any portion of the Property to any other person. The Declaration shall require that, at the closing of each dwelling unit, the Applicant shall allocate \$600.00 (or an amount equal to three (3) months' Community Assessment) and pay said amount into a "Capital Reserve" fund, as defined and required by the Declaration, for the maintenance reserve account for the benefit of and use of the Homeowners Association for maintenance purposes consistent with the Declaration. In addition, the Declaration shall provide for adequate building reserve funds to pay for operating expenses (insurance, building maintenance and cleaning vendors, utilities, security) and short-term and long-term maintenance, repair and replacement expenses for the exterior and interior of the building and its common areas, and also contain all necessary cross access easements for driveway use and garage access for the benefit of each of the dwelling units as well as common area easements for use, repair, replacement and maintenance of common areas and common elements (driveway, fencing, landscaping, roof and exterior building materials) of the building.
- g. The Village and the Applicant shall execute the Final Plat of Heritage Crossing and the Declaration, which shall be filed against title to the above-described property with the CCCORD. The Plat shall be filed by the Village, at the Developer's cost, along with a

certified copy of the Ordinance approving the Development. The Declaration shall be filed by the Developer, at its cost, with the CCCORD after the townhome units are constructed but prior to the sale and conveyance of legal title to any townhome. The Declaration shall contain provisions that are enforceable against the Applicant, and any successor owners, property managers, associations, lessees, licensees, transferees, receivers or successors in interest, which, in part, provides for the future installation, maintenance, repair and replacement of all stormwater management and other drainage structures, public utilities, water and sewer mains and related structures, including without limitation fire hydrants, driveway and parking lot improvements, parking lot and landscape lighting, and landscaping and retaining wall improvements. The Plat and the Declaration shall be in a form and content approved by the Village Engineer and the Village Attorney. The Plat and the Declaration shall impose on the Applicant, and any successor owners, lessees, licensees, transferees, receivers or successors in interest, at their cost, the obligation and responsibility of performing all future maintenance, repair and replacement work in regard to the above-described development improvements as reasonably deemed necessary by the Director of Code Enforcement and the Village Engineer in order to comply with the Village Code, as amended, and shall grant to the Village a non-exclusive easement for entry upon and access to all parts of the Property, for purposes of providing the Village with the right but not the obligation to perform such maintenance, repair and replacement work, in its sole, reasonable discretion, along with the right to recover the cost of such work directly from the owners, successor owners or successors in interest or to lien the property and take all other action provided for in 65 ILCS 5/11-31-2, as amended, or similar applicable law, including any law contained in the Illinois Municipal Code, as amended. The Applicant, and any successor owners, property managers, associations, lessees, licensees, transferees, receivers or successors in interest, at their cost, shall repair pavement, concrete, landscaped areas or other areas damaged by the Village if the Village performs such future installation, maintenance, repair and replacement work.

- h. Prior to the issuance of a building or development permit, the Applicant shall submit a construction schedule, routing, construction staging, restoration plan and phasing plan with map and plan exhibits, which are in conformance with the final set of Village approved engineering and construction plans for the Development. These plans shall identify construction access routes, temporary detours, regular street cleaning intervals and refuse removal, and other appropriate safety, restricted access and “good neighbor” practices. Standard Village construction hours shall apply, except as otherwise permitted by the Village Manager.
- i. Prior to the issuance of a building or development permit, the Applicant shall enter into a Maintenance and Development Agreement with the Village, as prepared by the Village Attorney and approved by the Village Board, which includes conditions for the construction and long-term maintenance of the Development, consisting generally of the following items:
  - i. The posting of an irrevocable letter of credit or other form of security with the Village to secure the completion of the required SSA Maintained Improvements and the landscape improvements for the Development (the “Developer Security”). The Developer Security shall be in a form acceptable to the Village Attorney and of a

dollar amount to be determined by the Village Engineer and shall be managed by the Village in accordance with Subsection 10-10-19(2) (Land Dedications and Completion, Maintenance and Acceptance of Improvements; Posting of a Bond, Cash, or Other Securities) of the Municipal Code;

- ii. The posting of a two-year maintenance bond (performance and payment bond) for the SSA Maintained Improvements and the landscape improvements;
- iii. The submittal of construction access plans for the Development requiring the Applicant and all of its employees, consultants and development and construction crews to use Wolf Road as the sole point of ingress and egress to the Development. It is the Applicant's responsibility to ensure that access to the site is maintained during all Development construction activities;
- iv. The Applicant shall either enter into a private tow company contract to enforce the community parking spaces with the Development or enter into a private parking / private street enforcement agreement with the Village that will allow for the posting of appropriate parking regulation signs and vehicle speed signs to enable Village police officers to issue parking tickets and traffic citations to enforce the parking and traffic regulations of Heritage Court within the Heritage Crossing Subdivision;
- v. At the request of the Applicant and the Homeowners Association for Heritage Springs Subdivision, the Village will consider approving an amendment to the planned development ordinance granted for the Heritage Springs Subdivision to allow for additional on-street parking spaces and the operation of the swing gate and such other requested amendments that are necessitated by the Development, and the Village will also consider entering into a private parking / private street enforcement agreement that will allow for the posting of appropriate parking regulation signs and vehicle speed signs to enable Village police officers to issue parking tickets and traffic citations to enforce the parking and traffic regulations of Heritage Court within the Heritage Springs Subdivision;
- vi. Prior to the issuance of a building or development permit, the submittal to the Village of a fully executed agreement with Cook County for perpetual maintenance of the Project-related roadway structures and all infrastructure improvements within the portion of the Wolf Road right-of-way, as required by Cook County;
- vii. Per Section 10-11-11 (Stormwater Management Requirements For All Developments) of the DCO, prior to obtaining any type of building or site development permit for the Project, the Applicant shall execute and enter into a stormwater management facilities maintenance agreement ("stormwater maintenance agreement") with the Village, as prepared by the Village Attorney and approved by the Village Board, relative to the stormwater drainage facilities located on the Property, which facilities shall be the responsibility of the Applicant and its successor owners (i.e., the Homeowners Association). Within the stormwater maintenance agreement, the Applicant shall guarantee that the Applicant and all of the successor owners of the Property will maintain the stormwater management

facilities and the stormwater drainage system and provide to the Village periodic written reports on the stormwater management facilities' monitoring and maintenance. The stormwater maintenance agreement shall also specifically authorize representatives of the Village to enter onto the Property for the purpose of inspections of the stormwater drainage system. Such agreement shall be recorded with the CCCORD. The stormwater maintenance agreement shall include a schedule for regular maintenance of each aspect of the Property's stormwater drainage system and shall provide for access to the system for inspection by authorized personnel of the Village. The stormwater maintenance agreement shall also stipulate that, if the appropriate authorized personnel of the Village notify the property owner in writing of maintenance problems which require correction, the property owner shall make such corrections within thirty (30) calendar days of such notification. If the corrections are not made within this time period, the Village may have the necessary work completed and assess the cost to the property owner.

- viii. Revise the Declaration to exclude/prohibit charcoal grills on the proposed balconies.
- j. Prior to the sale of any portion of the Property by the Developer or the issuance of any occupancy permits for the Development, the Developer shall participate in good faith in the formation process, and not object to the formation, of a dormant "Special Service Area" ("SSA") to be established by the Village, at the Developer's cost, pursuant to 35 ILCS 200/27-5, et seq. The SSA shall govern the Property for the purpose of ensuring, as and when appropriate, the maintenance, repair and replacement of the "SSA Maintained Improvements". The SSA Maintained Improvements shall include those public and privately-owned and developed improvements within the Development or within utility easements outside of the Property that are necessary to support and serve some or all of the Development including, but not limited to, new or the replacement, maintenance, extension or upsizing of existing public or private stormwater detention and drainage facilities, including the Lawn Avenue Detention Basin, the Outlot 31 Detention Basin and the Outlot 33 Detention Basin (each detention basin shall be privately-owned and maintained by the Homeowners Association), privately-owned Heritage Court, the Heritage Court Gate Access Improvements and its Opticom sensor system, other roads or pathways, drive aisles, curbs, light poles and light fixtures for roads, sidewalk and pedestrian pathways, and access drives, sanitary sewer mains and service lines and other sanitary sewer system facilities and equipment (i.e., lift stations), water mains and service lines and other water system facilities and equipment (i.e., pump and/or booster stations, vaults, generators, water storage tank or tower), and electric, telecommunications, cable and gas service lines and facilities.
- k. The individual dwelling units and platted lots within the Development shall not be permitted to request variations from the Village's Municipal Code that are unique and specific to the individual dwelling unit and lot owner. Amendments to the planned development ordinance that are not unique and specific to an individual dwelling unit and a specific lot owner may be applied for and presented to the Village in accordance with the applicable provisions of the Municipal Code.
- l. The residential buildings must comply with the architecture approved by the Village's Planned Development Ordinance.

- m. The exterior of the newly constructed buildings and other above grade structures of the Project shall be constructed primarily of high quality brick, brick veneer that is a minimum of three-fourths inches and individually adhered, stone, masonry, architectural-faced concrete block, stamped concrete panels, cement fiber board (i.e., Hardies or LP cement board products), architectural metals, and synthetic architectural products to provide a high quality aesthetic appearance. Sidewalks and pedestrian pathways shall be constructed of concrete. Vinyl siding shall not be permitted. Exterior Insulation and Finish Systems (EIFS) materials (i.e., Dry-vit materials) shall not be permitted. The Applicant agrees to take all commercially reasonable steps to ensure that the building design, building materials and exterior color schemes of the proposed building and its related landscaping are designed to blend in and complement the adjacent residential uses.
- n. The Applicant shall prepare and submit to the Village final versions of the Plat of Heritage Crossing Subdivision, the Plat of Abrogation for Storm Sewer Easement and Public Utility Easement, and the Plat of Vacation of Public Right-of-Way that have been revised to address the review comments of the Village Engineer and the Village Attorney. The Plat of Heritage Crossing Subdivision shall be revised to specifically identify all terms and conditions associated with the road and driveway usage and maintenance, including cleanliness standards, snow removal and other required reasonable terms. These Plats, and any other plats that may be required for this Development, are subject to approval by the Village Board (or the Trustees), and, if approved, then said Plats will be filed with the CCCORD, by the Village Attorney, at the Applicant's cost prior to the sale of any dwelling unit.
- o. In accordance with Subsection 9-1A-1 (Plan Review Deposits and Fees) and Subsection 9-1B-5: (Additional Deposit Required) of the Municipal Code, within five (5) business days of Village Board approval of the Requested Zoning Relief, the Applicant shall provide to the Village a developer-reimbursable costs / plan review escrow deposit of \$58,000.00 to defray the Village's cost of plan reviews and payment of other developer-reimbursable costs incurred by the Village relative to the processing of the Application and the plan reviews by the Village staff and Village consultants of the development plans submitted for development permit approval. The developer-reimbursable costs / plan review escrow deposit shall always maintain a positive cash balance of not less than \$10,000.00 and the Applicant shall provide the Village with additional funds to replenish the escrow within five (5) business days upon written demand from the Village.
- p. Once the Property is rezoned from its current designation of O – Limited Office Zoning District to the R4 - Multiple-Family Residence District, with a conditional use permit for planned development overlay approval, to allow for the construction and operation of the Development, it will expand the types of other possible adaptive uses that could be developed on the Property under the R4 - Multiple-Family Residence District classification, if the Development is not constructed, subject to Village approval of another conditional use permit for a planned development after the conducting of the required public hearing.



- q. The conditional use permit for planned development ordinance and its conditions shall be covenants of record that run with the land and shall be placed in a recordable format, acceptable to the Village Attorney, and then recorded by the Village against title to the Property with the Cook County Clerk's Office – Recording Division, at the Applicant's cost.
- r. The approval of the Requested Zoning Relief is subject to the Developer purchasing the Property from the Property Owner.
- s. Execution by the Applicant of the ACKNOWLEDGMENT Page that is part of the conditional use permit for planned development ordinance.

## 2. Engineering

- a. The Applicant, at its cost, shall install a new eight inch (8.00") ductile iron watermain and new fire hydrants to service the Development. The Developer shall obtain an IEPA permit for the new watermain. The Village, at the Applicant's cost, shall have a water system engineering inspection performed and an assessment report prepared by a licensed professional water system engineer to verify the condition and capacity of the existing adjacent water main located in the Heritage Springs Subdivision and to provide a recommendation for the sizing of the water main that will service the Development. The Applicant, at its cost, shall be responsible for any repairs and/or replacement related to its connection to and extension of the existing water main that are determined by the water system engineer to be necessary to provide adequate water main and service line connections to the Development.
- b. The Applicant shall be responsible to pay for any damage to any public improvements caused by any activities related to the Development. The Village will be the sole arbiter of determining if the damage was caused by the Applicant's actions. Within seven (7) calendar days of inspecting any damage, the Village will notify the Applicant in writing and define the scope of the damage and expected repairs. The Village and the Applicant will discuss whether the damage is to be repaired by the Applicant or if the estimated costs of repairs are paid to the Village.
- c. Per Section 10-11-11 (Stormwater Management Requirements For All Developments) of the DCO, prior to obtaining a certificate of occupancy for any dwelling unit within the Project, the Applicant shall file and maintain with the Village a current performance and payment bond in the amount of \$100,000.00 for maintenance of the stormwater drainage system. The Village shall be a beneficiary and obligee of the bond. The bond shall be replaced by the Applicant or its successor owners with a new bond prior to its expiration.
- d. The existing drainage pattern for the Property will not be altered by the construction of the Development, the stormwater drainage system, the landscaping or any of the related improvements.

- e. The Applicant, at its cost, shall use commercially reasonable efforts to cause any overhead electric service wires and other utility wires for the Development to be buried to enhance the aesthetics of the neighborhood.
- f. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated geometric plan that shows not only the location of a safety rail on top of the retaining walls, as shown on the current geometric plan, but also contains a detailed and structural design and calculations for the safety rail, which are needed to ensure the rail is adequate and meets applicable codes.
- g. The Applicant's engineer shall submit to the Village, as part of the Village plan review and approval process, accurate calculations showing that the stormwater management system is able to manage bypass stormwater appropriately as determined by the Village Engineer.
- h. The Applicant shall submit to the Village, as part of the Village plan review and approval process, accurate calculations that show that the rate of flow of the stormwater drainage bypass system is equal to or less than the current rate of all bypass flows (low flow and overland). This submittal must demonstrate that the bypass stormwater does not reach the Lawn Avenue Detention Basin faster than it currently does under the existing conditions.
- i. The Village will not accept the twin 54" aluminum pipes that are proposed by the Applicant to be installed in the rear yard of Units 1 through 7. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated design plan that utilizes reinforced concrete pipes or precast reinforced concrete box culverts to convey the stormwater. The Applicant shall submit to the Village design calculations that demonstrate the proposed pipes meet all relevant design criteria for capacity and velocity of stormwater.
- j. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a detailed operations and maintenance ("O&M") plan for the enclosed stormwater drainage bypass system. The O&M plan is required to be incorporated into the final plat of subdivision, the Declaration, and the Maintenance and Development Agreement.
- k. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated design plan that shows:
  - i. All components of the stormwater bypass system (open channel and piping) are secured and not accessible to the public.
  - ii. The Applicant shall install infrastructure to ensure that the stormwater bypass system is not a danger to the public.
- l. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a wetland plantings plan for the stormwater basins to be used with the volume control retention system needed to be designed by a licensed / certified ecologist and

reviewed by the Village prior to the issuance of any site development permit. This plan must also include a maintenance plan.

- m. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a set of structural design plans sealed by an Illinois licensed structural engineer for the retaining walls.
- n. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an O&M plan for the stormwater detention basins. The Applicant shall create an O&M plan for the stormwater detention basins and create a mechanism to fund all required maintenance activities for the establishment period of three (3) to five (5) years. A licensed / certified ecologist with experience in wetland basins shall produce this type of O&M plan for Village review and approval prior to the issuance of any site development permit.
- o. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an exhibit showing that the street light photometrics conform with the Village Code for Village review prior to the issuance of any site development permit.
- p. The plans have been updated to show new retaining walls along the west edge of the Lawn Avenue Detention Basin which will require the removal of the existing walls. However, the structural design of this new retaining wall and the other proposed retaining walls are not complete and are not provided. The Applicant shall submit to the Village, as part of the Village plan review and approval process, complete retaining wall details, elevations, and signoff approval by an Illinois licensed structural engineer.
- q. Since the structural design is not complete, it is not known if tiebacks or over excavation needed to construct the walls will be contained within the Property. Work needed to construct the new retaining walls cannot take place on private property unless temporary or permanent easements are acquired. Construction limits behind the retaining walls shall be identified and contained within the Property or copies of executed easements are to be provided prior to the issuance of any site development permit.
- r. Neighboring properties cannot be flooded as a result of any interim construction conditions or activities by the Applicant that could occur if the old retaining wall is torn down and the new retaining wall is not yet complete. The development plans shall contain provisions that temporarily protect the west property line to a pre-project elevation. The development plans shall identify a stormwater management plan that the Applicant shall comply with to address stormwater management issues during the site development phase and construction phase of the Development.
- s. The retaining wall design of the detention area between Units 20 and 21 shall be constructed and maintained to accommodate for overland flows that may occur if the twin 54" sewers are overwhelmed or not functioning properly
- t. Replace the existing flat grate that is part of the existing Heritage Springs stormwater system, which is prone to clogging, with a vaulted frame and grate. A vaulted grate will

be much less prone to clogging and will improve performance and reliability of both developments' stormwater management systems.

- u. The plans show inlets proposed to be located on the Heritage Springs property. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated plan that relocates the inlets to the south so they are located on the Heritage Crossing's property and adjusts the location of the inlets directly under the proposed swing gate to be fully located on Heritage Crossing property. The plans also need to be updated so that the Heritage Court roadway vertical curve is adjusted so the low point is moved south, which will result in the inlets being placed on the Heritage Crossing property and relocate the depressional area from Heritage Springs to Heritage Crossing.
- v. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a set of street lighting plans for the Development, which include all lighting conduits, cables, controllers, and service location. Also, these plans shall include light pole foundation and controller foundation details, and the street lighting plans shall be signed and sealed by an Illinois licensed structural engineer.
- w. The Applicant's narrative report shall be updated and resubmitted to the Village with a section discussing the development of the HEC-HMS modeling and results.
- x. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a report that discusses how the hydraulic modeling impacted the subdivision grading plan.
- y. The Applicant's narrative report shall be updated and resubmitted to the Village with a section discussing the worst-case flooding scenario. This updated report shall include exhibits sent to Engineering on October 31, 2024, which illustrate stormwater storage in this worst-case scenario. The updated report shall clearly state there is a net increase in stormwater storage despite the removal of the existing parking lot area and the back-filling of that parking lot area with soil as part of the site development work and lot grading work.
- z. The proposed design of the dual culverts suggests a full-flowing velocity of 14 ft/s, well above the acceptable maximum velocity. The Applicant's next plan submittal shall contain documentation that confirms 11 ft/s is the maximum flow velocity through these culvert stormwater pipes.
- aa. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a set of calculations for the riprap sizing at the outfall of the dual culverts. The current riprap gradation, shape and area do not appear to match the design provided by the Illinois Urban Manual. Furthermore, the detail provided (IL-610 on Sheet 6) is missing dimensions and shall be updated by the Applicant.
- bb. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated grading plan for the Property line north of Unit 14 that

demonstrates that the final re-grading of the area will prevent overland flow from continuing onto the Heritage Springs property.

- cc. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated Stormwater Management Report and HEC-HMS Model that includes:
  - i. An updated Stormwater Management Report's narrative revised to include a discussion of modeling results, reference and a discussion of the supporting modeling documentation, and also shall include a set of inundation maps.
  - ii. Clarification on how the discharge flows are defined between stormwater detention basins. The HEC-HMS files provided indicate that the discharge curves for all stormwater detention basins are turned off in both existing and proposed scenarios. Additionally, many of the nodes do not have discharge functions defined.
  - iii. Clarification on the distinction between the nodes "Storage East of Wolf Road" and "Box Inlet East Side Wolf Rd". Pages 71 and 72 of the report show stage-storage tables for these nodes, but the areas for elevations 664.0 and 665.0 match for these two, suggesting some volume may be double-counted. Furthermore, the "Box Inlet-East Side Wolf Rd" node table differs significantly from that shown in the HEC-HMS model.
  - iv. Provide a set of HEC-HMS results that match the conservative scenario displayed in the inundation maps because: (i) The inundation maps provided are for the scenario where the Ashbrook Subdivision ponds are not modeled, and the 2-hour duration storm is the critical duration., (ii) However, the HEC-HMS results provided are for the scenario where the ponds are modeled, and the 1-hour duration is critical.
  - v. Revise the inundation maps to reflect flood elevations upstream of Basin "C". For example, the "Storage West Side Wolf Road" node has critical duration elevations in excess of 660, which need to be shown on the inundation maps. This would include surcharging inlets along the dual culverts under proposed conditions.
- dd. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a written response to each of the initial plan review comments from the Village Engineer and Village's consulting engineer contained in Attachment 4 of the Village Staff Memo dated November 18, 2024.
- ee. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a set of final engineering plans that include the location of all utilities and light poles that demonstrate there are no conflicts between utilities, light poles, and the proposed landscape areas.

### 3. Landscaping



- a. The Applicant (and any successor owners, property managers, property associations), at its cost, shall be required to maintain each building façade and long-term lawn and landscape maintenance of the green spaces for the Development, which obligations shall be set forth in a combined Property Maintenance Plan / Landscaping Plan for the Village's plan review approval and final Village Board approval. Maintenance standards, tree replacement standards and other appropriate landscaping standards shall be part of the Applicant's Property Maintenance Plan / Landscape Plan for the Project, and the Applicant shall comply with the obligations and standards contained in the Property Maintenance Plan.

#### 4. Right-Of-Way, Road, and Traffic

- a. The Applicant proposes to maintain the current Wolf Road access point as the primary point of ingress and egress for the Development, subject to Cook County Department of Transportation and Highways approval of certain Wolf Road right-of-way modifications (i.e., required Project-related reconfiguration work to Wolf Road that may include a deceleration / turning lane) and modifications to the existing drainage culvert improvements that will allow it to construct the Development consistent with the current Site Plan. The Village's consideration of approval of the Development is conditioned on the Cook County Department of Transportation and Highways' approval of the current Wolf Road access point as the primary point of ingress and egress for the Development based on the current Site Plan and the Applicant's agreement to abide by the conditions of approval required of the Applicant by the Cook County Department of Transportation and Highways relative to the Wolf Road right-of-way modifications and modifications to the existing drainage culvert improvements. The Applicant, at its cost, shall be responsible for entering into all easements, maintenance agreements and other binding documents with the Cook County Department of Transportation and Highways, and completing the Wolf Road right-of-way modifications and any modifications to the existing drainage culvert improvements. Other than the Village's plan review process, the Village shall not be obligated to participate in the Cook County Department of Transportation and Highways' required Wolf Road right-of-way modifications and modifications to the existing drainage culvert improvements that are necessary to construct the Development under the current Site Plan and that will allow the Applicant to construct the Development consistent with the current Site Plan. In the event the Cook County Department of Transportation and Highways does not approve of the current Wolf Road access point as the primary point of ingress and egress for the Development, the Applicant will have to petition for an amendment to the planned development ordinance and present a revised Site Plan with a modified point of ingress and egress for the Development for review and consideration by the Plan Commission at a public hearing and then review and consideration by the Village Board.
- b. The Applicant, at its cost, shall construct a fence and swing gate across Heritage Court at the north lot line where the new Heritage Court meets the existing Heritage Court that serves the Heritage Springs Subdivision. The swing gate shall be operated by an Opticom sensor that shall be taller than the proposed fence/gate. The design of the swing gate shall ensure that gate electrical and control equipment is elevated one foot (1.0') above flood elevation. The swing gate must work at all times and shall have a battery backup system capable of operating the gate for at least 24 hours after loss of power to ensure

operation during power outages. The swing gate must have appropriate sensors on both sides to ensure the gate can operate in either direction for emergency vehicles. Design plans, operational details, and loss of power procedure for the swing gate and the Opticom system must be submitted by the Applicant for review and approval by the Village's Director of Fire and EMS before any permit is issued for site development. The Applicant shall enter into an operations and maintenance agreement with the Homeowners Association for the Heritage Springs Subdivision relative to the swing gate and the Opticom sensor(s).

- c. Vehicles parked in the driveway of Units 8, 15 and 21 may not overhang the curb or the sidewalk (if present).
- d. Prior to the issuance of any occupancy permits for the Development, Illinois Accessibility Code compliant sidewalks within the Development and along the entire property frontage that is adjacent to both Wolf Road and Park Place shall be installed by the Applicant, at its cost
- e. New sidewalks installed by the Applicant are required along the west side of Wolf Road and the north side of Park Place frontage per the Village Code. Replacement of existing sidewalks along the west side of Wolf Road along the entire property frontage is required by the Applicant. Placement of sidewalks must be as far from the paved roadways as practical, but the Village will defer to the Cook County Department of Transportation and Highways, as they will review and approve sidewalk placement and issue the permit for the work. On Park Place, placement of the sidewalk shall be one foot (1.0') inside the public right-of-way along the southern edge of the Development and the sidewalk shall dead end at west termini point. All new sidewalks shall comply with IDOT and Illinois Accessibility Code standards for slopes. The northwest corner of the Park Place and Wolf Road sidewalk ramp shall be removed and replaced by the Applicant.
- f. As part of the Maintenance and Development Agreement and the Declaration, the Applicant and the Heritage Crossing Homeowners Association shall be obligated to maintain the swing gate on a regular basis and to repair the swing gate, as needed, to ensure that the swing gate operates at all times.
- g. The Applicant shall submit to the Village, as part of the Village plan review and approval process, updated plans that Convert the turnaround area north of Unit 15 to grasscrete or similar material.
- h. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated version of the color site plan prepared by BSB Design (revised November 5, 2024) with the crosswalk shown perpendicular (not angled) to Heritage Court, consistent with the Final Engineering Plans for Heritage Crossing, prepared by DesignTek Engineering, Inc. (revised November 4, 2024).

## 5. Signage

- a. Provide information on any roadway vehicle traffic signage related to Heritage Court and other proposed subdivision signage type (private) for Village review for the Development for Village Board approval as part of its consideration of the planned development ordinance. All approved and required on-site parking restriction signage that pertains to the Development shall be installed and maintained by the Applicant, at its cost, or the Homeowners Association, at its cost.
- b. Provide for the Ridgewood monument sign, in its current location, or in an alternate location in close proximity to its current location, as agreed upon by the Ridgewood Subdivision Civic Association and Cook County. If the Ridgewood monument sign remains in its current location, the Developer, at its cost, shall provide to the Ridgewood Subdivision Civic Association an easement over the portion of the Property that the sign is partially located on and shall also obtain a dedication or easement over a portion of the Cook County-owned Wolf Road right-of-way that the sign is partially located on. If the sign is relocated, the Developer, at its cost, will make the required legal arrangements (i.e., easement agreement or land dedication) with either the Ridgewood Subdivision Civic Association or Cook County, or both, to provide for the long-term placement and maintenance of the monument sign.
- c. The placement of the sidewalk on Park Place will require the movement of the Ridgewood subdivision sign. The relocation of the subdivision sign must be addressed by the Applicant as part of the Village plan review and approval process. The Applicant is required to provide the written approval from the Ridgewood Civic Association of the subdivision sign design and sign placement.

**#. Acknowledgement and Agreement to Comply With the Obligations, Conditions, Terms and Provisions Set Forth in This Ordinance.** The Applicant agrees to comply with all of the obligations, conditions, terms and provisions of this Ordinance. The Applicant acknowledges and agrees that the Village is not and will not be, in any way, liable for any damages or injuries that may be sustained as a result of the Village's approval of this Ordinance or its review and approval of any plans for the Development or the issuance of any permits for the Development, and that the Village's review and approval of any such plans and issuance of any such permits do not and will not, in any way, be deemed to insure the Applicant against third party claims, causes of action and damages or injuries of any kind at any time. The Applicant consents to the approvals granted in the Approval Ordinance and all conditions of those approvals and also to the recordation of this Ordinance with the CCCORD against title to the Property for the purpose of providing notice that the Applicant, and its transferees, successors-in-interest, all legal or beneficial owners of record, assigns, tenants, licensees and all subsequent owners of the Property or any part of the Property, or any other person and each and all homeowners associations or their equivalent within the Property, are subject to the obligations, conditions, terms and provisions of this Ordinance.

**# Termination of Ordinance for Failure of Developer to Acquire Title to the Property.** This validity of this Ordinance is subject to the Developer purchasing the Property from the Property Owner. In the event the Developer does not purchase the Property from the Property Owner, upon written notice delivered to the Village Manager of the termination of the real estate purchase contract entered into between the Property Owner and the Developer, this Ordinance shall automatically terminate without further action by the Corporate Authorities of the Village and shall be void and unenforceable. If the Developer does not purchase the Property, the Developer agrees to waive all claims, causes of action

and damages of any kind that the Developer could file against the Village arising out of or related to the termination of this Ordinance. The Developer is required to provide written notice to the Village within five (5) calendar days of the termination of the real estate purchase contract.

**SECTION 4. Severability.** The sections, terms, provisions and conditions of this Ordinance shall be severable, and if any section, term, provision or condition is found to be invalid or unenforceable for any reason by a court of competent, final jurisdiction, the remaining sections, terms, provisions and conditions shall remain in full force and effect.

**SECTION 5. Repealer; Covenants that Runs With the Land.** Any Ordinance, or portion thereof, in conflict with this Ordinance is repealed to the extent of such conflict. The terms, provisions and conditions set forth in this Ordinance, including those incorporated herein by reference, are covenants that run with the land and shall be released or amended only by mutual agreement of the Applicant and the Village, or unless amended by ordinance approved by the Village Board after the required public hearing.

**SECTION 6. Filing with Cook County Recorder of Deeds Office.** A certified copy of this Ordinance shall be recorded against title to the Property with the Cook County Clerk's Office, Recording Division ("CCCORD") by the Village, at the Applicant's cost. The Village shall provide the Applicant with a stamped copy of this Ordinance after it is filed with the CCCORD. The terms, provisions and conditions set forth in this Ordinance, including those incorporated herein by reference, are covenants that run with the land and shall be released or amended only upon the written consent of the Village Board.

**SECTION 7. Effective Date.** This Ordinance shall be in full force and effect from and after its adoption, approval and publication, as provided by law.

**PASSED** by the Board of Trustees of the Village of Western Springs, Cook County, Illinois, at a Special Meeting thereof, held on the 10th day of February, 2025, and approved by me as President on the same day.

---

Heidi Rudolph, Village President

**ATTEST:**

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Edward Tymick, Village Clerk

This Ordinance was published by me in pamphlet form on the 10th day of February, 2025.

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Edward Tymick, Village Clerk

**Group Exhibit "1"**

The Application consists of information supporting the requested zoning relief, a description of the proposed improvements to be constructed as part of the Development, and the proposed Preliminary Development Plans, as follows:

| <b>Code Section</b>                        | <b>Requirement</b>                                                                                                                                                                                                                                     | <b>Proposed</b>                                                                                                                                    |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| 10-4-4(F)3a: Fences, Height Restrictions   | Front yard: 3.5 ft.<br>Rear & side yards: 6 ft.                                                                                                                                                                                                        | 8 ft.                                                                                                                                              |
| 10-6-5(D): Minimum Development Parcel Size | 5 ac.                                                                                                                                                                                                                                                  | 2.76 ac.                                                                                                                                           |
| 10-6-5(E)(1): Minimum Front Yard           | 25 ft.                                                                                                                                                                                                                                                 | 7 ft.                                                                                                                                              |
| 10-6-5(E)(2): Minimum Corner Side Yard     | 25 ft.                                                                                                                                                                                                                                                 | 14.48 ft.                                                                                                                                          |
| 10-6-5(E)(3): Minimum Interior Side Yard   | 30 ft.                                                                                                                                                                                                                                                 | 6.67 ft.                                                                                                                                           |
| 10-6-5(E)(4): Minimum Rear Yard            | 30 ft.                                                                                                                                                                                                                                                 | 12.75 ft.                                                                                                                                          |
| 10-8-4(B)(1)(e): Maximum Building Height   | 35 ft.                                                                                                                                                                                                                                                 | 36.33 ft.                                                                                                                                          |
| 10-10-7: Street Design Criteria            | Pavement width of 27 ft.                                                                                                                                                                                                                               | 23 ft.                                                                                                                                             |
| 10-10-7: Street Design Criteria            | Minium horizontal curve radius of 150 ft.                                                                                                                                                                                                              | 40 ft.                                                                                                                                             |
| 10-10-7: Street Design Criteria            | Minimum vertical curves 100 ft. in length                                                                                                                                                                                                              | 50 ft.                                                                                                                                             |
| 10-11-11(C)2: Detention                    | Streets are not to be used for the storage of excess stormwater, ponding depths shall not encroach more than 3' on the adjacent traffic lane and shall not remain flooded for more than 8 hours for any event less than or equal to the 100-year event | Allow for storage of 1.5 ft on the entire street width from the northern property line to a point roughly 36.5 ft. south along the Heritage Court. |

(incorporated herein by reference and with copies on file at  
the Village Clerk's Office and the Community Development Department)



**ACKNOWLEDGMENT AND AGREEMENT  
TO COMPLY WITH THE OBLIGATIONS, CONDITIONS, TERMS AND PROVISIONS  
SET FORTH IN WESTERN SPRINGS ORDINANCE NO. 25-\_\_\_\_\_**

I, Paul McNaughton, Managing Member of McNaughton Development, LLC, the contract purchaser of the above-described Property (5600 South Wolf Road) and the prospective acquirer of the Lawn Avenue ROW Parcel, have read and understand each of the above obligations, conditions, terms and provisions of this Ordinance that are required of the McNaughton Development, LLC, including the obligations, conditions, terms and provisions set forth at Section 3 above, and have signed this ACKNOWLEDGMENT AND AGREEMENT, as an authorized corporate officer of McNaughton Development, LLC, to confirm that McNaughton Development, LLC shall be bound by such obligations, conditions, terms and provisions.

**McNaughton Development, LLC**

By: \_\_\_\_\_  
Managing Member

By: \_\_\_\_\_  
Notary Public

Name: \_\_\_\_\_ Paul McNaughton

Date: \_\_\_\_\_, 2024.

Date: \_\_\_\_\_, 2024.

Commission Expires: \_\_\_\_\_

STATE OF ILLINOIS     )  
                                      ) SS  
COUNTY OF COOK     )

**CLERK'S CERTIFICATE**

I, Edward Tymick, Village Clerk of the Village of Western Springs, in the County of Cook and State of Illinois, certify that the attached document is a true and correct copy of that certain Ordinance now on file in my office, entitled:

**AN ORDINANCE APPROVING A MAP AMENDMENT TO REZONE  
THE 5600 SOUTH WOLF ROAD PROPERTY, WESTERN SPRINGS, ILLINOIS, FROM  
THE O – LIMITED OFFICE ZONING DISTRICT TO THE R4 - MULTIPLE-FAMILY RESIDENCE  
DISTRICT; APPROVING AN APPLICATION FOR A CONDITIONAL USE PERMIT FOR A  
PLANNED DEVELOPMENT FOR THE CONSTRUCTION AND OPERATION OF THE PROPOSED  
29 UNIT HERITAGE CROSSING TOWNHOME DEVELOPMENT LOCATED AT THE 5600 SOUTH  
WOLF ROAD PROPERTY, INCLUDING THE APPROVAL OF THE COMBINED PRELIMINARY /  
FINAL DEVELOPMENT PLANS, SUBJECT TO VILLAGE PLAN REVIEW PROCESS, AND  
APPROVAL OF CERTAIN DEVELOPMENT ALLOWANCES, EXCEPTIONS AND VARIATIONS  
FROM THE VILLAGE ZONING REGULATIONS, INCLUDING A WAIVER OF THE  
FIVE (5) ACRE MINIMUM LOT AREA REQUIREMENT AND A REDUCTION OF  
CERTAIN PLANNED DEVELOPMENT SUBMISSION REQUIREMENTS**

which Ordinance was passed by a roll call vote of the Board of Trustees of the Village of Western Springs at a Special Meeting on the 10th day of February, 2025, at which meeting a quorum was present, and approved by the President of the Village of Western Springs on the 10th day of February, 2025.

I further certify that the vote on the question of the passage of said Ordinance by the Board of Trustees of the Village of Western Springs was taken by Ayes and Nays and recorded in the minutes of the Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

**AYES:** \_\_\_\_\_

**NAYS:** \_\_\_\_\_

**ABSENT:** \_\_\_\_\_

I do further certify that the original Ordinance, of which the foregoing is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

**IN WITNESS WHEREOF**, I have hereunto set my hand and affixed the seal of the Village of Western Springs, this 10th day of February, 2025.

\_\_\_\_\_  
Edward Tymick, Village Clerk

[SEAL]

## Attachment 8.

### ORDINANCE NO. 25-

VOTE:

AYES:

NAYS:

ABSTAIN:

ABSENT:

DATE: February 10, 2025.

OTHER: None.

NOTE: Voting: 5 of 6 Affirmative Vote of Trustees for Passage.

AN ORDINANCE APPROVING AND AUTHORIZING THE VACATION OF THE 66.00 FEET BY 225.00 FEET PORTION OF THE LAWN AVENUE RIGHT-OF-WAY ADJACENT TO AND WEST OF THE 5600 SOUTH WOLF ROAD PROPERTY LOCATED IN WESTERN SPRINGS, ILLINOIS AND LOT 5 AND LOT 6 OF MAXTED SUBDIVISION, AND APPROVING A PLAT OF VACATION AND RESERVATION OF A STORMWATER DRAINAGE EASEMENT (APPLICANT: MCNAUGHTON DEVELOPMENT, LLC)

**WHEREAS**, the Village President and Board of Trustees (the “Village Board” or the “Corporate Authorities”) of the Village of Western Springs (“Village”) approved a revised policy governing the disposal of public right-of-way property on April 24, 2017, under Resolution No. 17-2384; said policy is entitled “Village Excess Rights-of-Way Disposal Policy and Procedures Dated April 24, 2017” (the “ROW Policy”). The ROW Policy incorporates the requirements for vacating public rights-of-way as set forth in the State Vacation Statute (65 ILCS 5/11-91-1, *et seq.*) and Section 10-10-20 (Vacations) of the Western Springs Municipal Code; and

**WHEREAS**, while not expressly listed in the ROW Policy, the sixty-six (66.00) foot by two hundred twenty-five (225.00) foot portion of the Lawn Avenue right-of-way located adjacent to and immediately West of Lot 5 and Lot 6 of Maxted Subdivision (the “ROW Parcel”) is public property that may be vacated by the Village, in the sole discretion of the Board of Trustees, in accordance with the provisions of the ROW Policy; and

**WHEREAS**, McNaughton Development, LLC, with its principal business office located at 115220 Jackson Street, Burr Ridge, Illinois 60527 (“Applicant”), is the contract purchaser and prospective developer of the real property commonly known as 5600 South Wolf Road, Western Springs, Illinois (“Property”). Casey and Fran Gaik (collectively the “Property Owner”) are the fee simple title owners of the Property and have submitted a written authorization to the Village that allowed the Applicant to file with the Village a completed “General Information Application for Land Use and Development in the Village” form with supporting documents (the “Application”) for the redevelopment of the Property as a twenty-nine (29) unit residential townhome development (the “Development”). The Property Owner has further executed a “Written Consent and Waiver” to allow McNaughton Development, LLC to enter into this Agreement, a copy of which is on file with the Community Development Department and is incorporated herein by reference and made a part hereof; and

**WHEREAS**, in 2024, the Applicant submitted the Application to the Village requesting approval of a plat of vacation relating to the ROW Parcel, which is utilized as a stormwater detention basin (the “Lawn Avenue Detention Basin”), so the Applicant could purchase title to the ROW Parcel and incorporate it into the Development. The Application also requested approval of a Comprehensive Plan Amendment to the Long-Range Land Use Map, a Map Amendment (Rezoning of the Property from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence District), a Conditional Use for a Planned Development, and Exceptions / Variations to the Village Development Control Ordinance (“DCO”), and a Subdivision approval for the construction, operation, and maintenance of a Townhome Subdivision

Development referred to as “Heritage Crossing”, and a single stage Final Plan review and approval process (i.e., a combined Preliminary Plan / Final Plan approval) for the Development per Subsection 10-8-8(C) of the DCO, provided that the Applicant complies with the submittal and plan review requirements of Section 10-8-5(C) (Final Plan) of the DCO, subject to certain stated conditions of approval (the “Development Zoning Relief”) in order to construct the Development, which is commonly referred to as the Heritage Crossing Subdivision or the Heritage Crossing Townhome Development. A copy of the Application is on file with the Village’s Community Development Department and is incorporated herein by reference; and

**WHEREAS**, the proposed Development consists of nine (9) townhome buildings with unit counts of either three-units or four-units. Each dwelling unit will have a balcony, a rear patio, and an attached, front-loaded garage with a driveway accessed by a private street through the Development. The Development will have off-street community parking spaces, possible on street-parking, sidewalks, an expanded stormwater detention basin system and stormwater management facilities and other private and public infrastructure, open space, landscaped areas and streetlights. The Applicant proposes to extend private Heritage Court to the southeast through the Property to the Development’s access driveway proposed along Wolf Road. The existing portion of Heritage Court, a private road, currently services only the Heritage Springs Townhome Development, connects to 55th Street to the north of the Property and is maintained by the Heritage Springs Homeowner’s Association. The Applicant’s plans indicate that the new portion of Heritage Court will match the existing road’s width. An automatic gate will separate the Development from the existing Heritage Springs Subdivision to the north. Vehicle access between the adjacent subdivisions will be controlled by a swing gate and gate access will only be granted to residents of both subdivisions with clicker-access and Village emergency service vehicles. The swing gate will be improved with an Opticom system that will give Village emergency service vehicles access similar to the systems on streetlights. The Developer agrees to accept title to a sixty-six (66.00) foot by two hundred twenty-five (225.00) foot portion of Lawn Avenue (the “Lawn Avenue ROW Parcel”) that will be vacated by the passage of a vacation ordinance and a plat of right-of-way vacation and retention of stormwater facility easement by the Village for purposes of incorporation into the Property and the Development so that the Developer can construct an expanded stormwater detention basin system as part of the Development; and

**WHEREAS**, the Applicant’s Lawn Avenue ROW Parcel purchase proposal is an integral part of the Development because it allows for the Applicant to meet certain zoning bulk regulations and to expand the size and capacity of the existing Lawn Avenue Detention Basin and to construct two (2) additional, new on-site stormwater detention facilities referred to on the updated Site Plan as “Outlot 31 Detention Basin” and “Outlot 33 Detention Basin”; and

**WHEREAS**, a public hearing has been conducted by the Western Springs Plan Commission relative to the Application, including the requested purchase offer for the Lawn Avenue ROW Parcel, during public meetings held on August 13, 2024, September 24, 2024 and November 18, 2024, as required by the applicable provisions of State law, including the Illinois Open Meetings Act, 5 ILCS 120/ and Division 11-13 of the Illinois Municipal Code (65 ILCS 5/ 11-13), and the applicable provisions of the DCO. Prior to conducting the public hearing, a notice of public hearing was published in a newspaper, a “zoning application pending” sign was posted at the Property, a public hearing notice was mailed to those persons who are required to be mailed the public hearing notice in compliance with applicable State law and the DCO, and separate agendas for each of the Plan Commission meetings where the public hearing sessions

were held were posted as required by the Open Meetings Act; and

**WHEREAS**, during the Plan Commission public hearing sessions, the Applicant's request to purchase the ROW Parcel and the Village's intent to consider the vacation of the Lawn Avenue ROW Parcel and conveyance to the Applicant for the purpose of incorporating the Lawn Avenue ROW Parcel into the Development and to require that the Applicant complete certain enhancements to the existing stormwater detention basin located within the Lawn Avenue ROW Parcel for the benefit of the Development were discussed with the attendees of the public hearing. The Plan Commission, in place of the Village Board, conducted the public hearing to consider the merits of the Applicant's purchase offer regarding the vacation of the Lawn Avenue ROW Parcel and provided an opportunity for the adjacent property owners and taxpayers of record to the Lawn Avenue ROW Parcel and the public to provide comments relative to the Applicant's purchase proposal and intended use for the Lawn Avenue ROW Parcel. With the passage of Plan Commission Recommendation No. 24-02, the Plan Commission favorably recommended the approval of the Development, the Development Zoning Relief, and the vacation of the Lawn Avenue ROW Parcel and its conveyance to the Applicant to allow the Lawn Avenue ROW Parcel to be incorporated into the Development and to require that the Applicant complete certain enhancements to the existing stormwater detention basin located within the Lawn Avenue ROW Parcel for the benefit of the Development; and

**WHEREAS**, after completion of the required public hearing before the Village Plan Commission, on February 10, 2025, with the passage of **Ordinance No. 25-**, the President and Board of Trustees of the Village of Western Springs ("Corporate Authorities") granted approval of the Development Zoning Relief (the "Approval Ordinance"); and

**WHEREAS**, pursuant to Sections A and B of the ROW Policy, the Corporate Authorities of the Village may deviate from the ROW Policy or grant an exception or variation from any provision of the ROW Policy under the appropriate circumstances, provided such deviation, exemption or variation is approved by a three-fourths vote of the Corporate Authorities of the Village, and, in the case of a proposed residential planned development, the Village Board "reserves the right to set a price for the sale of such right-of-way based on: (1) the fair market value of the property; or (2) on the benefits (as documented in the public record by the Village Board) which will accrue to the Village as a result of the vacation and the incorporation of the vacated right-of-way into the Development." In lieu of paying the fair market value that is assigned to the Lawn Avenue ROW Parcel under the ROW Policy (which equals \$408,375.00), the Applicant has requested that the Village Board approve the vacation of the Lawn Avenue ROW Parcel in exchange for the Applicant completing equivalent "like-kind, like value" improvements consisting of the enhanced stormwater drainage improvements to the Lawn Avenue Detention Basin and the construction of the Outlot 31 Detention Basin and the Outlot 33 Detention Basin at an estimated construction cost of \$505,729.00 based on the Lawn Avenue Detention Pond Budget, which is part of the Application; and

**WHEREAS**, because the Application involves a proposed residential planned development, the Corporate Authorities of the Village find that it is appropriate to grant the following deviations, exceptions or variations from the ROW Policy: (1) to offer the Lawn Avenue ROW Parcel for sale only to the Applicant for purposes of its incorporation into the Development to provide for enhanced stormwater drainage facilities, and to not offer the Lawn Avenue ROW Parcel to all adjacent property owners for purposes of submitting competing purchase proposals; and (2) to vacate and convey title to the Lawn Avenue ROW



Parcel to the Applicant, at no cost, in exchange for the construction of enhanced stormwater drainage improvements to the Lawn Avenue Detention Basin and the construction of the Outlot 31 Detention Basin and the Outlot 33 Detention Basin, provided that the final actual, documented construction costs are approximately \$505,729.00, as confirmed by the Village Engineer; and

**WHEREAS**, in accordance with the ROW Policy, the Board of Trustees of the Village has agreed to vacate and convey title to the Lawn Avenue ROW Parcel to the Applicant in exchange for the Applicant completing equivalent “like-kind, like value” improvements consisting of the enhanced stormwater drainage improvements to the Lawn Avenue Detention Basin and the construction of the Outlot 31 Detention Basin and the Outlot 33 Detention Basin at an estimated construction cost of \$505,729.00 based on the Lawn Avenue Detention Pond Budget, subject to the Applicant agreeing to the conditions set forth in Section 3 below, including the acceptance **of a storm water drainage easement**, as shown on the attached Plat of Vacation of Public Right Of Way and Stormwater Drainage Easement dated **November 1, 2024** and prepared by DesignTek Engineering, Inc., a copy of which is attached hereto as **Exhibit “1”** (the “Plat of ROW Vacation”); and

**WHEREAS**, the Board of Trustees has determined that it is protective of the health, wealth and safety of and in the best interests of the Village to sell this Lawn Avenue ROW Parcel at the above-stated purchase contribution obligation (i.e., completing equivalent “like-kind, like value” improvements consisting of the enhanced stormwater drainage improvements to the Lawn Avenue Detention Basin and the construction of the Outlot 31 Detention Basin and the Outlot 33 Detention Basin at an estimated construction cost of \$505,729.00) to the Applicant, based on the benefits that will accrue to the Village as a result of the development of the Lawn Avenue ROW Parcel in conjunction with the development of the adjacent 5600 South Wolf Road property by the Applicant, including the return of the property to the real estate tax rolls as a tax producing parcel and the removal of the property from the Village’s inventory of property that has to be maintained and insured at the Village’s cost; and

**WHEREAS**, pursuant to the State Vacation Statute (65 ILCS 5/11-91-1), Section 10-10-20 (Vacations) of the Western Springs Municipal Code, and the ROW Policy, the President and Board of Trustees have determined that the public interests of the Village will be subserved by vacating the Lawn Avenue ROW Parcel for the reasons stated in the Whereas paragraphs of this Ordinance, that the vacation will relieve the Village from the burden and responsibility of the Lawn Avenue ROW Parcel, and that, in the judgment of the President and Board of Trustees, based on a review of comparable real estate sales data, the estimated fair market value of the Lawn Avenue ROW Parcel to be acquired by the Applicant, subject to the conditions set forth in Section 3 below, is **Four Hundred Eight Thousand Three Hundred Seventy-Five and 00/100 Dollars (\$408,375.00)**; and

**WHEREAS**, pursuant to Section A and Section B of the ROW Policy, the Corporate Authorities of the Village may deviate from the ROW Policy or grant an exception or variation from any provision of the ROW Policy under the appropriate circumstances, provided such deviation, exemption or variation is approved by a three-fourths vote of the Corporate Authorities of the Village; and

**WHEREAS**, at open public meetings held on January 9, 2025 and January 16, 2025, the Village’s Planning and Zoning Committee (“Committee”) reviewed and discussed the proposed Heritage Crossing Townhome Development and the vacation of the Lawn Avenue ROW Parcel, and received input from the

Village staff on the matter, and provided an opportunity for public input on the matter. At its January 16, 2025 meeting, the Committee recommended that the Corporate Authorities of Village **approve / not approve / consider** the vacation of the Lawn Avenue ROW Parcel as part of the approval of the Development; and

**WHEREAS**, at open public meetings held on January 13, 2025, January 27, 2025 and February 10, 2025, the Corporate Authorities of Village reviewed and discussed the Committee's recommendation regarding the proposed Heritage Crossing Townhome Development and the vacation of the Lawn Avenue ROW Parcel as part of the approval of the Development, and received input from the Village staff on the matter and provided an opportunity for input from the public on the matter. At its February 10, 2025 open public meeting, the Corporate Authorities of the Village unanimously passed a motion finding and determining that there are appropriate circumstances, based on the statements set forth in the above Whereas paragraphs of this Ordinance and those other statements and documents that are part of the public record relating to this matter, to approve all necessary deviations from the ROW Policy and to grant all necessary exceptions or variations from any procedural requirements of the ROW Policy in order to approve this Ordinance; and

**WHEREAS**, the Board of Trustees of the Village is authorized to pass this Ordinance pursuant to the State Vacation Statute (65 ILCS 5/11-91-1, *et seq.*) and the applicable provisions of the ROW Policy.

**BE IT ORDAINED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:**

**SECTION 1. Incorporation.** Each of the Whereas paragraphs set forth above are incorporated into Section 1 of this Ordinance as material provisions.

**SECTION 2. Approval of Right-of-Way Vacation.** Pursuant to Chapter 65 of the Illinois Compiled Statutes, Section 5/11-91-1, as amended, the Board of Trustees of the Village of Western Springs vacate that portion of the dedicated Lawn Avenue right-of-way (the "Lawn Avenue ROW Parcel") legally described as follows:

THAT PART OF THE 66 FEET WIDE LAWN AVENUE, LYING SOUTH OF THE NORTH LINE OF WESTERN SPRINGS TOWNHOMES, RECORDED MARCH 29, 1999, AS DOCUMENT NO. 99297584, LYING NORTH OF THE SOUTH LINE OF RIDGEWOOD UNIT 12, RECORDED OCTOBER 6, 1965, AS DOCUMENT NO. 19610359, LYING WEST OF THE EAST LINE OF THE WEST ½ OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION, RECORDED NOVEMBER 13, 1948, AS DOCUMENT NO. 14442019, AND LYING EAST OF THE WEST LINE OF RIDGEWOOD UNIT NO. 11, RECORDED APRIL 3, 1964, AS DOCUMENT NO. 19089916, IN THE EAST HALF OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS.

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The Lawn Avenue ROW Parcel described above contains approximately 14,850.00 square feet.

The property legally described above is shown on the Plat of ROW Vacation and Reservation of Stormwater Drainage Easement dated \_\_\_\_\_, 2024 and prepared by DesignTek Engineering, Inc., a copy of which is attached hereto as **Exhibit "1"** (the "Plat of ROW Vacation"). The property legally described above is vacated, SUBJECT TO THE CONDITIONS SET FORTH IN SECTION 3 BELOW.

**SECTION 3. Conditions of Approval for Right-of-Way Vacation.** The vacation of the property legally described in Section 2 above is subject to the following conditions, each of which have been agreed to by the Applicant, as evidenced by the Applicant's execution of the "Acknowledgement And Agreement To Comply With The Obligations, Conditions, Terms And Provisions" of this Ordinance, which is attached to this Ordinance as **Exhibit "1"**:

- A. **Payment of "Like-Kind, Like Value" Consideration / Purchase Price.** In lieu of paying the fair market value assigned to the Lawn Avenue ROW Parcel as set forth in the ROW Policy (which equals \$408,375.00), the Village agrees to vacate and convey title to the Lawn Avenue ROW Parcel to the Applicant in exchange for the Applicant completing equivalent "like-kind, like value" improvements consisting of the enhanced stormwater drainage improvements to the existing Lawn Avenue Detention Basin and the construction of the Outlot 31 Detention Basin and the Outlot 33 Detention Basin at an estimated construction cost of \$505,729.00 based on the Lawn Avenue Detention Pond Budget and the Site Plan dated November 5, 2024 as part of the Applicant's construction of the Development. As part of the Village's construction inspection and post-construction approval process of the enhanced and newly constructed stormwater drainage facilities, including the Lawn Avenue Detention Basin, the Outlot 31 Detention Basin and the Outlot 33 Detention Basin, within five (5) business days of any written request for Development-related documents from the Village, the Applicant shall provide the Village with true and accurate copies of expenditure summaries, as prepared and certified by the Applicant, with appropriate supporting documentation (i.e., construction escrow statements, paid invoices, proof of payment to contractors, subcontractors and suppliers, executed liens waivers, contractor's sworn statement and affidavit, lender financing statements, lender progress payments and evidence of wire transfers, etc.), as deemed reasonably necessary by the Village (i.e., Village Manager, Village Engineer or Village Attorney) to allow the Village Engineer to verify the actual incurred costs of the enhancements to and construction of those stormwater drainage facilities. If the actual cost of the construction of the stormwater drainage improvements is less than the fair market value assigned to the Lawn Avenue ROW Parcel as set forth in the ROW Policy (\$408,375.00), as determined by the Village Engineer, the Applicant shall pay to the Village the dollar amount representing the difference between the actual cost of the construction of the stormwater drainage improvements and the fair market value assigned to the Lawn Avenue ROW Parcel (\$408,375.00) upon written demand of the Village. If necessary, the Parties agree to meet and confer upon written notice delivered by the requesting Party to the other Party in order to discuss and attempt to resolve any dispute(s) relative to the Village Engineer's verification of the actual incurred costs of the enhancements to and construction of those stormwater drainage facilities. If the Parties are not able to resolve the dispute(s) within thirty (30) calendar days of their initial meet / confer session, the Village Engineer's final determination shall be a final, non-appealable decision within the Village's organizational hierarchy for

purposes of resolving the matter and any further dispute of the matter shall be redressed in a court of equity or law. If, after acquiring title to the Lawn Avenue ROW Parcel, the Applicant, or its successors-in-interests, successor owners, assignees or transferees, do not construct the Development or do not complete the enhanced stormwater drainage improvements to the Lawn Avenue Detention Basin and the construction of the Outlot 31 Detention Basin and the Outlot 33 Detention Basin, as shown on the Village-approved Development Plans, the Applicant or its successors-in-interests, successor owners, assignees or transferees shall be obligated to pay the Village an amount equal to \$408,375.00 plus all of the incurred reimbursable costs and fees that are payable to the Village under the ROW Policy (e.g., engineering, legal, survey fees and 10% administrative fees, etc.) upon written demand of the Village.

- B. Reservation of New Storm Water Drainage Easement.** The reservation of a new sixty-six (66.00) foot by two hundred twenty-five (225.00) foot wide storm water drainage easement area that extends over the entire Lawn Avenue ROW Parcel , as shown on the attached Plat of ROW Vacation (**Exhibit "1"**), is agreed to by the Applicant for the purposes set forth in the easement description contained in the Plat of ROW Vacation.
- C. No Effect on Other Recorded Easements and Encumbrances.** This Vacation Ordinance does not affect or alter any other private or public easements or encumbrances of record.
- D. Conveyance of Title.** Title to the Lawn Avenue ROW Parcel shall be conveyed to and accepted by the Applicant by the passage of this Vacation Ordinance in "AS-IS, WHERE-IS" condition, including all known and unknown environmental conditions (including but not limited to soil and groundwater) and soil quality conditions. The Village makes no representations, warranties or guaranties of any kind in regard to the Lawn Avenue ROW Parcel to the Applicant, except that the Lawn Avenue ROW Parcel will be zoned as an R-4 - Multiple-Family Residence District property as defined under the Village's Development Control Ordinance. This Ordinance shall be effective and enforceable only after the Applicant acquires fee simple title to the 5600 South Wolf Road property. This Ordinance shall be filed with the Cook County Clerk's Office, Recording Division ("CCCORD") after the Applicant acquires fee simple title to the 5600 South Wolf Road property.
- E. Hold Harmless, Defense and Indemnity.** In the event that litigation of any kind is filed by any person against the Village and/or its appointed or elected officials, president and trustees, agents, engineers, attorneys, employees and representatives ("Village Affiliates") relating to any matters covered by or contained in this Ordinance, the Applicant and/or their successors-in-interest, successor owners, assignees or transferees of the 5600 South Wolf Road property shall defend, hold harmless and indemnify the Village and the Village Affiliates from and against any and all claims, actions, lawsuits, damages, judgments, costs, expenses and liabilities of any kind, including the reasonable fees and expenses of any attorneys, expert witnesses, staff time and consultants, defenses costs, court costs and fines, asserted against the Village and/or the Village Affiliates or sought to be imposed upon the Village and/or the Village Affiliates, individually, jointly or severally, and which arise directly or indirectly out of or in connection in any way with this Ordinance or the vacation of the Lawn Avenue ROW

Parcel. The Village shall select its own attorney(s) to defend itself and the Village Affiliates in any such litigation or claims. The scope of the above Hold Harmless, Defense and Indemnity provisions specifically include any claims, causes of action or lawsuits for damages or other relief filed by any person(s), and the award and/or payment of such damages, judgments, costs, expenses and liabilities of any kind or other relief arising out of or relating to the vacation and conveyance of the Lawn Avenue ROW Parcel to the Applicant where the claims, causes of action or lawsuits and damages, judgments, costs, expenses and liabilities of any kind or other relief are filed pursuant to 65 ILCS 5/11-91-1.

- F. Reimbursement of Village for Enforcement of This Ordinance and its Conditions.** If the Village files a lawsuit to enforce any provision or condition of this Ordinance, the Applicant and/or their successors-in-interest, successor owners, assignees or transferees of the 5600 South Wolf Road property shall reimburse the Village for its reasonable attorney's fees and litigation defenses costs in prosecuting the litigation. This hold harmless and indemnity provision is a covenant that runs with the land and shall survive the vacation and conveyance of title of the Lawn Avenue ROW Parcel into the 5600 South Wolf Road property.
- G. Compliance With ROW Policy.** Compliance with the other applicable terms and conditions of the ROW Policy.
- H. Acknowledgement and Agreement to Comply With the Obligations, Conditions, Terms and Provisions Set Forth in This Ordinance.** The Applicant agrees to comply with all of the obligations, conditions, terms and provisions of this Ordinance. The Applicant acknowledges and agrees that the Village is not and will not be, in any way, liable for any damages or injuries that may be sustained as a result of the Village's approval of this Ordinance or its review and approval of any plans for the Development or the issuance of any permits for the Development, and that the Village's review and approval of any such plans and issuance of any such permits do not and will not, in any way, be deemed to insure the Applicant against third party claims, causes of action and damages or injuries of any kind at any time. The Applicant consents to the approvals granted in the Approval Ordinance and all conditions of those approvals and also to the recordation of the Approval Ordinance and this Ordinance with the CCCORD against title to the Property for the purpose of providing notice that the Applicant, and its transferees, successors-in-interest, all legal or beneficial owners of record, assigns, tenants, licensees and all subsequent owners of the Property or any part of the Property, or any other person and each and all homeowners associations or their equivalent within the Property, are subject to the obligations, conditions, terms and provisions of the Approval Ordinance and this Ordinance.

Upon satisfaction of the above conditions, and the filing of this Ordinance and the Plat of ROW Vacation with the CCCORD, the Lawn Avenue ROW Parcel legally described in Section 2 above shall be vacated and title to the vacated right-of-way shall be conveyed and pass to the legal owner of the adjacent property commonly known as 5600 South Wolf Road, Western Springs, Illinois (**P.I.N.: 18-18-200-038-000**). In consideration of the vacation of the right-of-way, the Applicant agrees to each of the easement reservations specifically listed above in this Section 3 and as shown on the attached Plat of ROW Vacation.



**SECTION 4. Filing Ordinance With the Cook County Clerk's Office, Recording Division.** The Village shall cause a certified copy of this Ordinance and the original of the attached Plat of ROW Vacation to be recorded with the CCCORD upon satisfaction of the conditions set forth in Section 3 above. The Village shall provide the Applicant with a CCCORD-filed stamped copy of this Ordinance and the Plat of ROW Vacation.

**SECTION 5. Repealer; Severability.** All Ordinances or parts of Ordinances in conflict herewith are, to the extent of such conflict, hereby repealed, and each section, paragraph, clause and provision of this Ordinance is separable, and if any provision is held unconstitutional or invalid for any reason, such decision shall not affect the remainder of this Ordinance, nor any part thereof, other than that part affected by such decision.

**SECTION 6. Termination of Ordinance for Failure of Developer to Acquire Title to the Property.** This validity of this Ordinance is subject to the Developer purchasing the Property from the Property Owner. In the event the Developer does not purchase the Property from the Property Owner, upon written notice delivered to the Village Manager of the termination of the real estate purchase contract entered into between the Property Owner and the Developer, this Ordinance shall automatically terminate without further action by the Corporate Authorities of the Village and shall be void and unenforceable. If the Developer does not purchase the Property, the Developer agrees to waive all claims, causes of action and damages of any kind that the Developer could file against the Village arising out of or related to the termination of this Ordinance. The Developer is required to provide written notice to the Village within five (5) calendar days of the termination of the real estate purchase contract.

**SECTION 7. Publication; Effective Date.** This Ordinance shall be in full force and effect from and after its passage and due publication in pamphlet form according to law.

**PASSED** by an affirmative vote of at least five (5) of six (6) of the Board of Trustees of the Village of Western Springs, Cook County, Illinois, at a Special Meeting thereof, held on the 10th day of February, 2025, and approved by me as President on the same day.

---

Heidi Rudolph, Village President

**ATTEST:**

---

Edward Tymick, Village Clerk

This Ordinance was published by me in pamphlet form on the 10th day of February, 2025.

---

Ed Tymick, Village Clerk

**Exhibit "1"**

**ORDINANCE NO. 25-\_\_\_\_\_**

**ACKNOWLEDGEMENT AND AGREEMENT TO COMPLY WITH THE  
OBLIGATIONS, CONDITIONS, TERMS AND PROVISIONS SET FORTH IN  
WESTERN SPRINGS ORDINANCE NO. 25-\_\_\_\_\_**

I, Paul McNaughton, Member of McNaughton Development, LLC, the contract purchaser of the above-described Property and the prospective acquirer of the Lawn Avenue ROW Parcel, have read and understand each of the above obligations, conditions, terms and provisions of this Right-of-Way Vacation Ordinance that are required of the McNaughton Development, LLC, including the obligations, conditions, terms and provisions set forth at Section 3 above, and have signed this ACKNOWLEDGMENT AND AGREEMENT, as an authorized corporate officer of McNaughton Development, LLC, to confirm that McNaughton Development, LLC shall be bound by such obligations, conditions, terms and provisions.

**McNaughton Development, LLC**

By: \_\_\_\_\_  
Paul McNaughton, Member

Date: \_\_\_\_\_, 2025.

**Exhibit "2"**

**Plat of ROW Vacation and Reservation of Stormwater Drainage Easement  
dated November \_\_, 2024 and prepared by DesignTek Engineering, Inc.**

(attached)

STATE OF ILLINOIS     )  
                                      ) SS  
COUNTY OF COOK        )

**CLERK'S CERTIFICATE**

I, Edward Tymick, Village Clerk of the Village of Western Springs, in the County of Cook and State of Illinois, certify that the attached document is a true and correct copy of that certain Ordinance now on file in my office, entitled:

**ORDINANCE NO. 25-\_\_\_\_\_**

**AN ORDINANCE APPROVING AND AUTHORIZING THE VACATION OF  
THE 66.00 FEET BY 225.00 FEET PORTION OF THE LAWN AVENUE RIGHT-OF-WAY  
ADJACENT TO AND WEST OF THE 5600 SOUTH WOLF ROAD PROPERTY LOCATED IN WESTERN  
SPRINGS, ILLINOIS AND LOT 5 AND LOT 6 OF MAXTED SUBDIVISION AND APPROVING A PLAT OF  
VACATION AND RESERVATION OF A STORMWATER DRAINAGE EASEMENT  
(Applicant: McNaughton Development, LLC)**

which Ordinance was passed by a roll call vote of the Board of Trustees of the Village of Western Springs at a Special Meeting on the 10th day of February, 2025, at which meeting a quorum was present, and approved by the President of the Village of Western Springs on the 10th day of February, 2025.

I further certify that the vote on the question of the passage of said Ordinance by the Board of Trustees of the Village of Western Springs was taken by Ayes and Nays and recorded in the minutes of the Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

**AYES:** \_\_\_\_\_

**NAYS:** \_\_\_\_\_

**ABSENT:** \_\_\_\_\_

I do further certify that the original Ordinance, of which the foregoing is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

**IN WITNESS WHEREOF**, I have hereunto set my hand and affixed the seal of the Village of Western Springs, this 10th day of February, 2025.

**[SEAL]**

\_\_\_\_\_  
Edward Tymick, Village Clerk



## Attachment 9.

RESOLUTION NO. 25- \_\_\_\_\_  
VOTE: \_\_\_\_\_  
AYES: \_\_\_\_\_  
NAYS: \_\_\_\_\_  
ABSENT: \_\_\_\_\_  
ABSTAIN: \_\_\_\_\_  
DATE: February 10, 2025.  
OTHER: None.

**A RESOLUTION AUTHORIZING THE APPROVAL  
AND EXECUTION OF REDEVELOPMENT AND  
MAINTENANCE AGREEMENT BY AND BETWEEN  
THE VILLAGE OF WESTERN SPRINGS, ILLINOIS  
AND MCNAUGHTON DEVELOPMENT, LLC FOR  
THE HERITAGE CROSSING RESIDENTIAL  
TOWNHOME DEVELOPMENT (5600 South Wolf  
Road, Western Springs, Illinois)**

**WHEREAS**, McNaughton Development, LLC, with its principal business office located at 11S220 Jackson Street, Burr Ridge, Illinois 60527 ("Applicant"), is the contract purchaser and prospective developer of the real property commonly known as 5600 South Wolf Road, Western Springs, Illinois ("Property"). Casey and Fran Gaik (collectively the "Property Owner") are the fee simple title owners of the Property and have submitted a written authorization to the Village of Western Springs ("Village") that allowed the Applicant to file with the Village a completed "General Information Application for Land Use and Development in the Village" form with supporting documents (the "Application") for the redevelopment of the Property as a twenty-nine (29) unit residential townhome development (the "Development"). The Property Owner has further executed a "Written Consent and Waiver" to allow McNaughton Development, LLC to enter into this Agreement, a copy of which is on file with the Community Development Department and is incorporated herein by reference and made a part hereof. The Property is legally described in **Exhibit "A"** attached hereto and made a part hereof; and

**WHEREAS**, in 2024, the Applicant submitted the Application to the Village requesting approval of a conditional use permit for a planned development, a map amendment, an amendment to the Village's Comprehensive Land Use Plan, a plat of consolidation, a plat of abrogation for storm sewer easement and public utility easement, a plat of right-of-way vacation relating to a sixty-six (66.00) foot by two hundred twenty-five (225.00) foot portion of Lawn Avenue (the "ROW Parcel"), which is utilized as a stormwater detention basin, certain development allowances, exceptions and variations, and other zoning relief as noted below in accordance with the applicable provisions of the Village's Development Control Ordinance ("DCO"), in order to construct the Development, which is commonly referred to as the Heritage Crossing Subdivision or the Heritage Crossing Townhome Development. A copy of the Application is on file with the Village's Community Development Department and is incorporated herein by reference; and

**WHEREAS**, the proposed Development consists of nine (9) townhome buildings with unit counts of either three-units or four-units. Each dwelling unit will have a balcony, a rear patio, and an attached, front-loaded garage with a driveway accessed by a private street through the Development. The Development will have off-street community parking spaces, possible on street-parking, sidewalks, stormwater detention basins, open space and streetlights. The Applicant proposes to extend private Heritage Court to the southeast through the Property to the Development's access driveway proposed along Wolf Road. The existing portion of Heritage Court, a private road, currently services only the Heritage Springs Townhome Development, connects to 55th Street to the north of the Property and is maintained by the Heritage Springs Homeowners Association. The Applicant's plans indicate that the new portion of Heritage Court will match the existing road's width. An automatic gate will separate the Development from the existing Heritage Springs Subdivision to the north. Vehicle access between the adjacent subdivisions will be controlled by a swing gate and gate access will only be granted to residents of both subdivisions with clicker-access and Village emergency service vehicles. The swing gate will be improved with an Opticom system that will give Village emergency service vehicles access similar to the

systems on streetlights. The Developer agrees to accept title to a sixty-six (66.00) foot by two hundred twenty-five (225.00) foot portion of Lawn Avenue (the "ROW Parcel") that will be vacated by the passage of a vacation ordinance and a plat of right-of-way vacation and retention of stormwater facility easement by the Village for purposes of incorporation into the Property and the Development so that the Developer can construct an expanded stormwater detention basin system as part of the construction of the Development; and

**WHEREAS**, based on the Application submitted by the Applicant, the Village conducted a public hearing relative to certain zoning relief requested by the Applicant in order to construct the Development, pursuant to prior notice, postings and newspaper publication as required by the applicable provisions of State law, including the Illinois Open Meetings Act, 5 ILCS 120/ and Division 11-13 of the Illinois Municipal Code (65 ILCS 5/ 11-13), and the applicable provisions of the DCO (the "Public Hearing"). The Public Hearing was conducted by the Village Plan Commission and commenced on August 13, 2024 and concluded November 18, 2024. The Village Plan Commission issued Recommendation No. PC-2024-02 on November 18, 2024 that favorably recommended approval of the zoning relief contained in the Application, including a Comprehensive Plan Amendment to the Long-Range Land Use Map, a Map Amendment (Rezoning of the Property from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence District), a Conditional Use for a Planned Development, and Exceptions / Variations to the Village Development Control Ordinance ("DCO"), and a Subdivision approval for the construction, operation, and maintenance of a Townhome Subdivision Development referred to as "Heritage Crossing", and a single stage Final Plan review and approval process (i.e., a combined Preliminary Plan / Final Plan approval) for the Development per Subsection 10-8-8(C) of the DCO, provided that the Applicant complies with the submittal and plan review requirements of Section 10-8-5(C) (Final Plan) of the DCO, subject to certain stated conditions of approval (the "Development Zoning Relief"). A copy of Plan Commission Recommendation No. 24-02 is incorporated herein by reference and is on file with the Community Development Department; and

**WHEREAS**, after completion of the required public hearing before the Village Plan Commission, on February 10, 2025 with the passage of **Ordinance No. 25-**, the President and Board of Trustees of the Village of Western Springs ("Corporate Authorities") granted approval the Development Zoning Relief; and

**WHEREAS**, as part of the conditions of approval of the Development contained in **Ordinance No. 25-**, it is necessary for the Village and the Developer to approve and enter into the attached "REDEVELOPMENT AND MAINTENANCE AGREEMENT BY AND BETWEEN THE VILLAGE OF WESTERN SPRINGS, ILLINOIS AND MCNAUGHTON DEVELOPMENT, LLC FOR THE HERITAGE CROSSING RESIDENTIAL TOWNHOME DEVELOPMENT (5600 South Wolf Road, Western Springs, Illinois)" (the "Redevelopment Agreement") to provide for the redevelopment of the Property, including the construction of certain public improvements on behalf of the Village as described in the Redevelopment Agreement. A copy of the Redevelopment Agreement is attached hereto as **Exhibit "B"** and made a part hereof; and

**WHEREAS**, at open public meetings held on January 9, 2025 and January 16, 2025, the Village's Planning and Zoning Committee ("Committee") reviewed and discussed the proposed Heritage Crossing Townhome Development and the related Redevelopment Agreement, and received input from the Village staff on the matter, and provided an opportunity for public input on the matter. At its January 16, 2025 meeting, the Committee recommended that the Corporate Authorities of Village **approve / not approve / consider** the Redevelopment Agreement; and

**WHEREAS**, at open public meetings held on January 13, 2025, January 27, 2025 and February 10, 2025, the Corporate Authorities of Village reviewed and discussed the Committee's recommendation regarding the proposed Heritage Crossing Townhome Development and the related Redevelopment Agreement, and received input from the Village staff on the matter and provided an opportunity for input from the public on the matter. At its February 10, 2025 meeting, the Corporate Authorities of the Village accepted the Committee's recommendation regarding approval of the Redevelopment Agreement; and

**WHEREAS**, the Corporate Authorities of the Village of Western Springs are authorized, under the applicable provisions of the Illinois Municipal Code (65 ILCS 5/), and the intergovernmental cooperation powers set forth at Article VII (Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) and Section 10 (Intergovernmental Cooperation) of the Constitution of the State of Illinois of 1970, to approve and enter into the Redevelopment Agreement, and further find that it is protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners, local businesses and the public to approve and enter into the Redevelopment Agreement.

**BE IT ORDAINED BY THE VILLAGE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:**

**SECTION 1: Incorporation.** Each Whereas paragraph above is incorporated by reference into this Section 1 and made a part hereof as material and operative provisions of this Resolution.

**SECTION 2: Approval and Execution of Redevelopment Agreement and Other Related Documents.** The Village President and Board of Trustees of the Village of Western Springs authorize the approval and execution of the attached Redevelopment Agreement, substantially in the form attached hereto as **Exhibit "B"**, which may contain certain non-substantive and non-financial modifications that are approved by the Village Attorney, and all other instruments and documents that are necessary to fulfill the Village's obligations under the Redevelopment Agreement.

**SECTION 3: Delivery of Redevelopment Agreement and Other Documents.** After approval and execution of this Resolution and the Redevelopment Agreement by the Village President and Village Clerk, or their designees, the Village Clerk's Office shall arrange for the delivery of certified copies of this Resolution and executed versions of the attached Redevelopment Agreement to the Church and the Developer for record retention purposes.

**SECTION 4. Termination of Resolution for Failure of Developer to Acquire Title to the Property.** This validity of this Resolution is subject to the Developer purchasing the Property from the Property Owner. In the event the Developer does not purchase the Property from the Property Owner, upon written notice delivered to the Village Manager of the termination of the real estate purchase contract entered into between the Property Owner and the Developer, this Resolution shall automatically terminate without further action by the Corporate Authorities of the Village and shall be void and unenforceable. If the Developer does not purchase the Property, the Developer agrees to waive all claims, causes of action and damages of any kind that the Developer could file against the Village arising out of or related to the termination of this Resolution based on the Developer not purchasing the Property. The Developer is required to provide written notice to the Village within five (5) calendar days of the termination of the real estate purchase contract.

**SECTION 5: Effective Date.** This Resolution shall be in full force and effect from and after its passage and approval as provided by State law.

**PASSED** by the Village President and Board of Trustees of the Village of Western Springs, Cook County, Illinois, on a roll call vote at a Special Meeting thereof, held on the 10th day of February, 2025, and approved by me as Village President, and attested by the Village Clerk on the same day.

\_\_\_\_\_  
Heidi Rudolph, Village President

**ATTEST:**

\_\_\_\_\_  
Edward Tymick, Village Clerk

**Exhibit "A"**

**Legal Description for 5600 South Wolf Road, Western Springs, Illinois.**

PARCEL 1: THE WEST  $\frac{1}{2}$  OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) OF THE NORTH EAST  $\frac{1}{4}$  OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 2: LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTH EAST  $\frac{1}{4}$  OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 IN COOK COUNTY, ILLINOIS.

**Legal Description for the Lawn Avenue ROW Parcel:**

THAT PART OF THE 66 FEET WIDE LAWN AVENUE, LYING SOUTH OF THE NORTH LINE OF WESTERN SPRINGS TOWNHOMES, RECORDED MARCH 29, 1999, AS DOCUMENT NO. 99297584, LYING NORTH OF THE SOUTH LINE OF RIDGEWOOD UNIT 12, RECORDED OCTOBER 6, 1965, AS DOCUMENT NO. 19610359, LYING WEST OF THE EAST LINE OF THE WEST  $\frac{1}{2}$  OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION, RECORDED NOVEMBER 13, 1948, AS DOCUMENT NO. 14442019, AND LYING EAST OF THE WEST LINE OF RIDGEWOOD UNIT NO. 11, RECORDED APRIL 3, 1964, AS DOCUMENT NO. 19089916, IN THE EAST HALF OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS.

PINS: 18-18-200-017-0000  
18-18-200-038-0000  
18-18-200-001-0000 (Lawn Avenue ROW Parcel)



**Exhibit "B"**

**REDEVELOPMENT AND MAINTENANCE AGREEMENT BY AND BETWEEN  
THE VILLAGE OF WESTERN SPRINGS, ILLINOIS AND MCNAUGHTON DEVELOPMENT, LLC  
FOR THE HERITAGE CROSSING RESIDENTIAL TOWNHOME DEVELOPMENT  
(5600 South Wolf Road, Western Springs, Illinois)**

(attached)

Draft

After Recording Return To:  
Michael T. Jurusik  
Klein, Thorpe and Jenkins, Ltd.  
900 Oakmont Lane, Suite 301  
Westmont, Illinois 60559

**Common Address:**

5600 South Wolf Road  
Western Springs, Illinois 60558

This space for Recorder of Deeds Office use only

**Property Identification Numbers:**

18-18-200-017-0000  
18-18-200-038-0000  
18-18-200-001-0000 (Lawn Avenue ROW Parcel)

**REDEVELOPMENT AND MAINTENANCE AGREEMENT BY AND BETWEEN  
THE VILLAGE OF WESTERN SPRINGS, ILLINOIS AND MCNAUGHTON DEVELOPMENT, LLC  
FOR THE HERITAGE CROSSING RESIDENTIAL TOWNHOME DEVELOPMENT  
(5600 South Wolf Road, Western Springs, Illinois)**

**THIS REDEVELOPMENT AND MAINTENANCE AGREEMENT ("Agreement")** is dated the \_\_\_\_ day of \_\_\_\_\_, 2025 ("**Effective Date**"), and is entered into by and between the **VILLAGE OF WESTERN SPRINGS**, an Illinois municipal corporation ("**Village**") and **MCNAUGHTON DEVELOPMENT, LLC**, an Illinois limited liability company, with its principal corporate office located at 11S220 Jackson Street, Suite #101, Burr Ridge, Illinois ("**Applicant**" or "**Developer**"), by and through their respective duly authorized agents and/or representatives. The Village and the Developer are at times referred to below individually as a "**Party**" and collectively as the "**Parties**".

**IN CONSIDERATION OF** the mutual covenants and promises as contained in this Agreement and other good and valuable consideration, the receipt and sufficiency of which are acknowledged, the Parties agree as follows:

**SECTION 1. RECITALS.**

I. The Village, a non-home rule municipality, is a duly constituted and existing municipality within the meaning of Section 1 (Municipalities And Units Of Local Government) and Section 7 (Counties and Municipalities Other Than Home Rule Units) of Article VII (Local Government) of the Constitution of the State of Illinois of 1970.

J. The Village is authorized, under the provisions of Section 10 (Intergovernmental Cooperation) of Article VII (Local Government) of the State of Illinois Constitution of 1970, to contract and otherwise associate with individuals, associations and corporations in any manner not prohibited by law. The Village has the statutory authority to promote the health, safety and welfare of the Village and its residents, to encourage private development in order to enhance the local tax base, and to enter into contractual agreements with developers and redevelopers to achieve these objectives.

K. As of May 23, 2024, the Developer is the contract purchaser and prospective developer of the real property commonly known as 5600 South Wolf Road, Western Springs, Illinois ("Property") and has filed a General Information Application for Land Use and Development in the Village with supporting documents (the "Application") for the rezoning and redevelopment of the 5600 South Wolf Road Property. Casey and Fran Gaik (the "Property Owner") are the fee simple title owners of the Property and have submitted a written authorization to the Village that allowed the Applicant to file the Application for the redevelopment of the Property as a twenty-nine (29) unit residential townhome development as described in more detail below (the "Development"). The Property Owner has further executed a "Written Consent and Waiver" to allow McNaughton Development, LLC to enter into this Agreement, a copy of which is attached hereto as **Exhibit "I"** and made a part hereof. The Property is approximately 2.755 acres, which consists of 2.414 acres of 5600 Wolf Road and the adjacent Lawn Avenue right-of-way. The Property Tax Index Numbers for the Property are identified as follows: (1) PIN: 18-18-200-017-0000, (2) PIN: 18-18-200-038-0000, and (3) PIN: 18-18-200-001-0000 (collectively the "**Property PINs**").

D. The Developer proposes to redevelop the Property with twenty-nine (29) unit residential townhomes consisting of nine (9) townhome buildings with varying unit counts of either three-units or four-units. Each dwelling unit will have a balcony, a rear patio, and an attached, front-loaded garage with driveways accessed by a private street through the Development. The Development will have off-street community parking spaces, on street-parking along the west and south sides of the proposed Heritage Court, sidewalks, an expanded stormwater detention basin system and stormwater management facilities and other private and public infrastructure, open space areas, landscaped areas and private streetlights. The Applicant proposes to extend private Heritage Court to the southeast through the Property to the Development's access driveway proposed along Wolf Road. The existing portion of Heritage Court, a private road, currently services only the Heritage Springs Townhome Development, connects to 55th Street to the north of the Property and is maintained by the Heritage Springs Homeowners Association. An automatic gate will separate the Development from the existing Heritage Springs Subdivision to the north. Vehicle access between the adjacent subdivisions will be controlled by a swing gate, and gate access will only be granted to residents of both subdivisions with clicker-access and Village emergency service vehicles. The swing gate will be improved with an Opticom system that will give Village emergency service vehicles access similar to the systems on streetlights. The Developer agrees to accept title to a sixty-six (66.00) foot by two hundred twenty-five (225.00) foot portion of Lawn Avenue (the "Lawn Avenue ROW Parcel") that will be vacated by the passage of a vacation ordinance and a plat of right-of-way vacation and retention of stormwater facility easement by the Village for purposes of incorporation into the Property and the Development so that the Developer can construct an expanded stormwater detention basin system as part of the construction of the Development. A copy of the Site Plan for the Development revised as of **November 5, 2024** is attached hereto as **Exhibit "A"** and made a part hereof.

E. The Developer agrees to apply for and use commercially reasonable efforts to secure all required zoning and development permit approvals from the Village and all other permits and approvals from other governmental oversight agencies in order to secure final approvals that allow for the construction and operation of the Development in conformance with the Village-approved Final Development Plans, as amended by any Village-approved zoning relief and development entitlements and any approval conditions and requirements imposed by other governmental oversight agencies. The Developer agrees to actively participate in good faith in all required zoning hearing proceedings and development permit processes and all other permits and approvals from other governmental oversight agencies in order to secure final approvals that allow for the construction and operation of the Development.

F. Based on the Application submitted by the Applicant, the Village conducted a public hearing relative to certain zoning relief requested by the Applicant in order to construct the Development. The public hearing was conducted by the Village Plan Commission and commenced on August 13, 2024 and concluded November 18, 2024. The Village Plan Commission issued Recommendation No. PC-2024-02 on November 18, 2024 that favorably recommended approval of the zoning relief contained in the Application, including a Comprehensive Plan Amendment to the Long-Range Land Use Map, a Map Amendment (Rezoning of the Property from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence District), a Conditional Use for a Planned Development, and Exceptions / Variations to the Village Development Control Ordinance (“DCO”), and a Subdivision approval for the construction, operation and maintenance of a Townhome Subdivision Development referred to as “Heritage Crossing”, subject to certain stated conditions of approval (the “Development Zoning Relief”).

G. On February 10, 2025, the Corporate Authorities of the Village approved Ordinance No. 25-\_\_\_\_\_ that granted the Development Zoning Relief and a set of Final Development Plans, subject to final Village Engineer comments and Community Development Department comments and subject to final plan review comments at the time of application for a site development permit or a building permit, for purposes of encouraging the Developer to proceed with the necessary land acquisition, project financing, and other zoning, development or governmental permitting entitlement activities relative to securing final approvals to construct the Development (the “Approval Ordinance”). On February 10, 2025, the Corporate Authorities of the Village also approved Ordinance No. 25-\_\_\_\_\_, which vacated the Lawn Avenue ROW Parcel and approved a plat of right-of-way vacation and retention of stormwater facility easement for purposes of incorporating the Lawn Avenue ROW Parcel into the Property and the Development so that the Developer can construct an expanded stormwater detention basin system as part of the Development. The Corporate Authorities of the Village will not unreasonably deny any requested zoning relief or permits that are consistent with the terms of this Agreement after completion of the required public hearing process or the permitting process.

H. To receive a site development permit or a construction permit for the Development, the Developer is required to submit and obtain the approval of the Corporate Authorities of the Village of a set of Final Development Plans, which shall incorporate and account for the Village-approved zoning relief after the required public hearing(s) are completed, including consideration of any recommendation issued by the advisory Village Plan Commission and public input, the Village plan review comments, the Village Engineer review comments and the Community Development Department review comments, and all required amendments issued by any other governmental authority with jurisdiction over the Development and proof of approval of all necessary development or governmental permits issued by any other governmental authority with jurisdiction over the Development.

I. The Developer intends that all roads, driveways, parking spaces, landscaping, stormwater management facilities and other infrastructure and improvements located within the Property will be privately owned and privately maintained in perpetuity, except only Public Infrastructure as defined in Section 2 of this Agreement.

J. The Developer intends to construct the Development continuously to completion once work on the Development commences.

K. The foregoing Recitals of this Section 1 are material terms and provisions and are incorporated herein and made a part of this Agreement.

## **SECTION 2. DEFINITIONS.**

Whenever used in this Agreement, the following terms have the following meanings unless a different meaning is required by the context:

I. "Approval Ordinance": Western Springs Ordinance No. 25-\_\_\_\_\_ approving a Conditional Use Permit for Planned Development for the Construction and Operation of the Development with Conditions. See attached **Exhibit "B"**.

J. "Approved Plans": See Subsection 4.A. of this Agreement.

K. "Board of Trustees" or "Corporate Authorities": The President and Trustees of the Village of Western Springs.

L. "Certificate of Completion": means a certificate, issued by the Village, that confirms (a) the Development has been completed in substantial conformance with the Approval Ordinance and the Village-approved Final Development Plans; or (b) substantial completion of any significant milestone component of the Development (e.g., completion of the Infrastructure or the Stormwater Conveyance System or of a townhome building), as applicable.

M. "Change in Law": Means the occurrence, after the Effective Date, of an event described below in this definition, provided such event materially changes the ability of the Party relying thereon to carry out its obligations under this Agreement and such event is not caused by the Party relying thereon. Change in Law means any of the following: (1) the enactment, adoption, promulgation or modification of any federal, State or local law, ordinance, code, rule or regulation (other than by the Village or with respect to those made by the Village, only if they violate the terms of this Agreement); (2) the order or judgment of any federal or State court, administrative agency or other governmental body (other than the Village); or (3) the adoption, promulgation, modification or interpretation in writing of a written guideline or policy statement by a governmental agency (other than the Village, or, with respect to those made by the Village, only if they violate the terms of this Agreement). Change in Law, for purposes of this Agreement, shall also include the imposition of any conditions on, or delays in, the issuance or renewal of any governmental license, approval or permit (or the suspension, termination, interruption, revocation, modification, denial or failure of issuance or renewal thereof) necessary for the undertaking of the actions to be performed under this Agreement (except any imposition of any conditions on, or delays in, any such issuance or renewal by the Village, except as provided herein).

N. "Development Director": The Village's Community Development Director.

O. "Developer": Includes McNaughton Development, LLC and its transferees, successors-in-interest, all legal or beneficial owners of record, assigns, tenants, licensees and all subsequent owners of the Property or any part of the Property, or any other person and each and all homeowners associations or their equivalent within the Property.

P. "Effective Date": The date that the last signatory signs this Agreement, which shall be written in the first paragraph of this Agreement.

Q. "Force Majeure": See definition of Uncontrollable Circumstance and Subsection 17.N. of this Agreement.



- R. "IDOT": The Illinois Department of Transportation.
- S. "IEPA": The Illinois Environmental Protection Agency.
- T. "Infrastructure": All utilities including without limitation drinking water, sanitary sewer, storm sewer and detention basins, electric, gas, and telecommunication; stormwater system elements including without limitation detention facilities, streets, drive aisles, driveways, drive aprons, curbs, gutters, street lights, and parking spaces; sidewalks, other pedestrian ways, pedestrian amenities, pedestrian lighting, way-finding signs, and trees and other landscaping; and all related improvements for the Development, whether private or public and whether within the Property or within adjacent rights-of-way and property.
- U. "Infrastructure Cost Estimate": See Subsection 4.B. of this Agreement.
- V. "LOC": An irrevocable letter of credit issued by a lending institution licensed to do business in the State of Illinois, on a form approved by the Village Attorney.
- W. "MWRD": The Metropolitan Water Reclamation District of Greater Chicago.
- X. "Private Infrastructure": All Infrastructure other than Public Infrastructure, including the Stormwater Conveyance System.
- Y. "Property": The real property legally described and depicted in **Exhibit "C"** attached to this Agreement.
- Z. "Public Infrastructure": Infrastructure that is being dedicated to the Village or to other governmental agencies, including without limitation drinking water mains (but not water service lines to buildings), water hydrants, sanitary sewers and other elements determined by the Village. In the event of any ambiguity, the Village will determine whether an Infrastructure element is public or private.
- AA. "Director of Engineering Department": The Village's Village Engineer.
- BB. "Reimbursable Costs": See Subsection 8. of this Agreement.
- CC. "Requirements of Law": All applicable federal and State of Illinois laws and statutes, the Zoning Code, the Village Code, and the Village's building, stormwater management, and other codes and regulations. The **Title 9 Building Regulations of the Village Code** will apply to architectural and structural plans and specifications for all buildings within the Development unless preempted by State of Illinois or federal law or the Village designates, in writing, other applicable standards. Otherwise, Village-adopted model codes will apply and State of Illinois building codes will apply in the absence of an applicable Village-adopted model code. Accessibility standards of the Americans with Disabilities Act (42 U.S. Code § 12101) will apply to all common areas. The **Title 9 Building Regulations of the Village Code** reference to 2009 ICC Accessible and Usable Buildings and Facilities (ANSI) (2003 Safe Harbor of FHA) in conjunction with the standards of the Illinois Accessibility Code will be followed for all residential units.
- DD. "Site Work": Grading land, excavating soil and debris, environmental remediation, installation of underground utilities, and similar activities.

EE. “Stormwater Conveyance System”: All elements of Infrastructure that relate to the management, detention, storage, and conveyance of stormwater, which shall be privately owned and maintained by the Developer and then by the homeowners association.

FF. “Uncontrollable Circumstance”: An event that is beyond the reasonable control of and occurs without the fault of the involved party, including without limitation to the following events: (i) an insurrection, riot, civil disturbance, sabotage act of a public enemy, explosion, nuclear incident, war, or naval blockade; (ii) an epidemic, pandemic, hurricane, tornado, landslide, earthquake, lightning, fire windstorm, or other casualty or act of God, or persistent bad weather that impedes progress; (iii) a government condemnation or taking; (iv) a strike, lockout, or other labor dispute other than those caused by the unlawful acts of the Developer; and (v) a Change in Law. Uncontrollable Circumstance does not include any of the following events or conditions: Economic hardship, impracticability of performance, commercial, economic or market conditions, or a failure of performance by a contractor (except as caused by an event that is an Uncontrollable Circumstance as to that contractor). See Subsection 17.N. regarding Force Majeure.

GG. “Village Code”: The Western Springs Code of Ordinances.

HH. “Village Manager”: The Western Springs Village Manager, or their designee.

II. “Zoning Code” or “DCO”: The Western Springs Development Control Ordinance.

### **SECTION 3. PROPERTY ACQUISITION; TERMINATION.**

I. **Property Acquisition.** The Developer has entered into a real estate purchase contract with the Property Owner, and, subject to the terms and conditions of this Agreement, intends to acquire fee simple title to the Property on or before **February \_\_\_\_\_, 2025** (the “**Acquisition Deadline Date**”). The closing date at which the Developer obtains fee simple title to the Property is referred to as the “**Acquisition Date**”. If the Developer does not acquire fee simple title to the Property by 5:00 p.m. CST on the Acquisition Deadline Date, the Developer shall send written notice to the Village within five (5) calendar days after of the expiration of the Acquisition Deadline Date advising that the acquisition of the Property did not occur and providing a status on the acquisition consisting of one of these responses: (i) the Property Owner or the Developer has terminated the real estate purchase contract; or (ii) the Property Owner and the Developer have mutually agreed to terminate the real estate purchase contract; or (iii) the Developer and the Property Owner have extended the Acquisition Date and are actively working on matters to complete the acquisition of the Property by the extended Acquisition Date. If the Property Owner or the Developer terminates the real estate purchase contract or the Property Owner and the Developer have mutually agreed to terminate the real estate purchase contract, this Agreement shall automatically terminate without any further action being taken by either Party, and without any liability to either Party. In the event the Developer does not purchase the Property from the Property Owner, this Agreement shall automatically terminate without further action by the Corporate Authorities of the Village and shall be void and unenforceable, and the Developer agrees to waive all claims, causes of action and damages of any kind that the Developer could file against the Village arising out of or related to the termination of this Agreement based on the Developer not purchasing the Property. If the Developer and the Property Owner extend the Acquisition Date and actively work on matters to complete the acquisition of the Property by the extended Acquisition Date, this Agreement shall remain in effect until either the Property Owner or the Developer terminates the real estate purchase contract or the Property Owner and the Developer mutually agree to terminate the real estate purchase contract, subject to the next

sentence. This Agreement shall automatically terminate without any further action being taken by either Party, and without any liability to either Party, if the Developer does not acquire the Property within twelve (12) months of the approval date of the Approval Ordinance, based on the DCO's automatic expiration provision that applies to Village-approved conditional use permits (See, Section 10-3-14K (Condition Uses; Revocation)) of the DCO. Notwithstanding any other provision or term in this Agreement, each Party expressly agrees that the cure remedy under **Section 16 (Default; Cure)** of this Agreement shall not apply to the automatic expiration provision that applies to Village-approved conditional use permits. The Corporate Authorities of the Village, in their sole discretion, may pass an ordinance for this Development that extends the 12-month automatic expiration provision that applies to Village-approved conditional use permits so that the Developer has additional time to acquire the Property. The Developer agrees to waive any claims or causes of action for damages of any kind that it could file against the Village for not passing an ordinance that extends the 12-month automatic expiration provision that applies to Village-approved conditional use permits so that the Developer has additional time to acquire the Property. The Developer also agrees to indemnify, defend and hold harmless the Village and its appointed and elected officials, employees, engineers, attorneys, agents and representatives from any claims or causes of action or damages of any kind that could be filed against the Village by the Property Owner or any person for not passing an ordinance that extends the 12-month automatic expiration provision that applies to Village-approved conditional use permits so that the Developer has additional time to acquire the Property.

B. **Lawn Avenue Right-of-Way Vacation.** The Developer agrees to accept title to the Lawn Avenue ROW Parcel that will be vacated by the passage of a vacation ordinance and a plat of right-of-way vacation and retention of stormwater facility easement by the Village for purposes of incorporation into the Property and the Development so that the Developer can construct an expanded stormwater detention basin system as part of the construction of the Development.

#### **SECTION 4. DEVELOPMENT PLANS.**

A. **Development Plans.** Prior to the issuance by the Village of any permit for construction within the Property, the Developer must provide to the Village the following detailed Final Development Plans for the Development, all of which must be substantially consistent with **Exhibit "D" to the Approval Ordinance** and shall be reviewed by the Community Development Director, the Director of Fire and Emergency Medical Services and the Director of Law Enforcement Services, the Village Engineer, the Village Attorney, and other Village consultants (collectively, the "Village Staff") as part of the Village development plan review process, and shall be returned to the Developer for updating and corrections to comply with the Village Staff's development plan review comments and requirements (the "Approved Plans"). The final version of the Approved Plans shall be stamped by a licensed engineer or signed by a licensed architect. The Developer may re-submit updated Final Development Plans to address the Village Staff's plan review comments and requirements. If the Developer objects to any of the Village Staff's development plan review comments and requirements, the Developer may file a written request with the Village Board seeking approval of a modification(s) to the Village Staff's development plan review comments and requirements, which may or may not be granted by the Village Board, in its sole discretion, at an open public meeting. The Approved Plans, at a minimum, shall consist of final versions of:

- (i) Detailed engineering plans, including without limitation civil, structural, architectural, lighting, construction staging, mechanicals screening, on-site and off-site storm water drainage plans, and Infrastructure plans.
- (ii) Detailed, dimensioned site plans.
- (iii) Detailed, dimensioned landscaping plans.
- (iv) Building Elevations and Village-approved Exterior Building Materials List (color, material type, etc.).
- (v) Signage plan for buildings, traffic, parking and other informational signs within the Development.
- (vi) Stack wall for the townhouses. Prior to issuance by the Village of any permit for construction other than Site Work, the Developer must assemble a representative “stack” wall on the Property with the Village-approved masonry, wood, and other construction materials to be used on the townhouse buildings. The stack wall must precisely show the materials and techniques to be used for the walls of the townhouses. The stack wall will be reviewed by the Community Development Director and will be approved by the Community Development Director only if it conforms to the Approved Plans.
- (vii) Such other plans and documents reasonably required by the Village Staff for the construction of the Development by the Developer.

B. **Infrastructure Cost Estimate.** The Developer must prepare an itemized estimate of the cost of construction of each component of the Infrastructure (the “Infrastructure Cost Estimate”) and submit the estimate to the Village prior to the issuance by the Village of any permit for construction. The Village Engineer will review, revise as necessary, and approve the Infrastructure Cost Estimate.

## **SECTION 5. DEVELOPMENT AND USE OF THE PROPERTY.**

### **I. Commencement and Completion of Construction.**

(i) The Developer intends to commence site improvement or construction work on the Development not more than one hundred eighty (180) calendar days after the Village Board’s approval of the Approval Ordinance (the “**Anticipated Commencement Date**”), subject only to Force Majeure.

(ii) The date the Developer receives a Village site development permit or a building permit authorizing work to proceed on the Development, or any part thereof, shall be the “**Commencement Date**”.

(iii) Construction of the Development shall substantially comply with the provisions of the Approval Ordinance and each of the conditions of approval set forth in the Approval Ordinance.

(iv) Construction of the Development shall substantially comply with, and the Development shall be substantially completed in accordance with, the timeframes outlined on Developer’s “Construction Schedule”, attached hereto as **Exhibit “E”** and incorporated herein (the

“Construction Schedule”), but not later than twenty-four (24) months after the Commencement Date, subject to Force Majeure, with the actual date of Substantial Completion being the **“Substantial Completion Date”**. “Substantial Completion” or “Substantially Completed” shall mean that the residential component of the Development is eligible to receive a certificate of occupancy, and the public improvements are completed to the Village’s dedication standard, to the extent applicable to such public improvements.

B. **Substantial Compliance with Approved Plans.** Except for minor alterations due to field conditions approved by the Village Engineer or Development Director, the construction of the Development shall substantially conform with: (i) the Approval Ordinance, (ii) this Agreement, (iii) the Approved Plans, and (iv) the Requirements of Law; and shall not materially impact the exterior materials and/or exterior architectural designs included in the Approved Plans, were not rejected by the Village during the design phase of the Development, and are necessary for the Developer to complete the Development, or any portion thereof, within the applicable portion of the Development Construction Schedule. Any type of approved plan changes must comply with Section 10-8 of the Village Code.

C. **Plat of Subdivision; Easements for Cross Access.** Prior to the issuance of any permit for construction, the Developer must prepare and file the final Plat of Heritage Crossing Subdivision, in a form satisfactory to the Village, granting cross access easements by the general public and the property owners of the Heritage Springs Subdivision and the Heritage Crossing Subdivision onto and across the pedestrian ways, roads (Heritage Court), and other paths within the Property.

D. **Development – Prior to Property Acquisition or Issuance of Permits.** No construction, improvement or development of any kind by the Developer shall be permitted on any portion of the Property unless and until: (a) the Developer acquires title to the Property; and (b) the Developer has been issued either a Village site development permit or a Village building permit. Further, no occupancy of the Development may occur prior to the issuance of a Village Certificate of Completion for the Infrastructure and a Village certificate of occupancy for the portion of the Development that occupancy is sought (i.e., individual certificates of occupancy shall be issued for individual townhome units only after the Village issues a Certificate of Completion for the individual townhome building).

E. **Development – Failure to Complete.** In the event that the Developer fails to complete the Development on or prior to the Substantial Completion Date, or fails to comply with the Construction Schedule (in either case, subject to Force Majeure), and such failure continues for more than thirty (30) calendar days after notice thereof by the Village to the Developer, then:

- (i) The Village, by delivery of written notice to the Developer, may require the Developer to submit, within fifteen (15) calendar days, a plan pursuant to which the Developer will: (i) avoid falling further behind the dates set forth in the Construction Schedule; and (ii) complete construction of the Development in accordance with the Construction Schedule, as modified to reflect the “catch-up” plan (a **“Catch-Up Plan”**), for approval by the Village Manager, which approval shall not be withheld unreasonably provided that the Catch-Up Plan has been approved by the Developer’s construction lender (the **“Lender”**). At such time as the Village has approved a Catch-Up Plan, the Developer shall use commercially reasonable efforts to implement, and diligently pursue and complete, the activities of the Catch-Up Plan.



- (ii) If the Developer fails to timely: (i) submit a Catch-Up Plan to the Village that has been approved by the Lender, or (ii) implement or complete the Catch-Up Plan; which failure continues for more than thirty (30) calendar days, then the Developer shall be deemed to be in default under the Catch-Up Plan and the Village shall have the right, but not the obligation, to hire a replacement contractor to complete the unfinished Public Infrastructure and Stormwater Conveyance System ("Default Work") and shall have the right to use the Developer Security (as defined below) to pay the contractor to complete such Default Work. Upon such a default by the Developer, subject to and in accordance with the terms and conditions of any construction financing agreement, the Lender will have the right, but not the obligation, to exercise and perform the Developer's rights and obligations under this Agreement, including the hiring of a replacement contractor to complete the Default Work and/or to complete the Development. If the Village elects to complete the Default Work, then the Developer shall be obligated to pay, or to reimburse the Village for, all costs and expenses of completing such work that are in excess of the proceeds of the construction financing agreement and the Developer's Security.
- (iii) The Developer shall be responsible for all costs and expenses to prepare and implement and complete the Catch-Up Plan.
- (iv) The rights and remedies set forth in this Subsection 5.E shall be the sole remedies available to the Village for the failures specified in this Subsection; provided that the Village shall have: (i) the remedy of specific performance to enforce the obligations of Developer pursuant to the terms and conditions of this Subsection; and (ii) the right to recover from the Developer all costs and expenses, including reasonable attorney fees, incurred by the Village in connection with exercising its rights and remedies under this Subsection, together with interest at the rate of eight percent (8%) per annum on any Village funds expended prior to reimbursement from the Developer Security.

F. **Dedication and Maintenance of Land.** The Developer shall comply with the dedication of land and maintenance of landscaping obligations as set forth in the Conditions of the Approval Ordinance. The Developer shall use commercially reasonable efforts to convey, transfer or dedicate any portion of Property to Cook County or any other necessary governmental agency that is required to provide for the street access (ingress and egress) point onto Wolf Road for the Development.

G. **Development Covenants, Conditions, and Restrictions.** Prior to the issuance by the Village of any building permit other than a permit for Site Work, the Developer must present to the Village for review and comment and approval a set of Covenants, Conditions, and Restrictions ("CC&Rs") for the Development. The CC&Rs may not be amended without the prior express written consent of the Village at any time or in any manner that alters or interferes with any easement, grant, right, or remedy granted or reserved to the Village, including without limitation the right of the Village: (i) to cure any violation of the CC&Rs, this Agreement, the Approval Ordinance, or any other Requirements of Law, (ii) to perform necessary maintenance and repairs, (iii) to be reimbursed for all of the Village's costs and expenses related to maintenance and repairs, and (iv) to have a lien against the Property for unpaid costs and expenses. After Village approval, the CC&Rs shall be filed with the Cook County Clerk's Office, Recording Division ("CCCORDER") by the Developer, at its cost.

H. **Maintenance of and Damage to Public Property and Off-Site Improvements.** During construction of the Development, the Developer must: (i) maintain all streets, sidewalks, and other public

property adjacent to the Property in a good and clean condition and free of hazards at all times, (ii) promptly clean all mud, dirt, or debris deposited on any street, sidewalk, or other public property in or adjacent to the Property by the Developer or any agent of or contractor hired by, or on behalf of, the Developer, and (iii) repair or replace all damage to any private or public utilities or other private or public improvements of any kind that are located on-site or off-site relative to the Property that may be caused by the activities of, or on behalf of, the Developer or any employees, contractors, subcontractors or agents hired by, or on behalf of, the Developer. The Developer agrees to promptly repair or replace or restore such damaged improvements with like-kind and like-quality materials. If, within twenty-four (24) hours after the Village gives the Developer notice to clean mud, dirt, or debris or to repair damage in compliance with this Subsection, the Developer neglects or fails to clean or repair or to undertake with due diligence to clean or repair the affected public property, then the Village may clean or repair the affected property, either with its own forces or with contracted forces, and recover from the Developer the greater of \$750.00 or the sum equal to the total cost incurred by the Village including without limitation administrative costs. The

I. **Environmental Conditions.** The Developer must remain in compliance with all applicable federal and State of Illinois environmental laws and regulations while constructing the Development.

J. **Building Certification.** RESERVED.

K. **Estimated Development Costs and Construction Budget.** Based on the Approved Plans, the “Estimated Development Costs” to develop, construct and complete the Development is \$ \_\_,000,000.00. The Developer shall deliver to the Village a letter from a licensed architect, which may be the Developer’s or its affiliate’s in-house architect, certifying to the Village that, to such architect’s knowledge following reasonable investigation and inquiry, the Estimated Development Costs will not be less than \$ \_\_,000,000.00.

L. **Development Financing.** Prior to the approval of this Agreement, the Developer shall provide the Village Manager with a confidential letter issued by the Developer that lists the tiered funding sources to be used to complete the Development and includes marked-confidential copies of supporting financing documents consisting of secured, fully executed construction financing term sheets, loan obligations and written proof of Developer equity contributions and investor equity contributions acceptable to the Village and sufficient to demonstrate that adequate funds are available to Substantially Complete the Development, including a financing commitment letter or a construction loan commitment letter issued by a bank or other financial lender for the Development. A copy of the financing commitment letter or a construction loan commitment letter issued by a bank or other financial lender for the Development, in a form and content that is reasonably satisfactory to the Village, shall be attached hereto as **Group Exhibit “F”** and made a part hereof. The Developer’s financing commitments shall be sufficient to cover the equity and debt financing, including the Developer Security, to Substantially Complete the Development. In the event the Developer is unable to provide the Village with written evidence of the Development financing sufficient to Substantially Complete the Development within the time frame set forth in this Agreement, the Village may, exercising its sole discretion, terminate this Agreement and all of the Parties’ rights, duties and obligations under this Agreement shall terminate without any liability being imposed on the Village or the Developer.

## **SECTION 6. CONSTRUCTION AND MAINTENANCE OF INFRASTRUCTURE.**

**A. Developer's Duty to Construct Infrastructure.** The Developer, at its cost, must construct and install all of the Infrastructure.

J. **Standards Applicable to Infrastructure.** The following standards apply to the construction of the Infrastructure.

- (i) **General Standards.** All Infrastructure must be constructed in compliance with the standards in this Agreement and all Requirements of Law. All work performed in the construction of the Infrastructure must be conducted in a good and workmanlike manner. All materials used for construction of the Infrastructure must be new and of first-rate quality.
- (ii) **Special Standards.** Construction of the Infrastructure must conform to the applicable standards of the MWRD, IDOT, Cook County and the IEPA.
- (iii) **Prosecution of the Work.** Once Site Work has begun, the Developer and all of its contractors must use commercially reasonable efforts to prosecute work on the Infrastructure in a diligent manner until the work is properly completed.
- (iv) **Inspection, Engineering, Testing Services.** The Developer must provide, at its cost, all inspection, engineering, and testing for construction of the Infrastructure, including without limitation: (a) on-site construction supervision services, (b) periodic inspections of construction of the Public Infrastructure conducted by a professional engineer, and (c) third-party materials sampling and testing services. The Developer must promptly provide the Village with the names of the project manager and project engineer and telephone numbers at which the project manager and project engineer can be reached at all times.
- (v) **Village Inspections and Approvals.** Village representatives have the right and authority, and the permission of the Developer, to inspect all work on the Infrastructure at all times between 8:00 a.m. and 6:00 p.m. weekdays, and at any other time work is taking place within the Property, and in the case of an emergency at any time reasonably determined by the Village, to confirm compliance with all requirements of this Agreement and all Requirements of Law.
- (vi) **Other Approvals.** When the construction of Infrastructure requires the permission or approval of a regulatory agency, including without limitation the MWRD, IDOT, Cook County or the IEPA, then the Developer must use all commercially reasonable efforts required to obtain the required permission or approval. The Developer may not commence work requiring the permission or approval of any such agency in advance of receiving that permission or approval.

K. **Approvals of Infrastructure.** When an Infrastructure improvement has been completed, the Developer must request final inspection and approval of that Infrastructure improvement by the Village. The Village will inspect that Infrastructure improvement and may prepare a punch list of items requiring repair or correction. The Developer must promptly make all necessary repairs and corrections as specified on the punch list. The Village will not approve an Infrastructure improvement until it has been fully and properly completed in accordance with the Approved Plans, including without limitation all punch list work for that Infrastructure improvement.

L. **Acceptance, Dedication and Acceptance of Public Infrastructure.** The Developer will dedicate to the Village or to any other governmental agency with oversight jurisdiction each Public Infrastructure improvement after it is approved by the Village or the other governmental agency with oversight jurisdiction. The Village will accept a Public Infrastructure improvement when it has been fully

and properly completed, but nothing will constitute an acceptance by the Village of a Public Infrastructure improvement except express written acceptance by the Village. Prior to the Village's acceptance, the Developer must execute, or cause to be executed, all documents reasonably requested by the Village to transfer ownership of the Public Infrastructure improvement to the Village, free and clear of all liens, claims, and encumbrances or restrictions that would prevent the Village from operating, maintaining, repairing, or replacing that Public Infrastructure improvement. The documents transferring ownership of a Public Infrastructure improvement to the Village must be reasonably acceptable in form and substance to the Village Attorney. Within thirty (30) calendar days of the acceptance, dedication or conveyance, the Developer shall provide the Village Manager with final, executed copies of the acceptance, dedication or conveyance documents that relate to each component of the Public Infrastructure improvements after it is approved by the other governmental agencies with oversight jurisdiction.

M. **Infrastructure Guarantees.** The Developer guarantees the prompt and satisfactory correction of every defect or deficiency in any Infrastructure that occurs or becomes evident within two (2) years after Village approval and acceptance of that Infrastructure, and in the case of stormwater management system elements three (3) years, pursuant to this Agreement. If any defect or deficiency occurs or becomes evident during the 2-year or 3-year period, then the Village will give notice to the Developer stating the defect or deficiency and the Developer must correct the defect or deficiency within ten (10) calendar days after receipt of the notice or, if the defect or deficiency cannot reasonably be corrected within that 10-day period, then within a longer period of time as is reasonably necessary to correct the defect or deficiency so long as the Developer has promptly commenced and uses commercially reasonable efforts to diligently pursue the correction. If the defect or deficiency is not corrected within the required time period, then the Village may undertake the correction and then the Village will have the right to draw from the performance securities deposited pursuant to Section 9 of this Agreement to reimburse itself for all costs and expenses incurred in making the correction. If any Public Infrastructure is repaired or replaced by the Developer pursuant to the demand of the Village, then the guaranty provided by this Subsection 6.E. will be extended, as to the repair or replacement, for two (2) full years after the date of completion of the repair or replacement.

N. **Perpetual Maintenance of Private Infrastructure.** The Developer, and then the homeowners association, must maintain, at its cost and expense, all Private Infrastructure at all times in good and serviceable condition consistent with Village codes and generally accepted engineering practices, including without limitation Village codes and ordinances and MWRD standards, as applicable. If at any time the Developer, or the homeowners association, is in breach of this standard, as determined by the Village, then the Village may issue a citation to, and impose a fine on, the Developer, or the homeowners association, as provided in the Village Code. In addition, the Village may issue notice stating that the Developer, or the homeowners association, must cure the breach within thirty (30) calendar days or, if the breach cannot reasonably be cured within thirty (30) calendar days, then within a date certain set by the Village. The Developer, or the homeowners association, must promptly commence the cure and use commercially reasonable efforts to diligently and continuously pursue the cure to completion. If the cure is not completed within the required time, then the Village may, but is not in any way obligated to, undertake the cure using its own forces or outside forces. The Developer, or the homeowners association, will be liable for, and must reimburse to the Village, all costs and expenses incurred by the Village to cure the breach. If the Village's costs and expenses have not been reimbursed in full within thirty (30) calendar days after notice from the Village, then all unpaid costs and expenses will become a lien against the Property in its entirety and the Village will have the right to collect the unpaid costs and expenses and to enforce the lien in the same manner as mortgage foreclosure proceedings. Under no circumstances will the Village ever be required or obligated to maintain or repair any Private

Infrastructure. The terms of this Subsection 6.F. shall be incorporated in the CC&Rs. Maintenance obligations for the Stormwater Conveyance System shall consist of:

- (i) **Operations and Maintenance Manual for Stormwater Conveyance System:** The Developer shall comply with the maintenance and operations obligations for the Stormwater Conveyance System set forth in and required by the Operations and Maintenance Manual, per the Approval Ordinance and Section 10-11-11 (Stormwater Management Requirements For All Developments) of the DCO. A copy of the Operations and Maintenance Manual is attached hereto as **Exhibit "G"** and made a part hereof.
- (ii) **Maintenance Obligations Imposed on the Developer and Then The Homeowners Association:** The maintenance of the Stormwater Conveyance System for the Development shall be the responsibility of the Developer and then the homeowners association. The Developer guarantees that it and all future owners of the Property shall maintain the Stormwater Conveyance System.
- (iii) **Inspection Access by Village Representatives:** The Developer specifically authorizes representatives of the Village to enter onto the Property for the purpose of conducting inspections and testing of the Stormwater Conveyance System.
- (iv) **Maintenance Schedule:** The Developer shall comply with the "Schedule for Regular Maintenance" of each aspect of the Stormwater Conveyance System and shall provide for access to the Stormwater Conveyance System for inspection and testing by authorized representatives of the Village. In the event that any authorized representatives of the Village notify the Developer, or the homeowners association, in writing of any maintenance problems which require correction, the Developer, or the homeowners association, shall make such corrections within thirty (30) calendar days of such notification. The Village shall be reimbursed by the Developer and then by the homeowners association for the actual costs and fees incurred relative to any inspection and/or testing conducted by its representatives. If the corrections are not made within this time period, the Village may have the necessary work completed and assess the cost to the Developer or the or the homeowners association.
- (v) **Annual Maintenance Inspections:** All components of the Stormwater Conveyance System shall be inspected by representatives of the Developer and then the homeowners association not less often than once per year. A written report shall be prepared of the results of any inspection and a copy of the report shall be sent to the Village Manager detailing any problems which need correction within thirty (30) calendar days of the date of the report or by no later than September 30 each year.

O. **Abandonment of Construction.** If the Developer abandons the Development or any part of the Development, then the Developer, within ninety (90) calendar days after notice from the Village, must: (i) remove all partially constructed improvements from the Property, (ii) backfill all excavations, and (iii) spread topsoil and plant grass seed throughout the Property, all to the satisfaction of the Village (collectively the "Required Restoration"). For purposes of this Subsection 6.G, "abandons" means cessation of construction for a continuous period of ninety (90) calendar days for any reason other than Force Majeure. If the Developer fails or refuses to complete the Required Restoration within the 90-day period, or such longer period of time as is reasonably necessary to complete the Required Restoration so long as the Developer has promptly commenced and uses commercially reasonable efforts to diligently



pursue the Required Restoration, then the Village will have, and is granted in addition to all other rights afforded to the Village in this Agreement and by law, the right, at the Village's option, to hire a contractor to complete part or all of the Required Restoration. Thereafter, the Village may charge the Developer an amount equal to the Village's actual costs of the Required Restoration including without limitation contractor costs, disposal costs, administrative personnel fees and costs, and legal fees (collectively the "Charged Amount"). If the Charged Amount is not paid by the Developer within thirty (30) calendar days after notice from the Village, then the Charged Amount, and all costs incurred by the Village related to collection of the Charged Amount (the "Collection Costs"), may be deducted from the Developer Security and will become a lien against the Property, and the Village will have the right to collect the Charged Amount and the Collection Costs and to enforce the lien in the same manner as mortgage foreclosure proceedings.

P. **Progress Meetings.** At all times, the Developer and the Village shall each have an individual designated as the Developer's and the Village's primary point of contact for Development-related matters. The Developer shall meet on a monthly basis with the Development Director and Village Engineer, or their designee, and other Village staff as appropriate, to provide a comprehensive progress report on the Development. Appropriate Development team personnel shall attend the meeting on behalf of the Developer and the Village, and shall provide and exchange information regarding the status of construction and occupancy, pending permit requests and other appropriate information.

Q. **Village Construction Manager Consultant.** The Village reserves the right to hire a construction manager consultant to assist the Village and its staff with all aspects of the Development, including but not limited to compliance with the terms of this Agreement, the plan review process, inspections, reporting and oversight of the construction of the Development. The compensation and other employment benefits payable to the construction manager consultant for their work relative to the Development qualifies as a charge under the Reimbursable Costs.

R. **"As-Built" Development Plans.** The Developer, at its cost, shall prepare and provide to the Development Director one (1) electronic copy of the "As-Built" Final Development Plans, with all minor modifications and in-field adjustments shown, at the time of issuance of the last occupancy permit for the final townhome unit as part of the Village's issuance of the Certificate of Completion for the Development. The "As-Built" Plans are subject to the review and approval by the Village Engineer and the Community Development Director, or their designees.

## **SECTION 7. CONSTRUCTION STAGING, TRAFFIC, PARKING; STREETS.**

A. **Construction Staging.** The staging of construction work and materials must be in conformance with the Village-approved construction staging plan. The Developer must submit a staging plan for Village review and approval prior to the issuance of the permit for construction of the Development. The Developer shall not allow for the staging any construction equipment, materials or vehicles within the right-of-way of Park Place. The Developer shall not allow the staging of any construction equipment, materials or vehicles on the Property in a manner that creates sight-line issues for vehicle traffic traveling on Wolf Road or Park Place or Heritage Court, as determined by the Village Manager. The Developer or its any contractor, subcontractor or material supplier who violates the Village-approved construction staging plan or this subsection shall each be subject to a \$750.00 per day fine for each separate violation that occurs.

B. **Designated Traffic Routes.** The Village, in consultation with the Developer, may designate routes of access to the Property for construction traffic to protect pedestrians and to minimize disruption of traffic and damage to particular streets.

C. **Parking.** All construction-related vehicles, including passenger vehicles and construction equipment, must be parked within the Property or in areas specifically designated in advance in writing by the Village. The Developer shall not allow construction-related vehicles, including passenger vehicles of employees of the Developer, contractors, subcontractors or material suppliers, to be parked on Park Place or Wolf Road during the construction of the Development. The Developer or its any contractors, subcontractors or material suppliers who violates this subsection shall each be subject to a \$750.00 per day fine for each separate violation that occurs.

D. **Streets, Sidewalks, and Other Rights-Of-Way.** Any work on streets, sidewalks, and other rights-of-way related to the Development, public or private, must meet the following standards:

- (i) Compliance with Plans. All work must comply with the Village-approved plans for that work.
- (ii) Protection of Final Surface Course; Restoration. Except with the prior express written consent of the Village, no construction traffic may use any improved public right-of-way after installation of the final surface course of that right-of-way. If the Developer uses an improved public right-of-way for construction traffic, then the Developer must keep that right-of-way free and clear of mud, dirt, debris, obstructions and hazards, and must, after the use is no longer necessary, restore and repair that right-of-way to Village standards.

## **SECTION 8. DEVELOPER PAYABLE COSTS, FEES, AND EXPENSES AND ESCROW.**

A. **Negotiation, Review, Inspection Fees.** In addition to all other costs, payments, fees, or other charges required by this Agreement or by the Requirements of Law or by the Village Code, the Developer must pay to the Village, promptly after receipt of a written demand or demands for payment:

- (i) All reimbursable costs, fees, payments, charges, and expenses (collectively "Reimbursable Costs") for outside engineering, outside legal, outside building, and other outside consulting or administrative services incurred or accrued in connection with the review and processing of plans for the development of the Property and in connection with the negotiation, preparation, consideration, and review of this Agreement, at the standard rates charged to the Village, as required by the Village Code. All Reimbursable Costs for which demand has been made, but payment has not been received, by the Village prior to execution of this Agreement must be made by a certified or cashier's check contemporaneous with the execution of this Agreement by the Village.
- (ii) All Reimbursable Costs for inspections of the Property and the Development conducted by outside inspectors.
- (iii) All Reimbursable Costs for inspections of an individual dwelling unit until issuance of a final certificate of occupancy for that unit.
- (iv) All Reimbursable Costs incurred in connection with a future application, document or proposal, whether formal or informal, of whatever kind submitted by the Developer (or its successor) to the Village in connection with the Development or the use or future development of the Property.

- (v) All Reimbursable Costs incurred by the Village for publications and recordings required in connection with the Development or the Property.

B. **Other Village Fees.** In addition to all other Reimbursable Costs required by this Agreement, the Developer must pay to the Village (as applicable): (i) all standard application, plan review, inspection, and permit fees, (ii) all standard water and sewer fees, tap-on fees, and charges, (iii) compensation for trees removed from public parkways or other public right-of-way, (iv) all costs for replacement trees, and (v) all other standard fees, charges, impact fees to the Village and to any other governmental agency with an impact fee ordinance and contributions pursuant to the Requirements of Law and the Village Code.

C. **Reimbursement for Village Work on Utilities.** If during construction of the Development the Developer discovers a water main, sewer main, or other utility that must be relocated to avoid conflict with the Development, then the Developer and the Village will determine how, where, and by whom the utility will be relocated and the Developer must pay all costs and expenses of that relocation.

D. **Developer Escrow.** The Developer shall maintain a “Developer Cash Escrow” with the Village for purposes of payment of the Reimbursable Costs and other costs payable to the Village by the Developer as required by this Agreement, and shall comply with the funding terms of the Developer Escrow as set forth in the Approval Ordinance and Section 9. below.

E. **Compensation for Development Impacts.** RESERVED.

## **SECTION 9. PERFORMANCE SECURITY.**

A. **Developer Cash Escrow; Letter of Credit (“LOC”).** As security to the Village for the performance by the Developer of the Developer’s obligations to construct and complete the Infrastructure pursuant to and in accordance with this Agreement, the Developer shall deposit with the Village the following:

- (i) **Developer Cash Escrow.** The sum of \$58,000.00 cash (the “Developer Cash Escrow”) shall be paid by the Developer to be held by the Village and drawn on to reimburse the Village for Reimbursable Costs incurred by the Developer described in Section 8. above. Any interest earned on the Developer Cash Escrow will be added to the escrow, but the Village is not required to cause interest to be earned. If draws on the Developer Cash Escrow reduce the balance in the Escrow to \$20,000.00 or below at any time, then the Developer must restore the Developer Cash Escrow to a level determined by the Village (but not exceeding \$30,000.00) until the Certificate of Completion is issued by the Village for the Development. Any money remaining in the Developer Cash Escrow will be distributed to the Developer within sixty (60) calendar days after notice from the Developer to the Village requesting release of such funds, after issuance of the full, final certificate of occupancy for the final townhome building constructed within the Development.
- (ii) **Performance and Payment Letter of Credit.** A performance and payment letter of credit in an amount equal to one hundred ten percent (110%) of the Infrastructure Cost Estimate (the “Performance LOC”) in the form required in Subsection 9.E. below.

- (iii) **Condition Precedent.** The deposit of the Performance LOC and the Developer Cash Escrow is a condition precedent to issuance of any permit by the Village for work on the Development.

B. **Maintenance of Performance LOC.** The Performance LOC shall be maintained and renewed by the Developer, and will be held in escrow by the Village, until completion of the Infrastructure and the Public Infrastructure, as determined by the Village, and the approval by the Village Manager and dedication to the Village of the Public Infrastructure, if any, and until the posting of the Guaranty Letter of Credit required by Subsection 9.C. below. After the acceptance and posting of the Guaranty Letters of Credit, the Village will release the Performance LOC and return it to the Developer.

C. **Guaranty Letters of Credit.** As a condition of the Village's approval of the Public Infrastructure and the Village's acceptance, where appropriate, of any or all of the Infrastructure pursuant to Subsections D. and E. of this Section, the Developer must post two (2) letters of credit, in the form required by Subsection 9.E. below (each a "Guaranty LOC") as follows:

- (i) **General Guaranty LOC:** This LOC shall be security for the performance of the Developer's obligations under this Agreement related to Infrastructure. The General Guaranty LOC will be in the amount of ten percent (10%) of the Infrastructure Cost Estimate and will be held by the Village in escrow until the end of the two-year guaranty period set forth in Subsection 6.E. of this Agreement or until two (2) years after any necessary modification to or correction of any defect or deficiency in a Public Infrastructure improvement pursuant to Section 6.E. above and payment therefor, whichever occurs later. At the end of the two-year guaranty period, the Village will inspect the Infrastructure to verify whether any modification or corrective repair work needs to be performed, and, if such work is needed, the General Guaranty LOC, in full or in part (a reduction in the amount of the LOC may be approved per Section 6.E.), shall be retained for two-year period by the Village in accordance with this Subsection.
- (ii) **Stormwater Detention Guaranty LOC:** This LOC shall be security for the proper construction and operation of the Stormwater Conveyance System. The Stormwater Detention Guaranty LOC will be in the amount of ten percent (10%) of the elements of the Stormwater Conveyance System within the Infrastructure Cost Estimate and will be held by the Village in escrow for a three (3) year period after the certificate completion is issued by the Village for the Development, or for a two (2) year period after any necessary modification to or correction of any defect or deficiency in the Stormwater Conveyance System, whichever occurs later. At the end of the three-year guaranty period, the Village will inspect the Stormwater Conveyance System to verify whether any modification or corrective repair work needs to be performed, and, if such work is needed, the Stormwater Detention Guaranty LOC, in full or in part (a reduction in the amount of the LOC may be approved per Section 6.E.), shall be retained for two-year period by the Village in accordance with this Subsection.

If the Village is required to draw on a Guaranty LOC by reason of the Developer's failure to fulfill its obligations under this Agreement, then the Developer, within twenty (20) calendar days thereafter, must cause the Guaranty LOC to be increased to its full original amount. "Developer Security" shall consist of the Developer Cash Escrow, the Performance LOC, the General Guaranty LOC and the Stormwater Detention Guaranty LOC.

D. **Costs of Developer Security.** The Developer is responsible for the full cost of securing and maintaining the Developer Cash Escrow, the Performance LOC and the Guaranty LOCs.

E. **Forms of Letters of Credit.** The Performance LOC and the Guaranty LOCs must be in substantially the forms attached to this Agreement as **Exhibit "H"**, with minor revisions as may be requested by the issuer and approved by the Village Attorney. Each letter of credit also must be from a bank having capital resources of at least \$25,000,000, with an office in the Chicago Metropolitan Area or other location acceptable to the Village and insured by the Federal Deposit Insurance Corporation. Each letter of credit must, at a minimum, provide that: (i) it will expire no earlier than the later of two (2) years after the date of its issuance or thirty (30) calendar days after delivery to the Village, in the manner provided in Subsection 9.G. below, of written notice that the letter of credit will expire, (ii) it may be drawn on based on the Village Manager's certification that the Developer has failed to fulfill any of the obligations secured by the letter of credit, (iii) it does not require the consent of the Developer prior to any draw on it by the Village, (iv) it cannot be canceled without the prior written consent of the Village, and (v) if at any time it will expire within thirty (30) or any lesser number of calendar days, and if it has not been renewed, and if any obligation of the Developer secured by the letter of credit remains uncompleted or unsatisfactory, then the Village may call and draw down the letter of credit and thereafter either hold all proceeds as security for the satisfactory completion of all Developer obligations or employ the proceeds to complete all obligations and to reimburse the Village for any and all costs and expenses, including legal fees and administrative costs, incurred by the Village in connection therewith, as the Village may determine.

After completion of the Developer's obligations to construct and complete the Infrastructure in accordance with this Agreement, and after reimbursement of the Village for all costs and expenses incurred by the Village, including without limitation legal fees and administrative costs, then the Village will release to the Developer any proceeds remaining on deposit with the Village drawn from the Performance LOC and return the Performance LOC to the Developer. The Performance LOC will provide that the aggregate amount of the Performance LOC may be reduced once, upon joint written direction by the Developer and the Village, to the amount of twenty-five percent (25%) of the Infrastructure Cost Estimate when Infrastructure totaling seventy-five percent (75%) of Infrastructure Cost Estimate have been completed and accepted by the Village. The reduction to reimburse the Developer for payment of Infrastructure Improvement work satisfactorily completed will be allowed only after the Developer has provided certified contractors' sworn statements, certified schedule of values, partial or final waivers of lien, proof of payment of contractors and subcontractors, bank statements, etc., as may be appropriate, and all additional documentation as the Village may reasonably request to demonstrate satisfactory completion of the Infrastructure Improvement in question and full payment of all contractors, subcontractors, and material suppliers.

The Guaranty LOCs shall not be reduced to reimburse the Developer for any cost incurred in satisfaction its obligations under Section 8. or Section 9. of this Agreement.

F. **Replenishment of Developer Security.** If at any time the Village reasonably determines that the funds remaining in the Developer Cash Escrow or the Performance LOC or a Guaranty LOC are not sufficient to pay in full the remaining unpaid cost of all Infrastructure and all unpaid or reasonably anticipated Village costs, fees, and expenses, or that the funds remaining in a Guaranty LOC are not, or may not be, sufficient to pay all unpaid costs of correcting any and all defects and deficiencies in the Public Infrastructure and all unpaid or reasonably anticipated Village fees, costs, and expenses, then, within twenty (20) calendar days after a demand by the Village, the Developer must increase the amount of the Developer Cash Escrow or the Performance LOC or a Guaranty LOC to an amount, as determined by the Village Engineer, to be sufficient to pay unpaid costs, fees, and expenses. Failure by the Developer to increase the amount of the Developer Security will be grounds for the Village to retain any remaining



balance of the Developer Cash Escrow and to receive the proceeds of, or to draw down, as the case may be, the entire remaining balance of the Performance LOC or a Guaranty LOC.

On completion of the Developer's obligations to construct and complete the Infrastructure pursuant to and in accordance with this Agreement, and after reimbursement of the Village for all fees and all costs and expenses, including legal fees and administrative costs, incurred by the Village, then the Village will release to the Developer any remaining funds in the Developer Cash Escrow and any proceeds remaining on deposit with the Village from the Performance LOC or a Guaranty LOC and will return the letters of credit to the Developer.

G. **Use of Funds in the Event of Breach of Agreement.** If the Developer, after all required notices and cure periods under this Agreement have been provided, fails or refuses to complete the Infrastructure in accordance with this Agreement, or fails or refuses to correct any defect or deficiency in the Public Infrastructure as required by Section 6 above or this Section 9, or fails or refuses to clean or repair property in accordance with a demand made pursuant to Subsection 5.E. or Subsection 7.D.(ii) of this Agreement, or fails or refuses to pay any amount pursuant to Section 8. above within five (5) business days after demand by the Village, or in any other manner fails or refuses to meet fully any of its obligations under this Agreement secured by a letter of credit, then the Village, in its discretion and after a delivery of a 5-day notice to the Developer and the Developer's failure to cure its failure or refusal within that 5-day period, may retain all or any part of the Developer Cash Escrow and/or draw on and retain all or any of the funds remaining in the appropriate letter of credit.

H. The Village thereafter will have the right to exercise its rights under Subsection 5.E. above and under this Subsection 9.G., to take any other action it deems reasonable and appropriate to mitigate the effects of any failure or refusal, and to reimburse itself from the proceeds of the Developer Cash Escrow and the appropriate letter of credit for all of its costs and expenses, including legal fees and administrative expenses, resulting from or incurred as a result of the Developer's failure or refusal to fully meet its obligations under this Agreement.

If the funds remaining in the Developer Cash Escrow or the appropriate letter of credit are insufficient to repay fully the Village for all costs and expenses, and to maintain a cash reserve equal to a required Guaranty LOC during the entire time the Guaranty LOC should have been maintained by the Developer, then the Developer, on demand of the Village therefor, must immediately deposit with the Village any additional funds as the Village reasonably determines are necessary to fully repay such costs and expenses and to establish such cash reserve.

After: (i) completion of the Developer's obligations to construct and complete the Infrastructure in accordance with this Agreement, (ii) correction of all defects and deficiencies in the Public Infrastructure as required by Subsection 6.E. above, (iii) repair of property in accordance with a demand made pursuant to Subsection 5.E. above, (iv) payment of all amounts demanded by the Village pursuant to this Section 9, (v) compliance with all other terms of this Agreement secured by a letter of credit, and (vi) reimbursement of the Village for all fees and all costs and expenses, including legal fees and administrative costs, incurred by the Village; then the Village will release to the Developer any remaining Developer Cash Escrow and any proceeds remaining on deposit with the Village from any letter of credit and return the letter of credit to the Developer.

I. **Village Lien Rights.** If any money, property, or other consideration due from the Developer to the Village pursuant to this Agreement is not either recovered from the performance security deposits required in this Section 9. or paid or conveyed to the Village by the Developer within thirty (30) calendar days after a demand for payment or conveyance, then the money, or an amount equal to the Village's reasonable estimate of the value of the property or other consideration, together with

interest and costs of collection, including legal fees and administrative expenses, will become a lien upon the Property and the Village will have the right to collect the amount or value, with interest and costs, including legal fees and administrative expenses, and the right to enforce the lien in the same manner as in statutory mortgage foreclosure proceedings.

#### **SECTION 10. INFRASTRUCTURE SSA.**

The Village will establish a special service area (the "Private Infrastructure SSA"), the boundaries of which will include all of the Property. The purpose of the Private Infrastructure SSA is to generate funds (the "Private Infrastructure SSA Tax Fund") that the Village may use to provide the special services of maintaining the Private Infrastructure if the Developer fails at any time to properly maintain the Private Infrastructure. The Private Infrastructure SSA will authorize the levy of a special service area tax from time to time on the Property to establish, replenish, and maintain the Private Infrastructure SSA Tax Fund sufficiently to pay for the special services only if the Developer or the homeowners association fails to pay for such services. The Village may from time to time levy the special service tax to replenish the Private Infrastructure SSA Tax Fund in a dollar amount, as determined by the Corporate Authorities of the Village, in their sole discretion, as reasonably necessary to pay for any special services or to ensure that the Fund has a balance of not less than \$37,700.00. The Village will not levy a special service tax for collection prior to the issuance of a Certificate of Completion for the Development. The Developer approves, and agrees not to object to, the establishment of the Private Infrastructure SSA as provided in this Section 10 and the levying and expending the Private Infrastructure SSA Funds by the Village, at the Corporate Authorities of the Village's sole discretion, consistent with this Section 10. Nothing regarding the Private Infrastructure SSA will compel or require the Village to provide special services or to levy the SSA tax. The obligation to maintain the Private Infrastructure rests entirely and in perpetuity on the Developer as provided in Subsection 6.F. of this Agreement. The Developer will initially fund the Private Infrastructure SSA Tax Fund with \$37,700.00 based on a cash contribution of \$1,300.00 per townhome unit payable by the Developer to the Village at each closing of the twenty-nine townhomes.

#### **SECTION 11. LIABILITY AND INDEMNITY OF VILLAGE.**

A. **No Village Liability.** The Developer acknowledges and agrees that the Village is not, and will not be, in any way liable for any damages or injuries of any kind that may be sustained as the result of: (i) the Village's review and approval of any plan or specification provided by the Developer or the Developer's representatives for the Development; or (ii) the issuance of any approvals, permits, certificates, or acceptances for the Development or use of the Property and that the Village's reviews, approvals, and issuances do not, and will not in any way, be deemed to insure the Developer or any of its transferees, successors-in-interest, all legal or beneficial owners of record, assigns, tenants, licensees and all subsequent owners of the Property or any part of the Property, and or any other person, and each and all homeowners associations or their equivalent within the Property, against damage or injury of any kind at any time.

B. **Village Procedures.** The Developer agrees not to challenge the Village's approval of this Agreement or of the Approval Ordinance or any other Village approved document that relates to the Development.

C. **Indemnification.** The Developer acknowledges that the accuracy and sufficiency of the Developer's Development Plans and related specifications for the Development are entirely the responsibility of the Developer and are not the responsibility of the Village, regardless of whether the Village reviews or approves the Developer's Development Plans and related specifications for apparent consistency with the Village's codes. The Developer agrees to indemnify the Village and all Village elected

or appointed officials, officers, employees, agents, representatives, engineers, and attorneys (collectively the "Indemnitees") from any and all third party claims and causes of action of any kind that may be asserted at any time against the Village and any of the Indemnitees in connection with: (i) any design defect in the Developer's Development Plans and related specifications for the Development or any Infrastructure, regardless of the Village's review and approval of any Developer Development Plans or related specification for the Development or the Infrastructure or the Village's issuance of any approval, permit, certificate, or acceptance for the Development based on the apparent consistency of any Developer Development Plans or related specification for the Development or any Infrastructure Improvement; or (ii) the design, development, construction, maintenance, or use of any portion of the Property or the Infrastructure (each a "Claim" and collectively "Claims"). This indemnity does not apply or extend to any matter concerning maintenance by the Village of any Public Infrastructure after that Public Infrastructure has been accepted by the Village in accordance with this Agreement.

D. **Defense Expenses.** The Developer agrees to pay all expenses, including without limitation attorney fees, litigation defense fees and costs, consultant fees and administrative expenses incurred by the Village in examining and tendering the defense of any Claim to the Developer in accordance with Subsection 11.C. above.

## **SECTION 12. BINDING NATURE OF AGREEMENT.**

The obligations assumed by the Developer under this Agreement are binding on the Developer, on all of the Developer's transferees, successors-interest, all legal or beneficial owners of record, assigns, tenants, licensees and all subsequent owners of the Property or any part of the Property and each and all homeowners associations or their equivalent within the Property.

## **SECTION 13. TERM.**

This Agreement will run with and bind the Property as long as the Development and its homeowners association continues to exist and operate, and will inure to the benefit of and be enforceable by the Developer, the homeowners association and the Village.

## **SECTION 14. ENFORCEMENT.**

Either Party to this Agreement may enforce or compel the performance of this Agreement, in law or in equity, by suit, action, mandamus, or any other proceeding including without limitation specific performance, except that the Developer agrees that it will not seek, and does not have the right under any circumstances to seek, to recover a judgment against any Village elected or appointed official, officer, employee, agent, representative, engineer, or attorney on account of the negotiation, execution, or breach of this Agreement.

In addition to every other remedy permitted by law for the enforcement of the terms of this Agreement, the Village will be entitled to withhold the issuance of a building permit or a certificate of occupancy for work or occupancy within the Property at any time when the Developer has failed or refused to comply with a material obligation under this Agreement and has not, after the required notices stated herein, cured that failure or refusal within the cure periods, if any, allowed for that failure or refusal.

A. **Compliance with Laws.** The Developer agrees to comply with all applicable laws, rules and regulations of any federal, State or local entity or agency relating to the Development. The Developer will not discriminate against any employee or applicant for employment on the basis of race, color, religion, sex or national origin. To the fullest extent permitted by law, the Developer will take affirmative action to ensure that applicants are employed and treated during employment, without regard to their

race, color, religion, sex or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, transfer, recruitment, recruitment advertising, layoff, termination, rate of pay or other forms of compensation, and selection for training, including apprenticeship.

**B. Conflict of Interest and Prohibited Interest Disclosures.** Upon the Village's request from time to time during the Term of this Agreement, the Developer will provide a list of all entities owning a greater than one percent (1%) interest in the Developer. Based in part on the information provided by the Developer and in part on information from the Village's independent investigation, the Village will affirm that its Corporate Authorities, and all appropriate Village elected and appointed officials, officers, employees, agents and representatives of the Village, have or will comply with the disclosure and conflict-of-interest provisions of the Public Officer Prohibited Activities Act (50 ILCS 105/3), the TIF Act (65 ILCS 5/11-74.4-4(n)) and the Illinois Governmental Ethics Act (5 ILCS 420). Upon the Village's request, the Developer shall provide the Village with all information required for compliance with the annual TIF report that the Village is required to file with the State of Illinois Comptroller or any such similar financial information, and required for the Village to comply with any disclosure and transparency ordinance or law enacted by the State of Illinois or DuPage County. In addition, the Developer shall provide, on an annual basis, the information required by the TIF Act.

**C. Successors and Assigns.** The Developer shall be liable for all of the Developer's obligations under this Agreement. All obligations assumed by the Developer under this Agreement shall be binding on the Developer, and on any and all of the Developer's successors and assigns, and on any and all of the respective successor owners of all or any portion of the Property. To assure that the Developer's successors, assigns and successor owners of all or any portion of the Property have notice of this Agreement and the obligations created by it, the Developer shall:

1. Deposit with the Village Clerk, within thirty (30) calendar days after the Acquisition Date, any consents or other documents necessary to authorize the Village to record a Memorandum of this Agreement, in form and substance reasonably acceptable to the Developer and the Village, in the Office of the Recorder of Deeds of DuPage County, Illinois;
2. Notify the Village in writing at least thirty (30) calendar days prior to any date that the Developer intends to transfer fee title to any portion of the Property to any person not a party to this Agreement;
3. Include in the Restrictive Covenant a memorandum or other similar reference(s) to this Agreement sufficient to put third parties on notice of the existence of this Agreement; and
4. Require, prior to the transfer of all or any portion of the Property to any person or entity not a Party to this Agreement that occurs prior to the Substantial Completion Date, the transferee to execute an enforceable written assignment and assumption agreement, in form and substance reasonably approved by the Village Attorney (the "**Transferee Assignment and Assumption Agreement**"), agreeing to be bound by this Agreement, and to provide the Village, after request, with reasonable assurance of the financial ability of the transferee to meet any remaining obligations under this Agreement. The Village and the Developer shall record against the Property a memorandum of this Agreement that obligates the owner of the Property from time to time to perform the obligations of the Developer under this Agreement and shall require notice to the Village of any transfer of the Property, which memorandum shall be in form and substance reasonably satisfactory to the Village and the Developer.

In order for a transferee or assignee to continue to receive payments of the TIF Incentive provided for under this Agreement, such transferee or assignee shall have executed and submitted to the Village a Transferee Assignment and Assumption Agreement. Notwithstanding anything to the contrary in this Subsection, the Developer shall have the right to assign to a third-party investor or purchaser of the Developer's rights to the reimbursements described in **Section 4.** above pursuant to an assignment or other instrument executed by the Developer and acknowledged by the Village, which assignment or other instrument shall be in form and substance reasonably satisfactory to the Village Attorney.

The Village agrees that, after a successor becoming bound to the obligations of the Developer created in the manner provided in this Agreement, and providing the financial assurances required in this Section, the liability of the Developer shall be deemed automatically released. The failure of the Developer to provide the Village with a fully executed copy of a Transferee Assignment and Assumption Agreement before completing the transfer shall result in the Developer remaining fully liable for all of the Developer's obligations under this Agreement, but shall not relieve the transferee of its liability for those obligations as a successor to the Developer.

**D. Representations and Warranties of the Developer.**

1. No Gifts. The Developer covenants that no officer, member, manager, stockholder, employee or agent of the Developer, or any other person connected with the Developer, have made, offered or given, either directly or indirectly, to any member of the Corporate Authorities, or any officer, employee or agent of the Village, or any other person connected with the Village, any money or anything of value as a gift or bribe or other means of influencing his or her action in his or her capacity with the Village.
2. Assignment. The Developer may not assign or transfer some or all of its rights or obligations under this Agreement without the prior written consent of the Village, the granting or denial of which consent shall be in the sole discretion of the Village; provided, however, that, without the Village's prior consent, the Developer may assign this Agreement to an entity controlling, controlled by, or under common control with the Developer and/or assign or collaterally assign any of the Developer's rights and/or obligations to the Lender.
3. Prevailing Wage. The Developer and its contractors and subcontractors are required to pay prevailing wages for all or portions of the Development work only if the Illinois Prevailing Wage Act (820 ILCS 130/) (the "IPWA") requires payment of prevailing wages.
4. Property Acquisition. The Developer shall provide the Village with sufficient documentation regarding Developer's ownership of the Property for the Development.
5. Corporate Authorization. This Agreement has been submitted for consideration and review by the board of directors, corporate officers, shareholders, members and/or managers of the Developer, and the Developer's board of directors, corporate officers, shareholders, members and/or managers have taken all actions required to be taken prior to the execution of this Agreement in order to make the same binding upon the Developer according to the terms hereof, and any and all actions of the Developer's board of directors, corporate officers, shareholders, members and/or managers, as the case may be, precedent to the



execution of this Agreement have been undertaken and performed in the manner required by law.

E. Agreement shall be deemed to be the agreement of any official, agent, employee, consultant or attorney of the Village, in their individual capacity, and no official, employee or attorney of the Village shall be liable personally under this Agreement or be subject to any personal liability or accountability by reason of or in connection with or arising out of the execution, delivery and performance of this Agreement, or any failure in connection therewith.

## **SECTION 15. INSURANCE AND INDEMNIFICATION.**

**A. Liability Insurance Prior to Completion.** Prior to issuance of Permits, the Developer shall procure and deliver evidence of such policies to the Village, at the Developer's cost and expense, and shall maintain in full force and effect during any period of construction and through completion of construction of the Development, for both ongoing and completed operations, the following types of insurance, written on the comprehensive form and as an "occurrence" policy, in not less than the following amounts:

1. Commercial General Liability Insurance (including property damage insurance): \$1,000,000.00 per occurrence and \$2,000,000.00 in the aggregate.
2. Contractor's Liability Insurance: \$1,000,000.00 per occurrence and \$2,000,000.00 in the aggregate.
3. Automobile Insurance: \$1,000,000.00 per occurrence and \$1,000,000.00 in the aggregate.
4. Umbrella Coverage or Excess Liability Coverage: \$10,000,000.00 in the aggregate.
5. Workers Compensation Insurance: Statutory Amount.

Said insurance shall state that the insurance provided by the Developer shall be primary and that any provision of any contract of insurance or other risk protection benefit or self-insurance policy purchased or in effect or enacted by the Village and any other insurance or benefit of the Village shall be in excess of the Developer's insurance. All such policies shall be in such form and issued by such companies as shall be reasonably acceptable to the Village. Each such policy, including any related insurance certificates, endorsements and riders, shall expressly name "the Village of Western Springs and its appointed and elected officials, mayor and trustees, employees, engineers, attorneys, agents and representatives" as additional insureds.

Prior to commencement of construction of the Development, the Developer shall furnish to the Village the above-required certificates of insurance, policies, riders and policy endorsements, with premiums paid in full that contain the insurer(s) written confirmation that the nature, scope, duration and amount of insurance coverage meets the requirements of this Agreement and shall remain in effect for all aspects of the Development for both ongoing and completed operations. The Developer shall provide the Village with satisfactory proof of the above insurance requirements in the form of a certificate executed by an insurer with no less than an A rating by the most recent "AM Best Insurance Rating Guide."

The Village shall be given written notice at least thirty (30) calendar days prior to any cancellation or material amendment of the Developer's insurance policies required hereunder. Alternatively, the Developer may satisfy its insurance obligations in this **Subsection 15.A.** by way of a blanket policy or policies, which includes other liabilities, properties and locations meeting the minimum insurance

coverage amounts. The Developer shall provide to the Village a replacement certificate prior to expiration, cancellation or material modification of any policy.

**B. Developer's Risk Prior to Completion.** Prior to completion of the construction of the Development, as certified by the Village, the Developer shall keep in force at all times builders risk insurance on a completed value basis, in non-reporting form, against all risks of physical loss, including collapse, covering the total value of work performed and equipment, supplies and materials furnished for the Development (including on-site stored materials), all as to work by the Developer. Such insurance policies shall be issued by companies satisfactory to the Village. The Developer shall provide written notice to the Village at least twenty-one (21) calendar days before any such policy is cancelled or materially modified.

**C. Village Review.** The Developer acknowledges and agrees that, except for breaches of this Agreement by the Village, the Village is not, and shall not be, in any way liable for any damages or injuries of any kind that may be sustained as the result of the Village's review, approval or denial of any plans or failure to review any plans for the Property or the Development, or the issuance of any approvals, permits, certificates or acceptances for the development or use of the Property or the Development, and that the Village's review and approval of those plans and the Development and issuance of those approvals, permits, certificates or acceptances does not, and shall not, in any way be deemed to insure the Developer, or any of its heirs, successors, assigns, tenants, invitees and licensees, or any other person, against damage or injury of any kind at any time.

**D. Village Procedure.** The Developer has been advised by the Village that notices, meetings and hearings have been properly given and held by the Village with respect to the approval of this Agreement, and the Developer agrees not to challenge the Village's approval of this Agreement on the grounds of any procedural infirmity or of any denial of any procedural right.

**E. Indemnity and Defense Expense.** The Developer undertakes and assumes all potential liability for any injuries, deaths, losses, damages, claims or judgments of any nature whatsoever resulting from or in connection with its/their redevelopment activities at the Property, and the Developer shall hold harmless, indemnify and defend the Village against any such losses, except to the extent that the same is caused by the negligence or willful misconduct of the Village or its elected and appointed officials, officers, employees, agents, contractors and representatives, or by the breach of this Agreement by the Village.

1. **Developer Defense Expense.** The Developer shall, and does, agree to pay all reasonable expenses incurred by the Village, the Village's Corporate Authorities, and all Village elected and appointed officials, officers, employees, agents, contractors and representatives in defending against any and all claims, demands, causes of action, investigations, lawsuits, proceedings, liabilities, actions or penalties of any kind that may, at any time, be asserted against any of the Parties by any person(s) in connection with the Development, the approval of this Agreement, any terms or provisions of this Agreement, or the Developer's duties, obligations and performance under this Agreement, including, without limitation, any claims, demands, causes of action, investigations, lawsuits, proceedings, liabilities, actions or penalties related to or associated with environmental conditions, matters or contaminants concerning or relating to the Property, in each case, except to the extent caused by the negligence or willful misconduct of the Village or its elected and appointed officials, officers, employees, agents, contractors and representatives. These expenses shall include, without limitation, all reasonable out-of-pocket expenses, such as attorneys' and experts' fees and other litigation costs.

2. **Mutual Indemnification.** Each Party shall indemnify, hold harmless and defend the other Party and their respective officers, employees, agents, contractors and representatives against all injuries, deaths, losses, damages, claims, suits, liabilities, liens, including mechanic's liens, judgments, costs and expenses, including reasonable attorney fees, which may in any way arise from or accrue against the other Party as a consequence of this Agreement or which may in any way result therefrom, other than those indemnified matters which arise from or relate to the negligence or willful misconduct of the other Party or its officials, officers, employees, agents, contractors and representatives. The provisions of this Subsection and any other indemnification obligations on the part of either Party shall survive the termination or expiration of this Agreement for a period of two (2) years. In any such action against either Party, the other Party shall, at its own expense, appear, defend and pay all charges of reasonable attorney fees and all reasonable costs and other reasonable expenses arising therefrom or incurred in connection therewith; and, if any judgment shall be rendered against the Party in any such action, the other Party shall, at its own expense, satisfy and discharge such judgment. The prevailing Party shall indemnify the other Party for any costs, including reasonable attorney fees, in enforcing the provisions of this Agreement.

#### **SECTION 16. DEFAULT; CURE.**

In addition to any other "Event of Default" identified in this Agreement, an "**Event of Default**" shall mean a failure on the part of either Party to comply with any material term, representation, warranty, covenant, agreement or condition of this Agreement, which failure is not cured within thirty (30) calendar days after written notice thereof; provided, however, if the failure is of a nature that it cannot be cured within thirty (30) days, then the defaulting Party shall have such additional time as is reasonably necessary to cure such failure so long as the defaulting Party commences activities designed or intended to cure such Event of Default within such thirty (30) calendar day period and thereafter diligently pursues activities designed or intended to cure such Event of Default to completion. Upon an Event of Default by the Village in the performance of any of its obligations under this Agreement, the Developer's remedies shall include specific performance (including statutory interest on any sums deemed to be improperly withheld), and any and all rights and remedies available to the Developer at law or in equity, including termination of this Agreement. The Village shall not be liable for punitive damages, consequential damages or lost profits. Upon an Event of Default by the Developer in the performance of any of its obligations under this Agreement, the Village shall be entitled to take such action as authorized by this Agreement and pursue any other remedies available at law or in equity; provided, however, that the Developer shall in no event be liable for punitive or consequential damages. Notwithstanding anything to the contrary in this Agreement, the Developer's defaults, and the Village's remedies upon such defaults, described in **Subsections 3.A.** and **5.E.** and shall be only as expressly set forth in **Subsection 3.A.** and **5.E.**, respectively.

#### **SECTION 17. GENERAL PROVISIONS.**

A. **Notice.** Any notice or communication required or permitted to be given under this Agreement shall be in writing and shall be delivered: (i) personally; (ii) by a reputable overnight courier; (iii) by certified mail, return receipt requested, and deposited in the U.S. Mail, postage prepaid; or (iv) by electronic internet mail ("Email"). Email notices shall be deemed valid only to the extent that they are: (a) opened by the recipient on a business day at the address set forth below; and (b) followed by delivery of actual notice in the manner described in either (i), (ii) or (iii) above within three (3) business

days thereafter at the appropriate address set forth below. Unless otherwise provided in this Agreement, notices shall be deemed received after the first to occur of: (a) the date of actual receipt; or (b) the date that is one (1) business day after deposit with an overnight courier as evidenced by a receipt of deposit; or (c) the date that is three (3) business days after deposit in the U.S. Mail, as evidenced by a return receipt. By notice complying with the requirements of this **Subsection 17.A.**, each Party to this Agreement shall have the right to change the address or the addressee, or both, for all future notices and communications to them, but no notice of a change of addressee or address shall be effective until actually received.

Notices and communications to the Village shall be addressed to, and delivered at, the following addresses:

|                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ellen Baer<br>Village Manager<br>Village of Western Springs<br>740 Hillgrove Avenue<br>Western Springs, Illinois 60558<br>Direct: 708.246.1800<br>Email: <a href="mailto:ebaer@wsprings.com">ebaer@wsprings.com</a> | With a copy to:<br>Michael T. Jurusik, Esq.<br>Klein, Thorpe and Jenkins, Ltd.<br>900 Oakmont Lane, Suite 301<br>Westmont, Illinois 60559<br>Cell Number: 708.638.0355<br>Email: <a href="mailto:mtjurusik@ktjlaw.com">mtjurusik@ktjlaw.com</a> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Notices and communications to the Developer shall be addressed to, and delivered at, the following addresses:

|                                                                                                                                                                                                              |                                                                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Paul McNaughton<br>McNaughton Development, LLC<br>11S220 Jackson Street<br>Burr Ridge, Illinois 60527<br>Direct: 630.325.4048<br>Email: <a href="mailto:pmcnaughton83@yahoo.com">pmcnaughton83@yahoo.com</a> | With a copy to:<br>James E. Olguin, Esq.<br>16101 South 108th Avenue, 1st Floor<br>Orland Park, Illinois 60467<br>Direct: 630.403.8003<br>Email: <a href="mailto:jim@olguinlawllc.com">jim@olguinlawllc.com</a> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

B. **Time of the Essence.** Time is of the essence in the performance of this Agreement.

C. **Rights Cumulative.** Unless expressly provided to the contrary in this Agreement, each and every one of the rights, remedies and benefits provided by this Agreement shall be cumulative and shall not be exclusive of any other rights, remedies and benefits allowed by law.

D. **Non-Waiver.** The Village shall be under no obligation to exercise any of the rights granted to it in this Agreement. The failure of the Village to exercise at any time any right granted to the Village shall not be deemed or construed to be a waiver of that right, nor shall the failure void or affect the Village's right to enforce that right or any other right.

E. **Consents.** Unless otherwise provided in this Agreement, whenever the consent, permission, authorization, approval, acknowledgement, or similar indication of consent of any Party to this Agreement, or of any duly authorized officer, employee, agent, or representative of any Party to this Agreement, is required in this Agreement, the consent, permission, authorization, approval, acknowledgement, or similar indication of consent will be in writing. The Property Owner has further executed a "Written Consent of the Property Owner" to allow the Developer to enter into this Agreement, a copy of which is attached hereto as **Exhibit "I"** and made a part hereof.

F. **Facilitation of Agreement.** The Village and the Developer will act in good faith and in a reasonable and cooperative manner with respect to consents, approvals, and other matters contemplated under this Agreement. No consent or approval may be unreasonably delayed, conditioned, or withheld. The Village and the Developer will execute, acknowledge, and deliver reasonable documents and other instruments necessary to fully carry out the terms of this Agreement.

G. **Governing Law.** This Agreement shall be governed by, and enforced in accordance with, the laws of the State of Illinois.

H. **Severability.** It is the intent of the Parties that, should any provision, covenant, agreement or portion of this Agreement or its application to any person or property be held invalid by a court of competent jurisdiction, the remaining provisions of this Agreement and the validity, enforceability and application to any person or property shall not be impaired thereby, but the remaining provisions shall be interpreted, applied and enforced so as to achieve, as near as may be, the purpose and intent of this Agreement to the greatest extent permitted by applicable law.

I. **Entire Agreement.** This Agreement constitutes the entire agreement between the Parties and supersedes any and all prior agreements and negotiations between the Parties, whether written or oral, relating to the subject matter of this Agreement.

J. **Interpretation.** This Agreement shall be construed without regard to the identity of the Party who drafted the various provisions of this Agreement. Moreover, each and every provision of this Agreement shall be construed as though all Parties to this Agreement participated equally in the drafting of this Agreement. As a result of the foregoing, any rule or construction that a document is to be construed against the drafting Party shall not be applicable to this Agreement.

K. **Amendments and Modifications.** No amendment or modification to this Agreement shall be effective until it is reduced to writing and approved and executed by all Parties to this Agreement in accordance with all applicable statutory procedures.

L. **Authority to Execute.** The Village warrants and represents to the Developer that the persons executing this Agreement on its behalf have been properly authorized to do so by the Corporate Authorities of the Village. The Developer warrants and represents to the Village that: (i) the Developer has the full and complete right, power and authority to enter into this Agreement and to agree to the terms, provisions and conditions set forth in this Agreement and to bind the Property as set forth in this Agreement; (ii) all legal actions needed to authorize the execution, delivery and performance of this Agreement by the Developer have been taken; and (iii) neither the execution of this Agreement nor the performance of the obligations assumed by the Developer will: (a) result in a breach or default under any agreement to which the Developer is a party or to which it or the Property is bound; or (b) violate any statute, law, restriction, court order or agreement to which the Developer or the Property are subject.

M. **No Third-Party Beneficiaries/No Joint Venture.** Nothing in this Agreement, whether expressed or implied, is intended to confer any rights or remedies under or by reason of this Agreement on any other entity other than the Village and the Developer, nor is anything in this Agreement intended to relieve or discharge the obligation or liability of any third persons to either the Village or the Developer, nor shall any provision give any third parties any rights or subrogation or action over or against either the Village or the Developer. This Agreement is not intended to and does not create any third-party beneficiary rights whatsoever. Nothing in this Agreement, or any actions of the Parties to this Agreement,



shall be construed by the Parties or any third-party person to create the relationship of a partnership, agency or joint venture between or among such Parties.

N. **Force Majeure.** Either Party will be temporarily excused from the performance of its obligations under this Agreement when and to the extent the non-performing Party's performance is delayed or prevented by any circumstances beyond the non-performing Party's control, including but not limited to fire, flood, explosion, epidemic, pandemic, strikes or other labor disputes, acts of God or public emergency, war, rioting, malicious damage, acts or omission of any governmental authority, delay or failure or shortage of any type of transportation, equipment or service from a public utility needed for their performance or action or omission of the other Party (collectively, "Force Majeure"), provided that:

- a. The non-performing Party gives the other Party reasonably prompt written notice describing the particulars of Force Majeure including, but not limited to, the nature of the occurrence, and continues to furnish timely reports with respect thereto during the period of Force Majeure;
- b. The excuse of performance is of no greater scope and of no longer duration than is required by Force Majeure;
- c. No obligations of either Party that arose before Force Majeure causing the excuse of performance are excused as a result of Force Majeure; and
- d. The non-performing Party uses commercially reasonable and diligent efforts to remedy its inability to perform.

Economic hardship or other financial considerations, including but not limited to increases in the costs of construction materials, equipment or construction labor, of the Developer will not constitute an event of Force Majeure.

O. **Counterparts.** This Agreement may be executed in counterparts, each of which shall constitute an original document, which together shall constitute one and the same instrument.

P. **Enforcement of Agreement.** The provisions of this Agreement shall be enforceable in any action in law or in chancery. The Parties hereto agree that any legal action to enforce any right or obligation contained in or arising out of this Agreement shall be brought in the Circuit Court of Cook County, Illinois.

Q. **Exhibits.** The following Exhibits are attached hereto and made a part hereof or incorporated herein by reference and made a part hereof:

- Exhibit "A":** Site Plan for the Development, Revised as of November 5, 2024 (attached)
- Exhibit "B":** "Approval Ordinance": Western Springs Ordinance No. 24-\_\_\_\_ approving a Conditional Use Permit for Planned Development for the Construction and Operation of the Development with Conditions (attached)
- Exhibit "C":** Legal Description of the Property (attached)
- Exhibit "D":** Final Development Plans (to be attached after Village Board approval)
- Exhibit "E":** Construction Schedule (attached)
- Group Exhibit "F":** Developer's Lender's Financing Commitment Letter issued by \_\_\_\_\_ Bank and dated \_\_\_\_\_, 202\_\_ and Developer's Bank Certification Letter issued by \_\_\_\_\_ and dated \_\_\_\_\_, 202\_\_ (attached)

**Exhibit "G":** Operations and Maintenance Manual and Specifications and Maintenance Schedule for Stormwater Conveyance System  
**Exhibit "H":** Forms of Letters of Credit (attached)  
**Exhibit "I":** Written Consent of the Property Owner to Allow Developer to Enter into Redevelopment and Maintenance Agreement (attached)

In the event of a conflict between an Exhibit and the text of this Agreement, the text of this Agreement shall control.

R. **Estoppels.** Within ten (10) business days following request by either Party from time to time, the other Party shall execute and deliver to the requesting Party an estoppel certificate that certifies: (i) that this Agreement is unmodified and in full force and effect or, if there had been modifications, that this Agreement is in full force and effect as modified, (ii) that the Party is not in default of this Agreement or specifying any defaults, and (iii) such other information that may be reasonably requested by the Party.

**IN WITNESS WHEREOF**, the Parties hereto have executed this Agreement as of the dates set forth below, and the date of the last signatory below shall be inserted on page 1 of this Agreement, as the Effective Date of this Agreement.

**McNaughton Development, LLC,**  
A limited liability company

**VILLAGE OF WESTERN SPRINGS ,**  
an Illinois municipal corporation

By: \_\_\_\_\_  
Paul McNaughton  
Member

By: \_\_\_\_\_  
Heidi Rudolph  
Village President

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**ATTEST:**

**ATTEST:**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

By: \_\_\_\_\_  
Edward Tymick  
Village Clerk

Date: \_\_\_\_\_

Date: \_\_\_\_\_

Draft

**Exhibit “A”**

**Site Plan for the Development,  
Revised as of November 5, 2024**

(attached)

Draft

**Exhibit "B"**

**"Approval Ordinance": Western Springs Ordinance No. 25-\_\_\_\_\_**

ORDINANCE APPROVING A MAP AMENDMENT TO REZONE THE 5600 SOUTH WOLF ROAD PROPERTY, WESTERN SPRINGS, ILLINOIS, FROM THE O – LIMITED OFFICE ZONING DISTRICT TO THE R4 - MULTIPLE-FAMILY RESIDENCE DISTRICT; APPROVING AN APPLICATION FOR A CONDITIONAL USE PERMIT FOR A PLANNED DEVELOPMENT FOR THE CONSTRUCTION AND OPERATION OF THE PROPOSED 29 UNIT HERITAGE CROSSING TOWNHOME DEVELOPMENT LOCATED AT THE 5600 SOUTH WOLF ROAD PROPERTY, INCLUDING THE APPROVAL OF THE COMBINED PRELIMINARY / FINAL DEVELOPMENT PLANS, SUBJECT TO VILLAGE PLAN REVIEW PROCESS, AND APPROVAL OF CERTAIN DEVELOPMENT ALLOWANCES, EXCEPTIONS AND VARIATIONS FROM THE VILLAGE ZONING REGULATIONS, INCLUDING A WAIVER OF THE FIVE (5) ACRE MINIMUM LOT AREA REQUIREMENT AND A REDUCTION OF CERTAIN PLANNED DEVELOPMENT SUBMISSION REQUIREMENTS

(attached)

**Exhibit "C"**

**Legal Description for 5600 South Wolf Road, Western Springs, Illinois.**

PARCEL 1: THE WEST ½ OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) OF THE NORTH EAST ¼ OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 2: LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTH EAST ¼ OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 IN COOK COUNTY, ILLINOIS.

**Legal Description for the Lawn Avenue ROW Parcel:**

THAT PART OF THE 66 FEET WIDE LAWN AVENUE, LYING SOUTH OF THE NORTH LINE OF WESTERN SPRINGS TOWNHOMES, RECORDED MARCH 29, 1999, AS DOCUMENT NO. 99297584, LYING NORTH OF THE SOUTH LINE OF RIDGEWOOD UNIT 12, RECORDED OCTOBER 6, 1965, AS DOCUMENT NO. 19610359, LYING WEST OF THE EAST LINE OF THE WEST ½ OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION, RECORDED NOVEMBER 13, 1948, AS DOCUMENT NO. 14442019, AND LYING EAST OF THE WEST LINE OF RIDGEWOOD UNIT NO. 11, RECORDED APRIL 3, 1964, AS DOCUMENT NO. 19089916, IN THE EAST HALF OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS.

PINS: 18-18-200-017-0000  
18-18-200-038-0000  
18-18-200-001-0000 (Lawn Avenue ROW Parcel)

(attached)



**Exhibit “D”**

**Final Development Plans**

(To be attached and incorporated herein  
after Village Board approval)

Draft

**Exhibit "E"**

**Construction Schedule**

(attached)

Draft

**Group Exhibit "F"**

Developer's Lender's Financing Commitment Letter issued by \_\_\_\_\_ Bank  
and dated \_\_\_\_\_, 2025

(attached)

and

Developer's Financial Certification Letter and dated \_\_\_\_\_, 2025  
(attached)

Draft

**Exhibit “G”**

**Operations and Maintenance Manual and Specifications and Maintenance Schedule  
for Stormwater Conveyance System**

(attached)

Draft

**Exhibit “H”**

**Forms of Letters of Credit**

(attached)

Draft

**REQUIRED FORM OF PERFORMANCE LETTER OF CREDIT IRREVOCABLE LETTER OF CREDIT  
NO.**

**AMOUNT:**       \$

**EXPIRATION DATE:**       Two years after issuance

**DATE OF ISSUE:** \_\_\_\_\_ 202\_\_.

[Name of Bank]

[Address]

TO:     Village of Western Springs (Beneficiary)  
          740 Hillgrove Avenue  
          Western Springs, Illinois 60558  
          Attention: Village Manager

\_\_\_\_\_ BANK HEREBY AUTHORIZES YOU TO DRAW AT SIGHT on the     UP     TO     AN     AGGREGATE  
AMOUNT OF \_\_\_\_\_ United States Dollars (\$\_\_\_\_\_) for account of [Developer], a \_\_\_\_\_ limited  
liability company ("Customer").

Drafts under this Letter of Credit shall bear upon their face the words:

Drawn under     \_\_\_\_\_.  
Credit No.       Dated: \_\_\_\_\_ 202\_\_.

Drafts may be for all or any portion of the amount of this Letter of Credit, and shall be generally  
in the form of the sample draft attached hereto as Exhibit "1," and shall be accompanied by one of the  
following documents executed by the Western Springs Village Manager:

- (a)     A written statement on the form attached hereto as Exhibit "2" stating that, conditioned  
        upon proper notice to the Western Springs Village Manager, Letter of Credit No. \_\_\_\_ will  
        expire within thirty (30) calendar days or less and that the Customer / [Developer] has  
        failed to deliver to the Western Springs Village Manager evidence of a renewal of Letter  
        of Credit No. \_\_\_\_; or
- (b)     A written statement on the form attached hereto as Exhibit "3" stating that all or any part  
        of the Infrastructure as defined in and required to be constructed by the Customer /  
        [Developer] pursuant to "An Agreement \_\_\_\_\_ (the "Development  
        Agreement") have not been constructed in accordance with the Development Agreement  
        and any cure period has expired; or
- (c)     A written statement on the form attached hereto as Exhibit "4" stating that all or any part  
        of the costs, payments, permit fees, or other fees required to be paid to the Village of  
        Western Springs by the Customer / [Developer] pursuant to the Development Agreement  
        have not been paid in accordance with the Development Agreement and any cure period  
        has expired; or
- (e)     A written statement on the form attached hereto as Exhibit "5" stating that all or any  
        portion of the maintenance, repair, or restoration required to be performed by the  
        Customer / [Developer] pursuant to the Development Agreement has not been  
        performed in accordance with the Development Agreement and any cure period has  
        expired.



- (f) A written statement on the form attached hereto as Exhibit "6" stating that the aggregate amount of the Letter of Credit may be reduced under Subsection \_\_\_ of the Development Agreement in a certain amount.

\_\_\_\_\_[BANK] HEREBY AGREES with the beneficiary Village of Western Springs that:

1. Drafts drawn under and in compliance with this Letter of Credit shall be duly honored immediately upon presentation to [BANK] if presented on or before the above-stated Expiration Date or presented at the [BANK] office located at [ADDRESS] together with the original of this Letter of Credit on or before that date. Further, one or more drafts may be presented at [BANK] office on or before the Expiration Date.

2. If, within three (3) banking days after any draft drawn under this Letter of Credit is presented to [BANK] in conformance with the terms of this Letter of Credit, [BANK] fails to honor same, [BANK] agrees to pay all attorneys' fees, litigation and court costs, and other expenses incurred by the Village of Western Springs in enforcing the terms of this Letter of Credit.

3. This Letter of Credit shall expire on \_\_\_\_\_, 20\_\_\_\_, (two (2) years from issuance) as stated hereinabove; provided, however, this Letter of Credit shall only expire after [BANK] sends a written notice to the Western Springs Village Manager by certified mail, return receipt requested, or hand-delivered courier at least thirty (30) calendar days prior to the Expiration Date or such extended Expiration Date, that informs the Village that this Letter of Credit is about to expire (the "30-Day Expiration Notice").

4. In no event will this Letter of Credit or the obligations contained herein expire except after the 30-Day Expiration Notice required herein is delivered to the Western Springs Village Manager, it being expressly agreed that the above Expiration Date shall be extended by the number of calendar days as is required to comply with the 30-Day Expiration Notice delivery requirement.

5. No consent, acknowledgment, or approval of any kind from the Customer / [Developer] shall be necessary or required prior to honoring any draft presented in conformance with the terms of this Letter of Credit.

6. The aggregate amount of this Letter of Credit may be reduced only upon receipt by [BANK] of a document executed by the Western Springs Village Manager as provided in Paragraph (f) above stating that the aggregate amount of this Letter of Credit may be reduced in a specified amount as provided in Subsection \_\_\_ of the Development Agreement.

6. This Letter of Credit is irrevocable.

This Letter of Credit shall be governed by and construed in accordance with the Uniform Customs and Practices for ISP 98 of the International Chamber of Commerce (the "Uniform Customs"). In the event of a conflict between this Letter of Credit and the Uniform Customs, this Letter of Credit shall control. This Letter of Credit shall be deemed to be a contract made under the laws of the State of Illinois, including without limitation Article 5 of the Uniform Commercial Code as in effect in the State of Illinois and shall, as to matters not governed by the Uniform Customs, be governed by and construed in accordance with the Laws of the State of Illinois, without regard to principles of conflicts of law.

As used herein, the term “banking day” means any day other than a Saturday, Sunday, or a day on which banks in the State of Illinois are authorized or required to be closed, and a day on which payments can be effected on the Fedwire Network.

[Signature of Bank Officer]      [Signature of Bank Officer]  
[Officer’s Title]    [Officer’s Title]

Draft

EXHIBIT "1" TO FORM OF IRREVOCABLE LETTER OF CREDIT

DRAFT (sample) , 20\_\_ \$

(place) (date) (amount in figures USD)

PAY TO THE ORDER OF: US DOLLARS (amount in words) for value received and charge to the account of:

(Letter of Credit applicant name and address)

TO:

(name of Drawee Bank)

(address)

By:

\_\_\_\_\_

EXHIBIT "2" TO FORM OF IRREVOCABLE LETTER OF CREDIT

To: [BANK]

Attn: Bank Officer

Re: Draw Under Letter of Credit No. -----  
Project: [Insert Project Description]  
Customer / [Developer]

To Whom It May Concern:

This is to advise you that Letter of Credit No. \_\_\_\_\_ dated \_\_\_\_\_, 20\_\_\_\_ in the amount of \$\_\_\_\_\_ will expire within thirty (30) days or less and that the Customer / [Developer] has failed to deliver to the Western Springs Village Manager evidence of a renewal of Letter of Credit No.\_\_\_\_\_.

The Funds of this LOC that are be are being drawn upon by the Village of Western Springs as a consequence of the failure of the Customer / [Developer] to timely renew the LOC, arrange for the extension of the LOC or provide for an acceptable replacement LOC relative to above-referenced Project that are defined in more detail in the LOC.

As the Village Manager of the Village of Western Springs (the "Beneficiary" under the LOC), I certify and state under oath that:

1. The Customer / [Developer] has failed to timely renew the LOC, arrange for the extension of the LOC or provide for an acceptable replacement LOC, in an amount agreed upon by the Beneficiary and the Customer [Developer], at least thirty (30) days prior to the Expiration Date of the LOC.

2. [Bank] has not delivered to the Village by registered letter, return receipt requested, or other courier service addressed to the attention of the Village President, any notice of expiration of the LOC as required under the SPECIAL CONDITIONS at Page 2 of the LOC.

Amount of Draft: \_\_\_\_\_Dollars (\$\_\_\_\_\_).

Immediately Payable to: Village of Western Springs.

If you have any questions regarding this letter, please contact me.

Sincerely,

Western Springs Village Manager

cc. President and Board of Trustees  
Deputy Village Manager  
Finance Director  
Community Development Director  
Village Engineer  
Village Attorney

EXHIBIT "3" TO FORM OF IRREVOCABLE LETTER OF CREDIT

To: [BANK]

Attn: Bank Officer

Re: Draw Under Letter of Credit No. \_\_\_\_  
Project: [Insert Project Description]  
Customer / [Developer]

To Whom It May Concern:

This is to advise you that the Funds of the LOC that are due and payable to the Village of Western Springs are being drawn upon as a consequence of the failure of the Customer / [Developer] to complete all or any part of the Infrastructure required to be constructed by the Customer / [Developer] pursuant to the Development Agreement dated \_\_\_\_\_, 20\_\_ by and between the Village of Western Springs and [Developer] has not been constructed in accordance with the Development Agreement and any cure period has expired.

As the Village Manager of the Village of Western Springs (the "Beneficiary" under the LOC), I certify and state under oath that:

1. The Customer / [Developer] has failed to complete all or any part of the Infrastructure required to be constructed by the Customer / [Developer] pursuant to the Development Agreement dated \_\_\_\_\_, 20\_\_ by and between the Village of Western Springs and [Developer] has not been constructed in accordance with the Development Agreement and any cure period has expired.

Amount of Draft: \_\_\_\_\_ Dollars (\$\_\_\_\_\_).

Immediately Payable to: Village of Western Springs.

If you have any questions regarding this letter, please contact me.

Sincerely,

Western Springs Village Manager

cc. President and Board of Trustees  
Deputy Village Manager  
Finance Director  
Community Development Director  
Village Engineer  
Village Attorney

EXHIBIT "4" TO FORM OF IRREVOCABLE LETTER OF CREDIT

To: [BANK]

Attn: Bank Officer

Re: Draw Under Letter of Credit No. \_\_\_\_\_  
Project: [Insert Project Description]  
Customer / [Developer]

To Whom It May Concern:

This is to advise you that the Funds of the LOC that are due and payable to the Village of Western Springs are being drawn upon as a consequence of the failure of the Customer / [Developer] to pay all or any part of the costs, payments, permit fees, or other fees required to be paid by the Customer / [Developer] pursuant to the Development Agreement dated \_\_\_\_\_, 20\_\_ by and between the Village of Western Springs and [Developer] in accordance with the Development Agreement and any cure period has expired.

As the Village Manager of the Village of Western Springs (the "Beneficiary" under the LOC), I certify and state under oath that:

1. The Customer / [Developer] has failed to pay all or any part of the costs, payments, permit fees, or other fees required to be paid by the Customer / [Developer] pursuant to the Development Agreement dated \_\_\_\_\_, 20\_\_ by and between the Village of Western Springs and [Developer] in accordance with the Development Agreement and any cure period has expired.

Amount of Draft: \_\_\_\_\_ Dollars (\$\_\_\_\_\_).

Immediately Payable to: Village of Western Springs.

If you have any questions regarding this letter, please contact me.

Sincerely,

Western Springs Village Manager

cc. President and Board of Trustees  
Deputy Village Manager  
Finance Director  
Community Development Director  
Village Engineer  
Village Attorney



EXHIBIT "5" TO FORM OF IRREVOCABLE LETTER OF CREDIT

To: [BANK]

Attn: Bank Officer

Re: Draw Under Letter of Credit No. \_\_\_\_  
Project: [Insert Project Description]  
Customer / [Developer]

To Whom It May Concern:

This is to advise you that the Funds of the LOC that are due and payable to the Village of Western Springs are being drawn upon as a consequence of the failure of the Customer / [Developer] to complete all or any part of the maintenance, repair, or restoration required to be performed by the Customer / [Developer] pursuant to the Development Agreement dated \_\_\_\_\_, 20\_\_ by and between the Village of Western Springs and such work has not been performed by the [Developer] in accordance with the Development Agreement and any cure period has expired.

As the Village Manager of the Village of Western Springs (the "Beneficiary" under the LOC), I certify and state under oath that:

1. The Customer / [Developer] has failed to complete all or any part of the maintenance, repair, or restoration required to be performed by the Customer / [Developer] pursuant to the Development Agreement dated , 20\_\_ by and between the Village of Western Springs and such work has not been performed by the [Developer] in accordance with the Development Agreement and any cure period has expired.

If you have any questions regarding this letter, please contact me.

Sincerely,

Western Springs Village Manager

cc. President and Board of Trustees  
Deputy Village Manager  
Finance Director  
Community Development Director  
Village Engineer  
Village Attorney

EXHIBIT "6" TO FORM OF IRREVOCABLE LETTER OF CREDIT

To: [BANK]

Attn: Bank Officer

Re: Reduction of Dollar Amount of Letter of Credit No.  
Project: [Insert Project Description]  
Customer / [Developer]

To Whom It May Concern:

This is to advise you that the Customer / [Developer] has satisfactorily completed and the Village of Western Springs has accepted certain Infrastructure work and, under Subsection \_\_ of the Development Agreement, the aggregate amount of the Letter of Credit may be reduced in the following amount to reimburse the Developer for payment of that work: \$\_\_\_\_\_.

If you have any questions regarding this letter, please contact me.

Sincerely,

Western Springs Village Manager

cc. President and Board of Trustees  
Deputy Village Manager  
Finance Director  
Community Development Director  
Village Engineer  
Village Attorney

REQUIRED FORM OF GUARANTY LETTER OF CREDIT IRREVOCABLE LETTER OF CREDIT  
NO.

AMOUNT:

EXPIRATION DATE: Two years from issuance

DATE OF ISSUE:

[Name of Bank]

[Address]

TO: Village of Western Springs (Beneficiary)  
740 Hillgrove Avenue  
Western Springs, Illinois 60558  
Attention: Village Manager

[BANK] HEREBY AUTHORIZES YOU TO DRAW AT SIGHT on the \_\_\_\_\_ UP TO AN AGGREGATE  
AMOUNT OF \_\_\_\_\_ United States Dollars (\$ \_\_\_\_\_) for account of [Developer], a  
\_\_\_\_\_ limited liability company ("Customer").

Drafts under this Letter of Credit shall bear upon their face the words: Drawn under Credit No.  
\_\_\_\_\_ Dated: \_\_\_\_\_, 202\_\_.

Drafts may be for all or any portion of the amount of this Letter of Credit and shall be accompanied  
by one of the following documents executed by the Western Springs Village Manager on the form  
attached hereto as Exhibit "A" stating that all or any portion of the maintenance, repair, or restoration  
required to be performed related to Public Infrastructure pursuant to the Development Agreement in  
accordance with the Development Agreement has not been properly performed.

[BANK] HEREBY AGREES with the beneficiary Village of Western Springs that:

1. Drafts drawn under and in compliance with this Letter of Credit shall be duly honored  
immediately upon presentation to [BANK] if presented on or before the above-stated expiration date or  
presented at the [BANK] office located at [ADDRESS] together with the original of this Letter of Credit on  
or before that date. Further, one or more drafts may be presented at the [BANK] office on or before the  
Expiration Date.

2. If, within three (3) banking days after any draft drawn under this Letter of Credit is  
presented to [BANK] in conformance with the terms of this Letter of Credit, [BANK] fails to honor same,  
[BANK] agrees to pay all attorneys' fees, courts costs, and other expenses incurred by the Village of  
Western Springs in enforcing the terms hereof.

3. This Letter of Credit shall expire on \_\_\_\_\_, 20\_\_, (two (2) years from issuance) as  
stated hereinabove; provided, however, this Letter of Credit shall only expire after [BANK] sends a written  
notice to the Western Springs Village Manager by certified mail, return receipt requested, or hand-  
delivered courier at least thirty (30) calendar days prior to the Expiration Date or such extended Expiration  
Date, that informs the Village that this Letter of Credit is about to expire (the "30-Day Expiration Notice").

4. In no event will this Letter of Credit or the obligations contained herein expire except after the 30-Day Expiration Notice required herein is delivered to the Western Springs Village Manager, it being expressly agreed that the above Expiration Date shall be extended by the number of calendar days as is required to comply with the 30-Day Expiration Notice delivery requirement.

5. No consent, acknowledgment, or approval of any kind from the Customer / [Developer] shall be necessary or required prior to honoring any draft presented in conformance with the terms of this Letter of Credit.

6. The aggregate amount of this Letter of Credit may be reduced only upon receipt by [BANK] of a document executed by the Western Springs Village Manager stating that the aggregate amount may be reduced in a certain amount because the guarantee period for certain maintenance, repair, or restoration amount has expired.

7. This Letter of Credit is irrevocable.

This Letter of Credit shall be governed by and construed in accordance with the Uniform Customs and Practices for ISP 98 of the International Chamber of Commerce (the "Uniform Customs"). In the event of a conflict between this Letter of Credit and the Uniform Customs, this Letter of Credit shall control. This Letter of Credit shall be deemed to be a contract made under the laws of the State of Illinois, including without limitation Article 5 of the Uniform Commercial Code as in effect in the State of Illinois and shall, as to matters not governed by the Uniform Customs, be governed by and construed in accordance with the Laws of the State of Illinois, without regard to principles of conflicts of law.

As used herein, the term "banking day" means (a) any day other than a Saturday, Sunday, or a day on which banks in the State of Illinois are authorized or required to be closed and (b) any day on which payments can be effected on the Fedwire Network.

|                             |                             |
|-----------------------------|-----------------------------|
| [Signature of Bank Officer] | [Signature of Bank Officer] |
| [Officer's Title]           | [Officer's Title]           |

**Exhibit "I"**

**Written Consent and Waiver Of Casey Gaik And Fran Gaik To Allow  
McNaughton Development, LLC To Enter Into A Redevelopment And Maintenance Agreement And  
Other Related Documents Regarding The Proposed Heritage Crossing Subdivision Located At 5600  
South Wolf Road In The Village Of Western Springs, Cook County, Illinois**

**(attached)**

Draft

**Written Consent and Waiver Of Casey Gaik And Fran Gaik To Allow  
McNaughton Development, LLC To Enter Into A Redevelopment And Maintenance Agreement  
And Other Related Documents Regarding The Proposed Heritage Crossing Subdivision  
Located At 5600 South Wolf Road In The Village Of Western Springs, Cook County, Illinois**

**Consent:** Casey Gaik and Fran Gaik (collectively the “Property Owner”) are the fee simple title owners of the Property, and submit this written authorization to the Village of Western Springs to allow McNaughton Development, LLC of 11S220 Jackson Street, Suite #101, Burr Ridge, Illinois (the “Applicant” or “Developer”), the contract purchaser and prospective developer of the real property commonly known as 5600 South Wolf Road, Western Springs, Illinois (“Property”), to file an application for the redevelopment of the Property as a twenty-nine (29) unit residential townhome development (the “Development” or “Heritage Crossing Subdivision”) and to enter into or consent to the following agreements, ordinances, plats, resolutions and other documents (the “Development Documents”) with the Village of Western Springs (the “Village”) in anticipation of the approval of the Development:

1. RESOLUTION AUTHORIZING THE APPROVAL AND EXECUTION OF REDEVELOPMENT AND MAINTENANCE AGREEMENT BY AND BETWEEN THE VILLAGE OF WESTERN SPRINGS, ILLINOIS AND MCNAUGHTON DEVELOPMENT, LLC FOR THE HERITAGE CROSSING RESIDENTIAL TOWNHOME DEVELOPMENT (5600 South Wolf Road, Western Springs, Illinois)
2. RESOLUTION AUTHORIZING THE APPROVAL AND EXECUTION OF AGREEMENT REGULATING THE USE OF THE PRIVATELY OWNED HERITAGE COURT STREET RIGHT-OF-WAY, ON-STREET AND OFF-STREET PARKING SPACES AND EMERGENCY TURN-AROUND AREAS, OTHER PAVED OR UNPAVED VEHICLE ACCESS DRIVEWAYS OR PATHWAYS, PARKING OF MOTOR VEHICLES, AND CONTROL OF MOTOR VEHICLE TRAFFIC WITHIN THE PROPOSED HERITAGE CROSSING SUBDIVISION LOCATED AT 5600 SOUTH WOLF ROAD IN THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS.
3. RESOLUTION APPROVING A WAIVER OF THE FIVE (5) ACRE MINIMUM LAND AREA REQUIREMENT UNDER SECTION 10-8-3 (GUIDELINES) OF THE WESTERN SPRINGS VILLAGE CODE AND THE REDUCTION OF CERTAIN PLANNED DEVELOPMENT SUBMISSION MATERIALS UNDER SECTION 10-8-8 (SUBMITTAL REQUIREMENTS) OF THE WESTERN SPRINGS VILLAGE CODE AS REQUESTED BY APPLICANT / CONTRACT PURCHASER MCNAUGHTON DEVELOPMENT, LLC FOR APPROVAL OF A CONDITIONAL USE FOR A PLANNED DEVELOPMENT TO CONSTRUCT THE PROPOSED 29 UNIT HERITAGE CROSSING TOWNHOME DEVELOPMENT AT THE PROPERTY COMMONLY KNOWN AS 5600 SOUTH WOLF ROAD, WESTERN SPRINGS, ILLINOIS.
4. ORDINANCE APPROVING AND ADOPTING AN UPDATED LONG RANGE LAND USE MAP TO THE WESTERN SPRINGS OFFICIAL COMPREHENSIVE LAND USE PLAN FOR PURPOSES OF RECLASSIFYING THE ZONING DESIGNATION OF THE 5600 SOUTH WOLF ROAD PROPERTY, WESTERN SPRINGS, ILLINOIS FROM THE O – LIMITED OFFICE ZONING DISTRICT TO THE R4 - MULTIPLE-FAMILY RESIDENCE DISTRICT TO ALLOW FOR THE CONSTRUCTION THE PROPOSED HERITAGE CROSSING TOWNHOME DEVELOPMENT BY APPLICANT / CONTRACT PURCHASER MCNAUGHTON DEVELOPMENT, LLC.



5. ORDINANCE APPROVING AND AUTHORIZING THE VACATION OF THE 66.00 FEET BY 225.00 FEET PORTION OF THE LAWN AVENUE RIGHT-OF-WAY ADJACENT TO AND WEST OF THE 5600 SOUTH WOLF ROAD PROPERTY LOCATED IN WESTERN SPRINGS, ILLINOIS AND LOT 5 AND LOT 6 OF MAXTED SUBDIVISION, AND APPROVING A PLAT OF VACATION AND RESERVATION OF A STORMWATER DRAINAGE EASEMENT (APPLICANT: MCNAUGHTON DEVELOPMENT, LLC).
6. ORDINANCE APPROVING A MAP AMENDMENT TO REZONE THE 5600 SOUTH WOLF ROAD PROPERTY, WESTERN SPRINGS, ILLINOIS, FROM THE O – LIMITED OFFICE ZONING DISTRICT TO THE R4 - MULTIPLE-FAMILY RESIDENCE DISTRICT; APPROVING AN APPLICATION FOR A CONDITIONAL USE PERMIT FOR A PLANNED DEVELOPMENT FOR THE CONSTRUCTION AND OPERATION OF THE PROPOSED 29 UNIT HERITAGE CROSSING TOWNHOME DEVELOPMENT LOCATED AT THE 5600 SOUTH WOLF ROAD PROPERTY, INCLUDING THE APPROVAL OF THE COMBINED PRELIMINARY / FINAL DEVELOPMENT PLANS, SUBJECT TO VILLAGE PLAN REVIEW PROCESS, AND APPROVAL OF CERTAIN DEVELOPMENT ALLOWANCES, EXCEPTIONS AND VARIATIONS FROM THE VILLAGE ZONING REGULATIONS, INCLUDING A WAIVER OF THE FIVE (5) ACRE MINIMUM LOT AREA REQUIREMENT AND A REDUCTION OF CERTAIN PLANNED DEVELOPMENT SUBMISSION REQUIREMENTS.
7. ORDINANCE AUTHORIZING THE APPROVAL AND EXECUTION OF A PLAT OF ABROGATION FOR STORM SEWER EASEMENT AND PUBLIC UTILITY EASEMENT LOCATED WITHIN THE PROPERTY COMMONLY KNOWN AS 5600 SOUTH WOLF ROAD, WESTERN SPRINGS, ILLINOIS FOR THE CONSTRUCTION OF THE PROPOSED 29 UNIT HERITAGE CROSSING TOWNHOME DEVELOPMENT BY APPLICANT / CONTRACT PURCHASER MCNAUGHTON DEVELOPMENT, LLC.
8. ORDINANCE AUTHORIZING THE APPROVAL AND EXECUTION OF A FINAL PLAT OF HERITAGE CROSSING RESUBDIVISION FOR THE PROPOSED 29 UNIT HERITAGE CROSSING TOWNHOME DEVELOPMENT TO BE CONSTRUCTED AT 5600 SOUTH WOLF ROAD, WESTERN SPRINGS, ILLINOIS BY APPLICANT / CONTRACT PURCHASER MCNAUGHTON DEVELOPMENT, LLC.
9. ORDINANCE APPROVING A MINOR AMENDMENT TO THE CONDITIONAL USE PERMIT FOR A PLANNED DEVELOPMENT ISSUED FOR THE WESTERN SPRINGS TOWNHOMES SUBDIVISION (THE “HERITAGE SPRINGS SUBDIVISION”) LOCATED AT SOUTH OF 55TH STREET AND WEST OF WOLF ROAD IN WESTERN SPRINGS, ILLINOIS RELATIVE TO CONSTRUCTION OF ON-STREET PARKING SPACES WITHIN HERITAGE COURT.
10. RESOLUTION APPROVING A WAIVER OF THE FIVE (5) ACRE MINIMUM LAND AREA REQUIREMENT UNDER SECTION 10-8-3 (GUIDELINES) OF THE WESTERN SPRINGS VILLAGE CODE AND THE REDUCTION OF CERTAIN PLANNED DEVELOPMENT SUBMISSION MATERIALS UNDER SECTION 10-8-8 (SUBMITTAL REQUIREMENTS) OF THE WESTERN SPRINGS VILLAGE CODE AS REQUESTED BY APPLICANT / CONTRACT PURCHASER MCNAUGHTON DEVELOPMENT, LLC FOR APPROVAL OF A CONDITIONAL USE FOR A PLANNED DEVELOPMENT TO CONSTRUCT THE PROPOSED 29 UNIT

HERITAGE CROSSING TOWNHOME DEVELOPMENT AT THE PROPERTY COMMONLY  
KNOWN AS 5600 SOUTH WOLF ROAD, WESTERN SPRINGS, ILLINOIS.

11. Any other document that is approved by the Corporate Authorities of the Village related to the Development.

**Waiver:** The Property Owner agrees that the validity of the Development Documents to be approved by the Corporate Authorities of the Village of Western Springs are subject to the Developer purchasing the Property from the Property Owner. If the Developer does not purchase the Property from the Property Owner, then the Village's approval of the Development Documents shall automatically terminate without any further action being taken by either Party and such Development Documents shall be void and unenforceable. If the Developer does not purchase the Property from the Property Owner, the Property Owner agrees to waive all claims, causes of action and damages of any kind that the Property Owner could file against the Village arising out of or related to the termination of the Development Documents. The Developer is required to provide written notice to the Village within five (5) calendar days of the termination of the real estate purchase contract that it has entered into with the Property Owner related to the Property.

**CASEY GAIK**

By: \_\_\_\_\_  
Casey Gaik

Date: \_\_\_\_\_, 202\_\_.

**FRAN GAIK**

By: \_\_\_\_\_  
Fran Gaik

Date: \_\_\_\_\_, 202\_\_.

STATE OF ILLINOIS     )  
                                      ) SS  
COUNTY OF C O O K    )

**CLERK'S CERTIFICATE**

I, Edward Tymick, Village Clerk of the Village of Western Springs, Cook County, Illinois, certify that the attached document is a true and correct copy of the Resolution now on file in my office, entitled:

**RESOLUTION NO. 25-\_\_\_\_\_**

**A RESOLUTION AUTHORIZING THE APPROVAL AND EXECUTION OF A  
REDEVELOPMENT AND MAINTENANCE AGREEMENT BY AND BETWEEN THE  
VILLAGE OF WESTERN SPRINGS, ILLINOIS AND MCNAUGHTON DEVELOPMENT, LLC FOR  
THE HERITAGE CROSSING RESIDENTIAL TOWNHOME DEVELOPMENT  
(5600 South Wolf Road, Western Springs, Illinois)**

which was passed by a roll call vote of the Village President and Board of Trustees of the Village of Western Springs at a Special Meeting thereof, held on the 10th day of February, 2025, at which meeting a quorum was present, and approved by the Village President of the Village of Western Springs on the 10th day of February, 2025.

I further certify that the vote on the question of the passage of the Resolution by the Village President and Board of Trustees of the Village of Western Springs was taken by the Ayes and Nays and recorded in the Journal of Proceedings of the Village President and Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

AYES:\_\_\_\_\_

NAYS:\_\_\_\_\_

ABSENT:\_\_\_\_\_

I do further certify that the original Resolution, of which the attached is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Village of Western Springs this 10th day of February, 2025.

\_\_\_\_\_  
Edward Tymick, Village Clerk

## Attachment 10.

RESOLUTION NO. 25- \_\_\_\_\_  
VOTE: \_\_\_\_\_  
AYES: \_\_\_\_\_  
NAYS: \_\_\_\_\_  
ABSENT: \_\_\_\_\_  
ABSTAIN: \_\_\_\_\_  
DATE: February 10, 2025.  
OTHER: None.

A RESOLUTION AUTHORIZING THE APPROVAL AND EXECUTION OF AN AGREEMENT MADE BETWEEN THE VILLAGE OF WESTERN SPRINGS AND MCNAUGHTON DEVELOPMENT, LLC REGULATING THE USE OF THE PRIVATELY-OWNED HERITAGE COURT STREET RIGHT-OF-WAY, ON-STREET AND OFF-STREET PARKING SPACES AND EMERGENCY TURN-AROUND AREAS, OTHER PAVED OR UNPAVED VEHICLE ACCESS DRIVEWAYS OR PATHWAYS, PARKING OF MOTOR VEHICLES, AND CONTROL OF MOTOR VEHICLE TRAFFIC WITHIN THE HERITAGE CROSSING SUBDIVISION LOCATED AT 5600 SOUTH WOLF ROAD IN THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS.

**WHEREAS**, McNaughton Development, LLC, with its principal business office located at 11S220 Jackson Street, Burr Ridge, Illinois 60527 ("Applicant"), is the contract purchaser and prospective developer of the real property commonly known as 5600 South Wolf Road, Western Springs, Illinois ("Property"). Casey and Fran Gaik (collectively the "Property Owner") are the fee simple title owners of the Property and have submitted a written authorization to the Village of Western Springs ("Village") that allowed the Applicant to file with the Village a completed "General Information Application for Land Use and Development in the Village" form with supporting documents (the "Application") for the redevelopment of the Property as a twenty-nine (29) unit residential townhome development (the "Development"). The Property Owner has further executed a "Written Consent and Waiver" to allow McNaughton Development, LLC to enter into this Agreement, a copy of which is on file with the Community Development Department and is incorporated herein by reference and made a part hereof. The Property is legally described in **Exhibit "A"** attached hereto and made a part hereof; and

**WHEREAS**, in 2024, the Applicant submitted the Application to the Village requesting approval of a conditional use permit for a planned development, a map amendment, an amendment to the Village's Comprehensive Land Use Plan, a plat of consolidation, a plat of abrogation for storm sewer easement and public utility easement, a plat of right-of-way vacation relating to a sixty-six (66.00) foot by two hundred twenty-five (225.00) foot portion of Lawn Avenue (the "ROW Parcel"), which is utilized as a stormwater detention basin, certain development allowances, exceptions and variations, and other zoning relief as noted below in accordance with the applicable provisions of the Village's Development Control Ordinance ("DCO"), in order to construct the Development, which is commonly referred to as the Heritage Crossing Subdivision or the Heritage Crossing Townhome Development. A copy of the Application is on file with the Village's Community Development Department and is incorporated herein by reference; and

**WHEREAS**, the proposed Development consists of nine (9) townhome buildings with unit counts of either three-units or four-units. Each dwelling unit will have a balcony, a rear patio, and an attached, front-loaded garage with a driveway accessed by a private street through the Development. The Development will have off-street community parking spaces, possible on street-parking, sidewalks, stormwater detention basins, open space and streetlights. The Applicant proposes to extend private Heritage Court to the southeast through the Property to the Development's access driveway proposed along Wolf Road. The existing portion of Heritage Court, a private road, currently services only the

Heritage Springs Townhome Development, connects to 55th Street to the north of the Property and is maintained by the Heritage Springs Homeowners Association. The Applicant's plans indicate that the new portion of Heritage Court will match the existing road's width. An automatic gate will separate the Development from the existing Heritage Springs Subdivision to the north. Vehicle access between the adjacent subdivisions will be controlled by a swing gate and gate access will only be granted to residents of both subdivisions with clicker-access and Village emergency service vehicles. The swing gate will be improved with an Opticom system that will give Village emergency service vehicles access similar to the systems on streetlights. The Developer agrees to accept title to a sixty-six (66.00) foot by two hundred twenty-five (225.00) foot portion of Lawn Avenue (the "ROW Parcel") that will be vacated by the passage of a vacation ordinance and a plat of right-of-way vacation and retention of stormwater facility easement by the Village for purposes of incorporation into the Property and the Development so that the Developer can construct an expanded stormwater detention basin system as part of the construction of the Development; and

**WHEREAS**, based on the Application submitted by the Applicant, the Village conducted a public hearing relative to certain zoning relief requested by the Applicant in order to construct the Development, pursuant to prior notice, postings and newspaper publication as required by the applicable provisions of State law, including the Illinois Open Meetings Act, 5 ILCS 120/ and Division 11-13 of the Illinois Municipal Code (65 ILCS 5/ 11-13), and the applicable provisions of the DCO (the "Public Hearing"). The Public Hearing was conducted by the Village Plan Commission and commenced on August 13, 2024 and concluded November 18, 2024. The Village Plan Commission issued Recommendation No. PC-2024-02 on November 18, 2024 that favorably recommended approval of the zoning relief contained in the Application, including a Comprehensive Plan Amendment to the Long-Range Land Use Map, a Map Amendment (Rezoning of the Property from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence District), a Conditional Use for a Planned Development, and Exceptions / Variations to the Village Development Control Ordinance ("DCO"), and a Subdivision approval for the construction, operation, and maintenance of a Townhome Subdivision Development referred to as "Heritage Crossing", and a single stage Final Plan review and approval process (i.e., a combined Preliminary Plan / Final Plan approval) for the Development per Subsection 10-8-8(C) of the DCO, provided that the Applicant complies with the submittal and plan review requirements of Section 10-8-5(C) (Final Plan) of the DCO, subject to certain stated conditions of approval (the "Development Zoning Relief"). A copy of Plan Commission Recommendation No. 24-02 is incorporated herein by reference and is on file with the Community Development Department; and

**WHEREAS**, after completion of the required public hearing before the Village Plan Commission, on February 10, 2025, with the passage of **Ordinance No. 25-**, the President and Board of Trustees of the Village of Western Springs ("Corporate Authorities") granted approval the Development Zoning Relief; and

**WHEREAS**, as part of the conditions of approval of the Development contained in **Ordinance No. 25-**, it is necessary for the Village and the Developer to approve and enter into the attached "AGREEMENT MADE BETWEEN THE VILLAGE OF WESTERN SPRINGS AND MCNAUGHTON DEVELOPMENT, LLC REGULATING THE USE OF THE PRIVATELY-OWNED HERITAGE COURT STREET RIGHT-OF-WAY, ON-STREET AND OFF-STREET PARKING SPACES AND EMERGENCY TURN-AROUND AREAS, OTHER PAVED OR UNPAVED VEHICLE ACCESS DRIVEWAYS OR PATHWAYS, PARKING OF MOTOR VEHICLES, AND CONTROL OF MOTOR VEHICLE TRAFFIC WITHIN THE HERITAGE CROSSING SUBDIVISION LOCATED AT 5600 SOUTH WOLF ROAD IN THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS" (the "Traffic and Parking Agreement") relative to the enforcement of traffic regulations and parking

regulations within the proposed Heritage Crossing Subdivision and its private street, Heritage Court, any emergency turn-around areas, or other paved or unpaved vehicle access driveways or pathways, and each of its private on-street parking spaces and off-street resident parking areas (the "PARKING AND TRAFFIC REGULATIONS"). The Traffic and Parking Agreement does not cover parking on private driveways that serve the individual townhome units. A copy of the Traffic and Parking Agreement is attached hereto as **Exhibit "B"** and made a part hereof; and

**WHEREAS**, at open public meetings held on January 9, 2025 and January 16, 2025, the Village's Planning and Zoning Committee ("Committee") reviewed and discussed the proposed Heritage Crossing Townhome Development and the related Traffic and Parking Agreement, and received input from the Village staff on the matter, and provided an opportunity for public input on the matter. At its January 16, 2025 meeting, the Committee recommended that the Corporate Authorities of Village **approve / not approve / consider** the Traffic and Parking Agreement; and

**WHEREAS**, at open public meetings held on January 13, 2025, January 27, 2025 and February 10, 2025, the Corporate Authorities of Village reviewed and discussed the Committee's recommendation regarding the proposed Heritage Crossing Townhome Development and the related Traffic and Parking Agreement, and received input from the Village staff on the matter and provided an opportunity for input from the public on the matter. At its February 10, 2025 meeting, the Corporate Authorities of the Village accepted the Committee's recommendation regarding approval of the Traffic and Parking Agreement; and

**WHEREAS**, the Corporate Authorities of the Village of Western Springs are authorized, under the applicable provisions of the Illinois Municipal Code (65 ILCS 5/), and the intergovernmental cooperation powers set forth at Article VII (Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) and Section 10 (Intergovernmental Cooperation) of the Constitution of the State of Illinois of 1970, to approve and enter into the Traffic and Parking Agreement , and further find that it is protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners, local businesses and the public to approve and enter into the Traffic and Parking Agreement.

**BE IT ORDAINED BY THE VILLAGE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:**

**SECTION 1: Incorporation.** Each Whereas paragraph above is incorporated by reference into this Section 1 and made a part hereof as material and operative provisions of this Resolution.

**SECTION 2: Approval and Execution of Traffic and Parking Agreement and Other Related Documents.** The Village President and Board of Trustees of the Village of Western Springs authorize the approval and execution of the attached Traffic and Parking Agreement, substantially in the form attached hereto as **Exhibit "B"**, which may contain certain non-substantive and non-financial modifications that are approved by the Village Attorney, and all other instruments and documents that are necessary to fulfill the Village's obligations under the Traffic and Parking Agreement .

**SECTION 3: Delivery of Traffic and Parking Agreement and Other Documents.** After approval and execution of this Resolution and the Traffic and Parking Agreement by the Village President and Village Clerk, or their designees, the Village Clerk's Office shall arrange for the delivery of certified copies of this Resolution and executed versions of the attached Traffic and Parking Agreement to the Church



and the Developer for record retention purposes.

**SECTION 4. Termination of Resolution for Failure of Developer to Acquire Title to the Property.**

This validity of this Resolution is subject to the Developer purchasing the Property from the Property Owner. In the event the Developer does not purchase the Property from the Property Owner, upon written notice delivered to the Village Manager of the termination of the real estate purchase contract entered into between the Property Owner and the Developer, this Resolution shall automatically terminate without further action by the Corporate Authorities of the Village and shall be void and unenforceable. If the Developer does not purchase the Property, the Developer agrees to waive all claims, causes of action and damages of any kind that the Developer could file against the Village arising out of or related to the termination of this Resolution. The Developer is required to provide written notice to the Village within five (5) calendar days of the termination of the real estate purchase contract.

**SECTION 5: Effective Date.** This Resolution shall be in full force and effect from and after its passage and approval as provided by State law.

**PASSED** by the Village President and Board of Trustees of the Village of Western Springs, Cook County, Illinois, on a roll call vote at a Special Meeting thereof, held on the 10th day of February, 2025, and approved by me as Village President, and attested by the Village Clerk on the same day.

---

Heidi Rudolph, Village President

**ATTEST:**

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Edward Tymick, Village Clerk

**Exhibit "A"**

**Legal Description for 5600 South Wolf Road, Western Springs, Illinois.**

PARCEL 1: THE WEST  $\frac{1}{2}$  OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) OF THE NORTH EAST  $\frac{1}{4}$  OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 2: LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTH EAST  $\frac{1}{4}$  OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 IN COOK COUNTY, ILLINOIS.

**Legal Description for the Lawn Avenue ROW Parcel:**

THAT PART OF THE 66 FEET WIDE LAWN AVENUE, LYING SOUTH OF THE NORTH LINE OF WESTERN SPRINGS TOWNHOMES, RECORDED MARCH 29, 1999, AS DOCUMENT NO. 99297584, LYING NORTH OF THE SOUTH LINE OF RIDGEWOOD UNIT 12, RECORDED OCTOBER 6, 1965, AS DOCUMENT NO. 19610359, LYING WEST OF THE EAST LINE OF THE WEST  $\frac{1}{2}$  OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION, RECORDED NOVEMBER 13, 1948, AS DOCUMENT NO. 14442019, AND LYING EAST OF THE WEST LINE OF RIDGEWOOD UNIT NO. 11, RECORDED APRIL 3, 1964, AS DOCUMENT NO. 19089916, IN THE EAST HALF OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS.

PINs: 18-18-200-017-0000  
18-18-200-038-0000  
18-18-200-001-0000 (Lawn Avenue ROW Parcel)

**Exhibit "B"**

**AGREEMENT MADE BETWEEN  
THE VILLAGE OF WESTERN SPRINGS AND MCNAUGHTON DEVELOPMENT, LLC  
REGULATING THE USE OF THE PRIVATELY-OWNED HERITAGE COURT STREET RIGHT-OF-WAY,  
ON-STREET AND OFF-STREET PARKING SPACES AND EMERGENCY TURN-AROUND AREAS,  
OTHER PAVED OR UNPAVED VEHICLE ACCESS DRIVEWAYS OR PATHWAYS,  
PARKING OF MOTOR VEHICLES, AND CONTROL OF MOTOR VEHICLE TRAFFIC  
WITHIN THE HERITAGE CROSSING SUBDIVISION LOCATED AT 5600 SOUTH WOLF ROAD IN THE  
VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS**

(attached)

|                                                                                                                                                                                                                                                                                                                                       |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <p><b>Recording Requested by and When Recorded Return to:</b></p> <p>Michael T. Jurusik<br/>Klein, Thorpe and Jenkins, Ltd.<br/>900 Oakmont Lane, Suite 301<br/>Westmont, Illinois 60559</p> <p><b>Record against:</b><br/><b>PINs:</b><br/><b>18-18-200-017-0000</b><br/><b>18-18-200-038-0000</b><br/><b>18-18-200-001-0000</b></p> |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

**AN AGREEMENT MADE BETWEEN THE VILLAGE OF WESTERN SPRINGS AND  
MCNAUGHTON DEVELOPMENT, LLC REGULATING THE USE OF THE PRIVATELY OWNED  
HERITAGE COURT STREET RIGHT-OF-WAY, ON-STREET AND OFF-STREET PARKING SPACES AND  
EMERGENCY TURN-AROUND AREAS, OTHER PAVED OR UNPAVED VEHICLE ACCESS DRIVEWAYS OR  
PATHWAYS, PARKING OF MOTOR VEHICLES, AND CONTROL OF MOTOR VEHICLE TRAFFIC  
WITHIN THE HERITAGE CROSSING SUBDIVISION LOCATED AT 5600 SOUTH WOLF ROAD  
IN THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS**

**THIS AGREEMENT** ("Agreement") is made and entered into by and between the Village of Western Springs (the "VILLAGE"), a non-home rule Illinois municipal corporation, and McNaughton Development, LLC, an Illinois limited liability company, with its principal corporate office located at 11S220 Jackson Street, Suite #101, Burr Ridge, Illinois (the "DEVELOPER"), by and through their respective duly authorized agents and/or representatives, relative to the enforcement of traffic regulations and parking regulations within the proposed Heritage Crossing Subdivision and its private street, Heritage Court, any emergency turn-around areas, or other paved or unpaved vehicle access driveways or pathways, and each of its private on-street parking spaces and off-street resident parking areas (the "PARKING AND TRAFFIC REGULATIONS"). The Traffic and Parking Agreement does not cover parking on private driveways that serve the individual townhome units. The VILLAGE and the DEVELOPER are at times referred to below individually as a "Party" and collectively as the "Parties".

**RECITALS**

**WHEREAS**, the VILLAGE is a duly constituted and existing non-home rule municipality within the meaning of Section 1 (Municipalities And Units Of Local Government) and Section 7 (Counties and Municipalities Other Than Home Rule Units) of Article VII (Local Government) of the Constitution of the State of Illinois of 1970. The VILLAGE is authorized, under the provisions of Section 10 (Intergovernmental Cooperation) of Article VII (Local Government) of the Constitution of the State of Illinois of 1970, to contract and otherwise associate with individuals, associations and corporations in any manner not prohibited by law. The VILLAGE has statutory authority to promote the health, safety and welfare of the VILLAGE and its residents, to encourage private development in order to enhance the

local tax base, and to enter into contractual agreements with developers and redevelopers to achieve these objectives; and

**WHEREAS**, the DEVELOPER is the contract purchaser and prospective developer of the real property commonly known as 5600 South Wolf Road, Western Springs, Illinois ("Property") and has filed a General Information Application for Land Use and Development in the VILLAGE with supporting documents (the "Application") for the rezoning and redevelopment of the 5600 Wolf Road Property (the "Property"). Casey and Fran Gaik (the "Property Owner") are the fee simple title owners of the Property, and have submitted a written authorization to the VILLAGE that allowed the Applicant to file the Application for the redevelopment of the Property as a twenty-nine (29) unit residential townhome development as described in more detail below (the "Development"). The Property Owner has further executed a "Written Consent and Waiver" to allow McNaughton Development, LLC to enter into this Agreement, a copy of which is on file with the Community Development Department and is incorporated herein by reference and made a part hereof. The Property is approximately 2.755 acres and is legally described in **EXHIBIT "A"** attached hereto and made a part hereof. The Property Tax Index Numbers for the Property are identified as follows: (1) PIN: 18-18-200-017-0000, (2) PIN: 18-18-200-038-0000, and (3) PIN: 18-18-200-001-0000 (collectively the "Property PINs"); and

**WHEREAS**, the DEVELOPER proposes to redevelop the Property with twenty-nine (29) unit residential townhomes consisting of nine (9) townhome buildings with varying unit counts of either three-units or four-units. Each dwelling unit will have a balcony, a rear patio, and an attached, front-loaded garage with driveways accessed by a private street through the Development. The Development will have off-street community parking spaces, possible on street-parking, sidewalks, an expanded stormwater detention basin system and stormwater management facilities and other private and public infrastructure, open space areas, landscaped areas and private streetlights. The Applicant proposes to extend private Heritage Court to the southeast through the Property to the Development's access driveway proposed along Wolf Road. The existing portion of Heritage Court, a private road, currently services only the Heritage Springs Townhome Development, connects to 55th Street to the north of the Property and is maintained by the Heritage Springs Homeowners Association. An automatic gate will separate the Development from the existing Heritage Springs Subdivision to the north. Vehicle access between the adjacent subdivisions will be controlled by a swing gate, and gate access will only be granted to residents of both subdivisions with clicker-access and VILLAGE emergency service vehicles. The swing gate will be improved with an Opticom system that will give VILLAGE emergency service vehicles access similar to the systems on streetlights. The Developer agrees to accept title to a sixty-six (66.00) foot by two hundred twenty-five (225.00) foot portion of Lawn Avenue (the "ROW Parcel") that will be vacated by the passage of a vacation ordinance and a plat of right-of-way vacation and retention of stormwater facility easement by the Village for purposes of incorporation into the Property and the Development so that the Developer can construct an expanded stormwater detention basin system as part of the construction of the Development. A copy of the **SITE PLAN FOR THE HERITAGE CROSSING SUBDIVISION AND HERITAGE COURT (PRIVATE STREET)** ("Site Plan") for the Development, revised as of November 5, 2024, is attached hereto as **EXHIBIT "B"** and made a part hereof; and

**WHEREAS**, the DEVELOPER and the VILLAGE have agreed to enter into this Agreement relative to the enforcement of traffic regulations and parking regulations within the proposed Heritage Crossing Subdivision and its private street, Heritage Court, any emergency turn-around areas, or other paved or unpaved vehicle access driveways or pathways, and each of its private on-street parking spaces and off-street resident parking areas (the "PARKING AND TRAFFIC REGULATIONS"). This Agreement does not cover parking on private driveways that serve the individual townhome units; and

**WHEREAS**, Section 11-209 of the Illinois Vehicle Code, 625 ILCS 5/11-209, authorizes and empowers the VILLAGE to enter into an agreement with the DEVELOPER, with the OWNER'S consent, to regulate and control motor vehicle traffic and motor vehicle parking, and the use of motor vehicle parking areas, within the proposed Heritage Crossing Subdivision, which is located within the corporate limits of the VILLAGE; and

**WHEREAS**, the President and the Board of Trustees of the VILLAGE deem it necessary for the health, safety and welfare of the citizens and residents of the VILLAGE, and for the health, safety and welfare of those persons using the Heritage Court right-of-way and the on-street and off-street parking spaces and the emergency turn-around areas within the proposed Heritage Crossing Subdivision, to regulate and control motor vehicle traffic and motor vehicle parking, and the use of the motor vehicle parking areas in the proposed Heritage Crossing Subdivision; and

**WHEREAS**, the DEVELOPER, with the OWNER'S consent, has filed a written request that the VILLAGE and its Department of Law Enforcement Services ("POLICE DEPARTMENT") enforce the PARKING AND TRAFFIC REGULATIONS within the proposed Heritage Crossing Subdivision.

### **AGREEMENT**

**NOW, THEREFORE**, in consideration of the foregoing and in consideration of the Parties' mutual understandings, promises, covenants and agreements as set forth below, the Parties agree as follows:

**Section 1: Incorporation.** The foregoing Recitals are incorporated by reference into Section 1 of this Agreement as material provisions of this Agreement.

**Section 2: Parking And Traffic Regulations.** The VILLAGE agrees to establish under this Agreement and enforce the following PARKING AND TRAFFIC REGULATIONS regarding motor vehicle movement, parking and control on and within the Heritage Court right-of-way, the on-street and off-street parking spaces, and the emergency turn-around areas within the proposed Heritage Crossing Subdivision, to regulate and control motor vehicle traffic and motor vehicle parking, and the use of the motor vehicle parking areas within the proposed Heritage Crossing Subdivision, as set forth below, and alternatively as contained in the attached document entitled "**MAP OF TRAFFIC SIGNAGE AND ON-STREET AND OFF-STREET PARKING REGULATION SIGNAGE, OTHER MOTOR VEHICLE REGULATORY SIGNAGE AND SCHEDULE OF REGULATIONS FOR HERITAGE COURT AND THE HERITAGE CROSSING SUBDIVISION DATED \_\_\_\_\_, 202\_\_**" (attached hereto as **EXHIBIT "C"** and made a part hereof):

- (A) *The posting of stop signs and/or yield signs at specified locations within the Heritage Crossing Subdivision, as the VILLAGE and the DEVELOPER deem necessary for the safety and convenience of the public and the users of the Heritage Court and the on-street and off-street parking spaces and the emergency turn-around areas within the Heritage Crossing Subdivision, and at all exits into a public highway within the Heritage Crossing Subdivision;*
- (B) *All motor vehicle movement shall be within the designated traffic lanes, subject to "turning of vehicle" regulations and where marked by arrow or posted "One Way" no motor vehicle movement shall be in the opposite direction;*
- (C) *The stopping, standing or parking of a motor vehicle on Heritage Court or within the Heritage Crossing Subdivision by anyone not employed by, or otherwise required or authorized by, the DEVELOPER shall be prohibited;*
- (D) *The stopping, standing or parking of commercial vehicles (vehicles of the second division as defined by 625 ILCS 5/1-146, other than recreational vehicles), which*



*are required to have other than Class B State of Illinois license plates as defined by 625 ILCS 5/3-815, on Heritage Court or within the Heritage Crossing Subdivision, other than temporarily for such time as is necessary for the reasonably expeditious loading and unloading of said vehicles when making pick-ups or deliveries to persons who own or lease or occupy a townhome or the DEVELOPER, or its designee, shall be prohibited;*

- (E) No motor vehicle shall be operated so as to cause or produce unnecessary loud, raucous, excessive or unusual noises, by the playing of the vehicle radio, by the racing of the motor, by lack of muffler cutout, by tire friction upon rapid turning or weaving, by spinning of wheel from standing or slow moving position produced by sudden unnecessary acceleration, by continuous unnecessary sounding of a horn or other noise or signal device, or by running of refrigeration units or compressors on the motor vehicle;*
- (F) The stopping, standing or parking of a motor vehicle within any designated handicapped parking area, without the proper display of the handicapped status of the occupant of said motor vehicle by way of either special state license plates or a locally issued handicapped status placard, shall be prohibited;*
- (G) The maximum speed for any motor vehicle shall not exceed fifteen (15) miles per hour OR twenty five (25) miles per hour;*
- (H) Any motor vehicle parked or abandoned during a snow storm, flood, fire or other public emergency, or found unattended on Heritage Court or within the Heritage Crossing Subdivision, where it constitutes an obstruction to traffic or where stopping, standing or parking is prohibited shall be towed at the owner's expense in accordance with the applicable provisions of Title 7 (Motor Vehicles) of the Western Springs Municipal Code;*
- (I) The stopping, standing or parking of a motor vehicle in, or otherwise obstructing, any fire lane, safety zone, loading zone or properly designated no parking zone shall be prohibited;*
- (K) The regulation of pedestrians and of pedestrian crossings that cross Heritage Court or within the Heritage Crossing Subdivision; and*
- (L) The establishment and enforcement of such additional reasonable rules and regulations in regard to traffic and parking on Heritage Court or within the Heritage Crossing Subdivision as local conditions may require for the safety and convenience of the public or of the users of Heritage Court or the Heritage Crossing Subdivision.*

**Section 3: Signage.** The DEVELOPER, at its own cost and expense, agrees to erect and post all necessary signs and provide for all necessary pavement markings for the regulation of traffic and the use of the motor vehicle parking areas on Heritage Court or within the Heritage Crossing Subdivision as is necessary to carry out the PARKING AND TRAFFIC REGULATIONS, and agrees to bear the costs and expense of the maintenance thereof.

**Section 4: Violations.** When violations of the PARKING AND TRAFFIC REGULATIONS arise, upon request of the DEVELOPER, the VILLAGE agrees to inspect and regulate motor vehicle traffic and motor vehicle parking on Heritage Court and within the Heritage Crossing Subdivision in accordance with the PARKING AND TRAFFIC REGULATIONS, and, in relation thereto, agrees to furnish customary police services necessary for the enforcement of the aforementioned regulations. The VILLAGE is not obligated to permanently dedicate a police officer to monitor or inspect Heritage Court and the Heritage Crossing Subdivision on a daily basis. The level of police service to be provided by the VILLAGE in

relation to Heritage Court and the Heritage Crossing Subdivision shall be the same as is provided to any other person who contacts the VILLAGE to report a potential violation of law and requests assistance or to file a complaint.

**Section 5: Effective Date of Parking and Traffic Regulations.** After the Parties approve this Agreement, at such time as the PARKING AND TRAFFIC REGULATIONS established on Heritage Court and within the Heritage Crossing Subdivision under this Agreement become effective pursuant to 625 ILCS 5/11-209 (three (3) calendar days after the recording of the Agreement with the Cook County Clerk's Office, Recording Division ("CCCORD")), it shall be an offense for any person to violate or fail to comply with or fail to conform to any of the PARKING AND TRAFFIC REGULATIONS set forth above in Section 2. Such offense shall be punishable by a fine in accordance with the applicable Ordinances of the VILLAGE.

**Section 6: Annual Inspection of Signage by Developer.** The DEVELOPER shall, at least once annually, inspect Heritage Court and the Heritage Crossing Subdivision to verify and determine that all required signs and/or pavement striping are in place and in good condition. A letter confirming the findings of the annual inspection shall be sent by the DEVELOPER to the Village Manager. If the VILLAGE, on its own information or based on notice provided to it by any person, determines at any time that additional signs and/or pavement striping are needed, or that existing signs and/or pavement striping are in need of repair or replacement, the VILLAGE shall notify the DEVELOPER in writing of such necessary additional pavement striping or sign installations or repair and/or replacement work. The DEVELOPER, at its own cost and expense, shall install such additional signs and/or pavement striping, or undertake the repair and/or replacement of such signs and/or pavement striping on Heritage Court and within the Heritage Crossing Subdivision as requested by the VILLAGE within thirty (30) calendar days of the VILLAGE'S notice or such other time agreed upon by the Parties. The VILLAGE has no duty or obligation to inspect the condition of parking and traffic signs posted on Heritage Court and within the Heritage Crossing Subdivision pursuant to this Agreement.

**Section 7: Authorization to Enforce State and Local Laws.** The DEVELOPER authorizes the VILLAGE to enforce such other State or local laws, not specifically referenced in Section 2 above, on Heritage Court and within the Heritage Crossing Subdivision, and the VILLAGE agrees to enforce such State or local laws, if warranted.

**Section 8: Indemnification, Defense and Hold Harmless.** The DEVELOPER shall indemnify, defend and hold harmless the VILLAGE, and its officers, appointed and elected officials, president and trustees, employees, engineers, attorneys, volunteers and agents, with respect to any claim or loss, including but not limited to attorney fees, costs and expenses of litigation, claims and judgments in connection with any and all claims for injuries, death, illness or damages of any kind which may arise, either directly or indirectly, out of the VILLAGE'S performance of the terms of this Agreement, except for any intentional wrongful acts on the part of the VILLAGE or its officers, appointed and elected officials, president and trustees, employees, engineers, attorneys, volunteers or agents.

**Section 9: Insurance.** The DEVELOPER shall maintain a Comprehensive General Liability Insurance Policy which specifically names the VILLAGE, and its officers, appointed and elected officials, president and trustees, employees, engineers, attorneys, volunteers and agents as additional insureds. The coverage shall be in the minimum amount of One Million Dollars (\$1,000,000.00) per occurrence and Two Million Dollars (\$2,000,000.00) in the aggregate or in such other amounts agreed to by the Parties on an annual basis. The DEVELOPER shall keep the coverage in full force and effect during the term of this Agreement, provide a certificate of insurance to the Village Manager on an annual or

renewal basis, and the coverage shall not be terminated or canceled without thirty (30) calendar days prior written notice to the VILLAGE.

**Section 10: Term; Termination; Notice.** This Agreement shall be in full force and effect from and after its date of approval by the VILLAGE for a period of twenty (20) years thereafter, unless terminated as provided for in this Section or unless extended in writing by mutual agreement of the Parties for one or more twenty (20) year terms. This Agreement may be terminated for any reason by either Party upon thirty (30) calendar days prior written notice to the other Party. Whenever notice is required to be sent to either Party, it shall be addressed as follows:

|                                                                                                                                   |                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| A. If to the VILLAGE:<br>Village Manager<br>Village of Western Springs<br>740 Hillgrove Avenue<br>Western Springs, Illinois 60558 | B. If to the OWNER:<br>Paul McNaughton, Manager<br>McNaughton Development, LLC<br>11S220 Jackson Street, Suite #101<br>Burr Ridge, Illinois 60527 |
|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|

All notices shall be sent by personal delivery or certified mail, return receipt requested, and shall be deemed given as of the date of the personal delivery or, if given by certified mail, three (3) calendar days from the date of mailing.

**Section 11: Authority to Enter into this Agreement.** The DEVELOPER and the VILLAGE warrant that they have the full power and authority to enter into this Agreement and have been properly authorized to do so by the Corporate Authorities of the VILLAGE and the required corporate action of the DEVELOPER. The DEVELOPER warrants and represents to the VILLAGE that: (i) the DEVELOPER has the full and complete right, power and authority to enter into this Agreement and to agree to the terms, provisions and conditions set forth in this Agreement and to bind the Property as set forth in this Agreement; (ii) all legal actions needed to authorize the execution, delivery and performance of this Agreement by the DEVELOPER have been taken; and (iii) neither the execution of this Agreement nor the performance of the obligations assumed by the DEVELOPER will: (a) result in a breach or default under any agreement to which the DEVELOPER is a party or to which it or the Property is bound; or (b) violate any statute, law, restriction, court order or agreement to which the DEVELOPER or the Property are subject.

**Section 12: Entire Agreement.** This Agreement constitutes the entire understanding between the VILLAGE and the DEVELOPER with respect to the subject matter contained herein, and supersedes any and all prior understandings and/or agreements between the Parties, whether written, oral or otherwise. Any and all representations, agreements, promises and/or understandings not expressly set forth herein are null, void and of no legal effect.

**Section 13: Amendments.** This Agreement may be modified or amended only by the mutual consent of the Parties. Any modification or amendment of this Agreement must be in writing, signed by the Parties, duly executed, and then filed with the CCCORD. Any attempt to modify or amend this Agreement that fails to conform to the aforementioned requirements shall be null, void and of no legal effect.

**Section 14: Counterparts.** This Agreement may be executed in any number of counterparts, with each counterpart deemed to be an original. This Agreement shall be effective on the date that the last signatory executes this Agreement.

**Section 15: Severability.** The terms, conditions and provisions of this Agreement shall be severable, and if any term, condition or provision is found to be unenforceable for any reason whatsoever, the remaining terms, conditions and provisions shall remain in full force and effect.

**Section 16: Governing Law; Venue.** This Agreement is entered into under, and shall be governed, enforced and interpreted for all purposes under the laws of the State of Illinois. For purposes of any litigation brought in regard to this Agreement, the Parties agree that such litigation shall only be brought in the Circuit Court of Cook County, Illinois or the United States District Court located in Chicago, Illinois, and consent to the jurisdiction of said courts.

**Section 17: Enforcement.** Either Party to this Agreement may enforce or compel the performance of this Agreement, in law or in equity, by suit, action, mandamus, or any other proceeding including without limitation specific performance, except that the DEVELOPER agrees that it will not seek, and does not have the right under any circumstances to seek, to recover a judgment against any VILLAGE elected or appointed official, officer, employee, agent, representative, engineer, or attorney on account of the negotiation, execution, or breach of this Agreement.

**Section 18: Successors and Assigns; Assignment and Assumption of the Agreement.** The term "DEVELOPER" includes McNaughton Development, LLC and its transferees, successors-interest, all legal or beneficial owners of record, assigns, tenants, licensees, and all subsequent owners of the Property or any part of the Property, or any other person and each and all homeowners associations or their equivalent within the Property. The DEVELOPER shall be liable for all of the DEVELOPER'S obligations under this Agreement. All obligations assumed by the DEVELOPER under this Agreement shall be binding on the DEVELOPER, and on any and all of the DEVELOPER'S successors and assigns, and on any and all of the respective successor owners of all or any portion of the Property. To assure that the DEVELOPER'S successors, assigns and successor owners of all or any portion of the Property have notice of this Agreement and the obligations created by it, the DEVELOPER shall:

1. Deposit with the Village Clerk, within thirty (30) calendar days after the closing date at which the DEVELOPER obtains fee simple title to the Property, which is referred to as the "Acquisition Date", any consents or other documents necessary to authorize the VILLAGE to record a Memorandum of this Agreement against title to the Property in form and substance reasonably acceptable to the DEVELOPER and the VILLAGE with the CCCORD;
2. Notify the VILLAGE in writing at least thirty (30) calendar days prior to any date that the DEVELOPER intends to transfer fee title to any portion of the Property to any person not a Party to this Agreement;
3. File against title to the Property with the CCCORD a Memorandum of this Agreement or other similar reference(s) to this Agreement sufficient to put third parties on notice of the existence of this Agreement; and
4. Require, prior to the transfer of all or any portion of the Property to any person or entity not a Party to this Agreement that occurs prior to the substantial completion of the Development, the transferee to execute an enforceable written assignment and assumption agreement, in form and substance reasonably approved by the Village Attorney (the "Transferee Assignment and Assumption Agreement"), agreeing to be bound by this Agreement, and to provide the VILLAGE, after request, with reasonable assurance of the financial ability of the transferee to meet any remaining obligations under this Agreement. The Transferee Assignment and Assumption Agreement shall be filed against title to the Property with the CCCORD and shall obligate the new owner of the Property from time to time to perform the obligations of the DEVELOPER under this

Agreement and shall require notice to the VILLAGE of any transfer of the Property, which memorandum shall be in a form and substance reasonably satisfactory to the VILLAGE and the DEVELOPER.

**Section 19: Binding Agreement.** This Agreement will run with and bind the Property as long as the Development and its homeowners association continues to exist and operate, and will inure to the benefit of and be enforceable by the DEVELOPER, the homeowners association and the VILLAGE, provided it is renewed by the Parties if the Agreement terminates due to the expiration of its initial twenty (20) year term. The obligations of the DEVELOPER under this Agreement are binding on the DEVELOPER, on all of the DEVELOPER'S transferees, successors-interest, all legal or beneficial owners of record, assigns, tenants, licensees and all subsequent owners of the Property or any part of the Property and each and all homeowners associations or their equivalent within the Property.

**Section 20: Termination of the Agreement For Failure of the Developer to Acquire Title to the Property.** This validity of this Agreement is subject to the DEVELOPER purchasing the Property from the Property Owner. If the DEVELOPER does not purchase the Property from the Property Owner, this Agreement shall automatically terminate without any further action being taken by either Party and shall be void and unenforceable. If the DEVELOPER does not purchase the Property, the DEVELOPER agrees to waive all claims, causes of action and damages of any kind that the DEVELOPER could file against the VILLAGE arising out of or related to the termination of this Agreement. The DEVELOPER is required to provide written notice to the VILLAGE within five (5) calendar days of the termination of the real estate purchase contract that it has entered into with the Property Owner related to the Property.

**Section 21: Recording with CCCORD.** Upon its execution, a certified copy of this Agreement shall be recorded by the VILLAGE, at the OWNER'S expense, with the CCCORD. The VILLAGE shall deliver one (1) stamped copy of the Agreement to the OWNER after filing with the CCCORD.

**IN WITNESS WHEREOF,** the Village of Western Springs, pursuant to authority granted by the adoption of a Resolution by its Board of Trustees, has caused this Agreement to be executed by its President and attested by its Clerk, and MCNAUGHTON DEVELOPMENT, LLC, pursuant to the authority granted by the adoption of a corporate resolution, has caused this Agreement to be signed by its Manager and attested by its Secretary.

**VILLAGE OF WESTERN SPRINGS**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Village President

Date: \_\_\_\_\_, 2025.

**ATTEST:**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Village Clerk

Date: \_\_\_\_\_, 2025.

**MCNAUGHTON DEVELOPMENT, LLC**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Manager

Date: \_\_\_\_\_, 2025.

**ATTEST:**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Secretary

Date: \_\_\_\_\_, 2025.

**EXHIBIT "A"**

**Legal Description for 5600 South Wolf Road, Western Springs, Illinois.**

PARCEL 1: THE WEST ½ OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) OF THE NORTH EAST ¼ OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 2: LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTH EAST ¼ OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 IN COOK COUNTY, ILLINOIS.

**Legal Description for the Lawn Avenue ROW Parcel:**

THAT PART OF THE 66 FEET WIDE LAWN AVENUE, LYING SOUTH OF THE NORTH LINE OF WESTERN SPRINGS TOWNHOMES, RECORDED MARCH 29, 1999, AS DOCUMENT NO. 99297584, LYING NORTH OF THE SOUTH LINE OF RIDGEWOOD UNIT 12, RECORDED OCTOBER 6, 1965, AS DOCUMENT NO. 19610359, LYING WEST OF THE EAST LINE OF THE WEST ½ OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION, RECORDED NOVEMBER 13, 1948, AS DOCUMENT NO. 14442019, AND LYING EAST OF THE WEST LINE OF RIDGEWOOD UNIT NO. 11, RECORDED APRIL 3, 1964, AS DOCUMENT NO. 19089916, IN THE EAST HALF OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS.

PINS: 18-18-200-017-0000  
18-18-200-038-0000  
18-18-200-001-0000 (Lawn Avenue ROW Parcel)



**EXHIBIT "B"**

**SITE PLAN FOR THE HERITAGE CROSSING SUBDIVISION AND  
HERITAGE COURT (PRIVATE STREET) DATED NOVEMBER 5, 2024  
AND PREPARED BY \_\_\_\_\_**

(attached)

Draft

**EXHIBIT "C"**

**MAP OF TRAFFIC SIGNAGE AND ON-STREET AND OFF-STREET PARKING REGULATION SIGNAGE,  
OTHER MOTOR VEHICLE REGULATORY SIGNAGE AND SCHEDULE OF REGULATIONS FOR  
HERITAGE COURT AND THE HERITAGE CROSSING SUBDIVISION DATED \_\_\_\_\_, 202\_\_**

(attached)

Draft

STATE OF ILLINOIS     )  
                                      ) SS  
COUNTY OF C O O K    )

**CLERK'S CERTIFICATE**

I, Edward Tymick, Village Clerk of the Village of Western Springs, Cook County, Illinois, certify that the attached document is a true and correct copy of the Resolution now on file in my office, entitled:

**RESOLUTION NO. 25-????**

**A RESOLUTION AUTHORIZING THE APPROVAL AND EXECUTION OF AN AGREEMENT MADE BETWEEN THE VILLAGE OF WESTERN SPRINGS AND MCNAUGHTON DEVELOPMENT, LLC REGULATING THE USE OF THE PRIVATELY-OWNED HERITAGE COURT STREET RIGHT-OF-WAY, ON-STREET AND OFF-STREET PARKING SPACES AND EMERGENCY TURN-AROUND AREAS, OTHER PAVED OR UNPAVED VEHICLE ACCESS DRIVEWAYS OR PATHWAYS, PARKING OF MOTOR VEHICLES, AND CONTROL OF MOTOR VEHICLE TRAFFIC WITHIN THE HERITAGE CROSSING SUBDIVISION LOCATED AT 5600 SOUTH WOLF ROAD IN THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS**

which was passed by a roll call vote of the Village President and Board of Trustees of the Village of Western Springs at a Special Meeting thereof, held on the 10th day of February, 2025, at which meeting a quorum was present, and approved by the Village President of the Village of Western Springs on the 10th day of February, 2025.

I further certify that the vote on the question of the passage of the Resolution by the Village President and Board of Trustees of the Village of Western Springs was taken by the Ayes and Nays and recorded in the Journal of Proceedings of the Village President and Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

AYES: \_\_\_\_\_

NAYS: \_\_\_\_\_

ABSENT: \_\_\_\_\_

I do further certify that the original Resolution, of which the attached is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

**IN WITNESS WHEREOF**, I have hereunto set my hand and affixed the seal of the Village of Western Springs this 10th day of February, 2025.

\_\_\_\_\_  
Edward Tymick, Village Clerk

## Attachment 11.

**RESOLUTION NO. 25-** \_\_\_\_\_  
**Roll Call Vote.**  
**VOTE:** \_\_\_\_\_  
**AYES:** \_\_\_\_\_  
**NAYS:** \_\_\_\_\_  
**ABSTAIN:** \_\_\_\_\_  
**ABSENT:** \_\_\_\_\_  
**DATE:** February 10, 2025.  
**OTHER:** None.

**A RESOLUTION APPROVING A WAIVER OF THE FIVE (5) ACRE MINIMUM LAND AREA REQUIREMENT UNDER SECTION 10-8-3 (GUIDELINES) OF THE WESTERN SPRINGS VILLAGE CODE AND THE REDUCTION OF CERTAIN PLANNED DEVELOPMENT SUBMISSION MATERIALS UNDER SECTION 10-8-8 (SUBMITTAL REQUIREMENTS) OF THE WESTERN SPRINGS VILLAGE CODE AS REQUESTED BY APPLICANT / CONTRACT PURCHASER MCNAUGHTON DEVELOPMENT, LLC FOR APPROVAL OF A CONDITIONAL USE FOR A PLANNED DEVELOPMENT TO CONSTRUCT THE PROPOSED 29 UNIT HERITAGE CROSSING TOWNHOME DEVELOPMENT AT THE PROPERTY COMMONLY KNOWN AS 5600 SOUTH WOLF ROAD, WESTERN SPRINGS, ILLINOIS.**

**WHEREAS,** McNaughton Development, LLC, with its principal business office located at 115220 Jackson Street, Burr Ridge, Illinois 60527 (“Applicant”), is the contract purchaser and prospective developer of the real property commonly known as 5600 South Wolf Road, Western Springs, Illinois (“Property”). Casey and Fran Gaik (collectively the “Property Owner”) are the fee simple title owners of the Property and have submitted a written authorization to the Village of Western Springs (“Village”) that allowed the Applicant to file with the Village a completed “General Information Application for Land Use and Development in the Village” form with supporting documents (the “Application”) for the redevelopment of the Property as a twenty-nine (29) unit residential townhome development (the “Development”). The Property Owner has further executed a “Written Consent and Waiver” to allow McNaughton Development, LLC to enter into this Agreement, a copy of which is on file with the Community Development Department and is incorporated herein by reference and made a part hereof; and

**WHEREAS,** in 2024, the Applicant submitted the Application to the Village requesting approval of a conditional use permit for a planned development, a map amendment, an amendment to the Village’s Comprehensive Land Use Plan, a plat of consolidation, a plat of abrogation for storm sewer easement and public utility easement, a plat of vacation relating to a portion of Lawn Avenue, which is utilized as a stormwater detention basin, certain development allowances, exceptions and variations, and other zoning relief as noted below in accordance with the applicable provisions of the Village’s Development Control Ordinance (“DCO”), in order to construct the Development, which is commonly referred to as the Heritage Crossing Subdivision or the Heritage Crossing Townhome Development. A copy of the Application is on file with the Village’s Community Development Department and is incorporated herein by reference; and

**WHEREAS,** the proposed Development consists of nine (9) townhome buildings with unit counts of either three-units or four-units. Each dwelling unit will have a balcony, a rear patio, and an attached, front-loaded garage with a driveway accessed by a private street through the Development. The Development will have off-street community parking spaces, possible on street-parking, sidewalks, stormwater detention basins, open space and streetlights. The Applicant proposes to extend private Heritage Court to the southeast through the Property to the Development’s access driveway proposed along Wolf Road. The existing portion of Heritage Court, a private road, currently services only the

Heritage Springs Townhome Development, connects to 55th Street to the north of the Property and is maintained by the Heritage Springs Homeowners Association. The Applicant's plans indicate that the new portion of Heritage Court will match the existing road's width. An automatic gate will separate the Development from the existing Heritage Springs Subdivision to the north. Vehicle access between the adjacent subdivisions will be controlled by a swing gate and gate access will only be granted to residents of both subdivisions with clicker-access and Village emergency service vehicles. The swing gate will be improved with an Opticom system that will give Village emergency service vehicles access similar to the systems on streetlights; and

**WHEREAS**, the requested zoning relief consists of: (1) approval of a conditional use permit for a planned development in accordance with Chapter 3 (Conditional Uses) and Chapter 8 (Planned Developments) of the DCO to construct the Development, subject to the requested exceptions, variations and zoning relief from the DCO regulations; (2) a waiver of the five (5) acre minimum land area requirement under Section 10-8-3 (Guidelines) of the DCO; (3) the reduction of certain planned development submission materials under Section 10-8-8 (Submittal Requirements) of the DCO as set forth below; (4) approval of a single stage Final Plan review and approval process (i.e., a combined Preliminary Plan / Final Plan approval) for the Development per Subsection 10-8-8(C) of the DCO, provided that the Applicant complies with the submittal and plan review requirements of Section 10-8-5(C) (Final Plan) of the DCO, subject to the reduction in the submittal requirements and other exceptions authorized by this Resolution; (5) a Comprehensive Plan Amendment to the Long-Range Land Use Map that reclassifies the Property from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence District; (6) a map amendment to re-zone the Property from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence District; (7) an Exception (Variations) from Subsection 10-8-4(B)(1)(d) (Exceptions From District Regulations; Site Design Regulations; Exceptions From District Regulations) of the DCO applicable only to the Development to provide: "Along the periphery of such planned developments, set back yards shall be provided as required by the regulations of the underlying zoning district, except that in the R4 - Multiple-Family Residence District variations of not more than 61% to the front yard regulation and the corner side yard regulation may be allowed as part of the approval of the planned development."; (8) Exception (Variations) from Subsection 10-8-4(B)(1)(e) (Exceptions From District Regulations; Site Design Regulations; Exceptions From District Regulations) of the DCO to provide: "Building height shall comply with the Zoning District regulations approved by the Village for the planned development, except that a variation of not more than 9% above the maximum height of buildings and structures may be allowed as part of the approval of a planned development."; (9) Exceptions (Text Amendments / Variations) from requirements of Section 10-6-5 (R4 - Multiple-Family Residence District) regulations, including:

- i. ~~Subsection~~ Subsection 10-6-5(D): Minimum Development Parcel Size: Required: five (5) acres (217,800 square feet); and Requested: 2.76 acres;
- ii. Subsection 10-6-5(E)(1): Minimum Yards Requirements: Front Yard: Required: Twenty-five feet (25'); and Requested: Seven Feet (7');
- iii. Subsection 10-6-5(E)(2): Minimum Yards Requirements: Corner Side Yard: Required: Twenty-five feet (25'); and Requested: fourteen feet and five inches (14.48');
- iv. Subsection 10-6-5(E)(3): Minimum Yards Requirements: Interior Side Yard: Required: Thirty feet (30'); and Requested: six feet and eight inches (6.67');
- v. Subsection 10-6-5(E)(4): Minimum Yards Requirements: Rear Yard: Required: Thirty feet (30'); and Requested: Twelve feet and nine inches (12.75'); and
- vi. Any additional exception(s) or variation(s) identified at the Public Hearing from the other use, bulk and site design requirements contained in the DCO that are necessary to

permit the construction of the Development and allow the above real Property to be used for its intended purposes in accordance with the filed Application shall also be considered for Village approval; and

(10) a Variation from Subsection 10-4-4(f)3a (Fences; Height Restrictions) of the DCO to allow a fence height of 8 ft.; and

(11) a Variation from Subsection 10-8-4(B)(1)(e) (Maximum Building Height) of the DCO to allow a maximum building height of 36.33 ft.; and

(12) a Variation from Subsection 10-10-7 (Street Design Criteria) to allow a pavement width of 23 ft.; and

(13) a Variation from Subsection 10-10-7 (Street Design Criteria) to allow a minimum horizontal curve radius of less than 150 ft.

(14) a Variation from Subsection 10-10-7 (Street Design Criteria) to allow a minimum vertical curve of 40 ft.; and

(15) a Variation from Subsection 10-11-11(C)(2) (Stormwater Management Requirements For All Developments; Detention; Streets) of the DCO to allow the portion of the north end of Heritage Court (a private street) between the north lot line of the Property to a point approximately forty feet (40') south of the north lot line of the Property, which is not intended to be used for primary ingress and egress vehicle access to the Property, to be designed and constructed to temporarily hold stormwater during certain infrequent rain events to facilitate the movement of excess stormwater from the Property to the on-site stormwater detention basins and to draw stormwater off of the remainder of Heritage Court and away from the private driveways of northerly dwelling units so that there is no ponding of stormwater in front of the dwelling units. The standards for consideration and approval of the proposed map amendment and text amendments are set forth in Section 10-3-12 (Amendments) of the DCO; and

**WHEREAS**, a public hearing has been conducted by the Western Springs Plan Commission relative to the Application during public meetings held on August 13, 2024, September 24, 2024 and November 18, 2024, as required by the applicable provisions of State law, including the Illinois Open Meetings Act, 5 ILCS 120/ and Division 11-13 of the Illinois Municipal Code (65 ILCS 5/ 11-13), and the applicable provisions of the DCO (the "Public Hearing"). Prior to conducting the Public Hearing, a notice of Public Hearing was published in a newspaper, a "zoning application pending" sign was posted at the Property, a notice of Public Hearing was mailed to those persons who are required to be mailed the notice in compliance with applicable State law and the DCO, and separate agendas for each of the Plan Commission meetings where the Public Hearing sessions were held were posted as required by the Open Meetings Act; and

**WHEREAS**, pursuant to Section 10-8-3 (Guidelines) of the DCO, the Village Board, upon finding just cause, may waive the five (5) acre minimum land area requirement for planned developments; and

**WHEREAS**, pursuant to Section 10-8-8(B) (Submittal Requirements; Preliminary Plan Stage) of the DCO, the Village Board may "modify and/or reduce the required submission materials for any proposed planned development by resolution upon request of the Applicant and after receiving the recommendation of the Village Manager". The Applicant has requested that the following required submission materials for the planned development be waived (the "Waiver Requests"):

- (1) Subsection 10-8-8(B)(4)(d): Market Study prepared by a qualified, independent market research firm. [This waiver is supported by the fact that the Applicant has submitted a report with supporting market and financial data relative to other recent, active townhouse developments in the Village to demonstrate the market demand for the housing type and base cost.]



- (2) Subsection 10-8-8(B)(3)(g): “Site lighting plan”. [Due to the relatively small size of the Development, the site lighting details and specifications are identified on the submitted development plans and will be reviewed and approved by Village Staff as part of the plan review process.]; and

**WHEREAS**, pursuant to the applicable provisions of the DCO, the Village Board may grant the following requests of the Applicant (“Zoning Process Allowances”):

- (1) Approval of a combined Preliminary Plan / Final Plan as part of the Final Plan stage per Subsection 10-8-5(C) of the DCO to allow a single simultaneous submission per the Final Plan stage requirements and exemptions to specific requirements of Subsection 10-8-8 of the DCO deemed unnecessary due to the small size of the Development;
- (2) Pursuant to Subsection 10-3-6(B) of the DCO, ratifying direction to the Plan Commission to conduct a review of this Application and associated documents, to conduct the required public hearing and to make a recommendation to the Village Board, which has the final authority to grant approval of a map amendment and requested zoning relief; and

**WHEREAS**, Village Manager Ellen Baer has issued a recommendation dated December 26, 2024 in support of the waiver of the five (5) acre minimum land area requirement and the Waiver Requirements (“Village Manager Recommendation”), a copy of which is attached hereto as **Exhibit “A”** and made a part hereof; and

**WHEREAS**, in accordance with the authority granted by the applicable provisions of the DCO, the President and Board of Trustees of the Village of Western Springs make the following just cause findings and determinations in regard to the Waiver Requests and the Zoning Process Allowances:

- (a) It is reasonable and justified to approve the waiver of the five (5) acre minimum land area requirement because the Village Board has consistently waived this requirement for other in-fill planned developments involving the construction of residential townhomes;
- (b) It is reasonable and justified to approve the Waiver Requests and the Zoning Process Allowances, given the limited scope of the proposed Development to be constructed at the Property;
- (c) The absence of certain limited submission materials will not hinder or prejudice the Plan Commission’s or the Village Board’s ability to evaluate and take action on the requested zoning relief in the Application;
- (d) For this specific Development, the costs associated with preparing the submission materials that are the subject of the Waiver Requests are unduly burdensome when compared to the public benefit that such materials will provide;
- (e) Certain portions of the submission materials already exist in various formats and are public information that is available via the Freedom of Information Act; and

**WHEREAS**, at open public meetings held on January 9, 2025 and January 16, 2025, the Village’s Planning and Zoning Committee (“Committee”) reviewed and discussed the Waiver Requests and the Zoning Process Allowances and the Village Manager Recommendation, and received input from the Village staff on the matter, and provided an opportunity for public input on the matter. At its January 16, 2025 meeting, the Committee recommended that the Corporate Authorities of Village **approve / not approve / consider** the Waiver Requests and the Zoning Process Allowances; and

**WHEREAS**, at open public meetings held on **January 13, 2025, January 27, 2025 and February 10, 2025**, the Corporate Authorities of Village reviewed and discussed the Committee's Recommendation and the Village Manager Recommendation regarding the Waiver Requests and the Zoning Process Allowances, and received input from the Village staff on the matter and provided an opportunity for input from the public on the matter. At its February 10, 2025 meeting, the Corporate Authorities of the Village accepted the Committee's Recommendation and the Village Manager Recommendation regarding approval of the Waiver Requests and the Zoning Process Allowances; and

**WHEREAS**, for the above-stated reasons, the President and Board of Trustees of the Village of Western Springs find that it is protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners, local business owners and the public to approve the waiver of the five (5) acre minimum land area requirement and the Waiver Requests and the Zoning Process Allowances as set forth in this Resolution.

**NOW, THEREFORE, BE IT RESOLVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:**

**SECTION 1. Incorporation.** Each of the Whereas paragraphs set forth above are incorporated by reference into Section 1 of this Resolution.

**SECTION 2. Approval of Waiver Requests and Zoning Process Allowances; Acceptance of Village Manager Recommendation.** The President and Board of Trustees of the Village of Western Springs approve and grant the above-requested Waiver Requests and Zoning Process Allowances, and further accept the Village Manager Recommendation and approve the waiver of the five (5) acre minimum land area guideline requirement for the Development.

**SECTION 3. Termination of Resolution for Failure of Developer to Acquire Title to the Property.** This validity of this Resolution is subject to the Developer purchasing the Property from the Property Owner. In the event the Developer does not purchase the Property from the Property Owner, upon written notice delivered to the Village Manager of the termination of the real estate purchase contract entered into between the Property Owner and the Developer, this Resolution shall automatically terminate without further action by the Corporate Authorities of the Village and shall be void and unenforceable. If the Developer does not purchase the Property, the Developer agrees to waive all claims, causes of action and damages of any kind that the Developer could file against the Village arising out of or related to the termination of this Resolution. The Developer is required to provide written notice to the Village within five (5) calendar days of the termination of the real estate purchase contract.

**SECTION 4. Recording; Covenants That Run With The Land.** Upon approval by the President and Board of Trustees of the Village of Western Springs, a certified copy of this Resolution shall be filed with the Cook County Clerk's Office, Recording Division ("CCCORD") by the Village, at the Applicant's cost. The Village shall provide the Applicant with a file stamped copy of this Resolution after it is filed with the County Clerk. The terms, provisions and conditions set forth in this Resolution, including those incorporated herein by reference, are covenants that run with the land and shall be released or amended only upon the written consent of the President and Board of Trustees of the Village of Western Springs.

**SECTION 5. Effective Date.** This Ordinance shall be in full force and effect from and after its

adoption and approval as provided by law.

**PASSED** by a roll call vote of the Board of Trustees of the Village of Western Springs, Cook County, Illinois, at a **Special Meeting** thereof, held on the 10<sup>th</sup> day of February, 2025 and approved by me as President on the same day.

---

Heidi Rudolph, Village President

**ATTEST:**

---

Edward Tymick, Village Clerk

Exhibit "A"

**Village Manager Ellen Baer Recommendation  
dated December 26, 2024 in Support of  
the Waiver of the Five (5) Acre Minimum Land Area Requirement  
and the Waiver of Certain Planned Development Submittal Requirements**

(attached)



**VILLAGE PRESIDENT**  
Heidi Rudolph

**VILLAGE TRUSTEES**  
James Tyrrell  
Nicole Chen  
Alan Fink  
Scott Lewis  
Amy Avakian  
Philip Nawrocki

**VILLAGE CLERK**  
Edward Tymick

**VILLAGE MANAGER**  
Ellen Baer

**DEPUTY MANAGER**  
Casey Biernacki

**DIRECTORS**  
Patrick Schramm  
Matthew Supert  
Aleks Briedis  
Jeff Koza  
John Mastandona  
Sean Gilhooley  
Heather Valone  
Brian Scott

**To: President Heidi Rudolph and the Board of Trustees**

**From: Ellen Baer, Village Manager**

**Subject: Heritage Crossing Townhome Development, 5600 South Wolf Road:  
Recommendation Regarding Request for Waiver of Planned Development  
Submittal Requirements**

**Date: December 26, 2024**

**CC: Heather Valone, Director of Community Development**

McNaughton Development, LLC, the contract purchaser / proposed developer of the 5600 South Wolf Road property (the "Property"), has submitted an application and site plan for the rezoning, subdivision approval, conditional use permit / planned development approval and certain variation approvals to redevelop the Property with twenty-nine (29) unit residential townhomes known as the Heritage Crossing Townhome Development (the "Development"). The application and proposed site plan have been processed as a planned development. The Village's Plan Commission has held and completed the required public hearing (conducted on August 13, 2024, September 24, 2024 and November 18, 2024) and has issued Recommendation No. 24-02, which favorably recommends Village Board approval of the application and the request for zoning and development relief to allow the Developer to construct the Development, subject to a number of development conditions including the vacation of a portion of the Lawn Avenue right-of-way ("Lawn Avenue ROW Area") to transfer legal title to that real property to the Developer as part of the Developer's completion of certain stormwater drainage enhancements at the Property. In a separate memo provided in the Village Board packet, Director Heather Valone has outlined the Developer's request for a waiver of certain submittal requirements required by the Village Code. The requested waivers are also listed below.

Waivers of submittal requirements are not uncommon, since planned developments can vary in acreage, complexity, land use, and other features. The Development Control Ordinance of the Village Code ("DCO") states the following:

**"10-8-8: SUBMITTAL REQUIREMENTS:**

B. Preliminary Plan Stage: Required submission materials for the preliminary plan stage are outlined below. The village board may modify and/or reduce the required submission materials for any proposed planned development by resolution upon request of the petitioner and after receiving the recommendation of the village manager. The village manager shall inform the petitioner in writing of any such modification or reduction."

**Proposed Planned Development Submittal Waivers**

- Simultaneous Preliminary and Final Submission:  
Exemption from separate submissions for Preliminary Plan stage per DCO 10-8-8(B) and Final Plan stage per DCO 10-8-8 (C) to allow a single simultaneous submission per the Final Plan stage requirements.
- **Waiver of the 5 acre minimum land area guideline under Section 10-8-3**



**(Guidelines) of the DCO.** [The Property, with the inclusion of the Lawn Avenue ROW Area, meets the minimum lot area requirement of the R4 - Multiple-Family Residence District regulations. The most recent planned developments (Field Park 17 Ogden Avenue Townhomes and Foxford Station) have been granted waivers from this guideline.]

- **Reduction of certain planned development submission materials under Section 10-8-8 (Submittal Requirements) of the DCO:**

**DCO Subsection 10-8-8(B)(4)(d): Market study (financial information) prepared by a qualified, independent market research firm.** [The Applicant submitted fiscal impact projections showing that the Development will positively impact all taxing districts and generate impact fees. While the Applicant has requested a waiver from the market study submittal, the Applicant has submitted data on other townhouse developments in Western Springs to demonstrate the market demand for the housing type and base cost.] Although the applicant is requesting waivers, they are requests that have historically been granted to other infill developments. Additionally, although the applicant has requested waivers to the submittal requirements, the applicant has used other types of submittals to provide the same information that is required by the Village Code. I am in agreement with Director Valone that the waivers are reasonable and should be granted by the Village Board.

If you have any questions regarding this matter, please feel free to contact Director Valone or me.



STATE OF ILLINOIS     )  
                                      ) SS  
COUNTY OF C O O K     )

**CLERK'S CERTIFICATE**

I, Edward Tymick, Village Clerk of the Village of Western Springs, Cook County, Illinois, certify that attached hereto is a true and correct copy of the Resolution now on file in my office, entitled:

**RESOLUTION NO. 25-\_\_\_\_\_**

**A RESOLUTION APPROVING A WAIVER OF THE FIVE (5) ACRE MINIMUM LAND AREA REQUIREMENT UNDER SECTION 10-8-3 (GUIDELINES) OF THE WESTERN SPRINGS VILLAGE CODE AND THE REDUCTION OF CERTAIN PLANNED DEVELOPMENT SUBMISSION MATERIALS UNDER SECTION 10-8-8 (SUBMITTAL REQUIREMENTS) OF THE WESTERN SPRINGS VILLAGE CODE AS REQUESTED BY APPLICANT / CONTRACT PURCHASER MCNAUGHTON DEVELOPMENT, LLC FOR APPROVAL OF A CONDITIONAL USE FOR A PLANNED DEVELOPMENT TO CONSTRUCT THE PROPOSED 29 UNIT HERITAGE CROSSING TOWNHOME DEVELOPMENT AT THE PROPERTY COMMONLY KNOWN AS 5600 SOUTH WOLF ROAD, WESTERN SPRINGS, ILLINOIS**

which was passed by a roll call vote of the Board of Trustees of the Village of Western Springs at a **Special Meeting** held on the 10th day of February, 2025, at which meeting a quorum was present, and approved by the President of the Village of Western Springs on the 10th day of February, 2025.

I further certify that the vote on the question of the passage of the said Resolution by the Board of Trustees of the Village of Western Springs was taken by the Ayes and Nays and recorded in the Journal of Proceedings of the Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

AYES: \_\_\_\_\_

NAYS: \_\_\_\_\_

ABSENT: \_\_\_\_\_

I do further certify that the original Resolution, of which the attached is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

**IN WITNESS WHEREOF**, I have hereunto set my hand and affixed the seal of the Village of Western Springs, this 10th day of February, 2025.

\_\_\_\_\_  
Edward Tymick, Village Clerk

## Attachment 12.

**ORDINANCE NO. 25-** \_\_\_\_\_  
**VOTE:**  
**AYES:**  
**NAYS:**  
**ABSENT:**  
**ABSTAIN:**  
**DATE: February 10, 2025.**  
**OTHER: Published in Pamphlet Form.**

**AN ORDINANCE APPROVING A MINOR AMENDMENT TO THE CONDITIONAL USE PERMIT FOR A PLANNED DEVELOPMENT ISSUED FOR THE WESTERN SPRINGS TOWNHOMES SUBDIVISION (THE "HERITAGE SPRINGS SUBDIVISION") LOCATED SOUTH OF 55TH STREET AND WEST OF WOLF ROAD IN WESTERN SPRINGS, ILLINOIS RELATIVE TO CONSTRUCTION OF ON-STREET PARKING SPACES WITHIN HERITAGE COURT.**

**WHEREAS**, the Heritage Springs Owners Association (the "HS Association") is the current owner of the Common Area (defined below) within the Western Springs Townhomes Subdivision (the "Heritage Springs Subdivision"), which is located south of 55th Street immediately adjacent to the vacated Lawn Avenue right-of-way and west of Wolf Road in Western Springs, Illinois. The Subdivision consists of fourteen (14) single-family townhome units and the Common Area developed by former owner / developer Gammonley Group, which are shown on the "Final Plat of Subdivision Western Springs Townhomes" (the "Subdivision Plat"), a copy of which is incorporated herein by reference. The Subdivision Plat was filed on March 29, 1999, with the Cook County Recorder of Deeds Office and marked with Recording Number 99297584. The legal description of the Common Area is described as follows:

Common Area shown in the Western Springs Townhomes Subdivision, being a subdivision of the East ½ of the Northeast ¼ of Section 18, Township 38 North, Range 12 East of the Third Principal Meridian, according to the plat thereof recorded March 29, 1999, as Document No. 99297584 in Cook County, Illinois.

PIN: 18-18-200-059-0000.

Common address: 5500 Heritage Court, Western Springs, Illinois; and

**WHEREAS**, pursuant to the Village-approved Final Plans and Subdivision Plat, the HS Association, or the Gammonley Group, completed certain improvements to the Common Area that support the townhomes, including the installation of a sanitary sewer main and sanitary sewer services to each of the townhomes, a storm sewer system and detention system, a private street (named "Heritage Court"), a parking area, including curb and gutter and pavement markings and a vehicle turnaround, street lights, a sidewalk system, driveway aprons, a water main and water service lines to each of the townhomes, a fire hydrant system, and all fencing and retaining wall systems (the "Improvements"); and

**WHEREAS**, on March 24, 2014, with the passage of Ordinance No. 14-2747, the President and Board of Trustees of the Village (the "Corporate Authorities") accepted title to and ownership and maintenance responsibility only for certain Improvements located in the Common Area, consisting of the water main, streetlights and fire hydrant system (the "Accepted Public Improvements") in accordance with the applicable provisions of Section 10-10-19 (Land Dedications and Completion, Maintenance and Acceptance of Improvements) of the Development Control Ordinance of the Western Springs Municipal Code ("DCO"). The Accepted Public Improvements are further described and depicted in the "Bill of Sale for the Accepted Public Improvements in the Western Springs Townhomes Subdivision," and are further shown on the Utility and Grading As-Built Plan (Heritage Springs Townhomes, Western Springs, Illinois

dated September 29, 2007, as amended by James J. Benes & Associates, Inc. dated January 28, 2014) (the "As-Built Plan"), copies of which are attached as Exhibits to Ordinance No. 14-2747; and

**WHEREAS**, with the passage of Resolution No. 14-2747, the Corporate Authorities of the Village also approved and entered into a document with the HS Association titled "Cost Sharing Maintenance Agreement for the Private Street (Heritage Court) Located in the Western Springs Townhomes Subdivision". Under this Agreement, Heritage Court remained a private street, with continued ownership and maintenance responsibility remaining with the HS Association, but, at the request of the HS Association, the Village agreed to include any street resurfacing work or replacement work in regard to Heritage Court in a Village street repair bidding process and agreed to have the selected contractor perform such work to Heritage Court, provided that the HS Association pays to the Village ninety percent (90%) of the costs to complete such work. The Village agreed to pay ten percent (10%) of the costs to complete the work to Heritage Court in recognition that there is public use of Heritage Court. Based on traffic data provided by the Village staff and the Village Engineer, the President and Board of Trustees of the Village determined that Heritage Court is used for public traffic ten percent (10%) of the time. Heritage Court is shown on the As-Built Plan; and

**WHEREAS**, McNaughton Development, LLC (the "Developer"), the contract purchaser / proposed developer of the 5600 South Wolf Road property (the "Property"), has submitted an application and site plan for the rezoning, subdivision approval, conditional use permit / planned development approval and certain variation approvals to redevelop the Property with twenty-nine (29) unit residential townhomes known as the Heritage Crossing Townhome Development (the "Development"). The Property is immediately adjacent to and south of the Heritage Springs Subdivision. The application and proposed site plan have been processed as a planned development. After the required public hearing was conducted by the Western Springs Plan Commission, the Plan Commission issued Recommendation No. 24-02, which favorably recommended Village Board approval of the application and the request for zoning and development relief to allow the Developer to construct the Development; and

**WHEREAS**, on **February 10, 2025**, with the passage of Ordinance No. 25-\_\_\_\_\_, the Corporate Authorities of the Village approved the application and zoning relief and granted a conditional use permit for a planned development to allow the Developer to construct the Development, subject to a number of development conditions, including the construction of an extension of existing Heritage Court right-of-way by the Developer from its south terminus in the Heritage Springs Subdivision through the Heritage Crossing Subdivision to its connection point at Wolf Road. The new portion of Heritage Court will remain a privately owned street and will be maintained by the homeowners association of the Heritage Crossing Subdivision ("HC Association"). Vehicle access between the adjacent subdivisions will be controlled by a swing gate and gate access, which will be installed by the Developer and maintained by the HC Association, and access will only be granted to residents of both subdivisions with clicker-access and Village emergency service vehicles. The swing gate will be improved with an Opticom system that will give Village emergency service vehicles access similar to the systems on streetlights; and

**WHEREAS**, as part of the proposed Development application, the Developer has entered into an "Development Agreement" with the HS Association for purposes of agreeing to make certain improvements within the Heritage Springs Subdivision, including the construction of three (3) on-street parking spaces within privately owned Heritage Court that serves the Heritage Springs Subdivision, as shown on the Amended Site Plan for Heritage Court Parking Spaces within the Heritage Springs Subdivision. The Developer, with the consent of the HS Association, has requested a minor amendment to the Conditional Use Permit for Planned Development issued for the Heritage Springs Subdivision to

construct the above-mentioned parking spaces (the “Minor Amendment”) as part of its amended Application for the Development filed with the Village on May 23, 2024. Copies of the “Development Agreement” and the Amended Site Plan for Heritage Court Parking Spaces within the Heritage Springs Subdivision dated December 26, 2024 and prepared by DesignTek Engineering, Inc. are attached as **Group Exhibit “A”** and made a part hereof; and

**WHEREAS**, Village Manager Ellen Baer has issued a recommendation dated December 26, 2024 in support of an approval by the Corporate Authorities of the Village of the Minor Amendment (“Village Manager Recommendation”), a copy of which is attached hereto as **Exhibit “B”** and made a part hereof; and

**WHEREAS**, at open public meetings held on January 9, 2025 and January 16, 2025, the Village’s Planning and Zoning Committee (“Committee”) reviewed and discussed the Minor Amendment and the Village Manager Recommendation, and received input from the Village staff on the matter, and provided an opportunity for public input on the matter. At its January 16, 2025 meeting, the Committee recommended that the Corporate Authorities of Village **approve / not approve / consider** the Minor Amendment; and

**WHEREAS**, at open public meetings held on January 13, 2025, January 27, 2025 and February 10, 2025, the Corporate Authorities of Village reviewed and discussed the Committee’s recommendation and the Village Manager Recommendation regarding the Minor Amendment, and received input from the Village staff on the matter and provided an opportunity for input from the public on the matter. At its February 10, 2025 meeting, the Corporate Authorities of the Village accepted the Committee’s Recommendation and the Village Manager Recommendation regarding approval of the Minor Amendment, finding that:

- A. A minor modification of the Conditional Use Permit / Planned Development is not a major modification that will alter or change the essential character or operation of the Conditional Use Permit / Planned Development, as approved and/or amended, and, therefore, a new Conditional Use Permit / Planned Development is not required. See, Subsection 10-3-14(M) (Conditional Uses; Modification Or Intensification) of the DCO. While this zoning relief does not require approval of the Village Board, **it does require approval of the Village Manager, and the Village Manager has expressed her support for the zoning relief, provided the Village Board approves the zoning relief as well;** and
- B. A minor change to the Final Plan of the Conditional Use Permit / Planned Development is not a major change because the changes to the final plan will not alter the concept or intent, increase the density, increase building coverage, decrease the separation between buildings beyond the required setbacks, change the uses of the site, increase building height, reduce open space, change by more than fifteen percent (15%) the proportion of housing types, change road standards or locations, change sewer, water or electrical utilities, change proposed drainage, change the final governing agreements of the planned development, or change the development schedule by more than six (6) months, and, therefore, a new Conditional Use Permit / Planned Development is not required. See, Subsection 10-8-5(D)(2) (Changes In The Planned Development: Conditional Uses; Minor Changes In A Final Plan) of the DCO. **This zoning relief requires approval of the Village Board;** and

**WHEREAS**, in accordance with the authority granted by Sections 11-13-1 and 11-13-1.1 of the Illinois Municipal Code (65 ILCS 5/11-13-1 and 11-13-1.1) and the applicable provisions of the DCO, the Village President and Board of Trustees of the Village of Western Springs approve the Minor Amendment, as requested by the Developer, subject to the conditions contained in Section 3 below of this Ordinance, and find that the approvals set forth in this Ordinance are protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners, local businesses and the public.

**BE IT ORDAINED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:**

**SECTION 1. Incorporation.** The above recitals are incorporated by reference into Section 1 of this Ordinance as material terms and provisions.

**SECTION 2. Approval of Zoning Relief.** The President and Board of Trustees of the Village of Western Springs find just cause to approve the Zoning Relief relative to the Property, subject to the conditions set forth in Section 3 below:

1. Approval and issuance of a minor amendment to the Conditional Use Permit / Planned Development to allow the construction of three (3) on-street parking spaces within privately owned Heritage Court that serves the Heritage Springs Subdivision as set forth in the Application in accordance with Subsection 10-3-14(M) (Conditional Uses; Modification Or Intensification) of the DCO and Subsection 10-8-5(D)(2) (Changes In The Planned Development: Conditional Uses; Minor Changes In A Final Plan) of the DCO.

**SECTION 3. Conditions of Zoning Relief.** The above zoning relief and development approvals are SUBJECT TO THE FOLLOWING CONDITIONS:

- A. The Improvements are conditioned upon and subject to compliance with the Village Chief Code Officer's zoning and plan review recommendations and requirements.
- B. Each of the conditions set forth in all prior Village Ordinances approved relative to the Western Springs Townhomes Subdivision and the Conditional Use Permit for Planned Development and any other Village-approved zoning relief for the Western Springs Townhomes Subdivision remain in effect, unless expressly superseded by the approvals, provisions and conditions of this Ordinance or a prior Village-approved Ordinance.

**SECTION 4. Severability.** The sections, terms, provisions and conditions of this Ordinance shall be severable, and if any section, term, provision or condition is found to be invalid or unenforceable for any reason by a court of competent, final jurisdiction, the remaining sections, terms, provisions and conditions shall remain in full force and effect.

**SECTION 5. Repealer.** Any ordinance, or portion thereof, in conflict with this Ordinance is repealed to the extent of such conflict. The terms, provisions and conditions set forth in this Ordinance, including those incorporated herein by reference, are covenants that run with the land and shall be released or amended only by mutual agreement of the Applicant and the Village or unless amended by an ordinance approved by the Village Board after the required public hearing.

**SECTION 6. Termination of Ordinance for Failure of Developer to Acquire Title to the Property.**

This validity of this Ordinance is subject to the Developer purchasing the Property from the Property Owner. In the event the Developer does not purchase the Property from the Property Owner, upon written notice delivered to the Village Manager of the termination of the real estate purchase contract entered into between the Property Owner and the Developer, this Ordinance shall automatically terminate without further action by the Corporate Authorities of the Village and shall be void and unenforceable. If the Developer does not purchase the Property, the Developer agrees to waive all claims, causes of action and damages of any kind that the Developer could file against the Village arising out of or related to the termination of this Ordinance. If the Developer does not purchase the Property, the Heritage Springs Owners Association agrees to waive all claims, causes of action and damages of any kind that the Heritage Springs Owners Association could file against the Village arising out of or related to the termination of this Ordinance. The Developer is required to provide written notice to the Village within five (5) calendar days of the termination of the real estate purchase contract.

**SECTION 7. Recording; Covenants That Run With The Land.** Upon approval by the President and Board of Trustees of the Village of Western Springs, a certified copy of this Ordinance shall be filed with the Cook County Clerk's Office, Recording Division ("CCCORD") by the Village, at the Applicant's cost. The Village shall provide the Applicant with a file stamped copy of this Ordinance after it is filed with the County Clerk. The terms, provisions and conditions set forth in this Ordinance, including those incorporated herein by reference, are covenants that run with the land and shall be released or amended only upon the written consent of the President and Board of Trustees of the Village of Western Springs.

**SECTION 7. Effective Date.** This Ordinance shall be in full force and effect from and after its adoption, approval and publication as provided by law.

**PASSED** by a roll call vote of the Board of Trustees of the Village of Western Springs, Cook County, Illinois, at a Special Meeting thereof, held on the 10th day of February, 2025, and approved by me as President on the same day.

---

Heidi Rudolph, Village President

**ATTEST:**

---

Edward Tymick, Village Clerk

This Ordinance was published by me in pamphlet form on 10th day of February, 2025.

---

Edward Tymick, Village Clerk



**Group Exhibit "A"**

**"Development Agreement" dated April 30, 2024 by and between  
Heritage Springs Owners Association and McNaughton Development, LLC**

and

**Amended Site Plan for Heritage Court Parking Spaces Within the Heritage Springs Subdivision  
dated December \_\_, 2024 and prepared by DesignTek Engineering, Inc**

(attached)

**Exhibit "B"**

**Village Manager Ellen Baer Recommendation dated December 26, 2024  
in Support of Request for Minor Amendment to the Conditional Use Permit  
for a Planned Development Issued for the Heritage Springs Subdivision  
Located South of 55th Street and West of Wolf Road in Western Springs, Illinois  
Relative to the Construction of On-Street Parking Spaces Within Heritage Court  
(Requestors: Heritage Springs Owners Association and McNaughton Development, LLC)**

(attached)



**VILLAGE PRESIDENT**  
Heidi Rudolph

**VILLAGE TRUSTEES**

James Tyrrell  
Nicole Chen  
Alan Fink  
Scott Lewis  
Amy Avakian  
Philip Nawrocki

**VILLAGE CLERK**

Edward Tymick

**VILLAGE MANAGER**

Ellen Baer

**DEPUTY MANAGER**

Casey Biernacki

**DIRECTORS**

Patrick Schramm  
Matthew Supert  
Aleks Briedis  
Jeff Koza  
John Mastandona  
Sean Gilhooley  
Heather Valone  
Brian Scott

**To: President Heidi Rudolph and the Board of Trustees**

**From: Ellen Baer, Village Manager**

**Subject: Heritage Crossing Townhome Development, 5600 South Wolf Road:  
Recommendation Regarding Request for Waiver of Planned Development  
Submittal Requirements**

**Date: December 26, 2024**

**CC: Heather Valone, Director of Community Development**

McNaughton Development, LLC (the "Developer"), the contract purchaser / proposed developer of the 5600 South Wolf Road property (the "Property"), has submitted an application and site plan for the rezoning, subdivision approval, conditional use permit / planned development approval and certain variation approvals to redevelop the Property with twenty-nine (29) unit residential townhomes known as the Heritage Crossing Townhome Development (the "Development"). The Property is immediately adjacent to and south of the Western Springs Townhomes ("Heritage Springs") Subdivision. The application and proposed site plan have been processed as a planned development. The Village's Plan Commission has held and completed the required public hearing (conducted on August 13, 2024, September 24, 2024 and November 18, 2024) and has issued Recommendation No. 24-02, which favorably recommends Village Board approval of the application and the request for zoning and development relief to allow the Developer to construct the Development, subject to a number of development conditions, including the construction of an extension of the existing Heritage Court right-of-way by the Developer from its south terminus in the Heritage Springs Subdivision through the Heritage Crossing Subdivision to its connection point at Wolf Road. The new portion of Heritage Court will remain a privately owned street and will be maintained by the homeowners association of the Heritage Crossing Subdivision ("HC Association"). Vehicle access between the adjacent subdivisions will be controlled by a swing gate and gate access, which will be installed by the Developer and maintained by the HC Association, and access will only be granted to residents of both subdivisions with clicker-access and Village emergency service vehicles. The swing gate will be improved with an Opticom system that will give Village emergency service vehicles access similar to the systems on streetlights.

As part of the proposed Development application, the Developer has entered into an "Development Agreement" with the HS Association for purposes of agreeing to make certain improvements within the Heritage Springs Subdivision, including the construction of on-street parking spaces within privately owned Heritage Court that serves the Heritage Springs Subdivision, as shown on the Amended Site Plan for Heritage Court Parking Spaces Within the Heritage Springs Subdivision ("HS Association") dated December \_\_, 2024 and prepared by DesignTek Engineering, Inc. The Developer, with the consent of the HS Association, has requested a minor amendment to the Conditional Use Permit for Planned Development issued for the Heritage Springs Subdivision to construct the above-mentioned parking spaces (the "Minor Amendment") as part of its amended Application for the Development filed with the Village on May 23, 2024. Copies of the "Development Agreement" and the Amended Site Plan for Heritage Court Parking Spaces within the Heritage Springs Subdivision dated December 26, 2024 and prepared by DesignTek



Engineering, Inc. are attached to this Memo. The Application and its supporting documents are on file with the Community Development Department.

Subject to approval by the Corporate Authorities of the Village, I approve the Minor Amendment, finding that:

- A. A minor modification of the Conditional Use Permit / Planned Development is not a major modification that will alter or change the essential character or operation of the Conditional Use Permit / Planned Development, as approved and/or amended, and, therefore, a new Conditional Use Permit / Planned Development is not required. See, Subsection 10-3-14(M) (Conditional Uses; Modification Or Intensification) of the DCO. **While this zoning relief does not require approval of the Village Board, it does require approval of the Village Manager and, as the Village Manager, I support the zoning relief, provided the Village Board approves the zoning relief as well;** and
- B. A minor change to the Final Plan of the Conditional Use Permit / Planned Development is not a major change because the changes to the final plan will not alter the concept or intent, increase the density, increase building coverage, decrease the separation between buildings beyond the required setbacks, change the uses of the site, increase building height, reduce open space, change by more than fifteen percent (15%) the proportion of housing types, change road standards or locations, change sewer, water or electrical utilities, change proposed drainage, change the final governing agreements of the planned development, or change the development schedule by more than six (6) months, and, therefore, a new Conditional Use Permit / Planned Development is not required. See, Subsection 10-8-5(D)(2) (Changes In The Planned Development: Conditional Uses; Minor Changes In A Final Plan) of the DCO. **This zoning relief requires approval of the Village Board.**

In a separate memo provided in the Village Board packet, Director Heather Valone has provided site plan details that illustrate the Developer's request.

If you have any questions regarding this matter, please feel free to contact Director Valone or me.

**ACKNOWLEDGMENT AND CONSENT TO COMPLY WITH  
THE TERMS, CONDITIONS, OBLIGATIONS AND PROVISIONS SET FORTH IN  
WESTERN SPRINGS ORDINANCE NO. 25-\_\_\_\_\_**

I, \_\_\_\_\_, the Board President and Authorized Officer of the Heritage Springs Owners Association, have read and understand each of the above terms, conditions, obligations and provisions contained in this Ordinance, and Heritage Springs Owners Association agrees to be bound by the same.

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: Board President and Authorized Officer of the  
Heritage Springs Owners Association

Date: \_\_\_\_\_, 2025.

**ATTEST:**

By: \_\_\_\_\_  
Notary Public

Date: \_\_\_\_\_, 2025.

STATE OF ILLINOIS     )  
                                      ) SS  
COUNTY OF COOK     )

**CLERK'S CERTIFICATE**

I, Edward Tymick, Clerk of the Village of Western Springs, in the County of Cook and State of Illinois, certify that the attached is a true and correct copy of that certain Ordinance now on file in my office, entitled:

**ORDINANCE NO. 25-\_\_\_\_\_**

**AN ORDINANCE APPROVING A MINOR AMENDMENT TO THE CONDITIONAL USE PERMIT  
FOR A PLANNED DEVELOPMENT ISSUED FOR THE WESTERN SPRINGS TOWNHOMES SUBDIVISION  
(THE "HERITAGE SPRINGS SUBDIVISION") LOCATED SOUTH OF 55TH STREET AND  
WEST OF WOLF ROAD IN WESTERN SPRINGS, ILLINOIS RELATIVE TO CONSTRUCTION  
OF ON-STREET PARKING SPACES WITHIN HERITAGE COURT**

which Ordinance was passed by a roll call vote of the Board of Trustees of the Village of Western Springs at a Special Meeting thereof, held on the 10th day of February, 2025, at which meeting a quorum was present, and approved by the President of the Village of Western Springs on the 10th day of February, 2025.

I further certify that the vote on the question of the passage of said Ordinance by the Board of Trustees of the Village of Western Springs was taken by Ayes and Nays and recorded in the minutes of the Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

**AYES:** \_\_\_\_\_

**NAYS:** \_\_\_\_\_

**ABSENT:** \_\_\_\_\_

I do further certify that the original Ordinance, of which the foregoing is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

**IN WITNESS WHEREOF**, I have hereunto set my hand and affixed the seal of the Village of Western Springs, this 10th day of February, 2025

\_\_\_\_\_  
Edward Tymick, Village Clerk

[SEAL]



RESOLUTION NO. 25- \_\_\_\_\_  
VOTE: \_\_\_\_\_  
AYES: \_\_\_\_\_  
NAYS: \_\_\_\_\_  
ABSENT: \_\_\_\_\_  
ABSTAIN: \_\_\_\_\_  
DATE: February 10, 2025.  
OTHER: None.

A RESOLUTION AUTHORIZING THE APPROVAL AND EXECUTION OF AN AGREEMENT MADE BETWEEN THE VILLAGE OF WESTERN SPRINGS AND HERITAGE SPRINGS OWNERS ASSOCIATION REGULATING THE USE OF THE PRIVATELY-OWNED HERITAGE COURT STREET RIGHT-OF-WAY, ON-STREET AND OFF-STREET PARKING SPACES AND EMERGENCY TURN-AROUND AREAS, OTHER PAVED OR UNPAVED VEHICLE ACCESS DRIVEWAYS OR PATHWAYS, PARKING OF MOTOR VEHICLES, AND CONTROL OF MOTOR VEHICLE TRAFFIC WITHIN THE HERITAGE SPRINGS SUBDIVISION LOCATED AT 5500 HERITAGE COURT IN THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS

**WHEREAS**, the Heritage Springs Owners Association, an Illinois not-for-profit association, with its principal corporate office located at \_\_\_\_\_, Illinois (the "HS ASSOCIATION"), is the current owner of the Common Area (defined below) within the Western Springs Townhomes Subdivision (the "Heritage Springs Subdivision"), which is located south of 55th Street immediately adjacent to the vacated Lawn Avenue right-of-way and west of Wolf Road in Western Springs, Illinois. The Heritage Springs Subdivision consists of fourteen (14) single-family townhome units and the Common Area developed by former owner / developer Gammonley Group, which are shown on the "Final Plat of Subdivision Western Springs Townhomes" (the "Subdivision Plat"), a copy of which is incorporated herein by reference. The Subdivision Plat was filed on March 29, 1999, with the Cook County Recorder of Deeds Office and marked with Recording Number 99297584. The legal description of the Common Area is described as follows:

Common Area shown in the Western Springs Townhomes Subdivision, being a subdivision of the East ½ of the Northeast ¼ of Section 18, Township 38 North, Range 12 East of the Third Principal Meridian, according to the plat thereof recorded March 29, 1999, as Document No. 99297584 in Cook County, Illinois.

PIN: 18-18-200-059-0000.

Common address: 5500 Heritage Court, Western Springs, Illinois; and

**WHEREAS**, pursuant to the VILLAGE-approved Final Plans and Subdivision Plat, the HS ASSOCIATION, or the Gammonley Group, completed certain improvements to the Common Area that support the townhomes, including the installation of a sanitary sewer main and sanitary sewer services to each of the townhomes, a storm sewer system and detention system, a private street (named "Heritage Court"), a parking area, including curb and gutter and pavement markings and a vehicle turnaround, street lights, a sidewalk system, driveway aprons, a water main and water service lines to each of the townhomes, a fire hydrant system, and all fencing and retaining wall systems (the "Improvements"); and

**WHEREAS**, on March 24, 2014, with the passage of Ordinance No. 14-2747, the President and Board of Trustees of the Village (the "Corporate Authorities") accepted title to and ownership and

maintenance responsibility only for certain Improvements located in the Common Area, consisting of the water main, streetlights and fire hydrant system (the "Accepted Public Improvements") in accordance with the applicable provisions of Section 10-10-19 (Land Dedications and Completion, Maintenance and Acceptance of Improvements) of the Development Control Ordinance of the Western Springs Municipal Code ("DCO"). The Accepted Public Improvements are further described and depicted in the "Bill of Sale for the Accepted Public Improvements in the Western Springs Townhomes Subdivision," and are further shown on the Utility and Grading As-Built Plan (Heritage Springs Townhomes, Western Springs, Illinois dated September 29, 2007, as amended by James J. Benes & Associates, Inc. dated January 28, 2014) (the "As-Built Plan"), copies of which are attached as Exhibits to Ordinance No. 14-2747; and

**WHEREAS**, with the passage of Resolution No. 14-2747, the Corporate Authorities also approved and entered into a document with the HS ASSOCIATION titled "Cost Sharing Maintenance Agreement for the Private Street (Heritage Court) Located in the Western Springs Townhomes Subdivision". Under that agreement, Heritage Court remained a private street, with continued ownership and maintenance responsibility remaining with the HS ASSOCIATION, but, at the request of the HS ASSOCIATION, the VILLAGE agreed to include any street resurfacing work or replacement work in regard to Heritage Court in a VILLAGE street repair bidding process and agreed to have the selected contractor perform such work to Heritage Court, provided that the HS ASSOCIATION pays to the VILLAGE ninety percent (90%) of the costs to complete such work. The VILLAGE agreed to pay ten percent (10%) of the costs to complete the work to Heritage Court in recognition that there is public use of Heritage Court. Based on traffic data provided by the VILLAGE staff and the Village Engineer, the President and Board of Trustees of the VILLAGE determined that Heritage Court is used for public traffic ten percent (10%) of the time. Heritage Court is shown on the As-Built Plan; and

**WHEREAS**, McNaughton Development, LLC (the "DEVELOPER"), the contract purchaser / proposed developer of the 5600 South Wolf Road property (the "Property"), has submitted an application and site plan for the rezoning, subdivision approval, conditional use permit / planned development approval and certain variation approvals to redevelop the Property with twenty-nine (29) unit residential townhomes known as the Heritage Crossing Townhome Development (the "Development"). The Property is immediately adjacent to and south of the Heritage Springs Subdivision. The application and proposed site plan have been processed as a planned development. After the required public hearing was conducted by the Western Springs Plan Commission, the Plan Commission issued Recommendation No. 24-02, which favorably recommended Village Board approval of the application and the request for zoning and development relief to allow the Developer to construct the Development; and

**WHEREAS**, on February 10, 2025, with the passage of **Ordinance No. 25-\_\_\_\_\_**, the Corporate Authorities of the VILLAGE approved the application and zoning relief and granted a conditional use permit for a planned development to allow the DEVELOPER to construct the Development, subject to a number of development conditions, including the construction of an extension of existing Heritage Court right-of-way by the DEVELOPER from its south terminus in the Heritage Springs Subdivision through the Heritage Crossing Subdivision to its connection point at Wolf Road. The new portion of Heritage Court will remain a privately-owned street and will be maintained by the to-be-formed homeowners association of the Heritage Crossing Subdivision ("HC ASSOCIATION"). Vehicle access between the adjacent subdivisions will be controlled by a swing gate and gate access, which will be installed by the DEVELOPER and maintained by the HC ASSOCIATION, and access will only be granted to residents of both subdivisions with clicker-access and VILLAGE emergency service vehicles. The swing gate will be

improved with an Opticom system that will give VILLAGE emergency service vehicles access similar to the systems on streetlights; and

**WHEREAS**, as part of the proposed Development application, the DEVELOPER has entered into an “Development Agreement” with the HS ASSOCIATION for purposes of agreeing to make certain improvements within the Heritage Springs Subdivision, including the construction of three (3) on-street parking spaces within privately-owned Heritage Court that serves the Heritage Springs Subdivision, as shown on the Amended Site Plan for Heritage Court Parking Spaces within the Heritage Springs Subdivision. The Developer, with the consent of the HS ASSOCIATION, has requested a minor amendment to the Conditional Use Permit for Planned Development issued for the Heritage Springs Subdivision to construct the above-mentioned parking spaces (the “Minor Amendment”) as part of its amended Application for the Development filed with the VILLAGE on May 23, 2024. Copies of the “Development Agreement” and the Amended Site Plan for Heritage Court Parking Spaces within the Heritage Springs Subdivision dated December \_\_, 2024 and prepared by DesignTek Engineering, Inc. are attached as **Group Exhibit “A”** and made a part hereof; and

**WHEREAS**, subject to the construction of three (3) on-street parking spaces within privately-owned Heritage Court with the Heritage Springs Subdivision, the HS ASSOCIATION and the VILLAGE have agreed to enter into this Agreement relative to the enforcement of traffic regulations and parking regulations within the proposed Heritage Springs Subdivision and its private street, Heritage Court, any emergency turn-around areas, or other paved or unpaved vehicle access driveways or pathways, and each of its private on-street parking spaces and off-street resident parking areas (the “PARKING AND TRAFFIC REGULATIONS”). This Agreement does not cover parking on private driveways that serve the individual townhome units; and

**WHEREAS**, as part of the conditions of approval of the Development contained in **Ordinance No. 25-\_\_\_\_\_**, it is necessary for the Village and the Developer to approve and enter into the attached “AGREEMENT MADE BETWEEN THE VILLAGE OF WESTERN SPRINGS AND HERITAGE SPRINGS OWNERS ASSOCIATION REGULATING THE USE OF THE PRIVATELY-OWNED HERITAGE COURT STREET RIGHT-OF-WAY, ON-STREET AND OFF-STREET PARKING SPACES AND EMERGENCY TURN-AROUND AREAS, OTHER PAVED OR UNPAVED VEHICLE ACCESS DRIVEWAYS OR PATHWAYS, PARKING OF MOTOR VEHICLES, AND CONTROL OF MOTOR VEHICLE TRAFFIC WITHIN THE HERITAGE SPRINGS SUBDIVISION LOCATED AT 5500 HERITAGE COURT IN THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS” (the “Traffic and Parking Agreement”) relative to the enforcement of traffic regulations and parking regulations within the proposed Heritage Crossing Subdivision and its private street, Heritage Court, any emergency turn-around areas, or other paved or unpaved vehicle access driveways or pathways, and each of its private on-street parking spaces and off-street resident parking areas (the “PARKING AND TRAFFIC REGULATIONS”). The Traffic and Parking Agreement does not cover parking on private driveways that serve the individual townhome units. A copy of the Traffic and Parking Agreement is attached hereto as **Exhibit “B”** and made a part hereof; and

**WHEREAS**, at open public meetings held on January 9, 2025 and January 16, 2025, the Village’s Planning and Zoning Committee (“Committee”) reviewed and discussed the proposed Heritage Crossing Townhome Development and the related Traffic and Parking Agreement, and received input from the Village staff on the matter, and provided an opportunity for public input on the matter. At its January 16, 2025 meeting, the Committee recommended that the Corporate Authorities of Village **approve / not approve / consider** the Traffic and Parking Agreement; and

**WHEREAS**, at open public meetings held on January 13, 2025, January 27, 2025 and February 10, 2025, the Corporate Authorities of Village reviewed and discussed the Committee's recommendation regarding the proposed Heritage Crossing Townhome Development and the related Traffic and Parking Agreement, and received input from the Village staff on the matter and provided an opportunity for input from the public on the matter. At its February 10, 2025 meeting, the Corporate Authorities of the Village accepted the Committee's recommendation regarding approval of the Traffic and Parking Agreement; and

**WHEREAS**, the Corporate Authorities of the Village of Western Springs are authorized, under the applicable provisions of the Illinois Municipal Code (65 ILCS 5/), and the intergovernmental cooperation powers set forth at Article VII (Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) and Section 10 (Intergovernmental Cooperation) of the Constitution of the State of Illinois of 1970, to approve and enter into the Traffic and Parking Agreement, and further find that it is protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners, local businesses and the public to approve and enter into the Traffic and Parking Agreement.

**BE IT ORDAINED BY THE VILLAGE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:**

**SECTION 1: Incorporation.** Each Whereas paragraph above is incorporated by reference into this Section 1 and made a part hereof as material and operative provisions of this Resolution.

**SECTION 2: Approval and Execution of Traffic and Parking Agreement and Other Related Documents.** The Village President and Board of Trustees of the Village of Western Springs authorize the approval and execution of the attached Traffic and Parking Agreement, substantially in the form attached hereto as **Exhibit "A"**, which may contain certain non-substantive and non-financial modifications that are approved by the Village Attorney, and all other instruments and documents that are necessary to fulfill the Village's obligations under the Traffic and Parking Agreement.

**SECTION 3: Delivery of Traffic and Parking Agreement and Other Documents.** After approval and execution of this Resolution and the Traffic and Parking Agreement by the Village President and Village Clerk, or their designees, the Village Clerk's Office shall arrange for the delivery of certified copies of this Resolution and executed versions of the attached Traffic and Parking Agreement to the Church and the Developer for record retention purposes.

**SECTION 4. Termination of Resolution for Failure of Developer to Acquire Title to the Property.** This validity of this Resolution is subject to the Developer purchasing the Property from the Property Owner. In the event the Developer does not purchase the Property from the Property Owner, upon written notice delivered to the Village Manager of the termination of the real estate purchase contract entered into between the Property Owner and the Developer, this Resolution shall automatically terminate without further action by the Corporate Authorities of the Village and shall be void and unenforceable. If the Developer does not purchase the Property, the Developer agrees to waive all claims, causes of action and damages of any kind that the Developer could file against the Village arising out of or related to the termination of this Resolution. The Developer is required to provide written notice to the Village within five (5) calendar days of the termination of the real estate purchase contract.

**SECTION 5: Effective Date.** This Resolution shall be in full force and effect from and after its passage and approval as provided by State law.

**PASSED** by the Village President and Board of Trustees of the Village of Western Springs, Cook County, Illinois, on a roll call vote at a Special Meeting thereof, held on the 10th day of February, 2025, and approved by me as Village President, and attested by the Village Clerk on the same day.

---

Heidi Rudolph, Village President

**ATTEST:**

---

Edward Tymick, Village Clerk

**Group Exhibit "A"**

**"Development Agreement"**

**and**

**Amended Site Plan for Heritage Court Parking Spaces  
within the Heritage Springs Subdivision dated December , 2024 and prepared by DesignTek  
Engineering, Inc.**



**Exhibit "B"**

**AGREEMENT MADE BETWEEN THE VILLAGE OF WESTERN SPRINGS AND  
HERITAGE SPRINGS OWNERS ASSOCIATION REGULATING THE USE OF THE PRIVATELY-OWNED  
HERITAGE COURT STREET RIGHT-OF-WAY, ON-STREET AND OFF-STREET PARKING SPACES AND  
EMERGENCY TURN-AROUND AREAS, OTHER PAVED OR UNPAVED VEHICLE ACCESS DRIVEWAYS OR  
PATHWAYS, PARKING OF MOTOR VEHICLES, AND CONTROL OF MOTOR VEHICLE TRAFFIC  
WITHIN THE HERITAGE SPRINGS SUBDIVISION LOCATED AT 5500 HERITAGE COURT  
IN THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS**

(attached)

|                                                                                                                                                                                                                                                          |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <p><b>Recording Requested by and When Recorded Return to:</b></p> <p>Michael T. Jurusik<br/>Klein, Thorpe and Jenkins, Ltd.<br/>900 Oakmont Lane, Suite 301<br/>Westmont, Illinois 60559</p> <p><b>Record against:</b><br/><b>PIN: 18-18-200-059</b></p> |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

**AN AGREEMENT MADE BETWEEN THE VILLAGE OF WESTERN SPRINGS AND  
HERITAGE SPRINGS OWNERS ASSOCIATION REGULATING THE USE OF THE PRIVATELY-OWNED  
HERITAGE COURT STREET RIGHT-OF-WAY, ON-STREET AND OFF-STREET PARKING SPACES AND  
EMERGENCY TURN-AROUND AREAS, OTHER PAVED OR UNPAVED VEHICLE ACCESS DRIVEWAYS OR  
PATHWAYS, PARKING OF MOTOR VEHICLES, AND CONTROL OF MOTOR VEHICLE TRAFFIC  
WITHIN THE HERITAGE SPRINGS SUBDIVISION LOCATED AT 5600 SOUTH WOLF ROAD  
IN THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS**

**THIS AGREEMENT** ("Agreement") is made and entered into by and between the Village of Western Springs (the "VILLAGE"), a non-home rule Illinois municipal corporation, and Heritage Springs Owners Association, an **Illinois not-for-profit association**, with its principal corporate office located at \_\_\_\_\_, Illinois (the "HS ASSOCIATION"), by and through their respective duly authorized agents and/or representatives, relative to the enforcement of traffic regulations and parking regulations within the proposed Heritage Springs Subdivision and its private street, Heritage Court, any emergency turn-around areas, or other paved or unpaved vehicle access driveways or pathways, and each of its private on-street parking spaces and off-street resident parking areas (the "PARKING AND TRAFFIC REGULATIONS"). This Traffic and Parking Agreement does not cover parking on private driveways that serve the individual townhome units. The VILLAGE and the HS ASSOCIATION are at times referred to below individually as a "Party" and collectively as the "Parties".

**RECITALS**

**WHEREAS**, the VILLAGE is a duly constituted and existing non-home rule municipality within the meaning of Section 1 (Municipalities And Units Of Local Government) and Section 7 (Counties and Municipalities Other Than Home Rule Units) of Article VII (Local Government) of the Constitution of the State of Illinois of 1970. The VILLAGE is authorized, under the provisions of Section 10 (Intergovernmental Cooperation) of Article VII (Local Government) of the Constitution of the State of Illinois of 1970, to contract and otherwise associate with individuals, associations and corporations in any manner not prohibited by law. The VILLAGE has statutory authority to promote the health, safety and welfare of the VILLAGE and its residents, to encourage private development in order to enhance the

local tax base, and to enter into contractual agreements with developers and redevelopers to achieve these objectives; and

**WHEREAS**, the HS ASSOCIATION is the current owner of the Common Area (defined below) within the Western Springs Townhomes Subdivision (the “Heritage Springs Subdivision”), which is located south of 55th Street immediately adjacent to the vacated Lawn Avenue right-of-way and west of Wolf Road in Western Springs, Illinois. The Heritage Springs Subdivision consists of fourteen (14) single-family townhome units and the Common Area developed by former owner / developer Gammonley Group, which are shown on the “Final Plat of Subdivision Western Springs Townhomes” (the “Subdivision Plat”), a copy of which is incorporated herein by reference. The Subdivision Plat was filed on March 29, 1999, with the Cook County Recorder of Deeds Office and marked with Recording Number 99297584. The legal description of the Common Area is described as follows:

Common Area shown in the Western Springs Townhomes Subdivision, being a subdivision of the East ½ of the Northeast ¼ of Section 18, Township 38 North, Range 12 East of the Third Principal Meridian, according to the plat thereof recorded March 29, 1999, as Document No. 99297584 in Cook County, Illinois.

PIN: 18-18-200-059-0000.

Common address: 5500 Heritage Court, Western Springs, Illinois; and

**WHEREAS**, pursuant to the VILLAGE-approved Final Plans and Subdivision Plat, the HS ASSOCIATION, or the Gammonley Group, completed certain improvements to the Common Area that support the townhomes, including the installation of a sanitary sewer main and sanitary sewer services to each of the townhomes, a storm sewer system and detention system, a private street (named “Heritage Court”), a parking area, including curb and gutter and pavement markings and a vehicle turnaround, street lights, a sidewalk system, driveway aprons, a water main and water service lines to each of the townhomes, a fire hydrant system, and all fencing and retaining wall systems (the “Improvements”); and

**WHEREAS**, on March 24, 2014, with the passage of Ordinance No. 14-2747, the President and Board of Trustees of the Village (the “Corporate Authorities”) accepted title to and ownership and maintenance responsibility only for certain Improvements located in the Common Area, consisting of the water main, streetlights and fire hydrant system (the “Accepted Public Improvements”) in accordance with the applicable provisions of Section 10-10-19 (Land Dedications and Completion, Maintenance and Acceptance of Improvements) of the Development Control Ordinance of the Western Springs Municipal Code (“DCO”). The Accepted Public Improvements are further described and depicted in the “Bill of Sale for the Accepted Public Improvements in the Western Springs Townhomes Subdivision,” and are further shown on the Utility and Grading As-Built Plan (Heritage Springs Townhomes, Western Springs, Illinois dated September 29, 2007, as amended by James J. Benes & Associates, Inc. dated January 28, 2014) (the “As-Built Plan”), copies of which are attached as Exhibits to Ordinance No. 14-2747; and

**WHEREAS**, with the passage of Resolution No. 14-2747, the Corporate Authorities also approved and entered into a document with the HS ASSOCIATION titled “Cost Sharing Maintenance Agreement for the Private Street (Heritage Court) Located in the Western Springs Townhomes Subdivision”. Under that agreement, Heritage Court remained a private street, with continued ownership and maintenance responsibility remaining with the HS ASSOCIATION, but, at the request of the HS ASSOCIATION, the

VILLAGE agreed to include any street resurfacing work or replacement work in regard to Heritage Court in a VILLAGE street repair bidding process and agreed to have the selected contractor perform such work to Heritage Court, provided that the HS ASSOCIATION pays to the VILLAGE ninety percent (90%) of the costs to complete such work. The VILLAGE agreed to pay ten percent (10%) of the costs to complete the work to Heritage Court in recognition that there is public use of Heritage Court. Based on traffic data provided by the VILLAGE staff and the Village Engineer, the President and Board of Trustees of the VILLAGE determined that Heritage Court is used for public traffic ten percent (10%) of the time. Heritage Court is shown on the As-Built Plan; and

**WHEREAS**, McNaughton Development, LLC (the “DEVELOPER”), the contract purchaser / proposed developer of the 5600 South Wolf Road property (the “Property”), has submitted an application and site plan for the rezoning, subdivision approval, conditional use permit / planned development approval and certain variation approvals to redevelop the Property with twenty-nine (29) unit residential townhomes known as the Heritage Crossing Townhome Development (the “Development”). The Property is immediately adjacent to and south of the Heritage Springs Subdivision. The application and proposed site plan have been processed as a planned development. After the required public hearing before the Western Springs Plan Commission issued Recommendation No. 24-02, which favorably recommends Village Board approval of the application and the request for zoning and development relief to allow the DEVELOPER to construct the Development; and

**WHEREAS**, on February 10, 2025, with the passage of Ordinance No. 25-\_\_\_\_\_, the Corporate Authorities of the VILLAGE approved the application and zoning relief and granted a conditional use permit for a planned development to allow the DEVELOPER to construct the Development, subject to a number of development conditions, including the construction of an extension of existing Heritage Court right-of-way by the DEVELOPER from its south terminus in the Heritage Springs Subdivision through the Heritage Crossing Subdivision to its connection point at Wolf Road. The new portion of Heritage Court will remain a privately-owned street and will be maintained by the to-be-formed homeowners association of the Heritage Crossing Subdivision (“HC ASSOCIATION”). Vehicle access between the adjacent subdivisions will be controlled by a swing gate and gate access, which will be installed by the DEVELOPER and maintained by the HC ASSOCIATION, and access will only be granted to residents of both subdivisions with clicker-access and VILLAGE emergency service vehicles. The swing gate will be improved with an Opticom system that will give VILLAGE emergency service vehicles access similar to the systems on streetlights; and

**WHEREAS**, as part of the proposed Development application, the DEVELOPER has entered into an “Development Agreement” with the HS ASSOCIATION for purposes of agreeing to make certain improvements within the Heritage Springs Subdivision, including the construction of three (3) on-street parking spaces within privately-owned Heritage Court that serves the Heritage Springs Subdivision, as shown on the Amended Site Plan for Heritage Court Parking Spaces within the Heritage Springs Subdivision. The Developer, with the consent of the HS ASSOCIATION, has requested a minor amendment to the Conditional Use Permit for Planned Development issued for the Heritage Springs Subdivision to construct the above-mentioned parking spaces (the “Minor Amendment”) as part of its amended Application for the Development filed with the VILLAGE on May 23, 2024. Copies of the “Development Agreement” and the Amended Site Plan for Heritage Court Parking Spaces within the Heritage Springs Subdivision dated December \_\_, 2024 and prepared by DesignTeck Engineering, Inc. are attached as **Group Exhibit “A”** and made a part hereof; and

**WHEREAS**, subject to the construction of three (3) on-street parking spaces within privately-owned Heritage Court with the Heritage Springs Subdivision, the HS ASSOCIATION and the VILLAGE have agreed to enter into this Agreement relative to the enforcement of traffic regulations and parking regulations within the proposed Heritage Springs Subdivision and its private street, Heritage Court, any emergency turn-around areas, or other paved or unpaved vehicle access driveways or pathways, and each of its private on-street parking spaces and off-street resident parking areas (the "PARKING AND TRAFFIC REGULATIONS"). This Agreement does not cover parking on private driveways that serve the individual townhome units; and

**WHEREAS**, Section 11-209 of the Illinois Vehicle Code, 625 ILCS 5/11-209, authorizes and empowers the VILLAGE to enter into an agreement, with the HS ASSOCIATION'S consent, to regulate and control motor vehicle traffic and motor vehicle parking, and the use of motor vehicle parking areas, within the proposed Heritage Springs Subdivision, which is located within the corporate limits of the VILLAGE; and

**WHEREAS**, the President and the Board of Trustees of the VILLAGE deem it necessary for the health, safety and welfare of the citizens and residents of the VILLAGE, and for the health, safety and welfare of those persons using the Heritage Court right-of-way and the on-street and off-street parking spaces and the emergency turn-around areas within the proposed Heritage Springs Subdivision, to regulate and control motor vehicle traffic and motor vehicle parking, and the use of the motor vehicle parking areas in the proposed Heritage Springs Subdivision; and

**WHEREAS**, the HS ASSOCIATION has filed a written request that the VILLAGE and its Department of Law Enforcement Services ("POLICE DEPARTMENT") enforce the PARKING AND TRAFFIC REGULATIONS within the proposed Heritage Springs Subdivision.

#### **AGREEMENT**

**NOW, THEREFORE**, in consideration of the foregoing and in consideration of the Parties' mutual understandings, promises, covenants and agreements as set forth below, the Parties agree as follows:

**Section 1: Incorporation.** The foregoing Recitals are incorporated by reference into Section 1 of this Agreement as material provisions of this Agreement.

**Section 2: Parking And Traffic Regulations.** The VILLAGE agrees to establish under this Agreement and enforce the following PARKING AND TRAFFIC REGULATIONS regarding motor vehicle movement, parking and control on and within the Heritage Court right-of-way, the on-street and off-street parking spaces, and the emergency turn-around areas within the proposed Heritage Springs Subdivision, to regulate and control motor vehicle traffic and motor vehicle parking, and the use of the motor vehicle parking areas within the proposed Heritage Springs Subdivision, as set forth below, and alternatively as contained in the attached document entitled "MAP OF TRAFFIC SIGNAGE AND ON-STREET AND OFF-STREET PARKING REGULATION SIGNAGE, OTHER MOTOR VEHICLE REGULATORY SIGNAGE AND SCHEDULE OF REGULATIONS FOR HERITAGE COURT AND THE HERITAGE SPRINGS SUBDIVISION DATED \_\_\_\_\_, 202\_\_\_\_" (attached hereto as **EXHIBIT "B"** and made a part hereof):

- (A) *The posting of stop signs and/or yield signs at specified locations within the Heritage Springs Subdivision, as the VILLAGE and the HS ASSOCIATION deem necessary for the safety and convenience of the public and the users of Heritage Court and the on-street and off-street parking spaces and the emergency turn-*

- around areas within the Heritage Springs Subdivision, and at all exits into a public highway within the Heritage Springs Subdivision;
- (B) All motor vehicle movement shall be within the designated traffic lanes, subject to "turning of vehicle" regulations and where marked by arrow or posted "One Way" no motor vehicle movement shall be in the opposite direction;
  - (C) The stopping, standing or parking of a motor vehicle on Heritage Court or within the Heritage Springs Subdivision by anyone not employed by, or otherwise required or authorized by, the HS ASSOCIATION shall be prohibited;
  - (D) The stopping, standing or parking of commercial vehicles (vehicles of the second division as defined by 625 ILCS 5/1-146, other than recreational vehicles), which are required to have other than Class B State of Illinois license plates as defined by 625 ILCS 5/3-815, on Heritage Court or within the Heritage Springs Subdivision, other than temporarily for such time as is necessary for the reasonably expeditious loading and unloading of said vehicles when making pick-ups or deliveries to persons who own or lease or occupy a townhome or the HS ASSOCIATION, or its designee, shall be prohibited;
  - (E) No motor vehicle shall be operated so as to cause or produce unnecessary loud, raucous, excessive or unusual noises, by the playing of the vehicle radio, by the racing of the motor, by lack of muffler cutout, by tire friction upon rapid turning or weaving, by spinning of wheel from standing or slow moving position produced by sudden unnecessary acceleration, by continuous unnecessary sounding of a horn or other noise or signal device, or by running of refrigeration units or compressors on the motor vehicle;
  - (F) The stopping, standing or parking of a motor vehicle within any designated handicapped parking area, without the proper display of the handicapped status of the occupant of said motor vehicle by way of either special state license plates or a locally issued handicapped status placard, shall be prohibited;
  - (G) The maximum speed for any motor vehicle shall not exceed fifteen (15) miles per hour OR twenty-five (25) miles per hour;
  - (H) Any motor vehicle parked or abandoned during a snow storm, flood, fire or other public emergency, or found unattended on Heritage Court or within the Heritage Springs Subdivision, where it constitutes an obstruction to traffic or where stopping, standing or parking is prohibited shall be towed at the owner's expense in accordance with the applicable provisions of Title 7 (Motor Vehicles) of the Western Springs Municipal Code;
  - (I) The stopping, standing or parking of a motor vehicle in, or otherwise obstructing, any fire lane, safety zone, loading zone or properly designated no parking zone shall be prohibited;
  - (J) The regulation of pedestrians and of pedestrian crossings that cross Heritage Court or within the Heritage Springs Subdivision; and
  - (K) The establishment and enforcement of such additional reasonable rules and regulations in regard to traffic and parking on Heritage Court or within the Heritage Springs Subdivision as local conditions may require for the safety and convenience of the public or of the users of Heritage Court or the Heritage Springs Subdivision.

**Section 3: Signage.** The HS ASSOCIATION, at its own cost and expense, agrees to erect and post all necessary signs and provide for all necessary pavement markings for the regulation of traffic and the use of the motor vehicle parking areas on Heritage Court or within the Heritage Springs Subdivision



as is necessary to carry out the PARKING AND TRAFFIC REGULATIONS, and agrees to bear the costs and expense of the maintenance thereof.

**Section 4: Violations.** When violations of the PARKING AND TRAFFIC REGULATIONS arise, upon request of the HS ASSOCIATION, the VILLAGE agrees to inspect and regulate motor vehicle traffic and motor vehicle parking on Heritage Court and within the Heritage Springs Subdivision in accordance with the PARKING AND TRAFFIC REGULATIONS, and, in relation thereto, agrees to furnish customary police services necessary for the enforcement of the aforementioned regulations. The VILLAGE is not obligated to permanently dedicate a police officer to monitor or inspect Heritage Court and the Heritage Springs Subdivision on a daily basis. The level of police service to be provided by the VILLAGE in relation to Heritage Court and the Heritage Springs Subdivision shall be the same as is provided to any other person who contacts the VILLAGE to report a potential violation of law and requests assistance or to file a complaint.

**Section 5: Effective Date of Parking and Traffic Regulations.** After the Parties approve this Agreement, at such time as the PARKING AND TRAFFIC REGULATIONS established on Heritage Court and within the Heritage Springs Subdivision under this Agreement become effective pursuant to 625 ILCS 5/11-209 (three (3) calendar days after the recording of this Agreement with the Cook County Clerk's Office, Recording Division ("CCCORD")), it shall be an offense for any person to violate or fail to comply with or fail to conform to any of the PARKING AND TRAFFIC REGULATIONS set forth above in Section 2. Such offense shall be punishable by a fine in accordance with the applicable Ordinances of the VILLAGE.

**Section 6: Annual Inspection of Signage by HS ASSOCIATION.** The HS ASSOCIATION shall, at least once annually, inspect Heritage Court and the Heritage Springs Subdivision to verify and determine that all required signs and/or pavement striping are in place and in good condition. A letter confirming the findings of the annual inspection shall be sent by the HS ASSOCIATION to the Village Manager. If the VILLAGE, on its own information or based on notice provided to it by any person, determines at any time that additional signs and/or pavement striping are needed, or that existing signs and/or pavement striping are in need of repair or replacement, the VILLAGE shall notify the HS ASSOCIATION in writing of such necessary additional pavement striping or sign installations or repair and/or replacement work. The HS ASSOCIATION, at its own cost and expense, shall install such additional signs and/or pavement striping, or undertake the repair and/or replacement of such signs and/or pavement striping on Heritage Court and within the Heritage Springs Subdivision as requested by the VILLAGE within thirty (30) calendar days of the VILLAGE'S notice or such other time agreed upon by the Parties. The VILLAGE has no duty or obligation to inspect the condition of parking and traffic signs posted on Heritage Court and within the Heritage Springs Subdivision pursuant to this Agreement.

**Section 7: Authorization to Enforce State and Local Laws.** The HS ASSOCIATION authorizes the VILLAGE to enforce such other State or local laws, not specifically referenced in Section 2 above, on Heritage Court and within the Heritage Springs Subdivision, and the VILLAGE agrees to enforce such State or local laws, if warranted.

**Section 8: Indemnification, Defense and Hold Harmless.** The HS ASSOCIATION shall indemnify, defend and hold harmless the VILLAGE, and its officers, appointed and elected officials, president and trustees, employees, engineers, attorneys, volunteers and agents, with respect to any claim or loss, including but not limited to attorney fees, costs and expenses of litigation, claims and judgments in connection with any and all claims for injuries, death, illness or damages of any kind which may arise, either directly or indirectly, out of the VILLAGE'S performance of the terms of this Agreement,

except for any intentional wrongful acts on the part of the VILLAGE or its officers, appointed and elected officials, president and trustees, employees, engineers, attorneys, volunteers or agents.

**Section 9: Insurance.** The HS ASSOCIATION shall maintain a Comprehensive General Liability Insurance Policy which specifically names the VILLAGE, and its officers, appointed and elected officials, president and trustees, employees, engineers, attorneys, volunteers and agents as additional insureds. The coverage shall be in the minimum amount of One Million Dollars (\$1,000,000.00) per occurrence and Two Million Dollars (\$2,000,000.00) in the aggregate or in such other amounts agreed to by the Parties on an annual basis. The HS ASSOCIATION shall keep the coverage in full force and effect during the term of this Agreement, provide a certificate of insurance to the Village Manager on an annual or renewal basis, and the coverage shall not be terminated or canceled without thirty (30) calendar days prior written notice to the VILLAGE.

**Section 10: Term; Termination; Notice.** This Agreement shall be in full force and effect from and after its date of approval by the VILLAGE for a period of twenty (20) years thereafter, unless terminated as provided for in this Section or unless extended in writing by mutual agreement of the Parties for one or more twenty (20) year terms. This Agreement may be terminated for any reason by either Party upon thirty (30) calendar days prior written notice to the other Party. Whenever notice is required to be sent to either Party, it shall be addressed as follows:

|                                                                                                                                   |                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| A. If to the VILLAGE:<br>Village Manager<br>Village of Western Springs<br>740 Hillgrove Avenue<br>Western Springs, Illinois 60558 | B. If to the OWNER:<br>Heritage Springs Owners Association<br>INSERT |
|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|

All notices shall be sent by personal delivery or certified mail, return receipt requested, and shall be deemed given as of the date of the personal delivery or, if given by certified mail, three (3) calendar days from the date of mailing.

**Section 11: Authority to Enter into this Agreement.** The HS ASSOCIATION and the VILLAGE warrant that they have the full power and authority to enter into this Agreement and have been properly authorized to do so by the Corporate Authorities of the VILLAGE and the required corporate action of the HS ASSOCIATION. The HS ASSOCIATION warrants and represents to the VILLAGE that: (i) the HS ASSOCIATION has the full and complete right, power and authority to enter into this Agreement and to agree to the terms, provisions and conditions set forth in this Agreement and to bind the Property as set forth in this Agreement; (ii) all legal actions needed to authorize the execution, delivery and performance of this Agreement by the HS ASSOCIATION have been taken; and (iii) neither the execution of this Agreement nor the performance of the obligations assumed by the HS ASSOCIATION will: (a) result in a breach or default under any agreement to which the HS ASSOCIATION is a party or to which it or the Property is bound; or (b) violate any statute, law, restriction, court order or agreement to which the HS ASSOCIATION or the Property are subject.

**Section 12: Entire Agreement.** This Agreement constitutes the entire understanding between the VILLAGE and the HS ASSOCIATION with respect to the subject matter contained herein, and supersedes any and all prior understandings and/or agreements between the Parties, whether written, oral or otherwise. Any and all representations, agreements, promises and/or understandings not expressly set forth herein are null, void and of no legal effect.

**Section 13: Amendments.** This Agreement may be modified or amended only by the mutual consent of the Parties. Any modification or amendment of this Agreement must be in writing, signed by the Parties, duly executed, and then filed with the CCCORD. Any attempt to modify or amend this Agreement that fails to conform to the aforementioned requirements shall be null, void and of no legal effect.

**Section 14: Counterparts.** This Agreement may be executed in any number of counterparts, with each counterpart deemed to be an original. This Agreement shall be effective on the date that the last signatory executes this Agreement.

**Section 15: Severability.** The terms, conditions and provisions of this Agreement shall be severable, and if any term, condition or provision is found to be unenforceable for any reason whatsoever, the remaining terms, conditions and provisions shall remain in full force and effect.

**Section 16: Governing Law; Venue.** This Agreement is entered into under, and shall be governed, enforced and interpreted for all purposes under, the laws of the State of Illinois. For purposes of any litigation brought in regard to this Agreement, the Parties agree that such litigation shall only be brought in the Circuit Court of Cook County, Illinois or the United States District Court located in Chicago, Illinois, and consent to the jurisdiction of said courts.

**Section 17: Enforcement.** Either Party to this Agreement may enforce or compel the performance of this Agreement, in law or in equity, by suit, action, mandamus, or any other proceeding including without limitation specific performance, except that the HS ASSOCIATION agrees that it will not seek, and does not have the right under any circumstances to seek, to recover a judgment against any VILLAGE elected or appointed official, officer, employee, agent, representative, engineer, or attorney on account of the negotiation, execution, or breach of this Agreement.

**Section 18: Successors and Assigns; Assignment and Assumption of this Agreement.** The term "HS ASSOCIATION" includes the Heritage Springs Owners Association and its transferees, successors-in-interest, all legal or beneficial owners of record, assigns, tenants, licensees, and all subsequent owners of the Property or any part of the Property, or any other person and each and all homeowners associations or their equivalent within the Property. The HS ASSOCIATION shall be liable for all of the HS ASSOCIATION'S obligations under this Agreement. All obligations assumed by the HS ASSOCIATION under this Agreement shall be binding on the HS ASSOCIATION, and on any and all of the HS ASSOCIATION'S successors and assigns, and on any and all of the respective successor owners of all or any portion of the Property. To assure that the HS ASSOCIATION'S successors, assigns and successor owners of all or any portion of the Property have notice of this Agreement and the obligations created by it, the HS ASSOCIATION shall:

1. Deposit with the Village Clerk, within thirty (30) calendar days after the closing date at which the HS ASSOCIATION obtains fee simple title to the Property, which is referred to as the "Acquisition Date", any consents or other documents necessary to authorize the VILLAGE to record a Memorandum of this Agreement against title to the Property in form and substance reasonably acceptable to the HS ASSOCIATION and the VILLAGE with the CCCORD;
2. Notify the VILLAGE in writing at least thirty (30) calendar days prior to any date that the HS ASSOCIATION intends to transfer fee title to any portion of the Property to any person not a Party to this Agreement;

3. File against title to the Property with the CCCORD a Memorandum of this Agreement or other similar reference(s) to this Agreement sufficient to put third parties on notice of the existence of this Agreement; and
4. Require, prior to the transfer of all or any portion of the Property to any person or entity not a Party to this Agreement that occurs prior to the substantial completion of the Development, the transferee to execute an enforceable written assignment and assumption agreement, in form and substance reasonably approved by the Village Attorney (the "Transferee Assignment and Assumption Agreement"), agreeing to be bound by this Agreement, and to provide the VILLAGE, after request, with reasonable assurance of the financial ability of the transferee to meet any remaining obligations under this Agreement. The Transferee Assignment and Assumption Agreement shall be filed against title to the Property with the CCCORD and shall obligate the new owner of the Property from time to time to perform the obligations of the HS ASSOCIATION under this Agreement and shall require notice to the VILLAGE of any transfer of the Property, which memorandum shall be in a form and substance reasonably satisfactory to the VILLAGE and the HS ASSOCIATION.

**Section 19: Binding Agreement.** This Agreement will run with and bind the Property as long as the Heritage Springs Subdivision and the HS ASSOCIATION continues to exist and operate, and will inure to the benefit of and be enforceable by the HS ASSOCIATION and the VILLAGE, provided it is renewed by the Parties if this Agreement terminates due to the expiration of its initial twenty (20) year term. The obligations of the HS ASSOCIATION under this Agreement are binding on the HS ASSOCIATION, on all of the HS ASSOCIATION'S transferees, successors-interest, all legal or beneficial owners of record, assigns, tenants, licensees and all subsequent owners of the Property or any part of the Property, and each and all homeowners associations or their equivalent within the Property.

**Section 20: Termination of this Agreement For Failure of the Developer to Acquire Title to the Property.** This validity of this Agreement is subject to the DEVELOPER purchasing the Property from the Property Owner. If the DEVELOPER does not purchase the Property from the Property Owner, this Agreement shall automatically terminate without any further action being taken by either Party and shall be void and unenforceable. If the DEVELOPER does not purchase the Property, the HS ASSOCIATION agrees to waive all claims, causes of action and damages of any kind that the HS ASSOCIATION could file against the VILLAGE arising out of or related to the termination of this Agreement. The DEVELOPER is required to provide written notice to the VILLAGE and the HS ASSOCIATION within five (5) calendar days of the termination of the real estate purchase contract that it has entered into with the Property Owner related to the Property.

**Section 21: Recording with CCCORD.** Upon its execution, a certified copy of this Agreement shall be recorded by the VILLAGE, at the HERITAGE SPRINGS OWNERS ASSOCIATION'S expense, with the CCCORD. The VILLAGE shall deliver one (1) stamped copy of the Agreement to the HERITAGE SPRINGS OWNERS ASSOCIATION after filing with the CCCORD.

**IN WITNESS WHEREOF**, the Village of Western Springs, pursuant to authority granted by the adoption of a Resolution by its Board of Trustees, has caused this Agreement to be executed by its President and attested by its Clerk, and HERITAGE SPRINGS OWNERS ASSOCIATION, pursuant to the authority granted by the adoption of a corporate resolution, has caused this Agreement to be signed by its Manager and attested by its Secretary.

**VILLAGE OF WESTERN SPRINGS**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Village President

Date: \_\_\_\_\_, 2025.

**ATTEST:**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Village Clerk

Date: \_\_\_\_\_, 2025.

**HERITAGE SPRINGS OWNERS ASSOCIATION**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
President

Date: \_\_\_\_\_, 2025.

**ATTEST:**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Secretary

Date: \_\_\_\_\_, 2025.

**GROUP EXHIBIT "A"**

**"Development Agreement"**

**and**

**Amended Site Plan for Heritage Court Parking Spaces within the  
Heritage Springs Subdivision dated December \_\_, 2024 and prepared by DesignTek Engineering, Inc.**

(attached)



**EXHIBIT "B"**

**MAP OF TRAFFIC SIGNAGE AND ON-STREET AND OFF-STREET PARKING REGULATION SIGNAGE,  
OTHER MOTOR VEHICLE REGULATORY SIGNAGE AND SCHEDULE OF REGULATIONS FOR  
HERITAGE COURT AND THE HERITAGE SPRINGS SUBDIVISION DATED \_\_\_\_\_, 202\_**

(attached)

Draft

STATE OF ILLINOIS     )  
                                      ) SS  
COUNTY OF C O O K     )

**CLERK'S CERTIFICATE**

I, Edward Tymick, Village Clerk of the Village of Western Springs, Cook County, Illinois, certify that the attached document is a true and correct copy of the Resolution now on file in my office, entitled:

**RESOLUTION NO. 25-\_\_\_\_\_**

**A RESOLUTION AUTHORIZING THE APPROVAL AND EXECUTION OF AN AGREEMENT MADE BETWEEN THE VILLAGE OF WESTERN SPRINGS AND HERITAGE SPRINGS OWNERS ASSOCIATION REGULATING THE USE OF THE PRIVATELY-OWNED HERITAGE COURT STREET RIGHT-OF-WAY, ON-STREET AND OFF-STREET PARKING SPACES AND EMERGENCY TURN-AROUND AREAS, OTHER PAVED OR UNPAVED VEHICLE ACCESS DRIVEWAYS OR PATHWAYS, PARKING OF MOTOR VEHICLES, AND CONTROL OF MOTOR VEHICLE TRAFFIC WITHIN THE HERITAGE SPRINGS SUBDIVISION LOCATED AT 5500 HERITAGE COURT IN THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS**

which was passed by a roll call vote of the Village President and Board of Trustees of the Village of Western Springs at a Special Meeting thereof, held on the 10th day of February, 2025, at which meeting a quorum was present, and approved by the Village President of the Village of Western Springs on the 10th day of February, 2025.

I further certify that the vote on the question of the passage of the Resolution by the Village President and Board of Trustees of the Village of Western Springs was taken by the Ayes and Nays and recorded in the Journal of Proceedings of the Village President and Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

AYES:\_\_\_\_\_

NAYS:\_\_\_\_\_

ABSENT:\_\_\_\_\_

I do further certify that the original Resolution, of which the attached is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

**IN WITNESS WHEREOF**, I have hereunto set my hand and affixed the seal of the Village of Western Springs this 10th day of February, 2025.

\_\_\_\_\_  
Edward Tymick, Village Clerk