



MANKATO PLANNING COMMISSION
Regular Meeting November 19, 2025 - 6:00 p.m.
Intergovernmental Center
Mankato Room

Any person speaking to the Commission shall give to the Secretary of the
Commission the NAME and HOME ADDRESS of such person prior to speaking.

1. **CALL TO ORDER**

2. **APPROVAL OF AGENDA**

3. **APPROVAL OF MINUTES**

1. **October 22, 2025, Draft Planning Commission Meeting minutes**

4. **OLD BUSINESS**

5. **NEW BUSINESS**

1.

CY56-25

Request of APX Construction Group, with permission of the owner, for a final plat review of Evenson Subdivision; for a conditional use permit to allow multiple family housing in the B-3, Highway Commercial zoning district; and for a certificate of design compliance for the construction of two new multiple family dwelling structures in the Highway Gateway Overlay District. The subject property is generally described as being in the east ½ of the northwest ¼, Section 21, Township 108 N, Range 26 W lying south of Highway 83 and east of Highway 22 excluding Stanley Subdivision, Blue Earth County (Blue Earth County PID R430921177001).

The anticipated date of City Council action is December 8, 2025.

2.

CY57-25

Request of Mankato Area Public Schools for an amended preliminary plat and final plat review of Mankato West High School Subdivision. The subject property is described as being located in the Southeast Quarter of Section 13, Township 108, Range 27, Blue Earth County, City of Mankato (West High School, 1351 S. Riverfront Drive).

The anticipated date of City Council action is December 8, 2025.

3.

CY58-25

Request of APX Construction Group, with permission of the owner, Cemstone, for the vacation of a portion of a 10' utility easement located on the westerly side of Lot 2, Block 2 as per the recorded plat of Lime Valley Fourth Addition. The subject property is described as part of Lot 2, Block 2, Lime Valley-Fourth Addition, Blue Earth County (Blue Earth County PID R010431455007, 100 Summit Avenue).

The anticipated date of City Council action is December 8, 2025.

6.

MISCELLANEOUS

7.

ADJOURNMENT

Planning Commission Regular Meeting

3. 1.

Meeting Date: 11/19/2025

Title

October 22, 2025, Draft Planning Commission Meeting minutes

Attachments

October 22, 2025 Draft PC minutes



MINUTES

**Mankato Planning Commission
October 22, 2025 - 6:00 p.m.
IGC - Mankato Room**

1. **CALL TO ORDER**

Chair Zehnder called the meeting to order at 6:00 p.m.

Commissioner's Present: Chair Zehnder, Ms. Surdy, Mr. Filipovitch, Mr. Dieken, Mr. Iddings, Mr. Wilke.

Staff Present: Molly Westman-Planning and Zoning Administrator, Mark Konz-Director of Planning and Development Services, Bennett Hanson-Planner, Travis Johnson-Permit Technician, Brittany Mitchell-Planning Coordinator, Nick Peterson-Sr. Management Analyst.

2. **APPROVAL OF AGENDA**

Ms. Surdy made a motion to approve the agenda. Mr. Iddings seconded the motion. The motion carried unanimously.

3. **APPROVAL OF MINUTES**

Mr. Filipovitch made a motion to approve the minutes from September 24th, 2025. Mr. Dieken seconded the motion. The motion carried unanimously.

1. **September 24, 2025 Planning Commission minutes**

4. **OLD BUSINESS**

No old business

5. **NEW BUSINESS**

1.

CY56-25

Request of the Planning Agency to review the proposed 2026-2030 Capital Infrastructure Plan.

Mr. Peterson reports that the Community Investment Program (CIP) is a multi-year plan that helps identify, prioritize, budget, and plan for needed improvements to streets, parks, utilities,

including water and wastewater facilities, major projects and purchases, such as airport improvements, park upgrades and city vehicles.

Part of the review and approval process for the CIP requires that the Planning Commission reviews the document and confirms the plan conforms to the goals of the Land Use Plan.

Mr. Konz reports that staff submitted the following findings:

1. The plan conforms to the goals of the Mankato Land Use Plan.
2. The plan conforms to the goals of the Mankato Parks and Open Spaces Plan.
3. The plan conforms to the goals of the Mankato Strategic Plan.

Mr. Konz reports that staff recommend approval of the Community Investment Plan.

Mr. Wilke inquired whether the pickleball court replacement proposed in the CIP would be constructed to meet the standards required to host regional tournaments. He recommended that the courts be built to those standards if they are not currently planned to do so.

Mr. Peterson indicated that for projects of this size, a feasibility study or public engagement process is typically conducted to ensure that the proposed facilities meet user needs. He noted that he will take this into consideration for this project.

Chair Zehnder questioned whether the airport tower construction would still be able to proceed despite delays in federal funding.

Mr. Konz stated that the City of Mankato originally had a five-year window, which is now nearing its end. During that period, the timeframe was extended to seven years, providing the city with additional time to complete the process. He noted that this extension has been very beneficial and expressed appreciation for the extra time granted without the need for a formal request.

Ms. Surdy inquired about the intentions for the airport upgrades, including the construction of the new tower.

Mr. Peterson indicated that in 2018, the FAA conducted an official count and found that the Mankato Airport was the second busiest in Minnesota, behind Minneapolis–St. Paul International Airport. He noted that some aviators have expressed reluctance to fly into Mankato due to the high volume of traffic and safety concerns. Mr. Peterson also stated that the FAA assigns airports a score to determine the need for a control tower; any score above 1 qualifies for a tower, and the Mankato Airport received a score of approximately 2.3.

Mr. Wilke added that the aviation program at Minnesota State University, Mankato, is large and continuing to grow, which further contributes to the need for a new control tower.

Chair Zehnder questioned what examples of stormwater best management practices would be implemented and whether these would be intended to assist homeowners with stabilization efforts.

Mr. Peterson explained that if a private residential property is experiencing stormwater issues and the owner wishes to make improvements, these efforts can also benefit the city. He stated that the fund would likely allow for a cost-sharing arrangement with the resident, enabling improvements that assist both the property owner and the city's infrastructure.

Chair Zehnder opened the public hearing for comment. With no one wishing to speak, the public hearing was closed.

Mr. Wilke made a motion to approve the 2026-2030 Community Investment Plan. Mr. Dieken seconded the motion. The motion passed unanimously.

The anticipated date of Council action is December 1, 2025.

2.

CY53-25

Request of APX Construction Group, with permission of the owner, for a preliminary plat review of Evenson Subdivision; for annexation; and for the rezoning of the subject parcel from T, Transition, to B-3, Highway Business. The subject property is generally described as being in the east ½ of the northwest ¼, Section 21, Township 108 N, Range 26 W lying south of Highway 83 and east of Highway 22 excluding Stanley Subdivision, Blue Earth County (Blue Earth County PID R430921177001).

Mr. Konz reports that staff respectfully submit the following findings regarding the proposed rezone from T, Transition, to B-3, Highway Commercial.

1. The rezoning from T, Transition, to B-3, Highway Commercial, is consistent with the goals, objectives, and policies of the comprehensive land use plan, as adopted and amended from time to time by the City Council.
2. The rezoning is compatible with the overall character of existing development in the immediate vicinity of the affected property.
3. The proposed B-3 zoning classification is consistent with adjacent properties in the immediate vicinity.
4. The proposed rezoning will not interfere with or diminish the use of property in the immediate vicinity.
5. The properties will be served by public utilities.

Mr. Konz reports that staff respectfully submit the following findings of fact regarding the proposed preliminary plat of Evenson Subdivision.

1. General Requirements
 1. The subdivided site will be used for purposes permitted or conditionally permitted as a multiple family dwelling site.
 2. Drainage and storm water management for Lot One, Block 1 of the development, will be required to conform to City drainage requirements. Concept plans for the future site development show a private stormwater pond in the northwest corner of Lot 1, Block 1.
 3. The site provides storm connections.
 4. On-site wetlands are shown on the plat.
2. Streets
 1. New streets are not being dedicated with the subject plat. The street right-of-way widths from the previously approved Right of Way plat are in line with the existing street right-of-way widths.
3. Easements
 1. The plat will be required to provide standard drainage and utility easements around the subject site, and a recommended condition is included herein.
4. Block Standards
 1. The blocks within the subdivision were designed for the intended end use as commercial property. The proposed Lot 1, Block 1 achieves the Block standard as it is approximately 550 feet, which is less than the maximum block length of 1,200 feet.
5. Lot Standards
 1. The lot within the subdivision is intended for commercial use and provides an

adequate size to allow off-street parking, loading and other facilities for the intended end use.

6. Public Sites and Open Spaces

1. The applicant will be required to pay a payment-in-lieu of parkland dedication fee as the subject parcel has not previously been platted.

Mr. Konz reports that staff recommend approval of the preliminary plat of Evenson Subdivision with the following conditions:

1. The final plat submission shall reflect easements around the subject site in conformance with the Mankato City Code.
2. The applicant shall enter into a subdividers agreement for any public improvements or improvements located in the public right of way.
3. The applicant shall provide a payment in lieu of a parkland dedication fee based on the 2025 commercial assessed market rates.
4. In conjunction with the submission of the final plat, the applicant shall provide updated drainage and utility plans conforming to engineering standards and other applicable standards.
5. In conjunction with the submission of the final plat, the applicant shall address the wetlands on the site and obtain a no loss finding or the applicable wetland impact approvals.
6. The applicant will be required to obtain a conditional use permit and a certificate of design compliance for the use shown on the proposed concept plan.
7. The applicant shall review and evaluate the design of the sidewalk located on the north side of the property. This review shall be conducted in coordination with the City of Mankato Department of Public Works and the Blue Earth County Department of Public Works to address any grading concerns and to ensure appropriate separation between the sidewalk and the adjacent ditch.

Mr. Konz reports that staff recommends approval of the rezoning of the subject parcel from T, Transition, to B-3, Highway Commercial.

Shawn Meschke (APX Construction). Mr. Meschke attended the meeting on behalf of Ryan Evenson (landowner). He stated his agreement with the seven conditions presented during the meeting and would be working towards addressing them over the coming weeks. Mr. Meschke thanked the commission for their review of the project and indicated that he was available to answer any questions from the commission members.

Chair Zehnder opened the public hearing for comment. With no one wishing to speak, the public hearing was closed.

Ms. Surdy expressed her desire to encourage the City of Mankato to prioritize the development of actual park land rather than accepting payment in lieu of park dedication. She added that green space promotes healthy living and provides significant benefits to the neighborhood, particularly in areas such as this.

Mr. Dieken made a motion to approve the preliminary plat of Evenson Subdivision with conditions and for the rezoning of the subject parcel from T to B-3. Mr. Iddings seconded the motion. The motion passed unanimously.

The anticipated date of Council action is November 10, 2025.

Request of Ryan Evenson, with permission of the property owner, for a conditional use permit to allow an indoor playground and sport center in the B-3, Highway Business, zoning district, and for a certificate of design compliance for the construction of a new structure in the Highway Gateway Overlay District. The subject property is described as Lot 5, Block 2, Venstar Subdivision (1740 Premier Drive).

Ms. Mitchell reports that staff respectfully submits the following findings:

1. The request is in keeping with the comprehensive planning policies of the City as the underlying land use plan identifies this parcel as "commercial."
2. The proposal does not interfere with or diminish the use of property in the immediate vicinity.
3. The proposal is currently served by public facilities and services and will continue to be.
4. The proposal does not cause undue traffic congestion as the submission conforms to Mankato City Code criteria for off-street parking and driving areas. It was determined that no additional turn lanes are warranted at the proposed site driveway location. Additional intersection analysis is being completed at Augusta Drive and N. Victory Drive. The applicant will continue to work with City Staff.
5. There are no known historical or architectural resources on the site.
6. There are no known natural or environmental features on the site.
7. It will not cause a negative cumulative effect and effect on the City as a whole.
8. The proposal will not jeopardize the public's health, safety, or general welfare.
9. The property is located in the Highway Gateway Overlay District and the proposed value of the project exceeds \$500,000, which, by Mankato City Code Chapter 10, requires a review of the Planning Commission and City Council.
10. The building elevations conform to the guidelines of the Highway Gateway Overlay District. The proposed addition has exterior finishes including brick and metal. All sides of the building visible to the public will be treated consistently with quality materials and finishes.

Ms. Mitchell reports that staff recommends approval of the requested Conditional Use Permit and Certificate of Design Compliance with the following conditions:

1. The exterior finishes as shown and approved by the City Council shall be implemented. No corrugated metal or exposed fasteners shall be allowed.
2. A plan conforming to MS4 requirements per the City of Mankato will need to be submitted at the time of building permit submission. If it is determined that a storm water facility is needed to accommodate onsite stormwater, the applicant will be required to conform to the standards.
3. A final traffic memo should be submitted to reflect the analysis of the adjacent intersections at the time of building permit submittal.
4. At the time of building permit submission for the proposed expansion, the applicant shall provide a photometric plan and light fixture cut sheets in accordance with City Code Chapter 10.
5. There shall be no outside storage of materials.
6. All mechanical equipment shall be screened from the street and the adjacent residential properties.
7. Dumpsters shall be screened according to City Code Chapter 10.
8. A snow storage and removal plan shall be provided at the time of building permit submittal.
9. A bike rack shall be provided.
10. Prior to fabrication or installation of any signage, a sign permit shall be required. All signage shall achieve the sign standards in City Code Chapter 10.

Mr. Wilke questioned recommendation number 3 relating to the traffic memo. He asked

whether other projects in the area also had traffic memos and what factors trigger the need for a traffic memo for a project such as this.

Mr. Konz explained that, generally, a conditional use permit will trigger the need for a traffic memo. One requirement of the submittal is to provide documentation of the expected traffic circulation and patterns resulting from the project. He referenced the Kuepers development, noting that they were required to complete a traffic study and made modifications to lanes in that area to address impacts identified in the study. The current study for this project builds on the Kuepers study, incorporating that information into the project's design. He also noted the difficulty of conducting traffic counts with Highway 22 being closed, which required some assumptions in the current traffic study, supplemented by previously collected data.

Ms. Surdy questioned whether the new building would require a new turn lane.

Ms. Mitchell stated that, according to the traffic study received by Bolton & Menk, there is no need for an additional traffic lane on Premier Drive.

Ms. Surdy stated that she felt the traffic study was inaccurate. She expressed concern that the potential for significantly increased traffic could lead to traffic issues and that the impact might be underestimated. She suggested that a condition be added requiring the owner to be financially responsible for any future traffic improvements that may become necessary.

Mr. Konz referenced the Circle-K project at 1510 Adams Street and the Kuepers development on Victory Drive. He noted that in those cases, a condition was included stating that if traffic improvements were required, the property owner would participate in the costs. He added that such conditions typically have a sunset provision and recommended including a similar approach for any new conditions.

Shawn Meschke (APX Construction), Josh and Christian Brooks. Mr. Meschke attended the meeting on behalf of Ryan Evenson (owner). He thanked the commission for reviewing the project and introduced Mr. and Ms. Brooks as the prospective operators of the business. Ms. Brooks stated that they have lived in the area for some time and are looking forward to starting this project.

Ms. Surdy questioned whether the intention was to include a soft play area or what type of setup was being planned for the facility.

Ms. Brooks explained that the facility will include three separate play areas designed for different age groups: one for children ages 0–2, another for ages 2–5, and a third for ages 7–12. Each area will feature equipment and activities tailored to the specific developmental needs of that age group. She also noted the time and effort invested in the project and emphasized their goal of creating a space designed to meet those needs—a place where children and families can connect, play, and learn.

Chair Zehnder opened the public hearing for comment.

Jayne Wolle (561 Grayhawk Drive). Ms. Wolle indicated that she lives directly behind the proposed facility. She indicated the intersection at Augusta and Premier Drive has seen an increase in traffic over the past few years. She indicated that they were supportive of the facility but felt as though if more children were going to be present in the area, then further examination of the traffic patterns would be needed.

Kent Waletski (144 Torrey Pines Ct). Mr. Waletski stated that he thought it was a great project but questioned the height of the berm being put in place.

Chair Zehnder indicated that he believed the berm was six feet high.

Mr. Konz asked Mr. Meschke whether the berm was four or six feet high.

Mr. Meschke indicated that the height of the berm varies within that range but noted that they could construct one that is six feet high.

Mr. Waletski stated that he was unsure of the standard. He referenced the berm at Home Depot as being quite large and the one at the fire station as being small but expressed that he felt six feet would be ideal.

Mr. Meschke indicated that they would commit to a six-foot berm at this location.

With no one wishing to speak further, the public hearing was closed.

Mr. Konz asked whether the commission wanted to add a condition addressing potential traffic issues.

Ms. Surdy stated that she wanted to add a condition requiring the applicant to be responsible for any traffic improvements if congestion occurs. She added that she was not aware of the typical sunset provision associated with such conditions.

Mr. Konz indicated that, historically, the sunset provision for such conditions has been three years.

Mr. Wilke commented that he does not believe this project will be the sole contributor to traffic patterns in the area, noting that traffic impacts are likely cumulative from multiple properties. He stated that he is not comfortable placing the responsibility solely on this project and felt that others, including the City of Mankato, should also share in addressing any traffic concerns.

Mr. Konz indicated that the City of Mankato typically evaluates the traffic volume generated by a specific project and allocates the cost share for improvements accordingly.

Ms. Surdy made a motion to approve the Conditional Use Permit and Certificate of Design Compliance with the added condition. Mr. Iddings seconded the motion. The motion carried unanimously.

The anticipated date of Council action is November 10, 2025.

4.

CY55-25

Request of the Planning Agency to review Chapter 10 of Mankato City Code related to variances.

Mr. Hanson indicated that the City of Mankato is requesting to amend multiple sections pertaining to variances within Chapter 10 of the Mankato City Code.

He indicated that in order to act in accordance with the amended 2011 State Statute, the City of Mankato has applied their Variance review through the lens of the three practical difficulties for some time now. Despite this, he indicated that our current City Code still reflects pre-2011 variance standards. The goal of this amendment pertaining to variances is to bring the City Code into alignment with current practice and the State Statute as it exists today.

Mr. Hanson stated that these amendments would replace the existing terminology with the terminology used within the State Statute. The improved continuity between the State Statute and the City Code, as well as the improved uniformity of terminology, serve to provide greater clarity of the standards that must be met for Variances from the Mankato City Code.

Ms. Surdy asked whether the proposed changes were like Blue Earth County's variance procedures.

Mr. Hanson indicated this was correct.

Chair Zehnder opened the public hearing for comment. With no one wishing to speak, the public hearing was closed.

Mr. Filipovitch made a motion to approve the proposed amendments pertaining to variances within Chapter 10 of the Mankato City Code. Ms. Surdy seconded the motion. The motion passed unanimously.

The anticipated date of City Council action is December 8, 2025.

6. **MISCELLANEOUS**

No Miscellaneous items

7. **ADJOURNMENT**

There being no further business, Ms. Surdy moved to adjourn the meeting. The motion was seconded by Mr. Dieken with all in favor. The meeting adjourned at 6:58 pm.

MINUTES APPROVED.

Chair, Mankato Planning Commission

Meeting Date: 11/19/2025

Title

CY56-25

Request of APX Construction Group, with permission of the owner, for a final plat review of Evenson Subdivision; for a conditional use permit to allow multiple family housing in the B-3, Highway Commercial zoning district; and for a certificate of design compliance for the construction of two new multiple family dwelling structures in the Highway Gateway Overlay District. The subject property is generally described as being in the east ½ of the northwest ¼, Section 21, Township 108 N, Range 26 W lying south of Highway 83 and east of Highway 22 excluding Stanley Subdivision, Blue Earth County (Blue Earth County PID R430921177001).

The anticipated date of City Council action is December 8, 2025.

Applicant

The applicant is Ryan Evenson, on behalf of APX Construction Group.

Request

Request of APX Construction Group, with permission of the owner, for a final plat review of Evenson Subdivision; for a conditional use permit to allow multiple family housing in the B-3, Highway Commercial zoning district; and for a certificate of design compliance for the construction of two new multiple-family dwelling structures in the Highway Gateway Overlay District.

Location

The subject property is located at 901 S. Victory Dr. and is described as being in the east ½ of the northwest ¼, Section 21, Township 108 N, Range 26 W lying south of Highway 83 and east of Highway 22 excluding Stanley Subdivision, Blue Earth County (Blue Earth County PID R430921177001).

Existing Land Use

The property is currently vacant.

Zoning

The property has been recently zoned B-3, Highway Business District.

Other Board or Commission

The Mankato Township Board reviewed the petition for annexation at their October 14, 2025, meeting. The Board adopted a resolution outlining that they have no objection to the annexation.

City Council approved the annexation at their November 10, 2025 meeting.

Environmentally Sensitive Areas

There are areas on the site that have delineated wetlands.

Public Utilities

Water Access Charges and Sewer Access Charges will apply. Costs will be determined once the final unit count is provided.

City Code

The Mankato City Code related to Subdivision and Development Regulations (Platting) can be found in Chapter 10, Article XII, as linked here: https://library.municode.com/mn/mankato/codes/code_of_ordinances?nodeId=PTIICOOR_CH10LAUSDE_ARTXIIISUDEREPL

Mankato City Code related to B-3, Highway Business, zoning criteria can be found in Chapter 10, Article V, Division 8, as linked here: https://library.municode.com/mn/mankato/codes/code_of_ordinances?nodeId=PTIICOOR_CH10LAUSDE_ARTVCODI_DIV8HIBUDI

The Mankato City Code related to the Highway Gateway Overlay District, criteria can be found in Chapter 10, Division 9, as linked here: https://library.municode.com/mn/mankato/codes/code_of_ordinances?nodeId=PTIICOOR_CH10LAUSDE_ARTVCODI_DIV9GTGAOVDI_SDIVHGHGAOVDI

Site Plan Review Comments

The Site Plan and Traffic Advisory Committee met on November 4, 2025. Below are their comments. The applicant's responses are included in the attachments section of this report.

1. The applicant shall verify that the proposed pond location, in relation to the building, complies with all applicable building code requirements. An alternative pond design is recommended. Additionally, all preliminary plat comments must be addressed; at this time, they have not been satisfied.
2. If the stated conditions have not been met, the Site Plan and Traffic Committee recommend denial of this item. Revised plans and documentation addressing all outstanding conditions must be submitted and approved prior to this project moving forward.
3. The applicant shall provide a revised site plan demonstrating that sufficient parking is provided in accordance with the Mankato City Code.
4. The applicant shall be advised that upon annexation of the property, Water Access Charges (WAC) and Sewer Access Charges (SAC) will apply. These fees will be calculated based on residential units (RUs). Accordingly, the applicant shall provide clarification regarding the number of units proposed within each building.
5. The applicant shall be advised that the plans indicate the water main connection in the northeast corner is located approximately two (2) feet from a property pin. The applicant shall be responsible for reinstalling any property pins that are removed or disturbed during construction.
6. The applicant shall be advised that a manhole and water valve are located within the dog park area, and it is recommended that they be relocated to allow proper maintenance access. The applicant shall also note that the City of Mankato will require continued access to these utilities.
7. The applicant shall relocate the proposed dumpster enclosure to a location that meets accessibility, screening, and setback requirements per the Mankato City Code.
8. The applicant shall be advised that the assigned addresses for the buildings will be 905 and 909 South Victory Drive.
9. The applicant shall be aware that Parcel R43.09.21.177.001 has two deferred assessments that will be due upon annexation.
10. The applicant shall submit a revised drainage report based on previously provided review comments from 10-24-25 submittal.
11. The applicant shall submit updated plans based on previously provided plan review comments from 10-24-25 submittal.

12. The applicant shall provide a sidewalk connection from the proposed site to the existing sidewalk system at the roundabout of Stadium Road and S Victory Dr as approved by the City of Mankato and Blue Earth County.

Additional comments were provided on November 5, 2025.

1. An annexation fee of \$25.00 shall be made out to the State of Minnesota and should be provided to staff so that when the City Council has officially approved the annexation, the information can be sent to the law judge.
2. As previously corresponded, the wetland no-loss cannot be reviewed by the City of Mankato until such time as the annexation has occurred. Annexation is planned for review by the City Council on November 10, after which it will be sent to the State for official annexation.
3. If the desire is to have the City review the no-loss application once the annexation is complete, please make a separate request for as much in the City's portal. If this separate application is complete, then the wetland TEP group can review the application at their November 19, 2025, meeting, which is tentatively scheduled for 1:00 p.m.
4. Additional clarification is needed on the actual size of the lot. The preliminary plat showed 3.89 acres; the annexation petition request contained a different request and the final plat shows 4.27 acres. Please provide details on the variation in the submitted lot size.

Review

APX Construction Group is requesting a final plat review of Evenson Subdivision, a conditional use permit to allow for multiple-family housing in the B-3, Highway Business District, and a certificate of design compliance for the construction of two new multiple-family dwelling structures in the Highway Gateway Overlay District.

The subject property is located at 905 S. Victory Dr. at the roundabout of Victory Dr. and Stadium Rd.

The project was reviewed last month by the Planning Commission for a preliminary plat and a rezone to B-3, Highway Business District. The property has been annexed into the City of Mankato, receiving approval on November 10, 2025 from City Council.

Final Plat:

The final plat proposes the creation of a one-lot, one-block subdivision encompassing approximately 4.0 acres. The lot standards outlined in the Mankato City Code are achieved with the proposed subdivision. Standard easements are shown on all sides of the parcel.

The plat contains two wetland areas, one on the northwestern side of the parcel and one on the eastern side of the parcel. An easement is shown to represent the required 16.5' wetland setback around each of the wetland areas. The applicant has submitted a No Loss request which will be reviewed by the TEP Board on November 19, 2025.

Below are the conditions of approval for the preliminary plat (and demonstration of compliance).

1. *The final plat submission shall reflect easements around the subject site in conformance with the Mankato City Code.* The applicant has shown the required easements on the final plat document.
2. *The applicant shall enter into a subdividers agreement for any public improvements or improvements located in the public right of way.* Alternatively, the applicant will apply for a license to encroach and for a variance to construct the sidewalk.
3. *The applicant shall provide a payment in lieu of a parkland dedication fee based on the 2025 commercial assessed market rates.* The applicant shall pay a parkland dedication fee of \$12,400 based on the current commercial market value rates.
4. *In conjunction with the submission of the final plat, the applicant shall provide updated drainage and utility plans conforming to engineering standards and other applicable standards.* The plans have been submitted to the City Engineer for review and approval.
5. *In conjunction with the submission of the final plat, the applicant shall address the wetlands on the site and obtain a no loss finding or the applicable wetland impact approvals.* The applicant has submitted a "No Loss" application for review by the TEP Board on November 19, 2025.
6. *The applicant will be required to obtain a conditional use permit and a certificate of design compliance for the use shown on the proposed concept plan.* The applicant has submitted these applications.

Conditional Use Permit:

Site plans for the Evenson Subdivision illustrate a grouped housing development consisting of two apartment buildings with a total of 82 residential units. Supporting site improvements include on-site parking and associated residential amenities. The property is currently zoned B-3 Highway Business District, where grouped housing projects are classified as conditional uses.

The project meets the recently adopted special requirements outlined in Chapter 10 for apartment buildings located in the B3 district. The following are those requirements and the details on how the development conforms.

1. *The housing unit density shall conform to the high-density residential standards in the land use plan.* The proposed development conforms to the standard. The land use plan states that the high density residential developments shall have greater than 10 units per acre. This development achieves the land use density standard by having 20.5 units per acre. In addition, the development conforms to the R-4 zoning district density standards, which are 10,000 square feet for up to four dwelling units, plus an additional 2,000 square feet for each dwelling unit in excess of four units. The subject property contains 174,500 sf. to achieve the density standards 166,000 is required, and thus the site conforms.
2. *Shall provide a transitional yard the proposed development and low- and medium residential density uses. The transitional yard shall be 130 feet. For the purposes of this ordinance, a street right-of-way located between the proposed development and low- and medium residential density uses shall satisfy the transitional yard requirements.* There are no low density areas directly adjacent to the site and thus no transitional yard is required.
3. *No outside storage shall be allowed.* The plans do not reflect any outside storage and a condition has been added to ensure compliance with this special requirement.
4. *The property shall provide open space and recreational amenities. The open space and recreational amenities shall not be located in the front yard.* Several outdoor amenities and recreational areas are proposed, including two patios with grilling areas and outdoor games, a fenced dog park, and outdoor athletic courts.
5. *Parking shall conform to the requirements set forth for multiple-family dwellings.* Parking exceeds the requirement of 1.5 stalls per unit. Per the parking ordinance requirements, 123 parking stalls are required. The applicant is proposing to construct 154 parking stalls.
6. *Parking lots shall be hardsurfaced, striped, and screened from adjacent residential properties or rights-of-way.* The plans indicated that the parking lot shall be hardsurfaced.
7. *All mechanical equipment shall be screened from rights-of-way and residential uses and residential zones.* Mechanical equipment has not be shown on the plans. A condition has been added to ensure compliance with this special requirement.
8. *Building materials shall conform to Mankato Site Code Section 10-788.* See Certificate of Design Compliance for exterior materials.

The applicant proposes to construct two 41-unit buildings arranged in an "L" shape around a central parking lot. Building placement will be along the street frontages. In addition to the building and parking lot area, the applicant is depicting a stormwater pond that will be required to meet the MS4 requirements for the City of Mankato.

The 41-unit buildings include 23 two-bedroom units, 12 three-bedroom units and 6 four-bedroom units. Both buildings will have a dedicated lobby and mail room. Both buildings include a variety of unit layouts for each bedroom classification.

A tentative sidewalk location is proposed along Victory Dr, connecting with the current public sidewalk at the northwest corner of the property. The proposed sidewalk is located on the public right of way and does encroach onto one of the wetlands. Review and coordination will need to continue with City Staff to determine the viability of the sidewalk location. This will include the application for a variance to allow for the sidewalk to be located in the wetland setback and a license to encroach.

Public utilities will be connected, and the owner will be required to pay the Water Access Connection and Sewer Access Connection fees. Fee totals will be based on the final unit count and will be calculated at the rate listed in the fee schedule at the time of construction.

Site access is shown off of Victory Dr. and will be required to conform to the City's engineering and access management standards. Access will not be allowed on the northern side of the site connecting to Stadium Road.

A traffic study has been submitted with the request. The findings of the study indicate that the number of new vehicle trips estimated to be generated by the Proposed Project is 30 trips during the morning peak hour (7 entering and 23 exiting), 37 trips during the evening peak hour (23 entering and 14 exiting), and 447 trips daily. This volume is low, resulting in roughly one new trip every two minutes during peak hours. The operational analyses show acceptable conditions in the study area for both existing and 2027 No-Build scenarios. The crash history review revealed no safety issues. Further, the study finds that the operation analyses for 2027 Build Conditions with the Proposed Project indicate acceptable study area

operations. The Victory Drive and access intersection function acceptably with single-lane approaches.

Certificate of Design Compliance:

The proposed exterior elevations have a modern industrial aesthetic. Materials include flat cement board architectural panels with square reveals, cement board and metal siding, exposed concrete, and thin stone veneer accents. The proposed materials are currently selected to be earth tones of white, grey and beige, with a purple accent. The storefronts and windows will be black. Any fencing material will also be black.

A preliminary landscaping plan has been provided demonstrating the necessary landscaping and screening areas around the parcel.

Findings

Staff submits the following findings of fact:

1. The use, a grouped housing project, is considered a conditional use in the B-3, Highway Commercial district.
2. The request is in keeping with the comprehensive planning policies of the City, as the underlying land use plan identifies this parcel as "Commercial."
3. The proposal does not interfere with or diminish the use of property in the immediate vicinity.
4. The proposal will be served with public utilities and services.
5. There are no known historical or architectural resources on the site.
6. There are known environmental conditions on the site. The applicant is continuing to work through the conditions with the appropriate state and city departments. Permits will not be issued for the project until the wetlands have been addressed.
7. The grouped housing development will not cause a negative effect on the city as a whole as the proposed development conforms to the standards in the Code.
8. To the extent known, the proposal conforms with all other applicable regulations of the district, and other applicable ordinances.
9. The proposal will not jeopardize the public's health, safety, or general welfare.
10. The proposal will not cause undue traffic congestion, as the traffic impact analysis demonstrates that the level of service proposed for the amount of traffic generated within the development will remain at acceptable levels.

Recommendation

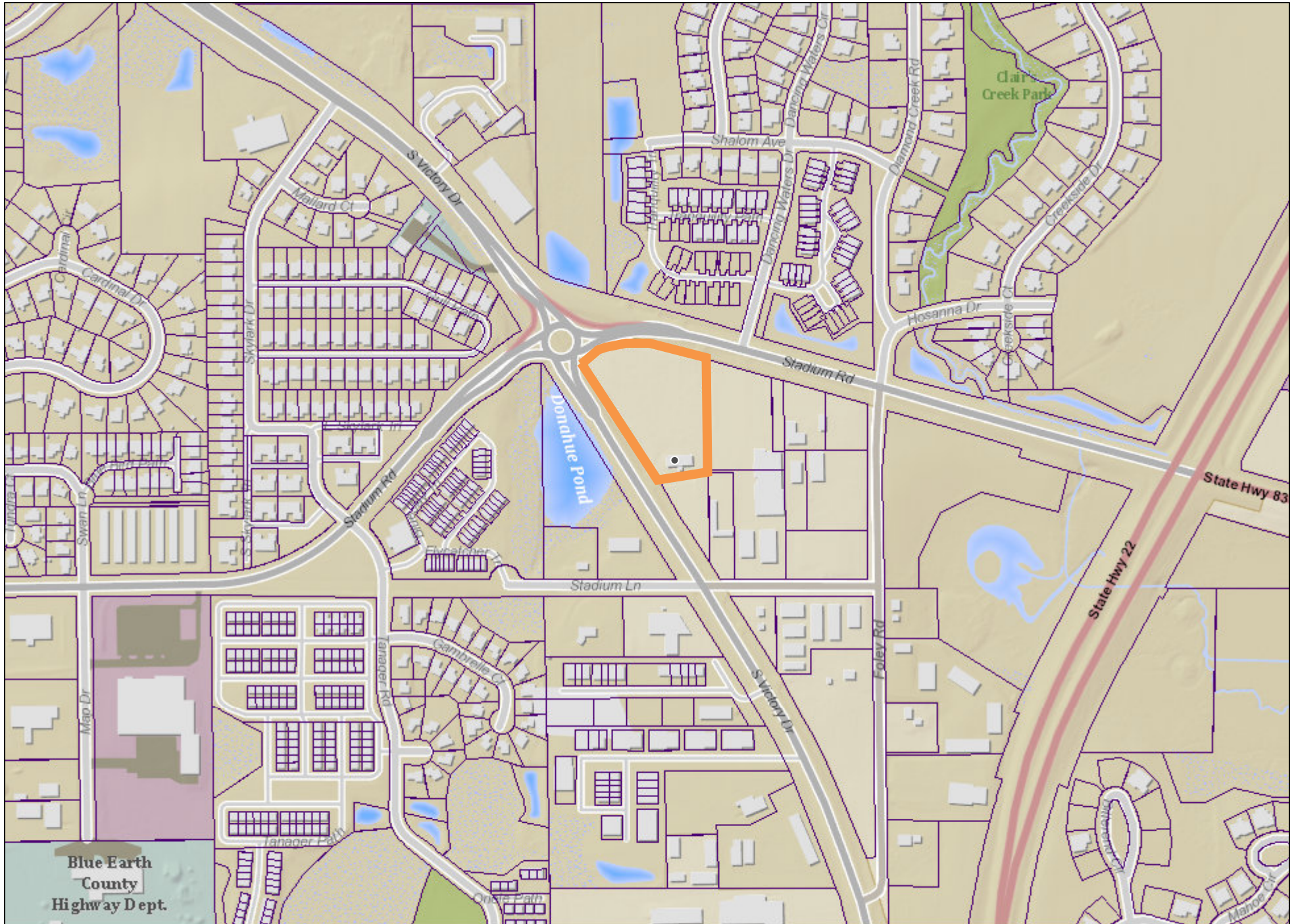
Staff recommends approval of the final plat, conditional use permit, and certificate of design compliance for the Victory Ridge Development with the following conditions:

1. If the grouped housing project on the subject parcel is constructed in phases, a phasing plan shall be submitted for review and approval, which demonstrates conformance to all standards for each phase of the development.
2. The applicant shall continue working with staff with regard to site water management and drainage. All systems shall conform to engineering standards and other applicable standards.
3. The applicant will be required to make revisions to the site design to accommodate the wetland requirements based on the Technical Evaluation Panel recommendations.
4. The applicant shall submit a variance request and a license to encroach for the construction of the sidewalk.
5. No outside storage shall be allowed.
6. The property shall have all amenity spaces complete at the time of leasing of units.
7. Parking shall conform to the requirements set forth for multiple-family dwellings.
8. Parking lots shall be hard surfaced, striped, and screened from residential properties and rights of way.
9. All mechanical equipment shall be screened from rights of way and residential uses and zones.
10. All exterior elevations shall be consistent per the Certificate of Design Compliance. The exterior finishes as shown and approved by the City Council shall be implemented. No substitutions shall be allowed.
11. The applicant shall install bicycle parking which conforms to the Mankato City Code.
12. The applicant shall provide a photometric plan that demonstrates conforming lighting levels at the property line. This shall be provided with the building permit submission for the structures.
13. The applicant shall provide exterior light fixture cut sheets. All exterior light fixtures shall conform to the Mankato City Code.
14. The applicant shall obtain a sign permit for any desired site signage prior to fabrication and installation.
15. The required landscaping shall be installed prior to, or in conjunction with, occupancy of the premise. All required screening shall meet Mankato City Code Chapter 10.
16. Prior to occupancy of any units, a rental license issued by the City of Mankato shall be in place.
17. The applicant shall submit a snow removal and storage plan for the proposed grouped housing project. Snow placement shall be in accordance with the MS4 requirements for the City.
18. The applicant shall schedule a pre-construction meeting with all appropriate City Staff.
19. The applicant shall have the final plat recorded prior to the issuance of a building permit.
20. The applicant shall provide a staging plan related to the phasing of construction. Ensuring that adequate parking is available for any building occupants.
21. Prior to affixing the signature on the final plat, the applicant shall pay a parkland dedication fee of \$12,400.00.

Attachments

General Location Map
Aerial Plan
Preliminary Plat
Final Plat
Final Plat - Aerial
Civil Plans
CUP and CDC Submittal
Wetland No Loss Application
Drainage Report
Traffic Study
Site Plan Response Letter

General Location Map

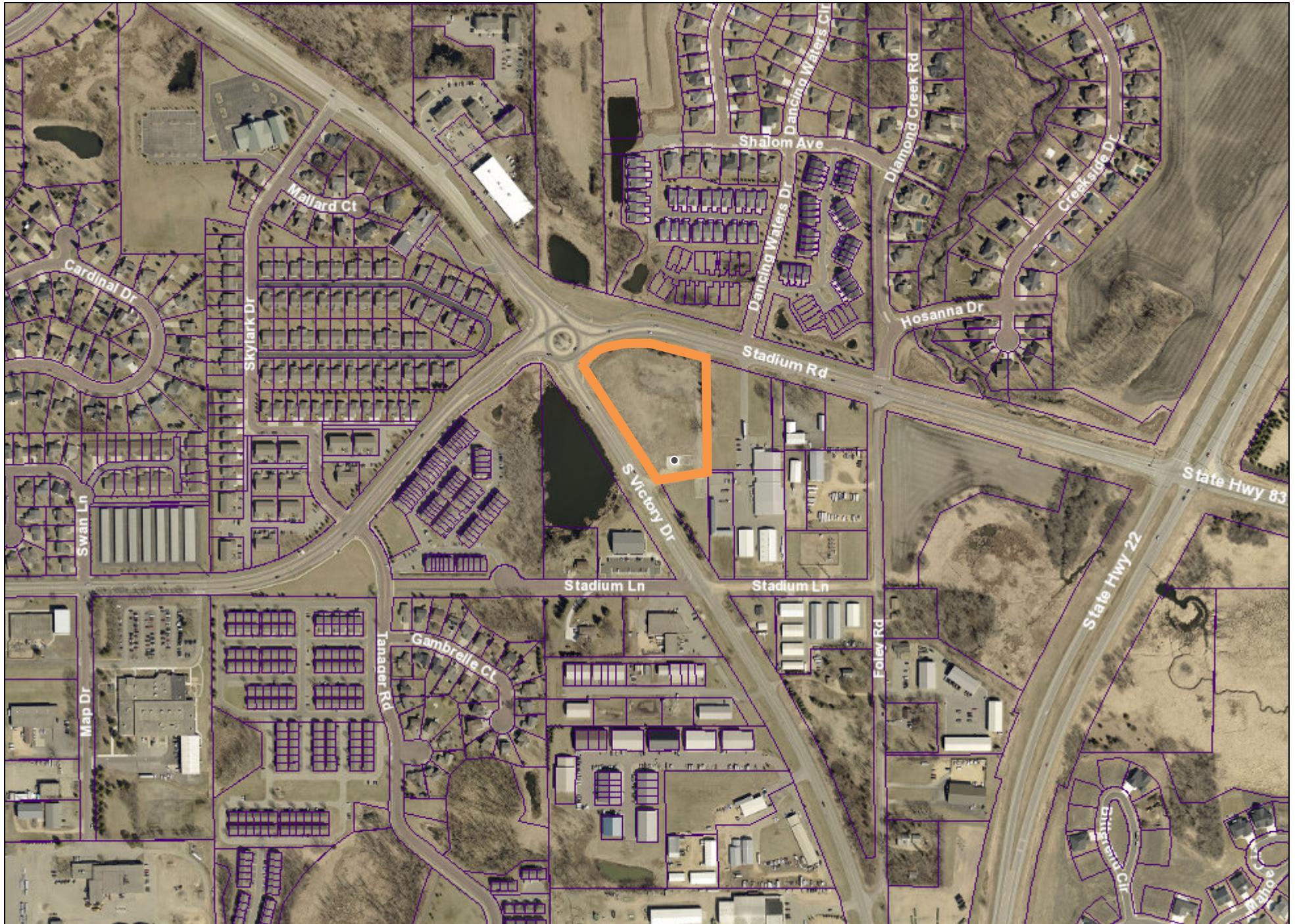


Date: September 2025

Author:

This information is to be used for reference purposes only. The City of Mankato does not guarantee accuracy of the material contained herein and is not responsible for misuser misinterpretation.

Aerial Map



Date: September 2025

Author:

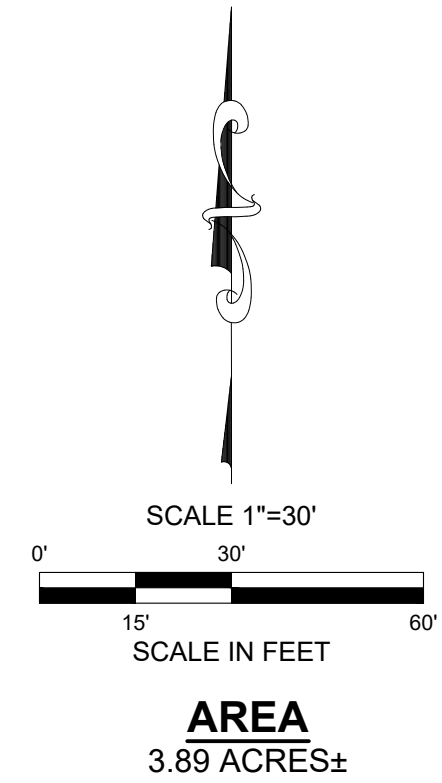
This information is to be used for reference purposes only. The City of Mankato does not guarantee accuracy of the material contained herein and is not responsible for misuser misinterpretation.

EVENSON SUBDIVISION

IN EAST 1/2 NW1/4 SECTION 21-T108N-R26W LYING SOUTH OF HWY 83
& EAST OF HWY 22 EXCLUDING STANLEY SUBDIVISION
BLUE EARTH COUNTY, MINNESOTA

LEGEND

- | | | | |
|----------|-----------------------------------|-----------|----------------------|
| ○ | = 5/8" X 16" iron stake monument | ⊞ | = Sign |
| ● | = Iron stake monument-Found | ⊞ | = Sign-Handicap |
| — W — | = Water Main | ⊞ | = Light Pole |
| — S — | = Sanitary Sewer | ⊞ | = Power Pole |
| — << — | = Storm Sewer | ⊞ | = Guy Anchor |
| — G — | = Gas Main | ⊞ | = Fire hydrant |
| — UT — | = Underground Telephone | ⊞ | = Water Main Valve |
| — OT — | = Overhead Telephone | ⊞ | = Fire Sprinkler |
| — FO — | = Fiber-Optics | ⊞ | = Cleanout |
| — UE — | = Underground Electric | ⊞ | = Culvert |
| — OE — | = Overhead Electric | ⊞ | = Gas Main Valve |
| — X — | = Chain Link Fence | ⊞ | = Catch Basin |
| ⊞ | = Control Access | ⊞ | = Manholes |
| ⊞ | = Gate Post | | |
| ⊞ | = Bollards | 1271.23 | = Spot Elevation |
| ⊞ | = Electric Meter | RM1270.89 | = Rim Elevation |
| ⊞ | = Gas Meter | FL1262.34 | = Line Elevation |
| ⊞ | = Fiber-Optics Box | | = Concrete Surface |
| ⊞ | = Telephone Pedestal | | = Bituminous Surface |
| ⊞ | = Light Tower | | = Gravel Surface |
| ⊞ | = Silt Fence | | = Pavement Elevation |
| F&I | = Furnish & Install | | |
| — 1272 — | = Existing Elevation Contour Line | | |
| — 1272 — | = Proposed Elevation Contour Line | | |



JONES, HAUGH & SMITH INC.
CONSULTING ENGINEERS & LAND SURVEYORS
515 SOUTH WASHINGTON AVENUE ALBERT LEA,
MINNESOTA 56007
SEPTEMBER 2025

OFFICIAL PLAT

EVENSON SUBDIVISION

IN W1/2 E1/2 NW1/4 SECTION 21-T108N-R26W
MANKATO, BLUE EARTH COUNTY, MINNESOTA

CERTIFICATE OF DEDICATION

KNOW ALL PERSONS BY THESE PRESENTS: That **Victory Mankato, LLC.**, a Minnesota Limited Liability Company, owner of the following described property:

All that part of the W1/2 E1/2 NW1/4 Section 21-T108N-R26W, Blue Earth County, Minnesota; described as follows:

Beginning at the northwest corner of Stanley's Subdivision, as the same is platted and recorded in the office of the County Recorder of Blue Earth County, Minnesota;

thence North 31°58'23" West a distance of 526.47 feet on the northeasterly right-of-way line of Victory Drive, to the southerly-most corner of Parcel F of Blue Earth County Highway Right-of-Way Plat No. 29, as platted and recorded in the office of said County Recorder;

thence northeasterly and easterly on the southeasterly line of said Parcel F, described as follows:

North 53°58'00" East a distance of 86.95 feet;

North 70°24'06" East a distance of 25.00 feet;

East a distance of 203.38 feet, on a tangential curve, concave to the south and a central angle of 30°01'57", having a radius of 388.00 feet, to the easterly-most corner of said Parcel F;

thence South 74°25'06" East a distance of 183.48 feet on the southwesterly right-of-way line of Stadium Drive, to east line of said W1/2 E1/2 NW1/4;

thence South 00°53'28" East a distance of 441.47 feet on said east line, to a corner of said Stanley's Subdivision;

thence South 81°02'14" West a distance of 201.51 feet on the northwesterly line of said Stanley's Subdivision, to the point of beginning.

Has caused the same to be surveyed and platted as **EVENSON SUBDIVISION** and does hereby dedicate to the public for public use the public way(s) and/or the drainage and utility easement(s) as created by this plat.

In witness whereof said **Victory Mankato, LLC.**, a Minnesota Limited Liability Company, has caused these present to be signed by its proper officer this ____ day of ____, 2025.

Signed: **Victory Mankato, LLC.**

_____, Chief Manager
Kyle Smith

STATE OF MINNESOTA
COUNTY OF BLUE EARTH

This instrument was acknowledged before me on ____ by **Kyle Smith, Chief Manager of Victory Mankato, LLC.**, a Minnesota Limited Liability Company.

_____, Notary Public
My Commission Expires _____

SURVEYOR'S CERTIFICATE

I, Steven J. Thompson, do hereby certify that this plat was prepared by me or under my direct supervision; that I am a duly Licensed Land Surveyor in the State of Minnesota; that this plat is a correct representation of the boundary survey; that all mathematical data and labels are correctly designed on this plat; that all monuments depicted on this plat have been, or will be correctly set within one year; that all water boundaries and wetlands, as defined in Minnesota Statutes, Section 505.01, Subd. 3, as of the date of this certificate are shown and labeled on this plat; and all public ways are shown and labeled on this plat.

Dated ____ day of ____, 2025.

_____, Licensed Land Surveyor
Minnesota Licensed No. 22705

STATE OF MINNESOTA
COUNTY OF FREEBORN

This instrument was acknowledged before me on this ____ day of ____, 2025 by Steven J. Thompson.

_____, Notary Public
My Commission Expires _____

CITY OF MANKATO PLANNING COMMISSION

Be it known that on this the ____ day of ____, 2025, the Planning Commission of the City of Mankato did duly review this plat of **EVENSON SUBDIVISION**.

Chair Person: _____ Secretary: _____

MANKATO CITY COUNCIL

Be it known that on this the ____ day of ____, 2025, the City Council of the City of Mankato did duly approve this plat of **EVENSON SUBDIVISION**.

Mayor: _____ Clerk: _____

TITLE OPINION

I, _____, licensed attorney, State of Minnesota, do hereby certify that the owner(s), as shown hereon represents all ownership interests in the land encompassed by this plat.

_____, Licensed Attorney

TAXPAYER SERVICES DEPARTMENT

I hereby certify that there are no delinquent taxes and/or delinquent special assessments, that the current taxes have been paid and that the transfer has been entered on the land described herein on the ____ day of ____, 2025.

_____, Taxpayer Services Director

COUNTY RECORDER'S CERTIFICATE

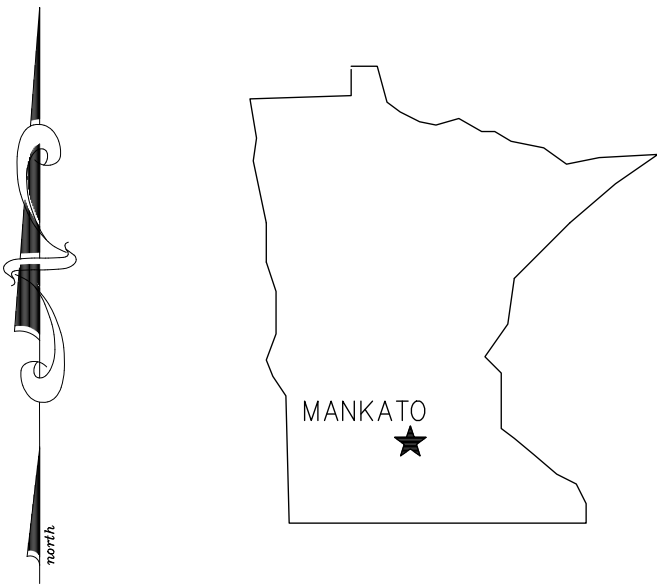
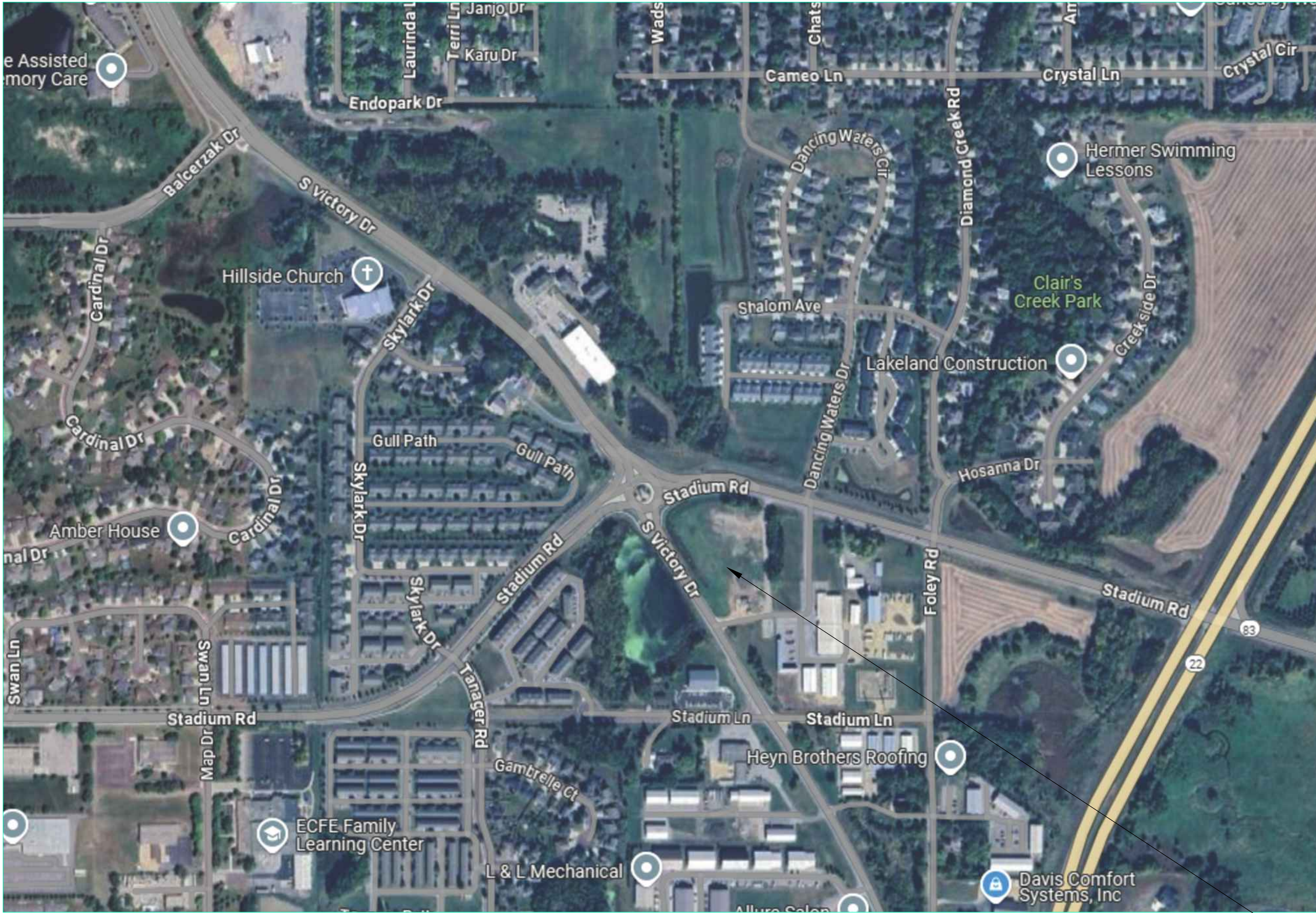
I hereby certify that this instrument was filed in my office for record on this, the ____ day of ____, 2025, at ____ o'clock ____ M., and that it was duly recorded on ____ of Plats, Number ____.

_____, County Recorder

JONES, HAUGH & SMITH INC.
CONSULTING ENGINEERS & LAND SURVEYORS
515 SOUTH WASHINGTON AVENUE ALBERT LEA,
MINNESOTA 56007
NOVEMBER 2025
DRAWN BY ANDY MCGOWAN

MANKATO APARTMENTS

MANKATO, MN



PROJECT LOCATION

INDEX TO SHEETS

C1: TITLE SHEET
C2: EXISTING CONDITIONS
C3: HARDSCAPE PLAN
C4: UTILITY PLAN
C5: GRADING PLAN
C6: LANDSCAPE PLAN
C7: DETAILS
C8: SWPPP NARRATIVE& DETAILS
C9: DETAILS
C10-C11: SPECIFICATIONS

THIS PLAN CONTAINS 11 SHEETS

LEGEN

	= 5/8" Ø X 16" iron stake monument		= Sign
	= Iron stake monument-Found		= Sign-Handicap
	W = Water Main		= Light Pole
	S = Sanitary Sewer		= Power Pole
	ST = Storm Sewer		= Guy Anchor
	G = Gas Main		= Fire hydrant
	UT = Underground Telephone		= Water Main Valve
	OT = Overhead Telephone		= Fire Sprinkler
	FO = Fiber-Optics		= Cleanout
	UE = Underground Electric		= Culvert
	OE = Overhead Electric		= Gas Main Valve
	X = Chain Link Fence		= Catch Basin
	= Control Access		= Manholes
	= Gate Post		= Spot Elevation
	= Bollards		= Rim Elevation
	= Electric Meter		= Line Elevation
	= Gas Meter		= Concrete Surface
	= Fiber-Optics Box		= Bituminous Surface
	= Telephone Pedestal		= Gravel Surface
	= Light Tower		= Proposed Pavement Elevation
	= Silt Fence		= Proposed Top/Bottom of Retaining Wall Elevation
	F&I = Furnish & Install		
	1272 = Existing Elevation Contour Line		
	1272 = Proposed Elevation Contour Line		

APPLICABLE CONSTRUCTION PERMITS

ALL CONSTRUCTION WITHIN ROAD RIGHT-OF-WAY
SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE
PERMIT AS ISSUED BY THE ROAD AUTHORITY.

GENERAL NOTES

DEVELOPER, CONTRACTOR AND ALL SUBCONTRACTORS SHALL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES GOVERNING BY STATE AND LOCAL JURISDICTION.

SITE IRRIGATION, LIGHTING, LANDSCAPING, SIGNING ARE NOT A PART OF THIS PLAN.

PROVIDE EROSION CONTROL PER NPDES PERMIT REQUIREMENTS AND AS SHOWN.

PROVIDE HANDICAP CURB RAMPS & SIGNAGE, COMPLY WITH ALL AMERICAN DISABILITY ACT REQUIREMENTS.

ALL CONCRETE OR ASPHALTIC PAVEMENT CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF MN/DOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION.

A ROCK CONSTRUCTION ENTRANCE IS REQUIRED AT ALL ENTRANCES FROM BITUMINOUS PAVEMENT.

ACCESS FOR LOCAL RESIDENTS/BUSINESSES SHALL ALWAYS BE MAINTAINED.

PROVIDE PAVEMENT STRIPING AS SHOWN

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FOR CONSTRUCTION.

SEE BOUNDARY SURVEY BY OTHERS FOR SITE BOUNDARIES.

ANY ALTERATIONS OR REVISIONS TO THE SITE DEVELOPMENT PLAN AS SHOWN SHALL BE THE RESPONSIBILITY OF THE DEVELOPER OR HAUGH & SMITH INC. AND SHALL RELEASE JONES, HAUGH & SMITH INC. OF ANY LIABILITY FOR ANY DAMAGES CAUSED THEREFROM UNLESS WRITTEN AUTHORIZATION OR PLAN REVISION HAS BE APPROVED BY JONES, HAUGH & SMITH INC. PRIOR.

BENCHMARK 1

Top head of spike in power pole at southeast corner of property
Elevation = 1001.49

BASIS OF BEARING SYSTEM

All bearings are based upon the MnDot Blue Earth County Coordinate
System Nad 83 (96) Harn Adjustment Grid

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

**JONES
HAUGH
SMITH**
Engineers + Surveyors
515 South Washington Ave. Albert Lea, MN 507-373-4876

MANKATO APARTMENTS

Project:

Revision:

No.: 25-188	Date: 9/20/2025
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Drawn: hij	Checked:
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Project Manager:

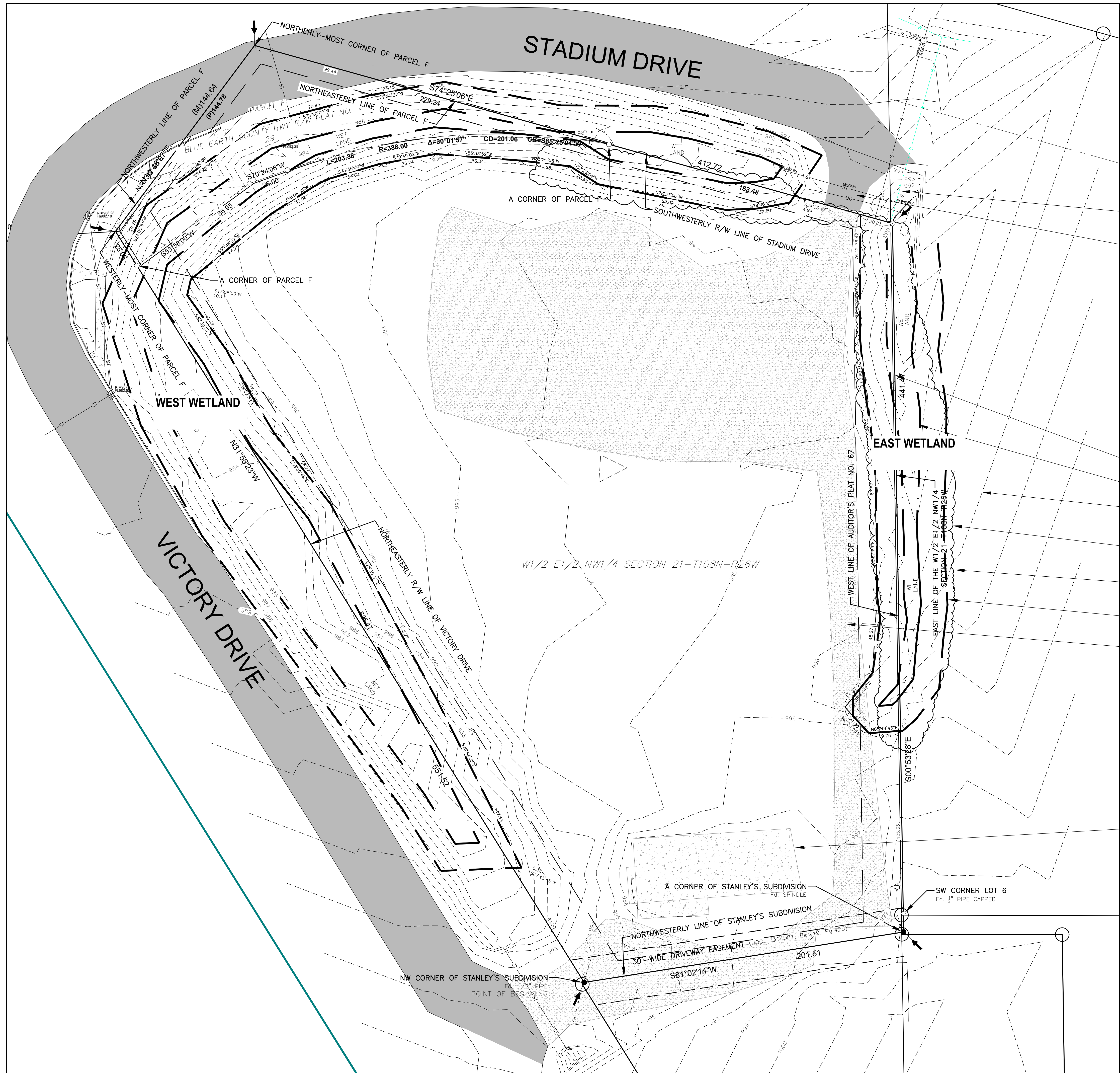
Project Status: **CD**

Sheet Title:

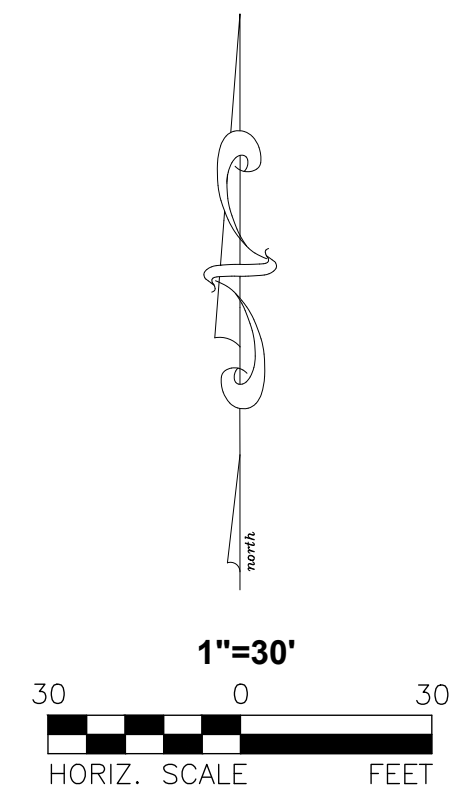
TITLE SHEET

Sheet No.:

C1



- EXISTING SEWER/WATER SERVICES-FIELD VERIFY LOCATION
- REMOVE EXISTING DRIVEWAY APPROACH-GRADE TO MATCH EXISTING DITCH SLOPES
SEE GRADING PLAN-REMOVE EXISTING DRIVEWAY CULVERT
- PROPERTY LINE TYP.
- WETLAND DELINEATION LINE TYP.
- EXISTING ELEVATION CONTOUR TYP.
- EDGE OF TREES TYP.
- EXISTING GROUND SPOT ELEVATION TYP.
- 16.5' WETLAND BUFFER LINE TYP.
- REMOVE OR SALVAGE EXISTING GRAVEL SURFACING
- REMOVE EXISTING CONCRETE SLABS & WALKS AS REQUIRED FOR CONSTRUCTION TYP.



Consultant:

JONES HAUGH SMITH
Engineers + Surveyors
515 South Washington Ave. Albert Lea, MN 56007
507-373-4876

Project:

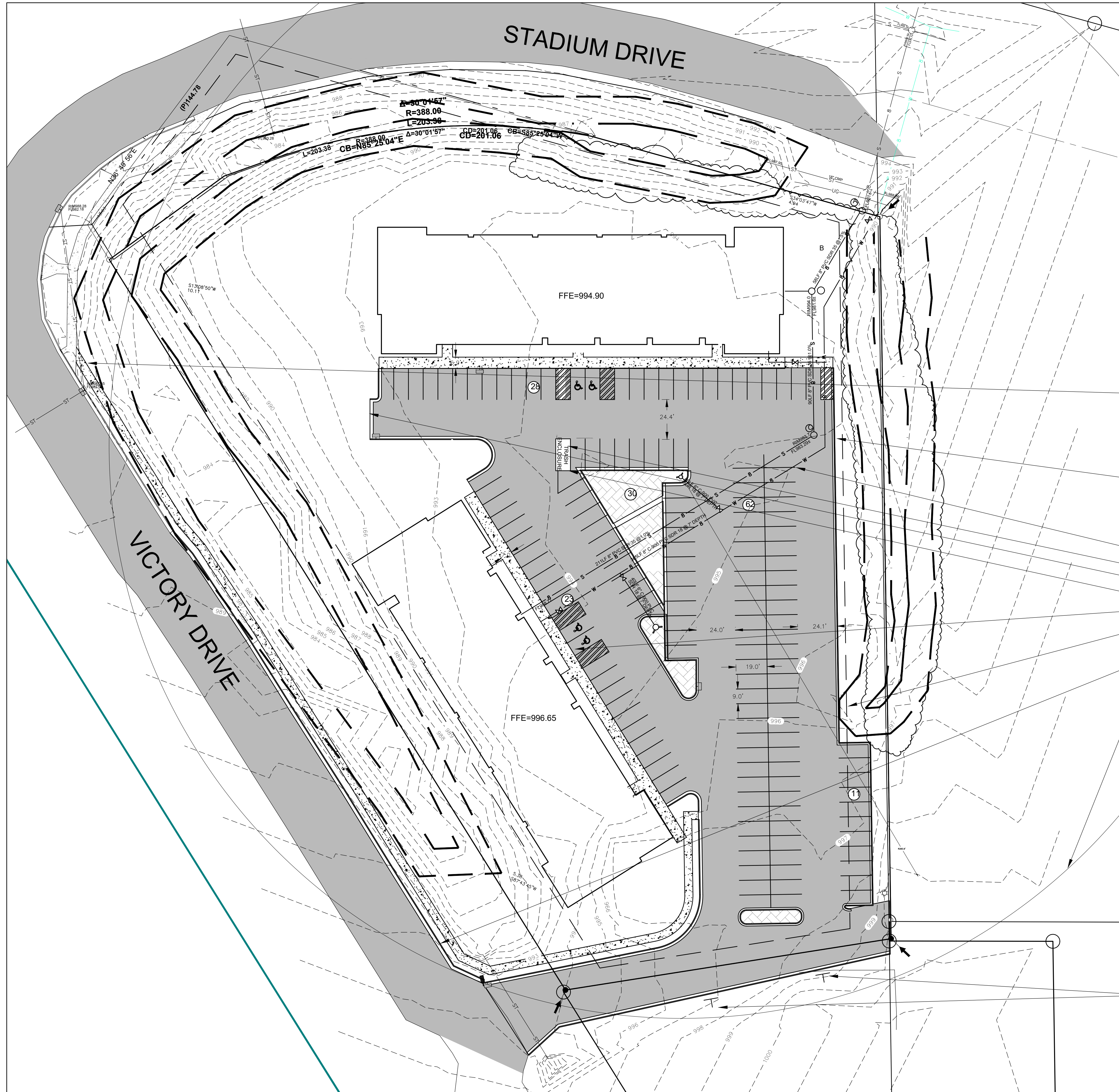
MANKATO APARTMENTS

Revision:

No: 25-188	Date: 9/20/2025
Drawn: bij	Checked:
Project Manager:	
Project Status: CD	
Sheet Title:	
EXISTING CONDITIONS	
Sheet No.: C2	

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Brian J. Johnson
Reg. No. 42744 Date: 9/20/25



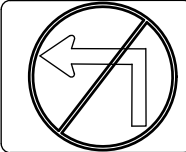
F&I NEW SIDEWALK ALONG VICTORY DR. WITH 4' BOULEVARD TYP. CONNECT NEW SIDEWALK TO EXISTING TYP.

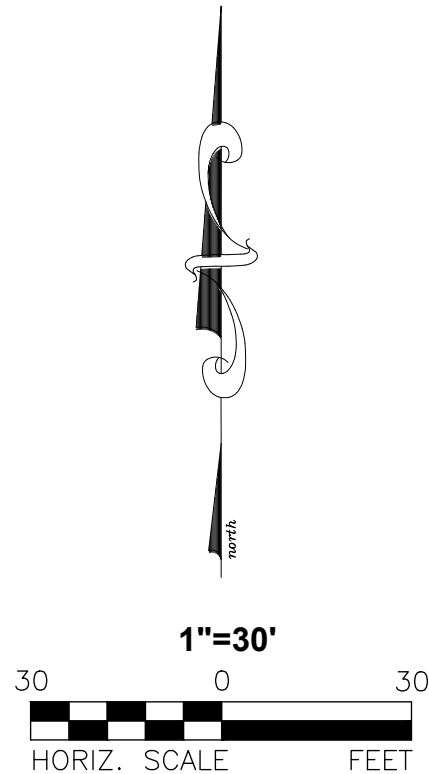
NEW CONCRETE B618 CURB & GUTTER TYP.

F&I LATEX PAVEMENT STRIPING/MESSAGES TYP.
F&I CONCRETE PAVEMENT SECTION WITHIN TRASH ENCLOSURE TYP.
F&I CURB CUT FOR POND MAINTENANCE ACCESS
PROPOSED DUMPSTER ENCLOSURE LOCATION-SEE ARCHITECTURAL
F&I THICKENED EDGE WALK ALONG BUILDING EXCEPT AT ADA STALLS TYP. SEE THICKENED EDGE WALK DETAIL AND RAISED PAVEMENT DETAIL
BUILDING SETBACK LINE TYP.

F&I B624 CURB & GUTTER ALONG EDGE OF VICTORY DRIVE ALONG NEW SIDEWALK SAWCUT EXISTING SHOULDER BITUMINOUS AND PATCH AS REQUIRED FOR CURB INSTALLATION

350' HYDRANT COVERAGE RADII-SEE UTILITY PLAN FOR MORE INFORMATION


F&I (2) R3-2 NO LEFT TURN SIGNS PER MUTCD MANUAL



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
Bryan Schaefer
Bryan J. Schaefer
Reg. No. 42744 Date: 9/20/2025

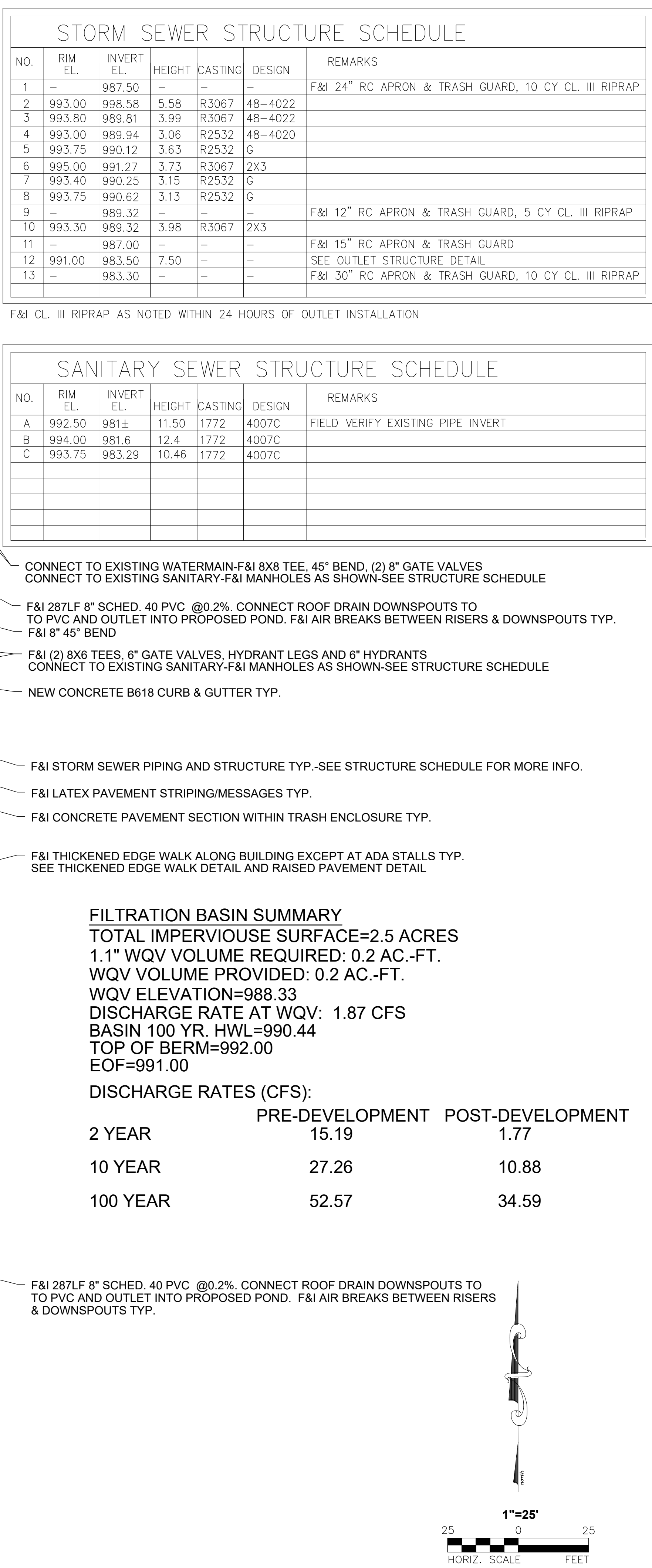
JONES HAUGH SMITH
Engineers & Surveyors
515 South Washington Ave. Albert Lea, MN 56007
507-373-4876

MANKATO APARTMENTS

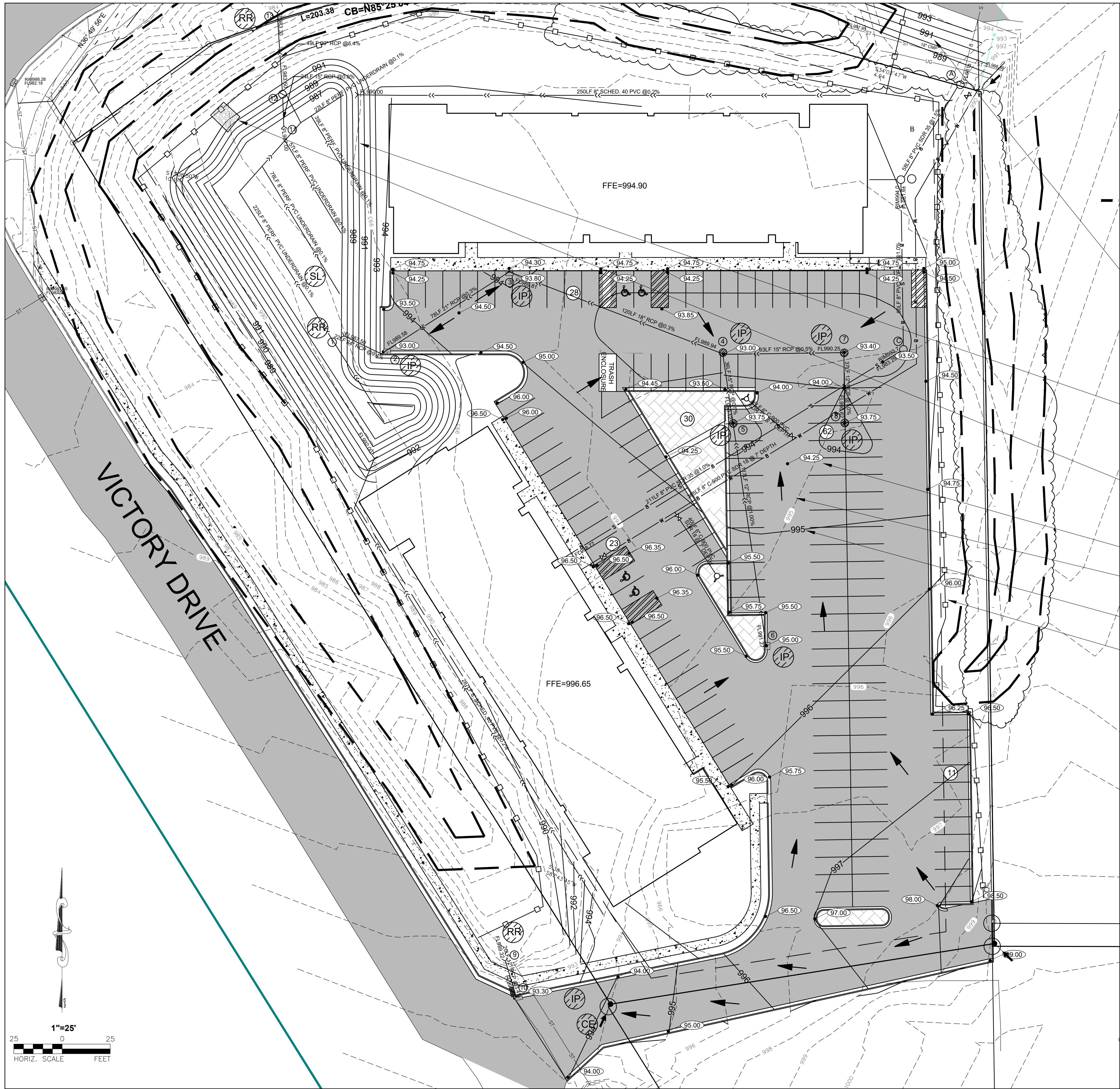
Project:	
Revision:	
No.:	Date: 9/20/2025
Drawn: bji	Checked:
Project Manager:	
Project Status: CD	
Sheet Title:	

HARDSCAPE PLAN

Sheet No.: **C3**



Project:	
Revision:	
No.:	Date: 9/20/2025
Drawn: bij	Checked:
Project Manager:	
Project Status: CD	
Sheet Title:	
UTILITY PLAN	
Sheet No.:	
C4	



SWPPP LEGEND

- CE = ROCK CONSTRUCTION ENTRANCE
- IP = INLET PROTECTION-TYP. AT ALL DOWNGRADIENT INLETS
- = SILT FENCE-FOR PERIMETER CONTROL
- = WOOD CHIP BIO-ROLL/SILT SOCK
- = HYDRO-SEED TYPE LAWN OVER 6" MIN. BLACK DIRT TOPSOIL (TYP. TO ALL NON-PAVED DISTURBED AREAS WITHIN SITE)
- CW = DESIGNATED CONCRETE WASHOUT AREA
- RR = CL. III RIPRAP ENERGY DISSIPATION-PLACE WITHIN 24 HOURS
- = RUNOFF FLOW DIRECTION
- = DRAINAGE AREA BOUNDARY
- PG = DESIGNATED POLLUTANT GENERATING AREA
- SL = DESIGNATED STEEP SLOPE AREA (4:1 OR GREATER) F&I CATEGORY 3 BLANKET ON ALL 4:1 OR STEEPER SLOPES
- ONSITE SOILS=SILTY CLAY, KLOSSNER MUCK PER NRCS SOIL SURVEY

QUANTITY

- 1 EA
- 9 EA
- 1400 LF
- 1 ACRE
- 1 EA
- 25 CY
- 1 EA
- 1300 SY

REMOVE EXISTING ACCESS ROAD & CULVERT-GRADE TO MATCH EXISTING ROAD SLOPES

PROPOSED FILTRATION BASIN-SEE BASIN DETAILS FOR SAND MEDIA AND SEEDING REQUIREMENTS

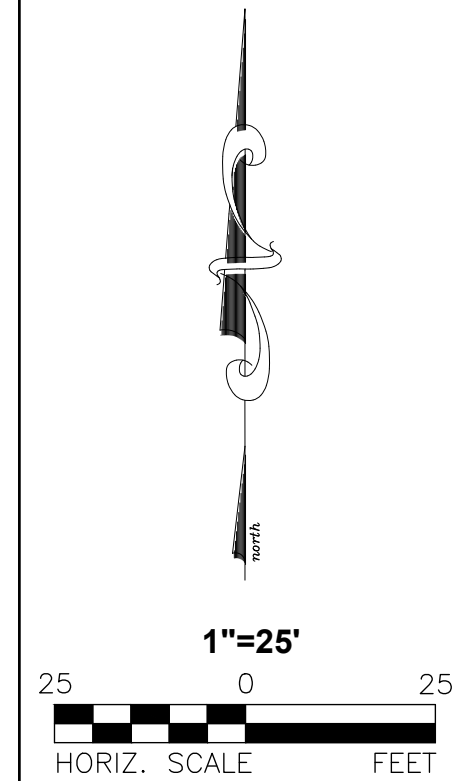
F&I EMERFENCY OVERFLOW (EOF) AT THIS LOCATION AT ELEV. 1192.00 -INSTALL 10'X12'X12" THICK RIPRAP OVERFLOW WITH CL. III RIPRAP OVER GEO-FABRIC

PROPOSED PAVEMENT/GUTTER ELEVATION (NGVD LESS 900) TYP.

EXISTING ELEVATION CONTOUR TYP.

PROPOSED ELEVATION CONTOUR TYP.

PROPOSED SILT FENCE TYP.



I hereby certify that this plan, specification, or report was prepared by me, or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
Brian J. Johnson
Brian J. Johnson
Reg. No. 42744
Date: 9/20/25

Consultant:
JONES HAUGH SMITH
Engineers & Surveyors
515 South Washington Ave. Albert Lea, MN 5507-373-4876

Project:
MANKATO APARTMENTS

Revision:

No.:
Drawn: **bjj**
Project Manager:
Project Status: **CD**
Sheet Title:
GRADING PLAN

Sheet No.:
C5

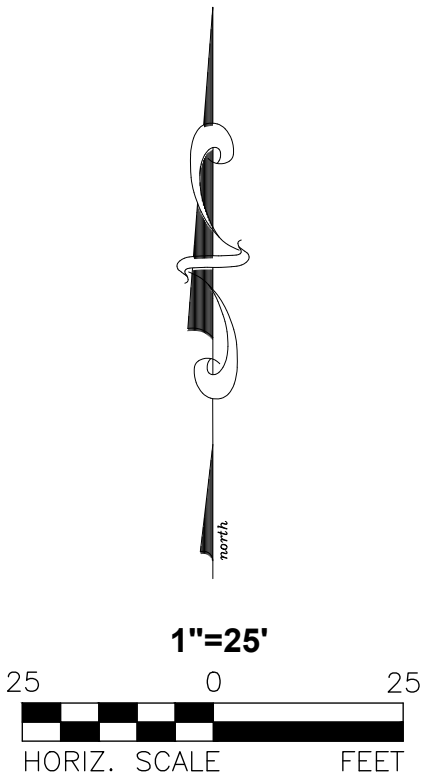


LANDSCAPING NOTES

Sec. 10-1740 PERIMETER OFF STREET PARKING LOT
(1) SHADE TREE/ 50 LF OF FRONTAGE
(1) EVERGREEN TREE/ 25 LF OF FRONTAGE
80% OPAQUE ALONG ALL PARKING FRONTING STREET
PLANTING BEDS SHALL BE MULCHED WITH BARK CHIPS,
ROCK MULCH, FEATHER ROCKS OR SIMILAR MATERIAL.
PERIMETER LANDSCAPING & TRANSITIONAL YARDS SHALL
CONSIST OF A COMBINATION OF GROUND COVER, SHADE
TREES OR EVERGREEN TREES, SHRUBS AND APPROPRIATE
SCREENING DEVICES SUCH AS DECORATIVE WALLS, FENCES OR
BERMS.

LANDSCAPING LEGEND

- =DENOTES EVERGREEN TREE
- =DENOTES SHRUB
- =DENOTES ARBOVITAE HEDGE (4' MIN. - 8' MAX)
(80% OPAQUE ALONG ALL PARKING FRONTING PREMIER DR.)
- =DENOTES SHADE TREE
- =DENOTES PLANTING BED W/ MULCH
- =DENOTES EXISTING TREELINE



Consultant:

JONES HAUGH SMITH
Engineers & Surveyors
515 South Washington Ave. Albert Lea, MN 56731-4876
Reg. No. 42744 Date: 9/20/25

I hereby certify that this plan, specification, or report was prepared by a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Doreen J. Howard
Professional Engineer
Reg. No. 42744 Date: 9/20/25

MANKATO APARTMENTS

Project:

Revision:

No.:

Date: 9/20/2025

Drawn: **bjj**

Checked:

Project Manager:

Project Status: **CD**

Sheet Title:

LANDSCAPE PLAN



THE HANGER STUDENT HOUSING

905 S. VICTORY DRIVE

CONDITIONAL USE PERMIT & CERTIFICATE OF DESIGN COMPLIANCE SUBMITTAL

GENERAL CONTRACTOR / OWNERS REP: SHAWN MESCHKE | APX CONSTRUCTION GROUP
612.360.3710 | shawnm@apxconstructiongroup.com

ARCHITECT: MATT J BOROWY | BRIGHT PIXEL DESIGN & RDS ARCHITECTS
507.720.1398 | matt@brightpixeldesign.com

CIVIL & LANDSCAPE ENGINEER : BRIAN JOHNSON | JONES HAUGH & SMITH
507.720.1398 | brianJ@jhsend.com

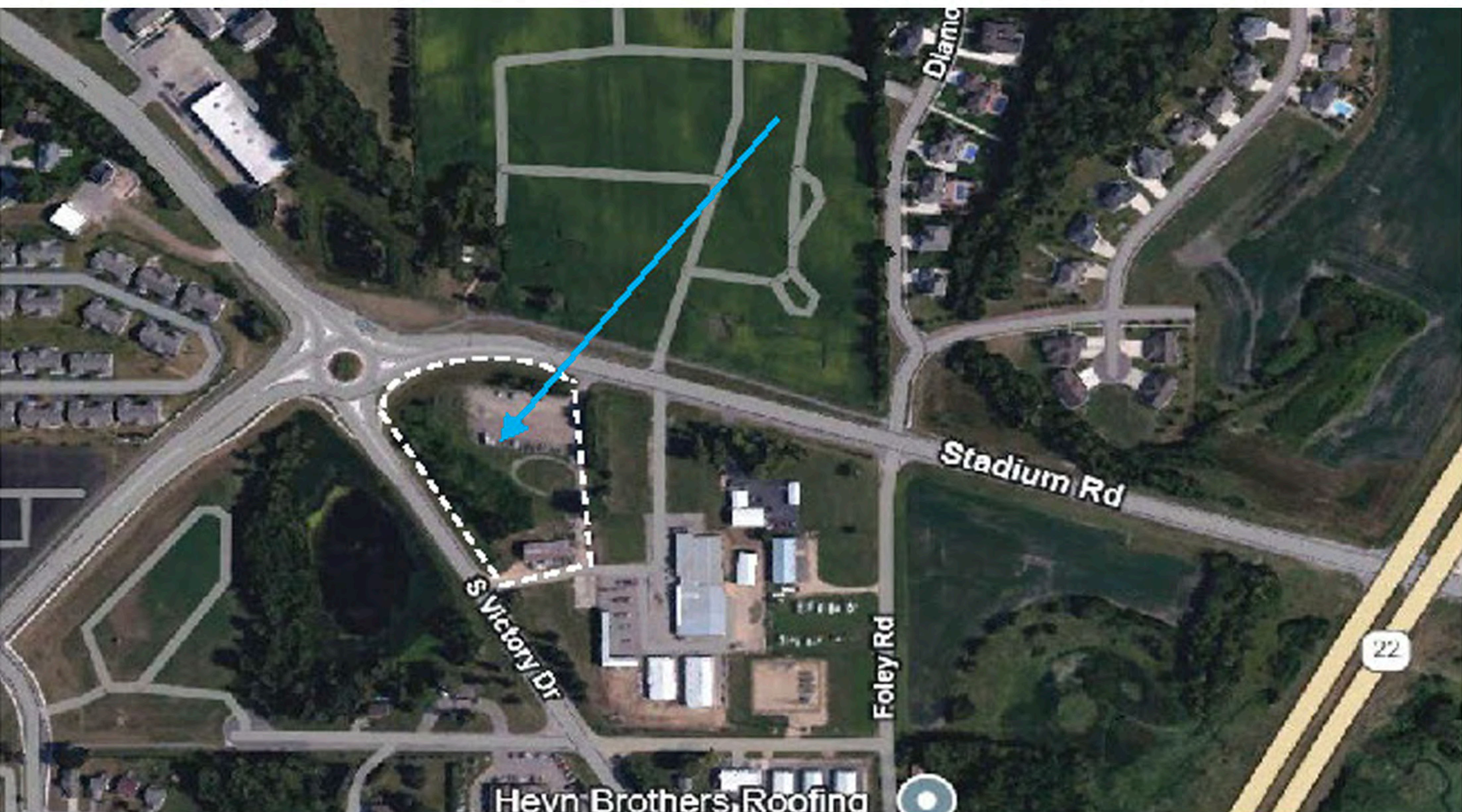
STRUCTURAL ENGINEER: JUSTIN CHRISTENSEN | RISE STRUCTURAL ASSOCIATES INC.
605.743.2510 | jjchristensen@riseincorp.com

MEP ENGINEERS: to be determined

PAGE INDEX:

1. TITLE PAGE
2. SITE IMAGERY
3. FLOOR PLAN - LEVEL 1
4. FLOOR PLAN - LEVELS 2 & 3
5. MAIN ENTRANCE VIEWS
6. STREETSIDE & PATIO VIEWS
7. ADDITIONAL DESIGN RENDERINGS
8. EXTERIOR MATERIALS
9. SITE AMENITY PLAN
10. CONSTRUCTION PHASING PLAN

*PHOTOMETRIC PLANS BY GRAYBAR
*CIVIL PLANS BY JONES, HAUGH & SMITH INC.





LOOKING NORTH:



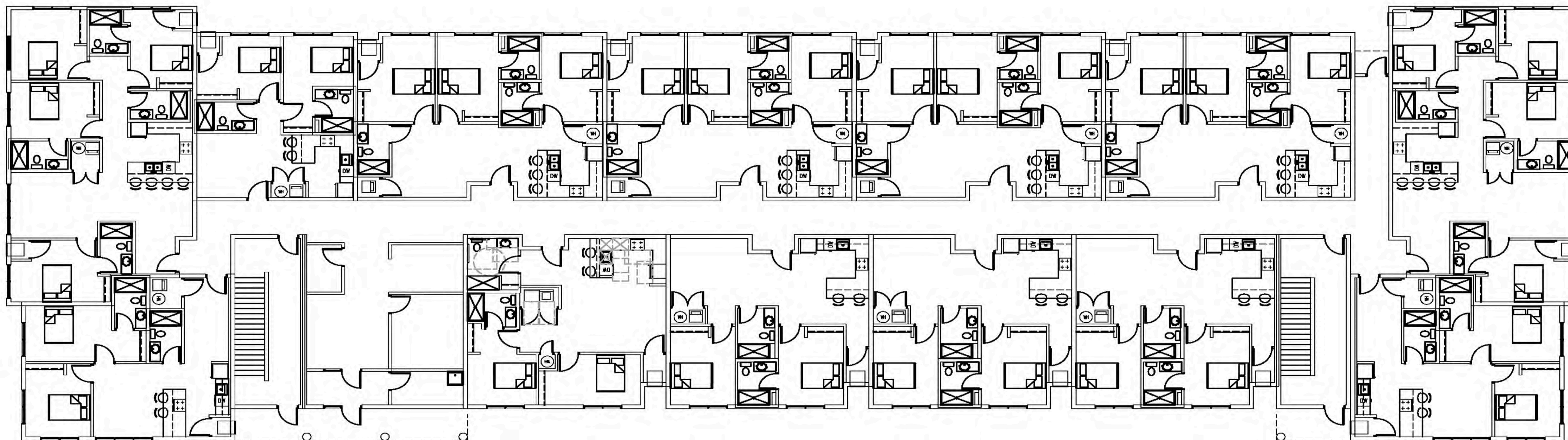
LOOKING EAST:



LOOKING SOUTH:

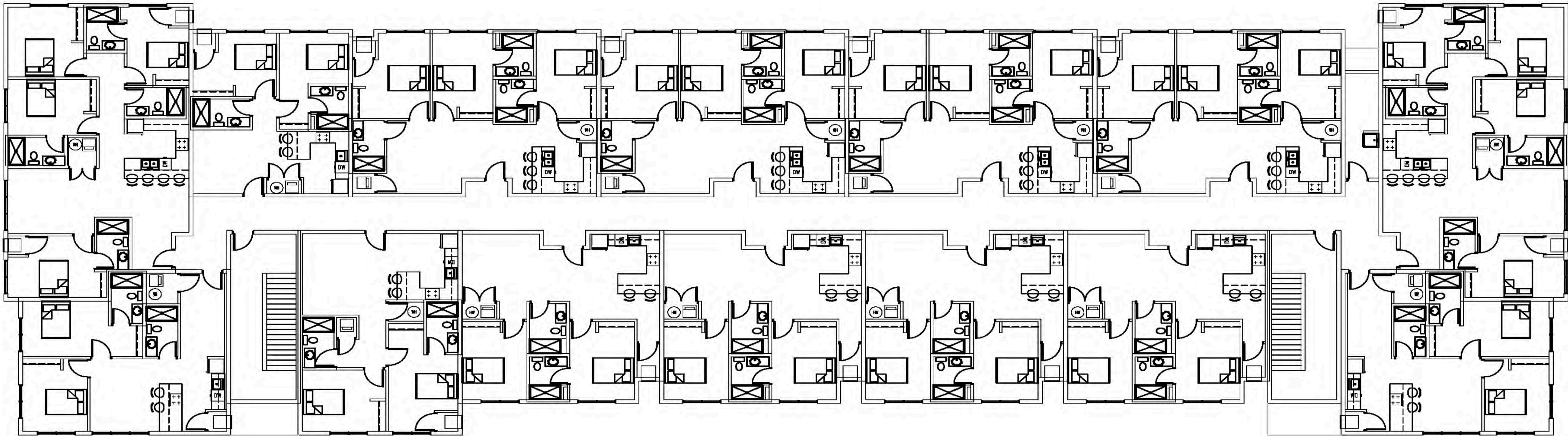


LOOKING WEST:



FLOOR PLAN - LEVEL 1

BUILDING AREA SUMMARY		UNIT COUNTS	
LEVEL 1	17,080	2 BEDROOM	23
LEVEL 2	17,228	3 BEDROOM	12
LEVEL 3	17,228	4 BEDROOM	6
TOTAL	51,536	TOTAL	41 *per building



FLOOR PLAN - LEVELS 2 & 3

BUILDING AREA SUMMARY		UNIT COUNTS	
LEVEL 1	17,080	2 BEDROOM	23
LEVEL 2	17,228	3 BEDROOM	12
LEVEL 3	17,228	4 BEDROOM	6
TOTAL	51,536	TOTAL	41 *per building



MAIN ENTRANCE VIEW



LEFT ELEVATION



PARKING SIDE ELEVATION



PATIO / STREETSIDE VIEW



RIGHT ELEVATION



STREETSIDE ELEVATION



ENTRANCE VIEW



ROUNDBOUT VIEW

ADDITIONAL DESIGN RENDERINGS

EXTERIOR MATERIALS

Parking Elevation:	Material	Area	% of total
Stone:	A	1,676	(18.7%)
Nichiha:	B	871	(9.7%)
Hardi-panel:	C	1,322	(14.8%)
Metal-Panel:	D	3,032	(33.9%)
Windows / Doors:	E	2,000	(22.4%)
Concrete:	F	44	(.5%)

Right Elevation:			
Stone:	A	324	(11.7%)
Nichiha:	B	751	(27.2%)
Hardi-panel:	C	498	(18.0%)
Metal-Panel:	D	696	(25.2%)
Windows:	E	495	(17.9%)

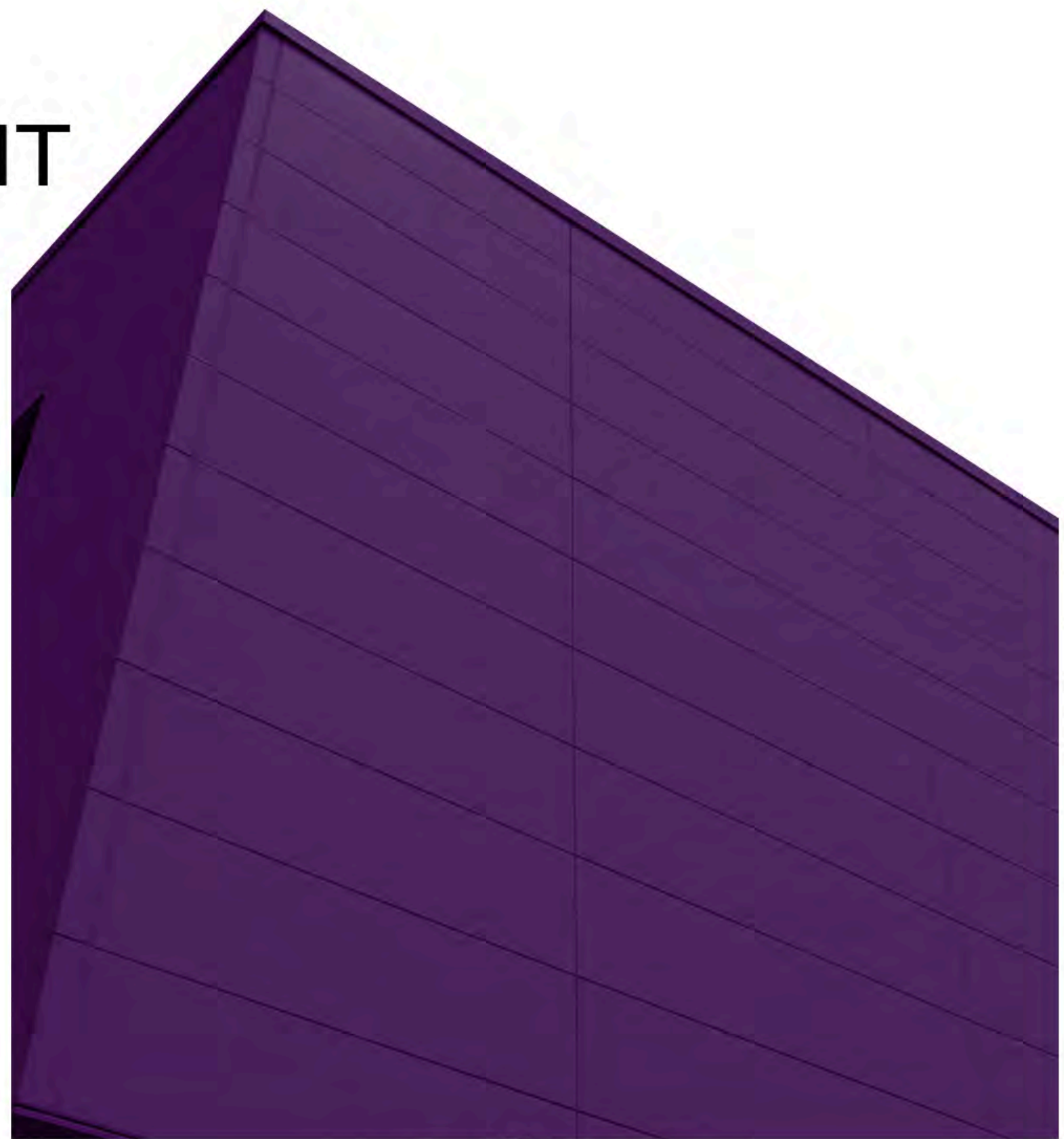
Streetside Elevation:			
Stone:	A	1,048	(12.4%)
Nichiha:	B	871	(10.4%)
Hardi-panel:	C	1,144	(13.6%)
Metal-Panel:	D	3,664	(43.7%)
Windows / Doors:	E	1,668	(19.9%)

Left Elevation:			
Stone:	A	314	(11.6%)
Nichiha:	B	703	(25.9%)
Hardi-panel:	C	1,113	(41%)
Windows:	E	585	(21.5%)

THINSTONE VENEER ‘A’
Centurion Stone “Rubble”



NICHIHA CEMENT
PANELS ‘B’
Maverick Purple



HARDIE CEMENT
PANELS ‘C’
SW 7074: Software



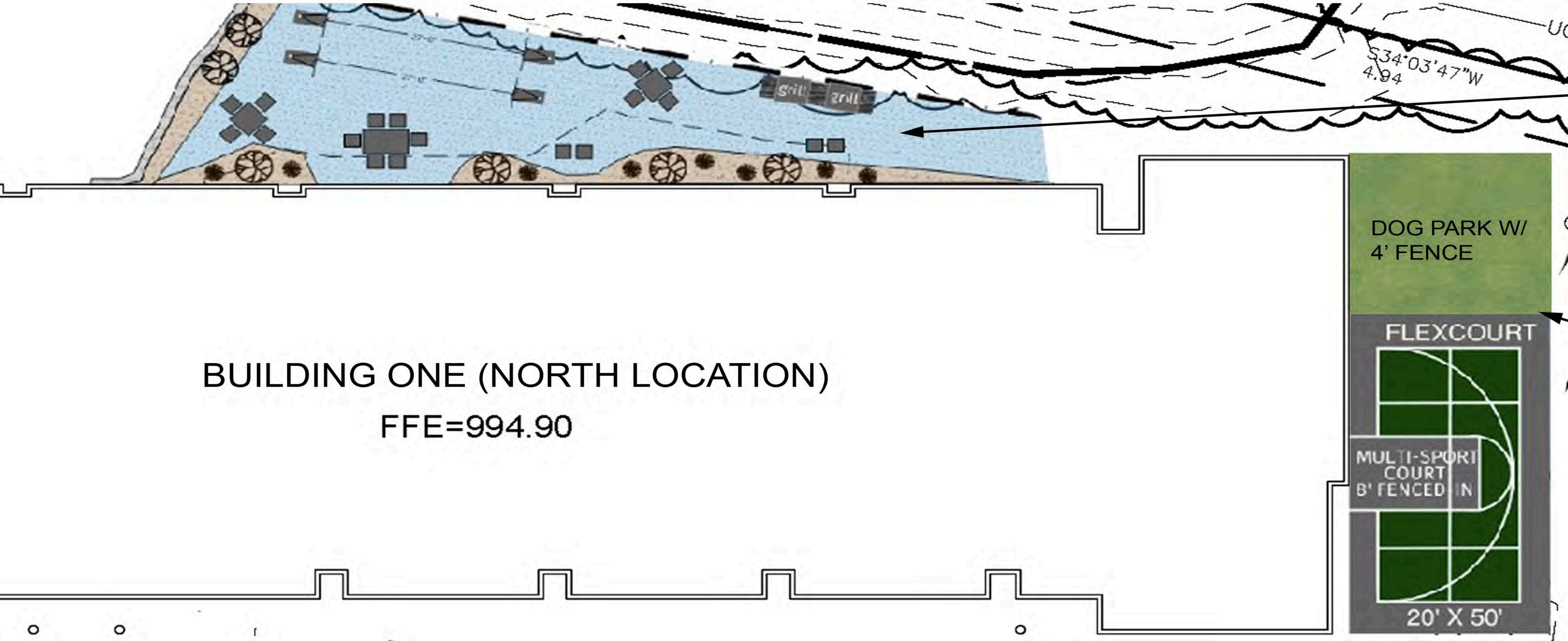
PREFINISHED METAL
PANELS ‘D’
MS Metal Sales
EM15-1210
“Snowdrive White”



BLACK ALUMINUM DOORS,
WINDOWS & TRIM ‘E’
Prefinished “Black”



EXPOSED CONCRETE ‘F’
Sonotube cast

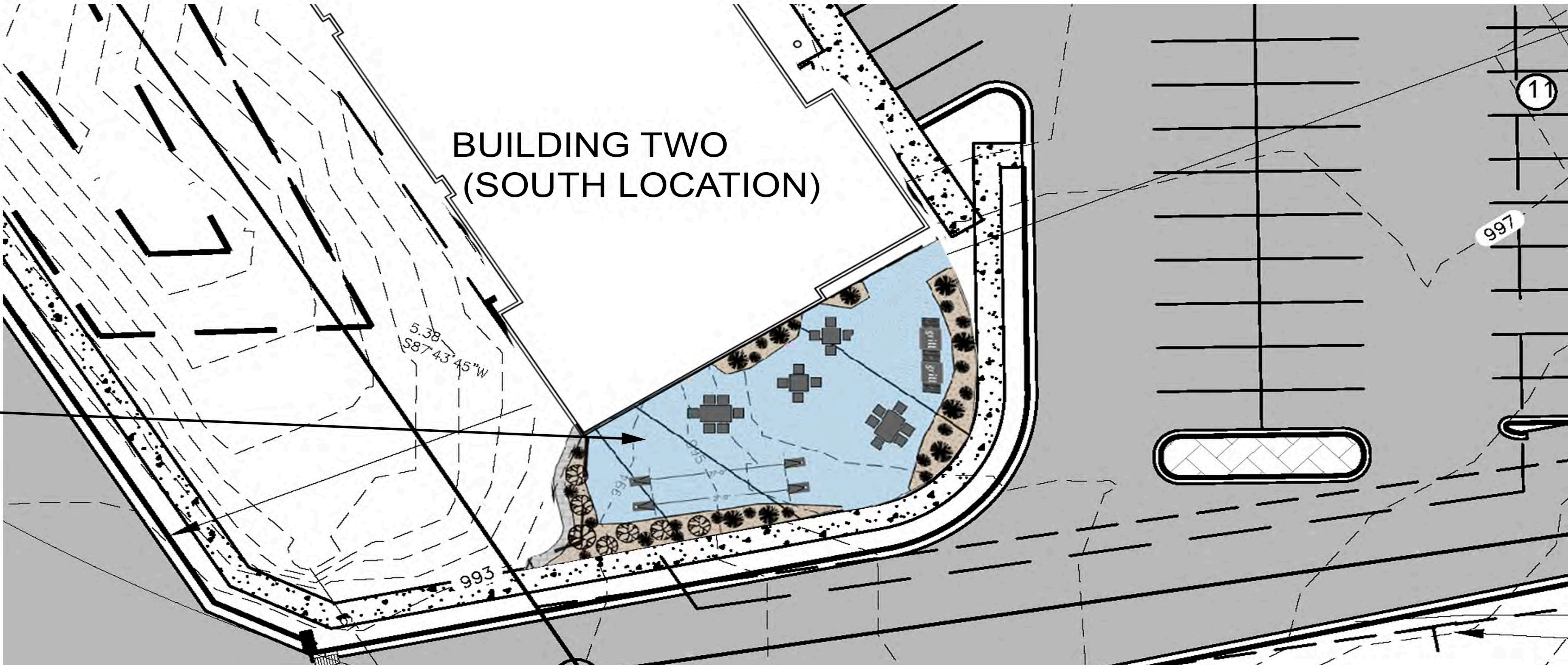


BUILDING ONE (NORTH LOCATION)
FFE=994.90

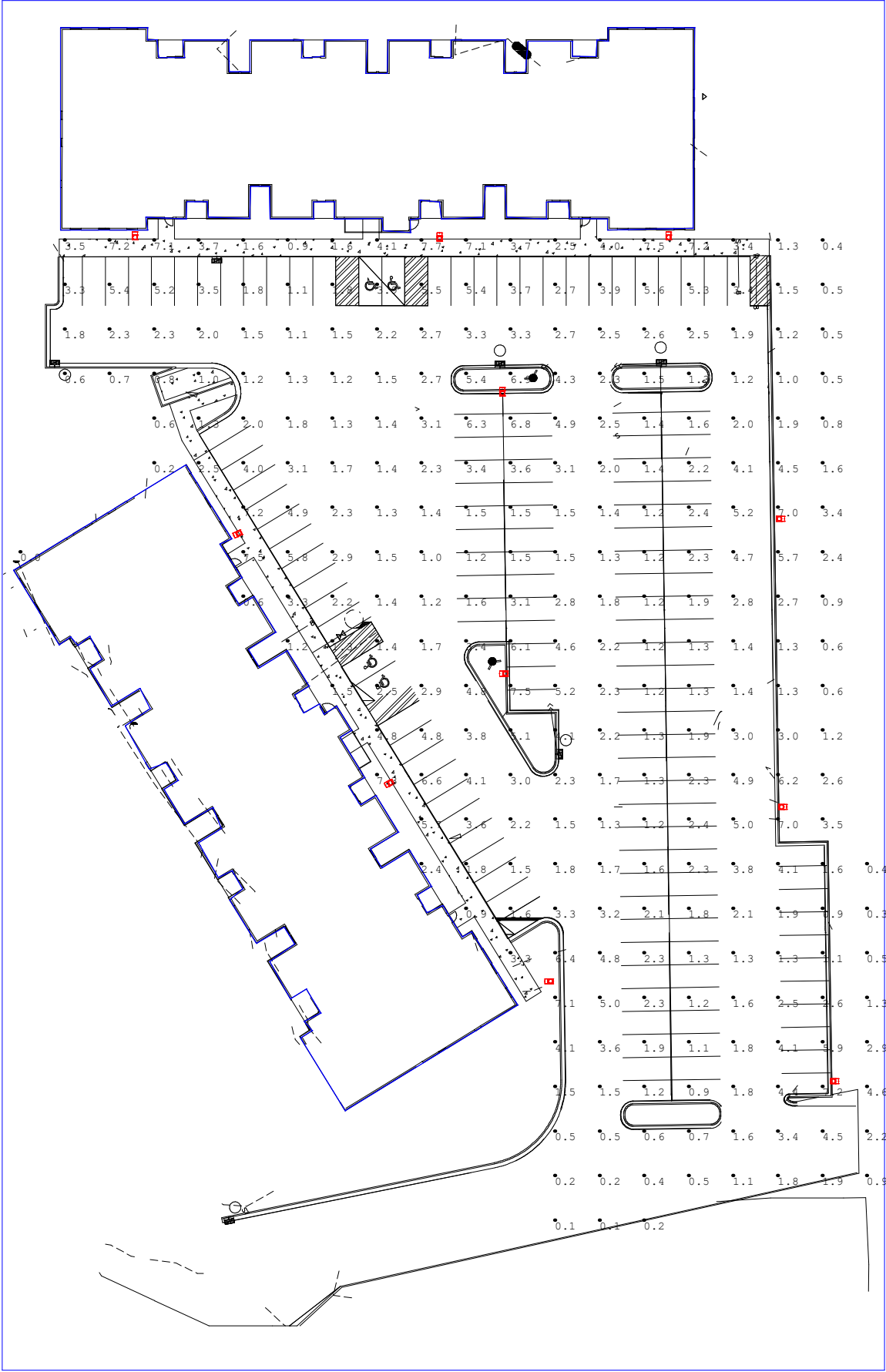
- NORTH SIDE AMENITIES
- OUTDOOR SEATING
 - YARD GAME AREA (BAG TOSS, BOCCE, LADDER GOLF ETC.)
 - EXTERIOR GRILLS
 - LANDSCAPING

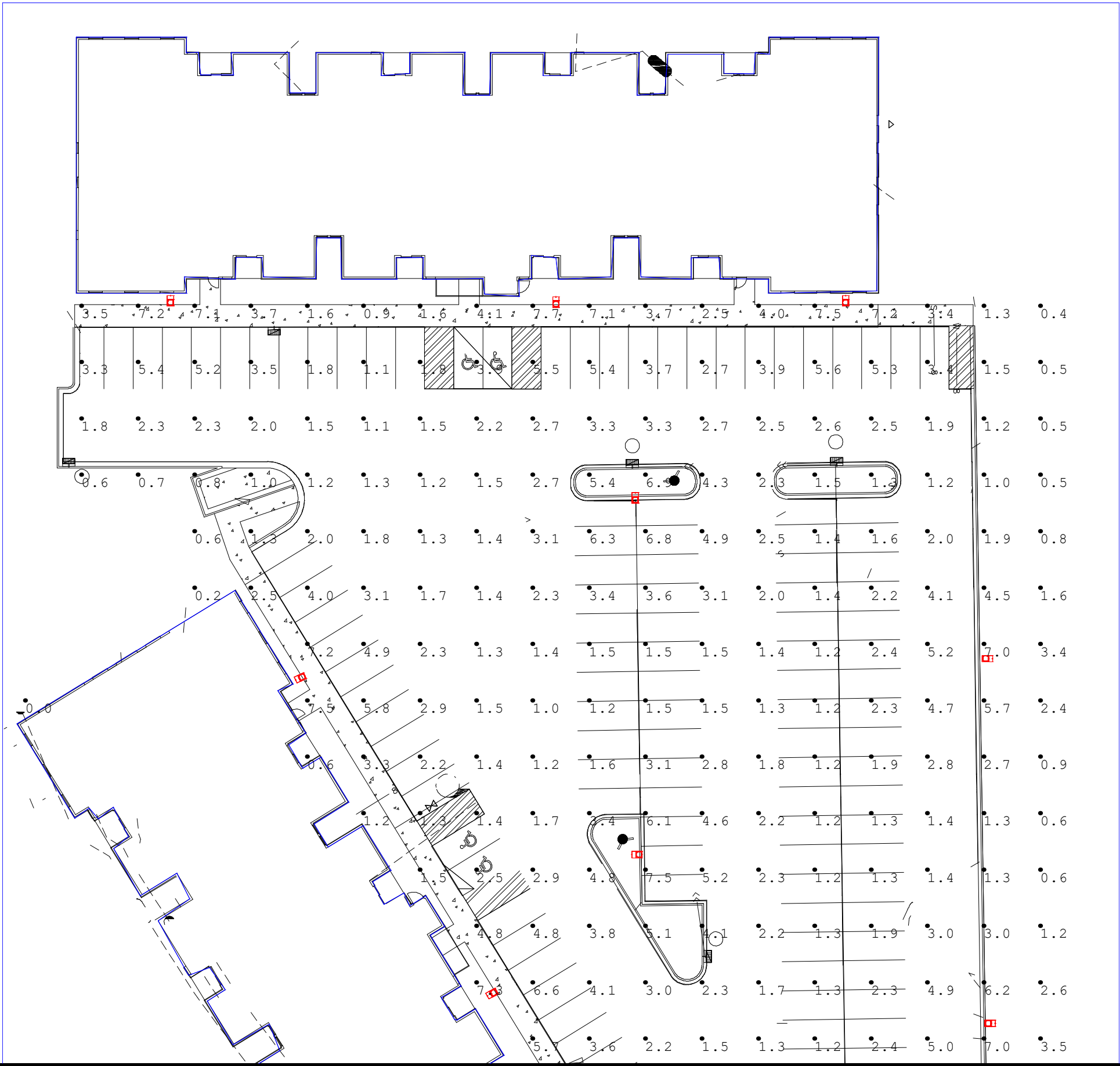
- NORTH EAST AMENITIES
- WALK PATH TO COMMON CORRIDOR (POTENTIAL BUS STOP)
 - FENCED-IN DOG PARK
 - FENCED IN MULTI-SPORT FLEX COURT (BASKETBALL, VOLLEYBALL, PICKLEBALL, ETC)
 - OBSERVATION BENCHES

- SOUTH AMENITIES
- OUTDOOR SEATING
 - YARD GAME AREA (BAG TOSS, BOCCE, LADDER GOLF ETC.)
 - EXTERIOR GRILLS
 - LANDSCAPING



BUILDING TWO
(SOUTH LOCATION)





#	Date	Comments

Drawn By: Chad B	Checked By:	Date: 9/22/2025	Scale:

Mankato Apartments	



Mankato Apartments

Drawn By: Chad B

Checked By:

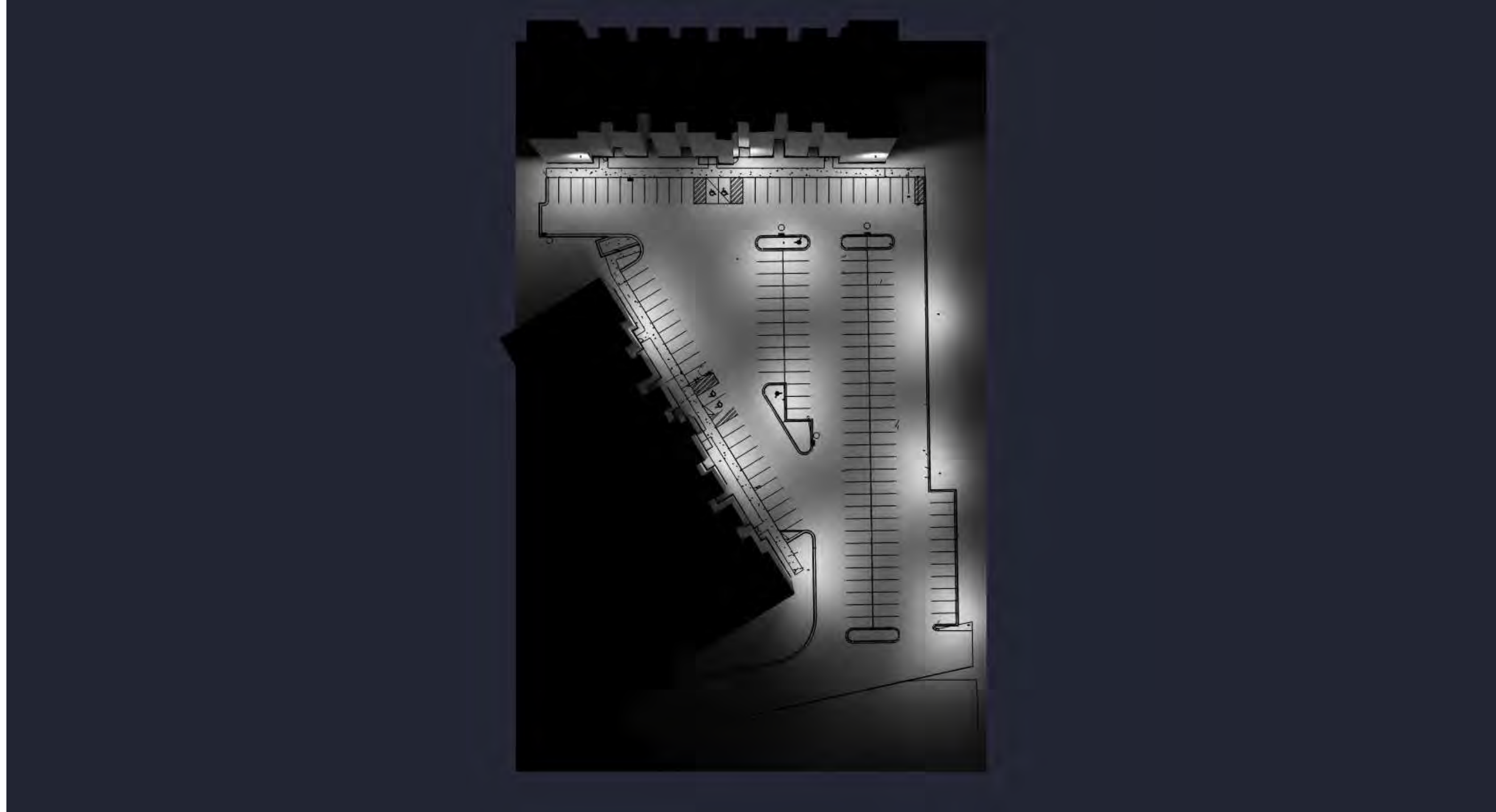
Date: 9/22/2025

Scale:

Revisions

#	Date	Comments

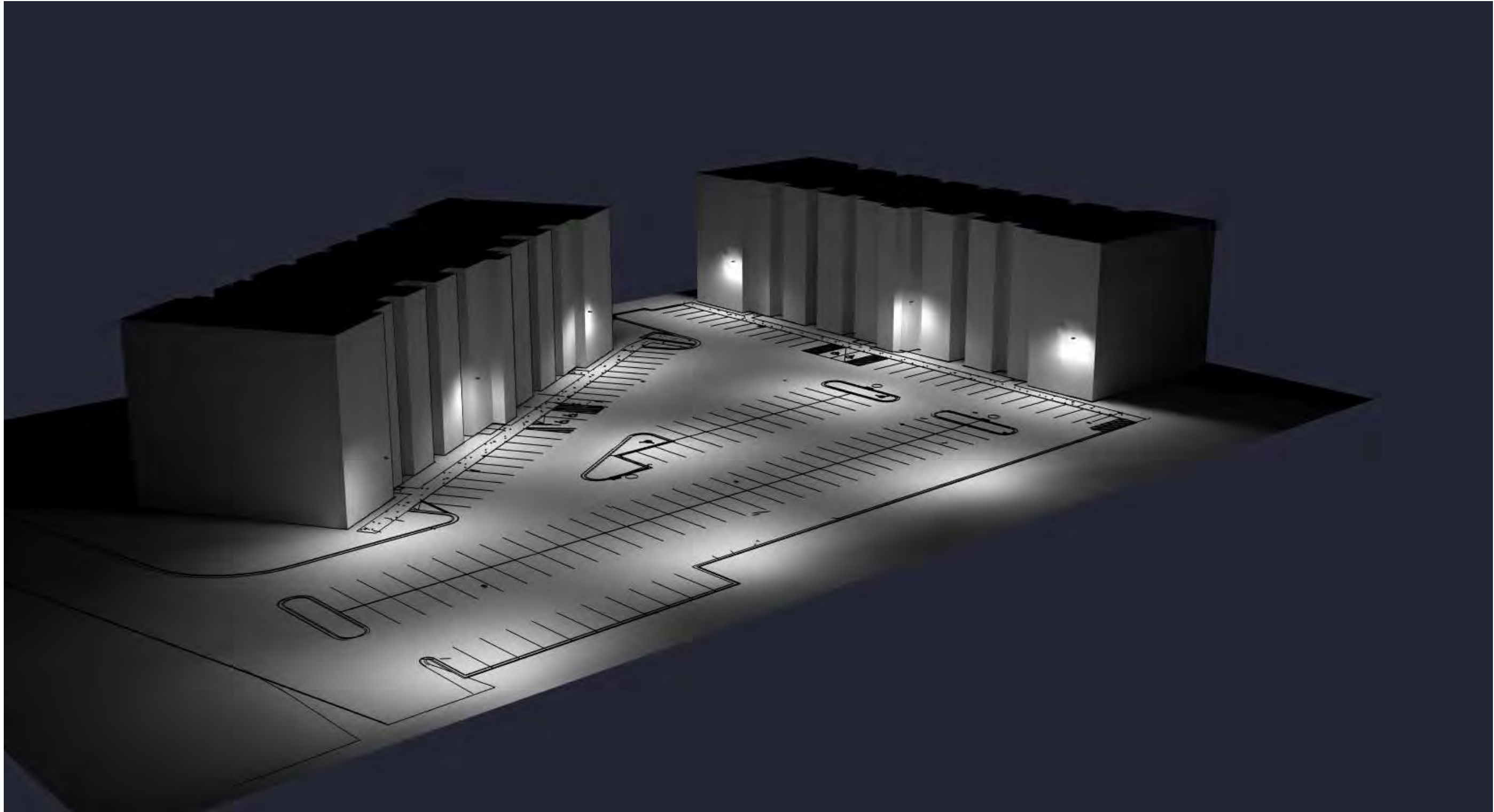




Mankato Apartments

Drawn By: Chad B
Checked By:
Date: 9/22/2025
Scale:

Revisions			
#	Date	Comments	



#	Date	Comments
Revisions		

Drawn By: Chad B
Checked By:
Date: 9/22/2025
Scale:

Mankato Apartments

Luminaire Schedule							
Symbol	Qty	Description	LLF	Luminaire Lumens	Luminaire Watts	Total Watts	Mounting Height
	11	ALF LS250 T4 G2 FSK-25000Lm-50K	0.900	25122	167	1837	25

Calculation Summary						
Label	Units	Avg	Max	Min	Avg/Min	Max/Min
Object_3_Planar	Fc	2.64	7.7	0.0	N.A.	N.A.

-Illumination values shown in foot-candles are the predicted results which are subject to change due to estimated reflection percentage.

-The calculation results of this lighting simulation represent anticipated prediction of system performance. Actual measure results may vary from the anticipated performance and are subject to means and methods which are beyond the control of the designer

-The light loss Factor (LLF) is a product of many variables.



#	Date	Comments
Revisions		

Drawn By: Chad B
Checked By:
Date:9/22/2025
Scale:

Mankato Apartments	

Joint Application Form for Activities Affecting Water Resources in Minnesota

This joint application form is the accepted means for initiating review of proposals that may affect a water resource (wetland, tributary, lake, etc.) in the State of Minnesota under state and federal regulatory programs. Applicants for Minnesota Department of Natural Resources (DNR) Public Waters permits **MUST** use the MPARS online permitting system for submitting applications to the DNR. Applicants can use the information entered into MPARS to substitute for completing parts of this joint application form (see the paragraph on MPARS at the end of the joint application form instructions for additional information). This form is only applicable to the water resource aspects of proposed projects under state and federal regulatory programs; other local applications and approvals may be required. Depending on the nature of the project and the location and type of water resources impacted, multiple authorizations may be required as different regulatory programs have different types of jurisdiction over different types of resources.

Regulatory Review Structure

Federal

The St. Paul District of the U.S. Army Corps of Engineers (Corps) is the federal agency that regulates discharges of dredged or fill material into waters of the United States (wetlands, tributaries, lakes, etc.) under Section 404 of the Clean Water Act (CWA) and regulates work in navigable waters under Section 10 of the Rivers and Harbors Act. Applications are assigned to Corps project managers who are responsible for implementing the Corps regulatory program within a particular geographic area.

State

There are three state regulatory programs that regulate activities affecting water resources. The Wetland Conservation Act (WCA) regulates most activities affecting wetlands. It is administered by local government units (LGUs) which can be counties, townships, cities, watershed districts, watershed management organizations or state agencies (on state-owned land). The Minnesota DNR Division of Ecological and Water Resources issues permits for work in specially-designated public waters via the Public Waters Work Permit Program (DNR Public Waters Permits). The Minnesota Pollution Control Agency (MPCA) under Section 401 of the Clean Water Act certifies that discharges of dredged or fill material authorized by a federal permit or license comply with state water quality standards. One or more of these regulatory programs may be applicable to any one project.

Required Information

Prior to submitting an application, applicants are **strongly encouraged** to seek input from the Corps Project Manager and LGU staff to identify regulatory issues and required application materials for their proposed project. Project proponents can request a pre-application consultation with the Corps and LGU to discuss their proposed project by providing the information required in Sections 1 through 5 of this joint application form to facilitate a meaningful discussion about their project. Many LGUs provide a venue (such as regularly scheduled technical evaluation panel meetings) for potential applicants to discuss their projects with multiple agencies prior to submitting an application. Contact information is provided below.

The following bullets outline the information generally required for several common types of determinations/authorizations.

- For delineation approvals and/or jurisdictional determinations, submit Parts 1, 2 and 5, and Attachment A.
- For activities involving CWA/WCA exemptions, WCA no-loss determinations, and activities not requiring mitigation, submit Parts 1 through 5, and Attachment B.
- For activities requiring compensatory mitigation/replacement plan, submit Parts 1 thru 5, and Attachments C and D.
- For local road authority activities that qualify for the state's local road wetland replacement program, submit Parts 1 through 5, and Attachments C, D (if applicable), and E to both the **Corps and the LGU**.

Submission Instructions

Send the completed joint application form and all required attachments to:

U.S Army Corps of Engineers. Applications may be sent directly to the appropriate Corps Office. For a current listing of areas of responsibilities and contact information, visit the St. Paul District's website at:

<http://www.mvp.usace.army.mil/Missions/Regulatory.aspx> and select "Minnesota" from the contact Information box.

Alternatively, applications may be sent directly to the St. Paul District Headquarters and the Corps will forward them to the appropriate field office.

Section 401 Water Quality Certification: Applicants do not need to submit the joint application form to the MPCA unless specifically requested. The MPCA will request a copy of the completed joint application form directly from an applicant when they determine an individual 401 water quality certification is required for a proposed project.

Wetland Conservation Act Local Government Unit: Send to the appropriate Local Government Unit. If necessary, contact your county Soil and Water Conservation District (SWCD) office or visit the Board of Water and Soil Resources (BWSR) web site (www.bwsr.state.mn.us) to determine the appropriate LGU.

DNR Public Waters Permitting: In 2014 the DNR will begin using the Minnesota DNR Permitting and Reporting System (MPARS) for submission of Public Waters permit applications (<https://webapps11.dnr.state.mn.us/mpars/public/authentication/login>). Applicants for Public Waters permits **MUST** use the MPARS online permitting system for submitting applications to the DNR. To avoid duplication and to streamline the application process among the various resource agencies, applicants can use the information entered into MPARS to substitute for completing parts of this joint application form. The MPARS print/save function will provide the applicant with a copy of the Public Waters permit application which, at a minimum, will satisfy Parts one and two of this joint application. For certain types of activities, the MPARS application may also provide all of the necessary information required under Parts three and four of the joint application. However, it is the responsibility of the Applicant to make sure that the joint application contains all of the required information, including identification of all aquatic resources impacted by the project (see Part four of the joint application). After confirming that the MPARS application contains all of the required information in Parts one and two the Applicant may attach a copy to the joint application and fill in any missing information in the remainder of the joint application.

PART ONE: Applicant Information

If applicant is an entity (company, government entity, partnership, etc.), an authorized contact person must be identified. If the applicant is using an agent (consultant, lawyer, or other third party) and has authorized them to act on their behalf, the agent's contact information must also be provided.

Applicant/Landowner Name: Ryan Evenson, Victory Mankato, LLC, Partner

Mailing Address: 1531 Madison Ave., Ste 200, Mankato, MN 56001

Phone: 507,387-6836

E-mail Address: ryan@apxconstructiongroup.com

Authorized Contact (do not complete if same as above): Brian Johnson, PE, Jones, Haugh & Smith, Inc.

Mailing Address: 515 South Washington Ave, Albert Lea, MN 56007

Phone: 507, 373-4876

E-mail Address: brianj@jhseng.com

Agent Name: Robert Merila, Aquatic EcoSolutions, Inc.

Mailing Address: PO Box 497, Nevis, MN 56467

Phone: 877, 346-3474

E-mail Address: robertmerila@arvig.net

PART TWO: Site Location Information

County: Blue Earth

City/Township: Mankato

Parcel ID and/or Address: R430921177001

Legal Description (Section, Township, Range): Sec 21, T 108 N, R 26 W

Lat/Long (decimal degrees): 44.14746 / 93.96333

Attach a map showing the location of the site in relation to local streets, roads, highways.

Approximate size of site (acres) or if a linear project, length (feet): Approximately 3.9 acres

If you know that your proposal will require an individual Permit from the U.S. Army Corps of Engineers, you must provide the names and addresses of all property owners adjacent to the project site. This information may be provided by attaching a list to your application or by using block 25 of the Application for Department of the Army permit which can be obtained at:

http://www.mvp.usace.army.mil/Portals/57/docs/regulatory/RegulatoryDocs/engform_4345_2012oct.pdf

PART THREE: General Project/Site Information

If this application is related to a delineation approval, exemption determination, jurisdictional determination, or other correspondence submitted **prior to** this application then describe that here and provide the Corps of Engineers project number.

Describe the project that is being proposed, the project purpose and need, and schedule for implementation and completion. The project description must fully describe the nature and scope of the proposed activity including a description of all project elements that effect aquatic resources (wetland, lake, tributary, etc.) and must also include plans and cross section or profile drawings showing the location, character, and dimensions of all proposed activities and aquatic resource impacts.

An apartment building is planned to be constructed on the property to provide housing units for the people in Mankato. The stubs for sanitary sewer and water are within Wetland 1-B, so there is no way to avoid this temporary impact. The required stormwater treatment pond needs to outlet into Wetland 1-A in a way that follows the NPDES Permit Guidelines. These are both are temporary impacts and the wetlands are planned to be restored back to original contours.

PART FOUR: Aquatic Resource Impact¹ Summary

If your proposed project involves a direct or indirect impact to an aquatic resource (wetland, lake, tributary, etc.) identify each impact in the table below. Include all anticipated impacts, including those expected to be temporary. Attach an overhead view map, aerial photo, and/or drawing showing all of the aquatic resources in the project area and the location(s) of the proposed impacts. Label each aquatic resource on the map with a reference number or letter and identify the impacts in the following table.

Aquatic Resource ID (as noted on overhead view)	Aquatic Resource Type (wetland, lake, tributary etc.)	Type of Impact (fill, excavate, drain, or remove vegetation)	Duration of Impact Permanent (P) or Temporary (T) ¹	Size of Impact ²	Overall Size of Aquatic Resource ³	Existing Plant Community Type(s) in Impact Area ⁴	County, Major Watershed #, and Bank Service Area # of Impact Area ⁵
Wetland 1-A	Wetland	Installation	T (7)	500sf	N/A	Frsh(Wet)Mdw	Blue Earth,32.9
Wetland 1-B	Wetland	Utility Connect	T (7)	500sf	N/A	Frsh(Wet)Mdw	Blue Earth,32.9

¹If impacts are temporary; enter the duration of the impacts in days next to the "T". For example, a project with a temporary access fill that would be removed after 220 days would be entered "T (220)".

²Impacts less than 0.01 acre should be reported in square feet. Impacts 0.01 acre or greater should be reported as acres and rounded to the nearest 0.01 acre. Tributary impacts must be reported in linear feet of impact and an area of impact by indicating first the linear feet of impact along the flowline of the stream followed by the area impact in parentheses). For example, a project that impacts 50 feet of a stream that is 6 feet wide would be reported as 50 ft (300 square feet).

³This is generally only applicable if you are applying for a de minimis exemption under MN Rules 8420.0420 Subp. 8, otherwise enter "N/A".

⁴Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.

⁵Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

If any of the above identified impacts have already occurred, identify which impacts they are and the circumstances associated with each:

PART FIVE: Applicant Signature

☐ Check here if you are requesting a pre-application consultation with the Corps and LGU based on the information you have provided. Regulatory entities will not initiate a formal application review if this box is checked.

By signature below, I attest that the information in this application is complete and accurate. I further attest that I possess the authority to undertake the work described herein.

Signature:  Date: 10-15-2025

I hereby authorize Robert Merila to act on my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.

¹ The term "impact" as used in this joint application form is a generic term used for disclosure purposes to identify activities that may require approval from one or more regulatory agencies. For purposes of this form it is not meant to indicate whether or not those activities may require mitigation/replacement.

Attachment A

Request for Delineation Review, Wetland Type Determination, or Jurisdictional Determination

By submission of the enclosed wetland delineation report, I am requesting that the U.S. Army Corps of Engineers, St. Paul District (Corps) and/or the Wetland Conservation Act Local Government Unit (LGU) provide me with the following (check all that apply):

☒ **Wetland Type Confirmation**

☐ **Delineation Concurrence.** Concurrence with a delineation is a written notification from the Corps and a decision from the LGU concurring, not concurring, or commenting on the boundaries of the aquatic resources delineated on the property. Delineation concurrences are generally valid for five years unless site conditions change. Under this request alone, the Corps will not address the jurisdictional status of the aquatic resources on the property, only the boundaries of the resources within the review area (including wetlands, tributaries, lakes, etc.).

☐ **Preliminary Jurisdictional Determination.** A preliminary jurisdictional determination (PJD) is a non-binding written indication from the Corps that waters, including wetlands, identified on a parcel may be waters of the United States. For purposes of computation of impacts and compensatory mitigation requirements, a permit decision made on the basis of a PJD will treat all waters and wetlands in the review area as if they are jurisdictional waters of the U.S. PJDs are advisory in nature and may not be appealed.

☐ **Approved Jurisdictional Determination.** An approved jurisdictional determination (AJD) is an official Corps determination that jurisdictional waters of the United States are either present or absent on the property. AJDs can generally be relied upon by the affected party for five years. An AJD may be appealed through the Corps administrative appeal process.

In order for the Corps and LGU to process your request, the wetland delineation must be prepared in accordance with the 1987 Corps of Engineers Wetland Delineation Manual, any approved Regional Supplements to the 1987 Manual, and the *Guidelines for Submitting Wetland Delineations in Minnesota* (2013).

<http://www.mvp.usace.army.mil/Missions/Regulatory/DelineationJDGuidance.aspx>

Attachment B

Supporting Information for Applications Involving Exemptions, No Loss Determinations, and Activities Not Requiring Mitigation

Complete this part *if* you maintain that the identified aquatic resource impacts in Part Four do not require wetland replacement/compensatory mitigation OR *if* you are seeking verification that the proposed water resource impacts are either exempt from replacement or are not under CWA/WCA jurisdiction.

Identify the specific exemption or no-loss provision for which you believe your project or site qualifies:

8420.0415 NO-LOSS CRITERIA.

"No-loss" means no permanent loss of, or impact to, wetlands from an activity according to the criteria in this part. The following qualify for a no-loss:

A.

an activity that will not impact a wetland;

§

F.

an activity associated with the operation, routine maintenance, or emergency repair of existing utilities and public works structures, including pipelines, provided the activity does not result in additional wetland intrusion or additional impacts, either wholly or partially;

Provide a detailed explanation of how your project or site qualifies for the above. Be specific and provide and refer to attachments and exhibits that support your contention. Applicants should refer to rules (e.g. WCA rules), guidance documents (e.g. BWSR guidance, Corps guidance letters/public notices), and permit conditions (e.g. Corps General Permit conditions) to determine the necessary information to support the application. Applicants are strongly encouraged to contact the WCA LGU and Corps Project Manager prior to submitting an application if they are unsure of what type of information to provide:

The proposed temporary impact to Wetland 1-A in the northwestern part of the property is the outlet from the stormwater pond into the roadside ditch (Wetland 1-A) after the water is pre-treated and retained on-site with the stormwater pond. The outlet structure from the stormwater pond is planned to be installed and the edge of the wetland restored to the pre-installation configuration with seeding done such that there would not be an impact to the wetland (Subpart A above). There will be some rock rip-rap at the outlet for flow dissipation that is based on the NPDES Permit Guidelines. This rock riprap would reduce erosion potential at this location and increase wildlife habitat by providing additional habitat diversity.

The proposed temporary impact to Wetland 1-B in the northeastern corner of the property is at the connection to the existing water and sanitary sewer that has been previously stubbed into the property. This appears to meet both Subpart A and Subpart F because the wetland is planned to be restored back to the previous shape and re-seeded with vegetation after the connection to the existing utility lines are made.

Both temporary impacts are anticipated to be restored within 7 days of temporary impact.

Attachment C

Avoidance and Minimization

Project Purpose, Need, and Requirements. Clearly state the purpose of your project and need for your project. Also include a description of any specific requirements of the project as they relate to project location, project footprint, water management, and any other applicable requirements. Attach an overhead plan sheet showing all relevant features of the project (buildings, roads, etc.), aquatic resource features (impact areas noted) and construction details (grading plans, storm water management plans, etc.), referencing these as necessary:

Avoidance. Both the CWA and the WCA require that impacts to aquatic resources be avoided if practicable alternatives exist. Clearly describe all on-site measures considered to avoid impacts to aquatic resources and discuss at least two project alternatives that avoid all impacts to aquatic resources on the site. These alternatives may include alternative site plans, alternate sites, and/or not doing the project. Alternatives should be feasible and prudent (see MN Rules 8420.0520 Subp. 2 C). Applicants are encouraged to attach drawings and plans to support their analysis:

Minimization. Both the CWA and the WCA require that all unavoidable impacts to aquatic resources be minimized to the greatest extent practicable. Discuss all features of the proposed project that have been modified to minimize the impacts to water resources (see MN Rules 8420.0520 Subp. 4):

Off-Site Alternatives. An off-site alternatives analysis is not required for all permit applications. If you know that your proposal will require an individual permit (standard permit or letter of permission) from the U.S. Army Corps of Engineers, you may be required to provide an off-site alternatives analysis. The alternatives analysis is not required for a complete application but must be provided during the review process in order for the Corps to complete the evaluation of your application and reach a final decision. Applicants with questions about when an off-site alternatives analysis is required should contact their Corps Project Manager.

Attachment D

Replacement/Compensatory Mitigation

Complete this part **if** your application involves wetland replacement/compensatory mitigation not associated with the local road wetland replacement program. Applicants should consult Corps mitigation guidelines and WCA rules for requirements.

Replacement/Compensatory Mitigation via Wetland Banking. Complete this section if you are proposing to use credits from an existing wetland bank (with an account number in the State wetland banking system) for all or part of your replacement/compensatory mitigation requirements.

Wetland Bank Account #	County	Major Watershed #	Bank Service Area #	Credit Type (if applicable)	Number of Credits

Applicants should attach documentation indicating that they have contacted the wetland bank account owner and reached at least a tentative agreement to utilize the identified credits for the project. This documentation could be a signed purchase agreement, signed application for withdrawal of credits or some other correspondence indicating an agreement between the applicant and the bank owner. *However, applicants are advised not to enter into a binding agreement to purchase credits until the mitigation plan is approved by the Corps and LGU.*

Project-Specific Replacement/Permittee Responsible Mitigation. Complete this section if you are proposing to pursue actions (restoration, creation, preservation, etc.) to generate wetland replacement/compensatory mitigation credits for this proposed project.

WCA Action Eligible for Credit ¹	Corps Mitigation Compensation Technique ²	Acres	Credit % Requested	Credits Anticipated ³	County	Major Watershed #	Bank Service Area #

¹Refer to the name and subpart number in MN Rule 8420.0526.

²Refer to the technique listed in *St. Paul District Policy for Wetland Compensatory Mitigation in Minnesota*.

³If WCA and Corps crediting differs, then enter both numbers and distinguish which is Corps and which is WCA.

Explain how each proposed action or technique will be completed (e.g. wetland hydrology will be restored by breaking the tile.....) and how the proposal meets the crediting criteria associated with it. Applicants should refer to the Corps mitigation policy language, WCA rule language, and all associated Corps and WCA guidance related to the action or technique:

Attach a site location map, soils map, recent aerial photograph, and any other maps to show the location and other relevant features of each wetland replacement/mitigation site. Discuss in detail existing vegetation, existing landscape features, land use (on and surrounding the site), existing soils, drainage systems (if present), and water sources and movement. Include a topographic map showing key features related to hydrology and water flow (inlets, outlets, ditches, pumps, etc.):

Project Name and/or Number: **Mankato Apartments Site**

Attach a map of the existing aquatic resources, associated delineation report, and any documentation of regulatory review or approval. Discuss as necessary:

For actions involving construction activities, attach construction plans and specifications with all relevant details. Discuss and provide documentation of a hydrologic and hydraulic analysis of the site to define existing conditions, predict project outcomes, identify specific project performance standards and avoid adverse offsite impacts. Plans and specifications should be prepared by a licensed engineer following standard engineering practices. Discuss anticipated construction sequence and timing:

For projects involving vegetation restoration, provide a vegetation establishment plan that includes information on site preparation, seed mixes and plant materials, seeding/planting plan (attach seeding/planting zone map), planting/seeding methods, vegetation maintenance, and an anticipated schedule of activities:

For projects involving construction or vegetation restoration, identify and discuss goals and specific outcomes that can be determined for credit allocation. Provide a proposed credit allocation table tied to outcomes:

Provide a five-year monitoring plan to address project outcomes and credit allocation:

Discuss and provide evidence of ownership or rights to conduct wetland replacement/mitigation on each site:

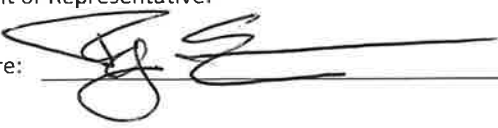
Quantify all proposed wetland credits and compare to wetland impacts to identify a proposed wetland replacement ratio. Discuss how this replacement ratio is consistent with Corps and WCA requirements:

By signature below, the applicant attests to the following (only required if application involves project-specific/permittee responsible replacement):

- All proposed replacement wetlands were not:
 - Previously restored or created under a prior approved replacement plan or permit
 - Drained or filled under an exemption during the previous 10 years
 - Restored with financial assistance from public conservation programs
 - Restored using private funds, other than landowner funds, unless the funds are paid back with interest to the individual or organization that funded the restoration and the individual or organization notifies the local government unit in writing that the restored wetland may be considered for replacement.
- The wetland will be replaced before or concurrent with the actual draining or filling of a wetland.
- An irrevocable bank letter of credit, performance bond, or other acceptable security will be provided to guarantee successful completion of the wetland replacement.
- Within 30 days of either receiving approval of this application or beginning work on the project, I will record the Declaration of Restrictions and Covenants on the deed for the property on which the replacement wetland(s) will be located and submit proof of such recording to the LGU and the Corps.

Applicant or Representative:

Title: *Manager*

Signature: 

Date: *10-15-2025*

Attachment E

Local Road Replacement Program Qualification

Complete this part **if** you are a local road authority (county highway department, city transportation department, etc.) seeking verification that your project (or a portion of your project) qualifies for the MN Local Government Road Wetland Replacement Program (LGRWRP). If portions of your project are not eligible for the LGRWRP, then Attachment D should be completed and attached to your application.

Discuss how your project is a repair, rehabilitation, reconstruction, or replacement of a currently serviceable road to meet state/federal design or safety standards/requirements. Applicants should identify the specific road deficiencies and how the project will rectify them. Attach supporting documents and information as applicable:

Provide a map, plan, and/or aerial photograph accurately depicting wetland boundaries within the project area. Attach associated delineation/determination report or otherwise explain the method(s) used to identify and delineate wetlands. Also attach and discuss any type of review or approval of wetland boundaries or other aspects of the project by a member or members of the local Technical Evaluation Panel (TEP) or Corps of Engineers:

In the table below, identify only the wetland impacts from Part 4 that the road authority has determined should qualify for the LGRWRP.

Wetland Impact ID (as noted on overhead view)	Type of Impact (fill, excavate, drain)	Size of Impact (square feet or acres to 0.01)	Existing Plant Community Type(s) in Impact Area ¹	County, Major Watershed #, and Bank Service Area # of Impact ²

¹Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.

²Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

Discuss the feasibility of providing onsite compensatory mitigation/replacement for important site-specific wetland functions:

Please note that under the MN Wetland Conservation Act, projects with less than 10,000 square feet of wetland impact are allowed to commence prior to submission of this notification so long as the notification is submitted within 30 days of the impact. The Clean Water Act has no such provision and requires that permits be obtained prior to any regulated discharges into water of the United States. To avoid potential unauthorized activities, road authorities must, at a minimum, provide a complete application to the Corps and receive a permit prior to commencing work.

By signature below, the road authority attests that they have followed the process in MN Rules 8420.0544 and have determined that the wetland impacts identified in Attachment D are eligible for the MN Local Government Road Wetland Replacement Program.

Road Authority Representative:

Title:

Signature: _____

Date:

Technical Evaluation Panel Concurrence:

Project Name and/or Number: **Mankato Apartments Site**

TEP member:

Representing:

Concur with road authority's determination of qualification for the local road wetland replacement program? ☐ Yes ☐ No

Signature: _____

Date: _____

TEP member:

Representing:

Concur with road authority's determination of qualification for the local road wetland replacement program? ☐ Yes ☐ No

Signature: _____

Date: _____

TEP member:

Representing:

Concur with road authority's determination of qualification for the local road wetland replacement program? ☐ Yes ☐ No

Signature: _____

Date: _____

TEP member:

Representing:

Concur with road authority's determination of qualification for the local road wetland replacement program? ☐ Yes ☐ No

Signature: _____

Date: _____

Upon approval and signature by the TEP, application must be sent to: **Wetland Bank Administration
Minnesota Board of Water & Soil Resources
520 Lafayette Road North
Saint Paul, MN 55155**

**MANKATO APARTMENTS
901 SOUTH VICTORY DRIVE
MANKATO, MN**

GRADING, DRAINAGE, WETLAND DELINEATION & TRIP GENERATION REPORT

Blue Earth County, Mankato, MN



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Brian J. Johnson

Date: 11/5/2025

License No. 42744

TABLE OF CONTENTS

	Pages
Grading & Drainage Report	4
Civil Plans	8
Existing Drainage Map	1
Proposed Drainage Map	1
Hydrologic Summary Table	1
Proposed Pipe Capacities	1
MIDS Calcs (Existing & Proposed)	6
Hydro Cad Hydraulic Calculations	73
NRCS Site Soil Survey	23
Wetland Delineation	26
Trip Generation Report	1

Applicant:

APX Construction
3 Civic Center Plaza Suite 400
Mankato, MN 56001

Project Description

APX Construction is proposing to construct (2) 36 unit apartment buildings in the West ½ of the East ½ of Section S21-T108-26W near the roundabout at Victory Drive and Stadium Road in Mankato, MN. An existing street access off Victory Drive will be utilized for egress to the parcel.

Existing Conditions

The current condition of the site is a previously developed site which now appears vacant. Wetlands are present on the site and were recently delineated. An undisturbed buffer of 16.5' will be maintained from the wetland delineation lines as part of development. The site is relatively flat with a high point in the southern portion of the site with slope northerly and primarily westerly from the high point. The soils on site consist of silty clays and muck near the north as outlined by the attached NRCS soils report. Approximately 1.25 acres of existing gravel surfacing exists on the site.

Adjacent Areas

Victory Drive and Stadium Road front the property on the two sides while developed commercial parcels abut the south and east sides of the site.

The site is not located within a 100 year flood plain as defined by FEMA Flood Insurance Rate Maps.

Areas and Volumes

The parcel consists of approximately 3.9 acres and approximately 2.5 acres of new impervious surfaces consisting of parking lots and the buildings will be constructed.

Stormwater Management Considerations

Storm water treatment for the proposed construction is proposed via a filtration basin located in the northwest side of the development. Stormwater off the new roof and parking areas will be collected with curb inlets and be transported via underground storm sewer to the basin. The attached plans illustrate the locations and grades of proposed storm sewer utilities. The proposed bottom of the basin is proposed at elevation 987. The basin would have a control structure at the outlet with a 30 degree V-notch weir wall at elevation 988.25 and an overflow weir wall at elevation 989.00 with a basin emergency overflow elevation of 991.00 as outlined in the attached hydro cad calculations. The top of berm for the basin will be at elevation 992.00 in all other locations.

The basin will provide rate control for the 2,10 and 100 year rain events thereby keeping post development rates of runoff the same or less than pre-development rates. This basin will also serve to provide removal of total suspended solids, particulate phosphorus and to a lesser degree, dissolved phosphorus. Consideration was given to implementing infiltration practices,

however the onsite silty clay loams are not suitable for infiltration due to being HSG D soils with a shallow water table.

The basin should provide total suspended solids (TSS) on the order of 80% removal as well as particulate phosphorus as shown on the attached Minimal Impact Design Standards (MIDS) pre and post development calculations.

The proposed impervious surface tributary to the new basin will be approximately 4.25 acres. Storm water runoff will enter the basin via underground storm sewer piping and surface runoff. A dry storage volume of approximately 35,000 cubic feet will be provided via the basin. A WQV of 2.5 acres of new impervious surface * 3600 cu. ft = 0.2 acre ft will be retained. The 1.1" water quality volume (approximately water elevation 988.33) discharge rate will be approximately 1.77 cfs.

Predevelopment and post development rates discharging from the new basin are summarized attached hydraulic summary along with proposed pipe capacity calculations. Discharge for the new basin will occur via a 24" outlet pipe into an existing roadway ditch that is currently tributary to existing City storm sewer.

A summary of the Hydro Cad treatment calculations and rate calculations is also appended to this report.

Maintenance

Seasonal maintenance of the storm water basin will be required to remove accumulated sediment, removal of undesired vegetation and to ensure all upstream and downstream areas are stabilized.

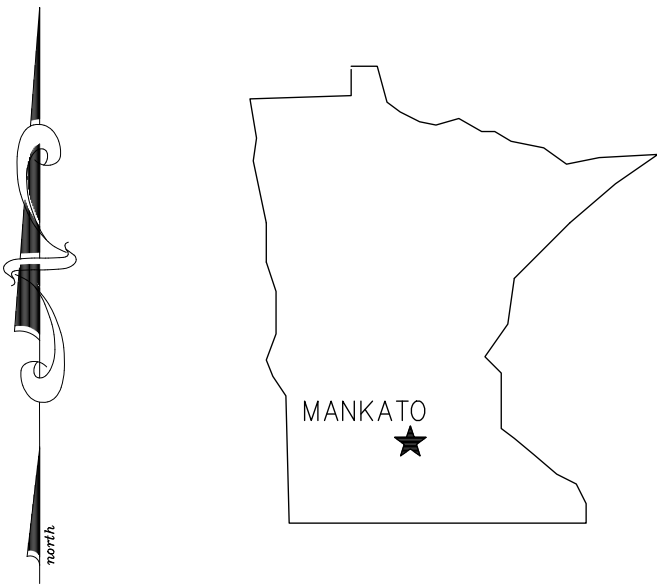
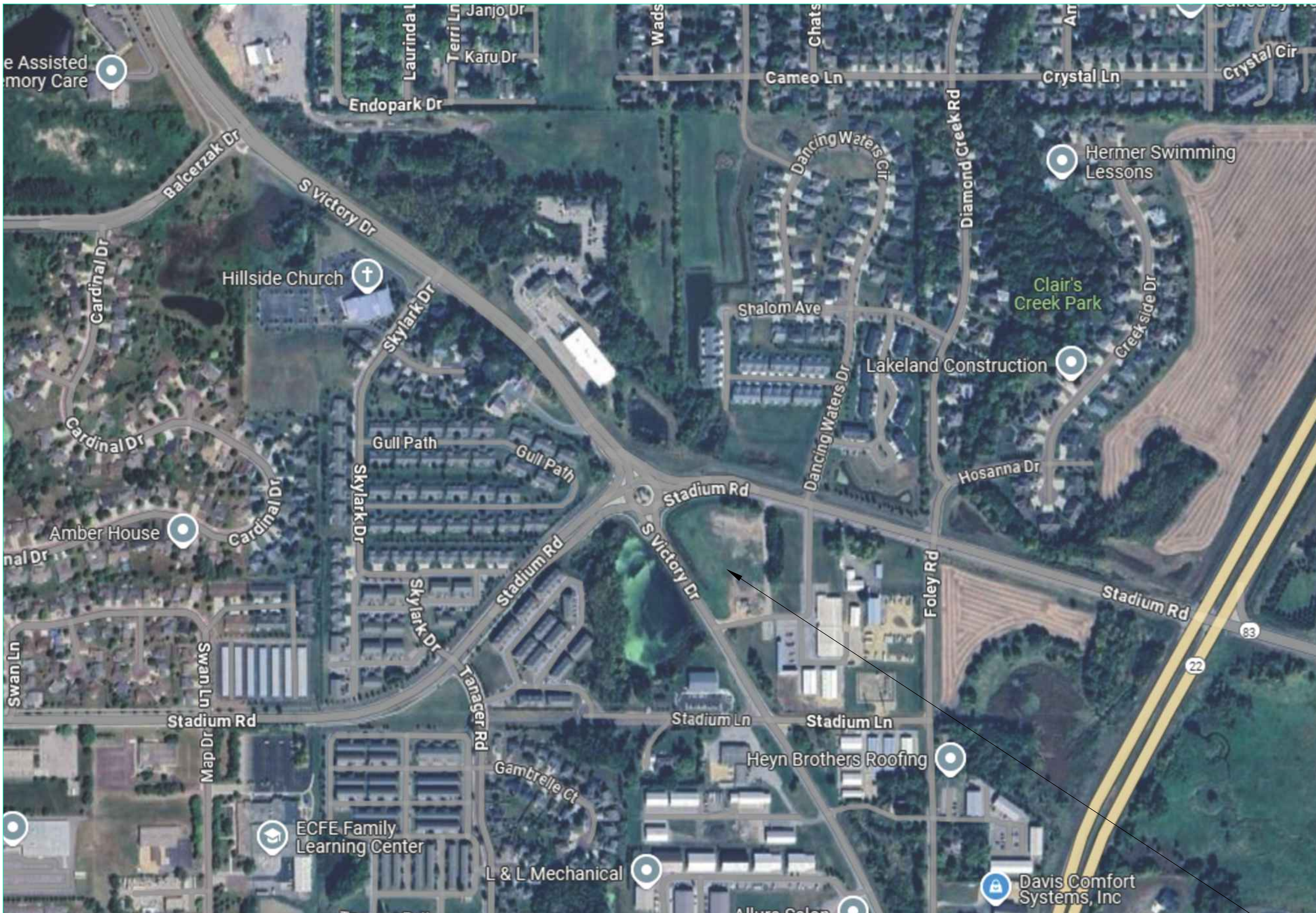
Signatures and Acceptance

We hereby acknowledge we have prepared the grading plan associated with this report.

Brian J. Johnson, Jones Haugh & Smith, Inc.

Date: 11/10/2025

MANKATO APARTMENTS
MANKATO, MN



PROJECT LOCATION

INDEX TO SHEETS

- C1: TITLE SHEET
- C2: EXISTING CONDITIONS
- C3: HARDSCAPE PLAN
- C4: UTILITY PLAN
- C5: GRADING PLAN
- C6: LANDSCAPE PLAN
- C7: DETAILS
- C8: SWPPP NARRATIVE& DETAILS
- C9: DETAILS
- C10–C11: SPECIFICATIONS

THIS PLAN CONTAINS 11 SHEETS

LEGEND

- | | | | |
|--|-----------------------------------|--|--|
| | = 5/8"Ø X 16" iron stake monument | | = Sign |
| | =Iron stake monument-Found | | = Sign-Handicap |
| | = Water Main | | = Light Pole |
| | = Sanitary Sewer | | = Power Pole |
| | = Storm Sewer | | = Guy Anchor |
| | = Gas Main | | = Fire hydrant |
| | = Underground Telephone | | = Water Main Valve |
| | = Overhead Telephone | | = Fire Sprinkler |
| | = Fiber-Optics | | = Cleanout |
| | = Underground Electric | | = Culvert |
| | = Overhead Electric | | = Gas Main Valve |
| | = Chain Link Fence | | = Catch Basin |
| | = Control Access | | = Manholes |
| | = Gate Post | | |
| | = Bollards | | = Spot Elevation |
| | = Electric Meter | | = Rim Elevation |
| | = Gas Meter | | = Line Elevation |
| | = Fiber-Optics Box | | =Concrete Surface |
| | = Telephone Pedestal | | =Bituminous Surface |
| | = Light Tower | | =Gravel Surface |
| | = Silt Fence | | =Proposed Pavement Elevation |
| | = Furnish & Install | | =Proposed Top/Bottom of Retaining Wall Elevation |
| | = Existing Elevation Contour Line | | |
| | = Proposed Elevation Contour Line | | |

APPLICABLE CONSTRUCTION PERMITS

ALL CONSTRUCTION WITHIN ROAD RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PERMIT AS ISSUED BY THE ROAD AUTHORITY.

GENERAL NOTES

DEVELOPER, CONTRACTOR AND ALL SUBCONTRACTORS SHALL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES GOVERNED BY STATE AND LOCAL JURISDICTION. SITE IRRIGATING, LIGHTING, LANDSCAPING, SIGNING ARE NOT A PART OF THIS PLAN. PROVIDE EROSION CONTROL PER NPDES PERMIT REQUIREMENTS AND AS SHOWN. PROVIDE HANDICAP CURB RAMPS & SIGNAGE. COMPLY WITH ALL AMERICAN DISABILITY ACT REQUIREMENTS. ALL CONCRETE OR ASPHALTIC PAVEMENT CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF MN/DOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION. A ROCK CONSTRUCTION ENTRANCE IS REQUIRED AT ALL ENTRANCES FROM BITUMINOUS PAVEMENT. ACCESS FOR LOCAL RESIDENTS/BUSINESSES SHALL ALWAYS BE MAINTAINED. PROVIDE PAVEMENT STRIPING AS SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FOR CONSTRUCTION. SEE BOUNDARY SURVEY BY OTHERS FOR SITE BOUNDARIES. ANY ALTERATIONS OR REVISIONS TO THE SITE DEVELOPMENT PLAN AS SHOWN SHALL NOT BE THE RESPONSIBILITY OF JONES, HAUGH & SMITH INC. AND SHALL RELEASE JONES, HAUGH & SMITH INC. OF ANY LIABILITY FOR ANY DAMAGES CAUSED THEREFROM UNLESS WRITTEN AUTHORIZATION OR PLAN REVISION HAS BE APPROVED BY JONES, HAUGH & SMITH INC. PRIOR.

BENCHMARK 1

Top head of spike in power pole at southeast corner of property.
Elevation = 1001.49

BASIS OF BEARING SYSTEM

All bearings are based upon the MnDot Blue Earth County Coordinate System Nad 83 (96) Harn Adjustment Grid

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
Brian J. Johnson
Reg. No. 42744 Date: 9/20/25

Consultant:
JONES HAUGH SMITH
Engineers - Surveyors
515 South Washington Ave. Albert Lea, MN 56007
507-373-4876

Project:
MANKATO APARTMENTS

Revision:

No. 25-188 Date: 9/20/2025

Drawn: bj Checked:

Project Manager:

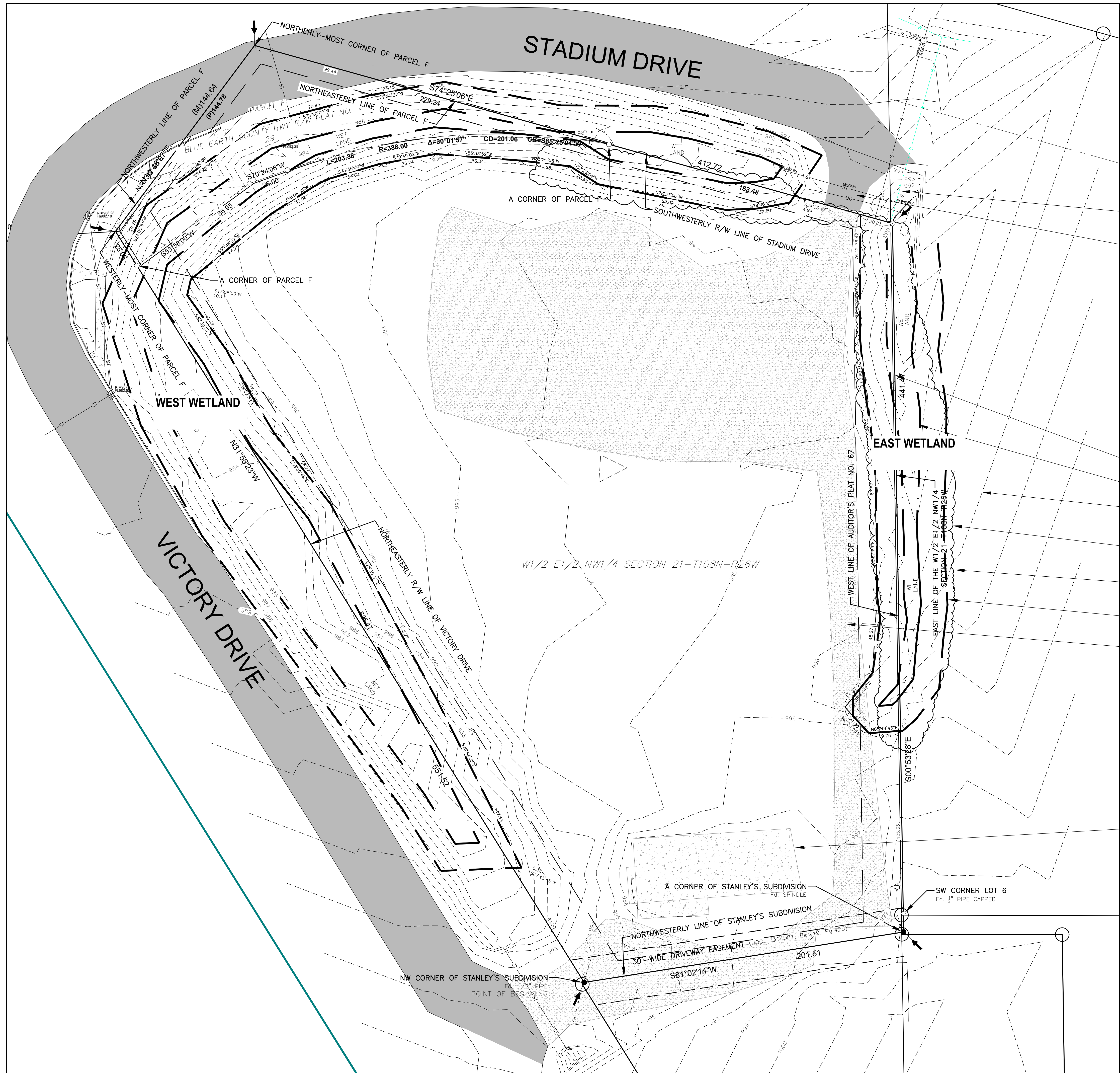
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Sheet Title:

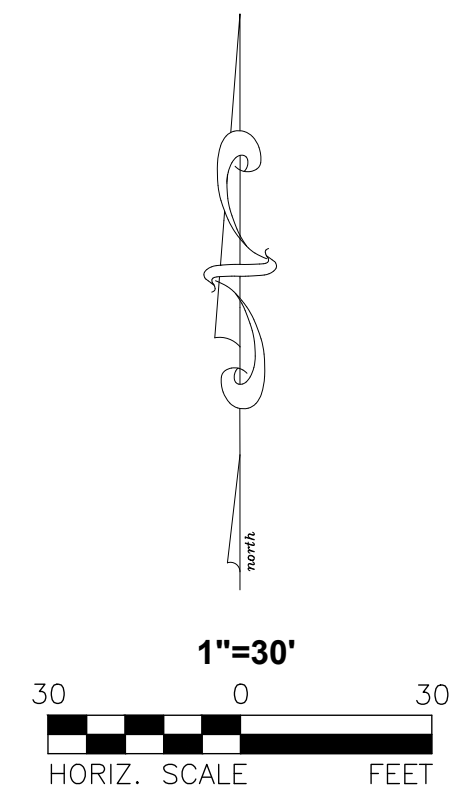
TITLE SHEET

Sheet No.:

C1



- EXISTING SEWER/WATER SERVICES-FIELD VERIFY LOCATION
- REMOVE EXISTING DRIVEWAY APPROACH-GRADE TO MATCH EXISTING DITCH SLOPES
SEE GRADING PLAN-REMOVE EXISTING DRIVEWAY CULVERT
- PROPERTY LINE TYP.
- WETLAND DELINEATION LINE TYP.
- EXISTING ELEVATION CONTOUR TYP.
- EDGE OF TREES TYP.
- EXISTING GROUND SPOT ELEVATION TYP.
- 16.5' WETLAND BUFFER LINE TYP.
- REMOVE OR SALVAGE EXISTING GRAVEL SURFACING
- REMOVE EXISTING CONCRETE SLABS & WALKS AS REQUIRED FOR CONSTRUCTION TYP.



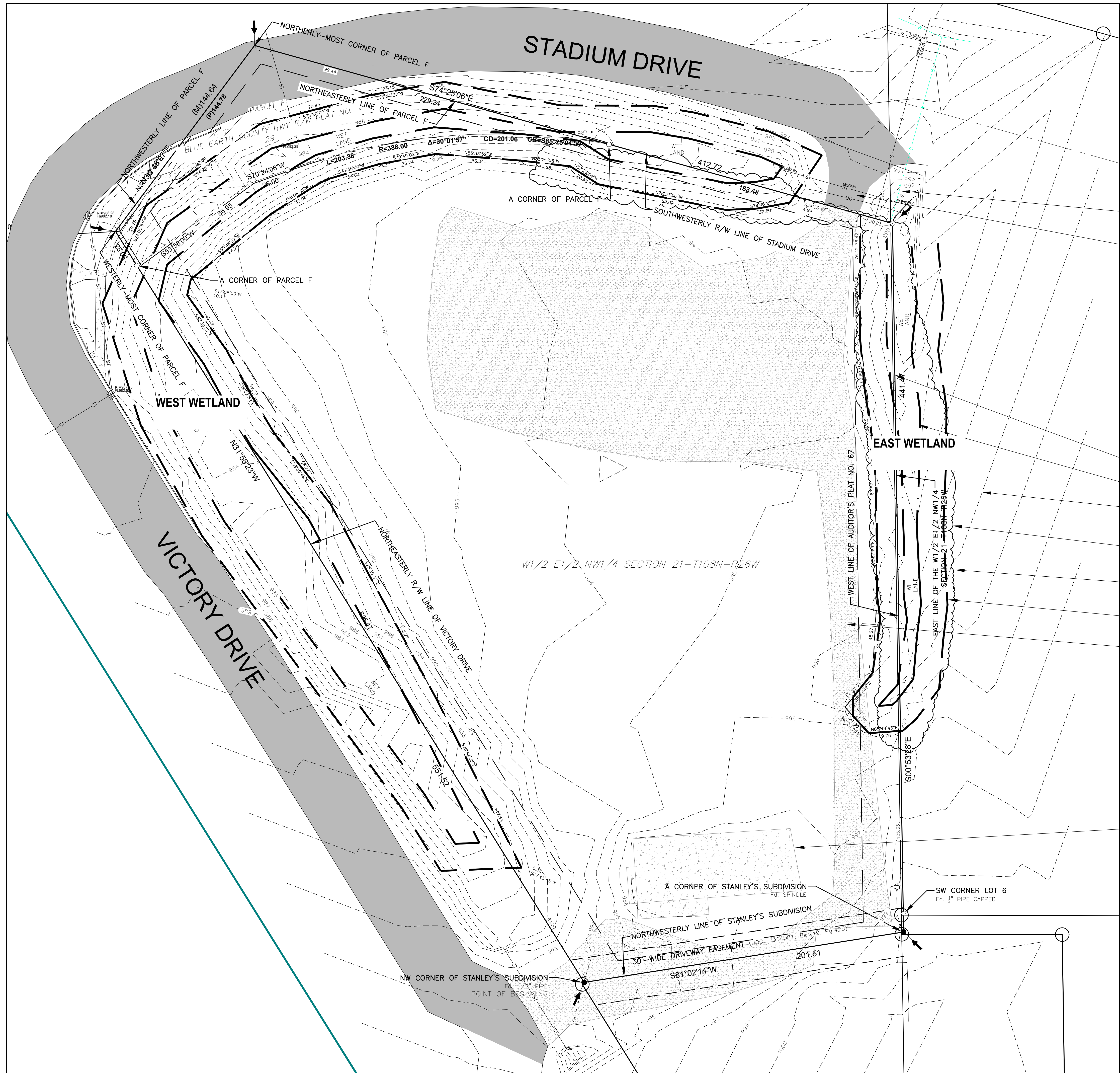
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Brian J. Johnson
Reg. No. 42744 Date: 9/20/25

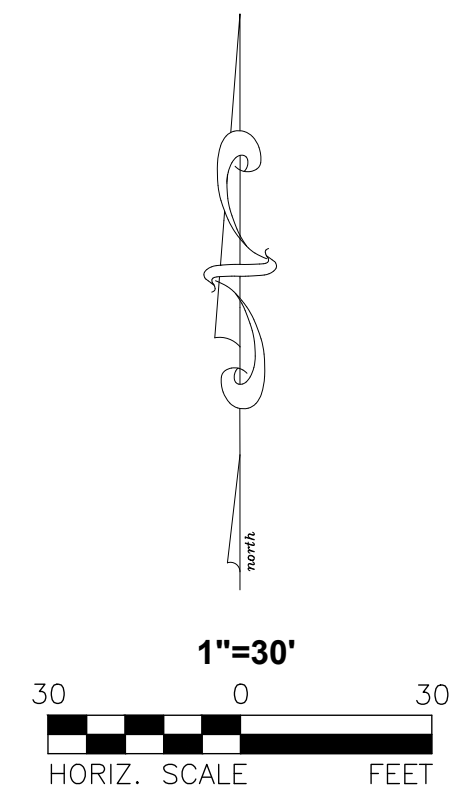
JONES HAUGH SMITH
Engineers + Surgeons
515 South Washington Ave. Albert Lea, MN 56007-373-4876

MANKATO APARTMENTS

No:	25-188	Date:	9/20/2025
Drawn:	bij	Checked:	
Project Manager:			
Project Status:	CD		
Sheet Title:	EXISTING CONDITIONS		
Sheet No.:	C2		



- EXISTING SEWER/WATER SERVICES-FIELD VERIFY LOCATION
- REMOVE EXISTING DRIVEWAY APPROACH-GRADE TO MATCH EXISTING DITCH SLOPES
SEE GRADING PLAN-REMOVE EXISTING DRIVEWAY CULVERT
- PROPERTY LINE TYP.
- WETLAND DELINEATION LINE TYP.
- EXISTING ELEVATION CONTOUR TYP.
- EDGE OF TREES TYP.
- EXISTING GROUND SPOT ELEVATION TYP.
- 16.5' WETLAND BUFFER LINE TYP.
- REMOVE OR SALVAGE EXISTING GRAVEL SURFACING
- REMOVE EXISTING CONCRETE SLABS & WALKS AS REQUIRED FOR CONSTRUCTION TYP.



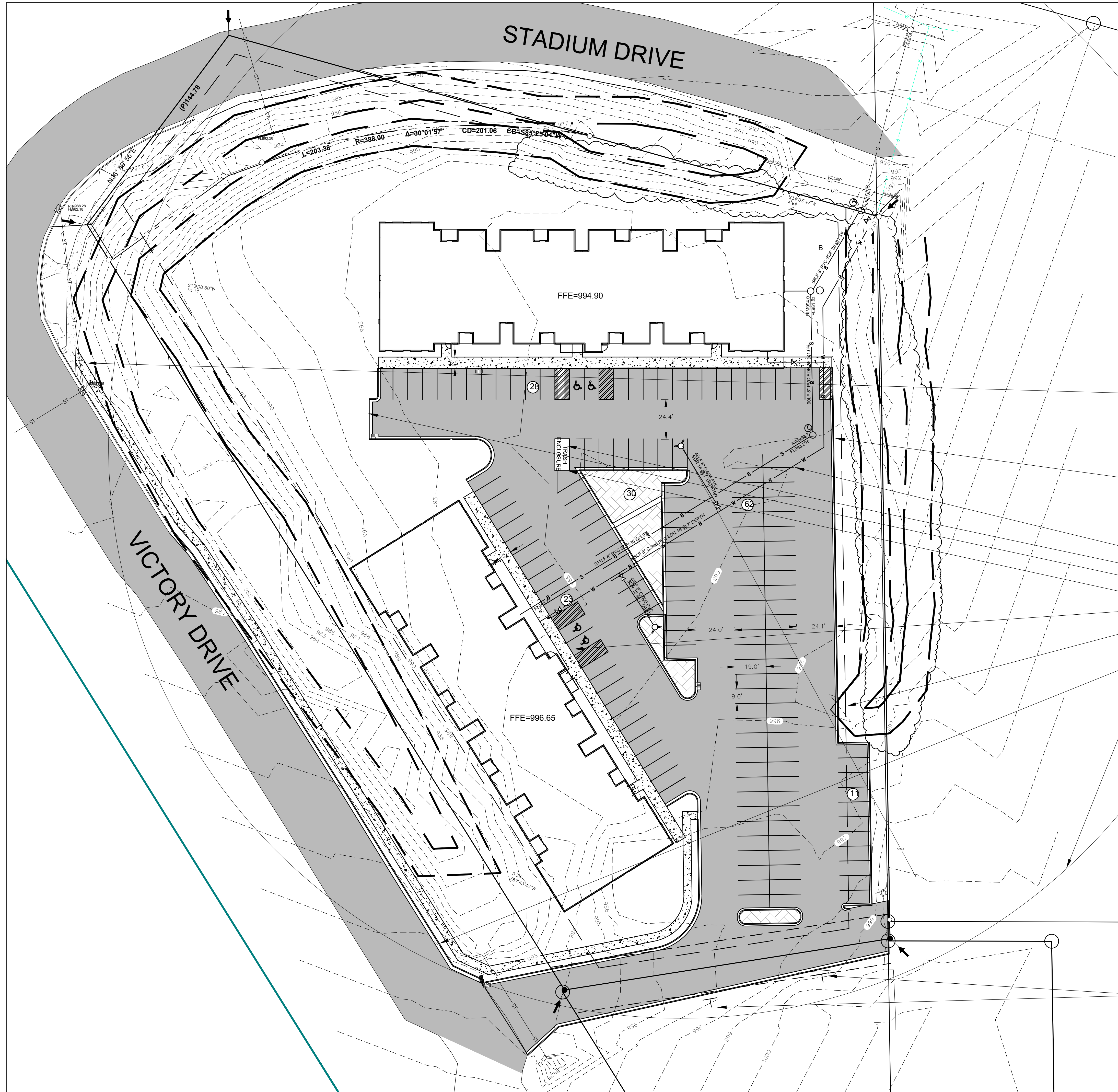
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Brian J. Johnson
Reg. No. 42744 Date: 9/20/25

JONES HAUGH SMITH
Engineers + Surveyors
515 South Washington Ave. Albert Lea, MN 56007-373-4876

MANKATO APARTMENTS

No:	25-188	Date:	9/20/2025
Drawn:	bij	Checked:	
Project Manager:			
Project Status:	CD		
Sheet Title:	EXISTING CONDITIONS		
Sheet No.:	C2		



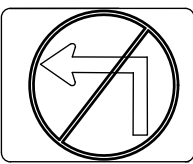
F&I NEW SIDEWALK ALONG VICTORY DR. WITH 4' BOULEVARD TYP.
CONNECT NEW SIDEWALK TO EXISTING TYP.

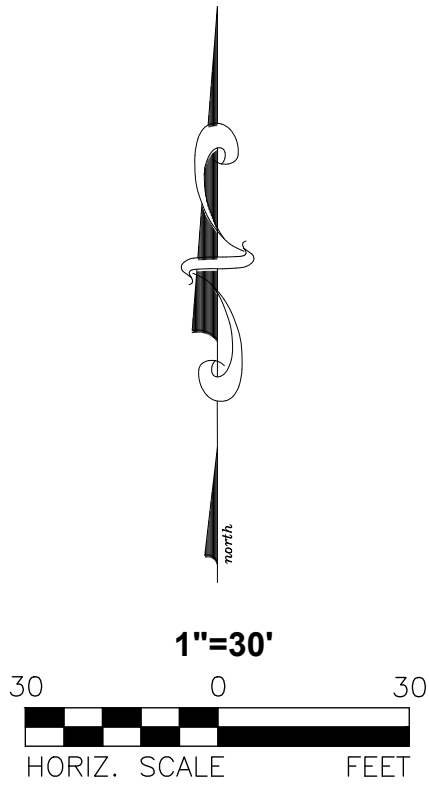
NEW CONCRETE B618 CURB & GUTTER TYP.

F&I LATEX PAVEMENT STRIPING/MESSAGES TYP.
F&I CONCRETE PAVEMENT SECTION WITHIN TRASH ENCLOSURE TYP.
F&I CURB CUT FOR POND MAINTENANCE ACCESS
PROPOSED DUMPSTER ENCLOSURE LOCATION-SEE ARCHITECTURAL
F&I THICKENED EDGE WALK ALONG BUILDING EXCEPT AT ADA STALLS TYP.
SEE THICKENED EDGE WALK DETAIL AND RAISED PAVEMENT DETAIL
BUILDING SETBACK LINE TYP.

F&I B624 CURB & GUTTER ALONG EDGE OF VICTORY DRIVE ALONG NEW SIDEWALK
SAWCUT EXISTING SHOULDER BITUMINOUS AND PATCH AS REQUIRED FOR CURB INSTALLATION

350' HYDRANT COVERAGE RADII-SEE UTILITY PLAN FOR MORE INFORMATION


F&I (2) R3-2 NO LEFT TURN SIGNS
PER MUTCD MANUAL



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

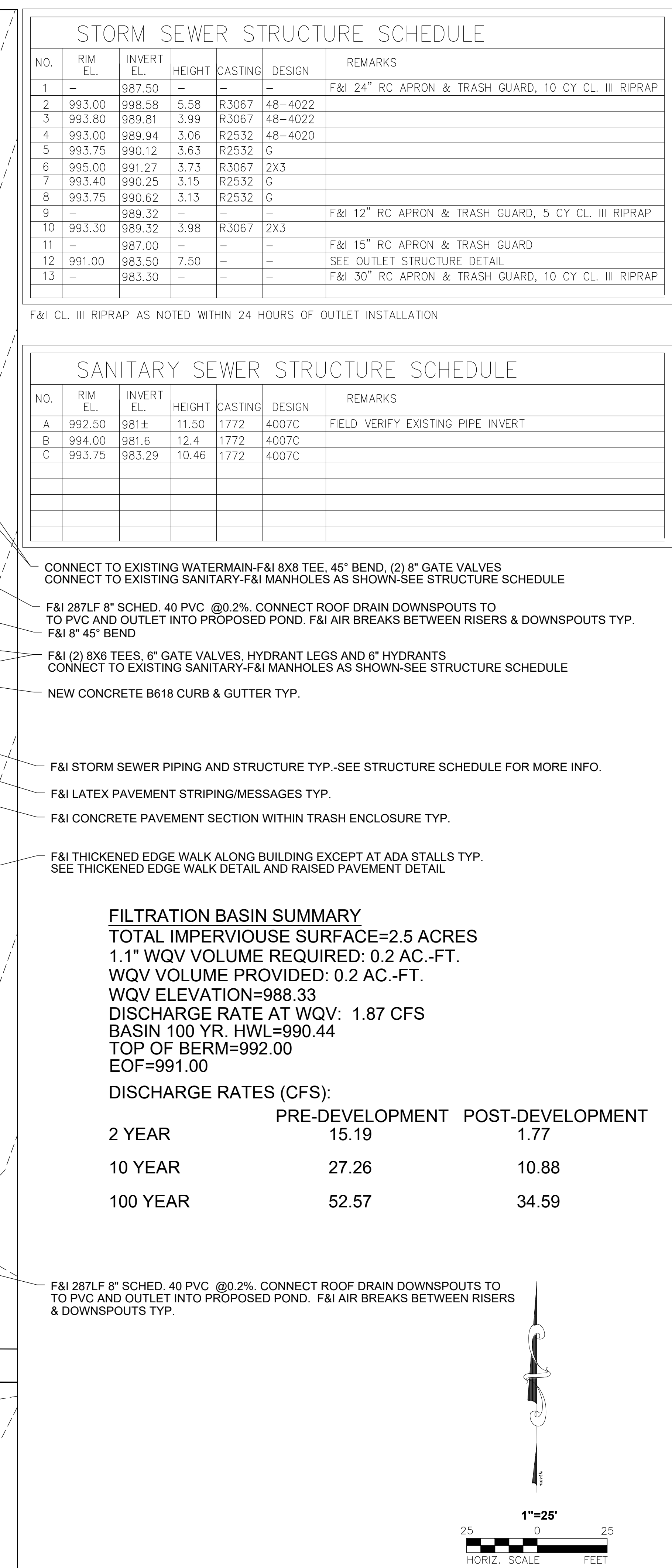
Brian J. Jones
Professional Engineer
No. 42144
Date: 9/20/25

JONES HAUGH SMITH
Engineers & Surveyors
515 South Washington Ave. Albert Lea, MN 56007-3734
507-373-4876

Consultant:

**MANKATO
APARTMENTS**

Project:	
Revision:	
No.:	Date: 9/20/2025
Drawn: bjj	Checked:
Project Manager:	
Project Status: CD	
Sheet Title:	
HARDSCAPE PLAN	
Sheet No.: C3	



SANITARY SEWER STRUCTURE SCHEDULE						
NO.	RIM EL.	INVERT EL.	HEIGHT	CASTING	DESIGN	REMARKS
A	992.50	981±	11.50	1772	4007C	FIELD VERIFY EXISTING PIPE INVERT
B	994.00	981.6	12.4	1772	4007C	
C	993.75	983.29	10.46	1772	4007C	

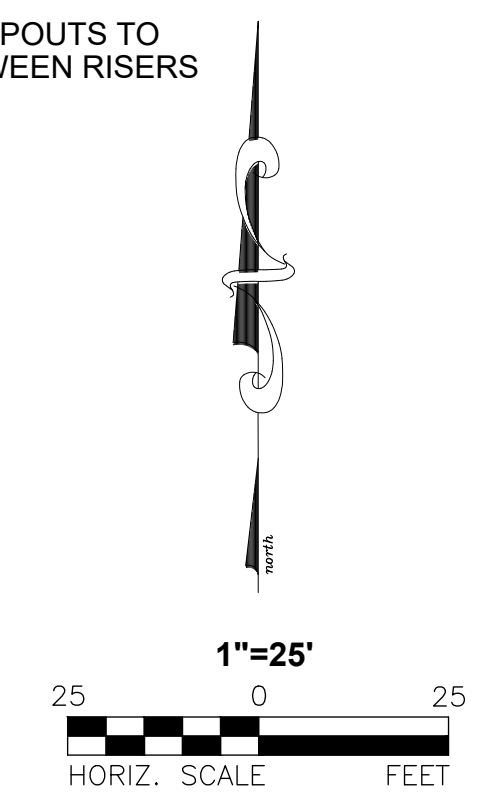
- CONNECT TO EXISTING WATERMAIN-F&I 8X8 TEE, 45° BEND, (2) 8" GATE VALVES
CONNECT TO EXISTING SANITARY-F&I MANHOLES AS SHOWN-SEE STRUCTURE SCHEDULE
- F&I 287LF 8" SCHED. 40 PVC @0.2%. CONNECT ROOF DRAIN DOWNSPOUTS TO
TO PVC AND OUTLET INTO PROPOSED POND. F&I AIR BREAKS BETWEEN RISERS & DOWNSPOUTS TYP.
F&I 8" 45° BEND
- F&I (2) 8X6 TEES, 6" GATE VALVES, HYDRANT LEGS AND 6" HYDRANTS
CONNECT TO EXISTING SANITARY-F&I MANHOLES AS SHOWN-SEE STRUCTURE SCHEDULE
- NEW CONCRETE B618 CURB & GUTTER TYP.
- F&I STORM SEWER PIPING AND STRUCTURE TYP.-SEE STRUCTURE SCHEDULE FOR MORE INFO.
- F&I LATEX PAVEMENT STRIPING/MESSAGES TYP.
- F&I CONCRETE PAVEMENT SECTION WITHIN TRASH ENCLOSURE TYP.
- F&I THICKENED EDGE WALK ALONG BUILDING EXCEPT AT ADA STALLS TYP.
SEE THICKENED EDGE WALK DETAIL AND RAISED PAVEMENT DETAIL

FILTRATION BASIN SUMMARY
TOTAL IMPERVIOUS SURFACE=2.5 ACRES
1.1" WQV VOLUME REQUIRED: 0.2 AC.-FT.
WQV VOLUME PROVIDED: 0.2 AC.-FT.
WQV ELEVATION=988.33
DISCHARGE RATE AT WQV: 1.87 CFS
BASIN 100 YR. HWL=990.44
TOP OF BERM=992.00
EOF=991.00

DISCHARGE RATES (CFS):

	PRE-DEVELOPMENT	POST-DEVELOPMENT
2 YEAR	15.19	1.77
10 YEAR	27.26	10.88
100 YEAR	52.57	34.59

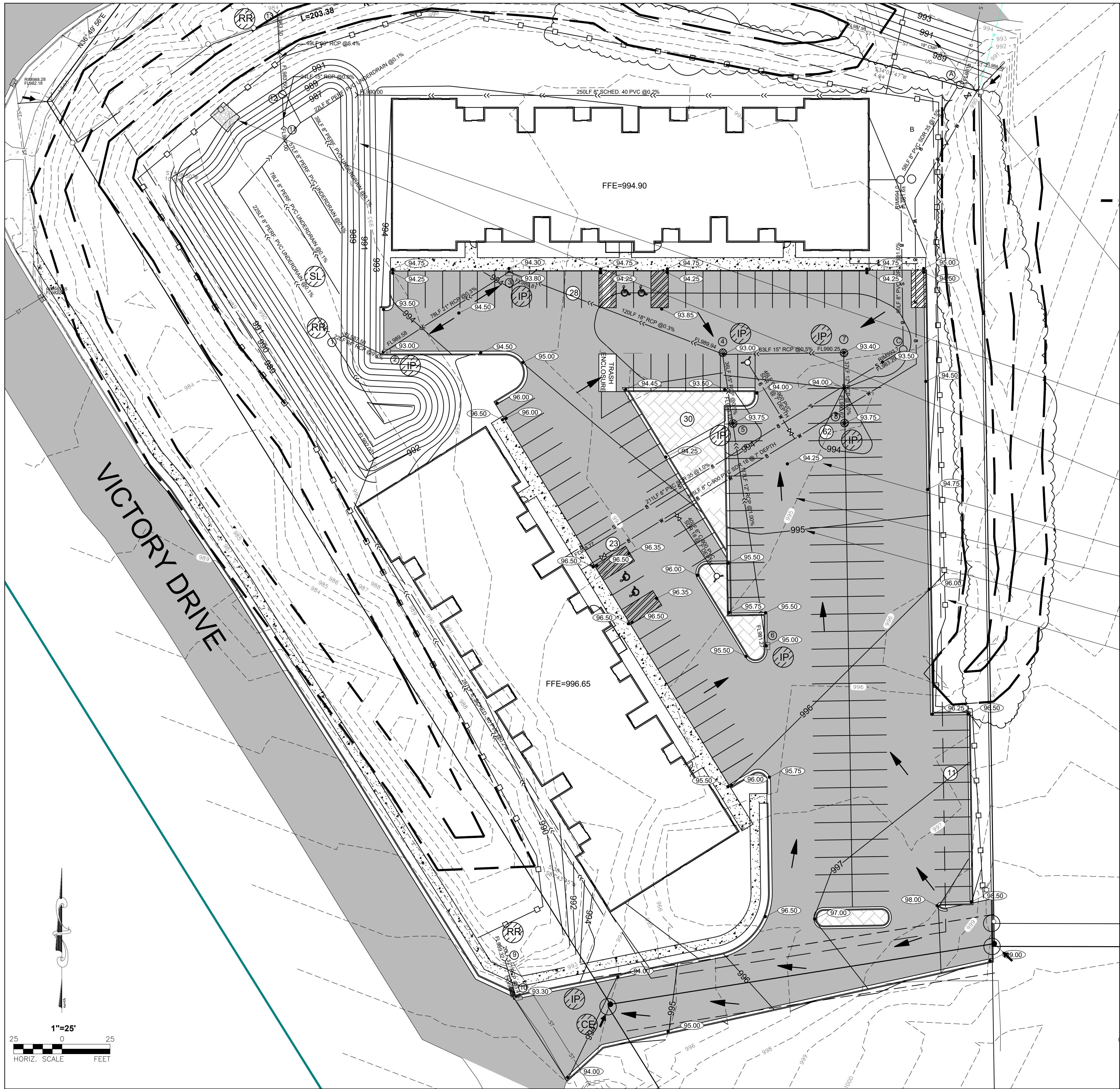
F&I 287LF 8" SCHED. 40 PVC @0.2%. CONNECT ROOF DRAIN DOWNSPOUTS TO TO PVC AND OUTLET INTO PROPOSED POND. F&I AIR BREAKS BETWEEN RISERS & DOWNSPOUTS TYP.




**JONES
HAUGH
SMITH**
 Engineers & Surveyors
 515 South Washington Ave. Albert Lea, MN 56737-4876
 507-373-4876

MANKATO APARTMENTS

Project:	
Revision:	
No.:	Date: 9/20/2025
Drawn: bji	Checked:
Project Manager:	
Project Status: CD	
Sheet Title:	
UTILITY PLAN	
Sheet No.:	
C4	



SWPPP LEGEND

- CE = ROCK CONSTRUCTION ENTRANCE
- IP = INLET PROTECTION-TYP. AT ALL DOWNGRAIENT INLETS
- = SILT FENCE-FOR PERIMETER CONTROL
- = WOOD CHIP BIO-ROLL/SILT SOCK
- = HYDRO-SEED TYPE LAWN OVER 6" MIN. BLACK DIRT TOPSOIL (TYP. TO ALL NON-PAVED DISTURBED AREAS WITHIN SITE)
- CW = DESIGNATED CONCRETE WASHOUT AREA
- RR = CL. III RIPRAP ENERGY DISSIPATION-PLACE WITHIN 24 HOURS
- = RUNOFF FLOW DIRECTION
- = DRAINAGE AREA BOUNDARY
- PG = DESIGNATED POLLUTANT GENERATING AREA
- SL = DESIGNATED STEEP SLOPE AREA (4:1 OR GREATER) F&I CATEGORY 3 BLANKET ON ALL 4:1 OR STEEPER SLOPES
- ONSITE SOILS=SILTY CLAY, KLOSSNER MUCK PER NRCS SOIL SURVEY

QUANTITY

- 1 EA
- 9 EA
- 1400 LF
- 1 ACRE
- 1 EA
- 25 CY
- 1 EA
- 1300 SY

REMOVE EXISTING ACCESS ROAD & CULVERT-GRADE TO MATCH EXISTING ROAD SLOPES

PROPOSED FILTRATION BASIN-SEE BASIN DETAILS FOR SAND MEDIA AND SEEDING REQUIREMENTS

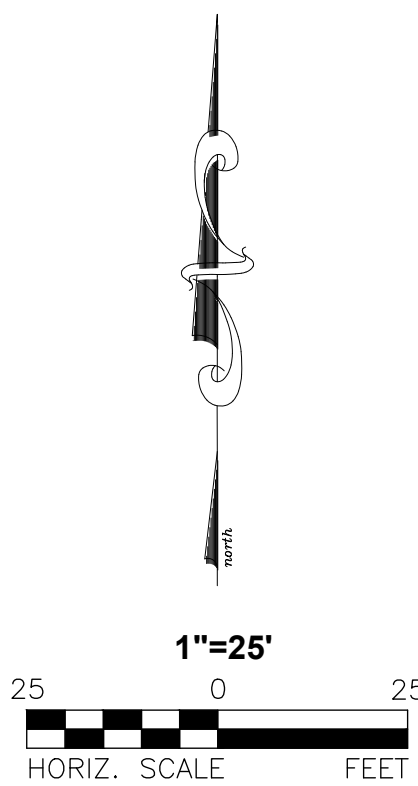
F&I EMERFENCY OVERFLOW (EOF) AT THIS LOCATION AT ELEV. 1192.00 -INSTALL 10'X12'X12" THICK RIPRAP OVERFLOW WITH CL. III RIPRAP OVER GEO-FABRIC

PROPOSED PAVEMENT/GUTTER ELEVATION (NGVD LESS 900) TYP.

EXISTING ELEVATION CONTOUR TYP.

PROPOSED ELEVATION CONTOUR TYP.

PROPOSED SILT FENCE TYP.



Consultant:
JONES HAUGH SMITH
Engineers & Surveyors
515 South Washington Ave. Albert Lea, MN 56007
Reg. No. 42744 Date: 9/20/25

Project:
MANKATO APARTMENTS

Revision:

No.:	Date:
Drawn: bjj	Checked:
Project Manager:	
Project Status: CD	
Sheet Title:	

GRADING PLAN

Sheet No.:
C5



LANDSCAPING NOTES

Sec. 10-1740 PERIMETER OFF STREET PARKING LOT
(1) SHADE TREE/ 50 LF OF FRONTAGE
(1) EVERGREEN TREE/ 25 LF OF FRONTAGE
80% OPAQUE ALONG ALL PARKING FRONTING STREET

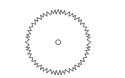
PLANTING BEDS SHALL BE MULCHED WITH BARK CHIPS,
ROCK MULCH, FEATHER ROCKS OR SIMILAR MATERIAL.

PERIMETER LANDSCAPING & TRANSITIONAL YARDS SHALL
CONSIST OF A COMBINATION OF GROUND COVER, SHADE
TREES OR EVERGREEN TREES, SHRUBS AND APPROPRIATE
SCREENING DEVICES SUCH AS DECORATIVE WALLS, FENCES OR
BERMS.

LANDSCAPING LEGEND



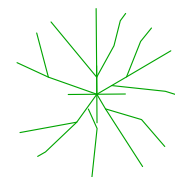
=DENOTES EVERGREEN TREE



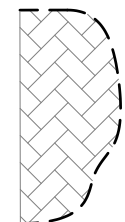
=DENOTES SHRUB



=DENOTES ARBOVITAE HEDGE (4' MIN. - 8' MAX)
(80% OPAQUE ALONG ALL PARKING FRONTING PREMIER DR.)



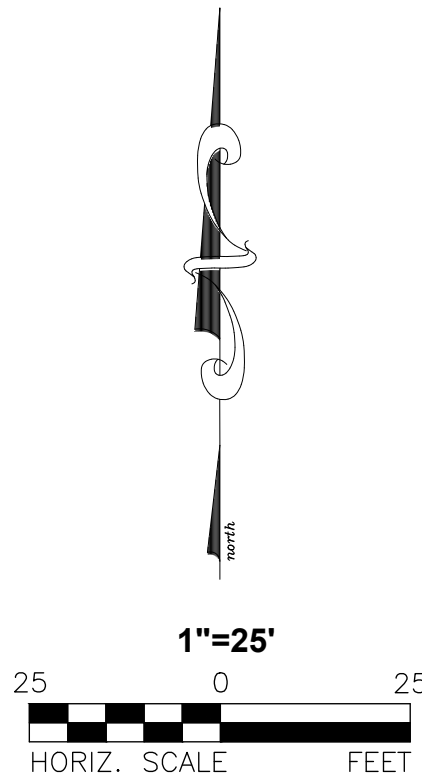
=DENOTES SHADE TREE



=DENOTES PLANTING BED W/ MULCH



=DENOTES EXISTING TREELINE



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly registered Professional Engineer under the laws of the State of Minnesota.
Brian J. Jones
Professional Engineer
Reg. No. 42744 Date: 9/20/25

Consultant:
JONES HAUGH SMITH
Engineers & Surveyors
515 South Washington Ave. Albert Lea, MN 56007
507-373-4876

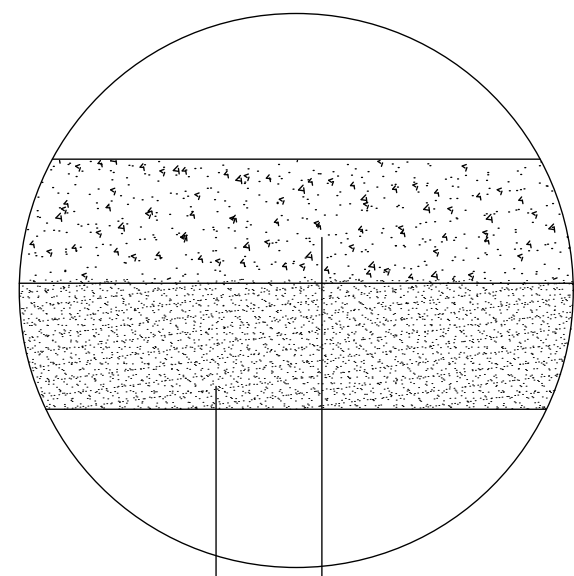
Project:
MANKATO APARTMENTS

Revision:

No.:	Date:
Drawn: bji	Checked:
Project Manager:	
Project Status: CD	
Sheet Title:	

LANDSCAPE PLAN

Sheet No.:
C6



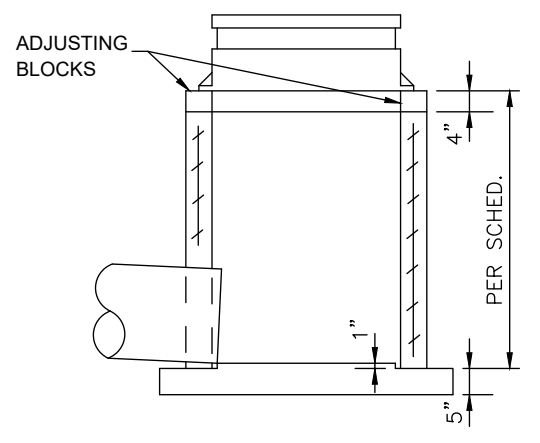
ALL JOINTS SHALL BE SEALED USING AN APPROVED MN/DOT HOT POUR ELASTIC SEALANT (3723) (INCIDENTAL)

7" CONCRETE PAVEMENT (MN/DOT 2301)

3" AGGREGATE BASE CLASS V (MN/DOT 2211)

ALL CONCRETE SHALL BE PORTLAND CEMENT CONCRETE PAVEMENT WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, A 4" MAXIMUM SLUMP AND 5% - 7% ENTRAINED AIR.

CONCRETE PAVEMENT SECTION



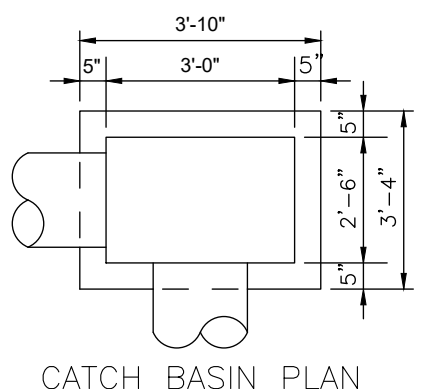
SECTIONAL VIEW
CATCH BASIN & BASE SLAB

NOTES:

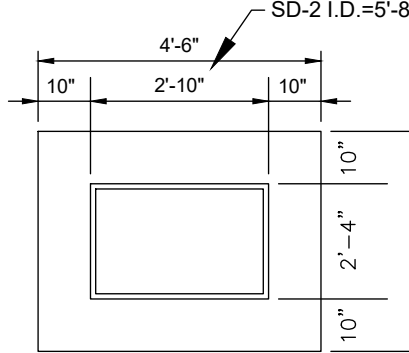
1. TO BE USED WITH NEENAH R3067 FRAMED COVER WITH 3" RAD. CURB BOX OR APPROVED EQUAL.
2. PIPE CUT-OUTS TO BE LOCATED WHERE REQUIRED.
3. ALTERNATE CAST-IN-PLACE BASE CAN BE USED.
4. MINIMUM REINFORCING SHALL BE WIRE FABRIC HAVING AN AREA OF NOT LESS THAN 0.12 SQ. IN. PER FOOT IN BOTH DIRECTIONS.

FOR USE WITH R3067 CASTING

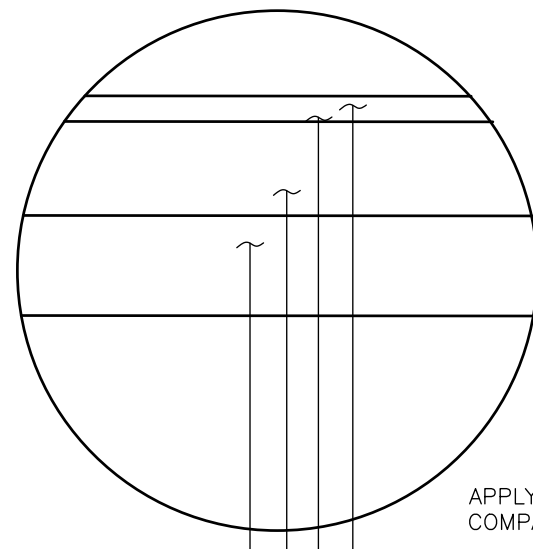
CATCH BASIN 2X3



CATCH BASIN PLAN



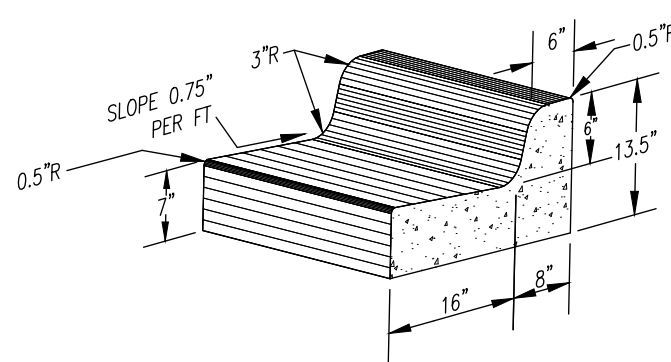
BASE SLAB PLAN



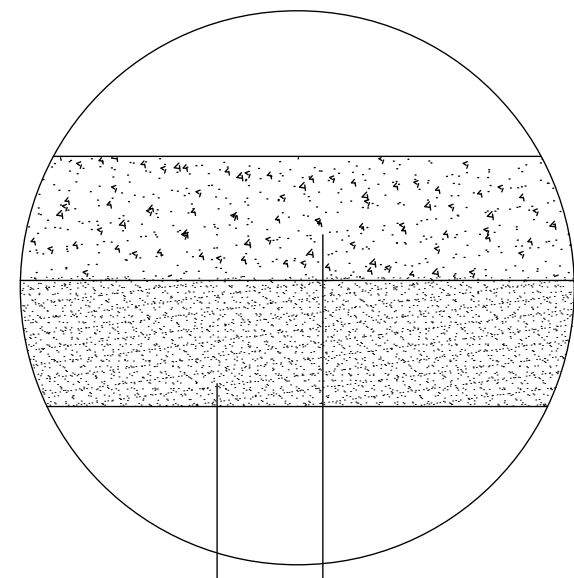
- APPLY BITUMINOUS TACK COAT BETWEEN LIFTS
COMPACT ALL GRANULAR MATERIAL TO 100% OF PROCTOR DENSITY.
- 2.0" TYPE SPWEA240B WEAR COURSE
 - 2.0" TYPE SPNWB230B BASE COURSE
 - 12" CLASS V AGGREGATE BASE (2211)
- SCARIFY THE UPPER 12" OF SUBGRADE IN "CUT" AREAS

ALL GRAVEL BASE SHALL EXTEND A MINIMUM OF 1' BEHIND ALL CURB

PARKING LOT PAVEMENT SECTION



CONCRETE CURB & GUTTER DESIGN B618



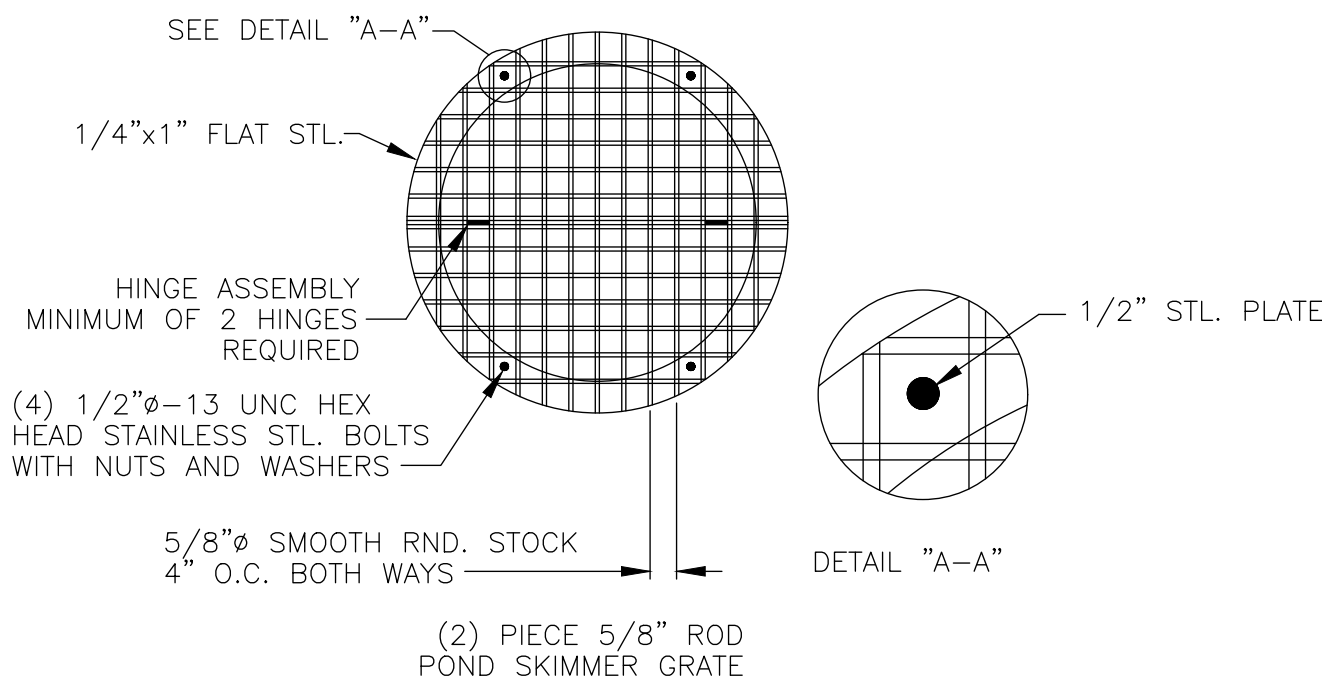
ALL JOINTS SHALL BE SEALED USING AN APPROVED MN/DOT HOT POUR ELASTIC SEALANT (3723) (INCIDENTAL)

4" CONCRETE PAVEMENT (MN/DOT 2301)

3" AGGREGATE BASE CLASS V (MN/DOT 2211)

ALL CONCRETE SHALL BE PORTLAND CEMENT CONCRETE PAVEMENT WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, A 4" MAXIMUM SLUMP AND 5% - 7% ENTRAINED AIR.

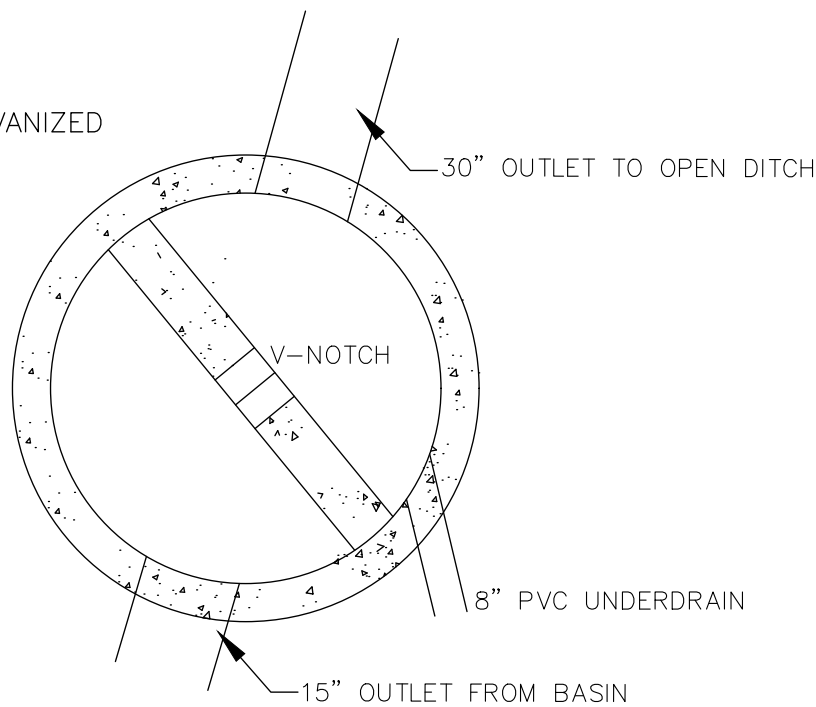
CONCRETE SIDEWALK SECTION



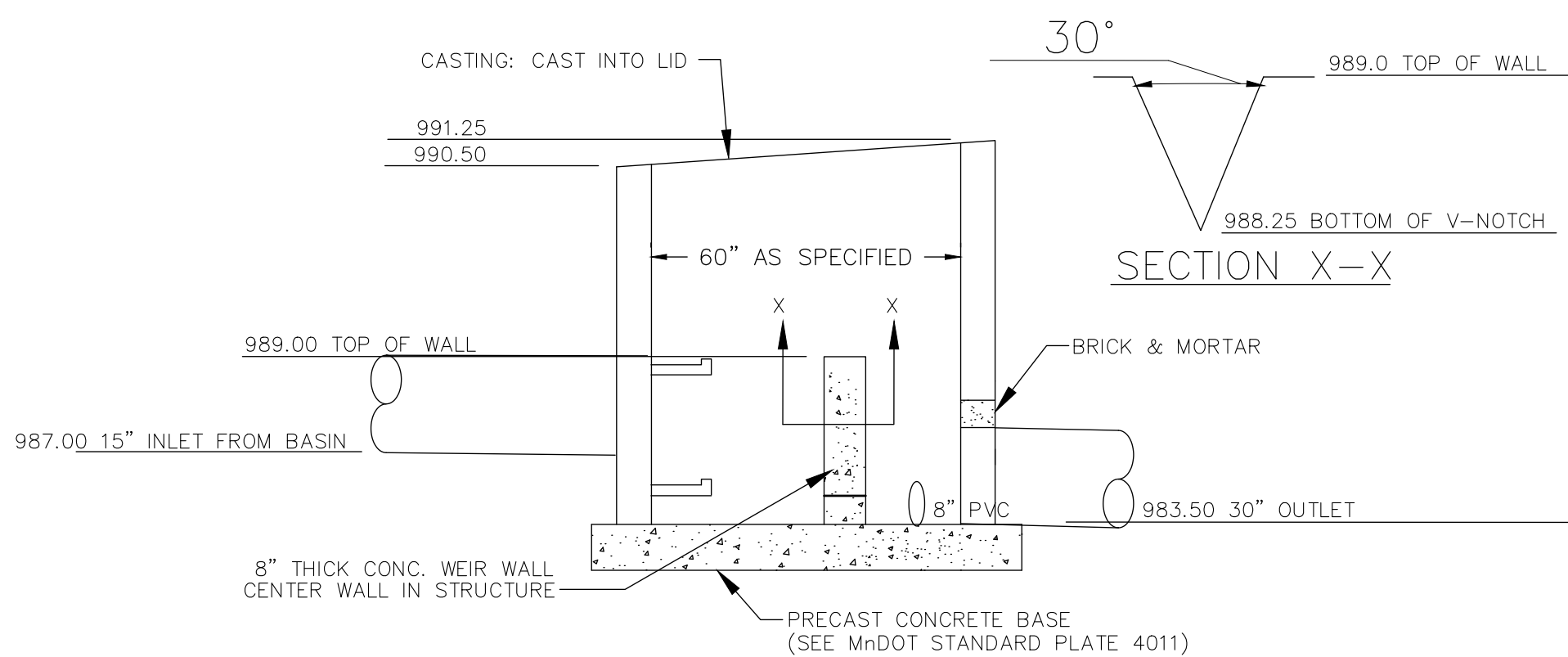
GRATE NOTES:

- 1) GRATE TO BE MADE IN TWO (2) PIECES
- 2) ALL METAL SHALL BE HOT-DIPPED GALVANIZED

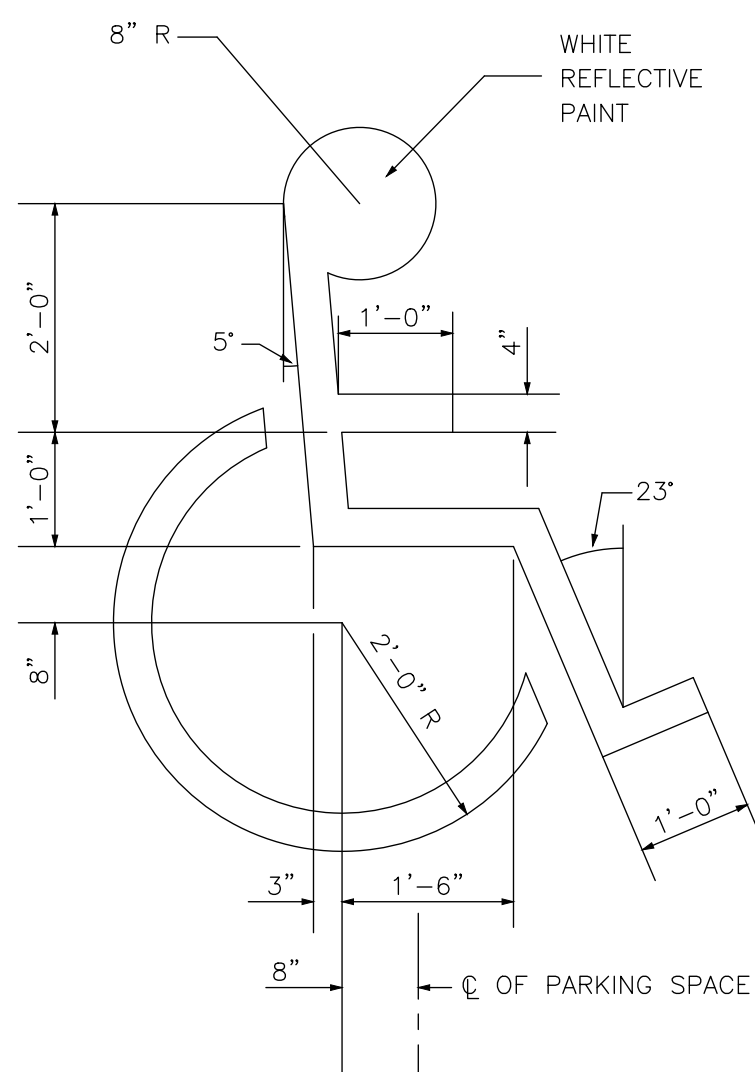
STRUCTURE 12 GRATE PLAN



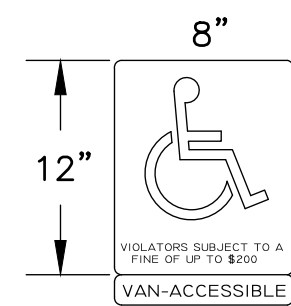
V-NOTCH WEIR OUTLET STRUCTURE PLAN



V-NOTCH WEIR OUTLET STRUCTURE 12 SECTION



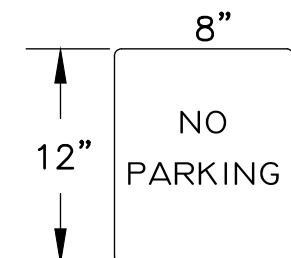
INTERNATIONAL HANDICAP SYMBOL



STEEL POST MOUNTED
(PERMANENT)

INSTALL AT ALL HANDICAP STALLS
60"-66" ABOVE FINISH GRADE
CENTERED AT THE HEAD OF THE STALL

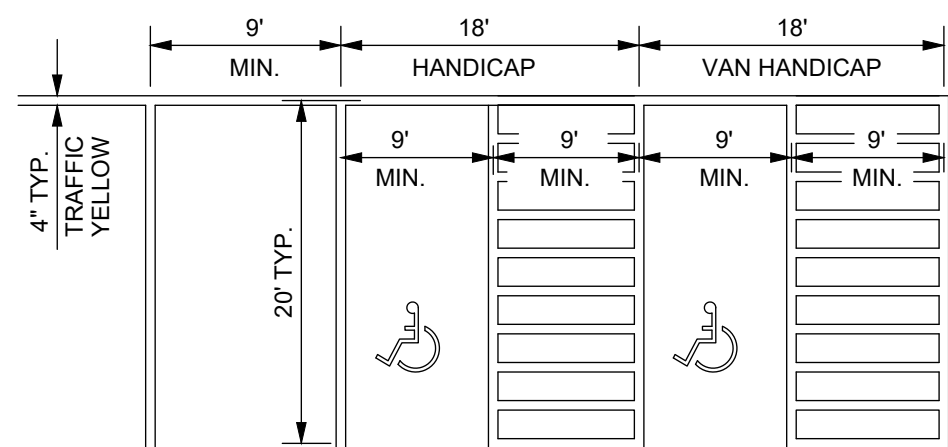
SIGN PANEL DETAIL



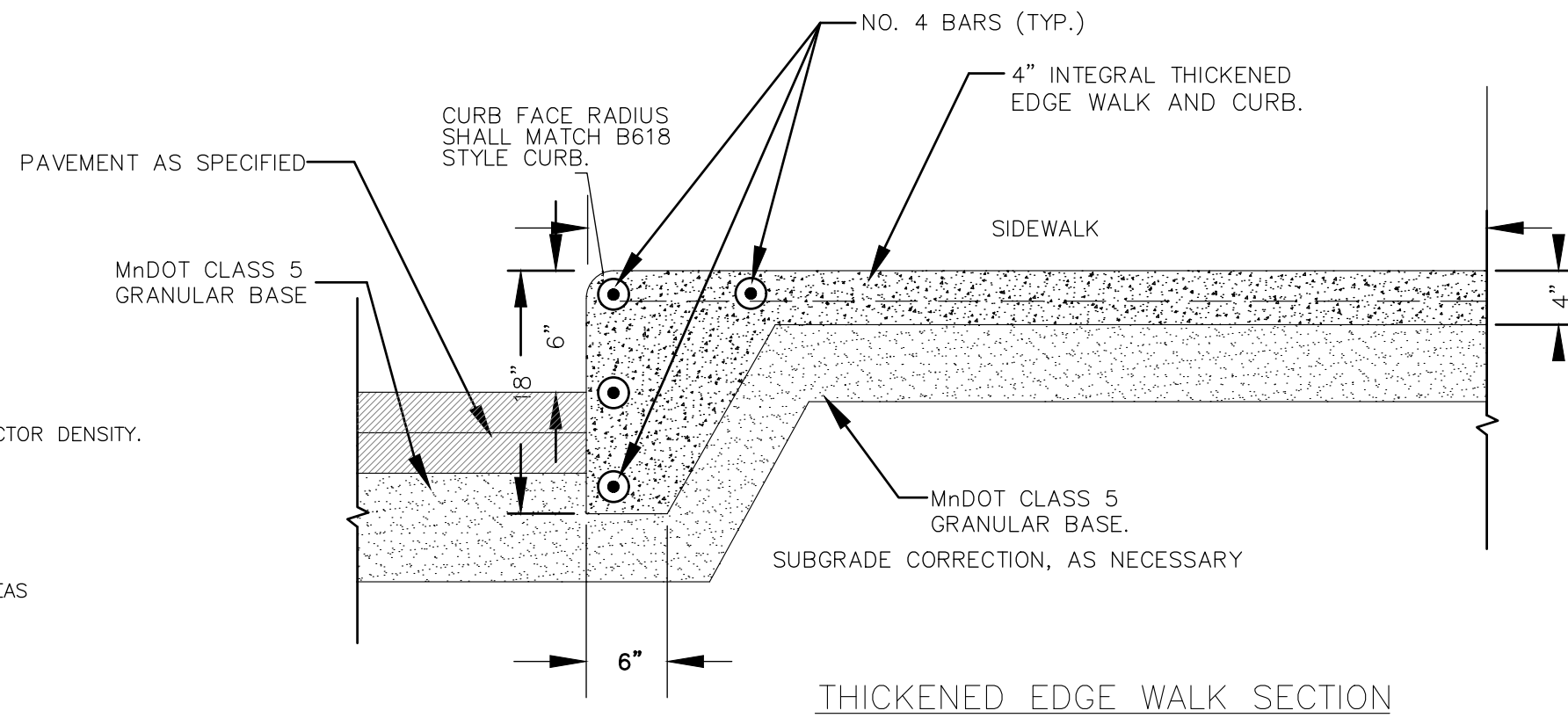
STEEL POST MOUNTED
(PERMANENT)

INSTALL AT ALL HANDICAP ACCESS
AISLES-60"-66" ABOVE FINISH GRADE
CENTERED AT THE HEAD OF THE STALL

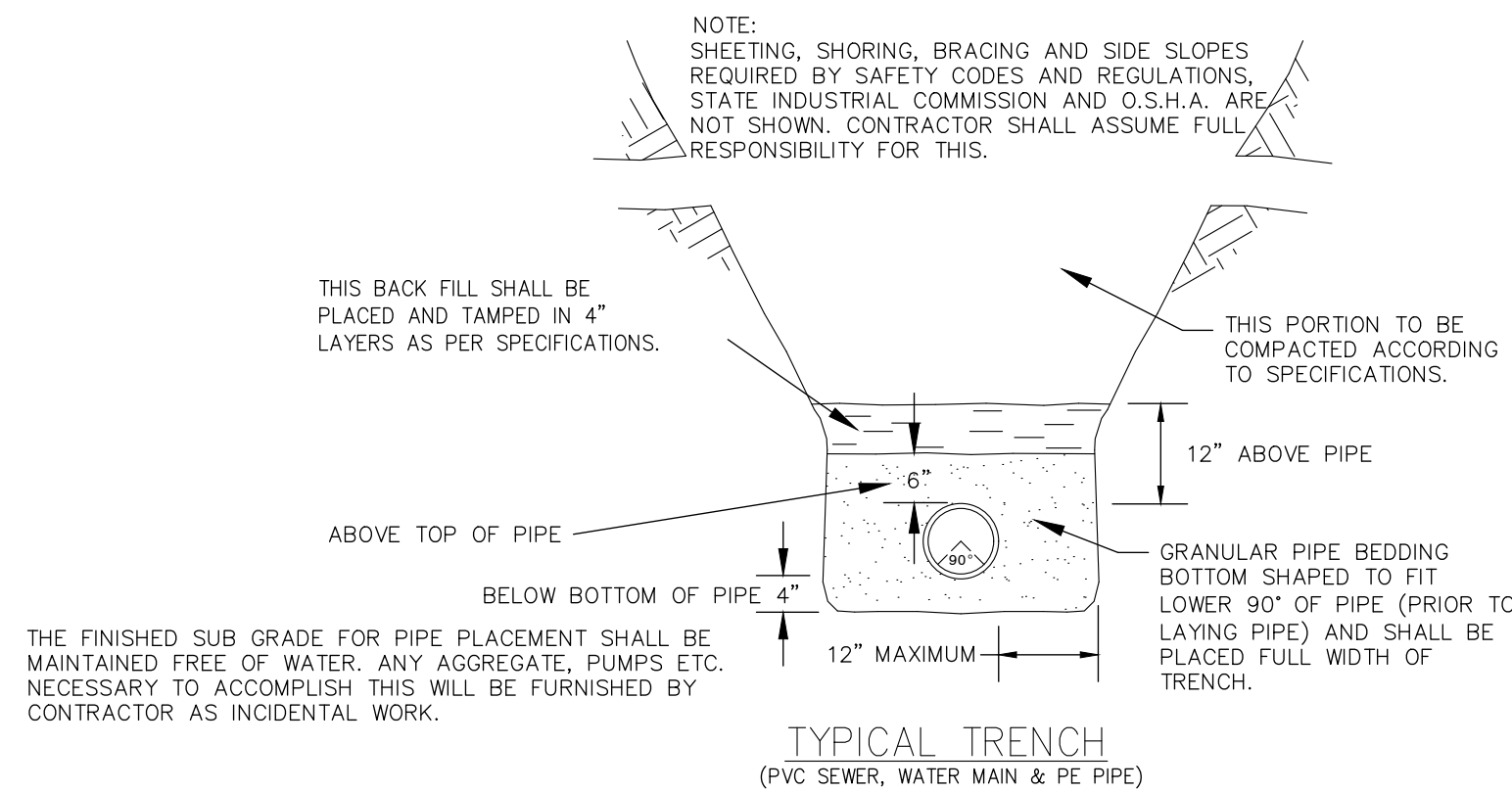
SIGN PANEL DETAIL



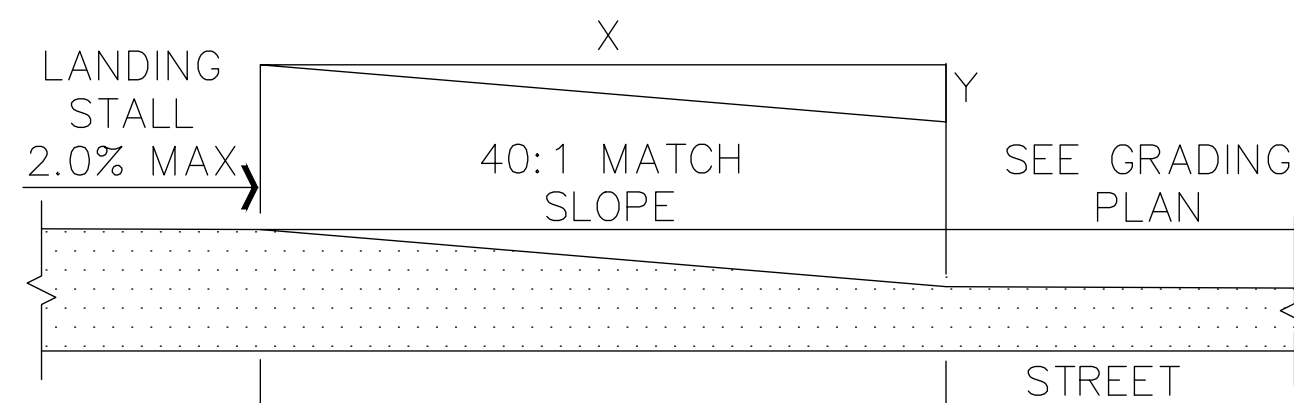
90° STALL



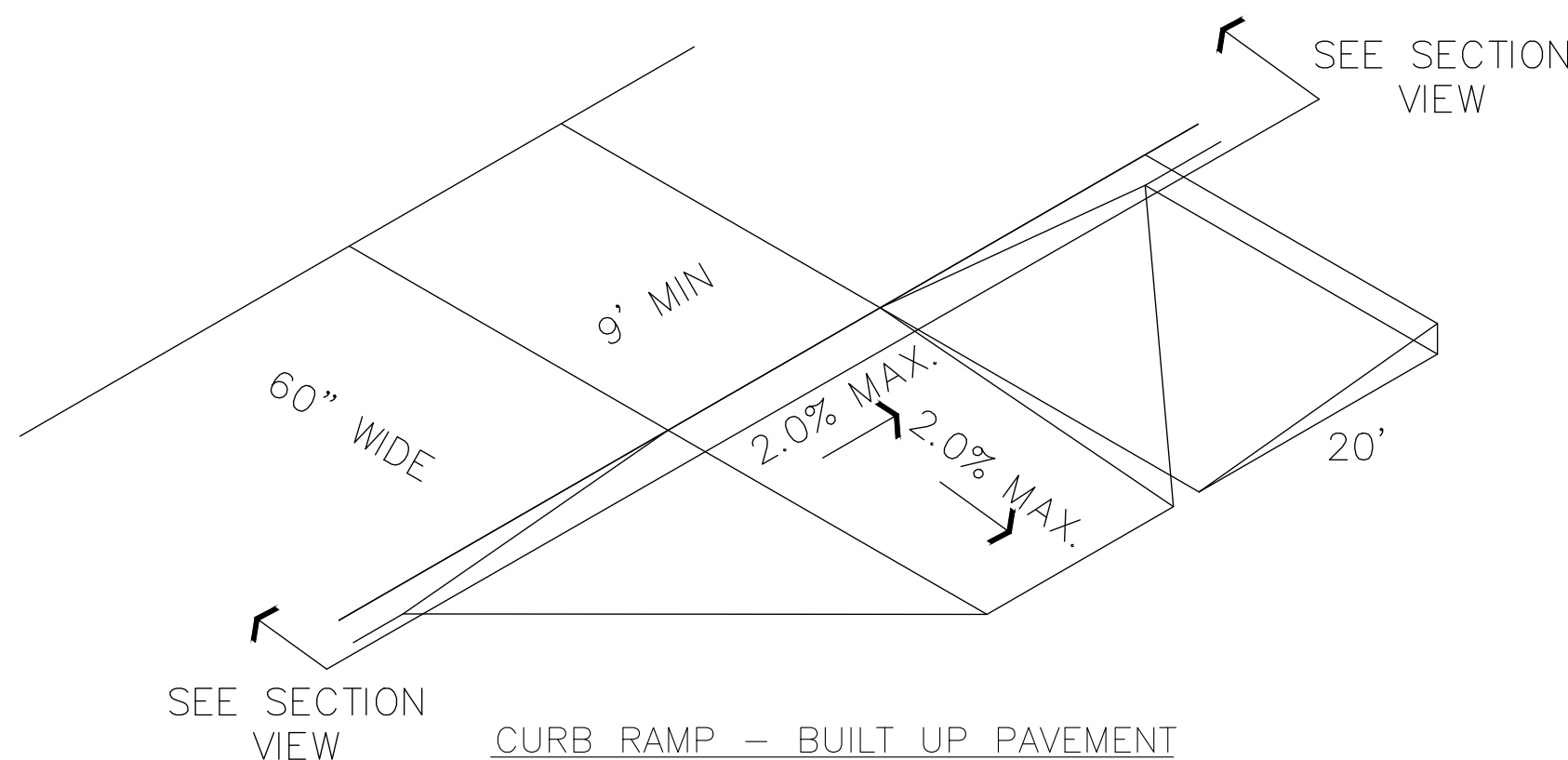
THICKENED EDGE WALK SECTION



TYPICAL TRENCH
(PVC SEWER, WATER MAIN & PE PIPE)



CROSS SECTION



SEE SECTION VIEW
CURB RAMP - BUILT UP PAVEMENT

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer in the State of Minnesota.

Brian J. Johnson
Engineer - Surveyors
515 South Washington Ave. Albert Lea, MN 55737-4876
Reg. No. 42144
Date: 9/20/25

JONES HAUGH SMITH
Engineers + Surveyors
515 South Washington Ave. Albert Lea, MN 55737-4876

Consultant

MANKATO APARTMENTS

Project

Revision:

No. Date: 9/20/2025

Drawn: bjj

Checked:

Project Manager:

Project Status: CD

Sheet Title:

DETAILS

Sheet No.:

C7

SWPPP NARRATIVE

CONSTRUCTION ACTIVITY INFORMATION

PROJECT NAME: MANKATO APARTMENTS
FACILITY IMPROVEMENT PROJECT

PROJECT LOCATION: MANKATO, MN

PROJECT SIZE: PARCEL SIZE: 4.25 DISTURBED ACRES

PROJECT TYPE: RESIDENTIAL BUILDING CONSTRUCTION

MAJOR SOIL TYPE: SILTY LOAM, KLOSSNER MUCK

CUMULATIVE IMPERVIOUS SURFACE:
EXISTING - 1.26 ACRES
POST CONSTRUCTION - 2.5 ACRES

DIRECT DISCHARGE FROM IMPERVIOUS SURFACE: 0.2 ACRES

RECEIVING WATERS:
CITY STORM SEWER

DATES OF CONSTRUCTION: 2025

OWNER: GROWTH HOLDINGS LLC

UNDERGROUND UTILITY/GRADING CONTRACTOR:

TO BE DETERMINED

PARTY RESPONSIBLE FOR LONG TERM O&M:

OWNER: GROWTH HOLDINGS LLC

GENERAL SITE INFORMATION

IMMEDIATELY FOLLOWING GRADING OF SLOPES OF 3:1 OR GREATER, SLOPES MUST BE STABILIZED WITH WOOD FIBER BLANKET (OR OTHER METHOD APPROVED BY THE ENGINEER) OVER APPROVED SEED MIXTURE AND A MINIMUM OF 4" OF TOPSOIL.

ALL EROSION CONTROL MEASURES SHALL REMAIN IN PLACE AND BE MAINTAINED IN GOOD CONDITION UNTIL THE SITE HAS BEEN RE-VEGETATED. AT WHICH TIME THE CONTRACTOR MAY REMOVE NECESSARY SILT FENCING TO CONSTRUCT ROADWAYS WHILE MAINTAINING ADEQUATE EROSION CONTROL IN ADJACENT AREAS. SUFFICIENT TOPSOIL SHALL BE STOCKPILED OR IMPORTED TO ALLOW FOR THE REPLACEMENT OF A MINIMUM OF 4" OF TOPSOIL FOR DISTURBED AREAS TO BE RE-VEGETATED.

CONTRACTOR SHALL SCHEDULE SITE GRADING, UTILITY INSTALLATION, AND ROADWAY CONSTRUCTION SO THAT THE GENERAL SITE CAN BE MULCHED AND RE-SEEDDED SOON AFTER DISTURBANCE. DISTURBED AREAS SHALL BE SEEDDED AND MULCHED OR SODDED WITHIN: 7 DAYS

INSPECT SILT FENCES AND BALE CHECKS AFTER EACH RAIN EVENT AND DAILY DURING A PROLONGED RAINFALL. IMMEDIATELY REPAIR FAILED OR FAILING MEASURES.

REMOVE SEDIMENT DEPOSITS FROM SILT FENCE AND BALE CHECKS WHEN SEDIMENT REACHES APPROXIMATELY 1/3 THE HEIGHT OF THE BARRIER.

BARRIERS WILL BE REPLACED WHEN THEY DECOMPOSE OR BECOME INEFFECTIVE BEFORE THE BARRIERS ARE NO LONGER NECESSARY. ANY SEDIMENT REMAINING IN-PLACE AFTER THE BARRIERS ARE NO LONGER NECESSARY WILL BE DRESSED TO CONFORM TO EXISTING GRADE, AND PREPARED AND SEEDDED WITH THE APPROPRIATE SEED MIX, AS DIRECTED BY THE ENGINEER.

IN THOSE AREAS WHERE WOOD FIBER BLANKET OR OTHER SLOPE STABILIZATION METHODS HAVE FAILED, THE SLOPE SHALL BE RE-ESTABLISHED, SEED AND TOPSOIL REPLACED, AND ADDITIONAL SLOPE TREATMENT INSTALLED.

BARRIERS WILL BE REMOVED WHEN FINAL STABILIZATION OF THE SLOPES HAS BEEN COMPLETED AS DETERMINED BY THE ENGINEER.

NO STORMWATER MITIGATION MEASURES WERE REQUIRED AS A PART OF ENVIRONMENTAL, ARCHAEOLOGICAL OR OTHER REQUIRED LOCAL, STATE, OR FEDERAL REVIEW OF THIS PROJECT.

THIS PROJECT IS NOT LOCATED IN A KARST AREA NECESSITATING MEASURES TO PROTECT DRINKING WATER SUPPLY.

THIS PROJECT DOES DISCHARGE WATER TO AN IMPAIRED WATER.

PROVIDE SILT FENCE AROUND ALL SOIL STOCKPILES

SWPPP IMPLEMENTATION CHAIN OF RESPONSIBILITY

EACH CONTRACTOR ON-SITE WILL DESIGNATE AN EMPLOYEE AS ITS PROJECT SWPPP OFFICER. A LIST OF THESE OFFICERS WITH CONTACT INFORMATION WILL BE AVAILABLE ON-SITE. IT WILL BE SOLEY THE SWPPP OFFICERS' RESPONSIBILITY TO ENSURE THAT ALL ON-SITE ACTIVITIES PERFORMED BY ITS COMPANY COMPLY WITH THE SWPPP. THE GENERAL CONTRACTOR'S SWPPP OFFICER WILL HAVE AUTHORITY OVER ALL SUB-CONTRACTOR'S SWPPP OFFICERS FOR WORK PERTAINING TO COMPLIANCE.

SHOULD A SWPPP OFFICER FAIL TO ENSURE COMPLIANCE, THAT OFFICER'S FOREMAN OR DIRECT SUPERVISOR WILL ASSUME ALL RESPONSIBILITY.

SHOULD A SUB-CONTRACTOR FAIL TO COMPLY WITH THE SWPPP, THE GENERAL CONTRACTOR WILL ASSUME ALL RESPONSIBILITY FOR COMPLIANCE.

SHOULD THE GENERAL CONTRACTOR FAIL TO COMPLY WITH THE SWPPP, THE OWNER WILL ASSUME ALL RESPONSIBILITY FOR COMPLIANCE.

EROSION PREVENTION PRACTICES

CONTRACTOR SHALL PHASE CONSTRUCTION, MAINTAIN VEGETATIVE BUFFER STRIPS, AND PROVIDE HORIZONTAL SLOPE STAKING IN ORDER TO MINIMIZE EROSION.

SILT FENCE SHALL BE INSTALLED BEFORE WORK BEGINS. SILT FENCE LIMITS SHALL COINCIDE WITH DOWNGRADE GRADING LIMITS UNLESS OTHERWISE NOTED.

THIS PROJECT DOES NOT HAVE EXPOSED POSITIVE SLOPES WITHIN 200' OF SURFACE WATER.

THE WETTED PERIMETER OF DRAINAGE SWALES WILL BE STABILIZED WITH WOOD FIBER BLANKETS AND/OR DITCH CHECKS WITHIN 200' OF THE SITE BOUNDARY LINE OR WETTED PERIMETER OF DITCHES WITHIN 24 HOURS.

TEMPORARY OR PERMANENT DITCHES THAT ARE BEING USED AS A SEDIMENT CONTAINMENT SYSTEM DURING CONSTRUCTION MUST BE STABILIZED WITHIN 24 HOURS AFTER NON-USE

PIPE OUTLETS MUST HAVE ENERGY DISSIPATION IN PLACE WITHIN 24 HOURS OF INSTALLATION. MULCH, HYDROMULCH, TACKLING, POLYACRYLAMIDE EROSION PREVENT PRACTICES CANNOT BE USED WITHIN THE NORMAL WETTED PERIMETER OF OF DRAINAGE DITCHES OR SWALE SECTIONS WITH A CONTINUOUS SLOPE GREATER THAN 2%

SEDIMENT CONTROL PRACTICES

CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN SEDIMENT CONTROLS FOR TEMPORARY AND PERMANENT DRAINAGE BASINS AND DRAINAGE DITCHES THAT ARE A PART OF THIS DESIGN

CHECK DAMS AND/OR WOOD FIBER BLANKETS TO ENSURE SHEET FLOW AND PREVENT RILLS FOR SLOPE LENGTHS GREATER THAN 75' WITH A SLOPE OF 3:1 OR GREATER

SILT FENCE AT ALL DOWN GRADIENT PERIMETERS INSTALLED PRIOR TO ALL LAND DISTURBING ACTIVITIES

INLET PROTECTION AT ALL DRAIN INLETS

SILT FENCING AROUND TEMPORARY SOIL STOCKPILES

ROCK CONSTRUCTION SITE ENTRANCES

STREET SWEEPING OF TRACKED SEDIMENT ONTO PAVED SURFACES

SEDIMENT CONTROL PRACTICES MUST BE IN PLACE AT ALL DOWN GRADIENT PERIMETERS AND UPGRADIENT OF ANY BUFFER ZONES

SEDIMENT CONTROL PRACTICES ARE ESTABLISHED AT THE BASE OF STOCKPILES ON DOWN GRADIENT PERIMETER

STOCKPILES ARE LOCATED OUTSIDE OF NATURAL BUFFERS OR SURFACE WATER, INCLUDING STORM WATER CONVEYANCES UNLESS THERE IS A BYPASS

THIS PROJECT DOES NOT INCLUDE DEWATERING OR BASIN DRAINING. PERMANENT SEDIMENT BASINS WILL BE USED AS TEMPORARY BASINS DURING CONSTRUCTION

ADDITIONAL BMP'S FOR SPECIAL WATERS

THIS PROJECT DOES NOT DISCHARGE TO SPECIAL WATERS OR HAVE SIGNIFICANT IMPACTS TO WETLANDS

INSPECTIONS AND MAINTAINANCE

CONTRACTOR SHALL INSPECT AND MAINTAIN MEASURES AT MINIMUM ONCE EVERY (7) DAYS DURING ACTIVE CONSTRUCTION, AND WITHIN 24 HOURS AFTER A RAINFALL EVENT OF 0.5" IN 24 HOURS.

INSPECTIONS WILL INCLUDE STABILIZED AREAS, EROSION PREVENTION AND SEDIMENT CONTROLS, AND INFILTRATION AREAS.

REFER TO MPCA'S COMPLIANCE GUIDE FOR EROSION AND SEDIMENT CONTROL FOR INSPECTION LOG REQUIREMENTS.

MAINTENANCE RECORDS SHOULD INCLUDE: DATES & TIMES IF INSPECTION, NAME OF PERSON CONDUCTING THE INSPECTION, FINDINGS & LOCATIONS OF CORRECTIVE ACTIONS, PARTY COMPLETING MAINTENANCE ACTIVITIES, DATES & AMOUNTS OF RAINFALL EVENTS GREATER THAN 0.5" RAINFALL AMOUNTS ARE TO BE RECORDED WITH RAIN GAUGE ON SITE OR WEATHER STATION WITHIN 1 MILE OF SITE. ANY DISCHARGES OBSERVED SHOULD BE DESCRIBED & PHOTOGRAPHED.

RECORDS RETENTION

CONTRACTOR SHALL MAINTAIN RECORDS OF THE SEDIMENT RETENTION PROCEDURES ON-SITE. RECORDS WILL INCLUDE:

COPY OF THE SWPPP AND ALL REVISIONS
INSPECTION AND MAINTAINANCE RECORDS
PERMANENT OPERATION AND MAINTAINANCE AGREEMENTS
CALCULATIONS FOR THE DESIGN OF TEMPORARY AND PERMANENT STORMWATER MANAGEMENT SYSTEMS
COPIES OF THE SWPPP MUST BE RETAINED ON SITE BY THE PERMITTEE

POLLUTION PREVENTION MEASURES

SOLID WASTE: COLLECTED SEDIMENT, ASPHALT AND CONCRETE MILLINGS, FLOATING DEBRIS, PAPER, PLASTIC, FABRIC, CONSTRUCTION AND DEMOLITION DEBRIS AND OTHER WASTES MUST BE DISPOSED OF PROPERLY AND MUST COMPLY WITH MPCA DISPOSAL REQUIREMENTS.

CONCRETE AND OTHER WASHOUTS: PERFORM ALL CONCRETE TRUCK WASHOUTS IN PROPER CONTAINMENT FACILITIES. SOLID AND LIQUID WASHOUT WASTE FROM OTHER MATERIALS (STUCCO, PAINT, FORM RELEASE OILS CURING COMPOUNDS ETC.) WILL BE DISPOSED OF IN A PROPERLY DESIGNATED LANDFILL.

PERFORM ALL WASHOUTS INCLUDING HANDTOOLS IN A LEAKPROOF CONTAINMENT FACILITY OR IMPERMEABLE LINER THAT PREVENTS RUNOFF ONTO ADJACENT SOILS. DEBRIS/SEDIMENT WILL NOT CONTACT THE GROUND SURFACE.

A SIGNE REQUIRING USE OF PROPER WASHOUT FACILITIES WILL BE INSTALLED ADJACENT TO SAID FACILITIES.

HAZARDOUS MATERIALS: OIL, GASOLINE, PAINT AND ANY HAZARDOUS SUBSTANCES MUST BE PROPERLY STORED, INCLUDING SECONDARY CONTAINMENT TO PREVENT SPILLS, LEAKS, OR OTHER DISCHARGE. RESTRICTED ACCESS TO STORAGE AREAS MUST BE PROVIDED TO PREVENT VANDALISM. STORAGE AND DISPOSAL OF HAZARDOUS WASTE MUST BE IN COMPLIANCE THE MPCA REGULATIONS.

EXTERNAL WASHING OF TRUCKS AND OTHER CONSTRUCTION VEHICLES MUST BE LIMITED TO A DEFINED AREA OF THE SITE. RUNOFF MUST BE CONTAINED OF AND WASTE PROPERLY DISPOSED OF. NO ENGINE DEGREASING IS ALLOWED ON SITE.

SWPPP AMENDMENTS

AMENDMENTS MADE IN THE FIELD TO THE SWPPP SHOULD BE UPDATED ON THE SWPPP. REFER TO PROCEDURES OUTLINED IN SECTION 6.1 OF THE PERMIT.

SWPPP IMPLEMENTATION CHAIN OF RESPOSIBILITY

THE GENERAL CONTRACTOR SHALL PROVIDE A TRAINED, CERTIFIED, KNOWLEDGEABLE PERSON WHO SHALL SERVE AS THE SITE'S EROSION CONTROL INSPECTOR. THIS PERSON SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL BMP'S, AND SHALL MAINTAIN THE INSPECTION LOG AT THE PROJECT SITE.

EACH SUBCONTRACTOR ON-SITE WILL DESIGNATE AN EMPLOYEE AS ITS PROJECT SWPPP OFFICER. A LIST OF THESE OFFICERS WITH CONTACT INFORMATION WILL BE AVAILABLE ON-SITE. IT WILL BE SOLEY THE SWPPP OFFICERS' RESPONSIBILITY TO ENSURE THAT ALL ON-SITE ACTIVITIES PERFORMED BY ITS COMPANY COMPLY WITH THE SWPPP. THE GENERAL CONTRACTOR'S SWPPP INSPECTOR WILL HAVE AUTHORITY OVER ALL SUBCONTRACTOR'S SWPPP OFFICERS FOR WORK PERTAINING TO COMPLIANCE.

SHOULD A SWPPP OFFICER FAIL TO ENSURE COMPLIANCE, THAT OFFICER'S FOREMAN OR DIRECT SUPERVISOR WILL ASSUME ALL RESPONSIBILITY.

SHOULD A SUBCONTRACTOR FAIL TO COMPLY WITH THE SWPPP, THE GENERAL CONTRACTOR WILL ASSUME ALL RESPONSIBILITY FOR COMPLIANCE.

SHOULD THE GENERAL CONTRACTOR FAIL TO COMPLY WITH THE SWPPP, THE OWNER WILL ASSUME ALL RESPONSIBILITY FOR COMPLIANCE.

CHANGES IN PERMIT AND NOTICE OF TERMINATION

THE CONTRACTOR WILL BE A CO-PERMITTEE DURING THE CONSTRUCTION OF THE PROJECT. AFTER GRAVEL SURFACING OF THE PROJECT HAS BEEN COMPLETED, AND 70% PERMANENT VEGETATIVE COVER HAS BEEN ESTABLISHED OVER THE PVIOUS AREAS OF THE SITE, AND THE WARRANTY PERIOD HAS ELAPSED, THE CONTRACTOR MAY SUBMIT A MPCA (NOT)F ORM TO THE OWNER FOR SIGNATURE AND SUBMITTAL TO THE MPCA.

THE OWNER WILL SUBMIT THE NOTICE OF TERMINATION (NOT) AFTER ONE FINAL ESTABLISHMENT OF ALL PVIOUS SURFACES ACCORDING TO THE MPCA GENERAL PERMIT REQUIREMENTS

NOTIFICATION OF THE MPCA IN CASE OF POLLUTION

IT IS THE DUTY OF THE CONTRACTOR TO NOTIFY THE MPCA IMMEDIATELY OF ANY DISCHARGE, ACCIDENTAL OR OTHERWISE, OF ANY SUBSTANCE OR MATERIAL UNDER HIS CONTROL WHICH, IF NOT RECOVERED, MAY CAUSE POLLUTION OF WATERS OF THE STATE, AND THE CONTRACTOR SHALL RECOVER AS RAPIDLY AND THOROUGHLY AS POSSIBLE SUCH SUBSTANCE OR MATERIAL AND TAKE IMMEDIATELY SUCH OTHER ACTION AS MAY BE REASONABLY POSSIBLE TO MINIMIZE OR ABATE POLLUTION OF WATERS OF THE STATE CAUSED THEREBY.

SEDIMENT LEAVING THE CONSTRUCTION SITE AND ENTERING A PUBLIC WATER IS CAUSE FOR NOTIFICATION.

MPCA DUTY OFFICER: 800-422-0798

QUALIFIED SWPPP PERSONNEL INFORMATION

SWPPP DESIGNER: BRIAN J. JOHNSON, PE
JONES HAUGH & SMITH, INC.
515 SOUTH WASHINGTON AVE
ALBERT LEA, MN 56007
(507) 373-4876

SWPPP INSTALLER:

NAME: _____

FIRM: _____

ADDRESS: _____

PHONE: _____

SWPPP INSPECTOR:

NAME: _____

FIRM: _____

ADDRESS: _____

PHONE: _____

GRADING CONTRACTOR:

NAME: _____

FIRM: BCM CONTRACTING

ADDRESS: _____

PHONE: _____

OTHER LAND DISTURBING CONTRACTOR:

NAME: _____

FIRM: _____

ADDRESS: _____

PHONE: _____

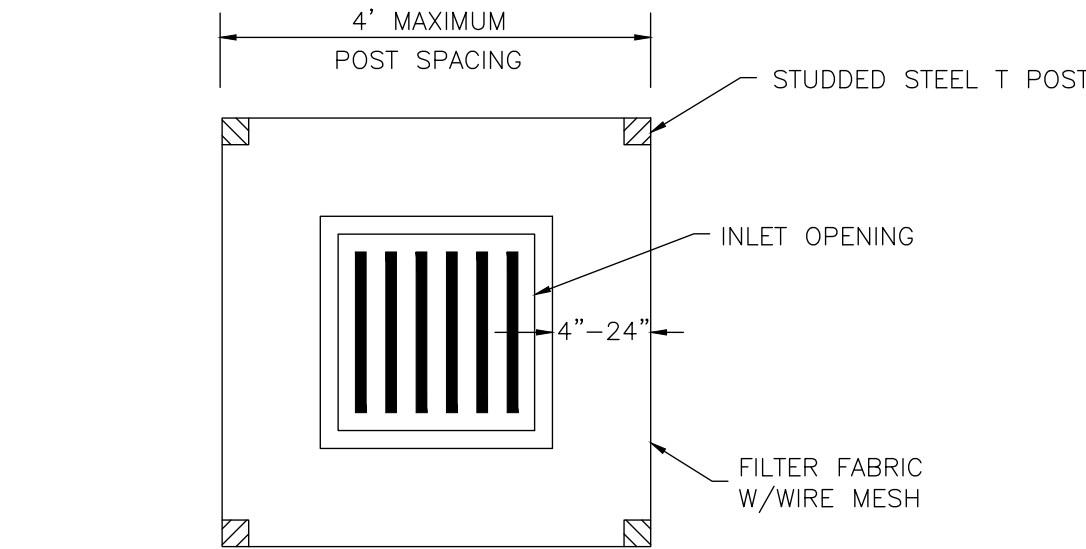
OTHER LAND DISTURBING CONTRACTOR:

NAME: _____

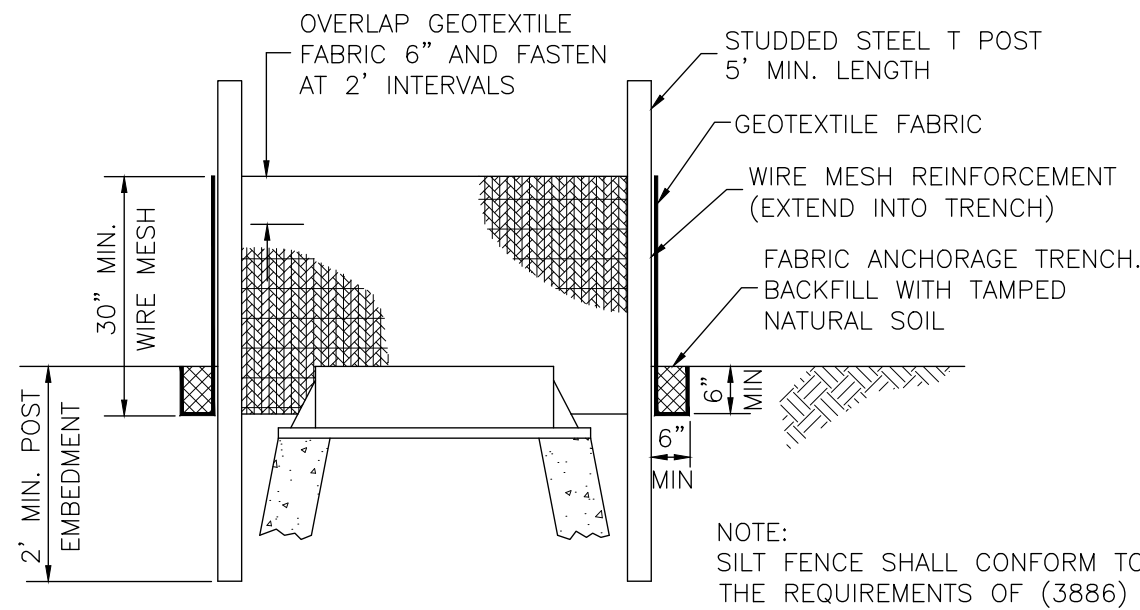
FIRM: _____

ADDRESS: _____

PHONE: _____

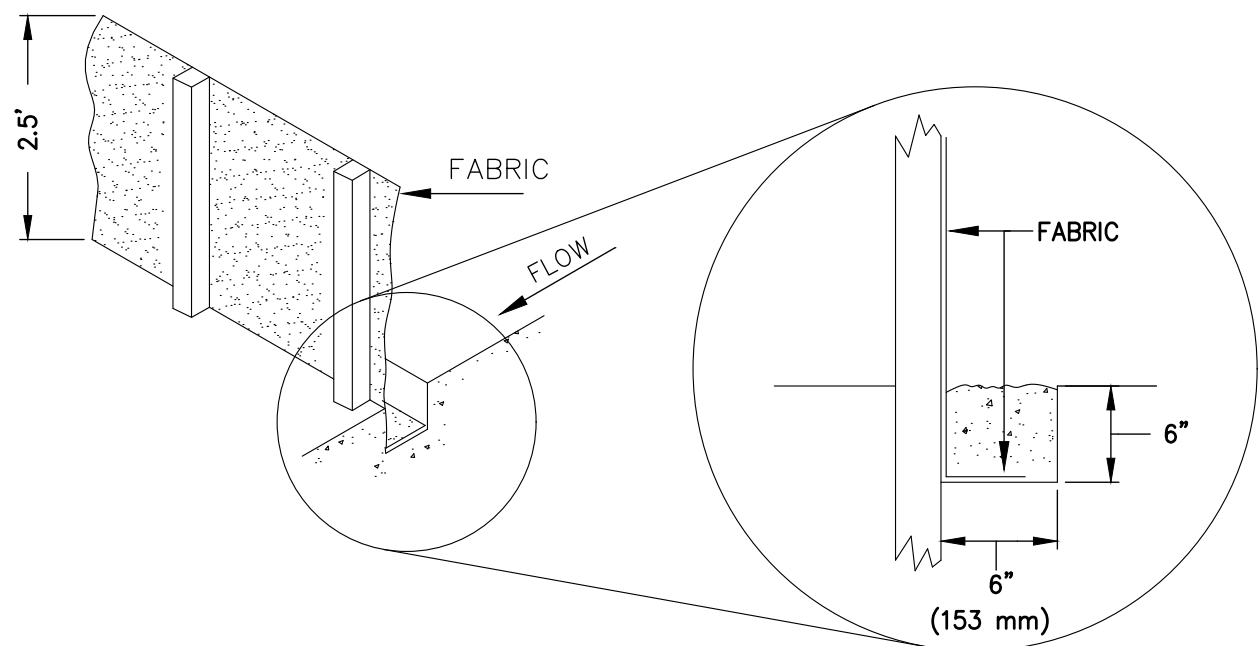


PLAN VIEW



SECTIONAL VIEW

INLET PROTECTION – HEAVY DUTY

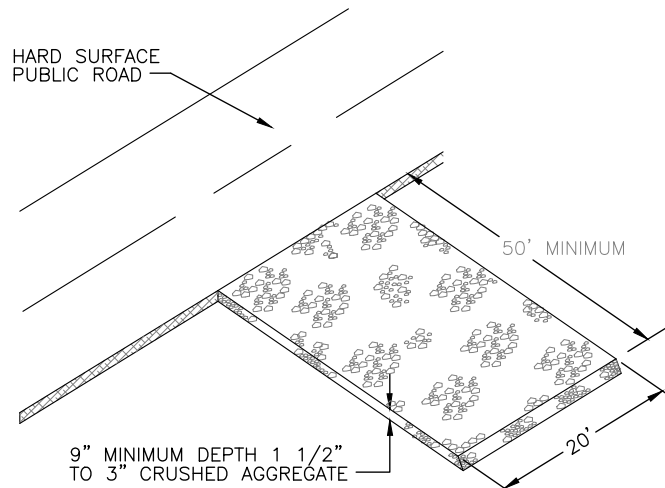


NOTES:

- PLACE BOTTOM EDGE OF FENCE INTO 6" (153 mm) DEEP
- POSTS SHALL BE:
 - 4" (1.22 m) ON CENTER
 - 2" (50.8 mm) X 2" (50.8 mm) HARDWOOD, PINE OR STANDARD STEEL FENCE POSTS
 - DRIVEN 2' (0.61 m) INTO THE GROUND.

EROSION CONTROL FENCE

(MACHINE SLICED)



EROSION CONTROL PROTECTION AT CONSTRUCTION ACCESS

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
Brian J. Johnson
Bridgn J. Johnson
Reg. No. 42744 Date: 9/20/25

JONES HAUGH & SMITH
Engineers - Surveyors
515 South Washington Ave. Albert Lea, MN 507-373-4876

Consultant:

Project:

Revision:

No.: Date: 9/20/2025

Drawn: **bjj** Checked:

Project Manager:

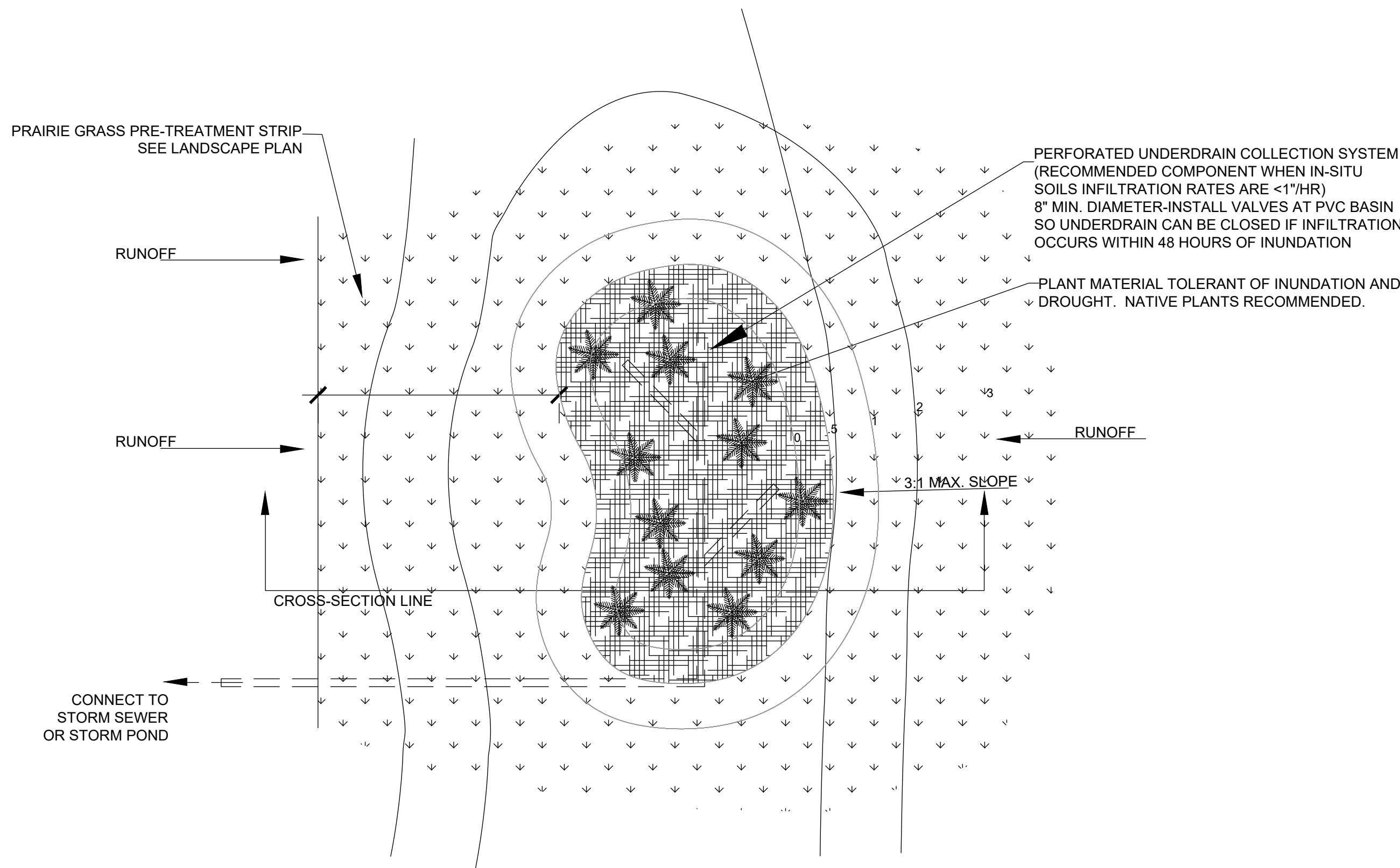
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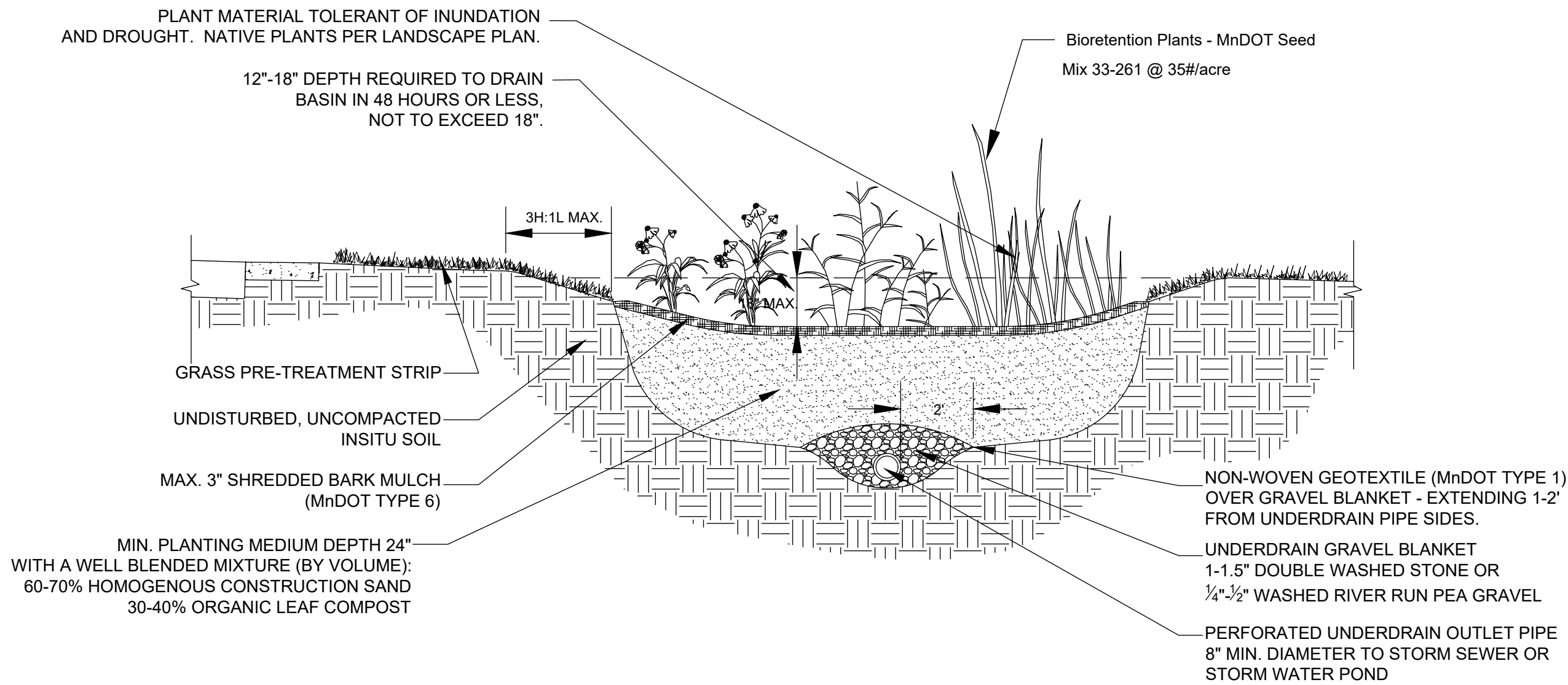
SWPPP
NARRATIVE &
DETAILS

Sheet No.:

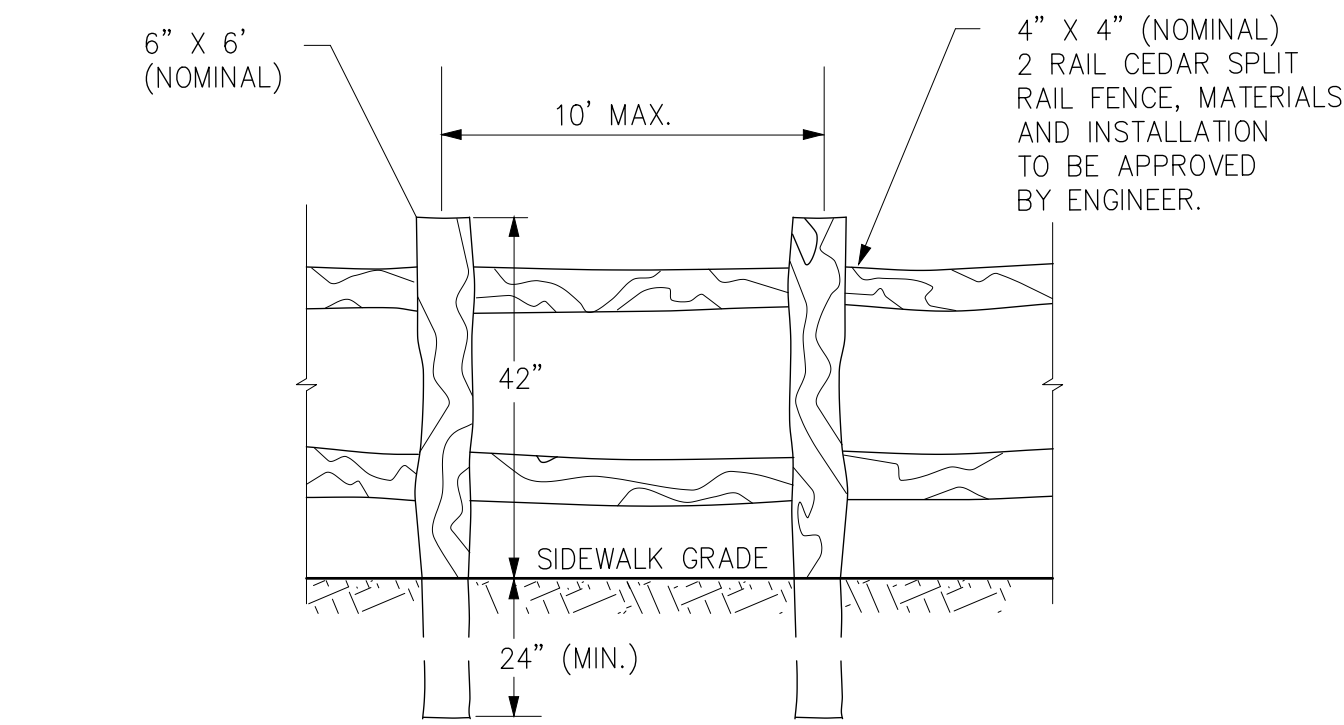
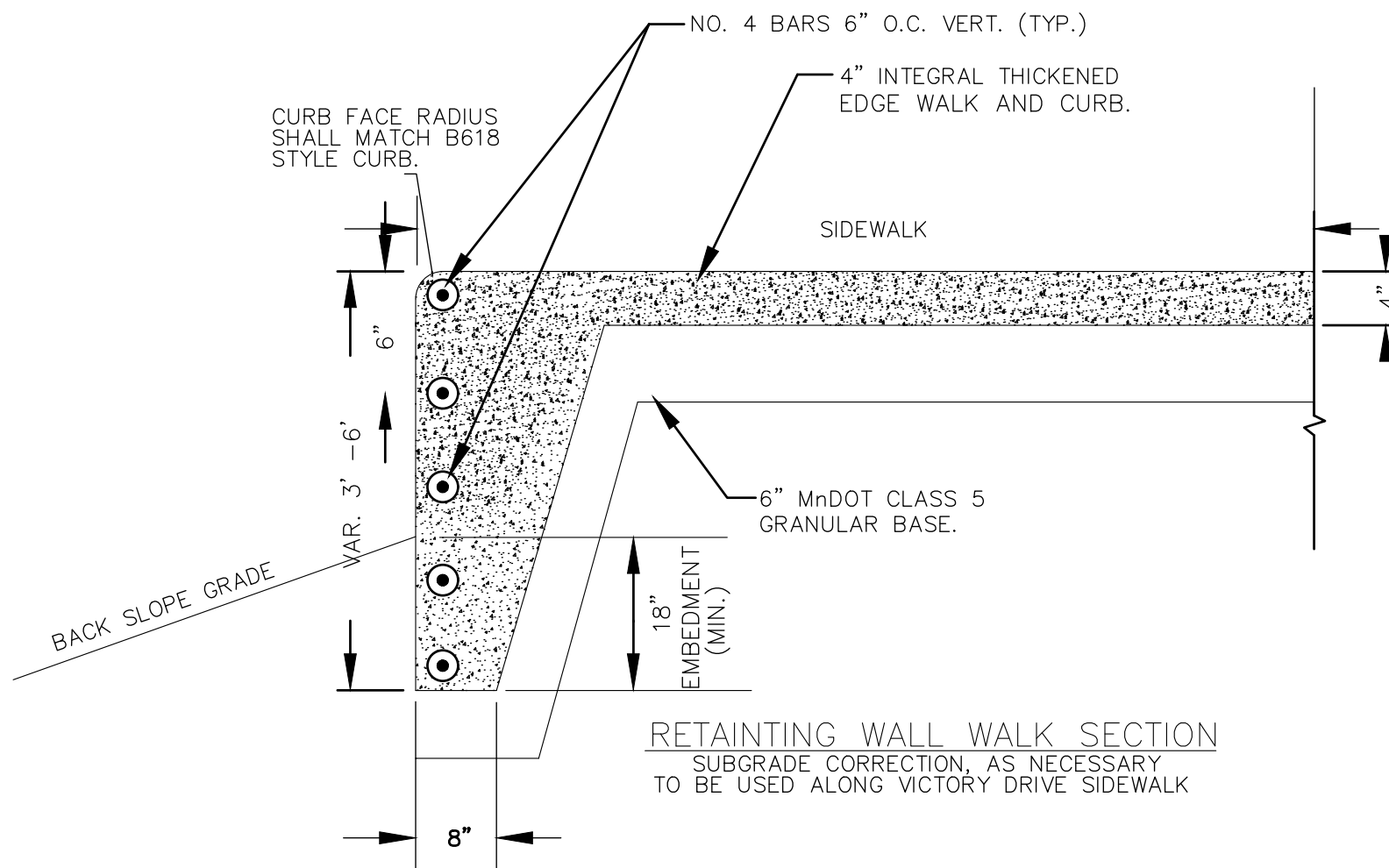
C8



PLAN VIEW: BIO-RETENTION/FILTRATION BASIN



PROFILE VIEW: BIO-RETENTION/FILTRATION BASIN



SPLIT RAIL WOOD FENCE REQUIRED ALONGSIDE SIDEWALK INSTALLED WITH ADJACENT 4:1 OR GREATER SLOPES

SPLIT RAIL WOOD FENCE

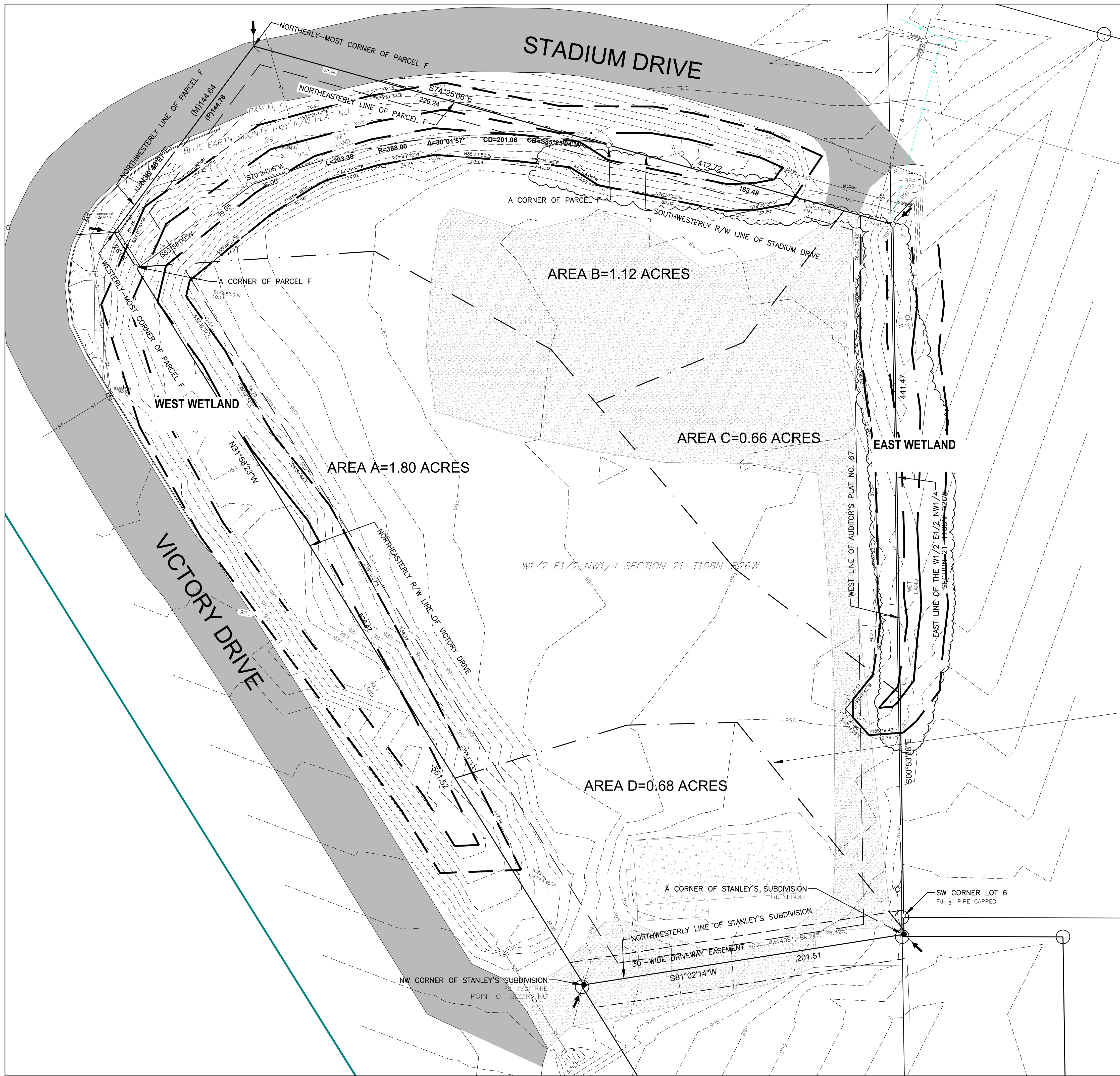
BIO-RETENTION/FILTRATION BASIN CONSTRUCTION SEQUENCING

1. INSTALL SILT FENCE AND/OR OTHER APPROPRIATE TEMPORARY EROSION CONTROL DEVICES TO PREVENT SEDIMENT FROM LEAVING OR ENTERING THE PRACTICE DURING CONSTRUCTION.
2. ALL DOWN-GRADIENT PERIMETER SEDIMENT CONTROL BMP'S MUST BE IN PLACE BEFORE ANY UP GRADIENT LAND DISTURBING ACTIVITY BEGINS.
3. PERFORM CONTINUOUS INSPECTIONS OF EROSION CONTROL PRACTICES.
4. INSTALL UTILITIES (WATER, SANITARY SEWER, ELECTRIC, PHONE, FIBER OPTIC, ETC) PRIOR TO SETTING FINAL GRADE OF BIORETENTION DEVICE.
5. ROUGH GRADE THE SITE. IF BIORETENTION AREAS ARE BEING USED AS TEMPORARY SEDIMENT BASINS LEAVE A MINIMUM OF 3 FEET OF COVER OVER THE PRACTICE TO PROTECT THE UNDERLYING SOILS FROM CLOGGING.
6. PERFORM ALL OTHER SITE IMPROVEMENTS.
7. SEED AND MULCH ALL AREAS AFTER DISTURBANCE.
8. CONSTRUCT BIORETENTION DEVICE UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA.
9. IMPLEMENT TEMPORARY AND PERMENATE EROSION CONTROL PRACTICES.
10. PLANT AND MULCH BIORETENTION DEVICE.
11. REMOVE TEMPORARY EROSION CONTROL DEVICES AFTER THE CONTRIBUTING DRAINAGE AREA IS ADEQUATELY VEGETATED.

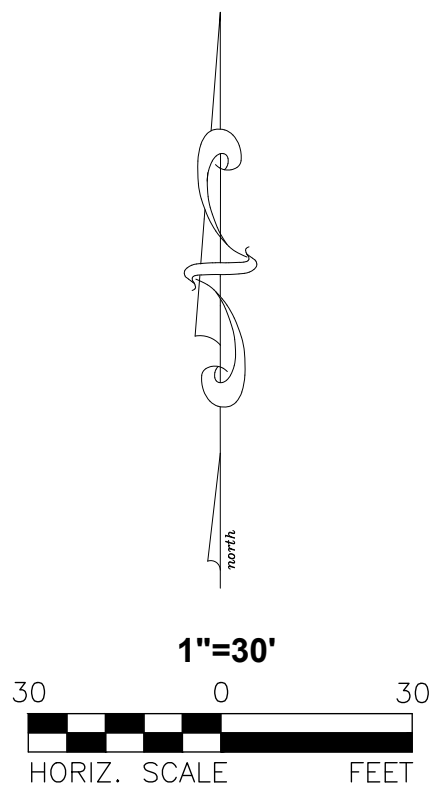
GENERAL NOTES

1. IN THE EVENT THAT SEDIMENT IS INTRODUCED INTO THE BMP DURING OR IMMEDIATELY FOLLOWING EXCAVATION, THIS MATERIAL SHALL BE REMOVED FROM THE PRACTICE PRIOR TO CONTINUING CONSTRUCTION.
2. GRADING OF BIORETENTION DEVICES SHALL BE ACCOMPLISHED USING LOW-COMPACTION EARTH-MOVING EQUIPMENT TO PREVENT COMPACTION OF UNDERLYING SOILS.
3. ALL SUB MATERIALS BELOW THE SPECIFIED BIORETENTION DEPTH (ELEVATION) SHALL BE UNDISTURBED, UNLESS OTHERWISE NOTED.
4. CONFIRM DURING CONSTRUCTION THAT THE EXISTING WATER TABLE OR BEDROCK DOES NOT EXCEED THE HEIGHT OF THE BOTTOM OF THE FILTRATION BASIN

C11



EXISTING WATERSHED DIVIDE LINE TYP.



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

BRUCE J. JOHNSON
BRUCE J. JOHNSON
Reg. No. 4244 Date: 9/20/25

JONES HAUGH SMITH
Engineers & Surveyors
515 South Washington Ave. Albert Lea, MN 56007-375-4876

Consultant:

Project:

Revision:

No.: 25-188	Date: 9/20/2025
Drawn: bjj	Checked:
Project Manager:	
Project Status: CD	
Sheet Title:	
EXISTING WATERSHED DRAINAGE MAP	
Sheet No.: EX 1	



PROPOSED ELEVATION CONTOUR TYP.

PROPOSED WATERSHED BOUNDARY TYP.

Consultant:

JONES
HAUGH
SMITH



Engineers & Surveyors
515 South Washington Ave. Albert Lea, MN 56007
507.373.4876

Project:

MANKATO
APARTMENTS

Revision:

No.:

Date: 9/20/2025

Drawn: **bji**

Checked:

Project Manager:

Project Status: **CD**

Sheet Title:

Sheet No.:

EX 2

PROPOSED
WATERSHED
DRAINAGE MAP

BRUCE SCHWAB

BRUCE SCHWAB
Professional Engineer under the laws
of the State of Minnesota
Reg. No. 42744
Date: 9/20/25

Mankato Apartments
901 Victory Drive
Hydrologic Summary Table

TABLE 1.2.A - HYDROLOGIC SUMMARY - OFF SITE RUN OFF

OFF SITE DISCHARGE	AREA (ac)		CN/C VALUES		Tc (min.)	2 YEAR (cfs)		10 YEAR (cfs)		100 YEAR (cfs)	
	EXISTING	PROPOSED	EXISTING	PROPOSED	Existing/Proposed	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED
VICTORY DRIVE DITCH	4.25	4.25	84.35	91.34	4.4/4.4	15.19	4.36	27.26	11.71	52.57	37.63
Total Offsite Discharge	4.25	4.25				15.19	2.27	27.26	12.80	52.57	38.73

TABLE 1.2.B - HYDROLOGIC SUMMARY - ON SITE RUN OFF

[illegible]

**MANKATO APARTMENTS
PROPOSED PIPE CAPACITIES
MANKATO, MN**

DESIGN FREQUENCY = 10 YR STORM

STRUCTURE LOCATION		RUNOFF COMPUTATION							SEWER DESIGN						CONCLUSION		% CAPACITY
		AREA (acres)	C	AxC	SUM of AxC	Tc (min)	I (in/hr)	Q (cfs)	SIZE (in)	LENGTH (ft)	SLOPE (%)	CAPACITY (cfs)	Full Vel. (fps)	Pipe Time (min)			
FROM	TO																
6	5	0.41	0.95	0.41	0.41	2.00	4.20	1.72	12	117	1.00	3.85	4.90	0.40	OKAY	44.7	
5	4	0.40	0.95	0.38	0.79	2.40	4.20	3.32	15	36	0.50	4.94	4.03	0.15	OKAY	67.1	
8	7	0.27	0.95	0.26	0.26	2.00	4.20	1.08	12	37	1.00	3.85	4.90	0.13	OKAY	28.0	
7	4	0.07	0.95	0.07	0.32	2.13	4.20	1.36	15	63	0.50	4.94	4.03	0.26	OKAY	27.4	
4	3	1.39	0.95	1.32	1.32	5.00	4.20	5.55	18	120	0.30	6.23	3.53	0.57	OKAY	89.0	
3	2	0.04	0.95	0.04	1.36	5.57	4.20	5.71	21	78	0.30	9.40	3.91	0.33	OKAY	60.7	
2	1	0.00	0.95	0.00	1.36	5.90	4.20	5.71	24	27	9.40	75.18	23.93	0.02	OKAY	7.6	

Project Information

Calculator Version:	Version 4: July 2020
Project Name:	Mankato Apartments Existing
User Name / Company Name:	Jones, Haugh & Smith Inc
Date:	6/25/2025
Project Description:	Mankato Apartments
Construction Permit?:	Yes

Site Information

Retention Requirement (inches):	1.1
Site's Zip Code:	56001
Annual Rainfall (inches):	30.7
Phosphorus EMC (mg/l):	0.3
TSS EMC (mg/l):	54.5

Total Site Area

Land Cover	A Soils (acres)	B Soils (acres)	C Soils (acres)	D Soils (acres)	Total (acres)
Forest/Open Space - Undisturbed, protected forest/open space or reforested land				0	0
Managed Turf - disturbed, graded for yards or other turf to be mowed/managed				2.74	2.74
			Impervious Area (acres)		1.26
			Total Area (acres)		4

Site Areas Routed to BMPs

Land Cover	A Soils (acres)	B Soils (acres)	C Soils (acres)	D Soils (acres)	Total (acres)
Forest/Open Space - Undisturbed, protected forest/open space or reforested land					0
Managed Turf - disturbed, graded for yards or other turf to be mowed/managed					0
			Impervious Area (acres)		
			Total Area (acres)		0

Summary Information

Performance Goal Requirement

Performance goal volume retention requirement: 5031 ft³
Volume removed by BMPs towards performance goal: ft³
Percent volume removed towards performance goal %

Annual Volume and Pollutant Load Reductions

Post development annual runoff volume 4.3333 acre-ft
Annual runoff volume removed by BMPs: acre-ft
Percent annual runoff volume removed: %

Post development annual particulate P load: 1.9448 lbs
Annual particulate P removed by BMPs: lbs
Post development annual dissolved P load: 1.591 lbs
Annual dissolved P removed by BMPs: 0 lbs
Total P removed by BMPs 0 lbs
Percent annual total phosphorus removed: %

Post development annual TSS load: 642.4 lbs
Annual TSS removed by BMPs: lbs
Percent annual TSS removed: %

BMP Summary

Performance Goal Summary

BMP Name	BMP Volume Capacity (ft ³)	Volume Recieved (ft ³)	Volume Retained (ft ³)	Volume Outflow (ft ³)	Percent Retained
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Annual Volume Summary

BMP Name	Volume From Direct Watershed (acre-ft)	Volume From Upstream BMPs (acre-ft)	Volume Retained (acre-ft)	Volume outflow (acre-ft)	Percent Retained (%)
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Particulate Phosphorus Summary

BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained
----------	----------------------------------	-------------------------------	---------------------	--------------------	------------------

Dissolved Phosphorus Summary

BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained
----------	---	--	---------------------------	--------------------------	---------------------

Total Phosphorus Summary

BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained
----------	---	--	---------------------------	--------------------------	---------------------

TSS Summary

BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained
----------	---	--	---------------------------	--------------------------	---------------------

BMP Schematic

Project Information

Calculator Version:	Version 4: July 2020
Project Name:	901 Victory Drive Apartments
User Name / Company Name:	JHS
Date:	11 9 2025
Project Description:	Mankato Apartments
Construction Permit?:	Yes

Site Information

Retention Requirement (inches):	1.1
Site's Zip Code:	56001
Annual Rainfall (inches):	30.7
Phosphorus EMC (mg/l):	0.3
TSS EMC (mg/l):	54.5

Total Site Area

Land Cover	A Soils (acres)	B Soils (acres)	C Soils (acres)	D Soils (acres)	Total (acres)
Forest/Open Space - Undisturbed, protected forest/open space or reforested land					0
Managed Turf - disturbed, graded for yards or other turf to be mowed/managed				1.74	1.74
			Impervious Area (acres)		2.62
			Total Area (acres)		4.36

Site Areas Routed to BMPs

Land Cover	A Soils (acres)	B Soils (acres)	C Soils (acres)	D Soils (acres)	Total (acres)
Forest/Open Space - Undisturbed, protected forest/open space or reforested land					0
Managed Turf - disturbed, graded for yards or other turf to be mowed/managed				0.61	0.61
			Impervious Area (acres)		2.5
			Total Area (acres)		3.11

Summary Information

Performance Goal Requirement

Performance goal volume retention requirement:	10462	ft3
Volume removed by BMPs towards performance goal:	230	ft ³
Percent volume removed towards performance goal	2	%

Annual Volume and Pollutant Load Reductions

Post development annual runoff volume	6.7325	acre-ft
Annual runoff volume removed by BMPs:	0.1429	acre-ft
Percent annual runoff volume removed:	2	%

Post development annual particulate P load:	3.0216	lbs
Annual particulate P removed by BMPs:	2.102	lbs
Post development annual dissolved P load:	2.472	lbs
Annual dissolved P removed by BMPs:	1.303	lbs
Total P removed by BMPs	3.405	lbs
Percent annual total phosphorus removed:	62	%

Post development annual TSS load:	998	lbs
Annual TSS removed by BMPs:	694.4	lbs
Percent annual TSS removed:	70	%

BMP Summary

Performance Goal Summary

BMP Name	BMP Volume Capacity (ft3)	Volume Recieved (ft3)	Volume Retained (ft3)	Volume Outflow (ft3)	Percent Retained
1 - Bioretention basin (with underdrain)	230	9982	230	9752	2

Annual Volume Summary

BMP Name	Volume From Direct Watershed (acre-ft)	Volume From Upstream BMPs (acre-ft)	Volume Retained (acre-ft)	Volume outflow (acre-ft)	Percent Retained (%)
1 - Bioretention basin (with underdrain)	5.8196	0	0.1429	5.6767	2

Particulate Phosphorus Summary

BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained
1 - Bioretention basin (with underdrain)	2.6118	0	2.1023	0.5095	80

Dissolved Phosphorus Summary

BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained
1 - Bioretention basin (with underdrain)	2.1369	0	1.3031	0.8338	61

Total Phosphorus Summary

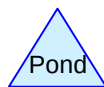
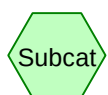
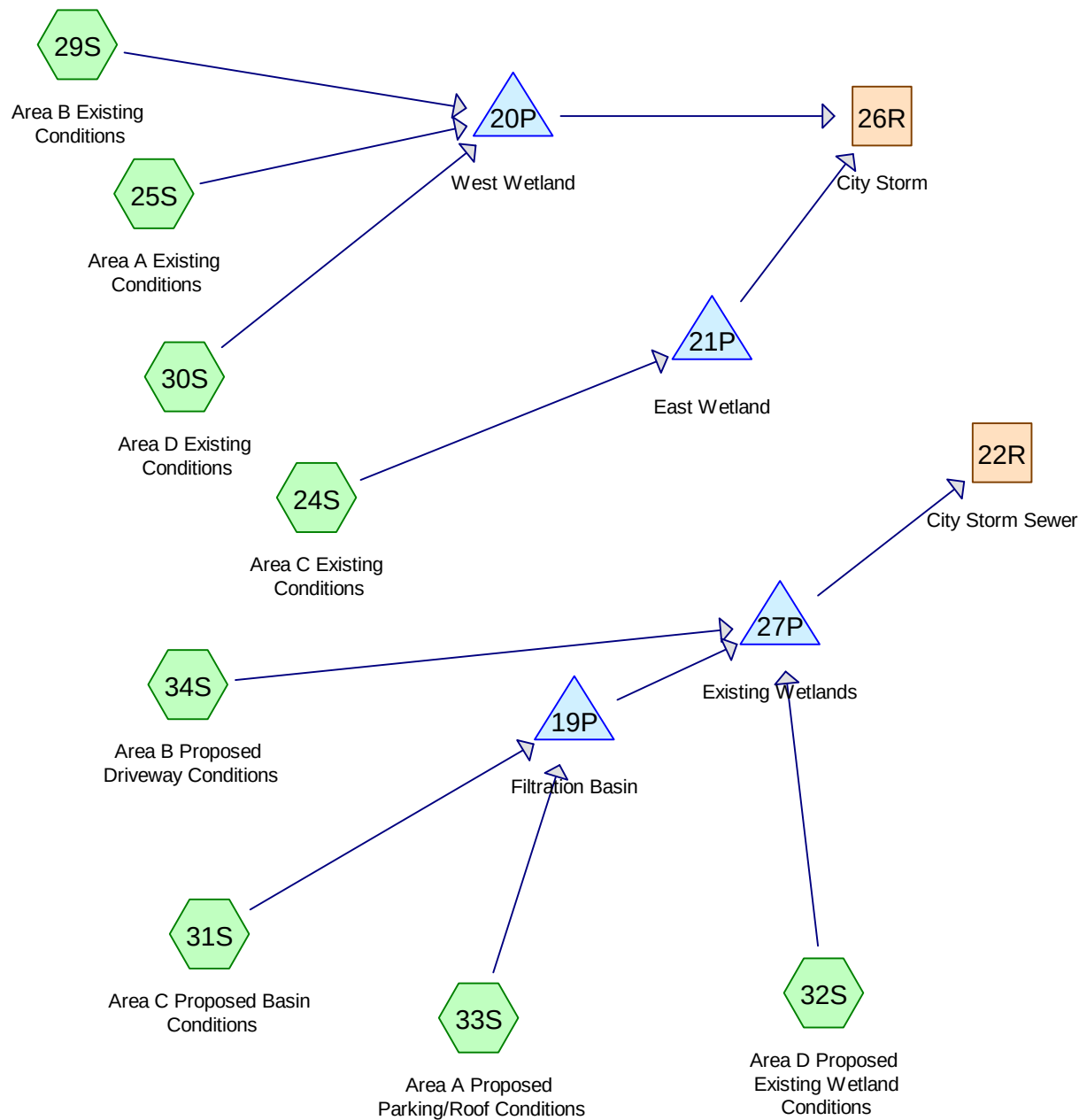
BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained
1 - Bioretention basin (with underdrain)	4.7487	0	3.4054	1.3433	70

TSS Summary

BMP Name	Load From Direct Watershed (lbs)	Load From Upstream BMPs (lbs)	Load Retained (lbs)	Outflow Load (lbs)	Percent Retained
1 - Bioretention basin (with underdrain)	862.69	0	694.39	168.3	80

BMP Schematic





Routing Diagram for 25-188MankatoApartmentsRev3 FiltrationSubcatchmentsRev1
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25-188MankatoApartmentsRev3 FiltrationSubcatchmentsRev1

Prepared by {enter your company name here}

Printed 11/9/2025

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Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
4.550	80	>75% Grass cover, Good, HSG D (24S, 25S, 29S, 30S, 31S, 32S, 34S)
1.010	96	Gravel surface, HSG D (24S, 29S)
2.930	98	Paved parking, HSG D (25S, 30S, 32S, 33S, 34S)
8.490	88	TOTAL AREA

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
8.490	HSG D	24S, 25S, 29S, 30S, 31S, 32S, 33S, 34S
0.000	Other	
8.490		TOTAL AREA

25-188MankatoApartmentsRev3 FiltrationSubcatchmentsRev1

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	4.550	0.000	4.550	>75% Grass cover, Good	24S, 25S, 29S, 30S, 31S, 32S, 34S
0.000	0.000	0.000	1.010	0.000	1.010	Gravel surface	24S, 29S
0.000	0.000	0.000	2.930	0.000	2.930	Paved parking	25S, 30S, 32S, 33S, 34S
0.000	0.000	0.000	8.490	0.000	8.490	TOTAL AREA	

25-188MankatoApartmentsRev3 FiltrationSubcatchmentsRev1

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Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	19P	983.50	983.30	49.0	0.0041	0.012	30.0	0.0	0.0
2	19P	987.50	987.00	20.0	0.0250	0.013	15.0	0.0	0.0

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 24S: Area C Existing Runoff Area=0.660 ac 0.00% Impervious Runoff Depth=1.63"
Flow Length=200' Slope=0.0200 '/' Tc=1.5 min CN=87 Runoff=2.92 cfs 0.089 af

Subcatchment 25S: Area A Existing Runoff Area=1.800 ac 7.78% Impervious Runoff Depth=1.21"
Flow Length=600' Slope=0.0200 '/' Tc=4.4 min CN=81 Runoff=5.31 cfs 0.182 af

Subcatchment 29S: Area B Existing Runoff Area=1.120 ac 0.00% Impervious Runoff Depth=1.87"
Flow Length=600' Slope=0.0200 '/' Tc=4.4 min CN=90 Runoff=4.93 cfs 0.174 af

Subcatchment 30S: Area D Existing Runoff Area=0.660 ac 15.15% Impervious Runoff Depth=1.34"
Flow Length=200' Slope=0.0200 '/' Tc=1.5 min CN=83 Runoff=2.47 cfs 0.074 af

Subcatchment 31S: Area C Proposed Basin Runoff Area=0.610 ac 0.00% Impervious Runoff Depth=1.15"
Flow Length=200' Slope=0.0200 '/' Tc=1.2 min CN=80 Runoff=1.95 cfs 0.059 af

Subcatchment 32S: Area D Proposed Runoff Area=0.970 ac 7.22% Impervious Runoff Depth=1.21"
Flow Length=200' Slope=0.0200 '/' Tc=1.2 min CN=81 Runoff=3.26 cfs 0.098 af

Subcatchment 33S: Area A Proposed Runoff Area=2.500 ac 100.00% Impervious Runoff Depth=2.64"
Flow Length=600' Slope=0.0200 '/' Tc=3.5 min CN=98 Runoff=14.37 cfs 0.550 af

Subcatchment 34S: Area B Proposed Runoff Area=0.170 ac 70.59% Impervious Runoff Depth=2.13"
Flow Length=200' Slope=0.0200 '/' Tc=1.5 min CN=93 Runoff=0.91 cfs 0.030 af

Reach 22R: City Storm Sewer Inflow=4.36 cfs 0.436 af
Outflow=4.36 cfs 0.436 af

Reach 26R: City Storm Inflow=15.19 cfs 0.520 af
Outflow=15.19 cfs 0.520 af

Pond 19P: Filtration Basin Peak Elev=989.01' Storage=0.397 af Inflow=16.25 cfs 0.608 af
Discarded=0.07 cfs 0.170 af Primary=1.88 cfs 0.308 af Outflow=1.95 cfs 0.477 af

Pond 20P: West Wetland Inflow=12.46 cfs 0.430 af
Primary=12.46 cfs 0.430 af

Pond 21P: East Wetland Inflow=2.92 cfs 0.089 af
Primary=2.92 cfs 0.089 af

Pond 27P: Existing Wetlands Inflow=4.36 cfs 0.436 af
Primary=4.36 cfs 0.436 af

Total Runoff Area = 8.490 ac Runoff Volume = 1.256 af Average Runoff Depth = 1.78"
65.49% Pervious = 5.560 ac 34.51% Impervious = 2.930 ac

Summary for Subcatchment 24S: Area C Existing Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

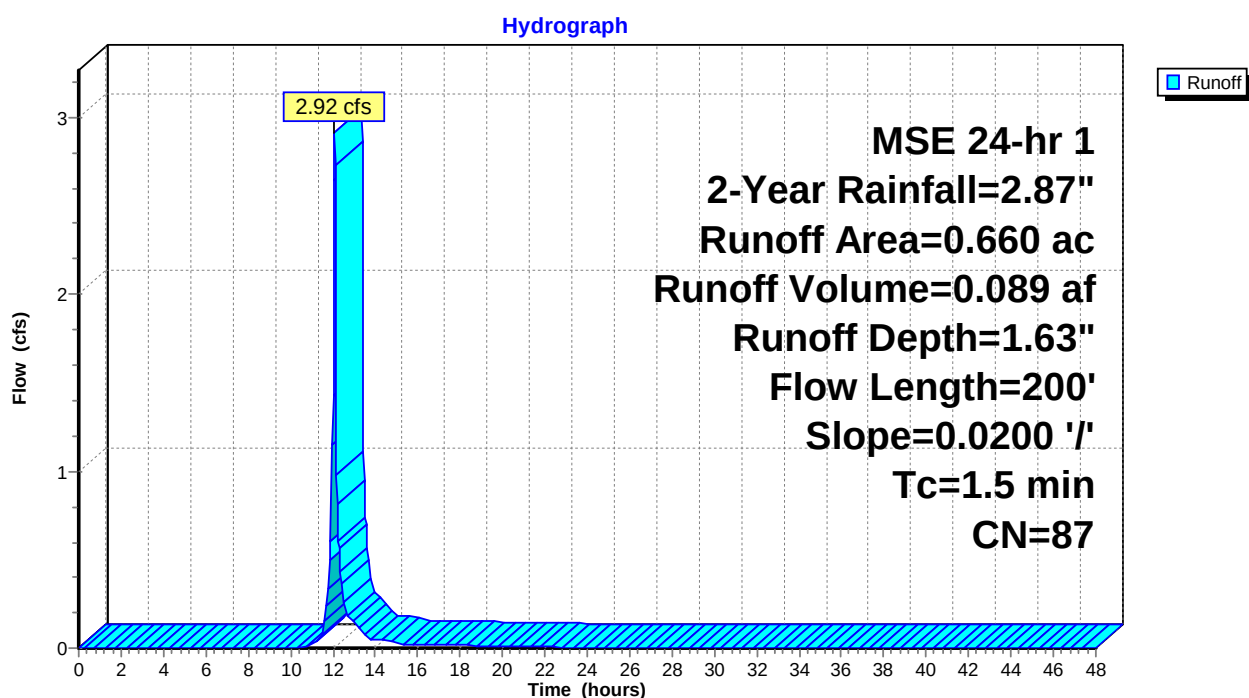
Runoff = 2.92 cfs @ 12.08 hrs, Volume= 0.089 af, Depth= 1.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 MSE 24-hr 1 2-Year Rainfall=2.87"

Area (ac)	CN	Description
0.360	80	>75% Grass cover, Good, HSG D
0.300	96	Gravel surface, HSG D
0.660	87	Weighted Average
0.660		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	200	0.0200	2.28		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps

Subcatchment 24S: Area C Existing Conditions



Summary for Subcatchment 25S: Area A Existing Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

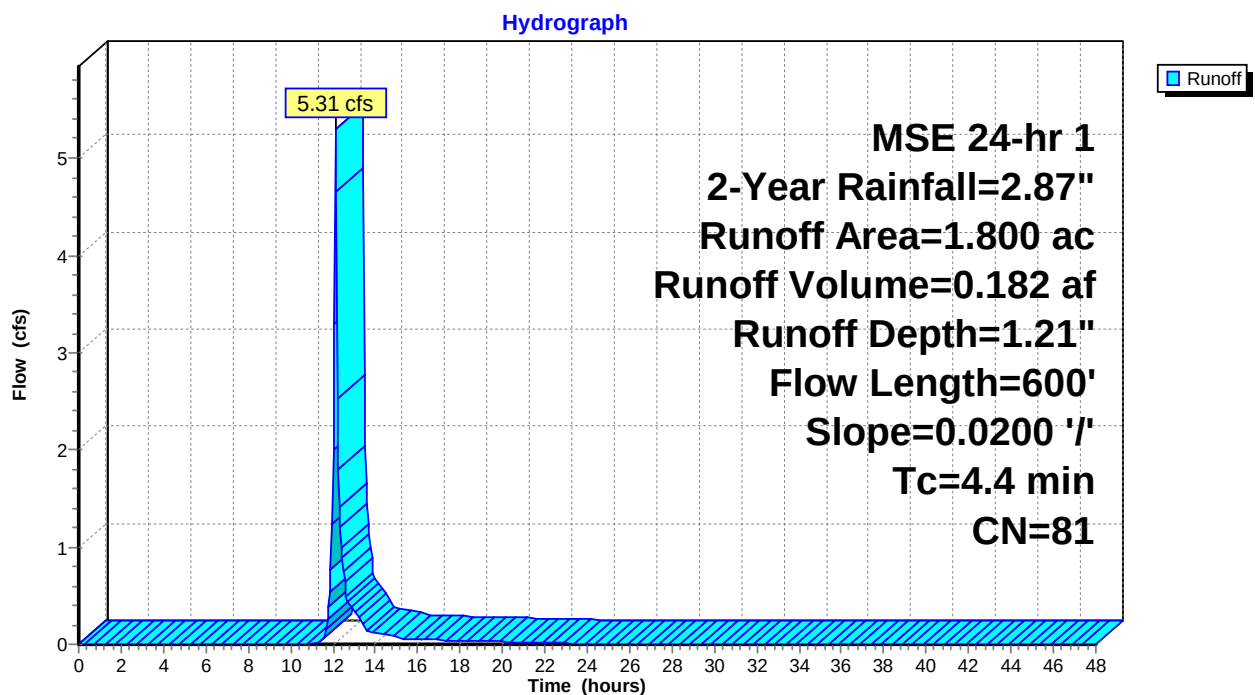
Runoff = 5.31 cfs @ 12.11 hrs, Volume= 0.182 af, Depth= 1.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 MSE 24-hr 1 2-Year Rainfall=2.87"

Area (ac)	CN	Description
1.660	80	>75% Grass cover, Good, HSG D
0.140	98	Paved parking, HSG D
1.800	81	Weighted Average
1.660		92.22% Pervious Area
0.140		7.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	600	0.0200	2.28		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps

Subcatchment 25S: Area A Existing Conditions



Summary for Subcatchment 29S: Area B Existing Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

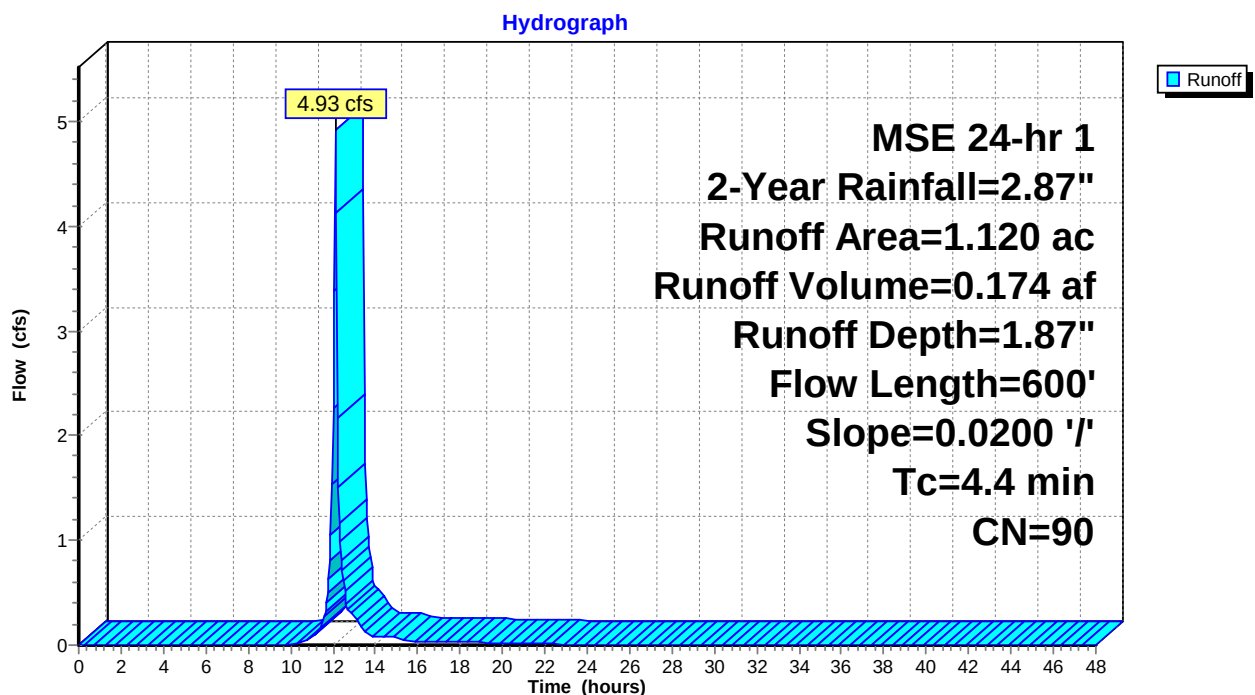
Runoff = 4.93 cfs @ 12.11 hrs, Volume= 0.174 af, Depth= 1.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 MSE 24-hr 1 2-Year Rainfall=2.87"

Area (ac)	CN	Description
0.410	80	>75% Grass cover, Good, HSG D
0.710	96	Gravel surface, HSG D
1.120	90	Weighted Average
1.120		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	600	0.0200	2.28		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps

Subcatchment 29S: Area B Existing Conditions



Summary for Subcatchment 30S: Area D Existing Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

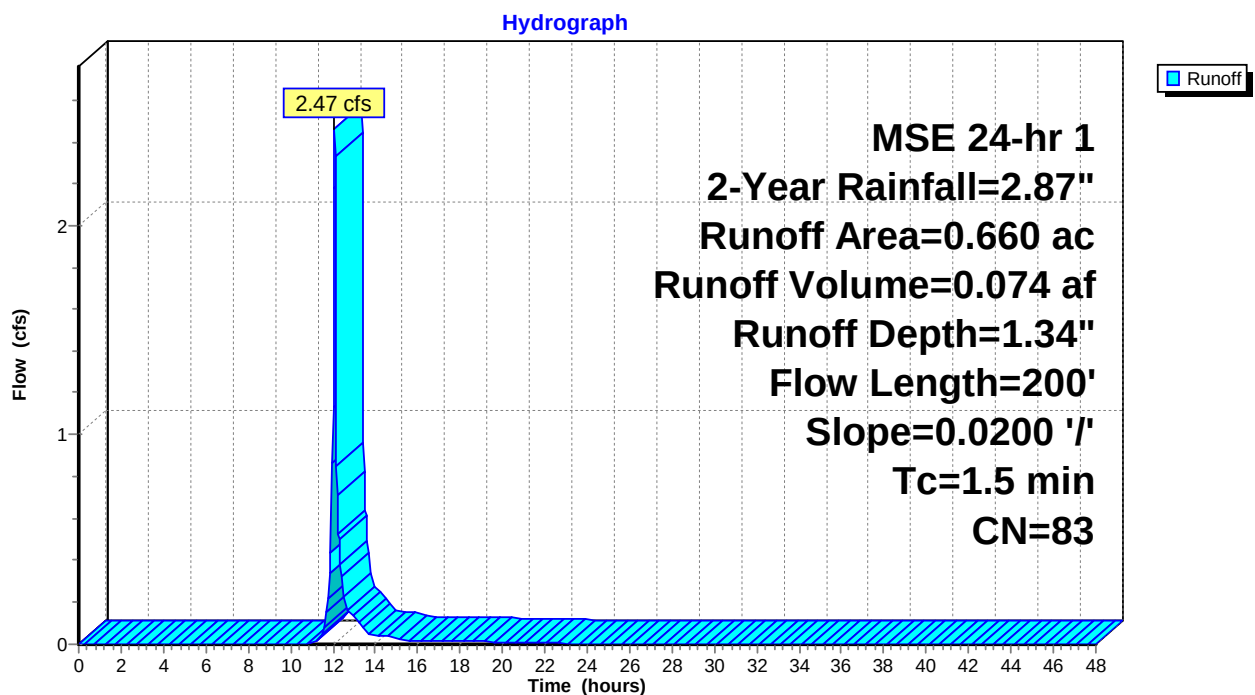
Runoff = 2.47 cfs @ 12.08 hrs, Volume= 0.074 af, Depth= 1.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 MSE 24-hr 1 2-Year Rainfall=2.87"

Area (ac)	CN	Description
0.560	80	>75% Grass cover, Good, HSG D
0.100	98	Paved parking, HSG D
0.660	83	Weighted Average
0.560		84.85% Pervious Area
0.100		15.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	200	0.0200	2.28		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps

Subcatchment 30S: Area D Existing Conditions



Summary for Subcatchment 31S: Area C Proposed Basin Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

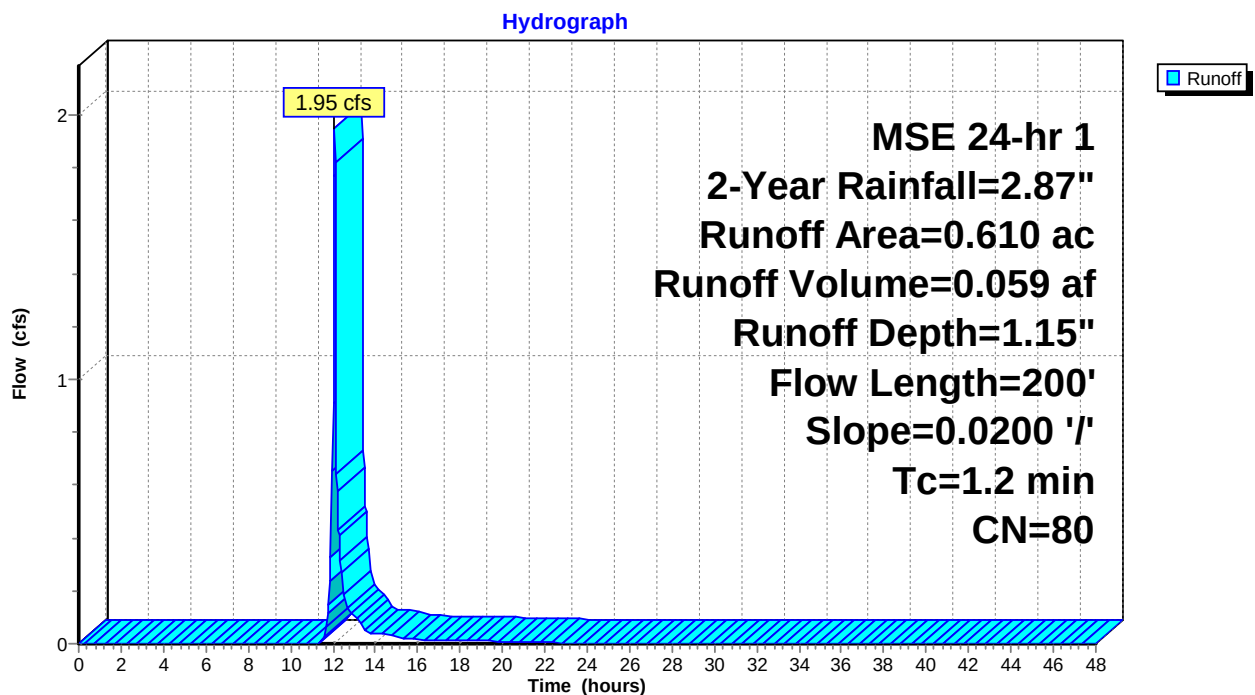
Runoff = 1.95 cfs @ 12.08 hrs, Volume= 0.059 af, Depth= 1.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 MSE 24-hr 1 2-Year Rainfall=2.87"

Area (ac)	CN	Description
0.610	80	>75% Grass cover, Good, HSG D
0.610		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	200	0.0200	2.87		Shallow Concentrated Flow, Paved Kv= 20.3 fps

Subcatchment 31S: Area C Proposed Basin Conditions



Summary for Subcatchment 32S: Area D Proposed Existing Wetland Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

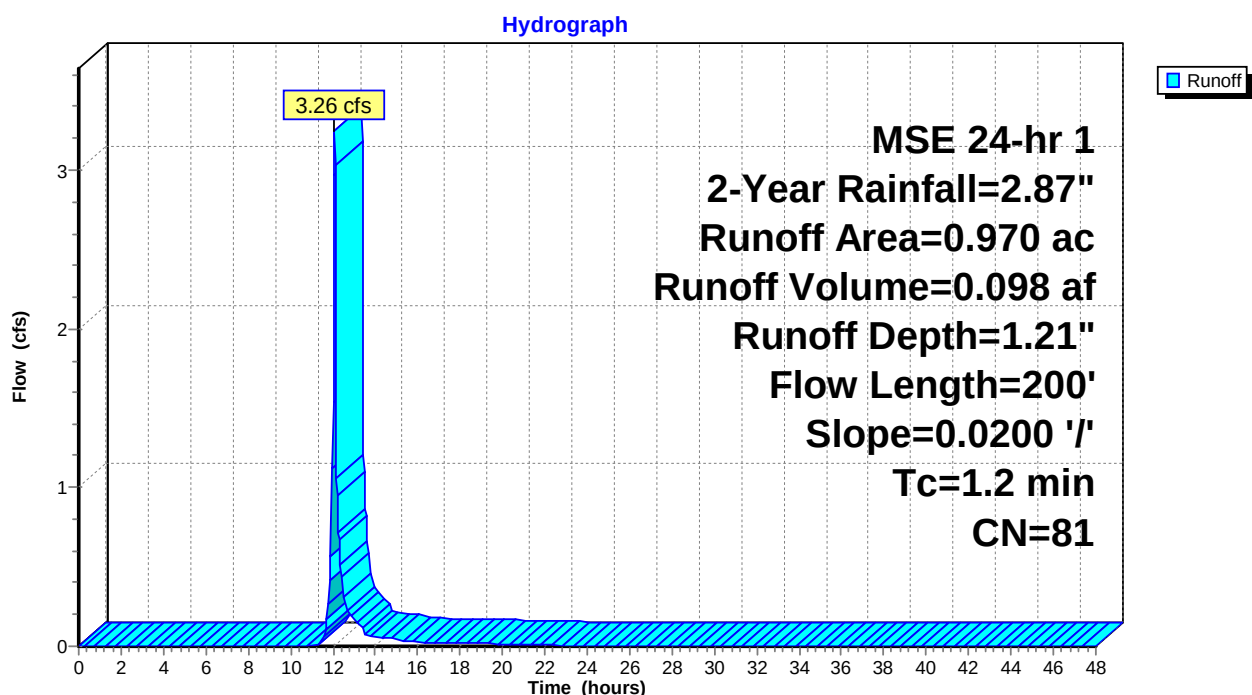
Runoff = 3.26 cfs @ 12.08 hrs, Volume= 0.098 af, Depth= 1.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 MSE 24-hr 1 2-Year Rainfall=2.87"

Area (ac)	CN	Description
0.900	80	>75% Grass cover, Good, HSG D
0.070	98	Paved parking, HSG D
0.970	81	Weighted Average
0.900		92.78% Pervious Area
0.070		7.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	200	0.0200	2.87		Shallow Concentrated Flow, Paved Kv= 20.3 fps

Subcatchment 32S: Area D Proposed Existing Wetland Conditions



Summary for Subcatchment 33S: Area A Proposed Parking/Roof Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

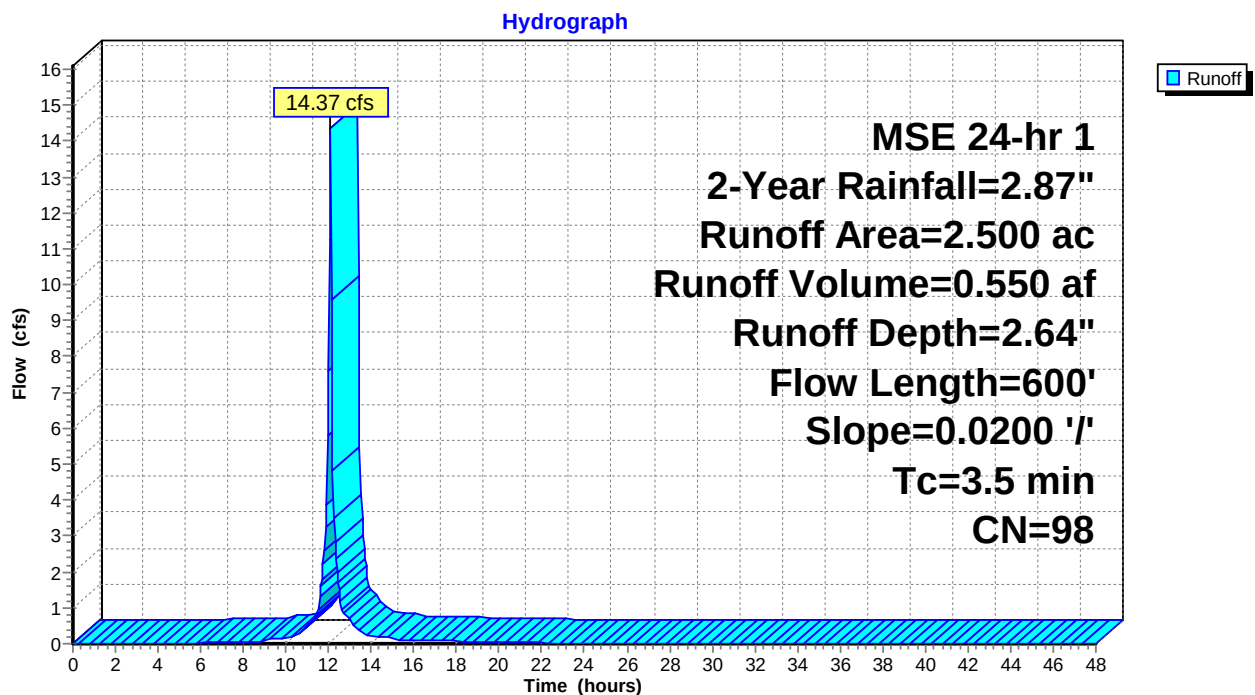
Runoff = 14.37 cfs @ 12.09 hrs, Volume= 0.550 af, Depth= 2.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 MSE 24-hr 1 2-Year Rainfall=2.87"

Area (ac)	CN	Description
2.500	98	Paved parking, HSG D
2.500		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.5	600	0.0200	2.87		Shallow Concentrated Flow, Paved Kv= 20.3 fps

Subcatchment 33S: Area A Proposed Parking/Roof Conditions



Summary for Subcatchment 34S: Area B Proposed Driveway Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

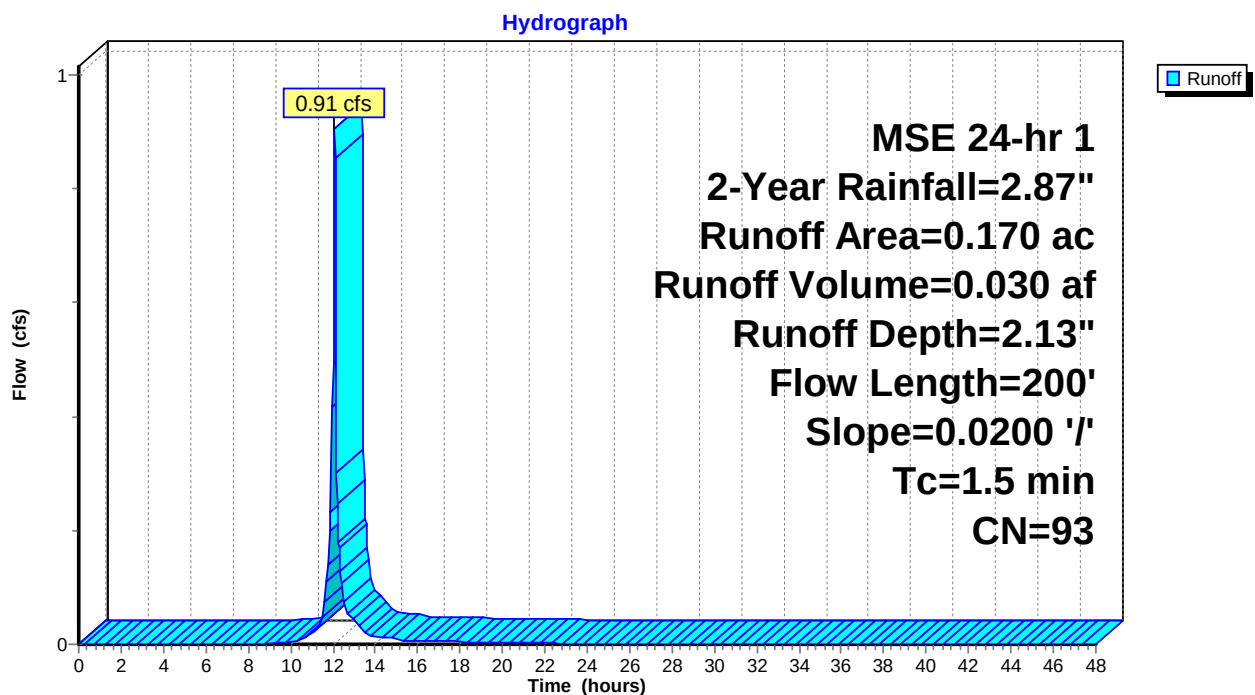
Runoff = 0.91 cfs @ 12.07 hrs, Volume= 0.030 af, Depth= 2.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 MSE 24-hr 1 2-Year Rainfall=2.87"

Area (ac)	CN	Description
0.050	80	>75% Grass cover, Good, HSG D
0.120	98	Paved parking, HSG D
0.170	93	Weighted Average
0.050		29.41% Pervious Area
0.120		70.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	200	0.0200	2.28		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps

Subcatchment 34S: Area B Proposed Driveway Conditions



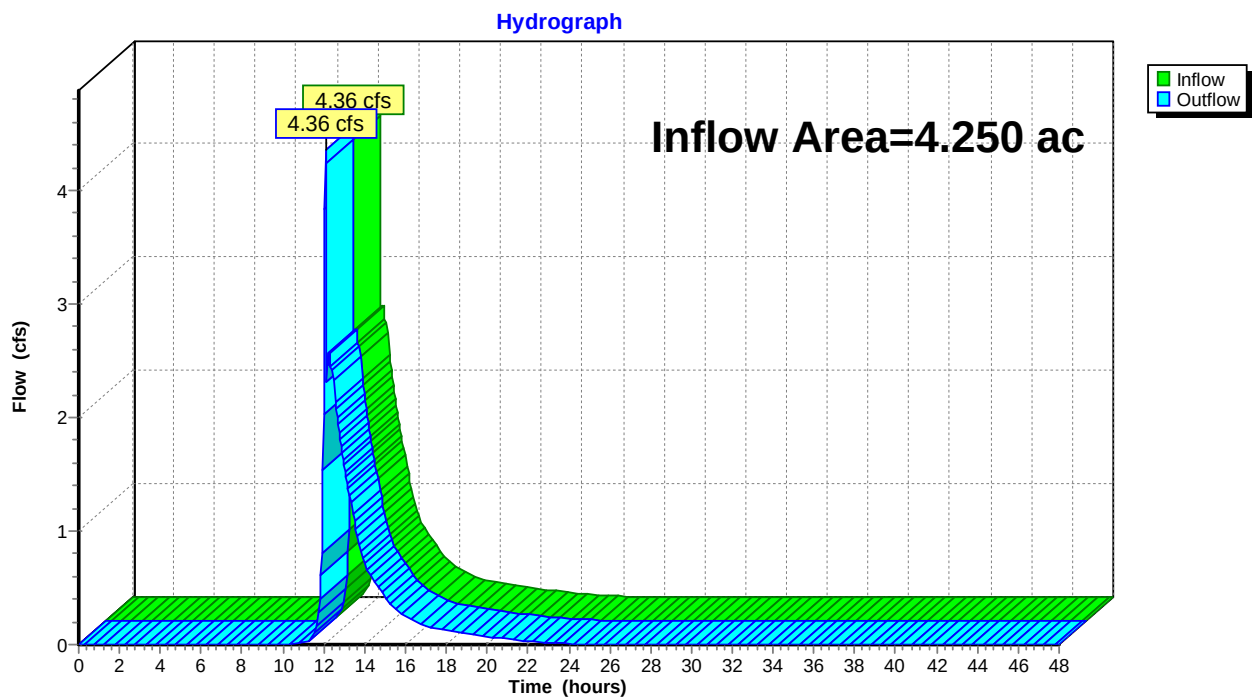
Summary for Reach 22R: City Storm Sewer

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.250 ac, 63.29% Impervious, Inflow Depth = 1.23" for 2-Year event
Inflow = 4.36 cfs @ 12.08 hrs, Volume= 0.436 af
Outflow = 4.36 cfs @ 12.08 hrs, Volume= 0.436 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Reach 22R: City Storm Sewer



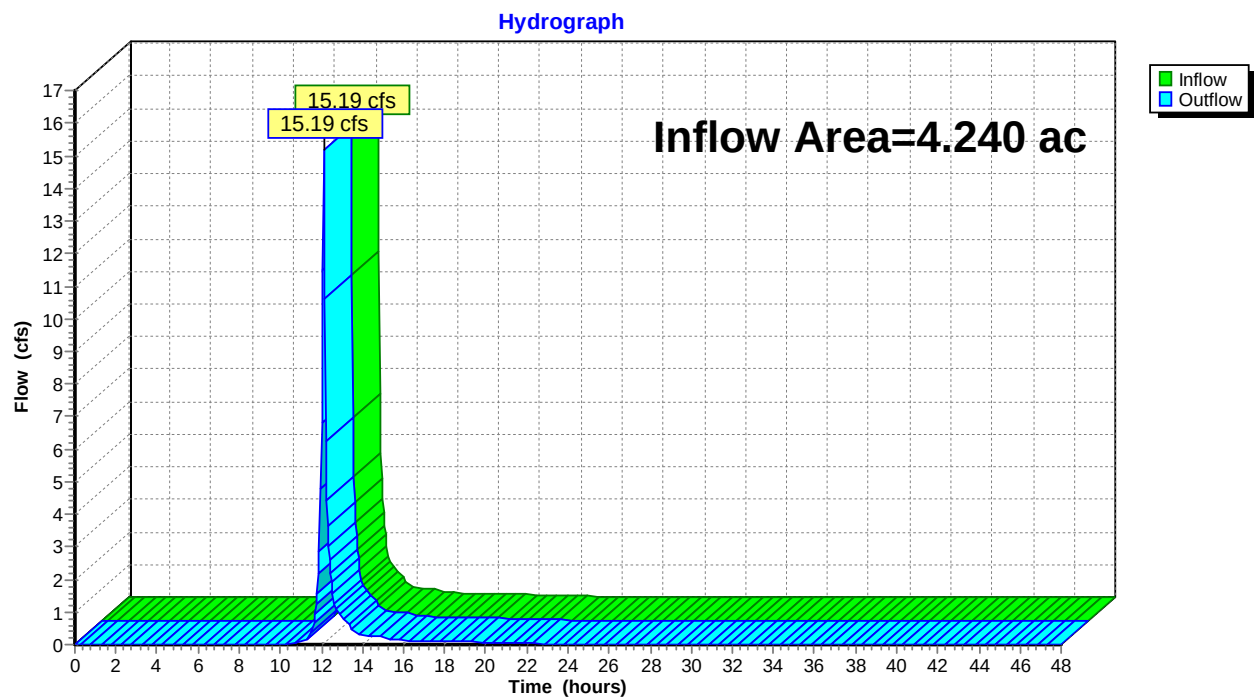
Summary for Reach 26R: City Storm

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.240 ac, 5.66% Impervious, Inflow Depth = 1.47" for 2-Year event
Inflow = 15.19 cfs @ 12.10 hrs, Volume= 0.520 af
Outflow = 15.19 cfs @ 12.10 hrs, Volume= 0.520 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Reach 26R: City Storm



Summary for Pond 19P: Filtration Basin

Inflow Area = 3.110 ac, 80.39% Impervious, Inflow Depth = 2.35" for 2-Year event
 Inflow = 16.25 cfs @ 12.09 hrs, Volume= 0.608 af
 Outflow = 1.95 cfs @ 12.46 hrs, Volume= 0.477 af, Atten= 88%, Lag= 21.8 min
 Discarded = 0.07 cfs @ 12.46 hrs, Volume= 0.170 af
 Primary = 1.88 cfs @ 12.46 hrs, Volume= 0.308 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 989.01' @ 12.46 hrs Surf.Area= 0.230 ac Storage= 0.397 af

Plug-Flow detention time= 430.5 min calculated for 0.477 af (78% of inflow)
 Center-of-Mass det. time= 386.3 min (1,136.3 - 749.9)

Volume Invert Avail.Storage Storage Description

#1 987.00' 1.275 af **Custom Stage Data (Prismatic) Listed below**

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
987.00	0.140	0.000	0.000
988.00	0.210	0.175	0.175
989.00	0.230	0.220	0.395
990.00	0.280	0.255	0.650
991.00	0.300	0.290	0.940
992.00	0.370	0.335	1.275

Device Routing Invert Outlet Devices

#1 Device 2 988.25' **30.0 deg x 0.7' long x 1.00' rise Sharp-Crested Vee/Trap Weir**
 Cv= 2.61 (C= 3.26)
 #2 Primary 983.50' **30.0" Round Culvert** L= 49.0' Ke= 1.000
 Inlet / Outlet Invert= 983.50' / 983.30' S= 0.0041 '/' Cc= 0.900
 n= 0.012 Concrete pipe, finished, Flow Area= 4.91 sf
 #3 Device 2 989.00' **5.0' long x 0.5' breadth Broad-Crested Rectangular Weir**
 Head (feet) 0.20 0.40 0.60 0.80 1.00
 Coef. (English) 2.80 2.92 3.08 3.30 3.32
 #4 Device 1 987.50' **15.0" Round Culvert** L= 20.0' Ke= 1.000
 Inlet / Outlet Invert= 987.50' / 987.00' S= 0.0250 '/' Cc= 0.900
 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
 #5 Discarded 987.00' **0.200 in/hr Exfiltration over Surface area**
 Conductivity to Groundwater Elevation = 983.00'

Discarded OutFlow Max=0.07 cfs @ 12.46 hrs HW=989.01' (Free Discharge)

↑ **5=Exfiltration** (Controls 0.07 cfs)

Primary OutFlow Max=1.87 cfs @ 12.46 hrs HW=989.01' (Free Discharge)

↑ **2=Culvert** (Passes 1.87 cfs of 36.58 cfs potential flow)

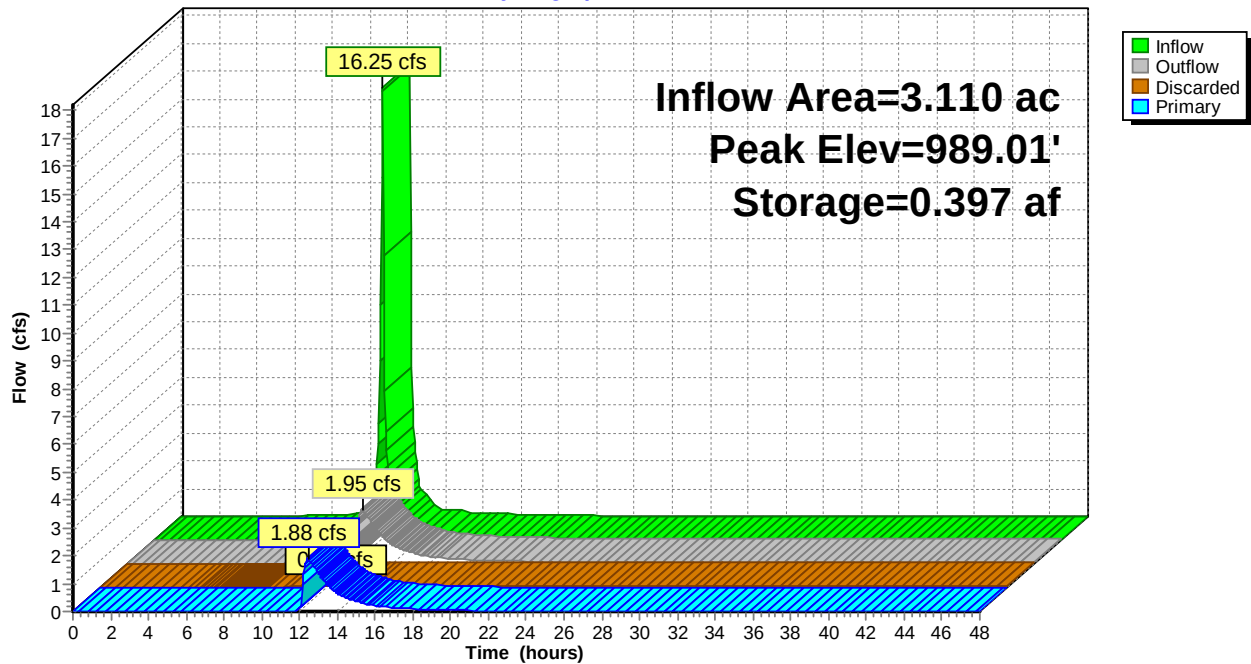
↑ **1=Sharp-Crested Vee/Trap Weir** (Weir Controls 1.86 cfs @ 2.71 fps)

↑ **4=Culvert** (Passes 1.86 cfs of 3.86 cfs potential flow)

↑ **3=Broad-Crested Rectangular Weir** (Weir Controls 0.01 cfs @ 0.25 fps)

Pond 19P: Filtration Basin

Hydrograph



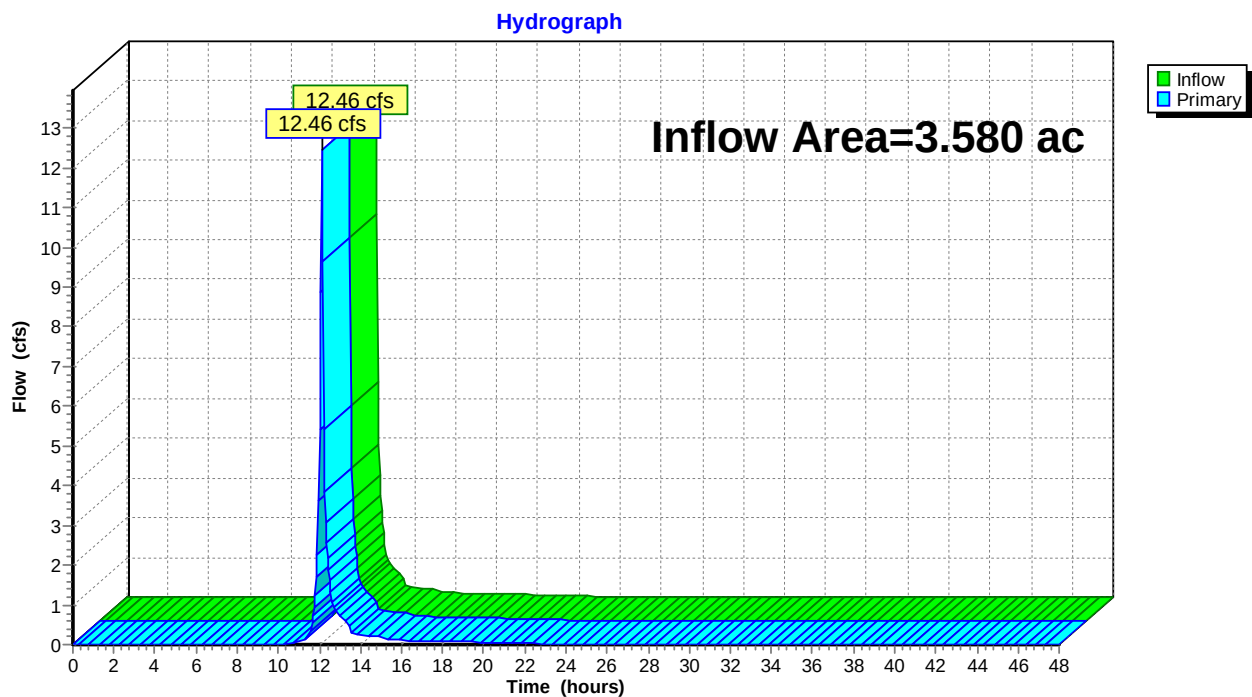
Summary for Pond 20P: West Wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.580 ac, 6.70% Impervious, Inflow Depth = 1.44" for 2-Year event
Inflow = 12.46 cfs @ 12.10 hrs, Volume= 0.430 af
Primary = 12.46 cfs @ 12.10 hrs, Volume= 0.430 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pond 20P: West Wetland



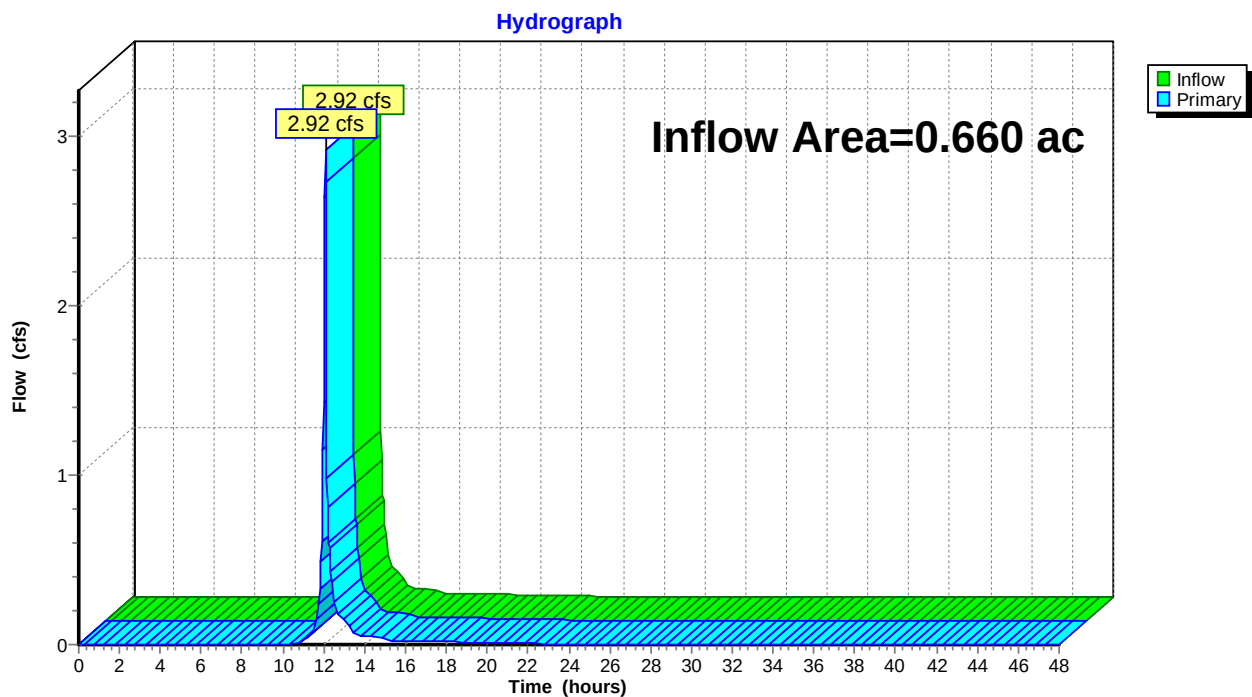
Summary for Pond 21P: East Wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.660 ac, 0.00% Impervious, Inflow Depth = 1.63" for 2-Year event
Inflow = 2.92 cfs @ 12.08 hrs, Volume= 0.089 af
Primary = 2.92 cfs @ 12.08 hrs, Volume= 0.089 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pond 21P: East Wetland



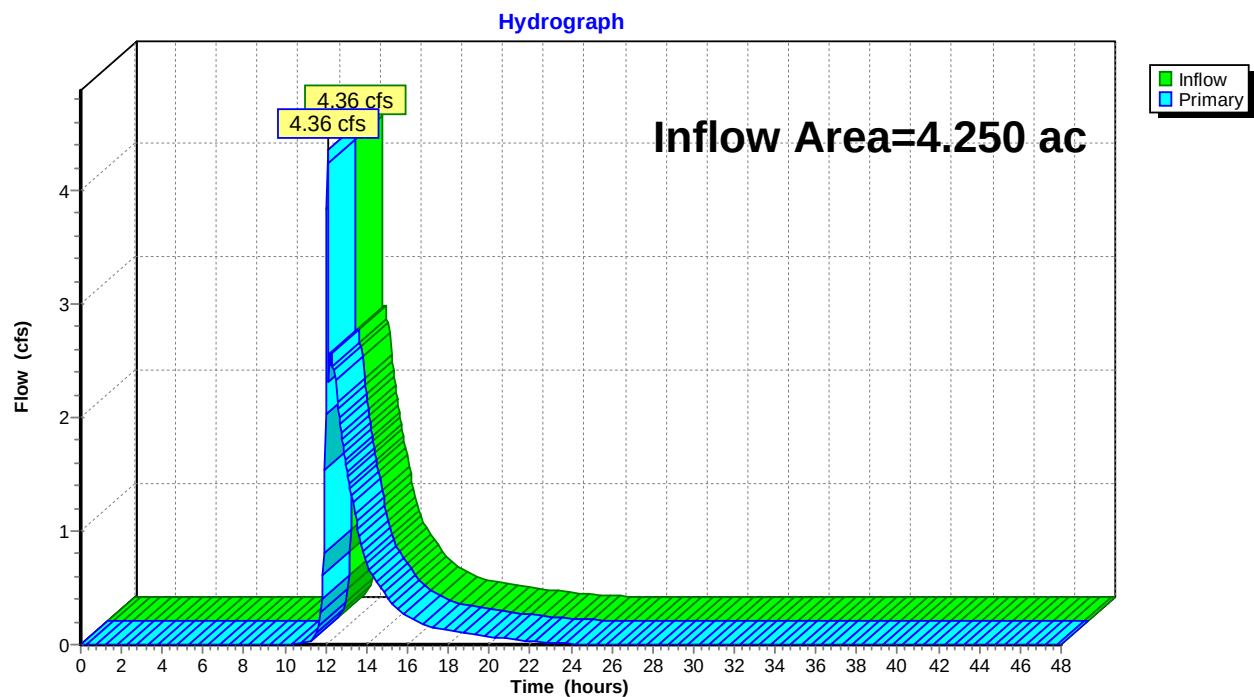
Summary for Pond 27P: Existing Wetlands

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.250 ac, 63.29% Impervious, Inflow Depth = 1.23" for 2-Year event
Inflow = 4.36 cfs @ 12.08 hrs, Volume= 0.436 af
Primary = 4.36 cfs @ 12.08 hrs, Volume= 0.436 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pond 27P: Existing Wetlands



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 24S: Area C Existing Runoff Area=0.660 ac 0.00% Impervious Runoff Depth=2.90"
Flow Length=200' Slope=0.0200 '/' Tc=1.5 min CN=87 Runoff=5.03 cfs 0.160 af

Subcatchment 25S: Area A Existing Runoff Area=1.800 ac 7.78% Impervious Runoff Depth=2.37"
Flow Length=600' Slope=0.0200 '/' Tc=4.4 min CN=81 Runoff=10.26 cfs 0.355 af

Subcatchment 29S: Area B Existing Runoff Area=1.120 ac 0.00% Impervious Runoff Depth=3.20"
Flow Length=600' Slope=0.0200 '/' Tc=4.4 min CN=90 Runoff=8.19 cfs 0.298 af

Subcatchment 30S: Area D Existing Runoff Area=0.660 ac 15.15% Impervious Runoff Depth=2.54"
Flow Length=200' Slope=0.0200 '/' Tc=1.5 min CN=83 Runoff=4.53 cfs 0.140 af

Subcatchment 31S: Area C Proposed Basin Runoff Area=0.610 ac 0.00% Impervious Runoff Depth=2.28"
Flow Length=200' Slope=0.0200 '/' Tc=1.2 min CN=80 Runoff=3.71 cfs 0.116 af

Subcatchment 32S: Area D Proposed Runoff Area=0.970 ac 7.22% Impervious Runoff Depth=2.37"
Flow Length=200' Slope=0.0200 '/' Tc=1.2 min CN=81 Runoff=6.09 cfs 0.191 af

Subcatchment 33S: Area A Proposed Runoff Area=2.500 ac 100.00% Impervious Runoff Depth=4.05"
Flow Length=600' Slope=0.0200 '/' Tc=3.5 min CN=98 Runoff=21.64 cfs 0.845 af

Subcatchment 34S: Area B Proposed Runoff Area=0.170 ac 70.59% Impervious Runoff Depth=3.50"
Flow Length=200' Slope=0.0200 '/' Tc=1.5 min CN=93 Runoff=1.44 cfs 0.050 af

Reach 22R: City Storm Sewer Inflow=11.71 cfs 0.891 af
Outflow=11.71 cfs 0.891 af

Reach 26R: City Storm Inflow=27.26 cfs 0.953 af
Outflow=27.26 cfs 0.953 af

Pond 19P: Filtration Basin Peak Elev=989.51' Storage=0.525 af Inflow=25.25 cfs 0.961 af
Discarded=0.08 cfs 0.176 af Primary=9.40 cfs 0.650 af Outflow=9.47 cfs 0.826 af

Pond 20P: West Wetland Inflow=22.54 cfs 0.793 af
Primary=22.54 cfs 0.793 af

Pond 21P: East Wetland Inflow=5.03 cfs 0.160 af
Primary=5.03 cfs 0.160 af

Pond 27P: Existing Wetlands Inflow=11.71 cfs 0.891 af
Primary=11.71 cfs 0.891 af

Total Runoff Area = 8.490 ac Runoff Volume = 2.154 af Average Runoff Depth = 3.05"
65.49% Pervious = 5.560 ac 34.51% Impervious = 2.930 ac

Summary for Subcatchment 24S: Area C Existing Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

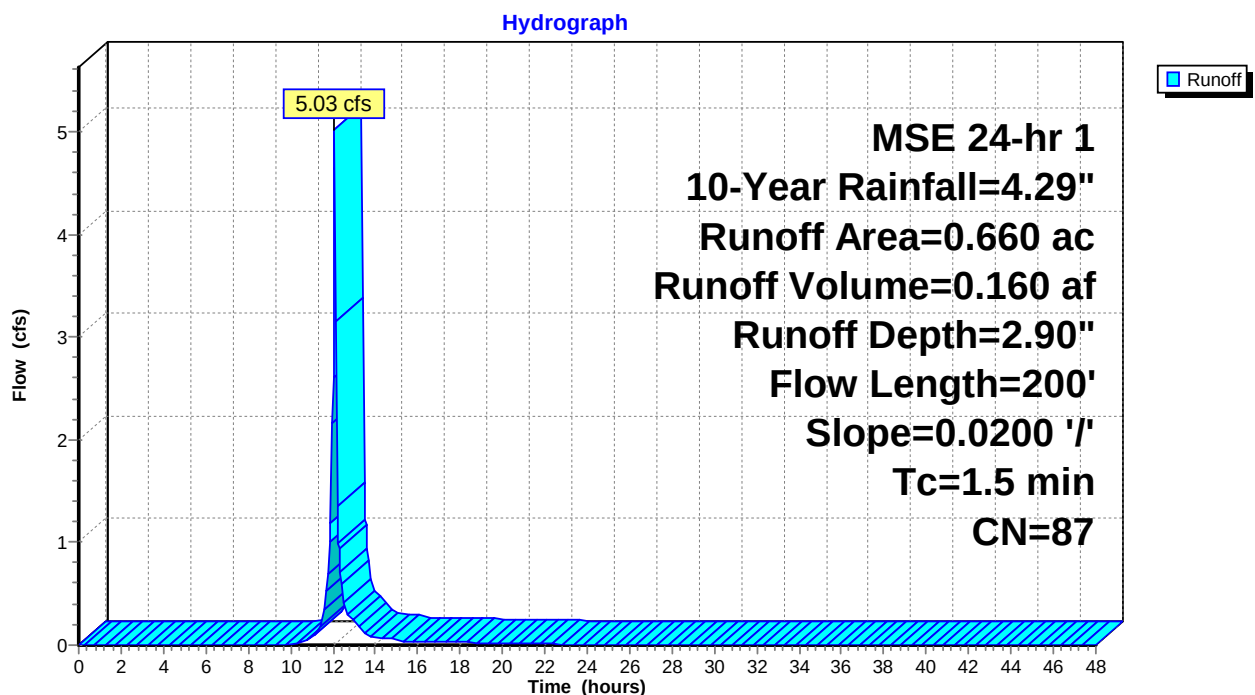
Runoff = 5.03 cfs @ 12.08 hrs, Volume= 0.160 af, Depth= 2.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 MSE 24-hr 1 10-Year Rainfall=4.29"

Area (ac)	CN	Description
0.360	80	>75% Grass cover, Good, HSG D
0.300	96	Gravel surface, HSG D
0.660	87	Weighted Average
0.660		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	200	0.0200	2.28		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps

Subcatchment 24S: Area C Existing Conditions



Summary for Subcatchment 25S: Area A Existing Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

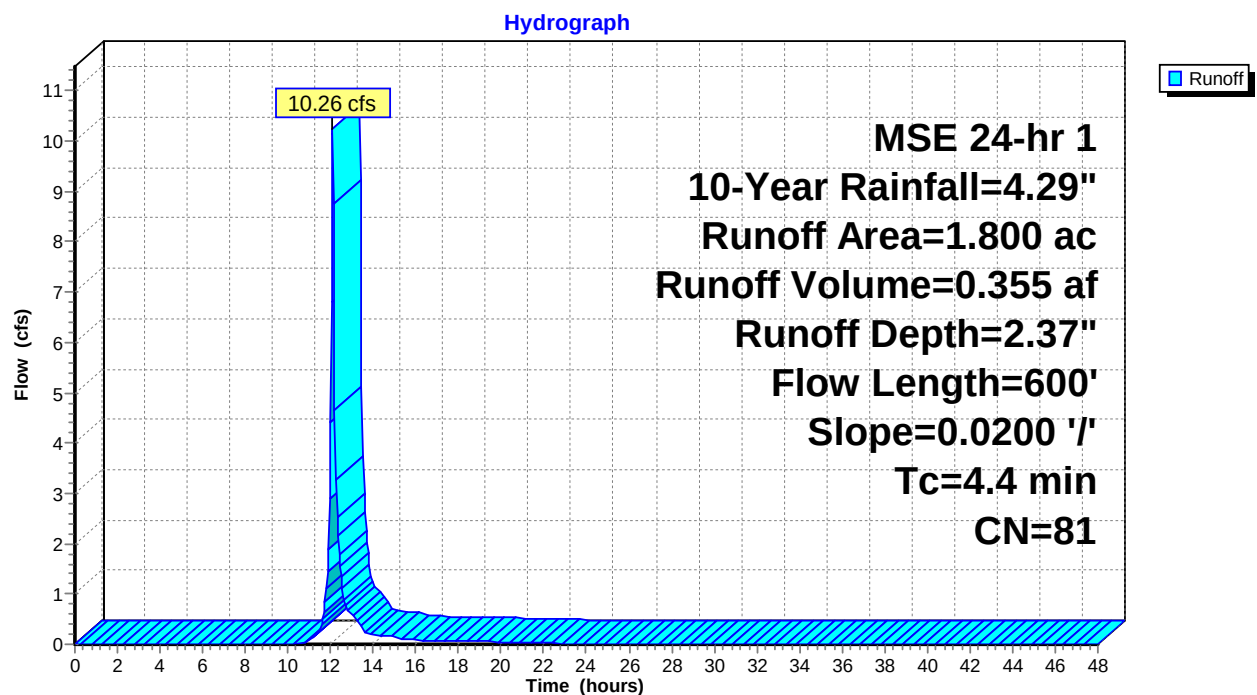
Runoff = 10.26 cfs @ 12.11 hrs, Volume= 0.355 af, Depth= 2.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 MSE 24-hr 1 10-Year Rainfall=4.29"

Area (ac)	CN	Description
1.660	80	>75% Grass cover, Good, HSG D
0.140	98	Paved parking, HSG D
1.800	81	Weighted Average
1.660		92.22% Pervious Area
0.140		7.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	600	0.0200	2.28		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps

Subcatchment 25S: Area A Existing Conditions



Summary for Subcatchment 29S: Area B Existing Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

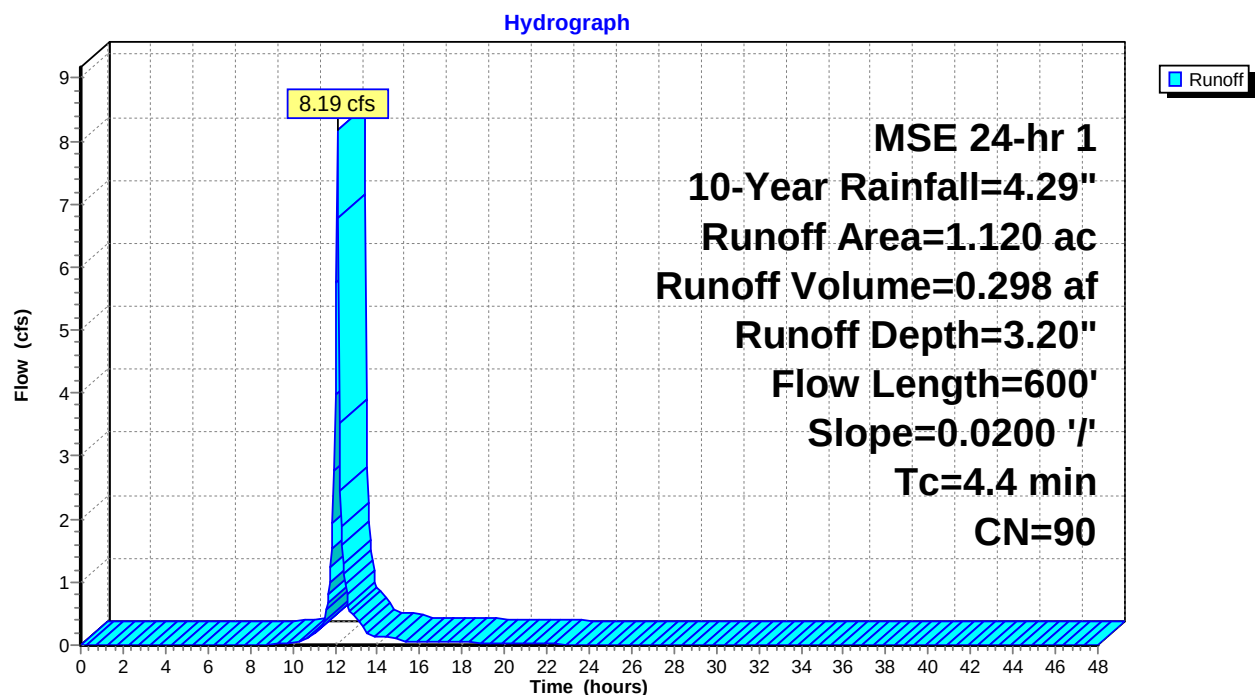
Runoff = 8.19 cfs @ 12.11 hrs, Volume= 0.298 af, Depth= 3.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 MSE 24-hr 1 10-Year Rainfall=4.29"

Area (ac)	CN	Description
0.410	80	>75% Grass cover, Good, HSG D
0.710	96	Gravel surface, HSG D
1.120	90	Weighted Average
1.120		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	600	0.0200	2.28		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps

Subcatchment 29S: Area B Existing Conditions



Summary for Subcatchment 30S: Area D Existing Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

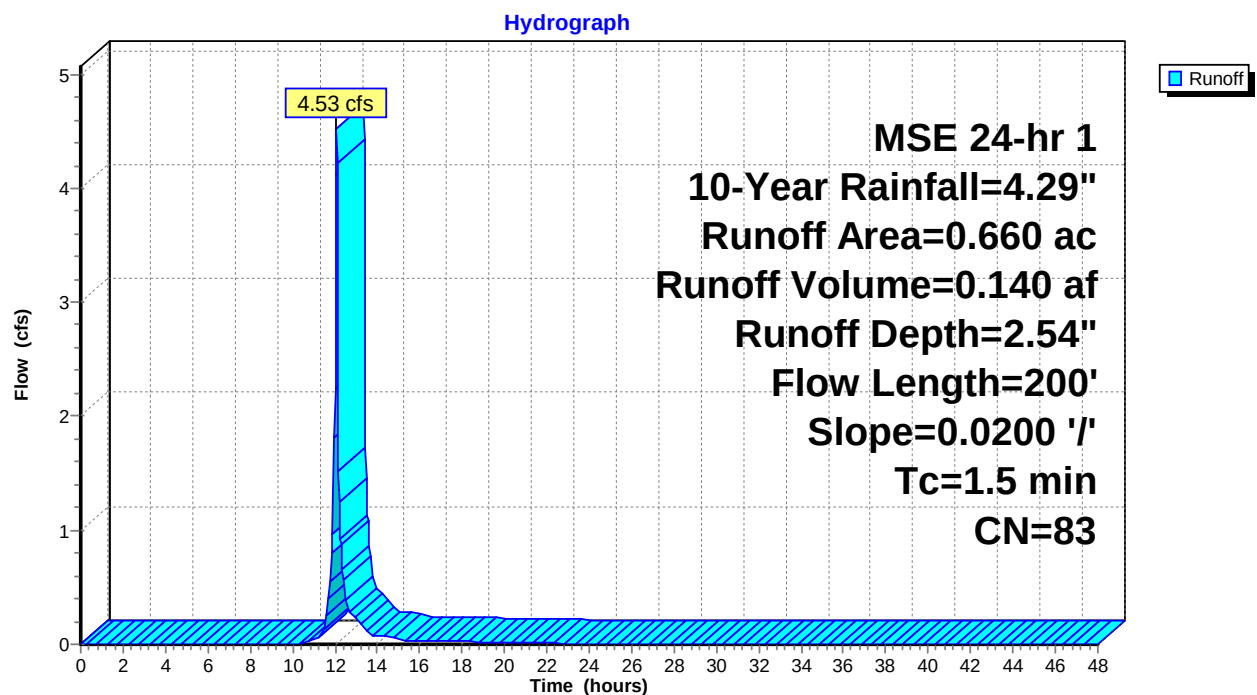
Runoff = 4.53 cfs @ 12.08 hrs, Volume= 0.140 af, Depth= 2.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 MSE 24-hr 1 10-Year Rainfall=4.29"

Area (ac)	CN	Description
0.560	80	>75% Grass cover, Good, HSG D
0.100	98	Paved parking, HSG D
0.660	83	Weighted Average
0.560		84.85% Pervious Area
0.100		15.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	200	0.0200	2.28		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps

Subcatchment 30S: Area D Existing Conditions



Summary for Subcatchment 31S: Area C Proposed Basin Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

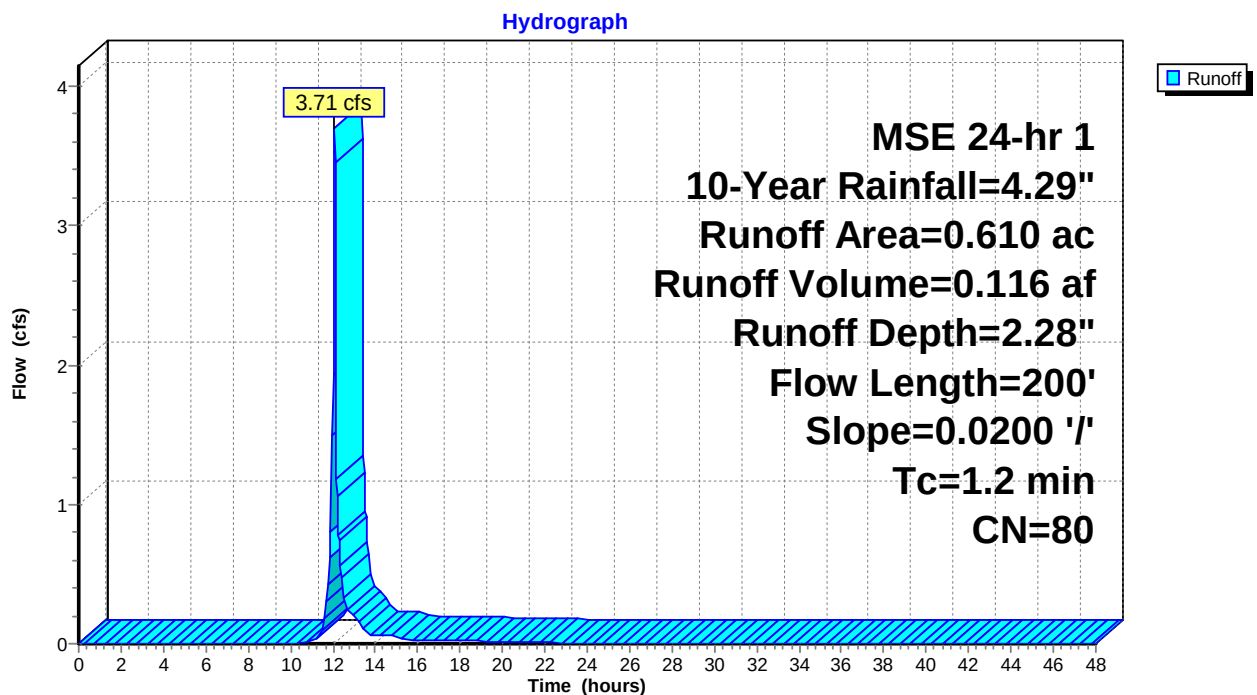
Runoff = 3.71 cfs @ 12.07 hrs, Volume= 0.116 af, Depth= 2.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 MSE 24-hr 1 10-Year Rainfall=4.29"

Area (ac)	CN	Description
0.610	80	>75% Grass cover, Good, HSG D
0.610		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	200	0.0200	2.87		Shallow Concentrated Flow, Paved Kv= 20.3 fps

Subcatchment 31S: Area C Proposed Basin Conditions



Summary for Subcatchment 32S: Area D Proposed Existing Wetland Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

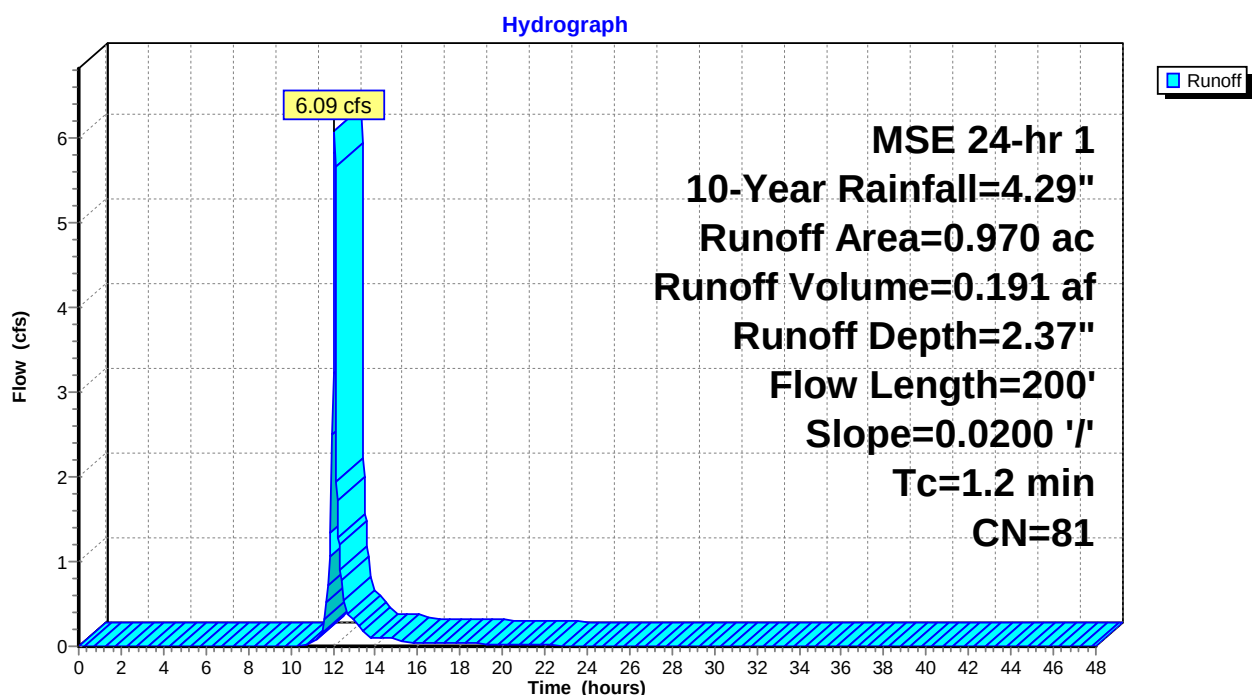
Runoff = 6.09 cfs @ 12.07 hrs, Volume= 0.191 af, Depth= 2.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 MSE 24-hr 1 10-Year Rainfall=4.29"

Area (ac)	CN	Description
0.900	80	>75% Grass cover, Good, HSG D
0.070	98	Paved parking, HSG D
0.970	81	Weighted Average
0.900		92.78% Pervious Area
0.070		7.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	200	0.0200	2.87		Shallow Concentrated Flow, Paved Kv= 20.3 fps

Subcatchment 32S: Area D Proposed Existing Wetland Conditions



Summary for Subcatchment 33S: Area A Proposed Parking/Roof Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

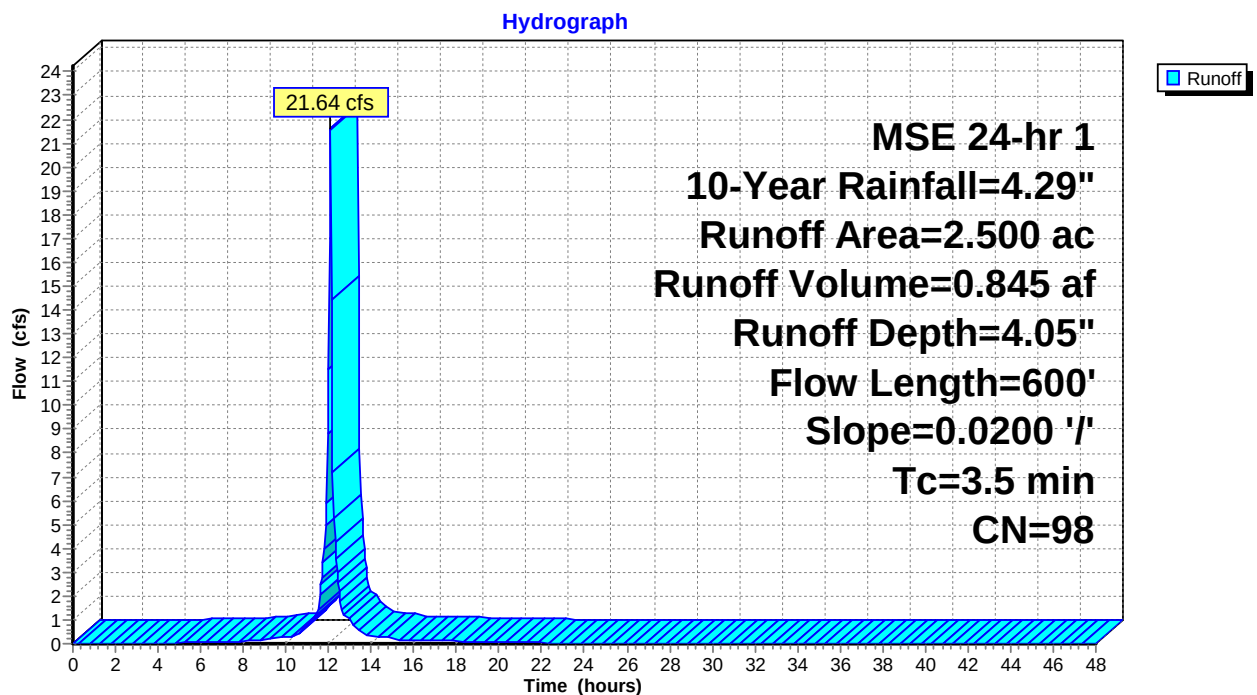
Runoff = 21.64 cfs @ 12.09 hrs, Volume= 0.845 af, Depth= 4.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 MSE 24-hr 1 10-Year Rainfall=4.29"

Area (ac)	CN	Description
2.500	98	Paved parking, HSG D
2.500		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.5	600	0.0200	2.87		Shallow Concentrated Flow, Paved Kv= 20.3 fps

Subcatchment 33S: Area A Proposed Parking/Roof Conditions



Summary for Subcatchment 34S: Area B Proposed Driveway Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

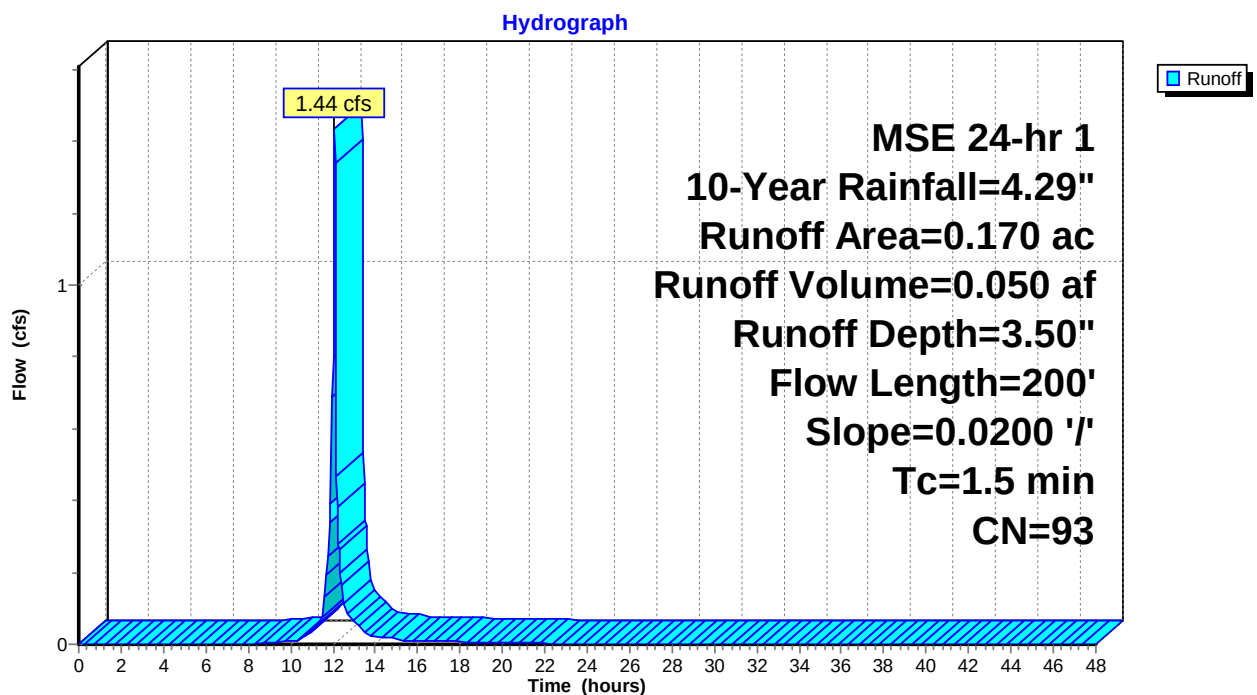
Runoff = 1.44 cfs @ 12.07 hrs, Volume= 0.050 af, Depth= 3.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 MSE 24-hr 1 10-Year Rainfall=4.29"

Area (ac)	CN	Description
0.050	80	>75% Grass cover, Good, HSG D
0.120	98	Paved parking, HSG D
0.170	93	Weighted Average
0.050		29.41% Pervious Area
0.120		70.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	200	0.0200	2.28		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps

Subcatchment 34S: Area B Proposed Driveway Conditions



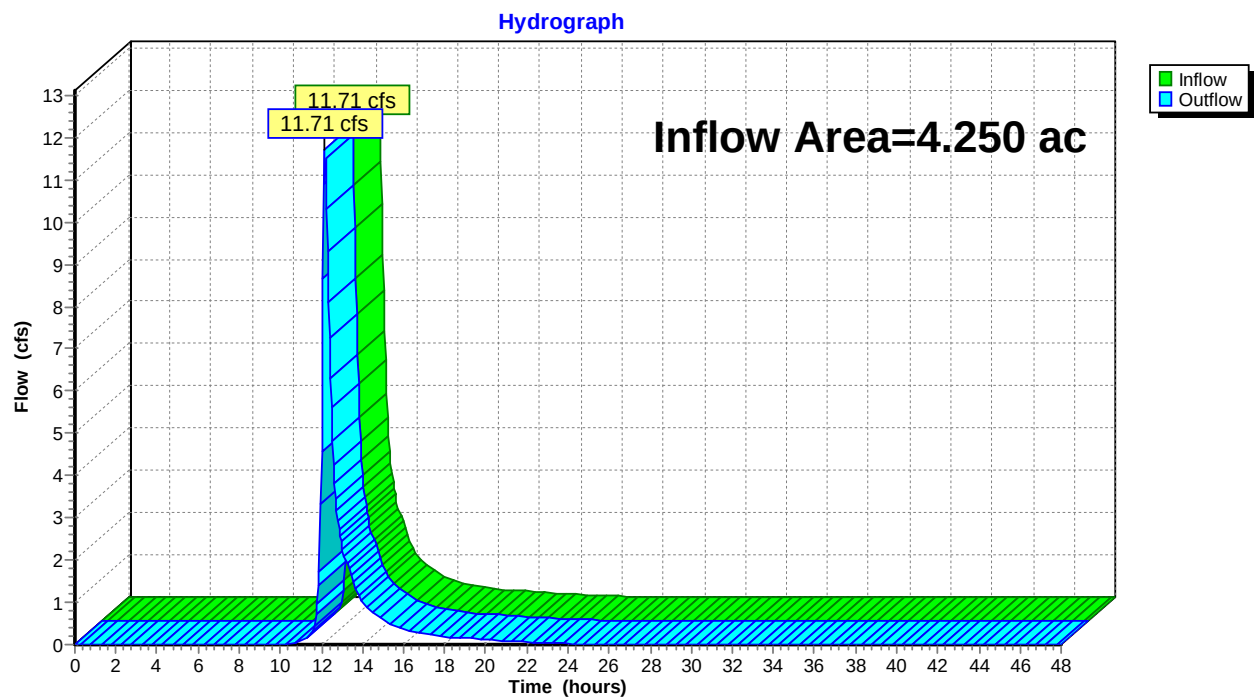
Summary for Reach 22R: City Storm Sewer

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.250 ac, 63.29% Impervious, Inflow Depth = 2.52" for 10-Year event
Inflow = 11.71 cfs @ 12.10 hrs, Volume= 0.891 af
Outflow = 11.71 cfs @ 12.10 hrs, Volume= 0.891 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Reach 22R: City Storm Sewer

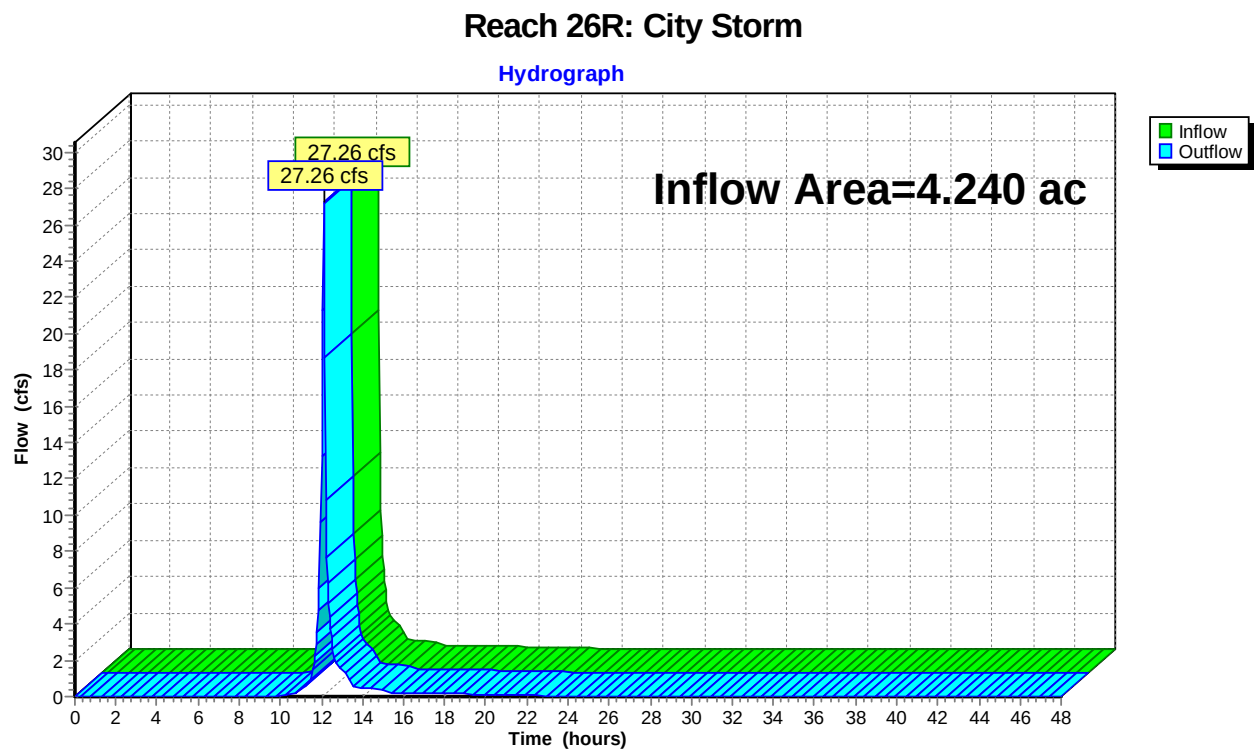


Summary for Reach 26R: City Storm

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.240 ac, 5.66% Impervious, Inflow Depth = 2.70" for 10-Year event
Inflow = 27.26 cfs @ 12.10 hrs, Volume= 0.953 af
Outflow = 27.26 cfs @ 12.10 hrs, Volume= 0.953 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs



Summary for Pond 19P: Filtration Basin

[95] Warning: Outlet Device #1 rise exceeded

Inflow Area = 3.110 ac, 80.39% Impervious, Inflow Depth = 3.71" for 10-Year event
 Inflow = 25.25 cfs @ 12.09 hrs, Volume= 0.961 af
 Outflow = 9.47 cfs @ 12.20 hrs, Volume= 0.826 af, Atten= 62%, Lag= 6.8 min
 Discarded = 0.08 cfs @ 12.20 hrs, Volume= 0.176 af
 Primary = 9.40 cfs @ 12.20 hrs, Volume= 0.650 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 989.51' @ 12.20 hrs Surf.Area= 0.255 ac Storage= 0.525 af

Plug-Flow detention time= 280.8 min calculated for 0.826 af (86% of inflow)
 Center-of-Mass det. time= 243.1 min (988.7 - 745.7)

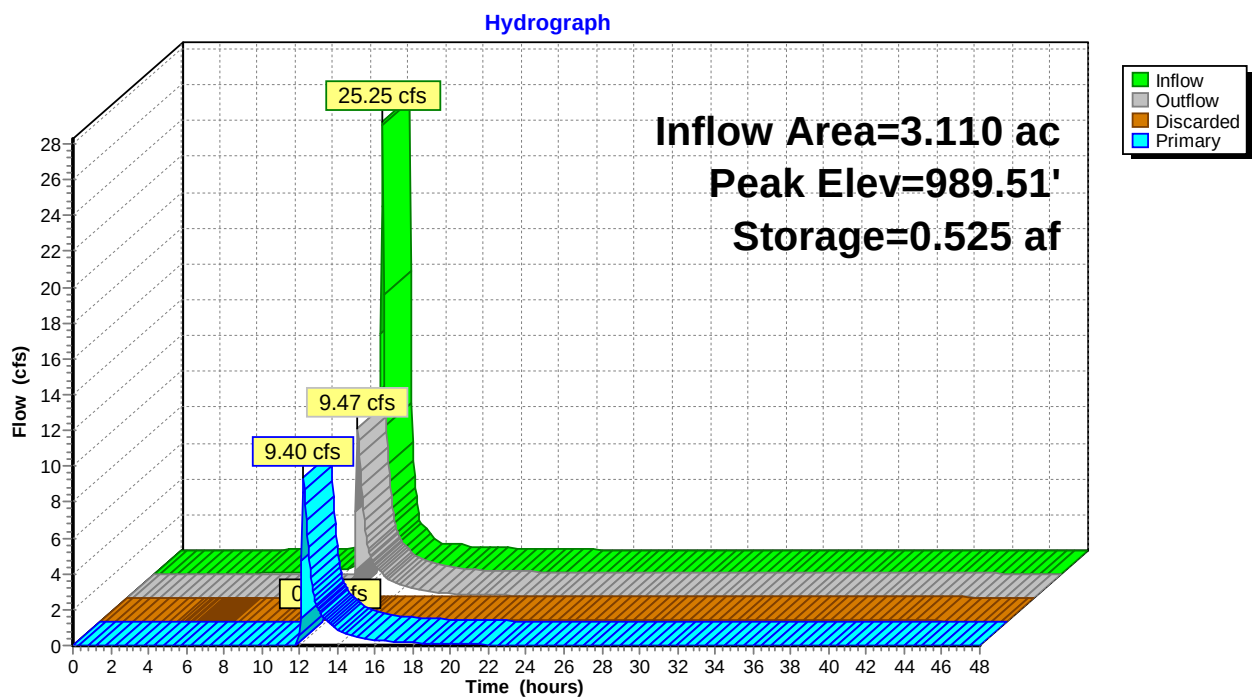
Volume	Invert	Avail.Storage	Storage Description
#1	987.00'	1.275 af	Custom Stage Data (Prismatic) Listed below
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
987.00	0.140	0.000	0.000
988.00	0.210	0.175	0.175
989.00	0.230	0.220	0.395
990.00	0.280	0.255	0.650
991.00	0.300	0.290	0.940
992.00	0.370	0.335	1.275

Device	Routing	Invert	Outlet Devices
#1	Device 2	988.25'	30.0 deg x 0.7' long x 1.00' rise Sharp-Crested Vee/Trap Weir Cv= 2.61 (C= 3.26)
#2	Primary	983.50'	30.0" Round Culvert L= 49.0' Ke= 1.000 Inlet / Outlet Invert= 983.50' / 983.30' S= 0.0041 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 4.91 sf
#3	Device 2	989.00'	5.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#4	Device 1	987.50'	15.0" Round Culvert L= 20.0' Ke= 1.000 Inlet / Outlet Invert= 987.50' / 987.00' S= 0.0250 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#5	Discarded	987.00'	0.200 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 983.00'

Discarded OutFlow Max=0.08 cfs @ 12.20 hrs HW=989.51' (Free Discharge)
 ↑ **5=Exfiltration** (Controls 0.08 cfs)

Primary OutFlow Max=9.34 cfs @ 12.20 hrs HW=989.51' (Free Discharge)
 ↑ **2=Culvert** (Passes 9.34 cfs of 38.66 cfs potential flow)
 ↑ **1=Sharp-Crested Vee/Trap Weir** (Orifice Controls 3.91 cfs @ 4.04 fps)
 ↑ **4=Culvert** (Passes 3.91 cfs of 4.97 cfs potential flow)
 ↑ **3=Broad-Crested Rectangular Weir** (Weir Controls 5.43 cfs @ 2.14 fps)

Pond 19P: Filtration Basin



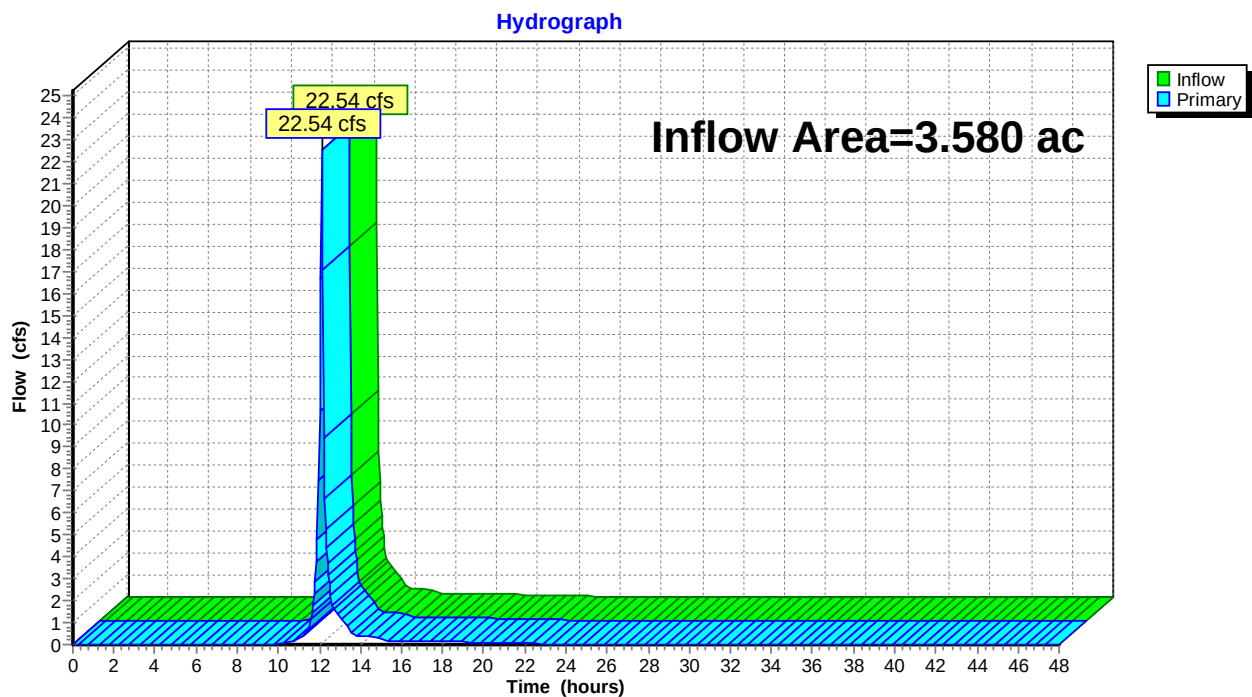
Summary for Pond 20P: West Wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.580 ac, 6.70% Impervious, Inflow Depth = 2.66" for 10-Year event
Inflow = 22.54 cfs @ 12.10 hrs, Volume= 0.793 af
Primary = 22.54 cfs @ 12.10 hrs, Volume= 0.793 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pond 20P: West Wetland



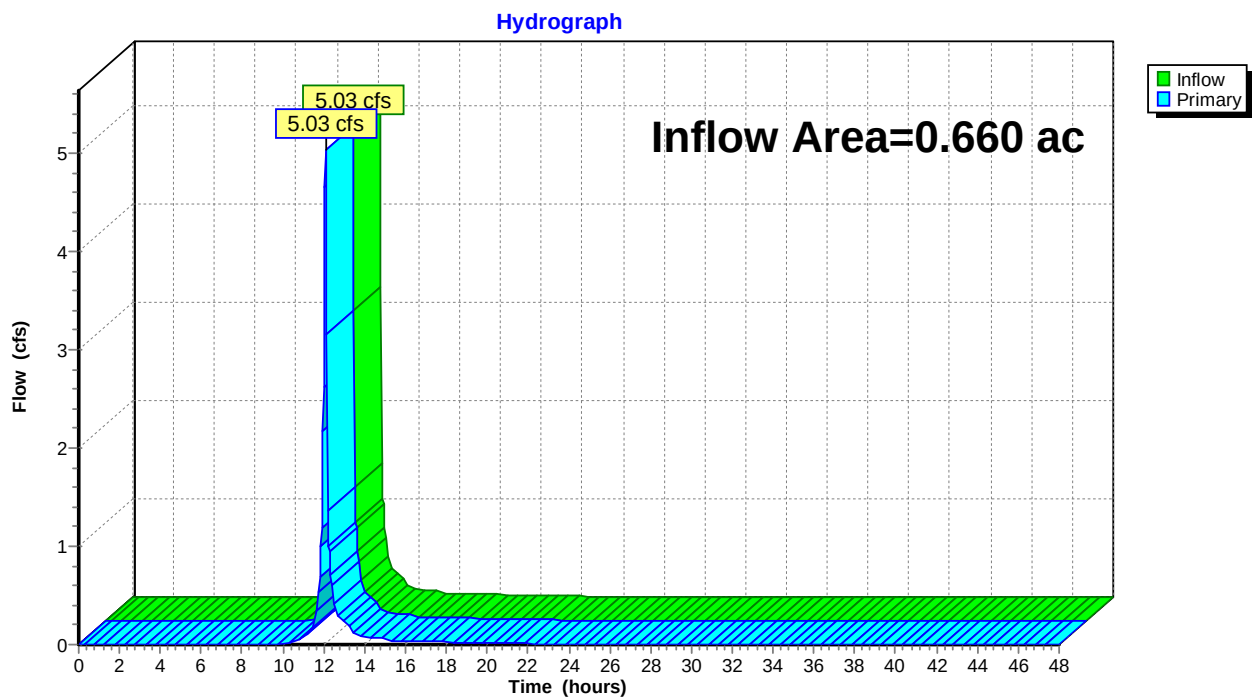
Summary for Pond 21P: East Wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.660 ac, 0.00% Impervious, Inflow Depth = 2.90" for 10-Year event
Inflow = 5.03 cfs @ 12.08 hrs, Volume= 0.160 af
Primary = 5.03 cfs @ 12.08 hrs, Volume= 0.160 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pond 21P: East Wetland



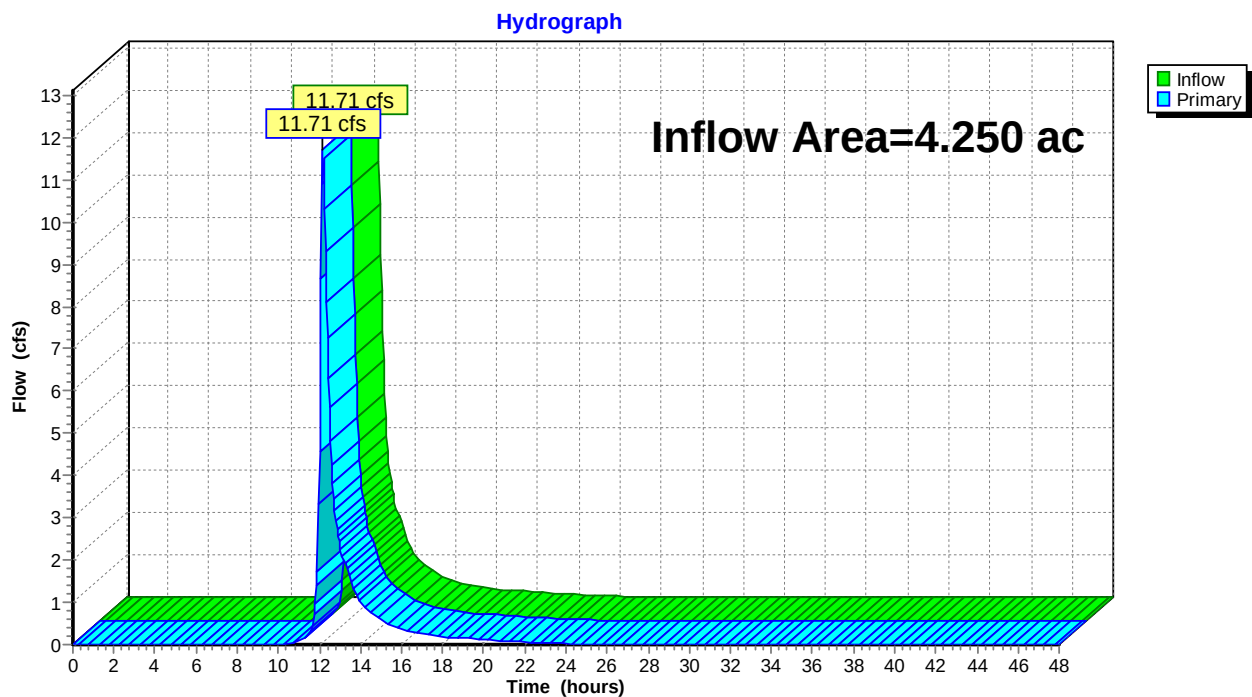
Summary for Pond 27P: Existing Wetlands

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.250 ac, 63.29% Impervious, Inflow Depth = 2.52" for 10-Year event
Inflow = 11.71 cfs @ 12.10 hrs, Volume= 0.891 af
Primary = 11.71 cfs @ 12.10 hrs, Volume= 0.891 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pond 27P: Existing Wetlands



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 24S: Area C Existing Runoff Area=0.660 ac 0.00% Impervious Runoff Depth=5.67"
Flow Length=200' Slope=0.0200 '/' Tc=1.5 min CN=87 Runoff=9.18 cfs 0.312 af

Subcatchment 25S: Area A Existing Runoff Area=1.800 ac 7.78% Impervious Runoff Depth=4.99"
Flow Length=600' Slope=0.0200 '/' Tc=4.4 min CN=81 Runoff=20.93 cfs 0.749 af

Subcatchment 29S: Area B Existing Runoff Area=1.120 ac 0.00% Impervious Runoff Depth=6.02"
Flow Length=600' Slope=0.0200 '/' Tc=4.4 min CN=90 Runoff=14.81 cfs 0.562 af

Subcatchment 30S: Area D Existing Runoff Area=0.660 ac 15.15% Impervious Runoff Depth=5.22"
Flow Length=200' Slope=0.0200 '/' Tc=1.5 min CN=83 Runoff=8.67 cfs 0.287 af

Subcatchment 31S: Area C Proposed Basin Runoff Area=0.610 ac 0.00% Impervious Runoff Depth=4.88"
Flow Length=200' Slope=0.0200 '/' Tc=1.2 min CN=80 Runoff=7.65 cfs 0.248 af

Subcatchment 32S: Area D Proposed Runoff Area=0.970 ac 7.22% Impervious Runoff Depth=4.99"
Flow Length=200' Slope=0.0200 '/' Tc=1.2 min CN=81 Runoff=12.38 cfs 0.403 af

Subcatchment 33S: Area A Proposed Runoff Area=2.500 ac 100.00% Impervious Runoff Depth=6.96"
Flow Length=600' Slope=0.0200 '/' Tc=3.5 min CN=98 Runoff=36.48 cfs 1.450 af

Subcatchment 34S: Area B Proposed Runoff Area=0.170 ac 70.59% Impervious Runoff Depth=6.37"
Flow Length=200' Slope=0.0200 '/' Tc=1.5 min CN=93 Runoff=2.52 cfs 0.090 af

Reach 22R: City Storm Sewer Inflow=37.63 cfs 1.869 af
Outflow=37.63 cfs 1.869 af

Reach 26R: City Storm Inflow=52.57 cfs 1.909 af
Outflow=52.57 cfs 1.909 af

Pond 19P: Filtration Basin Peak Elev=990.21' Storage=0.710 af Inflow=43.77 cfs 1.698 af
Discarded=0.09 cfs 0.185 af Primary=27.57 cfs 1.375 af Outflow=27.66 cfs 1.560 af

Pond 20P: West Wetland Inflow=43.78 cfs 1.597 af
Primary=43.78 cfs 1.597 af

Pond 21P: East Wetland Inflow=9.18 cfs 0.312 af
Primary=9.18 cfs 0.312 af

Pond 27P: Existing Wetlands Inflow=37.63 cfs 1.869 af
Primary=37.63 cfs 1.869 af

Total Runoff Area = 8.490 ac Runoff Volume = 4.101 af Average Runoff Depth = 5.80"
65.49% Pervious = 5.560 ac 34.51% Impervious = 2.930 ac

Summary for Subcatchment 24S: Area C Existing Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

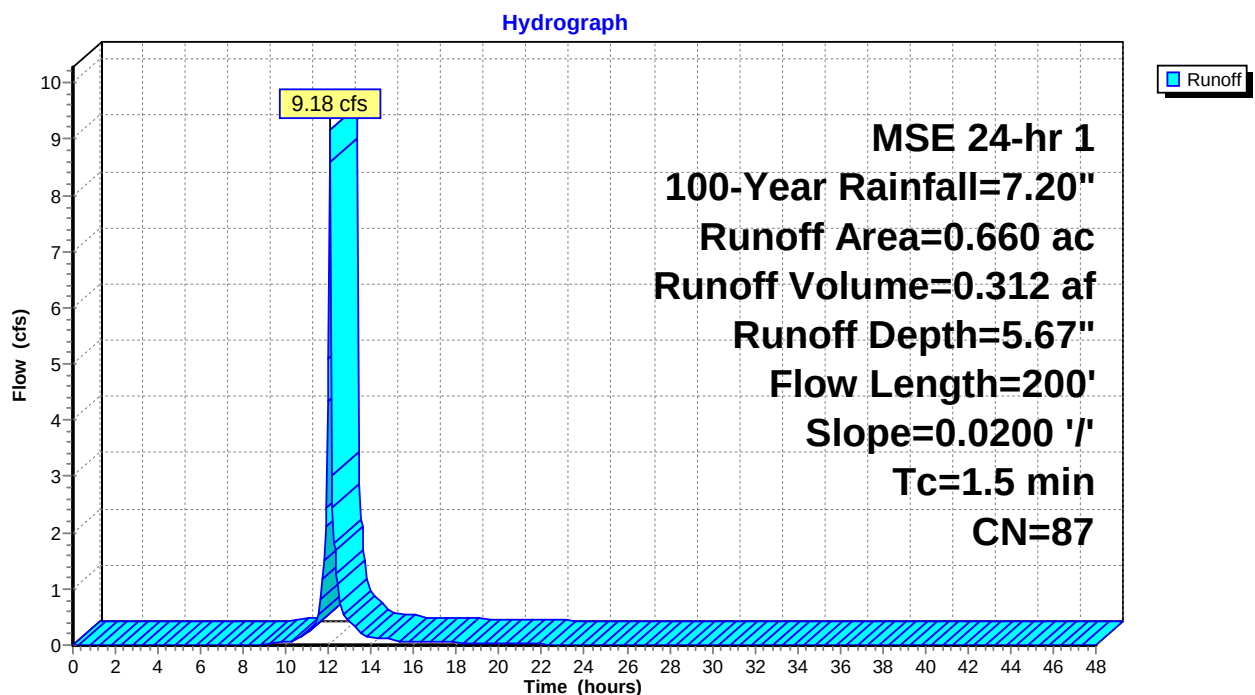
Runoff = 9.18 cfs @ 12.07 hrs, Volume= 0.312 af, Depth= 5.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 MSE 24-hr 1 100-Year Rainfall=7.20"

Area (ac)	CN	Description
0.360	80	>75% Grass cover, Good, HSG D
0.300	96	Gravel surface, HSG D
0.660	87	Weighted Average
0.660		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	200	0.0200	2.28		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps

Subcatchment 24S: Area C Existing Conditions



Summary for Subcatchment 25S: Area A Existing Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

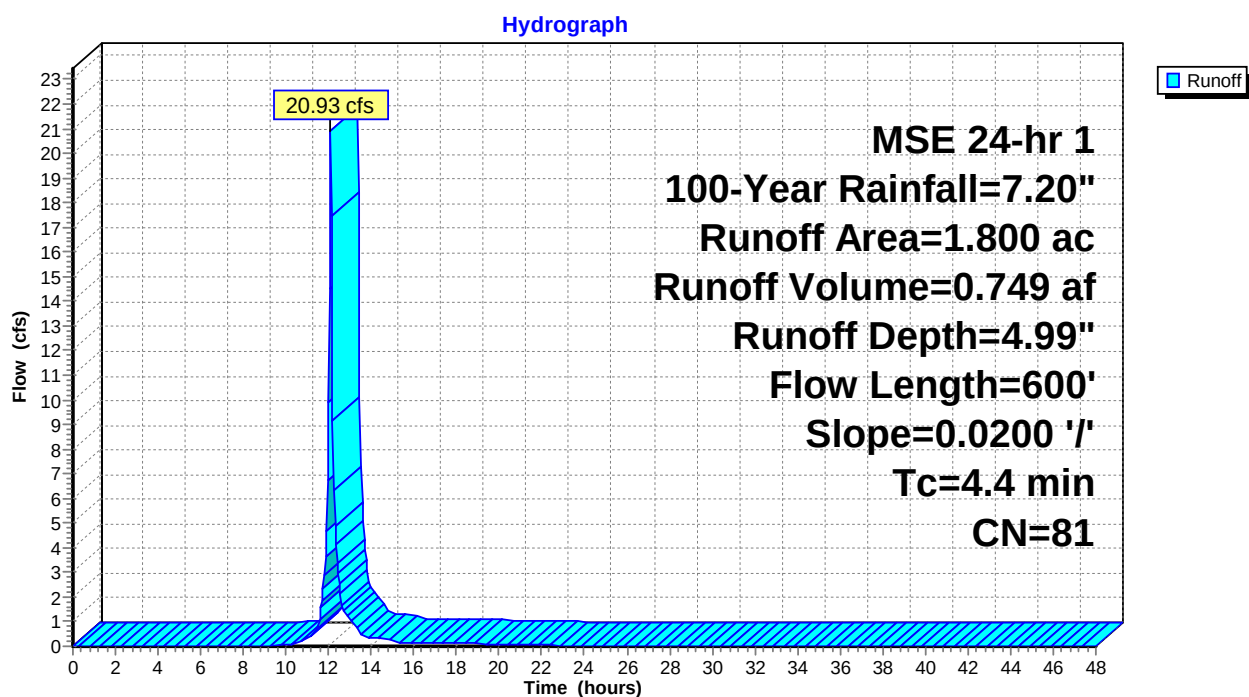
Runoff = 20.93 cfs @ 12.11 hrs, Volume= 0.749 af, Depth= 4.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 MSE 24-hr 1 100-Year Rainfall=7.20"

Area (ac)	CN	Description
1.660	80	>75% Grass cover, Good, HSG D
0.140	98	Paved parking, HSG D
1.800	81	Weighted Average
1.660		92.22% Pervious Area
0.140		7.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	600	0.0200	2.28		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps

Subcatchment 25S: Area A Existing Conditions



Summary for Subcatchment 29S: Area B Existing Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

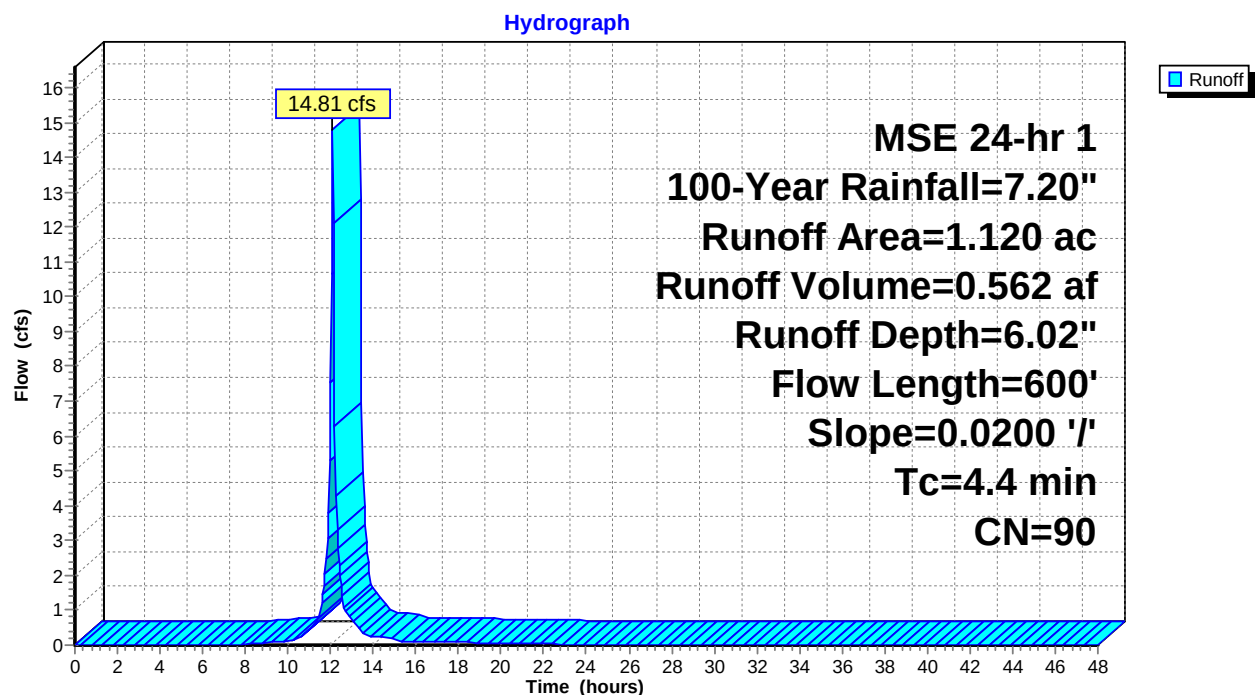
Runoff = 14.81 cfs @ 12.11 hrs, Volume= 0.562 af, Depth= 6.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 MSE 24-hr 1 100-Year Rainfall=7.20"

Area (ac)	CN	Description
0.410	80	>75% Grass cover, Good, HSG D
0.710	96	Gravel surface, HSG D
1.120	90	Weighted Average
1.120		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	600	0.0200	2.28		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps

Subcatchment 29S: Area B Existing Conditions



Summary for Subcatchment 30S: Area D Existing Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

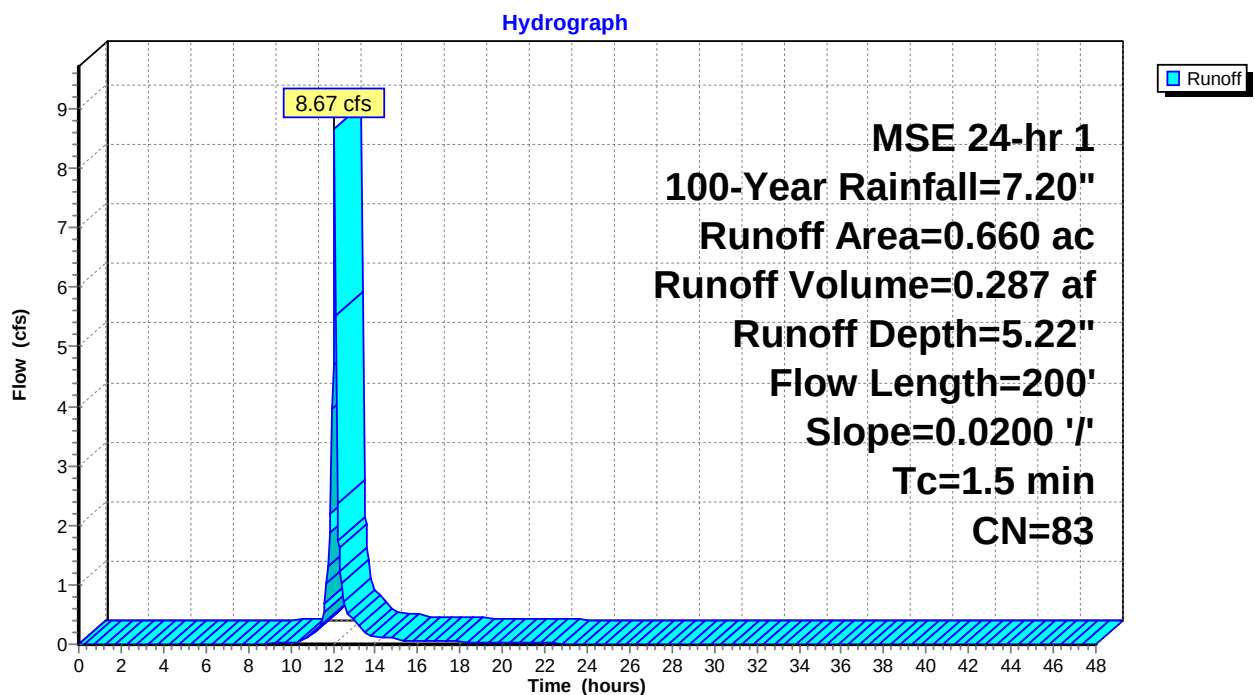
Runoff = 8.67 cfs @ 12.07 hrs, Volume= 0.287 af, Depth= 5.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 MSE 24-hr 1 100-Year Rainfall=7.20"

Area (ac)	CN	Description
0.560	80	>75% Grass cover, Good, HSG D
0.100	98	Paved parking, HSG D
0.660	83	Weighted Average
0.560		84.85% Pervious Area
0.100		15.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	200	0.0200	2.28		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps

Subcatchment 30S: Area D Existing Conditions



Summary for Subcatchment 31S: Area C Proposed Basin Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

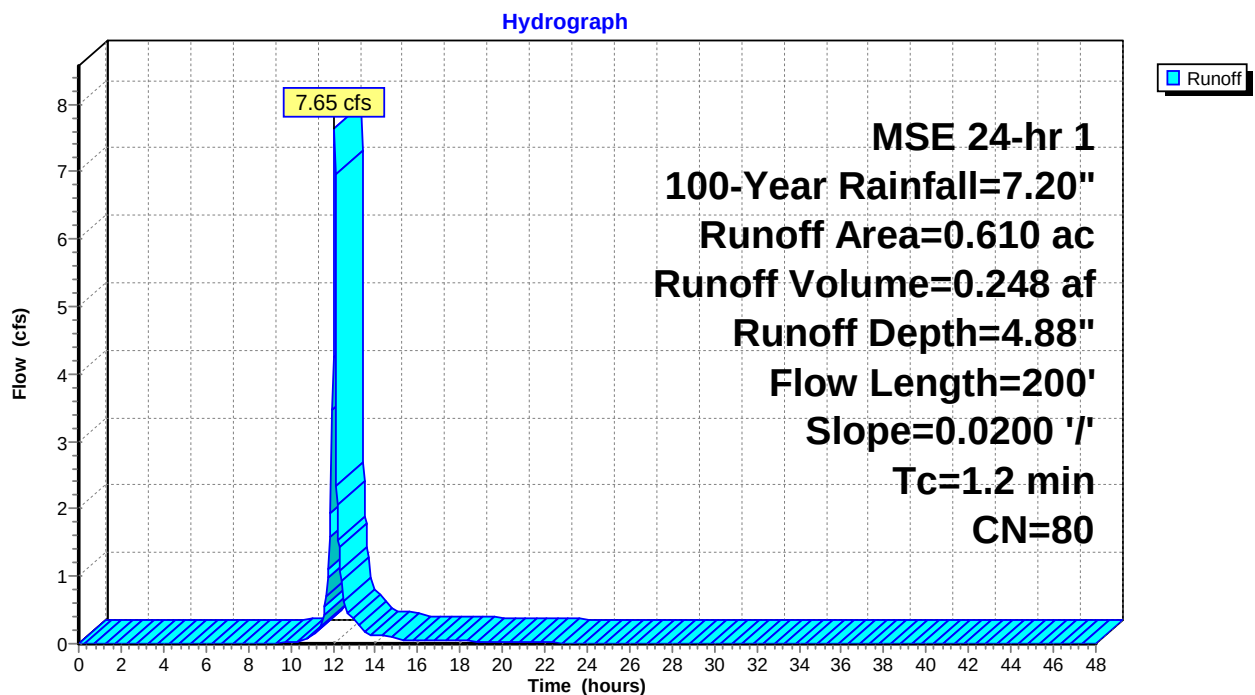
Runoff = 7.65 cfs @ 12.07 hrs, Volume= 0.248 af, Depth= 4.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 MSE 24-hr 1 100-Year Rainfall=7.20"

Area (ac)	CN	Description
0.610	80	>75% Grass cover, Good, HSG D
0.610		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	200	0.0200	2.87		Shallow Concentrated Flow, Paved Kv= 20.3 fps

Subcatchment 31S: Area C Proposed Basin Conditions



Summary for Subcatchment 32S: Area D Proposed Existing Wetland Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

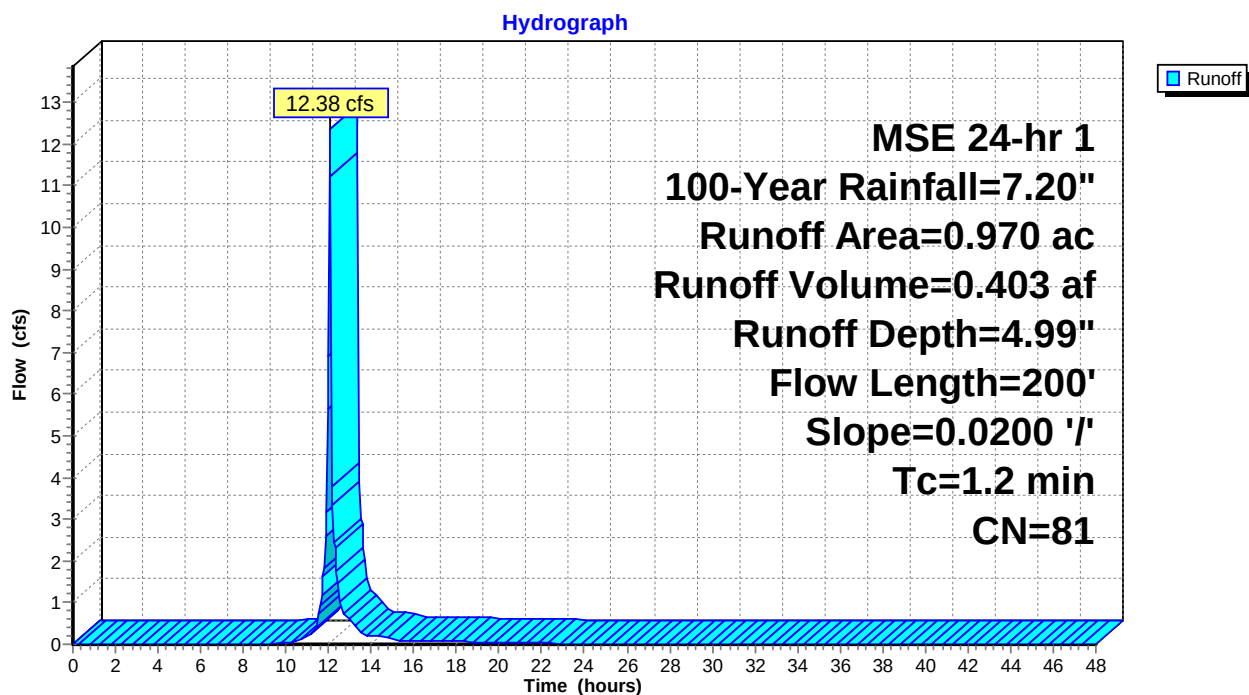
Runoff = 12.38 cfs @ 12.07 hrs, Volume= 0.403 af, Depth= 4.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 MSE 24-hr 1 100-Year Rainfall=7.20"

Area (ac)	CN	Description
0.900	80	>75% Grass cover, Good, HSG D
0.070	98	Paved parking, HSG D
0.970	81	Weighted Average
0.900		92.78% Pervious Area
0.070		7.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	200	0.0200	2.87		Shallow Concentrated Flow, Paved Kv= 20.3 fps

Subcatchment 32S: Area D Proposed Existing Wetland Conditions



Summary for Subcatchment 33S: Area A Proposed Parking/Roof Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

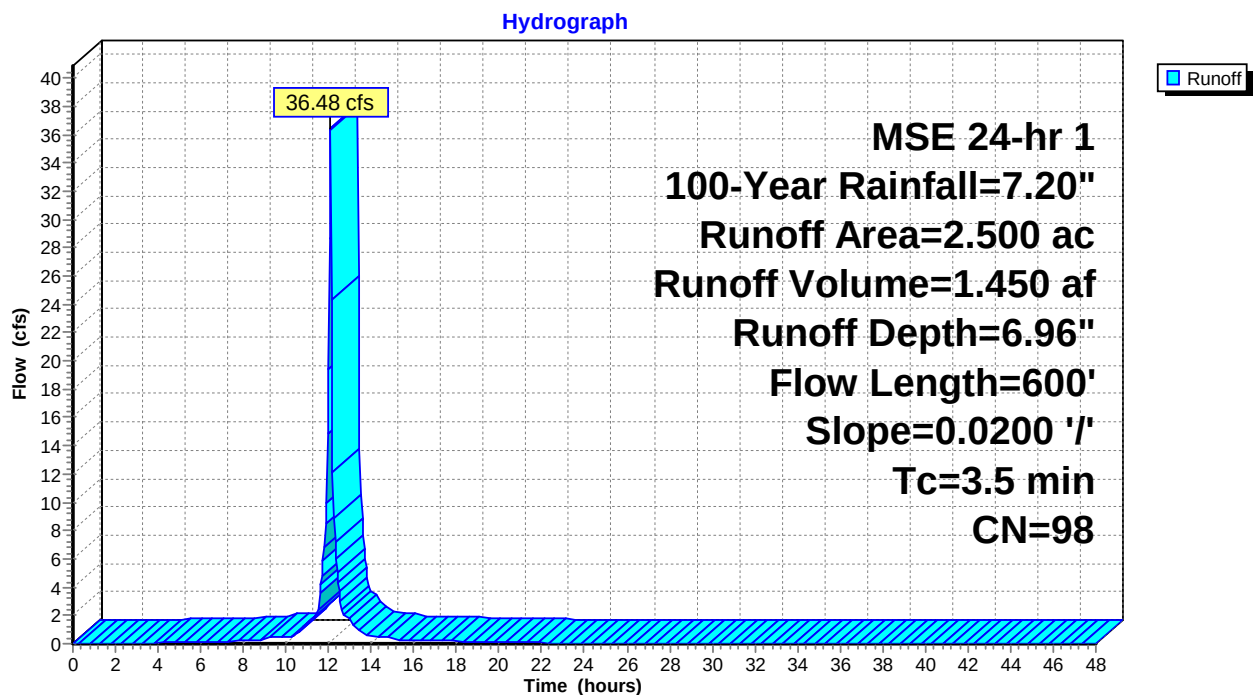
Runoff = 36.48 cfs @ 12.09 hrs, Volume= 1.450 af, Depth= 6.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 MSE 24-hr 1 100-Year Rainfall=7.20"

Area (ac)	CN	Description
2.500	98	Paved parking, HSG D
2.500		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.5	600	0.0200	2.87		Shallow Concentrated Flow, Paved Kv= 20.3 fps

Subcatchment 33S: Area A Proposed Parking/Roof Conditions



Summary for Subcatchment 34S: Area B Proposed Driveway Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

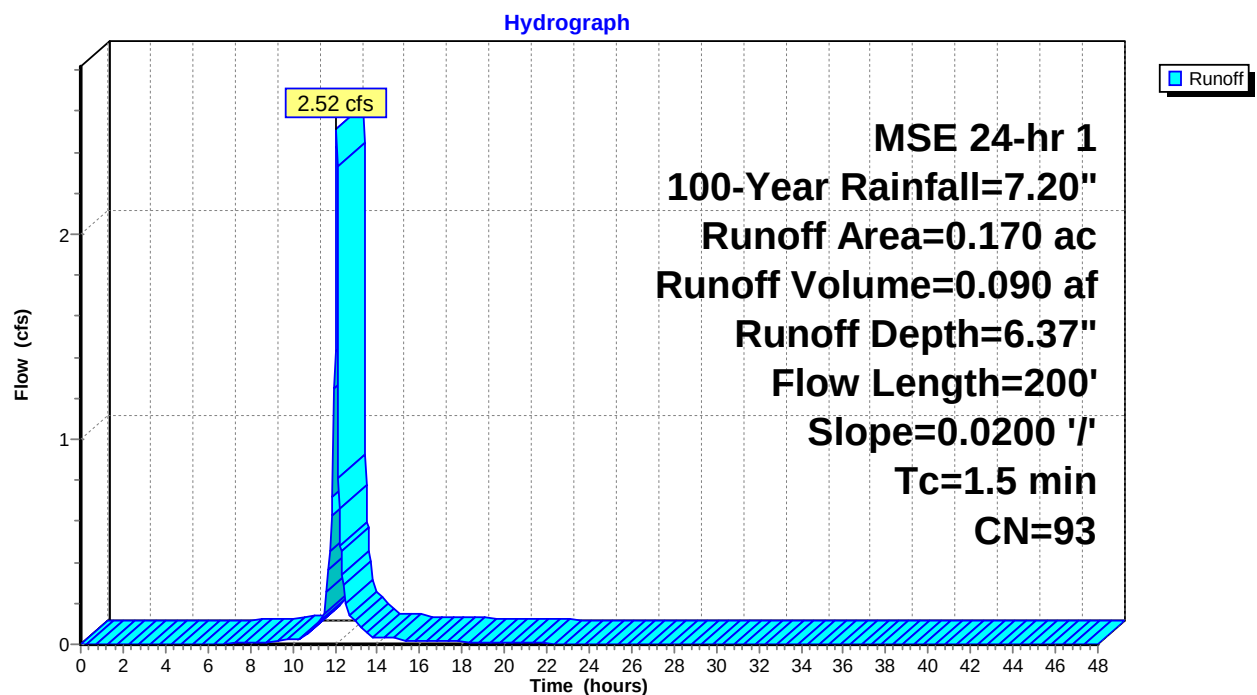
Runoff = 2.52 cfs @ 12.07 hrs, Volume= 0.090 af, Depth= 6.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 MSE 24-hr 1 100-Year Rainfall=7.20"

Area (ac)	CN	Description
0.050	80	>75% Grass cover, Good, HSG D
0.120	98	Paved parking, HSG D
0.170	93	Weighted Average
0.050		29.41% Pervious Area
0.120		70.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	200	0.0200	2.28		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps

Subcatchment 34S: Area B Proposed Driveway Conditions



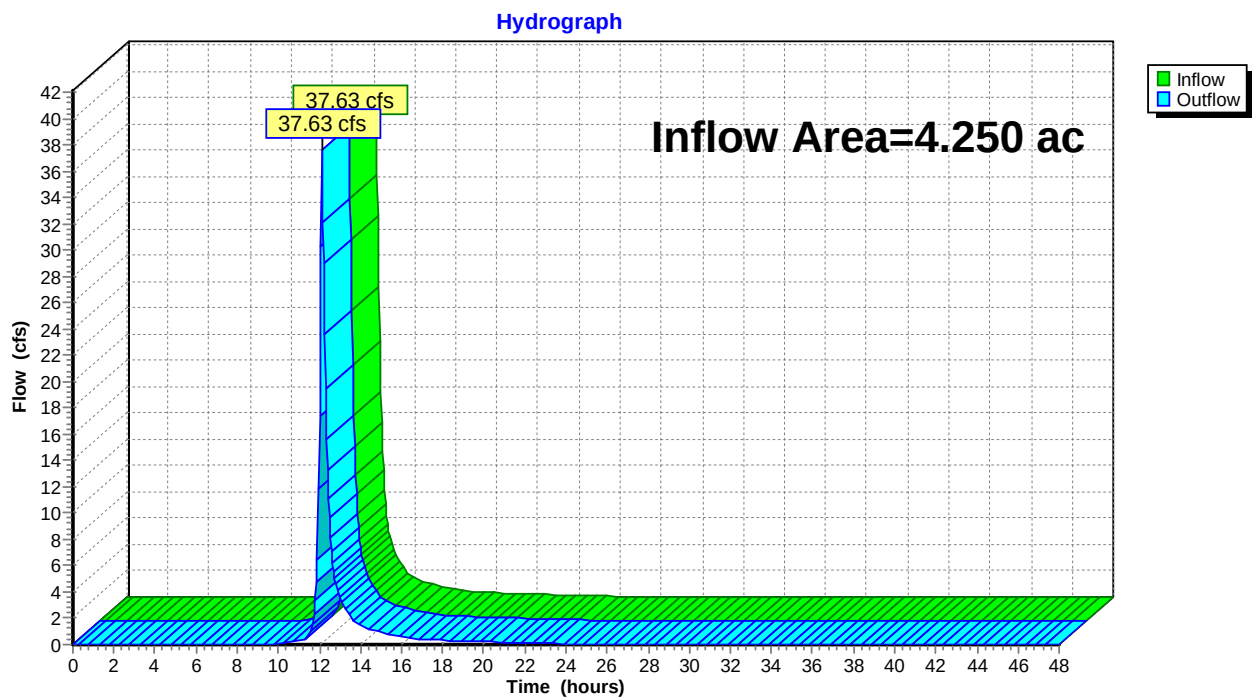
Summary for Reach 22R: City Storm Sewer

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.250 ac, 63.29% Impervious, Inflow Depth = 5.28" for 100-Year event
Inflow = 37.63 cfs @ 12.10 hrs, Volume= 1.869 af
Outflow = 37.63 cfs @ 12.10 hrs, Volume= 1.869 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Reach 22R: City Storm Sewer



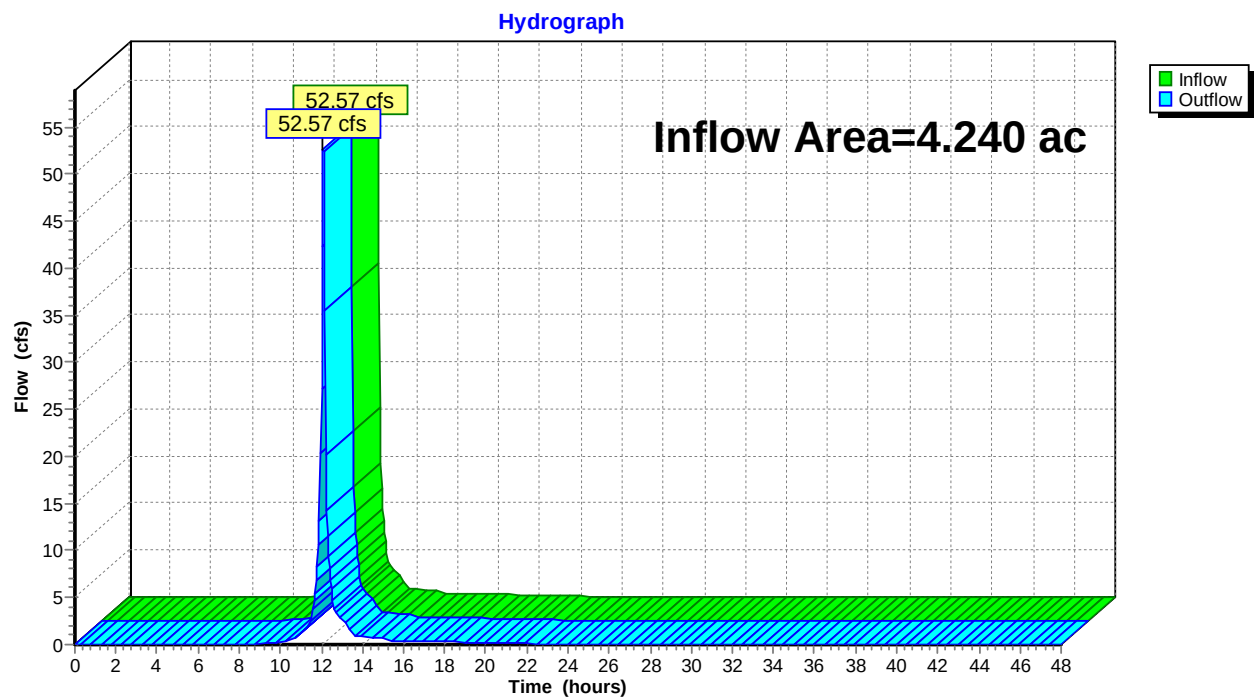
Summary for Reach 26R: City Storm

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.240 ac, 5.66% Impervious, Inflow Depth = 5.40" for 100-Year event
Inflow = 52.57 cfs @ 12.09 hrs, Volume= 1.909 af
Outflow = 52.57 cfs @ 12.09 hrs, Volume= 1.909 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Reach 26R: City Storm



Summary for Pond 19P: Filtration Basin

[95] Warning: Outlet Device #1 rise exceeded

Inflow Area = 3.110 ac, 80.39% Impervious, Inflow Depth = 6.55" for 100-Year event
 Inflow = 43.77 cfs @ 12.09 hrs, Volume= 1.698 af
 Outflow = 27.66 cfs @ 12.15 hrs, Volume= 1.560 af, Atten= 37%, Lag= 3.8 min
 Discarded = 0.09 cfs @ 12.15 hrs, Volume= 0.185 af
 Primary = 27.57 cfs @ 12.15 hrs, Volume= 1.375 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 990.21' @ 12.15 hrs Surf.Area= 0.284 ac Storage= 0.710 af

Plug-Flow detention time= 175.0 min calculated for 1.558 af (92% of inflow)
 Center-of-Mass det. time= 147.6 min (888.4 - 740.8)

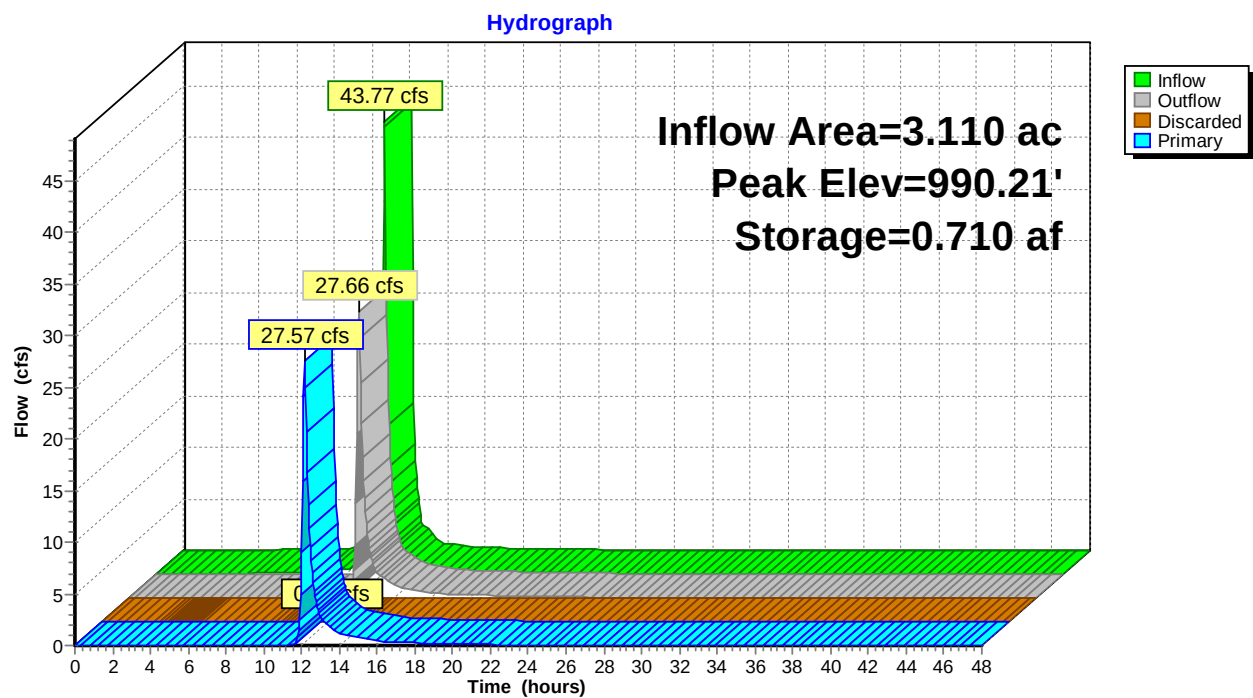
Volume	Invert	Avail.Storage	Storage Description
#1	987.00'	1.275 af	Custom Stage Data (Prismatic) Listed below
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
987.00	0.140	0.000	0.000
988.00	0.210	0.175	0.175
989.00	0.230	0.220	0.395
990.00	0.280	0.255	0.650
991.00	0.300	0.290	0.940
992.00	0.370	0.335	1.275

Device	Routing	Invert	Outlet Devices
#1	Device 2	988.25'	30.0 deg x 0.7' long x 1.00' rise Sharp-Crested Vee/Trap Weir Cv= 2.61 (C= 3.26)
#2	Primary	983.50'	30.0" Round Culvert L= 49.0' Ke= 1.000 Inlet / Outlet Invert= 983.50' / 983.30' S= 0.0041 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 4.91 sf
#3	Device 2	989.00'	5.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#4	Device 1	987.50'	15.0" Round Culvert L= 20.0' Ke= 1.000 Inlet / Outlet Invert= 987.50' / 987.00' S= 0.0250 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#5	Discarded	987.00'	0.200 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 983.00'

Discarded OutFlow Max=0.09 cfs @ 12.15 hrs HW=990.20' (Free Discharge)
 ↑5=Exfiltration (Controls 0.09 cfs)

Primary OutFlow Max=27.35 cfs @ 12.15 hrs HW=990.20' (Free Discharge)
 ↑2=Culvert (Passes 27.35 cfs of 41.38 cfs potential flow)
 ↑1=Sharp-Crested Vee/Trap Weir (Orifice Controls 5.58 cfs @ 5.76 fps)
 ↑4=Culvert (Passes 5.58 cfs of 6.19 cfs potential flow)
 ↑3=Broad-Crested Rectangular Weir (Weir Controls 21.77 cfs @ 3.63 fps)

Pond 19P: Filtration Basin



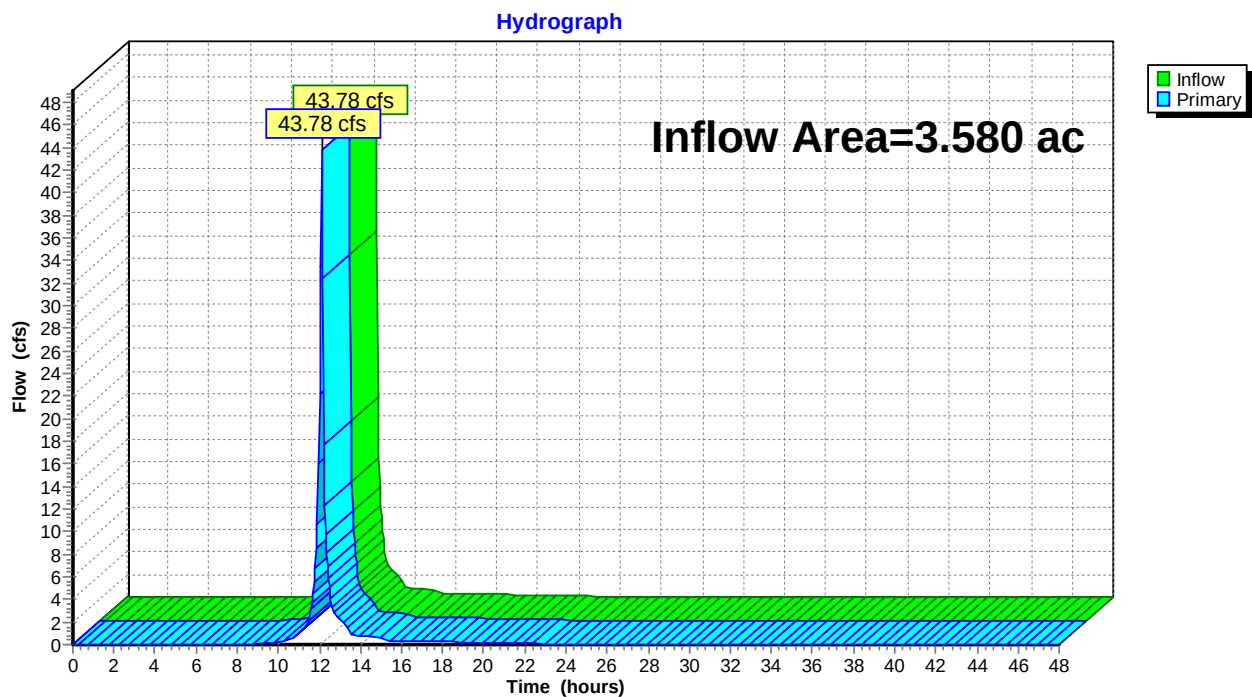
Summary for Pond 20P: West Wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.580 ac, 6.70% Impervious, Inflow Depth = 5.35" for 100-Year event
Inflow = 43.78 cfs @ 12.10 hrs, Volume= 1.597 af
Primary = 43.78 cfs @ 12.10 hrs, Volume= 1.597 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pond 20P: West Wetland



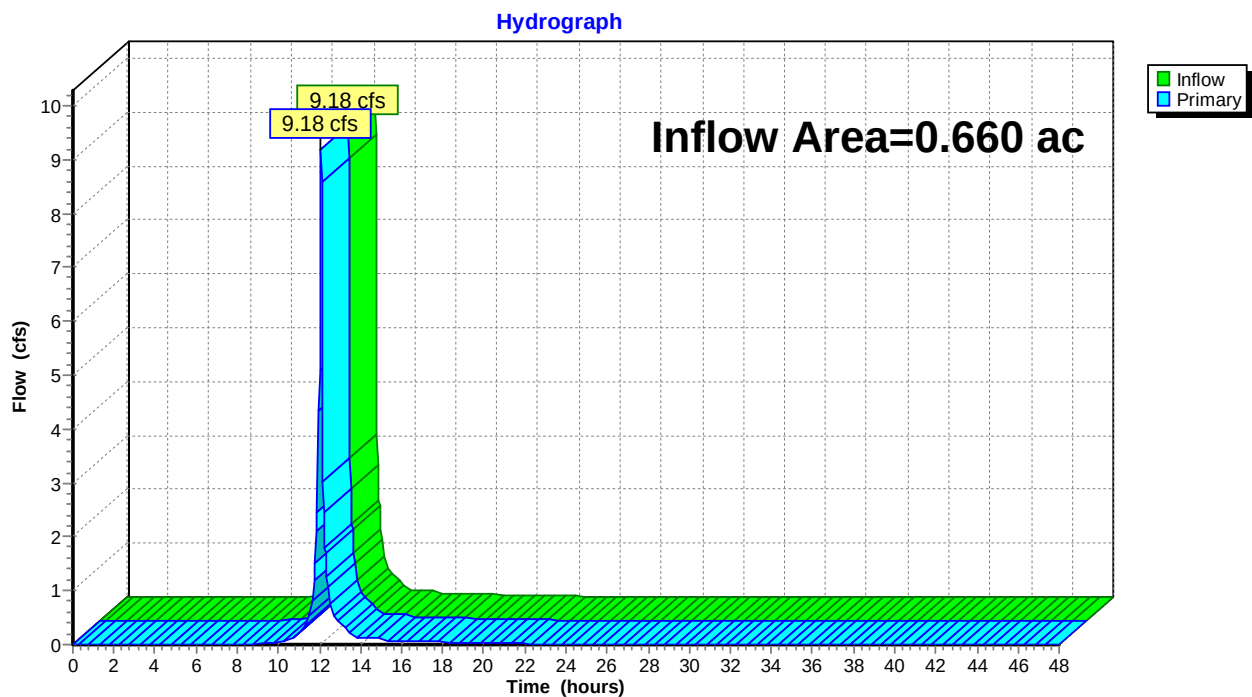
Summary for Pond 21P: East Wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.660 ac, 0.00% Impervious, Inflow Depth = 5.67" for 100-Year event
Inflow = 9.18 cfs @ 12.07 hrs, Volume= 0.312 af
Primary = 9.18 cfs @ 12.07 hrs, Volume= 0.312 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pond 21P: East Wetland



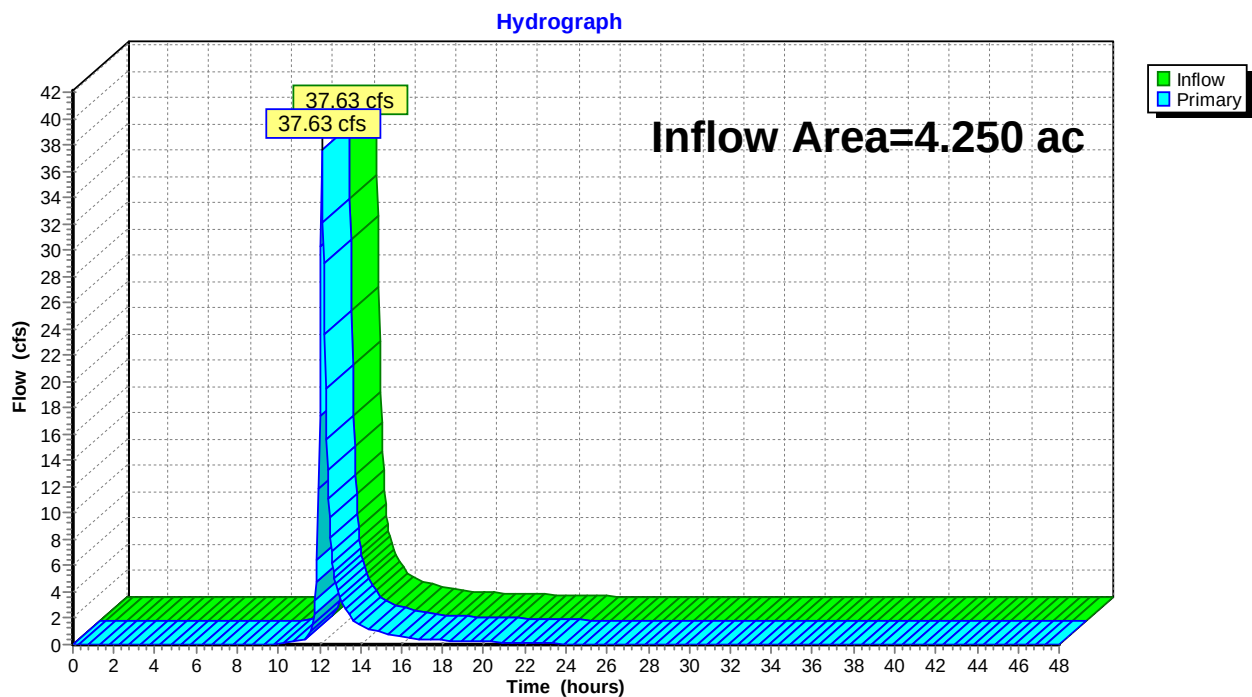
Summary for Pond 27P: Existing Wetlands

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.250 ac, 63.29% Impervious, Inflow Depth = 5.28" for 100-Year event
Inflow = 37.63 cfs @ 12.10 hrs, Volume= 1.869 af
Primary = 37.63 cfs @ 12.10 hrs, Volume= 1.869 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pond 27P: Existing Wetlands



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 24S: Area C Existing Runoff Area=0.660 ac 0.00% Impervious Runoff Depth=2.90"
 Flow Length=200' Slope=0.0200 '/' Tc=1.5 min CN=87 Runoff=3.59 cfs 0.160 af

Subcatchment 25S: Area A Existing Runoff Area=1.800 ac 7.78% Impervious Runoff Depth=2.37"
 Flow Length=600' Slope=0.0200 '/' Tc=4.4 min CN=81 Runoff=7.82 cfs 0.355 af

Subcatchment 29S: Area B Existing Runoff Area=1.120 ac 0.00% Impervious Runoff Depth=3.20"
 Flow Length=600' Slope=0.0200 '/' Tc=4.4 min CN=90 Runoff=6.23 cfs 0.298 af

Subcatchment 30S: Area D Existing Runoff Area=0.660 ac 15.15% Impervious Runoff Depth=2.54"
 Flow Length=200' Slope=0.0200 '/' Tc=1.5 min CN=83 Runoff=3.21 cfs 0.140 af

Subcatchment 31S: Area C Proposed Basin Runoff Area=0.610 ac 0.00% Impervious Runoff Depth=2.28"
 Flow Length=200' Slope=0.0200 '/' Tc=1.2 min CN=80 Runoff=2.74 cfs 0.116 af

Subcatchment 32S: Area D Proposed Runoff Area=0.970 ac 7.22% Impervious Runoff Depth=2.37"
 Flow Length=200' Slope=0.0200 '/' Tc=1.2 min CN=81 Runoff=4.50 cfs 0.191 af

Subcatchment 33S: Area A Proposed Runoff Area=2.500 ac 100.00% Impervious Runoff Depth=4.05"
 Flow Length=600' Slope=0.0200 '/' Tc=3.5 min CN=98 Runoff=16.11 cfs 0.845 af

Subcatchment 34S: Area B Proposed Runoff Area=0.170 ac 70.59% Impervious Runoff Depth=3.50"
 Flow Length=200' Slope=0.0200 '/' Tc=1.5 min CN=93 Runoff=1.05 cfs 0.050 af

Reach 22R: City Storm Sewer Inflow=9.14 cfs 0.868 af
 Outflow=9.14 cfs 0.868 af

Reach 26R: City Storm Inflow=20.25 cfs 0.953 af
 Outflow=20.25 cfs 0.953 af

Pond 19P: Filtration Basin Peak Elev=989.39' Storage=0.495 af Inflow=18.64 cfs 0.961 af
 Discarded=0.07 cfs 0.190 af Primary=7.09 cfs 0.627 af Outflow=7.17 cfs 0.817 af

Pond 20P: West Wetland Inflow=16.94 cfs 0.793 af
 Primary=16.94 cfs 0.793 af

Pond 21P: East Wetland Inflow=3.59 cfs 0.160 af
 Primary=3.59 cfs 0.160 af

Pond 27P: Existing Wetlands Inflow=9.14 cfs 0.868 af
 Primary=9.14 cfs 0.868 af

Total Runoff Area = 8.490 ac Runoff Volume = 2.154 af Average Runoff Depth = 3.05"
65.49% Pervious = 5.560 ac 34.51% Impervious = 2.930 ac

Summary for Subcatchment 24S: Area C Existing Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

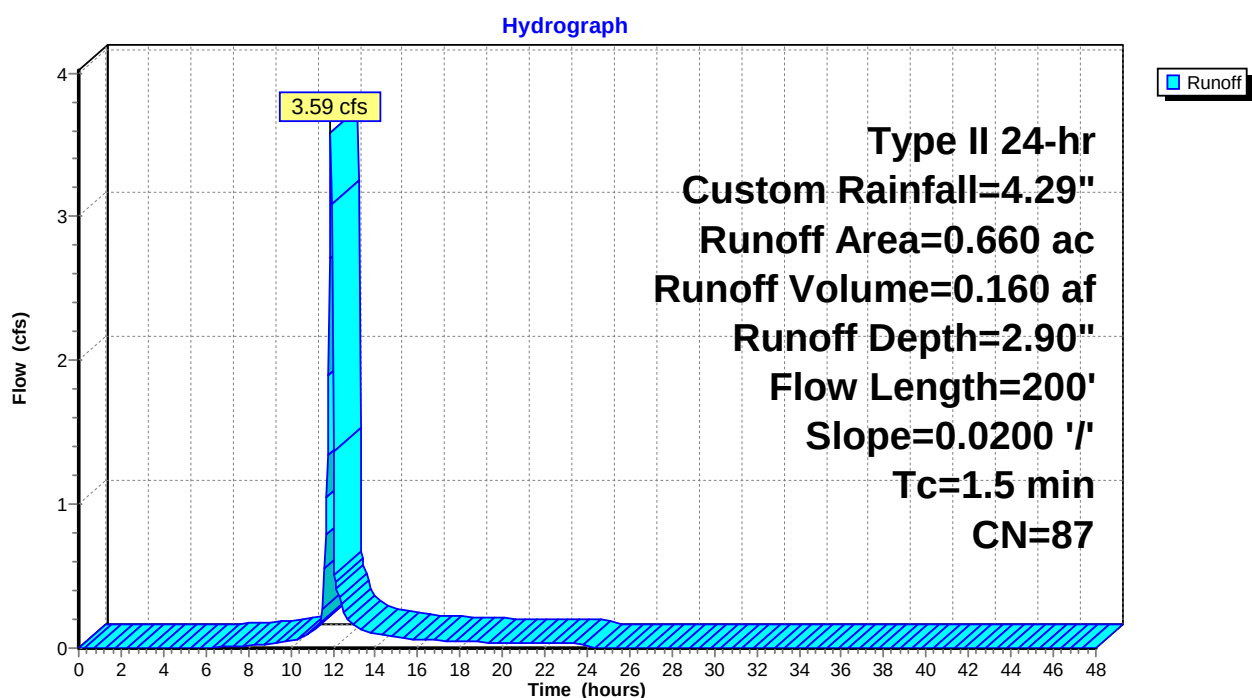
Runoff = 3.59 cfs @ 11.91 hrs, Volume= 0.160 af, Depth= 2.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 Type II 24-hr Custom Rainfall=4.29"

Area (ac)	CN	Description
0.360	80	>75% Grass cover, Good, HSG D
0.300	96	Gravel surface, HSG D
0.660	87	Weighted Average
0.660		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	200	0.0200	2.28		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps

Subcatchment 24S: Area C Existing Conditions



Summary for Subcatchment 25S: Area A Existing Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

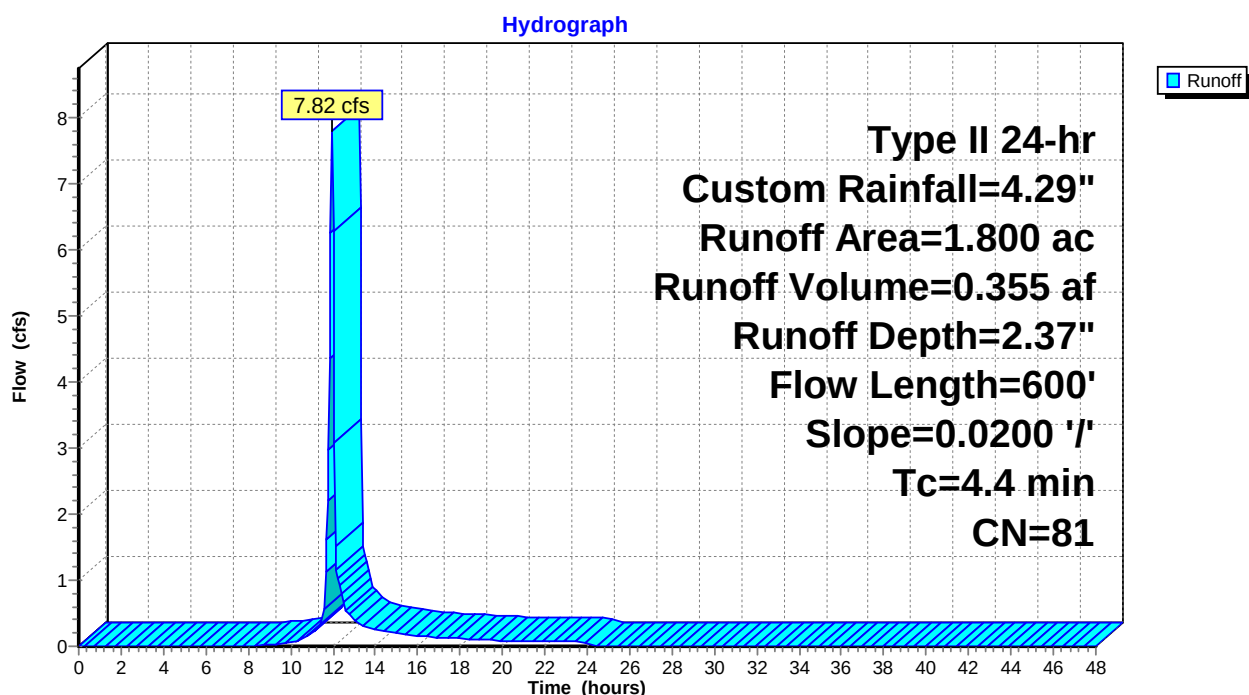
Runoff = 7.82 cfs @ 11.95 hrs, Volume= 0.355 af, Depth= 2.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 Type II 24-hr Custom Rainfall=4.29"

Area (ac)	CN	Description
1.660	80	>75% Grass cover, Good, HSG D
0.140	98	Paved parking, HSG D
1.800	81	Weighted Average
1.660		92.22% Pervious Area
0.140		7.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	600	0.0200	2.28		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps

Subcatchment 25S: Area A Existing Conditions



Summary for Subcatchment 29S: Area B Existing Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

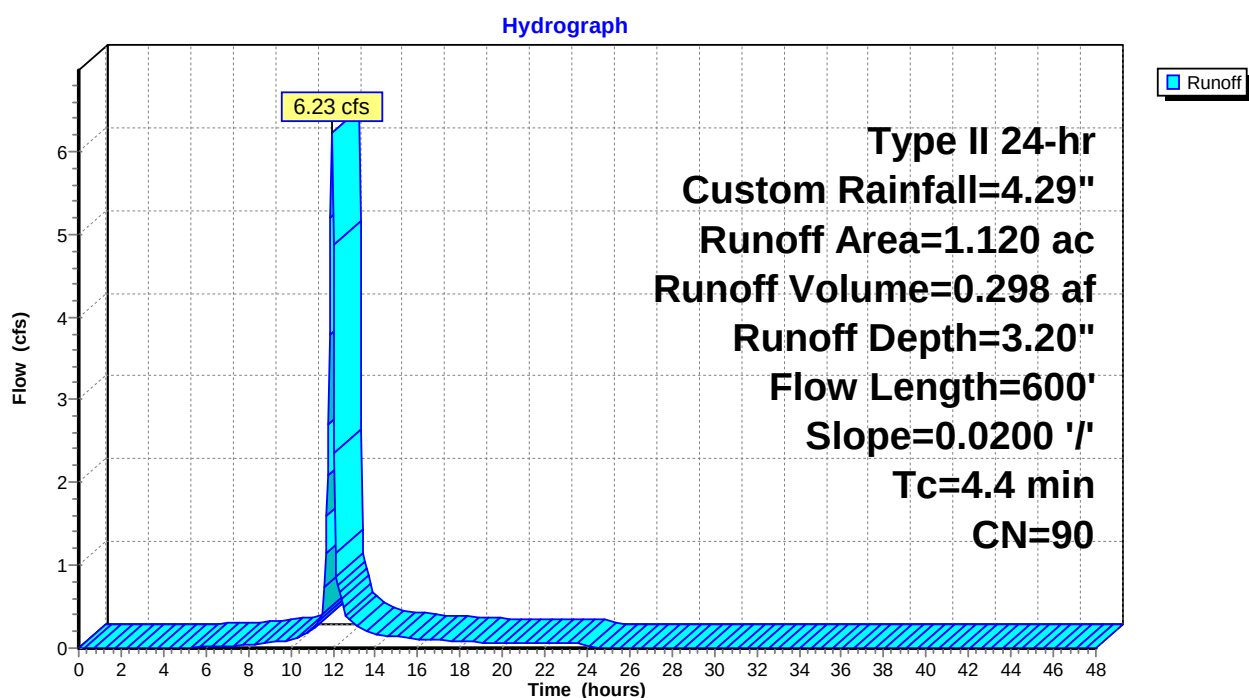
Runoff = 6.23 cfs @ 11.95 hrs, Volume= 0.298 af, Depth= 3.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 Type II 24-hr Custom Rainfall=4.29"

Area (ac)	CN	Description
0.410	80	>75% Grass cover, Good, HSG D
0.710	96	Gravel surface, HSG D
1.120	90	Weighted Average
1.120		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	600	0.0200	2.28		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps

Subcatchment 29S: Area B Existing Conditions



Summary for Subcatchment 30S: Area D Existing Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

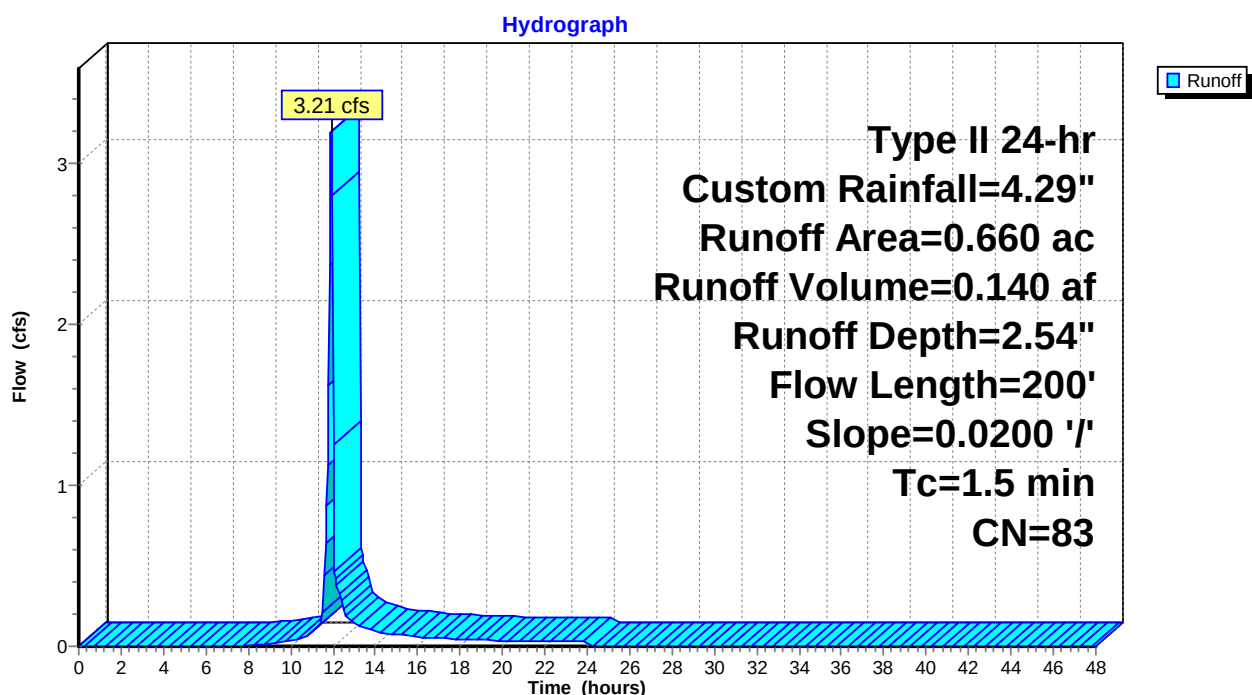
Runoff = 3.21 cfs @ 11.91 hrs, Volume= 0.140 af, Depth= 2.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 Type II 24-hr Custom Rainfall=4.29"

Area (ac)	CN	Description
0.560	80	>75% Grass cover, Good, HSG D
0.100	98	Paved parking, HSG D
0.660	83	Weighted Average
0.560		84.85% Pervious Area
0.100		15.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	200	0.0200	2.28		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps

Subcatchment 30S: Area D Existing Conditions



Summary for Subcatchment 31S: Area C Proposed Basin Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

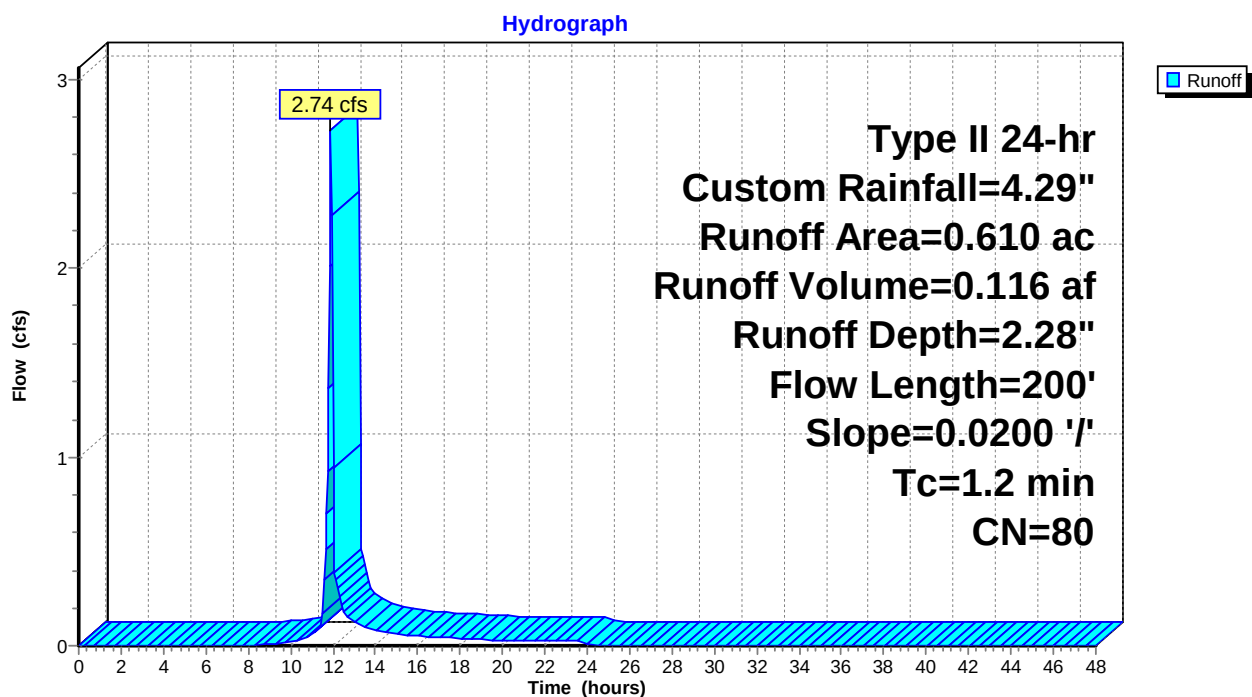
Runoff = 2.74 cfs @ 11.91 hrs, Volume= 0.116 af, Depth= 2.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 Type II 24-hr Custom Rainfall=4.29"

Area (ac)	CN	Description
0.610	80	>75% Grass cover, Good, HSG D
0.610		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	200	0.0200	2.87		Shallow Concentrated Flow, Paved Kv= 20.3 fps

Subcatchment 31S: Area C Proposed Basin Conditions



Summary for Subcatchment 32S: Area D Proposed Existing Wetland Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

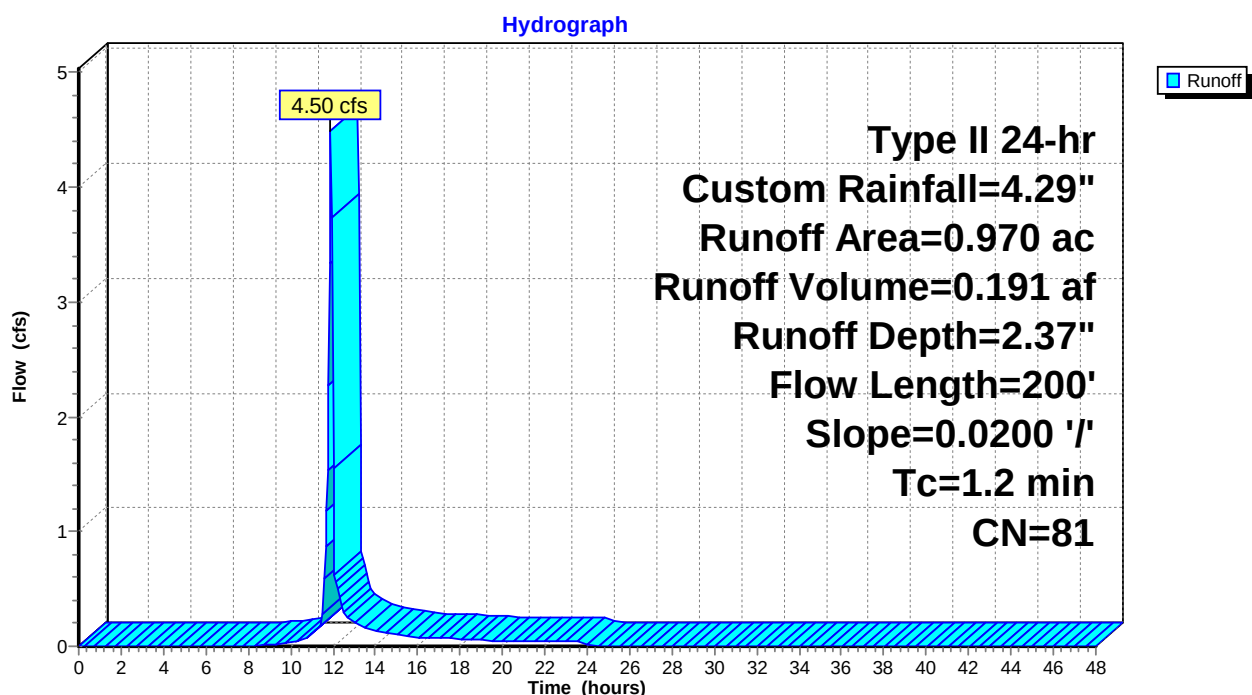
Runoff = 4.50 cfs @ 11.91 hrs, Volume= 0.191 af, Depth= 2.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 Type II 24-hr Custom Rainfall=4.29"

Area (ac)	CN	Description
0.900	80	>75% Grass cover, Good, HSG D
0.070	98	Paved parking, HSG D
0.970	81	Weighted Average
0.900		92.78% Pervious Area
0.070		7.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	200	0.0200	2.87		Shallow Concentrated Flow, Paved Kv= 20.3 fps

Subcatchment 32S: Area D Proposed Existing Wetland Conditions



Summary for Subcatchment 33S: Area A Proposed Parking/Roof Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

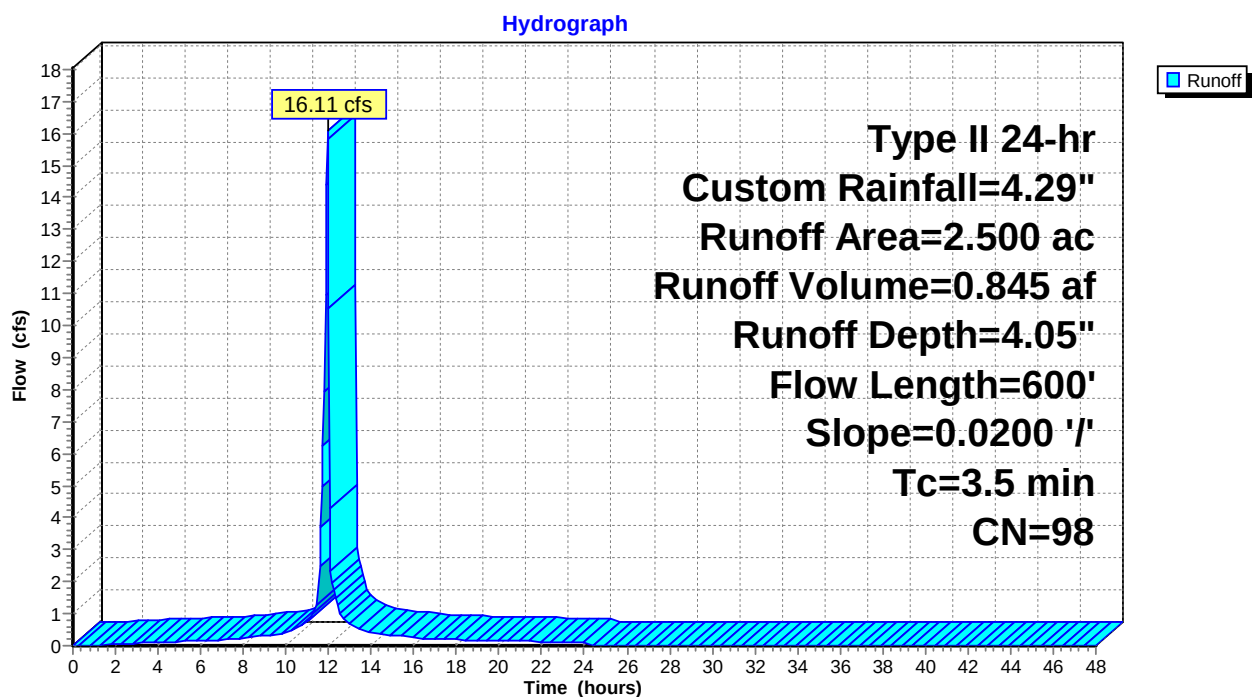
Runoff = 16.11 cfs @ 11.94 hrs, Volume= 0.845 af, Depth= 4.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 Type II 24-hr Custom Rainfall=4.29"

Area (ac)	CN	Description
2.500	98	Paved parking, HSG D
2.500		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.5	600	0.0200	2.87		Shallow Concentrated Flow, Paved Kv= 20.3 fps

Subcatchment 33S: Area A Proposed Parking/Roof Conditions



Summary for Subcatchment 34S: Area B Proposed Driveway Conditions

[49] Hint: $T_c < 2dt$ may require smaller dt

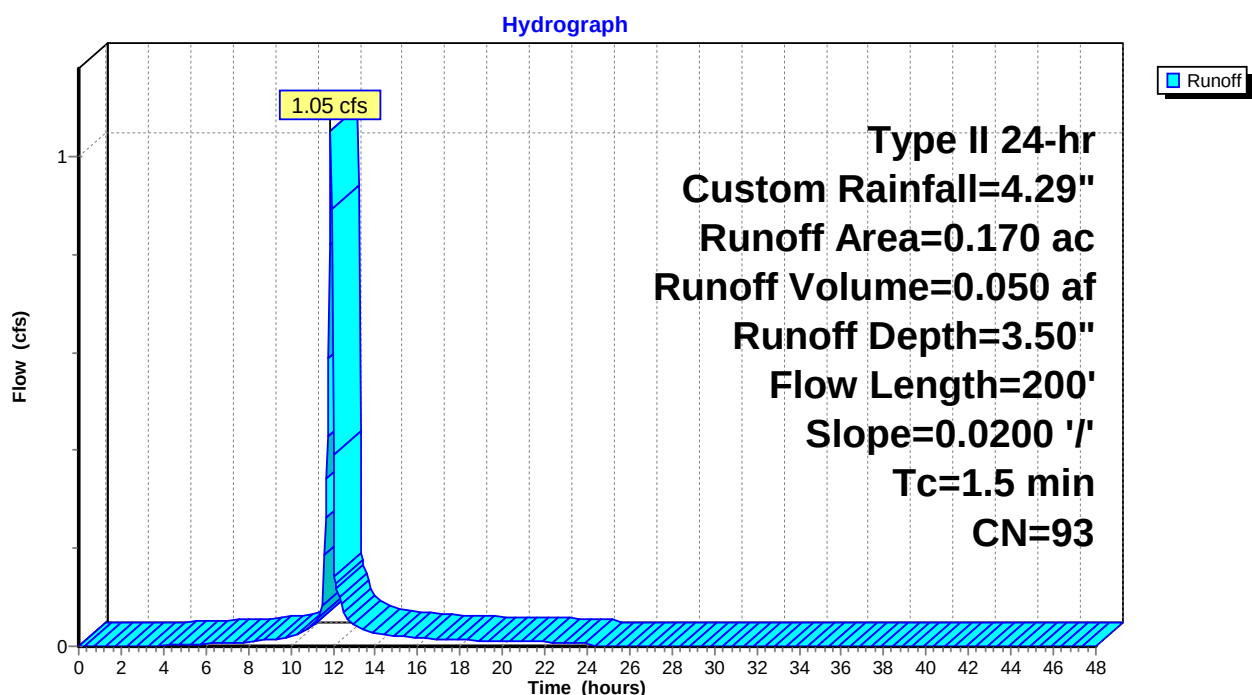
Runoff = 1.05 cfs @ 11.90 hrs, Volume= 0.050 af, Depth= 3.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, $dt=0.05$ hrs
 Type II 24-hr Custom Rainfall=4.29"

Area (ac)	CN	Description
0.050	80	>75% Grass cover, Good, HSG D
0.120	98	Paved parking, HSG D
0.170	93	Weighted Average
0.050		29.41% Pervious Area
0.120		70.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	200	0.0200	2.28		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps

Subcatchment 34S: Area B Proposed Driveway Conditions

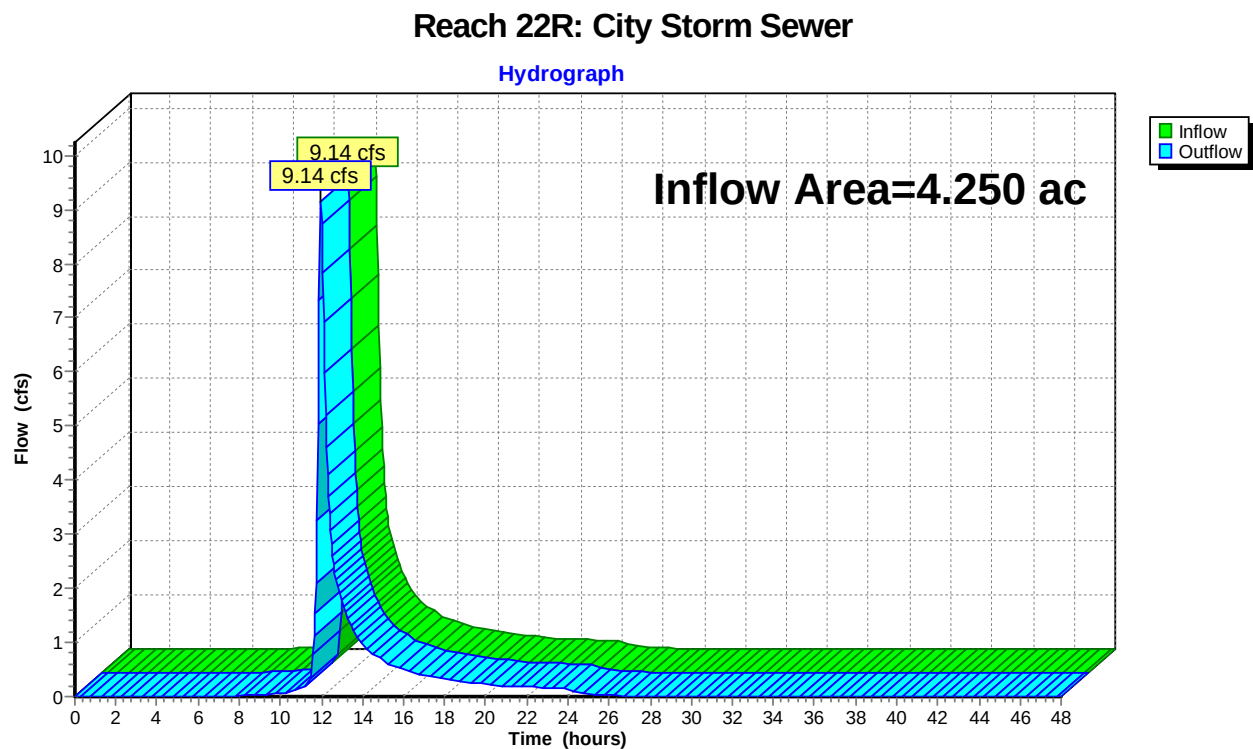


Summary for Reach 22R: City Storm Sewer

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.250 ac, 63.29% Impervious, Inflow Depth = 2.45" for Custom event
Inflow = 9.14 cfs @ 11.97 hrs, Volume= 0.868 af
Outflow = 9.14 cfs @ 11.97 hrs, Volume= 0.868 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

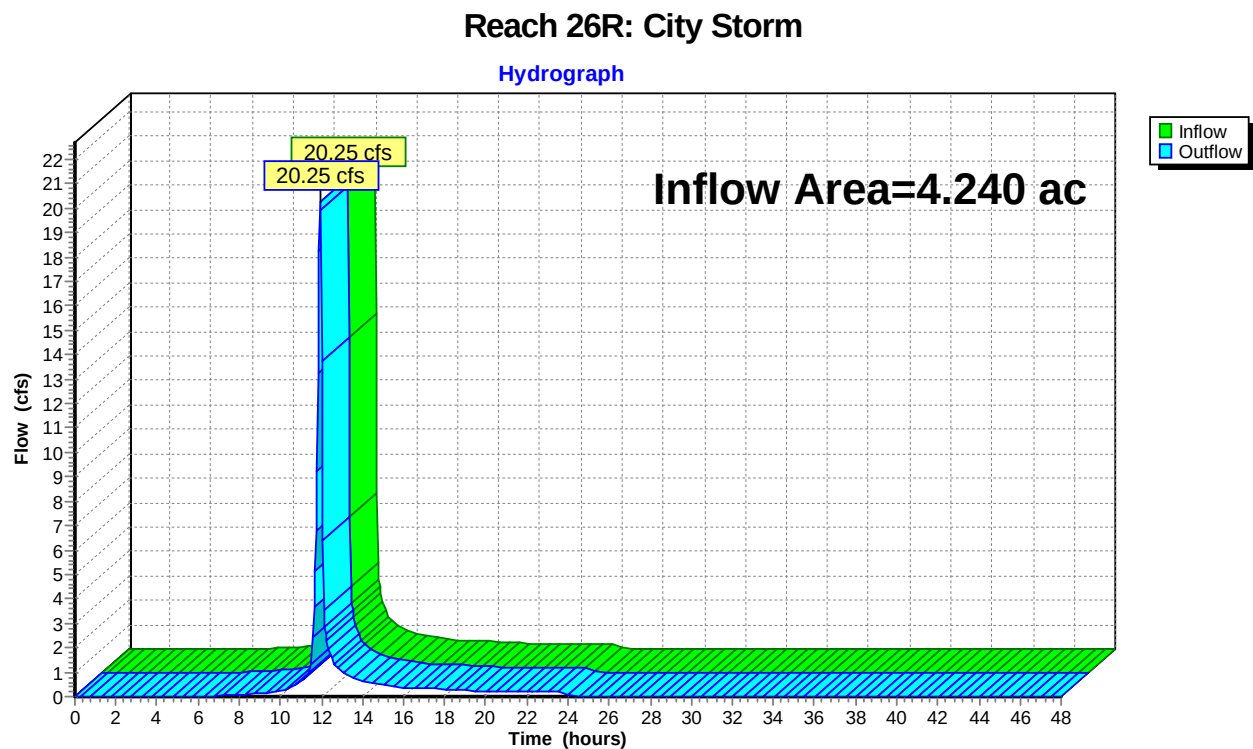


Summary for Reach 26R: City Storm

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.240 ac, 5.66% Impervious, Inflow Depth = 2.70" for Custom event
Inflow = 20.25 cfs @ 11.94 hrs, Volume= 0.953 af
Outflow = 20.25 cfs @ 11.94 hrs, Volume= 0.953 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs



Summary for Pond 19P: Filtration Basin

[95] Warning: Outlet Device #1 rise exceeded

Inflow Area = 3.110 ac, 80.39% Impervious, Inflow Depth = 3.71" for Custom event
 Inflow = 18.64 cfs @ 11.93 hrs, Volume= 0.961 af
 Outflow = 7.17 cfs @ 12.04 hrs, Volume= 0.817 af, Atten= 62%, Lag= 6.3 min
 Discarded = 0.07 cfs @ 12.04 hrs, Volume= 0.190 af
 Primary = 7.09 cfs @ 12.04 hrs, Volume= 0.627 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 989.39' @ 12.04 hrs Surf.Area= 0.250 ac Storage= 0.495 af

Plug-Flow detention time= 343.0 min calculated for 0.816 af (85% of inflow)
 Center-of-Mass det. time= 275.2 min (1,028.8 - 753.6)

Volume	Invert	Avail.Storage	Storage Description
#1	987.00'	1.275 af	Custom Stage Data (Prismatic) Listed below
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
987.00	0.140	0.000	0.000
988.00	0.210	0.175	0.175
989.00	0.230	0.220	0.395
990.00	0.280	0.255	0.650
991.00	0.300	0.290	0.940
992.00	0.370	0.335	1.275

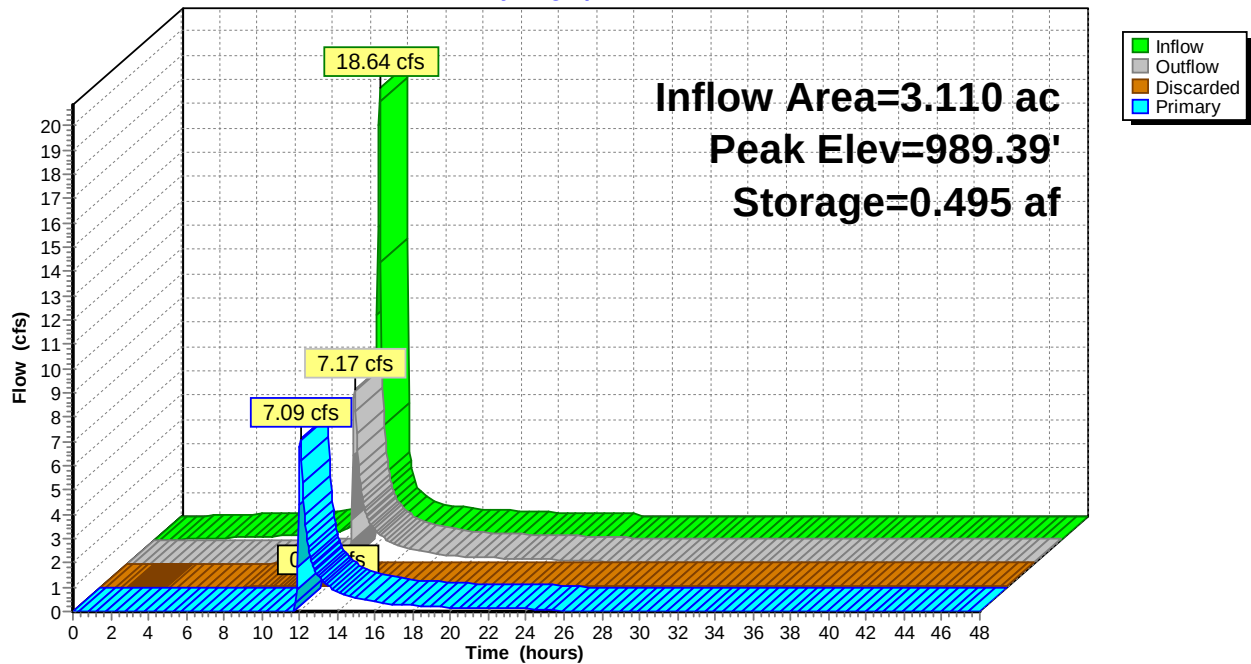
Device	Routing	Invert	Outlet Devices
#1	Device 2	988.25'	30.0 deg x 0.7' long x 1.00' rise Sharp-Crested Vee/Trap Weir Cv= 2.61 (C= 3.26)
#2	Primary	983.50'	30.0" Round Culvert L= 49.0' Ke= 1.000 Inlet / Outlet Invert= 983.50' / 983.30' S= 0.0041 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 4.91 sf
#3	Device 2	989.00'	5.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#4	Device 1	987.50'	15.0" Round Culvert L= 20.0' Ke= 1.000 Inlet / Outlet Invert= 987.50' / 987.00' S= 0.0250 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#5	Discarded	987.00'	0.200 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 983.00'

Discarded OutFlow Max=0.07 cfs @ 12.04 hrs HW=989.38' (Free Discharge)
 ↳ **5=Exfiltration** (Controls 0.07 cfs)

Primary OutFlow Max=6.98 cfs @ 12.04 hrs HW=989.38' (Free Discharge)
 ↳ **2=Culvert** (Passes 6.98 cfs of 38.16 cfs potential flow)
 ↳ ↳ **1=Sharp-Crested Vee/Trap Weir** (Orifice Controls 3.51 cfs @ 3.63 fps)
 ↳ ↳ ↳ **4=Culvert** (Passes 3.51 cfs of 4.72 cfs potential flow)
 ↳ ↳ ↳ ↳ **3=Broad-Crested Rectangular Weir** (Weir Controls 3.46 cfs @ 1.80 fps)

Pond 19P: Filtration Basin

Hydrograph



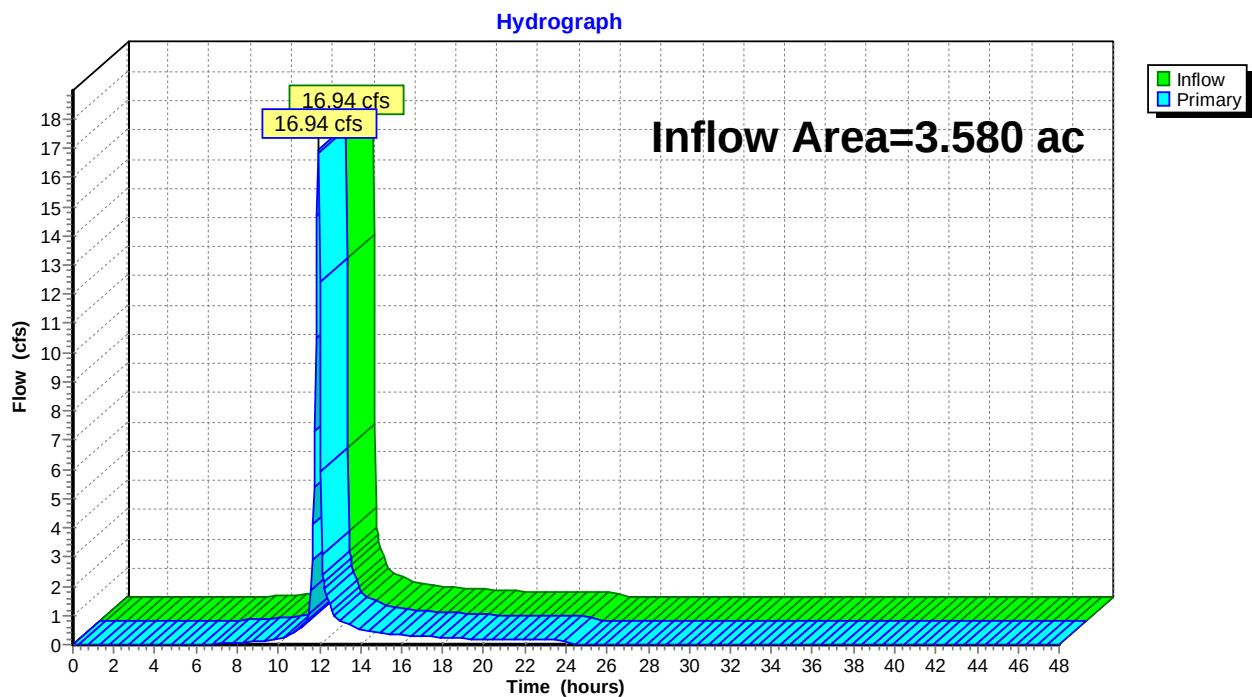
Summary for Pond 20P: West Wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.580 ac, 6.70% Impervious, Inflow Depth = 2.66" for Custom event
Inflow = 16.94 cfs @ 11.94 hrs, Volume= 0.793 af
Primary = 16.94 cfs @ 11.94 hrs, Volume= 0.793 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pond 20P: West Wetland



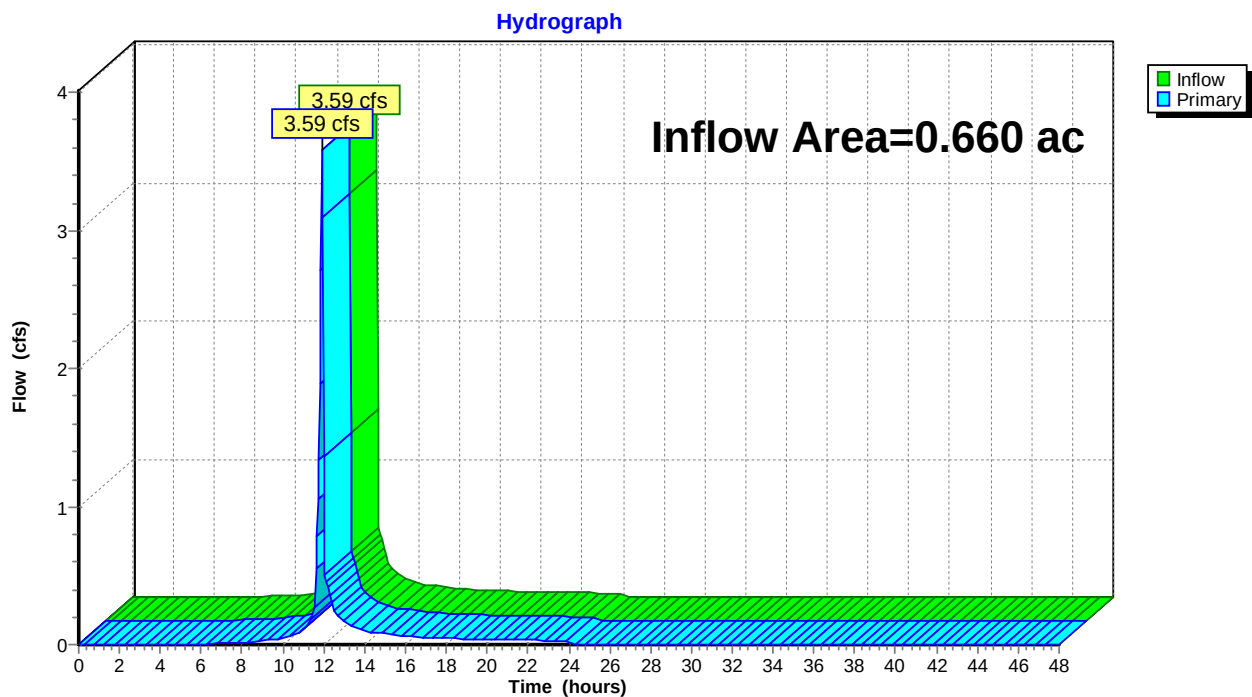
Summary for Pond 21P: East Wetland

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.660 ac, 0.00% Impervious, Inflow Depth = 2.90" for Custom event
Inflow = 3.59 cfs @ 11.91 hrs, Volume= 0.160 af
Primary = 3.59 cfs @ 11.91 hrs, Volume= 0.160 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pond 21P: East Wetland



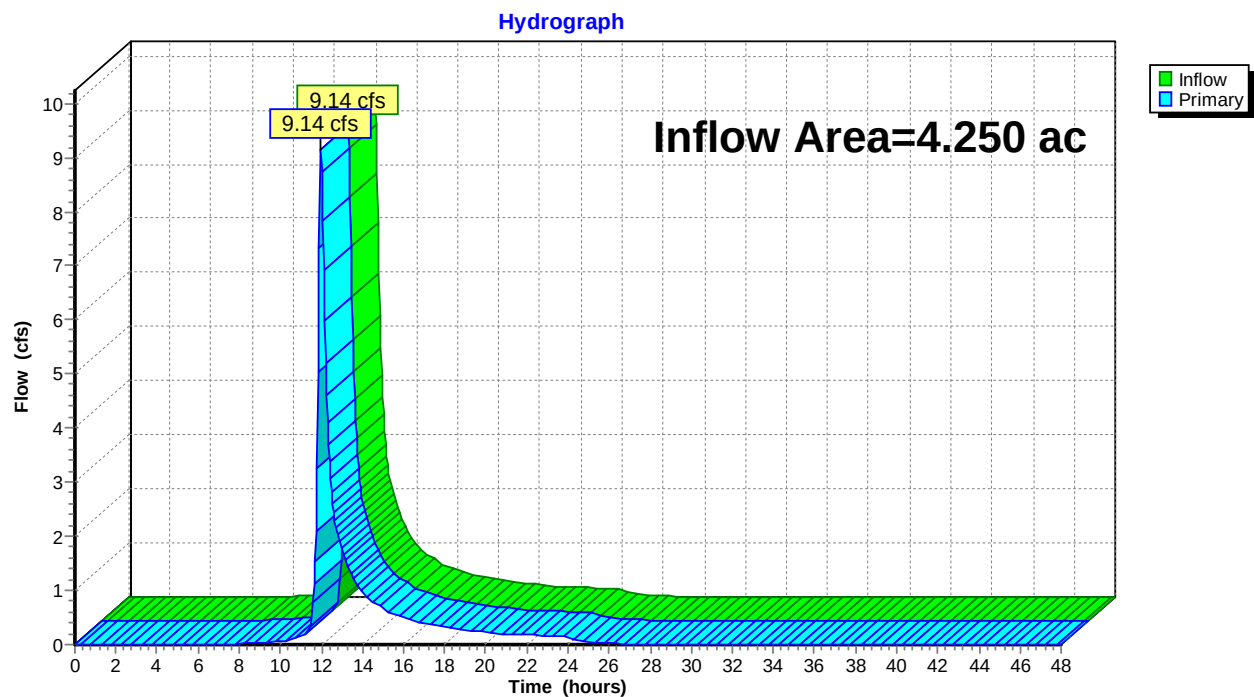
Summary for Pond 27P: Existing Wetlands

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.250 ac, 63.29% Impervious, Inflow Depth = 2.45" for Custom event
Inflow = 9.14 cfs @ 11.97 hrs, Volume= 0.868 af
Primary = 9.14 cfs @ 11.97 hrs, Volume= 0.868 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pond 27P: Existing Wetlands





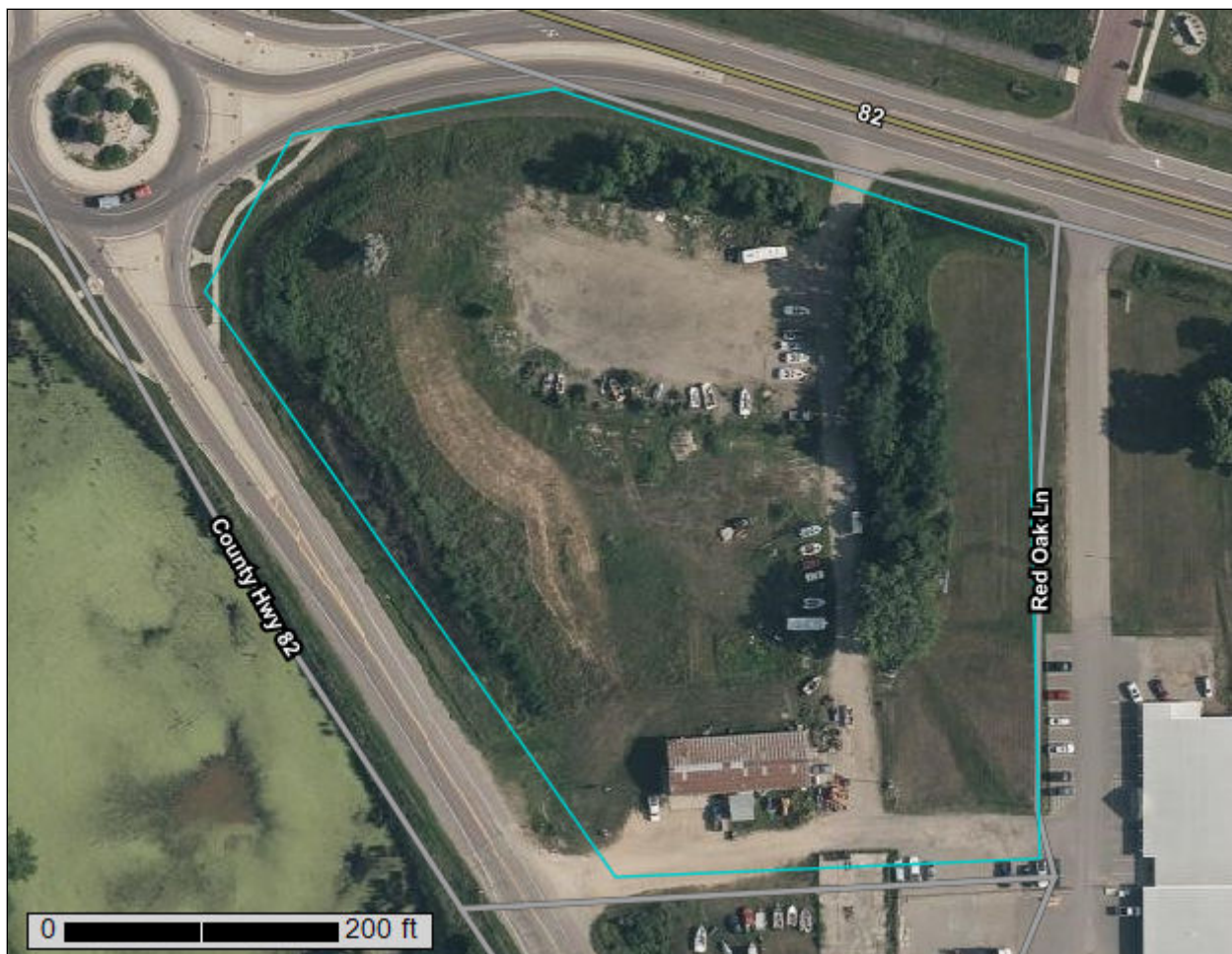
United States
Department of
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Natural
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a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Blue Earth County, Minnesota**



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Blue Earth County, Minnesota
Survey Area Data: Version 22, Sep 7, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 2, 2023—Aug 8, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
106C	Lester loam, 6 to 10 percent slopes	0.6	10.7%
110	Marna silty clay loam, 0 to 2 percent slopes	1.9	32.1%
286	Shorewood silty clay loam, 1 to 6 percent slopes	0.5	9.2%
539	Klossner muck, lake plain, depressional, 0 to 1 percent slopes	2.0	34.4%
L113B	Reedslake-Le Sueur complex, 1 to 6 percent slopes	0.8	13.6%
Totals for Area of Interest		5.8	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it

was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Blue Earth County, Minnesota

106C—Lester loam, 6 to 10 percent slopes

Map Unit Setting

National map unit symbol: 2ttc7

Elevation: 690 to 1,840 feet

Mean annual precipitation: 24 to 37 inches

Mean annual air temperature: 43 to 52 degrees F

Frost-free period: 140 to 180 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Lester and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lester

Setting

Landform: Hillslopes, ground moraines

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Interfluve, rise

Down-slope shape: Convex

Across-slope shape: Convex, linear

Parent material: Fine-loamy till

Typical profile

Ap - 0 to 9 inches: loam

Bt - 9 to 30 inches: clay loam

C - 30 to 79 inches: loam

Properties and qualities

Slope: 6 to 10 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 2.00 in/hr)

Depth to water table: About 47 to 63 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 20 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: High (about 10.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C

Ecological site: R103XY020MN - Loamy Upland Savannas

Forage suitability group: Sloping Upland, Acid (G103XS006MN)

Other vegetative classification: Sloping Upland, Acid (G103XS006MN)

Hydric soil rating: No

Minor Components

Le sueur

Percent of map unit: 10 percent
Landform: Ground moraines, hillslopes
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve, talus
Down-slope shape: Convex, linear
Across-slope shape: Linear
Ecological site: R103XY020MN - Loamy Upland Savannas
Other vegetative classification: Sloping Upland, Acid (G103XS006MN)
Hydric soil rating: No

Webster

Percent of map unit: 5 percent
Landform: Ground moraines
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R103XY001MN - Loamy Wet Prairies
Other vegetative classification: Level Swale, Neutral (G103XS001MN)
Hydric soil rating: Yes

Storden, moderately eroded

Percent of map unit: 3 percent
Landform: Ground moraines
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Rise
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Ecological site: R103XY020MN - Loamy Upland Savannas
Other vegetative classification: Sloping Upland, Calcareous (G103XS010MN)
Hydric soil rating: No

Lester

Percent of map unit: 2 percent
Landform: Ground moraines, hillslopes
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Linear, convex
Ecological site: R103XY020MN - Loamy Upland Savannas
Other vegetative classification: Sloping Upland, Acid (G103XS006MN)
Hydric soil rating: No

110—Marna silty clay loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2vwk0
Elevation: 690 to 1,840 feet
Mean annual precipitation: 24 to 37 inches

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Mean annual air temperature: 43 to 52 degrees F

Frost-free period: 140 to 180 days

Farmland classification: Prime farmland if drained

Map Unit Composition

Marna and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Marna

Setting

Landform: Lake plains, ground moraines, flats

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Glaciolacustrine deposits over till

Typical profile

Ap - 0 to 7 inches: silty clay loam

A - 7 to 18 inches: silty clay loam

Bg - 18 to 36 inches: silty clay

2Bkg - 36 to 45 inches: clay loam

2Cg - 45 to 79 inches: clay loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high
(0.06 to 2.00 in/hr)

Depth to water table: About 0 to 8 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 20 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: High (about 9.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: C/D

Ecological site: R103XY008MN - Clayey Wet Prairies

Forage suitability group: Level Swale, Neutral (G103XS001MN)

Other vegetative classification: Level Swale, Neutral (G103XS001MN)

Hydric soil rating: Yes

Minor Components

Okoboji

Percent of map unit: 7 percent

Landform: Depressions, depressions

Down-slope shape: Concave

Across-slope shape: Concave

Ecological site: R103XY015MN - Depressional Marsh

Other vegetative classification: Ponded If Not Drained (G103XS013MN)

Hydric soil rating: Yes

Guckeen

Percent of map unit: 5 percent
Landform: Ground moraines, flats, lake plains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R103XY005MN - Clayey Upland Prairies
Other vegetative classification: Level Swale, Neutral (G103XS001MN)
Hydric soil rating: No

Brownton

Percent of map unit: 3 percent
Landform: Lake plains, flats, ground moraines
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R103XY008MN - Clayey Wet Prairies
Other vegetative classification: Level Swale, Calcareous (G103XS009MN)
Hydric soil rating: Yes

286—Shorewood silty clay loam, 1 to 6 percent slopes

Map Unit Setting

National map unit symbol: f97m
Elevation: 700 to 1,570 feet
Mean annual precipitation: 23 to 35 inches
Mean annual air temperature: 43 to 50 degrees F
Frost-free period: 155 to 200 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Shorewood and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Shorewood

Setting

Landform: Rises on lake plains
Landform position (two-dimensional): Summit
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Clayey lacustrine deposits over fine-loamy till

Typical profile

Ap,A - 0 to 17 inches: silty clay loam
Bt - 17 to 39 inches: silty clay
C - 39 to 60 inches: loam

Properties and qualities

Slope: 1 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.57 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C/D
Ecological site: R103XY021MN - Clayey Upland Savannas
Forage suitability group: Sloping Upland, Neutral (G103XS002MN)
Other vegetative classification: Sloping Upland, Neutral (G103XS002MN)
Hydric soil rating: No

Minor Components

Minnetonka

Percent of map unit: 5 percent
Landform: Flats
Hydric soil rating: Yes

Guckeen

Percent of map unit: 5 percent
Landform: Lake plains
Hydric soil rating: No

539—Klossner muck, lake plain, depressional, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2s8x1
Elevation: 690 to 1,840 feet
Mean annual precipitation: 24 to 37 inches
Mean annual air temperature: 43 to 52 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Klossner, drained, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Klossner, Drained

Setting

Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Organic material over glaciolacustrine deposits

Typical profile

Oap - 0 to 9 inches: muck
Oa - 9 to 24 inches: muck
2A - 24 to 46 inches: silty clay loam
2Cg - 46 to 79 inches: silty clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 2.00 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Occasional
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 17.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: R103XY016MN - Organic Marsh
Forage suitability group: Organic (G103XS014MN)
Other vegetative classification: Organic (G103XS014MN)
Hydric soil rating: Yes

Minor Components

Lura

Percent of map unit: 10 percent
Landform: Depressions, ground moraines, lake plains
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R103XY015MN - Depressional Marsh
Other vegetative classification: Ponded If Not Drained (G103XS013MN)
Hydric soil rating: Yes

Brownnton

Percent of map unit: 5 percent
Landform: Lake plains, flats, ground moraines
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R103XY008MN - Clayey Wet Prairies
Other vegetative classification: Level Swale, Calcareous (G103XS009MN)

Hydric soil rating: Yes

L113B—Reedslake-Le Sueur complex, 1 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2y037

Elevation: 690 to 1,450 feet

Mean annual precipitation: 24 to 37 inches

Mean annual air temperature: 37 to 52 degrees F

Frost-free period: 140 to 168 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Reedslake and similar soils: 59 percent

Le sueur and similar soils: 30 percent

Minor components: 11 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Reedslake

Setting

Landform: Hillslopes

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Rise

Down-slope shape: Convex, linear

Across-slope shape: Linear, convex

Parent material: Fine-loamy till

Typical profile

Ap - 0 to 6 inches: loam

A - 6 to 15 inches: loam

Bt - 15 to 33 inches: loam

Bk - 33 to 54 inches: loam

C - 54 to 79 inches: loam

Properties and qualities

Slope: 2 to 6 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 2.00 in/hr)

Depth to water table: About 20 to 41 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 25 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: High (about 10.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

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Hydrologic Soil Group: C

Ecological site: R103XY020MN - Loamy Upland Savannas

Forage suitability group: Sloping Upland, Neutral (G103XS002MN)

Other vegetative classification: Sloping Upland, Neutral (G103XS002MN)

Hydric soil rating: No

Description of Le Sueur

Setting

Landform: Hillslopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Talf

Down-slope shape: Concave, linear

Across-slope shape: Linear

Parent material: Fine-loamy till

Typical profile

Ap - 0 to 6 inches: clay loam

A - 6 to 11 inches: clay loam

Bt - 11 to 24 inches: clay loam

Bkg - 24 to 36 inches: loam

BC - 36 to 55 inches: loam

C - 55 to 79 inches: loam

Properties and qualities

Slope: 1 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high
(0.06 to 2.00 in/hr)

Depth to water table: About 12 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 25 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: High (about 10.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 1

Hydrologic Soil Group: C/D

Ecological site: R103XY020MN - Loamy Upland Savannas

Forage suitability group: Sloping Upland, Acid (G103XS006MN)

Other vegetative classification: Sloping Upland, Acid (G103XS006MN)

Hydric soil rating: No

Minor Components

Cordova

Percent of map unit: 7 percent

Landform: Depressions

Landform position (three-dimensional): Talf

Down-slope shape: Concave

Across-slope shape: Concave

Ecological site: R103XY022MN - Loamy Wet Savannas

Other vegetative classification: Level Swale, Neutral (G103XS001MN)

Hydric soil rating: Yes

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Swanlake

Percent of map unit: 4 percent

Landform: Hillslopes

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Rise

Down-slope shape: Convex, linear

Across-slope shape: Convex

Ecological site: R103XY020MN - Loamy Upland Savannas

Other vegetative classification: Sloping Upland, Calcareous (G103XS010MN)

Hydric soil rating: No

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- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelpdb1043084>

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Minnesota Wetland Conservation Act Notice of Decision

Local Government Unit: Blue Earth County	County: Blue Earth
Applicant Name: Kyle Smith – Growth Holdings, LLC and Menk	Applicant Representative: Addie Theis – Bolton
Project Name: Victory Drive and TH 83 Redevelopment	LGU Project No. (if any): PL2023123
Date Application Received by LGU: 11/8/2023	
Date of LGU Decision: 12/19/2023	
Date this Notice was Sent: 12/19/2023	

WCA Decision Type - check all that apply

☒ Wetland Boundary/Type	☐ Sequencing	☐ Replacement Plan	☐ Bank Plan (not credit purchase)
☐ No-Loss (8420.0415)	☐ Exemption (8420.0420)		
Part: ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐ H		Subpart: ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9	

Replacement Plan Impacts (replacement plan decisions only)

Total WCA Wetland Impact Area:	
Wetland Replacement Type:	☐ Project Specific Credits:
	☐ Bank Credits:
Bank Account Number(s):	

Technical Evaluation Panel Findings and Recommendations (attach if any)

☒ Approve ☐ Approve w/Conditions ☐ Deny ☐ No TEP Recommendation
--

LGU Decision

☐ Approved with Conditions (specify below) ¹	☒ Approved ¹	☐ Denied
List Conditions:		
Decision-Maker for this Application: ☒ Staff ☐ Governing Board/Council ☐ Other:		
Decision is valid for: ☒ 5 years (default) ☐ Other (specify):		

¹ Wetland Replacement Plan approval is not valid until BWSR confirms the withdrawal of any required wetland bank credits. For project-specific replacement a financial assurance per MN Rule 8420.0522, Subp. 9 and evidence that all required forms have been recorded on the title of the property on which the replacement wetland is located must be provided to the LGU for the approval to be valid.

LGU Findings – Attach document(s) and/or insert narrative providing the basis for the LGU decision¹.

☐ Attachment(s) (specify): ☒ Summary: On November 14th the Victory Drive site was visited by Blue Earth County. The boundary of the identified wetland basins were walked and found to be accurate based off of the topography of the site. On November 15th the Blue Earth County Technical Evaluation Panel met to discuss the submitted report. Blue Earth County staff communicated what was observed during the site visit on the day prior and the TEP reviewed the boundaries against aerial photos. The TEP concurred that the boundaries and type identified were accurate. For more information regarding this application go to: https://cityview.blueearthcountymn.gov/cityviewportal/Planning/Status?planningId=15003

¹ Findings must consider any TEP recommendations.

Attached Project Documents

☐ Site Location Map ☒ Project Plan(s)/Descriptions/Reports (specify): Victory Drive and TH 83
Redevelopment Wetland Delineation

Appeals of LGU Decisions

If you wish to appeal this decision, you must provide a written request within 30 calendar days of the date you received the notice. All appeals must be submitted to the Board of Water and Soil Resources Executive Director along with a check payable to BWSR for \$500 *unless* the LGU has adopted a local appeal process as identified below. The check must be sent by mail and the written request to appeal can be submitted by mail or e-mail. The appeal should include a copy of this notice, name and contact information of appellant(s) and their representatives (if applicable), a statement clarifying the intent to appeal and supporting information as to why the decision is in error. Send to:

Appeals & Regulatory Compliance Coordinator
Minnesota Board of Water & Soils Resources
520 Lafayette Road North
St. Paul, MN 55155
travis.germundson@state.mn.us

Does the LGU have a local appeal process applicable to this decision?

☒ Yes¹ ☐ No

¹If yes, all appeals must first be considered via the local appeals process.

Local Appeals Submittal Requirements (LGU must describe how to appeal, submittal requirements, fees, etc. as applicable)

Appeal of an LGU staff decision. Send petition and \$700.00 fee to:
Blue Earth County Property and Environmental Resources
PO BOX 3566
Mankato, MN 56002

Notice Distribution (include name)

Required on all notices:

☒ SWCD TEP Member: Jake Fritz	☒ BWSR TEP Member: Alyssa Core
☐ LGU TEP Member (if different than LGU contact):	
☒ DNR Representative: Erynn Jenzen	
☐ Watershed District or Watershed Mgmt. Org.:	
☒ Applicant (notice only): Kyle Smith – Growth Holdings, LLC ☒ Agent/Consultant (notice only): Addie Theis – Bolton and Menk	

Optional or As Applicable:

☒ Corps of Engineers: Corps of Engineers General Notification	
☐ BWSR Wetland Mitigation Coordinator (required for bank plan applications only):	
☐ Members of the Public (notice only):	☐ Other:

Signature: 	Date: 12/19/23
--	--------------------------

This notice and accompanying application materials may be sent electronically or by mail. The LGU may opt to send a summary of the application to members of the public upon request per 8420.0255, Subp. 3.



Victory & TH 83 Redevelopment

Joint Type & Boundary Application

Growth Holdings, LLC.
October 27, 2023

Submitted by:
Bolton & Menk, Inc.
1960 Premier Drive
Mankato, MN 56001
P: (507) 625-4171
F: (507) 625-4177



**BOLTON
& MENK**

Real People. Real Solutions.

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WETLAND DELINEATION REPORT

PART ONE: Applicant Information

If applicant is an entity (company, government entity, partnership, etc.), an authorized contact person must be identified. If the applicant is using an agent (consultant, lawyer, or other third party) and has authorized them to act on their behalf, the agent's contact information must also be provided.

Applicant/Landowner Name:	Kyle Smith Growth Holdings, LLC.
Mailing Address:	530 Front Street Suite 100 Mankato, MN 56001
Phone:	507-469-0887
E-mail Address:	ksmith@thetailwindgroup.com

Authorized Contact (do not complete if same as above):

Mailing Address:

Phone:

E-mail Address:

Agent Name:	Bolton & Menk, Inc. Addeline Theis Natural Resource Specialist
Mailing Address:	1960 Premier Drive Mankato, MN 56001
Phone:	507-625-4171 ext 3745
E-mail Address:	Addeline.theis@bolton-menk.com

PART TWO: Site Location Information

County: Blue Earth

City/Township: Mankato TWP

Parcel ID and/or Address: 901 S Victory Dr Mankato, MN 56001 (Parcel ID: R430921177001)

Legal Description (Section, Township, Range): 21, 108N, 26W

Lat/Long (decimal degrees):

Attach a map showing the location of the site in relation to local streets, roads, highways.

Approximate size of site (acres) or if a linear project, length (feet): 4.5 acres

If you know that your proposal will require an individual Permit from the U.S. Army Corps of Engineers, you must provide the names and addresses of all property owners adjacent to the project site. This information may be provided by attaching a list to your application or by using block 25 of the Application for Department of the Army permit which can be obtained at:

http://www.mvp.usace.army.mil/Portals/57/docs/regulatory/RegulatoryDocs/engform_4345_2012oct.pdf

PART THREE: General Project/Site Information

If this application is related to a delineation approval, exemption determination, jurisdictional determination, or other correspondence submitted **prior to** this application then describe that here and provide the Corps of Engineers project number.

Describe the project that is being proposed, the project purpose and need, and schedule for implementation and completion. The project description must fully describe the nature and scope of the proposed activity including a description of all project elements that effect aquatic resources (wetland, lake, tributary, etc.) and must also include plans and cross section or profile drawings showing the location, character, and dimensions of all proposed activities and aquatic resource impacts.

PART FOUR: Aquatic Resource Impact¹ Summary

If your proposed project involves a direct or indirect impact to an aquatic resource (wetland, lake, tributary, etc.) identify each impact in the table below. Include all anticipated impacts, including those expected to be temporary. Attach an overhead view map, aerial photo, and/or drawing showing all of the aquatic resources in the project area and the location(s) of the proposed impacts. Label each aquatic resource on the map with a reference number or letter and identify the impacts in the following table.

Aquatic Resource ID (as noted on overhead view)	Aquatic Resource Type (wetland, lake, tributary etc.)	Type of Impact (fill, excavate, drain, or remove vegetation)	Duration of Impact Permanent (P) or Temporary (T) ¹	Size of Impact ²	Overall Size of Aquatic Resource ³	Existing Plant Community Type(s) in Impact Area ⁴	County, Major Watershed #, and Bank Service Area # of Impact Area ⁵

¹If impacts are temporary; enter the duration of the impacts in days next to the "T". For example, a project with a temporary access fill that would be removed after 220 days would be entered "T (220)".

²Impacts less than 0.01 acre should be reported in square feet. Impacts 0.01 acre or greater should be reported as acres and rounded to the nearest 0.01 acre. Tributary impacts must be reported in linear feet of impact and an area of impact by indicating first the linear feet of impact along the flowline of the stream followed by the area impact in parentheses). For example, a project that impacts 50 feet of a stream that is 6 feet wide would be reported as 50 ft (300 square feet).

³This is generally only applicable if you are applying for a de minimis exemption under MN Rules 8420.0420 Subp. 8, otherwise enter "N/A".

⁴Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.

⁵Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

If any of the above identified impacts have already occurred, identify which impacts they are and the circumstances associated with each:

N/A

PART FIVE: Applicant Signature

☐ Check here if you are requesting a pre-application consultation with the Corps and LGU based on the information you have provided. Regulatory entities will not initiate a formal application review if this box is checked.

By signature below, I attest that the information in this application is complete and accurate. I further attest that I possess the authority to undertake the work described herein.

Signature:  Date: 11/10/23

I hereby authorize **Bolton & Menk, Inc** to act on my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.

¹ The term "impact" as used in this joint application form is a generic term used for disclosure purposes to identify activities that may require approval from one or more regulatory agencies. For purposes of this form it is not meant to indicate whether or not those activities may require mitigation/replacement.

Attachment A

Request for Delineation Review, Wetland Type Determination, or Jurisdictional Determination

By submission of the enclosed wetland delineation report, I am requesting that the U.S. Army Corps of Engineers, St. Paul District (Corps) and/or the Wetland Conservation Act Local Government Unit (LGU) provide me with the following (check all that apply):

☒ **Wetland Type Confirmation**

☒ **Delineation Concurrence.** Concurrence with a delineation is a written notification from the Corps and a decision from the LGU concurring, not concurring, or commenting on the boundaries of the aquatic resources delineated on the property. Delineation concurrences are generally valid for five years unless site conditions change. Under this request alone, the Corps will not address the jurisdictional status of the aquatic resources on the property, only the boundaries of the resources within the review area (including wetlands, tributaries, lakes, etc.).

☐ **Preliminary Jurisdictional Determination.** A preliminary jurisdictional determination (PJD) is a non-binding written indication from the Corps that waters, including wetlands, identified on a parcel may be waters of the United States. For purposes of computation of impacts and compensatory mitigation requirements, a permit decision made on the basis of a PJD will treat all waters and wetlands in the review area as if they are jurisdictional waters of the U.S. PJDs are advisory in nature and may not be appealed.

☐ **Approved Jurisdictional Determination.** An approved jurisdictional determination (AJD) is an official Corps determination that jurisdictional waters of the United States are either present or absent on the property. AJDs can generally be relied upon by the affected party for five years. An AJD may be appealed through the Corps administrative appeal process.

In order for the Corps and LGU to process your request, the wetland delineation must be prepared in accordance with the 1987 Corps of Engineers Wetland Delineation Manual, any approved Regional Supplements to the 1987 Manual, and the *Guidelines for Submitting Wetland Delineations in Minnesota* (2013).

<http://www.mvp.usace.army.mil/Missions/Regulatory/DelineationJDGuidance.aspx>

Appendix



Victory & TH 83 Redevelopment

Wetland Delineation Report

Growth Holdings, LLC.
October 27, 2023

Submitted by:
Bolton & Menk, Inc.
1960 Premier Drive
Mankato, MN 56001
P: (507) 625-4171
F: (507) 625-4177



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Appendix

- Exhibit A: Site Location Map
- Exhibit B: 2-Foot LiDAR Contours Map
- Exhibit C: National Wetlands Inventory Map
- Exhibit D: Public Waters Inventory Map
- Exhibit E: Blue Earth County Soil Survey Map
- Exhibit F: Delineated Wetlands Map
- Exhibit G: Delineation Data Sheets

I. INTRODUCTION

Growth Holdings, LLC. Is proposing site improvements to their property at 901 s Victory Dr in Mankato, MN. This report details the findings of the field delineation completed on October 27, 2023.

The project is found in Section 21, in Township 108 North of Range 26 West.

II. WETLAND DELINEATION METHODOLOGY

The wetland boundaries were delineated and staked in the field in October 2023, using methods described in the “Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)”. Wetlands identified were classified using “Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, et al., 1979)”, “Wetlands of the United States (United States Fish and Wildlife Service Circular No. 39, 1971 edition)” and “Wetland Plants and Plant Communities of Minnesota and Wisconsin” (Eggers and Reed Third Edition). Subsequently, the three mandatory technical criteria for wetland determinations are as follows:

Hydrophytic Vegetation. A hydrophytic plant community is present when the dominant plant species present can endure prolonged inundation and/or soil saturation during the growing season. A plant’s Wetland Indicator Status is determined using the 2016 National Wetland Plant List for Minnesota, published by the Army Corp of Engineers.

Hydric Soils. A hydric soil is defined as a soil that is formed under conditions of saturation, flooding or ponding long enough during the growing season (the portion of the year when there is above ground growth and development of vascular plants and/or soil temperature at 12 inches below the soil surface is above 41 degrees Fahrenheit or higher) to develop anaerobic conditions in the upper part.

Wetland Hydrology. An area has wetland hydrology if it experiences 14 or more consecutive days of flooding, ponding or a water table within 12 inches of the surface during the growing season at a minimum frequency of five out of ten years. This is determined by using both primary and secondary Wetland Hydrology indicators.

III. BACKGROUND INFORMATION

Prior to conducting a field investigation of this site, Exhibits A through E were used to complete a preliminary evaluation. The data gathered during the preliminary investigation was used as described below:

Exhibit A is a location map of the study area.

Exhibits B is an aerial photo with topographic information overlaid on it. This provides information regarding topography of the site, helping to identify areas that may have wetland characteristics.

Exhibit C is the National Wetlands Inventory of the site and surrounding properties. This information is used to complete a preliminary investigation of the wetlands that may or may not exist on the site.

Exhibit D is used to identify waters that are regulated by the DNR. This exhibit shows where there are DNR public waters relative to the site.

Exhibit E is the Blue Earth County Soil Survey and is used to identify hydric soils that may lie within the study area.

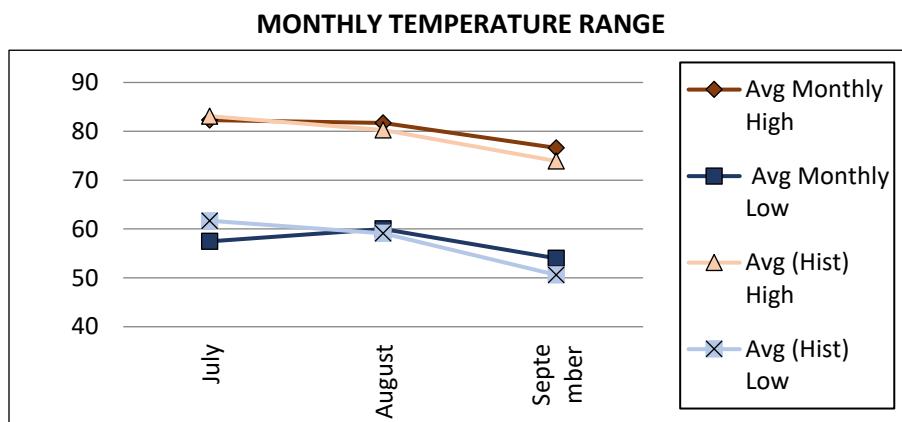
Delineation Exhibits F and G were prepared from the information gathered at the site.

Exhibit F is the site map showing the delineated aquatic resources.

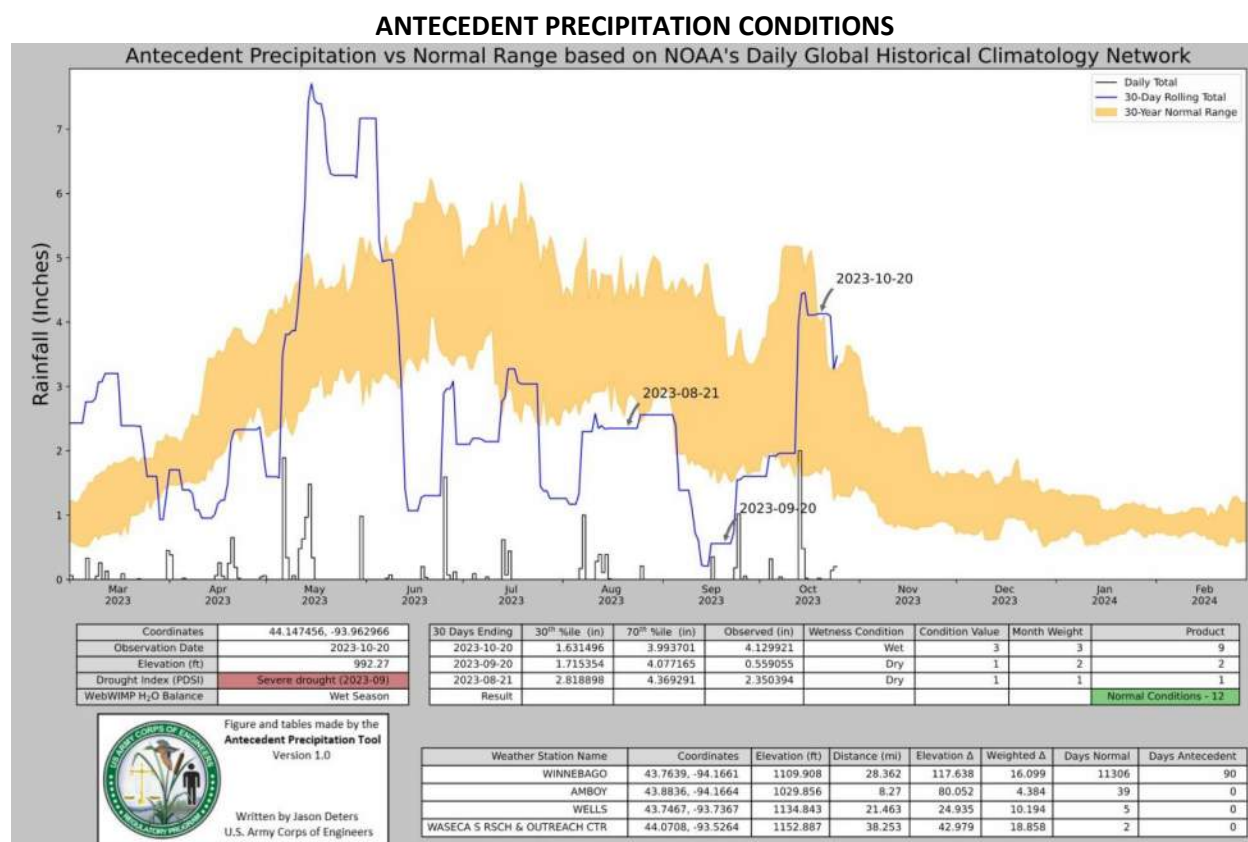
Exhibit G includes the wetland delineation data sheets.

IV. CLIMATE DATA

The monthly temperature table below shows the average high and low temperatures for the three months prior to the field delineation, along with the historical averages for these months. The monthly low and high temperatures have been within normal ranges for this period.



Antecedent precipitation was evaluated using a combination of the NRCS Method and the Rolling Totals Method. The analysis found that precipitation was normal over the past two months.



This climatic data was gathered using the Climatology Working Group Website, <http://climate.umn.edu/> and the National Weather Service Forecast Office, <http://w2.weather.gov/climate/>. The information for the investigation was retrieved from the WETS Station in St. Peter (ID: 217405)

V. FINDINGS

On October 27, 2023 a field investigation was performed to evaluate and verify the existence and boundary of any aquatic resources located within the study area. One wetland complex found to exist within the study area. The following describes the aquatic resources identified, together with a brief description of wetland types and observations made during the field investigation.

Wetland 1 (W1-A & W1-B):

NWI Cowardin: PEM1C

PWI (Hydro) ID: None

Field Observation Circular 39:

Types 2, 3, & 4

Field Observation Eggers and Reed:

Fresh (wet) Meadow, Shallow Marsh, & Deep Marsh

Soil Mapping Unit(s):

Wetland 1 is a complex of fresh wet meadow, shallow and deep marsh.

The field investigation found that the site has met all three wetland indicators and this wetland complex should be considered a combination of a palustrine emergent persistent temporarily flooded (PEM1A) wetland, a palustrine emergent persistent seasonally flooded (PEM1C) wetland and a palustrine emergent persistent continuously flooded (PEM1E) wetland. Two sample points were taken to determine the wetland boundary. The wetland boundary was largely drawn based on the changes in topography.

At the W1-A wetland pit location, the plant community was dominated by reed canary grass. The W1-B upland pit location was dominated by smooth brome and reed canary grass. Only the wetland pit location met hydrophytic vegetation. Soils in the W1-A wetland pit location met the hydric soil indicator F6-Redox Dark Surface.

Soils in the W1-B upland pit location did not meet any of the hydric soil indicators. The W1-A wetland location met primary indicator A1 and two secondary hydrology indicators D2-Geomorphic Position and D5- FAC-Neutral Test. The W1-B upland pit location did not meet any of the secondary hydrology indicators.

From the observations of both upland and wetland pit locations we can determine this area meets the criteria to be considered a wetland.



Photo 1: View of the W1-A & W1-B sample points looking into the wetland.



Photo 2: View of the Type 4 portion of wetland 1-A, facing south.



Photo 3: View of the Type 3 portion of wetland 1-A, facing west.



Photo 4: View of the Type 2 portion of wetland 1-A, facing north.



Photo 5: View of the Type 2 portion of wetland 1-A, facing east.



Photo 6: View of the Type 2 portion of wetland 1-B, facing south-east.



Photo 7: View of the Type 2 portion of wetland 1BA, facing south.



Photo 8: View of upland area of site. Water sitting due to previous rainfall.

VI. CONCLUSION

The delineation was performed on October 27, 2023. The boundaries of the wetlands were staked in the field with three foot "Wetland Delineation" pin flags. The location of the pin flags were surveyed by Bolton & Menk, Inc. using a Juniper Geode Data Collector and tied to the Blue Earth County coordinate system. The delineated limits are believed to be the upper limits of where all three of the required wetland criteria were present.

Bolton & Menk, Inc., was asked to determine the boundaries of those jurisdictional wetlands that exist upon this property as defined by the Wetland Conservation Act.

Based upon all available information, the existing conditions that currently prevail, and the on-site investigation, evidence supports the presence of one wetland complex within the boundaries of the study area.

WETLAND SUMMARY

Id #	Wetland Type [^]	Size*
W1-A	Type 2/3/4	0.31 ac
W1-B	Type 2	0.06 ac
Total:		0.37 ac

**size measured within study area.*

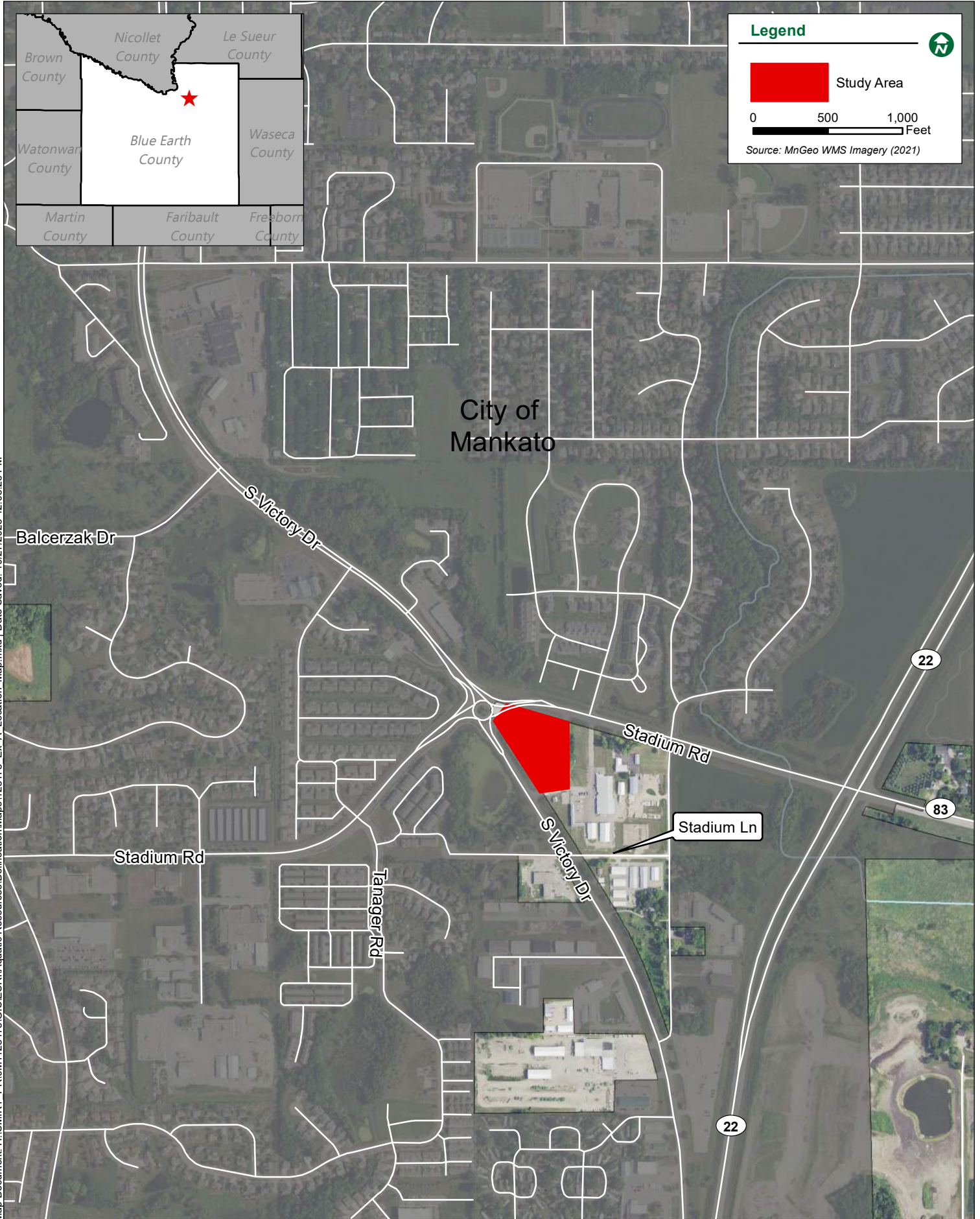
^wetland type within study area

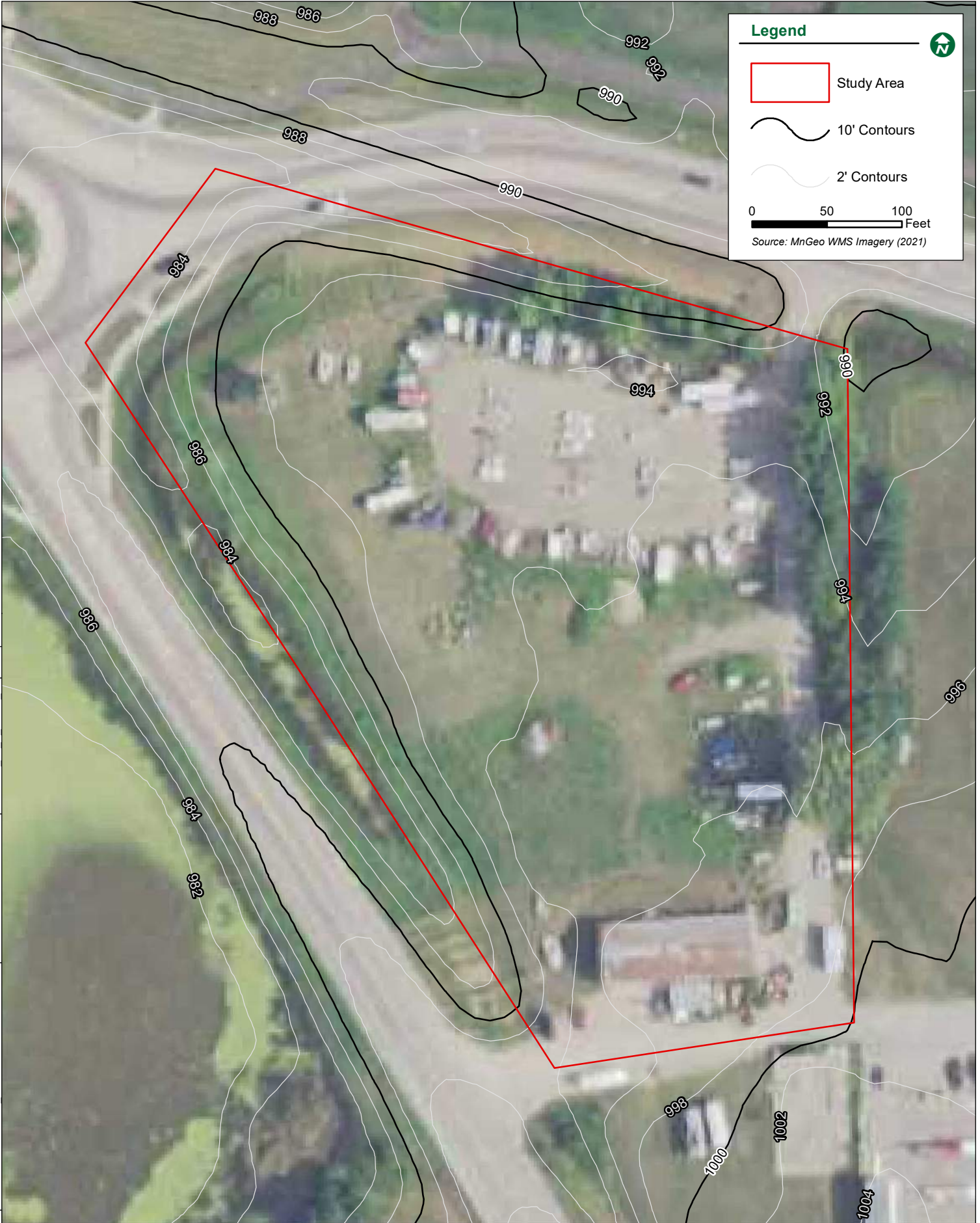
Sincerely,
BOLTON & MENK, INC.



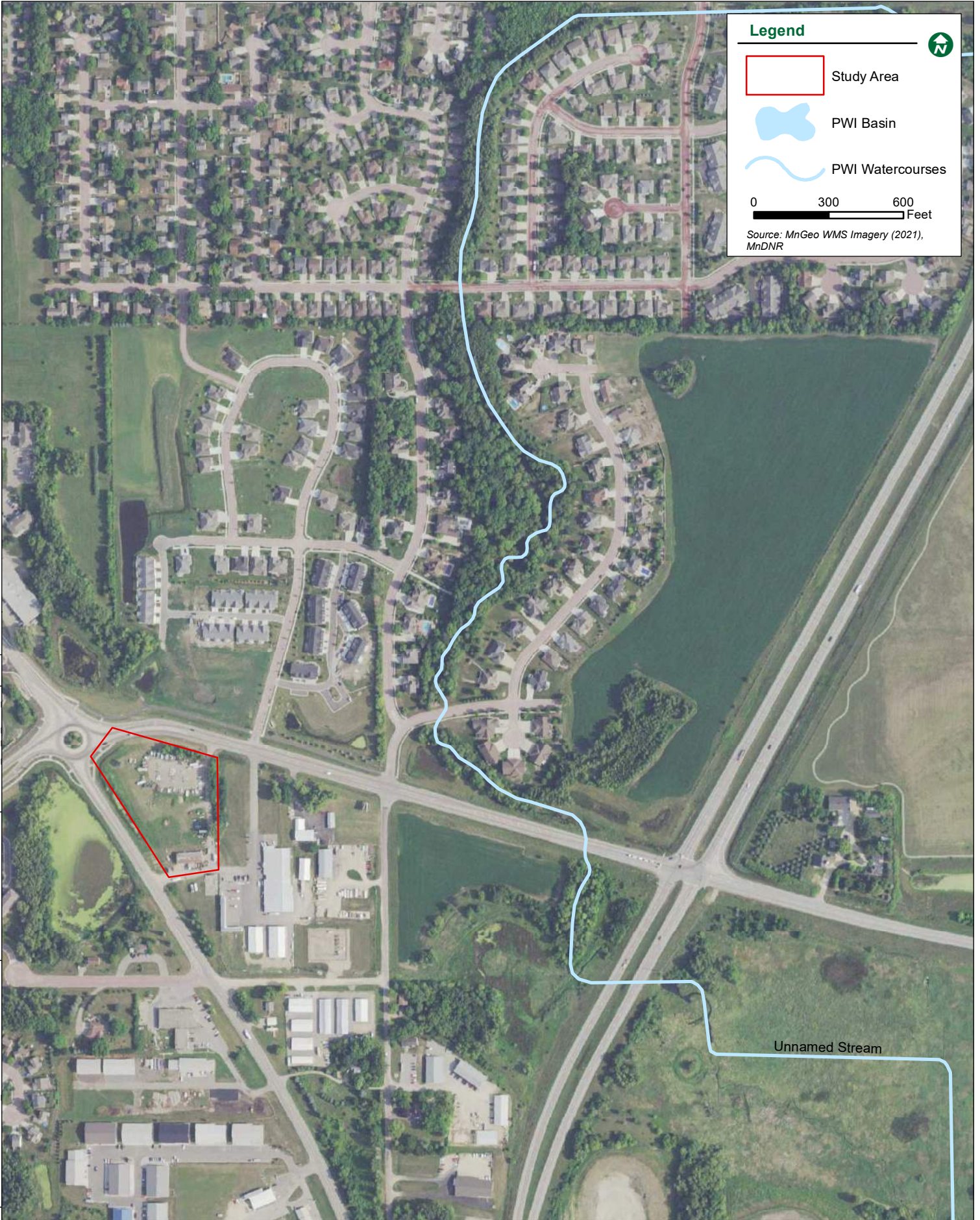
Addeline Theis
Certified Wetland Delineator, No. 1434

APPENDIX

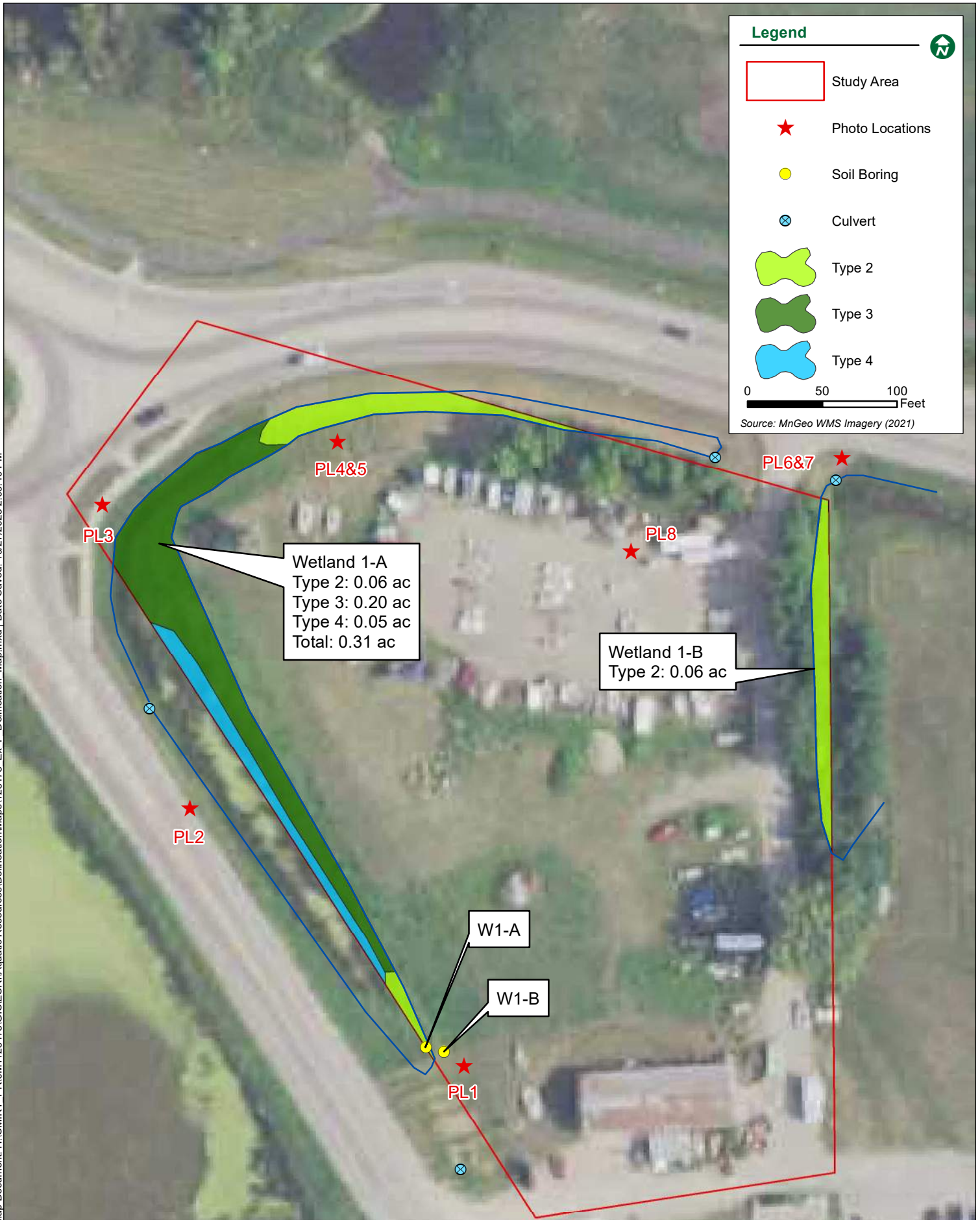












WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Victory & TH 83 Redevelopment City/County: Blue Earth County Sampling Date: 2023-10-27
 Applicant/Owner: Growth Holdings, LLC. State: Minnesota Sampling Point: W1-A
 Investigator(s): Addeline Theis Section, Township, Range: sec 21 T108N R026W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave
 Slope (%): 0-2 Lat: 44.146584 Long: -93.962611 Datum: WGS84
 Soil Map Unit Name: Marna silty clay loam, 0 to 2 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No _____	Is the Sampled Area within a Wetland? Yes ☒ No _____
Hydric Soil Present? Yes ☒ No _____	
Wetland Hydrology Present? Yes ☒ No _____	
Remarks: While drought conditions were dominate for a majority of the growing season, late fall rains just before site visit brought climate conditions back to normal.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>15.00</u> x 1 = <u>15.00</u> FACW species <u>65.00</u> x 2 = <u>130.00</u> FAC species <u>0.00</u> x 3 = <u>0.00</u> FACU species <u>0.00</u> x 4 = <u>0.00</u> UPL species <u>0.00</u> x 5 = <u>0.00</u> Column Totals: <u>80.00</u> (A) <u>145.00</u> (B) Prevalence Index = B/A = <u>1.81</u>
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: ☒ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☒ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>5</u>)				
1. <u>Phalaris arundinacea</u>	<u>65</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Typha angustifolia</u>	<u>15</u>	<u>N</u>	<u>OBL</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>80.0</u> = Total Cover				Hydrophytic Vegetation Present? Yes ☒ No _____
Woody Vine Stratum (Plot size: <u>30</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: W1-A**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features						Texture	Remarks
	Color (moist)		%	Color (moist)		%	Type ¹	Loc ²		
0-7	10YR	2/1	100						CL	
7-16	10YR	2/1	85	7.5YR	4/6	15	C	M	CL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ 2 cm Muck (A10)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 5 cm Mucky Peat or Peat (S3)

- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☒ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- ☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☒ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Sparsely Vegetated Concave Surface (B8)

- ☐ Water-Stained Leaves (B9)
☐ Aquatic Fauna (B13)
☐ True Aquatic Plants (B14)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Gauge or Well Data (D9)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 8
 Water Table Present? Yes ☒ No ☐ Depth (inches): 15
 Saturation Present? Yes ☐ No ☒ Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Victory & TH 83 Redevelopment City/County: Blue Earth County Sampling Date: 2023-10-27
 Applicant/Owner: Growth Holdings, LLC. State: Minnesota Sampling Point: W1-B
 Investigator(s): Addeline Theis Section, Township, Range: sec 21 T108N R026W
 Landform (hillslope, terrace, etc.): Footslope Local relief (concave, convex, none): Linear
 Slope (%): 3-7 Lat: 44.146583 Long: -93.962567 Datum: WGS84
 Soil Map Unit Name: Marna silty clay loam, 0 to 2 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No ☒	Is the Sampled Area within a Wetland? Yes _____ No ☒
Hydric Soil Present? Yes _____ No ☒	
Wetland Hydrology Present? Yes _____ No ☒	
Remarks: While drought conditions were dominate for a majority of the growing season, late fall rains just before site visit brought climate conditions back to normal.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.00</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0.00</u> x 1 = <u>0.00</u> FACW species <u>45.00</u> x 2 = <u>90.00</u> FAC species <u>0.00</u> x 3 = <u>0.00</u> FACU species <u>55.00</u> x 4 = <u>220.00</u> UPL species <u>0.00</u> x 5 = <u>0.00</u> Column Totals: <u>100.00</u> (A) <u>310.00</u> (B) Prevalence Index = B/A = <u>3.1</u>
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum (Plot size: <u>5</u>)				
1. <u>Bromus inermis</u>	<u>55</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Phalaris arundinacea</u>	<u>45</u>	<u>Y</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>100.0</u> = Total Cover				Hydrophytic Vegetation Present? Yes _____ No ☒
Woody Vine Stratum (Plot size: <u>30</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: W1-B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix			Redox Features				Texture	Remarks
	Color (moist)		%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR	2/1	100					CL	
10-19	10YR	2/2	100						

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)

- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)

- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ☒ Depth (inches): _____
Water Table Present? Yes _____ No ☒ Depth (inches): _____
Saturation Present? Yes _____ No ☒ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

June 6th, 2025

To: Brian Johnson, Jones, Haugh & Smith Inc.

From: Katie Schmidt, PE (MN PE License #47147)

Re: Trip Generation Memorandum – Mankato Apartments Development, Mankato, MN

Per your request, SSTS LLC has conducted a trip generation estimate for the proposed Mankato Apartment Development in the City of Mankato, Blue Earth County, MN. The Proposed Project is located on the south side of Stadium Rd (CSAH 60) and east of S Victory Dr. The Proposed Project includes 72 apartment units split between two three-level buildings and a 150-stall surface parking lot. Access is proposed on S Victory Dr. The adjacent **Figure 1** depicts the site layout and access location. It is noted that traffic will not be able to cut-through to eastern property.

Trip Generation

The volume of vehicle trips generated by the Proposed Project has been estimated for the weekday AM and PM peak traffic hours and on a daily basis using the data and methodology described in the Institute of Transportation Engineers' (ITE) **Trip Generation Manual**¹, which is a standard industry reference used by public agencies to estimate trips generated by specific land uses. **Table 1** summarizes the trip generation estimates. ITE's Low Rise Multifamily land use corresponds to the proposed three-level apartment buildings.



Figure 1. Proposed Project

Table 1 - Trip Generation

Land Use	ITE Land Use Code	Size	Trips Generated:				
			AM Peak		PM Peak		Weekday ADT
			Enter	Exit	Enter	Exit	
Multifamily Housing (Low-Rise)	220	72 units	7	22	23	14	485
Totals			7	22	23	14	485
			29		37		

The Proposed Project is estimated to generate the following:

- 29 new trips (7 entering and 22 exiting) during the morning traffic peak hour,
- 37 new trips (23 entering and 14 exiting) during the evening traffic peak hour, and
- 485 daily trips.

The anticipated travel patterns for residents of the Proposed Project are approximately 85% to/from the north and 15% to/from the South on S Victory Dr. The number of vehicle trips generated by the Proposed Project is low, approximately one new vehicle trip every two minutes during the peak hours, and impacts to existing traffic operations are anticipated to be minimal. Additionally, turning volumes at the access point do not warrant turn lanes per industry references (AASHTO and NCHRP Reports).

¹ **Trip Generation Manual**, Institute of Transportation Engineers (ITE), 11th Edition

September 19th, 2025

To: Shawn Meschke, PE – APX Construction Group

From: Katie Schmidt, PE - SSTS LLC (MN PE #47147)

Re: Traffic Study – Mankato Apartments (901 S Victory Dr) Traffic Study, Mankato, MN

SSTS, LLC has performed a traffic analysis for the Mankato Apartment Development located at 901 S Victory Dr, referred to as the Proposed Project. This development encompasses approximately 4.5 acres situated on the south side of Stadium Rd (CSAH 60) and east of S Victory Dr. The current land uses consist of a small engine repair shop and vacant land that will be redeveloped.

The Proposed Project consists of 72 apartment units distributed between two three-story buildings, along with a 150-stall surface parking lot. Access to the project is proposed via the existing driveway on S Victory Dr. Traffic will not be permitted to cut through to the eastern property. **Figure 1** illustrates the location and layout of the Proposed Project.

This study aims to assess the traffic impacts generated by the Proposed Project on the operations and safety of the adjacent roadway network and the proposed access driveway. Two existing intersections were analyzed: the Stadium Rd/S Victory Dr roundabout and the side-street stop-controlled intersection at S Victory Dr/Stadium Ln. Additionally, the proposed intersection of S Victory Dr and the Access Driveway was evaluated under Build conditions. Study years include Year 2025 (existing conditions) and Year 2027 without and with the Proposed Project. The following items will be reviewed to provide informed recommendations for safely accommodating traffic:

- Existing Conditions – Geometry and traffic volumes.
- Safety – Review of crash history.
- Future Conditions – Details on background growth and site-generated traffic. Descriptions of 2027 No-Build and 2027 Build Scenarios.
- Traffic Operations Analysis – Summary of Year 2025 Existing Conditions, and Year 2027 No-Build and Build Conditions.

EXISTING CONDITIONS

The existing conditions of the study area roadways and intersections are noted in **Table 1** and on **Figure 2**. Average Daily Traffic (ADT) volumes noted on Figure 2 are from MnDOT's traffic mapping application ([MnDOT ADT Map](#)).

Table 1. Study Roadway Characteristics

Roadway	Ownership	Functional Class*	Typical Section	Posted Speed
Stadium Rd (CSAH 60)	Blue Earth County	Minor Arterial	2-Lanes w/Turn Lanes (W of Victory Rd) 3-Lanes W/CLTL (E of Victory Rd)	40 mph
S Victory Dr	City of Mankato (S of Stadium Rd) Blue Earth County (N of Stadium Rd)	Major Collector	2-Lanes	45 mph
Stadium Ln	City of Mankato	Local	2-Lanes	30 mph

* Based on Enterprise MnDOT Mapping Application (EMMA) - [EMMA Link](#)

AM and PM peak hour turning movement counts were conducted at the two existing study area intersections (Stadium Rd/S Victory Dr roundabout and S Victory Dr/Stadium Ln side-street stop-controlled intersection) on Wednesday, September 10th, 2025. The AM peak traffic hour was found to occur from 7:15 to 8:15 AM, and the PM peak traffic hour was found to occur from 4:30 to 5:30 PM.

Figure 3 shows the existing traffic volumes at the study area intersections. Traffic volumes were balanced through the intersections as needed. Detailed traffic counts are included in Appendix A.

CRASH HISTORY REVIEW

Historical crash data from MnDOT’s Crash Mapping Analysis Tool (MnCMAT) for the existing study area intersections was reviewed for 5 years (2020-2024) to note any existing safety concerns and to determine if the addition of site-generated traffic could exacerbate existing safety issues. Intersection Crash Rate (CR), MnDOT’s Average Crash Rate for similar intersections, and Intersection Critical Crash Rate were reviewed. The Intersection Crash Rate is defined by the number of crashes occurring per million entering vehicles (MEV). MnDOT’s Average Crash Rate is from published system-wide average crash rates for similar intersections. The Intersection Critical Crash Rate is used to determine if an intersection has a crash rate higher than similar facilities by a statistically significant amount. The critical rate is calculated by adjusting the system-wide average crash rate based on the amount of exposure and a statistical constant indicating the level of confidence. If the actual crash rate at a specific location exceeds the critical crash rate, it suggests that deficiencies in the intersection design or other factors may be contributing to the crashes. In such cases, further engineering investigation is recommended.

Table 2 summarizes the intersection crash data for the studied intersections and compares the overall crash rates to the critical crash rates. Based on the crash history at these intersections, there are no existing safety concerns, as the crash rates are lower than the critical crash rates.

Table 2. Intersection Crash Summary

Study Intersection and Control	Years of Data	Total Crashes	Crash Types	F&A Crashes*	Entering ADT	Intersection CR (per MEV)		
						CR	MnDOT Ave. CR	Critical CR
Stadium Rd & S Victory Dr Roundabout	5	5	Single Vehicle - 4 Rear End - 1	0	15,737	0.17	0.97	1.46
S Victory Dr & Stadium Ln Side-Street Stop	5	1	Rear End - 1	0	1,557	0.35	0.15	0.90

* F & A crashes are fatalities and serious injury crashes.

2027 NO-BUILD SCENARIO

Year 2027 was studied to correspond to the year after build-out of the Proposed Project, and No-Build and Build Scenarios were determined. The No-Build Scenario considers the traffic and geometric conditions that would be present at the time of completion of the Proposed Project, without the inclusion of the Proposed Project. The Build Scenario includes the volumes and geometric conditions with the Proposed Project.

To account for general background traffic growth in the area, an annual traffic growth rate was calculated based on historical AADT trends in the area from MnDOT’s Traffic Mapping Application. An annual traffic growth rate of 2.35% was calculated and applied to the existing 2025 traffic volumes to estimate the 2027 No-Build traffic volumes shown on **Figure 4**.

2027 BUILD SCENARIO

The 2027 Build Scenario includes traffic from the Proposed Project. The volume of vehicle trips generated by the Proposed Project has been estimated for the weekday AM and PM peak traffic hours and on a daily basis using the data and methodology described in the Institute of Transportation Engineers’ (ITE) **Trip Generation Manual**¹, which is a standard industry reference used by public a

¹ **Trip Generation Manual**, Institute of Transportation Engineers (ITE), 12th Edition

agencies to estimate trips generated by specific land uses. **Table 3** summarizes the trip generation estimates. ITE's Low Rise Multifamily land use corresponds to the proposed three-level apartment buildings.

Table 3. Trip Generation

Land Use	ITE Land Use Code	Size	Trips Generated:				
			AM Peak		PM Peak		Weekday ADT
			Enter	Exit	Enter	Exit	
Multifamily Housing (Low-Rise)	220	72 units	7	23	23	14	447
Totals			7	23	23	14	447
			30		37		

The Proposed Project is estimated to generate the following:

- 30 new trips (7 entering and 23 exiting) during the morning traffic peak hour,
- 37 new trips (23 entering and 14 exiting) during the evening traffic peak hour, and
- 447 daily trips.

The primary travel pattern for residents of the Proposed Project is assumed to/from Minnesota State University via Stadium Rd, accounting for 70% of site-generated traffic. Additionally, it is estimated that 15% of the site-generated traffic is to/from the north on Victory Dr, 5% to/from the south on Victory Dr, and 10% to/from the east on Stadium Rd. **Figure 5** illustrates the distribution percentages of site-generated traffic and the resulting trip assignment at each intersection. The Build traffic volumes, shown on **Figure 6**, are formed when the No-Build traffic volumes are combined with the trip assignment traffic volumes.

Turning volumes at the S Victory Dr and the Access Driveway do not warrant turn lanes per industry references (NCHRP Reports) and the intersection was modeled with shared single lane approaches.

TRAFFIC OPERATIONS ANALYSIS

The operating conditions of intersections are assessed by comparing their capacity to the actual traffic volume. The industry standards for evaluating capacity are outlined in the **Highway Capacity Manual**². These conditions are described in terms of driver delay, which is represented by a Level of Service (LOS) grade, where "A" indicates the best conditions and "F" signifies the worst. Generally, LOS "D" marks the threshold for acceptable operations. **Table 4** provides a summary of the LOS and delay criteria for unsignalized intersections and roundabouts.

Table 4. Level of Service Criteria – Unsignalized Intersections & Roundabouts

LOS	A	B	C	D	E	F
Delay	0-10 seconds	>10-15 seconds	>15-25 seconds	>25-35 seconds	>35-50 seconds	>50 seconds
Description	 <i>Free-flow operation</i>	 <i>Unimpeded operation</i>	 <i>Stable operation</i>	 <i>Less stable & more delay</i>	 <i>Unstable & high delay</i>	 <i>Congested & back-ups</i>

Another component of operational analyses is a study of queuing. An intersection can operate with an acceptable LOS, but if queues from the intersection extend back to block adjacent intersections, entrances to turn lanes, or access driveways, unsafe conditions could result. This study reports the industry design standard 95th Percentile Queue Length.

This study utilized the Synchro/SimTraffic software package (12th Edition) for the side-street stop control operational analyses and RODEL Roundabout Analysis Software for the roundabout operational

² **Highway Capacity Manual (HCM)**, Transportation Research Board, 7th Edition

analyses. LOS D was considered the threshold for acceptable operations. LOS, delay, and queues are reported for each intersection.

Intersection operational analysis results for Existing Conditions, 2027 No-Build Conditions, and 2027 Build Conditions are reported in **Table 5** and **Table 6** for the AM and PM peak hours, respectively.

Table 5. Operational Analysis Results – AM Peak Hour

Intersection	Lane	2025 Existing AM Peak Hour		2027 No-Build AM Peak Hour		2027 Build AM Peak Hour	
		Delay	Queue (')	Delay	Queue (')	Delay	Queue (')
Stadium Rd & Victory Dr (Roundabout)	EB	A 3.8	49	A 3.9	53	A 3.9	54
	WB	A 6.0	48	A 6.2	53	A 6.4	55
	NB	A 5.1	24	A 5.2	27	A 5.4	30
	SB	A 4.2	9	A 4.3	10	A 4.3	10
	Overall	A 4.5		A 4.6		A 4.7	
Victory Dr & Stadium Ln (Side-Street Stop)	EB LTR	B 10.5	3	B 10.7	3	B 10.7	3
	WB LTR	A 9.4	0	A 9.5	0	A 9.5	0
	NB LT	A 7.4	0	A 7.4	0	A 7.4	0
	NB R	A 0.0	0	A 0.0	0	A 0.0	0
	SB LT	A 7.7	0	A 7.7	0	A 7.7	0
	SB R	A 0.0	0	A 0.0	0	A 0.0	0
	Overall	A 0.7		A 0.7		A 0.7	
Victory Dr & Access (Side-Street Stop)	WB LR	NA	NA	NA	NA	A 9.8	3
	NB TR					A 0.0	0
	SB LT					A 7.8	0
	Overall					A 0.8	

Table 6. Operational Analysis Results – PM Peak Hour

Intersection	Lane	2025 Existing PM Peak Hour		2027 No-Build PM Peak Hour		2027 Build PM Peak Hour	
		Delay	Queue (')	Delay	Queue (')	Delay	Queue (')
Stadium Rd & Victory Dr (Roundabout)	EB	A 4.0	59	A 4.2	65	A 4.2	67
	WB	A 7.9	103	A 8.6	119	A 8.8	122
	NB	A 5.0	19	A 5.2	21	A 5.3	23
	SB	A 5.7	30	A 6.0	33	A 6.1	35
	Overall	A 5.5		A 5.8		A 5.9	
Victory Dr & Stadium Ln (Side-Street Stop)	EB LTR	B 11.1	3	B 11.3	3	B 11.3	3
	WB LTR	A 9.7	0	A 9.7	0	A 9.7	0
	NB LT	A 7.6	0	A 7.6	0	A 7.6	0
	NB R	A 0.0	0	A 0.0	0	A 0.0	0
	SB LT	A 7.5	0	A 7.6	0	A 7.6	0
	SB R	A 0.0	0	A 0.0	0	A 0.0	0
	Overall	A 0.7		A 1.0		A 1.0	
Victory Dr & Access (Side-Street Stop)	WB LR	NA	NA	NA	NA	A 9.5	3
	NB TR					A 0.0	0
	SB LT					A 7.7	3
	Overall					A 0.7	

The following summarizes the operational results for each study year:

- 2025 Existing Conditions - The two study area intersections function acceptably under existing conditions. LOS is B or better for all approach lanes. Queuing is safely managed by the current roadway geometry.
- 2027 No-Build Conditions - The two study area intersections also operate acceptably under 2027 No-Build conditions. The growth in background traffic slightly increases delays and queuing. LOS remains B or better for all approach lanes. Queuing continues to be safely managed by the current roadway geometry.
- 2027 Build Conditions - The intersections and proposed access within the study area function acceptably under 2027 Build conditions with the Proposed Project. The addition of site-generated traffic causes slight increases in delay and queuing. LOS remains B or better for all approach lanes. Queuing is safely accommodated by the existing roadway geometry. Mainline turn lanes at the access are not necessary on Victory Dr based on operations.

SUMMARY

- ★ The number of new vehicle trips estimated to be generated by the Proposed Project is 30 trips during the morning peak hour (7 entering and 23 exiting), 37 trips during the evening peak hour (23 entering and 14 exiting), and 447 trips daily. This volume is low, resulting in roughly one new trip every two minutes during peak hours.
- ★ The operational analyses show acceptable conditions in the study area for both existing and 2027 No-Build scenarios. The crash history review revealed no safety issues.
- ★ The operation analyses for 2027 Build conditions with the Proposed Project indicate acceptable study area operations. The Victory Dr and Access intersection functions acceptably with single-lane approaches.



Figure 1. Project Location and Site Layout

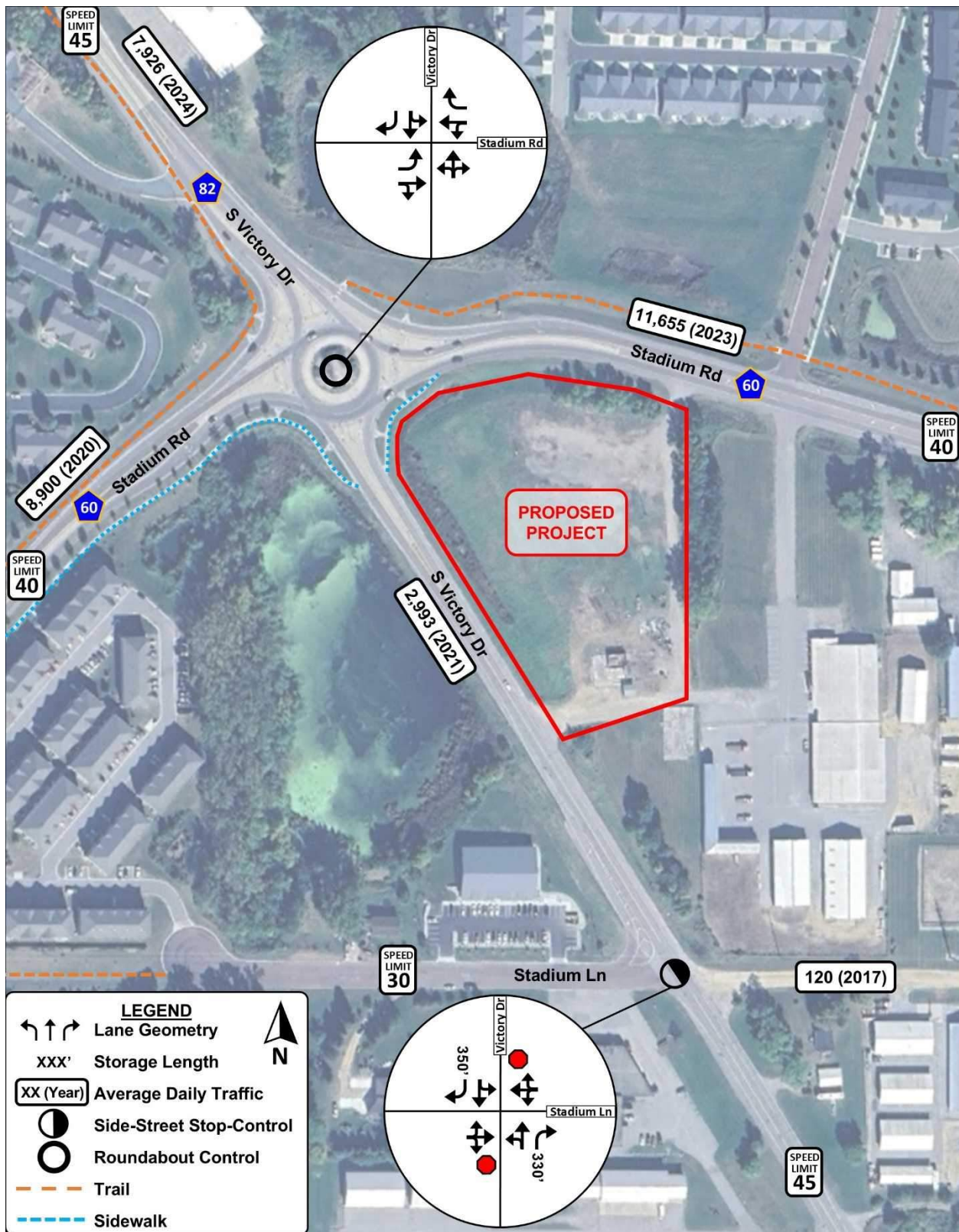


Figure 2. Existing Conditions



Figure 3. Existing 2025 Traffic Volumes



Figure 4. 2027 No-Build Traffic Volumes

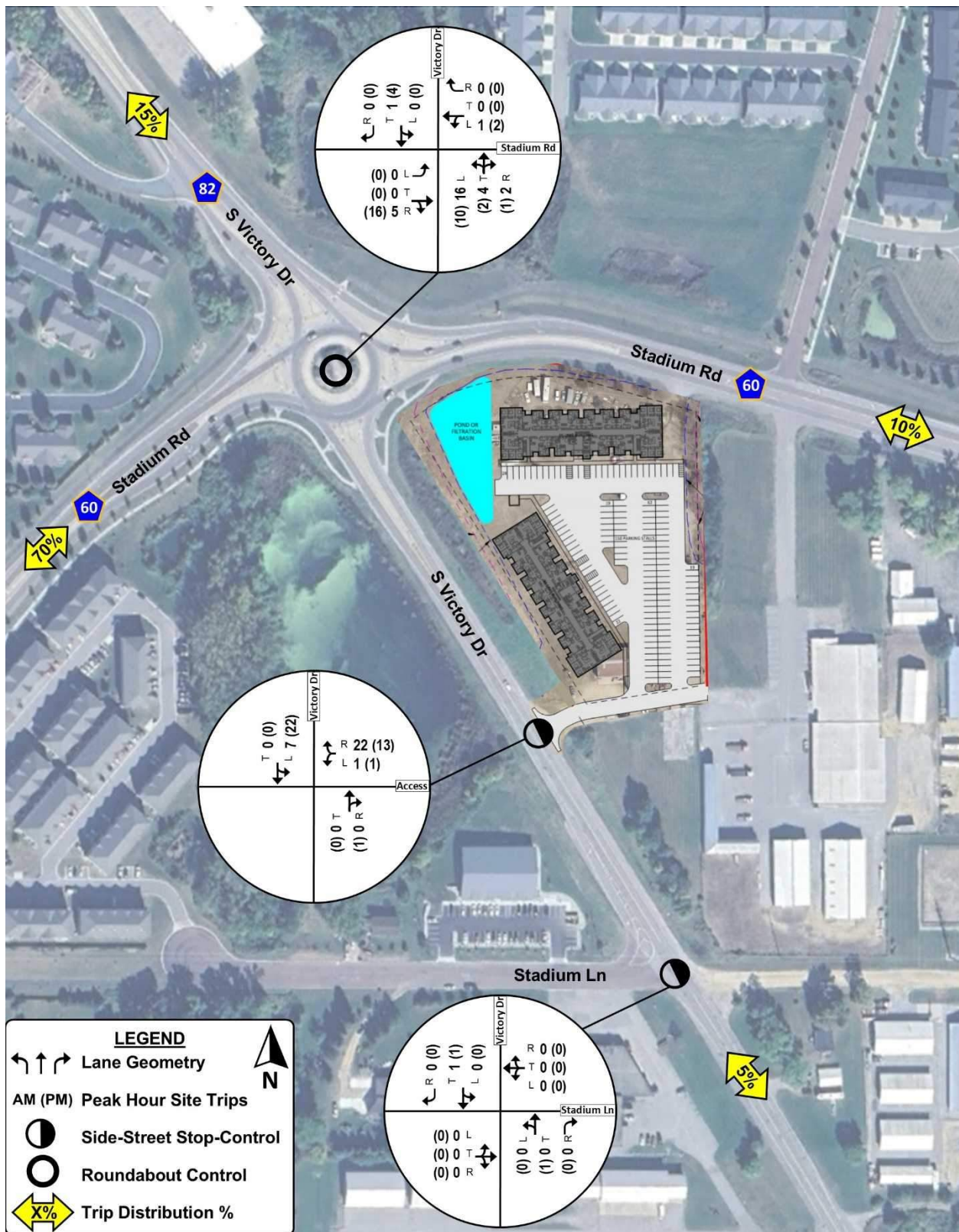


Figure 5. Trip Distribution and Assignment

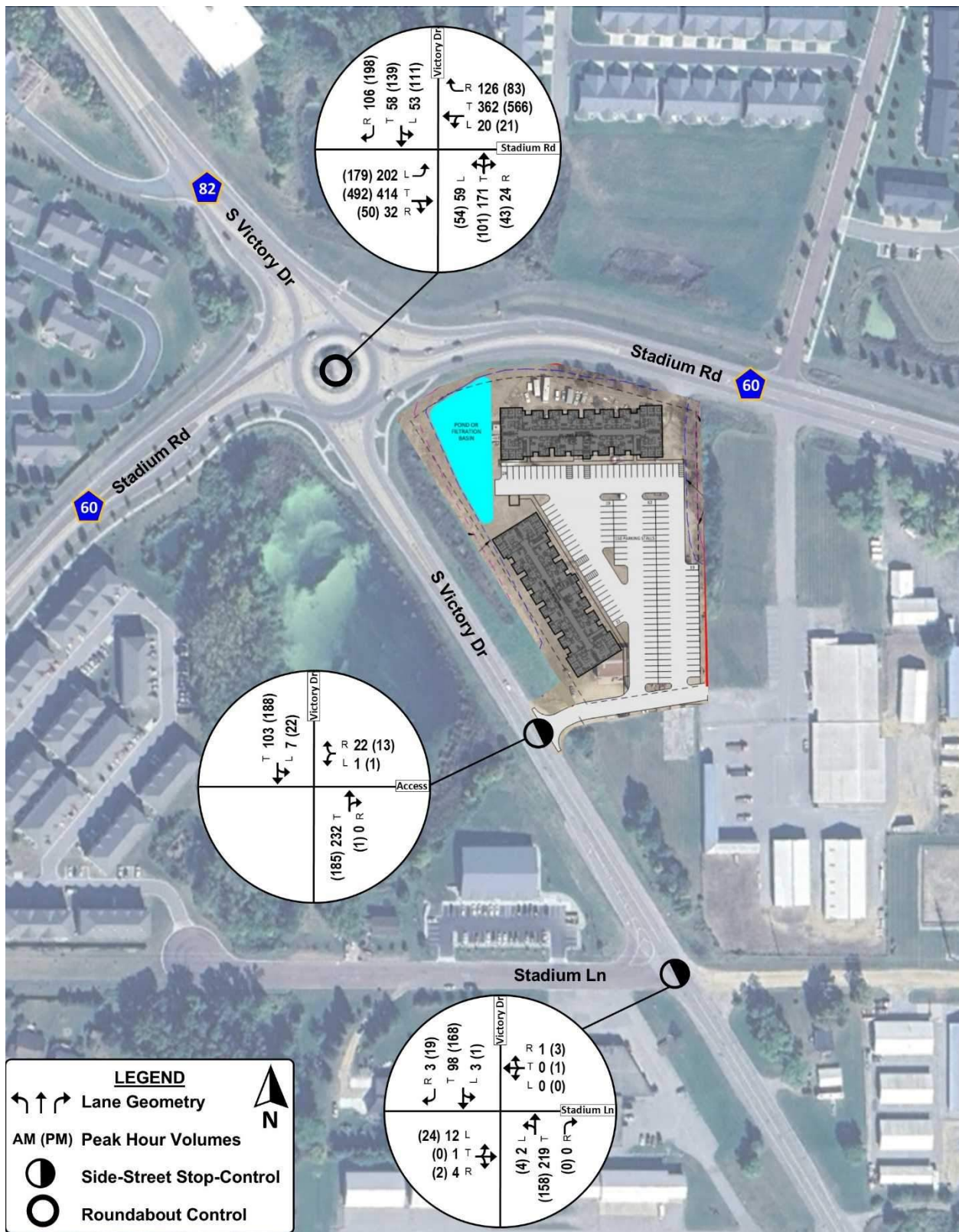
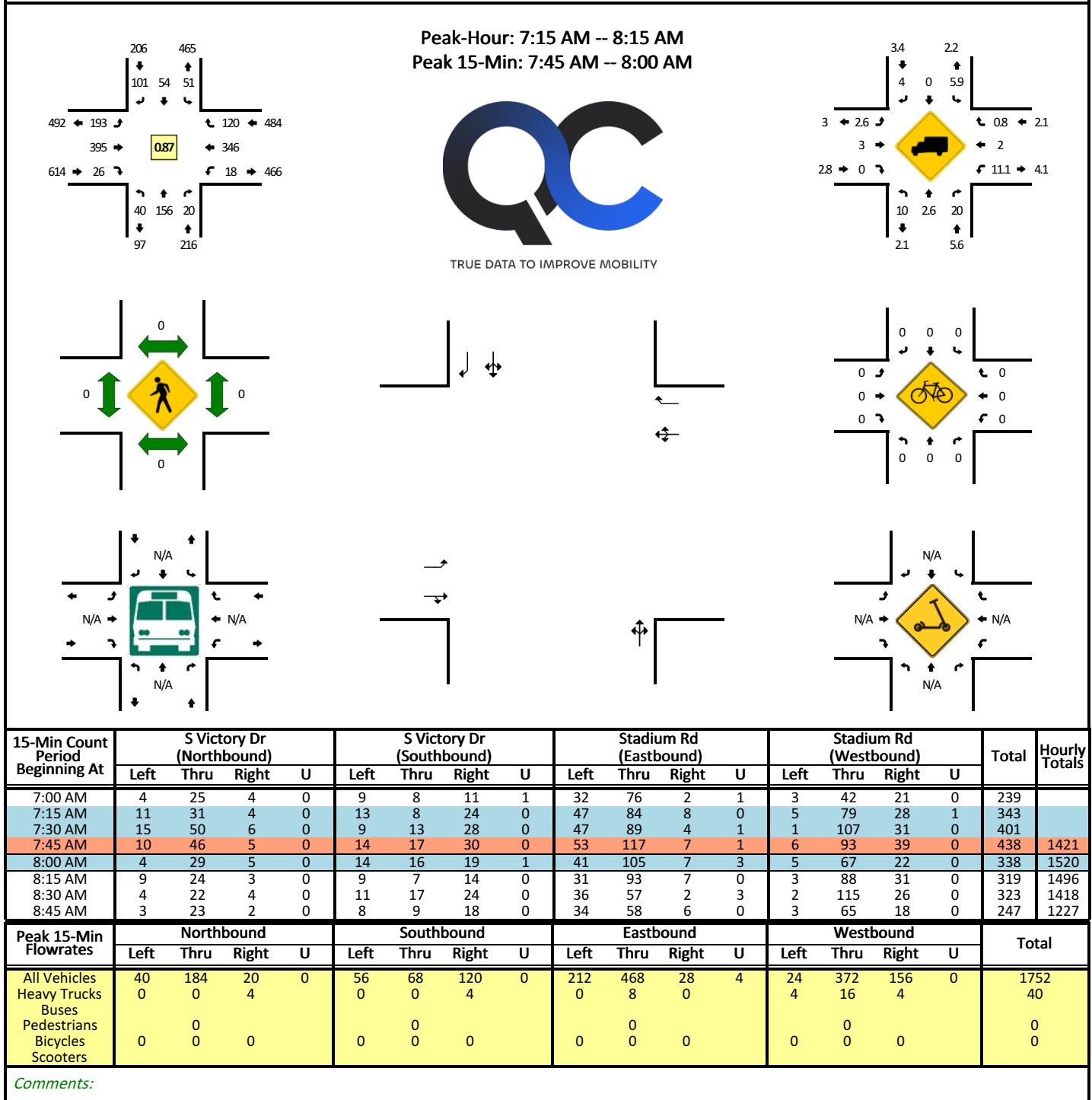


Figure 6. 2027 Build Traffic Volumes

Appendix A – Turning Movement Counts

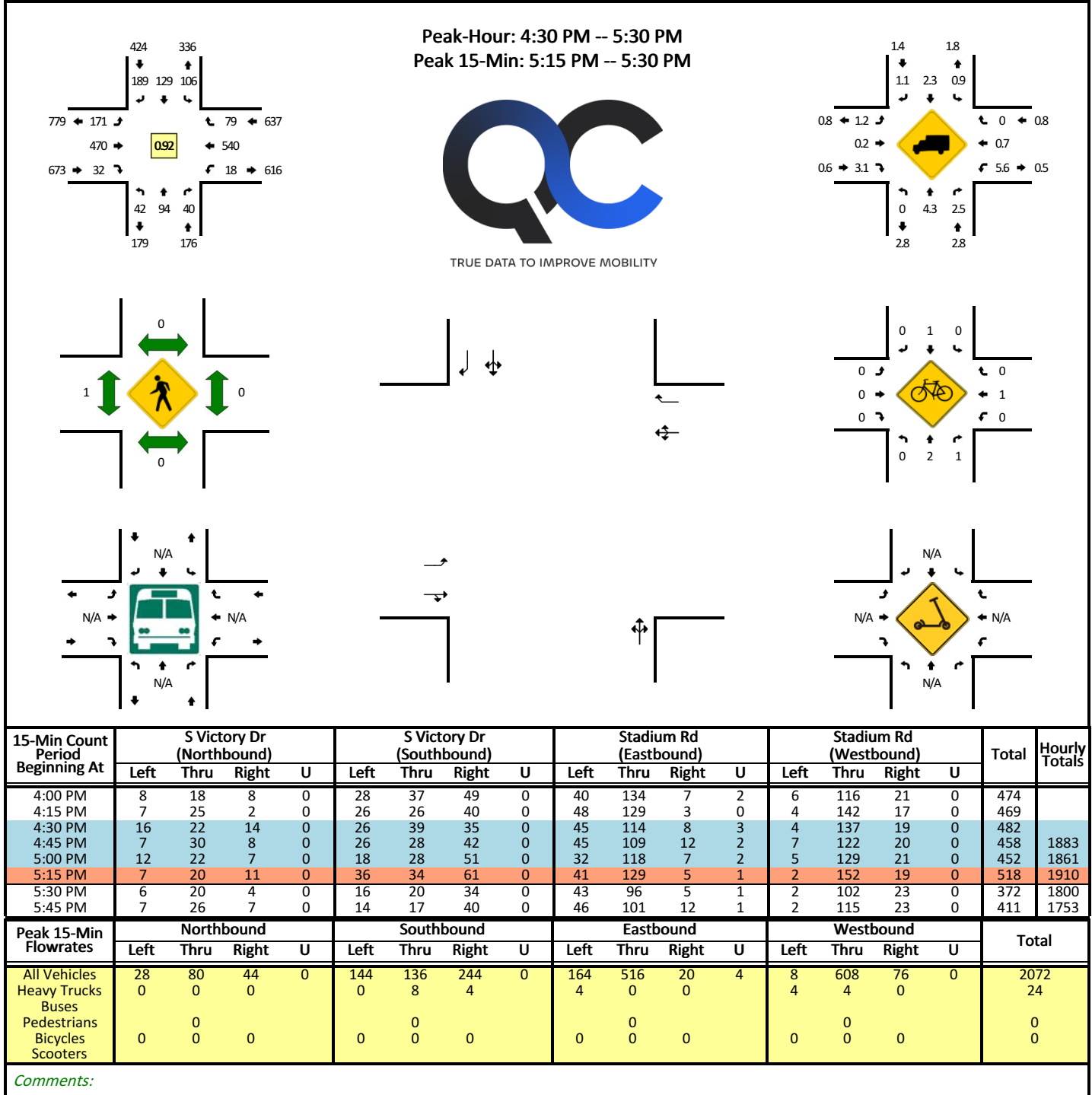
LOCATION: S Victory Dr -- Stadium Rd
CITY/STATE: Mankato, MN

QC JOB #: 17227201
DATE: Wed, Sep 10 2025



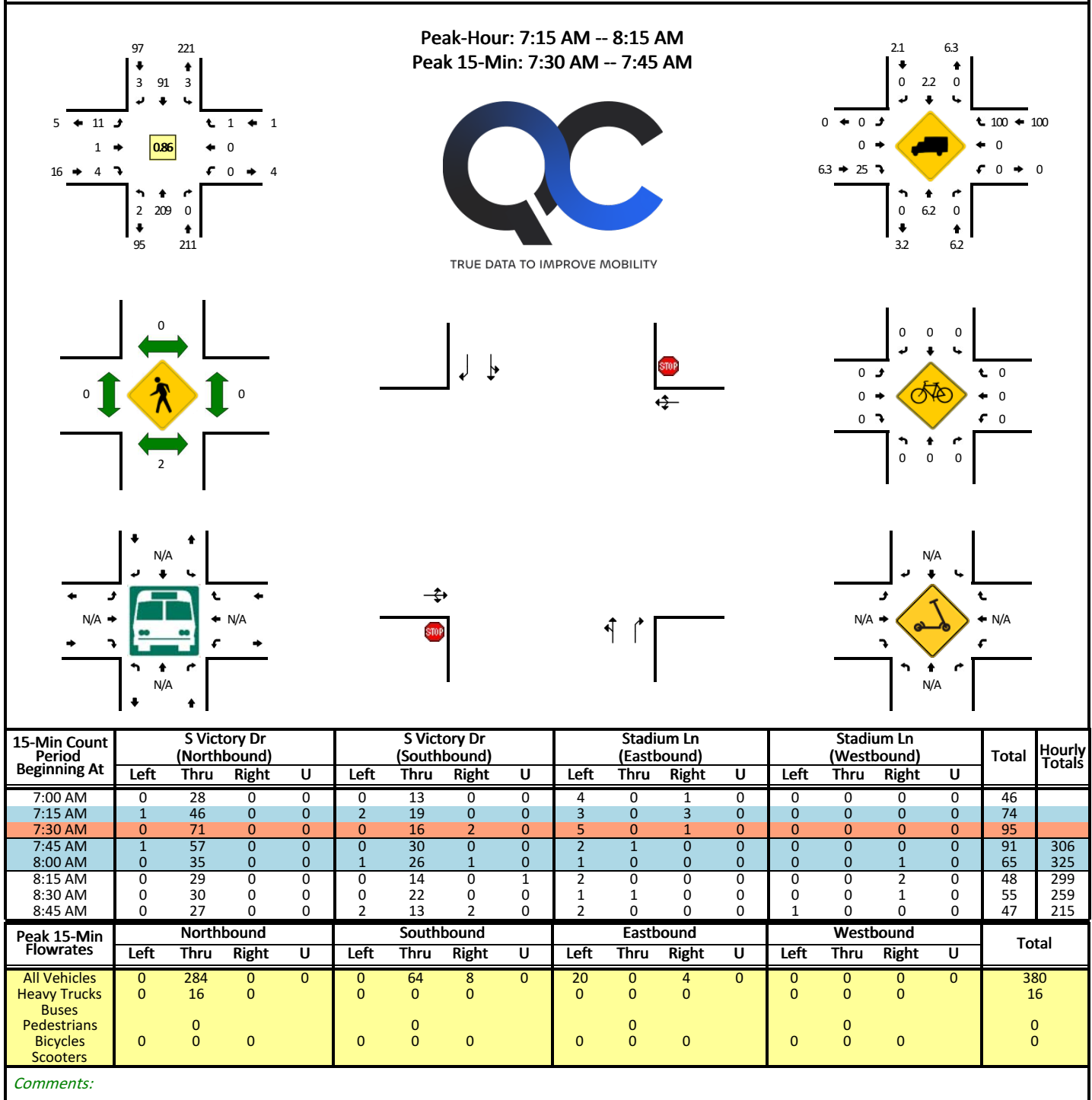
LOCATION: S Victory Dr -- Stadium Rd
CITY/STATE: Mankato, MN

QC JOB #: 17227202
DATE: Wed, Sep 10 2025



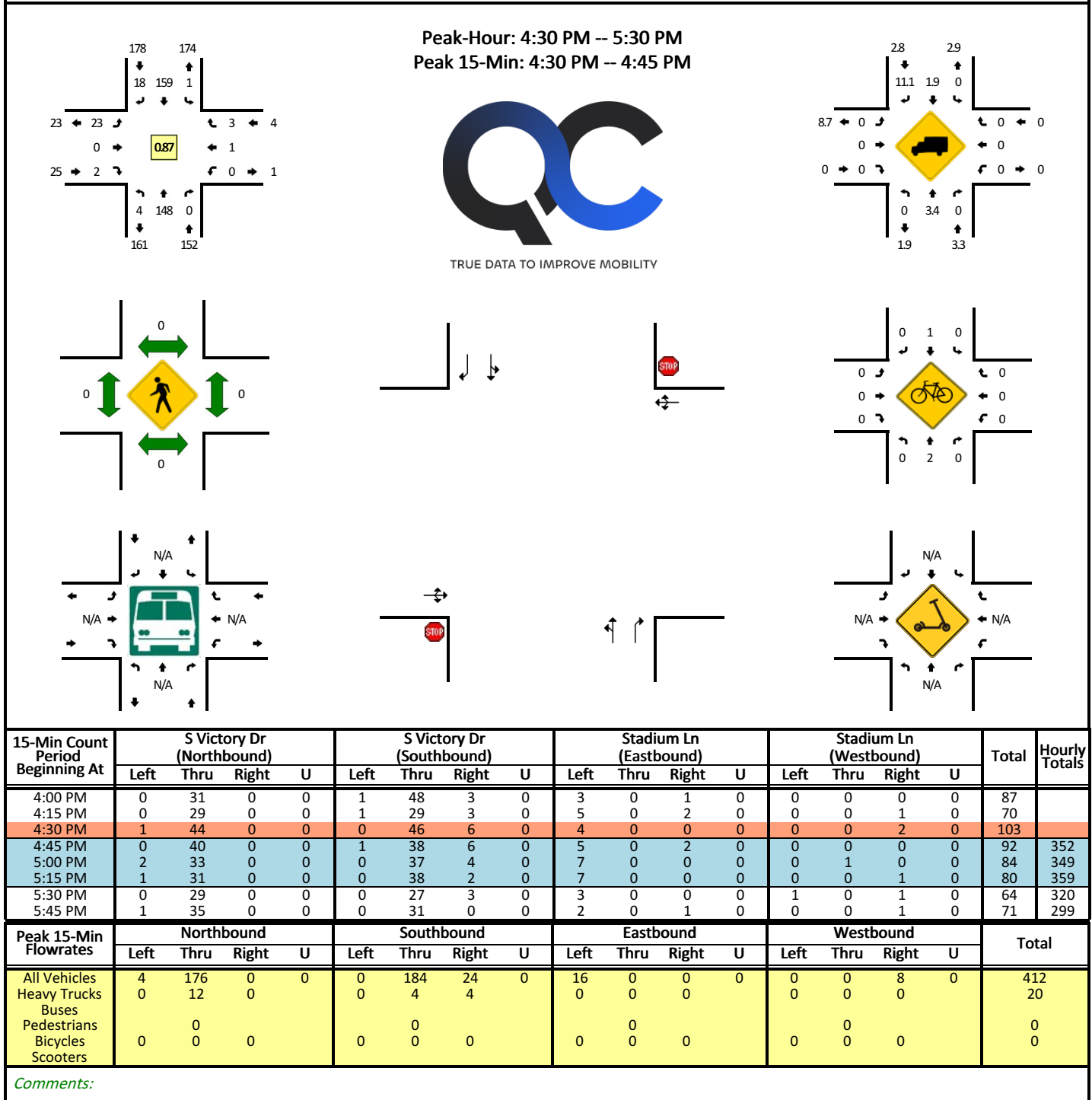
LOCATION: S Victory Dr -- Stadium Ln
CITY/STATE: Mankato, MN

QC JOB #: 17227203
DATE: Wed, Sep 10 2025



LOCATION: S Victory Dr -- Stadium Ln
CITY/STATE: Mankato, MN

QC JOB #: 17227204
DATE: Wed, Sep 10 2025





November 10th, 2025

Planning Department
City of Mankato
Intergovernmental Center
10 Civic Center Plaza
Mankato, MN 56001

RE: Plan Review Response Letter for **901 South Victory Drive** in Mankato.

To Whom It May Concern,

I am writing on behalf of the owners of Victory Mankato, LLC, who own the subject property and are requesting Preliminary Plat, Annexation and Rezoning approval. We appreciate the Planning Staff's understanding as our development team has made changes to the approach to this development. We do feel that the changes that have been made will make for a more successful project for the community.

Below are the developer's responses to the questions and concerns provided by the City of Mankato's plan review members.

Below are the applicant's responses to the comments offered by the City Planning staff on Thursday, November 6th.

1. There is conflicting information scattered throughout the report in reference to the site area, specifically the total area of the proposed site. The memo states that total "impervious surface tributary" of 4.25 acres, whereas the SWPPP mentions a disturbance area of 2 acres, and the MIDS report totals 4 acres. Please make sure that consistency is maintained.

The subject property consists of 4.00 acres (174,058 square feet). The surveyor erroneously included Parcel F to the north of the site on their original area determination.

2. Filtration stormwater facilities do not have a dry storage requirement. They only need to satisfy rate requirements more than the WQV and maintain freeboard during 100-year events. As such, it appears that the footprint of the facility could be much smaller than currently proposed based on HWL provided.

Please see the updated Civil drawings from Jones, Haugh & Smith that shows a modified storm filtration basin and adjusted grades around the buildings.

3. Please update MIDS report to account for the biofiltration w/underdrain, not a stormwater pond

The basin has been downsized, and the top of the berm was lowered by 1 foot. Please see the revised Civil drawings attached to this submittal.

4. Tabular summary of drainage areas needs to be updated to reflect actual pre-and-post catchment areas. The drainage area maps provided clearly indicate that drainage patterns are altered in the proposed condition and therefore do not have the same area associated with each catchment in the existing.

The site was divided into 4 actual proposed subcatchments consisting of the impervious surfaces tributary to the basin, impervious not tributary, the basin and the existing wetlands.

5. Outlet control structure needs to be revised to include the underdrain connection and removal of the v-notch weir at the new basin bottom. Water should not freely leave the BMP below the required WQV elevation as it will be filtered through the media and the underdrain.

The V-notch weir was raised to elevation 988.25 to withhold the WQV.

6. The entire site does not drain through the BMP as there will still be small areas routed directly to the east and west wetlands. Please update HydroCAD and MIDS to reflect this.

HydroCAD and MIDS have been updated.

7. Based on provided 100-yr HWL within the BMP, it does not seem necessary to grade such a tall berm, though the removal of the weir may raise the HWL. Please consider adjusting berm elevation upon revision to the outlet structure.

The basin has been downsized, and the top of the berm was lowered by 1 foot.

8. The sidewalk connection along S Victory Dr shall include a 4-ft grass boulevard and 5-ft concrete sidewalk. The sidewalk connection will require the addition of new concrete curb and gutter along S Victory Dr matching the lane and shoulder width existing at the roundabout.

Curb and sidewalk have been added to the plan.

9. The sidewalk typical section installed within the city right-of-way shall consist of 4-inch concrete with 6-inch of aggregate base.

A detail has been added to the civil plans for the sidewalk in City right-of-way.

10. Since phasing is now being proposed, a phasing plan and narrative that demonstrates each phase of the project and how compliance will be achieved.

The applicant is proposing the construction of the northernmost as soon as a building permit can be obtained from the City of Mankato. The estimated start date would be January 1, 2026 with a completion date of August of 2026. The 2nd phase construction of the south building would begin in the late Fall of 2026 and would have an anticipated completion date of June of 2027. The construction team will provide a traffic and pedestrian safety plan that will be implemented during construction of the 2nd phase.

Please see the phasing plan that is included on Sheet 9 of the Design Compliance document.

Below are the applicant's responses to the 2nd set of comments offered by the City Planning staff on Wednesday, November 5th.

- a. The applicant shall verify that the proposed pond location, in relation to the building, complies with all applicable building code requirements. An alternative pond design is recommended. Additionally, all preliminary plat comments must be addressed; at this time, they have not been satisfied.

The pond design has been changed as per the comments by City Engineering staff. The pond will be a filtration basin and there will not be a wet surface. The attached civil drawings show the modified pond grading and there is now ample, low-slope, space at the egress window areas.

Please see the new final plat with a revised property description and area calculation.

- b. If the stated conditions have not been met, the Site Plan and Traffic Committee recommend denial of this item. Revised plans and documentation addressing all outstanding conditions must be submitted and approved prior to this project moving forward.

Please see the balance of this letter and attached documents that address City Planning and Engineering comments.

- c. The applicant shall provide a revised site plan demonstrating that sufficient parking is provided in accordance with Mankato City Code.

Parking stalls required = 1.5 per unit. Number of units 82 x 1.5 = 123 stalls required.

- d. The applicant shall be advised that upon annexation of the property, Water Access Charges (WAC) and Sewer Access Charges (SAC) will apply. These fees will be calculated based on residential units (RUs). Accordingly, the applicant shall provide clarification regarding the number of units proposed within each building.

**The applicant acknowledges the fees related to the SAC/WAC process.
The number of units being proposed is 82.**

- e. The applicant shall be advised that the plans indicate the water main connection in the northeast corner is located approximately two (2) feet from a property pin. The applicant shall be responsible for reinstalling any property pins that are removed or disturbed during construction.

The applicant is aware that they are responsible for the reinstallation of any property corner pins on the property.

- f. The applicant shall be advised that a manhole and water valve are located within the dog park area, and it is recommended that they be relocated to allow proper maintenance access. The applicant shall also note that the City of Mankato will require continued access to these utilities.

The utility components noted above will be relocated to offer better access for maintenance.

- g. The applicant shall relocate the proposed dumpster enclosure to a location that meets accessibility, screening, and setback requirements per Mankato City Code.

The dumpster enclosure has been moved to a more viable location. Please see the updated Civil plans for additional information.

- h. The applicant shall be advised that the assigned addresses for the buildings will be 905 and 909 South Victory Drive.

The applicant is aware of the new address assignments.

- i. The applicant shall be aware that the Parcel R43.09.21.177.001 has two deferred assessments that will be due upon annexation.

The applicant is aware that there are two assessments on the property that will be due upon annexation.

- j. The applicant shall submit a revised drainage report based on previously provided review comments from 10-24-25 submittal.

Please see the revised drainage report provided by Jones, Haugh & Smith.

- k. The applicant shall submit updated plans based on previously provided plan review comments from 10-24-25 submittal.

Please see the updated Civil drawings.

- l. The applicant shall provide a sidewalk connection from the proposed site to the existing sidewalk system at the roundabout of Stadium Road and S Victory Dr as approved by City of Mankato and Blue Earth County.

The applicant is pursuing options for a sidewalk connection to the adjacent roundabout. We will be communicating with the local DNR to discuss the potential to fill in the wetland buffet adjacent to the delineated wetlands. We will continue to keep the Planning and Engineering staff involved in this conversation.

- m. Annexation fee of \$25.00 made out to the State of Minnesota should be provided to Molly so that when the City Council has officially approved the annexation, the information can be sent to the law judge.

APX will provide a check in the amount of \$25.00 made out to the State of MN.

- n. As previously corresponded, the wetland no-loss cannot be reviewed by the City of Mankato until such time as the annexation has occurred. Annexation is planned for review by the City Council on November 10 after which it will be sent to the State for official annexation.

We will work with the City on the annexation process and attempt to finalize the wetland no-loss agreement in the near future.

- o. If the desire is to have the City review the no-loss application once the annexation is complete, please make an separate request for as much in the City's portal. If this separate application is complete, then the wetland TEP group can review the application at their November 19, 2025 meeting, which is tentatively scheduled for 1:00 p.m.

We will work with the City on the annexation process and attempt to finalize the wetland no-loss agreement in the near future.

- p. Additional clarification is needed on the actual size of the lot. The preliminary plat showed 3.89 acres; the annexation petition request contained a different request and the final plat shows 4.27 acres. Please provide detail on the variation in the submitted lot size.

Please see the updated and corrected final plat that notes 4.00 acres and has removed Parcel F, in the northwest corner, from the platted area.

The applicant also acknowledges the following:

1. That the landscaping plan will have to be updated to meet the City's screening requirements.
2. That cut sheets of all exterior lighting fixtures will be submitted with our building permit application for this project and that fixtures will not be installed until said lighting is approved.
3. The site's photometric plan and related site light fixture placement will be adjusted to meet all applicable city requirements on light levels at the property line.

We appreciate your diligent review of this project and welcome further questions or comments as we proceed through this process.

Sincerely,



Shawn R. Meschke
Senior Project Manager
APX Construction Group

Meeting Date: 11/19/2025

Title

CY57-25

Request of Mankato Area Public Schools for an amended preliminary plat and final plat review of Mankato West High School Subdivision. The subject property is described as being located in the Southeast Quarter of Section 13, Township 108, Range 27, Blue Earth County, City of Mankato (West High School, 1351 S. Riverfront Drive).

The anticipated date of City Council action is December 8, 2025.

Applicant

The applicant is Mankato Area Public Schools.

Request

The applicant is requesting review of an amended preliminary plat and final plat review of Mankato West High School Subdivision.

Location

The subject property is described as being located in the Southeast Quarter of Section 13, Township 108, Range 27, Blue Earth County, City of Mankato (West High School, 1351 S. Riverfront Drive).

Existing Land Use

The property is currently used as a school. The City's Land Use Plan designates this area as Public-Semi Public.

Zoning

The property is zoned R-1, One Family Dwelling District.

Environmentally Sensitive Areas

A wetland delineation has been conducted on the site and the extent and boundary of the wetland on the southerly parcel is reflected on the plat.

Public Utilities

The property is currently served by public utilities.

City Code

Mankato City Code related to Subdivision and Platting can be found at this

link: https://library.municode.com/mn/mankato/codes/code_of_ordinances?nodeId=PTIICOOR_CH10LAUSDE_ARTXIISUDEREPL

Site Plan Review Comments

The Site Plan and Traffic Advisory Committee reviewed the item at their November 4, 2025 meeting and provided the following comments, and the applicant's responses are included.

- a. The applicant shall provide signed consent for access from the YMCA. *Applicant's response: Acknowledged. This is being prepared and will be provided once complete.*
- b. The applicant shall revise the proposed Sanitary Sewer Easement "A" to provide a total width of 30 feet, with 15 feet lying on each side of the existing sanitary sewer main. *Applicant's response: Change has been made. Please see revised easement.*
- c. The applicant shall provide the easement documents for the proposed private easements on the property. *Applicant's response: Acknowledged. This is being prepared and will be provided once complete.*
- d. Notification fees shall be paid in the online portal if not already done. *Applicant's response: Notification fees will be paid.*

Review

The applicant is seeking an amended preliminary plat review and the final plat review of Mankato West Subdivision.

The preliminary plat was reviewed by the planning commission on August 27, 2025, and subsequently by the City Council on September 8, 2025. The recommended conditions of approval for the initial review are included as follows:

1. The applicant shall be a willing petitioner when any intersection improvements are proposed on adjacent roads.
2. The applicant shall obtain a cross-access agreement with the adjacent parcel (YMCA).
3. The applicant shall grant the City an easement for all existing storm and sanitary over the parcel between Riverfront Drive and Pleasant Street.

As a result of the applicant working through the initial conditions of approval associated with the preliminary plat, an amendment to the previously approved preliminary plat is being sought with this request along with the final plat.

The revised preliminary and final plats still include 2 blocks, Block 1 and Block 2, each having one lot, and the plat now includes an outlot.

Lot 1, Block 1, is located between South Riverfront Drive and West Pleasant Street and is unchanged from the original approval. The lot encompasses 24.96 acres and contains the high school building, parking areas, and athletic facilities.

Lot 1, Block 2, is located south of West Pleasant Street and contains parking and athletic fields. With the revision, the lot size decreased from the original 24.21 acres to 6.96 acres because the wetland areas were removed from this Lot.

Outlot A, an area containing 17.25 acres, is new on the revised plat. The outlot is over the wetland areas and is designated as such as a result of the area receiving public storm water.

The applicant will be dedicating the northern portion of the property as South Riverfront Drive. This will relocate the property line south of the existing sidewalk which is currently located within an easement. Additionally, a small triangular parcel located along Stoltzman Road will be dedicated to the public.

The extent of adjacent street/road/intersection improvements is currently unknown for dedication with this current platting process. Adjacent intersections have been studied in Mankato Area Planning Organization transportation documents. The Riverfront Drive and CSAH 16 (Stoltzman Road) [Intersection Control Evaluation](#) study was completed in November 2024 and an [Intersection Control Evaluation](#) study at Stoltzman Road and Pleasant Street was complete in October 2017. A recommended condition is included herein that the applicant shall be a willing petitioner when/if any intersection improvements are proposed on adjacent roads.

Access to the site will continue to be provided via Riverfront Drive, Stoltzman Road, and Pleasant Street. A shared access agreement will be required with the adjacent YMCA property to formalize cross-access. Any additional or modified access points will be subject to review and approval by the Minnesota Department of Transportation, Blue Earth County, and the City of Mankato.

The amended preliminary plat and final plat identifies and clarifies the location, ownership and establishment of easements for private and public utilities.

Lot 1, Block 1 contains a sanitary line that is located on the westerly side of the parcel. With the amended preliminary plat, this sanitary line has been clarified as being a City/public line and a new, 30' private easement between the city and the school will be established over the line.

Within this lot, there is also a City/public sanitary line that runs centrally on the site under the tennis court area. The line is believed to be approximately 21' deep, and a 30' private easement between the school and the city is proposed.

Lot 1, Block 1 also contains several City/public storm lines located on the easterly side (Stoltzman Road) that are not in an existing easement. New 20', private easements between the city and school are proposed to be established over each of these locations.

Lot 1, Block 2 and the newly proposed outlot in the southern parcel/area contain areas that receive public drainage, which continues through the entirety of the wetland on the southern portion of the parcel. For this reason, Outlot A has been established. Additionally, there is a physical storm line/structure that is a City line on the subject parcels that a private city/school easement will be established to address.

A recommended condition of approval is that, prior to or in conjunction with affixing signatures on the final plat, these private easement documents will be in place.

A recommended condition of approval is included herein that, at the end of the current construction projects, the school will provide the city with an as-built plan identifying the location of all private utility lines on the site.

Findings

Staff submits the following findings:

1. General Requirements
 1. The site is designed in conformance with the existing location and widths of streets, the general drainage situation, lot sizes and arrangement.
 2. A drainage study was submitted and is in compliance with the City drainage requirements.
2. Streets
 1. The street right-of-way widths conform to the standards listed in Chapter 10 of Mankato City Code.
3. Easements
 1. The preliminary plat provides standard easements required in Chapter 10 of the Mankato City Code.
 2. Private easements will also be provided over existing City utilities that traverse the site.
4. Block Standards
 1. The blocks within the subdivision were designed around the existing corridors.
5. Lot Standards
 1. The lots are designed in conformance with the standards set forth in Chapter 10.
6. Public Sites and Open Spaces
 1. The applicant will not be making a payment in lieu of parkland dedication because the site provides public open spaces. The Parks and Open Space Plan does not show that a park is needed within this subdivision. The site provides public amenities such as ballfields and open areas.

Recommendation

Staff recommends approval of the Mankato West High School preliminary plat with the following conditions:

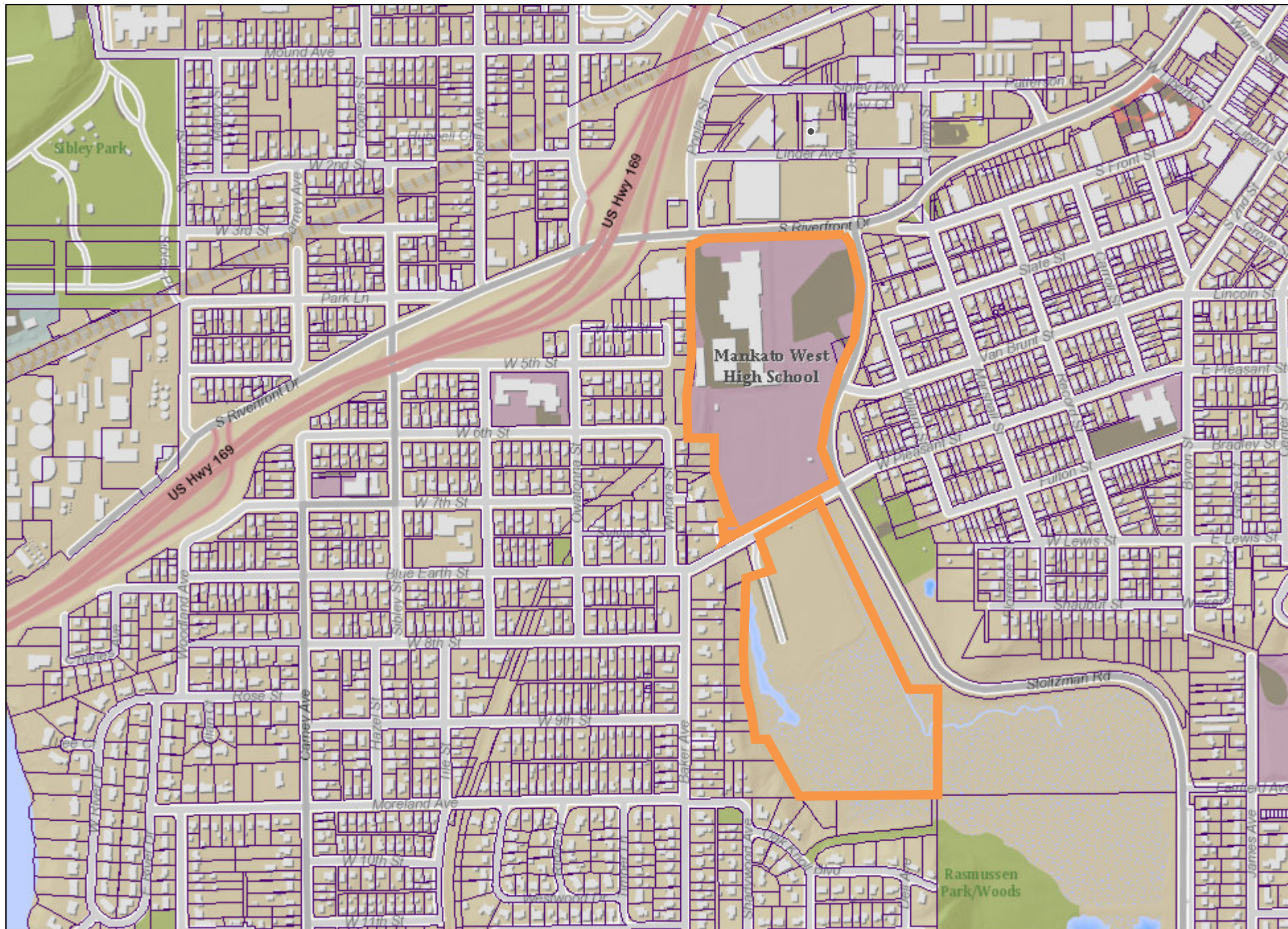
1. Prior to, or in conjunction with, affixing the signatures on the final plat, private easements will be executed and recorded for the existing City/public infrastructure on the subject parcels.
2. At the end of the current improvement projects on the subject site, the property owner will provide the City with an as-built plan identifying the location of all private utility lines on the subject site.
3. The applicant shall be a willing petitioner when any intersection improvements are proposed on adjacent roads.
4. The applicant shall obtain a cross-access agreement with the adjacent parcel (YMCA) and this shall be in place prior to or in conjunction with affixing the signatures on the final plat.
5. The applicant shall provide any applicable deed/conveyance for the transfer of the public ways that are dedicated within the plat.

Based on conformance with the recommended conditions of the preliminary plat, staff recommends approval of the Mankato West High School Subdivision final plat.

Attachments

General Location Map
Aerial Plan
Amended Preliminary Plat
Final Plat

General Location Map



Date: June 2025

Author:

This information is to be used for reference purposes only. The City of Mankato does not guarantee accuracy of the material contained herein and is not responsible for misuse or misinterpretation.



The map displays the City of St. Louis, Missouri, with a grid of streets. The proposed stadium site is highlighted with an orange outline. The site is located between S Riverfront Dr and S Front St, east of US Hwy 169. The map includes numerous street names, such as W 2nd St, W 3rd St, W 4th St, W 5th St, W 6th St, W 7th St, W 8th St, W 9th St, W 10th St, W 11th St, S Riverfront Dr, S Front St, S 2nd St, S 3rd St, S 4th St, S 5th St, S 6th St, S 7th St, S 8th St, S 9th St, S 10th St, S 11th St, S 12th St, S 13th St, S 14th St, S 15th St, S 16th St, S 17th St, S 18th St, S 19th St, S 20th St, S 21st St, S 22nd St, S 23rd St, S 24th St, S 25th St, S 26th St, S 27th St, S 28th St, S 29th St, S 30th St, S 31st St, S 32nd St, S 33rd St, S 34th St, S 35th St, S 36th St, S 37th St, S 38th St, S 39th St, S 40th St, S 41st St, S 42nd St, S 43rd St, S 44th St, S 45th St, S 46th St, S 47th St, S 48th St, S 49th St, S 50th St, S 51st St, S 52nd St, S 53rd St, S 54th St, S 55th St, S 56th St, S 57th St, S 58th St, S 59th St, S 60th St, S 61st St, S 62nd St, S 63rd St, S 64th St, S 65th St, S 66th St, S 67th St, S 68th St, S 69th St, S 70th St, S 71st St, S 72nd St, S 73rd St, S 74th St, S 75th St, S 76th St, S 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Author:





MANKATO WEST HIGH SCHOOL SUBDIVISION

EXISTING LEGAL DESCRIPTION:

(Per Preliminary Title Opinion)

All that part of the West Half of the Southeast Quarter of Section 13, Township 108, Range 27, Blue Earth County, Minnesota, which lies southerly of the South right-of-way line of W. Pleasant Street in the City of Mankato, easterly of Auditor's Plat No. 37 and westerly of Stoltzman Road Subdivision, Blue Earth County, Minnesota.

AND

Commencing at a point on the Southerly line of Pleasant Street One Hundred Thirty (130) feet Northeasterly of the Northeast corner of Lot One (1) of Pelton's Subdivision of a part of the Southwest Quarter of the Southeast Quarter (SW 1/4 SE 1/4) Section Thirteen (13), Township One Hundred Eight (108) North, Range Twenty-seven (27) West; thence running Northeasterly along said Southerly line of Pleasant Street a distance of Sixty-six (66) feet; thence Southeasterly at an angle of One Hundred Degrees (100°) a distance of One Hundred Fifty Nine and Thirty Six Hundredredths (159.36) feet; thence Southwesterly at an angle of Eighty-four Degrees Fifteen Minutes (84°15') a distance of Seventy Nine and Fifty Two Hundredredths (79.52) feet; thence Northwesterly at an angle of One Hundred (100°) a distance of One Hundred Fifty Six (156) feet to the place of beginning, also known as Lot One (1) of Auditor's Plat No. 37 which is on file and of record in the office of the Register of Deeds in and for Blue Earth County, Minnesota.

AND

All that portion of the Northwest Quarter of the Southeast Quarter and the Southwest Quarter of the Northeast Quarter of Section 13, Township 108 North, Range 27, lying south of Front Street, west of Stoltzman Road Subdivision and northerly of W. Pleasant Street, Blue Earth County, Minnesota, EXCEPTING THEREFROM THE FOLLOWING TRACTS:

1. West Street Subdivision

2. West Mankato Trail

3. Auditor's Plat No. 83

4. The Northerly 82 feet of the following tract or parcel of land lying Easterly of Winona Street in West Mankato described as follows: Beginning at the Northeasterly intersection of West Seventh Street and Winona Street, thence Northerly along Winona Street to West Sixth Street, thence Easterly along West Sixth Street to Government Quarter line of Section 13-108-27, thence Southerly along said quarter line to West Seventh Street, thence Westerly along West Seventh Street to the place of beginning, except the Southerly 140 feet thereof: subject to existing street and alley easements, if any, and subject to all easements and restrictions of record; said tract lying East of Block 166 and Winona Street, in the City of Mankato.

A strip of land adjoining and easterly of the land described in Book 219 of Blue Earth County Records, page 65, said strip of land is described as: The West 43.00 feet of the North 82.00 feet of the South 238.22 feet of the North 975.27 feet of the Northwest quarter of the Southeast quarter of Section 13, Township 108 North, Range 27 West, Blue Earth County, Minnesota.

And the East 87.00 feet of the West 130.00 feet of the North 82.00 feet of the South 238.22 feet of the North 975.27 feet of the Northwest Quarter of the Southeast Quarter of Section 13, Township 108 North, Range 27 West, Blue Earth County, Minnesota.

**The North-South centerline of Section 13, Township 108 North, Range 27 West is, as indicated on the plat of West Mankato Trail, City of Mankato, Blue Earth County, Minnesota.

5. Beginning at a point 258 feet North of the Southwest corner of the Northwest Quarter of the Southeast Quarter, Section 13, Township 108, Range 27, thence North 82½ feet, thence northeasterly 58 degrees 30 minutes, 127 feet, thence southeasterly 59 degrees 30 minutes, 58.75 feet, thence southeasterly 45 degrees, 126.5 feet, thence west 107 degrees, 197.32 feet to the place of beginning.

AND

The North 8 feet of the following described tract of land, to-wit: Commencing at a point 138 feet North of the Southwest corner of the Northwest Quarter of the Southeast Quarter of Section 13, Township 108, Range 27, thence North on the West line of said Northwest Quarter of the Southeast Quarter of said Section 13, 120 feet, thence East 197.32 feet, thence Southeasterly 125.50 feet to a point 234 feet directly east of the point of beginning, thence West 234 feet to the place of beginning.

6. Commencing at a point 138 feet North of the Southwest corner of the NW ¼ SE ¼ of Section 13-108-27, thence North on the West line of said NW ¼ SE ¼ of said Sec. 13, 120 feet, thence east 197.32 feet, thence southeasterly 125.50 feet to a point 234 feet directly east of the point of beginning, thence West 234 feet to the place of beginning; except the North 8 feet of said premises, together with easement for a driveway in the West 20 feet of said Northerly 8 foot strip; and except that part of the aforesaid Tract lying Easterly of the East line of the West 197.32 feet of the Northwest Quarter of the Southeast Quarter of Section 13, Township 108 North, Range 27 West.

7. All that part of the Northwest Quarter (NW¼) of the Southeast Quarter (SE¼), of Section Thirteen (13), Township One Hundred Eight (108) North of Range Twenty-seven (27) West, described as follows: Commencing at a point on the West line of said Northwest Quarter (NW¼) of the Southeast Quarter (SE¼) Seventy-two (72) feet North of the Southwest corner thereof; running thence East at right angles to said West line One Hundred Eighty-five (185) feet; thence North Sixty-six (66) feet; thence West on a line parallel with South line of said tract One Hundred Eighty-five (185) feet to said West line of said Forty-acre tract; thence South along said West line Sixty-six (66) feet to the place of beginning; also a right of way adjoining said tract hereby conveyed Fifteen (15) feet in width, and thence South to Pleasant Street in City of Mankato, said right of way following present traveled track.

8. That part of the Southwest Quarter of the Southeast Quarter of Section 13 and that part of the Northwest Quarter of the Southeast Quarter of Section 13, all in Township 108 North, Range 27 West Blue Earth County, described as: Commencing at the northwest corner of the Southwest Quarter of the Southeast Quarter of Section 13, thence North 89 degrees 00 minutes 25 seconds East (assumed bearing), along the north line of the Southwest Quarter of the Southeast Quarter of Section 13 a distance of 8.32 feet to the point of beginning; thence North 00 degrees 27 minutes 42 seconds East along a line parallel with the North-South center line of Section 13 a distance of 71.79 feet; thence South 89 degrees 32 minutes 18 seconds East at right angles to the North-South center line of Section 13, a distance of 202.06 feet; thence South 00 degrees 27 minutes 42 seconds West along a line parallel with the North-South center line of Section 13, a distance of 45.40 feet to a point on the northerly right of way line of Pleasant Street; thence South 60 degrees 35 minutes 51 seconds West, along said northerly line, 233.00 feet to the point of intersection with a line parallel with and distant 8.32 feet easterly of the North-South center line of Section 13; thence North 00 degrees 27 minutes 42 seconds East along said parallel line, 89.63 feet to the point of beginning.

OWNERS / DEVELOPERS:

Independent School District No. 77
PO Box 8741
Mankato, MN 56001

SURVEYOR:

ISG
115 E. Hickory Street Suite 300
Mankato, MN 56001
(507)-387-6651

AREA TABLE:

Lot 1 Block 1 = 24.96 acres
Lot 1 Block 2 = 6.96 acres
Outlot A = 17.25 acres
Right of Way = 0.13 acres
Total = 49.30 acres

EXISTING PROPERTY:

ZONED: R-1 (One-Family Dwelling) (per City of Mankato website)

Setbacks

Building
Front = 30 feet
Rear = 25 feet
Side = 6 feet

BENCHMARK:

Top nut fire hydrant located on south side of Riverfront Drive at northeast corner of property.
Elevation = 786.55 (NAVD88)

FLOOD ZONE:

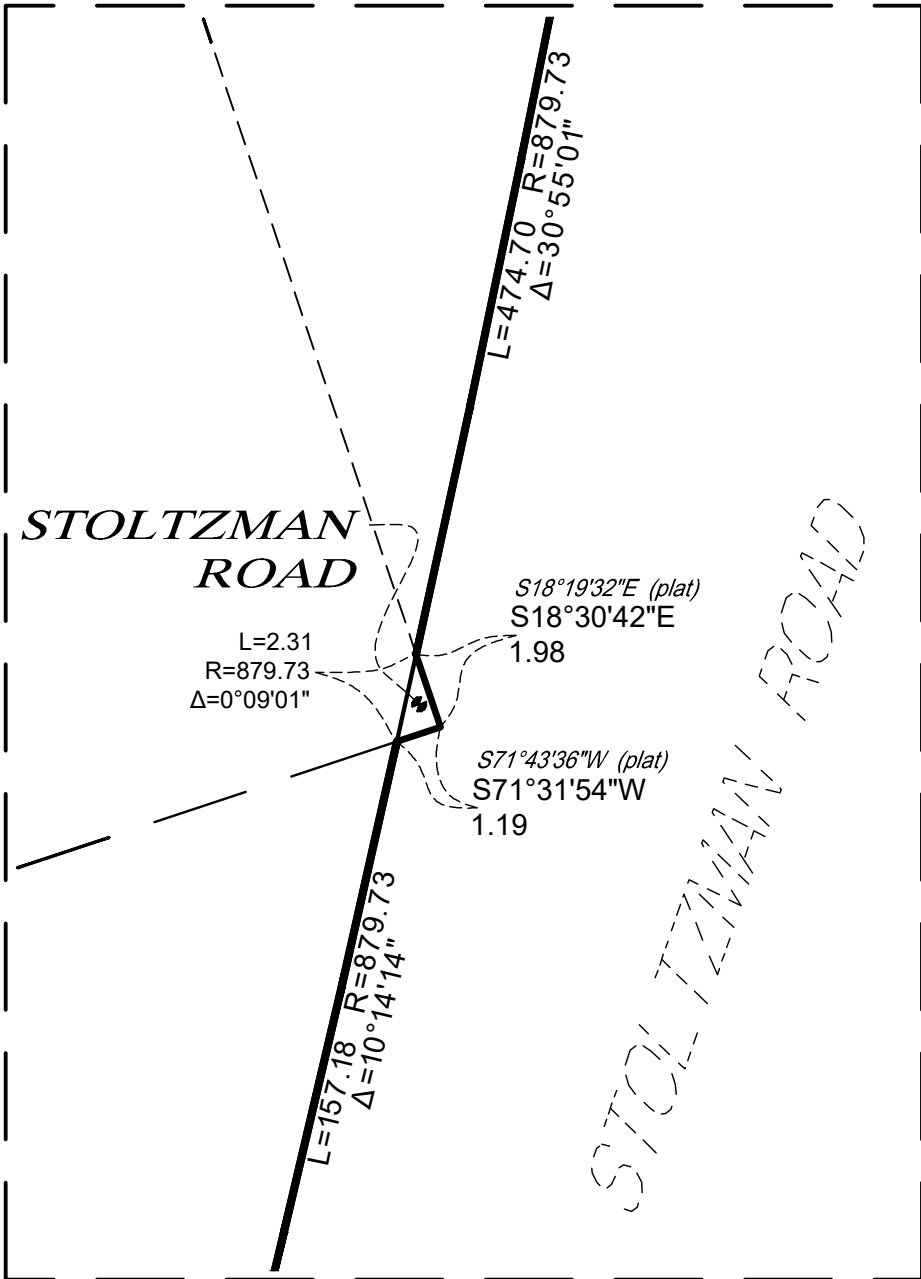
Parts of the surveyed premises shown on this survey map are in Flood Zone X (areas of the 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from the 1% annual chance flood) and Zone X (areas determined to be outside the 0.2% annual chance floodplain), according to Flood Insurance Rate Map Community Panel No. 27013C0092F, published by the Federal Emergency Management Agency, effective date February 22, 2024.

Parts of the surveyed premises shown on this survey map are in Special Flood Hazard Area AE (base flood areas determined) and Zone X (areas determined to be outside the 0.2% annual chance floodplain), according to Flood Insurance Rate Map Community Panel No. 27013C0094F, published by the Federal Emergency Management Agency, effective date February 22, 2024.

NOTE:

A blanket easement covering storm and sanitary sewer north of Pleasant Street exists per Book 152, Page 531, Blue Earth County Records.

DETAIL



LEGEND

- Iron Monument Found
- Mag Nail Found
- WET --- Delineated Wetland Line

SEE
SHEET 3

BLOCK 1

SEE
DETAIL

SEE
SHEET 3

LOT 1

BLOCK 2

LOT 1

OUTLOT A

Proposed Drainage Easement
Over all of Outlot A



0 150 300
SCALE IN FEET

MANKATO WEST HIGH SCHOOL ADDITION AND RENOVATION

MANKATO MINNESOTA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY
8/18/25	City Comments	KH
10/10/25	City Comments	KH

PROJECT NO.	22-27129
FILE NAME	27129 PPLAT
DRAWN BY	KH
DESIGNED BY	---
REVIEWED BY	---
ORIGINAL ISSUE DATE	7/22/25
CLIENT PROJECT NO.	-

TITLE

PRELIMINARY PLAT

SHEET

1

OF 4



MANKATO WEST HIGH SCHOOL SUBDIVISION

EXISTING LEGAL DESCRIPTION: (Per Preliminary Title Opinion)

All that part of the West Half of the Southeast Quarter of Section 13, Township 108, Range 27, Blue Earth County, Minnesota, which lies southerly of the South right-of-way line of W. Pleasant Street in the City of Mankato, easterly of Auditor's Plat No. 37 and westerly of Stoltzman Road Subdivision, Blue Earth County, Minnesota.

AND

Commencing at a point on the Southerly line of Pleasant Street One Hundred Thirty (130) feet Northeasterly of the Northeast corner of Lot One (1) of Pelton's Subdivision of a part of the Southwest Quarter of the Southeast Quarter (SW 1/4 SE 1/4) Section Thirteen (13), Township One Hundred Eight (108) North, Range Twenty-seven (27) West; thence running Northeasterly along said Southerly line of Pleasant Street a distance of Sixty-six (66) feet; thence Southeasterly at an angle of One Hundred Degrees (100°) a distance of One Hundred Fifty Nine and Thirty Six Hundredths (159.36) feet; thence Southwesterly at an angle of Eighty-four Degrees Fifteen Minutes (84°15') a distance of Seventy Nine and Fifty Two Hundredths (79.52) feet; thence Northwesterly at an angle of One Hundred One Degrees (101°) a distance of One Hundred Fifty Six (156) feet to the place of beginning, also known as Lot One (1) of Auditor's Plat No. 37 which is on file and of record in the office of the Register of Deeds in and for Blue Earth County, Minnesota.

AND

All that portion of the Northwest Quarter of the Southeast Quarter and the Southwest Quarter of the Northeast Quarter of Section 13, Township 108 North, Range 27, lying south of Front Street, west of Stoltzman Road Subdivision and northerly of W. Pleasant Street, Blue Earth County, Minnesota, EXCEPTING THEREFROM THE FOLLOWING TRACTS:

- West Street Subdivision
- West Mankato Trail
- Auditor's Plat No. 83

4. The Northerly 82 feet of the following tract or parcel of land lying Easterly of Winona Street in West Mankato described as follows: Beginning at the Northeasterly intersection of West Seventh Street and Winona Street, thence Northerly along Winona Street to West Sixth Street, thence Easterly along West Sixth Street to Government Quarter line of Section 13-108-27, thence Southerly along said quarter line to West Seventh Street, thence Westerly along West Seventh Street to the place of beginning, except the Southerly 140 feet thereof; subject to existing street and alley easements, if any, and subject to all easements and restrictions of record; said tract lying East of Block 166 and Winona Street, in the City of Mankato.

A strip of land adjoining and easterly of the land described in Book 219 of Blue Earth County Records, page 65, said strip of land is described as: The West 43.00 feet of the North 82.00 feet of the South 238.22 feet of the North 975.27 feet of the Northwest quarter of the Southeast quarter of Section 13, Township 108 North, Range 27 West, Blue Earth County, Minnesota.

And the East 87.00 feet of the West 130.00 feet of the North 82.00 feet of the South 238.22 feet of the North 975.27 feet of the Northwest Quarter of the Southeast Quarter of Section 13, Township 108 North, Range 27 West, Blue Earth County, Minnesota.

**The North-South centerline of Section 13, Township 108 North, Range 27 West is, as indicated on the plat of West Mankato Trail, City of Mankato, Blue Earth County, Minnesota.

5. Beginning at a point 258 feet North of the Southwest corner of the Northwest Quarter of the Southeast Quarter, Section 13, Township 108, Range 27, thence North 82°1/2' feet, thence northeasterly 58 degrees 30 minutes, 127 feet, thence southeasterly 59 degrees 30 minutes, 58.75 feet, thence southeasterly 45 degrees, 126.5 feet, thence west 107 degrees, 197.32 feet to the place of beginning.

AND

The North 8 feet of the following described tract of land, to-wit: Commencing at a point 138 feet North of the Southwest corner of the Northwest Quarter of the Southeast Quarter of Section 13, Township 108, Range 27, thence North on the West line of said Northwest Quarter of the Southeast Quarter of said Section 13, 120 feet, thence East 197.32 feet, thence Southeasterly 125.50 feet to a point 234 feet directly east of the point of beginning, thence West 234 feet to the place of beginning.

6. Commencing at a point 138 feet North of the Southwest corner of the NW 1/4 SE 1/4 of Section 13-108-27, thence North on the West line of said NW 1/4 SE 1/4 of said Sec. 13, 120 feet, thence east 197.32 feet, thence southeasterly 125.50 feet to a point 234 feet directly east of the point of beginning, thence West 234 feet to the place of beginning; except the North 8 feet of said premises, together with easement for a driveway in the West 20 feet of said Northerly 8 foot strip; and except that part of the aforesaid Tract lying Easterly of the East line of the West 197.32 feet of the Northwest Quarter of the Southeast Quarter of Section 13, Township 108 North, Range 27 West.

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OWNERS / DEVELOPERS:
Independent School District No. 77
PO Box 8741
Mankato, MN 56001

SURVEYOR:
ISG
115 E. Hickory Street Suite 300
Mankato, MN 56001
(507)-387-6651

AREA TABLE:
Lot 1 Block 1 = 24.96 acres
Lot 1 Block 2 = 6.96 acres
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Right of Way = 0.13 acres
Total = 49.30 acres

EXISTING PROPERTY:
ZONED: R-1 (One-Family Dwelling) (per City of Mankato website)

Setbacks
Building
Front = 30 feet
Rear = 25 feet
Side = 6 feet

BENCHMARK:
Top nut fire hydrant located on south side of Riverfront Drive at northeast corner of property.
Elevation = 786.55 (NAVD88)

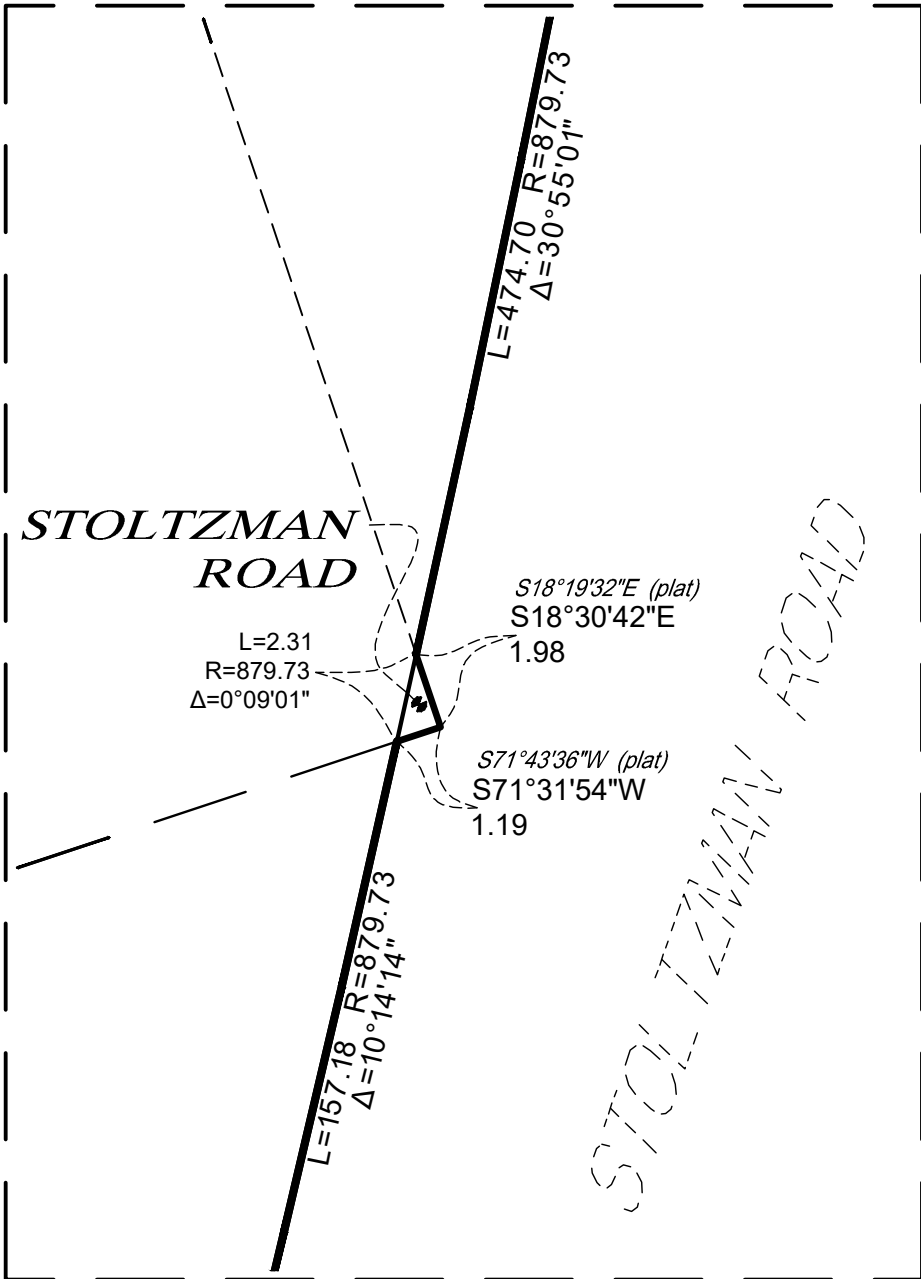
FLOOD ZONE:
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NOTE:

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- Aerial photograph shown on this sheet is from 2025, provided by Blue Earth County.

DETAIL

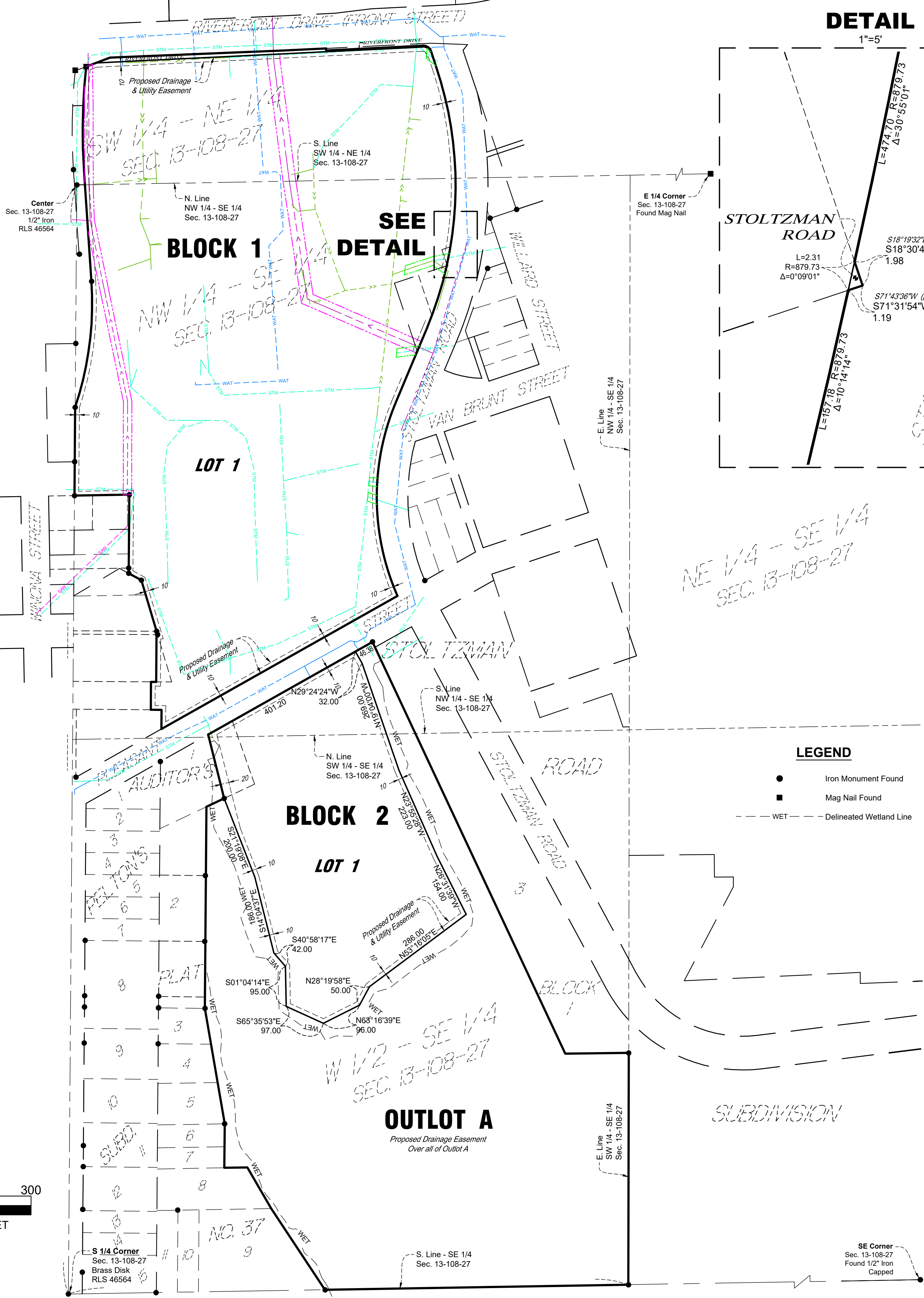


LEGEND

- Iron Monument Found
- Mag Nail Found
- WET --- Delineated Wetland Line

LEGEND

- >--- Sanitary Sewer Line
- SAN --- Sanitary Sewer Line Per City
- >>--- Storm Sewer Line
- STM --- Storm Sewer Line Per City
- WAT --- Watermain Per City
- Proposed Private Sanitary Easement Line
- Proposed Private Storm Easement Line



I HEREBY CERTIFY THAT THIS SURVEY, PLAN, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA.

RYAN E. KOTTHOFF

DATE 7/22/25 LIC. NO. 61565

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PROJECT

MANKATO WEST HIGH SCHOOL ADDITION AND RENOVATION

MANKATO MINNESOTA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY
8/18/25	City Comments	KH
10/10/25	City Comments	KH

PROJECT NO.	22-27129
FILE NAME	27129 PPLAT
DRAWN BY	KH
DESIGNED BY	---
REVIEWED BY	---
ORIGINAL ISSUE DATE	7/22/25
CLIENT PROJECT NO.	-

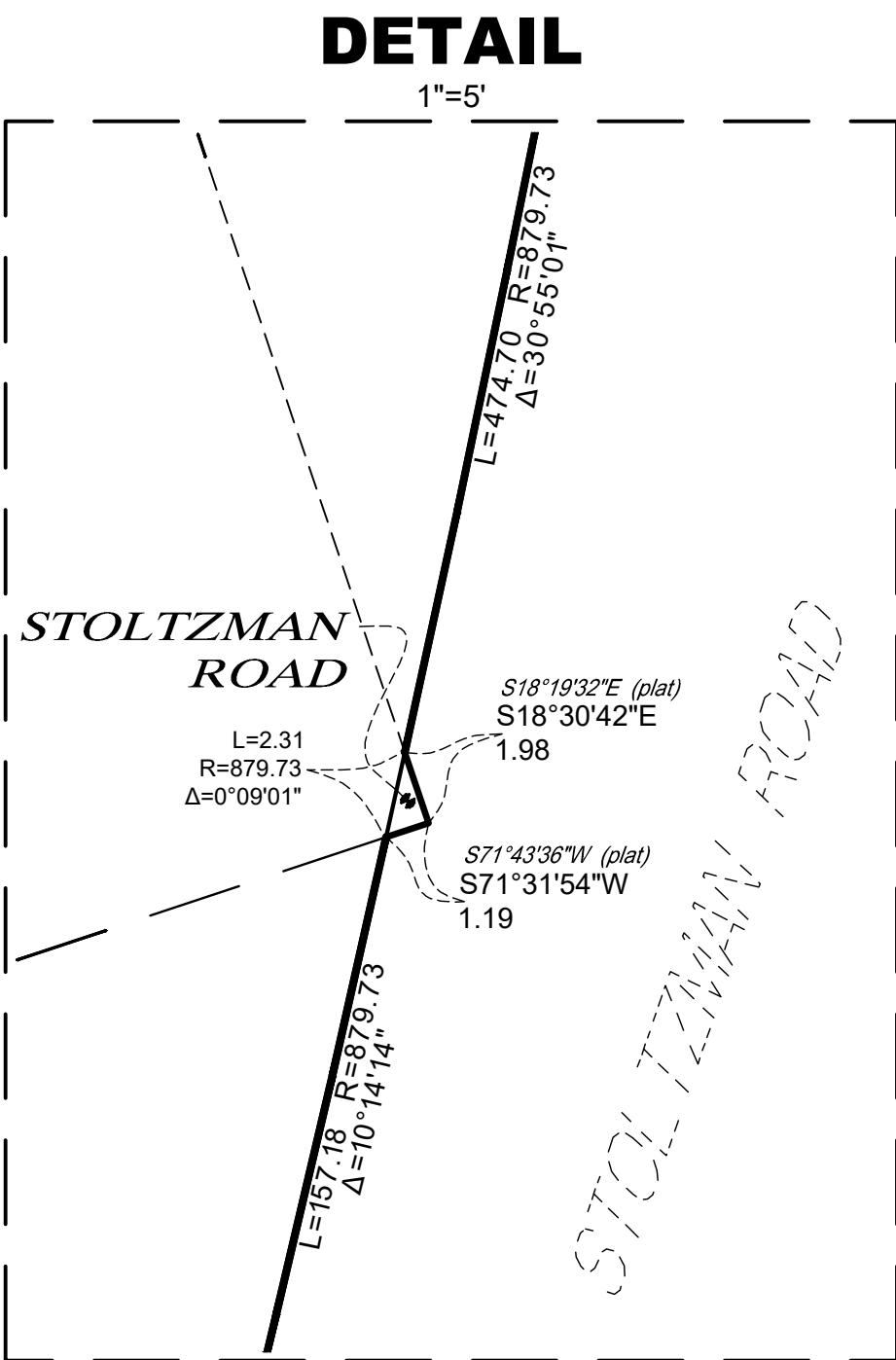
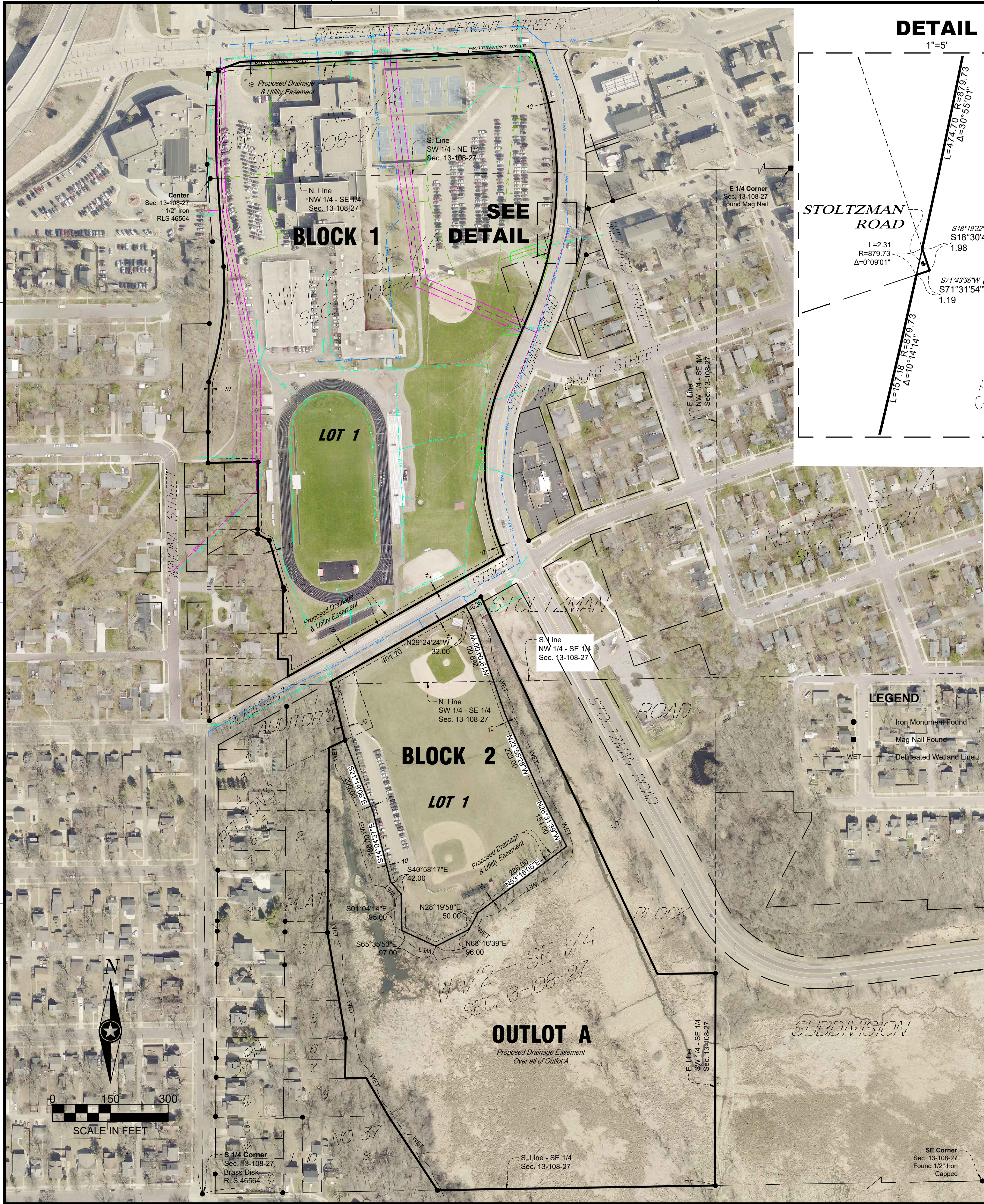
TITLE

PRELIMINARY PLAT

SHEET

2

OF 4



MANKATO WEST HIGH SCHOOL SUBDIVISION

EXISTING LEGAL DESCRIPTION:

(Per Preliminary Title Opinion)

All that part of the West Half of the Southeast Quarter of Section 13, Township 108, Range 27, Blue Earth County, Minnesota, which lies southerly of the South right-of-way line of W. Pleasant Street in the City of Mankato, easterly of Auditor's Plat No. 37 and westerly of Stoltzman Road Subdivision, Blue Earth County, Minnesota.

AND

Commencing at a point on the Southerly line of Pleasant Street One Hundred Thirty (130) feet Northeasterly of the Northeast corner of Lot One (1) of Pelton's Subdivision of a part of the Southwest Quarter of the Southeast Quarter (SW 1/4 SE 1/4) Section Thirteen (13), Township One Hundred Eight (108) North, Range Twenty-seven (27) West; thence running Northeasterly along said Southerly line of Pleasant Street a distance of Sixty-six (66) feet; thence Southeasterly at an angle of One Hundred Degrees (100°) a distance of One Hundred Fifty Nine and Thirty Six Hundredths (159.36) feet; thence Southwesterly at an angle of Eighty-four Degrees Fifteen Minutes (84°15') a distance of Seventy Nine and Fifty Two Hundredths (79.52) feet; thence Northwesterly at an angle of One Hundred One Degrees (101°) a distance of One Hundred Fifty Six (156) feet to the place of beginning, also known as Lot One (1) of Auditor's Plat No. 37 which is on file and of record in the office of the Register of Deeds in and for Blue Earth County, Minnesota.

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All that portion of the Northwest Quarter of the Southeast Quarter and the Southwest Quarter of the Northeast Quarter of Section 13, Township 108 North, Range 27, lying south of Front Street, west of Stoltzman Road Subdivision and northerly of W. Pleasant Street, Blue Earth County, Minnesota, EXCEPTING THEREFROM THE FOLLOWING TRACTS:

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- West Mankato Trail
- Auditor's Plat No. 63
- The Northerly 82 feet of the following tract or parcel of land lying Easterly of Winona Street in West Mankato described as follows: Beginning at the Northeasterly intersection of West Seventh Street and Winona Street, thence Northerly along Winona Street to West Sixth Street, thence Easterly along West Sixth Street to Government Quarter line of Section 13-108-27, thence Southerly along said quarter line to West Seventh Street, thence Westerly along West Seventh Street to the place of beginning, except the Southerly 140 feet thereof; subject to existing street and alley easements, if any, and subject to all easements and restrictions of record; said tract lying East of Block 166 and Winona Street, in the City of Mankato.

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OWNERS / DEVELOPERS:
Independent School District No. 77
PO Box 8741
Mankato, MN 56001

SURVEYOR:
ISG
115 E. Hickory Street Suite 300
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(507)-387-6651

AREA TABLE:
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EXISTING PROPERTY:
ZONED: R-1 (One-Family Dwelling) (per City of Mankato website)

Setbacks
Building
Front = 30 feet
Rear = 25 feet
Side = 6 feet

BENCHMARK:
Top nut fire hydrant located on south side of Riverfront Drive at northeast corner of property.
Elevation = 786.55 (NAVD88)

FLOOD ZONE:
Parts of the surveyed premises shown on this survey map are in Flood Zone X (areas of the 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from the 1% annual chance flood) and Zone X (areas determined to be outside the 0.2% annual chance floodplain), according to Flood Insurance Rate Map Community Panel No. 27013C0092F, published by the Federal Emergency Management Agency, effective date February 22, 2024.

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LEGEND

- Sanitary Sewer Line
- Sanitary Sewer Line Per City
- Storm Sewer Line
- Storm Sewer Line Per City
- Watermain Per City
- Proposed Private Sanitary Easement Line
- Proposed Private Storm Easement Line



I HEREBY CERTIFY THAT THIS SURVEY, PLAN, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA.

RYAN E. KOTTHOFF

DATE 7/22/25 LIC. NO. 61565

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PROJECT

MANKATO WEST HIGH SCHOOL ADDITION AND RENOVATION

MANKATO MINNESOTA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY
8/18/25	City Comments	KH
10/10/25	City Comments	KH

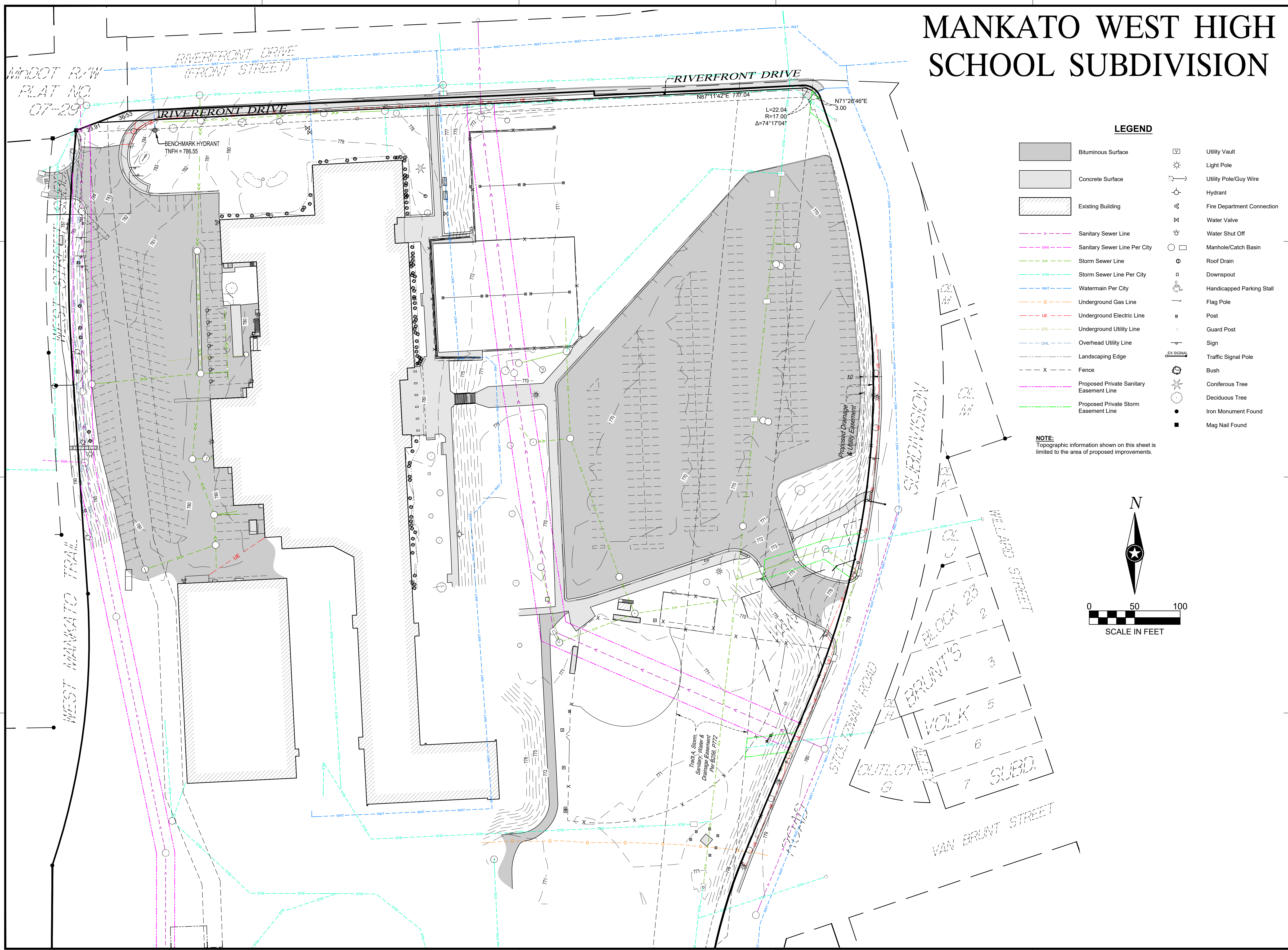
PROJECT NO.	22-27129
FILE NAME	27129 PPLAT
DRAWN BY	KH
DESIGNED BY	---
REVIEWED BY	---
ORIGINAL ISSUE DATE	7/22/25
CLIENT PROJECT NO.	-

TITLE

PRELIMINARY PLAT

SHEET

MANKATO WEST HIGH SCHOOL SUBDIVISION



LEGEND

- Bituminous Surface

Concrete Surface

Existing Building

Sanitary Sewer Line

Sanitary Sewer Line Per City

Storm Sewer Line

Storm Sewer Line Per City

Watermain Per City

Underground Gas Line

Underground Electric Line

Underground Utility Line

Overhead Utility Line

Landscaping Edge

Fence

Proposed Private Sanitary Easement Line

Proposed Private Storm Easement Line
- Utility Vault

Light Pole

Utility Pole/Guy Wire

Hydrant

Fire Department Connection

Water Valve

Water Shut Off

Manhole/Catch Basin

Roof Drain

Downspout

Handicapped Parking Stall

Flag Pole

Post

Guard Post

Sign

Traffic Signal Pole

Bush

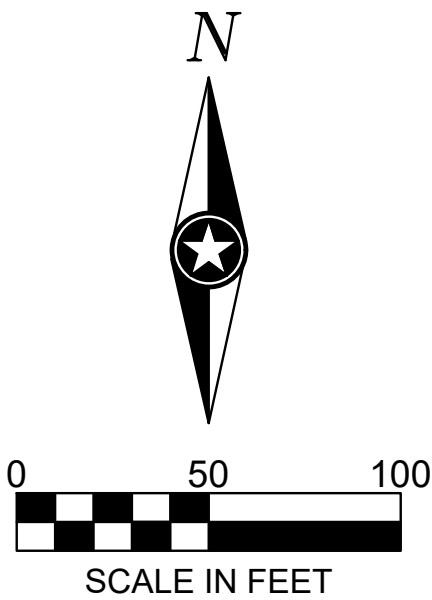
Coniferous Tree

Deciduous Tree

Iron Monument Found

Mag Nail Found

NOTE:
Topographic information shown on this sheet is limited to the area of proposed improvements.



I HEREBY CERTIFY THAT THIS SURVEY, PLAN, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA.

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MANKATO MINNESOTA

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TITLE

PRELIMINARY PLAT

SHEET

MANKATO WEST HIGH SCHOOL SUBDIVISION

DETAIL

INSTRUMENT OF DEDICATION

KNOW ALL PERSONS BY THESE PRESENTS: That Independent School District # 77, a corporation under the laws of the State of Minnesota f/a Board of Education of the City of Mankato, owner of the following described property:

All that part of the West Half of the Southeast Quarter of Section 13, Township 108, Range 27, Blue Earth County, Minnesota, which lies southerly of the South right-of-way line of W. Pleasant Street in the City of Mankato, easterly of Auditor's Plat No. 37 and westerly of Stoltzman Road Subdivision, Blue Earth County, Minnesota.

AND

Commencing at a point on the Southerly line of Pleasant Street One Hundred Thirty (130) feet Northeasterly of the Northeast corner of Lot One (1) of Pelton's Subdivision of a part of the Southwest Quarter of the Southeast Quarter (SW 1/4 SE 1/4) Section Thirteen (13), Township One Hundred Eight (108) North, Range Twenty-seven (27) West; thence running Northeasterly along said Southerly line of Pleasant Street a distance of Sixty-six (66) feet; thence Southeasterly at an angle of One Hundred Degrees (100°) a distance of One Hundred Fifty Nine and Thirty Six Hundredths (159.36) feet; thence Southwesterly at an angle of Eighty-four Degrees Fifteen Minutes (84°15') a distance of Seventy Nine and Fifty Two Hundredths (79.52) feet; thence Northwesterly at an angle of One Hundred One Degrees (101°) a distance of One Hundred Fifty Six (156) feet to the place of beginning, also known as Lot One (1) of Auditor's Plat No. 37 which is on file and of record in the office of the Register of Deeds in and for Blue Earth County, Minnesota.

AND

All that portion of the Northwest Quarter of the Southeast Quarter and the Southwest Quarter of the Northeast Quarter of Section 13, Township 108 North, Range 27, lying south of Front Street, west of Stoltzman Road Subdivision and northerly of W. Pleasant Street, Blue Earth County, Minnesota, EXCEPTING THEREFROM THE FOLLOWING TRACTS:

1. West Street Subdivision
2. West Mankato Trail
3. Auditor's Plat No. 83

4. The Northerly 82 feet of the following tract or parcel of land lying Easterly of Winona Street in West Mankato described as follows: Beginning at the Northeasterly intersection of West Seventh Street and Winona Street, thence Northerly along Winona Street to West Sixth Street, thence Easterly along West Sixth Street to Government Quarter line of Section 13-108-27, thence Southerly along said quarter line to West Seventh Street, thence Westerly along West Seventh Street to the place of beginning, except the Southerly 140 feet thereof: subject to existing street and alley easements, if any, and subject to all easements and restrictions of record; said tract lying East of Block 166 and Winona Street, in the City of Mankato.

A strip of land adjoining and easterly of the land described in Book 219 of Blue Earth County Records, page 65, said strip of land is described as: The West 43.00 feet of the North 82.00 feet of the South 238.22 feet of the North 975.27 feet of the Northwest quarter of the Southeast quarter of Section 13, Township 108 North, Range 27 West, Blue Earth County, Minnesota.

And the East 87.00 feet of the West 130.00 feet of the North 82.00 feet of the South 238.22 feet of the North 975.27 feet of the Northwest Quarter of the Southeast Quarter of Section 13, Township 108 North, Range 27 West, Blue Earth County, Minnesota.

**The North-South centerline of Section 13, Township 108 North, Range 27 West is, as indicated on the plat of West Mankato Trail, City of Mankato, Blue Earth County, Minnesota.

5. Beginning at a point 258 feet North of the Southwest corner of the Northwest Quarter of the Southeast Quarter, Section 13, Township 108, Range 27, thence North 82½ feet, thence northeasterly 58 degrees 30 minutes, 127 feet, thence southeasterly 59 degrees 30 minutes, 58.75 feet, thence southeasterly 45 degrees, 126.5 feet, thence west 107 degrees, 197.32 feet to the place of beginning.

AND

The North 8 feet of the following described tract of land, to-wit: Commencing at a point 138 feet North of the Southwest corner of the Northwest Quarter of the Southeast Quarter of Section 13, Township 108, Range 27, thence North on the West line of said Northwest Quarter of the Southeast Quarter of said Section 13, 120 feet, thence East 197.32 feet, thence Southeasterly 125.50 feet to a point 234 feet directly east of the point of beginning, thence West 234 feet to the place of beginning.

6. Commencing at a point 138 feet North of the Southwest corner of the NW ¼ SE ¼ of Section 13-108-27, thence North on the West line of said NW ¼ SE ¼ of said Sec. 13, 120 feet, thence east 197.32 feet, thence southeasterly 125.50 feet to a point 234 feet directly east of the point of beginning, thence West 234 feet to the place of beginning; except the North 8 feet of said premises, together with easement for a driveway to the West 20 feet of said Northerly 8 foot strip; and except that part of the aforesaid Tract lying Easterly of the East line of the West 197.32 feet of the Northwest Quarter of the Southeast Quarter of Section 13, Township 108 North, Range 27 West.

7. All that part of the Northwest Quarter (NW¼) of the Southeast Quarter (SE¼), of Section Thirteen (13), Township One Hundred Eight (108) North of Range Twenty-seven (27) West, described as follows: Commencing at a point on the West line of said Northwest Quarter (NW¼) of the Southeast Quarter (SE¼) Seventy-two (72) feet North of the Southwest corner thereof, running thence East at right angles to said West line One Hundred Eighty-five (185) feet; thence North Sixty-six (66) feet; thence West on a line parallel with South line of said tract One Hundred Eighty-five (185) feet to said West line of said Forty-acre tract, thence South along said West line Sixty-six (66) feet to the place of beginning; also a right of way adjoining said tract hereby conveyed Fifteen (15) feet in width, and thence South to Pleasant Street in City of Mankato, said right of way following present traveled track.

8. That part of the Southwest Quarter of the Southeast Quarter of Section 13 and that part of the Northwest Quarter of the Southeast Quarter of Section 13, all in Township 108 North, Range 27 West Blue Earth County, described as: Commencing at the northwest corner of the Southwest Quarter of the Southeast Quarter of Section 13, thence North 89 degrees 00 minutes 25 seconds East (assumed bearing), along the north line of the Southwest Quarter of the Southeast Quarter of Section 13 a distance of 8.32 feet to the point of beginning; thence North 00 degrees 27 minutes 42 seconds East along a line parallel with the North-South center line of Section 13 a distance of 71.79 feet; thence South 89 degrees 32 minutes 18 seconds East at right angles to the North-South center line of Section 13, a distance of 202.06 feet; thence South 00 degrees 27 minutes 42 seconds West along a line parallel with the North-South center line of Section 13, a distance of 45.40 feet to a point on the northerly right of way line of Pleasant Street; thence South 80 degrees 35 minutes 51 seconds West, along said northerly line, 233.00 feet to the point of intersection with a line parallel with and distant 8.32 feet easterly of the North-South center line of Section 13; thence North 00 degrees 27 minutes 42 seconds East along said parallel line, 89.63 feet to the point of beginning.

Has caused the same to be surveyed and platted as **MANKATO WEST HIGH SCHOOL SUBDIVISION** and does hereby dedicate to the public, for public use, the public way and the drainage and utility easements as created by this plat.

In witness whereof said Independent School District # 77, a corporation under the laws of the State of Minnesota, has caused these presents to be signed by its proper officer this _____ day of _____, 20____.

Signed: Independent School District # 77

Dr. Paul Peterson, Superintendent

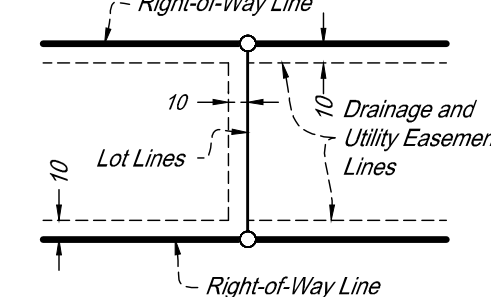
State of _____

County of _____

This instrument was acknowledged before me on _____, 20____ by Dr. Paul Peterson, Superintendent, of Independent School District # 77, a corporation under the laws of the State of Minnesota, on behalf of the corporation.

Notary Public _____
My Commission Expires _____

Drainage and Utility Easements are shown thus:



Being 10 feet in width and adjoining right-of-way and Outlot lines as indicated on the plat.

SURVEYOR'S CERTIFICATE

I, Ryan E. Kothhoff, do hereby certify that this plat was prepared by me or under my direct supervision; that I am a duly Licensed Land Surveyor in the State of Minnesota; that this plat is a correct representation of the boundary survey; that all mathematical data and labels are correctly designated on this plat; that all monuments depicted on this plat have been or will be correctly set within one year; that all water boundaries and wet lands, as defined in Minnesota Statutes, Section 505.01, Subd. 3, as of the date of this certificate are shown and labeled on this plat; and all public ways are shown and labeled on this plat.

Dated this _____ day of _____, 20____.

Ryan E. Kothhoff, Licensed Land Surveyor
Minnesota License No. 61565

State of Minnesota
County of Blue Earth

This instrument was acknowledged before me on _____, 20____ by Ryan E. Kothhoff, Licensed Land Surveyor.

Kent A. Hays
Notary Public, Minnesota
My Commission Expires Jan. 31, 2030

MANKATO PLANNING COMMISSION

Be it known that on this _____ day of _____, 20____, the Planning Commission of the City of Mankato did duly review this plat of **MANKATO WEST HIGH SCHOOL SUBDIVISION**.

Chair Person _____ Secretary _____

CITY COUNCIL, CITY OF MANKATO, MINNESOTA

This plat of **MANKATO WEST HIGH SCHOOL SUBDIVISION**, was approved and accepted by the City Council of the City of Mankato, Minnesota at a regular meeting thereof held this _____ day of _____, 20____, and said plat is in compliance with the provisions of Minnesota Statutes, Section 505.03, Subd. 2.

Mayor _____ Clerk _____

TITLE OPINION

I, _____, Licensed Attorney, State of Minnesota, do hereby certify that the owners as indicated hereon represent all ownership interest in the land encompassed by this plat.

Licensed Attorney _____

BLUE EARTH COUNTY PROPERTY AND ENVIRONMENTAL RESOURCES

I hereby certify that there are no delinquent taxes and/or delinquent special assessments, that the current taxes have been paid and that the transfer has been entered on the land described herein on the _____ day of _____, 20____.

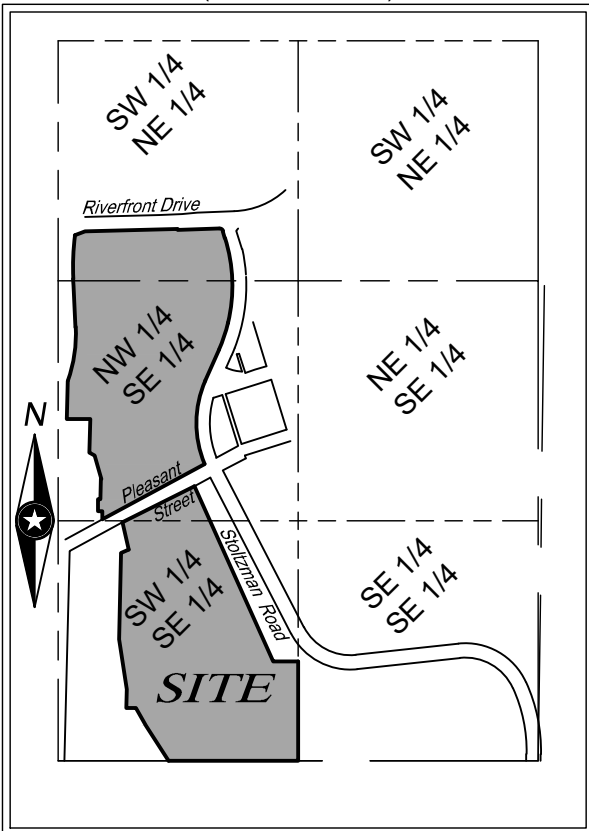
Blue Earth County Property and Environmental Resources Director _____

COUNTY RECORDER, BLUE EARTH COUNTY, MINNESOTA

I hereby certify that this plat of **MANKATO WEST HIGH SCHOOL SUBDIVISION** was filed in the office of the County Recorder for public record on this _____ day of _____, 20____, at _____ o'clock _____ M. and was duly filed in Book _____ of Plats, page _____, as Document No. _____.

Blue Earth County, County Recorder _____

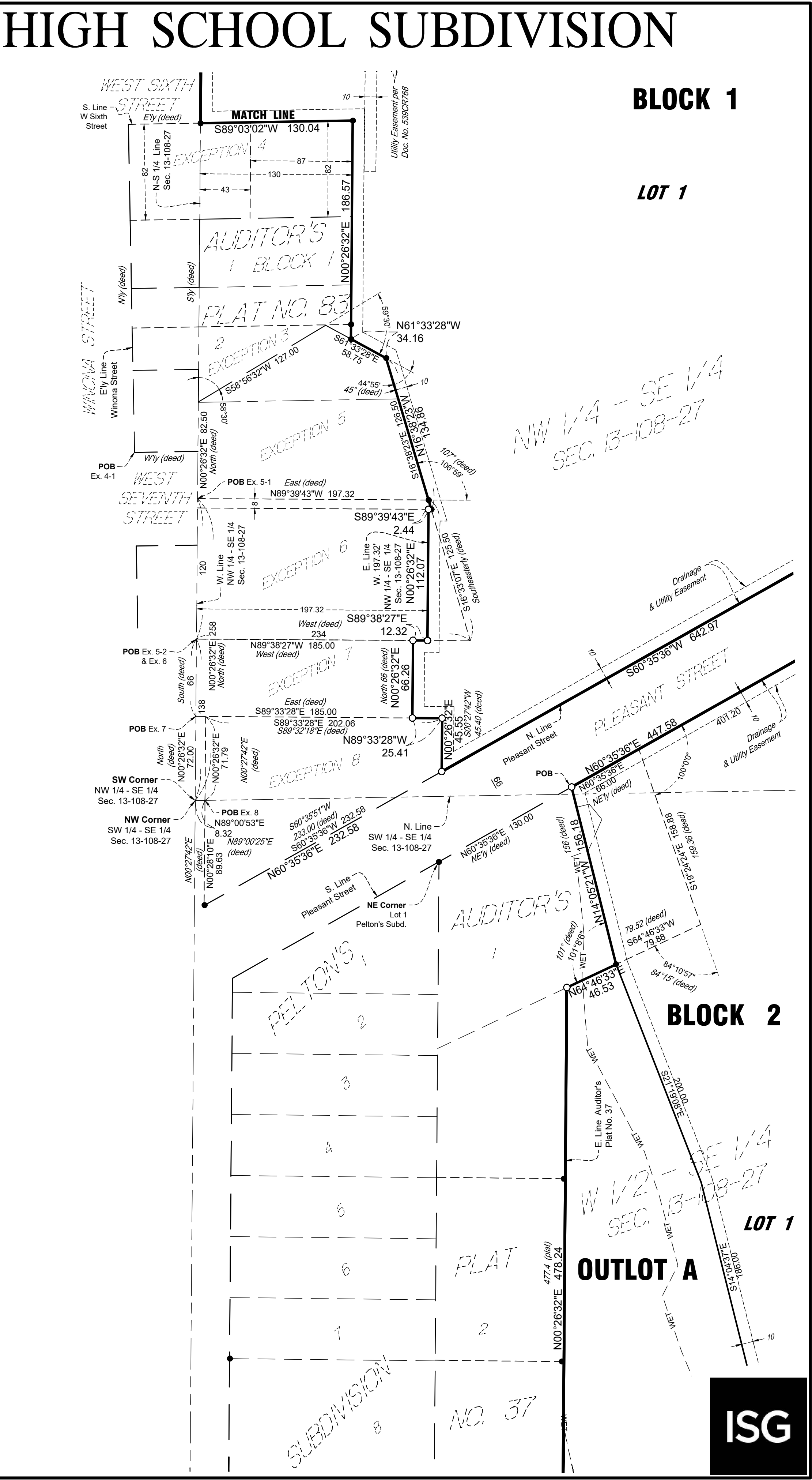
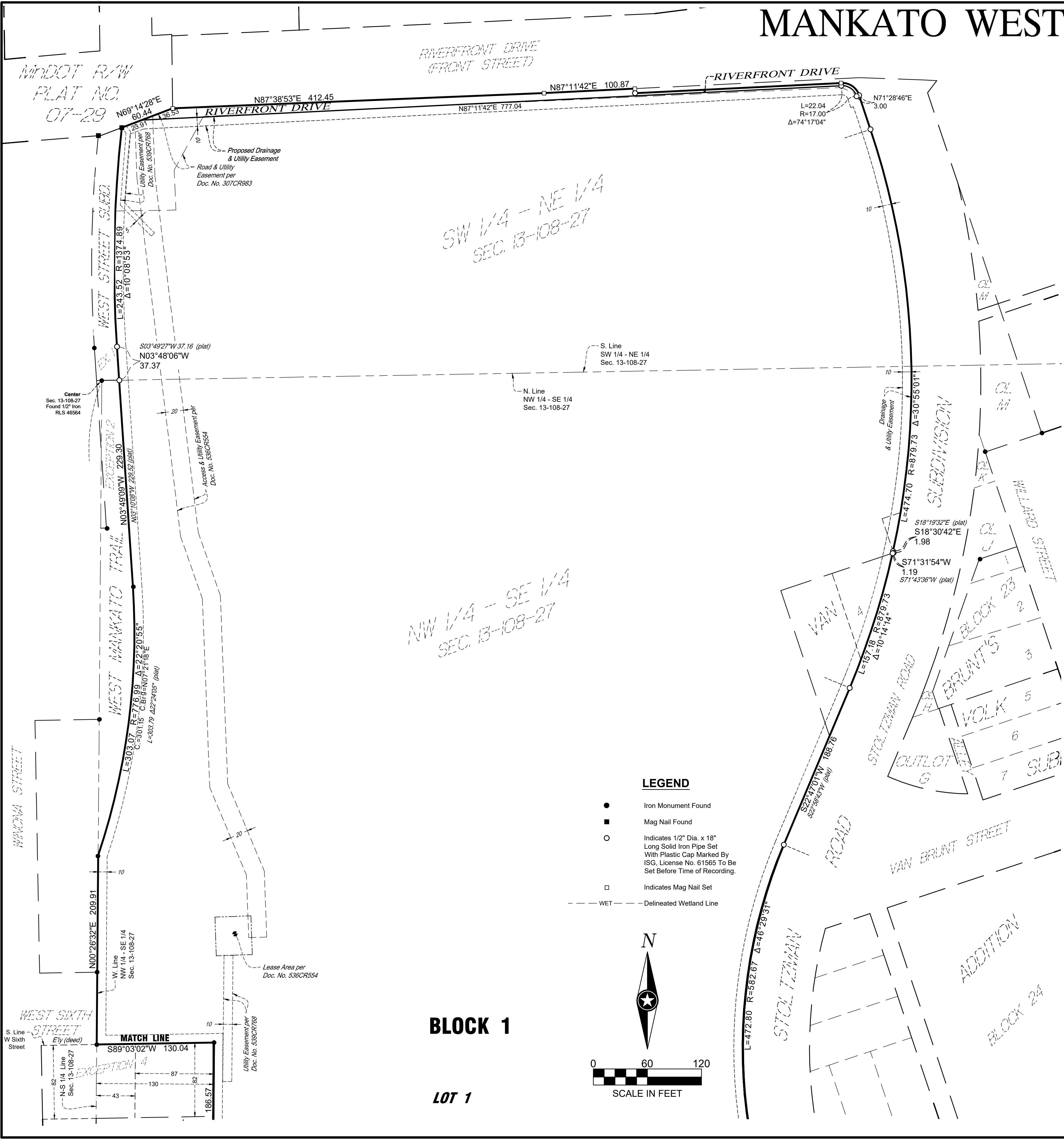
VICINITY MAP (NOT TO SCALE)



SEC. 13, TWP. 108, RGE. 27
Blue Earth County, Minnesota

ISG

MANKATO WEST HIGH SCHOOL SUBDIVISION



Meeting Date: 11/19/2025

Title

CY58-25

Request of APX Construction Group, with permission of the owner, Cemstone, for the vacation of a portion of a 10' utility easement located on the westerly side of Lot 2, Block 2 as per the recorded plat of Lime Valley Fourth Addition. The subject property is described as part of Lot 2, Block 2, Lime Valley-Fourth Addition, Blue Earth County (Blue Earth County PID R010431455007, 100 Summit Avenue).

The anticipated date of City Council action is December 8, 2025.

Applicant

The applicant is APX Construction Group, on behalf of the property owner, Cemstone.

Request

The applicant is requesting the vacation of a portion of a 10' utility easement located on the westerly side of Lot 2, Block 2, per the recorded Plat of Lime Valley-Fourth Addition adjoining the west line of Lot 2, Block 2 said Lime Valley-Fourth Addition; excepting there from the 20.00 foot Drainage and Utility Easement adjoining the northerly line of said Lot 2 as dedicated per said Plat and excepting there from the variable width Utility Easement adjoining the Southerly line of said Lot 2 as dedicated per said Plat.

Location

The subject property is described as part of Lot 2, Block 2, Lime Valley-Fourth Addition, Blue Earth County (Blue Earth County PID R010431455007, 100 Summit Avenue).

Existing Land Use

The subject properties are currently used for aggregate storage.

Zoning

The subject properties are zoned M-2, Heavy Industrial District.

Environmentally Sensitive Areas

The subject parcel was delineated for wetlands and determined not to contain as much. A stream identified as a PEM1F, runs along the northern and eastern property boundaries of the subject area. A drainage easement was dedicated for the stream area.

Public Utilities

Public Utilities are available to the site via Summit Avenue to the south. The applicant shall coordinate design of the new water service and required pressure actuator with the City of Mankato Department of Public Works.

City Code

Mankato City Charter Section 10.04.b. provides standards for the vacation of easements on private property. Linked Here:

https://library.municode.com/mn/mankato/codes/code_of_ordinances?nodeId=PTICH_CH10MIPR_S10.04.BVAEAPRPR

Mankato City Code Chapter 10, Article VII, Division 4. Provides standards for the M-2, Heavy Industrial District. Linked Here:

https://library.municode.com/mn/mankato/codes/code_of_ordinances?nodeId=PTICOOR_CH10LAUSDE_ARTVIIINDI_DIV4HEINDI

Site Plan Review Comments

The Site Plan and Traffic Committee reviewed the request at their November 4th, 2025 meeting and the following comment was provided.

- a. The applicant shall be aware that a right-of-way permit is required for the utility connections in the public ROW.

Review

The applicant, APX Construction Group, with permission of the property owner, Cemstone, is requesting the vacation of a 3,515 Sq. Ft. portion of a 10' utility easement. This easement is located on the westerly side of Lot 2, Block 2, Lime Valley-Fourth Addition (100 Summit Ave).

The proposed easement vacation area excludes the 20.00-foot Drainage and Utility Easement adjoining the northerly line of Lot 2, and the variable-width Utility Easement adjoining the southerly line of Lot 2.

The easement vacation is being proposed to allow for the construction of a new concrete batch plant to be owned and operated by Cemstone and to be located across the existing easement location. In order to permit the construction of a structure at this location, the subject easement must be vacated.

The applicant has notified the utility companies and received signatures stating that the easement would not be necessary for their utility purposes. Based on the information received, there are no known utilities within the utility easement requested for vacation. Therefore, no utilities would need to be relocated as part of this vacation.

Cemstone currently operates a batch plant at 141 Summit Ave, which is located across Summit Ave SE from the subject properties.

Existing Site Conditions:

The site consists of 5.3 acres. The site was graded in 2016 as part of approved site construction plans. The proposed site construction plans were only partially

completed in 2016. The improvements consisted of grading the site, construction of a filtration pond, removal of the 3rd Avenue access, addition of a secondary access from Summit Avenue, paving of a 100'x100' area, graveling of the site, and minor landscaping. Site grading directs on-site stormwater into the filtration pond on the east portion of the site, which then outlets into the existing ditch located along the north and east site boundaries.

Proposed Site Improvements:

Cemstone Companies intends to develop the site into a concrete plant with a standalone building, batch plant, aggregate storage, and parking & driving areas.

The proposed building will be addressed as 100 Summit Ave and the proposed batch plant as 104 Summit Ave.

All proposed site improvements shall conform to Mankato City Code; the proposed improvements will be subject to review through the Building Permit process. This will include, but not be limited to, the review of on-site stormwater management, screening, hard-surfacing, exterior storage, parking, operations, and landscaping.

It is the City of Mankato's recommendation that the subject parcels be combined into a singular zoning lot to prevent future separation of the lots contemplating the existence of an encroaching structure. The construction of a structure across multiple parcels creates a uniquely concerning condition. One particular reason for concern is the separation of ownership for each parcel, as technically the sale of one parcel may occur entirely separate from another, creating differing ownership between both parcels and thus different portions of a singular structure. Another reason is the separation of tax, utility, and other costs associated with the ownership and operation of a parcel. Hypothetically, an owner could intentionally or unintentionally withhold tax or utility payments for just one of the parcels. That singular parcel would then be in a state of delinquency and could be subject to tax forfeiture, possibly leading to a forced change in ownership between just one of the two parcels and thus portions of a singular structure. To prevent any such concern, a recommended condition of approval is included herein to address this.

Findings

Staff respectfully submits the following findings of fact for the requested Easement Vacation:

1. The applicant has petitioned to vacate the subject portion of the 10' utility easement.
2. The applicant has provided notice to the utility companies with a copy of the vacation request and has provided responses from the utility companies stating that no utilities are present within the easement area. Based on this response, the easement would no longer be needed for utility purposes.
3. This proposed 3,515 Sq. Ft. easement vacation preserves the dedicated utility easements along the northern and southern property boundaries.
4. The proposed vacation is necessary for the development of the subject parcel.

Recommendation

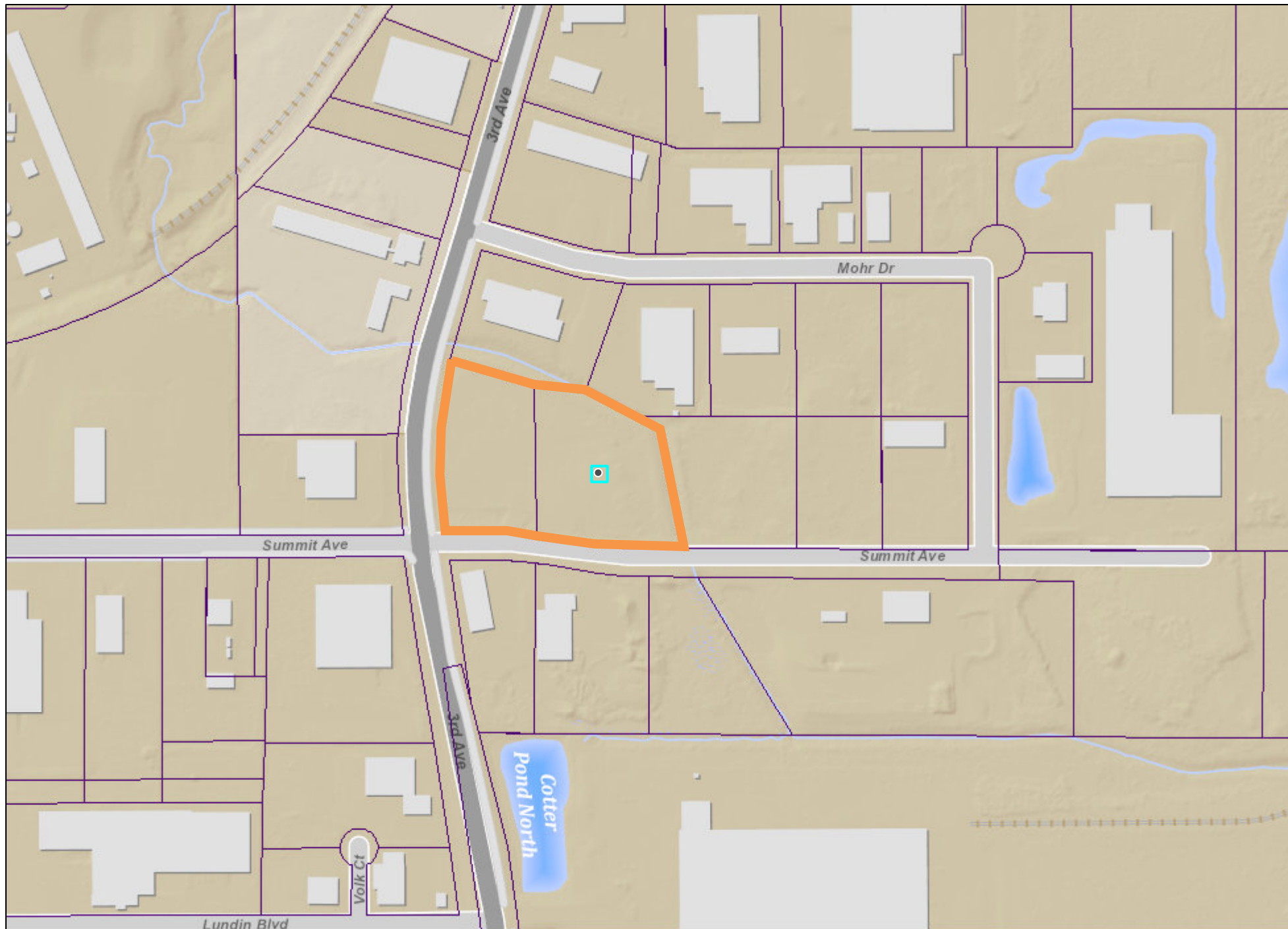
Staff recommends approval of the vacation of the subject utility easement with the following conditions:

1. The applicant shall combine the two subject parcels into a single zoning lot (R010431455077 & R010431455006) prior to issuance of a building permit for the proposed batch plant that spans across both parcels.
2. The vacation shall be recorded with Blue Earth County prior to issuance of a building permit for the proposed batch plant.

Attachments

General Location Map
Aerial Map
Easement Vacation Exhibit
Proposed Site Plan
Proposed Civil Plans
Petition to Vacate

General Location Map



Date: October 2025

Author:

This information is to be used for reference purposes only. The City of Mankato does not guarantee accuracy of the material contained herein and is not responsible for misuse or misinterpretation.

Aerial Plan

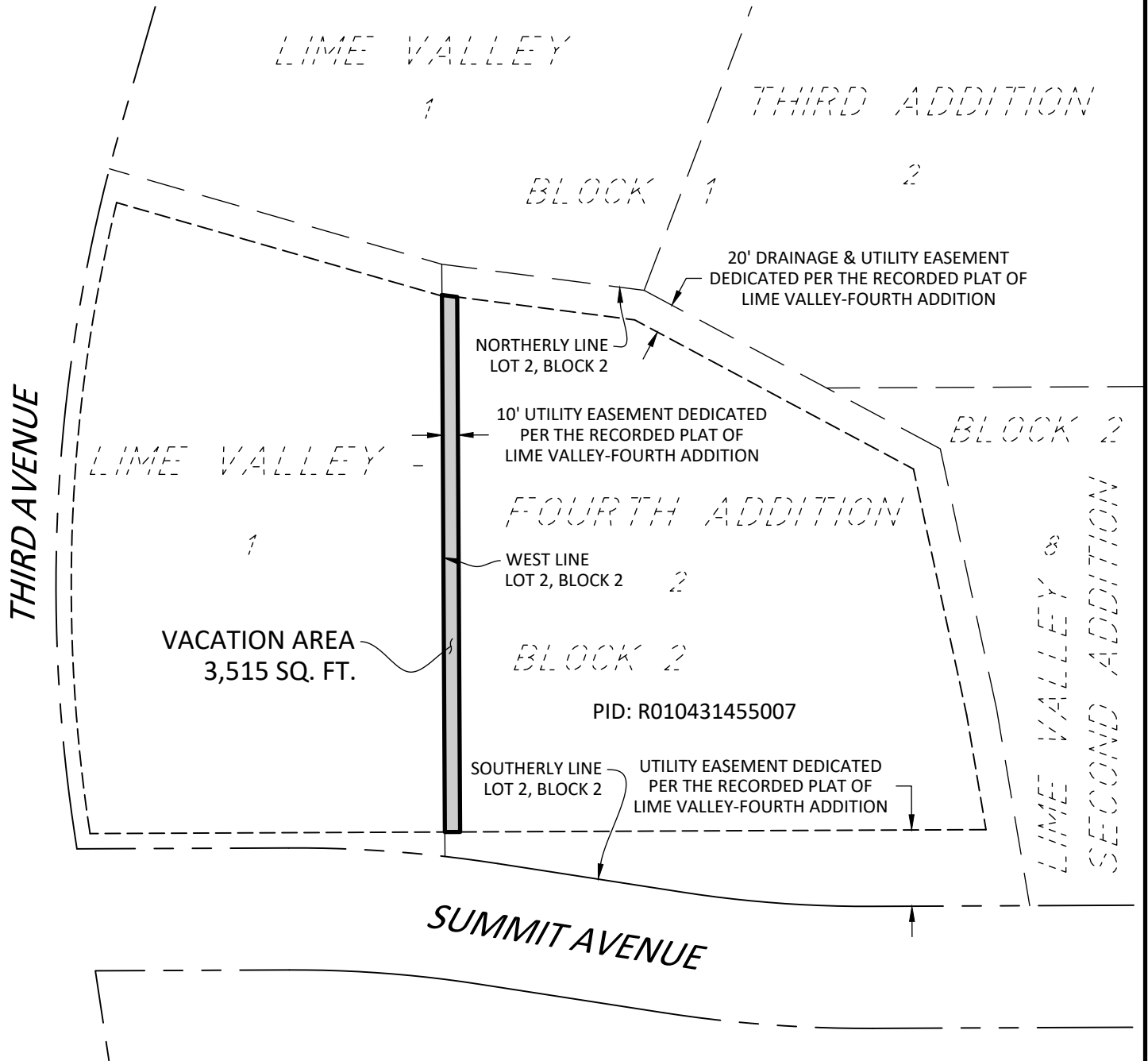


Date: October 2025

Author:

This information is to be used for reference purposes only. The City of Mankato does not guarantee accuracy of the material contained herein and is not responsible for misuser misinterpretation.

EXHIBIT A



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CERTIFICATE OF EASEMENT VACATION MANKATO, MINNESOTA



**BOLTON
& MENK**

1960 PREMIER DRIVE
MANKATO, MN 56001
(507) 625-4171

PART OF LOT 2, BLOCK 2, LIME VALLEY-FOURTH ADDITION,
BLUE EARTH COUNTY, MINNESOTA

FOR: APX CONSTRUCTION GROUP

JOB NUMBER: 25X.141070.000

FIELD BOOK:

DRAWN BY: CDT

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1.0 S31-T109N-R26W-(43)

EXHIBIT B

VACATION AREA

The 10.00 foot Utility Easement dedicated per the recorded Plat of Lime Valley-Fourth Addition adjoining the west line of Lot 2, Block 2 said Lime Valley-Fourth Addition; excepting there from the 20.00 foot Drainage and Utility Easement adjoining the northerly line of said Lot 2 as dedicated per said Plat and excepting there from the variable width Utility Easement adjoining the Southerly line of said Lot 2 as dedicated per said Plat.

SURVEYOR'S CERTIFICATION

I hereby certify that this survey, plan, or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

Janele Fowlds

Janele Fowlds
License Number 26748

10/14/2025
Date

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CERTIFICATE OF EASEMENT VACATION MANKATO, MINNESOTA



**BOLTON
& MENK**

1960 PREMIER DRIVE
MANKATO, MN 56001
(507) 625-4171

PART OF LOT 2, BLOCK 2, LIME VALLEY-FOURTH ADDITION,
BLUE EARTH COUNTY, MINNESOTA

FOR: APX CONSTRUCTION GROUP

JOB NUMBER: 25X.141070.000

FIELD BOOK:

DRAWN BY: CDT

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1.0 S31-T109N-R26W-(43)

EXHIBIT C



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CERTIFICATE OF EASEMENT VACATION MANKATO, MINNESOTA



**BOLTON
& MENK**

1960 PREMIER DRIVE
MANKATO, MN 56001
(507) 625-4171

PART OF LOT 2, BLOCK 2, LIME VALLEY-FOURTH ADDITION,
BLUE EARTH COUNTY, MINNESOTA

FOR: APX CONSTRUCTION GROUP

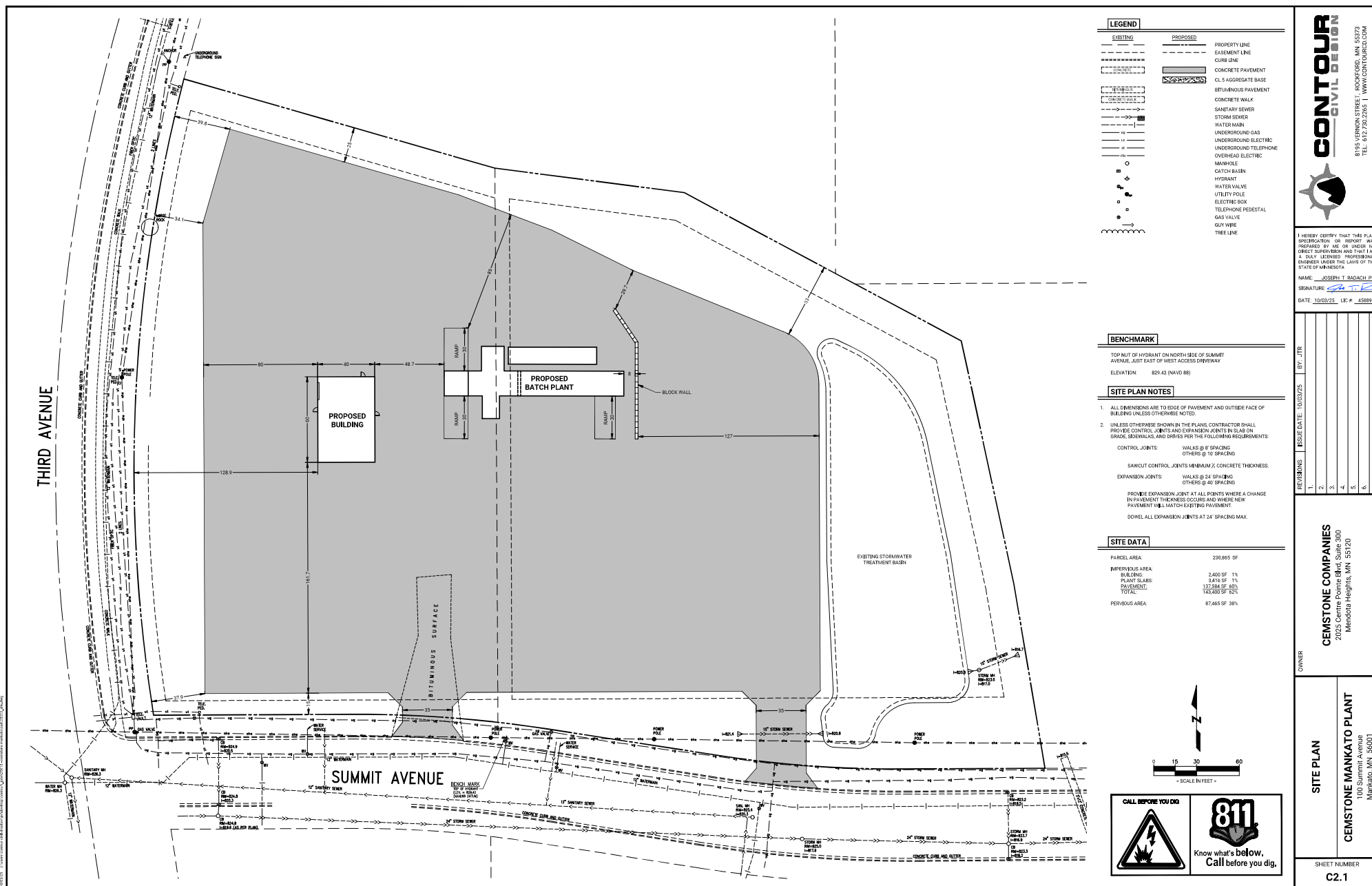
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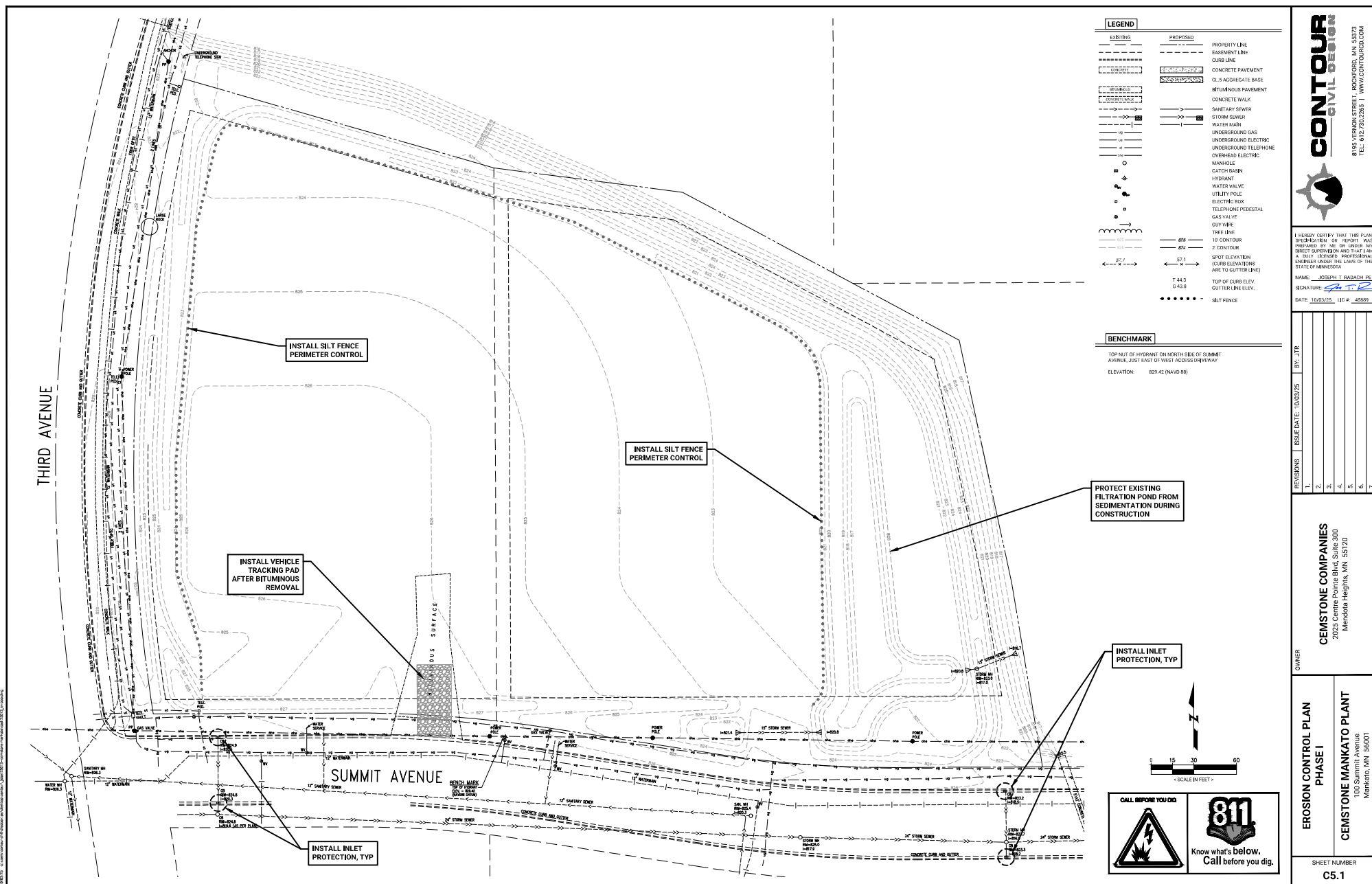
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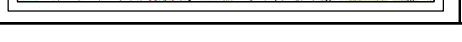
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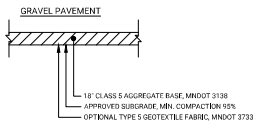
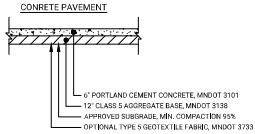
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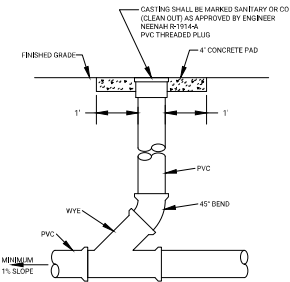
C5.3



NOTES:
1. FINAL PAVEMENT SECTIONS AND SUBGRADE COMPACTION REQUIREMENTS TO BE CONFIRMED BY GEOTECHNICAL ENGINEER OF RECORD

1 PAVEMENT SECTIONS

NO SCALE



NOTES:
• ALL JOINTS SHALL BE SOLVENT WELD EXCEPT AS NOTED.
• CLEAN OUTS ARE REQUIRED AT 100' SPACING AND AT CHANGE OF DIRECTION.
• ALL CLEAN OUTS SHALL BE EQUIPPED WITH A FROST SLEEVE.

2 CLEANOUT

NO SCALE

STABILIZE ALL EXPOSED SOIL AREAS, INCLUDING STOCKPILES. STABILIZATION MUST BE INITIATED IMMEDIATELY TO LIMIT EROSION WHEN CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. STABILIZATION MUST BE COMPLETED NO LATER THAN 1 CALENDAR DAY AFTER THE CONSTRUCTION ACTIVITY HAS CEASED. STABILIZATION NOT REQUIRED ON CONSTRUCTED BASE COMPONENTS OF ROADS, PARKING LOTS AND SIMILAR SURFACES. STABILIZATION IS NOT REQUIRED ON TEMPORARY STOCKPILES WITHOUT SIGNIFICANT SILT CLAY OR ORGANIC COMPONENTS (E.G., CLEAN AGGREGATE STOCKPILES, DEMOLITION CONCRETE STOCKPILES, SAND STOCKPILES) BUT PERMITTEES MUST PROVIDE SEDIMENT CONTROL AT THE BASE OF THE STOCKPILE.

TEMPORARY SEEDING SHALL BE IN ACCORDANCE WITH MNDOT 2575 AND SHALL BE AS FOLLOWS:

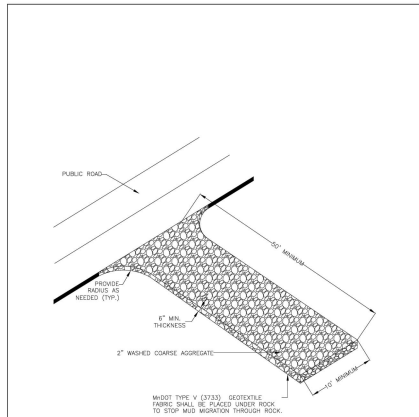
SEED: 21-111 AT 100 LBS PER ACRE OR 21-112 AT 100 LBS PER ACRE
MULCH: TYPE 1 AT 2 TONS PER ACRE
FERTILIZER: 10-20-20 AT 200 LBS PER ACRE

PERMANENT SEEDING SHALL BE IN ACCORDANCE WITH MNDOT 2575 AND SHALL BE AS FOLLOWS, UNLESS SHOWN OTHERWISE ON THE PLANS:

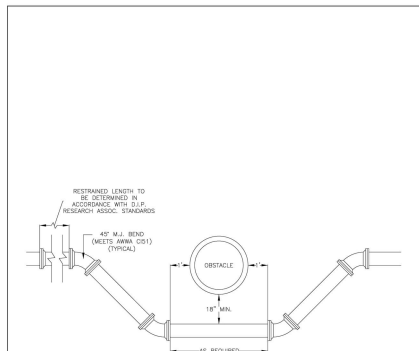
SEED: 25-131 AT 220 LBS PER ACRE OR 25-141 AT 59 LBS PER ACRE
MULCH: TYPE 1 AT 2 TONS PER ACRE
FERTILIZER: 10-20-20 AT 200 LBS PER ACRE

3 TURF ESTABLISHMENT

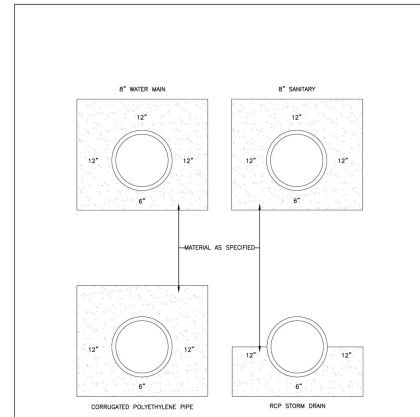
NO SCALE



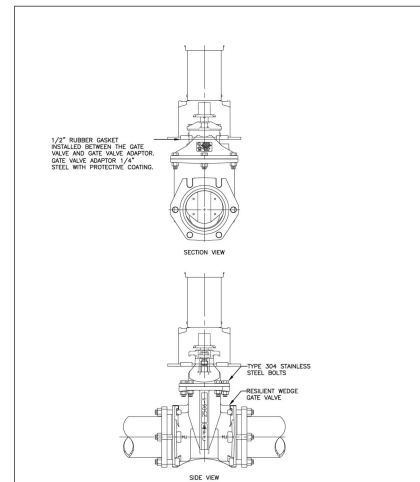
CITY OF MINNAPOTA
ENGINEERING
STABILIZED CONSTRUCTION EXIT
SPECIFICATION REFERENCE
STANDARD PLATE 2003A
1 OF 1



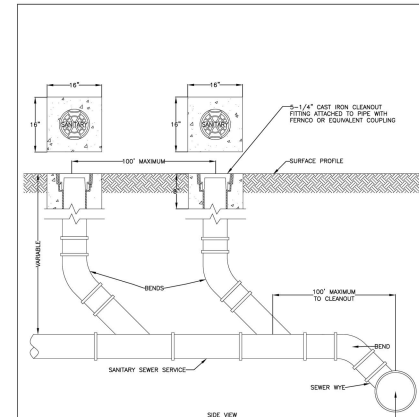
CITY OF MINNAPOTA
ENGINEERING
WATERMAIN CONSTRUCTION AROUND OBSTACLES
SPECIFICATION REFERENCE
STANDARD PLATE 2320A
1 OF 1



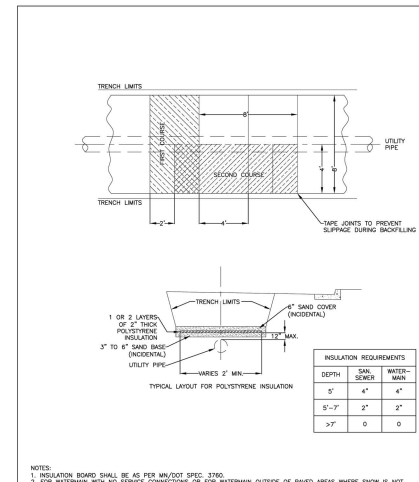
CITY OF MINNAPOTA
ENGINEERING
GRANULAR BEDDING & ENCASEMENT
SPECIFICATION REFERENCE
STANDARD PLATE 2100A
1 OF 1



CITY OF MINNAPOTA
ENGINEERING
GATE VALVE ADAPTOR
SPECIFICATION REFERENCE
STANDARD PLATE 2321A
1 OF 1



CITY OF MINNAPOTA
ENGINEERING
SANITARY SERVICE CLEANOUT
SPECIFICATION REFERENCE
STANDARD PLATE 2242A
1 OF 1



CITY OF MINNAPOTA
ENGINEERING
POLYSTYRENE INSULATION
SPECIFICATION REFERENCE
STANDARD PLATE 2323A
1 OF 1



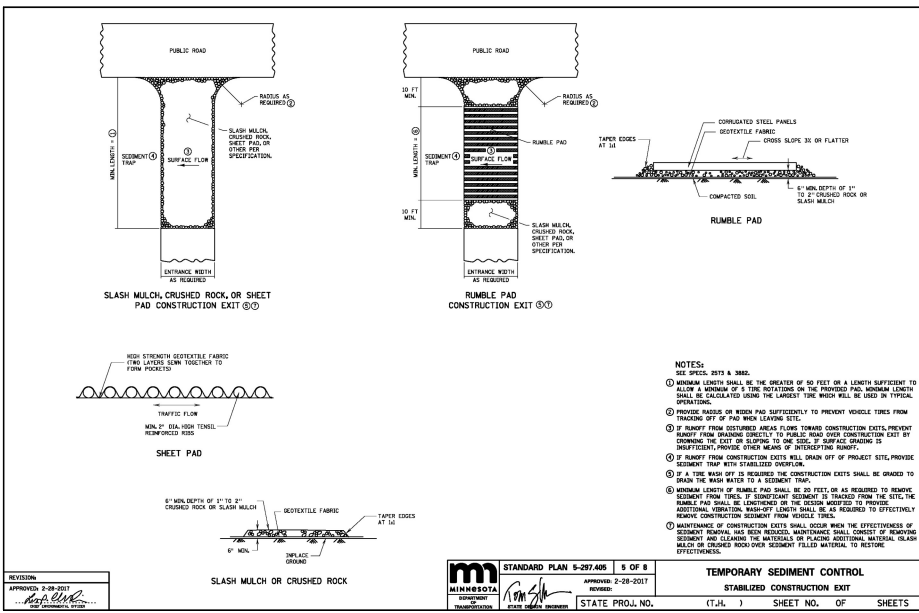
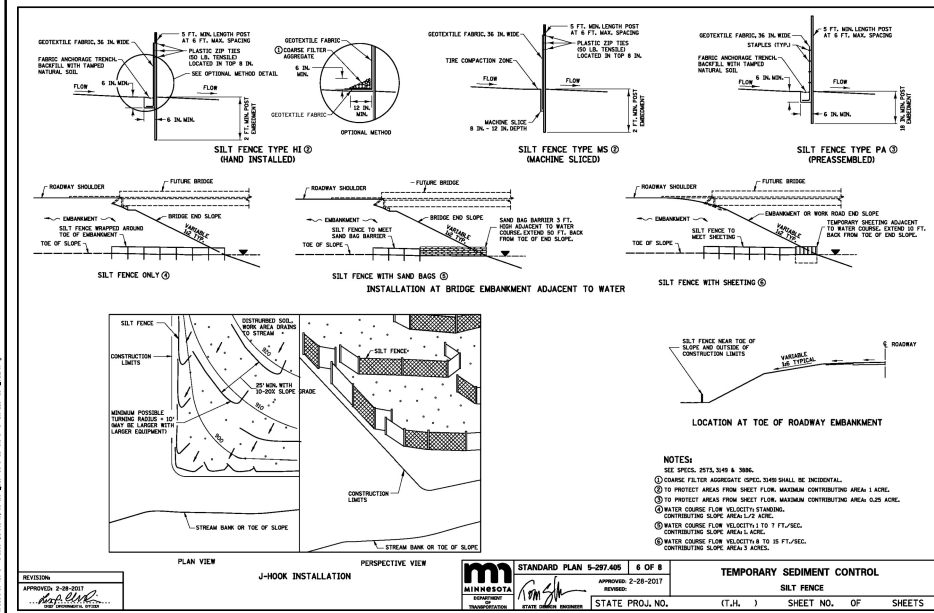
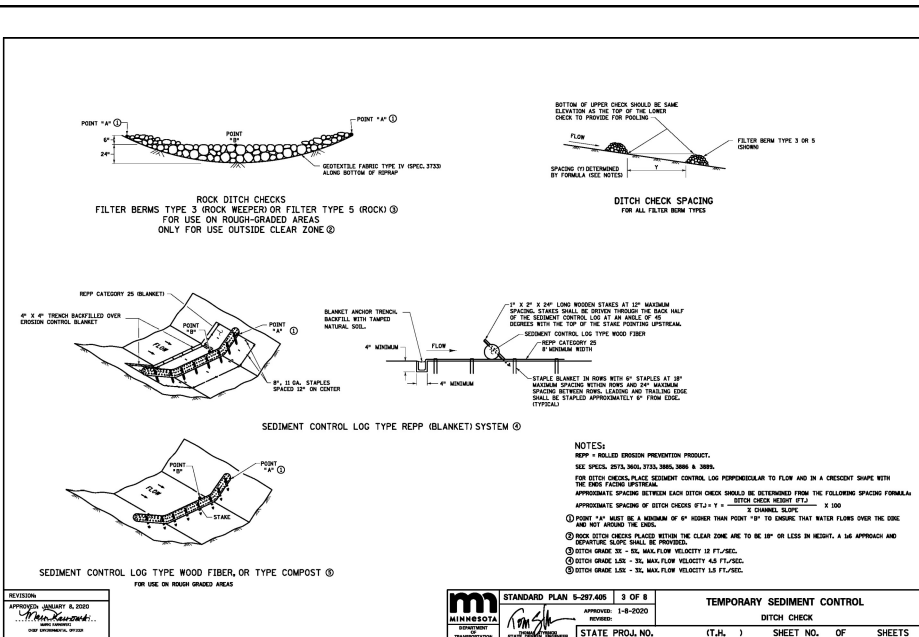
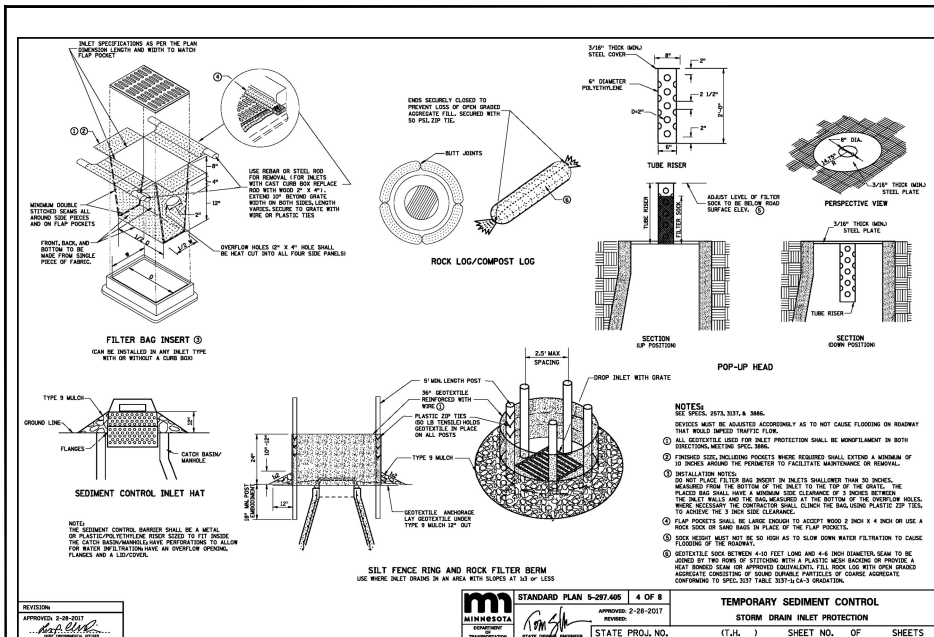
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
NAME: JOSEPH T. RADACH PE
SIGNATURE: [Signature]
DATE: 10/03/25, LIC # 45589

REVISIONS	ISSUE DATE	DESCRIPTION
1.	10/03/25	SHT-27R
2.		
3.		
4.		
5.		
6.		
7.		

CEMSTONE COMPANIES
2025 Centre Pointe Blvd, Suite 300
Mendota Heights, MN 55120

CEMSTONE MANKATO PLANT
100 Summit Avenue
Mankato, MN 56001

DETAILS
SHEET NUMBER
C6.1



**CONTOUR
CIVIL DESIGN**

8175 VERNON STREET, ROCKFORD, MN 56373
TEL: 762.250.2335 | WWW.CONTOURCIVIL.COM

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

NAME: JOSEPH T. BACHMANN, PE
SIGNATURE: [Signature]
DATE: 10/03/25, LIC #: 45889

REVISIONS

NO.	DATE	DESCRIPTION
1	10/03/25	5/1-JTB
2		
3		
4		
5		
6		
7		

OWNER

CEMSTONE COMPANIES
2025 Centre Pointe Blvd, Suite 300
Mendota Heights, MN 55120

DETAILS

CEMSTONE MAKATO PLANT
100 Summit Avenue
Mankato, MN 56001

SHEET NUMBER

C6.2

Logan Stenberg

From: Mayers, Charles J <charles.mayers@CenterpointEnergy.com>
Sent: Tuesday, October 14, 2025 6:02 AM
To: Logan Stenberg
Cc: Mayers, Charles J
Subject: RE: [External Email] Vacation Request - 114 Summit Ave Mankato, Mn 56001

Hi Logan,

CenterPoint Energy has no issues or concerns at this time with your Vacation Request - 114 Summit Ave Mankato, Mn 56001. We have no facilities within the vacated area. You are good to go.

Chuck Mayers



Chuck Mayers **SR/WA**
Senior Agent, Right of Way
System Integrity & Operation Support
612-321-5381 w. | 952-334-9180 c.
Charles.mayers@centerpointenergy.com



From: Logan Stenberg <LoganS@apxconstructiongroup.com>
Sent: Monday, October 13, 2025 3:33 PM
Cc: Lars Anderson <landerson@cemstone.com>; Alex Olin <aolin@cemstone.com>
Subject: [External Email] Vacation Request - 114 Summit Ave Mankato, Mn 56001
Importance: High

You don't often get email from logans@apxconstructiongroup.com. [Learn why this is important](#)

All,

Please see the attached easement vacation request. Please review and sign for your respective companies as soon as possible. We are looking for this request returned end of day tomorrow 10/14.

Thank you,

LOGAN STENBERG

PROJECT MANAGER

CEL: 507-316-1444

TEL: 507-387-6836

EXT: 221

FAX: 507-387-1169

STREET/ALLEY VACATION REQUEST

City of Mankato
Intergovernmental Center
10 Civic Center Plaza
Mankato, MN 56001



Address/Location of Property:

114 Summit Ave Mankato, MN 56001

Community Development
Phone: 507.387.8600
Fax: 507.388.7530
www.mankatomn.gov

The City Council, with the assistance of the City Planning Commission, has the exclusive power to vacate or discontinue public streets, alleys, highways, or any portion thereof in the city, and public utility or access easements, but no such vacation or discontinuance shall be granted or ordered by the Council except upon the verified petition, in writing, of one or more of the owners of real property on that portion of such street, alley, or highway proposed to be vacated, or upon the verified petition of the city's Community Development Director. The petition shall state the reason for the vacation and briefly describe the street, alley, highway, or portion thereof, to be vacated.

The petition shall be delivered to the Community Development Director, who will forward it to the City Planning Commission, which will hold a hearing on the request and make a recommendation to the City Council.

It is the responsibility of the applicants to have all utility companies review the request for vacation to determine whether utilities are located in the right-of-way or easement to be vacated. The petition for right-of-way or easement vacation shall be accompanied by this form, along with a map of the proposed vacation, and brought to each utility listed below, to be signed and an indication made as to the presence of utilities. If easements must be retained for utilities or access, the applicant shall submit a drawing and a written description of the easements with this form.

Utility	By	Utilities present within vacation	Check box if easement needed
Alliance Pipeline		Yes ___ No ___	
Benco Electric		Yes ___ No ___	
CenterPoint Energy		Yes ___ No ___	
Charter Communication		Yes ___ No ___	
Consolidated Communications	<i>Jason F. Ladd</i>	Yes ___ No X	
Enterprise Products (propane)		Yes ___ No ___	
Greater MN Gas		Yes ___ No ___	
Metronet		Yes ___ No ___	
Kinder Morgan Cochin Pipeline		Yes ___ No ___	
Magellan Pipeline		Yes ___ No ___	
Mankato Public Works		Yes ___ No ___	
Northern Natural Gas		Yes ___ No ___	
Sprint		Yes ___ No ___	
Verizon Wireless		Yes ___ No ___	
Xcel Energy		Yes ___ No ___	
Zayo Group		Yes ___ No ___	

Utility Company Comments: _____

STREET/ALLEY VACATION REQUEST

City of Mankato
Intergovernmental Center
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Alliance Pipeline		Yes ___ No ___	
Benco Electric		Yes ___ No ___	
CenterPoint Energy		Yes ___ No ___	
Charter Communication		Yes ___ No ___	
Consolidated Communications		Yes ___ No ___	
Enterprise Products (propane)		Yes ___ No ___	
Greater MN Gas		Yes ___ No ___	
Metronet		Yes ___ No ___	
Kinder Morgan Cochin Pipeline		Yes ___ No ___	
Magellan Pipeline	HEath Biegler	Yes ___ No <u>x</u>	
Mankato Public Works		Yes ___ No ___	
Northern Natural Gas		Yes ___ No ___	
Sprint		Yes ___ No ___	
Verizon Wireless		Yes ___ No ___	
Xcel Energy		Yes ___ No ___	
Zayo Group		Yes ___ No ___	

Utility Company Comments: _____

STREET/ALLEY VACATION REQUEST

City of Mankato
Intergovernmental Center
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Alliance Pipeline		Yes ___ No ___	
Benco Electric		Yes ___ No ___	
CenterPoint Energy		Yes ___ No ___	
Charter Communication		Yes ___ No ___	
Consolidated Communications		Yes ___ No ___	
Enterprise Products (propane)	<i>D. Nicholson</i>	Yes ___ No <u>X</u>	
Greater MN Gas		Yes ___ No ___	
Metronet		Yes ___ No ___	
Kinder Morgan Cochin Pipeline		Yes ___ No ___	
Magellan Pipeline		Yes ___ No ___	
Mankato Public Works		Yes ___ No ___	
Northern Natural Gas		Yes ___ No ___	
Sprint		Yes ___ No ___	
Verizon Wireless		Yes ___ No ___	
Xcel Energy		Yes ___ No ___	
Zayo Group		Yes ___ No ___	

Utility Company Comments: *Enterprise is clear. Any questions, please let me know. Thanks, Nick 651-295-0960*

D. Nick Nicholson - 651-295-0960

STREET/ALLEY VACATION REQUEST

City of Mankato
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Alliance Pipeline		Yes ___ No ___	
Benco Electric		Yes ___ No ___	
CenterPoint Energy		Yes ___ No ___	
Charter Communication	<i>CSDC BRANDON</i>	Yes ___ No <u>X</u>	
Consolidated Communications		Yes ___ No ___	
Enterprise Products (propane)		Yes ___ No ___	
Greater MN Gas		Yes ___ No ___	
Metronet		Yes ___ No ___	
Kinder Morgan Cochin Pipeline		Yes ___ No ___	
Magellan Pipeline		Yes ___ No ___	
Mankato Public Works		Yes ___ No ___	
Northern Natural Gas		Yes ___ No ___	
Sprint		Yes ___ No ___	
Verizon Wireless		Yes ___ No ___	
Xcel Energy		Yes ___ No ___	
Zayo Group		Yes ___ No ___	

Utility Company Comments: NO UTILITIES IN EASEMENT REQUESTED.

UTILITY COMPANY CONTACTS

Steven Senger - **Zayo Group**
5005 Cheshire Parking North, STE 1
Minneapolis, MN 55446-3719
Phone: 612.210.8036
steven.senger@zayo.com

Randy Phillips - **Alliance Pipeline**
7701 France Ave S, Suite 600
Edina, MN 55435
Phone: 612-597-9616
Randall.phillips@enbridge.com

Tim Braulick - **Benco Electric Cooperative**
20946 549th Avenue, PO Box 8
Mankato, MN 56001
Phone: 507.387.7963 Fax: 507.387.6254
timb@benco.coop

Charles Mayer - **Center Point Energy**
2400 N. Riverfront Drive
Mankato, MN 56001
Phone: 612.321.5381
charles.mayers@centerpointenergy.com

Brian Oviatt - **Charter Communications**
101 Pauley Way,
Mankato, MN 56001
Phone: 507.469.0256
Brian.oviatt@charter.com

Nick Nicholson - **Enterprise Products (propane)**
10825 Courthouse Blvd. E.
Inver Grove Heights, MN 55077
Phone: 651-453-5302 Fax: 651-453-5310
ddnicholson@eprod.com

Nikki Kupser - **Greater Minnesota Gas**
1900 Cardinal Drive
Fairbault, MN 55021
Phone: 888.931.3411 Fax: 507.934.6675
nkupser@greatermngas.com

Lori Kemper - **Metronet**
3701 Communications Way
Evansville, IN 47715
Phone: 812.213.1050
Lori.kemper@metronet.com

Jason Fladland - **Consolidated Communications**
2730 3rd Ave, PO Box 3288
Mankato, MN 56002-3248
Phone: 507.386.3597
Jason.Fladland@consolidated.com

Stephen Urban - **Kinder Morgan Cochin Pipeline**
PO Box 39
Eagle Lake, MN 56024
Phone: 507.625.1411 Fax: 507.625.4494
Stephen_urban@kindermorgan.com

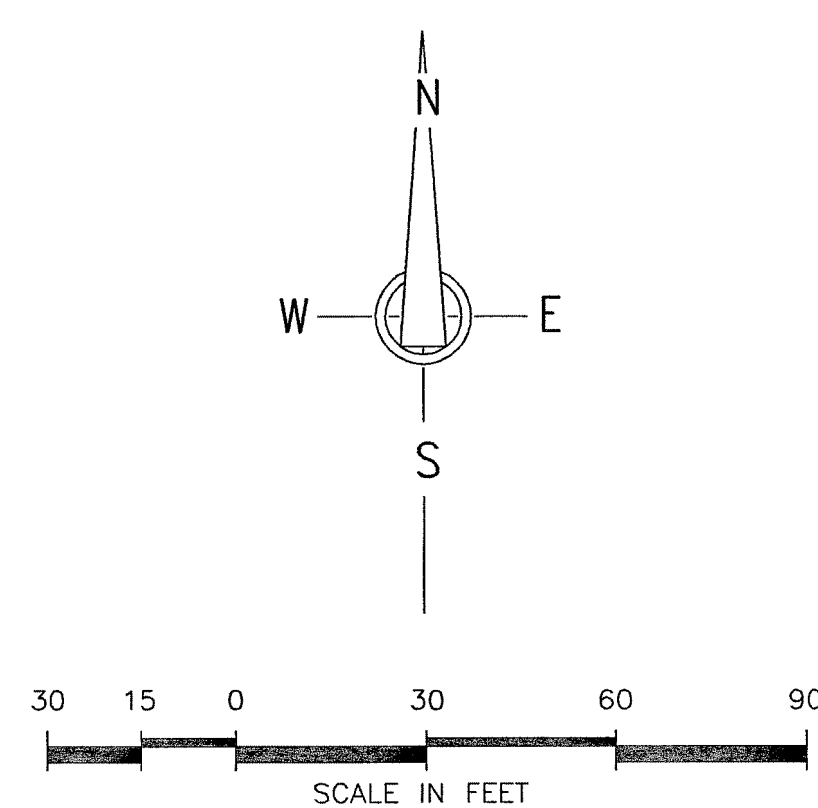
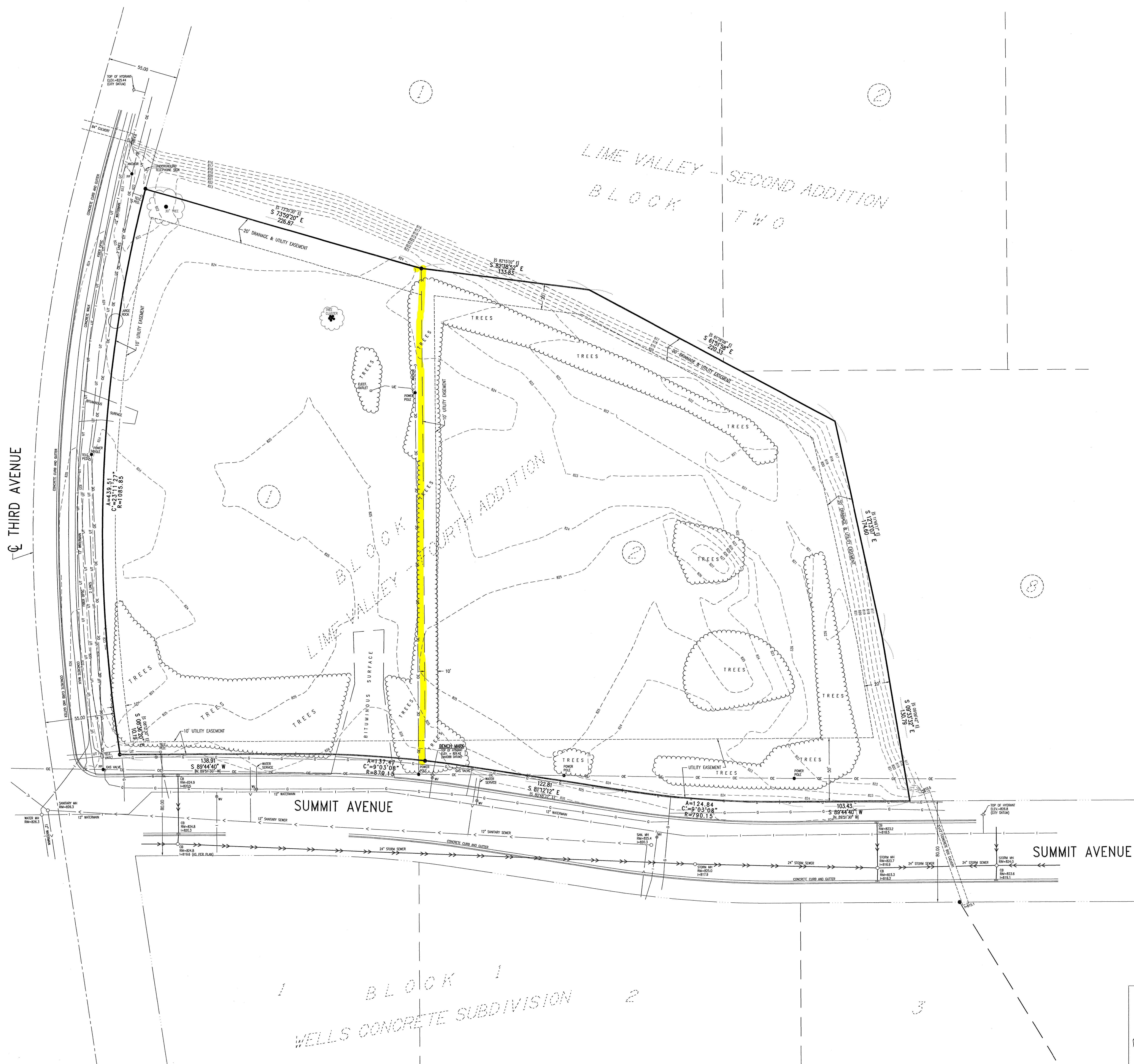
Heath Biegler - **Magellan Pipeline**
2728 Paton Rd.
St. Paul, MN 55113
Phone: 612-723-0107
Heath.biegler@magellanlp.com

Rod Nelson - **Northern Natural Gas Company**
1186 State Highway 263
Welcome, MN 56181
Phone: 402.530.2451 Cell: 507.226.6848
Fax: 402.530.2484
Rod.nelson@nngco.com

Karl Nelson - **Sprint**
465 Kim Lane
Owatonna, MN 55060
Phone: 507.451.8097 Cell: 507.363.9513
Fax: 507.451.4475
Karl.nelson@sprint.com

Robert Clements - **Verizon Wireless**
100 Warren Street Suite 300
Mankato, MN 56001
Phone: 507.385.3133
Robert.clements@verizonwireless.com

Lawrence Novak - **Xcel Energy**
210 Lime Street
PO Box 1090
Mankato, MN 56002
Phone: 507.387.9612
Fax: 507.387.9604
Lawrence.j.novak@xcelenergy.com



- INDICATES 1/2" DIA. X 20' LONG IRON PIPE SET WITH PLASTIC CAP MARKED BY LICENSE NO. 46564.
- INDICATES IRON PIPE MONUMENTS FOUND.

LEGEND		
SM	INDICATES	SANITARY
DN	INDICATES	DIAMETER
MH	INDICATES	MANHOLE
CONC	INDICATES	CONCRETE
MON	INDICATES	MONUMENT
ELEV	INDICATES	ELEVATION
TELE	INDICATES	TELEPHONE
PP	INDICATES	POWER POLE
SQ.FT.	INDICATES	SQUARE FEET
WV	INDICATES	WATER VALVE
CB	INDICATES	CATCH BASIN
APPROX.	INDICATES	APPROXIMATE
RM	INDICATES	RING ELEVATION
I	INDICATES	INVERT ELEVATION
TELEPED.	INDICATES	TELEPHONE PEDESTAL
—	INDICATES	WATER MAIN
—	INDICATES	STORM SEWER
—	INDICATES	SANITARY SEWER
—	INDICATES	GAS MAIN
—	INDICATES	UNDERGROUND ELECTRIC
—	INDICATES	UNDERGROUND TELEPHONE
—	INDICATES	OVERHEAD ELECTRIC

NOTES

SANITARY SEWER, WATERMAIN, AND STORM SEWER INFORMATION OBTAINED FROM MANKATO CITY ENGINEERING DEPARTMENT.

ELECTRICAL INFORMATION OBTAINED FROM XCEL ENERGY.

TELEPHONE INFORMATION OBTAINED FROM HOKORY TECH.

GAS INFORMATION OBTAINED FROM CENTERPOINT ENERGY MINNESOTA.

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPREHEND ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

UTILITIES WERE LOCATED FROM MARKS PLACED BY UTILITY COMPANIES NOTIFIED BY THE GOPHER STATE ONE-CALL CALL MADE BY CLIENT.

BASIS OF BEARINGS
(MINNESOTA COUNTY COORDINATE SYSTEM - BLUE EARTH COUNTY ZONE - HARN NAD83 - 1996)
INDICATES LIME VALLEY - FOURTH ADDITION BEARING DATUM

I hereby certify that this survey, plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

Signature: *Warren P. Smith*
Print Name: WARREN P. SMITH
Date: 4/28/16 License No. 14701

MINNESOTA
STATE
SURVEYORS
ASSOCIATION

TOPOGRAPHIC SITE PLAN
MANKATO, MINNESOTA

LOTS 1 & 2, BLOCK 2,
LIME VALLEY - FOURTH ADDITION

FOR: CEMSTONE

DATE: APRIL, 2016 F.B.: FILE 16106

