

Applicant: Patrick Buhl; Normandale Community College  
 Consultant: Bryan Miller; Larson Engineering, Inc.  
 Project: Normandale Community College Parking Lot 6 Improvements  
 Location: 4200 94<sup>th</sup> Street West, Bloomington, MN  
 Applicable Rule(s): 2, 3, 4, and 5  
 Reviewer(s): Dallen Webster and Louise Heffernan; Barr Engineering Co.

### **General Background & Comments**

The applicant proposes parking lot and site improvements at Normandale Community College in Bloomington. The proposed work includes mill and overlay of parking lot 6 (located at the northern end of the site, with portions of the parking lot improvement requiring full depth bituminous pavement reconstruction, utility improvements, and the construction of a stormwater management facility for compliance with the NMCWD stormwater requirements. The 87.9-acre, five-parcel site located at 9700 France Avenue in Bloomington, is occupied by school buildings that have included several additions in the past, surface parking, and wetlands and floodplain of Marsh Lake/Nine Mile Creek located partially onsite. Parking lot 6 is located at 4200 94<sup>th</sup> Street West in Bloomington.

Ten permits have previously been issued by the NMCWD for work at Normandale Community College (site). Relevant project site information is provided in the tables below.

Site Information	Permit 2008-031	Permit 2009-029	Permit 2010-015	Permit 2010-037	Permit 2011-066 <sup>3</sup>	Permit 2012-017
Total Site Area <sup>1</sup> (ac)	87.9	87.9	87.9	87.9	87.9	87.9
Existing Site Impervious Area <sup>2</sup> (ac)	33.0	33.03	33.07	34.13	34.37	34.37
Change (increase or decrease) in Site Impervious Area (ac)	0.03	0.04	1.06	0.24	0	-0.26
Percent Change in Impervious Area (%)	0.1%	0.1%	3.2%	0.7%	0%	-0.8%
Disturbed/Reconstructed Impervious Area (ac)	0	0.15	0.67	1.03	0	4.60
Percent Disturbance of Existing Impervious Area (%)	0%	0.5%	2.0%	3.0%	0.0%	13.4%

Site Information	Permit 2012-071	Permit 2018-018	Permit 2018-020	Permit 2022-154 (Current)	Site Aggregate Total (10 Projects)
Total Site Area <sup>1</sup> (ac)	87.9	87.9	87.9	87.9	87.9
Existing Site Impervious Area <sup>2</sup> (ac)	34.11	35.42	35.34	35.03	33.0
Change (increase or decrease) in Site Impervious Area (ac)	1.31	-0.08	1.00	-0.33	3.01
Percent Change in Impervious Area (%)	3.8%	-0.2%	2.8%	-0.9%	<b>9.1%</b>
Disturbed/Reconstructed Impervious Area (ac)	0	0.34	7.81	0.43	15.03
Percent Disturbance of Existing Impervious Area (%)	0.0%	1.0%	22.1%	1.2%	<b>45.5%</b>

<sup>1</sup>Normandale Community College includes five parcels under common or related ownership.

<sup>2</sup>Permit #2008-031 existing site impervious area identifies pre-2008 project existing conditions. Rule 4.2.5 Common Scheme of Development took effect in March 2008.

<sup>3</sup>Project activities under Permit #2011-066 proposed a decrease of approximately 19,166 square feet of impervious surface, and 191,664 square feet of disturbed and reconstructed impervious area for the construction of the Academic Partnership Center and a four-level parking ramp. A revised stormwater management plan was submitted under Permit #2012-017 to account for runoff from the Academic Partnership Center and parking ramp, with the addition of a maintenance garage. The proposed plans under Permit #2012-017 supersede Permit #2011-066 and the revised plan includes stormwater management for the above-noted areas.

#### Exhibits Reviewed:

1. Permit Application dated November 30, 2022 (received December 1, 2022). Email correspondence dated December 13, 2022, December 20, 2022, and January 9, 2023, outlining review comments and items required to complete the application. The application with the submittal items is complete.
2. Plans received December 1, 2022 (dated November 30, 2022), with revisions received March 10, 2023, (dated March 6, 2023), prepared by Larson Engineering, Inc.
3. Geotechnical Evaluation Report dated November 16, 2021, prepared by Braun Intertec.
4. Stormwater Management Report dated November 18, 2022 (received December 1, 2022), with revisions dated and received on March 10, 2023, prepared by Larson Engineering, Inc.
5. Electronic HydroCAD modeling received on March 10, 2023, prepared by Larson Engineering, Inc.
6. Electronic MIDS Calculator files received on March 10, 2023, prepared by Larson Engineering, Inc.
7. Wetland Delineation Report dated October 14, 2022, prepared by Bopray Environmental.
8. Floodplain Storage Calculations received on December 1, 2022, prepared by Larson Engineering.

9. Comment Response Memorandum received on March 10, 2023, prepared by Larson Engineering, Inc.
10. Wetland Conservation Act Notice of Decision Issued on November 22, 2022, by the City of Bloomington (LGU) Approving the Wetland Boundary and Type.

## **2.0 Floodplain Management and Drainage Alterations**

The applicant proposes land-altering activities below the NMCWD Atlas 14 model 100-year frequency flood management elevation, 807.0 M.S.L., of Marsh Lake located along the northern boundary of the project area. Because grading and land-altering activities are proposed below the 100-year flood management elevation, the project must conform to the requirements of the District's Floodplain Management and Drainage Alterations Rule 2.0.

Rule 2 criteria for floodplain and drainage alterations includes the following:

*2.3.1: The low floor elevation of all new and reconstructed structures must be constructed in accordance with the NMCWD Stormwater Rule, subsection 4.3.3*

The project does not include new or reconstructed buildings, bridges or boardwalks that qualify as "structures" pursuant to subsection 2.3.1 criteria.

*2.3.2: Placement of fill below the 100-year flood elevation is prohibited unless fully compensatory flood storage is provided within the floodplain and:*

- a. at the same elevation +/- 1 foot for fill in the floodplain; or*
- b. at or below the same elevation for fill in the floodplain of a water basin or constructed stormwater facility.*

Based on the applicant's submittal, the project will result in an increase of approximately 60 cubic feet of flood storage volume below elevation 807.0 M.S.L., the 100-year frequency flood elevation of Marsh Lake. As shown on the plans, the proposed pavement improvements will generally maintain existing grading and drainage characteristics in post-development conditions. The additional storage volume provided will be at the same elevation +/- 1 foot of fill within the floodplain. The submittal demonstrates and the engineer finds the project is in conformance with subsection 2.3.2 criteria.

*2.3.3. The District will issue a permit to alter surface flows only if it finds that the alteration is not reasonably likely to have a significant adverse impact on any upstream or downstream landowner and is not reasonably likely to have a significant adverse effect on flood risk, basin or channel stability, groundwater hydrology, stream base-flow, water quality or aquatic or riparian habitat.*

The project proposes grading and land-altering activities that will not alter the drainage boundaries within the wetlands' watersheds nor increase the impervious area within the site. As stated in the subsection 2.3.2 analysis, the project will result in an increase in flood storage volume (60 cubic feet) below the 100-year frequency flood elevation of Marsh Lake, thereby not adversely affecting flood risk or transferring flood risk to upstream or downstream landowners, in compliance with subsection 2.3.3 criteria. The submittal demonstrates and the engineer finds that the grading, earthwork, and stormwater facility installation below the 100-year flood frequency elevation of Marsh Lake are not reasonably likely to transfer flood risk to other portions of the site or adjacent landowners.

Basin stability, water quality and aquatic or riparian habitat within Marsh Lake will not be changed and/or altered as the discharge rates from the site will be less than the existing discharge rates at all collection points where stormwater leaves the site. A decrease in site impervious area is proposed, and the proposed stormwater facility to be constructed will further attenuate the discharge of stormwater from the site. The project is not likely to deter wildlife (such as waterfowl, amphibians, reptiles) from using the area adjacent to the wetland edge of Marsh Lake, if currently used, because the project does not propose to remove or deteriorate habitat conditions adjacent to the waterbodies either temporarily during construction or permanently for the establishment of buffer areas. Revegetation plans provided by the applicant include wetland buffers for riparian areas, as outlined in the **Rule 3.0 Wetlands Management** section of this report. Groundwater hydrology will not be changed and/or altered as a result of the project because the project does not propose water basin alterations (e.g. pumping, establishment of new normal water levels, or physical characteristic changes such as depth of water or bed permeability) that would result in surface water inflow to groundwater interaction changes or restriction of seepage out of the bottom of the waterbodies. The submittal demonstrates and the engineer finds that the project is not reasonably likely to have significant adverse impacts, and therefore conforms to Rule 2.3.3 criteria.

*2.3.4 No structure may be placed, constructed, or reconstructed and no surface may be paved within 50 feet of the centerline of any water course, except that this provision does not apply to:*

*a. Bridges, culverts, and other structures and associated impervious surface regulated under Rule 6.0;*

*b. Trails 10 feet wide or less, designed primarily for nonmotorized use.*

The creek is located to the north of the project site and is greater than 50 feet way from the proposed land-disturbing activities.

### **3.0 Wetlands Management**

NMCWD's Wetland Management Rule 3.0 applies to the project because, 1) the onsite wetland, adjacent to Marsh Lake, described in the paragraphs above is located downgradient from the project's land-disturbing activities, and 2) a permit under NMCWD Rules 2.0, 4.0 and 6.0 is required (Rule 3.4). The City of Bloomington is the Local Governmental Unit (LGU) responsible for administering the requirements of the Wetland Conservation Act (WCA) in Bloomington.

A wetland delineation report and Joint Application, including a request for wetland boundary and type approval for the onsite wetland, was prepared by Bopray Environmental and submitted to the City of Bloomington. A WCA Notice of Decision approving the wetland boundary and type determination was issued by the City of Bloomington on November 22, 2022.

Based on District records from previous projects and the comparison of the function and values presented in Appendix 3b of the District's Rules, the site wetland classification was determined as high value for the wetland, requiring a 60-foot average and 30-foot minimum

buffer width per subsection 3.4.1c criteria. We are in agreement with the MnRAM results and NMCWD value determinations for the site wetlands.

Rule 3.4 requires buffer around the entirety of wetlands disturbed by an activity and on the portion of a wetland downgradient from an activity. The following table provides a brief explanation of how the wetland is implicated by the project activities.

**Table 1. Wetland implication(s)**

Wetland	Implication
Wetland (Marsh Lake)	Wetland is downgradient from activities; a buffer is required along the downgradient edge of wetland

In accordance with Rule 3.4.4 criteria, the buffer is only required on property owned by the applicant that is subject to a district permit and is required where the wetland is either on or adjacent to the subject property.

Based on an average 60-foot buffer required along the edge of the wetland downgradient from land-disturbing activities, a 45,366 square foot buffer is required to be provided. As shown on the plans, a 45,422 square foot buffer is proposed. The required minimum buffer width of 30 feet is provided. The project complies with Rule 3.4 criteria.

In accordance with Rule 3.4.5, buffer markers at the edges of the buffer area are required. As shown on the plans, permanent, free-standing markers at the buffer's upland edge are proposed at an interval no more than 200 feet. In accordance with the requirements of Rule 3.4.7, the buffer must be documented by a declaration or other document approved by the district and recorded in the office of the county recorder or registrar before the permit will be issued. The declaration must include an exhibit clearly showing the provided buffer areas and monument locations.

Rule 3.5 stormwater treatment does not impose requirements for the project because the use of the wetland for stormwater treatment for runoff from the project site is not proposed.

#### **4.0 Stormwater Management**

NMCWD's requirements for stormwater management apply to the project because more than 50 cubic yards of material will be disturbed and 5,000 square feet or more of surface area is altered, Rules 4.2.1a and b.

The NMCWD's Rule for Redevelopment, Rule 4.2.3, states, if a proposed activity will disturb more than 50% of the existing impervious surface on the site or will increase the imperviousness of the site by more than 50%, stormwater management will apply to the entire project site. Otherwise, the stormwater requirements will apply only to the disturbed, replaced and net additional impervious surface on the project site. Because nine projects have been permitted since Rule 4.2.5 took effect in 2008 (NMCWD Permits 2008-031, 2009-029, 2010-015, 2010-037, 2011-066, 2012-017, 2012-071, 2018-018, and 2018-020), the proposed work under the current application is considered in aggregate with activities subject to Rule 4.2.5 Common Scheme of Development.

The project activities under the current application (Permit 2022-154), considered in aggregate with the nine previous projects permitted at the site, result in a 45.5% combined disturbance of the existing impervious surface, less than 50% of the existing impervious at the site, and will not increase the imperviousness at the site by more than 50% (9.1% combined increase). Therefore, stormwater management is required only for the net new impervious area (0.0 acres) and newly disturbed and reconstructed areas (0.43 acres) under the current permit application, amounting to 0.43 acres (18,804 square feet) of regulated impervious surface.

Soil borings in the area indicate lean clays (CL) not favorable to infiltration; therefore, volume credits previously credited by the applicant will be utilized to fulfill the required retention volume for the regulated areas per subsection 4.3.1a. The following table provides a tabulation of deposited or withdrawn volume credits from previous projects permitted at the site.

Volume Credits	Permit 2012-017	Permit 2012-071	Permit 2018-018	Permit 2018-020	Permit 2022-154 (Current)
Transaction	Deposit	Withdrawal	Withdrawal	Withdrawal	Withdrawal
Deposit or Withdrawal Amount (cubic feet)	18,110	(9,802)	(1,226)	(3,639)	(1,724)
Volume Credit Balance (cubic feet)	18,110	8,308	7,082	3,443	1,719

A retention volume of 1,724 cubic feet is required from the 18,804 square feet of regulated site impervious area. The previous approval of Permit 2018-020 left a volume credit balance of 3,443 cubic feet. The current application (Permit 2022-154) will withdraw 1,724 cubic feet of volume credits from the previous balance and leave a new remaining balance of 1,719 cubic feet of volume credits. The proposed project is in conformance with subsection 4.3.1a. The district's Volume Credit Worksheet must be completed and authorized by the district's administrator.

In accordance with Rule 4.3.1a (i), where infiltration or filtration facilities, practices or systems are proposed, pre-treatment of runoff must be provided. A Rain Guardian manufactured pretreatment device will provide the required pretreatment of runoff discharging to the proposed filtration basin, complying with Rule 4.3.1a (i).

With a filtration area of 1,110 square feet to be provided and a design filtration rate of 0.80 inches/hour, the 699 cubic feet of volume retention below the primary outlet elevation of the filtration basin is drawn down in 10 hours, which is within the required 48-hours, complying with Rule 4.3.1a (ii).

Stormwater management for compliance with subsection 4.3.1b and 4.3.1c for the project will be provided by a filtration basin to provide rate control and water quality management for the regulated areas.

Rule 4.3.1b requires the 2-, 10-, and 100-year post development peak runoff rates be equal to or less than the existing discharge rates for all collection points where stormwater leaves the site. The applicant used a HydroCAD hydrologic model to simulate the collection point where

stormwater discharge leaves the site. The existing and proposed 2-, 10- and 100-year frequency discharge rates are summarized in the tables below.

Existing Conditions			
Discharge Location	2- year (c.f.s.)	10- year (c.f.s.)	100- year (c.f.s.)
To North (Marsh Lake)	13.4	31.9	41.4

Proposed Conditions			
Discharge Location	2- year (c.f.s.)	10- year (c.f.s.)	100- year (c.f.s.)
To North (Marsh Lake)	12.0	21.0	40.6

The proposed stormwater management plan provides rate control in compliance with the NMCWD requirements for the 2-, 10-, and 100-year events. Rule 4.3.1b is met.

Rule 4.5.4d (i) requires a minimum of three feet of separation between the bottom of a filtration facility and groundwater. The boring (ST-1) taken by Braun Intertec nearest the proposed facility did not identify a water table to the bottom of the boring, elevation 793.9 M.S.L. The bottom elevation of the infiltration basin is 803.50 M.S.L., providing a separation of 9.6 feet. Rule 4.5.4d (i) is met.

NMCWD's water quality criterion requires 60% annual removal efficiency for total phosphorus (TP) and 90% annual removal efficiency for total suspended solids (TSS) from the regulated site runoff. A MIDS model was used to evaluate the proposed infiltration basin annual removal efficiency. The results of the MIDS modeling are summarized in the table below. The engineer concurs with the modeling results and the project is in conformance with Rule 4.3.1c criteria.

#### Annual TSS and TP Removal Summary

Pollutant of Interest	Regulated Site Loading* (lbs./year)	Required Load Removal (lbs./year)	Provided Load Reduction (lbs./year)
Total Suspended Solids (TSS)	143	128 (90%)	202.5 (>100%)
Total Phosphorus (TP)	0.8	0.5 (60%)	0.8 (>100%)

\*Includes TP and TSS loading from the 18,804 square feet of regulated impervious drainage area to the proposed filtration basin.

Rule 4.3.3 states that all new and reconstructed buildings must be constructed such that the low floor is at least two feet above the 100-year high-water elevation or one foot above the emergency overflow of a constructed facility. Additionally, Rule 4.3.3 states that all new and reconstructed buildings must be constructed such that no opening where surface flow can enter the structure is less than two feet above the 100-year high-water elevation of an adjacent facility. Rule 4.3.3 also states that a stormwater management facility must be constructed at an elevation that ensures no adjacent habitable building will be brought into noncompliance with a standard in subsection 4.3.3.

As previously mentioned, Rule 4.3.3 states that all new and reconstructed buildings must be constructed such that no opening where surface flow can enter the structure is less than two

feet above the 100-year high-water elevation of an adjacent facility. The low opening evaluation of the applicable structures and stormwater management facilities' 100-year high-water elevations are summarized as follows:

- The low floor elevations (805.0 and 807.0 M.S.L.) of the existing storage sheds located in the southeast corner of the project area are at or below elevation 807.0 M.S.L., the 100-year frequency flood elevation of Marsh Lake. The proposed filtration facility does not alter the 100-year frequency flood elevation of Marsh Lake. The project will not change the existing condition of the structures being affected by the high-water conditions of the project or Marsh Lake. The storage sheds are to be removed in a future phase of the project.

If not previously submitted in the calendar year of closeout, in accordance with Rule 4.3.4, a post-project chloride management plan must be provided that will, 1) designate an individual authorized to implement the chloride-use plan and 2) designate a MPCA certified salt applicator engaged in the implementation of the chloride-use plan for the site.

Subsection 4.3.5 requires the submission of a maintenance plan. All stormwater management structures and facilities must be designed for maintenance access. The applicant being a public entity must provide a written document to the district signed by an official with authority stating the stormwater management facilities as proposed will be properly maintained in perpetuity to assure that they continue to function as designed.

### **5.0 Erosion and Sediment Control**

The district's requirements for erosion and sediment control apply to the project because more than 50 cubic yards of material will be disturbed and 5,000 square feet or more of surface area is altered, Rules 5.2.1a and b.

The erosion control plan prepared by Larson Engineering Inc. includes installation of silt fence, sediment control logs, and storm sewer inlet protection. The contractor for the project will need to designate a contact who will remain liable to the district for performance under the District's Erosion and Sediment Control Rule 5.0 from the time the permitted activities commence until vegetative cover is established, in accordance with subsection 5.4.1e. NMCWD must be notified if the responsible individual changes during the permit term.

### **11.0 Fees**

Because the property owner is a public entity, no fees are charged.

Rules 4.0 and 5.0 \$0

### **12.0 Financial Assurances**

Because the property owner is a public entity, the district's financial assurance requirements do not apply.

Sureties for the project are: \$0

### **Findings**

1. The proposed project includes the information necessary, plan sheets and erosion control plan for review.



2. The proposed project will conform to Rules 2, 3, 4, and 5 with the fulfillment of the conditions identified below.
3. The proposed stormwater management facility will provide rate control and water quality management in accordance with subsections 4.3.1a-c criteria.
4. In accordance with NMCWD Rule 4.3.5, the applicant must provide a maintenance and inspection plan that identifies and protects the design, capacity, and functionality of the stormwater management facility.
5. The project will not change the existing condition of the structures being affected by the high-water conditions of the project or Marsh Lake.

*Approval, contingent upon:*

Compliance with the General Provisions (attached).

The applicant provides a name and contact information for the individual responsible for the erosion and sediment control at the site. NMCWD must be notified if the responsible individual changes during the permit term.

The district's Volume Credit Worksheet must be completed and authorized by the district's administrator.

*By accepting the permit, when issued, the applicant agrees to the following stipulations for closeout of the permit:*

The work for the Normandale Community College Parking Lot 6 Improvements project under the terms of Permit 2022-154, if issued, must have an impervious surface area, stormwater infrastructure design, and grading plans consistent with the approved plans. Design that differs materially from the approved plans will need to be the subject of a request for a permit modification or new permit, which will be subject to review for compliance with all applicable regulatory requirements.

Per Rules 3.4.7 and 4.3.5, it is required to execute an agreement for the operation and maintenance of the wetland buffer and proposed stormwater management facility. A draft of the agreement must be approved by the district. A public entity assuming the maintenance obligation may do so by filing with the district a document signed by an official with authority.

If not previously submitted in the calendar year of closeout, submission of a plan for post-project management of Chloride use on the site. The plan must include 1) the designation of an individual authorized to implement the chloride use plan and 2) the designation of a Minnesota Pollution Control Agency certified salt applicator engaged in the implementation of the chloride-use plan for the site.

Per Rule 4.5.6, an as-built drawing of the stormwater management facility conforming to the design specifications based on surveyed as-built information, including a stage volume relationship in tabular form for the filtration basin, as approved by the district, must be provided.

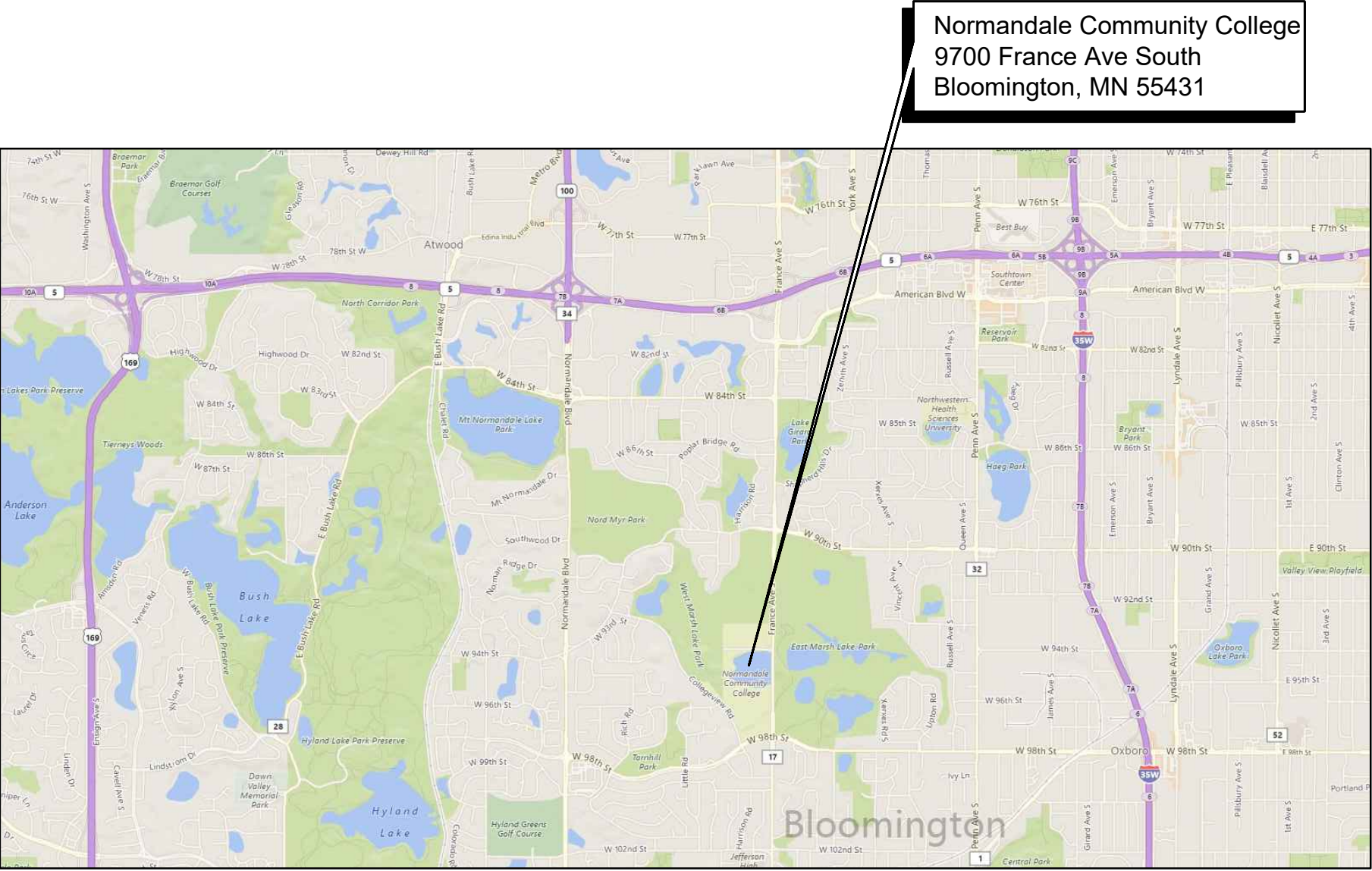
In accordance with Rule 3.4.5, the buffer monumentations with the design and text approved by NMCWD are required at the limits of the wetland buffer on the site.

PROJECT:  
PARKING LOT 6 REHABILITATION



9700 FRANCE AVE SOUTH  
BLOOMINGTON, MN 55431

VICINITY MAP



PROJECT CONTACTS

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INDEX OF DRAWINGS

T	Title Sheet
-	Topographic Survey (2 Sheets)
	<b>CIVIL</b>
C100	Demolition Plan
C200	Paving and Dimension Plan
C201	Paving Plan - Future Expansion
C300	Grading & Erosion Control Plan
C301	Floodplain Mitigation Plan
C400	Utility Plan
C500	Details
C501	Details
C502	Details
C600	Stormwater Pollution Prevention Plan
	<b>LANDSCAPING</b>
L001	Landscape Notes
L100	Site Planting Plan
L101	Site Planting Plan Future Expansion
L200	Site Soils Plan
L300	Irrigation Concept Plan
L500	Landscape Details
	<b>ELECTRICAL</b>
E100	Partial Site Plan - Electrical Demolition
E200	Site Plan - Lighting
E300	Site Plan - Power and Systems
E400	Details
E500	Schedules and Details



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Project Title:

PARKING LOT 6

REHABILITATION

NORMANDALE COMMUNITY COLLEGE

9700 FRANCE AVE SOUTH

BLOOMINGTON, MN 55431

I hereby certify that this plan, specifications 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.

Eric G. Meyer, P.E.

Date: 03.06.2023 Reg. No.: 44592

Rev.	Date	Description

Project #:

12206060

Drawn By:

KBK

Checked By:

BDM

Issue Date:

03.06.23

Sheet Title:

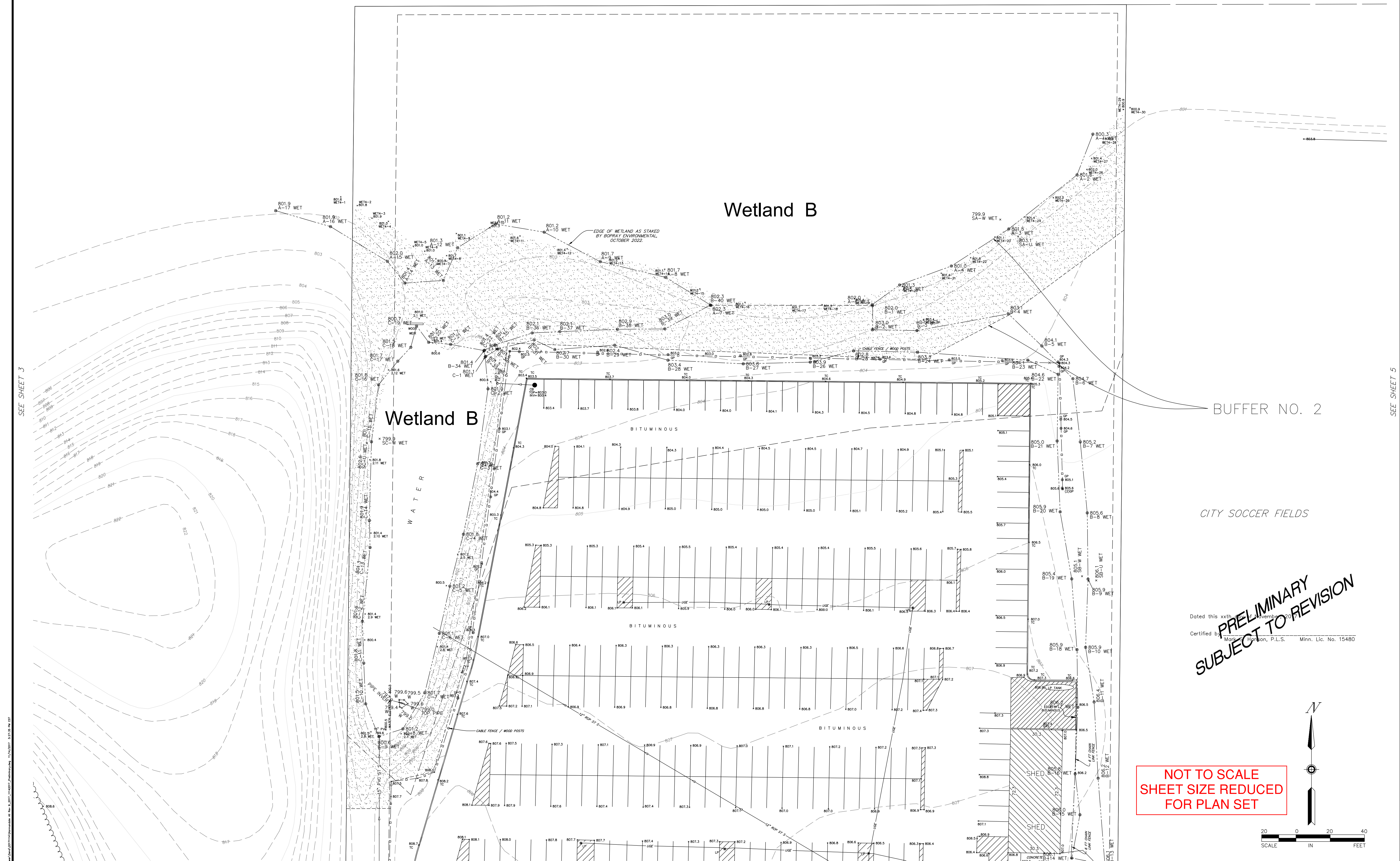
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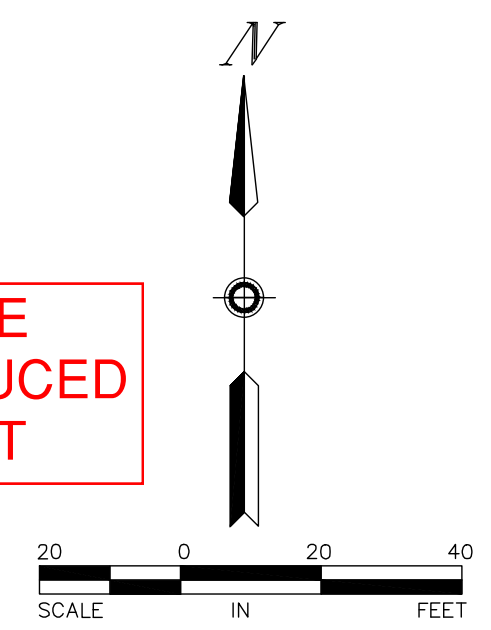


**PRELIMINARY  
SUBJECT TO REVISION**

Dated this xxth day of \_\_\_\_\_, November, 20\_\_\_\_.

Certified by \_\_\_\_\_  
Marked Hanson, P.L.S. Minn. Lic. No. 15480

NOT TO SCALE  
SHEET SIZE REDUCED  
FOR PLAN SET





SEE SHEET 4

CITY SOCCER FIELDS

WEST 94TH STREET

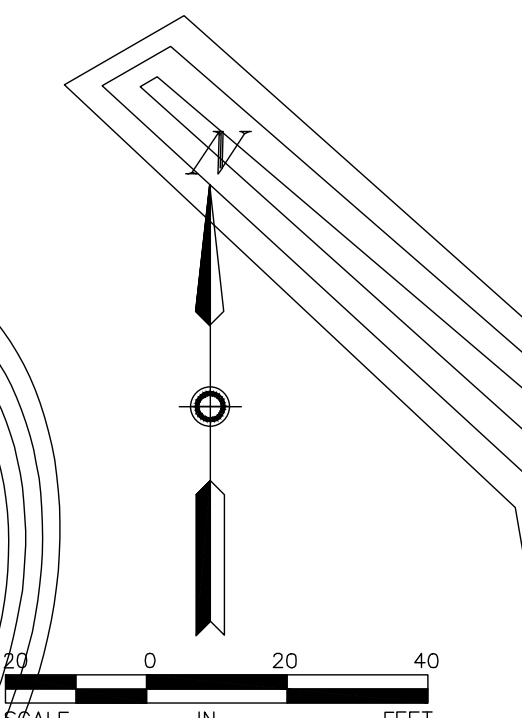
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BUFFER NO. 3

Wetland C

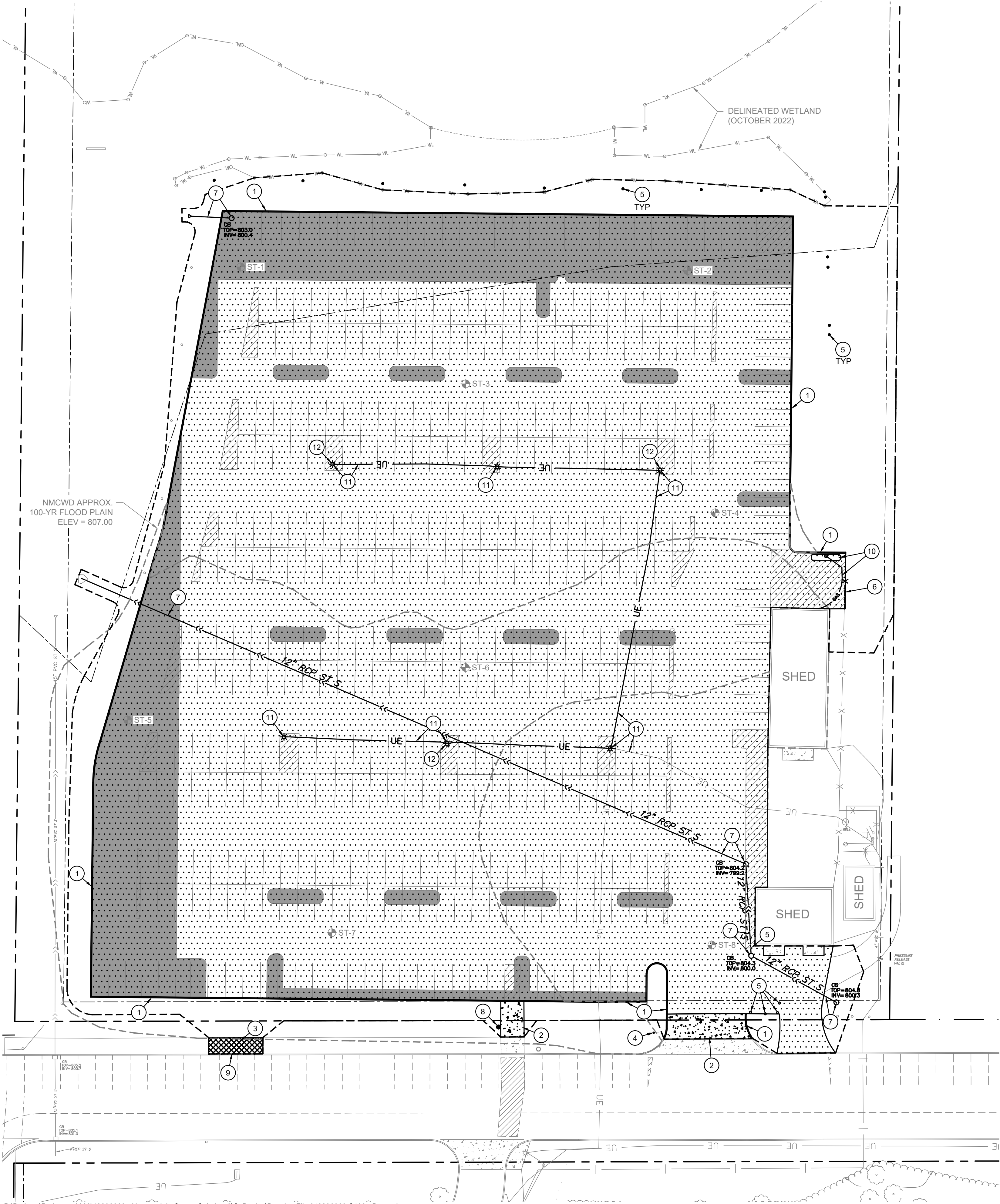
NOT TO SCALE  
SHEET SIZE REDUCED  
FOR PLAN SET

Wetland  
PRELIMINARY  
SUBJECT TO REVISION



SEE SHEET 10





PAVEMENT CORE TABLE

CORE LOCATION	BITUMINOUS THICKNESS (INCHES)	APPARENT BASE AGGREGATE (INCHES)
ST-1	3.0	11.0
ST-2	4.0	6.0
ST-3	3.0	16.0
ST-4	2.0	6.0
ST-5	4.0	12.0
ST-6	5.0	5.0
ST-7	3.0	13.0
ST-8	4.0	8.0

DEMOLITION NOTES

1. Verify all existing utility locations.
2. It is the responsibility of the Contractor to perform or coordinate all necessary utility demolitions and relocations from existing utility locations to all onsite amenities and buildings. These connections include, but are not limited to, water, sanitary sewer, cable tv, telephone, gas, electric, site lighting, etc.
3. Prior to beginning work, contact Gopher State Onecall (651-454-0002) to locate utilities throughout the area under construction. The Contractor shall retain the services of a private utility locator to locate the private utilities.
4. Sawcut along edges of pavements, sidewalks, and curbs to remain.
5. All construction shall be performed in accordance with state and local standard specifications for construction.
6. See the Geotechnical Baseline Report (Section 00 31 32) of the Project Manual for existing pavement and soils information.

SYMBOL LEGEND

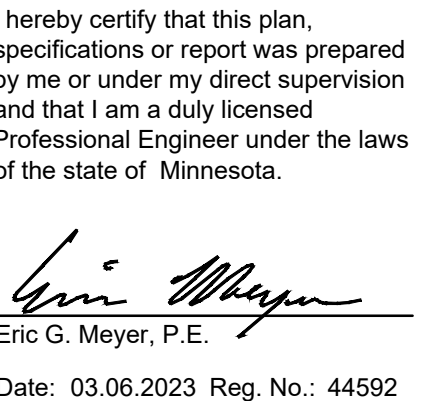
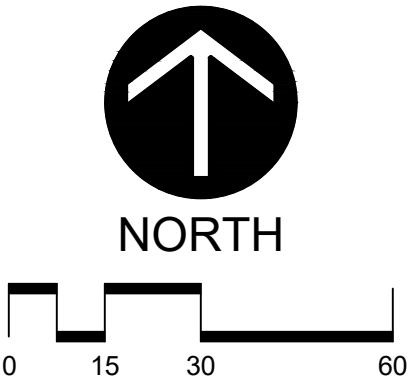
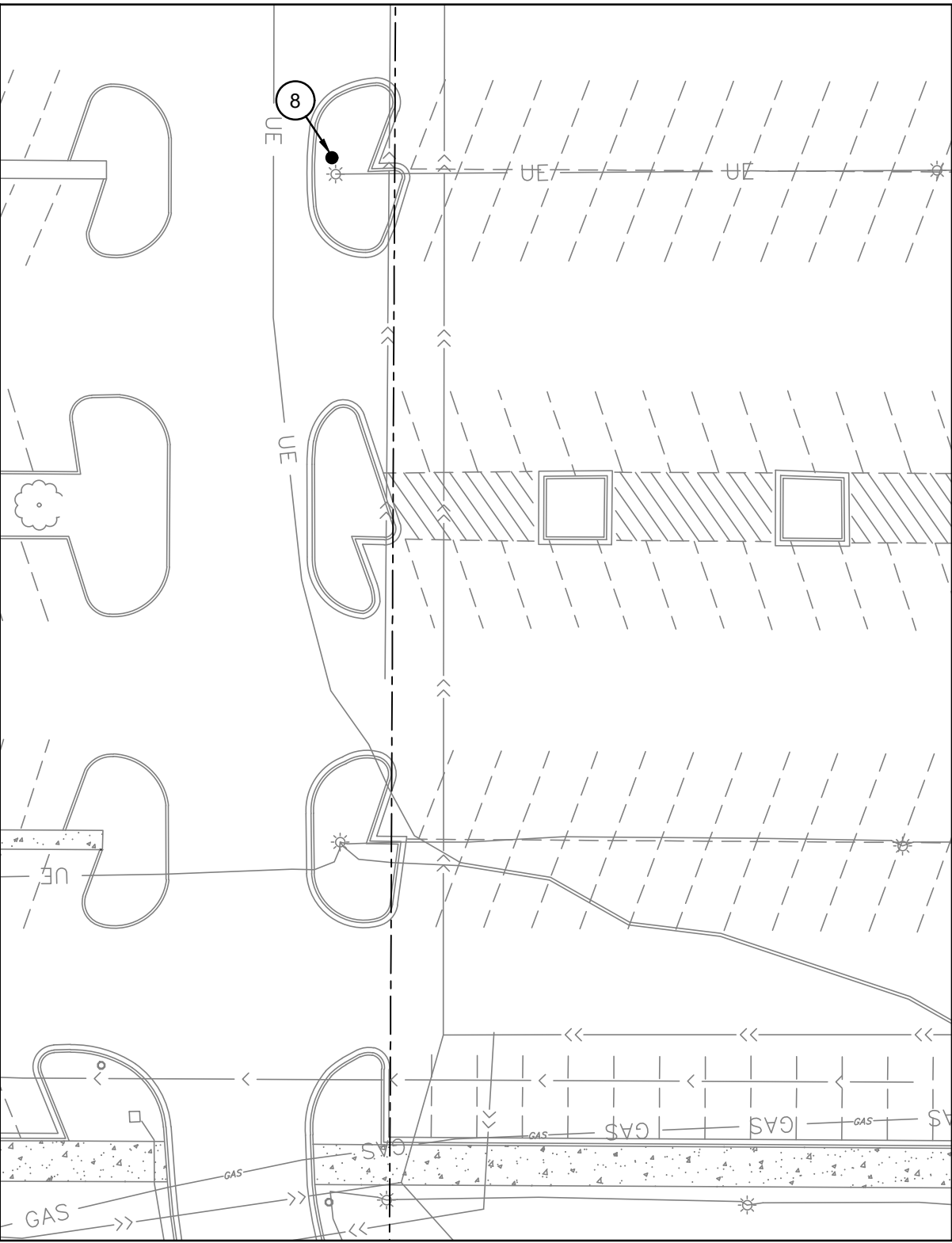
- RECLAIM EXISTING BITUMINOUS PAVEMENT TO A DEPTH OF APPROXIMATELY 8" FOR RE-USE AS AGGREGATE BASE. DISPOSE OF EXCESS MATERIAL OFF-SITE.
- REMOVE ALL RECLAIM AND UNDERLYING BASE AGGREGATE IN PROPOSED GREEN SPACE AREA. LOOSEN COMPACTED SUBGRADE AND PLACE GRANULAR AND/OR PLANTING SOIL - SEE LANDSCAPE
- REMOVE AND DISPOSE OF EXISTING BITUMINOUS PAVEMENT SECTION
- REMOVE AND DISPOSE OF EXISTING CONCRETE PAVEMENT SECTION
- APPROX. CONSTRUCTION LIMITS
- APPROX. PAVEMENT CORE LOCATION

KEY NOTES

1. REMOVE AND DISPOSE OF EXISTING CONCRETE CURB.
2. REMOVE AND DISPOSE OF EXISTING CONCRETE PAVEMENT.
3. REMOVE AND DISPOSE OF EXISTING BITUMINOUS PAVEMENT.
4. REMOVE AND DISPOSE OF EXISTING SIGN AND POST.
5. REMOVE AND DISPOSE OF EXISTING WOOD POST/BOLLARD. REMOVE ADDITIONAL BOLLARDS ALONG NORTH AND WEST PROJECT LIMITS AS NEEDED TO COMPLETE THE WORK.
6. REMOVE AND DISPOSE OF EXISTING FENCE AS NEEDED TO COMPLETE THE WORK.
7. REMOVE AND DISPOSE OF EXISTING STORM SEWER PIPE AND/OR STRUCTURE.
- NOTE: SEE DEDUCT ALTERNATE #3 FOR SOUTH STORM SEWER REPLACEMENT - SEE PROJECT MANUAL AND UTILITY PLAN C400 FOR ADDITIONAL INFORMATION.
8. REMOVE AND DISPOSE OF EXISTING CALL BOX AND FOOTING. RESTORE ADJACENT LANDSCAPING. SEE INSET 1/C100 FOR PARKING LOT #3 CALL BOX LOCATION.
9. REMOVE AND DISPOSE OF EXISTING PAVEMENT AND CURB AS NECESSARY FOR CONSTRUCTION ACCESS. SURFACE WITH APPROVED GRAVEL/ROCK ENTRANCE AND MAINTAIN POSITIVE DRAINAGE. PROVIDE TRAIL CLOSURE/DETOUR SIGNAGE.
10. RELOCATE EXISTING LP TANK - SEE SHEET C400 FOR LOCATION. DESIGN-BUILD INCLUDING NEW LINE TO BUILDING. COORDINATE W/OWNER'S PROPANE SUPPLIER AS NECESSARY.
11. SEE ELECTRICAL FOR REMOVAL AND/OR PROTECTION OF ALL EXISTING ELECTRICAL CONDUITS, LIGHT POLES, ETC.
12. SALVAGE ALL EXISTING SIGNS OFF LIGHT POLES - REINSTALL ON NEW POLES AS IDENTIFIED BY OWNER/ENGINEER.

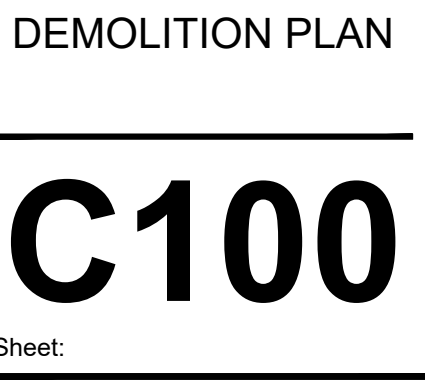
TRAFFIC CONTROL NOTES

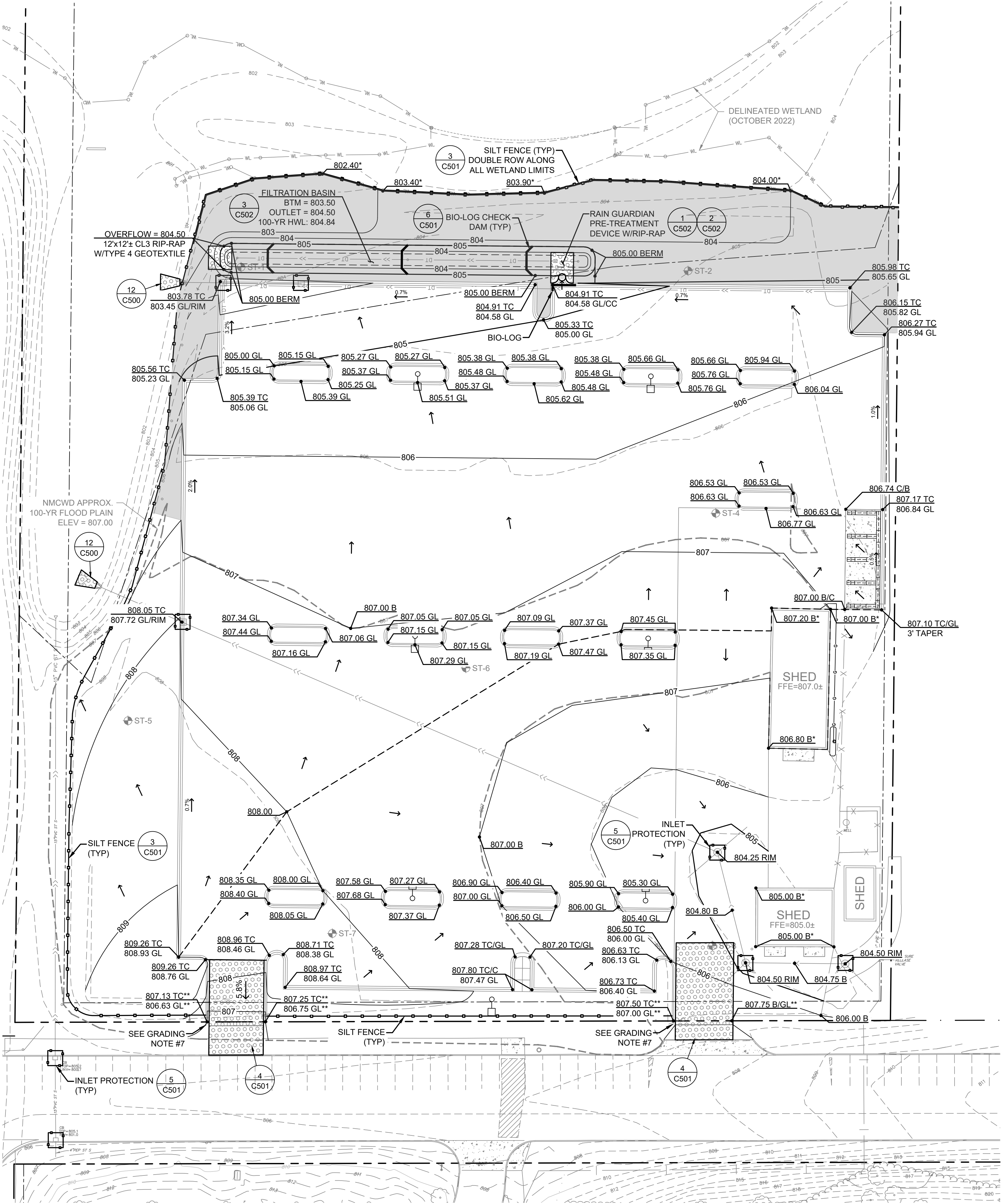
1. All traffic control including barricades, temporary signs, traffic cones, etc. is the responsibility of the contractor and shall be installed prior to commencement of any work. All traffic control measures shall adhere to requirements of the local governing agency.
2. The Contractor shall prepare and submit a Traffic Control Plan to the City of Bloomington for approval prior to construction.
3. All construction parking and material/equipment storage must be on-site. Use of public streets for private construction parking, loading/unloading, and storage is not allowed.



Rev.	Date	Description

Project #: 12206060  
Drawn By: KBK  
Checked By: BDM  
Issue Date: 03.06.23  
Sheet Title:





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## LEGEND

- 950 --- EXISTING CONTOURS  
--- 950 --- PROPOSED CONTOURS - MAJOR  
--- 949 --- PROPOSED CONTOURS - MINOR  
--- GRADE BREAK LINE  
← 2.0% GRADE SLOPE
- SPOT ABBREVIATIONS:  
TC - TOP OF CURB  
GL - GUTTER LINE  
B - BITUMUNOUS  
C - CONCRETE  
EOF - EMERGENCY OVERFLOW  
(\*) - EXISTING TO BE VERIFIED
- SILT FENCE  
--- RIP-RAP / ROCK CONST. ENTRANCE  
--- EROSION CONTROL BLANKET  
--- INLET PROTECTION  
--- CONCRETE WASHOUT STATION  
--- LOCATE DURING CONSTRUCTION

## GRADING NOTES

- All elevations with an asterisk (\*) shall be field verified. If elevations vary significantly, notify the Engineer for further instructions.
- Grades shown in paved areas represent finish elevation.
- Spot elevations shown on interior islands represent finished grade at the gutter line. Top of curb shall be +0.50' unless noted otherwise.
- Restore all disturbed areas with minimum 4" of good quality topsoil and seed, or as specified on Landscaping plans.
- All construction shall be performed in accordance with state and local standard specifications for construction.
- Provide erosion control blanket where shown and any slopes 3:1 or steeper.
- All elevations and alignments at new driveways, including those marked with (\*\*), shall be coordinated w/City of Bloomington West 94th Street project. See Owner and/or Engineer for project contact information. Additional survey staking and site coordination may be necessary to ensure proper elevations at tie-in points.

## EROSION CONTROL NOTES

- See Sheet C501 for Erosion Control Notes.



**Larson Engineering, Inc.**  
3524 Labore Road  
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651.481.9120 (F) 651.481.9201  
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**PARKING LOT 6  
REHABILITATION**  
NORMANDALE COMMUNITY COLLEGE  
9700 FRANCE AVE SOUTH  
BLOOMINGTON, MN 55431

I hereby certify that this plan, specifications 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.

*Eric G. Meyer, P.E.*  
Eric G. Meyer, P.E.

Date: 03.06.2023 Reg. No.: 44592

Rev.	Date	Description

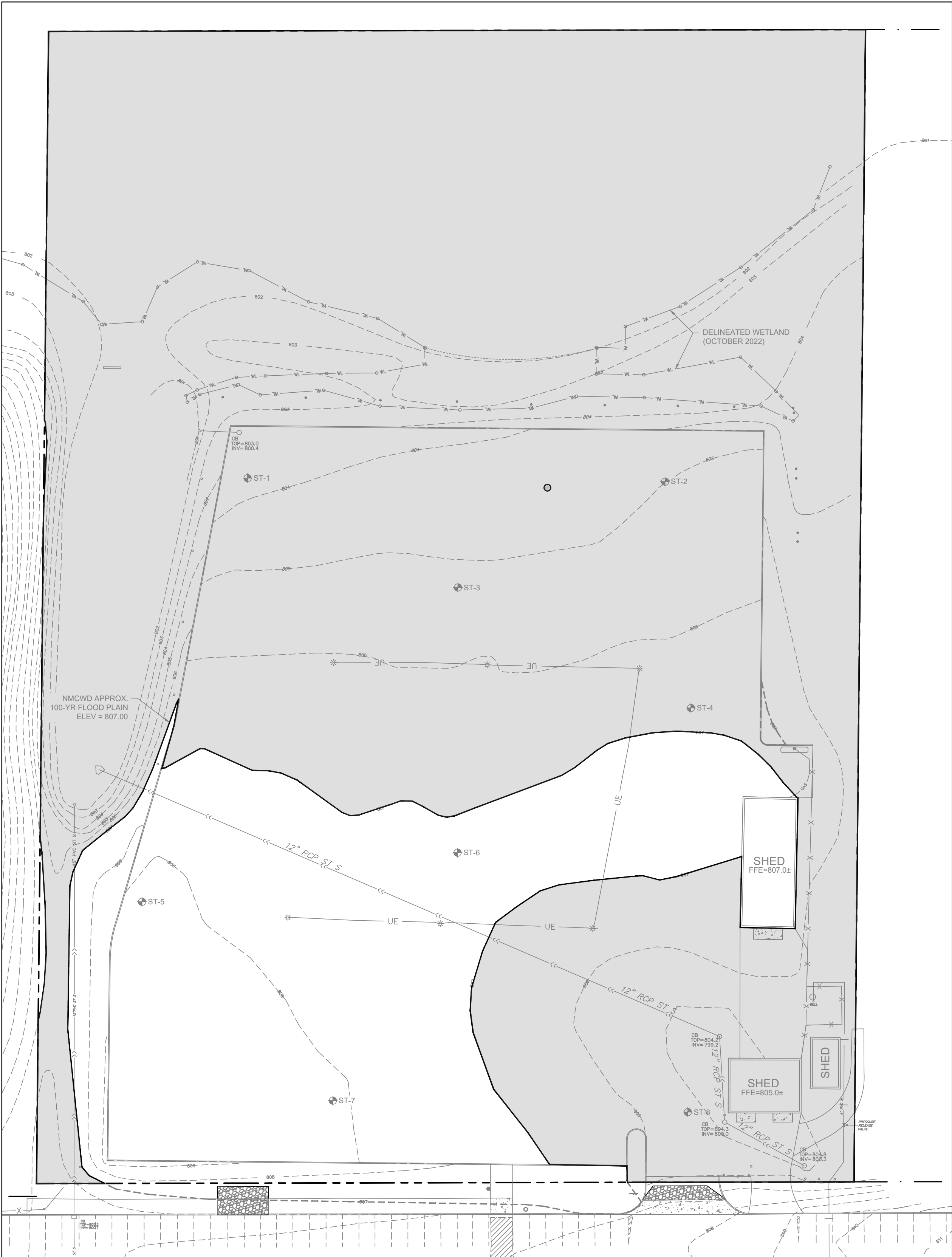
Project #: 12206060  
Drawn By: KBK  
Checked By: BDM  
Issue Date: 03.06.23  
Sheet Title:

**GRADING AND  
EROSION CONTROL  
PLAN**

**C300**

Sheet:





IMPACT LEGEND



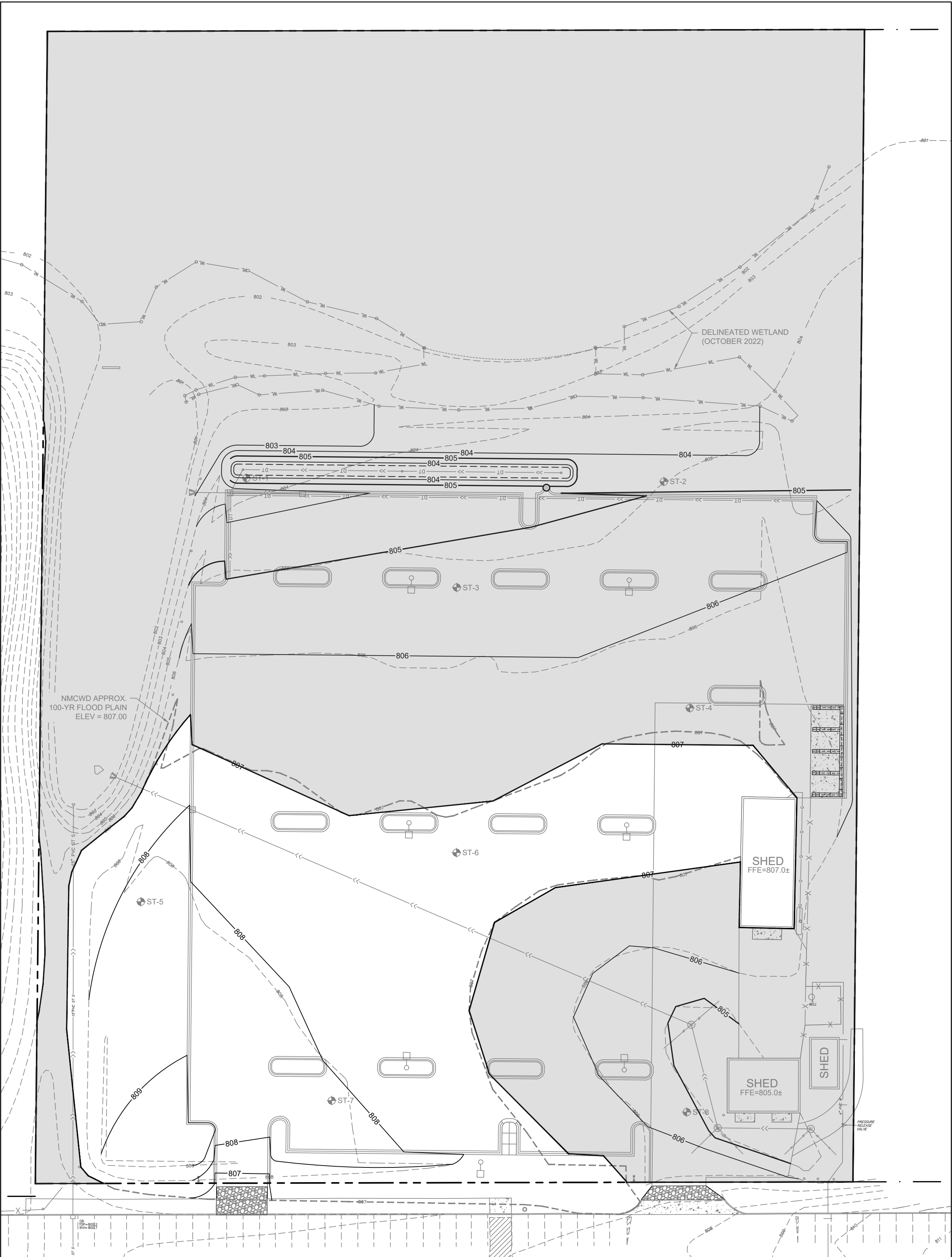
EXISTING FLOODPLAIN VOLUME WITHIN PROPERTY LIMITS  
(BELOW ELEVATION 807.00) = **678,104 CF±**



EXISTING 100-YR FLOODPLAIN ELEVATION = 807.00  
(PER NMCWD - BLMCRK9)

100-YEAR EXISTING FLOODPLAIN

SCALE: 1" = 40'



IMPACT LEGEND



PROPOSED FLOODPLAIN VOLUME WITHIN PROPERTY LIMITS  
(BELOW ELEVATION 807.00) = **678,164 CF±**



PROPOSED 100-YR FLOODPLAIN ELEVATION = 807.00  
(PER NMCWD - BLMCRK9)

100-YEAR PROPOSED FLOODPLAIN

SCALE: 1" = 40'



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COMMUNITY COLLEGE

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*Eric G. Meyer*  
Eric G. Meyer, P.E.

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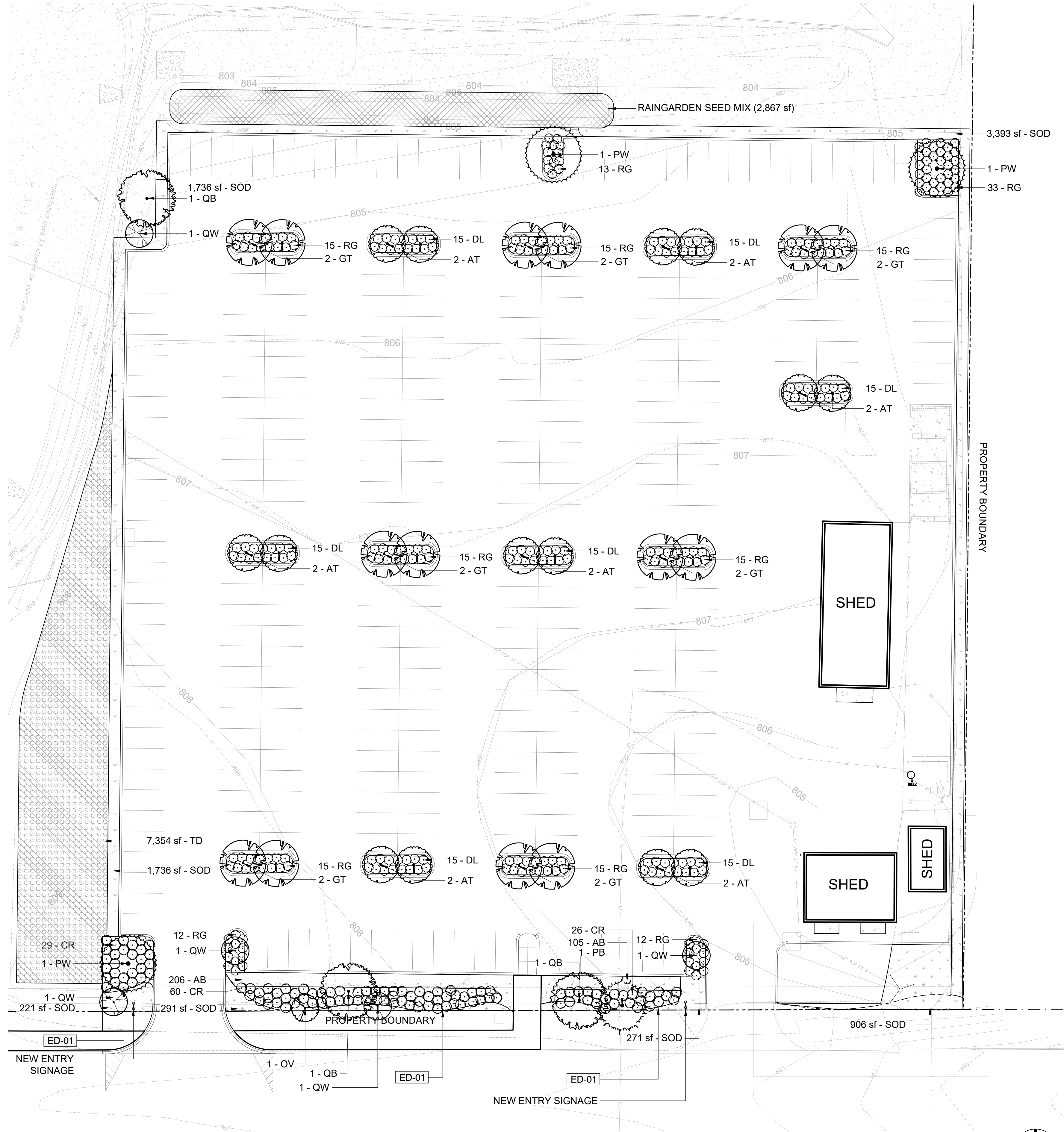
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**FLOODPLAIN  
MITIGATION  
PLAN**

**C301**

Sheet:

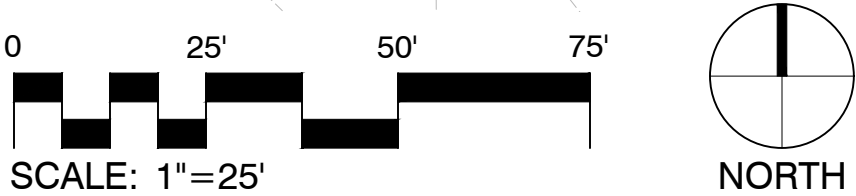




PLANT SCHEDULE PLANTING PLAN							
TREES	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	CONT.		REMARKS
	AT	14	ACER RUBRUM 'AUTUMN FLAME' AUTUMN FLAME RED MAPLE	3" CAL.	B&B		
	GT	14	GINKGO BILOBA 'AUTUMN GOLD' AUTUMN GOLD MAIDENHAIR TREE	2.5" CAL.	B&B		NO FEMALE SPECIMENS
	OV	1	OSTRYA VIRGINIANA AMERICAN HOPHORNBEAM	2" CAL.	B&B		
	PB	1	PICEA GLAUCA DENSATA BLACK HILLS SPRUCE	10' HT.	B&B		
	PW	3	PINUS STROBUS WHITE PINE	10' HT.	B&B		
	QB	3	QUERCUS BICOLOR SWAMP WHITE OAK	2.5" CAL.	B&B		
	QW	5	QUERCUS X WAREI 'LONG' REGAL PRINCE® OAK	2" CAL.	B&B		
SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	CONT.	SPACING	REMARKS
	CR	127	CORNUS SERICEA RED TWIG DOGWOOD	#5	CONT	54" o.c.	
	DL	105	DIERVILLA LONICERA DWARF BUSH HONEYSUCKLE	#3	CONT	48" o.c.	
	RG	175	RHUS AROMATICA 'GRO-LOW' GRO-LOW FRAGRANT SUMAC	#3	CONT.	48" o.c.	
GROUND COVERS	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	CONT.	SPACING	REMARKS
		2,867 SF	RAINGARDEN SEED MIX				SSNS DETENTION BASIN MIX. 8 LB/ACRE (102 SEEDS/SQUARE FOOT). SOIL - WET MESIC TO DRY MESIC, SUN - FULL TO PARTIAL
	AB	311	AMSONIA X 'BLUE ICE' BLUE ICE BLUESTAR	2 GAL	CONT.	24" o.c.	
	SOD	6,988 SF	SOD	SOD			
	TD	7,354 SF	TURF SEED DROUGHT TOLERANT DWARF FESCUE BLEND	SEED	SEED		

EDGING SCHEDULE PLANTING PLAN					
SYMBOL	DESCRIPTION	QTY	MATERIAL PROFILE/ASSEMBLY	PRODUCT/MODEL	COLOR/FINISH
	STEEL PLANTING EDGER	310 LF	3/16" STEEL EDGING STAKED IN PLACE	3/16" STEEL	BLACK

**NOTES:**  
CONTRACTOR TO RESTORE ANY PLANT MATERIALS DISRUPTED BY  
HORIZONTAL BORING DURING ELECTRICAL ROUTING.



**NORMANDALE**  
COMMUNITY COLLEGE

**DF/**  
DAMON FARBER LANDSCAPE ARCHITECTS  
310 South 4th Avenue Suite 7050, Minneapolis, MN 55415

**PROJECT TITLE:**  
PARKING LOT 6  
REHABILITATION  
NORMANDALE COMMUNITY COLLEGE  
9700 FRANCE AVE SOUTH  
BLOOMINGTON, MN 55431

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Charles Evens  
Date: 03-06-2023 Reg. No.: 50575

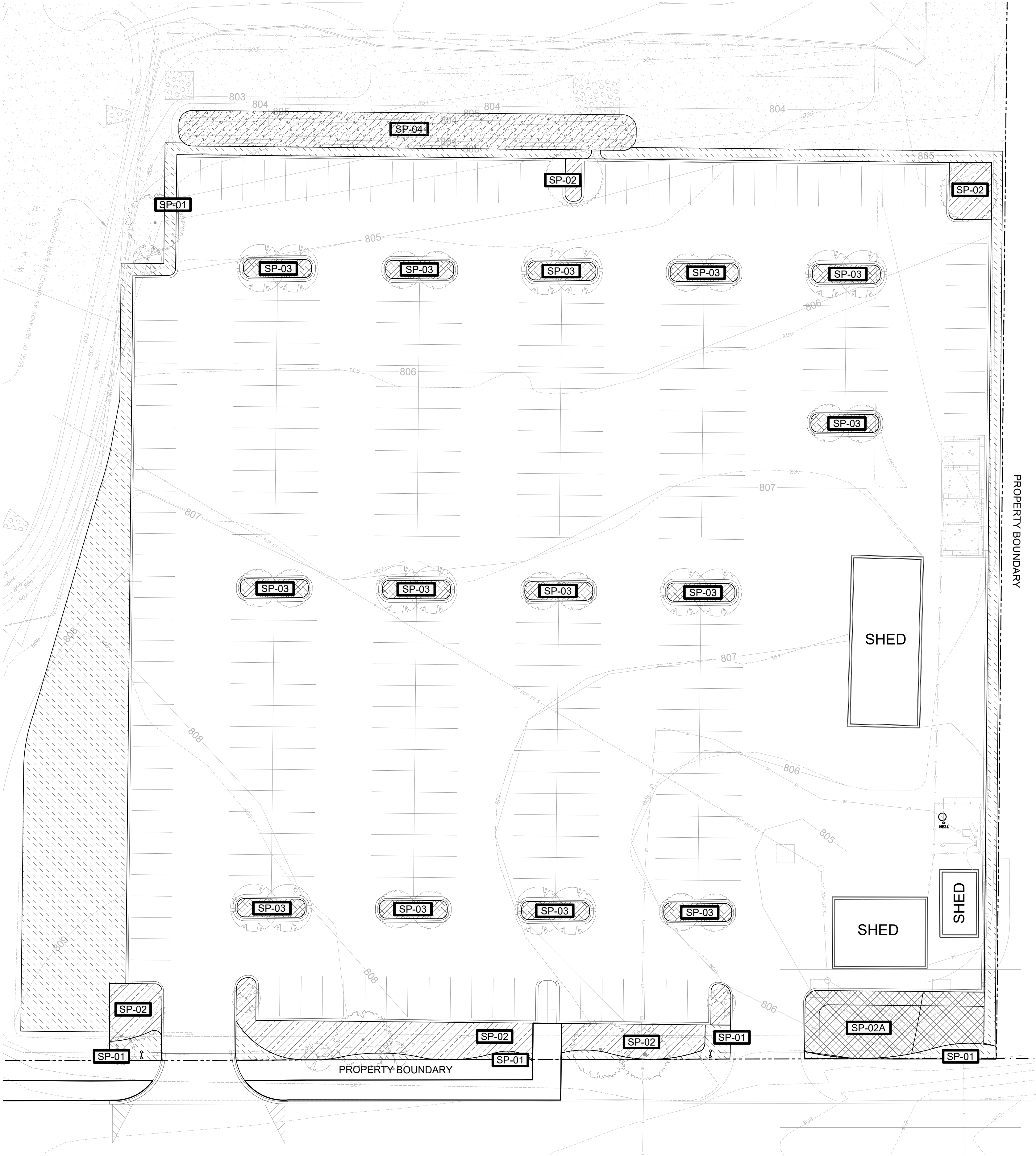
Rev.	Date	Description

Project #: 22-100  
Drawn By: AG  
Checked By: CE  
Issue Date: 03-06-2023  
Sheet Title:

**L100**

Sheet:





SOIL PROFILE SCHEDULE PLANTING PLAN					
SYMBOL	DESCRIPTION	QTY	DEPTH	COMPOSITION	NOTES
SP-01	SOIL TYPE 01 - LAWN MIX	123.73 CY	2" COMPOST		
SP-02	SOIL TYPE 02 - 18" PLANTING SOIL	213.09 CY	18"	60% COARSE SAND, 25-30% LOAM, 10-15% COMPOST	3" THK FINELY SHREDDED HARDWOOD MULCH, JUTE ECB ON SLOPES 3:1 OR STEEPER
SP-02A	SOIL TYPE 02A - 18" PLANTING SOIL FUTURE EXPANSION	108.09 CY	18"	SEE SOIL TYPE 02	
SP-03	SOIL TYPE 03 - 24" DEPTH PLANTING SOIL	219.85 CY	24"	60% COARSE SAND, 25-30% LOAM, 10-15% COMPOST	3" THK FINELY SHREDDED HARDWOOD MULCH, JUTE ECB ON SLOPES 3:1 OR STEEPER
SP-03A	SOIL TYPE 03A - 24" PLANTING SOIL FUTURE EXPANSION	31.41 CY	24"	SEE SOIL TYPE 03	
SP-04	SOIL TYPE 04 - STORMWATER PLANTING SOIL	159.26 CY	18"	SEE CIVIL	SEE CIVIL

**NOTES:**  
RAINGARDEN PLANTING AREA SHALL INCLUDE FULLY BIODEGRADABLE EROSION CONTROL BLANKET.  
SEE SPECIFICATIONS FOR BLANKET DETAILS, SITE PREP, AND NATIVE SEED MIX MAINTENANCE.



NORMANDALE

COMMUNITY COLLEGE

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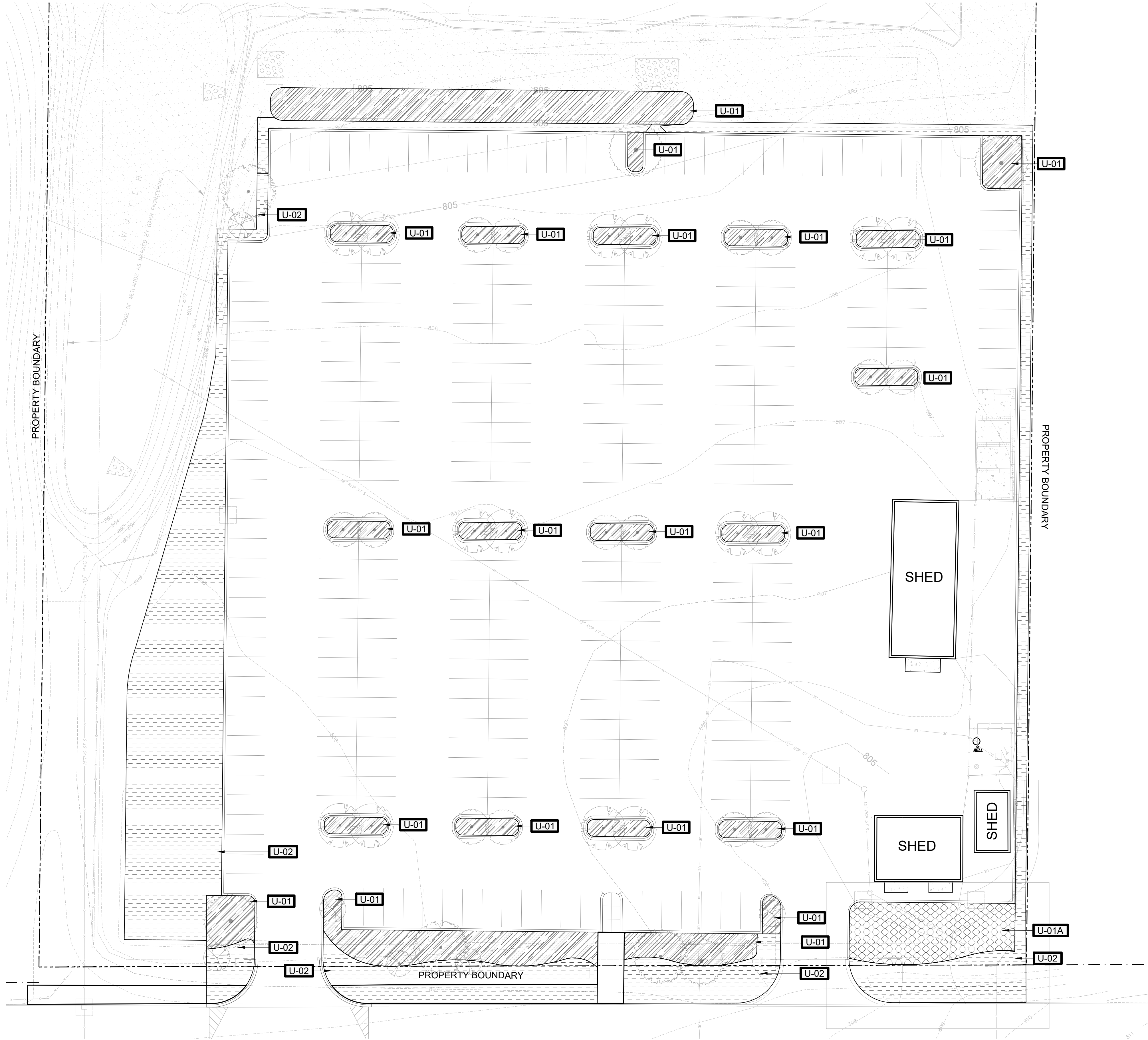
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SITE SOILS PLAN

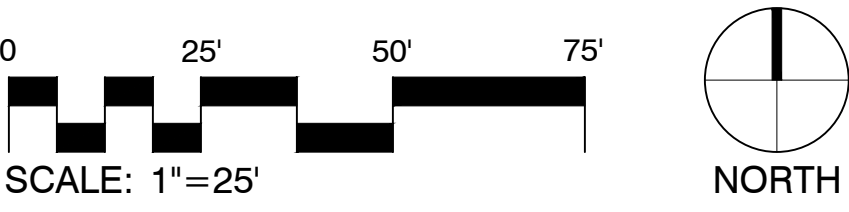
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IRRIGATION SCHEDULE			
SYMBOL	DESCRIPTION	QTY	MATERIAL PROFILE
U-01	SITE IRRIGATION TYPE 01	17,840 SF	DRIP OR SPRAY NOZZLE IRRIGATION
U-01A	SITE IRRIGATION TYPE 01A - FUTURE EXPANSION	424 SF	DRIP OR SPRAY NOZZLE IRRIGATION
U-02	SITE IRRIGATION TYPE 02	12,024 SF	SPRAY NOZZLE IRRIGATION





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310 South 4th Avenue Suite 7050, Minneapolis, MN 55415

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AG

Checked By:

CE

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Sheet Title:

IRRIGATION

DIAGRAMMATIC

PLAN

L300

Sheet: