Permit Application Review

Applicant:	Ryan Dunlay; Stuart Development Corporation
Consultant:	Matt Pavek; Civil Site Group
Project:	Knox & American II
Location:	8000 Knox Avenue South, Bloomington, MN
Applicable Rule(s):	4, 5, 11 and 12
Reviewer(s):	Azeemuddin Ahmed and Louise Heffernan; Barr Engineering Co.

### General Background & Comment

The applicant proposes the construction of Knox & American II, a multi-family residential building, on the 1.81-acre lot located at 8000 Knox Avenue South in Bloomington. Additional site improvements including surface parking, an underground parking garage, concrete sidewalks, utilities, landscaping, and a stormwater management facility are proposed.

Currently, the site is vacant. In 2018, the district approved the demolition and removal of the commercial office, building foundations, and concrete and bituminous pavement under NMCWD Permit #2018-068. Review of the proposed project in conformance with the current stormwater management requirements requires review with regard to the "last major use" of the site. The existing conditions, or "last major use" of the site, includes site elements (i.e. building with surface parking) prior to demolition.

The project site information includes the following:

- Total Site Area: 78,694 square feet (1.81 acres)
- Disturbed Area: 78,694 square feet (1.81 acres)
- Existing Site Impervious Area: 65,082 square feet (1.49 acres)
- Proposed Site Impervious Area: 63,520 square feet (1.46 acres)
- 2.4% decrease in the site impervious area: -1,562 square feet
- 100% disturbance of the existing impervious surface: 65,082 square feet (1.49 acres)

Exhibits Reviewed:

 Permit Application dated July 27, 2023 (received July 31, 2023). Email correspondence dated August 22, 2023, identifying seven review comments required to be addressed to complete the permit application. Email correspondence dated September 13, 2023, identifying four review comments required to be addressed to complete the permit application. Email correspondence dated October 2, 2023, identifying three review comments required to be addressed to complete the permit application.

- 2. Plans dated July 31, 2023 (received July 31, 2023), revised August 31, 2023, revised September 29, 2023, revised December 4, 2023, prepared by Civil Site Group.
- 3. Stormwater Management Report dated July 31, 2023 (received July 31, 2023), revised August 31, 2023, revised September 29, 2023, revised December 4, 2023, prepared by Civil Site Group.
- 4. Geotechnical Evaluation dated April 5, 2023, revised October 17, 2023, prepared by Braun Intertec Corporation.
- 5. Electronic HydroCAD modeling received on July 31, 2023, revised August 31, 2023, revised September 29, 2023, prepared by Civil Site Group.
- 6. Electronic MIDS modeling received on July 31, 2023, revised August 31, 2023, revised September 29, 2023, prepared by Civil Site Group.
- 7. NMCWD review comment responses dated August 31, 2023, September 29, 2023, and December 4, 2023, prepared by Civil Site Group.
- 8. Signed Property Owner Authorization received December 5, 2023.
- 9. Site photo identifying low point in northeast corner (curb cut) of private drive, received December 4, 2023, prepared by Civil Site Group.

The application with the submittal items above is complete.

### 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 the proposed activity will increase the total impervious surface on the site by 50 percent or more or will disturb 50 percent or more of the existing impervious surface on the site, the stormwater criteria will apply to the entire site. Otherwise, the criteria of section 4.3 will apply only to the disturbed areas, and replaced and net additional impervious surface on the project site. Since the proposed activities will decrease the total impervious surface of the site by 2.4% but will disturb 100% of the existing site impervious area, the district's stormwater management criteria will apply to the entire site (1.81 acres).

Stormwater management for compliance with subsection 4.3.1 criteria will be provided by an underground stormwater management facility (UGSWMF) to provide rate control, volume retention and water quality management for the entire site.

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 the collection points where stormwater leaves the site. The applicant used a HydroCAD hydrologic model to simulate runoff rates. The existing

and proposed 2-, 10- and 100-year frequency discharge rates are summarized in the tables below.

Location	Existing 2-Year 24-hr (c.f.s.)	Existing 10-Year 24-hr (c.f.s.)	Existing 100-Year 24-hr (c.f.s.)
To Knox Ave. South	4.7	7.1	12.7
To American Blvd. West	<1.0	1.0	1.8

### Peak Discharge Rates (Existing)

### Peak Discharge Rates (Proposed)

Location	Proposed 2-Year 24-hr (c.f.s.)	Proposed 10-Year 24-hr (c.f.s.)	Proposed 100-Year 24-hr (c.f.s.)
To Knox Ave. South	<1.0	1.6	9.9
To American Blvd. West	<1.0	<1.0	<1.0

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.

A retention volume of 5,823 cubic feet is required from the 63,520 square feet (1.46 acres) of proposed impervious surface. Boring ST-307 in the geotechnical report by Braun Intertec completed in 2023 identifies the soil below the bottom of the proposed UGSWMF as primarily poorly graded sand (SP) to the bottom of the boring, elevation 817.4 M.S.L. A design infiltration rate of 0.8 inches per hour has been used for the UGSWMF, conforming with infiltration rates identified in the Minnesota Stormwater Manual. Boring ST-10, which was taken in the area of the UGSWMF in 2007, identifies the soil within the area of the proposed UGSWMF as organic silts underlain by primarily poorly graded sand with silt (SP-SM) from approximately 811-821 M.S.L. The plans indicate that if soils with lower permeability than SP soils are encountered during construction in the bottom area of the proposed stormwater management facility, they will be excavated and backfilled with soils that provide an infiltration rate of at least 0.8 inches per hour.

The table below summarizes the volume retention required and volume retention achieved. The proposed project is in conformance with subsection 4.3.1a.

### **Volume Retention Summary**

Required Volume	Provided Volume	Maximum	Provided Infiltration
Retention	Retention	Infiltration Depth	Depth
(cubic feet)	(cubic feet)	Allowable* (feet)	(feet)
5,823	10,694	8.0	3.7

\*Maximum inundation depth allowable for the UGSWMF to draw down within 48-hours based on a design infiltration rate of 0.8 inches/hour and 40% rock voids.

With a provided infiltration depth of 3.7 feet (8.0 feet allowable), the required 5,823 cubic feet of volume retention is drawn down within the required 48-hours, complying with Rule 4.3.1a (ii).

Rule 4.5.4d (i) requires at least three feet of separation between the bottom of a stormwater management facility and groundwater. Per the geotechnical report by Braun Intertec, groundwater was encountered at elevation 810.2 M.S.L. in the boring completed near the proposed UGSWMF (Boring ST-10). The bottom of the UGSWMF is 821.5 M.S.L., providing a separation of 11.3 feet (to the elevation where groundwater was encountered). 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 UGSWMF annual removal efficiencies. The results of the MIDS modeling are summarized in the table below. The NMCWD engineer agrees with the modeling results and the project is in conformance with Rule 4.3.1c criteria.

Pollutant of Interest	Regulated Site Loading (Ibs./year)	Required Load Removal (Ibs./year)	Provided Load Reduction (Ibs./year)
Total Suspended Solids (TSS)	499.3	449.4 (90%)	448.0 (90%)
Total Phosphorus (TP)	2.7	1.6 (60%)	2.5 (93%)

### Annual TSS and TP Removal Summary

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.

The low floor elevation of the proposed building in relation to the UGSWMF's 100-year highwater elevation is summarized in the table below. Appendix 4a analysis was used to demonstrate compliance with subsection 4.3.3 criteria. The low floor elevation of the proposed structure is in compliance with Rule 4.3.3 criteria.

Building	Low Floor Elevation of Building (M.S.L.)	100-year Frequency Flood Elevation of Proposed Facility (M.S.L.)	Low Floor Elevation Freeboard (feet)	Distance from Building to Proposed Facility(ft)	* Minimum permissible depth to water table (ft)
Proposed Knox & American II	823.5	827.0	-3.5	77	4.5

\*Minimum permissible depth to groundwater table determined from Appendix 4a: Plot 1.

Based on Appendix 4a analysis, the minimum permissible depth to the water table from the low floor elevation is 4.5 feet, or elevation 819.0 M.S.L. The Braun Intertec geotechnical report

identifies groundwater was encountered at elevation 810.2 M.S.L. in the boring completed near the proposed UGSWMF (Boring ST-10). The separation provided between groundwater and the low floor elevation is 13.3 feet. The Appendix 4a analysis demonstrates compliance with subsection 4.3.3 criteria.

The low opening is at elevation 823.5 M.S.L. and located at the underground parking garage entrance. The volume of runoff generated from the site will be detained within the UGSWMF during the 100-year event. The underground parking garage access drive has a high point at elevation 829.0 M.S.L. just before the down ramp to the underground parking garage entrance, which provides two feet of separation from the high point to the 100-year high water elevation of the proposed stormwater management facility, 827.0 M.S.L. Therefore, the low opening elevation at 823.5 M.S.L. is not hydraulically connected to the UGSWMF. Surface overflow from the UGSWMF, should it occur, is directed from the northeast corner of the site to the street, at elevation 828.0 M.S.L. The low opening meets criteria of subsection 4.3.3, as surface overflow from the proposed UGSWMF is not connected to the low opening at the underground parking garage.

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 and properly maintained in perpetuity to assure that they continue to function as designed. The applicant must provide a receipt showing recordation of a maintenance declaration for the operation and maintenance of the onsite stormwater management facility.

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. Pretreatment will be provided sumps, complying with Rule 4.3.1a (i).

### 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 Civil Site Group includes installation of perimeter erosion control (silt fence), inlet protection, and two construction entrances.

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

Fees for the project are:

Total Fees:	\$1,500
Rule 5:	\$750
Rule 4:	\$750

### 12.0 Financial Assurances

Financial Assurances for the project are:

Rule 4: Stormwater Facility: 1,820 S.F. x \$12/S.F. =	. \$21,840
Rule 5: Perimeter Control: 1,200 L.F. x \$2.50/L.F. =	\$3,000
Inlet Protection: 16 x \$100 =	\$1,600
Site Restoration: 1.8 acres x \$2,500/acre =	\$4,500
Chloride Management	\$5,000
Contingency and Administration	\$13,260

### **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 4 and 5 with the fulfilment of the conditions identified below.
- 3. The proposed stormwater management facility will provide volume retention, 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, and record the plan in a declaration on the property title.
- 5. Based on the NMCWD Atlas 14 model results in the area of Knox Avenue South, an inundation area in the 100-year, 24-hour storm event extends onto the site. Because the inundation area is not associated with a waterbody or watercourse, Rule 2.0 Floodplain Management and Drainage Alterations is not applicable.

### **Recommendation**

Approval, contingent upon:

Compliance with the General Provisions (attached).

Financial Assurance in the amount of \$49,200; \$44,200 for stormwater management, erosion control and site restoration, \$5,000 for compliance with the chloride management requirements.

The applicant providing 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.

Per Rule 4.3.5, a receipt showing recordation of a maintenance declaration for the operation and maintenance of the stormwater management facility is required. A draft of the declaration must be approved by the district prior to recordation.

# By accepting the permit, when issued, the applicant agrees to the following stipulations for closeout of the permit and release of the financial assurance after the project:

The work associated with the building construction and site improvements at 8000 Knox Avenue South under the terms of Permit #2023-097 must have an impervious surface area and configuration materially consistent with the approved plans. A 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 Rule 4.5.6, an as-built drawing of the stormwater management facility conforming to the design specifications, including a stage volume relationship in tabular form for the underground stormwater management facility, as approved by the district, must be provided.

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. The release of the \$5,000 of the financial assurance required for the chloride-management plan requires that the chloride-management plan has been provided to and approved by the District's Administrator.

Per Rule 12.4.1b, demonstration and confirmation that the stormwater management facility has been constructed or installed and are functioning as designed and permitted. Verification, through daily observation logs and photographs, must be provided showing the stormwater management facility used for volume retention have drawn down within 48 hours from the completion of two 1-inch (approximate) separate rainfall events.

# KNOX & AMERICAN II BLOOMINGTON, MINNESOTA **ISSUED FOR: WATERSHED RESUBMITTAL**



# ARCHITECT:

**ESG ARCHITECTURE & DESIGN** 500 WASHINGTON AVE S, SUITE 1080 MINNEAPOLIS, MN 55415 CONTACT: ARON THOMAS 612-268-2440

# DEVELOPER / PROPERTY OWNER:

STUART DEVELOPMENT CORPORATION 1000 W 80TH STREET MINNEAPOLIS, MN 55420 CONTACT: RYAN DUNLAY 952-948-9546

# ENGINEER / LANDSCAPE ARCHITECT:

CIVIL SITE GROUP 5000 GLENWOOD AVE GOLDEN VALLEY, MN 55422 GOLDEN VALLEY, MN 55422 MATT PAVEK 612-615-0060 EXT 701

CIVIL SITE GROUP 5000 GLENWOOD AVE CIVIL ENGINEER CONTACT: LANDSCAPE ARCHITECT CONTACT: BILL BROHMAN 612-615-0060 EXT 710

# SURVEYOR:

CIVIL SITE GROUP 5000 GLENWOOD AVE GOLDEN VALLEY, MN 55422 CONTACT: RORY SYNSTELIEN RORY@CIVILSITEGROUP.COM 612-615-0060

GEOTECHNICAL ENGINEER: BRAUN INTERTEC CORPORATION 11001 HAMPSHIRE AVE S

MINNEAPOLIS, MN 55438 CONTACT: JOSEPH L. WESTPHAL 952-995-2000

ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS. 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.



Know what's **below**. Call before you dig.



		ISSUE/S	SUBMITTAL SUMMARY
		DATE	DESCRIPTION
			SKETCH PLAN
		4/26/2023	PRE-APP DRC SUBMISSION
		05/17/2023	
		07/31/2023	WATERSHED SUBMITTAL
SHEET NUMBER	SHEET TITLE	09/29/2023	DD/GMP SET
C0.0	TITI E SHEET	12/04/2023	WATERSHED RESUBMITTAL
C1.0	REMOVALS PLAN		
C2.0	SITE PLAN		<u> .</u>
C2.1	SITE PLAN - TURNING MOVEMENT EXHIBIT		
C2.2	SITE PLAN - EASEMENT EXHIBIT		<u>.</u>
C3.0	GRADING PLAN		
C4.0	UTILITY PLAN		
C5.0	CIVIL DETAILS		<u>.</u>
C5.1	CIVIL DETAILS		· · · · · · · · · · · · · · · · · · ·
C5.2	CIVIL DETAILS		
C5.3	CIVIL DETAILS	PROJECT NU	MBER: 23027
C5.4	CIVIL DETAILS	RE	VISION SUMMARY
L1.0	LANDSCAPE PLAN	DATE DE	SCRIPTION
L1.1	LANDSCAPE PLAN NOTES & DETAILS		
SW1.0	SWPPP - EXISTING CONDITIONS		
SW1.1	SWPPP - PROPOSED CONDITIONS		
SW1.2	SWPPP - DETAILS		
SW1.3	SWPPP - NARRATIVE		
SW1.4	SWPPP - ATTACHMENTS		TITLE SHEET
SW1.5	SWPPP - ATTACHMENTS		
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1. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-116 FOR UTILITY LOCATIONS 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT

9. PROPERTY LINES SHALL BE CONSIDERED GENERAL CONSTRUCTION LIMITS UNLESS OTHERWISE NOTED ON THE DRAWINGS. WORK WITHIN THE GENERAL CONSTRUCTION LIMITS SHALL INCLUDE STAGING, DEMOLITION AND CLEAN-UP OPERATIONS AS WELL AS

REQUIREMENTS. FOR ANY WORK ON ADJACENT PRIVATE PROPERTY, THE CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION FROM

12. PROPOSED WORK (BUILDING AND CIVIL) SHALL NOT DISTURB EXISTING UTILITIES UNLESS OTHERWISE SHOWN ON THE DRAWINGS

NORMAL WORK HOURS, THROUGHOUT THE DURATION OF THE CONTRACT. SECURITY MATERIALS SHALL BE IN ACCORDANCE WITH

14. VEHICULAR ACCESS TO THE SITE SHALL BE MAINTAINED FOR DELIVERY AND INSPECTION ACCESS DURING NORMAL OPERATING HOURS. AT NO POINT THROUGHOUT THE DURATION OF THE CONTRACT SHALL CIRCULATION OF ADJACENT STREETS BE BLOCKED

BARRICADES, FLASHERS, AND FLAGGERS AS NEEDED. ALL PUBLIC STREETS SHALL REMAIN OPEN TO TRAFFIC AT ALL TIMES. NO

16. SHORING FOR BUILDING EXCAVATION MAY BE USED AT THE DISCRETION OF THE CONTRACTOR AND AS APPROVED BY THE OWNERS

ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-116 FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT

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SHE AREA CALCULATIONS		
	EXISTING CONE	OITIO
BUILDING COVERAGE	5,553 SF	7.19
ALL PAVEMENTS	59,530 SF	75.79
ALL NON-PAVEMENTS	13,608 SF	17.39
TOTAL SITE AREA	78,691 SF	100.09
IMPERVIOUS SURFACE		
EXISTING CONDITION	65,083 SF	82.7
PROPOSED CONDITION	63,520 SF	80.7
DIFFERENCE (EX. VS PROP.)	-1,563 SF	-2.0

# SITE LAYOUT NOTES:

- 1. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.
- 2. CONTRACTOR SHALL VERIFY LOCATIONS AND LAYOUT OF ALL SITE ELEMENTS PRIOR TO BEGINNING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO, LOCATIONS OF EXISTING AND PROPOSED PROPERTY LINES EASEMENTS, SETBACKS, UTILITIES, BUILDINGS AND PAVEMENTS. CONTRACTOR IS RESPONSIBLE FOR FINAL LOCATIONS OF ALL ELEMENTS FOR THE SITE. ANY REVISIONS REQUIRED AFTER COMMENCEMENT OF CONSTRUCTION, DUE TO LOCATIONAL ADJUSTMENTS SHALL BE CORRECTED AT NO ADDITIONAL COST TO OWNER. ADJUSTMENTS TO THE LAYOUT SHALL BE APPROVED BY THE ENGINEER/LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF MATERIALS. STAKE LAYOUT FOR APPROVAL.
- 3. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION, INCLUDING A RIGHT-OF-WAY AND STREET OPENING PERMIT.
- 4. THE CONTRACTOR SHALL VERIFY RECOMMENDATIONS NOTED IN THE GEO TECHNICAL REPORT PRIOR TO INSTALLATION OF SITE IMPROVEMENT MATERIALS.
- 5. CONTRACTOR SHALL FIELD VERIFY COORDINATES AND LOCATION DIMENSIONS & ELEVATIONS OF THE BUILDING AND STAKE FOR REVIEW AND APPROVAL BY THE OWNERS REPRESENTATIVE PRIOR TO INSTALLATION OF FOOTING MATERIALS.
- 6. LOCATIONS OF STRUCTURES, ROADWAY PAVEMENTS, CURBS AND GUTTERS, BOLLARDS, AND WALKS ARE APPROXIMATE AND SHALL BE STAKED IN THE FIELD, PRIOR TO INSTALLATION, FOR REVIEW AND APPROVAL BY THE ENGINEER/LANDSCAPE ARCHITECT.
- 7. CURB DIMENSIONS SHOWN ARE TO FACE OF CURB. BUILDING DIMENSIONS ARE TO FACE OF CONCRETE FOUNDATION. LOCATION OF BUILDING IS TO BUILDING FOUNDATION AND SHALL BE AS SHOWN ON THE DRAWINGS.
- 8. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR SAMPLES AS SPECIFIED FOR REVIEW AND APPROVAL BY THE ENGINEER/LANDSCAPE ARCHITECT PRIOR TO FABRICATION FOR ALL PREFABRICATED SITE IMPROVEMENT MATERIALS SUCH AS, BUT NOT LIMITED TO THE FOLLOWING, FURNISHINGS, PAVEMENTS, WALLS, RAILINGS, BENCHES, FLAGPOLES, LANDING PADS FOR CURB RAMPS, AND LIGHT AND POLES. THE OWNER RESERVES THE RIGHT TO REJECT INSTALLED MATERIALS NOT PREVIOUSLY APPROVED.
- 9. ALL PEDESTRIAN RAMP COMPONENTS TO BE CONSTRUCTED AND GRADED PER MnDOT DETAILS. TRUNCATED DOMES CAN BE OMITTED ON PRIVATE PROPERTY AS DIRECTED BY THE ENGINEER/OWNERSHIP, UNLESS REQUIRED BY THE CITY.
- 10. CROSSWALK STRIPING SHALL BE 24" WIDE WHITE PAINTED LINE, SPACED 48" ON CENTER PERPENDICULAR TO THE FLOW OF TRAFFIC. WIDTH OF CROSSWALK SHALL BE 5' WIDE. ALL OTHER PAVEMENT MARKINGS SHALL BE WHITE IN COLOR UNLESS OTHERWISE NOTED OR REQUIRED BY ADA OR LOCAL GOVERNING BODIES.
- 11. SEE SITE PLAN FOR CURB AND GUTTER TYPE. TAPER BETWEEN CURB TYPES-SEE DETAIL.
- 12. ALL CURB RADII ARE MINIMUM 3' UNLESS OTHERWISE NOTED.
- 13. CONTRACTOR SHALL REFER TO FINAL PLAT FOR LOT BOUNDARIES, NUMBERS, AREAS AND DIMENSIONS PRIOR TO SITE IMPROVEMENTS.
- 14. FIELD VERIFY ALL EXISTING SITE CONDITIONS, DIMENSIONS.
- 15. PARKING IS TO BE SET PARALLEL OR PERPENDICULAR TO EXISTING BUILDING UNLESS NOTED OTHERWISE. 16. ALL PARKING LOT PAINT STRIPPING TO BE WHITE, 4" WIDE TYP.
- 17. BITUMINOUS PAVING TO BE "LIGHT DUTY" UNLESS OTHERWISE NOTED. SEE DETAIL SHEETS FOR PAVEMENT SECTIONS.
- 18. ALL TREES THAT ARE TO REMAIN ARE TO BE PROTECTED FROM DAMAGE WITH A CONSTRUCTION FENCE AT THE DRIP LINE. SEE LANDSCAPE DOCUMENTS.

	PROJECT STU
SITE PLAN LEGEND:	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.
LIGHT DUTY BITUMINOUS PAVEMENT (IF APPLICABLE). SEE GEOTECHNICAL REPORT FOR AGGREGATE BASE & WEAR COURSE DEPTH, SEE DETAIL.	Matthew R. Pavek
HEAVY DUTY BITUMINOUS PAVEMENT (IF APPLICABLE).         SEE GEOTECHNICAL REPORT FOR AGGREGATE BASE &         WEAR COURSE DEPTH, SEE DETAIL.         CONCRETE PAVEMENT (IF APPLICABLE) AS         SPECIFIED (PAD OR WALK) SEE GEOTECHNICAL         REPORT FOR AGGREGATE BASE & CONCRETE         DEPTHS, WITHIN ROW SEE CITY DETAIL, WITHIN         PROPERTY SEE CSG DETAIL         PROPERTY LINE         CONSTRUCTION LIMITS	DATE       12/04/23       LICENSE NO. 44263         ISSUE/SUBMITTAL SUMMARY         DATE       DESCRIPTION         3/9/2023       SKETCH PLAN         4/26/2023       PRE-APP DRC SUBMISSION         05/17/2023       DEVELOPMENT APPLICATION SUBMITTAL         07/31/2023       WATERSHED SUBMITTAL         08/31/2023       DD/GMP SET         12/04/2023       WATERSHED RESUBMITTAL
CURB AND GUTTER-SEE NOTES (T.O.) TIP OUT GUTTER WHERE APPLICABLE-SEE PLAN	
TRAFFIC DIRECTIONAL ARROW PAVEMENT MARKINGS	
SIGN AND POST ASSEMBLY. SHOP DRAWINGS REQUIRED. HC = ACCESSIBLE SIGN NP = NO PARKING FIRE LANE ST = STOP	DRAWN BY:JR, BB REVIEWED BY: MP PROJECT NUMBER: 23027
ACCESSIBILITY ARROW (IF APPLICABLE) DO NOT PAINT.	DATE         DESCRIPTION           .         .           .         .           .         .           .         .           .         .           .         .           .         .           .         .           .         .           .         .           .         .           .         .           .         .
Know what's below. 1" = 20'-0"	SITE PLAN
<b>Can berole you dig.</b> 10'-0" 0 20'-0"	COPYRIGHT 2023 CIVIL SITE GROUP INC.

# <u>SITE PLA</u>

N	PROPOSED CO	NDITION
%	20,416 SF	25.9%
%	43,104 SF	54.8%
%	15,171 SF	19.3%
%	78,691 SF	100.0%

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# **GENERAL GRADING NOTES:**

CONTRACTOR SHALL VERIFY ALL BUILDING ELEVATIONS, (FFE, LFE, GFE), PRIOR TO CONSTRUCTION BY CROSS CHECKING WITH ARCHITECTURAL, STRUCTURAL AND CIVIL ELEVATIONS FOR EQUIVALENT "100" ELEVATIONS. THIS MUST BE DONE PRIOR TO EXCAVATION AND INSTALLATION OF ANY FOOTING MATERIALS. VERIFICATION OF THIS COORDINATION SHALL BE CONFIRMED IN WRITING BY CIVIL, SURVEYOR, ARCHITECTURAL, STRUCTURAL AND CONTRACTOR PRIOR TO CONSTRUCTION.

2. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER

3. SEE SITE PLAN FOR HORIZONTAL LAYOUT & GENERAL GRADING NOTES.

THE CONTRACTOR SHALL COMPLETE THE SITE GRADING CONSTRUCTION (INCLUDING BUT NOT LIMITED TO SITE PREPARATION, SOIL CORRECTION, EXCAVATION, EMBANKMENT, ETC.) IN ACCORDANCE WITH THE REQUIREMENTS OF THE OWNER'S SOILS ENGINEER. ALL SOIL TESTING SHALL BE COMPLETED BY THE OWNER'S SOILS ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED SOIL TESTS AND INSPECTIONS WITH THE SOILS ENGINEER.

ANY ELEMENTS OF AN EARTH RETENTION SYSTEM AND RELATED EXCAVATIONS THAT FALL WITHIN THE PUBLIC RIGHT OF WAY WILL REQUIRE A "RIGHT OF WAY EXCAVATION PERMIT". CONTRACTOR IS RESPONSIBLE FOR AQUIRING THIS PERMIT PRIOR TO CONSTRUCTION IF

ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

GRADING AND EXCAVATION ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT REQUIREMENTS & PERMIT REQUIREMENTS OF THE CITY.

4. PROPOSED SPOT GRADES ARE FLOW-LINE FINISHED GRADE ELEVATIONS, UNLESS OTHERWISE NOTED.

5. GRADES OF WALKS SHALL BE INSTALLED WITH 5% MAX. LONGITUDINAL SLOPE AND 1% MIN. AND 2% MAX. CROSS SLOPE, UNLESS OTHERWISI

6. PROPOSED SLOPES SHALL NOT EXCEED 3:1 UNLESS INDICATED OTHERWISE ON THE DRAWINGS. MAXIMUM SLOPES IN MAINTAINED AREAS IS

7. PROPOSED RETAINING WALLS, FREESTANDING WALLS, OR COMBINATION OF WALL TYPES GREATER THAN 4' IN HEIGHT SHALL BE DESIGNED AND ENGINEERED BY A REGISTERED RETAINING WALL ENGINEER. DESIGN DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF GRADE STAKES THROUGHOUT THE DURATION OF CONSTRUCTION TO ESTABLISH PROPER GRADES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR A FINAL FIELD CHECK OF FINISHED GRADES ACCEPTABLE TO THE ENGINEER/LANDSCAPE ARCHITECT PRIOR TO TOPSOIL AND SODDING ACTIVITIES.

IF EXCESS OR SHORTAGE OF SOIL MATERIAL EXISTS, THE CONTRACTOR SHALL TRANSPORT ALL EXCESS SOIL MATERIAL OFF THE SITE TO AN AREA SELECTED BY THE CONTRACTOR, OR IMPORT SUITABLE MATERIAL TO THE SITE.

EXCAVATE TOPSOIL FROM AREAS TO BE FURTHER EXCAVATED OR REGRADED AND STOCKPILE IN AREAS DESIGNATED ON THE SITE. THE CONTRACTOR SHALL SALVAGE ENOUGH TOPSOIL FOR RESPREADING ON THE SITE AS SPECIFIED. EXCESS TOPSOIL SHALL BE PLACED IN EMBANKMENT AREAS, OUTSIDE OF BUILDING PADS, ROADWAYS AND PARKING AREAS. THE CONTRACTOR SHALL SUBCUT CUT AREAS, WHERE TURF IS TO BE ESTABLISHED, TO A DEPTH OF 6 INCHES. RESPREAD TOPSOIL IN AREAS WHERE TURF IS TO BE ESTABLISHED TO A MINIMUM DEPTH OF 6 INCHES.

FINISHED GRADING SHALL BE COMPLETED. THE CONTRACTOR SHALL UNIFORMLY GRADE AREAS WITHIN LIMITS OF GRADING, INCLUDING ADJACENT TRANSITION AREAS. PROVIDE A SMOOTH FINISHED SURFACE WITHIN SPECIFIED TOLERANCES, WITH UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE SHOWN, OR BETWEEN SUCH POINTS AND EXISTING GRADES. AREAS THAT HAVE BEEN FINISH GRADED SHALL BE PROTECTED FROM SUBSEQUENT CONSTRUCTION OPERATIONS, TRAFFIC AND EROSION. REPAIR ALL AREAS THAT HAVE BECOME RUTTED BY TRAFFIC OR ERODED BY WATER OR HAS SETTLED BELOW THE CORRECT GRADE. ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO EQUAL OR BETTER THAN ORIGINAL CONDITION OR TO THE REQUIREMENTS OF THE

PRIOR TO PLACEMENT OF THE AGGREGATE BASE, A TEST ROLL WILL BE REQUIRED ON THE STREET AND/OR PARKING AREA SUBGRADE. TH CONTRACTOR SHALL PROVIDE A LOADED TANDEM AXLE TRUCK WITH A GROSS WEIGHT OF 25 TONS. THE TEST ROLLING SHALL BE AT THE DIRECTION OF THE SOILS ENGINEER AND SHALL BE COMPLETED IN AREAS AS DIRECTED BY THE SOILS ENGINEER. THE SOILS ENGINEER SHALL DETERMINE WHICH SECTIONS OF THE STREET OR PARKING AREA ARE UNSTABLE. CORRECTION OF THE SUBGRADE SOILS SHALL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SOILS ENGINEER. NO TEST ROLL SHALL OCCUR WITHIN 10' OF ANY UNDERGROUND STORM RETENTION/DETENTION SYSTEMS.

13.1. THE BUILDING SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.30 FOOT ABOVE, OR 0.30 FOOT BELOW, TH PRESCRIBED ELEVATION AT ANY POINT WHERE MEASUREMENT IS MADE.

13.2. THE STREET OR PARKING AREA SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.05 FOOT ABOVE, OR 0.10 FOOT BELOW, THE PRESCRIBED ELEVATION OF ANY POINT WHERE MEASUREMENT IS MADE.

13.3. AREAS WHICH ARE TO RECEIVE TOPSOIL SHALL BE GRADED TO WITHIN 0.30 FOOT ABOVE OR BELOW THE REQUIRED ELEVATION, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.

13.4. TOPSOIL SHALL BE GRADED TO PLUS OR MINUS 1/2 INCH OF THE SPECIFIED THICKNESS.

14.1. THE CONTRACTOR SHALL PROTECT NEWLY GRADED AREAS FROM TRAFFIC AND EROSION, AND KEEP AREA FREE OF TRASH AND DEBRI 14.2. CONTRACTOR SHALL REPAIR AND REESTABLISH GRADES IN SETTLED, ERODED AND RUTTED AREAS TO SPECIFIED TOLERANCES. DURING THE CONSTRUCTION, IF REQUIRED, AND DURING THE WARRANTY PERIOD, ERODED AREAS WHERE TURF IS TO BE ESTABLISHED SHALL BE RESEEDED AND MULCHED.

14.3. WHERE COMPLETED COMPACTED AREAS ARE DISTURBED BY SUBSEQUENT CONSTRUCTION OPERATIONS OR ADVERSE WEATHER, CONTRACTOR SHALL SCARIFY, SURFACE, RESHAPE, AND COMPACT TO REQUIRED DENSITY PRIOR TO FURTHER CONSTRUCTION.

## **GRADING PLAN LEGEND:**

	Know what's <b>below.</b> 1" = 20'-0"				
835.52	EMERGENCY OVERFLOW				
	CURB AND GUTTER (T.O = TIP OUT)				
GB	GRADE BREAK - HIGH POINTS				
00 ME	SPOT GRADE ELEVATION MATCH EXISTING				
BW/TW	SPOT GRADE ELEVATION BOTTOM OF WALL/TOP OF WALL				
00 TC	SPOT GRADE ELEVATION TOP OF CURB				
.00 G	SPOT GRADE ELEVATION GUTTER				
00 TE	SPOT GRADE ELEVATION THICKENED EDGE	PROJE			
00 GR	SPOT GRADE ELEVATION GROUND	DRAW			
00 RE	SPOT GRADE ELEVATION RIM ELEVATION				
00 HP	SPOT GRADE ELEVATION HIGH POINT				
DO LP	SPOT GRADE ELEVATION LOW POINT				
00 CB	SPOT GRADE ELEVATION CATCH BASIN				
0 LOE	LOW OPENING ELEVATION				
0 LFE	LOW FLOOR ELEVATION				
0 FFE	FINISHED FLOOR ELEVATION				
0 GEE	UNLESS OTHERWISE NOTED) GARAGE ELOOR ELEVATION				
41.26	SPOT GRADE ELEVATION (GUTTER/FLOW LINE				
137	— 1.0' CONTOUR ELEVATION INTERVAL				
25	EX. 1' CONTOUR ELEVATION INTERVAL	0			

Call before you dig.

![](_page_12_Picture_28.jpeg)

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![](_page_13_Figure_0.jpeg)

LITY CROSSING NUMBER	ELEVATION OF OUTER DIAMETER OF PIPE	SEPARATION BETWEEN OUTER DIAMETER OF PIPES [FT] (MIN 18" OR 1.5 FT)
1	BOTTOM OF STORM SEWER=829.8 TOP OF WATER MAIN=826.0	3.8
2	BOTTOM OF STORM SEWER=828.6 TOP OF WATER MAIN=826.3	2.3
3	BOTTOM OF STORM SEWER=828.7 TOP OF WATER MAIN=824.3	4.4
4	BOTTOM OF WATER MAIN=822.5 TOP OF SANITARY SEWER=818.5	4.0
5	BOTTOM OF STORM SEWER=824.8 TOP OF SANITARY SEWER=818.2	6.6
6	BOTTOM OF STORM SEWER=823.0 TOP OF SANITARY SEWER=818.0	5.0
7	BOTTOM OF STORM SEWER=822.2 TOP OF SANITARY SEWER=817.2	5.0

# **GENERAL UTILITY NOTES:**

ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

2. SEE SITE PLAN FOR HORIZONTAL DIMENSIONS AND LAYOUT.

CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES AND TOPOGRAPHIC FEATURES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF DISCREPANCIES OR VARIATIONS FROM THE PLANS.

4. UTILITY INSTALLATION SHALL CONFORM TO THE CURRENT EDITION OF "STANDARD SPECIFICATIONS FOR WATER MAIN AND SERVICE LINE INSTALLATION" AND "SANITARY SEWER AND STORM SEWER INSTALLATION" AS PREPARED BY THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM), AND SHALL CONFORM WITH THE REQUIREMENTS OF THE CITY AND THE PROJECT SPECIFICATIONS.

CASTINGS SHALL BE SALVAGED FROM STRUCTURE REMOVALS AND RE-USED OR PLACED AT THE DIRECTION OF THE OWNER. ALL WATER PIPE SHALL BE CLASS 52 DUCTILE IRON PIPE (DIP) AWWA C151, ASME B16.4, AWWA C110, AWWA C153 UNLESS OTHERWISE NOTED.

7. ALL SANITARY SEWER SHALL BE SDR 26 POLYVINYL CHLORIDE (PVC) ASTM D3034 & F679, OR SCH 40 ASTM D1785, 2665, ASTM F794, 1866) UNLESS OTHERWISE NOTED.

8. ALL STORM SEWER PIPE SHALL BE HDPE ASTM F714 & F2306 WITH ASTM D3212 SPEC FITTINGS UNLESS OTHERWISE NOTED. 9. PIPE LENGTHS SHOWN ARE FROM CENTER TO CENTER OF STRUCTURE OR TO END OF FLARED END SECTION

10. UTILITIES ON THE PLAN ARE SHOWN TO WITHIN 5' OF THE BUILDING FOOTPRINT. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR THE FINAL CONNECTION TO BUILDING LINES. COORDINATE WITH ARCHITECTURAL AND MECHANICAL PLANS.

11. CATCH BASINS AND MANHOLES IN PAVED AREAS SHALL BE SUMPED 0.04 FEET. ALL CATCH BASINS IN GUTTERS SHALL BE SUMPED 0.15 FEET PER DETAILS. RIM ELEVATIONS SHOWN ON THIS PLAN DO NOT REFLECT SUMPED ELEVATIONS.

12. ALL FIRE HYDRANTS SHALL BE LOCATED 5 FEET BEHIND BACK OF CURB UNLESS OTHERWISE NOTED.

13. HYDRANT TYPE, VALVE, AND CONNECTION SHALL BE IN ACCORDANCE WITH CITY REQUIREMENTS. HYDRANT EXTENSIONS ARE INCIDENTAL.

14. A MINIMUM OF 8 FEET OF COVER IS REQUIRED OVER ALL WATERMAIN, UNLESS OTHERWISE NOTED. EXTRA DEPTH MAY BE REQUIRED TO MAINTAIN A MINIMUM OF 18" VERTICAL SEPARATION TO SANITARY OR STORM SEWER LINES. EXTRA DEPTH WATERMAIN IS INCIDENTAL.

15. A MINIMUM OF 18 INCHES OF VERTICAL SEPARATION AND 10 FEET OF HORIZONTAL SEPARATION IS REQUIRED FOR ALL UTILITIES, UNLESS OTHERWISE NOTED.

16. ALL CONNECTIONS TO EXISTING UTILITIES SHALL BE IN ACCORDANCE WITH CITY STANDARDS AND COORDINATED WITH THE CITY PRIOR TO CONSTRUCTION.

17. CONNECTIONS TO EXISTING STRUCTURES SHALL BE CORE-DRILLED.

18. COORDINATE LOCATIONS AND SIZES OF SERVICE CONNECTIONS WITH THE MECHANICAL DRAWINGS.

19. COORDINATE INSTALLATION AND SCHEDULING OF THE INSTALLATION OF UTILITIES WITH ADJACENT CONTRACTORS AND CITY STAFF.

ALL STREET REPAIRS AND PATCHING SHALL BE PERFORMED PER THE REQUIREMENTS OF THE CITY. ALL PAVEMENT CONNECTIONS SHALL BE SAWCUT. ALL TRAFFIC CONTROLS SHALL BE PROVIDED BY THE CONTRACTOR AND SHALL BE ESTABLISHED PER THE REQUIREMENTS OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) AND THE CITY. THIS SHALL INCLUDE BUT NOT BE LIMITED TO SIGNAGE, BARRICADES, FLASHERS, AND FLAGGERS AS NEEDED. ALL PUBLIC STREETS SHALL BE OPEN TO TRAFFIC AT ALL TIMES. NO ROAD CLOSURES SHALL BE PERMITTED WITHOUT APPROVAL BY THE CITY.

ALL STRUCTURES, PUBLIC AND PRIVATE, SHALL BE ADJUSTED TO PROPOSED GRADES WHERE REQUIRED. THE REQUIREMENTS OF ALL OWNERS MUST BE COMPLIED WITH. STRUCTURES BEING RESET TO PAVED AREAS MUST MEET OWNERS REQUIREMENTS FOR TRAFFIC LOADING.

22. 2CONTRACTOR SHALL COORDINATE ALL WORK WITH PRIVATE UTILITY COMPANIES.

23. CONTRACTOR SHALL COORDINATE CONNECTION OF IRRIGATION SERVICE TO UTILITIES. COORDINATE THE INSTALLATION OF IRRIGATION SLEEVES NECESSARY AS TO NOT IMPACT INSTALLATION OF UTILITIES.

CONTRACTOR SHALL MAINTAIN AS-BUILT PLANS THROUGHOUT CONSTRUCTION AND SUBMIT THESE PLANS TO ENGINEER UPON COMPLETION OF WORK.

25. ALL JOINTS AND CONNECTIONS IN STORM SEWER SYSTEM SHALL BE GASTIGHT OR WATERTIGHT. APPROVED RESILIENT RUBBER JOINTS MUST BE USED TO MAKE WATERTIGHT CONNECTIONS TO MANHOLES, CATCHBASINS, OR OTHER STRUCTURES.

26. ALL PORTIONS OF THE STORM SEWER SYSTEM LOCATED WITHIN 10 FEET OF THE BUILDING OR WATER SERVICE LINE MUST BE TESTED IN ACCORDANCE WITH MN RULES, CHAPTER 4714, SECTION 1109.0.

27. FOR ALL SITES LOCATED IN CLAY SOIL AREAS, DRAIN TILE MUST BE INSTALLED AT ALL LOW POINT CATCH BASINS 25' IN EACH DIRECTION. SEE PLAN AND DETAIL. INSTALL LOW POINT DRAIN TILE PER PLANS AND GEOTECHNICAL REPORT RECOMMENDATIONS AND REQUIREMENTS.

# CITY OF BLOOMINGTON UTILITY NOTES:

UTILITY AS-BUILTS MUST BE PROVIDED TO THE CITY PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.

HDPE PIPE CONNECTIONS INTO ALL CONCRETE STRUCTURES MUST BE MADE WITH WATER TIGHT MATERIALS UTILIZING AN A-LOK OR WATERSTOP GASKET OR BOOT, CAST-IN-PLACE RUBBER BOOT, OR APPROVED EQUAL. WHERE THE ALIGNMENT PRECLUDES THE USE OF THE ABOVE APPROVED WATERTIGHT METHODS, CONSEAL 231 WATERSTOP SEALANT, OR APPROVED EQUAL WILL ONLY BE ALLOWED AS APPROVED BY THE ENGINEER.

UTILITY PERMITS ARE REQUIRED FOR CONNECTIONS TO THE PUBLIC STORM SANITARY AND WATER SYSTEM. CONTACT UTILITIES (952-563-8777) FOR PERMIT INFORMATION.

UTILITY AS-BUILTS MUST BE PROVIDED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.

COMBINATION OF FIRE AND DOMESTIC SERVICE MUST TERMINATE WITH A THREAD ON FLANGE OR AN MJ TO FLANGE ADAPTER. 6. TAPS OF LIVE WATER MAINS ARE DONE BY CITY FORCES. THE CONTRACTOR PAYS FOR AND COORDINATES THIS WORK.

CONTRACTOR SHALL OBTAIN A PUBLIC WORKS PERMIT FOR UNDERGROUND WORK WITHIN THE RIGHT-OF-WAY. A PERMIT IS REQUIRED PRIOR TO REMOVALS OR INSTALLATION. CONTACT UTILITIES (952)-563-4568 FOR PERMIT INFORMATION.

UTILITY AND MECHANICAL CONTRACTORS MUST COORDINATE THE INSTALLATION OF ALL WATER AND SEWER SERVICE PIPES INTO THE BUILDING TO ACCOMMODATE CITY INSPECTION AND TESTING.

9. A MINIMUM 10-FOOT HORIZONTAL SEPARATION AND 18-INCH VERTICAL SEPARATION IS REQUIRED BETWEEN WATER MAIN AND SEWERS.

10. USE CLASS 52 DIP WATER MAIN FOR PIPE 12 INCH DIAMETER AND SMALLER. A MINIMUM 8 MIL POLYWRAP IS REQUIRED ON ALL DIP. ALL COMPONENTS OF THE WATER SYSTEM, UP TO THE WATER METER OR FIRE SERVICE EQUIPMENT MUST UTILIZE PROTECTIVE INTERNAL COATINGS MEETING CURRENT ANSI/AWWA STANDARDS FOR CEMENT MORTAR LINING OR SPECIAL COATINGS. THE USE OF UNLINED OR UNCOATED PIPE IS NOT ALLOWED.

EGEND:	

MANHOLE CATCH BASIN GATE VALVE AND VALVE BOX PROPOSED FIRE HYDRANT WATER MAIN SANITARY SEWER STORM SEWER

FES AND RIP RAP

![](_page_13_Picture_43.jpeg)

![](_page_13_Picture_44.jpeg)

![](_page_13_Picture_45.jpeg)

KNOX & AMERICAN II	8000 KNOX AVE S, BLOOMINGTON, MN 55431	STUART DEVELOPMENT COORPORATIC 1000 W 80TH STREET, MINNEAPOLIS, MN 55420			
I HEREBY SPECIFI PREPARED	CERTIFY THA CATION, OR RE BY ME OR UND	T THIS PLAN, EPORT WAS DER MY DIRECT			
SUPERVIS LICENSED UNDER T	SION AND THAT PROFESSION HE LAWS OF TH MINNESOTA	TI AM A DULY AL ENGINEER HE STATE OF			
$\square$	be				
date <u>12/04</u>	Matthew R. Pa	vek = NO <u>44263</u>			
		SUMMARY			
3/9/2023	SKETCH PLAN	MISSION			
05/17/2023		PLICATION SUBMITTAL			
08/31/2023		JBMITTAL			
<u> </u>	WATERSHED RESU	JBMITTAL			
<u> </u>					
DRAWN BY: JR, BB REVIEWED BY: MP					
	SCRIPTION				
·					
· ·					
UTILITY PLAN					

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![](_page_14_Figure_0.jpeg)

![](_page_15_Figure_0.jpeg)

CONTRACTOR TO CONFIRM FREE DRAINING SOILS EXIST AT BASE OF SYSTEM OF TYPE (POORLY GRADED SAND, SP). OVEREXCAVATE AND PERFORM SOIL CORRECTION IF NECESSARY. POSSIBLE SWAMP DEPOSIT LAYERS ON SITE COORD. W/ GEOTECH. INFILTRATION RATES TO BE BETWEEN 0.8-8.3 IN/HR.

![](_page_15_Picture_13.jpeg)

![](_page_16_Figure_0.jpeg)

![](_page_16_Figure_1.jpeg)

CIVIL DETAILS

C5.2

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![](_page_17_Figure_0.jpeg)

![](_page_17_Figure_1.jpeg)

![](_page_17_Figure_2.jpeg)

![](_page_18_Figure_0.jpeg)

![](_page_18_Figure_1.jpeg)

8% TO 10% SLOPE

NON-WALKABLE SURFACE

STANDARD ONE-WAY DIRECTIONAL (9)

- WALKABLE

2' MIN 2' 4' 3'

PEDESTRIAN \_\_

DIRECTIONAL RAMP WALKABLE FLARE

CONSTRUCTED AND IS LESS IN WIDTH AT TOP TRANSITION, PAVE CONCRE WIDTH TO ADJACENT BACK

GRADE BREAK

MAX. 2.0% SLOPE IN ALL DIRECTIONS

\_\_\_\_\_

WALKABLE

COMBINED DIRECTIONAL

LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE (PAR) CHANGE: DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE.

SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL SLOPE IS GREATER THAN 5.0%.

ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL. THUS BOTH SIDES OF A SLOPED WALKING SURFACE MUST BE EQUAL LENGTH.

TO ENSURE INITIAL RAMPS AND INITIAL LANDINGS ARE PROPERLY CONSTRUCTED, LANDINGS SHALL BE CAST SEPARATELY, FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 6 AND THE ADA SPECIAL PROVISION (PROSECUTION OF WORK).

WHEN THE BOULEVARD IS 4' WIDE OR LESS THE TOP OF CURB TAPER SHALL MATCH THE RAMP SLOPES TO REDUCE NEGATIVE BOULEVARD SLOPES FROM THE TOP BACK OF CURB TO THE PAR.

LI DAMET IFES SHULLU HAVE A MIRIMUM 3'LUNG MAME LENGIH. MIRIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS.DETECTABLE WARNINGS SHAL MIRIMUSLY EXTEND FOR A MIN.OF 24" IN THE DATH OF TRAVEL DETECTABLE WARNING TO COVER E EVITRE PAR WIDTH OF SHARD-USE PARTES AND THE ENTIRE PAR WIDTH OF THE WARNING TO COVER CEPTION OF 3" MAXIMUM ON EACH OUTSIDE LOBE WICH ENSURES THE DETECTABLE WARNINGS AND CEPTION OF 3" MAXIMUM ON EACH OUTSIDE LOBE WICH ENSURES THE DETECTABLE WARNINGS AND ALLOWED.

WHEN DESIGNING OR ORDERING RECTANGULAR DETECTABLE WARNING SURFACES SHOULD BE 6" LESS THAN THE INCOMING PAR. ARC LENGTH OF THE RADIAL DETECTABLE WARNINGS SHOULD NOT BE GREATER THAN

RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB. SEE NOTES 🔞 🏠 FOR INFORMATION REGARDING RECTANGULAR DETECTABLE WARNING PLACEMENT.

THE "BUMP" IN BETWEEN THE RAMPS SHOULD NOT BE IN THE PATH OF TRAVEL FOR COMBINED DIRECTIONAL RAMPS. IF THIS OCCURS MODIFY THE RAMP LOCATION OR SWITCH RAMP TO A FAN/DEPRESSED CORNER.

(6) GRADING SHALL ALWAYS BE USED WHEN FEASIBLE. V CURP, JF USED, SHALL BE PLACED OUTSIDE THE SIDEWA LIMITS WHEN RIGHT OF WAY ALLOWS, WHEN ADJACENT TO PARKING LOTS, CONCRETE OR BITUMINOUS TAPPERS SHOULD BE USED OVER V CURB TO REDUCE TRIPPING HAZARDS AND FACILITATE SNOW & ICE REMOVAL.

(5) WHEN USING CONCRETE PAVED FLARES ON THE OUTSIDE OF DIRECTIONAL RAMPS, AND ADJACENT TO A WALKABLE SURFACE, DIRECTIONAL RAMP FLARES SHALL BE USED. SEE THE DETAIL ON THIS SHEET.

T MAX 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK AND DRAIN TO FLOW LINE. SHALL BE CONSTRUCTED INTEGRAL WITH CURB AND GUTTER.

(6) BX TO 10% WALKABLE FLARE. (5) PLACE DOMES AT THE BACK OF CURB WHEN ALLOWABLE SETBACK CRITERIA IS EXCEEDED

CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS WITHIN THE PAR. 1/4" DEEP VISUAL JOINTS SHALL BE USED AT THE TOP GRADE BREAK OF CONCRETE FLARES ADJACENT TO WALKABLE SURFACES.

INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15'FROM THE BACK OF CURB, WITH 6'FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE, ONLY APPLICABLE WHEN THE INITIAL RAMP RUNNING SLOPE IS OVER 5.0%.

TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.

1) MATCH FULL CURB HEIGHT. a" HIGH CURB WHEN USING A 3'LONG RAMP 4" HIGH CURB WHEN USING A 4'LONG RAMP.

ALL RAMP TYPES SHOULD HAVE A MINIMUM 3'LONG RAMP LENGTH.

3" MINIMUM CURB HEIGHT (5.5' MIN, DISTANCE REQUIRED BETWEEN DOMES) 4" PREFERRED (7' MIN, DISTANCE REQUIRED BETWEEN DOMES).

![](_page_18_Figure_2.jpeg)

![](_page_19_Figure_0.jpeg)

MULCH SCHEDULE					
AREA	MULCH TYPE	EDGING	FABRIC	REMARKS	
TREE RINGS	4" DEPTH, SHREDDED CEDAR	YES	NO	SEE DETAIL SHT. L1.1	
PLANTING BEDS	4" DEPTH, DECORATIVE ROCK	YES	NO	SEE DETAIL SHT. L1.1 AND GROUND COVER SCHEDULE	
MAINT. STRIP AT BUILDING FOUNDATION	NA	NA	NA		
DOG PARK MULCH	NA	NA	NA		
NATIVE SEED AREAS	NA	NA	NA		

NOTE: COORDINATE ALL MULCH AND PLANTING BED MATERIAL PRIOR TO INSTALLATION, PROVIDE SAMPLES AND SHOP DRAWINGS/PHOTOS/DATA SHEETS OF ALL MATERIALS

# LANDSCAPE NOTES:

1. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

2. WHERE SHOWN, SHRUB & PERENNIAL BEDS SHALL BE MULCHED WITH 4" DEPTH (MINIMUM AFTER INSTALLATION AND/OR TOP DRESSING OPERATIONS) OF DECORATIVE ROCK MULCH.

3. ALL TREES SHALL BE MULCHED WITH SHREDDED CEDAR MULCH TO OUTER EDGE OF SAUCER OR TO EDGE OF PLANTING BED, IF APPLICABLE. ALL MULCH SHALL BE KEPT WITHIN A MINIMUM OF 2" FROM TREE TRUNK.

4. IF SHOWN ON PLAN, RANDOM SIZED LIMESTONE BOULDERS COLOR AND SIZE TO COMPLIMENT NEW LANDSCAPING. OWNER TO APPROVE BOULDER SAMPLES PRIOR TO INSTALLATION.

5. PLANT MATERIALS SHALL CONFORM WITH THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS AND SHALL BE OF HARDY STOCK, FREE FROM DISEASE, DAMAGE AND DISFIGURATION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING PLUMPNESS OF PLANT MATERIAL FOR DURATION OF ACCEPTANCE PERIOD.

6. UPON DISCOVERY OF A DISCREPANCY BETWEEN THE QUANTITY OF PLANTS SHOWN ON THE SCHEDULE AND THE QUANTITY SHOWN ON THE PLAN, THE PLAN SHALL GOVERN.

7. CONDITION OF VEGETATION SHALL BE MONITORED BY THE LANDSCAPE ARCHITECT THROUGHOUT THE DURATION OF THE CONTRACT. LANDSCAPE MATERIALS PART OF THE CONTRACT SHALL BE WARRANTED FOR TWO (2) FULL GROWING SEASONS FROM SUBSTANTIAL COMPLETION DATE.

8. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL RECEIVE 6" LAYER TOPSOIL AND SOD AS SPECIFIED UNLESS OTHERWISE NOTED ON THE DRAWINGS.

9. COORDINATE LOCATION OF VEGETATION WITH UNDERGROUND AND OVERHEAD UTILITIES, LIGHTING FIXTURES, DOORS AND WINDOWS. CONTRACTOR SHALL STAKE IN THE FIELD FINAL LOCATION OF TREES AND SHRUBS FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

10. ALL PLANT MATERIALS SHALL BE WATERED AND MAINTAINED UNTIL ACCEPTANCE.

11. REPAIR AT NO COST TO OWNER ALL DAMAGE RESULTING FROM LANDSCAPE CONTRACTOR'S ACTIVITIES.

12. SWEEP AND MAINTAIN ALL PAVED SURFACES FREE OF DEBRIS GENERATED FROM LANDSCAPE CONTRACTOR'S ACTIVITIES. 13. PROVIDE SITE WIDE IRRIGATION SYSTEM DESIGN AND INSTALLATION. SYSTEM SHALL BE FULLY PROGRAMMABLE AND CAPABLE OF ALTERNATE DATE WATERING. THE SYSTEM SHALL PROVIDE HEAD TO HEAD OR DRIP COVERAGE AND BE CAPABLE OF DELIVERING ONE INCH OF PRECIPITATION PER WEEK. SYSTEM SHALL EXTEND INTO THE PUBLIC RIGHT-OF-WAY TO THE EDGE OF

PAVEMENT/BACK OF CURB. 14. CONTRACTOR SHALL SECURE APPROVAL OF PROPOSED IRRIGATION SYSTEM INLCUDING PRICING FROM OWNER, PRIOR TO INSTALLATION.

# **IRRIGATION NOTES:**

1. ENTIRE SITE SHALL BE FULLY IRRIGATED. THE CONTRACTOR SHALL SUBMIT IRRIGATION SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

2. SEE MECHANICAL AND ELECTRICAL PLANS AND SPECIFICATIONS FOR IRRIGATION WATER, METER, AND POWER CONNECTIONS.

CONTRACTOR TO VERIFY LOCATION OF ALL UNDERGROUND/ABOVE GROUND FACILITIES PRIOR TO ANY EXCAVATION/INSTALLATION. ANY DAMAGE TO UNDERGROUND/ABOVE GROUND FACILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND COSTS ASSOCIATED WITH CORRECTING DAMAGES SHALL BE BORNE ENTIRELY BY THE CONTRACTOR.

4. SERVICE EQUIPMENT AND INSTALLATION SHALL BE PER LOCAL UTILITY COMPANY STANDARDS AND SHALL BE PER NATIONAL AND LOCAL CODES. EXACT LOCATION OF SERVICE EQUIPMENT SHALL BE COORDINATED WITH THE LANDSCAPE ARCHITECT OR EQUIVALENT AT THE JOB SITE.

CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANY FOR THE PROPOSED ELECTRICAL SERVICE AND METERING FACILITIES.

6. IRRIGATION WATER LINE CONNECTION SIZE IS 1-1/2" AT BUILDING. VERIFY WITH MECHANICAL PLANS.COVAGE.

7. ALL MAIN LINES SHALL BE 18" BELOW FINISHED GRADE.

8. ALL LATERAL LINES SHALL BE 12" BELLOW FINISHED GRADE.

9. ALL EXPOSED PVC RISERS, IF ANY, SHALL BE GRAY IN COLOR.

10. CONTRACTOR SHALL LAY ALL SLEEVES AND CONDUIT AT 2'-0" BELOW THE FINISHED GRADE OF THE TOP OF PAVEMENT. EXTEND SLEEVES TO 2'-0" BEYOND PAVEMENT.

11. CONTRACTOR SHALL MARK THE LOCATION OF ALL SLEEVES AND CONDUIT WITH THE SLEEVING MATERIAL "ELLED" TO 2'-0" ABOVE FINISHED GRADE AND CAPPED.

12. FABRICATE ALL PIPE TO MANUFACTURE'S SPECIFICATIONS WITH CLEAN AND SQUARE CUT JOINTS. USE QUALITY GRADE PRIMER AND SOLVENT CEMENT FORMULATED FOR INTENDED TYPE OF CONNECTION.

13. BACKFILL ALL TRENCHES WITH SOIL FREE OF SHARP OBJECTS AND DEBRIS.

14. ALL VALVE BOXES AND COVERS SHALL BE BLACK IN COLOR.

15. GROUP VALVE BOXES TOGETHER FOR EASE WHEN SERVICE IS REQUIRED. LOCATE IN PLANT BED AREAS WHENEVER POSSIBLE.

16. IRRIGATION CONTROLLER LOCATION SHALL BE VERIFIED ON-SITE WITH OWNER'S REPRESENTATIVE.

17. CONTROL WIRES: 14 GAUGE DIRECT BURIAL, SOLID COPPER IRRIGATION WIRE. RUN UNDER MAIN LINE. USE MOISTURE-PROOF SPLICES AND SPLICE ONLY AT VALVES OR PULL BOXES. RUN SEPARATE HOT AND COMMON WIRE TO EACH VALVE AND ONE (1) SPARE WIRE AND GROUND TO FURTHEST VALVE FROM CONTROLLER. LABEL OR COLOR CODE

18. AVOID OVER SPRAY ON BUILDINGS, PAVEMENT, WALLS AND ROADWAYS BY INDIVIDUALLY ADJUSTING RADIUS OR ARC ON SPRINKLER HEADS AND FLOW CONTROL ON AUTOMATIC VALVE.

19. ADJUST PRESSURE REGULATING VALVES FOR OPTIMUM PRESSURE ON SITE.

20. USE SCREENS ON ALL HEADS.

21. A SET OF AS-BUILT DRAWINGS SHALL BE MAINTAINED ON-SITE AT ALL TIMES IN AN UPDATED CONDITION.

22. ALL PIPE 3" AND OVER SHALL HAVE THRUST BLOCKING AT EACH TURN.

23. ALL AUTOMATIC REMOTE CONTROL VALVES WILL HAVE 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL UNDERNEATH VALVE AND VALVE BOX. GRAVEL SHALL EXTENT 3" BEYOND PERIMETER OF VALVE BOX.

24. THERE SHALL BE 3" MINIMUM SPACE BETWEEN BOTTOM OF VALVE BOX COVER AND TOP OF VALVE STRUCTURE.

scape	Requi	rements	

opable Landscape Area (square feet):	78,691
red Trees:	31
led Trees:	32
red Shrubs:	79
led Shrubs:	129

LEGEND

EDGING - SHALL BE COMMERCIAL GRADE, 4" DEPTH ALUMINUM, BLACK OR DARK GREEN IN COLOR, INCLUDE ALL CONNECTORS, STAKES, & ALL APPURTENANCES PER MANUF. INSTALL PER MANUF. INSTRUC./SPECS.

![](_page_19_Picture_47.jpeg)

![](_page_19_Picture_48.jpeg)

![](_page_19_Picture_49.jpeg)

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![](_page_19_Picture_51.jpeg)

SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIREC SUPERVISION AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDEF THE LAWS OF THE STATE OF MINNESOTA

	Patrick J. Sarver
dat <u>e 12/04</u>	/23 LICENSE NO. 24904
1330E/3	SUBINITIAL SUMMART
DATE	DESCRIPTION
3/9/2023	SKETCH PLAN
4/26/2023	PRE-APP DRC SUBMISSION
05/17/2023	
08/31/2023	
09/29/2023	DD/GMP SET
12/04/2023	WATERSHED RESUBMITTAL
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RAWN BY: JR	R, BB REVIEWED BY: MP
PROJECT NUM	MBER: 23027
DE/	
DATE DES	SCRIPTION
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LA	ANDSCAPE PLAN

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Call before you dig

TREES	QTY	COMMON / BOTANICAL NAME	CONT	NATIVE PLANTS	
BJ	9	Parkland Pillar® Asian White Birch / Betula platyphylla 'Jefpark'	2.5" CAL. B&B	NOT NATIVE	
GD	5	Street Keeper Honey Locust / Gleditsia triacanthos `Draves` TM	2.5" Cal. B&B	NATIVE CULTIVAR	
EK	2	Espresso Kentucky Coffeetree / Gymnocladus dioica `Espresso`	2.5" Cal. B&B	NATIVE CULTIVAR	
QP	1	American Dream® Oak / Quercus bicolor 'JFS-KW12'	2.5" CAL. B&B	NATIVE CULTIVAR	
QS2	4	Kindered Spirit Oak / Quercus robur x bicolor `Nader`	2.5" Cal. B&B	NOT NATIVE	
ORNAMENTAL TREES	QTY	COMMON / BOTANICAL NAME	CONT	NATIVE PLANTS	Т
AG	4	Autumn Brilliance Serviceberry / Amelanchier x grandiflora `Autumn Brilliance`	1.5" Cal. B&B	NATIVE	
CV	4	Thornless Cockspur Hawthorn / Crataegus crus-galli inermis TM	1.5" Cal. B&B	NATIVE	
OV	3	American Hophornbeam / Ostrya virginiana	1.75" Cal B&B	NATIVE	
SHRUBS	QTY	COMMON / BOTANICAL NAME	SIZE	NATIVE PLANTS	Τ
AB4	4	Low Scape Mound Black Chokeberry / Aronia melanocarpa 'UCONNAM165' TM	#5 CONT	NATIVE CULTIVAR	-
CA4	6	New Jersey Tea / Ceanothus americanus	#1 CONT	NATIVE	-
CA3	13	Arctic Fire Dogwood / Cornus sericea `Arctic Fire`	#5 CONT	NATIVE CULTIVAR	
СВ	20	Firedance Dogwood / Cornus sericea `Bailadeline` TM	#5 CONT	NATIVE CULTIVAR	+
FC	5	Gold Tide Forsythia / Forsythia x `Courtasol` TM	#2 CONT	NOT NATIVE	
SGJ	65	Sea Green Juniper / Juniperus chinensis `Sea Green`	#5 CONT	NOT NATIVE	1
JN	13	Grey Guardian Juniper / Juniperus virginiana `Greguard` TM	#5 CONT	NATIVE	T
PR	7	Raspberry Lemonade Ninebark / Physocarpus opulifolius 'ZLEYel2' TM	#5 CONT	NATIVE CULTIVAR	
GRASSES	QTY	COMMON / BOTANICAL NAME	SIZE	NATIVE PLANTS	Τ
BB	30	Blonde Ambition Blue Grama / Bouteloua gracilis `Blonde Ambition`	#1 CONT	NATIVE CULTIVAR	+
CR	72	Reed Grass / Calamagrostis brachytricha	#1 CONT	NOT NATIVE	
EH	8	Bottlebrush Grass / Elymus hystrix	#1 CONT	NATIVE	
PN	64	Northwind Switch Grass / Panicum virgatum `North Wind`	#1 CONT	NATIVE CULTIVAR	
SS	14	Smoke Signal Little Bluestem / Schizachyrium scoparium `Smoke Signal`	#1 CONT	NATIVE CULTIVAR	
SH	9	Prairie Dropseed / Sporobolus heterolepis	#1 CONT	NATIVE	
PERENNIALS	QTY	COMMON / BOTANICAL NAME	SIZE	NATIVE PLANTS	Τ
AF	12	Blue Fortune Anise Hyssop / Agastache x `Blue Fortune`	#1 CONT	NATIVE CULTIVAR	+

PLANT SCHEDULE					
GROUND COVERS	COMMON / BOTANICAL NAME	SIZE			
	Decorative Rock Mulch / Decorative Rock Mulch 2"- 4" Dresser Trap Rock, uniform in size over filter fabric. Include aluminum edging as shown on plan, or as needed. Provide Samples.	Mulch			
	Blue Grass Based / Sod Commercial grade, locally grown, well rooted sod blend of improved Kentucky Bluegrass w/ uniform color, leaf texture, density and varieties consisting of a minimum of two and no more than four common cultivars.	Sod			

![](_page_20_Figure_2.jpeg)

![](_page_20_Picture_3.jpeg)

![](_page_20_Figure_4.jpeg)

THREE TIMES WIDTH

OF ROOTBALL

![](_page_20_Figure_5.jpeg)

- PRUNE AS FIELD DIRECTED BY THE LANDSCAPE

![](_page_20_Figure_6.jpeg)

- ROCK OR ORGANIC MULCH, SEE GENERAL LANDSCAPE

![](_page_21_Figure_0.jpeg)

![](_page_21_Picture_8.jpeg)

# LEGEND:

----- 1125 ------

![](_page_21_Figure_10.jpeg)

Know what's **below**. Call before you dig

![](_page_22_Figure_0.jpeg)

![](_page_22_Picture_8.jpeg)

# LEGEND:

----- 1125 -----—1137— SILT FENCE / BIOROLL - GRADING LIMIT

Know what's **below. Call** before you dig.

EX. 1' CONTOUR ELEVATION INTERVAL 1.0' CONTOUR ELEVATION INTERVAL DRAINAGE ARROW

INLET PROTECTION

STABILIZED CONSTRUCTION ENTRANCE

EROSION CONTROL BLANKET

![](_page_22_Picture_16.jpeg)

![](_page_23_Figure_0.jpeg)

### THE CONTRACTOR AND ALL SUBCONTRACTORS INVOLVED WITH A CONSTRUCTION ACTIVITY THAT DISTURBS SITE SOIL OR WHO IMPLEMENT A POLLUTANT CONTROL MEASURE IDENTIFIED IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) MUST COMPLY WITH THE REQUIREMENTS OF THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT (DATED AUGUST 1, 2018 # MNR100001) AND ANY LOCAL GOVERNING AGENCY HAVING JURISDICTION CONCERNING EROSION AND SEDIMENTATION CONTROL.

# STORMWATER DISCHARGE DESIGN REQUIREMENTS

SWPPP

### THE NATURE OF THIS PROJECT WILL BE CONSISTENT WITH WHAT IS REPRESENTED IN THIS SET OF CONSTRUCTION PLANS AND SPECIFICATIONS. SEE THE SWPPP PLAN SHEETS AND SWPPP NARRATIVE (ATTACHMENT A: CONSTRUCTION SWPPP TEMPLATE) FOR ADDITIONAL SITE SPECIFIC SWPPP INFORMATION. THE PLANS SHOW LOCATIONS AND TYPES OF ALL TEMPORARY AND PERMANENT EROSION PREVENTION AND SEDIMENT CONTROL BMP'S. STANDARD DETAILS ARE ATTACHED TO THIS SWPPP DOCUMENT.

THE INTENDED SEQUENCING OF MAJOR CONSTRUCTION ACTIVITIES IS AS FOLLOWS:

- 1. INSTALL STABILIZED ROCK CONSTRUCTION ENTRANCE 2. INSTALLATION OF SILT FENCE AROUND SITE
- 3. INSTALL ORANGE CONSTRUCTION FENCING AROUND INFILTRATION AREAS
- 4. INSTALL INLET PROTECTION AT ALL ADJACENT AND DOWNSTREAM CATCH BASINS 5. CLEAR AND GRUB FOR TEMPORARY SEDIMENT BASIN / POND INSTALL
- 6. CONSTRUCT TEMPORARY SEDIMENT BASIN / POND (SECTION 14)
- 7. CLEAR AND GRUB REMAINDER OF SITE 8. STRIP AND STOCKPILE TOPSOIL
- 9. ROUGH GRADING OF SITE
- 10. STABILIZE DENUDED AREAS AND STOCKPILES 11. INSTALL SANITARY SEWER, WATER MAIN STORM SEWER AND SERVICES
- 12. INSTALL SILT FENCE / INLET PROTECTION AROUND CB'S
- 13. INSTALL STREET SECTION 14. INSTALL CURB AND GUTTER
- 15. BITUMINOUS ON STREETS
- 16. FINAL GRADE BOULEVARD, INSTALL SEED AND MULCH 17. REMOVE ACCUMULATED SEDIMENT FROM BASIN / POND

SILT FENCE AND RESEED ANY AREAS DISTURBED BY THE REMOVAL.

- 18. FINAL GRADE POND / INFILTRATION BASINS (DO NOT COMPACT SOILS IN INFILTRATION AREAS.) 19. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED BY EITHER SEED OR SOD/LANDSCAPING, REMOVE
- RECORDS RETENTION:

THE SWPPP (ORIGINAL OR COPIES) INCLUDING, ALL CHANGES TO IT, AND INSPECTIONS AND MAINTENANCE RECORDS MUST BE KEPT AT THE SITE DURING CONSTRUCTION BY THE PERMITTEE WHO HAS OPERATIONAL CONTROL OF THAT PORTION OF THE SITE. THE SWPPP CAN BE KEPT IN EITHER THE FIELD OFFICE OR IN AN ON SITE VEHICLE DURING NORMAL WORKING HOURS.

ALL OWNER(S) MUST KEEP THE SWPPP, ALONG WITH THE FOLLOWING ADDITIONAL RECORDS, ON FILE FOR THREE (3) YEARS AFTER

- SUBMITTAL OF THE NOT AS OUTLINED IN SECTION 4. THIS DOES NOT INCLUDE ANY RECORDS AFTER SUBMITTAL OF THE NOT.
- 1. THE FINAL SWPPP 2. ANY OTHER STORMWATER RELATED PERMITS REQUIRED FOR THE PROJECT;
- 3. RECORDS OF ALL INSPECTION AND MAINTENANCE CONDUCTED DURING CONSTRUCTION (SEE SECTION 11, INSPECTIONS AND MAINTENANCE);
- 4. ALL PERMANENT OPERATION AND MAINTENANCE AGREEMENTS THAT HAVE BEEN IMPLEMENTED, INCLUDING ALL RIGHT OF WAY, CONTRACTS, COVENANTS AND OTHER BINDING REQUIREMENTS REGARDING PERPETUAL MAINTENANCE; AND
- 5. ALL REQUIRED CALCULATIONS FOR DESIGN OF THE TEMPORARY AND PERMANENT STORMWATER MANAGEMENT SYSTEMS.
- SWPPP IMPLEMENTATION RESPONSIBILITIES:
- 1. THE OWNER AND CONTRACTOR ARE PERMITTEE(S) AS IDENTIFIED BY THE NPDES PERMIT. 2. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE IMPLEMENTATION OF THE SWPPP, INCLUDING THE ACTIVITIES OF ALL OF THE CONTRACTOR'S SUBCONTRACTORS.
- 3. CONTRACTOR SHALL PROVIDE A PERSON(S) KNOWLEDGEABLE AND EXPERIENCED IN THE APPLICATION OF EROSION PREVENTION AND SEDIMENT CONTROL BMPS TO OVERSEE ALL INSTALLATION AND MAINTENANCE OF BMPS AND IMPLEMENTATION OF THE
- 4. CONTRACTOR SHALL PROVIDE PERSON(S) MEETING THE TRAINING REQUIREMENTS OF THE NPDES PERMIT TO CONDUCT INSPECTION AND MAINTENANCE OF ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPS IN ACCORDANCE WITH THE REQUIREMENTS OF THE PERMIT. ONE OF THESE INDIVIDUAL(S) MUST BE AVAILABLE FOR AN ONSITE INSPECTION WITHIN 72 HOURS UPON REQUEST BY MPCA. CONTRACTOR SHALL PROVIDE TRAINING DOCUMENTATION FOR THESE INDIVIDUAL(S) AS REQUIRED BY THE NPDES PERMIT. THIS TRAINING DOCUMENTATION SHALL BE RECORDED IN OR WITH THE SWPPP BEFORE THE START OF CONSTRUCTION OR AS SOON AS THE PERSONNEL FOR THE PROJECT HAVE BEEN DETERMINED. DOCUMENTATION SHALL INCLUDE: 4.1. NAMES OF THE PERSONNEL ASSOCIATED WITH THE PROJECT THAT ARE REQUIRED TO BE TRAINED PER SECTION 21 OF THE PERMIT
- 4.2. DATES OF TRAINING AND NAME OF INSTRUCTOR AND ENTITY PROVIDING TRAINING. 4.3. CONTENT OF TRAINING COURSE OR WORKSHOP INCLUDING THE NUMBER OF HOURS OF TRAINING.
- 5. FOLLOWING FINAL STABILIZATION AND THE TERMINATION OF COVERAGE FOR THE NPDES PERMIT. THE OWNER IS EXPECTED TO FURNISH LONG TERM OPERATION AND MAINTENANCE (O & M) OF THE PERMANENT STORM WATER MANAGEMENT SYSTEM.

### CONSTRUCTION ACTIVITY REQUIREMENTS

SWPPP AMENDMENTS (SECTION 6):

- 1. ONE OF THE INDIVIDUALS DESCRIBED IN ITEM 21.2.A OR ITEM 21.2.B OR ANOTHER QUALIFIED INDIVIDUAL MUST COMPLETE ALL SWPPP CHANGES. CHANGES INVOLVING THE USE OF A LESS STRINGENT BMP MUST INCLUDE A JUSTIFICATION DESCRIBING HOW THE REPLACEMENT BMP IS EFFECTIVE FOR THE SITE CHARACTERISTICS.
- 2. PERMITTEES MUST AMEND THE SWPPP TO INCLUDE ADDITIONAL OR MODIFIED BMPS AS NECESSARY TO CORRECT PROBLEMS IDENTIFIED OR ADDRESS SITUATIONS WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE, WEATHER OR SEASONAL CONDITIONS HAVING A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR GROUNDWATER.
- 3. PERMITTEES MUST AMEND THE SWPPP TO INCLUDE ADDITIONAL OR MODIFIED BMPS AS NECESSARY TO CORRECT PROBLEMS IDENTIFIED OR ADDRESS SITUATIONS WHENEVER INSPECTIONS OR INVESTIGATIONS BY THE SITE OWNER OR OPERATOR, USEPA OR MPCA OFFICIALS INDICATE THE SWPPP IS NOT EFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR GROUNDWATER OR THE DISCHARGES ARE CAUSING WATER QUALITY STANDARD EXCEEDANCES (E.G., NUISANCE CONDITIONS AS DEFINED IN MINN. R. 7050.0210, SUBP. 2) OR THE SWPPP IS NOT CONSISTENT WITH THE OBJECTIVES OF A USEPA APPROVED TMDL.

BMP SELECTION AND INSTALLATION (SECTION 7):

1. PERMITTEES MUST SELECT, INSTALL, AND MAINTAIN THE BMPS IDENTIFIED IN THE SWPPP AND IN THIS PERMIT IN AN APPROPRIATE AND FUNCTIONAL MANNER AND IN ACCORDANCE WITH RELEVANT MANUFACTURER SPECIFICATIONS AND ACCEPTED ENGINEERING PRACTICES.

**EROSION PREVENTION (SECTION 8):** 

- 1. BEFORE WORK BEGINS, PERMITTEES MUST DELINEATE THE LOCATION OF AREAS NOT TO BE DISTURBED. 2. PERMITTEES MUST MINIMIZE THE NEED FOR DISTURBANCE OF PORTIONS OF THE PROJECT WITH STEEP SLOPES. WHEN STEEP
- SLOPES MUST BE DISTURBED, PERMITTEES MUST USE TECHNIQUES SUCH AS PHASING AND STABILIZATION PRACTICES DESIGNED FOR STEEP SLOPES (E.G., SLOPE DRAINING AND TERRACING). 3. PERMITTEES MUST STABILIZE ALL EXPOSED SOIL AREAS, INCLUDING STOCKPILES. STABILIZATION MUST BE INITIATED IMMEDIATELY
- TO LIMIT SOIL 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 14 CALENDAR DAYS AFTER THE CONSTRUCTION ACTIVITY HAS CEASED. STABILIZATION IS 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 CONTROLS AT THE BASE OF THE STOCKPILE.
- 4. FOR PUBLIC WATERS THAT THE MINNESOTA DNR HAS PROMULGATED "WORK IN WATER RESTRICTIONS" DURING SPECIFIED FISH SPAWNING TIME FRAMES, PERMITTEES MUST COMPLETE STABILIZATION OF ALL EXPOSED SOIL AREAS WITHIN 200 FEET OF THE WATER'S EDGE, AND THAT DRAIN TO THESE WATERS, WITHIN 24 HOURS DURING THE RESTRICTION PERIOD.
- 5. PERMITTEES MUST STABILIZE THE NORMAL WETTED PERIMETER OF THE LAST 200 LINEAR FEET OF TEMPORARY OR PERMANENT DRAINAGE DITCHES OR SWALES THAT DRAIN WATER FROM THE SITE WITHIN 24 HOURS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE. PERMITTEES MUST COMPLETE STABILIZATION OF REMAINING PORTIONS OF TEMPORARY OR PERMANENT DITCHES OR SWALES WITHIN 14 CALENDAR DAYS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE AND CONSTRUCTION IN THAT PORTION OF THE DITCH TEMPORARILY OR PERMANENTLY CEASES.
- 6. TEMPORARY OR PERMANENT DITCHES OR SWALES BEING USED AS A SEDIMENT CONTAINMENT SYSTEM DURING CONSTRUCTION (WITH PROPERLY DESIGNED ROCK-DITCH CHECKS, BIO ROLLS, SILT DIKES, ETC.) DO NOT NEED TO BE STABILIZED. PERMITTEES MUST STABILIZE THESE AREAS WITHIN 24 HOURS AFTER THEIR USE AS A SEDIMENT CONTAINMENT SYSTEM CEASES 7. PERMITTEES MUST NOT USE MULCH, HYDROMULCH, TACKIFIER, POLYACRYLAMIDE OR SIMILAR EROSION PREVENTION PRACTICES
- WITHIN ANY PORTION OF THE NORMAL WETTED PERIMETER OF A TEMPORARY OR PERMANENT DRAINAGE DITCH OR SWALE SECTION WITH A CONTINUOUS SLOPE OF GREATER THAN 2 PERCENT. 8. PERMITTEES MUST PROVIDE TEMPORARY OR PERMANENT ENERGY DISSIPATION AT ALL PIPE OUTLETS WITHIN 24 HOURS AFTER
- CONNECTION TO A SURFACE WATER OR PERMANENT STORMWATER TREATMENT SYSTEM. 9. PERMITTEES MUST NOT DISTURB MORE LAND (I.E., PHASING) THAN CAN BE EFFECTIVELY INSPECTED AND MAINTAINED IN ACCORDANCE WITH SECTION 11.

SEDIMENT CONTROL (SECTION 9):

- 1. PERMITTEES MUST ESTABLISH SEDIMENT CONTROL BMPS ON ALL DOWNGRADIENT PERIMETERS OF THE SITE AND DOWNGRADIENT AREAS OF THE SITE THAT DRAIN TO ANY SURFACE WATER, INCLUDING CURB AND GUTTER SYSTEMS. PERMITTEES MUST LOCATE SEDIMENT CONTROL PRACTICES UPGRADIENT OF ANY BUFFER ZONES. PERMITTEES MUST INSTALL SEDIMENT CONTROL PRACTICES BEFORE ANY UPGRADIENT LAND-DISTURBING ACTIVITIES BEGIN AND MUST KEEP THE SEDIMENT CONTROL PRACTICES IN PLACE UNTIL THEY ESTABLISH PERMANENT COVER.
- 2. IF DOWNGRADIENT SEDIMENT CONTROLS ARE OVERLOADED, BASED ON FREQUENT FAILURE OR EXCESSIVE MAINTENANCE REQUIREMENTS, PERMITTEES MUST INSTALL ADDITIONAL UPGRADIENT SEDIMENT CONTROL PRACTICES OR REDUNDANT BMPS TO ELIMINATE THE OVERLOADING AND AMEND THE SWPPP TO IDENTIFY THESE ADDITIONAL PRACTICES AS REQUIRED IN ITEM 6.3.

- SYSTEM (E.G., DITCHES WITH ROCK-CHECK DAMS) REQUIRE SEDIMENT CONTROL PRACTICES ONLY AS APPROPRIATE FOR SITE CONDITIONS
- ACTIVITIES SUCH AS CLEARING OR GRUBBING, OR PASSAGE OF VEHICLES, IMMEDIATELY AFTER THE SHORT-TERM ACTIVITY IS THE SHORT-TERM ACTIVITY IS NOT COMPLETE.
- ESTABLISH PERMANENT COVER ON ALL AREAS WITH POTENTIAL FOR DISCHARGING TO THE INLET. FLOODING/FREEZING) IS IDENTIFIED BY THE PERMITTEES OR THE JURISDICTIONAL AUTHORITY (E.G.,
- FOR REMOVAL IN THE SWPPF 8. PERMITTEES MUST PROVIDE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS AT THE BASE OF STOCKPILES ON THE
- DOWNGRADIENT PERIMETER
- 10. PERMITTEES MUST INSTALL A VEHICLE TRACKING BMP TO MINIMIZE THE TRACK OUT OF SEDIMENT FROM THE CONSTRUCTION SITE OR ONTO PAVED ROADS WITHIN THE SITE.
- ONTO THE STREET. 12. PERMITTEES MUST INSTALL TEMPORARY SEDIMENT BASINS AS REQUIRED IN SECTION 14.
- EQUIPMENT USE TO MINIMIZE SOIL COMPACTION. 14. PERMITTEES MUST PRESERVE TOPSOIL ON THE SITE, UNLESS INFEASIBLE.
- 15. PERMITTEES MUST DIRECT DISCHARGES FROM BMPS TO VEGETATED AREAS UNLESS INFEASIBLE. 16. PERMITTEES MUST PRESERVE A 50 FOOT NATURAL BUFFER OR, IF A BUFFER IS INFEASIBLE ON THE SITE, PROVIDE REDUNDANT
- SETTLEMENT OF THE FLOC PRIOR TO DISCHARGE.

DEWATERING AND BASIN DRAINING (SECTION 10):

- SURFACE WATER OR DOWNSTREAM PROPERTIES.
- FILTRATION DEVICE (E.G., CARTRIDGE FILTERS, ABSORBENTS PADS) PRIOR TO DISCHARGE.

VICINITY OF DISCHARGE POINTS THAT CAUSES SIGNIFICANT ADVERSE IMPACT TO THE WETLAND. 4. IF PERMITTEES USE FILTERS WITH BACKWASH WATER, THEY MUST HAUL THE BACKWASH WATER AWAY FOR DISPOSAL, RETURN THE BACKWASH WATER TO THE BEGINNING OF THE TREATMENT PROCESS, OR INCORPORATE THE BACKWASH WATER INTO THE SITE IN A MANNER THAT DOES NOT CAUSE EROSION.

**INSPECTIONS AND MAINTENANCE (SECTION 11):** 

- THAN 1/2 INCH IN 24 HOURS
- 2. PERMITTEES MUST INSPECT AND MAINTAIN ALL PERMANENT STORMWATER TREATMENT BMPS. ACCESS TO THE AREA.
- 4. DURING EACH INSPECTION, PERMITTEES MUST INSPECT SURFACE WATERS, INCLUDING DRAINAGE DITCHES AND CONVEYANCE
- PERMITS, PRIOR TO CONDUCTING ANY WORK IN SURFACE WATERS.
- A SHORTER TIME TO AVOID A SAFETY HAZARD TO USERS OF PUBLIC STREETS. 6. PERMITTEES MUST REPAIR, REPLACE OR SUPPLEMENT ALL PERIMETER CONTROL DEVICES WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES 1/2 OF THE HEIGHT OF THE DEVICE.
- OF SEDIMENT COLLECTED IN THE BASIN REACHES 1/2 THE STORAGE VOLUME.
- THREE (3) CALENDAR DAYS) IS TRAINED IN THE JOB DUTIES DESCRIBED IN ITEM 21.2.B. 9. PERMITTEES MAY ADJUST THE INSPECTION SCHEDULE DESCRIBED IN ITEM 11.2 AS FOLLOWS:
- CONTINUES ON OTHER PORTIONS OF THE SITE; OR COMPLETELY UNTIL CONSTRUCTION ACTIVITY RESUMES. THE MPCA MAY REQUIRE INSPECTIONS TO RESUME IF CONDITIONS WARRANT: OR

WHICHEVER COMES FIRST

- THESE RECORDS MUST BE RETAINED WITH THE SWPPP. THESE RECORDS MUST INCLUDE:
- a. DATE AND TIME OF INSPECTIONS; AND b. NAME OF PERSONS CONDUCTING INSPECTIONS; AND

- SITE SPECIFIC RAINFALL DATA FROM RADAR SUMMARIES; AND f. IF PERMITTEES OBSERVE A DISCHARGE DURING THE INSPECTION, THEY MUST RECORD AND SHOULD PHOTOGRAPH AND
- OBVIOUS INDICATORS OF POLLUTANTS); AND
- g. ANY AMENDMENTS TO THE SWPPP PROPOSED AS A RESULT OF THE INSPECTION MUST BE DOCUMENTED AS REQUIRED IN SECTION 6 WITHIN SEVEN (7) CALENDAR DAYS.

POLLUTION PREVENTION MANAGEMENT (SECTION 12):

- 1. PERMITTEES MUST PLACE BUILDING PRODUCTS AND LANDSCAPE MATERIALS UNDER COVER (E.G., PLASTIC SHEETING OR STORMWATER OR ARE DESIGNED TO BE EXPOSED TO STORMWATER.
- 2. PERMITTEES MUST PLACE PESTICIDES, FERTILIZERS AND TREATMENT CHEMICALS UNDER COVER (E.G., PLASTIC SHEETING OR
- MATERIALS MUST BE IN COMPLIANCE WITH MINN. R. CH. 7045 INCLUDING SECONDARY CONTAINMENT AS APPLICABLE.
- MUST PROPERLY DISPOSE SANITARY WASTE IN ACCORDANCE WITH MINN. R. CH. 7041. 6. PERMITTEES MUST TAKE REASONABLE STEPS TO PREVENT THE DISCHARGE OF SPILLED OR LEAKED CHEMICALS, INCLUDING FUEL,
- MEASURES WHERE POSSIBLE.

### 3. TEMPORARY OR PERMANENT DRAINAGE DITCHES AND SEDIMENT BASINS DESIGNED AS PART OF A SEDIMENT CONTAINMENT

4. A FLOATING SILT CURTAIN PLACED IN THE WATER IS NOT A SEDIMENT CONTROL BMP TO SATISFY ITEM 9.2 EXCEPT WHEN WORKING ON A SHORELINE OR BELOW THE WATERLINE, IMMEDIATELY AFTER THE SHORT TERM CONSTRUCTION ACTIVITY (E.G., INSTALLATION OF RIP RAP ALONG THE SHORELINE) IN THAT AREA IS COMPLETE, PERMITTEES MUST INSTALL AN UPLAND PERIMETER CONTROL PRACTICE IF EXPOSED SOILS STILL DRAIN TO A SURFACE WATER. 5. PERMITTEES MUST RE-INSTALL ALL SEDIMENT CONTROL PRACTICES ADJUSTED OR REMOVED TO ACCOMMODATE SHORT-TERM

COMPLETED. PERMITTEES MUST RE-INSTALL SEDIMENT CONTROL PRACTICES BEFORE THE NEXT PRECIPITATION EVENT EVEN IF 6. PERMITTEES MUST PROTECT ALL STORM DRAIN INLETS USING APPROPRIATE BMPS DURING CONSTRUCTION UNTIL THEY

7. PERMITTEES MAY REMOVE INLET PROTECTION FOR A PARTICULAR INLET IF A SPECIFIC SAFETY CONCERN (E.G. STREET CITY/COUNTY/TOWNSHIP/MINNESOTA DEPARTMENT OF TRANSPORTATION ENGINEER). PERMITTEES MUST DOCUMENT THE NEED

9. PERMITTEES MUST LOCATE STOCKPILES OUTSIDE OF NATURAL BUFFERS OR SURFACE WATERS, INCLUDING STORMWATER CONVEYANCES SUCH AS CURB AND GUTTER SYSTEMS UNLESS THERE IS A BYPASS IN PLACE FOR THE STORMWATER.

11. PERMITTEES MUST USE STREET SWEEPING IF VEHICLE TRACKING BMPS ARE NOT ADEQUATE TO PREVENT SEDIMENT TRACKING

13. IN ANY AREAS OF THE SITE WHERE FINAL VEGETATIVE STABILIZATION WILL OCCUR, PERMITTEES MUST RESTRICT VEHICLE AND

(DOUBLE) PERIMETER SEDIMENT CONTROLS WHEN A SURFACE WATER IS LOCATED WITHIN 50 FEET OF THE PROJECT'S FARTH DISTURBANCES AND STORMWATER FLOWS TO THE SURFACE WATER. PERMITTEES MUST INSTALL PERIMETER SEDIMENT CONTROLS AT LEAST 5 FEET APART UNLESS LIMITED BY LACK OF AVAILABLE SPACE, NATURAL BUFFERS ARE NOT REQUIRED ADJACENT TO ROAD DITCHES, JUDICIAL DITCHES, COUNTY DITCHES, STORMWATER CONVEYANCE CHANNELS, STORM DRAIN INLETS, AND SEDIMENT BASINS. IF PRESERVING THE BUFFER IS INFEASIBLE, PERMITTEES MUST DOCUMENT THE REASONS IN THE SWPPP. SHEET PILING IS A REDUNDANT PERIMETER CONTROL IF INSTALLED IN A MANNER THAT RETAINS ALL STORMWATER. 17, PERMITTEES MUST USE POLYMERS, FLOCCULANTS, OR OTHER SEDIMENTATION TREATMENT CHEMICALS IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICES, DOSING SPECIFICATIONS AND SEDIMENT REMOVAL DESIGN SPECIFICATIONS PROVIDED BY THE MANUFACTURER OR SUPPLIER. THE PERMITTEES MUST USE CONVENTIONAL EROSION AND SEDIMENT CONTROLS PRIOR TO CHEMICAL ADDITION AND MUST DIRECT TREATED STORMWATER TO A SEDIMENT CONTROL SYSTEM FOR FILTRATION OR

1. PERMITTEES MUST DISCHARGE TURBID OR SEDIMENT-LADEN WATERS RELATED TO DEWATERING OR BASIN DRAINING (E.G. PUMPED DISCHARGES, TRENCH/DITCH CUTS FOR DRAINAGE) TO A TEMPORARY OR PERMANENT SEDIMENT BASIN ON THE PROJECT SITE UNLESS INFEASIBLE. PERMITTEES MAY DEWATER TO SURFACE WATERS IF THEY VISUALLY CHECK TO ENSURE ADEQUATE TREATMENT HAS BEEN OBTAINED AND NUISANCE CONDITIONS (SEE MINN. R. 7050.0210, SUBP. 2) WILL NOT RESULT FROM THE DISCHARGE. IF PERMITTEES CANNOT DISCHARGE THE WATER TO A SEDIMENTATION BASIN PRIOR TO ENTERING A SURFACE WATER, PERMITTEES MUST TREAT IT WITH APPROPRIATE BMPS SUCH THAT THE DISCHARGE DOES NOT ADVERSELY AFFECT THE

2. IF PERMITTEES MUST DISCHARGE WATER CONTAINING OIL OR GREASE, THEY MUST USE AN OIL-WATER SEPARATOR OR SUITABLE 3. PERMITTEES MUST DISCHARGE ALL WATER FROM DEWATERING OR BASIN-DRAINING ACTIVITIES IN A MANNER THAT DOES NOT CAUSE EROSION OR SCOUR IN THE IMMEDIATE VICINITY OF DISCHARGE POINTS OR INUNDATION OF WETLANDS IN THE IMMEDIATE

1. PERMITTEES MUST ENSURE A TRAINED PERSON, AS IDENTIFIED IN ITEM 21.2.B, WILL INSPECT THE ENTIRE CONSTRUCTION SITE AT LEAST ONCE EVERY SEVEN (7) DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER

3. PERMITTEES MUST INSPECT ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPS AND POLLUTION PREVENTION MANAGEMENT MEASURES TO ENSURE INTEGRITY AND EFFECTIVENESS. PERMITTEES MUST REPAIR. REPLACE OR SUPPLEMENT

ALL NONFUNCTIONAL BMPS WITH FUNCTIONAL BMPS BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY UNLESS ANOTHER TIME FRAME IS SPECIFIED IN ITEM 11.5 OR 11.6. PERMITTEES MAY TAKE ADDITIONAL TIME IF FIELD CONDITIONS PREVENT

SYSTEMS BUT NOT CURB AND GUTTER SYSTEMS, FOR EVIDENCE OF EROSION AND SEDIMENT DEPOSITION. PERMITTEES MUST REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATERS, INCLUDING DRAINAGE WAYS, CATCH BASINS, AND OTHER RAINAGE SYSTEMS AND RESTABILIZE THE AREAS WHERE SEDIMENT REMOVAL RESULTS IN EXPOSED SOIL. PERMITTEES MUS COMPLETE REMOVAL AND STABILIZATION WITHIN SEVEN (7) CALENDAR DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL. REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. PERMITTEES MUST USE ALL REASONABLE EFFORTS TO OBTAIN ACCESS. IF PRECLUDED, REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) DAYS OF OBTAINING ACCESS. PERMITTEES ARE RESPONSIBLE FOR CONTACTING ALL LOCAL, REGIONAL, STATE AND FEDERAL AUTHORITIES AND RECEIVING ANY APPLICABLE

5. PERMITTEES MUST INSPECT CONSTRUCTION SITE VEHICLE EXIT LOCATIONS, STREETS AND CURB AND GUTTER SYSTEMS WITHIN AND ADJACENT TO THE PROJECT FOR SEDIMENTATION FROM EROSION OR TRACKED SEDIMENT FROM VEHICLES. PERMITTEES MUST REMOVE SEDIMENT FROM ALL PAVED SURFACES WITHIN ONE (1) CALENDAR DAY OF DISCOVERY OR, IF APPLICABLE, WITHIN

7. PERMITTEES MUST DRAIN TEMPORARY AND PERMANENT SEDIMENTATION BASINS AND REMOVE THE SEDIMENT WHEN THE DEPTH 8. PERMITTEES MUST ENSURE THAT AT LEAST ONE INDIVIDUAL PRESENT ON THE SITE (OR AVAILABLE TO THE PROJECT SITE IN

a. INSPECTIONS OF AREAS WITH PERMANENT COVER CAN BE REDUCED TO ONCE PER MONTH, EVEN IF CONSTRUCTION ACTIVITY

b. WHERE SITES HAVE PERMANENT COVER ON ALL EXPOSED SOIL AND NO CONSTRUCTION ACTIVITY IS OCCURRING ANYWHERE ON THE SITE, INSPECTIONS CAN BE REDUCED TO ONCE PER MONTH AND, AFTER 12 MONTHS, MAY BE SUSPENDED

c. WHERE CONSTRUCTION ACTIVITY HAS BEEN SUSPENDED DUE TO FROZEN GROUND CONDITIONS, INSPECTIONS MAY BE SUSPENDED. INSPECTIONS MUST RESUME WITHIN 24 HOURS OF RUNOFF OCCURRING, OR UPON RESUMING CONSTRUCTION,

10. PERMITTEES MUST RECORD ALL INSPECTIONS AND MAINTENANCE ACTIVITIES WITHIN 24 HOURS OF BEING CONDUCTED AND

c. ACCURATE FINDINGS OF INSPECTIONS, INCLUDING THE SPECIFIC LOCATION WHERE CORRECTIVE ACTIONS ARE NEEDED; AND d. CORRECTIVE ACTIONS TAKEN (INCLUDING DATES, TIMES, AND PARTY COMPLETING MAINTENANCE ACTIVITIES); AND e. DATE OF ALL RAINFALL EVENTS GREATER THAN 1/2 INCHES IN 24 HOURS, AND THE AMOUNT OF RAINFALL FOR EACH EVENT. PERMITTEES MUST OBTAIN RAINFALL AMOUNTS BY EITHER A PROPERLY MAINTAINED RAIN GAUGE INSTALLED ONSITE, A WEATHER STATION THAT IS WITHIN ONE (1) MILE OF YOUR LOCATION, OR A WEATHER REPORTING SYSTEM THAT PROVIDES

DESCRIBE THE LOCATION OF THE DISCHARGE (I.E., COLOR, ODOR, SETTLED OR SUSPENDED SOLIDS, OIL SHEEN, AND OTHER

TEMPORARY ROOFS) OR PROTECT THEM BY SIMILARLY EFFECTIVE MEANS DESIGNED TO MINIMIZE CONTACT WITH STORMWATER. PERMITTEES ARE NOT REQUIRED TO COVER OR PROTECT PRODUCTS WHICH ARE EITHER NOT A SOURCE OF CONTAMINATION TO

TEMPORARY ROOFS) OR PROTECT THEM BY SIMILARLY EFFECTIVE MEANS DESIGNED TO MINIMIZE CONTACT WITH STORMWATER. 3. PERMITTEES MUST STORE HAZARDOUS MATERIALS AND TOXIC WASTE, (INCLUDING OIL, DIESEL FUEL, GASOLINE, HYDRAULIC FLUIDS, PAINT SOLVENTS, PETROLEUM-BASED PRODUCTS, WOOD PRESERVATIVES, ADDITIVES, CURING COMPOUNDS, AND ACIDS) IN SEALED CONTAINERS TO PREVENT SPILLS, LEAKS OR OTHER DISCHARGE. STORAGE AND DISPOSAL OF HAZARDOUS WASTE

4. PERMITTEES MUST PROPERLY STORE, COLLECT AND DISPOSE SOLID WASTE IN COMPLIANCE WITH MINN. R. CH. 7035. 5. PERMITTEES MUST POSITION PORTABLE TOILETS SO THEY ARE SECURE AND WILL NOT TIP OR BE KNOCKED OVER. PERMITTEES

FROM ANY AREA WHERE CHEMICALS OR FUEL WILL BE LOADED OR UNLOADED INCLUDING THE USE OF DRIP PANS OR ABSORBENTS UNLESS INFEASIBLE. PERMITTEES MUST ENSURE ADEQUATE SUPPLIES ARE AVAILABLE AT ALL TIMES TO CLEAN UP DISCHARGED MATERIALS AND THAT AN APPROPRIATE DISPOSAL METHOD IS AVAILABLE FOR RECOVERED SPILLED MATERIALS. PERMITTEES MUST REPORT AND CLEAN UP SPILLS IMMEDIATELY AS REQUIRED BY MINN. STAT. 115.061, USING DRY CLEAN UP

7. PERMITTEES MUST LIMIT VEHICLE EXTERIOR WASHING AND EQUIPMENT TO A DEFINED AREA OF THE SITE. PERMITTEES MUST

CONTAIN RUNOFF FROM THE WASHING AREA IN A SEDIMENT BASIN OR OTHER SIMILARLY EFFECTIVE CONTROLS AND MUST DISPOSE WASTE FROM THE WASHING ACTIVITY PROPERLY. PERMITTEES MUST PROPERLY USE AND STORE SOAPS, DETERGENTS, OR SOLVENTS.

8. PERMITTEES MUST PROVIDE EFFECTIVE CONTAINMENT FOR ALL LIQUID AND SOLID WASTES GENERATED BY WASHOUT OPERATIONS (E.G., CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS) RELATED TO THE CONSTRUCTION ACTIVITY. PERMITTEES MUST PREVENT LIQUID AND SOLID WASHOUT WASTES FROM CONTACTING THE GROUND AND MUST DESIGN THE CONTAINMENT SO IT DOES NOT RESULT IN RUNOFF FROM THE WASHOUT OPERATIONS OR AREAS. PERMITTEES MUST PROPERLY DISPOSE LIQUID AND SOLID WASTES IN COMPLIANCE WITH MPCA RULES. PERMITTEES MUST INSTALL A SIGN INDICATING THE LOCATION OF THE WASHOUT FACILITY.

### PERMIT TERMINATION (SECTION 4 AND SECTION 13):

- 1. PERMITTEES MUST SUBMIT A NOT WITHIN 30 DAYS AFTER ALL TERMINATION CONDITIONS LISTED IN SECTION 13 ARE COMPLETE. 2. PERMITTEES MUST SUBMIT A NOT WITHIN 30 DAYS AFTER SELLING OR OTHERWISE LEGALLY TRANSFERRING THE ENTIRE SITE, INCLUDING PERMIT RESPONSIBILITY FOR ROADS (E.G., STREET SWEEPING) AND STORMWATER INFRASTRUCTURE FINAL CLEAN OUT, OR TRANSFERRING PORTIONS OF A SITE TO ANOTHER PARTY. THE PERMITTEES' COVERAGE UNDER THIS PERMIT TERMINATES AT MIDNIGHT ON THE SUBMISSION DATE OF THE NOT.
- 3. PERMITTEES MUST COMPLETE ALL CONSTRUCTION ACTIVITY AND MUST INSTALL PERMANENT COVER OVER ALL AREAS PRIOR TO SUBMITTING THE NOT. VEGETATIVE COVER MUST CONSIST OF A UNIFORM PERENNIAL VEGETATION WITH A DENSITY OF 70 PERCENT OF ITS EXPECTED FINAL GROWTH. VEGETATION IS NOT REQUIRED WHERE THE FUNCTION OF A SPECIFIC AREA DICTATES
- NO VEGETATION, SUCH AS IMPERVIOUS SURFACES OR THE BASE OF A SAND FILTER. 4. PERMITTEES MUST CLEAN THE PERMANENT STORMWATER TREATMENT SYSTEM OF ANY ACCUMULATED SEDIMENT AND MUST ENSURE THE SYSTEM MEETS ALL APPLICABLE REQUIREMENTS IN SECTION 15 THROUGH 19 AND IS OPERATING AS DESIGNED.
- 5. PERMITTEES MUST REMOVE ALL SEDIMENT FROM CONVEYANCE SYSTEMS PRIOR TO SUBMITTING THE NOT.
- 6. PERMITTEES MUST REMOVE ALL TEMPORARY SYNTHETIC EROSION PREVENTION AND SEDIMENT CONTROL BMPS PRIOR TO SUBMITTING THE NOT. PERMITTEES MAY LEAVE BMPS DESIGNED TO DECOMPOSE ON-SITE IN PLACE.
- 7. FOR RESIDENTIAL CONSTRUCTION ONLY. PERMIT COVERAGE TERMINATES ON INDIVIDUAL LOTS IF THE STRUCTURES ARE FINISHED AND TEMPORARY EROSION PREVENTION AND DOWNGRADIENT PERIMETER CONTROL IS COMPLETE, THE RESIDENCE SELLS TO THE HOMEOWNER, AND THE PERMITTEE DISTRIBUTES THE MPCA'S "HOMEOWNER FACT SHEET" TO THE HOMEOWNER.
- 8. FOR CONSTRUCTION PROJECTS ON AGRICULTURAL LAND (E.G., PIPELINES ACROSS CROPLAND), PERMITTEES MUST RETURN THE DISTURBED LAND TO ITS PRECONSTRUCTION AGRICULTURAL USE PRIOR TO SUBMITTING THE NOT.

### SEED NOTES:

ALL SEED MIXES AND APPLICATION SHALL BE IN ACCORDANCE WITH THE MNDOT SEEDING MANUAL.

### GENERAL RECOMMENDATIONS

THE CONTRACTOR IS RESPONSIBLE TO SALVAGE AND PRESERVE EXISTING TOPSOIL NECESSARY FOR FINAL STABILIZATION AND TO ALSO MINIMIZE COMPACTION IN ALL LANDSCAPE AREAS. IMMEDIATELY BEFORE SEEDING THE SOIL SHALL BE TILLED TO A MINIMUM DEPTH OF 3 INCHES.

TEMPORARY EROSION CONTROL SEEDING, MULCHING & BLANKET.

### SEED

MUI CH

- TEMPORARY SEED SHALL BE MNDOT SEED MIX 21-112 (WINTER WHEAT COVER CROP) FOR WINTER AND 21-111 (OATS COVER CROP) FOR SPRING/SUMMER APPLICATIONS. BOTH SEED MIXES SHALL BE APPLIED AT A SEEDING RATE OF 100 LBS/ACRE.
- IMMEDIATELY AFTER SEEDING, WITHIN 24 HOURS, MNDOT TYPE 1 MULCH SHOULD BE APPLIED TO PROTECT AND ENHANCE SEED GERMINATION. MULCH SHALL BE APPLIED AT 90% COVERAGE (2 TONS PER ACRE OF STRAW MULCH)
- 3:1 (HORIZ/VERT.) OR FLATTER MUCH SHALL BE COVERED WITH MULCH
- SLOPES STEEPER THAN 3:1 OR DITCH BOTTOMS SHALL BE COVERED WITH EROSION CONTROL BLANKET. SEE PLAN FOR MORE DETAILED DITCH AND STEEP SLOPE EROSION CONTROL TREATMENTS.

# AREAS AND QUANTITIES

SITE AREA CA **BUILDING CO** 

**ALL PAVEME** ALL NON-PA

TOTAL SITE A

IMPERVIOUS **EXISTING CO** PROPOSED C DIFFERENCE

**EROSION CO** DISTURBED A SILT FENCE/B EROSION COI **INLET PROTE** 

NOTE: QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR SHALL DETERMINE FOR THEMSELVES THE EXACT QUANTITIES FOR BIDDING AND CONSTRUCTION.

CONTRACTOR:

CONTRACTOR SHALL OBTAIN A COPY OF THE FOLLOWING SWPPP ATTACHMENTS WHICH ARE A PART OF THE OVERALL SWPPP PACKAGE: ATTACHMENT A. CONSTRUCTION SWPPP TEMPLATE - SITE SPECIFIC SWPPP DOCUMENT ATTACHMENT B. CONSTRUCTION STORMWATER INSPECTION CHECKLIST ATTACHMENT C. MAINTENANCE PLAN FOR PERMANENT STORM WATER TREATMENT SYSTEMS ATTACHMENT D: STORMWATER MANAGEMENT REPORT - ON FILE AT THE OFFICE OF PROJECT ENGINEER, AVAILABLE UPON REQUEST. ATTACHMENT E: GEOTECHNICAL EVALUATION REPORT - ON FILE AT THE OFFICE OF PROJECT ENGINEER. AVAILABLE UPON REQUEST.

THESE NOTES SUPERCEDE ANY GENERAL SWPPP NOTES.

THIS PROJECT IS GREATER THAN 1.0 ACRES SO AN NPDES PERMIT IS REQUIRED AND NEEDS TO BE SUBMITTED TO THE MPCA. THE CONTRACTOR IS REQUIRED TO FOLLOW THE GUIDELINES IN THE NPDES PERMIT THROUGHOUT CONSTRUCTION.

PROJECT NARRATIVE:

PROJECT IS A REDEVELOPMENT OF A SMALL ONE STORY OFFICE BUILDING AND PARKING LOT INTO A MULTIFAMILY RESIDENTIAL BUILDING. SITE AND LANDSCAPE IMPROVEMENTS WILL OCCUR.

LOCATED ON SITE.

SPECIAL TMDL BMP REQUIREMENTS SITE SPECIFIC (IF REQUIRED):

CEASED.

PERMANENT STABILIZATION NOTES SITE SPECIFIC:

PERMANENT SEED MIX ACRF

# TRAINING SECTION 21

DESIGN ENGINEER: MATTHEW R. PAVEK P.E. TRAINING COURSE: DESIGN OF SWPPP TRAINING ENTITY: UNIVERSITY OF MINNESOTA INSTRUCTOR: JOHN CHAPMAN DATES OF TRAINING COURSE: 5/15/2011 - 5/16/2011 TOTAL TRAINING HOURS: 12 RE-CERTIFICATION: 2/27/2020 (8 HOURS), EXP. 5/31/2023

LCULATIONS				
	EXISTING CO	NDITION	PROPOSED CON	DITION
VERAGE	5,553 SF	7.1%	20,416 SF	25.9%
NTS	59,530 SF	75.7%	43,104 SF	54.8%
VEMENTS	13,608 SF	17.3%	15,171 SF	19.3%
REA	78,691 SF	100.0%	78,691 SF	100.0%
SURFACE				
NDITION	65,083 SF	82.7%		
ONDITION	63,520 SF	80.7%		
(EX. VS PROP.)	-1,563 SF	-2.0%		
NTROL QUANTITIES				
REA	75,000 SF			
IO-ROLL	±1200 LF			
NTROL BLANKET	±1800 SF			
CTION DEVICES	16 EA			

### SWPPP CONTACT PERSON

SWPPP INSPECTOR TRAINING: ALL SWPPP INSPECTIONS MUST BE PERFORMED BY A PERSON THAT MEETS THE TRAINING REQUIREMENTS OF THE NPDES CONSTRUCTION SITE PERMIT. TRAINING CREDENTIALS SHALL BE PROVIDED BY THE CONTRACTOR AND KEPT ON SITE WITH THE SWPPP

OWNER INFORMATION

1000 W 80TH STREET

952-948-9546

MINNEAPOLIS, MN 55420

CONTACT: RYAN DUNLAY

STUART DEVELOPMENT CORPORATION

# PARTY RESPONSIBLE FOR LONG TERM OPERATION AND MAINTENANCE OF PERMANENT STORM WATER MANAGEMENT SYSTEM

PERMANENT STORMWATER MANAGEMENT IS NOT REQUIRED AS PART OF THIS PROJECT TO MEET NPDES PERMIT REQUIREMENTS. THE PROPERTY OWNER IS RESPONSIBLE FOR THE LONG TERM OPERATION AND MAINTENANCE OF THE PROPOSED STORMWATER SYSTEM. SWPPP ATTACHMENTS (ONLY APPLICABLE IF SITE IS 1 ACRE OR GREATER)

# SUPPLEMENTARY SITE SPECIFIC EROSION CONTROL NOTES:

# NATIVE BUFFER NARRATIVE:

PRESERVING A 50' NATURAL BUFFER AROUND WATER BODIES IS NOT REQUIRED AS PART OF THIS PROJECT BECAUSE WATER BODIES ARE NOT

# INFILTRATION NARRATIVE:

INFILTRATION IS PROVIDED THROUGH THE USE OF AN UNDERGROUND INFILTRATION BASIN ON THE SITE.

# SOIL CONTAMINATION NARRATIVE:

SOILS ONSITE HAVE NOT BEEN IDENTIFIED AS CONTAMINATED. AN MPCA SOILS ASSESSMENT WAS COMPLETED AND IT WAS DETERMINED THAT THIS SITE IS APPROPRIATE FOR INFILTRATION.

THIS PROJECT IS WITHIN ONE MILE AND DISCHARGES TO PENN LAKE - PENN LAKE IS IDENTIFIED AS IMPAIRED WATER BODIES PER THE MPCA'S 303(D) IMPAIRED WATERS LIST. PENN LAKE IS IMPAIRED FOR NUTRIENTS. BECAUSE THIS WATER IS LOCATED WITHIN ONE MILE OF THE SITE, BMPS AS DEFINED IN THE NPDES PERMIT ITEMS 23.9 AND 23.10 APPLY. THESE ARE AS FOLLOWS:

# 1. DURING CONSTRUCTION:

A. STABILIZATION OF ALL EXPOSED SOIL AREAS MUST BE INITIATED IMMEDIATELY TO LIMIT SOIL EROSION BUT IN NO CASE COMPLETED LATER THAN SEVEN (7) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY B. TEMPORARY SEDIMENT BASIN REQUIREMENTS DESCRIBED IN SECTION 14. MUST BE USED FOR COMMON DRAINAGE LOCATIONS THAT

SERVE AN AREA WITH FIVE (5) OR MORE ACRES DISTURBED AT ONE TIME.

 FOR THIS PROJECT ALL AREAS THAT ARE NOT TO BE SODDED OR LANDSCAPED SHALL RECEIVE A NATIVE PERMANENT SEED MIX. AREAS IN BUFFERS AND ADJACENT TO OR IN WET AREAS MNDOT SEED MIX 33-261 (STORMWATER SOUTH AND WEST) AT 35 LBS PER

•• DRY AREAS MNDOT SEED MIX 35-221 (DRY PRAIRIE GENERAL) AT 40 LBS PER ACRE. • MAINTENANCE SHALL BE IN ACCORDANCE TO THE MNDOT SEEDING MANUAL.

![](_page_24_Picture_193.jpeg)

# ATTACHMENT A: SITE SPECIFIC SWPPP DOCUMENT

PROJECT NAME: KNOX & AMERICAN II PROJECT LOCATION (BRIEFLY DESCRIBE WHERE CONSTRUCTION ACTIVITY OCCURS. INCLUDE ADDRESS IF AVAILABLE.) ADDRESS: 8000 KNOX AVE S,

CITY OR TOWNSHIP: BLOOMINGTON

STATE: MN ZIP CODE: 55431

LATITUDE/LONGITUDE OF APPROXIMATE CENTROID OF PROJECT: 44°51'29" N, 93°18'08" W

METHOD OF LAT/LONG COLLECTION (CIRCLE ONE): GPS ONLINE TOOL USGS TOPOGRAPHIC ALL CITIES WHERE CONSTRUCTION WILL OCCUR: BLOOMINGTON

ALL COUNTIES WHERE CONSTRUCTION WILL OCCUR: HENNEPIN ALL TOWNSHIPS WHERE CONSTRUCTION WILL OCCUR: N/A

**PROJECT SIZE** (NUMBER OF ACRES TO BE DISTURBED): 1.7

**PROJECT TYPE** (CIRCLE ONE): RESIDENTIAL COMMERCIAL/INDUSTRIAL ROAD CONSTRUCTION RESIDENTIAL & RD CONSTRUCTION OTHER (DESCRIBE): XXXXX

CUMULATIVE IMPERVIOUS SURFACE (TO THE NEAREST TENTH ACRE) EXISTING AREA OF IMPERVIOUS SURFACE : 1.5 POST CONSTRUCTION AREA OF IMPERVIOUS SURFACE: 1.4 TOTAL NEW AREA OF IMPERVIOUS SURFACE: -0.1

### **RECEIVING WATERS**

WATER BODY ID	NAME OF WATER BODY	WATER BODY TYPE	SPECIAL WATER? (Y/N)	IMPAIRED WATER (Y/N)
27-0004-00	PENN	LAKE	Ν	Y

DATES OF CONSTRUCTION

CONSTRUCTION START DATE: 03/24 ESTIMATED COMPLETION DATE: 03/25

GENERAL CONSTRUCTION PROJECT INFORMATION

DESCRIBE THE CONSTRUCTION ACTIVITY: THIS PROJECT INVOLVES THE CONSTRUCTION OF A MULTI-FAMILY APARTMENT BUILDING WITH ASSOCIATED ABOVE GROUND PARKIN UTILITY AND LANDSCAPE IMPROVEMENTS WILL ALSO OCCUR DESCRIBE SOIL TYPES FOUND AT THE PROJECT: GLATIAL OUTWASH, VARIABLE SANDY PARENT MATERIAL

SITE LOCATION MAP

![](_page_25_Picture_18.jpeg)

### **GENERAL SITE INFORMATION (5.1)**

1. DESCRIBE THE LOCATION AND TYPE OF ALL TEMPORARY AND PERMANENT EROSION PREVENTION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMP'S). INCLUE TEMPORARY BMP'S AS NECESSARY. (5.5) THE PROJECT IS PROTECTED BY TWO (W) MAIN BMP'S, SILT FENCE AND INLET PROTECTION DEVICES. THE SILT FENCE WILL BE INSTALLED AT THE DOWNHILL LOCATIONS OF T INSTALLED IN ALL CATCH BASINS ON THE SITE AND ANY OFF SITE THAT WILL RECEIVE STORMWATER RUNOFF FROM THIS SITE. AS THE PROJECT PROGRESSES ADDITIONAL BM 2. ATTACH TO THIS SWPPP A TABLE WITH THE ANTICIPATED QUANTITIES FOR THE LIFE OF THE PROJECT FOR ALL EROSION PREVENTION AND SEDIMENT CONTROL BMP'S (5.7). 3. ATTACH TO THIS SWPPP A SITE MAP THAT INCLUDES THE FOLLOWING FEATURES (5.9): EXIST AND FINAL GRADES, INCLUDING DIVIDING LINES AND DIRECTION OF FLOW FOR ALL PRE AND POST-CONSTRUCTION STORMWATER RUNOFF DRAINAGE AREAS LOCATED

LOCATIONS OF IMPERVIOUS SURFACES AND SOIL TYPES. EXISTING AND FINAL GRADES, INCLUDING DIVIDING LINES AND DIRECTION OF FLOW FOR ALL PRE AND POST-CONSTRUCTION STORMWATER RUNOFF DRAINAGE AREAS LO

LOCATIONS OF AREAS NOT TO BE DISTURBED. LOCATION OF AREAS OF PHASED CONSTRUCTION.

ALL SURFACE WATERS AND EXISTING WETLANDS WITHIN ONE MILE FROM THE PROJECT BOUNDARIES THAT WILL RECEIVE STORMWATER RUNOFF FROM THE SITE (IDENTIF WHERE SURFACE WATERS RECEIVING RUNOFF ASSOCIATED WITH CONSTRUCTION ACTIVITY WILL NOT FIT ON THE PLAN SHEET, THEY MUST BE IDENTIFIED WITH AN ARROY METHODS TO BE USED FOR FINAL STABILIZATION OF ALL EXPOSED SOIL AREA

4. WERE STORMWATER MITIGATION MEASURES REQUIRED AS THE RESULT OF AN ENVIRONMENTAL, ARCHAEOLOGICAL, OR OTHER REQUIRED LOCAL, STATE OR FEDERAL REVI IF YES, DESCRIBE HOW THESE MEASURES WERE ADDRESSED IN THE SWPPP. (5.16)

5. IS THE PROJECT LOCATED IN A KARST AREA SUCH THAT ADDITIONAL MEASURES WOULD BE NECESSARY TO PROJECT DRINKING WATER SUPPLY MANAGEMENT AREAS AS DE IF YES, DESCRIBE THE ADDITIONAL MEASURES TO BE USED. (SECTION 23)

6. DOES THE SITE DISCHARGE TO A CALCEREOUS FEN LISTED IN MINN. R. 7050.0180, SUBP. 6.B? NO IF YES, A LETTER OF APPROVAL FROM THE MINNESOTA DEPARTMENT OF NATURAL RESOURCES MUST BE OBTAINED PRIOR TO APPLICATION FOR THIS PERMIT. 7. DOES THE SITE DISCHARGE TO A WATER THAT IS LISTED AS IMPAIRED FOR THE FOLLOWING POLLUTANT(S) OR STRESSOR(S): PHOSPHORUS, TURBIDITY, DISSOLVED OXYGEN WWW.PCA.STATE.MN.US/WATER/STORMWATER/STORMWATER-C.HTML YES

IF NO. SKIP TO TRAINING DOES THE IMPAIRED WATER HAVE AN APPROVED TOTAL MAXIMUM DAILY LOADS (TMDL) WITH AN APPROVED WASTE LOAD ALLOCATION FOR CONSTRUCTION ACTIVITY? YES IF YES: A. LIST THE RECEIVING WATER, THE AREAS OF THE SITE DISCHARGING TO IT, AND THE POLLUTANT(S) IDENTIFIED IN THE TMDL.

B. LIST THE BMP'S AND ANY OTHER SPECIFIC CONSTRUCTION STORMWATER RELATED IMPLEMENTATION ACTIVITIES IDENTIFIED IN THE TMDL. IF THE SITE HAS A DISCHARGE POINT WITHIN ONE MILE OF THE IMPAIRED WATER AND THE WATER FLOWS TO THE IMPAIRED WATER BUT NO SPECIFIC BMPS FOR CONSTRUCTION ADDED TO THE SWPPP AND IMPLEMENTED (15.19). THE ADDITIONAL BMPS ONLY APPLY TO THOSE PORTIONS OF THE PROJECT THAT DRAIN TO ONE OF THE IDENTIFIED DISCHAF N/A

8. IDENTIFY ADJACENT PUBLIC WATERS WHERE THE MINNESOTA DEPARTMENT OF NATURAL RESOURCES (DNR) HAS DECLARED "WORK IN WATER RESTRICTIONS" DURING FISH Ν/Δ

SELECTION OF A PERMANENT STORMWATER MANAGEMENT SYSTEM (SECTION 15)

1. WILL THE PROJECT CREATE A NEW CUMULATIVE IMPERVIOUS SURFACE GREATER THAN OR EQUAL TO ONE ACRE? YES

IF YES, A WATER QUALITY VOLUME OF ONE INCH OF RUNOFF FROM THE CUMULATIVE NEW IMPERVIOUS SURFACES MUST BE RETAINED ON SITE (SEE 16.7 OF THE PERMIT) THR ONE OF THE REASONS IN ITEMS 16.4 THROUGH 16.21. IF INFILTRATION IS PROHIBITED IDENTIFY OTHER METHOD OF MEETING WATER QUALITY REQUIREMENTS (E.G., FILTRATION PONDING OR EQUIVALENT METHOD

2. DESCRIBE WHICH METHOD WILL BE USED TO TREAT RUNOFF FROM THE NEW IMPERVIOUS SURFACES CREATED BY THE PROJECT:

INCLUDE ALL CALCULATIONS AND DESIGN INFORMATION FOR THE METHOD SELECTED. SEE SECTION 23 OF THE PERMIT FOR SPECIFIC REQUIREMENTS ASSOCIATED WITH EAC INFILTRATION / REGIONAL PONDING

CALCULATIONS ARE WITHIN THE SITE STORM WATER MANAGEMENT REPORT AND PART OF THIS SWPPP AS ATTACHMENT D.

3. IF IT IS NOT FEASIBLE TO MEET THE TREATMENT REQUIREMENT FOR THE WATER QUALITY VOLUME, DESCRIBE WHY. THIS CAN INCLUDE PROXIMITY TO BEDROCK OR ROAD P PRECLUDES THE INSTALLATION OF ANY PERMANENT STORMWATER MANAGEMENT PRACTICES. DESCRIBE WHAT OTHER TREATMENT, SUCH AS GRASS SWALES, SMALLER PONE TREAT RUNOFF PRIOR TO DISCHARGE TO SURFACE WATERS. (15.8) IT IS FEASIBLE TO MEET REQUIREMENT FOR WATER QUALITY VOLUME.

4. FOR PROJECTS THAT DISCHARGE TO TROUT STREAMS, INCLUDING TRIBUTARIES TO TROUT STREAMS, IDENTIFY METHOD OF INCORPORATING TEMPERATURE CONTROLS INT SYSTEM.

![](_page_25_Picture_38.jpeg)

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MAP UNIT MAP UNIT NAME	EROSION PREVENTION PRACTICES (SECTION 8.1)
U4A URBAN LAND UDIPSAMMENTS	DESCRIBE THE TYPES OF TEMPORARY EROSION PREVENTION BMP'S EXPECTED TO BE IMPLEMENTED ON THIS SITE DURING CO 1. DESCRIBE CONSTRUCTION PHASING, VEGETATIVE BUFFER STRIPS, HORIZONTAL SLOPE GRADING, AND OTHER CONSTRUCTION DISTURBED (E.G., WITH FLAGS, STAKES, SIGNS, SILT FENCE, ETC.) BEFORE WORK BEGINS
	SILT FENCE WILL BE INSTALLED AT THE DOWNHILL LOCATIONS OF THE SITE. 2. DESCRIBE METHODS OF TEMPORARILY STABILIZING SOILS AND SOIL STOCKPILES (E.G., MULCHES, HYDRAULIC TACKIFIERS, E
	3. DESCRIBE METHODS OF DISSIPATING VELOCITY ALONG STORMWATER CONVEYANCE CHANNELS AND AT CHANNEL OUTLETS SOD WILL BE UTILIZED ALONG CHANNELS AND RIP RAP AT CHANNEL.
	4. DESCRIBE METHODS TO BE USED FOR STABILIZATION OF DITCH AND SWALE WETTED PERIMETERS (NOTE THAT MULCH, HYDE SOIL STABILIZATION METHODS FOR ANY PART OF A DRAINAGE DITCH OR SWALE)
	FINAL STABILIZATION OF SWALES WILL BE SOD 5. DESCRIBE METHODS TO BE USED FOR ENERGY DISSIPATION AT PIPE OUTLETS (E.G., RIP RAP, SPLASH PADS, GABIONS, ETC.) RIP RAP WILL BE UTILIZED AT PIPE OUTLETS
	6. DESCRIBE METHODS TO BE USED TO PROMOTE INFILTRATION AND SEDIMENT REMOVAL ON THE SITE PRIOR TO OFFSITE DISC VEGETATED AREAS):
	DISCONNECTED IMPERVIOUS AREA AND INFILTRATION AREAS WILL BE UTILIZED 7. FOR DRAINAGE OR DIVERSION DITCHES, DESCRIBE PRACTICES TO STABILIZE THE NORMAL WETTED PERIMETER WITHIN 200 L SUBFACE WATER THE LAST 200 LINEAL FEET MUST BE STABILIZED WITHIN 24 HOURS AFTER CONNECTING TO SUBFACE WATER
	TEMPORARILY OR PERMANENTLY CEASED FOR ALL DISCHARGES TO SPECIAL, IMPAIRED OR "WORK IN WATER RESTRICTIONS". DITCHES OR SWALES WITHIN 14 CALENDAR DAYS AFTER CONNECTING TO A SURFACE WATER, PROPERTY EDGE AND CONSTRU
	N/A, NO DITCHES ON SITE 8. DESCRIBE ADDITIONAL EROSION PREVENTION MEASURES THAT WILL BE IMPLEMENTED AT THE SITE DURING CONSTRUCTION VEGETATIVE BUEFERS, HORIZONTAL SLOPE GRADING, SLOPE DRAINING/TERRACING, ETC.):
	OTHER EROSION CONTROL PRACTICES INCLUDE BUT ARE NOT LIMITED TO; MINIMIZING SITE EXPOSURE WHEN POSSIBLE. 9. IF APPLICABLE, INCLUDE ADDITIONAL REQUIREMENTS IN APPENDIX A PART C.3 REGARDING MAINTAINING A 100-FOOT BUFFEF
	N/A 10. IF APPLICABLE, DESCRIBE ADDITIONAL EROSION PREVENTION BMPS TO BE IMPLEMENTED AT THE SITE TO PROTECT PLANNE
	MINIMIZE SITE EXPOSURE IN AREAS ADJACENT TO FILTRATION AREAS.
	SEDIMENT CONTROL PRACTICES (SECTION 9.1) DESCRIBE THE METHODS OF SEDIMENT CONTROL BMPS TO BE IMPLEMENTED AT THIS SITE DURING CONSTRUCTION TO MINIMIZ
	GUTTER SYSTEMS  1. DESCRIBE METHODS TO BE USED FOR DOWN GRADIENT PERIMETER CONTROL:  SILT FENCE WILL BE INSTALLED ABOUND THE ENTIRE PERIMETER OF THE SITE
NG LOT AND BELOW GROUND UNDERGROUND PARKING	2. DESCRIBE METHODS TO BE USED TO CONTAIN SOIL STOCKPILES: SEED AND MULCH AS WELL AS EROSION CONTROL BLANKETS WILL BE UTILIZED AS NECESSARY
	3. DESCRIBE METHODS TO BE USED FOR STORM DRAIN INLET PROTECTION: SEE INLET PROTECTION DETAILS 4. DESCRIBE METHODS TO MINIMIZE VEHICLE TRACKING AT CONSTRUCTION EXITS AND STREET SWEEPING ACTIVITIES:
	THE PROJECT WILL UTILIZE A ROCK CONSTRUCTION ENTRANCE. 5. DESCRIBE METHODS, IF APPLICABLE, ADDITIONAL SEDIMENT CONTROLS (E.G., DIVERSION BERMS) TO BE INSTALLED TO KEEP
	EXCAVATED PRIOR TO FINAL STABILIZATION OF THE CONTRIBUTING DRAINAGE AREA: SILT FENCE TO BE INSTALLED IMMEDIATELY AFTER GRADING TO PROTECT INFILTRATION AREAS. 6. DESCRIBE METHODS TO BE USED TO MINIMIZE SOIL COMPACTION AND PRESERVE TOP SOIL (UNLESS INFEASIBLE) AT THIS SI
	LIGHT TRACKED EQUIPMENT WILL BE USED, TOPSOIL WILL BE STRIPPED AND STOCKPILED 7. DESCRIBE PLANS TO PRESERVE A 50-FOOT NATURAL BUFFER BETWEEN THE PROJECT'S SOIL DISTURBANCE AND A SURFACE
	IS INFEASIBLE: DOUBLE ROW OF SILT FENCE WILL BE INSTALLED ALONG WETLAND. PROJECT WILL NOT DISTURB WITHIN 200 FEET OF WETLAND 8. DESCRIBE PLANS FOR USE OF SEDIMENTATION TREATMENT CHEMICALS (F.G., POLYMERS, FLOCCULANTS, ETC.) SEE PART 9.1
	<ul> <li>N/A</li> <li>9. IS THE PROJECT REQUIRED TO INSTALL A TEMPORARY SEDIMENT BASIN DUE TO 10 OR MORE ACRES DRAINING TO A COMMON SPECIAL OR IMPARED WATER 2</li> </ul>
	YES IF YES, DESCRIBE (OR ATTACH PLANS ) SHOWING HOW THE BASIN WILL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WIT
	PROPOSED FILTRATION BASINS WILL SERVE AS TEMPORARY SEDIMENTS BASINS THAT WILL THEN BE CONVERTED TO PERMANE
	DEWATERING AND BASIN DRAINING (SECTION 10.1) 1. WILL THE PROJECT INCLUDE DEWATERING OR BASIN DRAINING? NO
	IF YES, DESCRIBE MEASURES TO BE USED TO TREAT/DISPOSE OF TURBID OR SEDIMENT-LADEN WATER AND METHOD TO PREVE 10.4 OF THE PERMIT):
DE THE TIMING FOR INSTALLATION AND PROCEDURES USED TO ESTABLISH ADDITIONAL	N/A 2. WILL THE PROJECT INCLUDE USE OF FILTERS FOR BACKWASH WATER? NO
HE SITE AND MONITORED AS NECESSARY. INLET PROTECTION DEVICES WILL BE /IP'S SUCH AS EROSION CONTROL BLANKET MAY BE UTILIZED.	N/A
SEE PAGE SW1.3 WITHIN THE PROJECT LIMITS.	ADDITIONAL BMP'S FOR SPECIAL WATERS AND DISCHARGES TO WETLANDS (SECTION 23.1)
CATED WITHIN PROJECT LIMITS.	2. IF PROXIMITY TO BEDROCK OR ROAD PROJECTS WHERE THE LACK OF RIGHT OF WAY PRECLUDES THE INSTALLATION OF ANY THEN OTHER TREATMENT SUCH AS GRASSED SWALES, SMALLER PONDS, OR GRIT CHAMBERS IS REQUIRED PRIOR TO DISCHAR
	WILL BE PROVIDED. N/A 3. DESCRIBE EROSION AND SEDIMENT CONTROLS FOR EXPOSED SOIL AREAS WITH A CONTINUOUS POSITIVE SLOPE TO A SPECI
DW, INDICATING BOTH DIRECTION AND DISTANCE TO THE SURFACE WATER.	DRAIN FIVE OR MORE ACRES DISTURBED AT ONE TIME. N/A
/IEW OF THE PROJECT? NO	4. DESCRIBE THE UNDISTURBED BUFFER ZONE TO BE USED (NOT LESS THAN 100 LINEAR FEET FROM THE SPECIAL WATER). N/A 5. DESCRIBE HOW THE PERMANENT STORMWATER MANAGEMENT SYSTEM WILL ENSURE THAT THE PRE AND POST PROJECT RU
ESCRIBED IN MINN. R. CHAPTERS 7050 AND 7060? NO	PRECIPITATION EVENTS REMAINS THE SAME. N/A
	6. DESCRIBE HOW THE PERMANENT STORMWATER MANAGEMENT SYSTEM WILL MINIMIZE ANY INCREASE IN THE TEMPERATURE 2-YEAR 24-HOUR PRECIPITATION EVENTS. N/A
IN OR BIOTIC IMPAIRMENT? USE THE SPECIAL AND IMPAIRED WATERS SEARCH TOOL AT:	7. WETLANDS. DOES YOUR PROJECT DISCHARGE STORMWATER WITH THE POTENTIAL FOR SIGNIFICANT ADVERSE IMPACTS TO STORMWATER POND)? YES OR NO
	IF YES, DESCRIBE THE WETLAND MITIGATION SEQUENCE THAT WILL BE FOLLOWED IN ACCORDANCE WITH SECTION 22 OF THE P N/A
	INSPECTIONS AND MAINTENANCE (SECTION 11.1)
ON ARE IDENTIFIED IN THE TMDL, THE ADDITIONAL BMPS IN SECTION 23 MUST BE ARGE POINTS.	DESCRIBE PROCEDURES TO ROUTINELY INSPECT THE CONSTRUCTION SITE: • ONCE EVERY SEVEN (7) DAYS DURING ACTIVE CONSTRUCTION AND • WITHIN 24 HOURS AFTER A DAINEAU EVENT OPEATER THAN 0.5 INCHES IN 24 HOURS, AND WITHIN (7) DAYS AFTER THAT
H SPAWNING TIMEFRAMES	• WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS, AND WITHIN (7) DATS AFTER THAT INSPECTIONS MUST INCLUDE STABILIZED AREAS, EROSION PREVENTION, AND SEDIMENT CONTROL BMP'S AND INFILTRATION ARE
	INSPECTOR WILL FOLLOW REQUIREMENTS SPECIFIED ABOVE AND FILL OUT "ATTACHMENT B - CONSTRUCTION STORMWATER INS 1. DESCRIBE PRACTICES FOR STORAGE OF BUILDING PRODUCTS WITH A POTENTIAL TO LEACH POLLUTANTS TO MINIMIZE EXPOS ALL BUILDING PRODUCTS WILL BE SEALED AND STORED IN A MANNER TO MINIMIZE EXPOSURE
	2. DESCRIBE PRACTICES FOR STORAGE OF PESTICIDES, HERBICIDES, INSECTICIDES, FERTILIZERS, TREATMENT CHEMICAL, AND L ALL LANDSCAPE TREATMENT CHEMICALS WILL BE SEALED AND STORED IN A MANNER TO MINIMIZED EXPOSURE
ROUGH INFILTRATION UNLESS PROHIBITED DUE TO DN SYSTEM, WET SEDIMENTATION BASIN, REGIONAL	3. DESCRIBE PRACTICES FOR STORAGE AND DISPOSAL OF HAZARDOUS MATERIALS OR TOXIC WASTE (E.G., OIL, FUEL, HYDRAULIU WOOD PRESERVATIVE, ADDITIVES, CURING COMPOUNDS, AND ACIDS) ACCORDING TO MINN. R. CH. 7045, INCLUDING RESTRICTED
	<ul> <li>4. DESCRIBE COLLECTION, STORAGE AND DISPOSAL OF SOLID WASTE IN COMPLIANCE WITH MINN. R. CH. 7035:</li> <li>ALL CONSTRUCTION DEBRIS AND SOLID WASTER WILL BE APPROPRIATELY DISPOSED OF OFF SITE ACCORDING TO LOCAL AND ST</li> </ul>
CH METHOD.	5. DESCRIBE MANAGEMENT OF PORTABLE TOILETS TO PREVENT TIPPING AND DISPOSAL OF SANITARY WASTES IN ACCORDANCE SANITARY AND SEPTIC SERVICES WILL BE PROVIDED TO WORKERS WITH PORTABLE FACILITIES MAINTAINED AS NEEDED BY THE 6. DESCRIBE SPILL PREVENTION AND RESPONSE FOR FLIFLING AND FOURPMENT OR VEHICLE MAINTENANCE.
	EMPLOYEES WILL BE TRAINED IN TECHNIQUES DESIGNED TO MINIMIZE SPILLS. VEHICLES AND EQUIPMENT SHALL BE CHECKED FOR THE PROPERTY OF THE PROPERTY. THE PROPERTY OF THE PROPERTY OF
	ALL CONSTRUCTION VEHICLES SHALL BE WASHED OFF SITE 8. DESCRIBE STORAGE AND DISPOSAL OF CONCRETE AND OTHER WASHOUT WASTES SO THAT WASTES DO NOT CONTACT THE G ALL CONCRETE WASHOUT SHALL OCCUR OFF SITE
ADD, ON ONT OFFICIDEND, WILL DE INFELMENTED TO	
TO THE PERMANENT STORMWATER MANAGEMENT	FINAL STABILIZATION (25.22)
	1. DESCRIBE METHOD OF FINAL STABILIZATION (PERMANENT COVER) OF ALL DISTURBED AREAS: FINAL STABILIZATION WILL BE ACCOMPLISHED WITH PAVEMENT, SOD AND LANDSCAPE MATERIALS

AL STABILIZATION WILL BE ACCOMPLISHED WITH PAVEMENT, SOD AND LANDSCAPE MATERIALS. 2. DESCRIBE METHODS USED TO CLEAN ALL STORMWATER TREATMENT SYSTEMS AND STORMWATER CONVEYANCE SYSTEMS OF ACCUMULATED SEDIMENT (25.22): CLEANING OF STORMWATER TREATMENT SYSTEMS SHALL BE DONE BY HAND SUCH AS THE USE OF A SHOVEL. 3. DESCRIBE METHODS FOR REMOVING ALL TEMPORARY SYNTHETIC EROSION PREVENTION AND SEDIMENT CONTROL BMP'S: REMOVAL OF TEMPORARY SYNTHETIC EROSION PREVENTION AND SEDIMENT CONTROL BMP'S CAN BE DONE BY HAND AND PROPERLY DISPOSED OF.

# ENTED ON THIS SITE DURING CONSTRUCTION:

DING, AND OTHER CONSTRUCTION PRACTICES TO MINIMIZE EROSION. DELINEATE AREAS NOT TO BE

CHES, HYDRAULIC TACKIFIERS, EROSION BLANKETS, ETC.): RE REQUIRED, WITH PERMANENT COVER BEING EITHER SOD OR LANDSCAPE FEATURES. ELS AND AT CHANNEL OUTLETS (E.G., CHECK DAMS, SEDIMENT TRAPS, RIP RAP, ETC.):

TERS (NOTE THAT MULCH, HYDRAULIC SOIL TACKIFIERS, HYDROMULCHES, ETC. ARE NOT ACCEPTABLE

HE SITE PRIOR TO OFFSITE DISCHARGE, UNLESS INFEASIBLE (E.G., DIRECT STORMWATER FLOW TO

ETTED PERIMETER WITHIN 200 LINEAL FEET OF THE PROPERTY EDGE OR POINT OF DISCHARGE TO INNECTING TO SURFACE WATERS AND CONSTRUCTION IN THAT PORTION OF THE DITCH HAS ORK IN WATER RESTRICTIONS". ALL OTHER REMAINING PORTIONS OF THE TEMPORARY OR PERMANENT PROPERTY EDGE AND CONSTRUCTION IN THAT AREA HAS TEMPORARILY OR PERMANENTLY CEASED. HE SITE DURING CONSTRUCTION (E.G., CONSTRUCTION PHASING, MINIMIZING SOIL DISTURBANCE,

POSURE WHEN POSSIBLE.

IAINTAINING A 100-FOOT BUFFER ZONE OR INSTALLING REDUNDANT BMPS FOR PORTIONS OF THE SITE

T THE SITE TO PROTECT PLANNED FILTRATION AREAS

RING CONSTRUCTION TO MINIMIZE SEDIMENT IMPACTS TO SURFACE WATERS, INCLUDING CURB AND

ERMS) TO BE INSTALLED TO KEEP RUNOFF AWAY FROM PLANNED INFILTRATION AREAS WHEN

UNLESS INFEASIBLE) AT THIS SITE:

DISTURBANCE AND A SURFACE WATER OR PLANS FOR REDUNDANT SEDIMENT CONTROLS IF A BUFFER

RB WITHIN 200 FEET OF WETLAND. LOCCULANTS, ETC.) SEE PART 9.18 OF THE PERMIT:

ACRES DRAINING TO A COMMON LOCATION OR 5 ACRES OR MORE IF THE SITE IS WITHIN 1 MILE OF A

ISTRUCTED IN ACCORDANCE WITH SECTION 14. IEN BE CONVERTED TO PERMANENT FILTRATIONS BASINS.

WATER AND METHOD TO PREVENT EROSION OR SCOUR OF DISCHARGE POINTS (SEE 10.2 THROUGH

JDES THE INSTALLATION OF ANY OF THE PERMANENT STORMWATER MANAGEMENT PRACTICES. S REQUIRED PRIOR TO DISCHARGE TO SURFACE WATERS. DESCRIBE WHAT OTHER TREATMENT

DUS POSITIVE SLOPE TO A SPECIAL WATERS, AND TEMPORARY SEDIMENT BASINS FOR AREAS THAT

THE PRE AND POST PROJECT RUNOFF RATE AND VOLUME FROM THE 1, AND 2-YEAR 24-HOUR

VCREASE IN THE TEMPERATURE OF TROUT STREAM RECEIVING WATERS RESULTING IN THE 1, AND

VIFICANT ADVERSE IMPACTS TO A WETLAND (E.G., CONVERSION OF A NATURAL WETLAND TO A

NCE WITH SECTION 22 OF THE PERMIT.

OL BMP'S AND INFILTRATION AREAS. NSTRUCTION STORMWATER INSPECTION CHECKLIST" OLLUTANTS TO MINIMIZE EXPOSURE TO STORMWATER:

RS, TREATMENT CHEMICAL, AND LANDSCAPE MATERIALS:

ZED EXPOSURE ASTE (E.G., OIL, FUEL, HYDRAULIC FLUIDS, PAINT SOLVENTS, PETROLEUM-BASED PRODUCTS, CH. 7045, INCLUDING RESTRICTED ACCESS AND SECONDARY CONTAINMENT: AND STATE LAWS.

N. R. CH. 7035: TE ACCORDING TO LOCAL AND STATE LAWS

TARY WASTES IN ACCORDANCE WITH MINN. R. CH. 7040:

AINTAINED AS NEEDED BY THE PROVIDER. INTENANCE:

QUIPMENT SHALL BE CHECKED FOR LEAKS. HIBITING ENGINE DEGREASING ON THE SITE:

ASTES DO NOT CONTACT THE GROUND:

![](_page_25_Picture_79.jpeg)

	PLIANCE; IT I	S THE RESPO	NSIBILITY C
ACILITY INFORMATION BITE NAME:			
BITE ADDRESS:     PERMIT NUMBER:       CITY:     STATE:     ZIP CODE:			
NSPECTOR NAME: PHONE NUMBER: DRGANIZATION/COMPANY MAN:			Y
S THE INSPECTOR CERTIFIED IN SEDIMENT AND EROSION CONTROL AND IS IT DOCUMENTED IN THE STORMWATER POLLUTION S THIS INSPECTION ROUTINE OR IN RESPONSE TO A STORM EVENT:	I PREVENTIO	N PLAN (SWPI	PP)?
7 DAY RAIN			
RAINFALL AMOUNT (IF APPLICABLE):	Y	Ν	
S SITE WITHIN ONE AERIAL MILE OF SPECIAL OR IMPAIRED WATER THAT CAN POTENTIALLY RECEIVE DISCHARGE FROM THE SI F YES, FOLLOW SECTION 23 AND OTHER APPLICABLE PERMIT REQUIREMENTS	TE?		
INTE: IF N/A IS SELECTED AT ANY TIME, SPECIEV WHY IN THE COMMENT AREA FOR THAT SECTION			
ROSION CONTROL REQUIREMENT (SECTION 8.1)			
ARE SOILS STABILIZED WHERE NO CONSTRUCTION ACTIVITY HAS OCCURRED FOR 14 DAYS (INCLUDING STOCKPILES)?	Y	N	N/A
(7 DAYS WHERE APPLICABLE, OR 24 HOURS DURING MINNESOTA DEPARTMENT OF NATURAL RESOURCES [DNR] FISH SPAWNING RESTRICTIONS)			
<ul> <li>HAS THE NEED TO DISTURB STEEP SLOPES BEEN MINIMIZED?</li> <li>IF STEEP SLOPES ARE DISTURBED, ARE STABILIZATION PRACTICES DESIGNED FOR STEEP SLOPES USED?</li> </ul>			
ALL DITCHES/SWALES STABILIZED 200° BACK FROM POINT OF DISCHARGE OR PROPERTY EDGE WITHIN 24 HOURS? (MULCH HYDROMULCH, TACKIFIER, OR SIMILAR BEST MANAGEMENT PRACTICES [BMPS] ARE NOT ACCEPTABLE IN DITCHES/SWALES	, <u> </u>		
IF THE SLOPE IS GREATER THAN 2%)ARE APPROPRIATE BMP'S INSTALLED PROTECTING INLETS/OUTLETS?     DO PIPE OUTLETS HAVE ENERGY DISSIPATION (WITHIN 24 HOURS OF CONNECTION)?			
. IS CONSTRUCTION PHASING BEING FOLLOWED IN ACCORDANCE WITH THE SWPPP? . ARE AREAS NOT TO BE DISTURBED MARKED OFF (FLAGS, SIGNS, ETC.)?			
COMMENTS:			
	Y	N	N/A
ARE APPROPRIATE BMPS INSTALLED PROTECTING INLETS, CATCH BASINS, AND CULVERT INLETS?			
3.1. IF NO, HAVE REDUNDANT SEDIMENT CONTROLS BEEN INSTALLED?			
<ul> <li>. IS THERE A TEMPORARY SEDIMENT BASIN ON SITE, AND IS IT BUILT AS REQUIRED IN SECTION 14 OF THE PERMIT?</li> <li>. IS SOIL COMPACTION BEING MINIMIZED WHERE NOT DESIGNED FOR COMPACTION?</li> </ul>			
IS CORE COMPACTION DEING MICHAELED WHERE NOT DEGICINED FOR COMPACTION			
COMMENTS			
ARE ALL PREVIOUSLY STABILIZED AREAS MAINTAINING GROUND COVER? ARE PERIMETER CONTROLS MAINTAINED AND FUNCTIONING PROPERLY, SEDIMENT REMOVED WHEN ONE-HALF FULL? ARE INLET PROTECTION DEVICES MAINTAINED AND ADEQUATELY PROTECTING INLETS?	Y	N	N/A
A DE THE TEMPODADY CEDIMENT DACING DEING MAINTAINED AND EUNCTIONING DDODEDI V2			<u> </u>
ARE VEHICLE TRACKING BMPS AT SITE EXISTS IN PLACE AND MAINTAINED AND FUNCTIONING PROPERLY?			
<ul> <li>ARE THE TEMPORART SEDIMENT BASINS BEING MAINTAINED AND FUNCTIONING PROPERLY?</li> <li>ARE VEHICLE TRACKING BMPS AT SITE EXISTS IN PLACE AND MAINTAINED AND FUNCTIONING PROPERLY?</li> <li>IS ALL TRACKED SEDIMENT BEING REMOVED WITHIN 24 HOURS?</li> <li>HAVE ALL SURFACE WATERS, DITCHES, CONVEYANCES, AND DISCHARGE POINTS BEEN INSPECTED?</li> <li>WERE ANY DISCHARGES SEEN DURING THIS INSPECTION (I.E., SEDIMENT, TURBID WATER, OR OTHERWISE)?</li> <li>IF YES, RECORD THE LOCATION OF ALL POINTS OF DISCHARGE. PHOTOGRAPH AND DESCRIBE THE DISCHARGE (SIZE, COLOR DESCRIBE HOW THE DISCHARGE WILL BE ADDRESSED. WAS THE DISCHARGE A SEDIMENT DELTA? IF YES, WILL THE DELTA BE</li> </ul>	, ODOR, FOA	M, OIL SHEEN	, TIME, ETC
<ul> <li>ARE THE TEMPORARY SEDIMENT BASING BEING MAINTAINED AND FONCTIONING PROPERLY?</li> <li>ARE VEHICLE TRACKING BMPS AT SITE EXISTS IN PLACE AND MAINTAINED AND FUNCTIONING PROPERLY?</li> <li>IS ALL TRACKED SEDIMENT BEING REMOVED WITHIN 24 HOURS?</li> <li>HAVE ALL SURFACE WATERS, DITCHES, CONVEYANCES, AND DISCHARGE POINTS BEEN INSPECTED?</li> <li>WERE ANY DISCHARGES SEEN DURING THIS INSPECTION (I.E., SEDIMENT, TURBID WATER, OR OTHERWISE)?</li> <li>IF YES, RECORD THE LOCATION OF ALL POINTS OF DISCHARGE. PHOTOGRAPH AND DESCRIBE THE DISCHARGE (SIZE, COLOR DESCRIBE HOW THE DISCHARGE WILL BE ADDRESSED. WAS THE DISCHARGE A SEDIMENT DELTA? IF YES, WILL THE DELTA BE IN ACCORDANCE WITH ITEM 11.5 OF THE PERMIT?</li> </ul>	, ODOR, FOA	M, OIL SHEEN	, TIME, ETC
<ul> <li>ARE THE TEMPORART SEDIMENT BASING BEING MAINTAINED AND FUNCTIONING PROPERTY?</li> <li>ARE VEHICLE TRACKING BMPS AT SITE EXISTS IN PLACE AND MAINTAINED AND FUNCTIONING PROPERTY?</li> <li>IS ALL TRACKED SEDIMENT BEING REMOVED WITHIN 24 HOURS?</li> <li>HAVE ALL SURFACE WATERS, DITCHES, CONVEYANCES, AND DISCHARGE POINTS BEEN INSPECTED?</li> <li>WERE ANY DISCHARGES SEEN DURING THIS INSPECTION (I.E., SEDIMENT, TURBID WATER, OR OTHERWISE)?</li> <li>IF YES, RECORD THE LOCATION OF ALL POINTS OF DISCHARGE. PHOTOGRAPH AND DESCRIBE THE DISCHARGE (SIZE, COLOR DESCRIBE HOW THE DISCHARGE WILL BE ADDRESSED. WAS THE DISCHARGE A SEDIMENT DELTA? IF YES, WILL THE DELTA BE IN ACCORDANCE WITH ITEM 11.5 OF THE PERMIT?</li> </ul>	, ODOR, FOA	M, OIL SHEEN	, TIME, ETC
ARE THE TEMPORART SEDIMENT BASINS BEING MAINTAINED AND FUNCTIONING PROPERLY?     ARE VEHICLE TRACKING BMPS AT SITE EXISTS IN PLACE AND MAINTAINED AND FUNCTIONING PROPERLY?     IS ALL TRACKED SEDIMENT BEING REMOVED WITHIN 24 HOURS?     HAVE ALL SURFACE WATERS, DITCHES, CONVEYANCES, AND DISCHARGE POINTS BEEN INSPECTED?     WERE ANY DISCHARGES SEEN DURING THIS INSPECTION (I.E., SEDIMENT, TURBID WATER, OR OTHERWISE)?  IF YES, RECORD THE LOCATION OF ALL POINTS OF DISCHARGE. PHOTOGRAPH AND DESCRIBE THE DISCHARGE (SIZE, COLOR DESCRIBE HOW THE DISCHARGE WILL BE ADDRESSED. WAS THE DISCHARGE A SEDIMENT DELTA? IF YES, WILL THE DELTA BEIN ACCORDANCE WITH ITEM 11.5 OF THE PERMIT?  OLLUTION PREVENTION (SECTION 12)  ARE ALL CONSTRUCTION MATERIALS THAT CANLE EACH POLY UTANTS UNDER COVER OR PROTECTED?	, ODOR, FOA RECOVERE		, TIME, ETC /EN DAYS A
ARE THE TEMPORARY SEDIMENT BASING BEING MAINTAINED AND FOUR TOWING PROPERLY?     ARE VEHICLE TRACKING BMPS AT SITE EXISTS IN PLACE AND MAINTAINED AND FUNCTIONING PROPERLY?     IS ALL TRACKED SEDIMENT BEING REMOVED WITHIN 24 HOURS?     HAVE ALL SURFACE WATERS, DITCHES, CONVEYANCES, AND DISCHARGE POINTS BEEN INSPECTED?     WERE ANY DISCHARGES SEEN DURING THIS INSPECTION (I.E., SEDIMENT, TURBID WATER, OR OTHERWISE)?      IF YES, RECORD THE LOCATION OF ALL POINTS OF DISCHARGE. PHOTOGRAPH AND DESCRIBE THE DISCHARGE (SIZE, COLOR     DESCRIBE HOW THE DISCHARGE WILL BE ADDRESSED. WAS THE DISCHARGE A SEDIMENT DELTA? IF YES, WILL THE DELTA BI     IN ACCORDANCE WITH ITEM 11.5 OF THE PERMIT?      OULLUTION PREVENTION (SECTION 12)      ARE ALL CONSTRUCTION MATERIALS THAT CAN LEACH POLLUTANTS UNDER COVER OR PROTECTED?      ARE HAZARDOUS MATERIALS BEING PROPERLY STORED?      ARE APPROPRIATE BEING AND MAINTENANCE OF	  , ODOR, FOA E RECOVERE   		, TIME, ETC (EN DAYS A
ARE THE TEMPORART SEDIMENT BASINS BEING MAINTAINED AND FONCTIONING PROPERLY?     ARE VEHICLE TRACKING BMPS AT SITE EXISTS IN PLACE AND MAINTAINED AND FUNCTIONING PROPERLY?     IS ALL TRACKED SEDIMENT BEING REMOVED WITHIN 24 HOURS?     HAVE ALL SURFACE WATERS, DITCHES, CONVEYANCES, AND DISCHARGE POINTS BEEN INSPECTED?     WERE ANY DISCHARGES SEEN DURING THIS INSPECTION (I.E., SEDIMENT, TURBID WATER, OR OTHERWISE)?      IF YES, RECORD THE LOCATION OF ALL POINTS OF DISCHARGE. PHOTOGRAPH AND DESCRIBE THE DISCHARGE (SIZE, COLOR     DESCRIBE HOW THE DISCHARGE WILL BE ADDRESSED. WAS THE DISCHARGE A SEDIMENT DELTA? IF YES, WILL THE DELTA BI     IN ACCORDANCE WITH ITEM 11.5 OF THE PERMIT?      OLLUTION PREVENTION (SECTION 12)      ARE ALL CONSTRUCTION MATERIALS THAT CAN LEACH POLLUTANTS UNDER COVER OR PROTECTED?      ARE ALL CONSTRUCTION MATERIALS THAT CAN LEACH POLLUTANTS UNDER COVER OR PROTECTED?      ARE APPROPRIATE BMPS BEING USED TO PREVENT DISCHARGES ASSOCIATED WITH FUELING AND MAINTENANCE OF     EQUIPMENT OR VEHICLES?      ARE ALL SOLID WASTES BEING PROPERLY CONTAINED AND DISPOSED OF?	 , ODOR, FOA E RECOVERE	N	
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ARE VERICLE TRACKING BURGENT DASING BEING NUMBER AND PARCHONING PROPERLY?     ARE VERICLE TRACKING BURGEAT STIE EXISTS IN PLACE AND MAINTAINED AND FUNCTIONING PROPERLY?     IS ALL TRACKED SEDIMENT BEING REMOVED WITHIN 24 HOURS?     HAVE ALL SURFACE WATERS, DITCHES, CONVEYANCES, AND DISCHARGE POINTS BEEN INSPECTED?     WERE ANY DISCHARGES SEEN DURING THIS INSPECTION (I.E., SEDIMENT, TURBID WATER, OR OTHERWISE)?     IF YES, RECORD THE LOCATION OF ALL POINTS OF DISCHARGE, PHOTOGRAPH AND DESCRIBE THE DISCHARGE (SIZE, COLOR     DESCRIBE HOUTH DISCHARGES SEEN DURING THIS INSPECTION, (I.E., SEDIMENT, TURBID WATER, OR OTHERWISE)?     IF YES, RECORD THE LOCATION OF ALL POINTS OF DISCHARGE, PHOTOGRAPH AND DESCRIBE THE DISCHARGE (SIZE, COLOR     DESCRIBE HOUTH DISCHARGES WILL BE ADDRESSED, WAS THE DISCHARGE A SEDIMENT DELTA? IF YES, WILL THE DELTA BI     IN ACCORDANCE WITH DISCHARGES WILL BE ADDRESSED, WAS THE DISCHARGE A SEDIMENT DELTA? IF YES, WILL THE DELTA BI     IN ACCORDANCE WITH DISCHARGES AND STATE AND DESCRIBE THE DISCHARGE (SIZE, COLOR     DESCRIBE HOUTH DISCHARGES ASSOCIATED WITH FUELING AND MAINTENANCE OF     OF ARE AALL CONSTRUCTION MATERIALS THAT CAN LEACH POLLUTANTS UNDER COVER OR PROTECTED?     ARE AALL CONSTRUCTION MATERIALS BEING PROPERLY STORED?     ARE APPROPRIATE BURDS BEING PROPERLY CONTINUED AND DISPOSED OF?     ARE APPROPRIATE BURDS BEING PROPERLY CONTINUED AND DISPOSED OF?     ARE APPROPRIATE MATERIAL WASHOUT AREA ON SITE AND IS IT BEING USED?     IS THE CONCRETE WASHOUT AREA AND SHOLD TAREA AND SITE AND IS IT BEING USED?     IS THE CONCRETE WASHOUT AREA MATERIAL WASHOUT AREAS PROPERLY MAINTAINED?     SOMMENTS:     STHE OF COLORED AND IMPLEMENTED ON SITE, AND AMENDED AS NEEDED?     IS AND DEWRETRIG ORECORDS, AND TRAINING DOCUMENTATION LOCATED ON THE CONSTRUCTION     SITE. OR CAN IT BE MADE AVAILABLE WITHIN 72 HOURS?     HAS THE SWPPP, INSPECTION RECORDS, AND TRAINING DOCUMENTATION LOCATED ON THE CONSTRUCTION     SITE. OF CAN IT BE MADE AVAILABLE WITHIN 72 HOURS?     HAS THE SWPPP, INSPECTION			
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ARE THE LEBRORARY SECTION SECTION RECORDS, SERIO WARN ANIMED AND FUNCTIONING PROPERLY?     ARE VENCES TRACKING BMPS AT SITE EXEMPLICE AND MAINTAINED AND FUNCTIONING PROPERLY?     IS ALL TRACKED SEDMENT BEING REMOVED WITHIN 24 HOURS?     HAVE ALL SURFACE WATERS, DITCHES, CONVEYANCES, AND DISCHARGE POINTS BEEN INSPECTED?     IF YES, RECORD THE LOCATION OF ALL POINTS OF DISCHARGE. PHOTOGRAPH AND DESCRIBE THE DISCHARGE (SIZE, COLOR     DESCRIBE HOW THE DISCHARGE WILL BE ADDRESSED. WAS THE DISCHARGE A SEDIMENT DELTA? IF YES, WILL THE DELTA B     IN ACCORDANCE WITH ITEM 11.5 OF THE PERMIT?     OULUTION PREVENTION (SECTION 12)     ARE ALL CONSTRUCTION MATERIALS THAT CAN LEACH POLLUTANTS UNDER COVER OR PROTECTED?     ARE ALL CONSTRUCTION MATERIALS BEING PROPERLY STORED?     ARE ALL CONSTRUCTION MATERIALS BEING PROPERLY STORED?     ARE ALL CONSTRUCTION MATERIALS BEING PROPERLY STORED?     ARE ALL SOUND WATERIALS BEING PROPERLY CONTAINED AND LISPOSED OF?     ARE ALL SOUND WATER ALLS BEING PROPERLY CONTAINED AND DISPOSED OF?     IS THER A CONCRETE ONLY AREA MARKED WITH A SIGN?     ARE TAL SOUND WASTES BEING PROPERLY CONTAINED AND DISPOSED OF?     IS THER ACCORCRETE ONLY AND MARKED WITH A SIGN?     ARE THE CONCRETE ONLY AREA MARKED WITH A SIGN?     ARE THE CONCRETE ONLY AREA MARKED WITH A SIGN?     ARE THE CONCRETE ONLY AREA MARKED WITH A SIGN?     ARE THE CONCRETE ONLY AREA MARKED WITH A SIGN?     ARE THE CONCRETE ONLY AREA MARKED WITH A SIGN?     ARE THE CONCRETE ONLY AREA MARKED WITH A SIGN?     ARE THE CONCRETE ONLY AREA MARKED WITH A SIGN?     ARE THE CONCRETE ONLY AREA MARKED WITH A SIGN?     ARE THE CONCRETE ONLY ANALYMENT ON DISCHARGE ONLY ANIMATINED?      OWMENTS:      DIFFER CONCRETE ONLY AREA MARKED WITH A SIGN?     ARE THE CONCRETE ONLY AREA MARKED WITH A SIGN?     ARE THE SOURCE THE AND THE MARKED WITH A SIGN?     HAS THE SIGN DUSE TO THE SITE AND THE DISCHARGE IS NOT     CAUSING ERGOIN OR SCOUR?      WILL A PERMANENT STORMARE MANAGEMENT SYSTEM BE CREATED FOR THIS PROJECT IF REQUIRED AND IN      ACCORDANC			
ARE VEHICLE TRACKING BMPS AT SITE EXSITS IN PLACE AND MAINTAINED AND FUNCTIONING PROPERLY?     ARE VEHICLE TRACKING BMPS AT SITE EXSITS IN PLACE AND MAINTAINED AND FUNCTIONING PROPERLY?     IS ALL TRACKED SEDMENT BEING REMOVED WITHIN 24 HOURS?     HAVE ALL SURFACE WATERS, DITCHES, CONVEYTANCES, AND DISCHARGE POINTS BEEN INSPECTED?     WERE ANY DISCHARGES SEEN DURING THIS INSPECTION (LE, SEDMENT, TURBID WATER, OR OTHERWISE)?      IF YES, RECORD THE LOCATION OF ALL POINTS OF DISCHARGE. PHOTOGRAPH AND DESCRIBE FUNCTION OF ALL POINTS OF DISCHARGE (SEE, COLOR     DESCRIBE HOW THE DISCHARGE WILL BE ADDRESSED. WAS THE DISCHARGE A SEDIMENT DELTA? IF YES, WILL THE DELTA B     IN ACCORDANCE WITH HEM 11.5 OF THE PERMIT?     SOMMENTS:      OULUTION PREVENTION (SECTION 12)      ARE ALL CONSTRUCTION MATERIALS THAT CAN LEACH POLLUTANTS UNDER COVER OR PROTECTED?     ARE APRONRATE MINS BEING PROPERLY STORED?     ARE APRONRATE MINS BEING PROPERLY STORED?     ARE APRONRATE MINS BEING PROPERLY STORED?     ARE APRONRATE MINS BEING PROPERLY CONTAINED AND DISPOSED OF?     IS THERE ACORCRETE/OTHER MATERIAL WASHOUT AREA AN SITE AND BIT BEING USED?     IS THERE ACORCRETE/OTHER MATERIAL WASHOUT AREA AND SITE AND BIT BEING USED?     IS THERE ACORCRETE/OTHER MATERIAL WASHOUT AREA AND SITE AND BIT BEING USED?     IS THERE ACORCRETE/OTHER MATERIAL WASHOUT AREA AND SITE AND BIT BEING USED?     IS THERE ACORCRETE/OTHER MATERIAL WASHOUT AREA AND SITE AND BIT BEING USED?     IS THERE ACORCRETE/OTHER MATERIAL WASHOUT AREA AND SITE AND BIT BEING USED?     IS THE OROCRETE/OTHER MATERIAL WASHOUT AREA AND SITE AND BIT BEING USED?     IS THERE ACORCRETE/OTHER MATERIAL WASHOUT AREA AND SITE AND BIT BEING USED?     IS THERE ACORCRETE/OTHER MATERIAL WASHOUT AREA AND SITE AND THE SITE AND THE CONSTRUCTION     SITE OR CONCRETE/OTHER MATERIAL WASHOUT AREA SPROPERLY MAINTAINED?     MANTER CANCER THE MATERIAL WASHOUT AREA SPROPERLY MAINTAINED?     IS AND DEWRETINE ON SITE?     IS AND OWNER THE MATERIAL WASHOUT AREA SPROPERLY MAINTAINED?     IS AND OWNER			
ARE UPINE DEPENDENT ADDRESS A SERIE MANA VALUE AND ADDRESS OF			
ARE UPIE LIBER CARGE STREET AND AND TRANSPORTED AND FUNCTIONING PROPERLY     ARE VENICLE TRACKING BURG AT STREE XISTS IN PLACE AND MUTTAINED AND FUNCTIONING PROPERLY?     IS ALL TRACKED SEDMENT BEING REMOVED WITHIN 24 HOURS?     WERE ANY DISCHARGE SEEN DURING THIS INSPECTION (I.E., SEDMENT, TURIND WATER, OR OTHERWISE)?     WERE ANY DISCHARGE SEEN DURING THIS INSPECTION (I.E., SEDMENT, TURIND WATER, OR OTHERWISE)?     WERE ANY DISCHARGE WILL BE ADDRESSED. WAS THE DISCHARGE A SEDMENT DELTAT IP YES, WILL THE DESCHARGE WILL BE ADDRESSED. WAS THE DISCHARGE A SEDMENT DELTAT IP YES, WILL THE DESCHARGE WILL BE ADDRESSED. WAS THE DISCHARGE A SEDMENT DELTAT IP YES, WILL THE DELTA BI     N ACCORDANCE WITH ITEM 11.5 OF THE PERMIT?     OULUTION PREVENTION (SECTION 12)     ARE ALL CONSTRUCTION MATERIALS THAT CAN LEACH POLLUTANTS UNDER COVER OR PROTECTED?     ARE HAZAROOUS MATERIALS BEING PROPERLY STORED?     ARE ALL CONSTRUCTION MATERIALS THAT CAN LEACH POLLUTANTS UNDER COVER OR PROTECTED?     ARE HAZAROOUS MATERIALS BEING PROPERLY STORED?     ARE APPROPRINT BURS BEING PROPERLY STORED?     ARE APPROPRINT BURS BEING PROPERLY STORED?     ARE APPROPRINTE BURS BEING PROPERLY STORED?     ARE APPROPRINTE BURS BEING PROPERLY CONTAINED AND DISPOSED OF?     IS THE CONCRETE WASHEDING USED TO PREVENT DISCHARGES ASSOCIATED WITH FUELING AND MAINTENANCE OF     EOURMENT OR VEHICLES?     MAE APPROPROPERT WASHEND USA AREA ON SITE AND SITE AND IS IT BEING USED?     IS THE CONCRETE WASHED WITH A SIGN?     ARE THE CONCRETE WASHED WITH A SIGN?     ARE THE CONCRETE WASHED WATER ALW ASHOUT AREAS PROPERLY MAINTAINED?     OWMENTS:      THER     IS A COPY OF THE SWPPP, INSPECTION RECORDS, AND TRAINING DOCUMENTATION LOCATED ON THE CONSTRUCTION     SITE, CONCRETE WASHED WITH A SIGN?     IS ANY DEWATERIA MADE AVAILABLE WITHIN 72 HOURS?     HAS THE SWPPP BERN FOLLOWED AND IMPERTIONS SURFACE)?     IS ANY DEWATERING MODEL AND MERENTED SYSTEM BE CREATED FOR THIS PROJECT IF REQUIRED AND THE DISCHARGE IS NOT     CANCEL WASHOUT DOCUMED AND MER THAT LEARN			

MINNESOTA POLLUTION CONTROL AGENCY.

### S/SDS) CONSTRUCTION STORMWATER PERMIT (PERMIT) ISSUED ON THE PERMITTEE(S) TO READ AND UNDERSTAND THE PERMIT

# ATTACHMENT C: MAINTENANCE PLAN FOR PERMANENT STORM WATER TREATMENT SYSTEM

ATTACHMENT C - CHAMBER FACILITY MANAGEMENT SCHEDULE

- 1. ALL GRIT CHAMBERS, SUMP CATCH BASINS, SUMP MANHOLES, OUTLET STRUCTURES, CULVERTS, OUTFALL STRUCTURES AND OTHER STORM WATER FACILITIES FOR WHICH MAINTENANCE REQUIREMENTS ARE NOT OTHERWISE SPECIFIED HEREIN MUST BE INSPECTED IN THE SPRING, SUMMER AND FALL OF EACH YEAR. WITHIN 30 DAYS OF THE INSPECTION DATE, ALL ACCUMULATED SEDIMENT AND DEBRIS MUST BE REMOVED SUCH THAT EACH STORM WATER FACILITY OPERATES AS DESIGNED AND PERMITTED. CONTRIBUTING DRAINAGE AREAS MUST BE KEPT CLEAR OF LITTER AND VEGETATIVE DEBRIS, INFLOW PIPES AND OVERFLOW SPILLWAYS KEPT CLEAR, INLET AREAS KEPT CLEAN, AND UNDESIRABLE VEGETATION REMOVED. EROSION IMPAIRING THE FUNCTION OR INTEGRITY OF THE FACILITIES, IF ANY, WILL BE CORRECTED, AND ANY STRUCTURAL DAMAGE IMPAIRING OR THREATENING TO IMPAIR THE FUNCTION OF THE FACILITIES MUST BE REPAIRED.
- 2. VOLUME CONTROL FACILITIES AND CONTRIBUTING DRAINAGE AREAS MUST BE INSPECTED EVERY THREE MONTHS DURING THE OPERATIONAL PERIOD (BETWEEN SPRING SNOWMELT AND FIRST SUBSTANTIAL SNOWFALL) AND MONITORED AFTER RAINFALL EVENTS OF 1 INCH OR MORE TO ENSURE THAT THE CONTRIBUTING DRAINAGE AREA IS CLEAR OF LITTER AND DEBRIS, INFLOW PIPES AND OVERFLOW SPILLWAYS ARE CLEAR, INLET AREAS ARE CLEAN, UNDESIRABLE VEGETATION IS REMOVED AND THERE IS NO EROSION IMPAIRING OR THREATENING TO IMPAIR THE FUNCTION OF A FACILITY. IF SEDIMENT HAS ACCUMULATED IN A INFILTRATION FEATURE, WITHIN 30 DAYS OF INSPECTION DEPOSITED SEDIMENTS MUST BE REMOVED, THE INFILTRATION CAPACITY OF THE UNDERLYING SOILS MUST BE RESTORED, AND ANY SURFACE DISTURBANCE MUST BE STABILIZED. INSPECTION MUST ENSURE THAT SEDIMENT TRAPS AND FOREBAYS ARE TRAPPING SEDIMENT AND THAT MORE THAN 50 PERCENT OF THE STORAGE VOLUME REMAINS, THE CONTRIBUTING DRAINAGE AREA IS STABLE (I.E., NO EROSION IS OBSERVED), AND INLETS AND OUTLET/OVERFLOW SPILLWAYS ARE IN GOOD CONDITIONS WITH NO EROSION. MAINTENANCE TECHNIQUES USED MUST PROTECT THE INFILTRATION CAPACITY OF THE PRACTICE BY LIMITING SOIL COMPACTION TO THE GREATEST EXTENT POSSIBLE (E.G., BY USING LOW-IMPACT EARTH-MOVING EQUIPMENT).
- 3. UNDERGROUND STORAGE CHAMBERS MUST BE INSPECTED AT LEAST ONCE A YEAR TO ENSURE THAT ADEQUATE STORAGE CAPACITY REMAINS. CAPACITY WILL BE CONSIDERED INADEQUATE IF SEDIMENT HAS DECREASED THE STORAGE VOLUME BY 50 PERCENT OF ITS ORIGINAL DESIGN VOLUME. ACCUMULATED DEBRIS AND SEDIMENT WILL BE REMOVED, AND INLET AND OUTLET STRUCTURES WILL BE CLEARED OF ANY FLOW IMPEDIMENTS.

PERMIT FOR MORE DETAILS.

ELL AS EROSION PREVENTION AND SEDIMENT CONTROL BMPS UNTIL THE PERMIT AND A NOTICE OF TERMINATION HAS BEEN SUBMITTED TO THE

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