

Applicant: Scott Douglas; Cross View Lutheran Church  
Consultant: Vicki Van Dell; Loucks  
Project: Building Addition and Parking Lot Improvements for Cross View Lutheran Church  
Location: 6646 McCauley Trail: Edina  
Rule(s): 4,5,11 and 12  
Reviewer: BCO

### **General Background & Comments**

The project proposes the construction of a 17,373 square foot building addition (footprint - 9,686 square feet) and parking lot modifications, including a drop-off and circle driveway, for Cross View Lutheran Church located at 6646 McCauley Trail in Edina.

The project site information is:

- Total Site Area: 5.44 acres
- Existing Total Site Impervious Area: 2.88 acres (125,453 square feet)
- Proposed Increase in Site Impervious Area: 13,939 square feet
- New Site Impervious Area: 139,392 square feet
- 11.1% Increase in the site Impervious Area
- Disturbed and Reconstructed Impervious Area: 14,375 square feet
- 11.5% of the Existing Site Impervious Area is to be Disturbed and Replaced
- Total Disturbed Area: 43,124 square feet

The Nine Mile Creek Watershed District's Rule for Redevelopment, Rule 4.2.3, states, if a proposed activity will disturb more than 50% of the existing impervious surface on a parcel or will increase the imperviousness of the parcel by more than 50%, storm water management will apply to the entire project parcel. Otherwise, the storm water requirements will apply only to the disturbed areas and additional impervious area on the parcel. Since the site impervious area is to be increased by 11.1% and 11.5% of the existing site impervious area is to be disturbed and replaced, storm water management is required for the 43,124 square feet of

disturbed area including 28,314 square feet of new, disturbed and reconstructed impervious area.

The District's requirements for both storm water management and erosion and sediment control apply to the project because more than 50 cubic yards of material will be disturbed and 5000 square feet or more surface area disturbed, Rules 4.2.1a and b and 5.2.1a and b.

Volume retention, rate control and water quality management will be provided within two rainwater gardens/infiltration areas and an underground storm water management facility (UGSWMF). The geotechnical information submitted indicates the underlying on site soil as clay (CL). This soil is typically not conducive for volume retention through infiltration and typically precludes retention to the standard in District Rule 4.3.1a. Site limitations resulting from the original church and parking lot construction, which exacerbate the challenge of infiltrating into clay soils, preclude compliance with the standard in Rule 4.3.1. The site therefore qualifies as a Restricted Site under Rule 4.3.2. Rule 4.3.2 requires retention of at least 0.55 inches of runoff from the regulated impervious surface, rate control, on-site, and water quality management complying with the requirements of section 4.3.1b and c of the revised rules.

Silt fence, inlet protection and a rock construction entrance are to be installed to provide erosion control.

#### Exhibits

1. Permit Application dated July 26, 2018.
2. Preliminary Plans submitted July 31, 2018, prepared by Loucks. Final plans dated April 29, 2018 prepared by Loucks.
3. Storm Water Management Report and calculations dated July 27, 2018 and revised April 25, 2019, prepared by Loucks.
4. Geotechnical Report dated October 31, 2018 prepared by Braun Intertec.
5. E-mail correspondence dated August 2 and August 22, 2018, April 22, 2019 and April 30, 2019 summarizing items required to be addressed/submitted for the application to be complete.

The project submittal is complete.

#### **4.0 Stormwater Management**

Stormwater management, volume retention, rate control and water quality management will be provided within two rainwater gardens/infiltration areas and an UGSWMF. There is one discharge point from the site and a comparison of the existing and proposed 2, 10 and 100 year frequency discharges is summarized in the following table:

<b>Frequency</b>	<b>Existing Discharge to the Eastern Storm Sewer c.f.s.</b>	<b>Proposed Discharge to the Eastern Storm Sewer c.f.s.</b>
2 year	4.5	3.0
10 year	7.4	5.8
100 year	12.2	12.1

The applicant has submitted information in support of a finding that the site qualifies as restricted under subsection 4.3.2 of the NMCWD rules. Given the subsurface conditions, as summarized above, the NMCWD engineer concurs that the applicant has demonstrated that if it is not practicable for the applicant to meet the retention standard in 4.3.1a and the site qualifies as restricted. Under 4.3.2a, an infiltration volume of 1,298 cubic feet would be required from the 28,314 square feet of new and disturbed and reconstructed site impervious area using a runoff of 0.55-inches from the impervious area (Rule 4.3.2a). The proposed stormwater facilities will provide 1,330 cubic feet of retention volume and an inundation area of 5,215 square feet with an inundation depth of 0.24 feet. With the soils being a Type D (clay), a maximum depth of 0.24 feet of inundation and an inundation area of 5,408 square feet (5,215 square feet provided) within the storm water management facilities allows for the volume retained to be drawn down within 48 hours, Rule 4.3.1a (ii). In reviewing the plans submitted, it is our determination with the site conditions and the applicant's plans considered, there is sufficient space available for the applicant to practicably expand the footprint area of the UGSWMF to provide the additional 193 square feet for compliance with the 48 hour draw down requirement, Rule 4.3.1a (ii). The areas and volumes of the two rainwater garden/infiltration areas have been maximized with further expansion limited by existing site constraints.

The District's water quality criterion requires a 60% annual removal efficiency for phosphorus and 90% annual removal efficiency for total suspended solids. The results of a MIDS calculator submitted indicate the stormwater management facilities provide an annual removal efficiency of 90.0% for total suspended solids (510 lbs.) and an annual removal efficiency of 76.7% for total phosphorus (1.4 lbs.). Rule 4.3.1c is met.

The geotechnical information submitted indicates that groundwater was encountered at elevation 876.5 M.S.L. The bottom of the lowest stormwater management facility (Pond 7P on the east side of the site) is 884.4 M.S.L., a separation of 7.9 feet. A three (3) foot separation is required between the bottom of an infiltration facility and groundwater.

Rule 4.3.3c states, 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. The following table summarizes the relationship between the flood elevation of the two rainwater gardens/infiltration areas and the UGSWMF with the building low floor elevation and low opening elevation:

Basin	100-year Flood Elevation (MSL)	Building Low Floor Elevation (MSL)	Separation (feet)	Building Low Opening Elevation (MSL)	Separation (feet)
3P	887.1	889.3	2.2	901.8	14.7
7P	885.3	889.3	4.0	901.8	16.5
UGSWMF	896.1	889.3	Appendix 4a-see discussion in paragraph below	901.8	5.7

As an alternate an applicant may site a stormwater management facility relative to a new or reconstructed building at a location in accordance with Appendix 4a, "Low-Floor Elevation Assessment." Referring to Plot 5, Appendix 4A of the District Rules with the depth to groundwater being 12.8 feet below the low floor elevation of the building (elevation 889.3 M.S.L.) and a distance of 30 feet provided between the building and the UGSWMF, the minimum depth to groundwater required is 4 feet. A separation of 12.8 feet will be provided. Rule 4.3.3 is met.

District Rule 4.3.3 states that all new and reconstructed buildings must be constructed such that no opening where surface water can enter the structure is less than two feet above the 100-year high water elevation of an adjacent facility or waterbody. The plan indicates the entrance to the building is at elevation 901.8 M.S.L. As presented in the table above, a separation of 14.7 feet and 16.5 feet will be provided between the high water elevations of the two rainwater gardens/infiltration basins and the low opening of the building and a separation of 5.7 feet between the flood elevation of the UGSWMF and the low opening of the building. This requirement of paragraph 4.3.3 is met.

In accordance with Rule 4.3.1a (i), the pre-treatment of runoff prior to the infiltration area will be provided by a sump manhole within the storm sewer system upstream of the UGSWMF. A method of pre-treatment, such as a Rain Guardian Turret or equivalent, will be required prior to stormwater discharging to rainwater garden/infiltration basin 7P (the eastern basin).

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.

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

The submitted erosion and sediment control plan includes silt fence at the limits of construction, inlet construction and a rock construction entrance at the entryway onto the site. The project contact is Vicki Van Dell, Loucks.

## **11.0 Fees**

Fees for the project are:

Rules 2.0-6.0	\$1,500
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## **12.0 Financial Assurances**

Financial Assurances for the project are:

Rule 4.0 Volume Retention: 5,408 sq. ft. x \$12/sq. ft. = \$64,896	\$64,896
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Chloride Management:	\$5000
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Rule 5: Silt fence: 1,744 L.F. x \$2.50/L.F. = \$4,360	
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Inlet Protection: 1 x \$100/each = \$100	
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Site restoration: 1.0 acres x \$2500/ acre = \$2,500	\$6,960
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Contingency and Administration	\$30,944
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## **Findings**

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

1. Rules 4 and 5 are met.

## **Recommendation**

Approval, contingent upon:

1. General Conditions
2. Financial Assurance in the amount of \$107,800 - \$102,800 for stormwater management, erosion control and site restoration and \$5,000 for compliance with the chloride management requirements.
3. Submission of documentation that a drainage easement over the stormwater-management facilities has been submitted to Edina (4.5.4i), if such easement is required by the city.
4. A receipt showing recordation of a maintenance declaration for the on-site storm water management facilities. A draft of the declaration must be approved by the District prior to recordation.
5. A plan showing pre-treatment of stormwater will be provided prior to discharging to rainwater garden/infiltration basin 7P (the eastern basin) for compliance with Rule 4.3.3.
6. The area provided for volume retention at an inundation depth of 0.24 feet is required to be increased by 193 square feet for compliance with Rule 4.3.1a (ii). This rule requires the inundation volume to be drawn down within 48 hours.

By accepting the permit, when issued, the applicant agrees to the following stipulations:

1. Per Rule 4.5.6, an as-built drawing of the storm water facilities, including a stage-volume relationship in tabular form, for the UGSWMF and the two rainwater garden/infiltration

areas conforming to the design specifications as approved by the District must be submitted.

2. 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 chloride-management plan has been provided and approved by the District's Administrator.
3. For the release of the \$102,800 financial assurance required in Recommendation #2, Rule 12.4.1b requires demonstration and confirmation that the storm water management facilities have been constructed or installed and are functioning as designed and permitted. Verification, through daily observation logs and photographs, must be provided showing the storm water facilities used for volume retention have drawn down within 48 hours from the completion of two 1-inch (approximate) separate rainfall events.

#### Board Action

It was moved by Manager \_\_\_\_\_, seconded by Manager \_\_\_\_\_ to approve permit application No. 2018-102 with the conditions recommended by staff.

**Permit #:** 2018-102  
**Project Name:** Cross View Lutheran Church Building Addition and Parking Lot Improvements – 6646  
McCauley Trail: Edina  
**Approval Date:** May 15, 2019

## General Provisions

1. All temporary erosion control measures shown on the erosion and sedimentation control plans must be installed prior to commencement of surface or vegetation alteration and be maintained until completion of construction and vegetation is established as determined by NMCWD.

If silt fence is used, the bottom flap must be buried and the maximum allowable spacing between posts is 4-foot on center. All posts must be either 2-inch x 2-inch pine, hardwood, or steel fence posts. If hay bales are used, all bales must be staked in place and reinforced on the downstream side with snow fence.

2. All areas altered because of construction must be restored with seed and disced mulch, sod, wood fiber blanket, or be hard surfaced within two weeks after completion of land alteration and no later than the end of the permit period.
3. Upon final stabilization, the permit applicant is responsible for the removal of all erosion control measures installed throughout the project site.
4. At the entryway onto the site, a rock filter dike being a minimum of two feet in height and having maximum side slopes of 4:1 must be constructed. This rock filter dike will enable construction traffic to enter the site and also provide an erosion control facility.
5. If dewatering is required and sump pumps are used, all pumped water must be discharged through an erosion control facility prior to leaving the construction site. Proper energy dissipation must be provided at the outlet of the pump system.
6. The NMCWD must be notified a minimum of 48 hours prior to commencement of construction.
7. The NMCWD, its officers, employees and agents review, comment upon, and approve plans and specifications prepared by permit applicants and their consultants for the limited administrative purpose of determining whether there is reasonable assurance that the proposed project will comply with the regulations and criteria of the NMCWD. The determination of the NMCWD that issuance of this permit is appropriate was made in reliance on the information provided by the applicant.
8. The grant of this permit shall not in any way relieve the permittee, its engineer, or other professional consultants of responsibility, nor shall it make the NMCWD responsible for the technical adequacy of the engineer's or consultant's work. The grant of this permit shall not relieve the permittee from complying with all conditions and requirements of the permit which shall be retained by the permittee with the permit.
9. The issue of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.
10. This permit is permissive only. No liability shall be imposed upon the NMCWD or any of its officers, agents or employees, officially or personally, on account of the granting of this permit or on account of any damage to any person or property resulting from any act or omission of the permittee or any of its agents, employees, or contractors.

11. In all cases where the doing by the permittee of anything authorized by this permit shall involve the taking, using, or damaging of any property, rights or interests of any other person or persons, or of any publicly-owned lands or improvements or interests, the permittee, before proceeding therewith, shall obtain the written consent of all persons, agencies, or authorities concerned, and shall acquire all necessary property, rights, and interest.
12. The permit is transferable only with the approval of the NMCWD (see NMCWD Rule 1.0). The permittee shall make no changes, without written permission previously obtained from the NMCWD, in the dimensions, capacity, or location of any items of work authorized by this permit.
13. The permittee shall grant access to the site at all reasonable times during and after construction to authorized representatives of the NMCWD for inspection of the work authorized by this permit.
14. This permit may be terminated by the NMCWD at any time deemed necessary in the interest of public health and welfare, or for violation of any of the provisions of this permit.
15. Construction work authorized under this permit shall be completed on or before date specified above. The permittee may, in writing, request that the NMCWD extend the time to complete the project in accordance with NMCWD Rule 1.0.





## Permit No.2018-102

Is hereby issued to Scott Douglas, Cross View Lutheran Church, subject to the conditions specified in the attached form:

For a building addition and parking lot improvements for Cross View Lutheran Church located at 6646 McCauley Trail in Edina.

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Jodi Peterson, Chair  
Nine Mile Creek Watershed District

This permit expires on: June 1, 2020

**EROSION CONTROL PLAN**

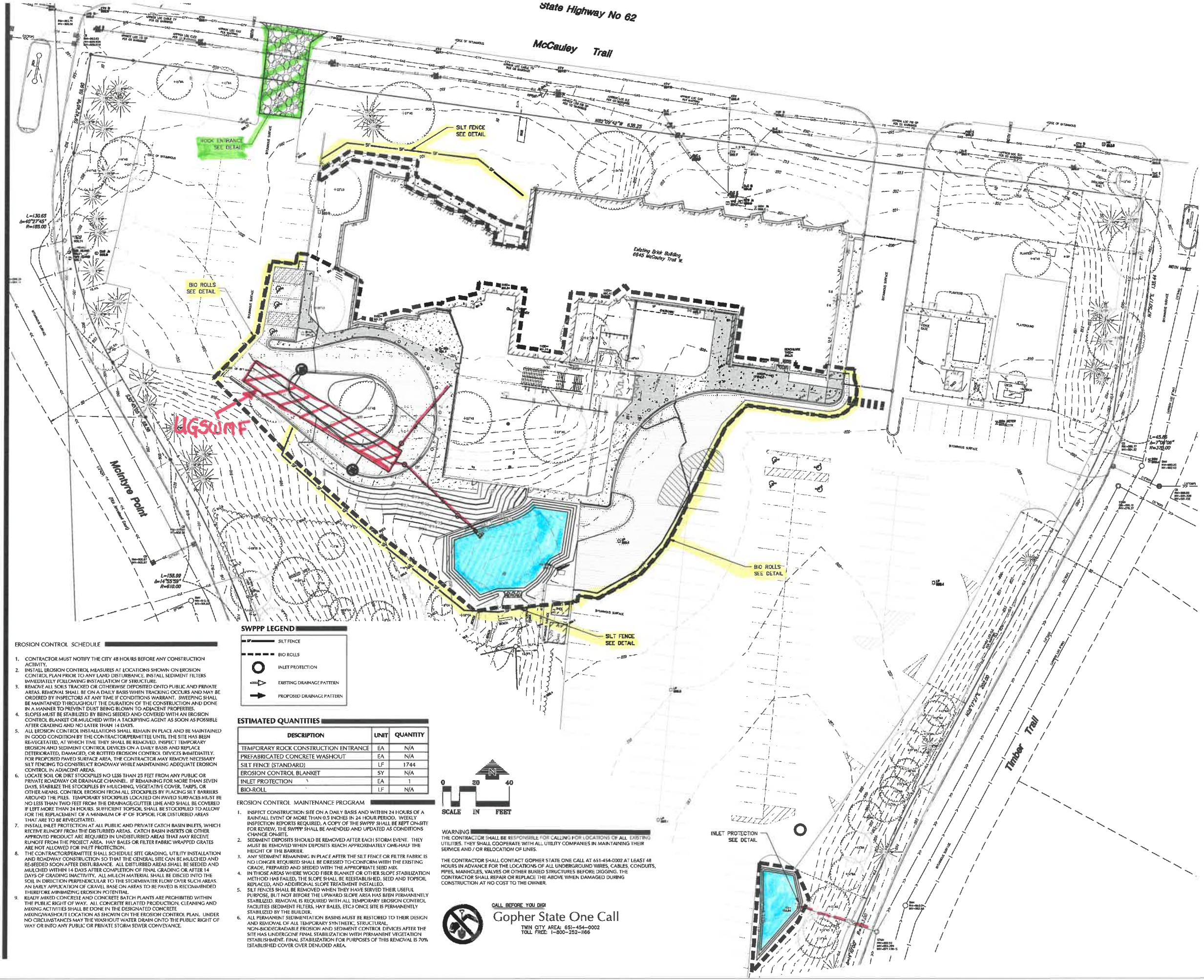

Prepared by: [Signature]  
 Date: 10/17/18

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 VJV

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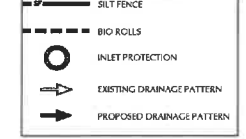
#2018-102



**EROSION CONTROL SCHEDULE**

1. CONTRACTOR MUST NOTIFY THE CITY 48 HOURS BEFORE ANY CONSTRUCTION ACTIVITY.
2. INSTALL EROSION CONTROL MEASURES AT LOCATIONS SHOWN ON EROSION CONTROL PLAN PRIOR TO ANY LAND DISTURBANCE. INSTALL SEDIMENT FILTERS IMMEDIATELY FOLLOWING INSTALLATION OF STRUCTURE.
3. REMOVE ALL SOIL TRACKED OR OTHERWISE DEPOSITED ONTO PUBLIC AND PRIVATE AREAS. REMOVAL SHALL BE ON A DAILY BASIS WHEN TRACKING OCCURS AND MAY BE ORDERED BY INSPECTORS AT ANY TIME IF CONDITIONS WARRANT. SWEEPING SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE CONSTRUCTION AND DONE IN A MANNER TO PREVENT DUST BEING BLOWN TO ADJACENT PROPERTIES.
4. SLOPES MUST BE STABILIZED BY BEING SEEDED AND COVERED WITH AN EROSION CONTROL BLANKET OR MULCHED WITH A TACKIFYING AGENT AS SOON AS POSSIBLE AFTER GRADING AND NO LATER THAN 14 DAYS.
5. ALL EROSION CONTROL INSTALLATIONS SHALL REMAIN IN PLACE AND BE MAINTAINED IN GOOD CONDITION BY THE CONTRACTOR/PERMITEE UNTIL THE SITE HAS BEEN REVEGETATED, AT WHICH TIME THEY SHALL BE REMOVED. INSPECT TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES ON A DAILY BASIS AND REPLACE DETRIORATED, DAMAGED, OR BOTTLED EROSION CONTROL DEVICES IMMEDIATELY. FOR PREFABRICATED CONCRETE WASHOUT, THE CONTRACTOR MAY REMOVE NECESSARY SILT FENCING TO CONSTRUCT ROADWAY WHILE MAINTAINING ADEQUATE EROSION CONTROL IN ADJACENT AREAS.
6. LOCATE SOIL OR DIRT STOCKPILES NO LESS THAN 25 FEET FROM ANY PUBLIC OR PRIVATE ROADWAY OR DRAINAGE CHANNEL. CATCH BASIN INSERTS OR OTHER APPROVED PRODUCT ARE REQUIRED IN UNDISTURBED AREAS THAT MAY RECEIVE RUNOFF FROM THE PROJECT AREA. HAY BALES OR FILTER FABRIC WRAPPED GRATES ARE NOT ALLOWED FOR INLET PROTECTION.
7. THE CONTRACTOR/PERMITEE SHALL SCHEDULE SITE GRADING, UTILITY INSTALLATION AND ROADWAY CONSTRUCTION SO THAT THE GENERAL SITE CAN BE MULCHED AND RE-SEEDED SOON AFTER DISTURBANCE. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED WITHIN 14 DAYS AFTER COMPLETION OF FINAL GRADING OR AFTER 14 DAYS OF GRADING INACTIVITY. ALL MULCH MATERIAL SHALL BE DISCED INTO THE SOIL IN DIRECTION PERPENDICULAR TO THE DRAINAGE/GUTTER LINE AND SHALL BE COVERED WITH AN EARLY APPLICATION OF GRAVEL BASE ON AREAS TO BE PAVED IS RECOMMENDED HEREBY TO MINIMIZE EROSION POTENTIAL.
8. READY MIXED CONCRETE AND CONCRETE BATCH PLANTS ARE PROHIBITED WITHIN THE PUBLIC RIGHT OF WAY. ALL CONCRETE RELATED PRODUCTION, CLEANING AND MIXING ACTIVITIES SHALL BE DONE IN THE DESIGNATED CONCRETE MIXING/WASHOUT LOCATION AS SHOWN ON THE EROSION CONTROL PLAN. UNDER NO CIRCUMSTANCES MAY THE WASHOUT WATER DRAIN ONTO THE PUBLIC RIGHT OF WAY OR INTO ANY PUBLIC OR PRIVATE STORM SEWER CONVEYANCE.

**SWPPP LEGEND**

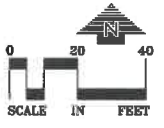


**ESTIMATED QUANTITIES**

DESCRIPTION	UNIT	QUANTITY
TEMPORARY ROCK CONSTRUCTION ENTRANCE	EA	N/A
PREFABRICATED CONCRETE WASHOUT	EA	N/A
SILT FENCE (STANDARD)	LF	1744
EROSION CONTROL BLANKET	SY	N/A
INLET PROTECTION	EA	1
BIO-ROLL	LF	N/A

**EROSION CONTROL MAINTENANCE PROGRAM**

1. INSPECT CONSTRUCTION SITE ON A DAILY BASIS AND WITHIN 24 HOURS OF A RAINFALL EVENT OF MORE THAN 0.2 INCHES IN 24 HOUR PERIOD. WEEKLY INSPECTION REPORTS REQUIRED. A COPY OF THE SWPPP SHALL BE KEPT ON-SITE FOR REVIEW. THE SWPPP SHALL BE AMENDED AND UPDATED AS CONDITIONS CHANGE ON-SITE.
2. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
3. ANY SEDIMENT REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER FABRIC IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE. PREPARED AND SEEDED WITH THE APPROPRIATE SEED MIX.
4. IN THOSE AREAS WHERE WOOD FIBER BLANKET OR OTHER SLOPE STABILIZATION METHOD HAS FAILED, THE SLOPE SHALL BE REESTABLISHED, SEED AND TOPSOIL REPLACED, AND ADDITIONAL SLOPE TREATMENT INSTALLED.
5. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPWARD SLOPE AREA HAS BEEN PERMANENTLY STABILIZED. REMOVAL IS REQUIRED WITH ALL TEMPORARY EROSION CONTROL FACILITIES (SEDIMENT FILTERS, HAY BALES, ETC) ONCE SITE IS PERMANENTLY STABILIZED BY THE BUILDER.
6. ALL PERMANENT SEDIMENTATION BASINS MUST BE RESTORED TO THEIR DESIGN AND REMOVAL OF ALL TEMPORARY SYNTHETIC, STRUCTURAL, NON-Biodegradable EROSION AND SEDIMENT CONTROL DEVICES AFTER THE SITE HAS UNDERGONE FINAL STABILIZATION WITH PERMANENT VEGETATION ESTABLISHMENT. FINAL STABILIZATION FOR PURPOSES OF THIS REMOVAL IS 70% ESTABLISHED COVER OVER DENUDATED AREA.



WARNING: THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL EXISTING UTILITIES. THEY SHALL COOPERATE WITH ALL UTILITY COMPANIES IN MAINTAINING THEIR SERVICE AND / OR RELOCATION OF LINES.

THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT 651-454-0002 AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WIRES, CABLES, CONDUITS, PIPES, MANHOLES, VALVES OR OTHER BURIED STRUCTURES BEFORE DIGGING. THE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

CALL BEFORE YOU DIG  
**Gopher State One Call**  
 TWIN CITY AREA: 651-454-0002  
 TOLL FREE: 1-800-252-1166