COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: April 24, 2017
AGENDA NUMBER: 9
FILE NUMBER: 16-175
ITEM: Spirit of Grace Church

RECOMMENDATION: Table with 5 Stipulations

APPLICANT: Spirit Of Grace Church
10110 Woodcrest Dr NW
Coon Rapids, MN 55433

PURPOSE: 4,242 SQ FT Building Addition on 2.06 Acre Lot

LOCATION: NW corner of Woodcrest Dr NW and 101st Ave NW, Coon Rapids, Minnesota

APPLICABILITY:
1. Within 1 mile of an impaired waters.
2. High infiltration soils

EXHIBITS:
1. Construction Plan set (4 sheets); by Otto Associates, dated 1/16/17, received 4/7/17.
4. Infiltration Test: by Braun Intertec, dated 3/17, received 4/7/17.

**PREVIOUS ACTION TAKEN:** This is a new application.

**FINDINGS:**

**Pre-application Meeting:** The project as submitted has not received a general review during a pre-application meeting.

**Ditches:** There is not a public ditch on the property.

**Ditch Hydraulics:** A crossing of the ditch is not proposed.

**Erosion and Sediment Control:** Soil affected by the proposal is Markey.
- Stabilizing vegetation is proposed for disturbed areas within seven (7) days of rough grading.
- Soil stockpiles have been proposed to be fitted with sediment-trapping measures to prevent soil loss. Adjacent properties and stormwater ponds are protected from sediment deposition.
- Construction schedules detailing when sediment trapping measures will occur; stabilization of earthen structures and the general timing of construction phases have been provided.
- Stormwater runoff does pass through a sediment basin or other sediment trapping BMP with equal or greater storage capacity.
- Stabilization adequate to prevent erosion has been provided at the outlets of all storm sewer pipes.
- All storm sewer inlets are protected from sediment-laden water during construction.
- All work adjacent to water or related resource has taken precautions to contain sediment, and stabilize the work area during construction.
- Provisions have been made to minimize transport of sediment (mud) by runoff or vehicle racking onto the paved surface.
- Provisions have been made for cleaning road surfaces where sediment is transported by the end of the day.
- Construction entrance points are clearly located on the erosion and sediment control plan.
- The erosion and sediment control plan does provide for the repair and maintenance of all temporary and permanent erosion and sediment control practices.

**Dewatering:** Shallow ground water does not exist on site. The project does not require dewatering.

**Floodplain:** There is no floodplain on the property according to the District model and FEMA.
High Water Flooding: Information has been provided to substantiate low floor elevations. Low floor elevations do meet the criteria for the City of Coon Rapids; 2 ft above highest anticipated water table, 2 ft over 100 yr.

Groundwater: Geotechnical information collected in August 2001 indicates long term groundwater elevation is present at 7-8 feet below the surface.

The site is not within a Municipal Drinking Water Supply Area (DWSMA).

The project site is not within the Emergency Response Area/10 Year Well Head Protection Area/Drinking Water Supply Management Area.

The proposal does not contain a land use discouraged or prohibited by the Safe Drinking Water Supply Act (SDSA).

Historic Sites: The proposed project does not include sites of historic or archeological significance.

Local Planning & Zoning: The proposed project is consistent with local planning and zoning. There is an approved local water plan.

Property owners affected by changes in drainage have been notified and acknowledge the changes proposed.

Maintenance: The Owner of the Stormwater Management features and treatment practices is Spirit of Grace Church. The Stormwater Treatment Practices (STPs) consisting of the following:

<table>
<thead>
<tr>
<th>Stormwater Treatment Practices</th>
<th>Number</th>
<th>Maintenance Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swale</td>
<td>1</td>
<td>Spirit of Grace Church</td>
</tr>
</tbody>
</table>

A maintenance agreement has not been executed. The applicant has not submitted a Maintenance Plan for each Stormwater Treatment Practice.

Easements: The proposed project does not include ditch maintenance easement. A ditch maintenance easement is not required. A maintenance access to all storm water management features is not provided.

Stormwater & Hydrology: Infiltration is allowed within the project area. The 1-inch infiltration is achieved. The stormwater management system utilizes swales and an existing infiltration area. Stormwater leaving the site is not discharged into a well-defined receiving channel or pipe and routed to a public drainage system. Model updates are needed to determine if there are impacts to adjacent properties.
Drainage sensitive uses do not exist downstream from the proposed site. The rate of post-development runoff from the site may exceed predevelopment rates, or rates which would interfere with sensitive downstream land uses. Properties and waterways downstream from the project are not protected from erosion due to increases in the volume, velocity and peak water flow rates of stormwater runoff. Concentrated storm water leaving a site is not discharged directly into a well-defined natural or man-made off-site receiving channel or pipe. All on-site constructed storm water conveyance channels are constructed to withstand the expected velocity from a 2-year frequency storm without erosion.

**Water Quality:** The proposed project does not cause an exceedance of State water quality standards. The project does not contribute to the adverse impact of wetlands through inundation or volume of flow. No discharges into wetlands are proposed. All work adjacent to wetlands, waterbodies and water conveyance systems are not protected from erosion. The proposal will not detrimentally affect the existing water quality of the receiving water. The proposal will not cause extreme fluctuations of water levels or temperature changes.

**Impairments:** This project is within one (1) mile of and drains to an Impaired Water. The Impaired Water is Lower Coon Creek. Lower Coon Creek is impaired for Aquatic Life (Macro-invertebrates)/Aquatic Recreation (E. coli). The major stressors are Total Suspended Solids (TSS)/ Total Phosphorus (TP)/E.coli. There is not an EPA approved Total Maximum Daily Load (TMDL) or Waste Load Allocation (WLA) for this water.

There are new impervious surfaces proposed as part of this project.

**Wetlands:** Wetlands do not exist on-site according to the 1987 Federal manual, NWI, PWI and Soil Survey.

**Wetland Replacement Plan:**
A wetland replacement plan has not been submitted and is not required

**Wildlife:**
The proposed project does not include endangered or threatened species, rare natural communities, colonial waterbird nesting sites, migratory waterfowl concentration areas, deer wintering areas or wildlife travel corridors.

**Performance Escrow:** $3,030
**Wetland Escrow:** $0.00
There are not ditch liens on the property.

**ISSUES/CONCERNS:**

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>NEED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Escrows: $2,000 + (2.06 ac × $500/ac) = $3,030</td>
<td>1. Receipt of escrows.</td>
</tr>
<tr>
<td>Stormwater &amp; Hydraulics: Updates are</td>
<td>2. Update the model with MSE-3</td>
</tr>
</tbody>
</table>
needed for the model to ensure adjacent property owners are not adversely affected by project:

| I. | Model uses Type-II rainfall distribution for proposed conditions, not MSE-3. |
| II. | Infiltration rate used (cfs) in the model is not consistent with infiltration test (in/hr) values provided by Braun. |

A post construction test on the infiltration basin will be required to verify the assumed infiltration rates are obtained.

| I. | Model uses Type-II rainfall distribution for proposed conditions. |
| II. | To ensure consistency in infiltration rates between model and information from Braun, use average (in/hr) value in model instead of cfs. |
| IV. | The applicant must acknowledge that they will conduct a post construction test on the infiltration basin by filling the basin to a minimum depth of 6 inches with water and monitor the time necessary to drain. The Coon Creek Watershed District shall be notified prior to the test to witness the results. |
| V. | Provide an O&M Agreement that meets District requirements. |

**Maintenance:** It is unknown who will be responsible for the inspection and maintenance of stormwater facilities. A maintenance agreement has not been executed. The applicant has not submitted a Maintenance Plan for each Stormwater Treatment Practice.

**RECOMMENDATION:** Table with 5 Stipulations

**Stipulations:**

1. Receipt of escrows.
2. Update the model with MSE-3 rainfall distribution for proposed conditions.
3. To ensure consistency in infiltration rates between model and information from Braun, use average (in/hr) value in model instead of cfs.
4. The applicant must acknowledge that they will conduct a post construction test on the infiltration basin by filling the basin to a minimum depth of 6 inches with water and monitor the time necessary to drain. The Coon Creek Watershed District shall be notified prior to the test to witness the results.
5. Provide an O&M Agreement that meets District requirements.