COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: May 22, 2017
AGENDA NUMBER: 9
FILE NUMBER: 17-071
ITEM: 10533 Foley Blvd Building and Parking Lot

RECOMMENDATION: Table with 12 Stipulations

APPLICANT: Dennis Zhigar
10533 Foley Blvd
Coon Rapids, MN 55448

PURPOSE: 1990 SQ FT New Building on 0.7 Acre Lot

LOCATION: SE corner of 105th Ln NW and Foley Blvd NW, Coon Rapids, MN
APPLICABILITY:
1. Within 1 mile of an impaired waters.

EXHIBITS:
1. Construction Plan set (5 sheets); by EDS, dated 5/9/17, received 5/10/17.
2. HydroCAD models; by EDS, dated 5/10/17, received 5/10/17.

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 Sartell.
- Stabilizing vegetation is not 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 not 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 not been made to minimize transport of sediment (mud) by runoff or vehicle racking onto the paved surface.
• Provisions have not 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 may exist on site. The project may require dewatering.

**Floodplain:** There is no floodplain on the property according to the District model or FEMA.

**High Water Flooding:** Low floor elevations do not meet the criteria for the City of Coon Rapids; 2 ft above 100 yr

**Groundwater:** Geotechnical information was not submitted.

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.
Maintenance: The Owner of the Stormwater Management features and treatment practices is unknown. 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>Rain Garden</td>
<td>1</td>
<td>unknown</td>
</tr>
</tbody>
</table>

It is unknown who the inspection and maintenance of stormwater facilities will be the responsibility of. 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 provided.

Stormwater & Hydrology: Infiltration is allowed within the project area. The 1-inch infiltration is achieved. The stormwater management system utilizes a rain garden. Stormwater leaving the site is discharged into a well-defined receiving channel or pipe and routed to a public drainage system.

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 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 discharged directly into a well-defined natural or man-made off-site receiving channel or pipe. No on-site constructed storm water conveyance channels are proposed as part of the project.

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. All discharges into infiltration basins are not pretreated by a sediment basin/water quality pond, and are not designed correctly. All work adjacent to wetlands, waterbodies and water conveyance systems are 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 but does not drains to an Impaired Water.

There are no 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.
**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:** $2,350.00  
**Wetland Escrow:** $ N/A  
There are not ditch liens on the property.

**ISSUES/CONCERNS:**

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>NEED</th>
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<tbody>
<tr>
<td>Escrows: $2,000 + (XX ac * $500/ac) = $2,350.00</td>
<td>1. Receipt of escrows.</td>
</tr>
<tr>
<td>Stormwater &amp; Hydraulics: Model updates are needed:</td>
<td>2. Model updates:</td>
</tr>
<tr>
<td>1. Type II rainfall distribution used instead of updated MSE-3.</td>
<td>a. Update models to use MSE-3 rainfall distribution which is associated with Atlas-14 depths.</td>
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<tr>
<td>2. Time of concentration appear to use values from multiple flow paths.</td>
<td>b. Use single flow path to calculate time of concentration.</td>
</tr>
<tr>
<td>3. Current 100-Yr water surface elevation appears to overtop RIM.</td>
<td>c. Include outlet rim elevation in outlet for rain garden. Include detail of OCS.</td>
</tr>
<tr>
<td>4. Infiltration rate used in model is not consistent with soil type ‘C’.</td>
<td>d. Use consistent infiltration rate for Type ‘C’ soils.</td>
</tr>
<tr>
<td>5. Hardcover values listed on construction plans do not match values used in model.</td>
<td>e. Provide consistent values between hardcover table and HydroCAD model.</td>
</tr>
</tbody>
</table>

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

Plans reference NGVD 29 Datum.

Unclear how water will be directed through proposed grassway on northwest side of proposed basin.

| Soils & Erosion Control: District | 6. Update Erosion Control Plan: |

4. Construction plans need to reference NAVD 88 Datum.

5. Provide details for how water will directed through grassway on northwest side of proposed basin.
requires all stabilization vegetation be within seven (7) days of rough grading or inactivity.

Infiltration basins are not protected from erosion and sedimentation during construction. After initial grading the District requires that infiltration basins be completely surround by erosion control measures to prevent the basin from clogging.

Provisions have not been made to minimize transport of sediment (mud) by runoff or vehicle racking onto the paved surface.

Provisions have not been made for cleaning road surfaces where sediment is transported by the end of the day.

It is unclear if dewatering is needed during the construction of the proposed project.

<table>
<thead>
<tr>
<th>Groundwater: Geotechnical information was not submitted.</th>
<th>a. Update construction plans to stabilize vegetation in 7 days of rough grading or inactivity.</th>
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<td>Water Quality: All discharges into wetlands/water quality basins are not pretreated.</td>
<td>b. After initial grading completely surround the proposed infiltration basins with erosion control measures to prevent the basin from clogging.</td>
</tr>
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<td>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.</td>
<td>c. Provide note on erosion control plan that provisions have been made to minimize transport of sediment (mud) by runoff or vehicle racking onto the paved surface.</td>
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<td></td>
<td>d. Provide note on erosion control plan that provisions have been made for cleaning road surfaces where sediment is transported by the end of the day.</td>
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<tr>
<td>7. Provide statement whether dewatering will be required for the construction of the proposed project. If yes, provide well-field location, rates, discharge location, schedule and quantities.</td>
<td>8. Geotechnical report needed:</td>
</tr>
<tr>
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<td>a. To ensure 3 foot separation from groundwater from bottom of basin.</td>
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<td></td>
<td>b. Verify infiltration rate used in model.</td>
</tr>
<tr>
<td>9. Concrete spillway should be redesigned to provide sediment capture.</td>
<td>10. Provide an O&amp;M Agreement that meets District requirements.</td>
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**Floodplain:** Low floor elevations do not meet the criteria for the City of Coon Rapids; 3 ft above mottled, 2 ft above 100 yr.  
Unclear where EOF is for rain garden.

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<td>11. Provide 2 foot separation from HWL of rain garden or City approval.</td>
<td>12. Show EOF on grading plan for rain garden.</td>
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**RECOMMENDATION:** Table with 12 Stipulations

**Stipulations:**

1. Receipt of escrows.
2. Model updates:
   a. Update models to use MSE-3 rainfall distribution which is associated with Atlas-14 depths.
   b. Use single flow path to calculate time of concentration.
   c. Include outlet rim elevation in outlet for rain garden. Include detail of OCS.
   d. Use consistent infiltration rate for Type ‘C’ soils.
   e. Provide consistent values between hardcover table and HydroCAD model.
3. 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.
4. Construction plans need to reference NAVD 88 Datum.
5. Provide details for how water will directed through grassway on northwest side of proposed basin.
6. Update Erosion Control Plan:
   a. Update construction plans to stabilize vegetation in 7 days of rough grading or inactivity.
   b. After initial grading completely surround the proposed infiltration basins with erosion control measures to prevent the basin from clogging.
   c. Provide note on erosion control plan that provisions have been made to minimize transport of sediment (mud) by runoff or vehicle racking onto the paved surface.
   d. Provide note on erosion control plan that provisions have been made for cleaning road surfaces where sediment is transported by the end of the day.
7. Provide statement whether dewatering will be required for the construction of the proposed project. If yes, provide well-field location, rates, discharge location, schedule and quantities.
8. Geotechnical report needed:
   a. To ensure 3 foot separation from groundwater from bottom of basin.
   b. Verify infiltration rate used in model.
9. Concrete spillway should be redesigned to provide sediment capture.
10. Provide an O&M Agreement that meets District requirements.
11. Provide 2 foot separation from HWL of rain garden or City approval.
12. Show EOF on grading plan for rain garden.