COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: March 25, 2019
AGENDA NUMBER: 9
FILE NUMBER: 17-202
ITEM: Coon Rapids Boulevard at Riverwalk

RECOMMENDATION: Table with 14 Stipulations

APPLICANT: City of Coon Rapids
11155 Robinson Drive
Coon Rapids, MN 55433

PURPOSE: Road Widening and Rehabilitation

LOCATION: Coon Rapids Boulevard, Egret Blvd to East River Road

APPLICABILITY:
1. Within 1 mile of an impaired waters.
2. Any work within or adjacent to a Public ditch within the Watershed District.
3. Any work in or adjacent to wetlands, lakes or water courses
4. One or more cumulative acres of land disturbance
5. The lands and waters that have been, or may be covered by the regional flood.

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

FINDINGS:
Pre-application Meeting: The project as submitted has received a general review during a pre-application meeting.

Ditches: There is a public ditch on the property. The public ditch is Lower Coon Creek according to the public drainage map. The approved elevations through this property are 841.5 ft MSL at the upstream end and no approved elevation at the downstream end and 0.05% slope at the upstream end. Existing elevations, slopes and condition of the ditch are 844.2 ft MSL at the upstream end, a 2.7 ft variance from the as-built elevations and
844.2 ft MSL at the downstream end. Alternatives to repair and additional drainage have been considered and reviewed.

The ditch is a 5th order stream. The ditch serves the primary role of trunk drainage system. The ditch serves approximately 88 acres of agricultural land. Land use in the area is toward residential and industrial use. There are flooding concerns upstream and downstream.

The ditch has been inspected. Existing elevations, slopes and condition of ditch are good. The ditch is not in need of repair. Alternatives to repair and additional drainage have been considered and reviewed.

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

**Erosion and Sediment Control:** Soils affected by the proposal are Nymore, Hayden, Lino, and Zimmerman.

- 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.
- 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 tracking 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 may exist on site. The project may require dewatering.
**Floodplain:** There is floodplain on the property according to the District model and FEMA. The District’s floodplain elevation is at 842.7 feet. The project does not propose to place fill within the floodplain.

**High Water Flooding:** Information has not been provided to substantiate low floor elevations and is not needed. No structures are proposed for this project.

**Groundwater:** Geotechnical information has not been provided and is not required for this project, no structures are proposed. Geotechnical information provided with the Port Riverwalk development collected in March, 2017 indicates long term groundwater elevation is present at 3 to 20.5 feet below the surface.

The project site is within the 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 should be notified and acknowledge the changes proposed.

**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>Inspection &amp; Maintenance Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filtration Basins</td>
<td>2</td>
<td>City of Coon Rapids (To be confirmed)</td>
</tr>
<tr>
<td>Sumps</td>
<td>4</td>
<td>Anoka County Hwy Dept (To be confirmed)</td>
</tr>
</tbody>
</table>

A maintenance agreement has not been executed. The applicant has not submitted a Maintenance Plan for each Stormwater Treatment Practice. The Maintenance Plan(s) is/are not consistent with District Maintenance standards for each STP.

Easements: The proposed project does 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. Infiltration is not feasible in portions of the project due to shallow groundwater, subsurface pollutants, and land availability. The 1.1-inch filtration is achieved for the new and reconstructed impervious areas between Egret Blvd and Avocet Street. The stormwater management system utilizes filtration. Calculations have been provided that illustrate the 1.1-inch filtration volume is achieved below outlet.

Drainage sensitive uses do not exist downstream from the proposed site. The rate of post-development runoff from the site does not 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. 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 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 wetlands/stormwater basins are not pretreated by a sediment basin/water quality pond. 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 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 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. Wetlands have not been delineated.

**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.

If the project is present, the project does not propose substantial adverse alteration or significant detrimental impact on a species or removal of a plant species will occur.
Performance Escrow: $5,830.00
Wetland Escrow: $ N/A
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 + (7.66 ac * $500/ac = $5,830.00</td>
<td>1. Receipt of escrows.</td>
</tr>
<tr>
<td><strong>Stormwater &amp; Hydraulics:</strong> HydroCAD model uses SCS Type II rainfall distribution.</td>
<td>2. Update HydroCAD model to use MSE 3 rainfall distribution.</td>
</tr>
<tr>
<td>Inconsistencies were found in invert elevations and diameter between the HydroCAD model and the Drainage table on sheet 8. Inconsistencies were found for Pond 404, 601, and 603.</td>
<td>3. Update HydroCAD model and/or Plans to reflect the correct diameter and invert elevations.</td>
</tr>
<tr>
<td>Not enough storm sewer information was provided to verify HydroCAD model.</td>
<td>4. Provide storm sewer information on all storm structures so the HydroCAD model can be verified.</td>
</tr>
<tr>
<td>Drain tile for FB 20 and 21 is shown as 4”. Drain tile for these basins are shown as 6” in the Port Riverwalk Development Plans.</td>
<td>5. Clarify and update Plans/HydroCAD model with the correct size of drain tile for FB 20 and 21.</td>
</tr>
<tr>
<td>Drain tile for FB 20 is shown to connect to the drain tile in FB 30 and outlet to FB 30 OCS. The outlet invert of FB 20 drain tile of 852.7 is unclear.</td>
<td>6. Clarify outlet invert for FB 20 drain tile.</td>
</tr>
<tr>
<td>It is indicated that filtration media depth for FB 21 is 1.5’. However, the invert for FB 21 drain tile is shown at 849.6 in the HydroCAD model. This indicates the filtration media depth to be less than 1.5’.</td>
<td>7. Clarify the invert elevation of FB 21 drain tile. Ensure MPCA requirements for filtration media depth are met.</td>
</tr>
<tr>
<td><strong>Soils &amp; Erosion Control:</strong> Details not provided for inlet protection and rip rap at flared end sections.</td>
<td>8. Provide details for inlet protection and for rip rap at flared end sections.</td>
</tr>
<tr>
<td>It is unclear if dewatering is needed during the construction of the proposed project.</td>
<td>9. Provide statement whether dewatering will be required for the construction of the proposed project. If yes, provide well-field location,</td>
</tr>
</tbody>
</table>
Perimeter control is needed to protect the Riverwalk infiltration basin (Sheet 78) rates, discharge location, schedule and quantities.

10. Provide perimeter upslope of infiltration basin (Sheet 78).

**Water Quality:**
Preserver Skimmers are proposed in several structures. Some structures include multiple inlet pipes.

Structures 107 and 303 are not meeting 80% TSS removal. Additional sumps should be added.

SHASM results were provided. Provide particle distribution used.

11. Include a preserver skimmer detail for the structures with multiple inlet pipes.

12. Additional sumps should be added to meet 80% TSS removal. Sump should be added to structure 201 to provide treatment before discharging to Coon Creek.

13. Provide particle distribution used in the SHASM calculator.

**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.

14. Provide an O&M Agreement that meets District requirements.

**RECOMMENDATION:** Table with 14 Stipulations

**Stipulations:**
1. Receipt of escrows.
2. Update HydroCAD model to use MSE 3 rainfall distribution.
3. Update HydroCAD model and/or Plans to reflect the correct diameter and invert elevations.
4. Provide storm sewer information on all storm structures so the HydroCAD model can be verified.
5. Clarify and update Plans/HydroCAD model with the correct size of drain tile for FB 20 and 21.
6. Clarify outlet invert for FB 20 drain tile.
7. Clarify the invert elevation of FB 21 drain tile. Ensure MPCA requirements for filtration media depth are met.
8. Provide details for inlet protection and for rip rap at flared end sections.
9. 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.
10. Provide perimeter upslope of infiltration basin (Sheet 78).
11. Include a preserver skimmer detail for the structures with multiple inlet pipes.
12. Additional sumps should be added to meet 80% TSS removal. Sump should be added to structure 201 to provide treatment before discharging to Coon Creek.
13. Provide particle distribution used in the SHASM calculator.
14. Provide an O&M Agreement that meets District requirements.