COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: May 27, 2014
AGENDA NUMBER: 8
FILE NUMBER: 13-121
ITEM: CSAH 51 (University Avenue) Transportation Improvement Project

RECOMMENDATION: Table with 7 Stipulations

APPLICANT: Andrew Witter
Anoka County Highway Department
1440 Bunker Lake Blvd NW
Andover MN 55304

PURPOSE: Lane expansion, culvert installation, grading and development, and pond construction/wetland alteration

LOCATION: CSAH 51 from approximately CSAH 12 (109th Ave NE) to CSAH 14 (125th Ave) in the cities Coon Rapids and Blaine, MN.
APPLICABILITY:
1. Any work within or adjacent to a Public Ditch within the Watershed District.
2. Any work in or adjacent to wetlands, lakes or water courses.
3. One or more cumulative acres of land disturbance.
4. The lands and water that have been, or may be covered by the regional flood.
5. High infiltration soils.
6. Highly erodible soils
7. Endangered, Threatened or Special concern species, elements of communities.

EXHIBITS:
1. Project Narrative Memorandum from Alison Harwood at WSB and Associates, Inc.; dated 5/2/2014; received 5/2/2014

HISTORY & CONSIDERATIONS:
A detailed floodplain analysis was completed for this area in 2013. The project will include a SAFL Baffle retrofit as well as a collaborative regional pond project with the City, School District, Highway Department and the District.

FINDINGS:
Ditches and Drainage: There are public ditches on the property. The ditches are County Ditch 39, 41, and 61-3. The ditches have been inspected. The project site is tributary to County Ditches 39, 41, and 61-3. The trend in land use for this drainage area is toward residential. There are flooding concerns downstream. Alternatives to additional drainage considered and reviewed include storage, and retention.

Floodplain: There is floodplain on the property according to FEMA. The District Atlas 14 model predicts the 100-year elevations for the subwatersheds at 893.9 feet upstream of CSAH 51 on CD-39 and 884.1 upstream of CSAH 51 on CD-41. The District Atlas 14 model predicts the 100-year elevation near the CD-61-3 crossing to range from 887.4 and 887.2 (see figure below). Elevations are presented in reference to the NAVD 1988 datum. The conversion from NGVD 1929 datum and NAVD 1988 datum for the area is +0.243 ft. The total floodplain impact is 0.61 acre-feet, within the flood/fringeway.

Compensatory storage is provided in total but a summary is necessary to compare existing to proposed conditions for each subwatershed.

The applicant is required to run the 100-year elevation for interior ponds using the NOAA Atlas 14 information as shown in the following web link.
http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=mn
**Groundwater:** Surficial ground water is present at 881.5 feet near the CD-39 crossing, and 879 near the CD-41 crossing. The site does not include groundwater sensitive areas.

**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 proposed project does include a ditch maintenance easement or utility line crossings. A drainage and utility easement is not provided for the storm water/infiltration ponds shown on the drainage plan and is not need since they will be owned by Anoka County. It is unclear if property owners affected by changes in drainage have been notified and have acknowledged the changes proposed.

**Soils & Erosion Control:** Soils affected by the proposal are Markey, Lino, Isanti, Rifle and Zimmerman. Stabilizing vegetation is proposed for disturbed areas within two weeks of rough grading. Adjacent properties are protected from sediment deposition. All wetlands, waterbodies, ponds, infiltration basins and water conveyance systems are not protected from erosion and sedimentation. Project site is greater than 1 acre; an NPDES permit is required.

**Stormwater & Hydraulics:** The applicant is not meeting the volume management requirement equivalent to infiltrating runoff from the first inch of precipitation.
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 does exceed predevelopment rates on the CD-41 system. However, the increased rates for the 2, 10 and 100-year flows are a small percentage of the total flow going through the system (10%, 4%, and 2% respectively). Furthermore, the reach downstream of the CD-41 crossing is a deep cut and the proposed flows will be no greater than existing after the confluence of Ditches 39 and 41.

**Water Quality:** Project does include new impervious drainage areas greater than 1 acre. The total increased impervious area is 7.21 acre. All discharges into wetlands are pretreated by a sediment basin/water quality pond and are designed correctly. 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.

**Wetlands:** Wetlands exist on-site according to the 1987 Federal manual, NWI, PWI and Soil Survey. Wetlands have been delineated. The wetland boundary has been checked.

The project is not exempt

The wetland is not a DNR protected water.

The total proposed wetland impact is 0.45 ac. and an additional 193 feet (0.06 ac) of impact to Sand Creek. The impact is through fill and excavation in 8 locations. All impacts are directly related to increased roadway width, stormwater pond construction/expansion, and trail and sidewalk reconstruction.

The applicant has provided 6 project alternatives:
1. No Build
2. Other Locations for Roadway
3. Redirecting Traffic
4. Stormwater ponding
5. Alignment Shifts
6. Current proposal

The TEP has accepted alternative 6 as the most prudent and feasible alternative to alleviate public health safety and welfare concerns.

Minimization efforts include:
1. Increased side slopes
2. Water Quality – stormwater will be directed to designated stormwater ponding and infiltration basins prior to discharging to wetland areas or other surface waters
3. Stormwater ponds were sited in upland areas to the maximum extent possible
The TEP has agreed that the applicant has minimized impacts to the maximum extent practical.

**Wetland Replacement Plan:** The project is proposing replacement through the BWSR Local Road Replacement Program.

**Wildlife:** The proposed project does include the special concern Beach Heather (*Hudsonia tomentosa*). No substantial adverse alteration or significant detrimental impact on a species food supply, security or reproductive cycle or the alteration or removal of a plant species will occur.

**Performance Escrow:** $21,475

**ISSUES/CONCERNS:**

<table>
<thead>
<tr>
<th>Stormwater &amp; Hydraulics: The applicant is not meeting the volume management requirement equivalent to infiltrating runoff from the first inch of precipitation.</th>
<th>However, the applicant has met with District staff and they are meeting to the maximum extent possible.</th>
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<tbody>
<tr>
<td>Stormwater plan sheets were not provided. The District would like to review the stormwater plan sheets and review the placement of sumps, hydrodynamic separators, skimmers, etc.</td>
<td>1. Provide plan sheets showing the storm sewer layout. Show on the plan sheets all water quality units, ponds, infiltration basins, etc and their respective connectivity within the system.</td>
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<td>The size of the sump/sump manhole must be appropriately sized in order to verify optimal sediment removal.</td>
<td>2. Provide detailed calculations showing the sizing of the proposed SAFL Baffle sump manholes.</td>
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<td><strong>Floodplain:</strong> Compensatory storage is required for all disturbed areas within a FEMA special flood hazard areas. For review purposes a summary of the total disturbed volume to the total compensatory storage volume provided is required.</td>
<td>3. Provide compensatory storage volume summary.</td>
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<td><strong>Maintenance:</strong> It is unclear if property owners affected by changes in drainage have been notified and have acknowledged the changes proposed.</td>
<td>4. Provide verification that adjacent property owners are aware of this project.</td>
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**Soils & Erosion Control:** Infiltration basins and ponds are not protected from erosion and sedimentation during construction. After initial grading the District requires that infiltration basins be completely surrounded by erosion control measures (i.e. silt fence) to prevent the basin from clogging.

5. After initial grading completely surrounded the proposed infiltration basins and ponds with silt fence to prevent the basin from clogging.

**Water Quality:** There is no water quality summary. The applicant must provide a water quality summary showing the effects of the project to the CD 61-3, CD-39 and CD-41 systems respectively. Water quality analysis for one location on each ditch immediately downstream of the construction limits needs to be provided (a total of two summaries).

6. Provide a water quality summary of all discharges into the creeks comparing existing and proposed water quality concentrations.

**Escrow:** $2,000 + (38.95ac x $500/ac) = $21,475

7. Receipt of escrows.

**RECOMMENDATION:** Table with 7 Stipulations

**Stipulations:**
1. Receipt of escrows.
2. Provide plan sheets showing the storm sewer layout. Show on the plan sheets all water quality units, ponds, infiltration basins, etc and their respective connectivity within the system.
3. Provide compensatory storage volume summary.
4. Provide a water quality summary of all discharges into the creeks comparing existing and proposed water quality concentrations.
5. Provide detailed calculations showing the sizing of the proposed SAFL Baffle sump manholes.
6. After initial grading completely surrounded the proposed infiltration basins and ponds with silt fence to prevent the basin from clogging.
7. Provide verification that adjacent property owners are aware of this project.