COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: August 12, 2019
AGENDA NUMBER: FILE NUMBER:
19-121
ITEM: Constance Blvd Terrace, LLC

RECOMMENDATION: Table with 16 Stipulations

APPLICANT: Gus Afrooz, Constance Blvd Terrace, LLC
4050 85th Lane NE, Circle Pines, MN 55014

PURPOSE: Development of 26.25 acres of farm land into
13 residential lots
13 Lots on 26.25 Acres

LOCATION: 3807 Constance Blvd. NE in Ham Lake, MN

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. Activities upstream from land that is dependent upon removal of water from the soil profile for their continued use (Drainage Sensitive Land Uses)
6. High infiltration soils
7. Highly erodible soils
8. Endangered, Threatened or Special concern species, elements or communities

EXHIBITS:
1. Title Sheet, Preliminary Plat, Grading Plan and Livability Plan set (7 sheets); by EG Rud & Sons, dated 7/31/2019, received 7/31/2019.
4. City of Ham Lake Comment letter with Developer Comments, Received 7/31/2019.
PREVIOUS ACTION TAKEN: The project was determined incomplete and was not presented at the June 24, 2019 Board Meeting. The following issues were identified:

1. Receipt of escrows.
2. If applicants cannot meet the volume management requirement due to site constraints in its entirety, they must meet it to the greatest extent practical and explain why it cannot be met.
3. Provide calculations that illustrate 1-inch infiltration volume requirement is meet below the outlet.
4. Fix all inconsistencies with model and plan that are shown, as well as others determined after doing a thorough scan of the hydraulic model.
5. Provide hydraulic detailed output for all watersheds, storage areas and reaches.
6. Label all EOFs on plan with elevations
7. The applicant must provide a note on the construction plans that a post construction test on the infiltration basin will be conducted 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.
8. Update construction plans to stabilize vegetation within 7 days of rough grading or inactivity.
9. After initial grading completely surround the proposed infiltration basins with erosion control measures to prevent the basin from clogging.
10. 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.

11. The 100-year post project conditions runoff rate and volume must be less than the 25 Year event.

12. Provide calculations (SHSAM can be used) to indicate sumps are appropriately sized to meet district removal rates of 80% TSS for OK110 particle size. A minimum of 4-foot depth is required to prevent resuspension.

13. Provide proof of purchase for wetland credits.

14. Provide documentation from the DNR if the proposed project includes endangered or threatened species, rare natural communities, colonial waterbird nesting sites, migratory waterfowl concentration areas, deer wintering areas or wildlife travel corridors.

**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 County Ditch 11 according to the public drainage map.

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

**Erosion and Sediment Control:** Soils affected by the proposal are Lino and Isanti.

- 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 and do have a note to stabilize within seven (7) days of inactivity.
- 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 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.
• Details provided for ESC (riprap, perimeter control, concrete washout, inlet protection, etc.)

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

**Floodplain:** There is floodplain on the property according to the District model. There are no FEMA mapped floodplains present. The 100-year high water level for ditch 11 from the District model is 898.84.

**High Water Flooding:** Information has been provided to substantiate low floor elevations. Low floor elevations meet the criteria for the City of Ham Lake; 1 ft above mottled soil or the 100-year high water level.

**Groundwater:** Geotechnical information collected in April of 2019 indicates long term groundwater elevation is not present at 10 feet below the surface.

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

**Local Planning & Zoning:** The proposed project is not consistent with local planning and zoning. There is an approved local water plan.

Property owners affected by changes in drainage have not been notified or acknowledge the changes proposed.

**Maintenance:** The owner of the Stormwater Management features and treatment practices is City of Ham Lake. 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>Basins</td>
<td>2</td>
<td>City</td>
</tr>
<tr>
<td>Infiltration basins</td>
<td>2</td>
<td>City</td>
</tr>
</tbody>
</table>

As a requirement of the City’s MS4 program, the city will inspect and maintain the stormwater facilities.
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 wet ponds with an infiltration bench area. Calculations are provided that illustrate the 1-inch infiltration volume is achieved below outlet. However, the calculations need to be amended to determine if proposed infiltration volume can infiltrate within 48 hours over only the infiltration area.

Drainage sensitive uses 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 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 wetlands/stormwater basins are pretreated by a sediment basin/water quality pond, and are 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 and drains to an Impaired Water. The Impaired Water is Coon Creek. 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 exist on-site according to the 1987 Federal manual, NWI, PWI and Soil Survey. Wetlands have been delineated. The most recent delineation was approved on 9/15/19. The wetland boundary has been checked.

The wetland is not a DNR protected water.

The total proposed wetland impact is 0.17 acres. The impact is through fill in two locations as shown below:
TEP members have been notified with a complete plan and have been requested to submit comments.
The project is not wetland dependent.

The project is not exempt.

The applicant does not need to contact the DNR area hydrologist and does need to contact the Corps of Engineers.

Two or more alternatives, plus the proposed project, have been submitted. On-site sequencing does apply. The avoidance alternatives are being reviewed.

1. The applicant suggests that avoidance is not reasonable because there is no feasible and prudent alternative:
   1) The basic purpose of the project cannot reasonably be accomplished at an alternative site, alternative sites are not available, alternative sites are not practical/prudent;
2) The basic purpose of the project can be accomplished by further design modification which would avoid wetland impacts; and
3) The applicant has not demonstrated that the activity will minimize wetland impacts through:
   a. modifying the size, scope, and configuration of the project.

**Wetland Replacement Plan:** A wetland replacement plan application has been submitted. The wetland replacement plan has been sent to TEP members for comment and is in comment period.

Replacement is proposed to be through purchasing wetland credits at a ratio of 2:1. The credits will be purchased through wetland bank #1537.

The TEP has not approved the wetland mitigation plan.

**Wildlife:** The proposed project may include endangered or threatened species, rare natural communities, colonial waterbird nesting sites, migratory waterfowl concentration areas, deer wintering areas or wildlife travel corridors. The applicant has not contacted the MDNR natural heritage or endangered species program.

If the project is present, the project may propose substantial adverse alteration or significant detrimental impact on a species or removal of a plant species.

**Performance Escrow:** $5,125.00

**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 + (26.25 ac * $500/ac) = $15,125.00</td>
<td>1. Receipt of escrows.</td>
</tr>
<tr>
<td><strong>Stormwater &amp; Hydraulics:</strong> The proposed infiltration basins meet the 1” infiltration volume requirement. However; the infiltration is applied over the entire wetted area of the ponds rather than over only the infiltration area. Appears infiltration bench will function only as filtration. Unclear of infiltration bench elevation. 15” culvert draining pond 1 does not appear to be shown on plan.</td>
<td>2. Revise infiltration to apply infiltration only over the infiltration bench. Confirm that the retention volume can be infiltrated within 48 hours over the available area. 3. Remove liner from infiltration bench to allow groundwater recharge. 4. Provide spot elevations of infiltration areas. 5. Provide plans for the outlet from Pond 1.</td>
</tr>
<tr>
<td><strong>Drainage sensitive uses exist downstream from the proposed site and standards are not met.</strong></td>
<td>6. The 100-year post project conditions runoff rate and volume must be less than the proposed 25-year event.</td>
</tr>
<tr>
<td>Drainage area 8 and W6 are not modeled correctly.</td>
<td>7. Update drainage areas and HydroCAD to include the proper ponding areas.</td>
</tr>
<tr>
<td>Drainage area maps do not match updated plans.</td>
<td>8. Provide updated proposed drainage area maps based on revised grading plan.</td>
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</tbody>
</table>

**Soils & Erosion Control:** It is unclear if dewatering is needed during the construction of the proposed project.  

9. Provide dewatering plans and copy of DNR appropriations permits if dewatering is used.  

**Water Quality:** All discharges into wetlands/water quality basins are pretreated by a sediment sump manhole. Calculations for removals with these sump manholes are not provided.  

10. Provide calculations (SHSAM can be used) to indicate sumps are appropriately sized to meet district removal rates of 80% TSS for OK110 particle size. A minimum of 4-foot depth is required to prevent resuspension.  

**Wetlands:** All wetland impacts are not accounted for. Drainage impacts occur as a result of the proposed development.  

11. Provide updated replacement plan including replacement for wetlands 1, 2, 3, 4.  

TEP comments have not been addressed. Sequencing is not acceptable.  

12. Provide updated replacement plan avoiding and minimizing wetland impacts. Additional alternatives were requested.  

Wetland ID labels between grading plan and replacement plan are not consistent.  

13. Provide consistent wetland labeling/naming.  

Wetland 6 (grading plan) drainage area is divided with a driveway.  

14. Provide equalizing culvert and update HydroCAD model.  

Wetland credits are proposed to be purchased to replace the wetland impacts.  

15. Provide proof of purchase for wetland credits.  

**Wildlife:** The proposed project may include endangered or threatened species, rare natural communities, colonial waterbird nesting sites, migratory waterfowl concentration areas, deer  

16. Provide documentation from the DNR if the proposed project includes endangered or threatened species, rare natural communities, colonial waterbird nesting sites,
wintering areas or wildlife travel corridors.  
migratory waterfowl concentration areas, deer wintering areas or wildlife travel corridors

RECOMMENDATION: Table with 16 Stipulations

Stipulations:
1. Receipt of escrows.
2. Revise infiltration to apply infiltration only over the infiltration bench. Confirm that the retention volume can be infiltrated within 48 hours over the available area.
3. Remove liner from infiltration bench to allow groundwater recharge.
4. Provide spot elevations of infiltration areas.
5. Provide plans for the outlet from Pond 1.
6. The 100-year post project conditions runoff rate and volume must be less than the proposed 25-year event.
7. Update drainage areas and HydroCAD to include the proper ponding areas.
8. Provide updated proposed drainage area maps based on revised grading plan.
9. Provide dewatering plans and copy of DNR appropriations permits if dewatering is used.
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13. Provide consistent wetland labeling/naming.
14. Provide equalizing culvert and update HydroCAD model.
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