COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: June 10, 2019
AGENDA NUMBER: 18
FILE NUMBER: 19-105
ITEM: Villas at Crosstown Woods

RECOMMENDATION: Table with 18 Stipulations

APPLICANT: Villas at Crosstown Woods, LLC
13432 Hansen Blvd
Andover, MN 55304

PURPOSE: Residential Development
48 Lots on 20 Acres

LOCATION: Constance Blvd NW & County Rd 18 in Andover, Minnesota
APPLICABILITY:
1. Any work in or adjacent to wetlands, lakes or water courses
2. One or more cumulative acres of land disturbance
3. The lands and waters that have been, or may be covered by the regional flood.

EXHIBITS:
2. Stormwater Management Report; by Advanced Engineering and Environmental Services, dated 5/19, received 5/29/19.
4. Preliminary Plat Narrative; dated 1/2/19, received 5/29/19.
5. Wetland Replacement Plan; by Kjolhaug Environmental, dated 5/29/19, received 5/29/19.

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 not a public ditch on the property.

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

Erosion and Sediment Control: Soils affected by the proposal are Isanti 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 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 not provided for ESC (riprap, perimeter control, concrete washout, inlet protection, etc.)

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

Floodplain: There is floodplain on the property according to the District model. The District’s floodplain elevation is at 899.0 feet. The project does propose to place fill within the floodplain. The total floodplain impact is 0.1 acre-feet. The proposed impact is within the flood fringe. Compensatory storage is provided; however a figure showing the location is needed. There are no flooding concerns upstream and/or downstream.

High Water Flooding: Information has been provided to substantiate low floor elevations. Low floor elevations do meet the criteria for the City of Andover; 3 ft above mottled soils/groundwater, 2 ft over 100 yr.

Groundwater: Geotechnical information collected in May, 2019 indicates long term groundwater elevation is present at 9 to 14 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.

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:** It is unknown if the proposed project is consistent with local planning and zoning. The applicant has not applied to the city. 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 the City of Andover. 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>3</td>
<td>City of Andover</td>
</tr>
<tr>
<td>Sumps</td>
<td>3</td>
<td>City of Andover</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 not achieved. The stormwater management system utilizes wet ponds and infiltration.

Drainage sensitive uses do exist downstream from the proposed site. Based on current design, 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 may cause an exceedance of State water quality standards. The project may 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 may detrimentally affect the existing water quality of the receiving water. The proposal will cause extreme fluctuations of water levels or temperature changes.

**Impairments:** This project is not within one (1) mile of an Impaired 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 1/17/19. The wetland boundary has been checked.

The wetlands are not a DNR protected water.

The total proposed wetland impact is .04045 acres. The impact is through fill/drainage/conversion in 6 locations as shown below:
The de minimis is 2,500 sf (type 1, 2, 6, 7, 8) or 100 sf (type 3, 4, 5). 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 need to contact the DNR area hydrologist and the Corps of Engineers.

Two or more alternatives, plus the proposed project, have been submitted. On-site sequencing does apply. The avoidance alternatives are considered good faith efforts. None of the avoidance alternatives are considered feasible and prudent.

Alternatives may exist because:

1) The basic purpose of the project can be accomplished by further design modification which would minimize wetland impacts.

**Wetland Replacement Plan:** A wetland replacement plan has been submitted and is required.

The wetland replacement plan has been sent to TEP members for comment.

Replacement is proposed to be through purchasing wetland credits at a ratio of 2:1. The credits will be purchased through wetland bank #1409.

The TEP has not approved the wetland mitigation plan.

**Wildlife:** The proposed project does 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 contacted the MDNR natural heritage or endangered species program. MDNR has responded to the applicant 5/8/19 correspondence #ERDB 20190311.

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

**Performance Escrow:** $10,450

**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 + (16.9 ac * $500/ac) = $10,450</td>
<td>1. Receipt of escrows.</td>
</tr>
<tr>
<td><strong>Stormwater &amp; Hydraulics:</strong> A post construction test on the infiltration basin</td>
<td>2. The applicant must provide a note on the construction plans that a post construction test on the infiltration is required.</td>
</tr>
</tbody>
</table>
will be required to verify the assumed infiltration rates are obtained.

The current design does not meet the volume management requirement equivalent to infiltrating runoff from the first inch of precipitation. It is unclear how consistent infiltration is expected in Ponds #1 and #2 due to potential groundwater mounding.

It is unclear how a NWL of 899 will be maintained in Pond #2 without matching seasonal high groundwater levels.

Unclear of downstream impacts with the installation of the leveling pipe connecting Pond #1 and the existing pond.

100-year HWL of Pond#1 is not contained on-site.

According to the Grading Plan, Pond #1 has an EOF at 900.3. However, the EOF is not modeled as an outlet device in HydroCAD.

A proposed pervious area CN of 32 is not representative of the proposed condition. Soil compaction by heavy equipment due to mass grading needs to be accounted for.

No storm sewer information provided.

<table>
<thead>
<tr>
<th>No.</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.</td>
<td>Re-design to provide infiltration outside of the wet ponds. See the groundwater section for an updated NGWL recommendation.</td>
</tr>
<tr>
<td>4.</td>
<td>Explain how a NWL of 899 will be maintained in Pond #2.</td>
</tr>
<tr>
<td>5.</td>
<td>Include the existing Pond – JP in the HydroCAD model to ensure no adverse impacts downstream.</td>
</tr>
<tr>
<td>6.</td>
<td>Redesign Pond #1 to contain 100-year HWL or provide written approval from adjacent landowner to allow flooding and include in the Drainage and Utility Easement.</td>
</tr>
<tr>
<td>7.</td>
<td>Update the HydroCAD model to include an EOF at 900.3 for Pond #1.</td>
</tr>
<tr>
<td>8.</td>
<td>Update the proposed pervious area CN in the HydroCAD model to reflect the proposed conditions which appears to be lawn, HSG A. Update plans to include soil decompaction to a depth of 6 inches or downgrade the proposed pervious curve number to the next HSG.</td>
</tr>
<tr>
<td>9.</td>
<td>Provide storm sewer information including diameter and inverts.</td>
</tr>
</tbody>
</table>

**Soils & Erosion Control:** Details are not provided for erosion and sediment control items.

10. Provide details for ESC items (i.e. rip rap, perimeter control, concrete
### Water Quality:
All discharges into wetlands/water quality basins are pretreated by a sediment sump manhole.

### Floodplain:
No floodplain figure provided.

### Groundwater:
SB #6 appears to not accurately represent the seasonal groundwater level. A seasonal groundwater level is assumed to be 898 according to aerial images of nearby ponds.

### Wetlands:
A wetland replacement plan has been provided. The TEP and LGU have not approved the replacement 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 based on DNR correspondence letter #ERDB 20190311.
**RECOMMENDATION:** Table with 18 Stipulations

**Stipulations:**

1. Receipt of escrows.
2. 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.
3. Re-design to provide infiltration outside of the wet ponds. See the groundwater section for an updated NGWL recommendation.
4. Explain how a NWL of 899 will be maintained in Pond #2.
5. Include the existing Pond – JP in the HydroCAD model to ensure no adverse impacts downstream.
6. Redesign Pond #1 to contain 100-year HWL or provide written approval from adjacent landowner to allow flooding and include in the Drainage and Utility Easement.
7. Update the HydroCAD model to include an EOF at 900.3 for Pond #1.
8. Update the proposed pervious area CN in the HydroCAD model to reflect the proposed conditions which appears to be lawn, HSG A. Update plans to include soil decompaction to a depth of 6 inches or downgrade the proposed pervious curve number to the next HSG.
9. Provide storm sewer information including diameter and inverts.
10. Provide details for ESC items (i.e. rip rap, perimeter control, concrete washout, inlet protection, construction entrance etc.)
11. 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.
12. Provide the input parameters used in SHSAM calculations. Sumps should be appropriately sized to meet District removal rates of 80% TSS for OK110 particle size. A minimum of 4-foot sump depth is required to prevent resuspension of sediment.
13. Provide a floodplain figure that shows the floodplain line and cut/fill areas.
14. Provide a soil boring within the infiltration basin (Pond #3) to ensure 3’ groundwater separation is met. If using a groundwater level other than 898, provide piezometer readings in Pond #1 and #2.
15. An approved replacement plan must be issued.
16. Provide USACE permit or verification from them that design modifications are not required for their permit.
17. Provide proof of purchase for wetland credits.
18. The applicant must acknowledge the project will follow the requirements and recommendation of the DNR correspondence and provide notes on the plans for the contractors to follow and receive DNR flyers and factsheets associated with their correspondence letter.