COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: June 24, 2019
AGENDA NUMBER: 19
FILE NUMBER: 19-076
ITEM: North Central Office Plaza

RECOMMENDATION: Table with 9 Stipulations

APPLICANT: Hearth Development
Attn: Ryan Grimes
3300 Rice Street, Suite 100
St. Paul, MN 55126

PURPOSE: 45,090 square feet building and parking on a 1.85-acre lot

LOCATION: Ulysses Street north of 117th Avenue and west of 118th Avenue, 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 waters that have been, or may be covered by the regional flood.
5. High water table, outwash and organic soils
6. High infiltration soils
7. Highly erodible soils

EXHIBITS:
1. Construction Plan set (6 sheets); by Erickson Civil, dated April 8, 2019 received April 9, 2019.
2. Stormwater Management Report (Drainage Report); by Erickson Civil, dated April 8, 2019 received April 9, 2019.

PREVIOUS ACTION TAKEN: This application was initially submitted on April 9, 2019. The application was incomplete with 13 stipulations:
1. Receipt of escrows.
2. The applicant must employ appropriate on-site testing to determine infiltration rates and to ensure a minimum of 3ft of separation from the seasonally high-water table and the bottom of the proposed basin.
3. 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.
4. 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.

5. Provide clarification on construction plans how impervious is routed to basin prior to discharging to regional basin.

6. Provide calculations that illustrate 1-inch infiltration volume requirement is meet below the outlet.

7. The applicant must include proposed drainage area map.

8. After initial grading completely surround the proposed filtration basins with erosion control measures to prevent the basin from clogging.

9. Provide details for all proposed erosion and sediment control devices.

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. Provide details on pretreatment into filtration basin. If using sumps, 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.

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

13. Update the plans to show the floodplain area of 893.8 feet. Calculate and provide an exhibit showing the floodplain fill and mitigation volumes.

FINDINGS:

Pre-application Meeting: The project as submitted has not received a general review during a pre-application meeting.

Ditches: There is a public ditch on the property. The public ditch is County Ditch 41 Branch 8 according to the public drainage map. The ditch is piped through the property. No changes are proposed.

Erosion and Sediment Control: Soil affected by the proposal is Rifle.

- Stabilizing vegetation is proposed for disturbed areas within seven (7) days of rough grading.

- Soil stockpiles have 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 not protected from sediment deposition. Add double row of perimeter control at adjacent pond to the southwest of the property.

- 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 not pass through a sediment basin or other sediment trapping BMP with equal or greater storage capacity. Temporary sediment basin is not required because the total disturbed area is less than 5 acres.
• Stabilization adequate to prevent erosion has not 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, bioroll, concrete washout, inlet protection, etc.)

**Dewatering:** Shallow ground water does exist on site. The project does require dewatering.

**Floodplain:** There is floodplain on the property according to the District model. The District’s floodplain elevation is at 893.8 feet. The project does propose to place fill within the floodplain. The total floodplain impact has not been calculated. The proposed impact is not within the floodway. Compensatory storage is not calculated. There are no flooding concerns upstream or downstream.

**Groundwater:** Geotechnical information collected in March 2005 indicates groundwater elevation is present at about 3 to 5 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. 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 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>
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<tbody>
<tr>
<td>Filtration Basins</td>
<td>1</td>
<td>Unknown</td>
</tr>
<tr>
<td>Pretreatment Device</td>
<td>?</td>
<td>Unknown</td>
</tr>
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</table>

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 but may not be feasible due to high groundwater. The 1-inch infiltration is not achieved. The stormwater management system utilizes filtration. Calculations have not been provided that illustrate the 1-inch infiltration volume is achieved below the 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 the 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 not 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 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 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 not within one (1) mile of and drains to an Impaired Water.

There are 45,090 square feet of 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. The mapped wetland is a stormpond. Wetlands have not been delineated. The wetland boundary has not been checked.
**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. The applicant has not contacted the MDNR natural heritage or endangered species program.

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:** $2,625.00  
**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 + (1.25 ac * $500/ac = $2,625.00)</td>
<td>1. Receipt of escrows.</td>
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</tbody>
</table>
| **Stormwater & Hydraulics:**  
It is our belief that the current design will bypass too much flow to the stormwater pond, underutilizing the filter area. Suggest hard capping existing catch basins and using Anoka Conservation District Rain Guardians (or similar) as pretreatment device.  
Calculations provided simply state how much storage the basin is providing versus how much volume is produced on impervious surfaces during a 1.1-inch storm. Several impervious areas will currently bypass the filter including the roof, which goes into the drain tile system and the northeastern corner of the parking area, which gets into the storm system. The watershed District requires an accurate accounting of the amount of water over impervious surface is getting treated and will require more detail in the calculation so we can see more clearly what is being treated and what is bypassing. | 2. Provide alternate plan to route water to proposed filtration area with pretreated water. Suggest using Anoka Conservation District Rain Guardian or similar.  
3. Provide more detailed calculations that illustrate 1.1-inch infiltration volume requirement is meet below the outlet. Suggest using HydroCAD  
4. Provide additional details for filtration basin construction including elevations and drain tile connection into storm structures. |
The elevations for the proposed filtration basin, drain tiles, and drain tile connections are not shown or not clear on the plans and details. Detail 4 and 8 need to have elevations shown for us to review that things will drain.

**Soils & Erosion Control:** Filtration 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.

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

The current proposed detail (detail 4) shows the filtration area cross section that includes 4” of 80/20% sand to compost mix, 14” of iron enhanced sand, and drain tile with sock embedded in the sand. It is our recommendation:

- That a sand compost mix is not used on top of iron sand. If it is used, 90/10 would be the very upper end to prevent clogging.
- No geotextile fabric between media
- That the drain tile is embedded in a section of filter rock with out the sock

5. After initial grading completely surround the proposed filtration basins with erosion control measures to prevent the basin from clogging.

6. 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.

7. Provide revised details for the filter area cross section.

**Water Quality:** Pretreatment proposed will bypass too much of the water to the pond. Suggest removing the catch basins in line with curb openings and installing Anoka Conservation District Rain Guardian or similar.

8. Provide revised pretreatment system that will not bypass flow to the pond. Suggest removing the catch basins in line with curb openings and installing Anoka Conservation District Rain Guardian or similar.

**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

9. Provide an O&M Agreement that meets District requirements.
a Maintenance Plan for each Stormwater Treatment Practice.

**RECOMMENDATION:** Table with 9 Stipulations

**Stipulations:**

1. Receipt of escrows.
2. Provide alternate plan to route water to proposed filtration area with pretreated water. Suggest using Anoka Conservation District Rain Guardian or similar.
3. Provide more detailed calculations that illustrate 1-inch infiltration volume requirement is meet below the outlet. Suggest using HydroCAD.
4. Provide additional details for filtration basin construction including elevations and drain tile connection into storm structures.
5. After initial grading completely surround the proposed filtration basins with erosion control measures to prevent the basin from clogging.
6. 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.
7. Provide revised details for the filter area cross section.
8. Provide revised pretreatment system that will not bypass flow to the pond. Suggest removing the catch basins in line with curb openings and installing Anoka Conservation District Rain Guardian or similar.
9. Provide an O&M Agreement that meets District requirements.