COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: January 27, 2020
AGENDA NUMBER: 11
FILE NUMBER: 19-181
ITEM: Blaine Public Storage

RECOMMENDATION: Table with 12 Conditions and 2 Stipulations

APPLICANT: Selmer, James W; Accent Enterprises, Inc.
17000 Ward Lake Drive, Andover, MN 55304
13739 Lincoln Street NE, Ham Lake, MN 55304

PURPOSE: Construction of three proposed storage buildings with associated parking
7.55 Acres

LOCATION: 11421 Ulysses Street NE, Blaine, MN

APPLICABILITY:
1. One or more cumulative acres of land disturbance
2. High infiltration soils
3. Highly erodible soils

**EXHIBITS:**
1. Construction Plan set (12 sheets); by Kimley-Horn, dated 1/14/2020, received 1/15/2020.
2. Preliminary Plat (1 sheet); by Kimley-Horn, dated 11/8/19, received 1/15/2020.
6. SWPPP; by Kimley-Horn, dated 10/29/19, received 11/15/2020.
7. Comment Response Letter; by Kimley-Horn, dated 1/15/2020, received 1/15/2020
8. Draft O&M Agreement; not dated, received 1/15/2020.

**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 Lino, 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 not have a note to stabilize within seven (7) days of inactivity.

Adjacent properties and stormwater basins 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 not pass through a sediment basin or other sediment trapping BMP with equal or greater storage capacity and is not required.

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 have been provided for ESC (riprap, perimeter control, concrete washout, inlet protection, etc.)

**Dewatering:** Shallow ground water does not exist on site. Dewatering is not anticipated during the construction of the proposed project.

**Floodplain:** There is no floodplain on the property according to the District model and FEMA.

**High Water Flooding:** Information has been provided to substantiate low floor elevations. Low floor elevations do meet the criteria for the City of Blaine; 2 ft above mottled, 2 ft above 100-year.

**Groundwater:** Geotechnical information collected in July 2019 indicates long term groundwater elevation is present at 6.5 to 13 feet below the surface. Additional data collected in November 2019 indicate groundwater at 9 to 13.5 feet below ground 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 and engineering. There is an approved local water plan.

Property owners affected by changes in drainage have not been notified or acknowledged the changes proposed and it is not needed.

**Maintenance:** The owner of the Stormwater Management features, and treatment practices is Accent Enterprises. 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>Infiltration Basins</td>
<td>2</td>
<td>Accent Enterprises</td>
</tr>
<tr>
<td>Sump with SAFL Baffle</td>
<td>1</td>
<td>Accent Enterprises</td>
</tr>
<tr>
<td>Forebay</td>
<td>1</td>
<td>Accent Enterprises</td>
</tr>
</tbody>
</table>

Inspection and maintenance of stormwater facilities will be the responsibility of Accent Enterprises. A maintenance agreement has been executed. The applicant has submitted a Draft Maintenance Plan for each Stormwater Treatment Practice. The Maintenance Plan is consistent with District Maintenance standards for each STP.

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 not provided.

**Stormwater & Hydrology:** Infiltration is allowed within the project area. The 1-inch infiltration may be achieved. The stormwater management system utilizes sedimentation, sump manholes, and infiltration. Calculations have been provided that illustrate the 1-inch infiltration volume is achieved below outlet but appear to be inaccurate.

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 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 sump manhole or sediment forebay, and they 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 not within one (1) mile of and does not drain to an Impaired 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.

**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.

**Performance Escrow:** $5,845.00
**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 + (7.69 ac * $500/ac = $5,845.00</td>
<td>1. Receipt of escrows.</td>
</tr>
<tr>
<td>Local Planning &amp; Zoning: It is unknown if the proposed project is consistent with local planning and zoning and engineering.</td>
<td>2. Provide confirmation from the city they are reviewing the same set of plans and that they do not have comments that will affect the design or layout of the project that will affect the Stormwater Management report.</td>
</tr>
<tr>
<td>Stormwater &amp; Hydraulics: Elevation for the 6” orifice on the OC-1 detail is incorrect. Pipe size listed for the OC-2 outlet/inlet pipes are inconsistent between the OC-2 detail, infiltration basin 2 typical section detail, and sheet C300.</td>
<td>3. Update the OC-1 detail with the correct 6” orifice elevation. 4. Update the OC-2 detail, the infiltration basin 2 typical section detail, and sheet C300 to show consistent pipe size for the OC-2 outlet and inlet pipes.</td>
</tr>
</tbody>
</table>
Invert elevation of the OC-2 inlet pipe listed on the infiltration basin 2 typical section detail is incorrect.

The outlet pipe invert from OC-2 is 898.0. It is not clear that there is positive drainage from the outlet at that elevation.

It appears that the applicant is meeting the volume management requirement equivalent to infiltrating runoff from the first inch of precipitation. However, the volume listed for infiltration basin 2 in the HydroCAD model does not appear consistent with the grading plan. Also, the water quality volume (below outlet) listed on page 2 of the stormwater management report is not consistent with the volumes listed in the HydroCAD report. Blaine requires a volume reduction of 1.1” from impervious surfaces.

It appears that the applicant is using a composite curve number method for the site HydroCAD modeling.

The HydroCAD report does not include any node summary information for review.

5. Update the infiltration basin 2 typical section detail to show the correct invert elevation for the OC-2 inlet pipe.

6. Provide topographic data showing the drainage from the outlet pipe to the north.

7. Check the HydroCAD volume for infiltration basin 2. The HydroCAD volume appears to be greater than what is shown on the grading plan. Update the Stormwater Management Report to report the correct water quality volume (below outlet) for both infiltration basin 1 and 2.

8. Change the HydroCAD settings to model separate runoff for each curve number (Weighted Q).

9. Include the node summaries in the HydroCAD report.

10. Raise the bottom of Infiltration Basin B-1 to 896.0 or provide further analysis to determine the seasonal high groundwater level and demonstrate 3 feet of separation from groundwater.

11. Provide matching erosion controls plans.

12. Provide an O&M Agreement that meets District requirements.
RECOMMENDATION: Table with 12 Conditions and 2 Stipulations.

Conditions:
1. Receipt of escrows.
2. Provide confirmation from the city they are reviewing the same set of plans and that they do not have comments that will affect the design or layout of the project that will affect the Stormwater Management report.
3. Update the OC-1 detail with the correct 6” orifice elevation.
4. Update the OC-2 detail, the infiltration basin 2 typical section detail, and sheet C300 to show consistent pipe size for the OC-2 outlet and inlet pipes.
5. Update the infiltration basin 2 typical section detail to show the correct invert elevation for the OC-2 inlet pipe.
6. Provide topographic data showing the drainage from the outlet pipe to the north.
7. Check the HydroCAD volume for infiltration basin 2. The HydroCAD volume appears to be greater than what is shown on the grading plan. Update the Stormwater Management Report to report the correct water quality volume (below outlet) for both infiltration basin 1 and 2.
8. Change the HydroCAD settings to model separate runoff for each curve number (Weighted Q).
9. Include the node summaries in the HydroCAD report.
10. Raise the bottom of Infiltration Basin B-1 to 896.0 or provide further analysis to determine the seasonal high groundwater level and demonstrate 3 feet of separation from groundwater.
11. Provide matching erosion controls plans.
12. Provide an O&M Agreement that meets District requirements.

Stipulations:
1. Submittal of as-builts for infiltration basin 1, infiltration basin 2, OC-1, OC-2, and STMH-101.
2. Completion of post construction infiltration tests on Infiltration Basin 1 and Infiltration Basin 2 by filling the basin to a minimum depth of 6 inches with water and monitoring the time necessary to drain, or multiple double ring infiltration tests to ASTM standards. The Coon Creek Watershed District shall be notified prior to the test to witness the results.