COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: May 23, 2016
AGENDA NUMBER: 6
FILE NUMBER: 16-072
ITEM: Andover Animal Hospital

RECOMMENDATION: Table with 3 Stipulations

APPLICANT: Kari Wittmer
1574 154th Ave. NW
Andover MN, 55304

PURPOSE: Building and new bituminous parking surface construction

LOCATION: Intersection of 139th Ln. NW and Jay St. NW, Andover MN
APPLICABILITY:
1) High infiltration soils.
2) Highly erodible soils
3) Project site is not greater than 1 acre, a NPDES permit is not required

EXHIBITS:
1) Drainage Calculations By Bogart Pederson and Associates; dated 5/9/2016; received 5/10/2016
2) Preliminary Plat of the property; by E.G. Rudd and Sons; dated May 2016; received 5/10/2016
3) Grading Plan; by Bogart, Pederson and Associates; revision (1) dated 5/9/2016; Received 5/10/2016
4) Geotechnical Report; by NTI, dated 3/23/2015; received 5/10/2016
5) Land Title Survey; by E.G. Rudd and Sons INC.; dated 2/1/2016; received 5/10/2016

HISTORY & CONSIDERATIONS: Project is part of the Andover Station North drainage area. All stormwater drains to basins to the west of the site and then to wetlands to the south. The site is not required to infiltrate on site or provide rate control as water volume and quality requirements are met through the regional basin. This is the first application for this site.

FINDINGS:
Ditches: There is not a public ditch on the property. The project site is tributary to County Ditch 57.
**Ditch Hydraulics:**
A crossing of the ditch is not proposed.

**Erosion and Sediment Control:** Soils affected by the proposal are Sartell. Stabilizing vegetation is not proposed for disturbed areas within one week of rough grading. Adjacent properties and stormwater ponds are not protected from sediment deposition. Project site is not greater than 1 acre, a NPDES permit is not required.

**Floodplain:** There is no floodplain on the property according to the District model or FEMA. The project does not propose to place fill within the floodplain. There are no flooding concerns upstream and/or downstream.

**Groundwater:** Geotechnical information has been submitted. Geotechnical information collected in March of 2016 indicates long term groundwater elevation is present at 12 feet below the surface.

The site is not within a Drinking Water Supply Management Area (DWSMA).

**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.

Property owners affected by changes in drainage have been notified and acknowledge the changes proposed.

**Maintenance:** The Owner of the Stormwater Management features and treatment practices is the City of Andover. Andover does agree to maintain the Stormwater Treatment Practices (STPs) consisting of the following:

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<th>Stormwater Treatment Practices</th>
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<tr>
<td>Sump catch basin</td>
<td>1</td>
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Inspection and maintenance of stormwater facilities will be the responsibility of the City of Andover. 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 maintenance access to all stormwater management features is provided.

Inspection and maintenance of stormwater facilities will be the responsibility of the City of Andover. A maintenance agreement has not been executed and is not needed.

**Stormwater & Hydrology:** Infiltration is allowed within the project area. The 1-inch infiltration is not achieved. The stormwater management system utilizes regional
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, or rates which would interfere with sensitive downstream land uses.

**Water Quality:** There are new impervious surfaces proposed as part of this project. Water Quality Results were not submitted. It is unknown if the proposed project will cause an exceedence of State water quality standards. It is unknown if the project will contribute to the adverse impact of wetlands through inundation or volume of flow. All discharges into wetlands are pretreated by a sediment basin/water quality pond, and are designed correctly. All work adjacent to wetlands, waterbodies and water conveyance systems are not protected from erosion. It is unknown if the proposal will detrimentally affect the existing water quality of the receiving water. It is unknown if the proposal will cause extreme fluctuations of water levels or temperature changes.

**Impairments:** This project is within one (1) mile and drains to an Impaired Water. The Impaired Water is Coon Creek. Coon Creek is impaired for (Aquatic Life (Macro-invertebrates)). The major stressors is Total Phosphorus (TP). There is not an EPA approved Total Maximum Daily Load (TMDL) or Waste Load Allocation (WLA).

**Wetlands:** Wetlands do not exist on-site according to the 1987 Federal manual, NWI, PWI and Soil Survey.

**Wetland Replacement Plan:** A wetland replacement plan has not been submitted and is not needed.

**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.

There are not Ground Water Dependent water resources on site.

**Performance Escrow:** $2,300.00  
**Wetland Escrow:** N/A  
There are not ditch liens on the property.

**FINDINGS/ISSUES/CONCERNS:**

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<td>Stormwater &amp; Hydraulics:</td>
<td>No action required</td>
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<td>The applicant is not meeting the volume management requirement equivalent to infiltrating runoff from the first inch of precipitation. However, the site is part of the Andover Station North drainage area which</td>
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drains to regional basins to the west of the site before entering wetlands to the south. These basins have the capacity for the additional drainage from the site to meet stormwater requirements. Also, the applicant is filtering the pervious area of the site into drain tile which are connected to city storm mains that also drain to the basins.

### Soils & Erosion Control:
Stabilization of rough graded areas is required within 7 days.

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| **Water Quality:** | All discharges into water quality basins are pretreated by a sediment sump manhole. These sump manholes are not designed correctly for water quality treatment prior to discharge into a wetland or receiving water. An optimally designed sump manhole shall be designed to remove 80% of the coarse sand and silt sediment draining to it. Guidelines for designing a properly sized sump manhole are indicated in “Urban Stormwater Management And Technology: Update and Users Guide” Lager et al. (1977) (http://nepis.epa.gov/Adobe/PDF/300014K5.pdf) General guidance suggests sump dimensions are as followed, however calculations will still need to be provided:  
  - The diameter of the catch basin should be equal to 4D (outlet of diameter)  
  - The sump depth should be at least 4D. This depth should be increased if cleaning is infrequent or if the area draining to the catch basin has high sediment loads.  
  - The top of the outlet pipe should be 1.5D from the inlet to the catch basin.  

Applicant shall provide calculations for the sizing of CB 101, to meet the 80% removal efficiency requirement or add device to improve sediment capture. If using SHASM to calculate removal rates, the MnDOT road sand particle size distribution is acceptable.

Another option that can reduce the overall size
of the sump is to incorporate hydrodynamic separation.

Two economical options that the District recommends are SAFL Baffle (http://upstreamtechnologies.us/products/safl-baffle) or The Preserver™ (http://www.momentumenv.com). Both of which have design guidelines for optimal water quality treatment.

| Escrows: $2,000 + (0.6 ac * $500/ac) = $2,300.00 | 3. Receipt of escrows |

**RECOMMENDATION:** Table with 3 Stipulations

**Stipulations:**

1. Receipt of escrows.
2. Provide note on erosion control plan that rough graded areas will be stabilized within 7 days.
3. Provide calculations for the sizing of CBMH 101 to meet the 80% removal efficiency requirement or add device to improve sediment capture. If using SHASM to calculate removal rates, the MnDOT road sand particle size distribution is acceptable.