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**ENGINEERING PLAN REVIEW CHECKLIST**

**Preliminary plat submittals, including all required documents, are to be submitted to the Planning Department. Please refer to the Preliminary Plat Application Checklist for submittal requirements. The following checklist details items that are reviewed by the Engineering Department for proposed plats and/or Commercial Site Plans. This list is not inclusive, and the developer is responsible to address all comments herein in writing.**

**Name of Project:** \_\_\_\_\_

**Date of Submittal:** \_\_\_\_\_

**Owner:** \_\_\_\_\_

**Review Conducted by:** \_\_\_\_\_

**Review Status:**        \_\_\_\_\_ **Approved**                        \_\_\_\_\_ **Denied Pending Revisions**

**Approved By:** \_\_\_\_\_                        **Date:** \_\_\_\_\_

**STORMWATER MANAGEMENT PLAN (HYDROLOGY REPORT)**

Approved	Denied/ Pending	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Two signed and bound copies of the Stormwater Management Plan (Hydrology Report).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Plan meets requirements of Surface Water Management Plan (SWMP), requirements of the Coon Creek Watershed District (CCWD), Lower Rum River Watershed Management Organization (LRRWMO) and applicable portions of items 20.2-20.23 (MCM 5: Post-Construction Stormwater Management) of the Minnesota Pollution Control Agency’s (MPCA’s) Small Municipal Separate Storm Sewer Systems General Permit.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	For 10-Day Snowmelt Event analysis for landlocked basins, use Constant Intensity distribution, AMC 4, 0.5”/hr infiltration rate or half of what is used in standard conditions for basin model (whichever is less), and 7.2” of runoff depth over 10 days (240 hours).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Plan and stormwater calculations submitted to CCWD or LRRWMO.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Stormwater modeling shall use NOAA Atlas 14 precipitation data and NRCS MSE 3 rainfall distribution.

Comments: \_\_\_\_\_  
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**GEOTECHNICAL / SOILS REPORT**

Approved	Denied/ Pending	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Two signed and bound geotechnical reports with recommendations.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SCS soil types.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>Identify Seasonal High Water Mark (each boring).</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Identify existing ground water level (each boring).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Relate boring logs / elevations to actual elevations.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Soil borings to a minimum depth of 25 feet with logs.

Comments: \_\_\_\_\_  
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**REQUIRED ITEMS ON ALL PLAN SHEETS**

Approved	Denied/ Pending	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Name, appropriate certification and signature of the plan preparer.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Date of preparation and revision(s), along with revision description.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Graphic scale no smaller than one inch to fifty feet (1" = 50').
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	North arrow, designated as true north.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A legend providing symbols and labels for each feature indicated on the plan sheets (on title sheet only is acceptable).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location and names of existing / platted streets and other public ways, railroads, parks, public open spaces, and right of ways and easements.

Comments: \_\_\_\_\_  
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**EXISTING CONDITIONS PLAN**

Approved	Denied/ Pending	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location of parks and public open spaces, buildings and structures with notation if proposed to be removed, existing easements, right of ways, and section and municipal boundary lines within the plat and to a distance of one hundred (100') feet beyond.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location, and grades (where appropriate) of roadway centerlines, curb and gutter and width of existing streets (including type of surfacing), railroads, sanitary sewers, water mains, storm sewers, gas, telephone, electric, cable T.V., culverts, catch basins and manholes (including rim and invert elevations), hydrants, gate valves, trees, significant vegetation, trees, landscaping, water courses, lakes, marshes, wetlands, rock outcrops, and any other significant physical features up to a distance of one hundred (100') feet beyond plat boundary. Include a note regarding the utility quality level per CI/ASCE 38-02.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Identify any existing wells and septic systems on the site. Septic systems/tanks shall be crushed and removed. Add notes existing wells shall be abandoned per Minnesota Department of Health requirements.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Contours at vertical intervals of not more than two (2') feet, except that where the horizontal contour interval is one hundred (100') feet or more, a one (1') foot vertical interval shall be shown.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location of all delineated wetlands and FEMA floodplain boundary (flood fringe and floodway areas). Show <u>existing</u> flood plain boundary per CCWD Atlas 14 model (if plat within CCWD), or if outside CCWD identify Atlas 14 floodplain boundary per City of Andover floodplain models (contact City for elevation).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Include note stating which firm completed the topo survey with date.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Include location and label of soil borings completed.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Elevation of all existing property lines adjacent to plat (field verified).

Comments: \_\_\_\_\_  
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**PRELIMINARY SITE PLAN**

Approved	Denied/ Pending	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Locations and widths of proposed roadways, trails, sidewalks, right of way, and easements.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Label centerline alignment data, proposed curb type, and all curb radii (20' min at intersections internal to plat, 30' into cul de sac and at country roads).

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Upon completion of the first review, the City Engineer may, at their discretion, require a traffic impact study.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Show proposed utility alignments screened to background.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Show proposed pavement markings and signs.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Label any proposed turn lane lengths, tapers and widths.

Comments: \_\_\_\_\_  
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**GRADING, DRAINAGE, AND EROSION CONTROL PLAN**

Approved	Denied/ Pending	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Show all erosion control measures as needed (silt fence, inlet protection, rock construction entrance, rip rap, etc). Include applicable construction details.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Show site triangle at all intersections within and into / out of the site. Base upon most restrictive of Cases IIIA, IIIB, and IIIC in the MnDOT Road Design Manual, Chapter 5, Section 2.02 (assume vehicle on minor street is stopped). Make sure there are no obstructions greater than 2' in height (grading or landscaping) within this corner. Also show these on a landscape plan (if provided). Any city street that intersects with a County road shall meet the requirements of the Anoka County Highway Department.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Note on plan that developer is responsible for removing erosion control features upon establishment of permanent erosion control. Note on plan to provide site stabilization, including on stockpiles, within 7 days of grading completion or inactivity.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Identify temporary erosion control measures to protect in-place and proposed storm sewer inlets. Add note stating inlet protection shall be removed by contractor prior to winter freeze and replaced in spring if site stabilization is not achieved, or at direction of the City Engineer.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This should also go on the preliminary plat. Table with the following areas provided: 1) Gross Residential Area; 2) Wetlands, Water Bodies and Non-Stormwater Ponds (including 16.5' buffer); 3) Public Parks / Open Spaces; 4) Arterial Road ROW (if any); 5) Floodplain (excluding 2 above); 6) Vehicle Maintenance Accesses; 7) Net Residential Area; 8) Total lots; 9) Total Units; 10) Net Density (units/acre); 11) Right of Way Area; 12) County Right of Way Area (if any); 13) Road Miles. Calculate areas to the nearest 0.1 acres. The Net Residential Area = 1-2-3-4-5-6
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Identify the location of the proposed plat as either in the Coon Creek Watershed District or the Lower Rum River Watershed Management Organization.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Include a note indicating maximum slopes shall be four to one (4:1).

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Identify and label right of way, trail easements, vehicle maintenance access easements, and drainage and utility easements.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Identify location of all delineated wetlands and FEMA floodplain boundary (flood fringe and floodway areas). Show existing and proposed (if changing with project) flood plain boundary per CCWD Atlas 14 model (if plat within CCWD), or if outside CCWD identify Atlas 14 floodplain boundary per City of Andover floodplain models (contact City for elevation). Identify any areas of wetland or flood plain proposed to be removed/filled/mitigated/revived.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	For lots without municipal sewer, show the location of designated building pad, including a minimum of 3,600 square feet of contiguous buildable land area.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	For lots served by municipal sewer, the first 110 feet of each lot shall be buildable. The 110-foot buildable area must be outside of the 16.5-foot wetland buffer, above the 100-year flood elevation, and outside of any drainage and utility easements. The minimum width shall be equal to the required width of the lot for that particular zoning district. All organic material shall be removed and backfilled with granular material with no more than 5% organic material by volume.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	For lots without municipal sewer, provide 5,000 square foot total area designated for primary and secondary on-site septic drain field based on design criteria for four (4) bedroom home in compliance with Chapter 7080. Areas shall be indicated on the grading plan and the design specifications for the drain fields shall be submitted in a report at the time of the submittal of the preliminary plat.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All low floor elevations shall be a minimum of three (3') feet above the seasonal high water mark or two feet (2') above the designated or designed one hundred (100) year flood elevation, whichever is higher.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Minimum basement floor and/or lookout/low opening elevations for all proposed buildings and existing buildings adjacent to plat boundary shall be identified.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Existing contours (dashed lines) and proposed contours (solid lines) at vertical intervals of not more than two feet (2'); except, that where the horizontal contour interval is one hundred feet (100') or more, a one-foot (1') vertical interval shall be shown.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Identify all areas of fill with a hatch pattern.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Watercourses, lakes, delineated wetlands, wooded areas, drain tile, rock outcrops, and other significant physical features shall be shown.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	For all ponds and wetlands label NWL and 100-Year HWL (Atlas 14).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Show proposed storm sewer system, including outlet control structures with details and FES elevations.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Minimum grades in pervious areas should be 2%. If 2% cannot be achieved, it will be necessary to show intermediate proposed finish grade elevations which must be staked for final grading at 1% minimum. Show drainage arrows to depict flow direction.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Two vehicle maintenance accesses for each ponding area with 20' easements, 10:1 maximum slope. If adjacent to a public roadway, one VMA is acceptable.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	On urban plats, a development plan identifying each lot shall show proposed elevations at all lot corners and intermediate proposed elevations along all lot lines or any additional location as deemed necessary by the Engineer and shall be submitted and accepted by the city prior to the issuance of building permits.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All proposed lots shall be shown in a table labeled “Lot by Lot Tabulation” containing Lot #, Block #, House Type, Top of Curb Elevation at Driveway, Garage Floor Elevation, Driveway Grade (%), Low Floor Elevation, Lookout Elevation, Lowest Opening Elevation, 100-Year HWL, Emergency Overflow Elevation, Seasonal High Water Mark. If some of these do not apply put N/A in the table.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A temporary 16.5-foot wetland buffer shall be shown adjacent to the delineated edge of all wetlands and the normal water level of all storm water ponds.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Show proposed location for mailbox clusters and identify in parenthesis the number of mail slots. Clusters shall be on one side of the street only and away from public utilities that are proposed on lot lines (hydrants, catch basins, etc.).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Label Emergency Overflows for all low points in the street. Overflows between lots shall not be higher than 6 inches above the top of curb. If the street is being used as EOF, it shall be clearly labeled as such and water should be pooled no more than 6” above the top of curb at the low point in the roadway prior to having an overflow.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Need to identify Custom Grade (CG) lots where appropriate and label as such on all sheets where appropriate.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Include location and label of soil borings completed.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Label all proposed street grades, low point and high point stations and elevations, vertical curve lengths. Add grades in critical areas and along curb lines and larger paved areas on commercial sites.

Comments: \_\_\_\_\_  
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**PRELIMINARY UTILITY PLAN**

Approved	Denied/ Pending	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Plan view of existing and proposed centerline grades of streets, storm sewers, drainage ditches and culverts; also sanitary sewers and water mains where required by the platting authority.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Label rim and invert elevations for all structures and all pipe sizes, material, and grade.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Label NWL and HWL for all ponding areas, with an outline of the HWL provided.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	City sanitary sewer and water main shall be stubbed to all undeveloped parcels adjacent to plat within the MUSA boundary.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All water main shall be looped except for cul-de-sacs less than 250' if not practical.

Comments: \_\_\_\_\_  
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**TREE PROTECTION PLAN**

Approved	Denied/ Pending	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A Tree Protection Plan (which can be shown on the grading plan) shall be required showing all information as defined by the Tree Preservation Policy as adopted by the City Council.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	On areas of proposed tree protection, are the proposed grades going to stay the same (no cuts and fills) and no rapid grade changes, which may cause too much damage to saved trees and ultimately require removal instead of preservation?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are all the tree protection areas out of areas that would require removal, including critical easements and right of ways?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Identify areas of custom grading for tree protection.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is a symbol denoting suitable tree protection, such as orange silt fence or tree protection fence shown around the tree protection areas?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Does the design incorporate Low Impact Development (LID) concepts?

Comments: \_\_\_\_\_  
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**LANDSCAPE PLAN (IF REQUIRED)**

Approved	Denied/ Pending	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A landscaping plan showing proposed landscaping and/or screening from public roadways for double frontage lots, Planned Unit Developments, and urban lots that abut permanently rural areas, as required by City Code 11-3-1-F.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Does the Landscape Plan incorporate trees and shrubs from the list of recommended trees and shrubs in the City of Andover?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are the species native and/or suitable for this region?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Does the plan incorporate a variety of species, taking diversity into consideration? Does the plan fit with existing landscaping?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are the species suitable for tough, urban conditions?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Does the design allow for adequate spacing of plant material and are species placed in locations where they fit?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is the Landscape Plan laid out in a way allowing easy maintenance?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are the planting details per City specifications?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is the plant material proposed to be planted outside of all easements, right of way, and site triangles?

Comments: \_\_\_\_\_  
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**OTHER ITEMS**

Approved	Denied/ Pending	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	New plats and CSP's accessing county roads need to be submitted to the Anoka County Highway Department for review.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A sketch plan shall be required for all adjacent undeveloped land. Potential locations for future right-of-way and roadway extensions shall be provided.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Wetland delineation reports shall be forwarded to the Coon Creek Watershed District of Rum River Watershed Management Organization for review. A copy shall also be submitted to the City for our files.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Submit LOMA/LOMR to FEMA if floodplain boundary if proposed to be revised.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Verify if a park is to be located within the plat.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Obtain the necessary permits from the DNR, US Army Corps of Engineers, Lower Rum River Watershed Management Organization (LRRWMO), Coon Creek Watershed District (CCWD), MPCA, MDH, Anoka County, and any other agency interested in the site. Copies of the permits need to be submitted to the City for our files.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Provide estimated quantities. Pay item descriptions shall be consistent with most current version of MnDOT TRNS*PORT list. Quantities shall be broken out into sections for: Sanitary Sewer, Water Main, Storm Sewer, Streets.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Verify with Building Department that proposed street names match City's street grid naming convention.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Verify if a trail system is identified to be located within the plat.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	When the final plat is approved and recorded at the County, a digital copy of the plat (.dwg file) shall be submitted to the City.



<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	When the as-built grading plan is approved, a digital copy of the plan shall be submitted to the City. Must use Anoka County coordinates and Anoka County elevation datum.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Please review all City Codes for compliance.

Comments: \_\_\_\_\_  
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