CITY OF KIRKLAND
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DEPARTMENT OF PUBLIC WORKS
PRE-APPROVED PLANS POLICY

Policy G-7: ENGINEERING PLAN REQUIREMENTS

All subdivision, multi-family, commercial, and single family residential projects, as directed by Public Works, which submit for grading or building permit must include engineering drawings which have been stamped, signed and dated by a professional engineer licensed in the State of Washington. The plans must also include all of the applicable requirements outlined below:

GENERAL PLAN FORMAT:

1. Plan sheets and profile sheets or combined plan and profile sheets, specifications and detail sheets shall be on sheet size 22” x 34” or 24" x 36".

2. The detail sheet(s) shall include all standard details which are applicable to the project plus any details which are unique to the project. The detail sheet(s) shall provide sufficient information to construct complex elements of the project. Details may be provided on the plan and profile sheets if space allows.

3. Each submittal shall contain a project information/cover sheet with the following information:
   a. Title: Project name and City of Kirkland file number.
   b. Table of contents (if more than three pages).
   c. Vicinity map.
   d. Legal description.
   e. Name and phone number of utility field contacts and One-Call number, 1-800-424-5555.
   f. Name and phone number of surveyor.
   g. Name and phone number of owner/agent.
   h. Name and phone number of applicant.
   i. Name and phone number of engineering firm preparing plans (company logos acceptable).
   j. City of Kirkland's pre-construction notification requirements.
   k. City of Kirkland Public Works inspection request line phone number, 425-587-3805.

4. A title block shall be provided on each plan sheet. The title block shall list at a minimum the development title, the name, address, and phone number of the firm or individual preparing the plan, a revision block, date, page (of pages) numbering, and sheet title (e.g. Road and Drainage, Grading, Erosion/Sedimentation Control).

5. All plan sheets must have a NORTH arrow and must indicate the drawing scale. Acceptable plan scales are 1"=10' and 1"=20". For profiles, the vertical scale shall be 1"=5'.

6. All plans shall use the King County Datum…(NAVD 1988 vertical, NAD 83(91) horizontal) and shall indicate the temporary or permanent benchmark used in the survey.

7. Wetlands and Native Growth Protection Easements shall be indicated on the plans as required by the Department of Planning and Community Development.

8. Existing features shall be shown with dashed lines, and/or half-toned (screened), in order to clearly distinguish existing features from proposed improvements.

9. Plan sheets shall indicate all property lines, right-of-way lines and easements.

10. Existing and proposed contours must be shown on all plan views. Contours shall be shown at 2-foot intervals (5-foot intervals for slopes > 15%; 10-foot intervals for slopes > 40%). Contours shall be field verified for roadway and stream centerlines, floodplains and for conveyance systems. Contours shall extend 50 feet beyond property lines to resolve questions of setback, cut and fill slopes, drainage swales, ditches, and access or drainage to adjacent property.

11. All existing utilities, structures, pavement, etc. to be removed shall be clearly labeled as "Existing to be removed".

WATER SYSTEM IMPROVEMENTS

1. Show all existing and proposed water system features including, but not limited to:
   a. Water mains.
   b. Water valves.
   c. Water meters.
   d. Fire hydrants.
   e. Blow-offs.
   f. Air and vacuum release valve assemblies.
   g. Pressure reducing valves.
   h. Fire sprinkler lines.
   i. Double check-valves
   j. Post indicator valves.
   k. Siamese connections.
   l. Thrust blocking.

2. Indicate all easements required for water main extensions.

3. Length, size and pipe type shall be shown for all main extensions, sprinkler services and domestic services.

4. Show the water system and the sanitary sewer system on the same plan view for verification of minimum separation requirements.

SANITARY SEWER SYSTEM IMPROVEMENTS

1. Show all existing and proposed sanitary sewer system features including, but not limited to:
   a. Sewer mains (gravity and force mains).
   b. Side sewers (laterals).
   c. Manholes.
   d. Clean outs.
   e. Backflow preventers.
   f. Existing septic tanks and drain fields.
   g. Pump stations.

2. Indicate all easements required for sanitary sewer main extensions and joint-use laterals.

3. Show the sanitary sewer system and the water system on the same plan view for verification of minimum separation requirements.

4. Slope, length, size and pipe material shall be indicated for all mains and laterals.

5. Each manhole shall be uniquely numbered and shall be stationed off of the right-of-way centerline. Indicate rim and invert elevations at all manholes. Also indicate invert elevations for all laterals stubbed to the property line and the centerline stationing for each lateral.
6. Provide a profile of all sewer main extensions. Clearly indicate the vertical and horizontal scale and also show the profile on the same sheet with, and aligned underneath, the plan view.

7. The profile must show the location of all existing and proposed gas, water and storm drain crossings.

STORM DRAIN SYSTEM IMPROVEMENTS

1. Show all existing and proposed storm drain system features including, but not limited to:
   a. Storm drain mains.
   b. Catch basins.
   c. Curb inlets.
   d. Yard drains.
   e. Detention systems.
   f. Biofiltration swales.
   g. Lot drain stubouts.
   h. Culverts.
   i. Streams.
   j. Ditches.
   k. Headwalls.
   l. Trench drains.
   m. Infiltration pits.
   n. French drains.
   o. Oil/water separator vaults.

2. Slope, length, size and pipe material shall be indicated for all storm drain mains and stubouts.

3. All catch basins shall be uniquely numbered and shall be clearly labeled with the type of CB (e.g. Type I, Type IL, Type II).

4. Indicate all grate, lid and invert elevations for all drainage structures in plan or profile view. Also, indicate the invert elevation of all lot drain stubs at the property line.

5. Provide a profile of all storm drain detention systems and all R.O.W. storm drainage. Clearly indicate the vertical and horizontal scale.

6. Indicate all easements required for storm drain main extensions, biofiltration swales, storm drain detention facilities and other drainage features.

7. Indicate the centerline stationing for all catch basins, curb inlets and storm drain laterals.

ROADWAY IMPROVEMENTS

1. Show all existing and proposed roadway improvements including, but not limited to:
   a. Pavement.
   b. Concrete curb & gutter.
   c. Thickened asphalt edges.
   d. Edge of pavement.
   c. Sidewalk (incl. safety railings, when applicable).
   d. Planter strips.
   e. Street trees.
   f. Utility structures (e.g. manhole lids, catch basins, electrical boxes, power poles)
   g. Handicap ramps.
   h. Street lights.
   i. Barricades.
   j. Signage and striping.
   k. Driveways.
   l. Rockery walls.
   m. Mailboxes.
   n. Monuments.

2. Show all right-of-way lines, centerlines and roadway widths for all R.O.W.'s.

3. Clearly differentiate between areas of existing pavement, areas of new pavement and areas to be overlaid. Also indicate location of all saw cut lines.

4. Provide a cross section of all right-of-ways indicating R.O.W. width, roadway width, sidewalks, planter strips, curb & gutter, pavement thicknesses and edge of existing pavement.

5. Provide a profile of all new roadways or extensions of existing roadways. Indicate all vertical curve data, roadway slopes, centerline stationing and existing ground profiles.

6. Clearly label all profiles with respective street names and plan sheet reference numbers if drawn on separate sheets.

7. Indicate all easements and/or R.O.W. dedications required.

CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN (CSWPPP)

The CSWPPP contains two parts; the Erosion and Sediment Control (ESC) Plan (required for all projects) and the Stormwater Pollution Prevention and Spill Plan (SWPPP). Both plans include drawings and reports. Details regarding the full CSWPPP can be found in Drainage Policy D-12. Listed below are minimum items to include in plan drawings.

EROSION SEDIMENT CONTROL (ESC) PLAN DRAWING – required for all projects

1. Provide details for all ESC BMPs used on site (from COK Pre-Approved Plans).

2. Include ESC Plan Notes (from COK Pre-Approved Plans).

3. Indicate clearing limits.

4. Specify the type and location of temporary cover measures.

5. Specify the type and location of permanent cover measures (this can be shown in the landscaping plan, if prepared).

6. Specify the location and type of perimeter protection.

7. Indicate the location for tree protection fencing.

8. Specify the location of the construction entrance(s); include length, width, thickness, rock size, etc.

9. Specify the locations of all sediment ponds and traps, provide all dimensions, and provide typical section views through pond and outlet structures. Provide typical details of the control structure and dewatering mechanism.

10. Indicate catch basins that are to be protected, and indicate type of protection to be used.

11. Locate all pipes, ditches, dikes, and swales that will be used to convey stormwater. Show grades, dimensions, location and direction of flow. Show all temporary pipe inverts.

12. Indicate locations and outlets of any possible dewatering systems. Indicate locations of outlet protection.

13. Indicate the location of any level spreaders.

14. Provide location and specifications for the interception of runoff from disturbed areas and the conveyance of the runoff to a non-erosive discharge point.

15. Provide locations of all check dams.

16. Indicate drainage sub-basins before and after proposed construction, indicating flow direction to structural control measures with arrows. Use a bold dashed line showing developed condition.

17. Show all cut and fill slopes, indicating top/bottom of slope catch lines.

18. Indicate hazard areas (and applicable buffers) that are on or adjacent to the project site such as flood, erosion, landslide, and steep slope hazard areas.

19. Indicate drainage features and critical areas (and applicable buffers) that are on or adjacent to the project site such as streams, lakes, wetlands, roads, bogs, depressions, springs, seeps, swales, ditches, existing pipe, and seasonal water locations.

STORMWATER POLLUTION PREVENTION AND SPILL (SWPPS) SITE PLAN DRAWING –

The SWPPS site plan includes the location and description of BMPs required to prevent pollution and control spills from construction activities and from chemicals and other materials used and stored on the construction site. The site plan drawing element of the SWPPS plan shall include all of the information required for the base map, as well as:

1. Existing and proposed roads, driveways, parking areas, buildings, drainage facilities, utility corridors not associated with roadways, relevant critical areas and associated buffers, and proposed final topography.

2. Identify locations where liquids will be stored and delineate secondary containment areas that will be provided.

3. Identify locations where construction materials and wastes will be generated and stockpiled.

4. Identify location of fueling for vehicles and equipment if stationary tanks will be used.

5. Delineate containment areas for fuel spills.

6. Show locations of lighting and signage for fueling during evening hours.

7. Delineate maintenance and repair areas and clearly note that drip pans or plastic shall be used beneath vehicles. Also clearly note that signs must be posted that state no vehicle washing may occur in the area.

8. Delineate truck washout areas and identify the location of slurry/washwater sumps and rinsing areas for tools.

9. Delineate where chemicals will be applied and identify where they will be stored.

10. Identify where the spill response materials will be stored.