



**Public Works Department**  
**January 2008**  
1812 Main Street ♦ Lake Stevens, WA 98258  
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## Construction Plan Completeness Checklist

Project Name: \_\_\_\_\_ Project Number: \_\_\_\_\_

Construction Plan Examiner: \_\_\_\_\_ Date: \_\_\_\_\_

Review #: 1 2 3 4 5

**NOTE: All materials submitted for review must use and comply with City of Lake Stevens Engineering Design and Development Standards (EDDS), City of Lake Stevens Municipal Code (LSMC), the most recent adopted version of the Department of Ecology's Stormwater Management Manual for Western Washington (SWMM), and the Low Impact Development Technical Guidance Manual for Puget Sound (LID). Any deviations shall include a deviation request form. LSMC and City of Lake Stevens EDDS can be provided upon request.**

### FILE INVENTORY AND PLAN SUBMITTAL

**Plans shall comply with the following reports and materials that are applicable:**

- Preliminary Plat Map
- Hearing Examiner's Report & Related Correspondence (check for latest report)
- Preliminary Plat Approval Ordinance
- SEPA Checklist

**Submittal shall contain: (check satisfied conditions, circle missing elements)**

- Construction Plan Submittal Checklist.
- A complete set of surveyed construction plans prepared by a licensed surveyor and stamped by a Professional Engineer. Plans need to include applicable information such as a Cover Sheet,

Grading Plan, SWPPP, Drainage Plan, Signage and Striping Plan, Sanitary Sewer and Water Plans, Roads and Transportation Plans, Construction Notes, and Details.

- A Drainage Report.
- A Geotechnical/Hydrogeotechnical Investigation Report.
- A Sensitive Areas or Wetland Investigation Report.

**Note: Fees for review of construction plans will be charged per current fees Resolution No. 2007-23.**

#### GENERAL REQUIREMENTS FOR PLAN SETS

- Sheet size shall be 24" x 36" unless otherwise requested.
- Construction plan view shall be drawn to common engineering scale (maximum 1"=50')
- The ratio of the vertical to the horizontal scale shall be 1V:10H.
- All details and cross sections must have titles and identify scale. Details must reference a source.
- For each standard detail in the engineered construction drawings plan set, include the corresponding City of Lake Stevens Standard Detail number from the EDDS or other source. When possible, correlate the standard detail number to the plan view sheets.
- All details, cross sections, and profiles must be labeled and referenced out on their corresponding plans.
- Roads and general lot layout must conform to the approved preliminary plat map.
- Construction Plans must comply with Hearing Examiners Decision or Notice of Preliminary Approval.
- Notes and specifications are to be provided directly from EDDS, WSDOT Standard Specifications, manufacturer specifications, LID specifications, and materials specifications, and are to be provided in their entirety. At a minimum, plan sets are to contain the following applicable notes from the EDDS:

- General Notes
- Storm Drainage Notes
- Site Grading & TESCP Notes
- Temporary Gravel Construction Entrance Notes
- Hydroseeding General Notes
- Biofilter Swale Planting Notes
- Stand Pipe & Sedimentation Pond Maintenance Notes
- Maintenance of Silt Barrier Notes
- Construction sequence and schedule

## GENERAL REQUIREMENTS FOR ALL PLAN SHEETS

### All sheets in the construction plans shall include the following information:

- a project title.
- a page title (For example: Site Plan, Drainage Plan...).
- a Title Block to contain Engineering Firm, Project name, Name of sheet, Sheet \_\_ of \_\_, located on right margin.
- a City of Lake Stevens Project Number.
- a Professional Engineer's seal, signature, date of signature, and expiration date (**Final Plans Only**).
- ¼ Section, Section, Township and Range centered at top border.
- an Acknowledgement Block for City Engineer (attached) with located in lower right corner.
- an approval Block for Fire Marshal (attached) on Water Plans or other applicable plans.
- an approval Block for Post Master on applicable plans.
- a note on all sheets that "The Contractor shall verify the location of all existing utilities prior to any construction. Agencies involved shall be notified within a reasonable time prior to the start of construction." Provide a prominent note "Call 1-800-424-5555 Before You Dig".
- a north arrow.
- an engineering scale on site plans shall not be more than 1" = 20' nor less than 1" = 50'.
- a complete legend for line types, hatches, and symbols on **ALL** plans and profiles.

## GENERAL REQUIREMENTS FOR ALL SITE AND TOPOGRAPHIC INFORMATION

- Show onsite benchmark locations and provide descriptions.
- All property lines are to be shown with bearings, distances, and ties to controlling corners or subdivision corners.
- Show location, size and type of any existing or proposed structures, impervious areas, drainage facilities, wells, drain fields, drain field reserve areas, roads, pavement, striping, signs, easements, setbacks, and utilities on the site. Clearly differentiate between proposed and existing elements.
- Property lines are to be shown with bearings, distances, and ties to controlling corners or subdivision corners. Show existing and proposed drainage pattern(s), storm drainage and LID facilities (e. g. ditch lines, culverts, catch basins, french drains, surface drainage or sheet flow arrows). Clearly/differentiate between proposed and existing.
- Show location of all property boundaries, easements, lakes, streams, creeks and structures on site and within 50 feet of site boundaries.

- Show location of all wetlands, sensitive areas, primary association areas for threatened and endangered species, and erosion hazardous areas and landslide areas on site and those within 100 feet of the site boundaries.
- Show location of all setbacks and buffers from critical areas, property lines, structures, and utilities.
- Show location of all existing and proposed native growth protection areas (NGPA's) or native growth easements (NGPAE) on the site.
- Show boundaries or limits of site disturbance, clearing, and grading.
- Show location of any off-site critical areas, and boundaries of areas which are affected by the construction.
- Map existing wells, drain fields, infiltration systems, rain gardens and drain field reserve areas located within the distances of concern.
- Show location and type of all existing and proposed water quality and source control BMPs.
- Show location and type of existing and proposed water quality control facilities or measures such as detention ponds, rain gardens, roof gardens or other BMP's. Provide high water elevations for design of infiltration systems, if any.
- Grading setback details are to include 1/2 height of fill, 1/5 height of cut, 2' minimum.

## **COVER SHEET**

- Provide a preliminary plat map that complies with requirements outlined in the "Master Permit Application for Land Use Development Submittal Checklist".
- Provide a Vicinity Map with north arrow and scale.
- Provide name, address and phone number of applicant or developer, engineer, architect, contractors, etc.
- Provide a legal description of site along with property tax account number(s) of subject property and adjacent properties.
- Provide a Sheet Index.
- Provide a horizontal and vertical datum or basis for elevation and the benchmark used for elevation control (NAD 83 and NAVD 88 datum only).

## **GRADING PLAN**

- Provide cut volumes and fill volumes in cubic yards.
- Depict locations considered for cut and fill calculations.
- Provide finished floor elevations if applicable.
- Provide lot areas if applicable.

## CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

**Note: The SWPPP will comply with all criteria outlined in Vol. 1, Ch. 3 of the SWMM. For LID developments, the SWPPP will also comply with the LID Manual.**

- Address all 12 Elements of the SWPPP.
- Show location and type of proposed measures (BMPs) for Temporary Erosion and Sedimentation Control (TESC) or SWPPP as contained in Vol. 2 of the DOE Stormwater Management Manual for Western Washington.
- Provide details and notes for erosion control.
- Reference all applicable BMP numbers.
- Show locations of temporary stockpiles.
- Show all construction BMP's and reference or provide standard details.
- Show construction site access.
- Show flow arrows or paths for stormwater control during construction.
- Protect drain inlets.
- Stabilize soils, slopes, channels and outlets.
- Control sources of pollution.
- Control dewatering (sites requiring dewatering will need to develop a dewatering plan).

## DRAINAGE PLAN

**Note: The Drainage Plan and stormwater design will comply with Section 5 of the EDDS, Title 11 of the LSMC, the SWMMWW, and the LID Manual.**

- Provide spot elevations/flow arrows/contours for stormwater flow at post-development construction.
- Convey or control water from proposed and existing roads and/or adjacent properties.
- Show locations of emergency overflows and bypasses.
- Show roof drains and yard drains.
- Provide a 15' minimum drainage easement for open channel storm drainage facilities and closed storm drainage facilities.
- Provide a 15' minimum building setback line from the top of bank of a defined channel.
- Provide a 10' minimum building setback for closed drainage systems.

- ❑ If a drainage easement is to run along a lot line within a subdivision, the easement may straddle the lot line provided the drainage facilities can be located entirely along one lot.
- ❑ Access is to be provided for inspection and maintenance purposes for drainage structures that are to be located within an easement.
- ❑ No storm sewer pipe within a drainage easement shall have its centerline closer than 5' to a rear or side property line.
- ❑ Minimum storm sewer pipe diameter in right of way and between catch basins and/or manholes shall be 12".
- ❑ 24" pipe cover is preferred for storm drain systems. Alternative pipe material and City approval will be required for pipes with less than 24" of cover.
- ❑ Show all sizes, pipe materials and structures.
- ❑ Show direction of pipe flow.
- ❑ Show pipe's invert, slope, length, type, and catch basin grate elevation on plan view.
- ❑ Show existing and proposed storm drainage system profile(s) with pipe size, slope, catch basin type, location, station, rim and invert elevations.
- ❑ Provide energy dissipater at outfalls.

## **STORMWATER SITE PLAN (DRAINAGE REPORT)**

**Note: The Stormwater Site Plan shall comply with Volume 1 of the SWMM. The City REQUIRES the use of their Stormwater Site Plan Template.**

- ❑ The Stormwater Site Plan will be submitted in the following format:
  - ❑ Section 1 Project Overview – Provide a project description, pertinent details, and proposed land uses.
  - ❑ Section 2 Existing Conditions Summary – Address subject matter outlined in Volume 1, Chapter 3.1.1 in the SWMMWW. Provide a figure that illustrates the subject matter.
  - ❑ Section 3 Offsite Analysis Report – Address subject matter outlined in Volume 1, Chapter 3.1.3 in the SWMMWW. Provide a figure that illustrates the subject matter.
  - ❑ Section 4 Minimum Requirements – Address all applicable Minimum Requirements in Volume 1, Chapter 2 of the SWMMWW. Show how you arrived at the requirements by including Figure 2.2 or 2.3.
  - ❑ Section 5 Stormwater Control Plan – Address subject matter outlined in Volume 1, Chapter 3.1.5 in the SWMM. Discuss the following information:
    - Existing Site Hydrology
    - Developed Site Hydrology

- Treatment and Flow Control Needed
  - Performance Standards and Goals per Volume 1, Chapter 4 of the SWMMWW for BMP and Facility Selection Process. Include Figure 4.1 from the SWMM showing your selection process.
  - Flow Control System
  - Water Quality System
  - Conveyance System Analysis.
- Section 6 Stormwater Pollution Prevention Plan – Address all 12 Elements outlined in Volume 1, Chapter 3.1.6 and Volume 1, Chapter 2 of the SWMMWW.
  - Section 7 Special Reports and Studies – Address subject matter outlined in Volume 1, Chapter 3.1.7 in the SWMMWW.
  - Section 8 Other Permits – Address subject matter outlined in Volume 1, Chapter 3.1.7 in the SWMMWW.
  - Section 9 Operations and Maintenance Manual - Address subject matter outlined in Volume 1, Chapter 3.1.7 in the SWMMWW.
  - Hydrologic Analysis and Flow Control Design shall be analyzed using the most recent version of the Western Washington Hydrology Model.
  - Include all computer generated reports, sources, references, tables, graphs, aerials, maps, and calculations used for all design and analysis in appendices.

## ROADS AND TRANSPORTATION PLAN

**Note: Road and transportation design shall comply with the EDDS and Title 14 of the LSMC.**

- Travel and parking lane(s) must be labeled on the roadway sections.
- Provide typical roadway sections and identify street names and classifications.
- Provide road alignment with 100 foot stationing and stationing at PCs and PTs with bearing and distances on centerlines
- Provide right of way lines and widths for existing and proposed road and intersecting roads
- Provide channelization plan and match or tie into existing channelization.
- Provide a signalization plan.
- Provide street illumination if applicable. PUD submittal may be required.
- Provide curve data with radius, delta, arc length, and tangent distance for all curves. These may be shown in a curve table.
- Show details for frontage improvements and overlays.

- ❑ Show limits of existing and proposed paving including grinds and overlays.
- ❑ All new residential access streets shall have traffic calming devices.
- ❑ Provide mailbox location and detail with Post Master approval.
- ❑ Rock facings over 4' in height are to be designed by a Geotechnical Engineer and are subject to approval by the Public Works Director or Designee.
- ❑ Minimum road grade is to be 0.5%.
- ❑ Grades are to be shown to 3 decimal places and as a percent.
- ❑ Vertical curves are to show elevations and stations of vertical PI (s) , P.C. (s) , PT (s), sag (low point) and crest (high point).
- ❑ Super elevation criteria/data is required to be shown for all roads greater than 25 MPH design speed.
- ❑ Include sight distance triangles at each roadway intersection. EDDS provide design standards for the sight distance triangles.