

DEVELOPMENT STANDARDS

City of Ellensburg



DRAFTING STANDARDS

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GENERAL

1. All final plans shall be prepared on reproducible paper. The standard sheet size is 24 inches x 36 inches, additional plan sizes may be accepted with the approval of the Public Works Department. Final plans shall also be submitted in electronic form on CD media in a format readable by the City's current version of AutoCAD.
2. The Professional Engineer's seal, signature, address and phone number shall be placed in the title block area, along the bottom of the page.
3. The drawing shall be in ink on reproducible paper.
4. At least 2 coordinates' matching Washington State Plane Coordinate System (NAD 83 South) is required. To be supplied with Base Drawing, preferably with basis of bearing. Use of NAVD 88 vertical datum is required.
5. Scales: The scale shall be a standard engineering ratio (10, 20, 30, 40, or 50 scale).
6. Draw the plan so the North Arrow points to the left or to the top of the sheet.
7. The minimum lettering size is 1/10th inch. This is to ensure the plan is legible after microfilming or reduction.
8. Use the City of Ellensburg Standard Drawing Symbols located at the end of this chapter, the Washington State Chapter of the American Public Works Association symbols, or others approved by the City of Ellensburg.
9. Match lines with matched sheet number shall be provided where plan is drawn on two or more sheets. Where plan is shown on three or more sheets, include a total site plan key map at scale 1" = 100' or 1" = 200' to cross reference portions of the project with their corresponding plan sheet location.
10. All division or phase lines shall be indicated showing proposed limits of construction.
11. Existing and proposed topography contours shall cover the entire site and a minimum of 30' beyond the site boundary. Topography contours should be shown at one (1) foot intervals (5 foot intervals for slopes greater than 15%, 10 foot intervals for slopes greater than 40%) unless otherwise approved. Elevation labeling shall be shown at 10 foot intervals maximum for one (1) foot contour intervals, maximum 25 feet for 5 foot contour intervals.
12. Show and clearly label property lines, right-of-way lines, sensitive areas and setbacks and all existing and proposed easements with their recording numbers. Show existing and proposed building footprints.
13. Label all streets by City of Ellensburg names.
14. Plans shall include a key for abbreviations and a legend for symbols where such are used. Where symbols are used, they shall be consistent with City of Ellensburg's standard drawing symbols.
15. "Record Drawings" are to be submitted to the Public Works Department from the Contractor, upon project completion. The Contractor shall be responsible for maintaining a paper copy of the "Record Drawings", by red lining the approved plans. The submitted copy of "Record Drawings" shall be neat and legible. The record drawings shall meet the requirement as determined in appropriate sections of this document and shall encompass any changes or alterations to the approved design plans.
16. Preliminaries should be submitted on a standard size paper. Refer to the Drafting Minimum Requirements handout at the end of this Section for paper sizes. All drawings should be the same size. If reduced sized sets are supplied in addition to the original set, these reduced sized drawings shall be fully scalable. An electronic copy of the preliminary shall also be submitted on CD media in a form readable by the City's current version of AutoCAD (.dwg or .dxf).

17. Preliminary plans should also be submitted in electronic format, readable by AutoCAD to the Energy Services Office for the design of gas and electrical utilities.
18. When both plan and profile views are necessary, they will be on the same page with the plan view for a particular segment appearing just above the profile of that segment.
19. Prior to beginning work on concrete curbs, water, sewer and storm drainage, "cut sheets" shall be delivered to engineer for inspection. Cut sheets shall also be required for other portions of work on the project which require survey control to stake them. The "cut sheets" shall be in stationing and elevations consistent with the approved design plans on the project.
20. A general note shall be placed on all design plans which states: "When design standards permit, all utilities constructed on public right of way shall contain a minimum of 6 inches of risers for all features that reach ground surface including catch basins, manholes and vaults, etc. The minimum of 6 inches of risers shall also be placed on all City water, sewer and storm drainage features that reach ground surface on private property".
21. Developer's licensed surveyor shall comply with the City's monument protection plan. The submittals shall reference all monuments and survey control data as required by the plan monument protection plan, RCW title 58, and WAC 332-120.

In addition to the drafting standards listed above, the following information should be included within the utility and transportation plans as appropriate:

DRAFTING STANDARDS (PLAN, PROFILE AND CROSS SECTION INFORMATION REQUIRED)

1. Each submittal shall contain the following project information on the cover sheet or first sheet:
 - A. Title: Project name (add explanatory note if project name has changed).
 - B. Table of Contents (if more than 3 sheets).
 - C. Vicinity Map (Scale sufficient to cover project limits on one sheet or 1" = 200' whichever is greater).
 - D. General description of site, including Quarter Section, Township and Range.
 - E. Name and phone number of architect/engineering firm preparing plans.
2. Existing Improvements and Topography: Show all existing underground and surface improvements and topography in proximity to the project. The information must be shown for the full width of the right of way or the easement and for a sufficient distance on either side of the right of way or easement to show possible impacts on adjacent properties and/or the relationship to related facilities, including adjacent parking lots, curbs, ditches, etc. Information of existing surface and underground City of Ellensburg facilities may be obtained from the Public Works Office for water, sewer, storm drainage, while natural gas and electricity information may be obtained from the City's Energy Services Department. The "one call" utility locate information number is 1-800-424-5555. The "one call" number should be utilized when obtaining field survey information. Other utility providers known to be in the area are Charter Communications (cable television), Ellensburg Telephone (telephone), Puget Sound Energy (natural gas and power), and Kittitas County Public Utility District (Power).
3.
 - A. Sewer, Water and Drainage Improvements: Provide profiles of all proposed sewer, water and drain lines. Show existing underground improvements within ten (10) feet of where they cross or connect to the new improvements. Show the storm water drainage discharge point to a public system or natural water course. Provide drainage system details whether or not detention of storm water is required, including biofiltration swales.
 - B. Gas and Electric Improvements: The provision of Plan, Profile, and Cross-sections of proposed gas and electrical work is optional. The design of both may be requested from the Energy Services Office.

4. Grades: All profiles and cross sections will show the proposed and the existing grade. For developments where road work is required on an existing road, development plans will be required to submit cross sections of existing road.
5. Infrastructure not within street right of way shall be within easements granted to the City or the appropriate utility.
6. Easements shall be shown on plan sheets.
7. Label all manholes, clean outs and catch basins in sequential number. Label rim and invert elevations and catch basin and manhole size and type adjacent to the component on plan view in addition to the profile sheet.
8. Include flow direction arrows on all gravity lines.
9. Label pipe size, length, material and slope.
10. Include datum and benchmark information on each plan and/or profile sheet.
11. Plans shall include a minimum of two horizontal control points and a minimum of one vertical control point, which can be tied to plan stationing and control.
12. Indicate on plans the locations of monuments to be installed. Installation of monuments and monument cases shall be per Ellensburg City Code, section 12.08.200 (C), Place at centerline of street intersections, the beginning and ending points of all curves, the center of cul-de-sacs and other points as directed by the City Engineer.
13. "Record Drawings" are to be submitted to the Public Works Department from the Contractor, upon project completion. The Contractor shall be responsible for maintaining a paper copy of the "Record Drawings", by red lining the approved plans. The submitted copy of "Record Drawings" shall be neat and legible. The record drawings shall meet the requirement as determined in appropriate sections of this document and shall encompass any changes or alterations to the approved design plans.
14. Show spot elevations of pavement in parking lots, and run off flow direction arrows.
15. Show roof leaders and footing drains connecting into conveyance system.
16. Show all stub-out locations for future connections.
17. Include section details for rockeries in grading/paving plans.
18. Show the following for all storm water facilities:
 - A. Show location and detail of emergency overflows and spillways.
 - B. Provide invert elevations of all pipes, inlets, tanks, vaults and spot elevations of the pond bottom. Call out pond volume and dimensions, and design surface elevation.
 - C. Provide plan and section views and details of all rock protection and energy dissipaters.
 - D. Section and plan view on restrictor/control structure must be shown and adequately detailed, including size and elevation of orifices, overflow weirs, etc.
 - E. Show length, width, and bottom width dimensions for all biofiltration and water quality swales and storm water conveyance swales. Include sectional view, showing side slopes and design depth of flow.
 - F. Include seeding material information.
19. Plans should include the following for Gas and Electric Utilities for multifamily and commercial projects, if known:
 - A. Gas and electric meter locations on the site plan.

- B.** Gas and electric loads for each meter.
 - C.** A cut-and-fill plan for the site.
- 20.** When water main construction is included on a project, plans shall include required static and test pressures. Contractor's engineer shall place hydrostatic water system pressure on civil drawing as well as test pressure requirement. Hydrostatic water system pressure is available from City's Public Works Department.

GENERAL DRAFTING GUIDELINES for APPLICATION SUBMITTAL MATERIALS

The following information is a general guideline for applicant submittals, the City of Ellensburg reserves the right to require additional items if necessary.

Depending upon the project description, the minimum required Construction Plans shall be categorized into Tier I, Tier II, or Tier III, based on the following Criteria. The minimum requirements for each Tier are included at the end of this handout:

Tier I or II: Single-Family Residential (New Construction & Additions Exceeding 50% of the value of existing structure): Tier I submittals will be allowed for a project which does not include the following Public Works Improvements: water or sewer main extensions, a storm drainage plan, curb/gutter, sidewalk, street lighting, and asphalt installation. The City of Ellensburg Engineering staff, if time allows, may upon written request, complete the design for curb and gutter, sidewalk installation, and water and sewer extension under 100' for Single Family Residential applicants and Short Plats up to 4 lots, which would allow the applicants to remain in Tier I if no other Public Works Improvements were required. The applicants permit will include the cost of any design work to be performed by City personnel. Tier II submittals will be required for any project which includes the Public Works Improvements stated above.

Tier I or II: Multi-Family Residential: Tier I submittals will be allowed for a project which does not include the following Public Works Improvements: water or sewer main extensions, a storm drainage plan, parking plan, curb and gutter, sidewalk, street lighting, and asphalt installation. Tier II submittals will be required for any project which includes the Public Works Improvements stated above.

Tier III: Commercial and Industrial: See Tier III information

Tier III: Short Plat: See Tier III information

Tier III: Long Plat: See Tier III information

Tier III: Subdivision: See Tier III information

Tier I – Drafting Guidelines

- Drawn to scale site plan showing accurate representation of the size and shape of the subject parcel(s) including easements, lot dimensions, and parcel orientation. Include appropriate scale and north arrow. The minimum paper size shall be 11" x 17".
- Locations, dimensions and height of all existing and proposed buildings and structures, existing utilities, fences, etc. Show dimensions from property lines.
- Existing and proposed curb, sidewalks, curb cuts and street trees.
- Location and layout of the required off street parking.
- Location and layout of existing or proposed utilities and utility services, including water, sewer, gas, electric, telephone, cable locations and street lights.
- **Standard Detail Drawings:** Shall be included in one of the following manners:
 - 1.) Included on the engineering plans and profile sheets, if the finished product does not become cluttered.
 - 2.) Included on a separate detail sheet.
 - 3.) Referenced by specific City of Ellensburg Standard Drawing name and numbers in the construction notes on the plans and profile sheets.
- General Notes of the construction.

Tier II – Drafting Guidelines

All required information from Tier I as superseded by Tier II

- Plans shall be stamped and signed by a Professional Civil Engineer, registered in the State of Washington.
- All final plans shall be prepared on reproducible paper. The standard sheet size is 24 inches x 36 inches, additional plan sizes may be accepted with the approval of the Public Works Department. Final plans shall also be submitted in electronic form on CD media in a format readable by the City's current version of AutoCAD.
- At a minimum the following information is required:
 - Cover sheet (required for projects with 4 or more sheets), with vicinity map, legal description, datum and benchmark reference, and Engineers and Developer's name, address, telephone and fax numbers. If no cover sheet is submitted all information listed above shall be included on the other sheets.
 - Civil plans and profiles sheet(s) shall show the layout of existing structures, utilities, sidewalks, curbs, rights-of-ways, easements, parking, property lines, etc. in fine gray lines and text. The proposed improvements, such as water and sewer mains, storm drainage systems, roadway (private or public), curbs, sidewalks, illumination poles, structures, utility services, etc. shall be in bold and black lines and text.
 - Parking plan is required for any applicant who will be required to have 5 or more parking stalls.
 - Standard Detail Drawings: Shall be included in one of the following manners:
 - 1.) Included on the engineering plans and profile sheets, if the finished product does not become cluttered.
 - 2.) Included on a separate detail sheet.
 - 3.) Referenced by specific City of Ellensburg Standard Drawing name and numbers in the construction notes on the plans and profile sheets.

Tier III – Drafting Guidelines

- Plans shall be stamped and signed by a Professional Civil Engineer, registered in the state of Washington.

- All final plans shall be prepared on reproducible paper. The standard sheet size is 24 inches x 36 inches, additional plan sizes may be accepted with the approval of the Public Works Department. Final plans shall also be submitted in electronic form on CD media in a format readable by the City's current version of AutoCAD.

- Each of the following sheets which pertain to proposed project shall be included in submittal. The applicant has the option of merging plans in the following combination, if the finished product does not become cluttered:
 - Water and Sewer Plan
 - Storm, Road, and Parking Plan
 - Clearing and Grading Plan

- **Cover sheet:** (required for projects with 4 or more sheets), with vicinity map, legal description, datum and benchmark reference, and Engineers and Developer's name, address, telephone and fax numbers. If no cover sheet is submitted all information listed above shall be included on the other sheets.

- **Detailed Clearing and Grading Sheet:** Dimensions of all property lines, easements, and abutting streets, location and dimensions of all on site structures, accurate contour lines at 1ft. intervals, location of any watercourses, top and toe of critical slopes, setback areas, existing drainage channels or detention ponds, location of trees clearly marked remove or save, and limits of clearing and grading.

- **Sewer Sheet:** Showing existing topography, limits of existing and proposed asphalt, curb and sidewalk alignments, existing utilities, rights-of-way, existing or proposed easements in fine gray lines and text. A detailed sanitary sewer plan in bold, black lines and text shall include size, length, slope, and type of pipe, location, size, and depth or elevation of any cleanouts and/or manholes, location and design depth of stub outs provided, typical trench backfill section, and connection to existing main. Sewer sheet shall also include a profile of the sewer construction.

- **Water Sheet:** Showing existing topography, limits of existing and proposed asphalt, curb and sidewalk alignments, existing utilities, rights-of-way, existing or proposed easements in fine gray lines and text. A detailed water plan in bold, black lines and text shall include location of new and existing water meters with meter sizes and service line size from meter to public main, connection to existing water mains, pipe size and length, type of pipe, type and size of fittings, appurtenances, hydrants (location, type, and port direction), valves (location, size, and type), pipe restraint requirements and/or thrust blocking.

- **Calculations showing the detention and treatment of stormwater** meeting the requirements set forth in the Storm Drainage section of the Development Standards shall be submitted by a Professional Civil Engineer, registered in the state of Washington.

- **Storm Drainage Control Plan:** Showing existing topography, limits of existing and proposed asphalt, curb and sidewalk alignments, existing utilities, rights-of-way, existing or proposed easements in fine gray lines and text. A detailed storm drainage plan in bold, black lines and text shall include existing and proposed storm systems specifying all pipe (type, size, length, and slope), existing and proposed structures (catch basin type, size, rim and invert elevations), detention systems, details of control manholes, and water quality mitigation.

- **Public and Private Access Drives:** Showing existing topography, limits of existing edge of asphalt and curb and sidewalk alignments, existing utilities, rights-of-way, existing or proposed easements in fine gray lines and text. A detailed road plan in bold, black lines and text shall include limits of new right-of-way, construction centerline, horizontal and vertical alignment of new road(s) and how it meets existing roads, curb and sidewalk locations, street trees, channelization and signing plan, new construction referenced to the construction centerline (station and offset), and typical road sections showing thickness and type of base course, top course, asphalt.

- **Parking Plan:** Commercial and Industrial construction shall be required to submit an engineered parking plan.

- **Standard Detail Drawings:** Shall be included in one of the following manners:
 - 1.) Included on the engineering plans and profile sheets, if the finished product does not become cluttered.
 - 2.) Included on a separate detail sheet.
 - 3.) Referenced by specific City of Ellensburg Standard Drawing name and numbers in the construction notes on the plans and profile sheets.

- The City of Ellensburg reserves the right to request additional pertinent information