

## DRAFTING REQUIREMENTS

Revision date: March 2006

### General

1. Drafting services and related activities required by the Scope of Work may include some or all of the following: base map preparation including engineering documents research, field verification, and drafting; and design drafting including plans, profiles, detail drawings, vicinity map, notes, etc.;
2. The Consultant's final plans shall be in accordance with the most current City of Seattle Inter-departmental CADD drafting standards unless by mutual agreement. The standards are available at [http://www.seattle.gov/util/Engineering/CAD\\_Resources/index.asp](http://www.seattle.gov/util/Engineering/CAD_Resources/index.asp). For questions regarding the standards, contact Dean Noble at 206-684-5137 or [Dean.Noble@seattle.gov](mailto:Dean.Noble@seattle.gov) or Lori Taylor at 206-684-5206 or [Lori.MJ.Taylor@seattle.gov](mailto:Lori.MJ.Taylor@seattle.gov).
3. Adhere to the current edition of the "Seattle Standard Specifications" and "Seattle Standard Plans" which are available at [http://www.seattle.gov/util/Engineering/Standard\\_Plans\\_&\\_Specs/index.asp](http://www.seattle.gov/util/Engineering/Standard_Plans_&_Specs/index.asp)
4. All base maps and design projects will be geo-referenced to the Washington State Lambert Grid Coordinate System using the NAD83(1991) datum as established in accordance with chapter 58.20 Revised Code of Washington. Vertical datum shall be NAVD 1988. The references to both horizontal and vertical control shall be shown in the project drawing notes. Exceptions must be approved by the Chief Surveyor of Seattle Public Utilities.
5. Plans shall be oriented with north directed up or left (within upper left quadrant).
6. Standard Sheet size is 22 inches by 34 inches.
7. A sample design drawing, which includes a sample base map, is available at [http://www.seattle.gov/util/Engineering/CAD\\_Resources/index.asp](http://www.seattle.gov/util/Engineering/CAD_Resources/index.asp)
8. The final product shall be a plotted hard copy drawing composed of black pigment-based ink (HP 750 or HP 1055) on 3 mil or thicker mylar with seal and signature affixed and AutoCAD files of the final product created according to the City of Seattle Inter-departmental CADD drafting standards.

## Base Maps

1. Base Map drawings shall be created to the City of Seattle Inter-departmental CADD drafting standards.
2. The consultant shall perform all records research necessary to determine the actual existing conditions. The list of Research Resources available at [http://www.seattle.gov/util/Engineering/Consulting\\_Resources/For\\_Drafting\\_Consultants/index.asp](http://www.seattle.gov/util/Engineering/Consulting_Resources/For_Drafting_Consultants/index.asp), may be used as a guide for locating data (it is not necessarily complete nor current). The document that installed an improvement is the source information and is noted on the base map reference layer. All sources of information must be checked and records conflicts resolved. The Consultant shall maintain a list of sources of information (plan numbers, field books, utility books, etc.) used in preparation of base map, by filling out the planform available at [http://www.seattle.gov/util/Engineering/Consulting\\_Resources/For\\_Drafting\\_Consultants/index.asp](http://www.seattle.gov/util/Engineering/Consulting_Resources/For_Drafting_Consultants/index.asp) and shall furnish this completed planform upon completion of base map.
3. City documents may not be removed from City premises, therefore, the City will make provisions for the Consultant to obtain necessary copies. Such copies, identified by the Consultant as necessary to the research and production of plans of existing facilities, will be paid for by SPU.
4. The Consultant shall field check the work as necessary to insure accuracy and completeness of drawings. The field check shall include location of all pertinent topographic features, as well as verification of visual indications of utility location and existence. Field notes shall be maintained and turned in to SPU.
5. Base map drawings shall have accuracy to within the following limits: Control line and R/W line distance shall at no point have an error in excess of 0.01 feet. All surface features shall be located to within 0.2 feet. Underground features shall be located using as-built plan location and visual indicators.
6. Center line Stationing shall be indicated on all Base Maps. When available, use stationing defined by previous City monumentation survey.
7. Features on the drawings shall be shown and noted in accordance with standard abbreviations and symbols (Standard Plan No 002 and 003) available at [http://www.seattle.gov/util/Engineering/Standard\\_Plans\\_&\\_Specs/index.asp](http://www.seattle.gov/util/Engineering/Standard_Plans_&_Specs/index.asp) and City of Seattle Inter-departmental CAD drafting standards.
8. All existing utilities, improvements and topography, determined necessary in the project scope, shall be illustrated in the drawing.
9. SPU will check the accuracy and completeness of the base map and the consultant shall make requested revisions before SPU will accept the product as complete.

## Design Drawings

1. Each set of design drawings may include one or more of the following:
  - Cover sheet and general notes
  - Site plan
  - Grading plans
  - Sewer and/or drainage plans and profiles
  - Water plans and profiles
  - Paving plans
  - Landscaping plans
  - Mechanical plans
  - Electrical plans
  - Telemetry plans
  - piping schematics
  - Structural plans
  - details
  - Other information as required.
2. The cover sheet(s) shall include the following (a sample is available at [http://www.seattle.gov/util/Engineering/CAD\\_Resources/index.asp](http://www.seattle.gov/util/Engineering/CAD_Resources/index.asp))
  - Index to drawings
  - Vicinity map
  - Sheet location map
  - General notes
  - Abbreviations not included in Standard Plan No.002
  - Symbols not included in Standard Plan No. 003.
  - Datum block
  - detail and section referencing symbols
3. Plans shall be prepared with such precision and in such detail as to permit the convenient layout in the field for construction and other purposes within a degree of accuracy acceptable to SPU.
4. Plans shall be in such detail as to permit the development of an accurate estimate of quantities for the pertinent items of work to be performed in the construction of the project.
5. The final drawings will be used to create half-sized prints for distribution for bidding and construction. The plans shall provide readily legible reproduction when the plans are reduced to half-size.
6. Plans shall use the SPU title and border which is available at [http://www.seattle.gov/util/Engineering/CAD\\_Resources/index.asp](http://www.seattle.gov/util/Engineering/CAD_Resources/index.asp)

7. The horizontal scale for plans and profiles shall be one inch equals 20 feet unless otherwise requested. Vertical scale for profiles shall be one inch equals 10 feet unless otherwise requested. Scale for details shall be as needed for clarity.
8. Improvements should be located by monument line stationing with offsets designated accordingly.
9. Clearly identify items to be removed or abandoned. If the line work of a detail is of such density that the new work cannot be readily distinguished from existing features, the detail will be modified to emphasize the new work.
10. Where an improvement continues on to another sheet, include the callout "matchline, see sheet XX" where XX = the appropriate sheet number.
11. Detail and section referencing shall adhere to the symbols described on the cover sheet as listed on #2 above.
12. Details should be drawn to scale, or as nearly as possible to scale, with the same orientation as their parent view, and with sufficient surrounding detail to establish their relationship to the project.
13. Submit the AutoCAD files to the SPU project manager along with the 30%, 60%, and 90% review. The files will be reviewed to confirm adherence to City of Seattle Inter-departmental CADD drafting standards. The AutoCAD files of the 100% submittal must be reviewed for adherence to City of Seattle Inter-departmental CADD drafting standards prior to creating the final signed drawings (see note #8 under General)