

RECORD DRAWING REQUIREMENTS

Record drawings are required for all construction projects conducted in the City of Issaquah. All Record drawings must be stamped and dated by both a State of Washington Registered Engineer and Surveyor. Record drawing drawings are required prior to request for final inspection and issuance of Certificate of Occupancy.

The following Record Drawing requirements are intended to provide a minimum guide to the engineer of record and should be used along with good engineering practices.

Each sheet of the Record drawing plans shall include the following statement along with the engineer's professional stamp, signed and dated, located at the bottom right-hand corner of the sheet when possible:

“These plans are Record Drawings and the information shown accurately reflects existing field conditions as of this date: _____”

GENERAL:

The Record Drawing Plans should consist of the design plans submitted, approved, and permitted for the construction project. The information shown shall reflect the actual construction completed under the permit with any and all deviations from the design plans. The modified design plans shall not have cross outs.

Horizontal and vertical datum to be used are NAD 83/91 and NAVD 88. Tie monumentation to at least two recognized and approved City monuments on or off site, with x, y, z coordinates for each. AutoCAD drawings are to be drafted utilizing this datum for insertion into the City base maps.

Each utility shall be shown on separate sheets with detailed information. In addition, a composite with all utilities shown together, without detailed information, and focusing on utility crossings, is required. If the project has very limited utility information, request for approval for a composite only with all detailed information may be submitted to the City's Project Manager.

The layering convention and plans symbols shall follow established standards as indicated by the American Public Works Association, Washington State Chapter.

Record drawings are to be drawn on clean sheets and submitted to the Public Works Department with one mylar copy and two (2) sets of blue line copies. AutoCAD drawings are to be submitted on CD and properly labeled with project and drawing names.

SANITARY SEWER:

Record drawing information for sanitary sewer, at minimum, should include, but not be limited to:

Plan and profiles, including line size, slope, and length, location.

All sanitary structures are to be labeled regarding type, size, function and inverts of all pipes connected to the structure.

Manholes - Locations, types, rim/invert elevations inside/outside drops and valving.

Sewer Line - Materials, locations, lengths, slopes, inverts, and sizes

Side Sewers - Materials, locations, lengths, sizes, and inverts at stub

Public Utility Easements - Locations and widths tied to property lines

Details - Details of any unique structures or features

TV Report - Compare TV reports to side sewer locations.

WATER:

Record drawing information for water should include, but not be limited to:

Location of all valves, tee junctions, bends, blocking, size of meters, hydrants, pressure reducing stations, and blow-offs.

Sizes, type and lengths should be shown.

Water Lines - Material, lengths, sizes, and location.

Material, lengths, and sizes

Water Valves - Location, type, size

Water Bends - Location, size, type, blocking

Water Main Blocking - Location

All Fittings - Reducers, Expanders, Sleeves, etc.

Fire Hydrants – Locations w/ valves

Blow-off - Locations and sizes of blow offs and valves

Air & Vacuum Relief Valve - Locations, Size, Valves

Pressure Reducing Valves - Locations and valving, bends, all fittings outside vault

Water Meters – Type, size and locations (Domestic, Irrigation, Fire)

Water Services - Size, locations, material

Public Utility Easements - Locations and widths tied to property lines

Details of Connections

Fire Sprinkler Connections - Locations of line, size of line, type, location of detector vault, location of service valve Any and all unusual fittings or installations deemed applicable by City Inspector/Reviewer

STORM DRAINAGE:

Record drawing survey and volume computations for the retention/detention ponds or compensatory storage systems, if any, must also be prepared and stamped by a Washington Registered Surveyor.

All storm drainage retention/detention systems Record Drawings shall include the following statement:

“The storm drainage (retention/detention) system has been constructed in conformance with the approved plans and is functioning as designed.”

Information for the system, at minimum, should include, but not be limited to:

Plans and profiles, including line size, slope, lengths, and locations.

All storm structures are to be labeled regarding function, material, cast in place or precast with inverts.

Manholes/Catch Basins - Locations, types, rim/inert elevations of all pipes

Storm Lines - Materials, locations, lengths, slopes, sizes and inverts

Materials, lengths, slopes, and sizes

Roof Drains – Size, type and slope

Oil/Water Separators - Location, size, type, all rim/invert elevations

Flow Control Structures - Location, type, size, rim and all invert elevations, discharge control orifice sizes and elevations, overflow elevations

Swales – Plan & profiles, locations, length, width, slope; check dams, trash racks, cleanouts, and valving

Details - All structures required to be shown in detail. Details - any unique structures or features may also be required

Public Utility Easements - Locations and widths tied to property lines

Retention/Detention Systems - Volume of storage provided, storage elevation, storage/ponding limits, pond bottoms elevations, overflow elevations and locations, spillway, emergency overflow, berm elevations, piping w/ inverts

STREETS:

Record drawing information for roads should include, at minimum, but not limited to:

Monument locations, slopes, roadway limits, profiles, and typical & non-standard cross sections.

Center line elevations every 50 feet.

Center line slopes and vertical.

Gutter line elevations every 50 feet if not standard crown.

Gutter line slopes and curve data if not standard crown.

Gutter line elevations at intersections and as applicable.

Driveways - Locations, lengths, and type.

Channelization - Locations and type.

Signage - Locations and type.

Illumination - Locations, type, height, and wattage.

Service Cabinets - Location and type.

Junction boxes - Locations and type.

Conduits/Wire - Locations, type, size, and depth.

Controller Cabinet - Location and type.

Signalization - Locations, type, height, and foundation depths and sizes.

Right-of-Way - Locations and widths.

Easements - Locations and widths tied to property lines.

R.O.W. Center line monument locations (property monuments if a Plat).

BRIDGES & CULVERTS OVER 72”

Foundation: Location, type, elevation, and piling locations.

Structure: Location, type, elevation, load rating for trucks of type (HS-20, Type-3, Type-352, Type 3-3, Military Load).

Structural diagram of reinforcement location and elevation of all utilities and conduits.

Earthquake analysis.

Reports:

- 1) Scour analysis
- 2) Load calculations
- 3) Earthquake analysis

SEWER LAYER LIST

LAYER NAME	COLOR	DESCRIPTION
SS- <i>size/type</i> (see below for List of pipe types)	GREEN	All sizes and types of sewer pipes. A different layer for each size and type. For example: SS-8PVC = 8” pvc pipe or SS-12DI = 12” ductile iron.
SS-SIDE	GREEN	All side sewers
SS-MH	GREEN	All sewer manholes and cleanouts.
SS-TEXT	WHITE	Size and Type of pipes and side sewers.
SS-DESC	WHITE	All other wording besides size & type. This will include all descriptions.
SS-ESMT**	WHITE	Public utility easements
*ABANDONED	YELLOW	All abandoned lines (size & type will be under SS-TEXT layer, if we have it)

*Layers for internal city use only

** Linetype should be Hidden2

Sewer Pipe types (size of pipe will precede type abbreviation):

DI = ductile iron CY = clay DR = driscopipe PVC = pvc pipe
 AC = Asbestos Cement RCP = Reinforced Concrete Pipe

Additional Information:

Linetype = continuous; Lineweight = default

Any additional abbreviated layers will be accompanied by description

STORM LAYER LIST

LAYER NAME	COLOR	DESCRIPTION
SD- <u>size/type</u> (See below for List of pipe types)	MAGENTA	All sizes and types of storm pipes. A different layer for each size and type. For example: SD-8PVC = 8" PVC or SD-12ADS = 12" ADS
SD-CB	MAGENTA	Type 1 Catch Basins
SD-MH	MAGENTA	Type 2 Catch Basins
SD-CO	WHITE	Clean Outs
SD-TEXT	WHITE	Size and Type of each storm pipe.
SD-DESC	WHITE	All other wording besides size & type. This will include all descriptions.
SD-ESMT**	WHITE	Public utility easements
SD-DTCH	MAGENTA	Swales, check dams, trash racks, trench drains, Valving, rockeries, retention walls, etc.
SD-OWS	MAGENTA	All Oil/Water separators
SD-DETN	MAGENTA	Ponds, detention chambers, spillways, overflow, etc.
*ABANDONED	YELLOW	All abandoned lines (size & type will be under WA-TEXT layer, if we have it)
SD-RD	MAGENTA	Roof Drains

*Layers for internal city use only

** Linetype should be Hidden2

Storm Pipe types (size of pipe will precede type abbreviation):

CPP = Corrugated Poly Pipe	N-12 = Corrugated Poly Pipe-smooth bore
RCP = Reinforced Concrete Pipe	VCP = Vitrified Clay Pipe
ADS = Flexible Poly Pipe	HDPE = High Density Polyethylene Pipe
CMP = Corrugated Metal Pipe	

Additional Information:

Linetypes = continuous; Lineweight = default

Any additional abbreviated layers will be accompanied by description

WATER LAYER LIST

LAYER NAME	COLOR	DESCRIPTION
WA- <u>size/type</u> (see below for List of pipe types)	BLUE	All sizes and types of water pipes. A different layer for each size and type. For example: WA-8DI = 8" ductile iron or WA-12CI = 12" cast iron.

WA-TEXT	WHITE	Size and Type of each water pipe.
WA-DESC	WHITE	All other wording besides size & type. This will include all descriptions.
WA-ESMT**	WHITE	Public utility easements
WA-WMET	BLUE	Water meters and water service lines.
WA-VALV	BLUE	All water valves
WA-FHYD	BLUE	All fire hydrants
WA-FIRE	BLUE	All fire sprinkler line connections
WA-FTNG	BLUE	All fittings (bends, blocking, blow offs, PRV, air & vacuum valves, etc.)
ABANDONED	YELLOW	All abandoned lines (size & type will be under WA-TEXT layer, if we have it)
*AC-PIPE	RED	Will be just for the lightning bolt symbol placed over each AC pipe.

*Layers for internal city use only

**Linetype should be Hidden2

Water Pipe types (size of pipe will precede type abbreviation):

DI = ductile iron CI = cast iron CO = copper STL = steel PVC = pvc pipe

Additional Information:

Linetypes = continuous; Lineweight = default

Any additional abbreviated layers will be accompanied by description