

AS-BUILT DRAWING REQUIREMENTS

MINIMUM AS-BUILT REQUIREMENTS:

The following as-built requirements are intended to provide a guide as to the *minimum* criteria for Developers, Engineers of record, and Licensed Land Surveyors, and should be used along with good engineering and surveying practices for the type of project and as the situation warrants.

GENERAL:

Identify and show on the "As-built Plans" all existing or abandoned utilities that were encountered during construction that were not shown on the design plans correctly.

The preferred method to show locations (both for proposed construction and as-built) is by the use of survey lines or centerlines between existing survey monuments with suitable distances (or situations) and offsets given relative to these lines. The next acceptable method for showing locations is by the use of State Plane Coordinates for each point located. For the latter method, the surveyor must clearly show: which survey points or monuments he used to begin his location work; the State Plane survey points or monuments; the bearings and distances to all temporary control points; and the coordinates of each point located.

All elevation information shall be based upon City of Pacific datum, and the proposed construction plans and as-built drawings will identify the Bench Mark used and the elevation Bench Mark. The use of assumed elevations is not acceptable, although the Engineering Department may, at its option, accept depths measured with respect to the top of existing pavement surfaces, in lieu of actual elevations, depending on the scope of the proposed project.

All As-Built plan sheets must include at least four (4) coordinate tics spaced across the extent the plan view. The tics must be clearly labeled with State Plane Coordinate values.

In addition, the following information shall be shown/corrected on the "As-built Plans", depending on the type of project it is:

CERTIFICATION:

Certified as-builts are to be provided by a State of Washington licensed Land Surveyor. Certified as-builts shall accurately reflect all field design revisions made during the construction process. All required as-built information shall be clearly shown on the original design Mylar drawings approved for construction by the City of Pacific. In lieu of correcting the original design Mylar drawings, a new set of AutoCad-prepared Mylar's may be submitted which are based upon the as-built information. In either case, each sheet of the as-built plans shall include the following statement along with the professional surveyor's stamp and date of expiration of said stamp. The stamp shall be signed and the expiration date filled in. The statement should be located in the bottom left hand corner of the as-built drawing whenever possible.

"I CERTIFY THAT THE LOCATIONS, ELEVATIONS, DEPTHS, AND AS-BUILT COMMENTS REFLECTING MATERIALS ACTUALLY USED DURING CONSTRUCTION, ACCURATELY REFLECTS EXISTING FIELD CONDITIONS AS DETERMINED BY ME OR UNDER MY DIRECT SUPERVISION ON THIS DATE: "

Professional PLS Stamp, Expiration Date & Signature

CAD FILES:

When the design plans have been prepared with a CAD program, the design professional is required to provide the City with a digital copy of the approved as-built plans. The digital information can be formatted in either .DWG (Autocad) or .DXF (Drawing Exchange File), and must be based on State Plane coordinates (North Zone). CAD drawing layer names must be consistent with APWA naming conventions.

STREET AND ROADS:

Centerline Elevations:	typically every fifty (50) feet; centerline slopes and as-built vertical curve data.
Gutter Line Elevations:	every fifty (50) feet if not standard crown section; every two hundred (200) feet in standard crown sections; slopes and as-built vertical curve data at twenty five (25) foot intervals when not in standard crown section and at intersections.
Driveways:	locations; widths; design information (was it built per City Standard Detail, if so which one?); and materials.
Channelization:	location; start and end of each type of lane markers; materials used if not specified on approved plans.
Signing:	location; material (is it high-intensity laminate on aluminum, or is it a painted wood sign?); size and type of sign.
Street Lighting:	location; overhang; height; manufacturer name; type and wattage of luminaire bulb.
Service Cabinets:	location; size; manufacturer name; and type.
Junction Boxes:	location and type.
Conduits and Wire:	location; types; sizes; and depths or elevations.
Controller Cabinet:	location; size; and manufacturer name.
Traffic Signals:	location; size; heights; foundation size and depths; and signal interconnect connection.
Right-of-way:	description(s); locations; widths; and recording number. Provide one copy of the recorded easement document.
Easements:	description(s); locations; widths; and recording number. Provide one copy of the recorded easement document.

STORM DRAINAGE PROJECTS:

Manholes/Catch Basins:	location(s); type(s); rim and invert elevations.
Storm Lines:	location(s); material(s); lengths; slopes; diameter; elevations on the top of the pipe at all utility crossings; locations of catch basins and side sewer tees; and invert elevations.
Side Storm Lines:	locations; materials; lengths; slopes; diameters; invert elevations; and depths of buried stub-outs.
Public Utility Easements:	legal description(s); widths; and location of storm drainage appurtenances within the easements and rec.
TV Reports:	comparisons of manhole/catch basin and side sewer locations shown on storm drainage as-builts with TV Reports.
Retention/Detention Systems:	volume of constructed system; pond storage and construction limits; overflow elevations and locations; discharge orifice diameters and locations; fence size, location and materials; gate size, location and materials; relationship of access road to provided easement.
Bio-filtration Swales:	Bio-filtration location; width; depth; side slopes; lengths; elevations of and of locations; vegetation name and condition.

SANITARY SEWER PROJECTS:

Manholes:	locations; types; rim & invert elevations.
Sewer Lines:	locations; materials, lengths; slopes; diameters; elevations along the top of the pipe at one hundred (100) foot maximum intervals; diameter and locations of side sewer tees and stub-outs; and inert elevations.
Side Sewer Lines:	tee locations; materials; lengths; slopes; diameter; invert elevations; and depths of buried stub-outs.
Public Utility Easements:	legal descriptions; widths; and location of sanitary appurtenances within the easement. Provide one copy of the recorded easement document.
TV Reports:	comparison of side sewer locations shown on sewer line as-builts with the TV reports.

WATER SYSTEM PROJECTS:

Water Main Pipes:	locations; materials; depths or elevations at one hundred (100) foot maximum intervals and at all utility crossings; lengths; and diameters.
Water Valves:	locations; type; alignment; and depth or elevation.
Water Main Blocking:	location and approximate volume bearing surface area.
Water Service Lines:	Corp location; materials; diameter; lengths; depth; and stub-out location.
Fire Hydrants:	locations; type; and alignment.
Blow-offs:	locations; sizes and alignment.
Air & Vacuum Relief Valves:	locations; vault sizes; depths; and alignment.
Pressure Reducing Valve:	location; vault size; depth; alignment; and as-constructed clearances within vault.
Detailed or Complex Connections:	as applicable for situation
Fire Flow Lines:	locations; materials; diameter; location and size of detector vault; and any revisions made to detector appurtenances during construction.

FRANCHISE UTILITIES:

Telephone:	location; materials; size, location and alignment of manholes/vaults, junction boxes and poles; diameter, and elevations of distribution conduits at one hundred (100) foot maximum intervals and at all utility crossings; locations, typical depths, and sizes for all service lines. .
Gas:	location; size, location and alignment of valves; diameter, typical depths and elevation of distribution lines at one hundred (100) foot maximum intervals and at all utility crossings; location of tee and line, typical depths, and diameter of all service lines.
Power:	location; materials; size, location and alignment of manholes and poles; diameter, and elevation of distribution conduits at one hundred (100) foot maximum intervals and at all utility crossings; locations, typical depths, and sizes for all service lines.
TV Cable:	location; materials; size, location and alignment of junction boxes and poles; diameter, and elevations of distribution conduits at one hundred (100) foot maximum intervals and at al utility crossings; locations, typical depths, and sizes for all service lines.
Utility Easements Contiguous To City Property:	legal descriptions; widths; location of utility appurtenances within the easement; and recording number. Provide one copy of the recorded easement document. □