



City of Phoenix  
City Manager's Office  
Light Rail Transit Division

## Water and Sewer As-Built Checklist

The Contractor or his representative must provide the following items for plans to be accepted as record drawings by the Water Services Department. Three (3) sets of acceptable black line prints are required. All as-built information shall be completed on the most current city approved and stamped plans with the Planning and Development Department plan reviewer initials for the specific work permitted.

Easement and rights-of-way shown on the drawings must be shown on a recorded plat or map of dedication. Easements dedicated by separate instruments and described by metes and bounds must be recorded. The Water Services Department must receive a copy that has been approved by City Council before the City accepts the main for service.

Prints must be black lines on white background, having dark, clean crisp, clear line work, symbols, and annotation. These items must be of sufficient boldness and size, and be free from background obscuring, so as to be legible and easily read. No shading or tinting is acceptable.

Minimum acceptable height for all record drawing lettering is 1/8 inch. Larger lettering is preferred, especially for dimensioning, stationing, size, material, slope, and elevation callouts. Standard bold block lettering is required.

All items changed or unchanged must have a bold (AB) lettered next to them. Required, minor as-built changes to the approved plans must be shown clearly by boldly striking through the item changed and placing the as-built information next to or as near as possible to it. All as-built annotation changes must be larger and bolder than the original and free from background obscuring. Note: This includes abandoned pipe. It must be noted if abandoned pipe is physically removed from ground or remained in place.

**\*\*\*PIAC submittals shall as-built all plan approved stationing, offsets, and elevations (No calculated inverts will be allowed on final as-builts). Other minor as-built information (i.e., lengths of pipe, slopes on water main (except water transmission mains 16-inch or greater), redline comments will not be required to be as-built until the final acceptance of the water and/or sewer main. Also, the area to be reviewed for PIAC approval must be highlighted and clearly show the limits for PIAC approval.**

**\*\*\*PIAC submittals must clearly show double protection, when required, per MAG Standard Detail 404 at all Water/Sewer crossings ("Concrete encased per MAG Standard Detail 404") or callout why encasement was not required.**

On phased projects, the phase lines must be clearly shown on the key map and on the plan and profile sheets, and their locations clearly identifiable. Actual pipe end locations relative to phasing lines must be shown by dimensioning or stationing.

Benchmark(s) location(s) and elevation(s) must be shown on the cover sheet. Only City datum is acceptable.

**\*\*\*PIAC submittals are allowed to use NAVD88 benchmark elevations. All elevations will need to be changed to NGVD29 benchmark elevations before final acceptance of water or sewer mains.**

The record drawing must be an approved plan with the Maricopa County Health Delegate signature.

The cover sheet must show the name, address, and phone number of the engineer that certifies the record drawing with the following statement:

"I hereby certify this record drawing was made under my supervision or as noted and are correct to the best of my knowledge and belief."

\_\_\_\_\_  
Registered Professional Engineer (Civil) Registration No.

\_\_\_\_\_  
Date

**\*Each additional plan sheet must contain the signature and seal of an Arizona registrant.**



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**Water:**

The record drawing must indicate the locations of the beginning(s) and end(s) of the construction, and all valves, fire hydrants, pipe fittings, and service connections. Their locations must be shown by stationing and dimensioning from appropriate monument lines or in their absence appropriate lot lines, property lines or easement line references. No dimensioning from points of curvature or tangency is acceptable for record drawing purposes. The drawings must clearly indicate the specific points of reference.

Note: In all cases where the pipeline is constructed within or parallel, in close proximity, with the right-of-way, all stationing and dimensioning must be from the nearest appropriate monument line and monument line intersection.

The water service stationing shown must be the locations of the taps at the main. Their locations must be measured perpendicular or radial relative to the appropriate right-of-way monument line, easement centerline, or property line intersection. Service tap locations must be indicated by using the following method throughout the plan set.

**\*\*\*PIAC submittals must include all new taps, cut in tee fittings, and lateral runs on existing waterline with the closest PIAC of new water main construction.**

Stationing in the same general direction along a straight or curvilinear pipe run starting with the nearest appropriate monument line or monument line intersection, or in their absence, appropriate easement line references as noted in Item 5, being designated as Station 0+00. The relative stationing of all monument line intersections occurs along the pipe runs must also be shown. When a monument line intersection occurs along the pipe run, the service tap stationing should again begin with Station 0+00 at the intersection and this process repeated to the end of the pipe run. Do not locate 0+00 at the closed end of a cul-de-sac or similar type street.

**\*\*\* PIAC submittals are not required to meet these stationing requirements. As-built the approved plan stationing on PIAC submittals. All other information, on the approved plan, will be required to be as-built per these guidelines.**

Note: When water services are not installed perpendicular to the water main, both the location of the tap at the main and the distance of the meter set from the nearest side property line of the lot must be shown.

**Sewer:**

For the purposes of the record drawing, every manhole, pipe plug, and building connection tap must be located by stationing based upon the nearest downstream manhole always being designated as Station 0+00. Cumulative stationing along the length of the pipe run is not acceptable. In addition, the building connection station must give the location of the tap at the mainline measured perpendicular or radial to the sewer main centerline. Where the building connection service line is not constructed perpendicular to the sewer main, or when located in a manhole both the tap station and the distance of the service line from the nearest side lot line of the lot (or area) it serves must be given.

**\*\*\* PIAC submittals are not required to meet these stationing requirements. As-built the approved plan stationing on PIAC submittals. All other information, on the approved plan, will be required to be as-built per these guidelines.**

New manholes built on existing lines require showing its station from the nearest existing downstream manhole and its distance to the nearest existing upstream manhole.

Where construction begins with removal of an existing pipe plug. 0+00 stationing always begins at the nearest existing downstream manhole. Pipe length measurement and stationing is always from the centerline of the downstream manhole to the centerline of the upstream manhole or cleanout. Do not give partial pipe lengths in plan or profile at match lines. Always indicate the distance between manholes or to pipe ends.

**\*\*\* PIAC submittals are not required to meet these stationing requirements. As-built the approved plan stationing on PIAC submittals. All other information, on the approved plan, will be required to be as-built per these guidelines.**

All as-built adjustments to manhole, cleanout, and pipe information must be shown on both plan and profile and repeated on every sheet in every instance that refers to the same information.