

**MODIFICATIONS TO TUCSON WATER STANDARD WATERWORKS SPECIFICATION
NO. 1445, PRIVATE PLUMBING**

REMOVE THE ENTIRE SECTION AND REPLACE WITH THE FOLLOWING:

1445.0100 GENERAL

1445.0101 Description of Work

The work under this section shall consist of furnishing all labor, materials, equipment and incidental fittings required for the installation of private plumbing, all in accordance with the details shown on the plans and the requirements of these specifications and of the International Plumbing Code. Where there is conflict between the plans and specifications and the International Plumbing Code, the more stringent requirements shall apply. The Contractor or Sub-Contractor (from hereon referred to as the Plumber) shall, under this section, relocate meters and meter boxes; install new meters and meter boxes; install new service lines and abandon existing waterline as called for in the specifications or shown on the approved plans. Meter relocation sketches shall also be used by the Plumber to prepare “as-built” location of private plumbing. The Plumber shall remove existing meters, meter boxes and abandon existing water mains (per Standard Detail SD-350) once the new meter and service line is approved by the permit inspector. The Plumber shall work on private property with a signed Right of Entry form to install new private plumbing from a point of connection as detailed on the plans to the new meter location. Any deviation from this method shall be approved by the Project Inspector and shall be in accordance with the latest edition of the International Plumbing Code Standards.

1445.0102 Permits

The Contractor is required to obtain permits from Pima County Development Services Center, for private plumbing work.

A permit will be required for each address receiving private plumbing. The cost of permits shall be incidental to the private plumbing work covered under this specification.

1445.0103 Plumbing Coordination

The Contractor shall assign a person to document and coordinate all private plumbing work, meter work, and abandonment of old water mains and all other associated work required (from hereon referred to as the Plumbing Coordinator). To assist the Contractor, a checklist is provided at the end of this Specification. This Coordinator must be assigned prior to commencement of any work and must attend the project pre-construction meeting.

The Coordinator shall be available to the Project Inspector, Pima County Inspector and

the Property Owners for the duration of the contract. The Coordinator shall be available to meet with homeowners before or after normal work hours and weekends. The Coordinator shall be at the construction site during all private plumbing work. During private plumbing work, and on a weekly basis, the Coordinator shall organize a field meeting with the Project Inspector (from hereon referred to as Inspector) to coordinate scheduling and resolve construction conflicts.

The Coordinator shall be available to assist the Owner in its effort to resolve any unsigned right-of-entry forms prior to construction. Where possible the Owner had indicated the proposed private side plumbing route based on a visual inspection of the property, which is subject to change once contact with the property owner occurs.

Before construction, the Coordinator shall verify the locations, size and meter number of each existing meter. This information will be compared with the plans and other project documentation to provide the Engineer with any errors or omissions found.

Locations for the new meter and private plumbing as shown on the approved plans are approximate and adjustment in the field shall be made as required.

1445.0200 PRODUCTS

1445.0201 Materials.

New private plumbing service line sizes shall be 2” unless otherwise noted on the approved meter relocation sketch.

Material shall include PVC, HDPE, or copper pipe, ball valve, ball valve fittings, insulation, and appurtenances required to install private plumbing and connections. Insulation for exposed pipe shall be Luma Wrap or Armstrong Armaflex insulation or Engineer approved equal. Approval of an equal must be requested ten (10) days prior to expected use.

Approved private plumbing service line material shall be Schedule 40 PVC, HDPE or copper, unless specifically noted on the meter relocation sketch.

Public side service connections and materials including new meter boxes and Roman bricks shall be covered by Standard Specification Section’s 1416, 1446, and Standard Detail MW-309.

1445.0300 EXECUTION

1445.0301 General.

The Contractor or Plumber shall furnish and install all labor and materials required to connect private plumbing to the distribution system per International Plumbing Code and/or Tucson Water Standards and Specifications and Metro Water Supplemental Specifications whichever is the most stringent.

1445.0302 Installation.

The Contractor is responsible to restore the work area to its original conditions. The Contractor shall establish a detailed video record of pre-construction conditions prior to commencing the work for each address that identifies existing features such as vegetation, fences, permanent and temporary structures. The Contractor shall review this record with the Project Inspector before each address is started.

Private plumbing work shall begin after Coordinator has field verified the size, location and meter number of the existing meter and service line shown on the plans and after installation and acceptance by MDWID of new public water mains and water service stubs.

Work on private property will not begin until: the Contractor has received a signed Right of Entry form with drawing attached; informed the Engineer of any errors and omissions; and given 48 hours advanced notification to the property owner and Engineer's representative.

The Contractor shall submit detailed as-built drawings for all private plumbing work indicating the point of connection with distances. These as-built drawings must be submitted prior to the release of any retention money. The costs for as-built drawings shall be included in the bid item for private plumbing.

The Contractor will coordinate their work with all work done on private property by the Plumber.

The Contractor may not begin work to abandon services and cut and plug water mains until private plumbing is connected and in service.

Private plumbing work by the Plumber shall include installation of private plumbing service line, ball valve fittings, ball valve (resetting of meter box per MDWID Standard Detail MW-309 as appropriate), testing, connections to existing private plumbing and water meter.

Locations for new private plumbing service lines as shown within these specifications and on approved plans are approximate; adjustment in the field may be required.

The Coordinator shall give two (2) working days advance notice to affected property owners that work is going to be done on their property. Written notices to property owners shall be furnished by the Coordinator. Notices shall be effective at 5:00 p.m. on the day posted and shall exclude weekends and holidays.

The Coordinator shall furnish documented proof to the Inspector that prior notice was given to affected property owners. Date of notice shall be included.

The Coordinator shall coordinate all work accomplished on private property with affected property owners.

1445.0303 Workmanship.

All work shall meet or exceed International Plumbing Code standards adopted by the Pima County. This includes any electrical grounding construction necessary to meet code. Any costs for electrical grounding construction shall be included in the price for the private service line bid item.

All work on private plumbing service lines, from the house connection to the angle meter stop, shall be performed by licensed plumbers. Proof of required certification or licensing shall be furnished to MDWID at least two (2) weeks prior to commencement of any work.

All obstructions, including existing utility services lines, shall be protected from damage by the Contractor and Plumber during construction and until completion of work. All damaged private service utilities, landscaping, improvements and obstructions are to be replaced in accordance with MDWID Standard Detail MW-105, and these Technical Specifications and shall be included in the private service line bid item.

New service stubs, private plumbing service lines, and new mains shall be tested, and flushed prior to setting of water meter and connection to the remaining private plumbing.

The Plumber shall trench through private property to the point of connection at the front, side or rear of the property as required by the plans and approved by the Inspector and the property owner. New private plumbing work shall have 18" minimum cover.

Inspection of trench and pipe material on private property shall be conducted by a Pima County Development Services Plumbing Inspector. Pima County Development Services will require 24 hour advance notice prior to inspection in accordance with their standard notification procedure.

All new service lines shall be bedded in screened native material. Bedding shall not include material greater than ½" diameter, cinders, debris or other deleterious materials.

Visual test for leaks and seepage shall be conducted under system pressure only. All pipe joints shall be completely exposed for the duration of the visual test. At the end of two hours, Development Services shall pressure test each joint, fitting, and valve, and be examined for leaks. The prescribed test pressure shall be maintained for the duration of the visual test inspection and examination. The lines shall be considered as having successfully passed the test when there is no leakage or seepage of any type at any joint, connection, or fitting.

The plumber shall flush lines sufficiently to remove all taste and odor of PVC solvent after pressure tests and prior to connecting to new water meter. The Contractor shall then coordinate with the property owner to flush the house interior plumbing.

Acceptability of the new private plumbing line shall be determined by Successful completion of the Development Services visual tests for leaks and seepage and approval by the MDWID Inspector.

Contractor shall submit detailed as-built drawings for private plumbing work, indicating point at connection with distances. These as-built drawings must be submitted prior to the release of any retention money.

All private plumbing work or related work shall be in accordance with the following checklist. The checklist shall be verified for each lot with new private plumbing.

The Plumber shall compact the backfill over the installed private plumbing to a minimum of 85% in open areas and 90% minimum to driveway areas and within three feet (3') of permanent structures, walls, foundations, etc.

The trench is to be of minimum width necessary for the proper laying and backfilling of the pipe as determined by the Plumber and approved by the Inspector.

Where existing obstructions on private property prohibit installing new private plumbing service lines by trenching the Plumber may tunnel or drive. Tunneling or driving shall be in accordance with Section 306.4 of the International Plumbing Code. The Coordinator shall submit a detailed plan of boring and driving to MDWID for approval. Boring or driving shall not be done until a detailed plan is approved by MDWID. Tunneling or driving shall not be a separate bid item and shall be included in the cost for private plumbing.

- () 1. Contractor shall install new public water mains as shown on Contract Drawings.
- () 2. Contractor shall tap new water main in accordance with MDWID Standard Detail MW-309. Service taps shall be aligned with new meter box location. The public water main and service connection must be inspected, tested and accepted by MDWID prior to commencement at private plumbing service line construction.
- () 3. The Coordinator shall review the size, location and meter number of the existing meter and the location of the proposed private plumbing service line, as shown on the meter relocation sketch, with the Homeowner and Inspector.
- () 4. The Contractor shall provide two (2) working days advance notice to affected property owners and Inspector for private plumbing work on private property. Notices shall be effective at 5:00 p.m. on the day posted and shall exclude weekends and holidays.
- () 5. The Plumber shall trench and install private plumbing service line to the point of connection from the new meter location. Determine need for electrical grounding per Pima County Building Codes. Install

required electrical grounding.

- () 6. The Plumber shall open ball valve slowly at meter in street. Flush air out of service line.
- () 7. The Coordinator shall notify property owner of service disruption.
- () 8. The Plumber shall close valve at existing meter.
- () 9. Test of leaks and seepage on private plumbing shall be witnessed by Development Services Inspector.
- () 10. The Plumber shall flush new private plumbing through angle meter stop at new meter location.
- () 11. The Plumber shall connect private plumbing line to existing house plumbing after flushing new private plumbing. Check point of connection for leaks and seepage.
- () 12. The Coordinator shall notify property owner service is restored.
- () 13. The Plumber shall backfill trench and repair damage to property.
- () 14. The Plumber shall close valve at existing meter in alley/easement.
- () 15. The Plumber shall reset meter box in accordance with MDWID Standard Detail MW-309 as appropriate.
- () 16. The Plumber shall cut and plug old service line in accordance with the Private Plumbing Detail.