

CALL PSE'S CUSTOMER CONSTRUCTION SERVICES AT 1-888-321-7779 OR VISIT [PSE.COM/CUSTOMERCONSTRUCTION](http://PSE.COM/CUSTOMERCONSTRUCTION) FOR MORE INFORMATION

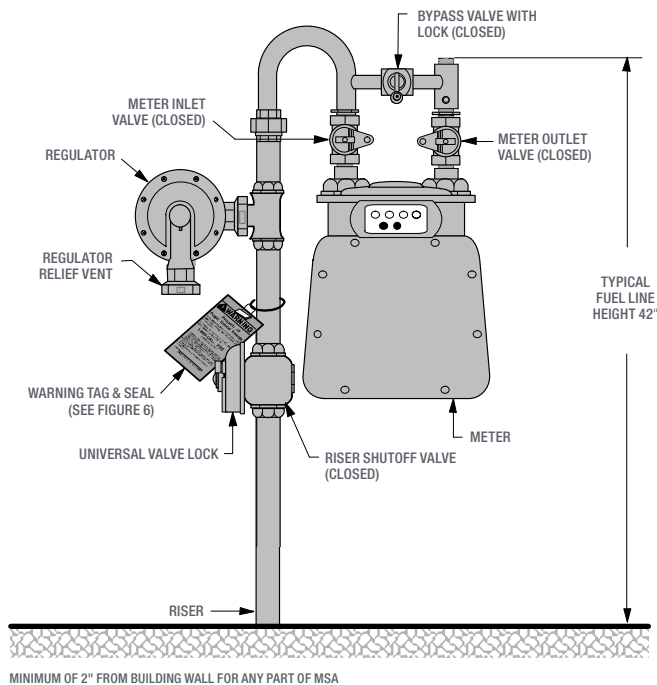
**Builder/owner/developer requirements**

- Complete and return the Gas Service Application(s) and (if applicable) Natural Gas Service Contract.
- Provide Customer Construction Services (CCS) with an approved complete set of civil site plans (if new construction) and the legal description or tax parcel identification. Include plans for any frontage road improvements.
- Inform CCS whether you will provide trenching/conduit per PSE's standards or if you would like PSE to handle all trenching.
- Inform PSE of your estimated natural gas load and pressure requirements. Evaluate your total natural gas load by adding up the Btu input for all equipment being installed (immediate and future use) and tell us the desired pressure delivery. Depending on the equipment installed, the delivery pressure options are 6-7 inches w.c., 2 psig, 5 psig, 10 psig, or 15 psig.
- The fuel line is the gas piping (owned and maintained by the customer) between the meter(s) and the customer's equipment/appliances.  
NOTE: It is your responsibility to ensure that a mechanical permit or a gas piping permit is obtained from the appropriate jurisdiction and an inspection of the completed fuel line and equipment installation is performed and the job is approved. For more information go to [pse.com/permitsandinspections](http://pse.com/permitsandinspections).
- Local regulations may require that you install earthquake activated shutoff valves. These valves must be installed downstream from the PSE meter set outlet. Once installed, the earthquake activated shutoff valve must not obstruct the operation or serviceability of PSE's piping, gas service shutoff valve, gas meter, or gas pressure regulating equipment.

**Gas meter location and clearances**

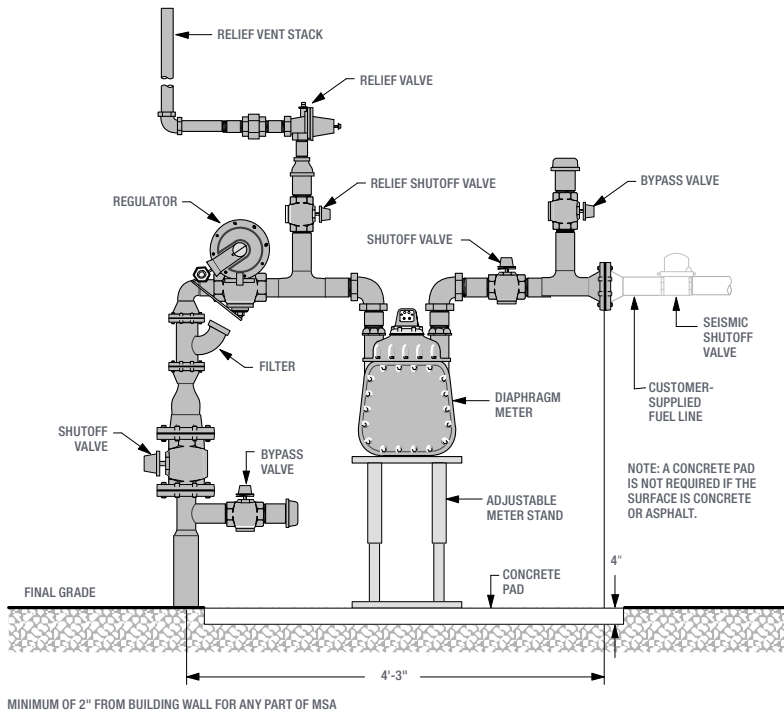
- For an acceptable meter location that allows for the required access and clearance, see the Gas meter clearances and service installation requirements (form 3885).

Typical A425 through A1000 gas meter set assembly

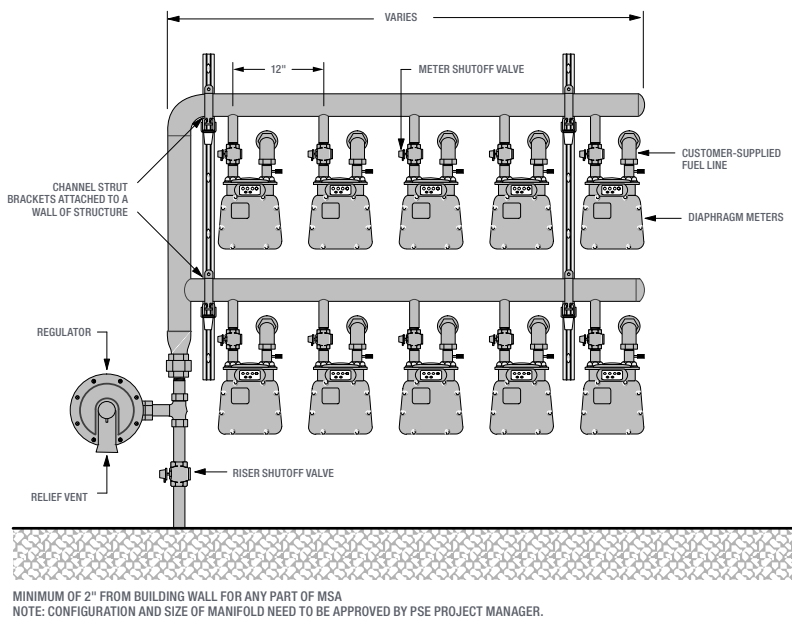


# Commercial, industrial, and multifamily main/service and meter installation requirements

Typical commercial/industrial diaphragm-type gas meter set assemblies



Components of a typical A250 manifold meter set assembly for a commercial structure with multiple tenants or multifamily



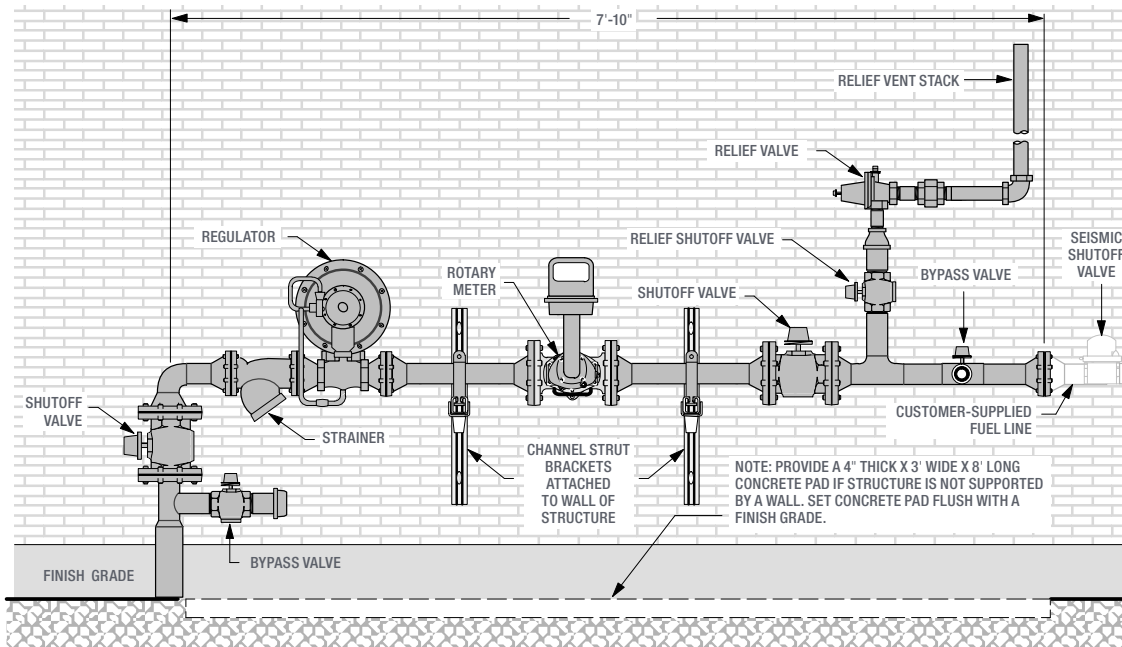
## Concrete Pad

- Concrete pad must be leveled
- Gas riser shall be 4" from slab and 15" from building wall
- Gas riser will be 24" minimum depth

METER TYPE	CONCRETE PAD DIMENSION (LxWxH)
A1000	4' x 3' x 4" Min.
Greater than D3000	8' x 3' x 4" Min.

# Commercial, industrial, and multifamily main/service and meter installation requirements

Typical commercial/industrial rotary-type gas meter set assemblies



## Permits

For equipment light-up and tie-in to the gas meter, the fuel line must be in place with an approved permit and plumbed to an approved gas meter location. A valid permit must be indicated by either:

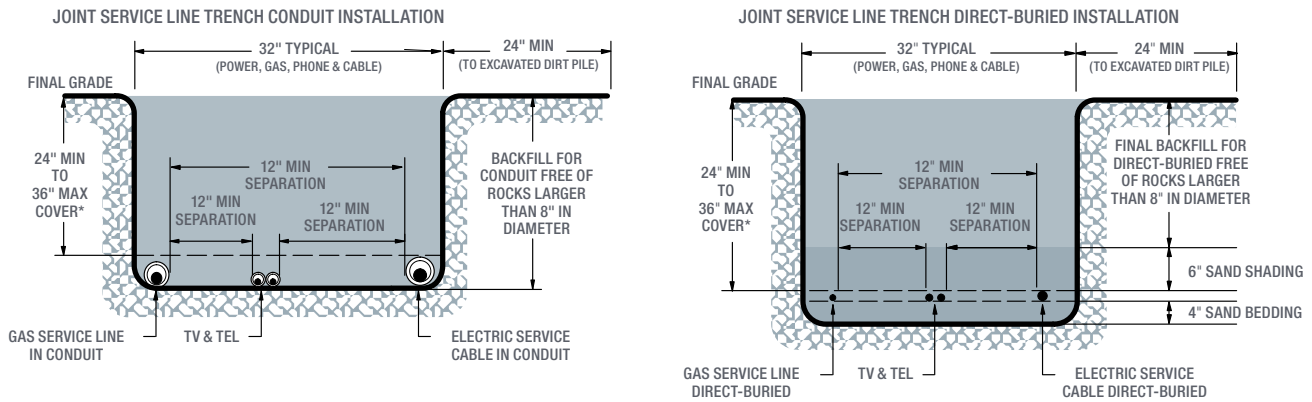
- A permit visible from outside the structure; or,
- A green Gas Service Approval sticker affixed to the fuel line.

## Guard post installation (PSE's responsibility)

- To protect the meter set assembly from vehicle damage, PSE will install guard posts when required.
- To avoid the need for PSE to install guard posts, choose a meter location that is away from driveways or other areas where vehicles travel.
- Guard post requirements are based on the following factors:
  - Existing barriers (curbs, guard rails, steep increases in grade, ditches, rockeries, trees, shrubs, chimneys, recessed walls, etc.), which will provide adequate protection;
  - Proximity of the facility to the edge of the travel lanes;
  - The expected speeds in the travel lanes;
  - The width of the travel lane;
  - The volume of vehicle traffic; and,
  - Existing nearby building damage or other indicators of vehicle damage that may have already occurred.
- In cases where a meter set assembly will be installed behind a curb, observe the following:
  - If the curb will be a rolled curb, and if there is less than 10 feet of space between the curb and the meter, guard posts will be installed; and,
  - If the curb will have a vertical face, and if there will be less than 5-1/2 feet between the curb and the meter, guard posts will be installed.
- Guard posts will be painted "caution" yellow, especially those located in commercial or industrial locations, street rights-of-way, and alleyways.

# Commercial, industrial, and multifamily main/service and meter installation requirements

## Service installation requirements



\*Check with local permitting agency for depth of cover requirements for any PSE facility installed in public right-of-way. 36" cover may be required over PSE facilities.

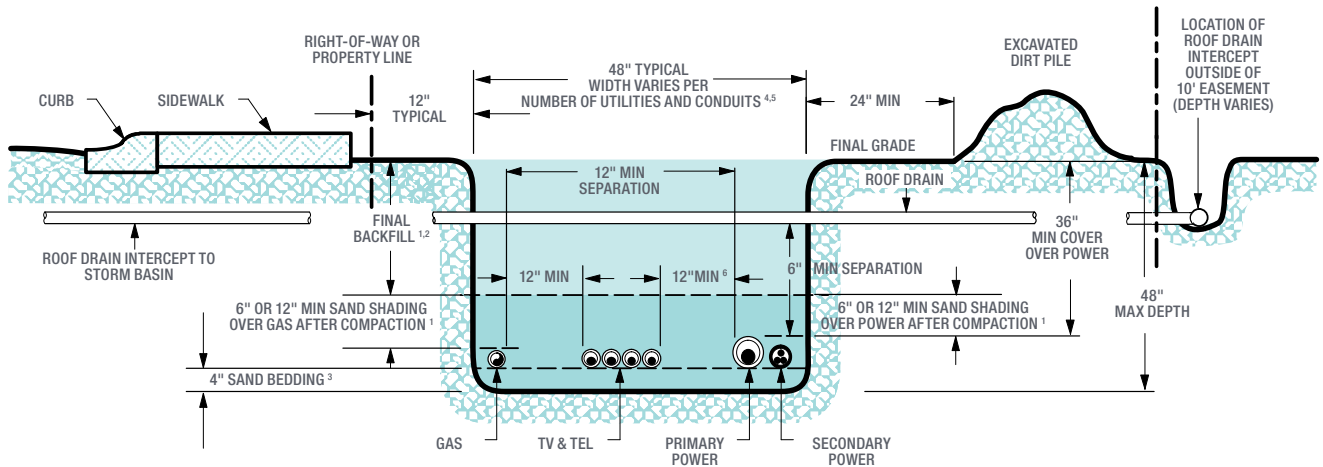
Separation requirements to other utilities for conduit and direct-buried installations

INSTALLATION	HORIZONTAL SEPARATION			VERTICAL SEPARATION WHEN CROSSING		
	GAS TO ELECTRIC	GAS TO TV/TEL	ELECTRIC TO TV/TEL	GAS TO ELECTRIC	GAS TO TV/TEL	ELECTRIC TO TV/TEL
CONDUIT	12" MINIMUM	12" MINIMUM	12" MINIMUM*	12" MINIMUM	6" MINIMUM	12" MINIMUM*
DIRECT-BURIED	12" MINIMUM	12" MINIMUM	12" MINIMUM*	12" MINIMUM	6" MINIMUM	12" MINIMUM*

NOTE: STACKING UTILITIES NOT PERMITTED

\*Contact your TV/TEL provider about their separation requirements from power.

## Typical mainline joint trench dimensions and facility placement

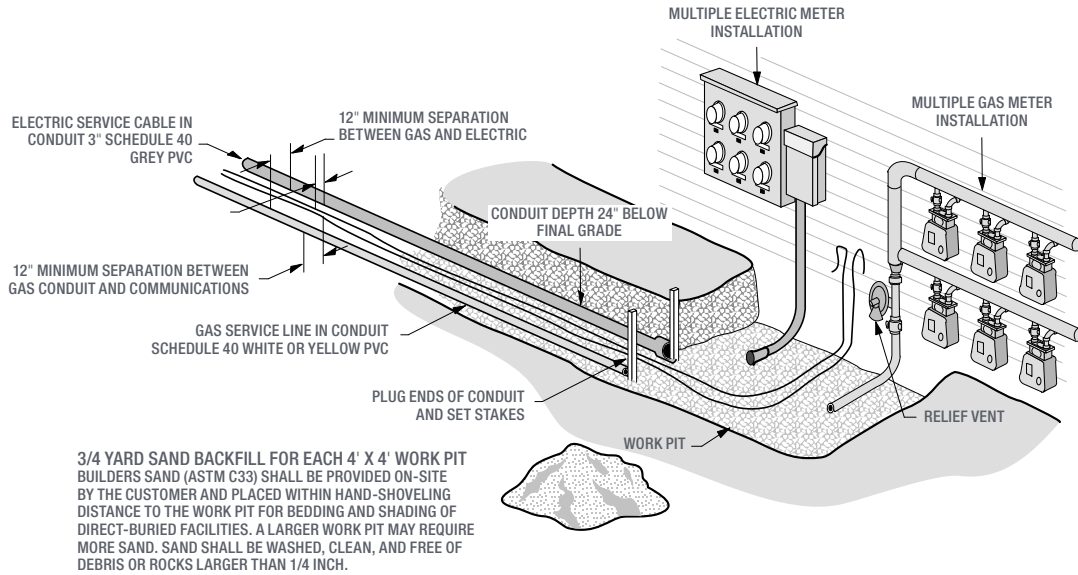
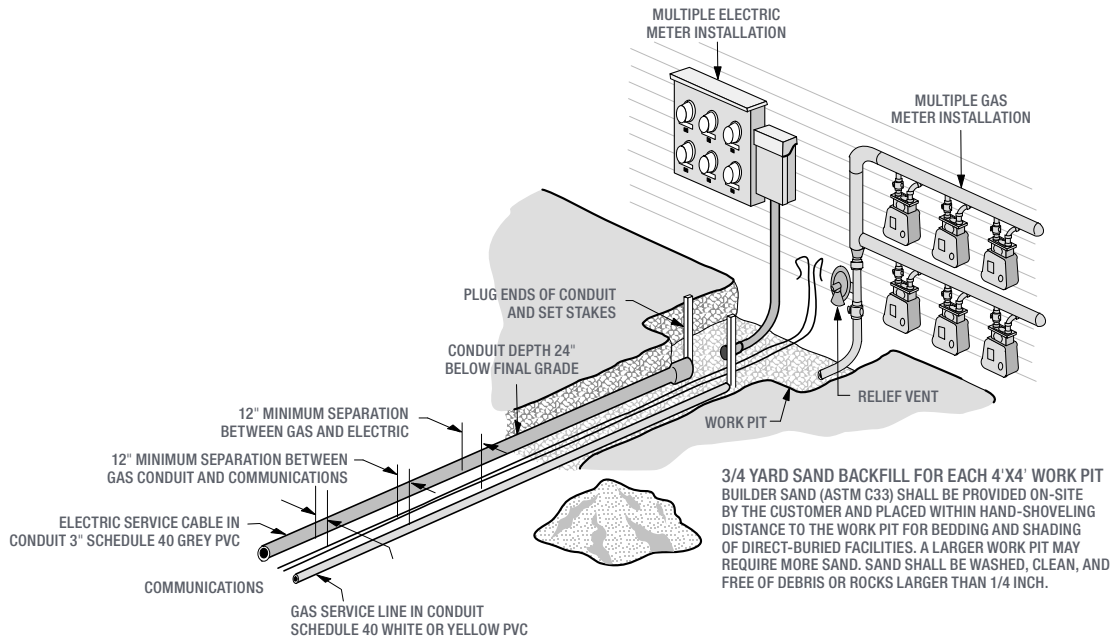


### NOTES:

- If the final backfill contains rocks **greater than 8 inches in diameter**, install **12 inches of compacted sand shading** across the full width of the trench.\* If the final backfill contains rocks **8 inches in diameter or smaller**, install **6 inches of compacted sand shading** across the full width of the trench.\*
- Rocks **greater than 10 inches in diameter** are not permitted in the final backfill.
- Sand bedding is required under PSE gas pipe. Bedding is not required for the full width of the trench; it shall extend from the side of the trench nearest to where the gas main/service is installed to a minimum of 6 inches on the opposite side of the gas line.
- Utilities shall not be stacked over the gas line in the trench.
- If wet utilities will be included in the trench, please contact PSE or local power company directly for clearance requirements.
- Reduced clearance of 4 inches between power and communication must have approval of participating communications companies.

# Commercial, industrial, and multifamily main/service and meter installation requirements

## Typical commercial/industrial/multifamily joint utility service trench with customer-installed gas service conduit



Suggested meter layouts. Upon Project Manager approval, the locations of the gas and electric meters may be reversed to prevent underground crossovers of electric and gas lines.

# Commercial, industrial, and multifamily main/service and meter installation requirements

## Conduit requirements for gas service

- PSE recommends the use of conduit for all gas service installations.
- Conduit installation requirements
  - Gas conduit runs over 100 feet long must have a 3/8-inch minimum diameter pull rope installed.
  - Conduit bends shall be one long radius, single-piece sweeps (see table below).
  - Fittings and elbows shall not be used because the joints prohibit service insertion.
  - The sum total of the degrees of bends in the conduit run cannot exceed 180°.
  - Conduit should not cross in the trench.
  - Yellow or white Schedule 40 PVC conduit used for gas service lines shall not be marked “water,” or any other utility.
- Backfill requirements for conduit installations
  - **Backfill for conduit:** Soil that is free from construction debris, glass, sharp rocks, frozen clods, and rocks larger than 10" in diameter.
  - **Shading:** None required above conduit.
  - **Bedding:** None required below conduit.

Gas service line depth table for conduit and direct-buried installations

GAS SERVICE TYPE	GAS SERVICE PIPE SIZE	MINIMUM DEPTH OF COVER OVER GAS
RESIDENTIAL	ANY SIZE	18"
COMMERCIAL/INDUSTRIAL	1-1/4"+	24"
ANY SERVICE IN SNOW COUNTRY (SEE FORM 3736)	ANY SIZE	24"

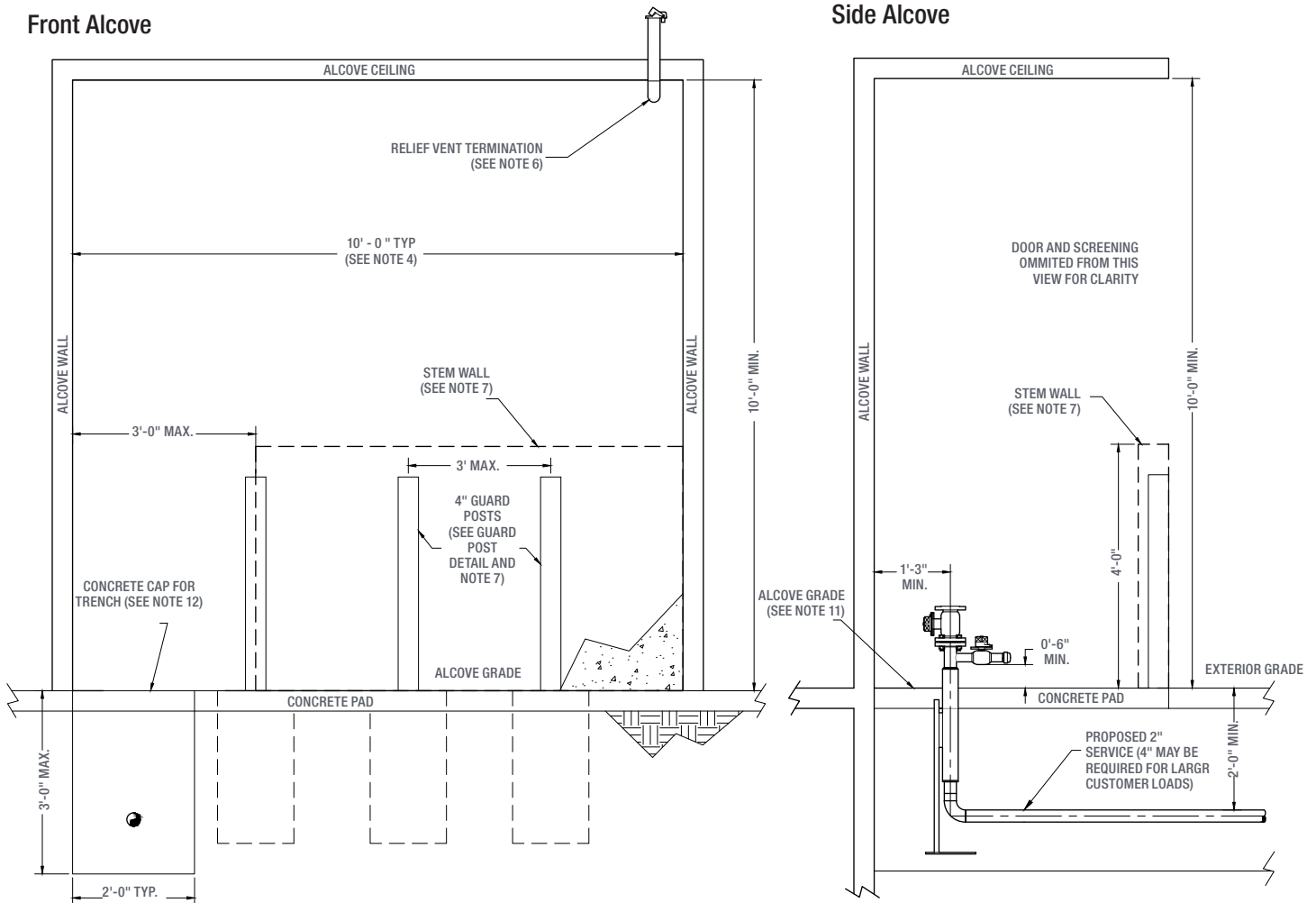
Proper conduit sizing and bending requirements of plastic service pipe

GAS SERVICE SIZE (in.)	MIN. BENDING RADIUS (in.)	MIN. CONDUIT DIAMETER (in.)
1-1/4	48	3
2	60	4
4	113	6

You may excavate the portion of the mainline trench and/or the service line trench on your own property. Customers are not authorized to excavate in the public right-of-way, so PSE will provide any trench that is not located on private property.

- If you provide your own trench, you are responsible for meeting the requirements outlined in PSE's Gas and Electric Underground Service Installation Requirements (Form 3061) and Joint Utility Mainline Trench Excavation Requirements (Form 2809). The applicable form is provided by PSE and can also be found at: [pse.com/customerconstruction](http://pse.com/customerconstruction).
- For unique site preparation requirements, contact your Project Manager.
- Sand must be provided by the builder or developer and placed within hand-shoveling distance to the work pit or trench for bedding and shading. (CFR 129.361, ASTM C33)

# Commercial, industrial, and multifamily main/service and meter installation requirements



To arrange for the gas meter turn-on, please call PSE at **1-888-225-5773**.

Coordinate with PSE PM for meter set assembly turn on if meter is set at 2 psi or greater and an A1000 or larger.

## Alcove guideline notes

4. Alcove width to be negotiated with PSE Project Manager. This may change based on, but not limited to:
  - 4.1 Meter size
  - 4.2 Number of meters
  - 4.3 Meter configuration
  - 4.4 Meter orientation
  - 4.5 Termination of vent line
6. Vent termination cutout size and location to be coordinated with PSE Project Manager. A 2" vent line is shown in this example, but may be larger depending on customer load.
7. Guard posts are to be the primary method for protecting all aboveground facilities in the alcove. PSE PM to determine whether guard posts need to be removable. Installation of a stem wall may be negotiated with the PSE Project Manager.
11. Bury line on riser to be at or above alcove grade.
12. Concrete cap to be a minimum of 4" but to be negotiated with PM.