

Standards for Gas Meter Installation and Customer Piping Requirements

Morton Municipal Gas -- Morton, Illinois

(Revised March - 2014)

Following are requirements for the installation of gas meters for residential, commercial and industrial applications. Some requirements are specific to residential meters only and are identified as such. Every specific requirement may not be addresses in these standards, however the Village of Morton retains the right to require changes in installation as required by code or other safety related conditions.

Gas Meter Location

- 1) Residential gas meters may be only installed within 15 feet of either front outside or inside corners of the house unless otherwise approved by the Superintendent of Gas Distribution. [This will assure a safe approach to the gas meter and eliminate most conflicts with fences, decks, patios, etc. \(See Figure A\)](#)
- 2) Any Potential Ignition Sources such as: electric meters, air conditioners, etc., **may not** be located within **3 feet** in all directions of any regulator or relief vents regardless of meter set type and design. [\(See Figure B\)](#)
- 3) All gas meters must be located in a readily accessible location and in an area that protects the gas meter from damage such as: Vehicles, water, ice, falling objects, etc.
(Note: Gas Meters will not be allowed to be installed behind any fenced area, under decks or surrounded by any structure or enclosure that may prohibit 24 hour access.)
- 4) Meter sets will **not be allowed** to be installed in the following locations:
 - Under or in front of operable windows used for egress or any other building openings and doors.
 - Under or in front of building and appliance vents or other air intakes.
- 5) The Village of Morton shall have the right to refuse installation of Gas Meter/Service if the desired location does not meet approval of the Superintendent of Gas Distribution.

Typical Residential Meter Set Standard [\(See Figure B\)](#)

- 1) Typical residential meters are as follows:
 - a. Normal residential meter capacity is: **500 scfh** (standard cubic feet per hour- based upon 2"wc differential across the meter).
 - b. Normal delivery pressure to the customer is: **7" w.c.** (water column) or **1/4 psi**.
 - c. Other customer requirements for capacity and/or pressure must be requested at the time of completing an "Application for Gas Service". [\(Meter, service and other appurtenances may require upgrading in order to meet customer load demand.\)](#)
- 2) The gas service, meter, regulator, meter valve, and fabricated meter set shall be installed by the Village of Morton Gas Distribution Department, and shall remain property of the Village of Morton.
- 3) Distance from centerline of the service riser to the outlet union (customer connection point), is **20 inches** for a residential meter set.
- 4) Normal gas service piping from the main to the residential customer meter set is typically 1/2 inch or 3/4 inch Polyethylene [\(see 1a. above\)](#). A #12 coated copper wire is buried along with the plastic service terminating at the riser allowing electrical locating of the service line.

Commercial / Industrial Meter Sets

Commercial / Industrial meters sets may vary in design and configuration because of increased flow and pressure requirements. Flow requirements may vary from 600 scfh to over 100,000 scfh. Customer requirements for delivery pressure may vary from 7" w.c. (.25 psi) to distribution pressure (40-60 psi).

- Typically, large capacity commercial / industrial sets will be fabricated using welded and flanged fittings. Meters may be large diaphragm (600-1000 class), rotary or turbine meters (with or without electronic instruments).
- It is critical that the customer engineer or architect provide specific pressure and flow requirements in order to design and build the correct gas meter set.

Customer Piping Requirements

- 1) Customer-owned Piping: Is all piping, either above or below ground, that is located after the outlet connection of the meter; or in the case of fabricated meter sets, the first connection point (which may be a union, flange or coupling) that is located after the fabricated section of the meter setting.
- 2) The Village of Morton **does not** provide maintenance on Customer-owned gas piping; which includes: repairs on piping and appliances (if needed), locating for excavation and periodic inspection for leaks and corrosion.
- 3) The final tie-in of the gas line to the outlet (customer) side of the meter is the responsibility of the property owner and must be made by a qualified installer who shall adhere to the guidelines set forth in the latest edition of the American National Standard "National Fuel Gas Code", also identified by National Fire Protection Association #54 and ANSI Z223.1. [\[Ref. VOM Ord. 8-2-10 \(B\)\]](#)
- 4) Customer piping connected to the meter set **must be** black iron. Corrugated Stainless Steel Tubing (CSST) is **not allowed** for use as a piping system. CSST may only be used in a fireplace application, provided it is properly bonded, grounded, meets manufacturer's installation specifications and is not longer than 6 foot in length. If used in a fireplace application, a shut off valve must be installed upstream of the CSST and be readily accessible and permanently identified as per ANSI Z223.1-71.
- 5) Customer piping that will be operated at a pressure of 10 psi or more, **must be** welded.
- 6) Installation will not be considered complete until a pressure test of all piping and appurtenances conducted in the presence of Village employees. (labor, materials, and equipment to be furnished by the contractor) [\[Ref. VOM Ord. 8-2-10 \(E\)\]](#) (See: [Pressure Testing of Customer Piping](#))
- 7) The Village shall have the right and option to demand changes, removal, or replacement of any pipe, fixture, or apparatus which is considered to be faulty, inadequate, or hazardous, provided, however, that this provision shall not obligate the Village in any way or manner. The Village shall have the right to refuse or discontinue gas service without notice to its customers if the Village finds any apparatus or appliance in operation which would be detrimental or hazardous to the efficient operation of the existing facilities. [\[Ref. VOM Ord. 8-2-10 \(G\)\]](#)
- 8) Temporary service (e.g. for construction) is **not permitted** in residential construction. All piping, appliance valves and vent piping must be in place before a final pressure test will be allowed and final connection to the meter set is made.
- 9) Customer-owned yard lines (e.g.: yard lights, gas grills, pool heaters, etc.); Shall be installed by use of standard installation procedures as outlined in the "National Fuel Gas Code", also identified by National Fire Protection Association #54 and ANSI Z223.1.
- 10) If Polyethylene gas pipe is used:
 - a. It must be only used in a below-ground application (installed with #12 copper trace wire).
 - b. All connections must be made below-ground, PE pipe cannot terminate aboveground.
 - c. Polyethylene pipe must meet the ASTM D 2513 standard.

Pressure Testing Of Customer Piping

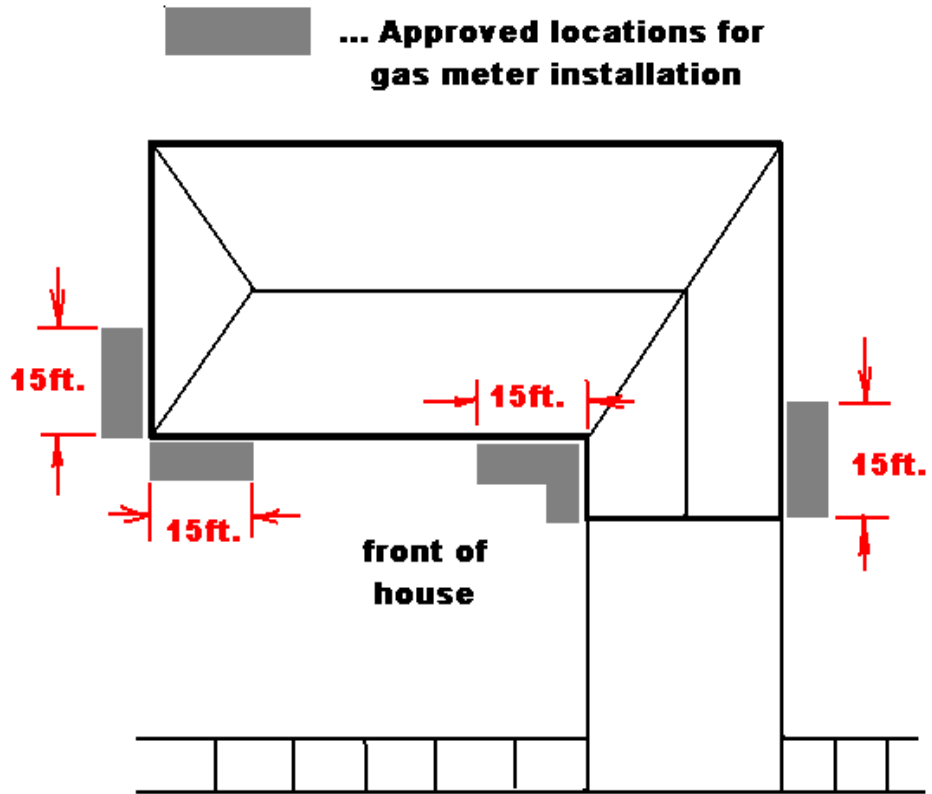
Pressure Testing Details:

- 1) System will be pressurized to two and one-half (2 1/2) times the customer operating pressure or to five (5) psi, whichever is greater.
- 2) Said pressurization shall be held for ten (10) minutes, with no drop in pressure. The Village may require a longer test period if the size of customer system is extensive.
- 3) The gauge being used shall measure in increments of one-half (1/2) psi. The gauge shall not be greater than 30 psi.
- 4) The Village shall be given notice of the test no less than four (4) hours prior to the proposed test time, and during normal working hours (7:30am to 4:00pm).
- 5) If the initial pressure test fails, it will be rescheduled. The Village may charge actual costs for time involved in re-testing.
- 6) The installer must be present at the time of the test.
- 7) Service will not be turned on until a successful pressure test is completed.
- 8) It is a violation of [\[VOM Ordinance 8-2-22\]](#) to tamper with the meter, regulator or any parts of the gas system belonging to the Village of Morton.

Other Guidelines:

- 1) Test may be easily performed by using an air line connector attached to a valve, tee with gauge, and test medium such as portable air tank, air compressor, or hand pump. Test medium may be air or inert gas, such as Nitrogen (N₂) or Carbon Dioxide (CO₂).
- 2) **Do Not** connect customer piping to the outlet connection of the meter set during the test. The service regulator contains an over-pressure relief device that will discharge excess gas pressure resulting in a failed pressure test or damage to the regulator.
- 3) Cap all appliance piping before the appliance regulator, if any, and after appliance valves (which must be in place). Appliance regulators may not withstand the higher test pressure.
- 4) A pretest performed by the installer before arrival of the Village employee is advisable. Any leaks can be found with a soapy solution brushed or sprayed on all fittings and joints.

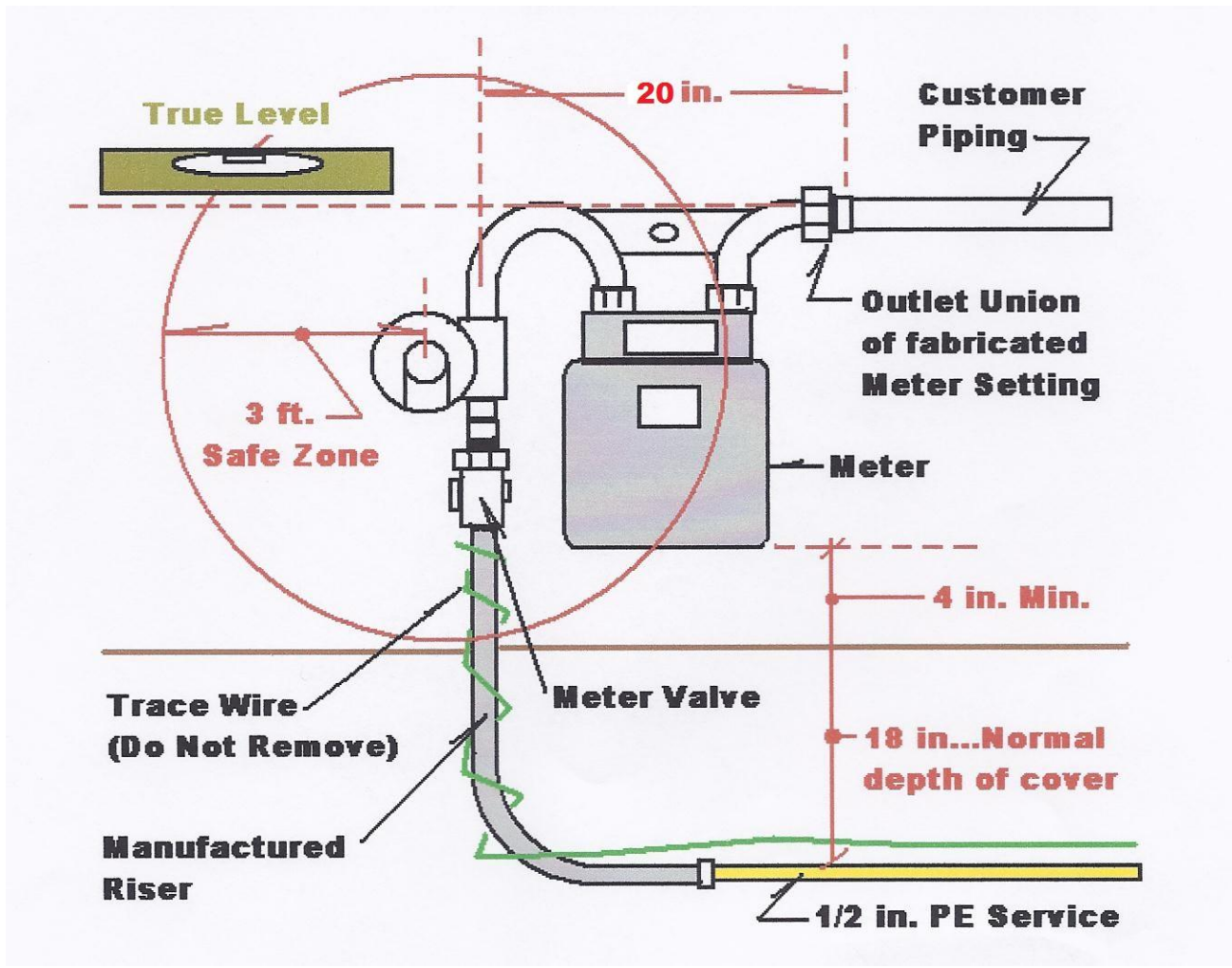
**Approved Location of Residential Meter Set
(Figure A)**



(Figure B)

RESIDENTIAL GAS METER STANDARD

Morton Municipal Gas ... Morton, Illinois



3 ft. "SAFE ZONE"

All ignition sources such as: electric meters, air conditioners, etc. **MUST NOT** be located within 3 ft. in all directions from the center of the regulator vent on the meter setting.

Keep meter sets a safe distance from windows, doors, air intakes or other vents.

NEVER install a meter set directly below any window that may be opened and used for egress.