GAS SYSTEM DETAILS

G-2 STEEL TO PE SERVICE CONNECTION
G-3 GAS MAIN BRANCH CONNECTIONS TO STEEL MAIN
G-4 TYPICAL WELD JOINTS
G-5 PE VALVE BOX SETTING
G-6 TRACER WIRE ACCESS BOX
G-7 12" POLYVALVE CUSTOM VALVE BOX
G-7A 12" POLYVALVE CUSTOM VALVE VAULT
G-8 HP GAS CROSSING AT RAILROAD
G-9 TYPICAL STEEL GAS SERVICE RISER - 3" AND LARGER
G-10 HIGH PRESSURE ½” GAS SERVICE INSTALLATION - RESIDENTIAL
G-11 HIGH PRESSURE GAS SERVICE INSTALLATION - 1” CTS & 2” IPS SERVICE
G-11A METER INSTALLATION, SIZES 400, 675, & 1000
G-12 ROOTS METER INSTALLATION
G-12A 15C ROOTS COMPACT METER INSTALLATION
G-12B 5M ROOTS COMPACT METER INSTALLATION
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G-14A TYPICAL MULTI-METER INSTALLATION
G-14B TYPICAL MULTI-METER INSTALLATION - 6 RESIDENTIAL METERS
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G-16 SEALING UNUSED LP GAS SERVICES
G-17 CATHODIC PROTECTION
G-18 TYPICAL METHOD OF BRAZED CONNECTION TO PIPE
G-22 GAS PIPING BUILDING ENTRY, BELOW GRADE
G-23 TYPICAL WELL FOR BELOW GRADE GAS PIPE ENTRY
G-24 TYPICAL GAS PIPING REVISION
G-26 TELEMETRIC GAS PRESSURE STATION
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G-34 REGULATOR VENT EXTENSION
G-35 7” WC METERING PRESSURE METER LOCATION
G-36 ELEVATED PRESSURE METER LOCATION
G-37 2” OR 3” BRANCH MAIN CONNECTION DETAIL FOR HDPE GAS MAINS
1" PE TUBING WITH TRACER WIRE INSIDE. 
NOTE: THE CONNECTION FOR THE WIRE IS SO THAT THE MINIMUM 
NUMBER OF CONNECTIONS IN THE WIRE SYSTEM ARE USED.

12" WIRE TAIL WITH STRIPPED 
END LOOPED BACK INTO THE 
1/2" PE TUBING

ADJUST 24" TO 44"

6" C.I. TOP SECTION

PLASTIC VALVE

1/2" MIN.

KNOCKOUT

DO NOT BLOCK UNDER VALVE

PLASTIC BOTTOM SECTION 
CUT OFF TOP TO ADJUST

2" X 6" BLOCKING PARALLEL TO MAIN

PE VALVE BOX SETTING

REVISED/APPROVED 05/01/2018

CITY OF DULUTH STANDARD DETAIL 
DEPT. OF PUBLIC WORKS AND UTILITIES

NO SCALE
24" wire with stripped end looped back into the ¾ PE tubing, strip wire to expose 1" of the conductor at the top of wire wire loop.

Recess top of box ½ ".

6" C.I. top section.

Run slack loop of continuous tracer wire into PE tubing.

PE gas main.

12 gauge solid bare copper wire or green insulated copper ground wire inside ¾ PE tubing connected magnesium anode.

¾ PE tubing with grounding wire inserted.

Plastic bottom section cut off top to adjust.

Magnesium anode (1 lb. min) required for locating ground when access box is located within a driving surface.

2" x 6" blocking parallel to main.

Note: For boxes in roadway construct concrete collar per standard detail W-19.
12" POLYVALVE CUSTOM VALVE VAULT

FILL VAULT WITH GRANULAR MATERIAL TO TOP OF GEAR BOX

PRECAST COVER

PRE-CAST CONCRETE STRUCTURE

CONCRETE BASE

VAULT OPENING SIZED TO MAINTAIN 6" CLEARANCE FROM GAS MAIN

12" POLYVALVE CUSTOM VALVE VAULT
FOR STREET INSTALLATIONS

REVISED/APPROVED 05/01/2018
CITY OF DULUTH STANDARD DETAIL
DEPT. OF PUBLIC WORKS AND UTILITIES

NO SCALE
NOTE: CONNECT SERVICE TRACER WIRE TO MAIN TRACER WIRE WITH APPROVED ELECTRICAL CONNECTOR.

BELOW GRADE TAP TEE MARKER

TAPPING TEE

PLASTIC BRANCH MAIN

VARIES

CITY OWNERSHIP
CUSTOMER OWNERSHIP

INSIDE GAS STOP, 1" VALVE AS CLOSE TO WALL PENETRATION AS POSSIBLE

12" WIRE TAIL WITH STRIPPED END LOOPEd BACK INTO ½" PE TUBING

1¼" PE TO PROTECT TRACER WIRE

12" L

5" MINIMUM, 12" MAXIMUM FROM FINISHED GRADE

A. REGULATOR, SCHUMBERGER B-42 WITH 1/8" ORIFICE
B. 3/4" NIPPLE
C. 3/4" METER STOP
D. 1/2" C.T.S. PE PIPE (5/8" O.D.)
E. 1/2" X 3/4" ANODELESS SERVICE RISER
F. 1/2" C.T.S. PE SOCKET COUPLING
G. PLASTIC PROTECTIVE SLEEVE (PE PIPE)
H. COATED TRACER WIRE
I. 1" BRONZE BALL VALVE
J. ROCKFORD ECLIPSE 701173 26-M WEDGESEAL METER BAR (OR EQUAL)
K. ADVANCE ENG. CORP. D.P. 1004 METER MOUNTING BRACKET (OR EQUAL)
L. METER
M. 1" MINIMUM BLACK STEEL PIPE

HIGH PRESSURE 1/2" GAS SERVICE INSTALLATION – RESIDENTIAL

REVISED/APPROVED 04/05/2019
CITY OF DULUTH STANDARD DETAIL
DEPT. OF PUBLIC WORKS AND UTILITIES

NO SCALE
1. CONNECT SERVICE TRACER WIRE TO MAIN TRACER WIRE WITH ELECTRIC CONNECTOR.
2. IN MULTIPLE METER SITUATIONS, EACH METER SHALL HAVE A LOCKING VALVE WHICH ALLOWS ANY METER TO BE LOCKED OUT OF SERVICE WHILE THE OTHER REMAIN IN SERVICE.
3. TEST POINTS SHALL BE INSTALLED WITH 1"-1/4" OR LARGER REGULATOR ON HIGH AND LOW SIDES USING WELD ON 1/4" COUPLING COMPLETE WITH PIETE'S PLUGS.

<table>
<thead>
<tr>
<th>METER SIZE</th>
<th>DISTANCE (X)</th>
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<tbody>
<tr>
<td>7M</td>
<td>12&quot;</td>
</tr>
<tr>
<td>11M</td>
<td>14&quot;</td>
</tr>
<tr>
<td>16M</td>
<td>17&quot;</td>
</tr>
<tr>
<td>23M</td>
<td>19&quot;</td>
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</table>

A. COATED TRACER WIRE
B. 90° ANODELESS SERVICE RISER
C. METER STOP, INSULATED UNION TYPE
D. NIPPLE
E. ELBOW
F. REGULATOR (SIZED AND FURNISHED BY DEPT.)
G. LARGER BRONZE BALL VALVE
H. PLASTIC PROTECTIVE SLEEVE (RIGID PE - 12" LONG)
I. 1" EFV - ON ALL SERVICES WITH RATED METER CAPACITY OF 1000 SCFH OR LESS

HIGH PRESSURE GAS SERVICE INSTALLATION – 1” CTS & 2” IPS SERVICES

REvised/approved 04/05/2019

City of duluth standard detail
dept. of public works and utilities

no scale
WHEN REQUIRED, INSTALL 1-1/2" X 1" TEE AND RELIEF VALVE "A" WITH RELIEF =23.5"

* METER STAKES MAY BE USED WHEN ATTACHMENT TO BUILDING IS NOT POSSIBLE

NOTE:
1. EXTEND VENT ONLY WHEN NECESSARY, SEE O & M SECTION 30. DEPT. TO FURNISH REGULATOR, TEST "PETE'S PLUG" - 2 EACH WITH 1-1/4" NIPPLES, METER WITH SWIVELS AND NUTS, AND ANGLE BRACKETS.
2. SECONDARY RELIEF DEVICE MAY BE REQUIRED.

<table>
<thead>
<tr>
<th>DIMENSION</th>
<th>400</th>
<th>675</th>
<th>1000</th>
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<tbody>
<tr>
<td>A</td>
<td>17-9/16&quot;</td>
<td>17-11/16&quot;</td>
<td>17-15/16&quot;</td>
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<tr>
<td>B</td>
<td>7&quot;</td>
<td>10&quot;</td>
<td>11&quot;</td>
</tr>
<tr>
<td>C</td>
<td>27&quot;</td>
<td>32&quot;</td>
<td>36&quot;</td>
</tr>
<tr>
<td>D</td>
<td>9&quot;</td>
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</tr>
<tr>
<td>E</td>
<td>11&quot;</td>
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<table>
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<tr>
<th>CUSTOMER LOAD (CFH)</th>
<th>397 TO 600</th>
<th>600 TO 900</th>
<th>900 TO 1428</th>
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<tbody>
<tr>
<td>METER SIZE</td>
<td>400</td>
<td>675</td>
<td>1000</td>
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<tr>
<td>METER CONNECTION</td>
<td>1-1/2&quot;</td>
<td>1-1/2&quot;</td>
<td>2&quot;</td>
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<tr>
<td>PRESSURE LOSS (WC)</td>
<td>1/2&quot; @ 397 CFH</td>
<td>1/2&quot; @ 397 CFH</td>
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<tr>
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<td>ITRON B42R</td>
<td>ITRON B42R</td>
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<td>SYSTEM PRESSURE</td>
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<td>56#-30#</td>
<td>66#-30#</td>
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<tr>
<td>ORIFICE</td>
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<td>3/16&quot;</td>
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<tr>
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<td>600</td>
<td>1560</td>
<td>1560</td>
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<tr>
<td>CAP @ PIN MIN.</td>
<td>400</td>
<td>765</td>
<td>870</td>
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<tr>
<td>VENT MAX. LENGTH</td>
<td>130&quot;</td>
<td>20&quot;</td>
<td>18&quot;</td>
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CAPACITY DATA IS FOR STANDARD 7" (WC) DELIVERY PRESSURE

METER INSTALLATION DETAIL - SIZES 400, 675, & 1000

C-11A

REVISED/APPROVED 01/20/2017

CITY OF DULUTH STANDARD DETAIL
DEPT. OF PUBLIC WORKS AND UTILITIES

NO SCALE
1.1-1/4" x 1" REDUCER EL
2. 1-1/4" STRAINER W/BLOWDOWN
3. 1/4" WELD ON COUPLING & PETE'S PLUGS
4. 1-1/2" x 1-1/4" REDUCER
5. B42R OR S202
6. 1.5M125 ROOTS METER
7. 1-1/2" UNIONS
8. 1-1/2" WELDED ANGLE
9. 1-1/2" x 1/4" U-CLAMPS
10. VENT W/RAIN CAP WHERE REQUIRED
11. RELIEF (IF NECESSARY)

1.5M125 ROOTS METER & REGULATOR DETAIL

REGULATOR CAPACITY (CFH)

<table>
<thead>
<tr>
<th>P OUT</th>
<th>7&quot; WC</th>
<th>2 PSI*</th>
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<tbody>
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<td>P IN</td>
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<td></td>
</tr>
<tr>
<td>CRIFICE</td>
<td>1/8&quot;</td>
<td>3/16&quot;</td>
</tr>
<tr>
<td>55</td>
<td>1300</td>
<td>2280</td>
</tr>
<tr>
<td>35</td>
<td>860</td>
<td>1080</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>1470</td>
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</table>

* METER PRESSURE 1.83 PSI @ MAX FLOW

NOTES:
1. TEST POINTS SHALL BE 1" WELD PETE'S PLUGS
2. PIPE FITTINGS 2 1/2" & LARGER SHALL BE WELDED
3. BUILDING TO BACK OF METER CLEARANCE SHALL BE MIN. 3"
4. FLANGES SHALL BE 150# FLAT FACE

TYPICAL DETAIL
3M125 ROOTS METER & LARGER

ROOTS METER INSTALLATION

REVISED/APPROVED 01/20/2017
CITY OF DULUTH STANDARD DETAIL
DEPT. OF PUBLIC WORKS AND UTILITIES
NO SCALE
MATERIALS LIST
1. 1" x 2" STREET EL
2. TEST POINTS (D)
3. 2" STRAINER (D)
4. FISHER S202 - 2" - W/ 3/8" ORIFICE REGULATOR (D)
5. 5M ROOTS METER - 3" FLANGE CONNECTION (D)
6. 2" UNION
7. ANGLE IRON BRACKETS (D)
(D) INDICATES TO BE FURNISHED BY DEPARTMENT

5M ROOTS COMPACT METER INSTALLATION

REVISED/APPROVED 02/01/2013
CITY OF DULUTH STANDARD DETAIL
DEPT. OF PUBLIC WORKS AND UTILITIES
NO SCALE
STANDARD TYPICAL GAS FUEL LINE TO OUT BUILDING

STANDARD NON-TYPICAL GAS FUEL LINE TO OUT BUILDING

UNDERGROUND GAS FUEL LINE PIPING – PAST METER

REVISED/APPROVED 07/06/2016

CITY OF DULUTH STANDARD DETAIL
DEPT. OF PUBLIC WORKS AND UTILITIES

NO SCALE
SEE SPEC. SECTION 22.03
FOR INSIDE SHUTOFF REQUIRED

NOTE:
INDIVIDUAL METER SHUT-OFF SHALL BE LOCKING STYLE VALVE, SAME AS THE METER STOP EXCEPT ISOLATING UNION IS NOT REQUIRED.

INDIVIDUAL SHUT-OFF

30" MINIMUM

TYPICAL DUPLEX

SEE SPEC. SECTION 22.03
FOR INSIDE SHUTOFF REQUIRED

NOTE:
INDIVIDUAL METER SHUT-OFF SHALL BE LOCKING STYLE VALVE, SAME AS THE METER STOP EXCEPT ISOLATING UNION IS NOT REQUIRED.

COMMON DIVIDING WALL

INDIVIDUAL SHUT-OFF

30" MINIMUM

SIDE-BY-SIDE DUPLEX

(OF METERS CAN BE AT DIVIDING WALL)

Valve required when serving adjacent unit—only. Units which are remote from meter will have valve cut in at the unit served.

Silicone caulk

Riser 6" 7 1/2"

Shaped and welded

Notes:
1. 6 meter set requires 4 angle supports.
2. Height is determined by any meter not being closer than 6" off grade. Manifold shall be horizontal.
3. 1-1/4" manifold by department or manufacturer.
4. Department to attach brass tag with number of units serviced to each meter bar.

Top view
3 or more residential meters

Combination stop & meter bar
Rockford—Eclipse No. CA-32-SSMO

1/4" neoprene pad or 1 wrap of tape coat

Silicone caulk

24" minimum to grade where grade is highest along building

1" ball valve required inside of each unit served

Typical multi-meter installation

City of Duluth Standard Detail
Dept. of Public Works and Utilities

Revised/approved 02/01/2013
No scale
NOTES
1. 6 METER SET REQUIRES 4 ANGLE SUPPORTS
2. HEIGHT IS DETERMINED BY ANY METER NOT BEING CLOSER THAN 6" OFF GRADE. MANIFOLD SHALL BE HORIZONTAL
3. 1-1/4" MANIFOLD BY DEPARTMENT OR MANUFACTURER
4. DEPARTMENT TO ATTACH BRASS TAG W/NUMBER OF UNIT SERVICED TO EACH METER BAR.

TYPICAL MULTI-METER INSTALLATION – 6 RESIDENTIAL METERS

REVISED/APPROVED 02/01/2013
CITY OF DULUTH STANDARD DETAIL
DEPT. OF PUBLIC WORKS AND UTILITIES
NO SCALE
MOBILE HOME GAS METER CONNECTION

A. RISER & METER STOP (TO BE INSTALLED BY OTHERS)
B. 3/4" NIPPLE
C. REGULATOR – 252 (TO BE FURNISHER BY DEPARTMENT)
D. METER BAR (TO BE FURNISHER BY DEPARTMENT)
E. 1" NIPPLE W/ 1" X 3/4" REDUCING ELBOW
F. MOBILE FLEX CONNECTOR
G. METER BRACKET (TO BE FURNISHER BY DEPARTMENT)

SPECIFICATIONS:
1. METER LOCATION SHALL BE ALONG THE SIDE AND WITHIN THE REAR 1/3 OF THE TRAILER.
2. ALL HEATING ACCOUNTS TO HAVE NOT LESS THAN 3/4" COPPER LINE WITH FLARED FITTINGS OR 3/4" B.I. PIPE THREADED FROM METER TO POINT WHERE EXISTING LINE ENTERS FLOOR FROM UNDERNEATH. NON-HEATING ACCOUNTS TO HAVE NOT LESS THAN 5/8" COPPER OR 1/2" B.I. PIPE BETWEEN ABOVE MENTIONED POINTS.
3. ANY EXISTING PIPING WHICH MEETS THE ABOVE REQUIREMENTS MAY BE UTILIZED IN MAKING THE CONNECTION.
4. EXISTING AND NEW PIPING DOWNSTREAM FROM FLEXIBLE CONNECTOR SHALL BE PRESSURE TESTED AT 10 PSI BEFORE SETTING METER.

REVISED/APPROVED 02/01/2013
CITY OF DULUTH STANDARD DETAIL
DEPT. OF PUBLIC WORKS AND UTILITIES
NO SCALE
NOTE: CAP TO BE INSTALLED AT LAST EXISTING THREAD NEAREST WALL OR FLOOR EXCEPT WHEN REQUESTED SHORTER BY OWNER.

STANDARD METHOD

NOTES:
1. DEPARTMENT WILL CUT PIPE OFF CLOSE AS POSSIBLE AND INSTALL EXPANDING RUBBER PLUG AND EXPANSIVE GROUT ONLY UPON SPECIFIC REQUEST BY OWNER. (DEPT POLICY)
2. STREET MAIN MUST BE INACTIVE

SPECIAL METHOD

SEALING UNUSED LP GAS SERVICES

REVISED/APPROVED 02/01/2013
CITY OF DULUTH STANDARD DETAIL
DEPT. OF PUBLIC WORKS AND UTILITIES
NO SCALE
**STEP 1**

PROCEDURES

1. PREPARE GRAPHITE MOLD AS SHOWN IN DETAIL
   A. PLACE METAL DISC
   B. PLACE METAL POWDER
   C. FILL WITH STARTING POWDER
   D. PLACE GRAPHITE COVER
2. PLACE GRAPHITE MOLD ON PIPE

**STEP 2**

- STRIP INSULATION FROM WIRE
- INSTALL COPPER SLEEVE OVER WIRE
- TAPE TO MAIN

**STEP 3**

- GRAPHITE COVER
- HANDLE
- GRAPHITE MOLD
- COPPER WIRE
- STARTING POWDER
- METAL POWDER
- METAL DISC
- COPPER SLEEVE
- CLEANED PIPE SECTION

**STEP 4**

- APPLY SPARK GUN AWAY FROM OPERATOR
- HOLD WELDER FIRMLY IN PLACE WHILE MAKING CONNECTION

**STEP 5**

- REMOVE SLAG WITH HAMMER

**STEP 6**

- COAT ALL BARE SURFACES

**TYPICAL METHOD OF BRAZED CONNECTION TO PIPE**

**REVISED/APPROVED 02/01/213**

**CITY OF DULUTH STANDARD DETAIL**

**DEPT. OF PUBLIC WORKS AND UTILITIES**

**NO SCALE**
**Below Grade Gas Pipe Entry - 2 1/2" & Larger**

**Below Grade Gas Pipe Entry - 1" & 2"**

**Notes:**
1. Above grade entry is required generally. Below grade will be permitted only by special exception.
2. Pipe shall be at least standard weight steel, conforming to A53 or API 5L, welded, coated, and wrapped according to standard specification section 25.
3. Gas pipe through wall shall be in sleeve or core drilled hole and annular space sealed with elastic & waterproof caulking. Cement caulk not permitted.
4. Anode depth (D1) shall be a minimum of 2' or below midpoint depth of riser, whichever is deeper.

**Gas Piping Building Entry Below Grade**

- Revised/approved 01/08/216
- City of Duluth Standard Detail
- Dept. of Public Works and Utilities
- No scale
**PLAN VIEW**

**WINDOW WELL SIZING CHART**

<table>
<thead>
<tr>
<th>IF X IS...</th>
<th>Y=</th>
</tr>
</thead>
<tbody>
<tr>
<td>3&quot; OR LESS</td>
<td>12&quot;</td>
</tr>
<tr>
<td>3.1&quot; TO 9&quot;</td>
<td>18&quot;</td>
</tr>
<tr>
<td>ABOVE 9&quot;</td>
<td>DO NOT USE WINDOW WELL</td>
</tr>
</tbody>
</table>

**SIDE VIEW**

- **FURNISH AND INSTALL PLASTIC WINDOW WELL**
- **3/8" TO 1/2" LIMESTONE AGGREGATE FOR DRAINAGE**
- **LANDSCAPE FILTER FABRIC**
- **3" MINIMUM**
- **BUILDING FOUNDATION**

**TYPICAL WELL FOR BELOW GRADE GAS PIPE ENTRY**
EXISTING ELBOW FROM METER

CAULK AND SEAL

EXISTING FLOOR JOIST

EXISTING BALL VALVE
(RELOCATE CLOSER TO PIPE ENTRY IF DISTANCE BETWEEN EXCEEDS 5'4"

EXISTING PLUMBING TO BE REMOVED AND WALL PATCHED WITH HYDROSTOP OR EQUAL

FOUNDATION WALL

TYPICAL GAS PIPING REVISION

CITY OF DULUTH STANDARD DETAIL
DEPT. OF PUBLIC WORKS AND UTILITIES

REVISED/APPROVED 02/01/2013
NO SCALE

G-24
TELEMETRIC GAS PRESSURE STATION

A. 22' MIN. FOR STREET X-ING OR 18' MINIMUM OTHERWISE
B. ELECTRIC METER
C. TELEMETRIC PANEL (6' MAXIMUM TO TOP)
D. 3/4" ANODELESS RISER
E. 1/2" C.T.S. PE H.P. GAS SERVICE
F. 6" STEEL POLE FOR STREET CROSSING, 4" STEEL POLE FOR OTHERS

TELEMETRIC PANEL

STAINLESS STEEL TUBING

1" IRON TO STAINLESS STEEL TUBING COUPLER

1" METER STOP

1" ANODELESS RISER
1. Multiple bollards shall be spaced at 4' on center.
2. Backfill bollard with waste cuttings, compact to 95% maximum density.
3. Bollard shall be finished with one of the following methods:
   A. Covered with a HDPE plastic bollard sleeve designed to fit over a 6" pipe bollard. The sleeve shall have a smooth finish, done top, and be yellow in color. An adhesive sealant shall be used to affix the sleeve to the bollard.
   B. Painted to the following specifications:

   | Surface Preparation | Precise Prime: Series 69—Color Primer To A Dth of 5.0 Mils | Field Finish: Series 69—Color To A Dth of 5.0 Mils | Final Finish: Series 73—Color To A Dth of 2.0-2.5 Mils Over The Field Finish | Colors: Bollards: Safety Yellow |

   C. Covered with a HDPE plastic bollard sleeve designed to fit over a 6" pipe bollard. The sleeve shall have a smooth finish, done top, and be yellow in color. An adhesive sealant shall be used to affix the sleeve to the bollard.
A. REGULATOR, SCHUMBERGER B-42 WITH 1/8" ORIFICE
B. 3/4'' NIPPLE
C. 3/4'' METER STOP
D. PE SERVICE
E. 1 1/2" X 3/4" ANODELESS SERVICE RISER
F. 1/2" C.T.S. PE SOCKET COUPLING
G. 1/2" P.E. TO PROTECT TRACER WIRE
H. COATED TRACER WIRE
I. 1" BRONZE BALL VALVE
J. ROCKFORD ECLIPSE 701173 26-M WEDGSEAL METER BAR (OR EQUAL)
K. ADVANCE ENG. CORP. D.P. 1004 METER MOUNTING BRACKET (OR EQUAL)
L. METER
M. 1" MINIMUM BLACK STEEL PIPE

NOTES:
1. VENT MAY DISCHARGE FROM REGULATOR TO THE LEFT (SHOWN) OR RIGHT. IF RIGHT ADDITIONAL FITTINGS MAY BE REQUIRED.
2. VENT EXTENSIONS LESS THAN 5' ONLY REQUIRE ONE GROUND SUPPORT POST. MULTIPLE POSTS SHALL BE NO MORE THAN 4' APART.
3. PIPE SHALL BE INSTALLED WITH NEGATIVE SLOPE FROM THE REGULATOR TO THE DISCHARGE.
4. ALL PVC VENT PIPE AND FITTINGS SHALL BE GRAY. PIPE MATERIALS SHALL BE SCHEDULE 80 AND FITTINGS SHALL BE SCHEDULE 40.
NO EXHAUST VENTS WITHIN 6' ABOVE METER

FRESH AIR INTAKE MINIMUM 10' ABOVE METER

DOOR OR WINDOW OPENING

36" RADIUS FROM RISER & VENT RELIEF

FURNACE OR WATER HEATER VENTS, DRYER VENT, OUTSIDE OUTLET

INDICATES AREA WHERE NO WINDOWS, DOORS, EXHAUST VENTS, DRYER VENTS MAY BE LOCATED
2" OR 3" MDPE BRANCH MAIN

2" OR 3" PE VALVE
(CONNECT WITH 2" X 3" MDPE INCREASER IN APPLICABLE)

2" MDPE GAS MAIN

ELECTROFUSION COUPLING

2" HDPE GAS MAIN STUB
(24" LONG MAX, PIPE TO BE SUPPLIED BY CITY OF DULUTH)

12" X 2" TAPPING TEE OR HIGH VOLUME TAPPING TEE

12" HDPE GAS MAIN