

CITY OF LATHROP

Department of Public Works

DESIGN & CONSTRUCTION

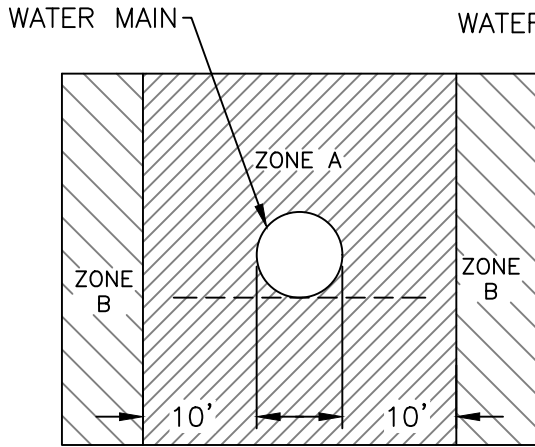
Standard Details



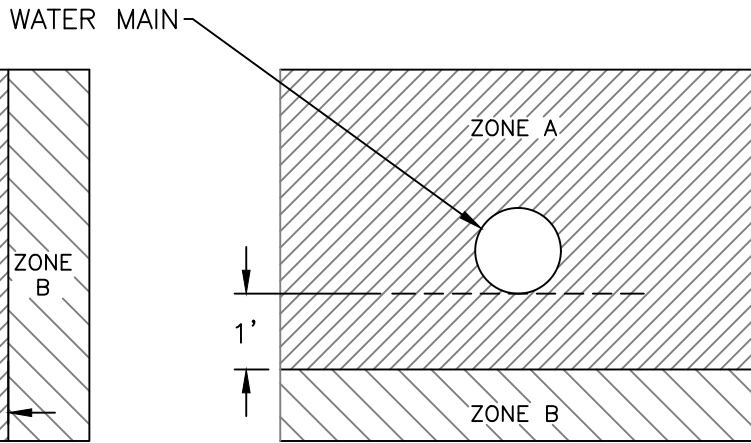
July 2024

Water

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PARALLEL CONSTRUCTION

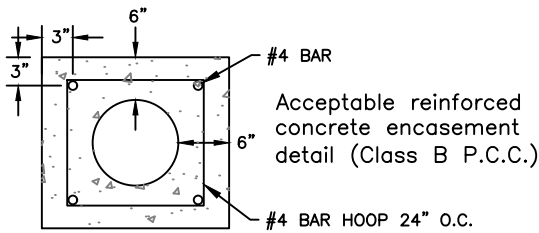


PERPENDICULAR CONSTRUCTION

NOTE: DIMENSIONS ARE FROM OUTSIDE OF WATER MAIN TO OUTSIDE OF SEWER. ALL CROSSINGS SHALL BE 90° WHERE POSSIBLE.

ZONE A: Sewer lines will not be permitted in this zone without the approval from the State Water Resources Control Board.

ZONE B: Sewer lines per City Standards are allowed in this zone.



NOT TO SCALE

Approved by:		
City Of Lathrop City Engineer		
No	Revised	Date

CITY OF LATHROP
DEPARTMENT OF PUBLIC WORKS

**WATER-SEWER
SEPARATION STANDARDS**

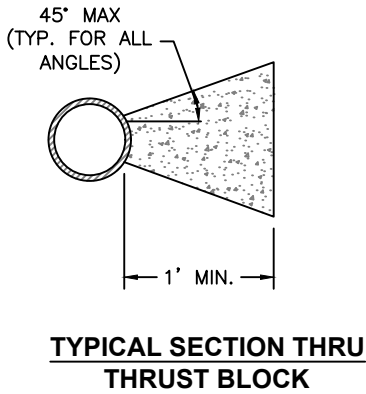
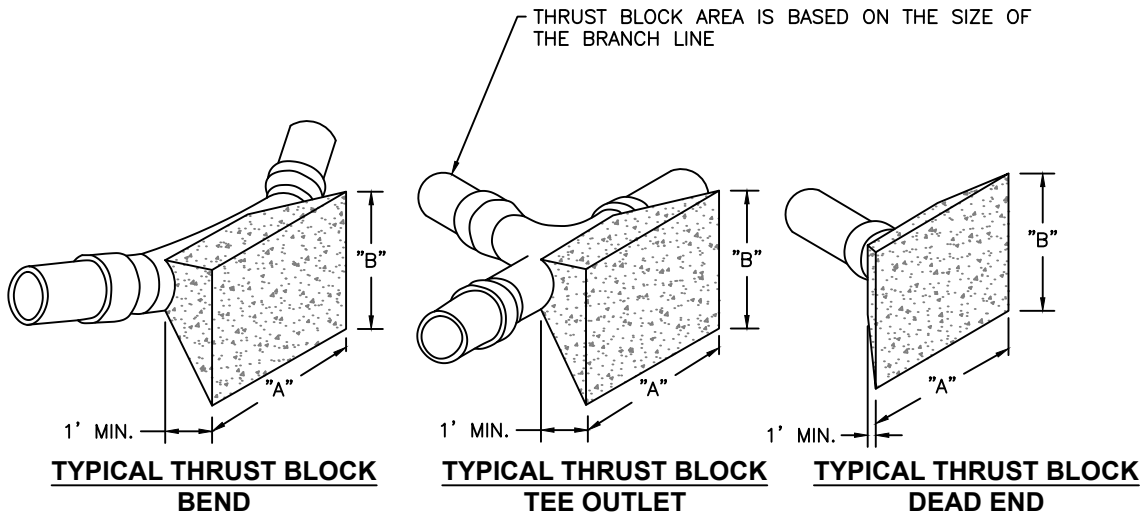


**STANDARD
DETAIL**

Date: JULY 2024

Drawing No:

W-1

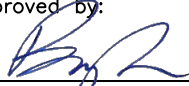


NOTES:

1. All thrust blocks shall be poured against undisturbed soil.
2. Restraint system for vertical pipe bends shall be approved by the City Engineer.
3. Thrust restraint systems for pipes larger than 12" shall be designed on a case by case basis and shall be approved by the City Engineer.
4. Concrete shall be 3,000 PSI.
5. No concrete shall be placed within 4 inches of flanged, bolted joints.

THRUST BLOCK AREA REQUIRED		
FITTINGS	ALLOWABLE SOIL BEARING 1000 LBS. PER SQ. FT.	
	"A"	"B"
6" LINE OR SMALLER		
22 1/2°	1'-6"	1'-6"
45°	2'-0"	2'-0"
90°	3'-0"	2'-6"
TEE OUTLET	2'-6"	2'-0"
DEAD END	2'-6"	2'-0"
8" LINE		
22 1/2°	2'-0"	2'-0"
45°	3'-0"	2'-6"
90°	4'-0"	3'-0"
TEE OUTLET	3'-0"	3'-0"
DEAD END	3'-0"	3'-0"
10" LINE		
22 1/2°	3'-0"	2'-0"
45°	3'-6"	3'-0"
90°	5'-0"	4'-0"
TEE OUTLET	4'-0"	3'-6"
DEAD END	4'-0"	3'-6"
12" LINE		
22 1/2°	3'-0"	3'-0"
45°	4'-0"	4'-0"
90°	7'-0"	4'-0"
TEE OUTLET	5'-0"	4'-0"
DEAD END	5'-0"	4'-0"

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City of Lathrop City Engineer		
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DEPARTMENT OF PUBLIC WORKS

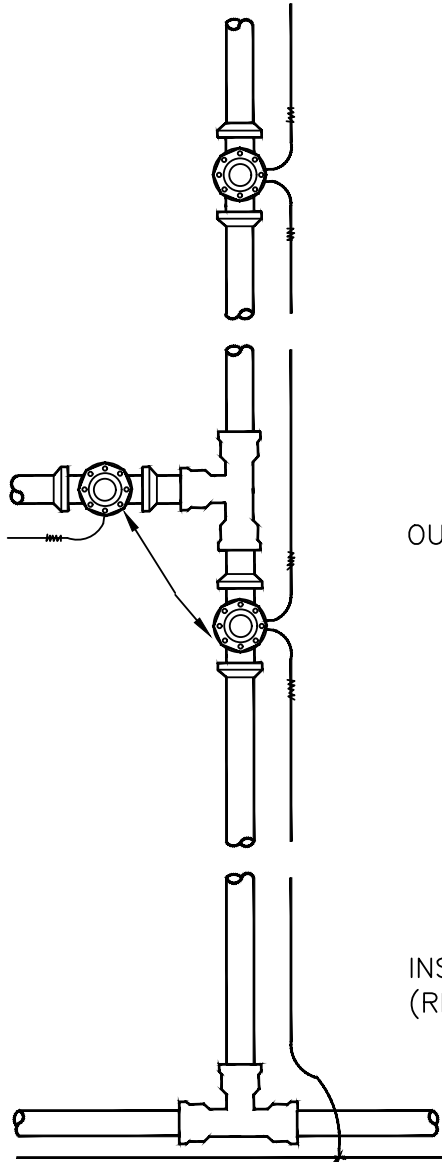


**STANDARD
DETAIL**

THRUST BLOCK CHART

Date: JULY 2024
Drawing No:

W-2

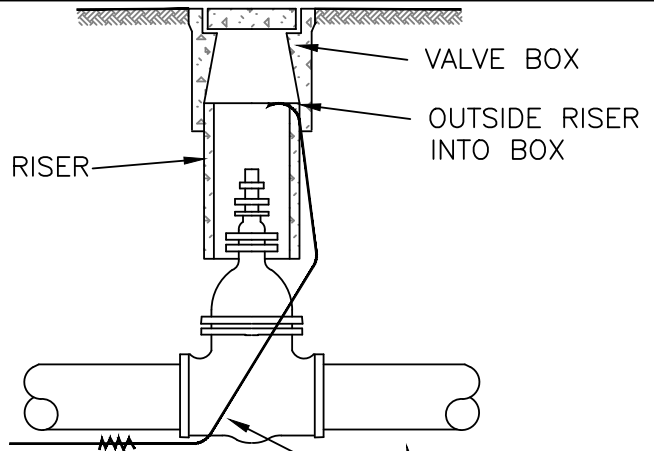


SPLICE RUNS TOGETHER
KEEP CLEAR OF FITTING

TYPICAL LAYOUT

NOTES:

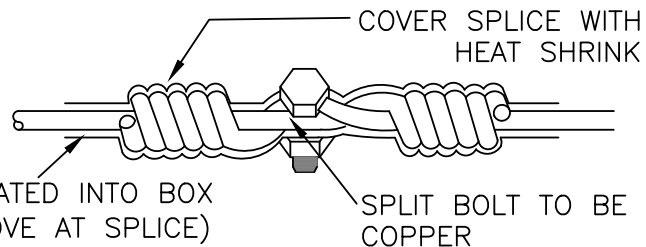
1. Wire to be continuous between valve boxes, except as noted.
2. Bare wire not to touch metal valves or fittings.
3. Locating wire to be laid at top of pipe.
4. Provide access box for tracer wire where no valves located within 250'.
5. Continuity test to be required on all tracer wires before acceptance.



#12 AWG, SINGLE STRAND, SOFT
DRAWN COPPER WIRE; 4/64"
POLYVINYL CHLORIDE INSULATION
OUTSIDE OF VALVE RISER AND INTO
THE VALVE BOX

SEE DETAIL
BELOW

VALVE DETAIL



SPLICE DETAIL

NOT TO SCALE

Approved by:

[Signature]
City Of Lathrop
City Engineer

No	Revised	Date

CITY OF LATHROP
DEPARTMENT OF PUBLIC WORKS

LOCATOR WIRE INSTALLATION

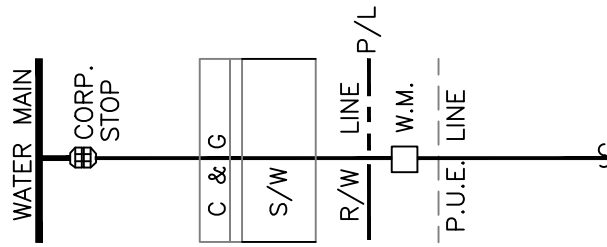


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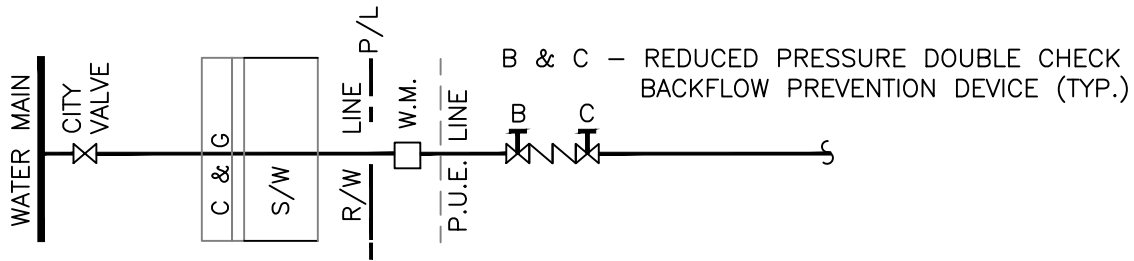
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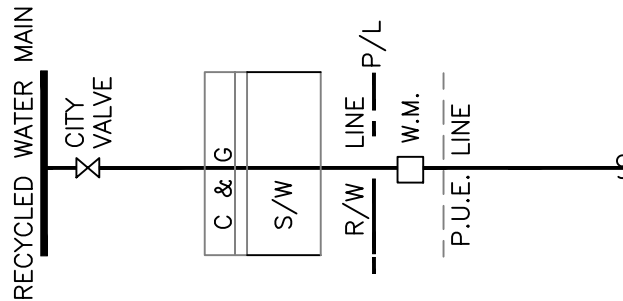
W-3



RESIDENTIAL WATER TURNOUTS



COMMERCIAL, INDUSTRIAL, OR IRRIGATION WATER TURNOUTS



RECYCLED WATER TURNOUTS

NOTE:

1. Backflow prevention device shall be FEBCO Model 860 or equal.
2. Meter shall be placed in streetright-of-way if there is no public utility easement (P.U.E).
3. Recycled water turnouts shall have proper signage, identification painting, and markings as required by the Recycled Water System Standards.
4. Backflows shall be painted as follow: potable water - blue, irrigation - green, recycled - Purple

NOT TO SCALE

Approved by:		
City Of Lathrop Public Works Director		
No	Revised	Date

CITY OF LATHROP
DEPARTMENT OF PUBLIC WORKS
WATER AND RECYCLED WATER TURNOUTS

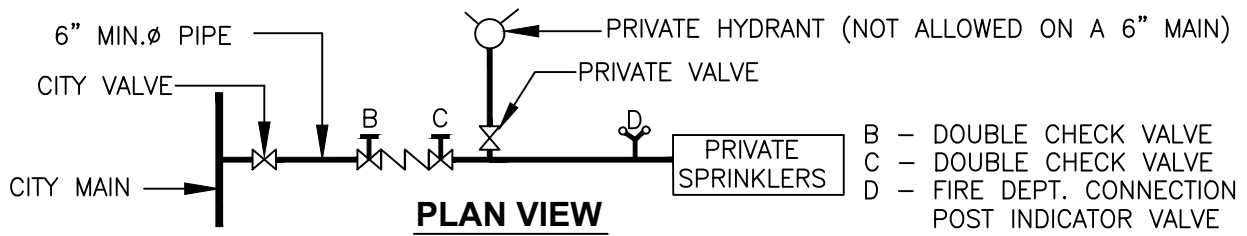


**STANDARD
DETAIL**

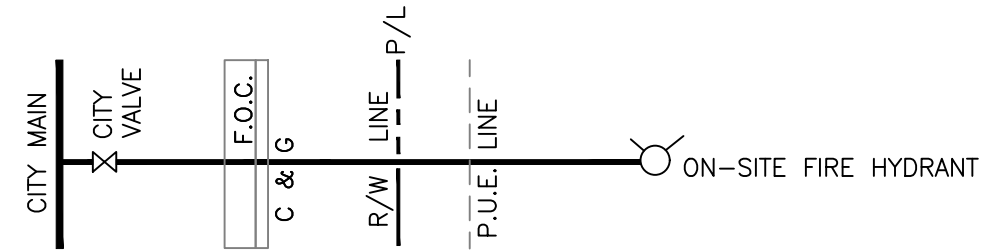
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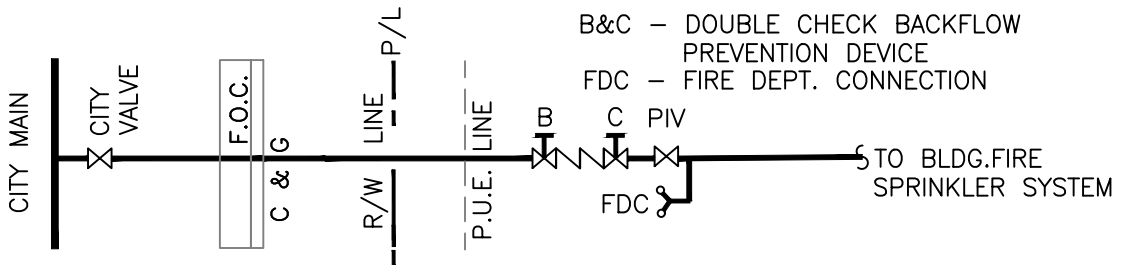
W-4



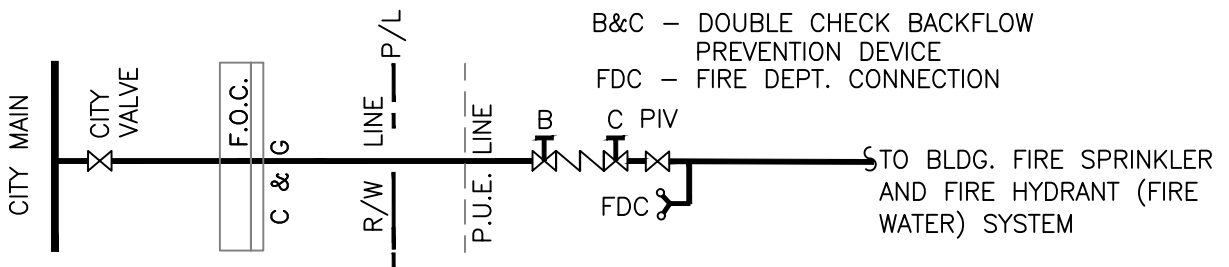
PLAN VIEW
SINGLE CONNECTION TO MAIN



ON-SITE FIRE HYDRANT
FIRE WATER LINE



ON-SITE BLDG
FIRE SPRINKLER SYSTEM LINE



DUAL ON-SITE
FIRE HYDRANT AND
BLDG. FIRE SPRINKLER SYSTEM

NOTES:

1. All backflow prevention devices shall be double check valve with no reduced pressure.
2. Check City approved backflow preventor list for approved brands and models.

NOT TO SCALE

Approved by: 		
City of Lathrop City Engineer		
No	Revised	Date

CITY OF LATHROP
DEPARTMENT OF PUBLIC WORKS

FIRE SERVICE

SCHEMATIC DIAGRAMS

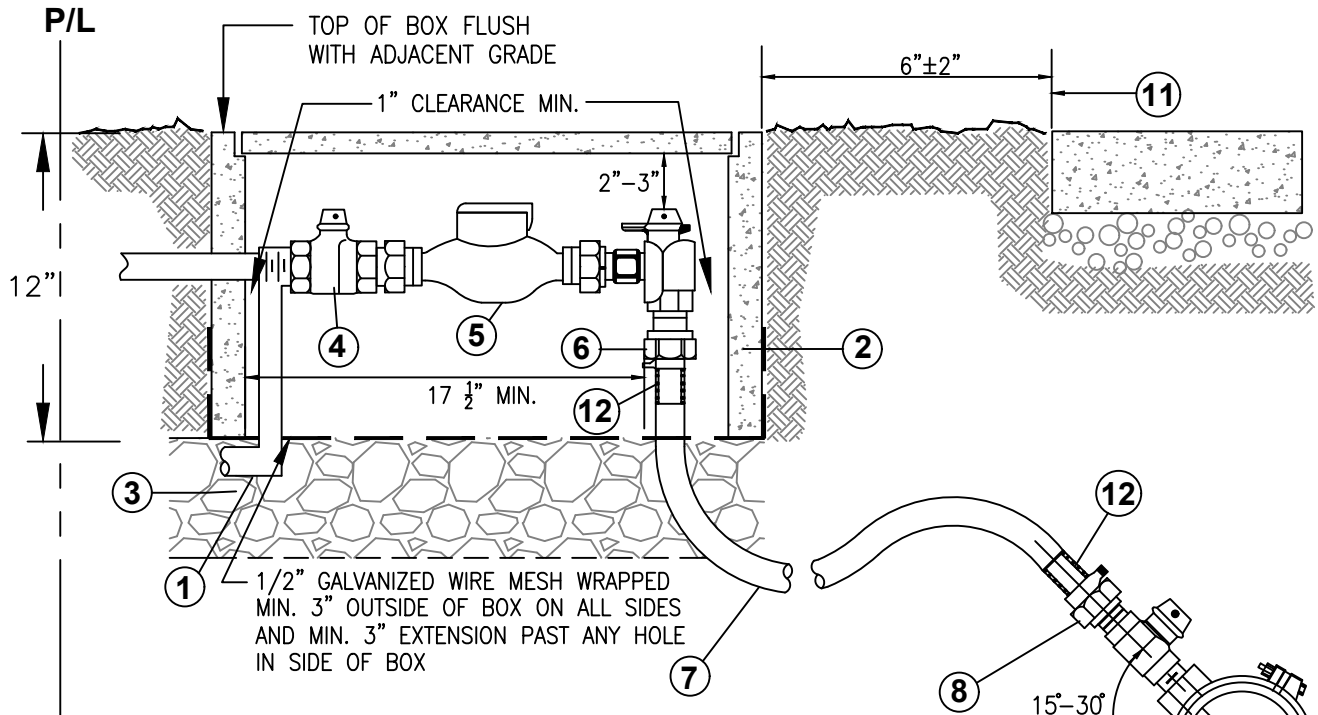


STANDARD
DETAIL

Date: **JULY 2024**

Drawing No:

W-5



DRAWING DETAILS:

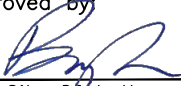
1. 2 foot, schedule 80 threaded PVC nipple.
2. Meter box shall be manufactured by Christy with fibrelite lid or approved equal (see chart for type). Cleanouts and meters shall not be located in driveways. In cases where meters are approved in vehicle paths, meter box shall be equivalent Christy traffic rated box or approved equal.
3. 3/4" clean crushed rock, 1 foot deep and flush with bottom of meter box.
4. Meter stop, full port ball valve only (with handle).
5. Meters shall be per latest standard specifications. Meters shall be furnished by contractor at owner's cost upon establishment of water account for lot serviced. Install 7 1/2" spacer for (3/8" x 3/4") meter, 10 3/4" spacer for (1") meter during initial construction. 3/8" holes shall be drilled in spacer.
6. Angle meter stop, full port ball valve only, lockable.
7. Polyethylene service line. See construction drawings for sizing, 1-1/2" min (typ.).
8. Corporation stop (Ford F-600 or approved equal).
9. Bronze or brass service saddle required for PVC mains, direct taps are not acceptable for ductile iron.
10. Water or recycled water main.
11. Back of city sidewalk.
12. Stainless steel stiffeners.

METER BOX AND LID TYPE		
METER	BOX	LID
1"	B-16	FL16D

NOTES:

1. Service pipe to be continuous (no joints) between main and angle meter stop unless approved by city engineer.
2. The location of the service saddle shall be a min of 24" from another service saddle, bell, spigot, or other fitting.
3. Meter box may be placed adjacent to property or easement line with prior approval of the city engineer.
4. Place #10 gauge solid soft drawn copper wire along service line with accessibility from meter box.
5. Tap to water main shall be made by the city approved contractor at owner's cost.
6. Commercial/industrial service installation will be approved on case by case basis.
7. For meters larger than 1", meter box and lid shall be submitted to city for review.

NOT TO SCALE

Approved by 		
City of Lathrop City Engineer		
No	Revised	Date

CITY OF LATHROP
DEPARTMENT OF PUBLIC WORKS
RESIDENTIAL SERVICE INSTALLATIONS



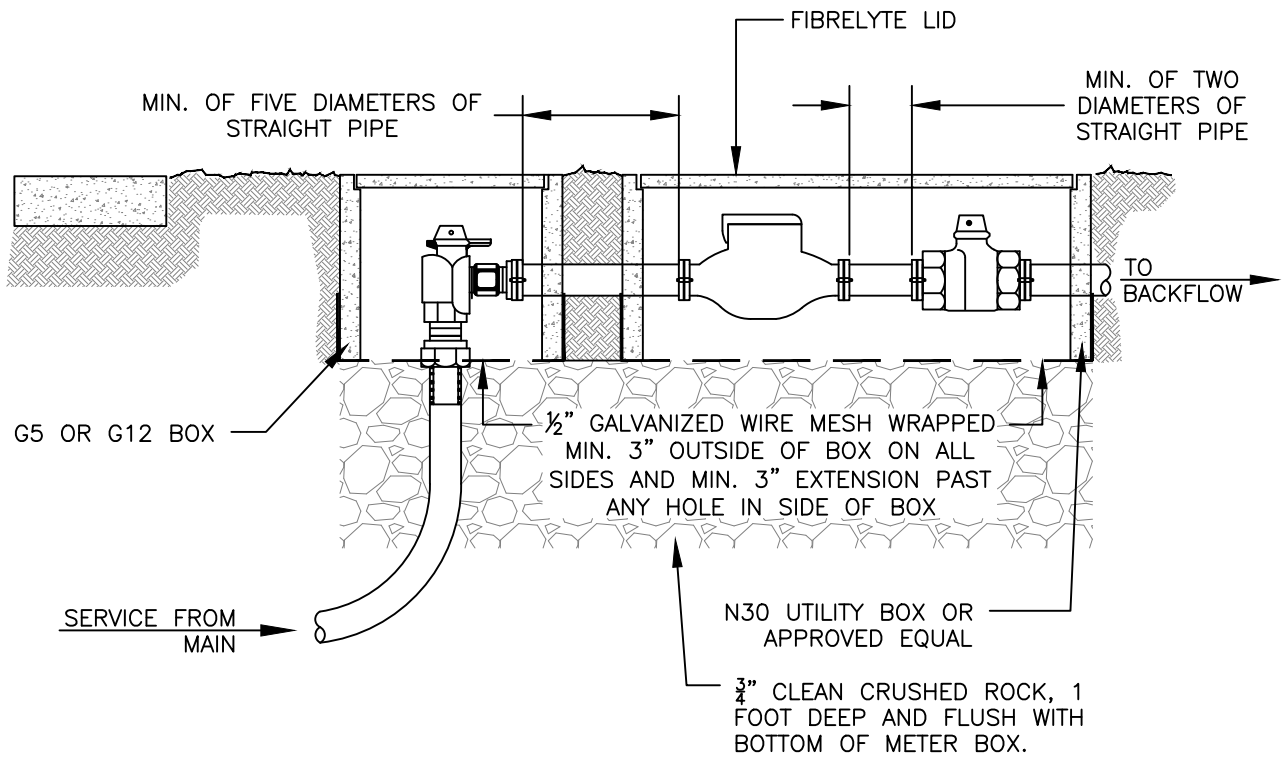
**STANDARD
DETAIL**

Date: JULY 2024

Drawing No:

W-6

REFER TO NOTES ON STANDARD DETAIL W-6



NOT TO SCALE

Approved by:

[Signature]
 City of Lathrop
 City Engineer

No	Revised	Date

CITY OF LATHROP
 DEPARTMENT OF PUBLIC WORKS
COMMERCIAL AND INDUSTRIAL
SERVICE INSTALLATION
 1 1/2 INCH TO 2 INCH



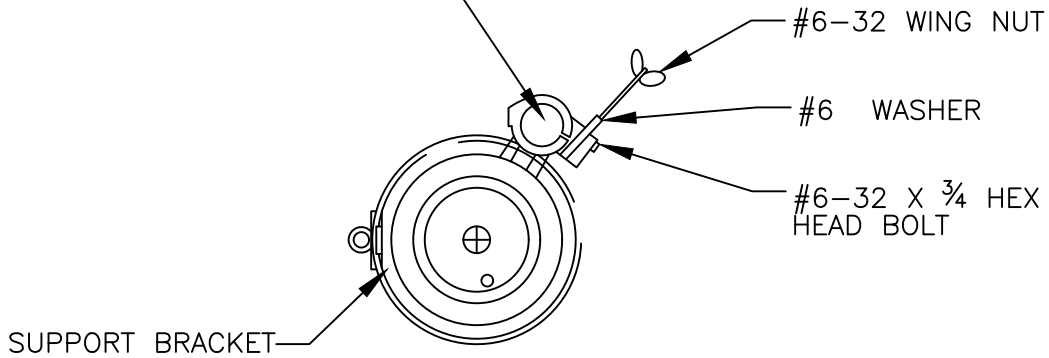
STANDARD
DETAIL

Date: JULY 2024

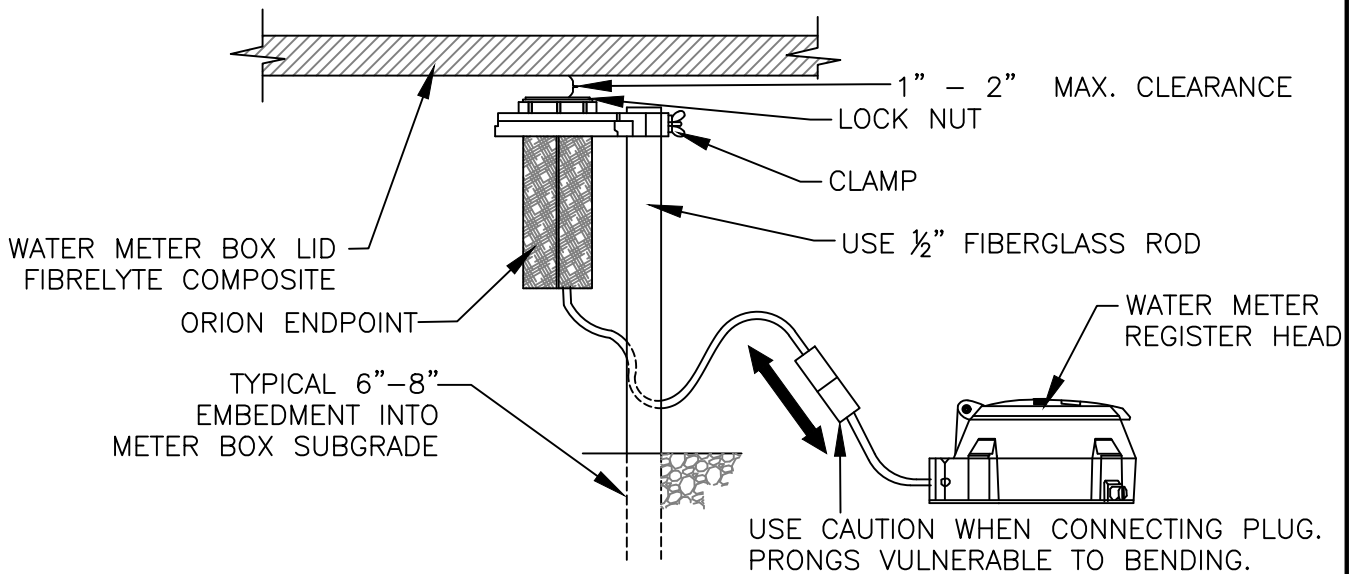
Drawing No:

W-7

USE 1/2" X 18" FIBERGLASS ROD



PIT SUPPORT BRACKET (KNUCKLES) - TOP VIEW



PIT ORION BENEATH LID INSTALLATION - SIDE VIEW

Installation of ORION ENDPOINT below a meter pit lid.

1. Drive rod into the ground prior to attaching the endpoint to avoid damage.
2. Once in the ground, secure the mounting bracket on the rod using the enclosed washer, wing nut and hex head bolt provided with bracket.
3. Insert the endpoint through the bottom of the bracket and thread the lock nut onto the top of the endpoint. Mount the endpoint a maximum of one to two inches below the underside of the lid.

NOT TO SCALE

Approved by:		
City Of Lathrop City Engineer		
No	Revised	Date

CITY OF LATHROP
DEPARTMENT OF PUBLIC WORKS
REMOTE READ
END-POINT-TRANSMITTER
INSTALLATION

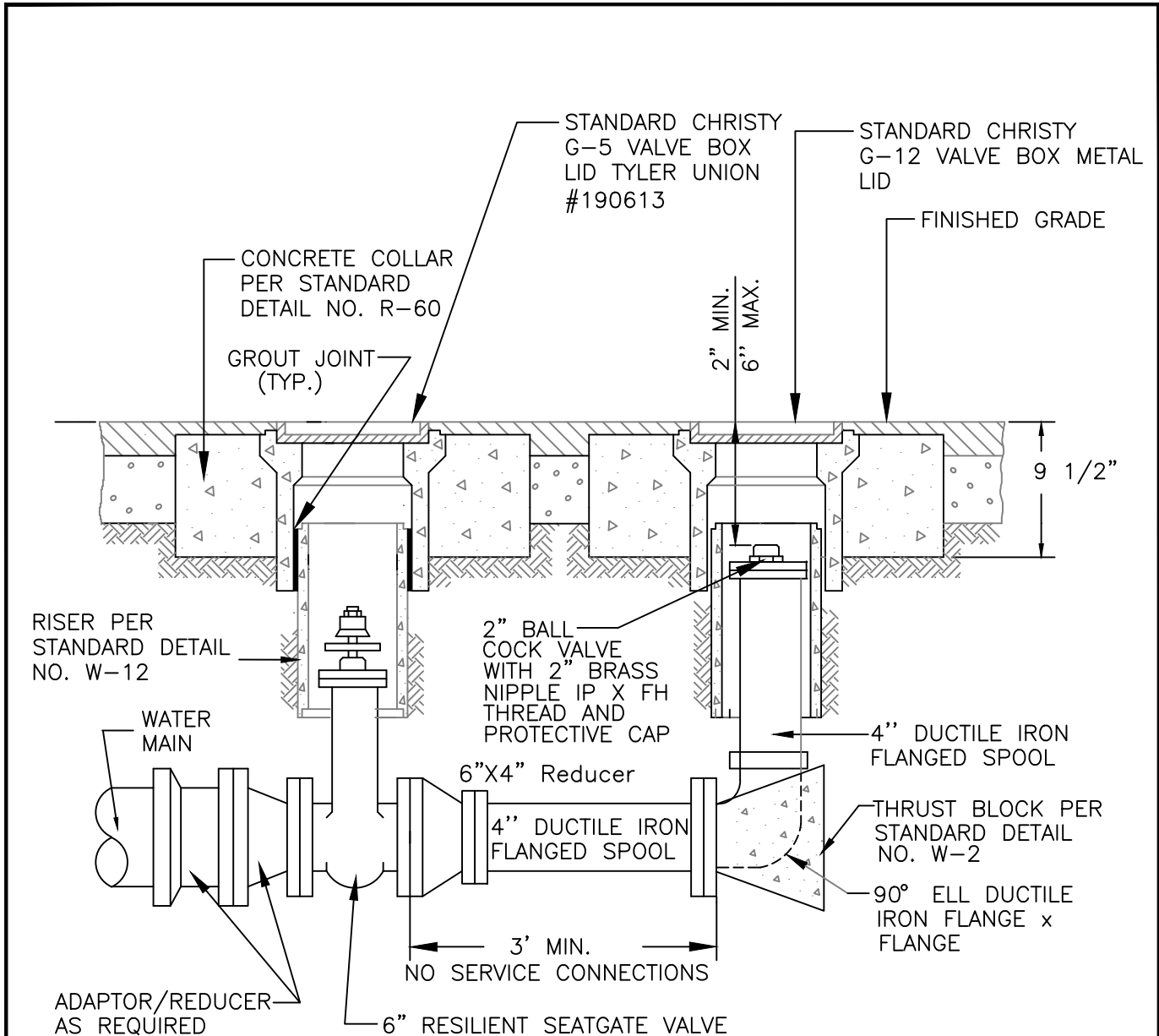


STANDARD
DETAIL

Date: JULY 2024

Drawing No:

W-8



NOTES:

1. Blow-off shall be used at all dead end lines except for cul-de-sacs.
2. No concrete or other obstruction within 4" of flanges.
3. Valve stem extension shall be used to comply with 5' max. distance from grade to nut.
4. Trace wire shall be used.
5. Blow-off shall be installed 5' from face of curb unless alternative location is approved by City Engineer.
6. All joints to be wrapped with 10 mil. PVC and tape.
7. Temporary blow-off allowed with approval of City Engineer.
8. All bolts must be stainless steel 316.

NOT TO SCALE

Approved by:		
City of Lathrop City Engineer		
No	Revised	Date

CITY OF LATHROP
 DEPARTMENT OF PUBLIC WORKS

WATER SYSTEM
BLOW - OFF



STANDARD
DETAIL

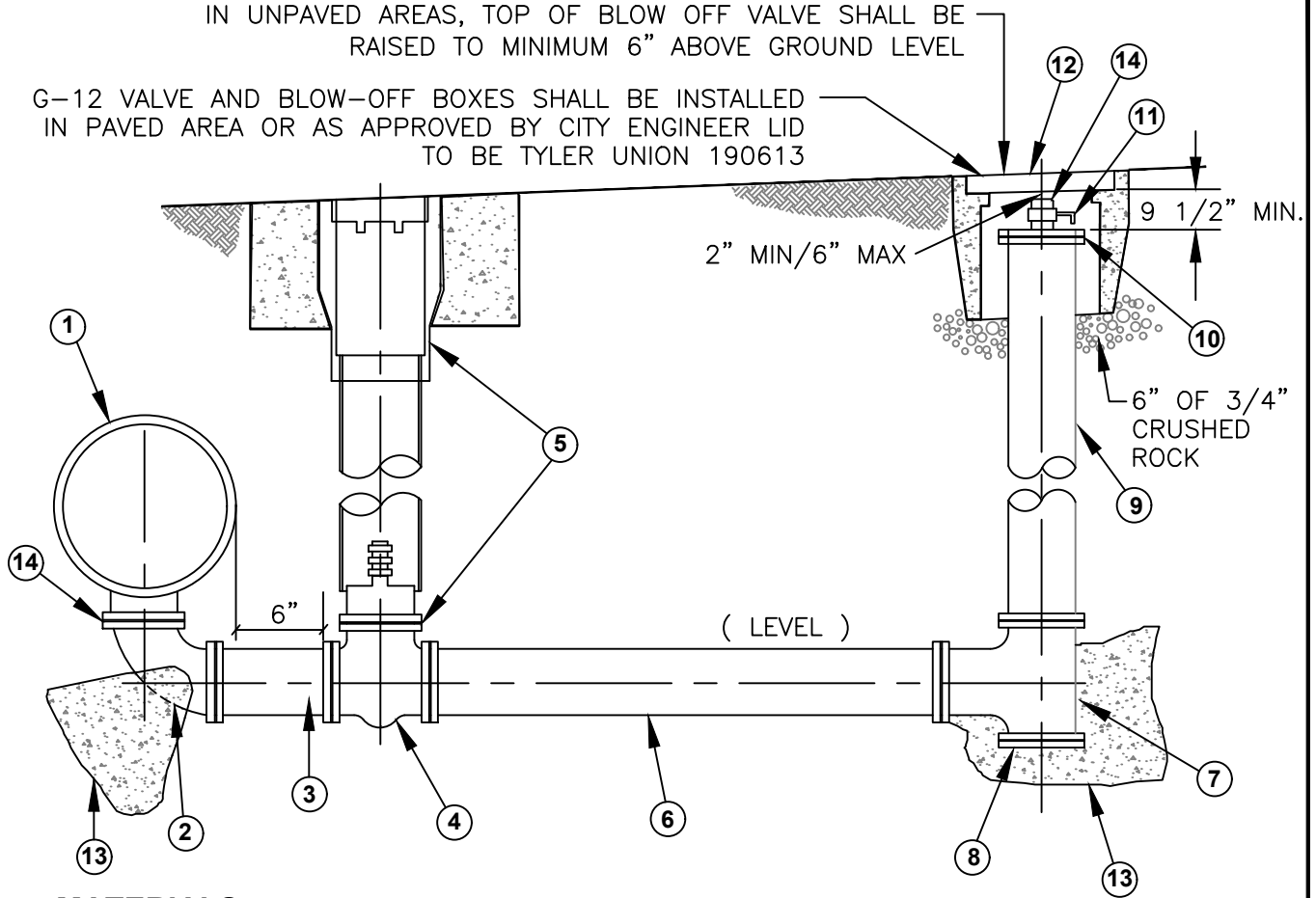
Date: JULY 2024

Drawing No:

W-9

IN UNPAVED AREAS, TOP OF BLOW OFF VALVE SHALL BE
RAISED TO MINIMUM 6" ABOVE GROUND LEVEL

G-12 VALVE AND BLOW-OFF BOXES SHALL BE INSTALLED
IN PAVED AREA OR AS APPROVED BY CITY ENGINEER LID
TO BE TYLER UNION 190613



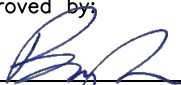
MATERIALS:

- | | |
|---|--|
| ① PIPE DIA. x 6" D.I. TEE, FLANGED | ⑩ 6" BLIND FLANGE WITH 2" TAP |
| ② 6" D.I. 90° ELL, FLG.x FLG. | ⑪ 2" BRASS NIPPLE AND 2" BALL VALVE, I.P. THREAD |
| ③ 6" x AS REQ'D D.I. SPOOL | ⑫ VALVE BOX PER STANDARD DETAIL NO. W-12 WITH CAST IRON TRAFFIC LIDS |
| ④ 6" RESILENT SEAT GATE VALVE, FLG.x FLG. | ⑬ THRUST BLOCKS PER STANDARD DETAIL NO. W-2 |
| ⑤ VALVE AND VALVE BOX INSTALLATION PER STANDARD DETAIL NO. W-12 | ⑭ 2" BRASS NIPPLE, I.P. THREAD x FH THREAD, WITH PROTECTIVE CAP |
| ⑥ 6" x AS REQ'D FLG. x FLG. D.I. PIPE | |
| ⑦ 6" x 6" D.I. TEE FLG. x FLG. x FLG. | |
| ⑧ 6" D.I. BLIND FLANGE | |
| ⑨ 6" x AS REQ'D D.I. PIPE | |

ABBREVIATIONS

- | | |
|------|---------------|
| D.I. | DUCTILE IRON |
| ELL | ELBOW |
| FLG. | FLANGE |
| I.P. | INTERNAL PIPE |
| F.H. | FIRE HOSE |

NOT TO SCALE

Approved by: 		
City Of Lathrop City Engineer		
No	Revised	Date

CITY OF LATHROP
DEPARTMENT OF PUBLIC WORKS
WATER SYSTEM
BLOW - OFF
6" LINE DRAIN ASSEMBLY

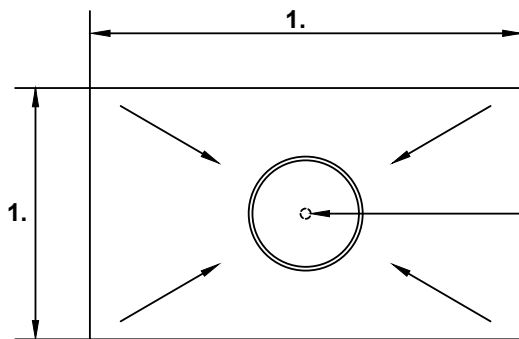


**STANDARD
DETAIL**

Date: JULY 2024

Drawing No:

W-10

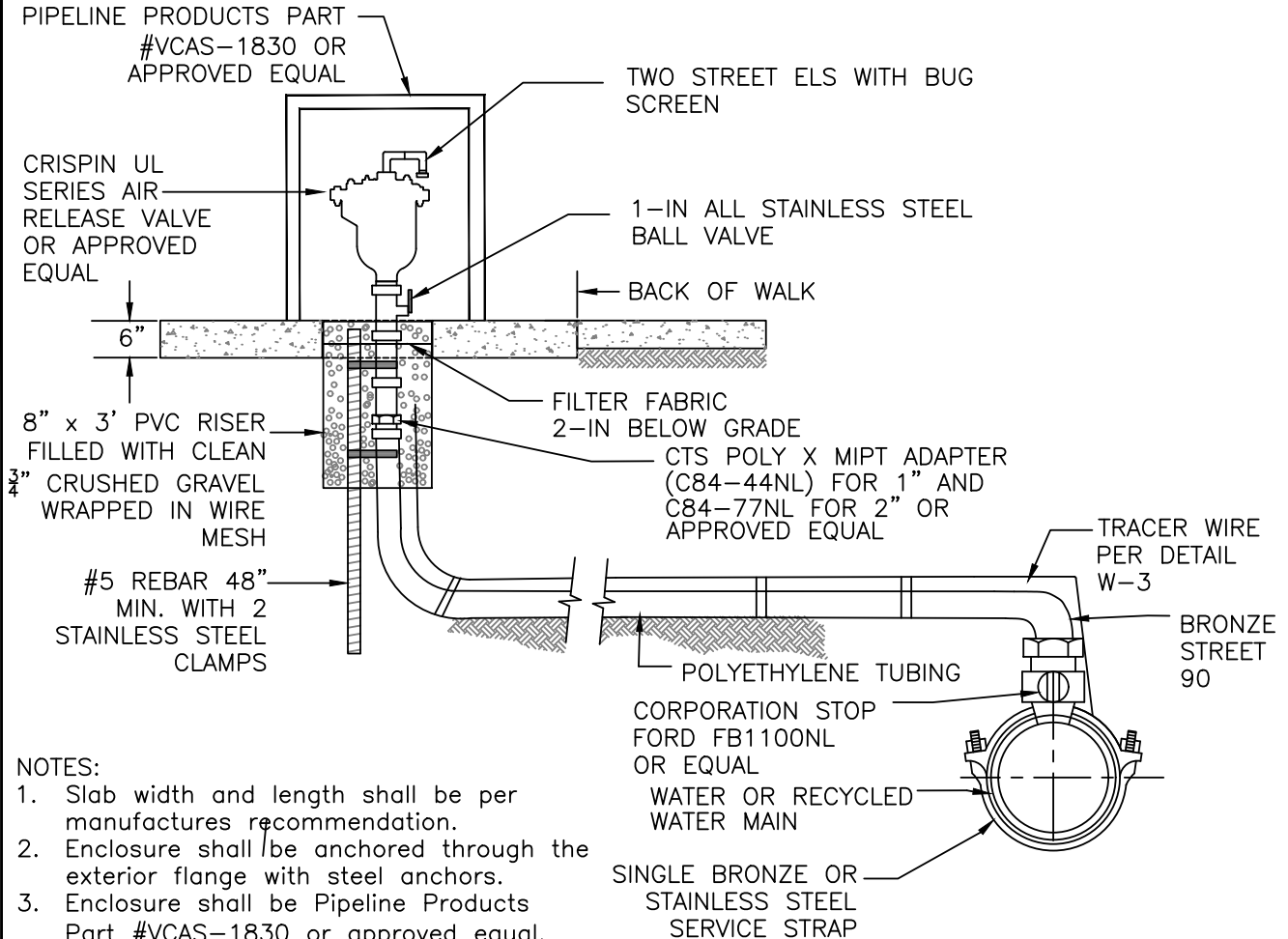


ENCLOSURE DETAILS:

1. FOR POTABLE WATER USE BLUE: PART # VCAS-1830-BL
2. FOR RECYCLED WATER USE PURPLE: PART # VCAS-1830-PR
3. FOR SEWER USE GREEN: PART #VCAS-1830-GR

SLOPE
CONCRETE
TOWARDS
DRAIN
RISER

SLAB SHALL BE 6-IN THICK



- NOTES:**
1. Slab width and length shall be per manufactures recommendation.
 2. Enclosure shall be anchored through the exterior flange with steel anchors.
 3. Enclosure shall be Pipeline Products Part #VCAS-1830 or approved equal.
 4. 12" and above, use 2" service and ARV
 5. All poly connections require stainless steel stiffening inserts

NOT TO SCALE

Approved by:		
City of Lathrop City Engineer		
No	Revised	Date

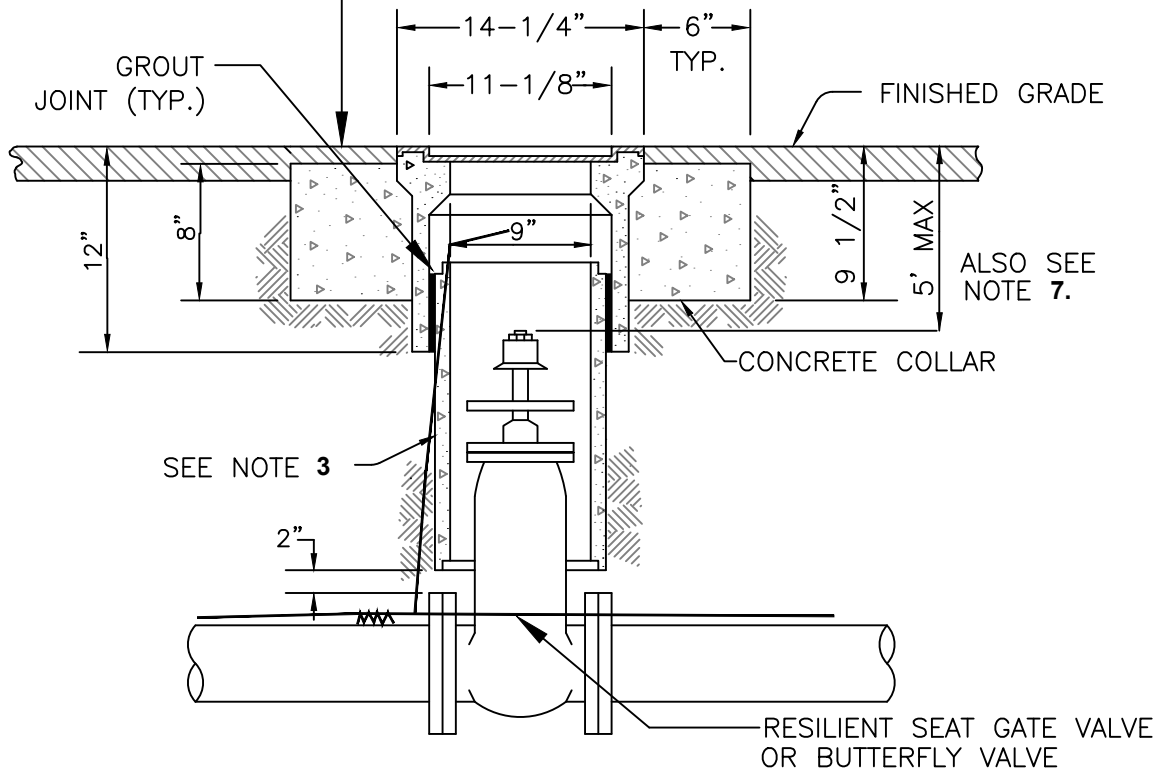
CITY OF LATHROP
DEPARTMENT OF PUBLIC WORKS

**DOMESTIC AND RECLAIMED
AIR RELEASE VALVE**

**STANDARD
DETAIL**

Date: JULY 2024
Drawing No:
W-11

ADJUST BOX TO GRADE PER CITY
STANDARD DETAIL NO. R-58.



NOTES:

1. Valve box shall be Christy no. G5 or equal as approved by the city engineer. Lid shall be Tyler Union #190613.
2. All lids shall be machined seating surface cast iron. Recycled water valve box lids to be heavy-duty, triangular in shape, and colored purple (Pantone 512) with language shown on standard detail No. R-59
3. Valve box riser to be one continuous piece and centered on valve unless otherwise approved by City Engineer. Shall be 8" ϕ , class 150 PVC (use C900) purple for lake fill, non-potable water, recycled water and blue only for potable water. See note 4.
4. Alternative valve box and risers may be used where approved by the City Engineer.
5. Concrete collar not required when valve box is located in concrete sidewalk area.
6. Valve operator extension shall be required when valve nut is deeper than 6' from finish grade, refer to standard detail no W-13.
7. Trace wire shall be used, refer to standard detail No. W-3.
8. Resilient seat gate valves shall comply with AWWA Standard W509. Butterfly valves shall comply with AWWA Standard C504.
9. Tracer wire must be tested for continuity.

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Approved by:		
City of Lathrop City Engineer		
No	Revised	Date

CITY OF LATHROP
DEPARTMENT OF PUBLIC WORKS

VALVE BOX

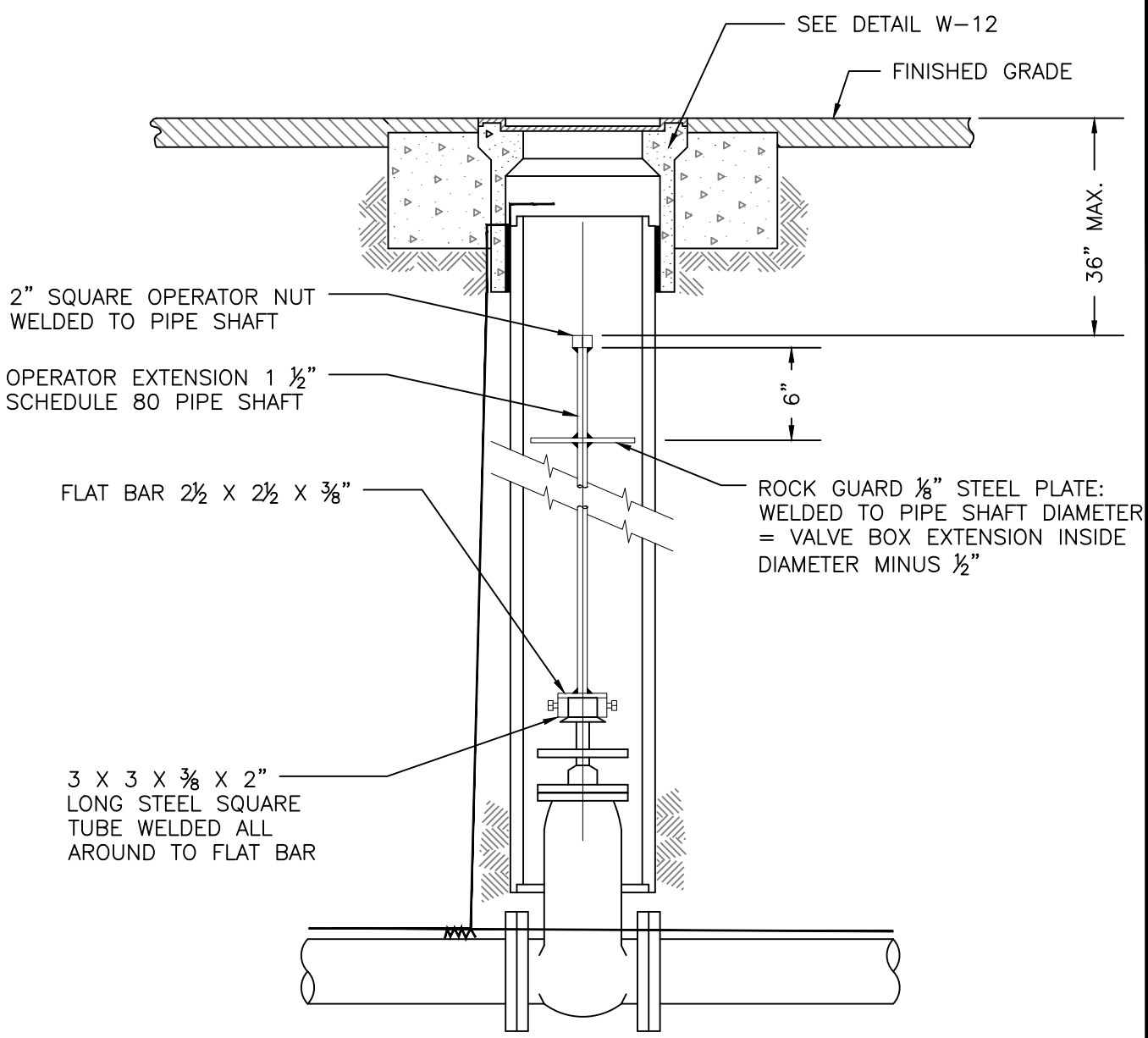


**STANDARD
DETAIL**

Date: **JULY 2024**

Drawing No:

W-12



2" SQUARE OPERATOR NUT
WELDED TO PIPE SHAFT

OPERATOR EXTENSION 1 1/2"
SCHEDULE 80 PIPE SHAFT

FLAT BAR 2 1/2 X 2 1/2 X 3/8"

3 X 3 X 3/8 X 2"
LONG STEEL SQUARE
TUBE WELDED ALL
AROUND TO FLAT BAR

SEE DETAIL W-12
FINISHED GRADE

36" MAX.

6"

ROCK GUARD 1/8" STEEL PLATE:
WELDED TO PIPE SHAFT DIAMETER
= VALVE BOX EXTENSION INSIDE
DIAMETER MINUS 1/2"

NOTES:

1. Operator extension required when valve nut is deeper than 6' from grade.
2. Center valve box on axis of operator nut
3. Welds shall be minimum 1/4" all around.
4. Hot dip galvanize operator extension after fabrication.

NOT TO SCALE

Approved by:



City of Lathrop
City Engineer

No	Revised	Date

CITY OF LATHROP
DEPARTMENT OF PUBLIC WORKS

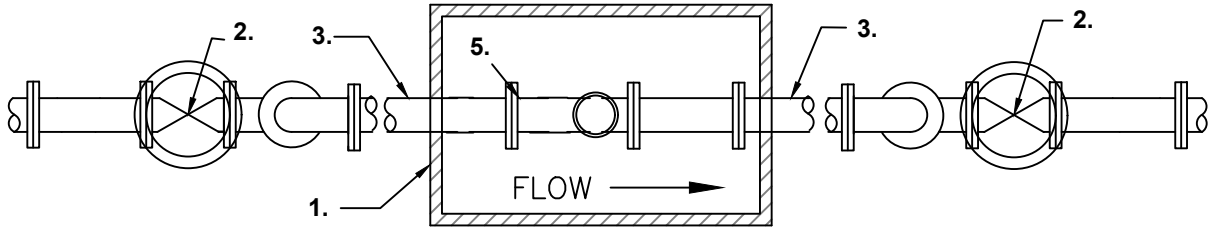
**VALVE OPERATOR
EXTENSION**



**STANDARD
DETAIL**

Date: **JULY 2024**
Drawing No:

W-13

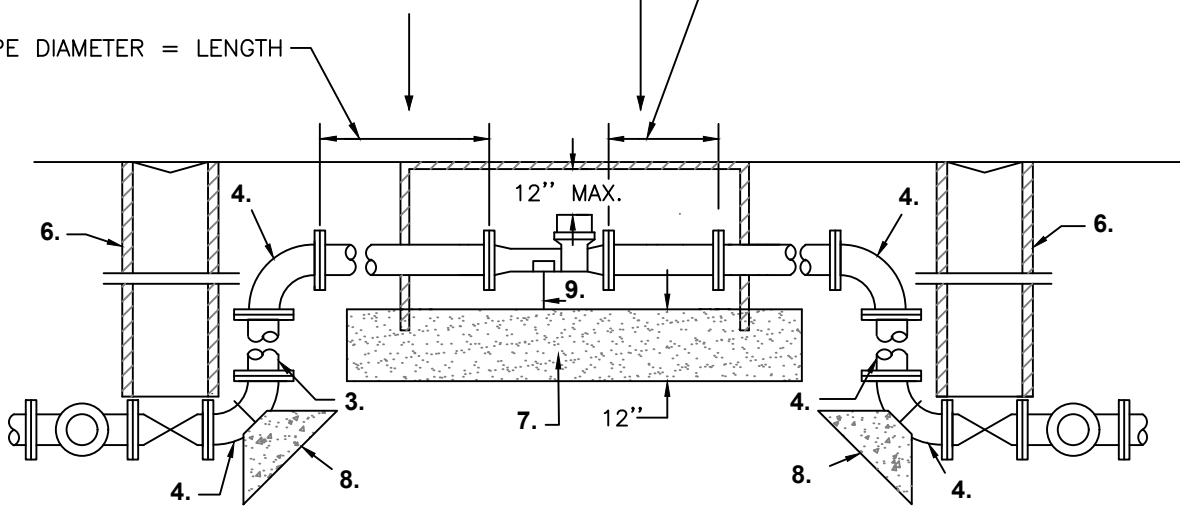


PLAN

MINIMUM PIPE DIAMETER AS PER
MANUFACTURER'S RECOMMENDATIONS.

5X PIPE DIAMETER = LENGTH

2X PIPE DIAMETER = LENGTH



NOTES:

- 1. SEE COMPONENTS LIST AND NOTES ON W-14A

NOT TO SCALE

Approved by:

[Signature]
City of Lathrop
City Engineer

No	Revised	Date

CITY OF LATHROP
DEPARTMENT OF PUBLIC WORKS

**LAYOUT FOR 3" OR
LARGER METER**



**STANDARD
DETAIL**

Date: JULY 2024

Drawing No:

W-14

COMPONENTS FOR 3" OR LARGER METER INSTALLATIONS

1. SIZE OF METER VAULT SHALL BE DETERMINED BY METER SIZE AND SHALL PROVIDE SUFFICIENT SPACE TO OPERATE WRENCHES ON ASSEMBLY BOLTS. WHEN METER VAULT IS PLACED IN A VEHICULAR AREA, BOTH VAULT AND LID SHALL BE H20 TRAFFIC RATED AND ENDPOINT TRANSMITTER SHALL BE INSTALLED IN A SEPARATE VALVE BOX WITH FIBERLYTE COMPOSITE LID IN A NON-VEHICULAR AREA. USE ¾" SCH. 40 PVC CONDUIT (WITH A MINIMUM COVER OF 18") FOR WIRE SPLICE IN WATER METER BOX USING BADGER 308 CONNECTOR. ENDPOINT TRANSMITTER VALVE BOX LOCATION SHALL BE APPROVED BY THE CITY ENGINEER.
2. GATE VALVE – PER CITY STANDARD.
3. CLASS 125 DUCTILE IRON PIPE SPOOL.
4. CLASS 125 DUCTILE IRON PIPE 90° LONG RADIUS ELBOW.
5. METER AS SPECIFIED BY CITY.
6. VALVE BOX PER CITY STANDARD DETAIL NO. W-12.
7. 3/8" MAXIMUM GRAVEL BASE. 12" MINIMUM DEPTH.
8. THRUST BLOCKS – CITY STANDARD DETAIL NO. W-2.
9. METER AND PIPE SUPPORTS AS REQUIRED.

NOTES:

- A. DETAILED DRAWING WILL BE REQUIRED AND SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO INSTALLATION.
- B. CONTRACTOR TO CONSULT WITH CITY'S SPECIFICATIONS FOR APPROPRIATE METERS, VALVES AND APPURTENANCES.
- C. USE STAINLESS STEEL 316 BOLTS WITH ANTI-SEIZE ON THE THREADS.
- D. BURIED METAL/VALVE ASSEMBLIES TO BE WRAPPED IN PLASTIC.

NOT TO SCALE

Approved by:		
		
City Of Lathrop City Engineer		
No	Revised	Date

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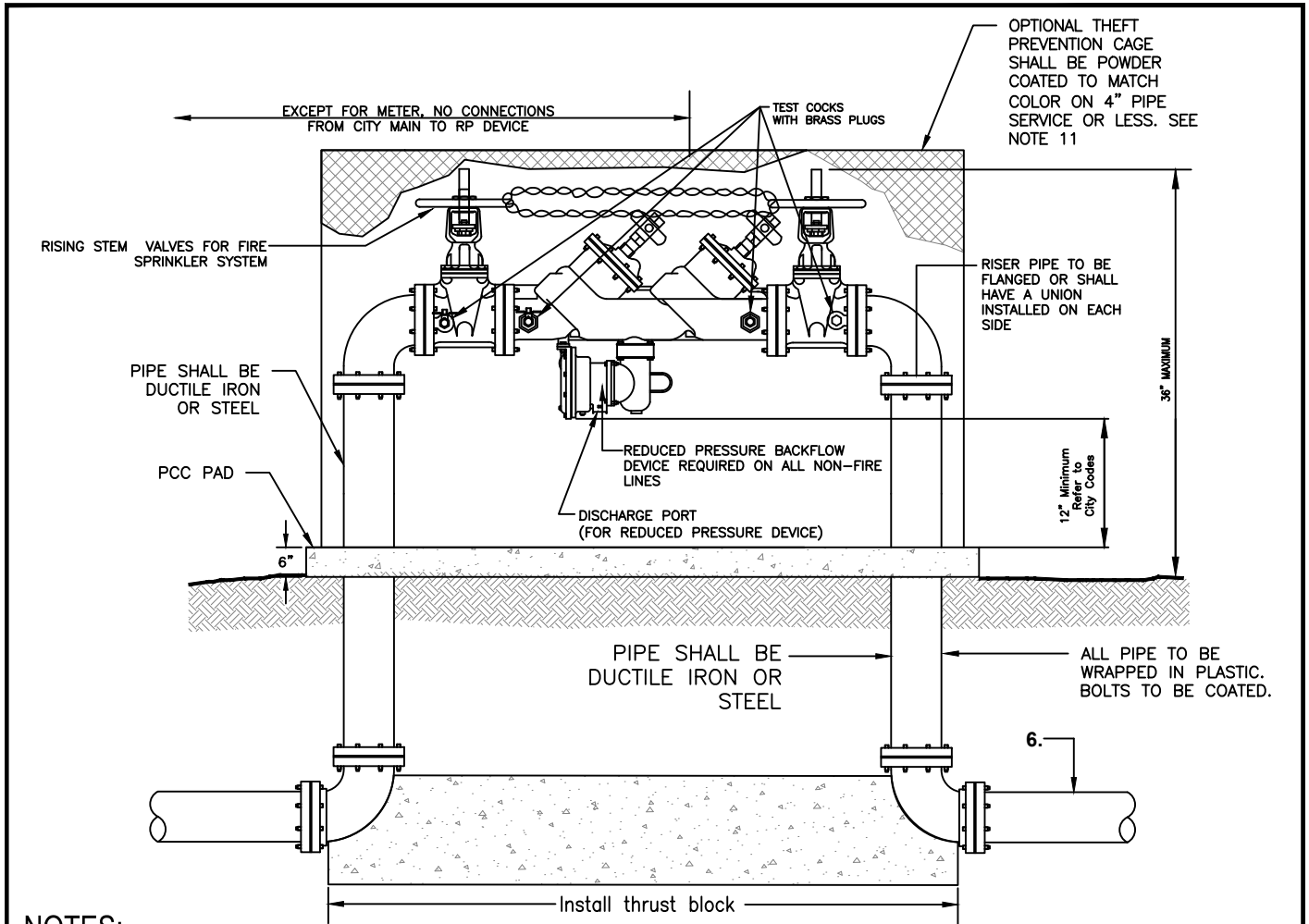
**LAYOUT FOR 3" OR
LARGER METER NOTES**



**STANDARD
DETAIL**

Date: **JULY 2024**

Drawing No:
W-15



NOTES:

1. Installed device shall be Febco Model LF 860 large diameter or approved equal.
2. Device shall be installed above ground.
3. Test cocks and shut-off valves must be supplied and installed as shown.
4. Discharge port must be kept clear of obstruction at all times, 12 inch min.
5. Any deviation from the installation shown above must receive prior approval.
6. All piping and appurtenances shall be AWWA rated 150 psi.
7. Thrust blocks per Standard Detail No. W-2.
8. Valves shall be chained with a breakaway lock in an open position at all times.
9. All bolts shall be 316 stainless steel. Never Sieze shall be used on all threads.
10. All assemblies must be tested by a certified backflow prevention tester and reports shall be sent to backflows@ci.lathrop.ca.us
11. See standard detail W-20 for temporary backflow preventer.

NOT TO SCALE

Approved by:		
City of Lathrop City Engineer		
No	Revised	Date

CITY OF LATHROP
DEPARTMENT OF PUBLIC WORKS
**REDUCE PRESSURE
BACKFLOW DEVICE**



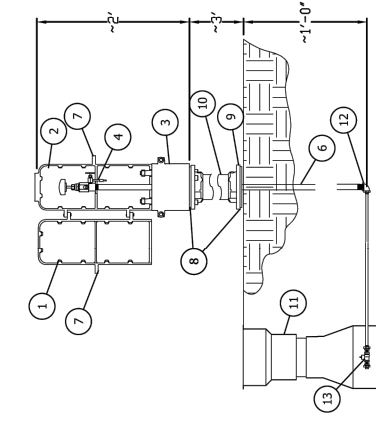
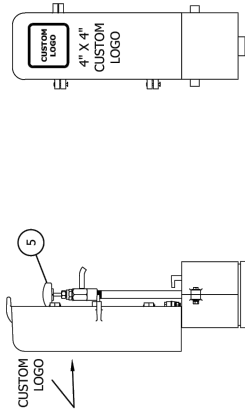
**STANDARD
DETAIL**

Date: **JULY 2024**

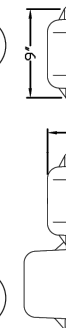
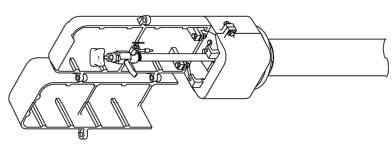
Drawing No:

W-16

#88WC-SS-PED SAMPLING STATION W/ PEDESTAL SPEC SHEET



ITEM	DESCRIPTION	NOTES
1	88 FRONT DOOR (COVER A)	
2	88 REAR DOOR (COVER B)	
3	88 BASE	2 PIECES
4	S.S. SAMPLING PETCOCK	
5	S.S. OPERATING VALVE	
6	1/2" S.S. WATERWAY	
7	LOCKING HOLE	
8	PEDESTAL GASKET	
9	PEDESTAL FLANGE	
10	PEDESTAL TUBE	
11	VALVE BOX	BY OTHERS
12	1/2" S.S. ELBOW	BY OTHERS
13	1 BALL VALVE CORNSTOP	BY OTHERS



GENERAL SPECIFICATIONS	
MAXIMUM OPERATING PRESSURE:	220 PSI
STATION MATERIALS:	303, 316, & 88-8 STAINLESS STEEL
ENCLOSURE MATERIAL:	CAST AL 319 ALUMINUM
ENCLOSURE COLOR:	GREEN
WETTED MATERIALS:	BUNA-N & SBR RUBBER
PEDISTAL HEIGHT:	3'
DEPTH OF BURY:	1'-0"
WEIGHT:	76 LBS
CUSTOM LOGO:	

Sampling station shall be standard 1' bury, with a 1/2" MIP inlet, and a 1/2" unthreaded blow off and dedicated sampling bibb.

Station shall be enclosure in a powder coated lockable non-removable cast aluminum box with hinged openings. Station shall utilize a flanged 3' pedestal.

The station shall have an operating valve that controls the flow of water through a 1/2" outlet, with 6 rotations of the handle being fully open. Located before the main blow off valve, a separate stainless steel petcock shall control the discharge of water via an unthreaded 1/8" outlet to allow the user a dedicated sampling point.

When open, the station shall require no key for operation. All water flow shall pass through an all stainless steel waterway.

All working parts shall be made of stainless steel and serviceable from above ground with no digging or replacement needed.

The station shall be model #88WC-SS-PED as manufactured by *The Kupperle Foundry Company, St. Louis MO 63102* or approved equal.



- NOTES:
- IF THE COLOR SHALL BE ANY COLOR OTHER THAN GREEN, CHECK WITH THE MANUFACTURER FOR COLOR OPTIONS.
 - WHEN INSTALLED ON OR WITH CONCRETE, KUPPERLE RECOMMENDS THE USE OF A GASKET OR BARRIER BETWEEN THE ENCLOSURE AND THE CONCRETE SURFACE. WHEN PURCHASING THE STATION, IF CONCRETE INSTALL IS SPECIFIED ON THE ORDER KUPPERLE WILL PROVIDE SAID GASKET. THE ENCLOSURE CLAMP ON THE BOTTOM OF THE ENCLOSURE WILL FIT INSIDE A 4" PVC PIPE.
 - PROLONGED EXPOSURE TO STRONG CHLORIDES WHICH CAN BE PRESENT IN CONCRETE, CLEANING AGENTS, AND SOMETIME EVEN POTABLE WATER CAN LEAD TO POSSIBLE ENCLOSURE CORROSION. REGULAR MAINTENANCE AND DRYING THE STATION AFTER USE ARE THE BEST METHODS FOR OPTIMAL STATION LONGEVITY.
 - IN CORROSIVE SOLIDS THE BURIED PIPE SHOULD BE PREPARED FOR ADDITIONAL RESISTANCE TO CORROSION. KUPPERLE RECOMMENDS SPRAYING ALL UNDERGROUND PIPING AND FITTINGS WITH BITUMINOUS SPRAY TAR, ALLOWING PROPER TIME TO DRY, AND THEN WRAPPING THE PARTS.

KUPPERLE
Since 1887

2511 NORTH 9TH STREET
ST. LOUIS, MO 63102
1-800-231-3990
FAX 314-231-2820
www.hydrants.com

INITIALS	DATE
DRAWN	KJW 3/17/20
APPROVED	DCL 3/17/20
MODIFIED	

DATE	STATUS / REVISION
03/17/20	NEW DRAWING

88VC-SS-PED	SAMPLING STATION	SHEET A	SCALE: VARIES
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SHEET 1 OF 1

NOT TO SCALE

Approved by:

City of Lathrop
City Engineer

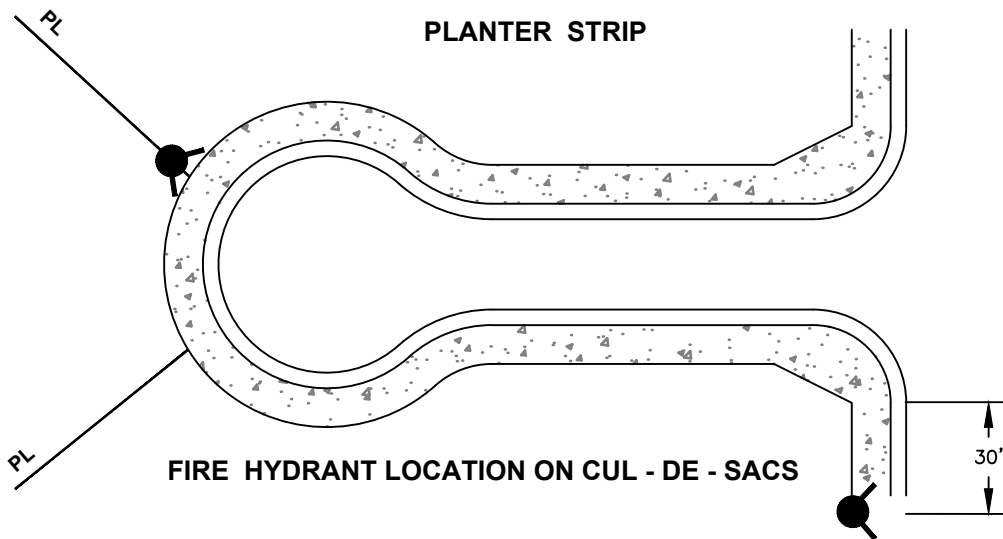
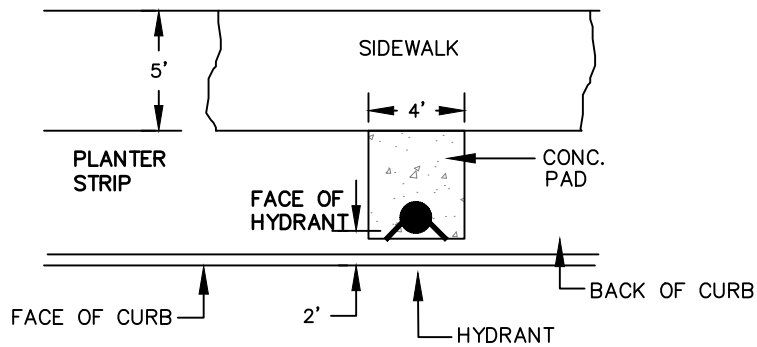
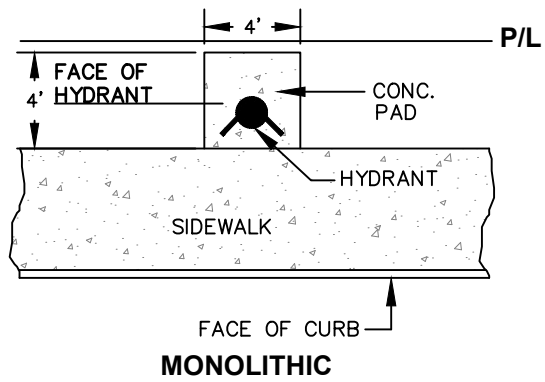
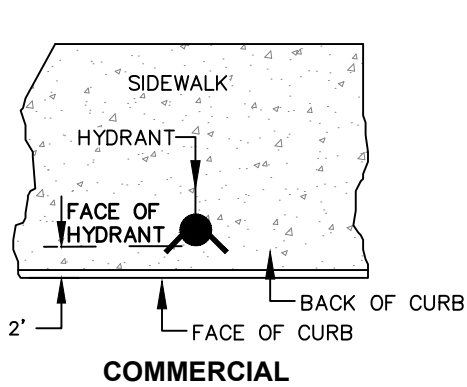
No	Revised	Date

CITY OF LATHROP DEPARTMENT OF PUBLIC WORKS BACTERIOLOGICAL SAMPLING STATION LAYOUT



STANDARD DETAIL

Date: **JULY 2024**
Drawing No: **W-18**



NOT TO SCALE

Approved by:

City of Lathrop
City Engineer

No	Revised	Date

CITY OF LATHROP
DEPARTMENT OF PUBLIC WORKS

**FIRE HYDRANT
LOCATIONS**

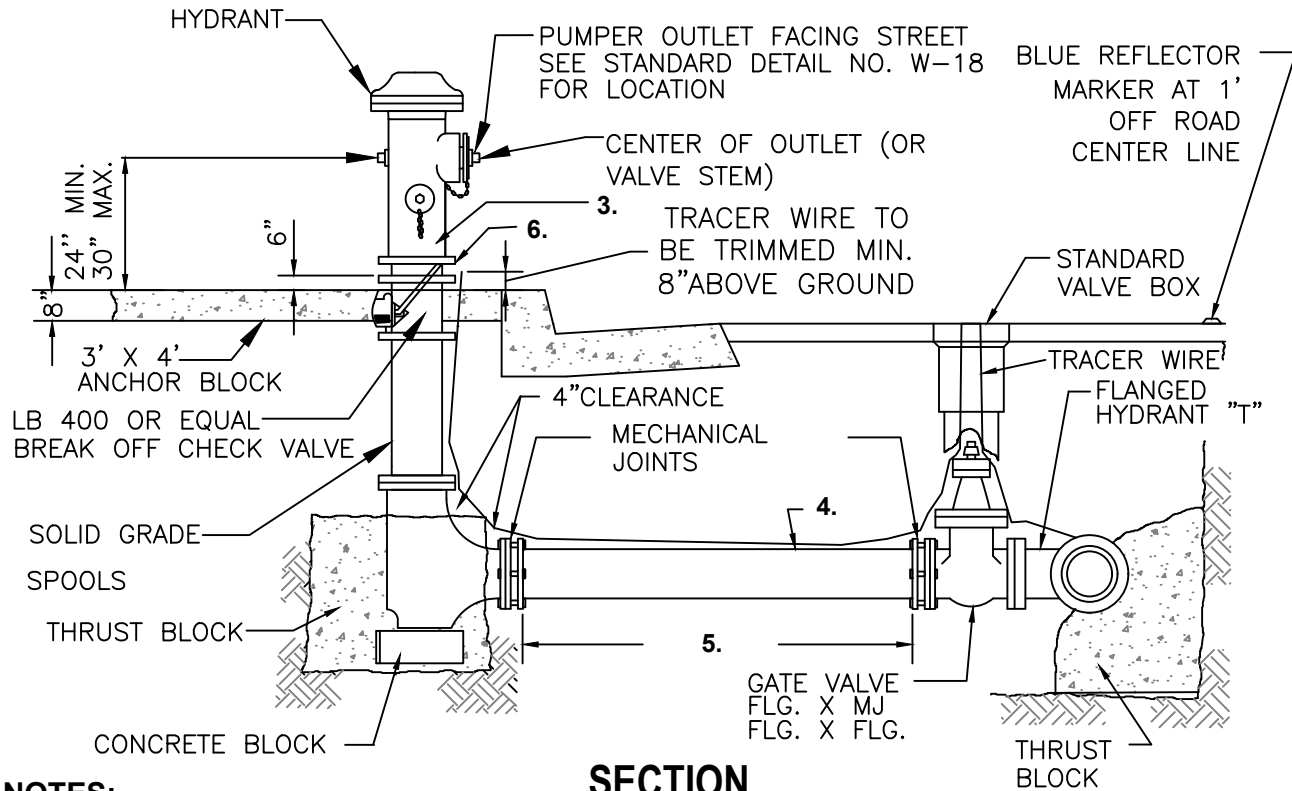


**STANDARD
DETAIL**

Date: **JULY 2024**

Drawing No:

W-19



NOTES:

1. Hydrant model to be :

Residential – Clow 850 or equal with 1 – 4 1/2” and 1 – 2 1/2” outlet.
 Commercial/Industrial – Clow 960 or equiv. 1 – 4 1/2” and 2 – 2 1/2” outlet.

2. Hydrants shall be clean and free of concrete.
3. Hydrant shall be painted OSHA Safety Yellow (Hy-Lux Industrial Coating or approved equal) and shall be numbered in accordance with City of Lathrop Standards (Black Stencil Lettering min 2” high, upstream of face of hydrant). Hydrants connected to RW shall be painted Pantone 512 or approved equal. Private hydrants shall be painted red.
4. 6” dia. PVC pipe (AWWA C-900 with CIP equivalent o.d.) or DIP
5. Fire hydrant laterals greater than 100 LF and shall have a second gate valve installed near the fire hydrant as approved by the fire district.
6. Break away spool with galvanized 304 or stainless steel spool bolts to be on bottom at connection to hydrant.
7. Expansion joints in sidewalk per standard detail R-5 and R-20.
8. All thrust blocks shall be inspected and approved at the time of construction per Standard Detail W-2.
9. Hydrants shall comply with AWWA standard.
10. All fittings and metal pipes shall be wrapped with PVC plastic using 10 mil tape.
11. Underground bolts must be stainless steel 316 and must use Never Seize or copper coat on threads.
12. Continuity test to be required before acceptance. See detail W-3.

NOT TO SCALE

Approved by:		
City of Lathrop City Engineer		
No	Revised	Date

CITY OF LATHROP
 DEPARTMENT OF PUBLIC WORKS

**FIRE HYDRANT
 ASSEMBLY**

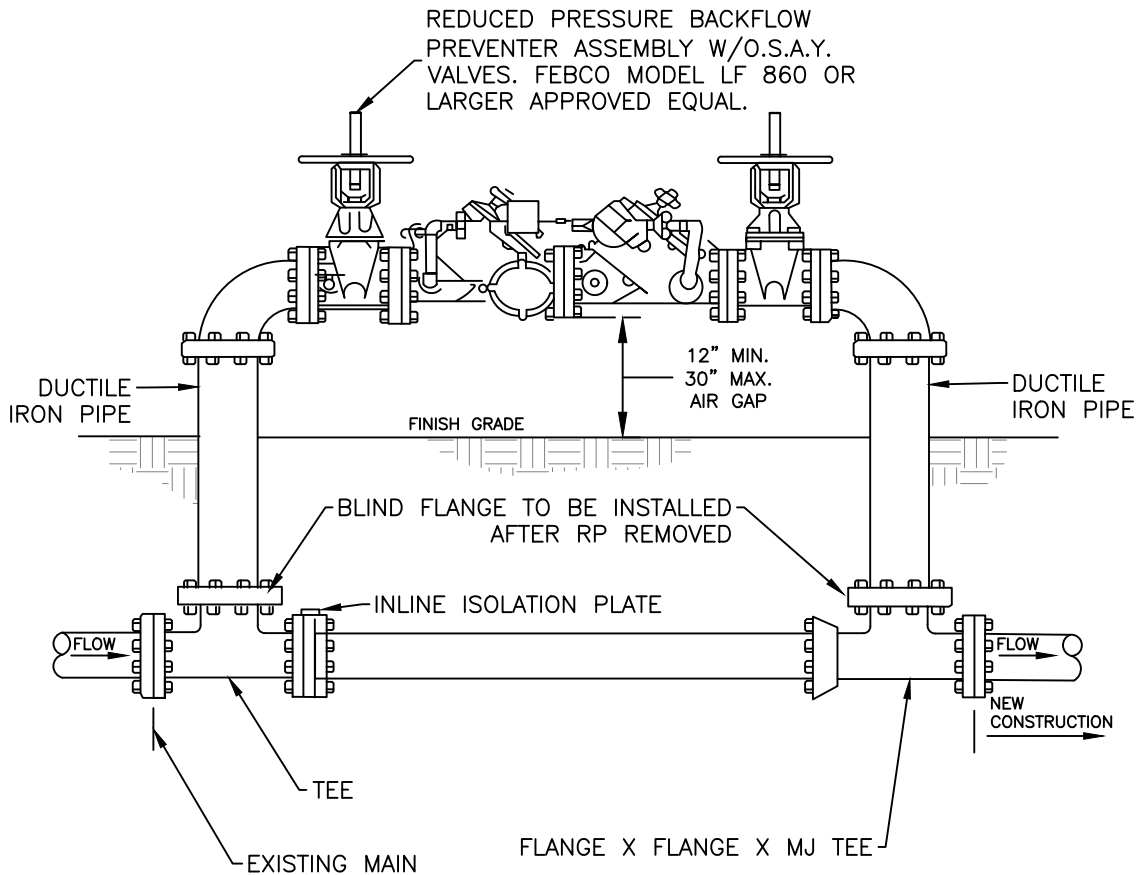


**STANDARD
 DETAIL**

Date: **JULY 2024**

Drawing No:

W-20



NOTES:

1. Installed device shall be FEBCO Model LF 860 large diameter or equal.
2. Any deviation from the installation shown above must receive prior approval
3. All piping and appurtenances shall be AWWA rated 200 psi for fire sprinkler systems.
4. All assemblies must be tested by a certified backflow prevention tester. Reports shall be sent to backflows@ci.lathrop.ca.us
5. All underground ductile iron or steel pipe must be wrapped with PVC plastic using 10 Mil. tape.
6. All flange bolts shall be never seize stainless steel 316 with never seize
7. T-bolts shall be coated with mastic.

NOT TO SCALE

Approved by:		
City of Lathrop City Engineer		
No	Revised	Date

CITY OF LATHROP
 DEPARTMENT OF PUBLIC WORKS
TEMPORARY BACKFLOW PREVENTION ASSEMBLY FOR 3" OR LARGER



**STANDARD
 DETAIL**

Date: **JULY 2024**

Drawing No:

W-21