PURISSIMA HILLS EST. 1955 WATER DISTRICT

LOS ALTOS HILLS, CALIFORNIA

STANDARD DRAWINGS

OCTOBER 2023

VERSION 14

STANDARD DRAWINGS

PURISSIMA HILLS WATER DISTRICT
STANDARD DRAWINGS
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STANDARD DRAWINGS
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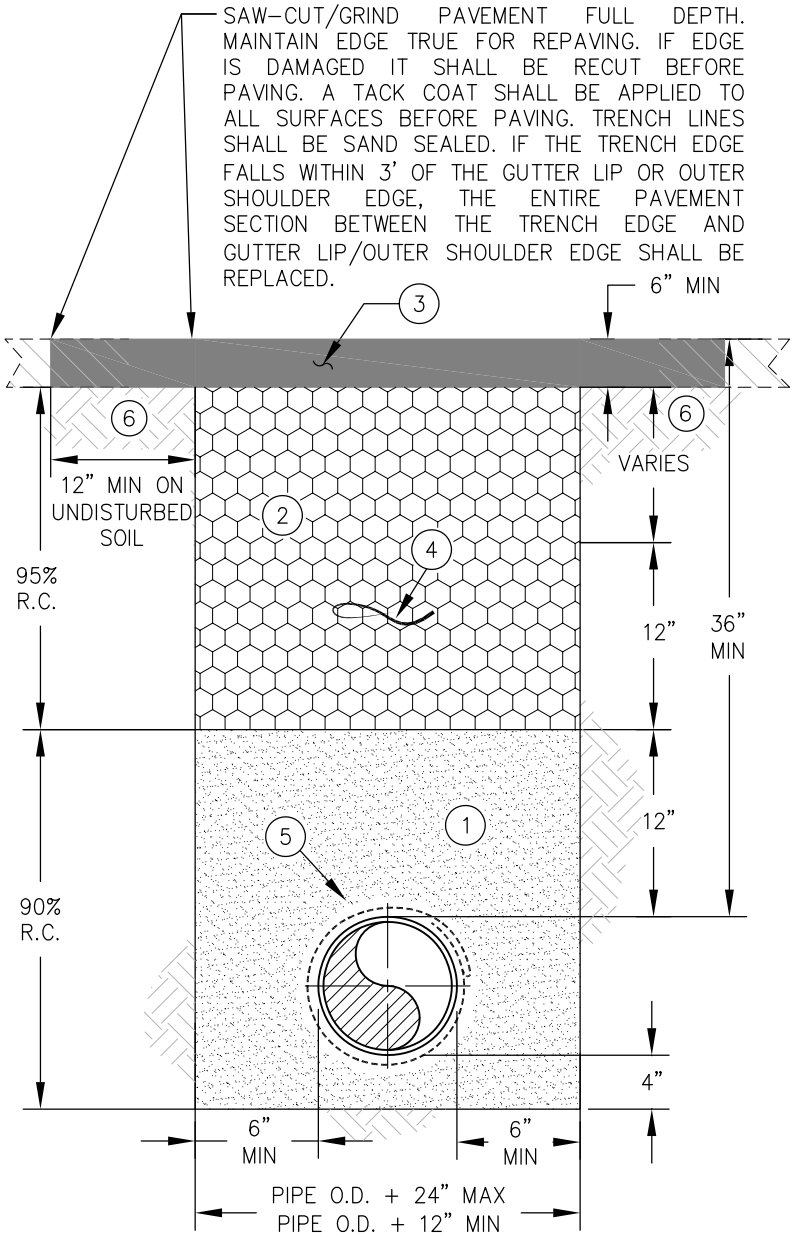

LEGEND

(1) EMBEDMENT ZONE (QUARRY FINES) SHALL BE PLACED IN THREE LIFTS:

LIFT ONE – SHALL CONSIST OF PLACING AND COMPACTING 4" OF MATERIAL PRIOR TO THE PLACEMENT OF THE PIPE. THE PIPE SHALL THEN BE PLACED PRIOR LIFT TWO.

LIFT TWO – SHALL CONSIST OF PLACING MATERIAL AROUND THE PIPE TO THE TOP OF THE PIPE. THE TOP OF THE PIPE SHALL BE VISIBLE PRIOR COMPACTION OF THE SECOND LIFT. COMPACTION AROUND THE PIPE SHALL BE PERFORMED BY PNEUMATIC MEANS SUCH AS A "POWDER PUFF." NO OTHER MEANS OF COMPACTION SHALL BE ALLOWED WITHOUT PRIOR APPROVAL BY THE DISTRICT. CONTRACTOR SHALL USE EXTREME CARE TO AVOID HITTING THE PIPE, AND POLYETHYLENE WRAPPING WHILE COMPACTING.

LIFT THREE – SHALL CONSIST OF PLACING AND COMPACTING 12" OF MATERIAL ABOVE THE PIPE.

(2) UPPER TRENCH ZONE (CLASS 2 AGGREGATE BASE) SHALL BE PLACED AND COMPACTED IN 12" LIFTS.

(3) ASPHALT CONCRETE SHALL BE REPLACED IN KIND BUT NO LESS THAN 6" IN DEPTH. PAVED DRIVEWAYS AND ROAD SHOULDERS SHALL BE 3" MIN. THICKNESS.

(4) MARKER TAPE TO BE INSTALLED 18"–24" ABOVE WATER MAIN.

(5) ENCASE DIP WITH V-BIO ENHANCED POLYETHYLENE ENCASEMENT.

(6) A SECOND OPERATION IS REQUIRED PRIOR TO FINAL PAVING TO ACHIEVE THE "T" CUT SECTION. SAW CUTTING/GRINDING A WIDER TRENCH LINE DURING INITIAL TRENCH EXCAVATION TO ACHIEVE A "T" CUT SECTION IS NOT PERMITTED.

NOTES

1. REPLACE EXISTING TRACER WIRE IF DAMAGED DURING TRENCHING OPERATION.
2. IF WATER IS ENCOUNTERED IN THE TRENCH OR THE DISTRICT INSPECTOR DETERMINES THE SUBGRADE BELOW THE PIPE EMBEDMENT ZONE IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE AN ADDITIONAL 12" AND INSTALL 3/4" CRUSHED DRAIN ROCK.

TRENCH SECTION – TYPE A PAVED SURFACES

6/20	5/06
7/13	8/02
2/10	10/01
1/07	7/01
11/06	3/96
REV.	7/89

PURISSIMA HILLS EST. 1955 WATER DISTRICT

APPROVED BY:

PHIL WITT, GENERAL MANAGER

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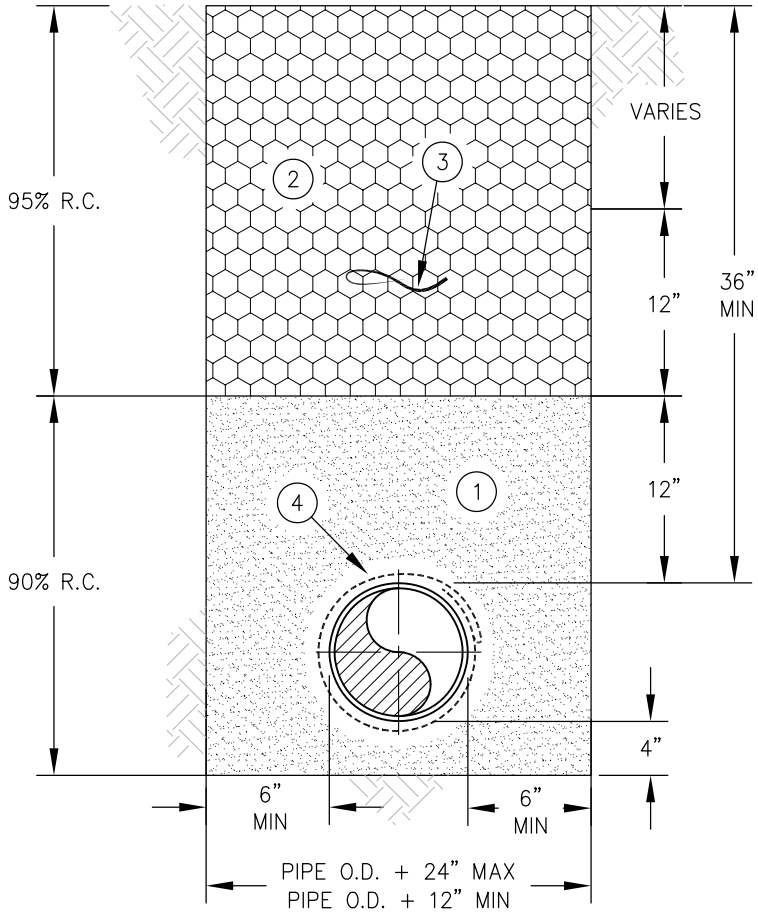
STD. NO.

PH– 01



LEGEND

(1) EMBEDMENT ZONE (QUARRY FINES) SHALL BE CONSTRUCTED IN THREE LIFTS:

LIFT ONE – SHALL CONSIST OF PLACING AND COMPACTING 4" OF MATERIAL PRIOR TO THE PLACEMENT OF THE PIPE. THE PIPE SHALL THEN BE PLACED PRIOR LIFT TWO.

LIFT TWO – SHALL CONSIST OF PLACING MATERIAL AROUND THE PIPE TO THE TOP OF THE PIPE. THE TOP OF THE PIPE SHALL BE VISIBLE PRIOR COMPACTION OF THE SECOND LIFT. COMPACTION AROUND THE PIPE SHALL BE PERFORMED BY PNEUMATIC MEANS SUCH AS A "POWDER PUFF." NO OTHER MEANS OF COMPACTION SHALL BE ALLOWED WITHOUT PRIOR APPROVAL BY THE DISTRICT. CONTRACTOR SHALL USE EXTREME CARE TO AVOID HITTING THE PIPE AND POLYETHYLENE WRAPPING WHILE COMPACTING.

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(3) MARKER TAPE TO BE INSTALLED 18"–24" ABOVE WATER MAIN.

(4) ENCASE DIP WITH V-BIO ENHANCED POLYETHYLENE ENCASEMENT.

NOTES

1. REPLACE EXISTING TRACER WIRE IF DAMAGED DURING TRENCHING OPERATION.
2. IF WATER IS ENCOUNTERED IN THE TRENCH OR THE DISTRICT INSPECTOR DETERMINES THE SUBGRADE BELOW THE PIPE EMBEDMENT ZONE IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE AN ADDITIONAL 12" AND INSTALL 3/4" CRUSHED DRAIN ROCK.
3. TOP 6" OF THE TRENCHES, WHICH ARE LOCATED WITHIN THE TOWN OF LOS ALTOS HILLS PATHWAY, SHALL BE PLACED PER TOWN PATHWAY STANDARD DETAILS.

TRENCH SECTION – TYPE B
GRAVELED AREAS / ROAD SHOULDERS
TOWN OF LOS ALTOS HILLS PATHWAY

6/20
7/13
3/08
1/07
5/06
0/01
7/01
3/96
REV. 7/89

PURISSIMA HILLS EST. 1955 WATER DISTRICT

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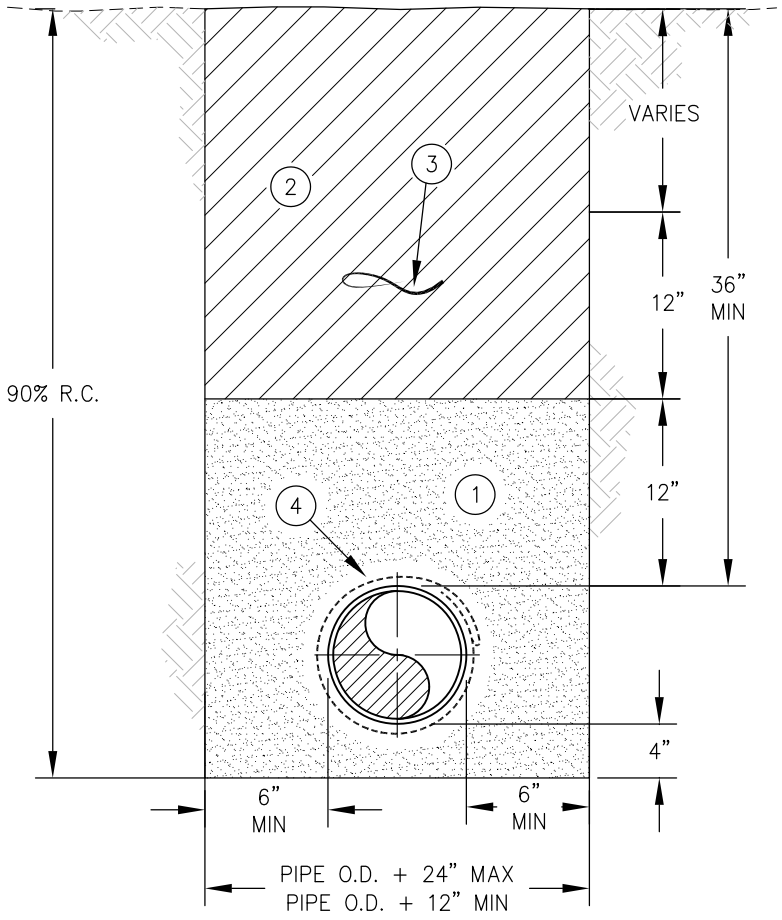
STD. NO.

PH-02



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LIFT THREE – SHALL CONSIST OF PLACING AND COMPACTING 12" OF MATERIAL ABOVE THE PIPE.

(2) UPPER TRENCH ZONE (NATIVE MATERIAL) SHALL BE PLACED AND COMPACTED IN 12" LIFTS.

(3) MARKER TAPE TO BE INSTALLED 18"–24" ABOVE WATER MAIN.

(4) ENCASE DIP WITH V-BIO ENHANCED POLYETHYLENE ENCASEMENT.

NOTES

1. REPLACE EXISTING TRACER WIRE IF DAMAGED DURING TRENCHING OPERATION.
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TRENCH SECTION – TYPE C
UNIMPROVED AREA

REV. 6/20 7/13 3/08 1/07 5/06 10/01 7/01 3/96 7/89

PURISSIMA HILLS EST. 1955 WATER DISTRICT

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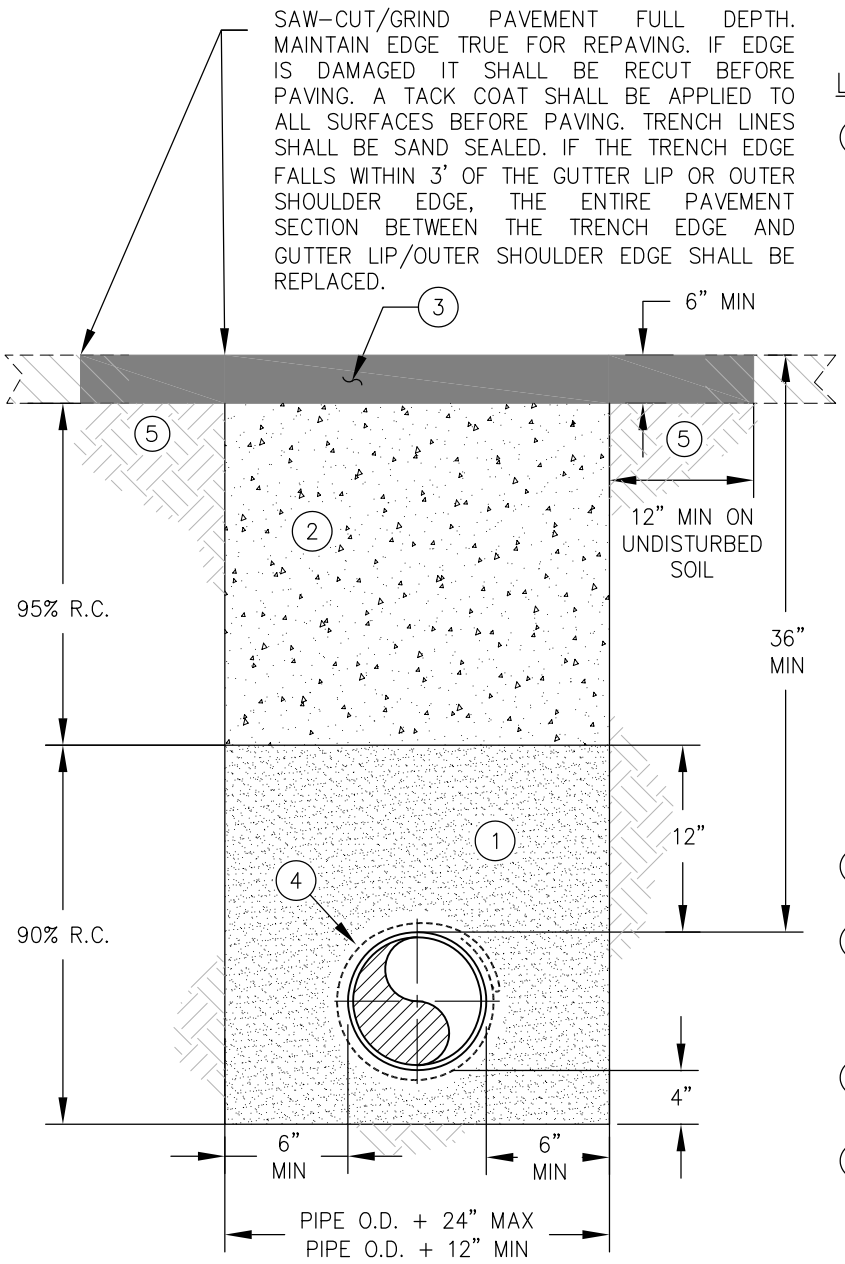
PH-03



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LIFT THREE – SHALL CONSIST OF PLACING AND COMPACTING 12" OF MATERIAL ABOVE THE PIPE.

(2) UPPER TRENCH ZONE (CONTROLLED DENSITY FILL).

(3) ASPHALT CONCRETE SHALL BE REPLACED IN KIND BUT NO LESS THAN 6" IN DEPTH. PAVED DRIVEWAYS AND ROAD SHOULDERS SHALL BE 3" MIN. THICKNESS.

(4) ENCASE DIP WITH V-BIO ENHANCED POLYETHYLENE ENCASEMENT.

(5) A SECOND OPERATION IS REQUIRED PRIOR TO FINAL PAVING TO ACHIEVE THE "T" CUT SECTION. SAW CUTTING/GRINDING A WIDER TRENCH LINE DURING INITIAL TRENCH EXCAVATION TO ACHIEVE A "T" CUT SECTION IS NOT PERMITTED.

NOTES

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2. IF WATER IS ENCOUNTERED IN THE TRENCH OR THE DISTRICT INSPECTOR DETERMINES THE SUBGRADE BELOW THE PIPE EMBEDMENT ZONE IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE AN ADDITIONAL 12" AND INSTALL 3/4" CRUSHED DRAIN ROCK.

TRENCH SECTION – TYPE D CONTROLLED DENSITY FILL

REV. 6/20 7/13 2/10

PURISSIMA HILLS EST. 1955 WATER DISTRICT

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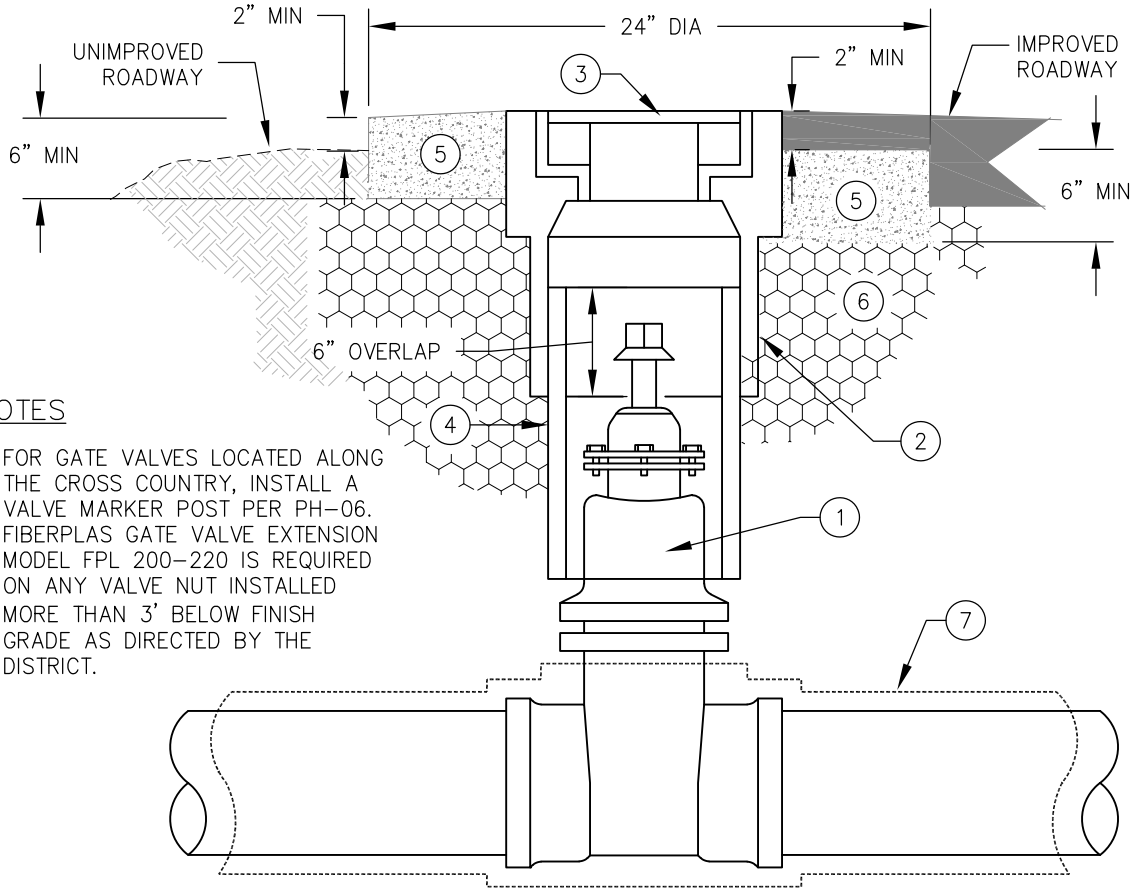
STD. NO. PH-04



NOTES

1. FOR GATE VALVES LOCATED ALONG THE CROSS COUNTRY, INSTALL A VALVE MARKER POST PER PH–06.
2. FIBERPLAS GATE VALVE EXTENSION MODEL FPL 200–220 IS REQUIRED ON ANY VALVE NUT INSTALLED MORE THAN 3' BELOW FINISH GRADE AS DIRECTED BY THE DISTRICT.

LEGEND

(1) GATE VALVE, MUELLER NO. A–2362 WITH TYPE 316 SS BOLTS AND NUTS, AND 2" SQUARE OPERATION NUT. VALVE STEM SHALL BE BRONZE; EPDM DISC AND O–RINGS; MACHINED RELEASE GROOVE BELOW OPERATING NUT; AND STUFFING BOX ALIGNED WITH THE DIRECTION OF THE PIPE. IF COATING ON GATE VALVE IS DAMAGED DURING THE INSTALLATION, IT SHOULD BE REPAIRED USING MUELLER EPOXY KIT (RED) PN 280087. VALVE SHALL BE SET PLUMB.

(2) TRAFFIC VALVE BOX, CHRISTY CONCRETE NO. G05T BOX. VALVE BOX SHALL BE PROJECTED 2" ABOVE GRADE IN UNIMPROVED/NON–TRAFFIC AREAS, EXPECT IN OWN LOS ALTOS HILLS PATHWAY.

(3) CAST IRON TRAFFIC COVER INSCRIBED "WATER", CHRISTY CONCRETE NO. G05CT.

(4) SDR 35 PVC PIPE – 8" MIN DIA.

(5) 2,000 PSI HIGH EARLY STRENGTH CONCRETE. PLACE ASPHALT ON TOP OF CONCRETE COLLAR, SAME DAY.

(6) TRENCH BACKFILL PER PH–01 THRU PH–04

(7) ENCASE DIP WITH V–BIO ENHANCED POLYETHYLENE ENCASEMENT. WRAP EXCESS FILM WITH 10–MIL PIPE TAPE.

GATE VALVE ASSEMBLY

	6/20	11/21
	1/07	7/13
	10/01	5/06
	4/96	7/01
REV.	2/81	7/89

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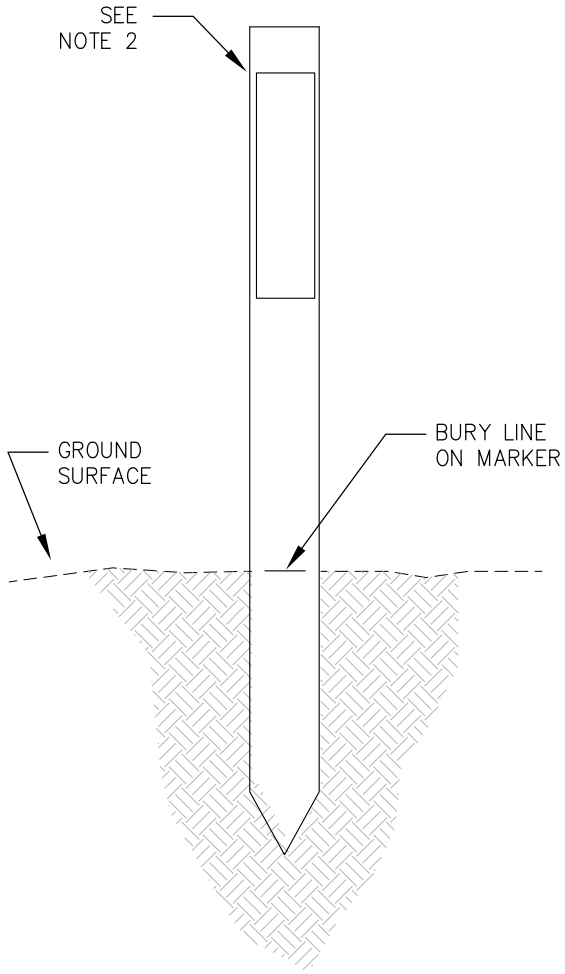
STD. NO.

PH–05



NOTES:

1. THE MARKER POST SHALL BE 4" HYBRID 3-RAIL 72" POST, MANUFACTURER BY RHINO MARKING SYSTEM. THE COLOR OF THE POST SHALL BE BLUE.
2. STANDARD WARNING LEGENDS GD-1332K FOR "WATER PIPELINE" AND GD-1333K FOR "WATER VALVE".
3. MARKER POST TO BE LOCATED IN THE FIELD BY THE DISTRICT.

WATER VALVE/WATER MAIN MARKER POST

6/20
6/08
5/06
1/01
7/01
3/96
7/89
REV. 10/76

PURISSIMA HILLS EST. 1955 WATER DISTRICT

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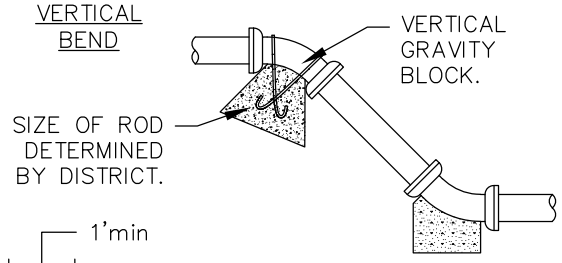
STD. NO.

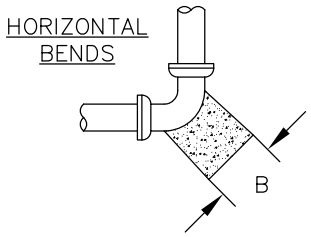
PH-06

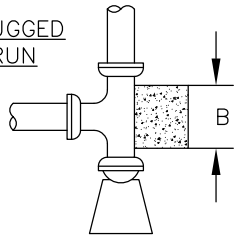
VOLUME OF GRAVITY BLOCK IN CUBIC YARDS

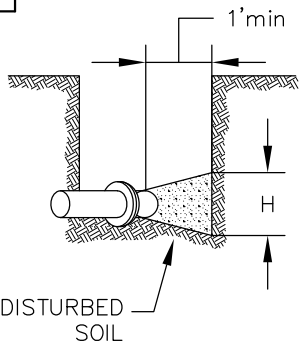
VERTICAL FITTING	DIAMETER OF PIPE					
	6"	8"	10"	12"	14"	16"
90°	1.0	2.0	3.0	4.0	5.0	6.0
45°	0.5	1.0	1.5	2.0	2.5	3.0

VERTICAL BEND

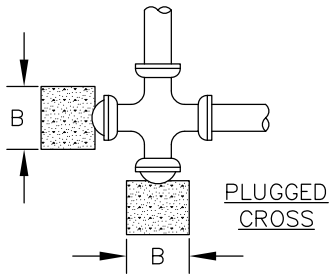


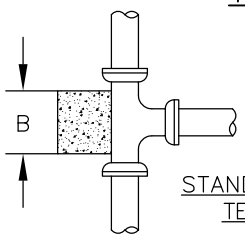


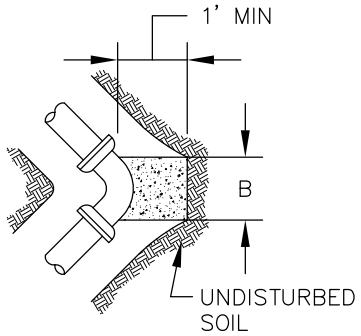




THRUST BLOCK PROFILE







THRUST BLOCK PLAN

DIMENSIONS OF THRUST BLOCKS IN FEET

HORIZONTAL FITTING	DIAMETER OF PIPE											
	6"		8"		10"		12"		14"		16"	
	B	H	B	H	B	H	B	H	B	H	B	H
90°	1'-9"	1'-9"	2'-3"	2'-3"	2'-9"	2'-9"	3'-3"	3'-3"	3'-9"	3'-9"	4'-3"	4'-3"
45°	1'-0"	1'-0"	1'-6"	1'-6"	2'-0"	2'-0"	2'-6"	2'-6"	3'-0"	3'-0"	3'-6"	3'-6"
PLUG/TEE	1'-3"	1'-3"	1'-9"	1'-9"	2'-3"	2'-3"	2'-9"	2'-9"	3'-3"	3'-3"	3'-9"	3'-9"

NOTES

1. THRUST BLOCK DIMENSIONS SHALL BE DOUBLED IF USED ON NON-RESTRAINED CONNECTIONS.
2. USE 2,000 PSI HIGH EARLY STRENGTH CONCRETE.
3. ALL THRUST BLOCKS AND GRAVITY BLOCKS SHALL BEAR AGAINST UNDISTURBED EARTH.
4. ENCASE DIP IN V-BIO ENHANCED POLYETHYLENE ENCASEMENT.
5. MAINTAIN A MIN CLEARANCE OF 2" BETWEEN THE THRUST BLOCK REINFORCING STEEL AND PIPE.
6. CONCRETE NOT TO EXTEND BEYOND THE FACE OF THE BELL.
7. THRUST BLOCK SHALL ENCOMPASS AT LEAST ONE-HALF OF THE OUTSIDE DIAMETER OF THE PIPE.
8. FLANGES, BOLTS, AND NUTS SHALL BE KEPT CLEAR OF CONCRETE.
9. DIMENSIONS ABOVE INCLUDE USE OF MECHANICAL RESTRAINTS ON PIPE.
10. IF GROUNDWATER IS PRESENT, THRUST BLOCK DIMENSIONS SHALL BE DETERMINED BY THE DISTRICT.

THRUST BLOCK DETAILS

6/20
7/13
2/10
5/08
1/07
5/06
10/01
4/97
3/96
7/89
REV. 10/76

PURISSIMA HILLS EST. 1955 WATER DISTRICT

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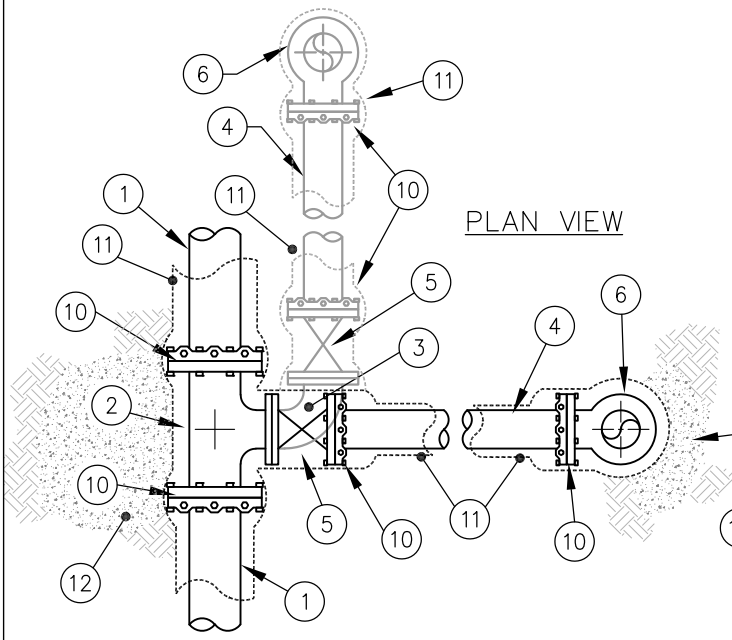
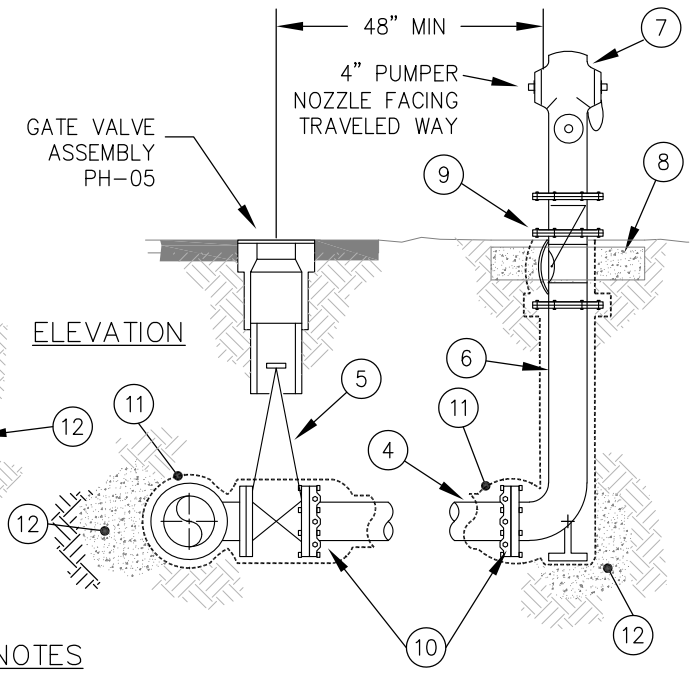
STD. NO.

PH-07





LEGEND

1. WATER MAIN, DIP
2. TEE (TYPE DETERMINED BY DISTRICT) OR TAPPING SLEEVE, JCM INDUSTRIES 6432 AII 316 STAINLESS STEEL OR AS DIRECTED BY THE DISTRICT
3. 6" 90° BEND, FLXFL.
4. 6" DIP.
5. 6" GATE VALVE, MUELLER A-2362, FLXMJ (RESTRAINED)
6. 6" BURY, FLXMJ (RESTRAINED)
7. HYDRANT, CLOW 960 (WET BARREL) WITH ONE 4" PUMPER AND TWO 2-1/2" OUTLETS, ALL NS THREADS.
8. 24" DIA, 12" THICK, 2,000 PSI CONCRETE COLLAR.
9. BREAK-OFF CHECK VALVE, CLOW VALVE MODEL LB400 (NOTE THAT LENGTH OF UNIT IS 20"). INSTALL CONCRETE COLLAR ⑧ TO ALLOW REMOVAL OF TYPE 316 STAINLESS STEEL BOLTS SECURING BREAK-OFF RISER. NATIVE SOIL SHALL THEN BE PLACED ON TOP OF THE COLLAR TO WITHIN 1" OF THE BOTTOM OF THE BREAK-OFF RISER.
10. 6" MJ RESTRAINT, EBAA IRON, "MEGALUG" SERIES 1100
11. ENCASE DIP FIRE HYDRANT LATERAL WITH V-BIO ENHANCED POLYETHYLENE ENCASEMENT. WRAP EXCESS FILM WITH 10 MIL PIPE TAPE.
12. THRUST BLOCK PER PH-07

NOTES

1. FOR NEW DEVELOPMENTS, THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL FIRE DEPARTMENT FOR HYDRANT LOCATIONS.
2. ALL JOINTS USED IN THE HYDRANT ASSEMBLY SHALL BE RESTRAINED AND SHALL BE MECHANICAL JOINT "MEGALUG," OR FIELD LOCKS.
3. BREAK-OFF RISER SHALL BE AT LEAST 1" BUT NOT MORE THAN 4" ABOVE FINISH GRADE.
4. ALL BOLTS AND NUTS SHALL BE TYPE 316 STAINLESS STEEL EXCLUDING PRE-MANUFACTURED BREAK-OFF CHECK VALVE.
5. INSTALL A BLUE, TWO-WAY, REFLECTIVE PAVEMENT MARKER AT EACH HYDRANT LOCATION IN ACCORDANCE WITH APPLICABLE PORTIONS OF SECTION 85 OF THE CALTRANS STANDARD SPECIFICATIONS.
6. PAINT BOTH THE TOP SURFACE OF THE FIRE HYDRANT GATE VALVE BOX AND COVER YELLOW WITH DIRECT TO METAL PAINT.
7. NEW FIRE HYDRANT ASSEMBLY SHALL BE PRESSURE TESTED AND DISINFECTED.
8. NEW FIRE HYDRANT SHALL BE PAINTED "SAFETY YELLOW". ALL METAL ABOVE THE CONCRETE COLOR SHALL ALSO BE FACTORY PAINTED "SAFETY YELLOW".

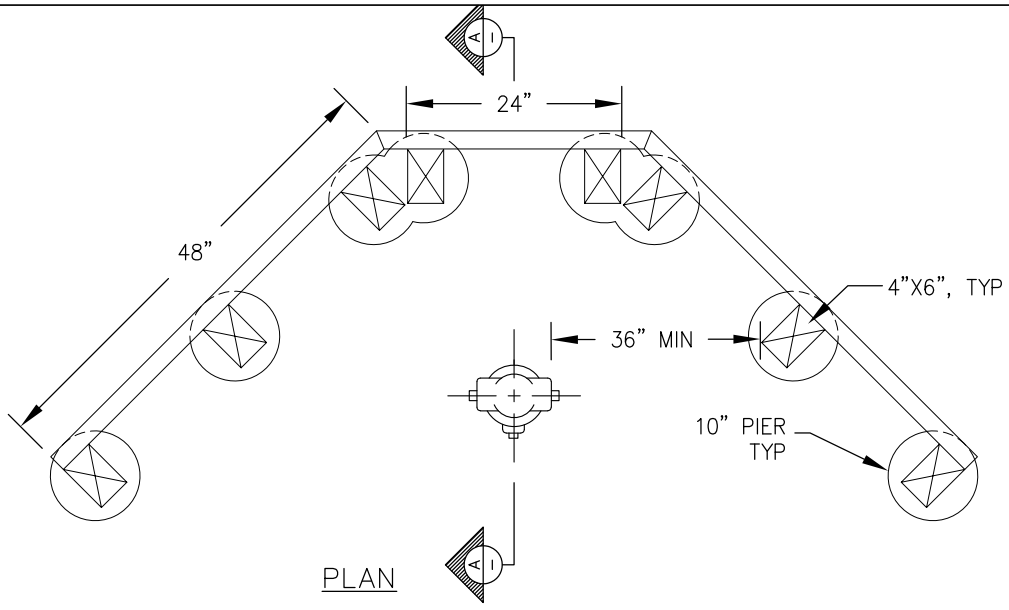
	6/20	7/13
2/10	5/08	1/07
5/06	8/02	10/01
7/01	8/00	12/98
4/97	3/96	8/95
REV.	2/81	7/89

FIRE HYDRANT ASSEMBLY

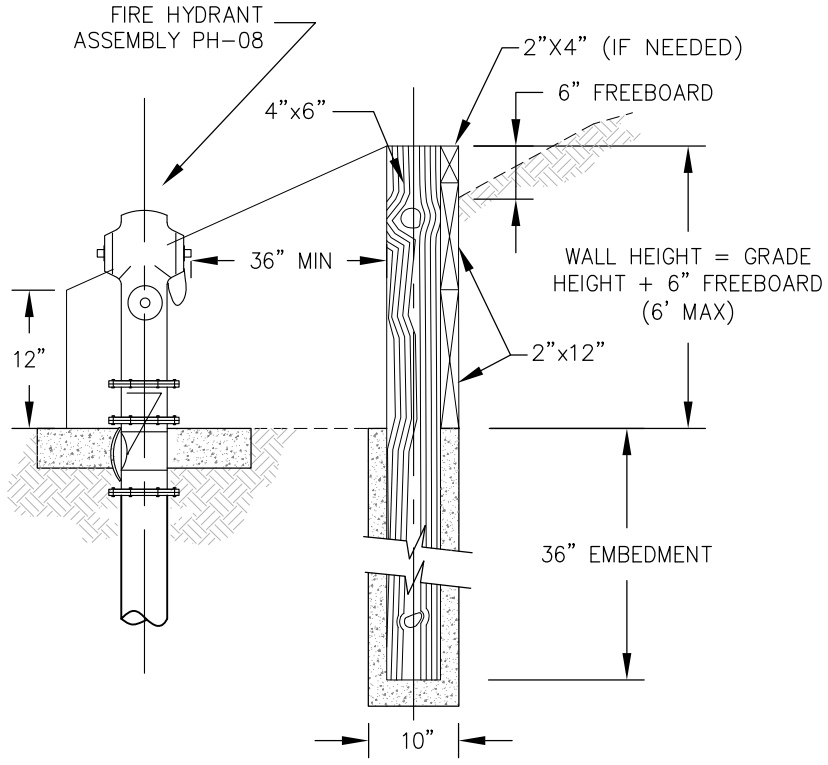
PURISSIMA HILLS EST. 1955 WATER DISTRICT

STD. NO.

PH-08



PLAN



SECTION A–A

NOTES

1. ALL LUMBER SHALL BE PRESSURE TREATED LUMBER WITH 0.40 LBS/CF RETENTION OR GREATER.
2. ALL DIMENSIONS SHOWN ARE FOR A TYPICAL RETAINING WALL. FIELD CONDITIONS MAY REQUIRE DEVIATION FROM DETAIL. CONTRACTOR SHALL VERIFY SITE CONDITIONS AND OBTAIN APPROVAL FROM THE DISTRICT BEFORE MAKING CHANGES.
3. FIRE HYDRANT RETAINING WALL SHALL BE INSTALLED 36" MIN. FROM FIRE HYDRANT ASSEMBLY OR AS DIRECTED BY THE DISTRICT.

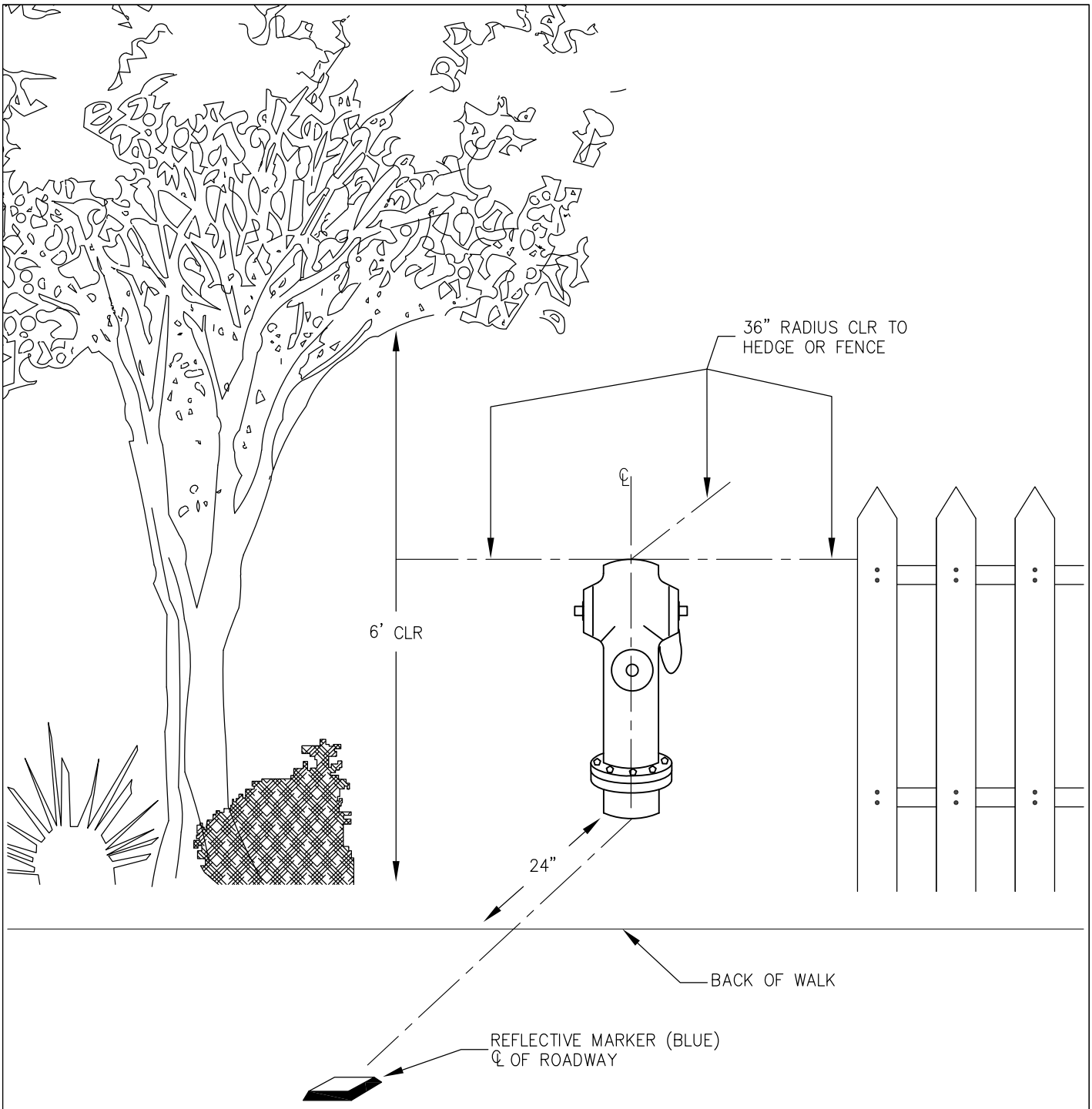
FIRE HYDRANT RETAINING WALL

10/23
6/20
7/13
2/10
5/06
REV. 8/02

PURISSIMA HILLS EST. 1955 WATER DISTRICT

STD. NO.

PH-09

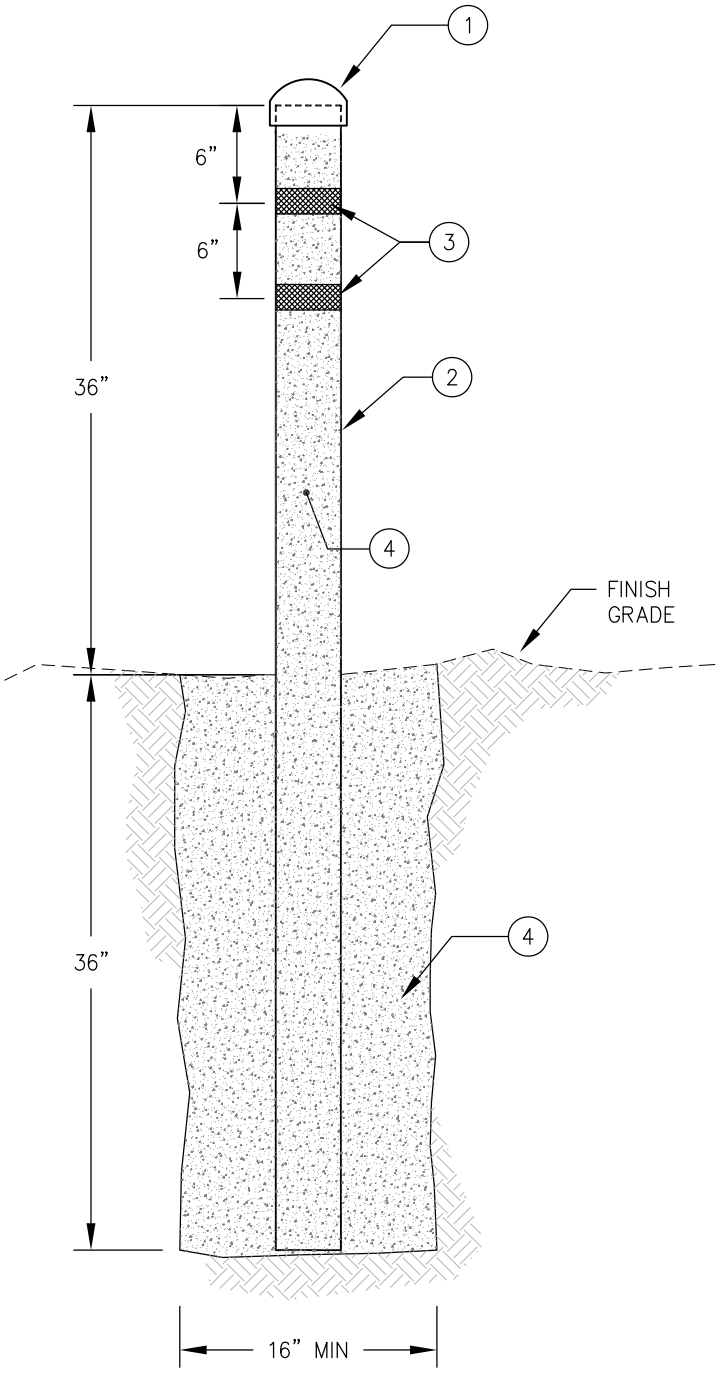


HYDRANT CLEARANCES

REV. 6/20

PURISSIMA HILLS EST. 1955
WATER DISTRICT

STD. NO.
PH– 10



LEGEND

1. 4" SCHEDULE 40 PVC CAP.
2. 4" DIA GALVANIZED STEEL PIPE FILLED WITH CLASS 2 CONCRETE. PIPE SHALL BE PAINTED SAFETY YELLOW WITH DIRECT TO METAL (DTM) HIGH PERFORMANCE INDUSTRIAL COATINGS SYSTEM (MINIMUM TWO COATS).
3. 2" YELLOW DOT–C2 REFLECTIVE TAPE
4. CLASS 2 CONCRETE

NOTES

1. BOLLARD LOCATIONS TO BE LOCATED IN THE FIELD BY THE DISTRICT.

BOLLARD

6/20
7/13
5/06
REV. 8/02

PURISSIMA HILLS EST. 1955 WATER DISTRICT

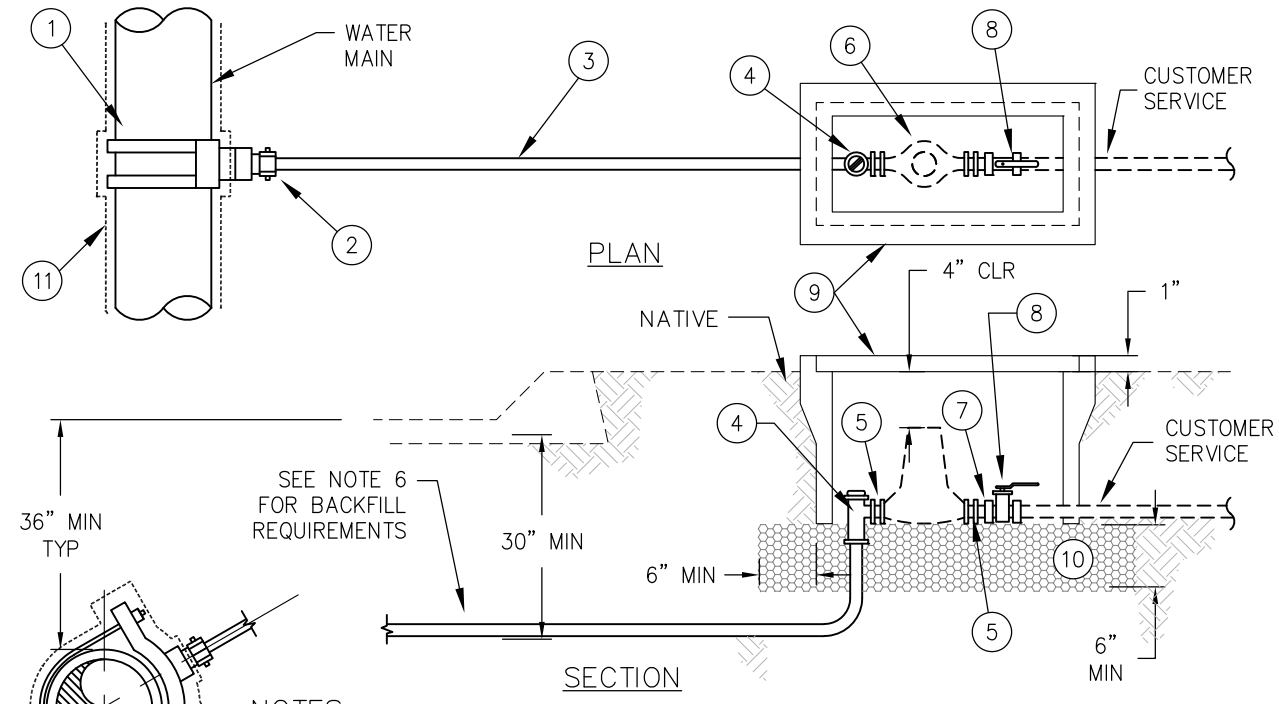
APPROVED BY:

PHIL WITT, GENERAL MANAGER

JOUBIN PAKPOUR, DISTRICT ENGINEER, RCE NO. 59155

STD. NO.

PH– 11



NOTES

1. METERS SHALL BE INSTALLED LEVEL WITH FINISH GRADE AND PERPENDICULAR TO THE CURB. NO METERS SHALL BE PLACED ON PRIVATE PROPERTY.
2. APPLICATIONS FOR SERVICES LARGER THAN 1" REQUIRE HYDRAULIC CALCULATION JUSTIFICATION AND PRIOR APPROVAL FROM THE DISTRICT.
3. USE MUELLER PACK JOINT V-15442N (FEMALE) OR V-15440N (MALE) WHEN CUSTOMER SERVICE IS PVC.
4. HOT-TAPS AND NEW CONNECTIONS SHALL BE 4' MIN FROM A BELL/JOINT OR AS DIRECTED BY THE DISTRICT.
5. SERVICE SADDLE SHALL BE 18" MIN FROM AN ADJACENT SERVICE CONNECTION.
6. EMBEDMENT MATERIAL (QUARRY FINES) SHALL BE PLACED 2" BELOW AND 6" ABOVE THE SERVICE LINE. BACKFILL AND COMPACT REMAINING SECTION PER APPLICABLE PH-01 THRU PH-04.

LEGEND

(1) DOUBLE STRAP BRONZE SERVICE SADDLE, MUELLER BR2B "CC".

(2) 1" INSULATED CORPORATION STOP, MUELLER N-35008N.

(3) 1" TYPE K SOFT COPPER PIPE. UNIONS OR COUPLINGS NOT PERMITTED.

(4) 1" COMPRESSION BALL ANGLE METER VALVE, MUELLER B-24258-3N.

(5) FORD A-XX-NL METER ADAPTERS, (BRASS), SHALL BE INSTALLED ON THE INLET AND OUTLET SIDES OF THE METER TO UPSIZE/DOWNSIZE THE METER SIZE AND LENGTH AS REQUIRED.

(6) 3/4" OR 1" METER (FURNISHED BY DISTRICT).

(7) INSULATED METER COUPLING, MUELLER H-10871N.

(8) BALL VALVE, RED-WHITE VALVE 5044AB.

(9) METER BOX, FIBRELYTE NO. FL30T BOX AND COVER. H/20 TRAFFIC RATED COVER SHALL BE PROVIDED IN TRAFFIC AREAS AND WHERE DIRECTED BY THE DISTRICT. COVERS SHALL HAVE A PROBE HOLE MADE FOR BADGER BEACON ORION RADIO READERS.

(10) QUARRY FINES SHALL BE MECHANICALLY COMPACTED TO 90%.

(11) ENCASE DIP WITH V-BIO ENHANCED POLYETHYLENE ENCASEMENT.

6/20
7/13
2/10
3/07
5/06
8/02
11/01
7/01
3/00
4/96
REV. 7/89

1" SERVICE CONNECTION

PURISSIMA HILLS EST. 1955 WATER DISTRICT

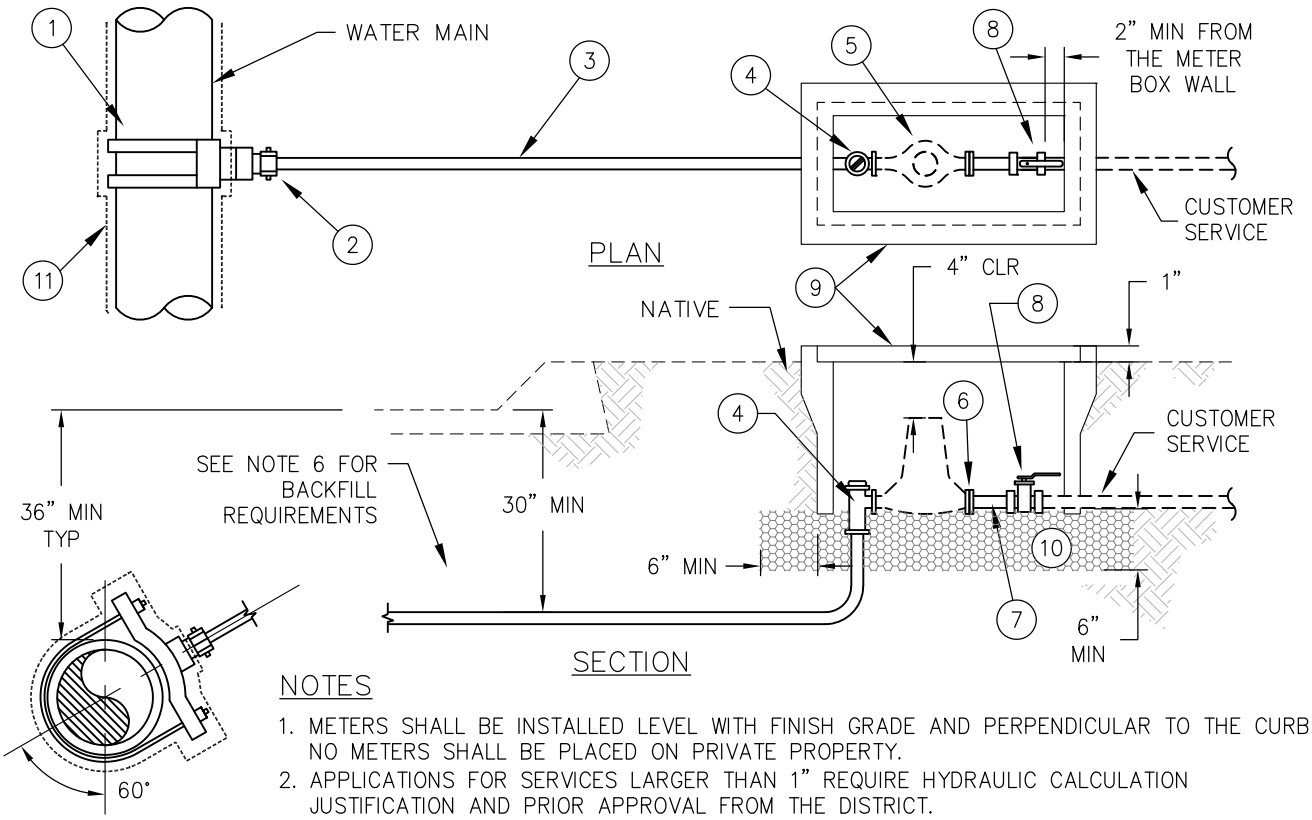
APPROVED BY:

PHIL WITT, GENERAL MANAGER

JOUBIN PAKPOUR, DISTRICT ENGINEER, RCE NO. 59155

STD. NO.

PH- 12



NOTES

1. METERS SHALL BE INSTALLED LEVEL WITH FINISH GRADE AND PERPENDICULAR TO THE CURB. NO METERS SHALL BE PLACED ON PRIVATE PROPERTY.
2. APPLICATIONS FOR SERVICES LARGER THAN 1" REQUIRE HYDRAULIC CALCULATION JUSTIFICATION AND PRIOR APPROVAL FROM THE DISTRICT.
3. USE MUELLER PACK JOINT V-15442N (FEMALE) OR V-15440N (MALE) WHEN CUSTOMER SERVICE IS PVC.
4. HOT-TAPS AND NEW CONNECTIONS SHALL BE 4' MIN FROM A BELL/JOINT OR AS DIRECTED BY THE DISTRICT.
5. SERVICE SADDLE SHALL BE 18" MIN FROM AN ADJACENT SERVICE CONNECTION.
6. EMBEDMENT MATERIAL (QUARRY FINES) SHALL BE PLACED 2" BELOW AND 6" ABOVE THE SERVICE LINE. BACKFILL AND COMPACT REMAINING SECTION PER APPLICABLE PH-01 THRU PH-04

LEGEND

(1) DOUBLE STRAP BRONZE SERVICE SADDLE, MUELLER BR2B "CC".

(2) 2" INSULATED CORPORATION STOP, MUELLER N-35008N.

(3) 2" TYPE K SOFT COPPER PIPE. UNIONS OR COUPLINGS NOT PERMITTED.

(4) 2" COMPRESSION BALL ANGLE METER VALVE, MUELLER B-24276-3N.

(5) 1-1/2" OR 2" METER (FURNISHED BY DISTRICT).

(6) 1-1/2" OR 2" BRASS METER FLANGE (LOW LEAD).

(7) 1-1/2" OR 2" BRASS NIPPLE (LOW LEAD).

(8) BALL VALVE, RED WHITE VALVE 5044AB.

(9) METER BOX, FIBRELYTE NO. FL36T BOX AND COVER. H/20 TRAFFIC RATED COVER, SHALL BE PROVIDED IN TRAFFIC AREAS AND WHERE DIRECTED BY THE DISTRICT. COVERS SHALL HAVE A PROBE HOLE MADE FOR BADGER BEACON WITH ORION RADIO READERS.

(10) QUARRY FINES SHALL BE MECHANICALLY COMPACTED TO 90%.

(11) ENCASE DIP WITH V-BIO ENHANCED POLYETHYLENE ENCASEMENT.

2" SERVICE CONNECTION WITH 1-1/2" OR 2" METER

10/23
6/20
7/13
2/10
6/08
3/07
REV. 5/06

PURISSIMA HILLS EST. 1955 WATER DISTRICT

APPROVED BY:

PHIL WITT, GENERAL MANAGER

JOUBIN PAKPOUR, DISTRICT ENGINEER, RCE NO. 59155

STD. NO.

PH- 13

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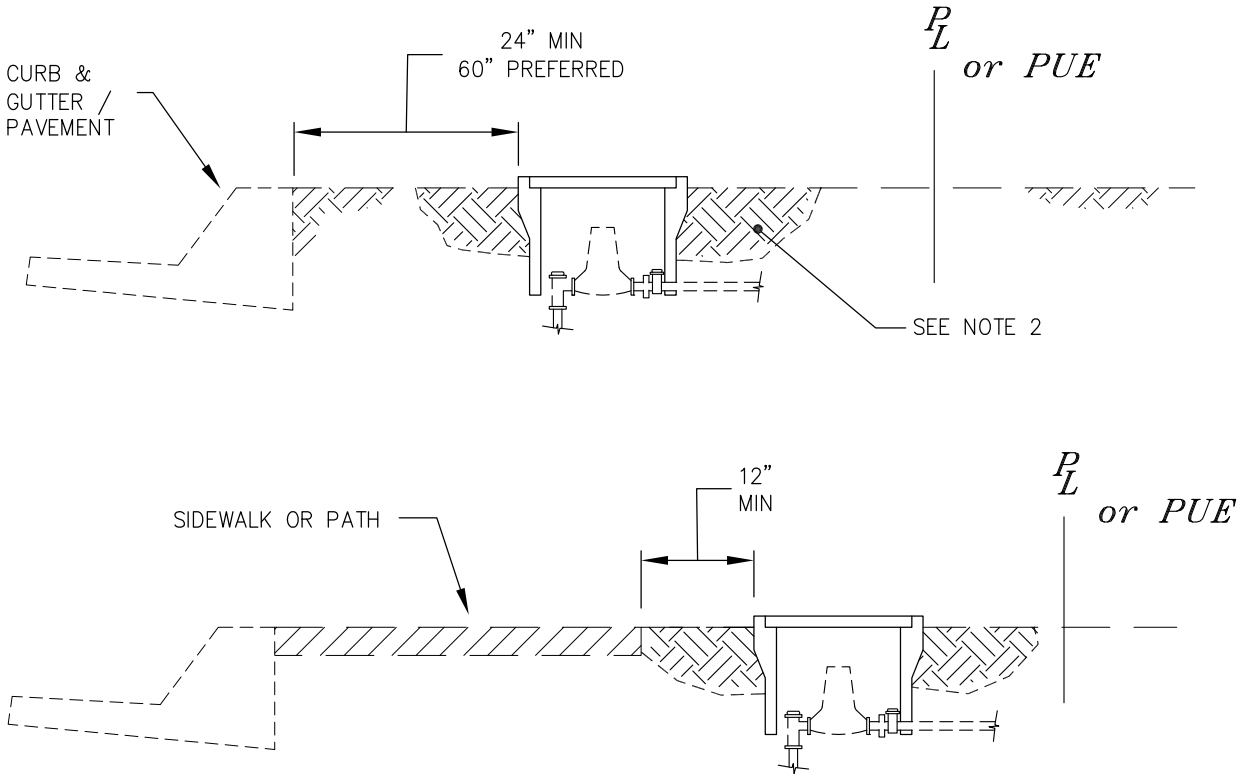


NOTES

1. METER BOXES SHALL BE SET PARALLEL TO THE SERVICE LINE FOLLOWING THE CONTOUR OF EXISTING GROUND, UNLESS A RETAINING WALL IS REQUIRED.
2. AFTER THE BOX IS SET AND ALIGNED WITH THE METER, THE CONTRACTOR MAY USE NATIVE MATERIAL OR AGGREGATE BASE TO BACKFILL AROUND THE BOX. BACKFILL WITHIN 12" PERIMETER OF THE BOX SHALL BE COMPACTED TO 90% R.C. CONTRACTOR SHALL USE CARE NOT TO DAMAGE THE METER BOX.
3. METER BOX SHALL PROJECT 1" ABOVE GRADE WHEN LOCATED IN NON-TRAFFIC AREAS AND SHALL BE FLUSH WITH PAVEMENT WHEN LOCATED IN TRAFFIC AREAS AND PATHWAYS.
4. AFTER THE BOX HAS BEEN SET AND COMPACTED, ANY DEBRIS AND DIRT INSIDE THE BOX SHALL BE REMOVED/DISPOSED OF TO THE SATISFACTION OF THE DISTRICT.

6/20
1/07
5/06
10/01
7/01
4/96
7/89
REV. 10/76

SERVICE METER LOCATION

PURISSIMA HILLS EST. 1955 WATER DISTRICT

APPROVED BY:

PHIL WITT, GENERAL MANAGER

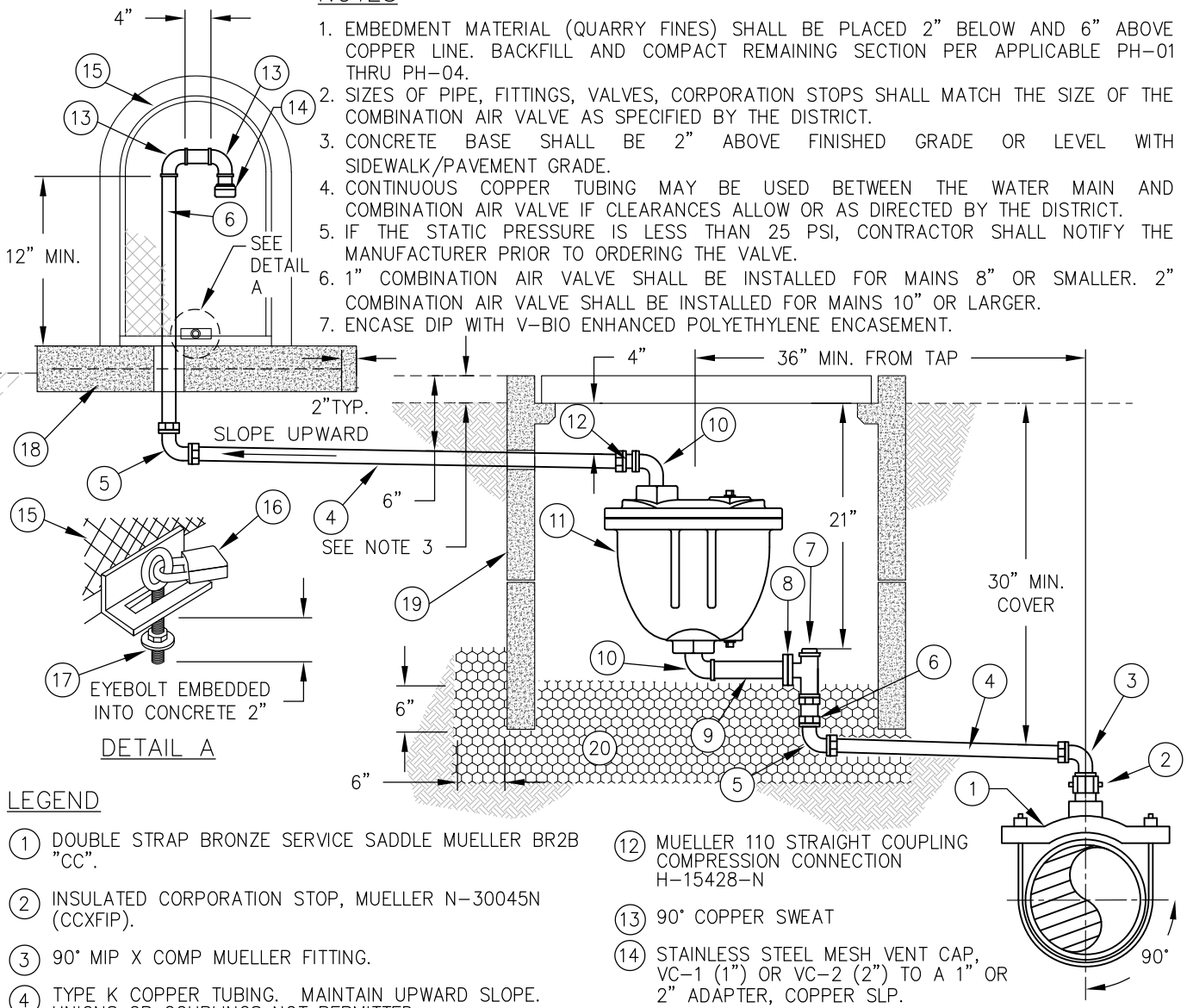
JOUBIN PAKPOUR, DISTRICT ENGINEER, RCE NO. 59155

STD. NO.

PH- 15

NOTES

1. EMBEDMENT MATERIAL (QUARRY FINES) SHALL BE PLACED 2" BELOW AND 6" ABOVE COPPER LINE. BACKFILL AND COMPACT REMAINING SECTION PER APPLICABLE PH-01 THRU PH-04.
2. SIZES OF PIPE, FITTINGS, VALVES, CORPORATION STOPS SHALL MATCH THE SIZE OF THE COMBINATION AIR VALVE AS SPECIFIED BY THE DISTRICT.
3. CONCRETE BASE SHALL BE 2" ABOVE FINISHED GRADE OR LEVEL WITH SIDEWALK/PAVEMENT GRADE.
4. CONTINUOUS COPPER TUBING MAY BE USED BETWEEN THE WATER MAIN AND COMBINATION AIR VALVE IF CLEARANCES ALLOW OR AS DIRECTED BY THE DISTRICT.
5. IF THE STATIC PRESSURE IS LESS THAN 25 PSI, CONTRACTOR SHALL NOTIFY THE MANUFACTURER PRIOR TO ORDERING THE VALVE.
6. 1" COMBINATION AIR VALVE SHALL BE INSTALLED FOR MAINS 8" OR SMALLER. 2" COMBINATION AIR VALVE SHALL BE INSTALLED FOR MAINS 10" OR LARGER.
7. ENCASE DIP WITH V-BIO ENHANCED POLYETHYLENE ENCASEMENT.



LEGEND

1. DOUBLE STRAP BRONZE SERVICE SADDLE MUELLER BR2B "CC".
2. INSULATED CORPORATION STOP, MUELLER N-30045N (CCXFIP).
3. 90° MIP X COMP MUELLER FITTING.
4. TYPE K COPPER TUBING. MAINTAIN UPWARD SLOPE. UNIONS OR COUPLINGS NOT PERMITTED.
5. 90° COMP X COMP MUELLER FITTING.
6. STRAIGHT COPPER PIPE.
7. BALL ANGLE METER VALVE, MUELLER B-24258-3N (1"), MUELLER B-24276-3N (2").
8. MUELLER H-10889N METER BUSHING (1"), BUDCO. BRASS METER FLANGE (MF) DOMESTIC (LOW LEAD) (2").
9. BRASS PIPE (LOW LEAD).
10. GALVANIZED STREET 90° BEND.
11. COMBINATION AIR VALVE, VAL-MATIC 201CDISV.2 (1"), 202CDISV.2 (2").
12. MUELLER 110 STRAIGHT COUPLING COMPRESSION CONNECTION H-15428-N
13. 90° COPPER SWEAT
14. STAINLESS STEEL MESH VENT CAP, VC-1 (1") OR VC-2 (2") TO A 1" OR 2" ADAPTER, COPPER SLP.
15. ENCLOSURE BPDI GS-1. COLOR SHALL BE GREEN.
16. PADLOCK (FURNISHED BY DISTRICT). TYP. BOTH SIDES.
17. THREADED SS 316 EYEBOLT & WASHER W/ 7/16" MIN. I.D.
18. CONCRETE BASE 30"W X 20"L X 4"H W/ STEEL WIRE MESH IN MIDDLE. BASE SHALL BE INSTALLED LEVEL.
19. VALVE BOX, FIBRELYTE NO. FL30T BOX, COVER AND EXTENSION. TRAFFIC COVER SHALL BE USED IN TRAFFIC AREAS AND WHERE DIRECTED BY DISTRICT ENGINEER.
20. BACKFILL MATERIAL PER APPLICABLE PH-01 THRU PH-04

1" OR 2" COMBINATION AIR VALVE

6/20
7/13
2/10
REV. 5/06

PURISSIMA HILLS EST. 1955 WATER DISTRICT

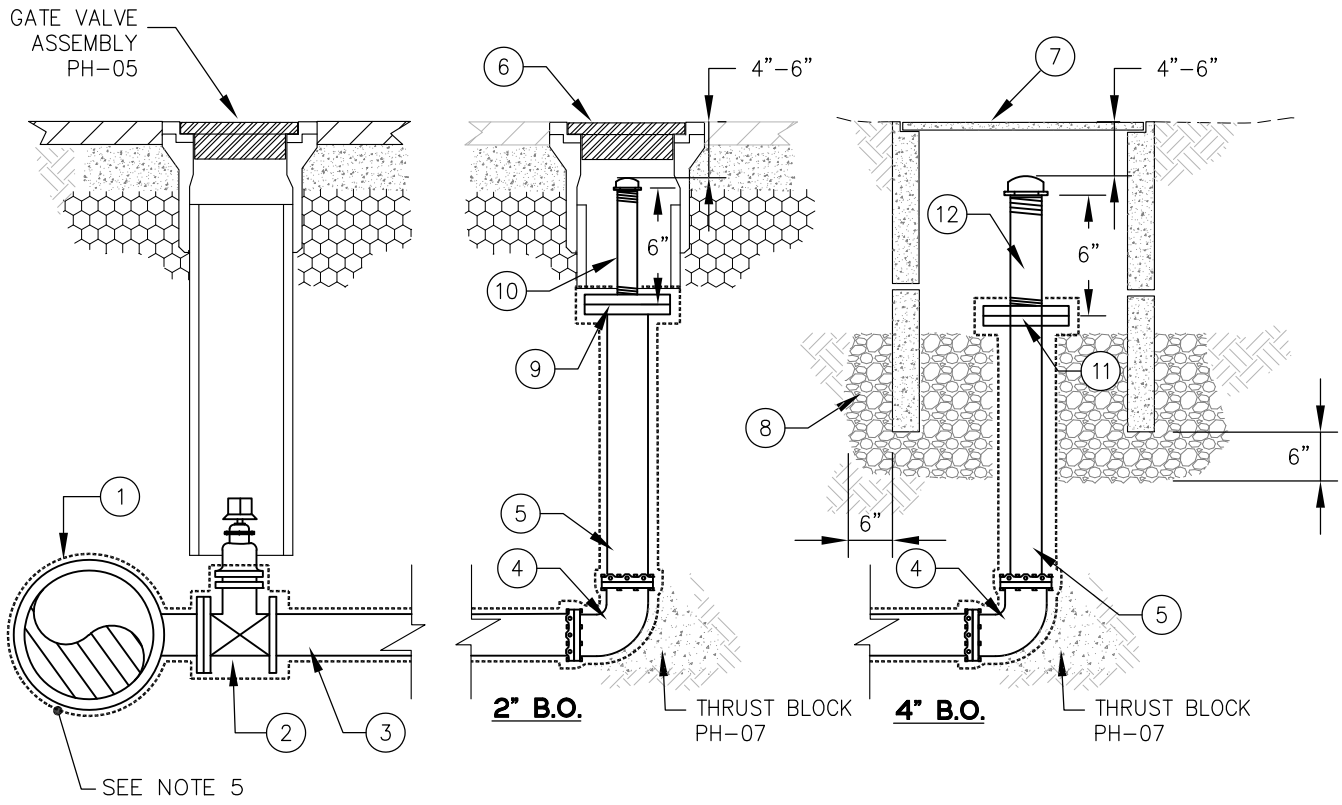
APPROVED BY:

PHIL WITT, GENERAL MANAGER

JOUBIN PAKPOUR, DISTRICT ENGINEER, RCE NO. 59155

STD. NO.

PH- 16



NOTES

1. 2" BLOW-OFF SHALL BE INSTALLED FOR MAINS 6" OR SMALLER.
2. 4" BLOW-OFF SHALL BE INSTALLED FOR MAINS 8" OR LARGER.
3. THE TOP OF THE TRAFFIC BOXES SHALL BE FLUSH WITH PAVEMENT WHEN LOCATED IN TRAFFIC AREAS.
4. ALL BURIED NUTS AND BOLTS SHALL BE TYPE 316 STAINLESS STEEL.
5. ENCASE BRANCH TEE, BENDS, NIPPLES, AND DIP IN V-BIO ENHANCED POLYETHYLENE ENCASEMENT.

LEGEND

1. 6" BRANCH TEE OR TAPPING SLEEVE, JCM INDUSTRIES 6432 ALL 316 STAINLESS STEEL.
2. 6" GATE VALVE, FLXMJ, MUELLER NO. 2362.
3. 6" DIP
4. 6" DIP 90° BEND, MJXMJ (RESTRAINED)
5. 6" DIP FLXPE
6. TRAFFIC VALVE BOX W/ COVER (H/20 LOADING), PVC RISER, CONCRETE COLLAR PER PH-05
7. TRAFFIC BOX, CHRISTY NO. B1324BOX (H/20 LOADING) WITH B1324-61JH STEEL CHECKER PLATE COVER AND B1324X12 EXTENSION.
8. 3/4" DRAIN ROCK, UP TO VALVE ONLY, SHALL BE MECHANICALLY COMPACTED.

2" BLOW-OFF

9. 6" COMPANION FLANGE W/ A 2" THREADED IP OUTLET.
10. 2" BRASS NIPPLE, W/ THREADED CAP

4" BLOW-OFF

11. 6" COMPANION FLANGE W/ A 4" THREADED IP OUTLET.
12. 4" BRASS NIPPLE, W/ THREADED PVC CAP

6/20 10/01
7/18 7/01
2/10 3/00
1/07 11/98
5/06 4/97
8/02 3/96
7/89
REV. 1/77

BLOW-OFF ASSEMBLY

PURISSIMA HILLS EST. 1955 WATER DISTRICT

APPROVED BY:

PHIL WITT, GENERAL MANAGER

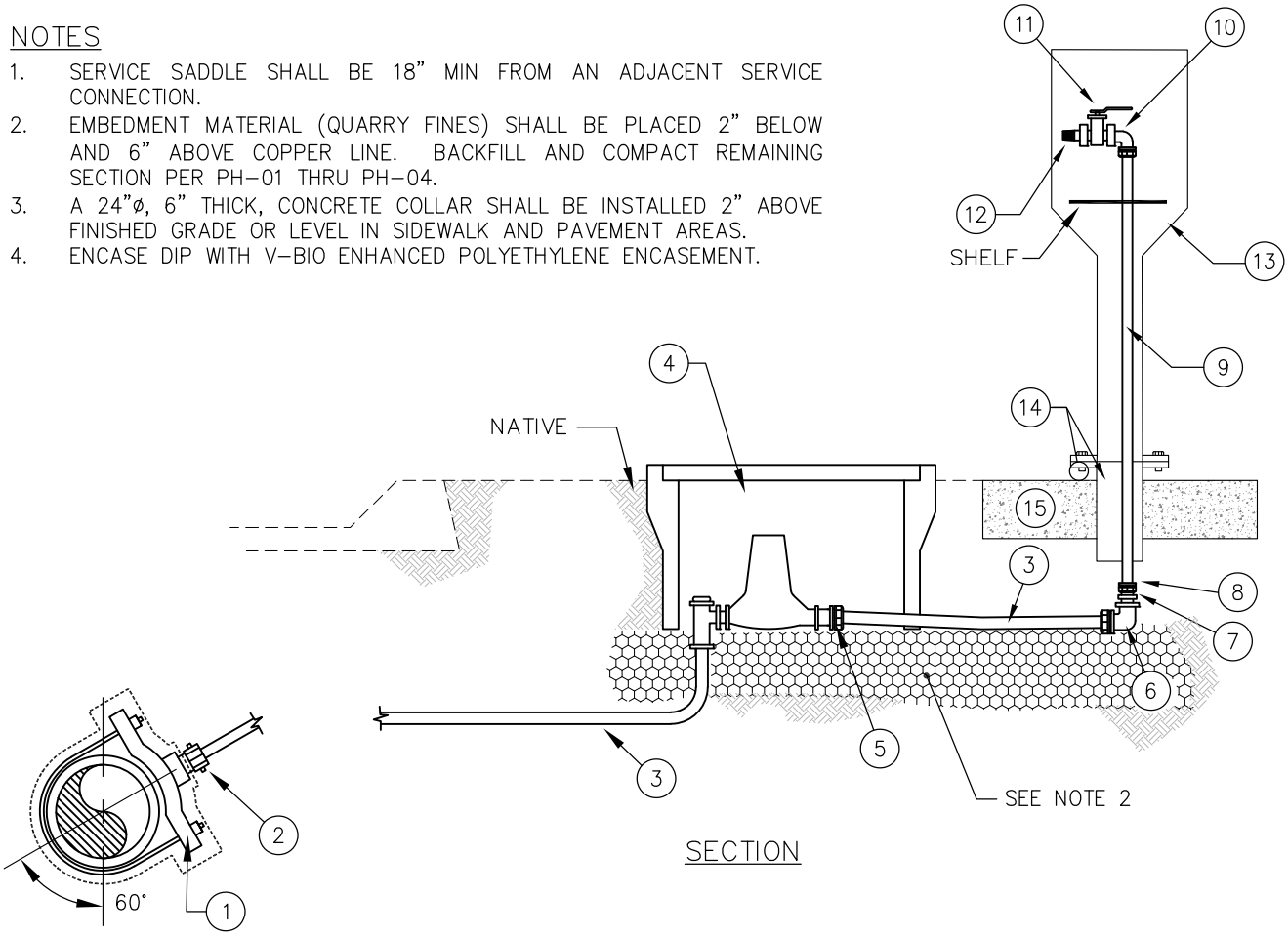
JOUBIN PAKPOUR, DISTRICT ENGINEER, RCE NO. 59155

STD. NO.

PH- 17

NOTES

1. SERVICE SADDLE SHALL BE 18" MIN FROM AN ADJACENT SERVICE CONNECTION.
2. EMBEDMENT MATERIAL (QUARRY FINES) SHALL BE PLACED 2" BELOW AND 6" ABOVE COPPER LINE. BACKFILL AND COMPACT REMAINING SECTION PER PH-01 THRU PH-04.
3. A 24"ø, 6" THICK, CONCRETE COLLAR SHALL BE INSTALLED 2" ABOVE FINISHED GRADE OR LEVEL IN SIDEWALK AND PAVEMENT AREAS.
4. ENCASE DIP WITH V-BIO ENHANCED POLYETHYLENE ENCASEMENT.



SECTION

LEGEND

1. DOUBLE STRAP BRONZE SERVICE SADDLE MUELLER BR2B "CC".
2. 1" INSULATED CORPORATION STOP, MUELLER N-35008N.
3. 1" TYPE K SOFT COPPER PIPE. UNIONS OR COUPLINGS NOT PERMITTED.
4. 1" SERVICE CONNECTION PER PH-12 AND PH-15.
5. 1" F.I.P. X COMP, MUELLER H-15451N.
6. 1" 90° F.I.P. X COMP, MUELLER H-15533N.
7. 1"X 3/4" BUSHING (LOW LEAD).
8. 3/4" M.I.P. X COMP, MUELLER H-15428N
9. 3/4" RIGID COPPER PIPE.
10. 3/4" 90° BRASS M.I.P X COMP, MUELLER H-15533N.
11. BALL VALVE, RED-WHITE 5044AB.
12. M.I.P. X M.H.T. BRASS (LOW LEAD).
13. ENCASEMENT, STEEL SOURCE CO. SDMX FBE(1013), WITH BEST/STANLEY LOCK AND WITHOUT MANUFACTURER PLUMBING.
14. 6" FLXPE (12" LENGTH). BOTTOM OF BOLTS SHALL BE AT LEAST 1" REMOVABLE FROM TOP.
15. 2,000 PSI CONCRETE COLLAR.

SAMPLING STATION

6/20
7/13
2/10
REV. 3/08

PURISSIMA HILLS EST. 1955 WATER DISTRICT

APPROVED BY:

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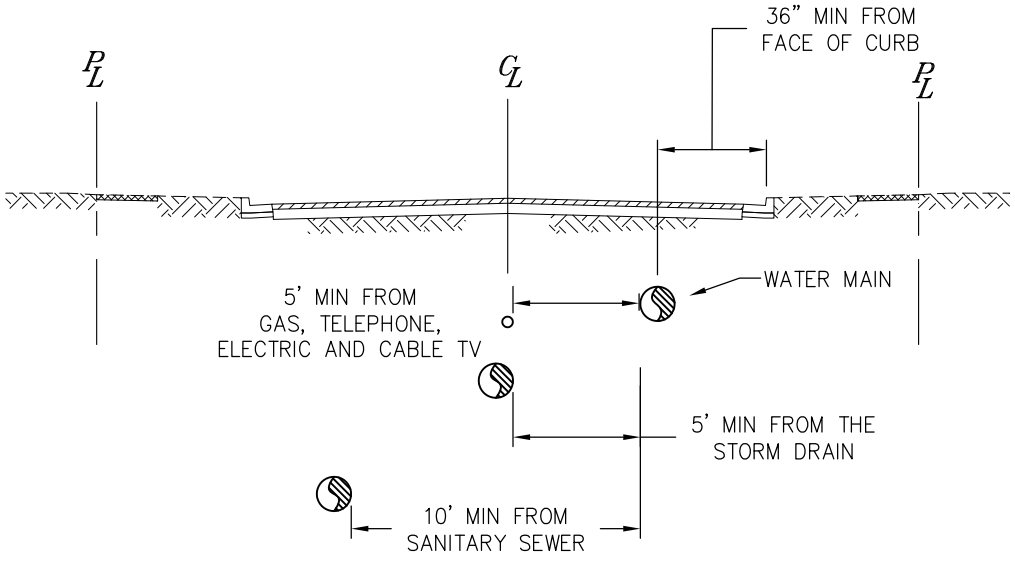
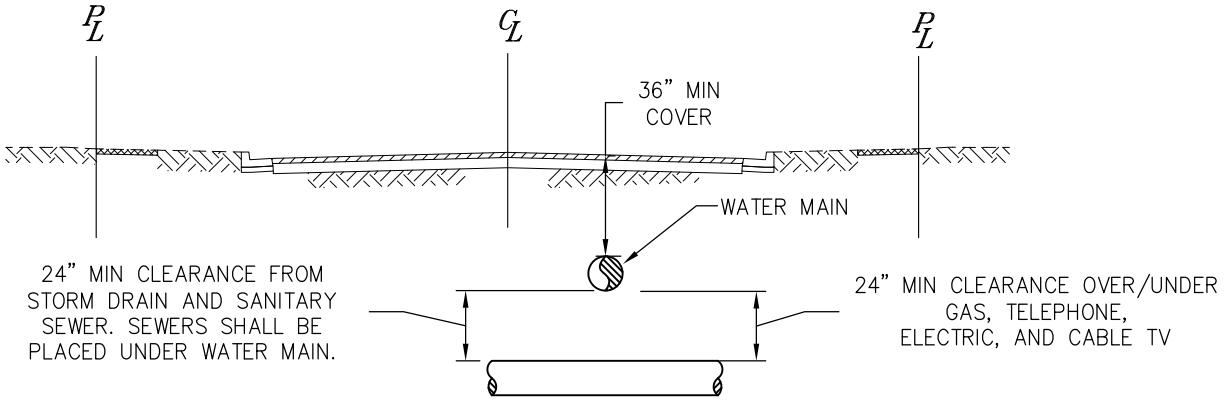
JOUBIN PAKPOUR, DISTRICT ENGINEER, RCE NO. 59155

STD. NO.

PH- 18



MINIMUM REQUIRED HORIZONTAL CLEARANCE FROM WATER MAIN



MINIMUM REQUIRED VERTICAL CLEARANCE FROM WATER MAIN AT CROSSINGS

NOTES

1. ANY DEVIATION FROM THESE REQUIREMENTS REQUIRES WRITTEN APPROVAL FROM THE DISTRICT.
2. ALL CROSSINGS SHALL BE AT 45° TO 90°.
3. NO CONNECTION JOINTS SHALL BE MADE IN THE WATER MAIN WITHIN EIGHT HORIZONTAL FEET OF THE STORM DRAIN OR SANITARY SEWER PIPELINE.
4. 12" CLEARANCE BETWEEN THE OUTER SURFACE OF NEAR STRUCTURES SUCH AS CATCH BASINS, DRAIN INLETS, AND THE EDGE OF THE TRENCH IS REQUIRED.

6/20
7/13
11/06
5/06
1/03
REV. 10/01

MINIMUM PIPE SEPARATION REQUIREMENTS

PURISSIMA HILLS EST. 1955 WATER DISTRICT

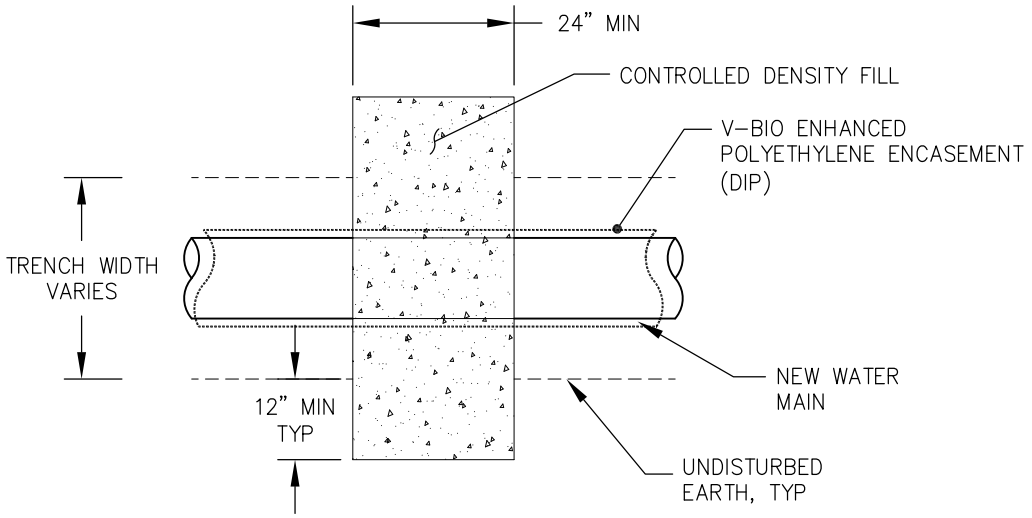
APPROVED BY:

PHIL WITT, GENERAL MANAGER

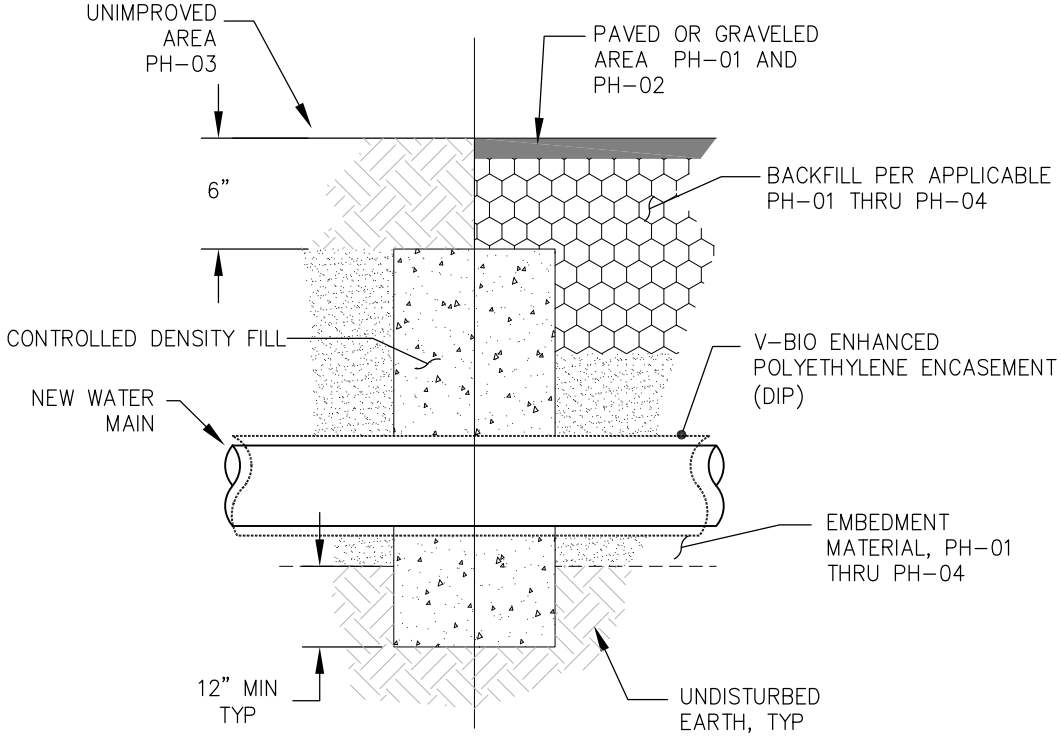
JOUBIN PAKPOUR, DISTRICT ENGINEER, RCE NO. 59155

STD. NO.

PH– 19



PLAN



PROFILE

NOTES

1. TRENCH DAMS SHALL BE PLACED ON NEW WATER MAIN ALIGNMENTS WHERE SLOPES EXCEED 10% AT 100' INTERVALS OR AS DIRECTED BY THE DISTRICT.

TRENCH DAM

6/20
1/07
5/06
10/01
REV. 7/01

PURISSIMA HILLS EST. 1955 WATER DISTRICT

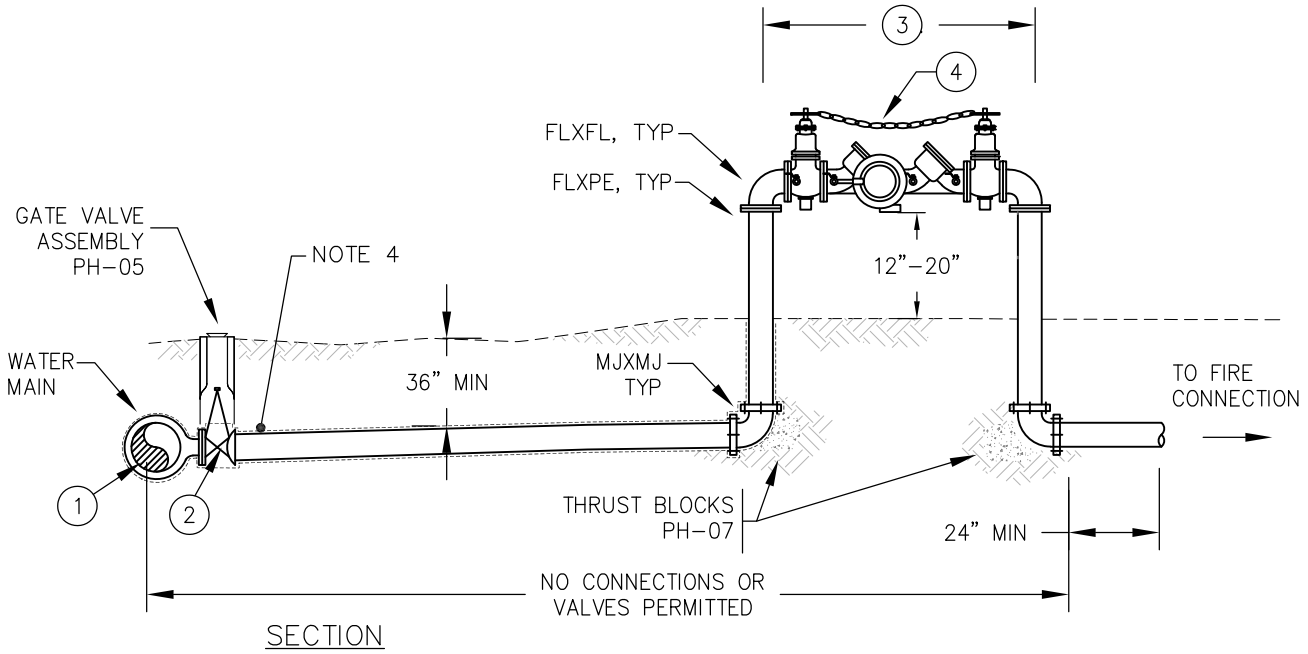
APPROVED BY:

PHIL WITT, GENERAL MANAGER

JOUBIN PAKPOUR, DISTRICT ENGINEER, RCE NO. 59155

STD. NO.

PH-20



SECTION

REQUIREMENTS

1. REDUCE PRESSURE BACKFLOW ASSEMBLIES ARE REQUIRED ON ALL FIRE SERVICE CONNECTIONS.
2. FAILURE TO PROVIDE BACKFLOW PROTECTION WILL RESULT IN WATER SERVICE SHUTDOWN PER TITLE 17, SECTION 7583-7605 OF THE STATE OF CALIFORNIA CODE OF REGULATIONS. (TITLE 17, DIVISION I, CHAPTER 5, SUBCHAPTER 1, GROUP 4, ARTICLES 1 AND 2.)
3. BACKFLOW ASSEMBLY SHALL BE TESTED AND CERTIFIED PRIOR TO BEING PUT IN SERVICE.

NOTES

1. THE SIZE OF THE PIPING, TAPPING VALVE, DETECTOR CHECK AND BACKFLOW PREVENTER SHALL BE DETERMINED IN ACCORDANCE WITH FIRE SERVICE FLOW REQUIREMENTS.
2. FIRE SERVICE LOCATION SHALL BE DETERMINED BY DISTRICT.
3. BOLLARD REQUIRED PER PH-11. EXACT LOCATION TO BE DETERMINED BY DISTRICT
4. ENCASE DIP WITH V-BIO ENHANCED POLYETHYLENE ENCASEMENT.
5. ABOVE GROUND DI PIPE AND FITTINGS SHALL BE FUSION EPOXY COATED.

LEGEND

(1) TEE (TYPE DETERMINED BY DISTRICT) OR TAPPING SLEEVE, JCM INDUSTRIES 6432 All 316 STAINLESS STEEL OR AS DIRECTED BY THE DISTRICT

(2) GATE VALVE, FLXMJ, MUELLER NO. A-2362

(3) REDUCED PRESSURE DETECTOR ASSEMBLY WITH OS&Y VALVES, WILKINS 375DA.

(4) 1/2" CHAIN AND LOCK WITH MINIMUM SLACK AND/OR TAMPER SWITCH AS DIRECTED BY THE FIRE DEPARTMENT.

6/20
7/13
2/10
3/08
1/07
5/06
8/02
REV. 10/01

FIRE SERVICE CONNECTION REQUIREMENTS

PURISSIMA HILLS EST. 1955 WATER DISTRICT

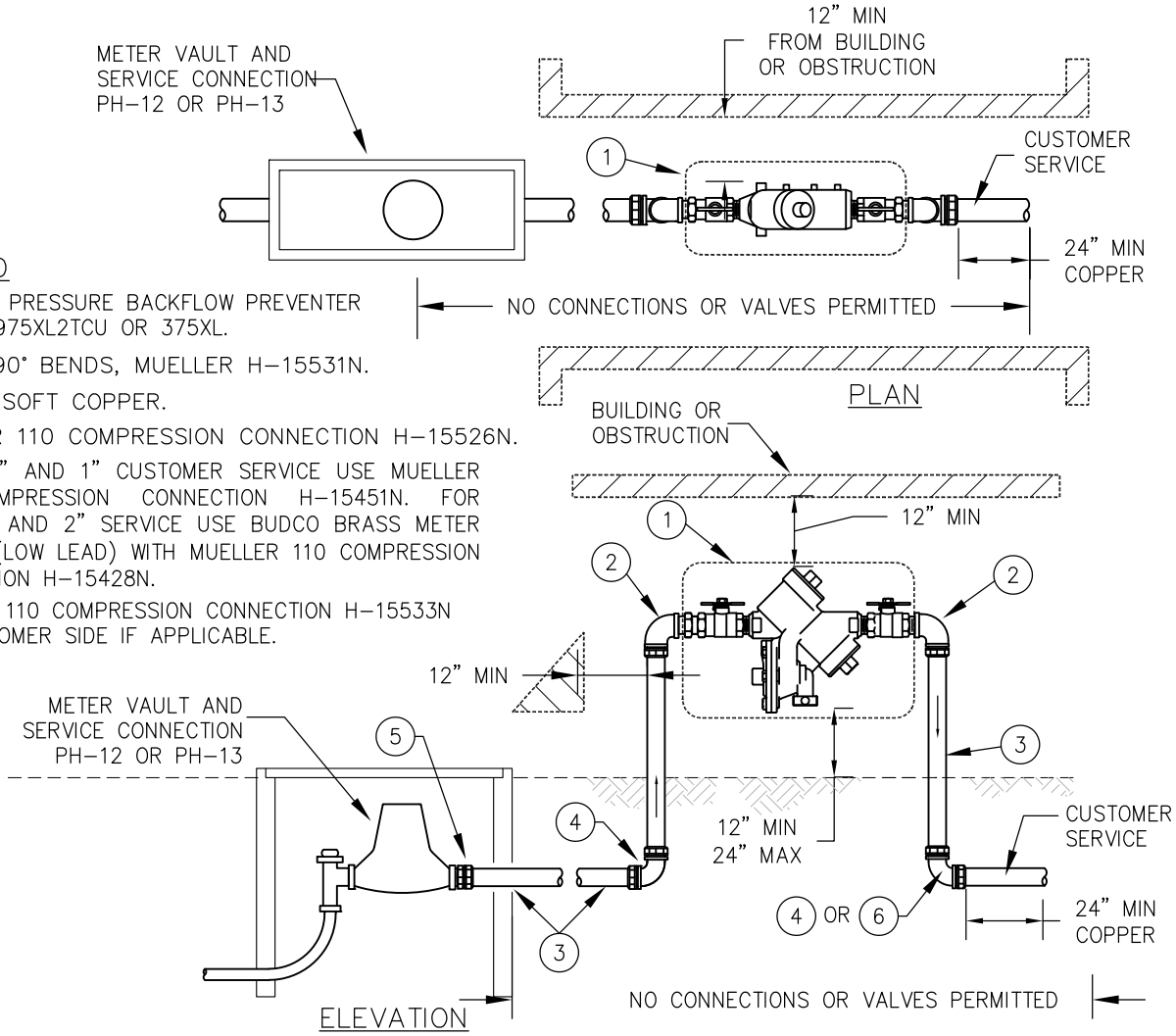
APPROVED BY:

PHIL WITT, GENERAL MANAGER

JOUBIN PAKPOUR, DISTRICT ENGINEER, RCE NO. 59155

STD. NO.

PH- 21



LEGEND

1. REDUCED PRESSURE BACKFLOW PREVENTER WILKINS 975XL2TCU OR 375XL.
2. BRASS 90° BENDS, MUELLER H-15531N.
3. TYPE K SOFT COPPER.
4. MUELLER 110 COMPRESSION CONNECTION H-15526N.
5. FOR 3/4" AND 1" CUSTOMER SERVICE USE MUELLER 110 COMPRESSION CONNECTION H-15451N. FOR 1-1/2" AND 2" SERVICE USE BUDCO BRASS METER FLANGE (LOW LEAD) WITH MUELLER 110 COMPRESSION CONNECTION H-15428N.
6. MUELLER 110 COMPRESSION CONNECTION H-15533N ON CUSTOMER SIDE IF APPLICABLE.

REQUIREMENTS

1. REDUCED PRESSURE BACKFLOW ASSEMBLIES ARE REQUIRED ON ALL SERVICE CONNECTIONS TO PROPERTIES THAT HAVE A SUPPLEMENTAL SOURCE OF WATER, A FIRE SPRINKLER SYSTEM, WELL, IRRIGATION SYSTEM THAT HAS AN AUTOMATIC CHEMICAL FEEDING CONTROL, PUMPS, MULTI STORY BUILDING OR ANY OTHER INSTANCE THAT MAY CONTAMINATE POTABLE WATER SUPPLY OR AS DIRECTED BY THE DISTRICT.
2. ALL REDUCED PRESSURE BACKFLOW ASSEMBLIES SHALL BE INSTALLED ON CUSTOMER PROPERTY ADJACENT TO THE METER.
3. FAILURE TO PROVIDE REDUCED PRESSURE BACKFLOW PROTECTION WILL RESULT IN WATER SERVICE SHUTDOWN PER TITLE 17, SECTION 7583-7605 OF THE STATE OF CALIFORNIA CODE OF REGULATIONS (TITLE 17, DIVISION 1, CHAPTER 5, SUB-CHAPTER 1, GROUP 4, ARTICLES 1 AND 2).
4. ENCLOSURE USED FOR BACKFLOW ASSEMBLY SHALL BE APPROVED BY THE DISTRICT.
5. BACKFLOW ASSEMBLY SHALL BE TESTED AND CERTIFIED PRIOR TO BEING PUT IN SERVICE.
6. THE INSTALLATION OF ANY CUSTOMER SIDE PRESSURE SYSTEM SHALL REQUIRE PRIOR REVIEW AND APPROVAL FROM THE DISTRICT. THE PRESSURE SYSTEM SHALL CONTAIN AN AIR GAP. DIRECT PUMPING FROM THE DISTRICT WATER MAINS IS NOT ALLOWED.

REDUCED PRESSURE BACKFLOW PREVENTER ASSEMBLY (RESIDENTIAL)

6/20 10/23
2/10 7/13
5/06 6/08
REV. 11/01 8/02

PURISSIMA HILLS EST. 1955 WATER DISTRICT

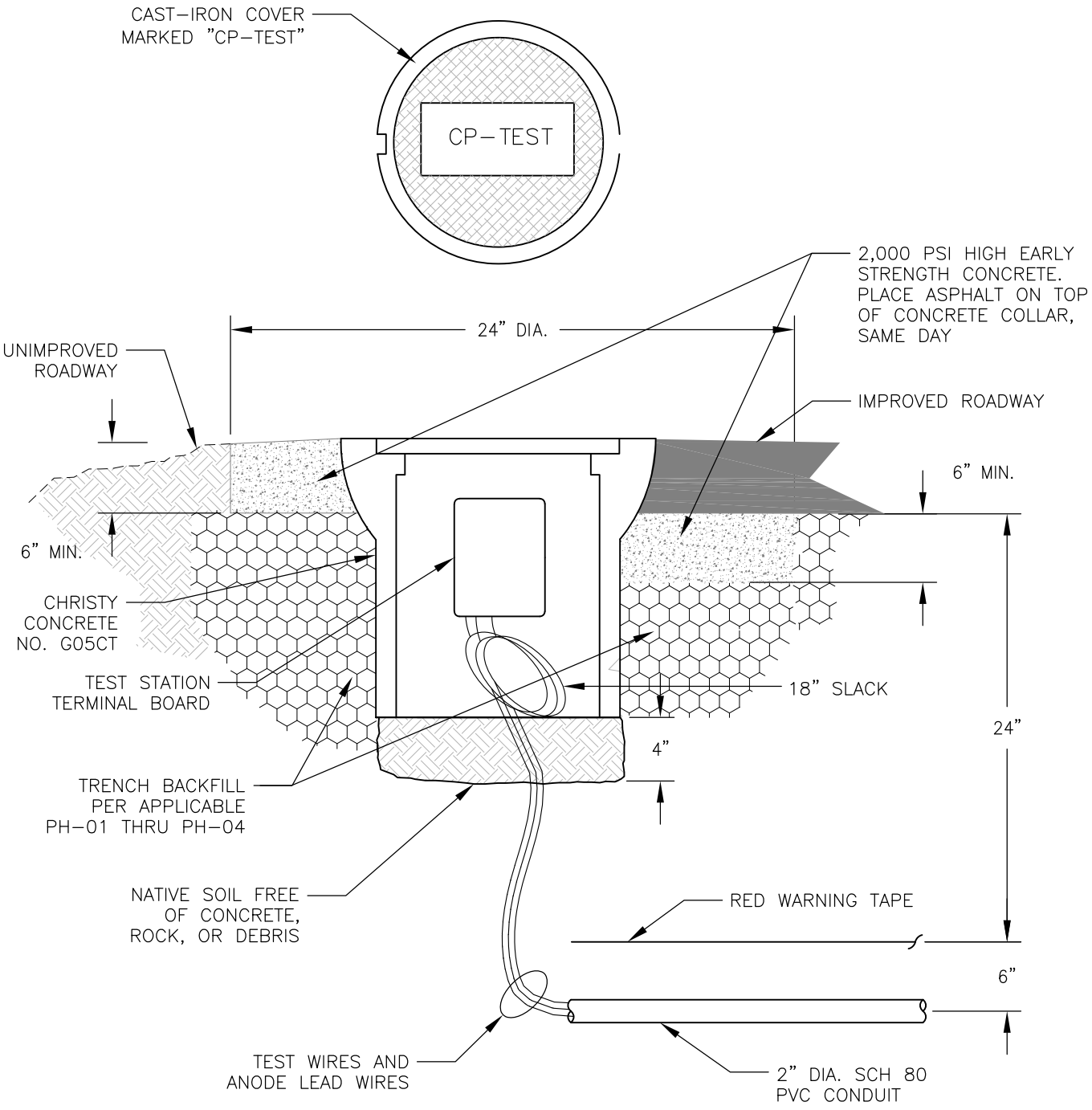
APPROVED BY:

PHIL WITT, GENERAL MANAGER

JOUBIN PAKPOUR, DISTRICT ENGINEER, RCE NO. 59155

STD. NO.

PH-22



FLUSH–MOUNTED TEST STATION BOX

REV. 11/21
6/20

PURISSIMA HILLS EST. 1955 WATER DISTRICT

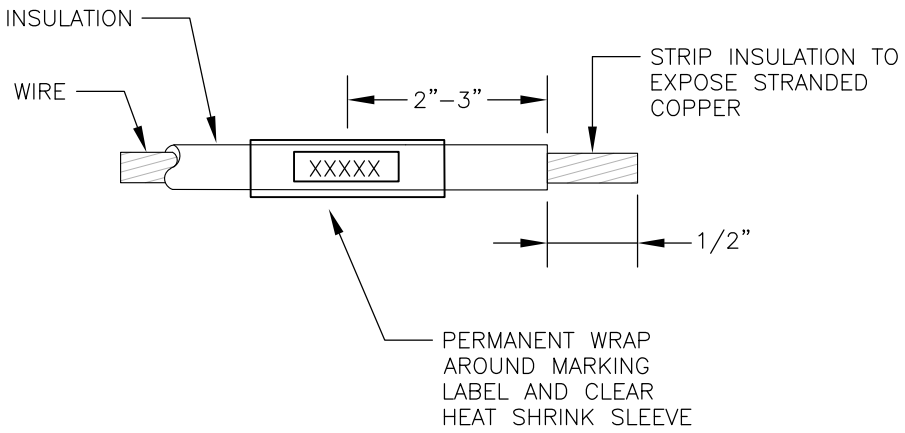
APPROVED BY:

PHIL WITT, GENERAL MANAGER

JOUBIN PAKPOUR, DISTRICT ENGINEER, RCE NO. 59155

STD. NO.

PH–23



WIRE IDENTIFIER SCHEDULE	
ANODE	ANODE
PROTECTED DIP	DIP (PR)
UNPROTECTED DIP/CIP	DIP/CIP (UPR)
CROSS	CROSS
TEE	TEE
90° ELBOW	90° EL
45° ELBOW	45° EL
GATE VALVE	GV
BLOW OFF	BO
FIRE HYDRANT	FH

WIRE IDENTIFIER

REV. 11/21
6/20

PURISSIMA HILLS EST. 1955 WATER DISTRICT

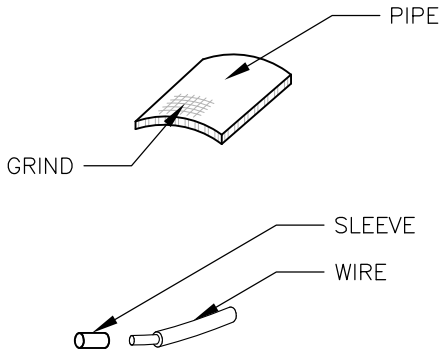
APPROVED BY:

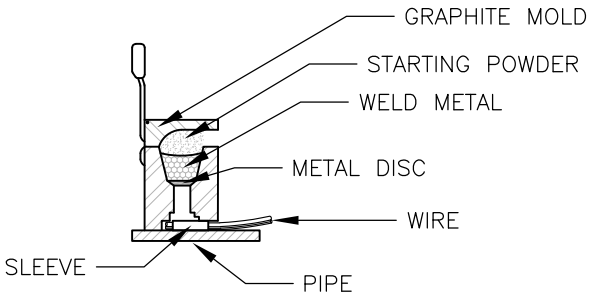
PHIL WITT, GENERAL MANAGER

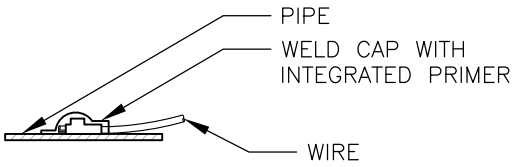
JOUBIN PAKPOUR, DISTRICT ENGINEER, RCE NO. 59155

STD. NO.

PH-24







1. ALL WELDS SHALL BE 6" APART AT MINIMUM.

2. GRIND PIPE TO BARE METAL AND CLEAN SURFACE. GROUND AREA SHALL BE LARGE ENOUGH FOR EXOTHERMIC WELD AND SMALL ENOUGH TO BE COMPLETELY COVERED BY WELD CAP.

3. STRIP INSULATION FROM WIRE AND ATTACH SLEEVE.

4. HOLD MOLD FIRMLY WITH OPENING AWAY FROM OPERATOR. IGNITE WITH FLINT GUN. REMOVE SLAG FROM CONNECTION WITH CHIPPING HAMMER. TEST WELD WITH 22 OZ HAMMER.

5. COVER WITH WELD CAP WITH INTEGRATED PRIMER. REPAIR ALL DAMAGE TO COATING BEYOND WELD IN ACCORDANCE WITH COATING AND LINING MFG RECOMMENDATIONS.

NOTES

PIN BRAZING IS ALLOWED UPON DISTRICT APPROVAL.

EXOTHERMIC WELD

REV. 11/21
6/20

PURISSIMA HILLS EST. 1955 WATER DISTRICT

APPROVED BY:

PHIL WITT, GENERAL MANAGER

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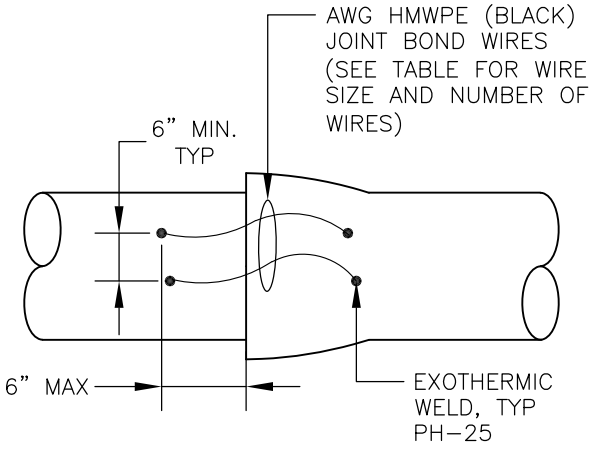
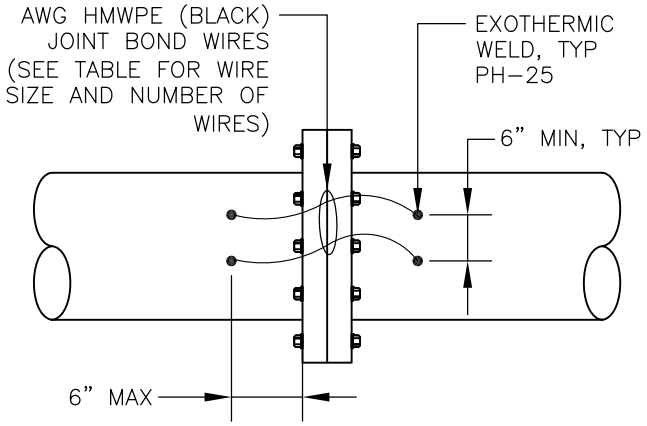
STD. NO.

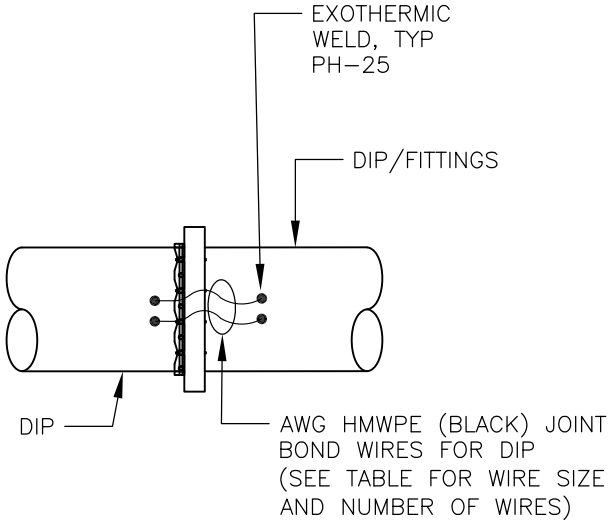
PH-25



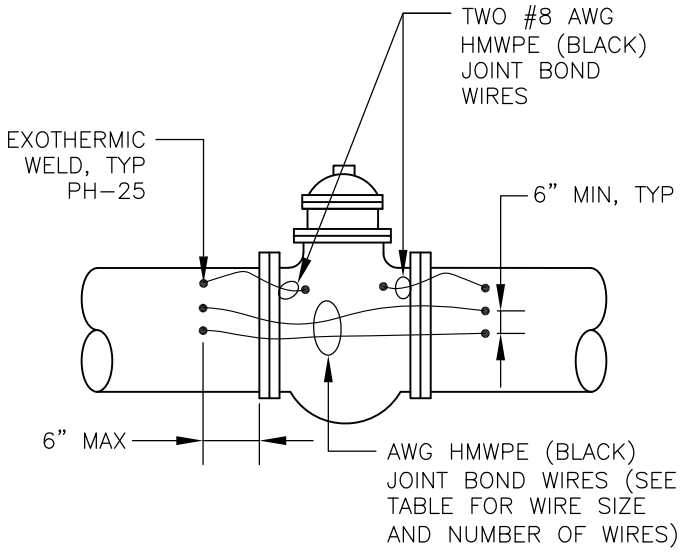
PUSH-ON JOINT



FLANGED JOINT



MECHANICAL JOINT



VALVE

PIPE DIAMETER	6"	8"	10"	12"	18"	24"
WIRE SIZE*	#4	#4	#4	#2	#2	#2
NUMBER OF WIRES	2	2	2	2	3	4

*WIRE SIZES ARE SHOWN FOR CLASS 50 DIP

PIPE JOINT BONDING

REV. 11/21
6/20

PURISSIMA HILLS EST. 1955 WATER DISTRICT

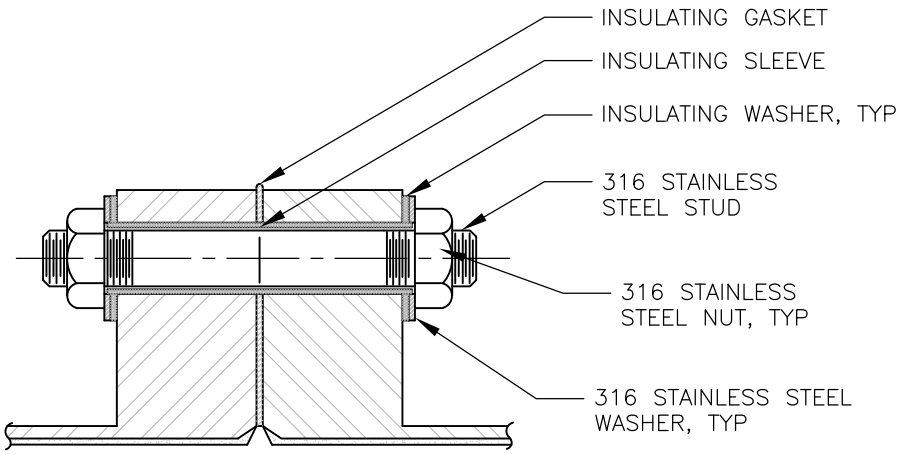
APPROVED BY:

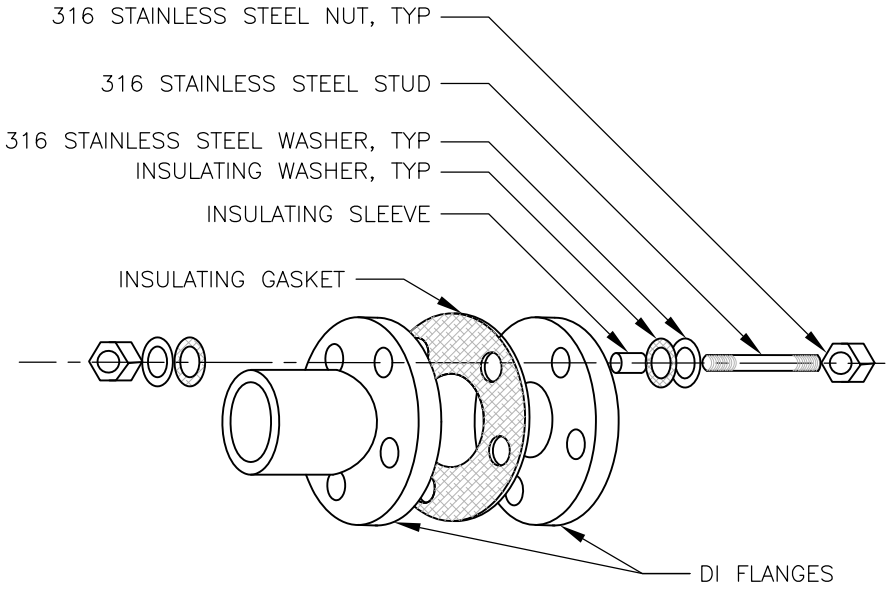
PHIL WITT, GENERAL MANAGER

JOUBIN PAKPOUR, DISTRICT ENGINEER, RCE NO. 59155

STD. NO.

PH-26





NOTES

INSULATION FLANGE SHALL BE USED FOR ABOVE GROUND CONNECTIONS, UNLESS OTHERWISE DIRECTED BY THE DISTRICT.

INSULATING FLANGE ASSEMBLY

REV. 11/21
6/20

PURISSIMA HILLS EST. 1955 WATER DISTRICT

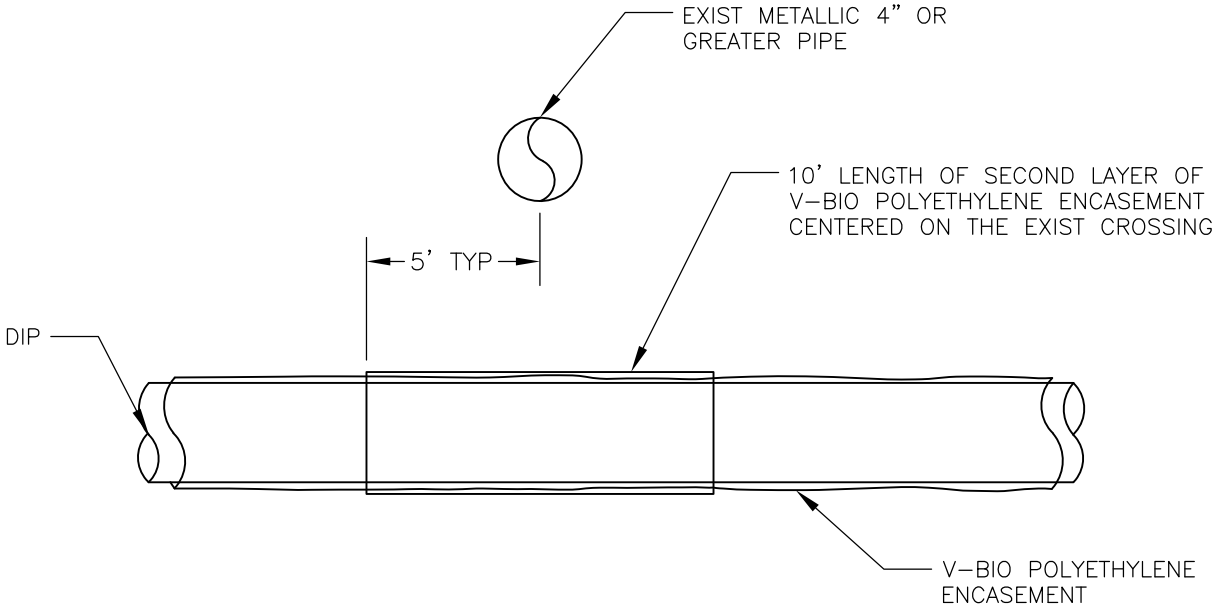
APPROVED BY:

PHIL WITT, GENERAL MANAGER

JOUBIN PAKPOUR, DISTRICT ENGINEER, RCE NO. 59155

STD. NO.

PH-27



DOUBLE ENCASEMENT

REV. 11/21
6/20

PURISSIMA HILLS EST. 1955 WATER DISTRICT

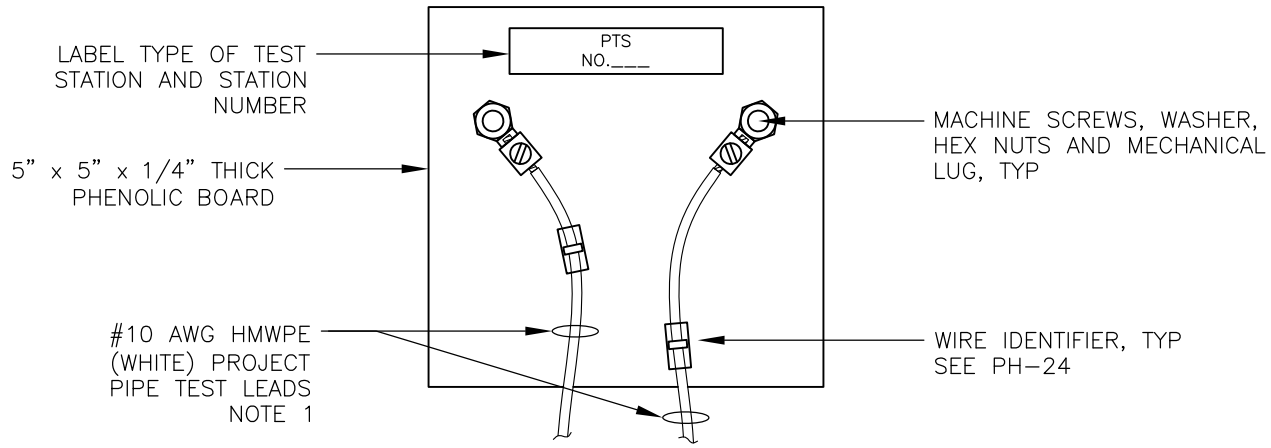
APPROVED BY:

PHIL WITT, GENERAL MANAGER

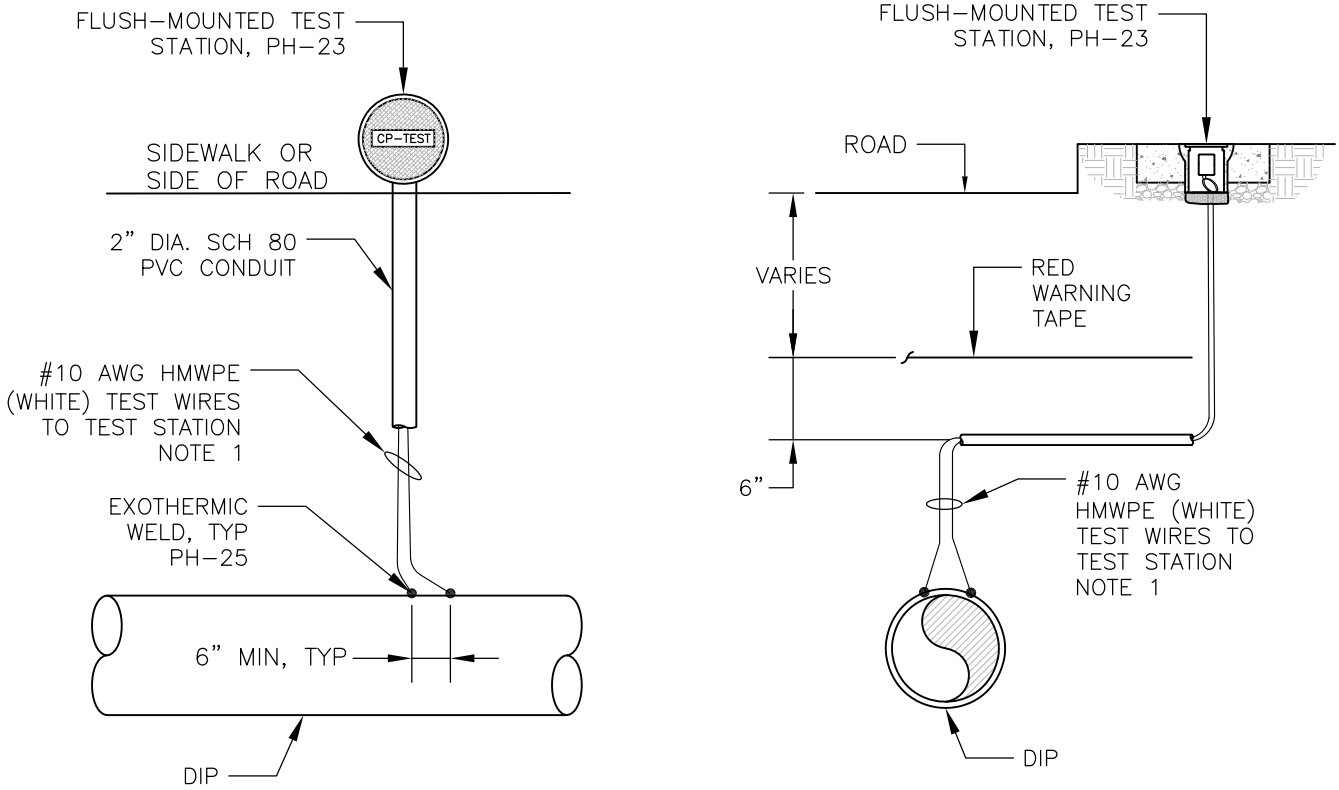
JOUBIN PAKPOUR, DISTRICT ENGINEER, RCE NO. 59155

STD. NO.

PH-28



TERMINAL BOARD



PLAN VIEW

PROFILE VIEW

NOTES

1. WHITE CABLE OR WRAP 6" OF CABLE WITH WHITE ELECTRICAL TAPE AS DIRECTED BY THE DISTRICT.

POTENTIAL TEST STATION (PTS)

REV. 11/21 6/20

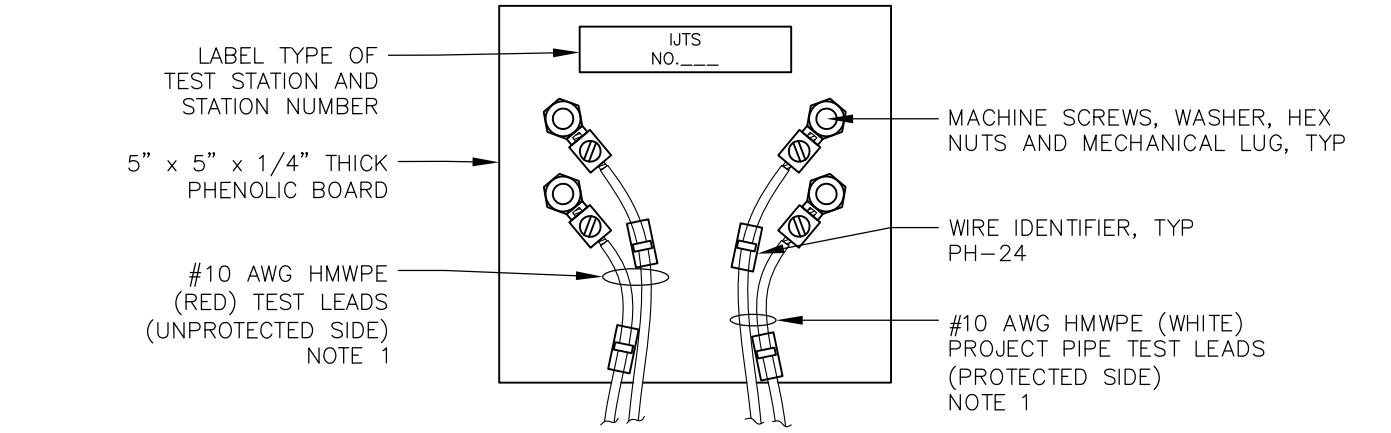
PURISSIMA HILLS EST. 1955 WATER DISTRICT

APPROVED BY:

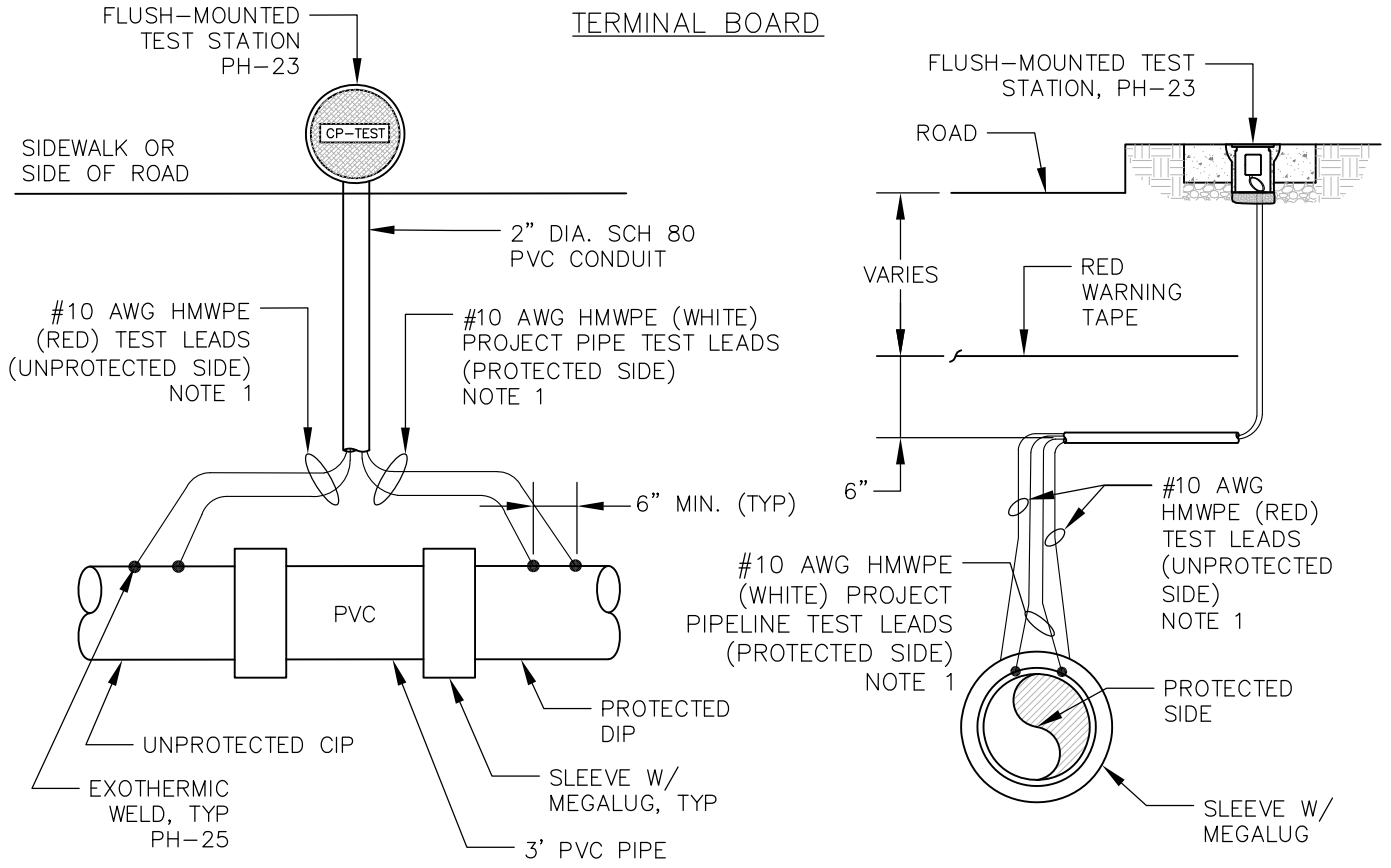
PHIL WITT, GENERAL MANAGER

JOUBIN PAKPOUR, DISTRICT ENGINEER, RCE NO. 59155

STD. NO. PH-29



TERMINAL BOARD



PLAN VIEW

PROFILE VIEW

NOTES

1. WHITE/RED CABLE OR WRAP 6" OF CABLE WITH WHITE/RED ELECTRICAL TAPE AS DIRECTED BY THE DISTRICT.

INSULATING JOINT TEST STATION (IJTS) AT CIP TIE-INS

REV. 11/21 6/20

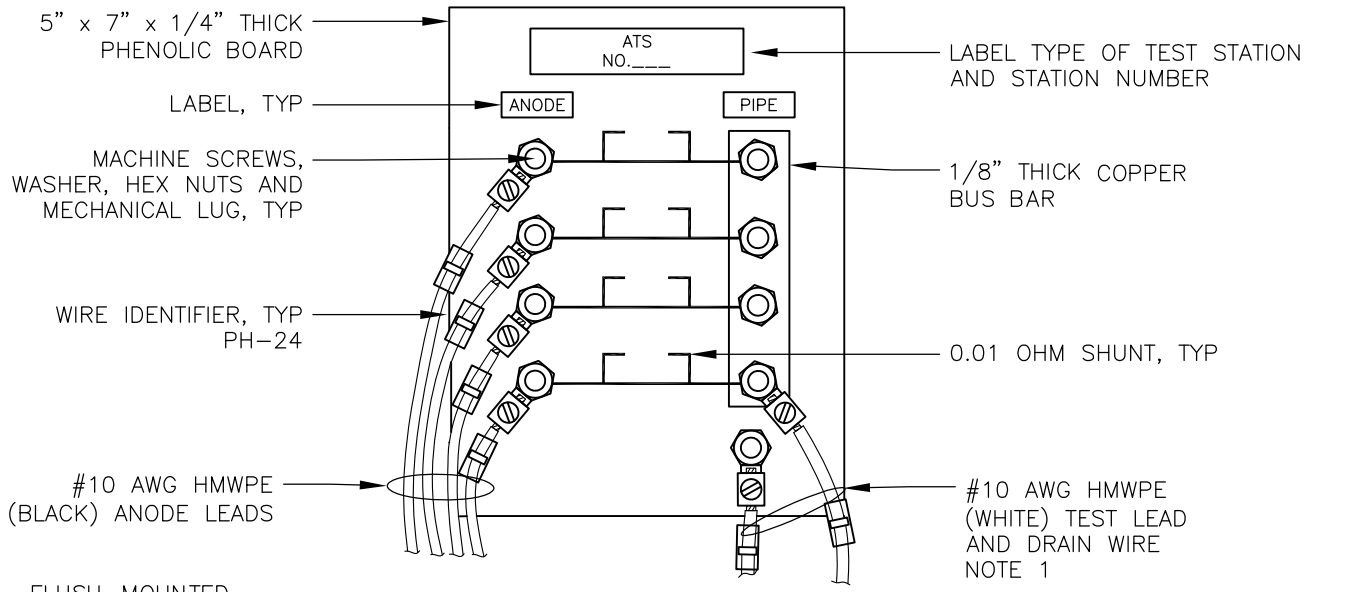
PURISSIMA HILLS EST. 1955 WATER DISTRICT

APPROVED BY:

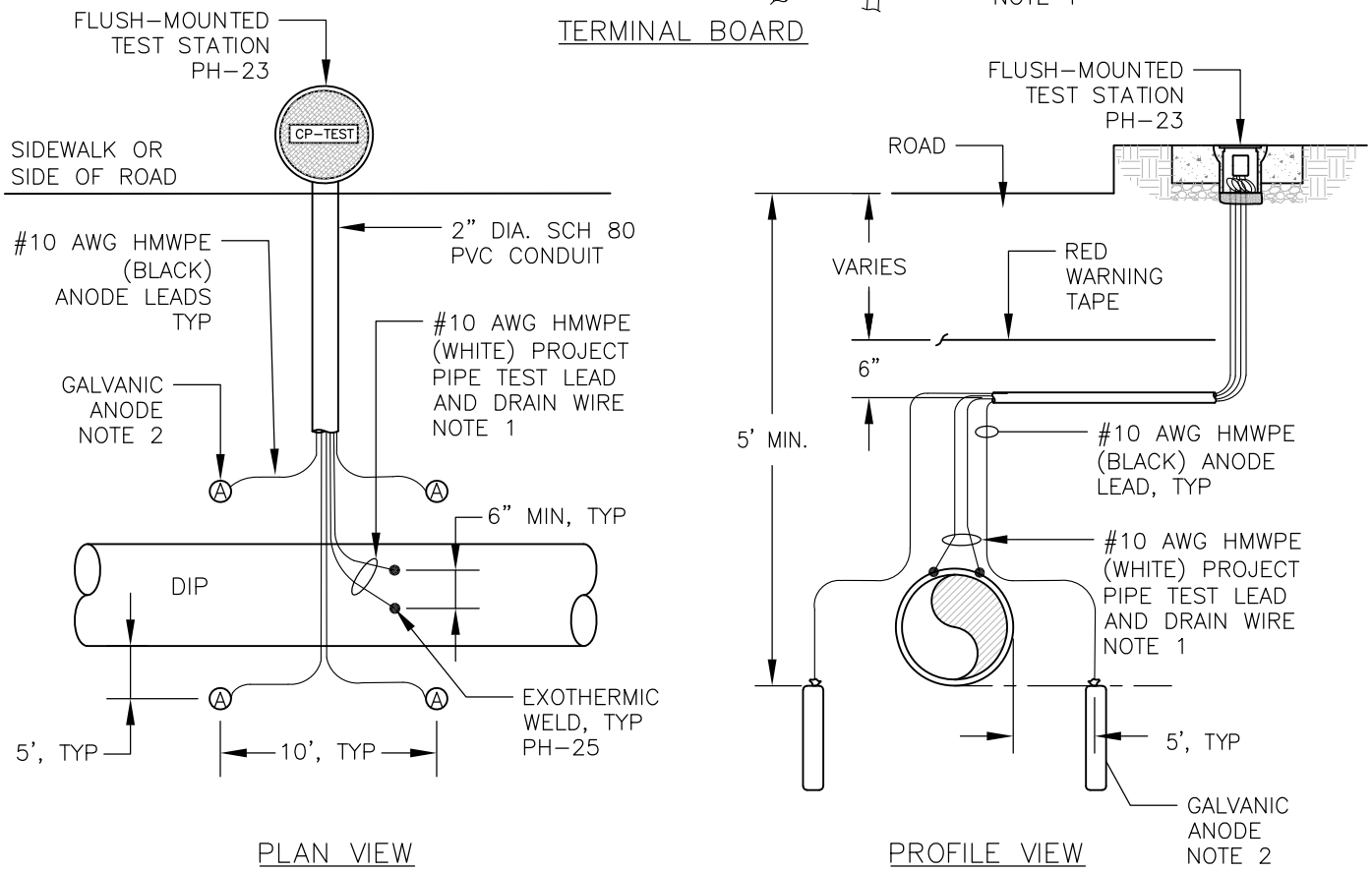
PHIL WITT, GENERAL MANAGER

JOUBIN PAKPOUR, DISTRICT ENGINEER, RCE NO. 59155

STD. NO. PH-30



TERMINAL BOARD



PLAN VIEW

PROFILE VIEW

NOTES

1. WHITE CABLE OR WRAP 6" OF CABLE WITH WHITE ELECTRICAL TAPE AS DIRECTED BY THE DISTRICT.
2. LOCATION, NUMBER AND TYPE OF ANODES DETERMINED BY THE DISTRICT.

ANODE TEST STATION (ATS)

REV. 11/21 6/20

PURISSIMA HILLS EST. 1955 WATER DISTRICT

APPROVED BY:

PHIL WITT, GENERAL MANAGER

JOUBIN PAKPOUR, DISTRICT ENGINEER, RCE NO. 59155

STD. NO.

PH- 31