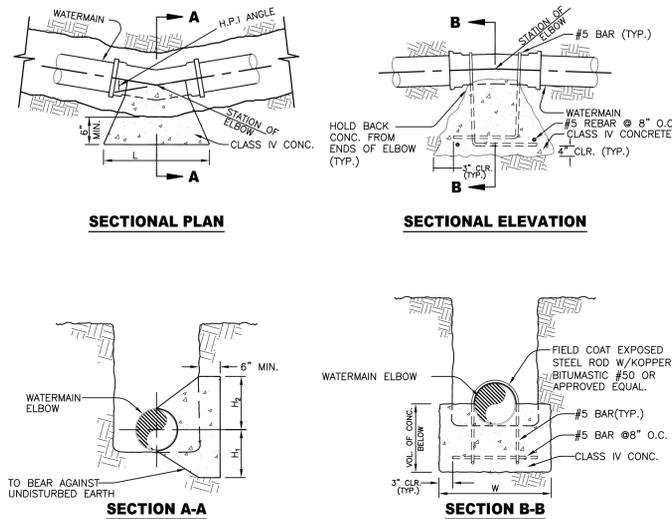


NOTES:

- WIDTH OF TRENCH
MIN. = PIPE O.D. + 12"
MAX. = PIPE O.D. + 16"
- REPLACE A.C. PAVEMENT AND ROAD BASE IN ACCORDANCE WITH EXCAVATION PERMIT.

TYPICAL TRENCH DETAIL

W-1



HORIZONTAL THRUST BLOCK

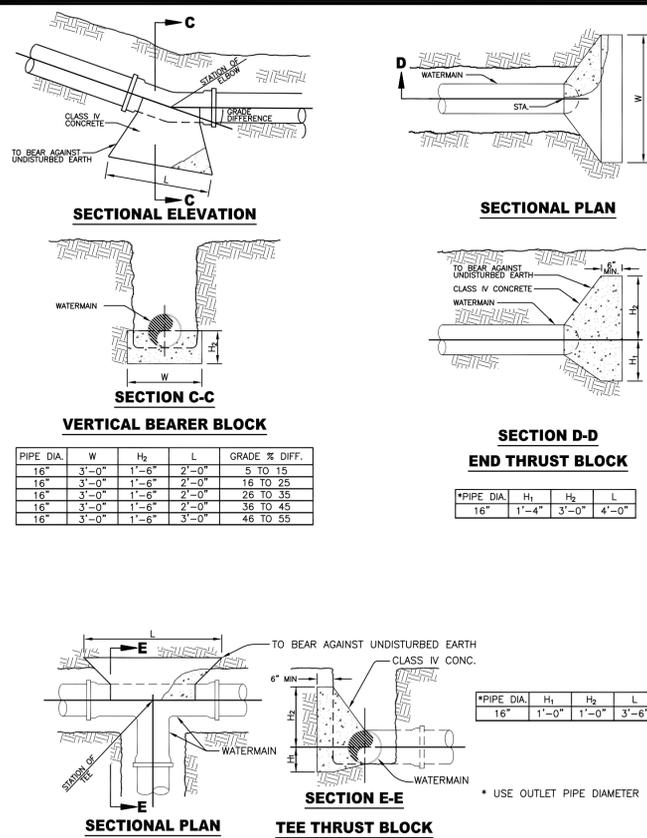
PIPE DIA.	H ₁	H ₂	L	H.P.I. ANGLE
16"	1/2 O.D.	1/2 O.D.	4'-0"	≤11.25°
18"	1'-6"	1'-6"	4'-0"	≤22.50°
18"	2'-8"	2'-8"	6'-0"	≤45°
16"	2'-8"	2'-8"	8'-0"	≤67.50°
16"	2'-8"	2'-8"	10'-0"	≤90°

VERTICAL ANCHOR BLOCK

PIPE DIA.	W	VOLUME OF CONC. (cu ft)	GRADE % DIFF.
16"	4'-0"	48.0	5 TO 15
16"	4'-0"	72.0	16 TO 25
16"	4'-0"	84.0	26 TO 35
16"	4'-0"	130.0	36 TO 45
16"	4'-0"	168.0	46 TO 55

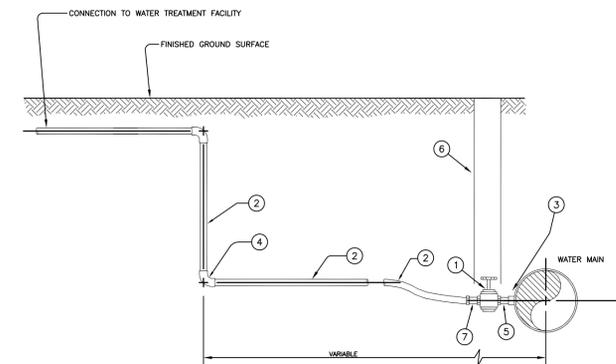
CONCRETE THRUST BLOCKS FOR PIPELINES (CLASS 200 P.S.I. MAX.)

W-3A



CONCRETE THRUST BLOCKS FOR PIPELINES (CLASS 200 P.S.I. MAX.)

W-3B



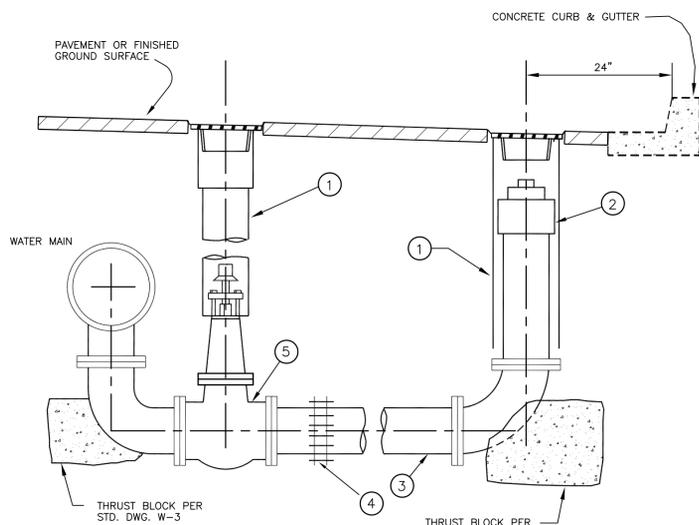
DESCRIPTION

NO.	DESCRIPTION
1	2" RESILIENT SEATED GATE VALVE, FEMALE X FEMALE IRON PIPE THREAD WITH 2" OPERATING NUT MUELLER A-2360 OR APPROVED EQUAL
2	2" TYPE K COPPER TUBING
3	PAINTED IRON SERVICE SADDLE WITH DOUBLE STAINLESS STEEL STRAPS, FORD FS 202, ROMAC 202S OR SMITH-BLAIR 317.
4	2" DIAMETER 90° SILVER SOLDERED ELBOW.
5	2" THREADED GALVANIZED PIPE NIPPLE
6	VALVE BOX AND COVER PER STANDARD DRAWING NO. 11
7	BRASS COUPLING, MALE IRON PIPE THREAD X PACK JOINT, FORD C-84 OR APPROVED EQUAL

- NOTES:**
- WRAP GIP PIPE WITH 2 LAYERS OF 10 MILS PVC TAPE

WATER SERVICE DETAIL

W-5B



NOTES:

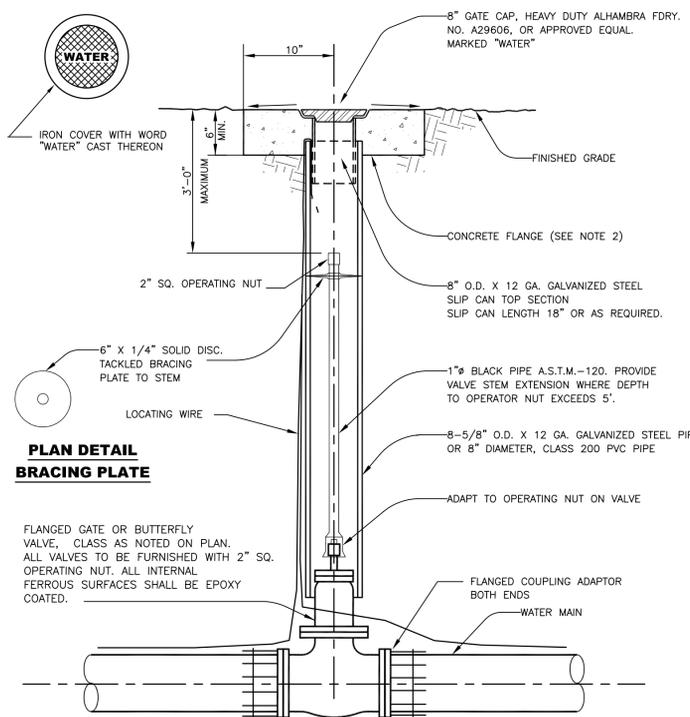
- LOCATE BLOW-OFF VALVE CAN 2'-0" IN FRONT OF FACE CURB
- 4" BLOW-OFF WILL BE REQUIRED FOR 6" - 12" WATER MAIN.
6" BLOW-OFF WILL BE REQUIRED FOR 14" AND LARGER WATER MAIN.
- SIZE OF PIPE, VALVE AND FITTINGS SHALL CONFORM TO THE SIZE OF BLOW-OFF REQUIRED.

DESCRIPTION

NO.	DESCRIPTION
1	8" VALVE BOX AND COVER PER STANDARD DRAWING NO. 11
2	4" OR 6" THREAD GALVANIZED IRON PIPE COUPLING WITH SLOTTED PLUG
3	4" OR 6" SCHEDULE 40 STEEL PIPE, FIELD WRAPPED BELOW GROUND PART WITH TWO LAYERS OF 10 MILS PVC TAPE.
4	4" OR 6" FLEXIBLE COUPLING
5	4" OR 6" Fx F R.S. GATE VALVE WITH PRESSURE RATING TO MATCH MAIN LINE. SEE W-11.

4" & 6" BLOW-OFF ASSEMBLY

W-7

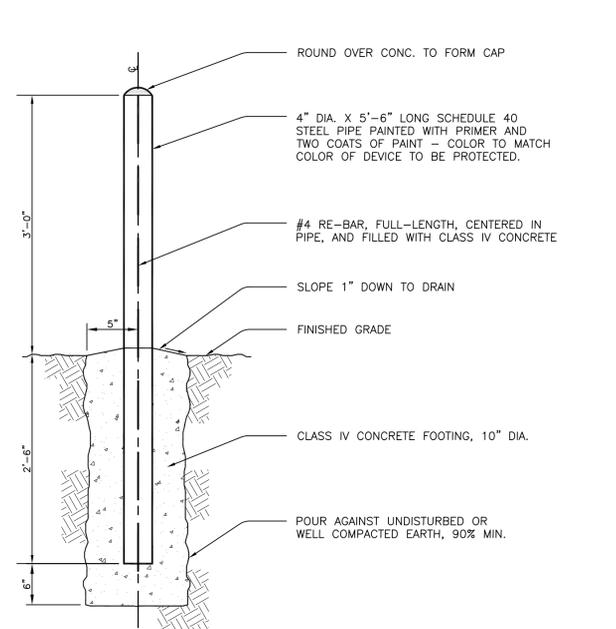


NOTES:

- VALVE MARKER SHALL BE INSTALLED AS DIRECTED BY THE DISTRICT INSPECTOR. DELETE VALVE MARKER WHENEVER VALVE BOX IS INSTALLED IN A ROAD HAVING CURB AND GUTTER.
- CLASS IV CONCRETE FLANGE, 20" SQ. POUR AGAINST WELL COMPACTED EARTH, 90% MIN. DELETE IF VALVE BOX IS INSTALLED IN A PAVED ROAD.

VALVE AND VALVE BOX INSTALLATION DETAIL

W-11

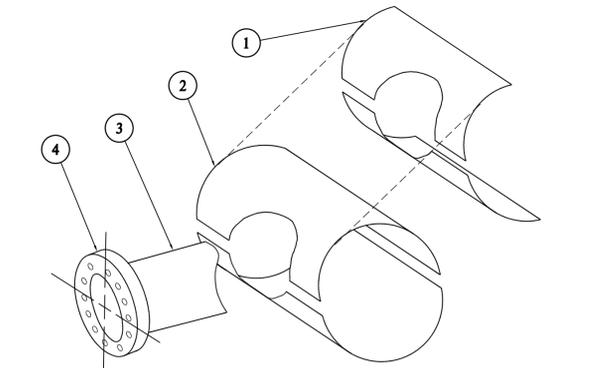


NOTE:

LOCATION SHALL BE AS SHOWN ON PLAN VIEW, OR AS DIRECTED IN THE FIELD BY THE DISTRICT INSPECTOR OR ENGINEER.

GUARD POST INSTALLATION DETAIL

W-12



NOTES:

- USE COLLAR REINFORCEMENT WHEN OUTLET TO MAIN RATIO IS 50% OR LESS.
- USE WRAPPER REINFORCEMENT WHEN OUTLET TO MAIN RATIO IS GREATER THAN 50%.
- SCHEDULE 40 STEEL OUTLET NOZZLE SHOULD BE POSITIONED AND WELDED ON TO WATER MAIN PRIOR TO WELDING THE REQUIRED REINFORCEMENT.
- FLANGE SHALL BE ATTACHED WITH BOLT HOLES CENTERED ABOUT THE VERTICAL AXIS OF THE PIPE UNLESS OTHERWISE NOTED.
- REINFORCEMENT DESIGN IS BASED ON THE STEEL AREA REMOVED FROM THE MAIN LINE AND THE OPERATING PRESSURE OF THE SYSTEM.
- JOB SPECIFICATIONS/DETAILS FOR REINFORCEMENT SHALL GOVERN IF IN EXCESS OF NOTES 1, 2 AND 3 ABOVE.
- ALL METAL SURFACES SHALL BE PAINTED PER SPECIFICATIONS COMPONENTS.

TAPPING OUTLET FOR STEEL PIPE 3" AND LARGER

W-19

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.

Underground Service Alert
Call: TOLL FREE 1-800-227-2600
TWO WORKING DAYS BEFORE YOU DIG

Revision	No.	By	Date	Approval

APPROVED
27395
RCE
Date
Designed LSJ
Checked RW
Scale: NTS
Job No. 62026.184
Drawn LSJ

ENGINEERING RESOURCES
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San Bernardino, California 92408-3430
(909) 890-1255 Fax (909) 890-0995

WEST VALLEY WATER DISTRICT / CITY OF RIALTO
WELL HEAD TREATMENT SYSTEM PROJECT
STANDARD DETAILS
SHEET 12 OF 12
SHEETS DWS-NO. W4-1344

