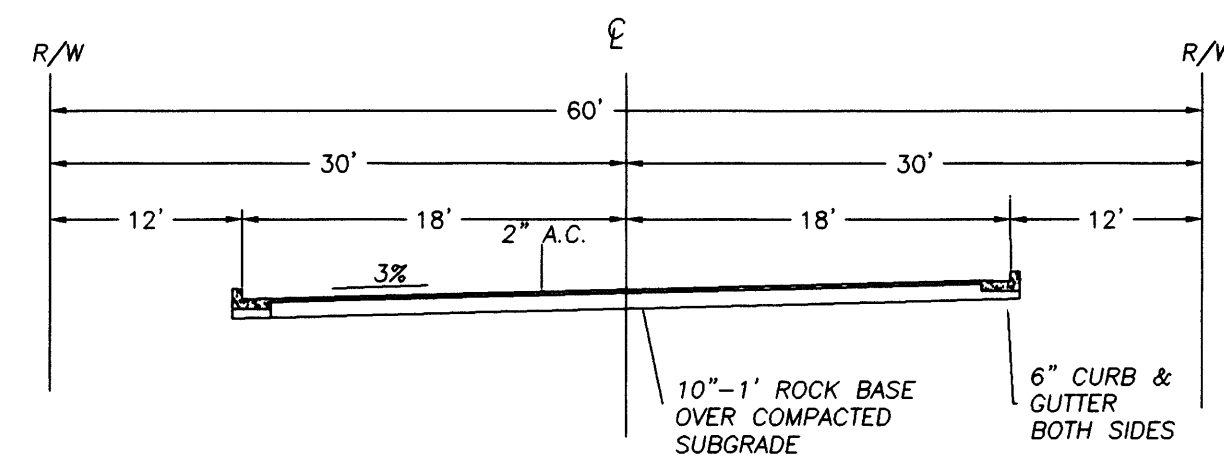


WATERLINE CONSTRUCTION NOTES

- CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES WHERE FACILITIES CROSS. CONTRACTOR SHALL POT HOLE EXISTING UTILITIES 200 FEET PRIOR TO LAYING PIPE AT ALL CROSSINGS. IF CONFLICTS ARISE, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION.
- EXISTING UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY AND ADDITIONAL UTILITIES MAY EXIST. CONTRACTOR SHALL HAVE UTILITIES LOCATED IN ACCORDANCE WITH ORS 757.541 THROUGH 757.571 PRIOR TO CONSTRUCTION. ONE-CALL PHONE NO. IS 1 - 800 332-2344.
- CONTRACTOR SHALL SUBMIT "AS-BUILT" INFORMATION TO THE ENGINEER UPON COMPLETION OF CONSTRUCTION.
- ALL EXISTING UTILITIES DISTURBED BY WATERLINE CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY AND THE RESPECTIVE UTILITY COMPANY NOTIFIED OF THE DISTURBANCE WITHOUT DELAY.
- PRIOR TO TIE-IN, CONTRACTOR SHALL INSTALL TEMPORARY BLOW-OFF ASSEMBLY FOR PRESSURE TESTING AND CHLORINATION.
- ALL VALVES SHALL INCLUDE VALVE BOXES AND LIDS AS REQUIRED BY THE OWNER.
- EXISTING WATER MAINS AND SERVICES SHALL BE KEPT IN OPERATION UNTIL NEW WATER MAINS AND SERVICES CONNECTED AND IN SERVICE.
- CONTRACTOR SHALL PLACE 5-MIL VISQUEEN BETWEEN THRUST BLOCKS AND PIPE FITTINGS.
- TRENCH BACKFILL SHALL BE CLASS B (3/4"-0" CRUSHED ROCK) UNDER ALL STREETS AND BE PATCHED WITH A MIN OF 3", OR MATCH EXISTING THICKNESS WHICHEVER IS GREATER, ASPHALTIC CONCRETE. ALL TRENCHES WILL BE COMPACTED WITH HAND OPERATED PNEUMATIC COMPACTOR.
- CONTRACTOR SHALL COORDINATE ALL STREET AND SIDEWALK CLOSURES WITH THE JURISDICTION CITY/COUNTY. CONTRACTOR SHALL SUPPLY ALL SIGNING AS REQUIRED TO ASSURE AUTOMOBILE AND PEDESTRIAN SAFETY.
- THE CONTRACTOR SHALL REPLACE ANY AND ALL SURVEY MONUMENTS WHICH ARE AFFECTED BY THE CONSTRUCTION. ALL MONUMENTS SHALL BE RESET BY A LICENSED LAND SURVEYOR.

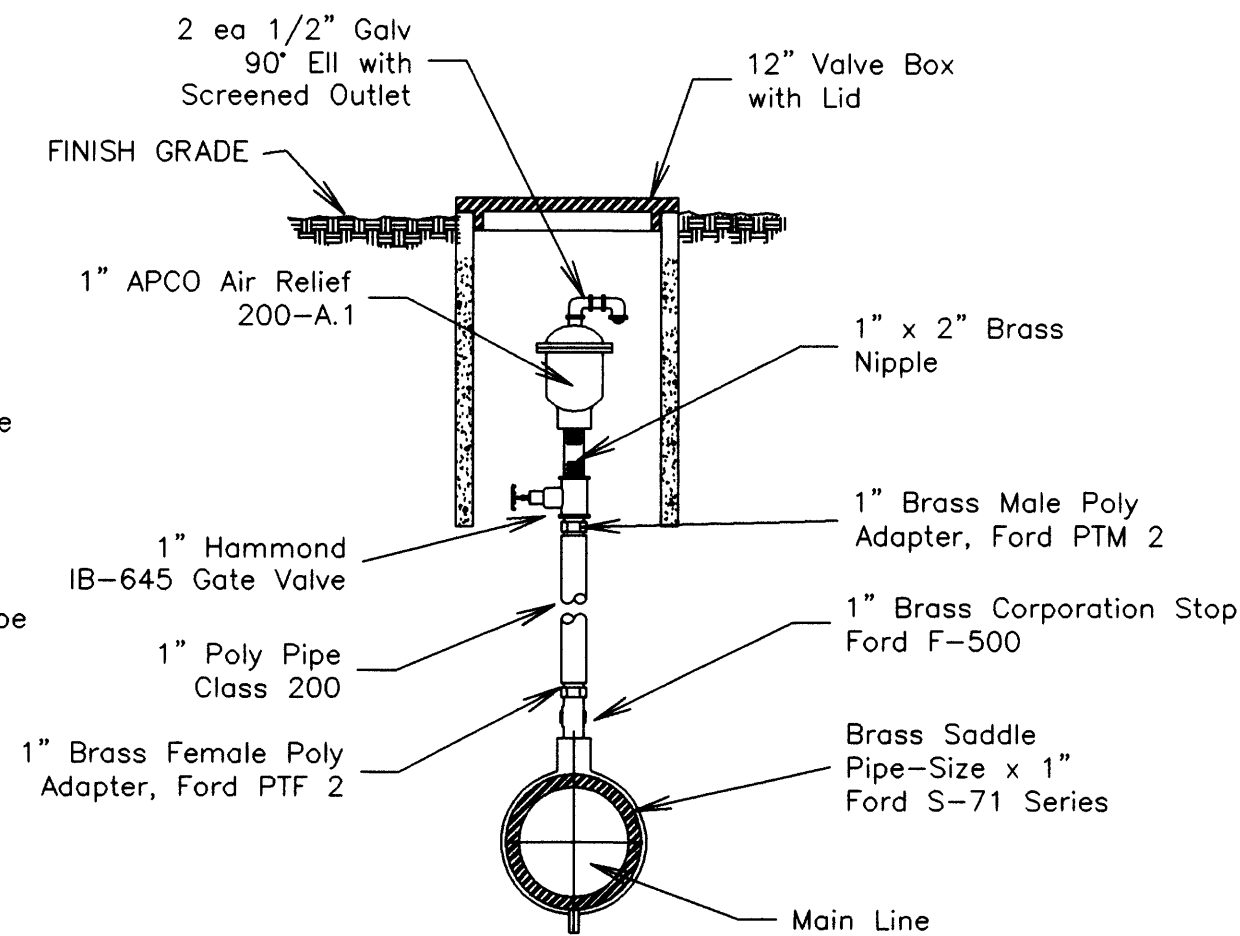
GENERAL WATER NOTES

- All water system work shall be in conformance with Roberts Creek Water District rules and regulations. In cases of conflict, Roberts Creek Specifications shall take precedence over the standard specifications. Developer or contractor shall warrant waterline for 2 years after final acceptance.
- All pipe for water mainlines shall be AWWA C-900 Class 150 PVC pipe or Ductile Iron Class 50, Exception: 4" D.I. shall be Class 52 and 6" D.I. shall be Class 51.
- The contractor shall flush, hydrostatically test, and chlorinate all new water mainlines installed. The engineer and Roberts Creek Water District shall witness all tests made by the contractor to ensure they are performed properly. Completed waterlines shall be chlorinated and bacteriologically tested in accordance with the requirements of ORS 333.61050 (11).
- All construction is subject to inspection by Roberts Creek Water District. The contractor shall give the District 48 hours notice prior to beginning construction. All segments of the water line shall be inspected by the District's inspector before the contractor covers the pipe.
- No other major utilities shall run parallel within 3 feet of the new water main.
- Thrust blocks shall be installed at all bends and fittings as per standard drawing.
- Water service shall be 1" polyethylene per Roberts Creek Standard Details. Contractor shall install all road service crossings in 1-1/2" minimum diameter Schedule 40 PVC conduit.
- All MJ fittings shall have Mega Lug restraint rings in addition to thrust blocks.
- Pipe bedding shall be reject sand per Roberts Creek Water District Specifications.
- Contractor shall be responsible for compliance with all Federal, State, County, and Local regulations regarding the construction of this project. No waterline construction shall begin until written approval of the construction plans is received from the Oregon Health Division.
- Valves shall be resilient seat gate valves, per AWWA C-509 Mueller, Kennedy, Clow, or approved.
- Fittings shall be ductile iron per AWWA C-110, 250 p.o.e. rating with mechanical joint or flanged ends, as detailed.
- Toning wire shall be 12 Ga. solid copper, blue insulated for in-ground use and shall be installed directly over all water main and service line installations. Wire shall be brought to the surface at all valves, hydrants, and meter boxes. Splices from mainline toning wire to service line toning wire shall be made with 3M-Direct Bury splice kits designed for in-ground use.
- Fire hydrants shall be Kennedy Guardian or 500F Mueller "Centurion". Hydrant shall have two 2-1/2" ports and one 4" threaded pumper nozzle. Pumper nozzle shall be oriented street side or toward building in parking lots. Hydrant valve shall be 5-1/4" compression type. Hydrant shall be mechanical joint.
- Meter location to be marked for horizontal and vertical alignment.
- All water mainlines shall be installed with a minimum cover of 36".
- In places where the installation of new water lines cross a sanitary sewer main or lateral, the current edition of The Construction Standards for the Oregon Health Division, Oregon Administrative Rules, Chapter 333, Section 333-61-050 (10) shall be complied with.
- Roberts Creek Water District employees shall operate all valves on existing system. Scheduled shut downs shall require 48 hours notification to the District so that adequate notice can be given to the District customers affected.

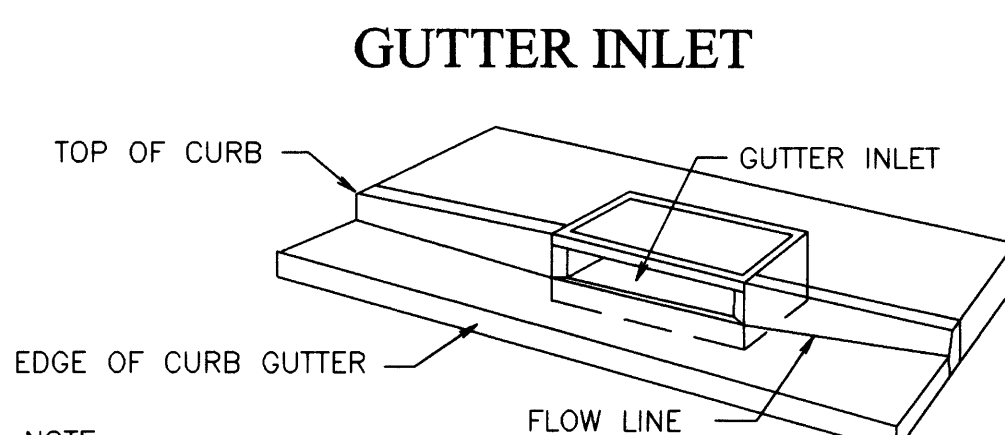


TYPICAL STREET SECTION

AUTOMATIC AIR RELIEF VALVE APCO # 200-A.1

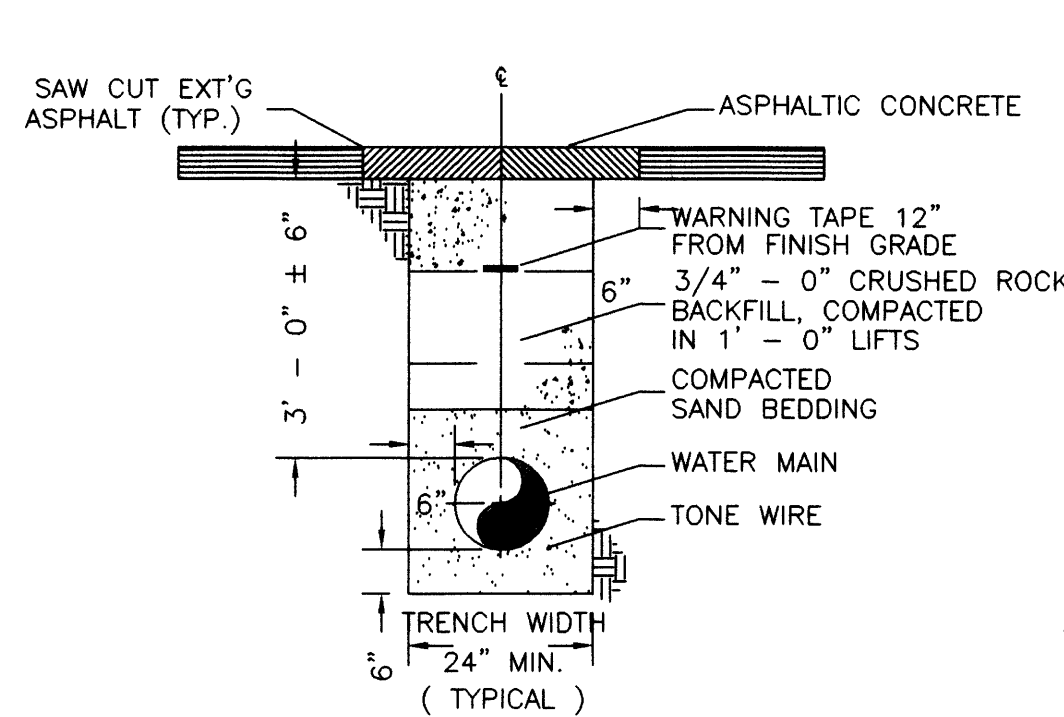


- NOTES:
- AIR-RELEASE AND VALVE ASSEMBLIES SHALL BE INSTALLED AT HIGH POINTS.
 - PIPE AND VALVE SIZES SHALL BE SPECIFIED FOR EACH PROJECT BY THE ENGINEER.

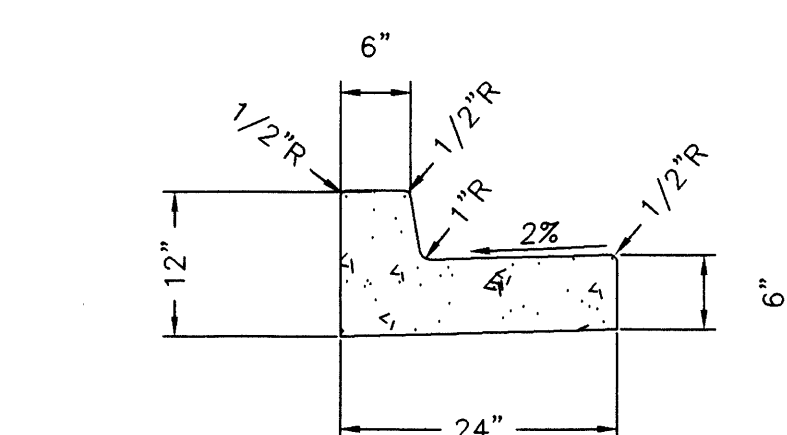


- NOTE:
- FOR COMPLETE DETAILS FOR GUTTER INLET, SEE THE FOLLOWING DOUGLAS COUNTY PUBLIC WORKS STANDARD DETAIL SHEETS:
- GUTTER INLET S-29
GUTTER INLET COVER S-30A

SURFACE RESTORATION 4" AC IN PAVED AREAS

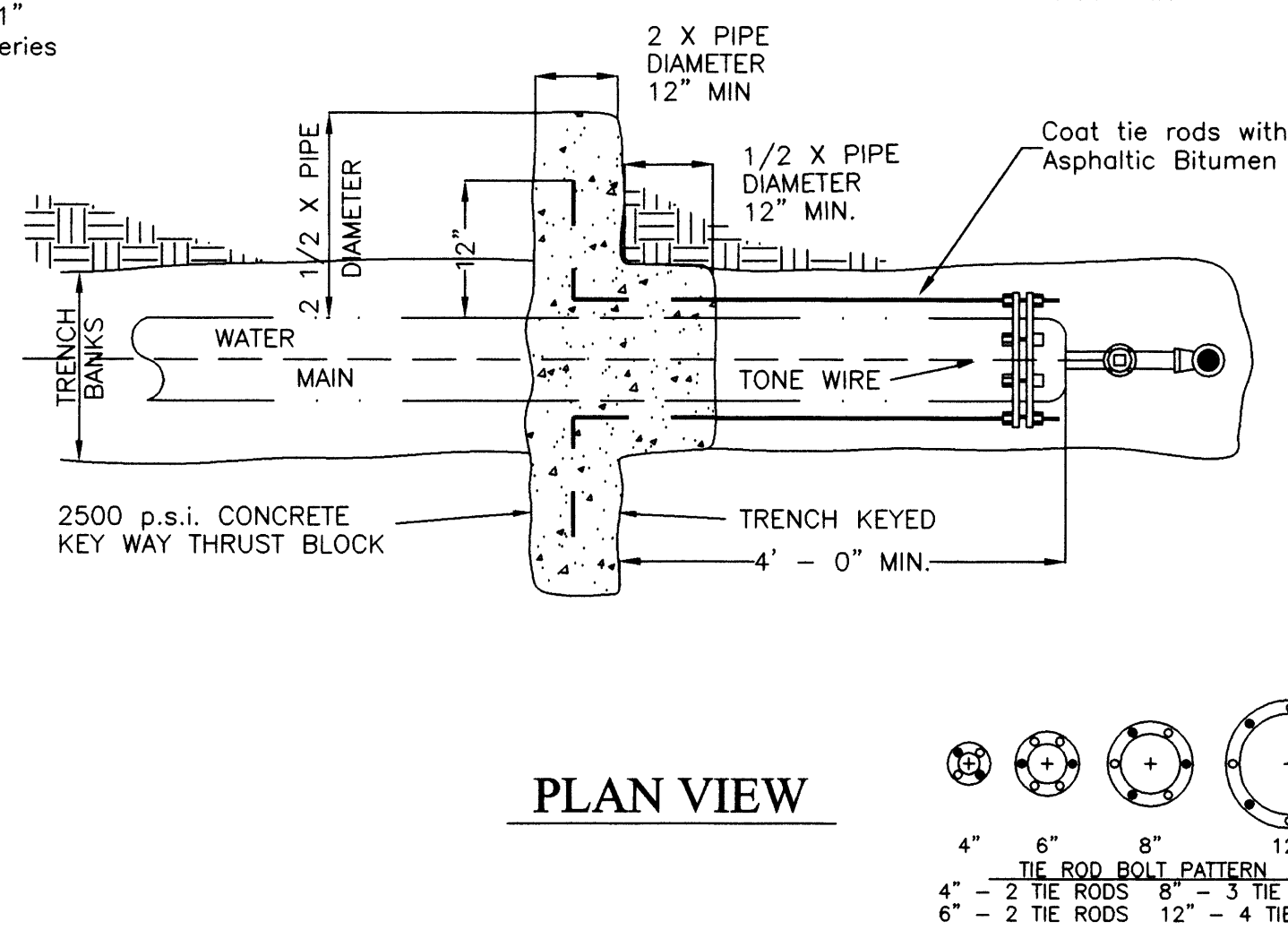


TYPICAL TRENCH SECTION

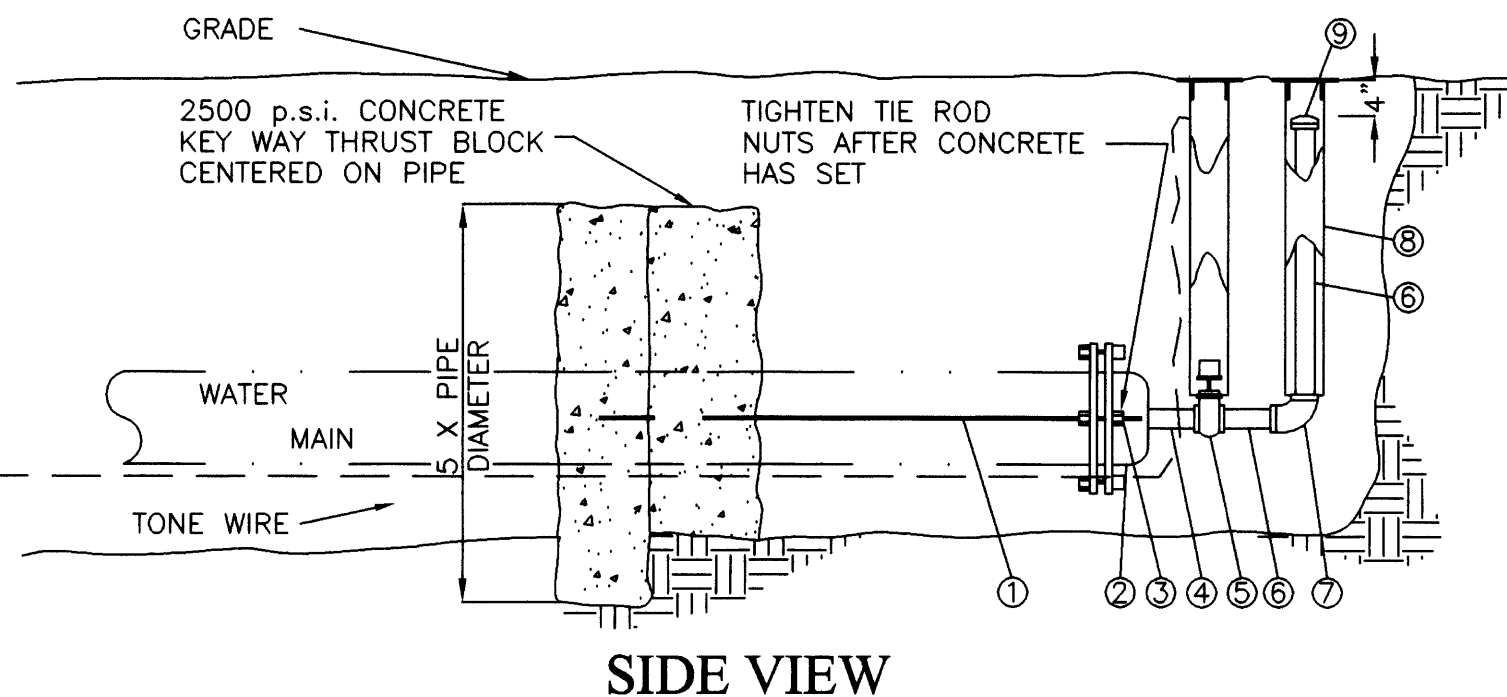


CURB & GUTTER MONOLITHIC

TYPICAL 2" BLOWOFF ASSEMBLY

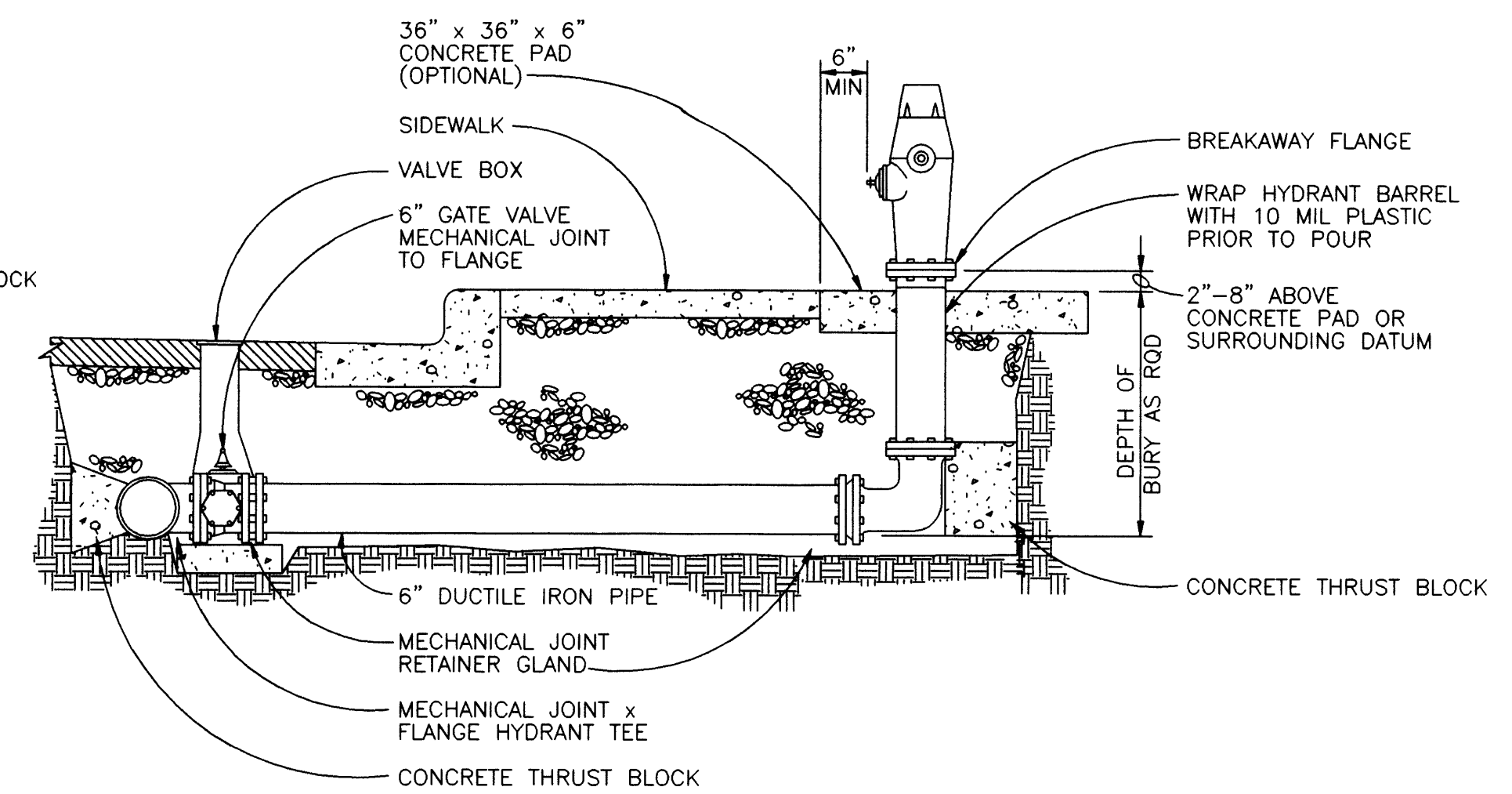


PLAN VIEW



SIDE VIEW

- LEGEND
- 3/4" DIA. STEEL TIE ROD, N.C. THD. ONE END, BITUMASTIC COATED AFTER INSTALLATION
 - MAIN SIZE CAP WITH 2" I.P. THD. OUTLET (M.J. X F.I.P.T.)
 - STAR "SUPERSTAR TIEBOLT" AND "SUPERSTAR TIENUT" (OPTIONAL)
 - 2" GALVANIZED IRON PIPE NIPPLE, BITUMASTIC COATED AFTER INSTALLATION
 - 2" GATE VALVE (F.I.P.T.) WITH 2" SQ. OPERATING NUT
 - 2" GALVANIZED IRON PIPE, LENGTH AS REQUIRED
 - 2" GALVANIZED 90° ELBOW (F.I.P.T.)
 - 6" STANDARD VALVE BOX WITH LID
 - 2" CAP, HAND TIGHTEN ONLY

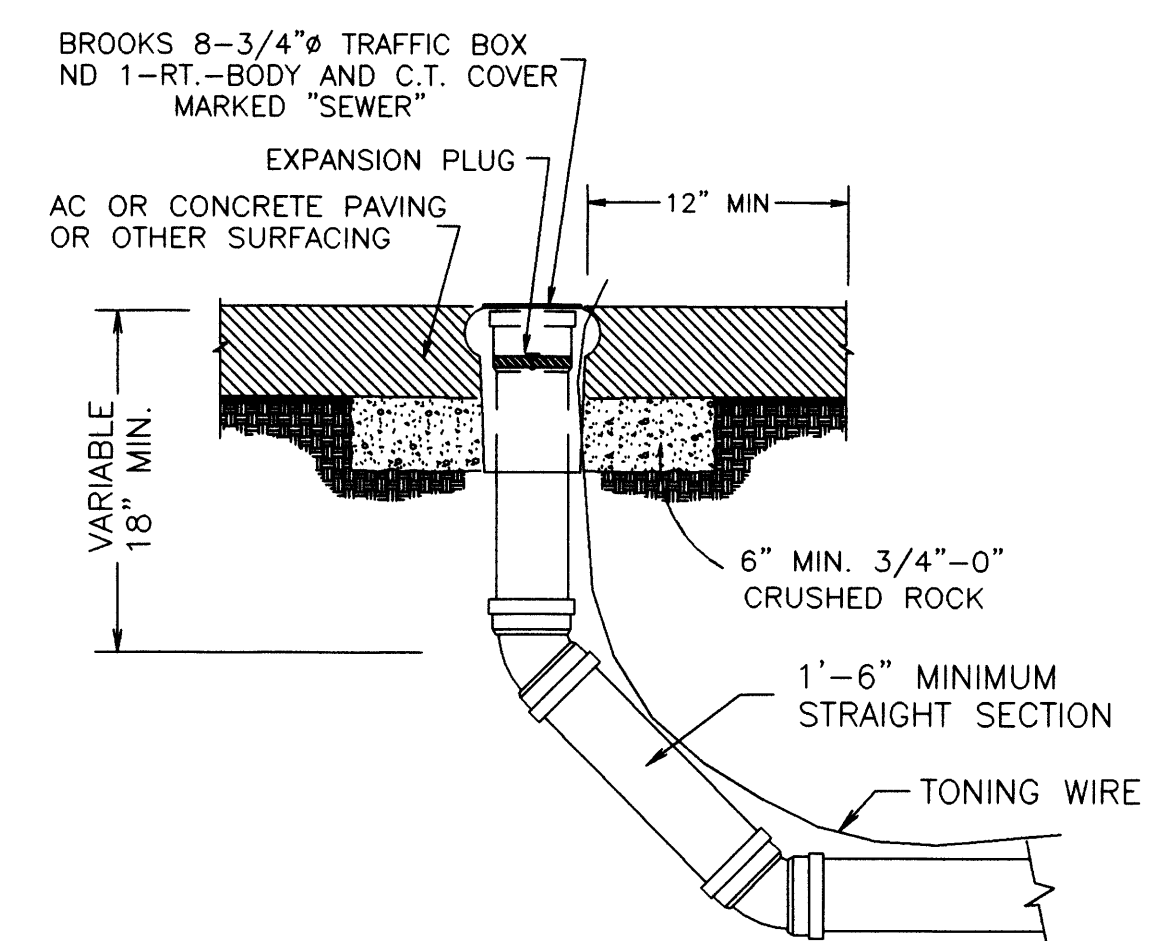


NOTES

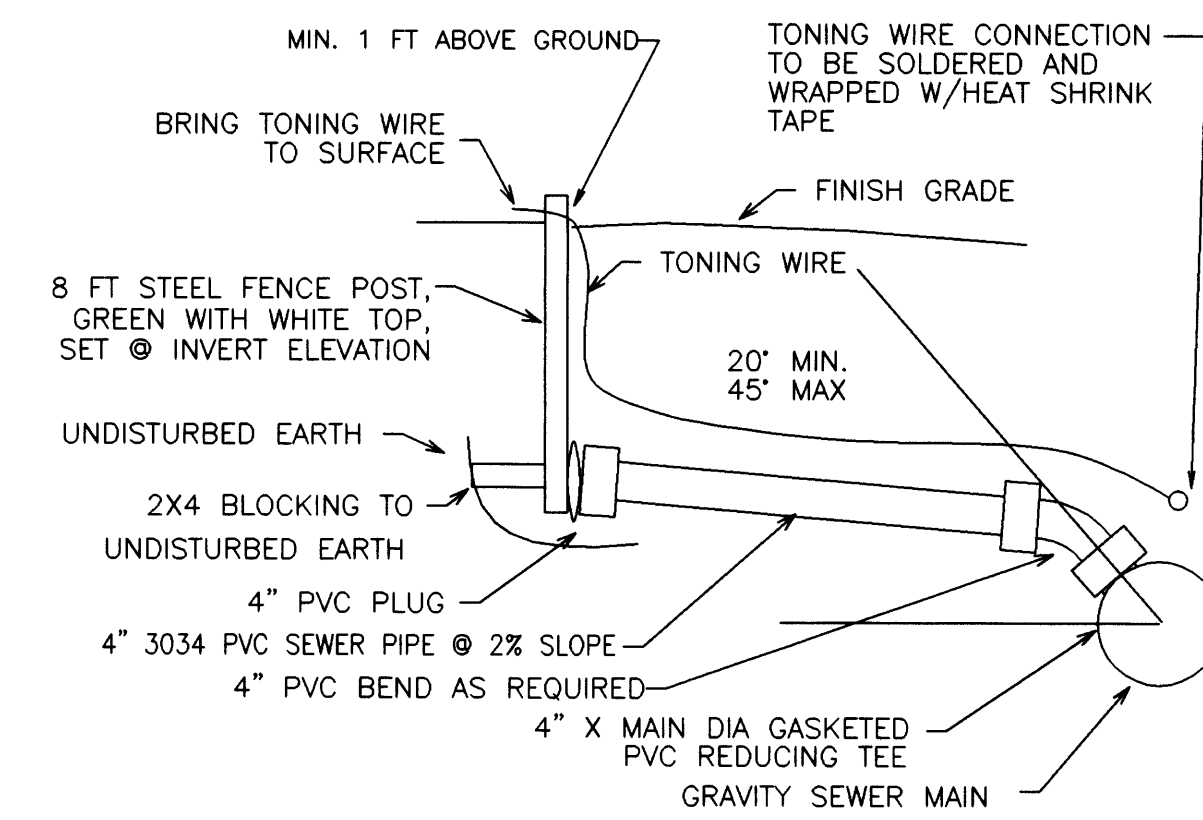
- WHEN PIPE IS SHORTER THAN 18', NO JOINTS ALLOWED. USE MECHANICAL JOINT RETAINER GLANDS. TWO 3/4" GALVANIZED TIE RODS MAY BE USED IN LIEU OF THRUST BLOCKS FOR INSTALLATIONS LESS THAN 18' LONG. TIE RODS SHALL BE COATED WITH TWO COATS OF BITUMASTIC.
- WHEN PIPE IS LONGER THAN 18', RETAINER GLANDS NOT REQUIRED.
- THERE SHALL BE A MINIMUM OF 18" HORIZONTAL CLEARANCE AROUND HYDRANT.
- WHEN PLACED ADJACENT TO CURB, HYDRANT PORT SHALL BE 24" FROM FACE OF CURB.
- CONCRETE THRUST BLOCKS SHALL BE CONSTRUCTED AS PER THRUST BLOCK STANDARD DRAWING. DO NOT BLOCK DRAIN HOLES.
- EXTENSIONS REQUIRED FOR HYDRANT SYSTEMS SHALL BE INSTALLED TO THE MANUFACTURER'S SPECIFICATIONS.
- FIRE HYDRANTS SHALL BE PLACED TO PROVIDE A MINIMUM OF 5' CLEARANCE FROM DRIVEWAYS, POLES, AND OTHER OBSTRUCTIONS.
- HYDRANT PUMPER PORT SHALL FACE DIRECTION OF ACCESS.

FIRE HYDRANT INSTALLATION DETAILS

CLEAN-OUT DETAIL



TYPICAL 4" SEWER SERVICE CONNECTION DETAIL

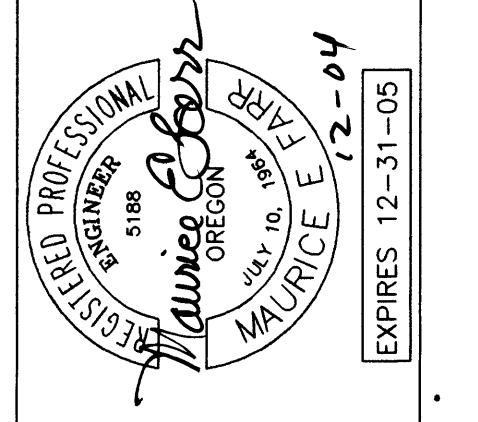


AS-BUILT PLAN OCTOBER 2004

Co. Rd. #413 M.F. 0.00. 0.05

CO. RD. #413 DETAIL SHEET

FILED
Date: 3-9-2006 Pr. JP
This survey consists of
M. p.
N. relative
Corner Rpt:
DOUGLAS COUNTY
SURVEYOR



DETAIL SHEET
FOR: CURRIE, EWERT, & KING

DATE: 4-20-99
JOB #: 99-005
FILE: STR504.DWG
SHEET #: 2 of 3

FOR: VALYNN CURRIE
271 SW MAIN
WINSTON, OR 97469

TEL 541-874-3258
163 TRAYLOR ROAD
RIDGELAND, OREGON 97469

DAVID J. BEEDLE
PROFESSIONAL
LAND SURVEYING

R413DET1