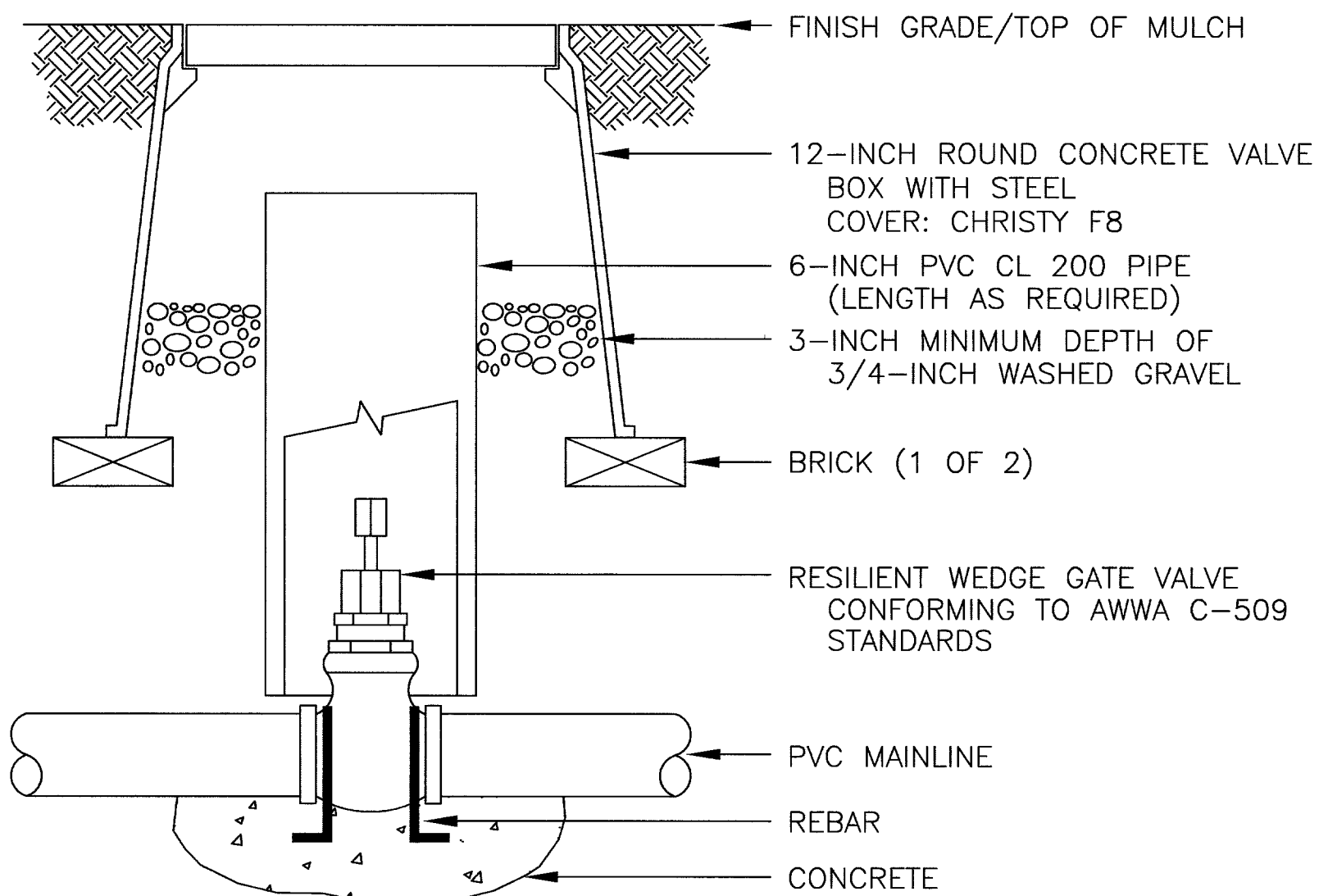
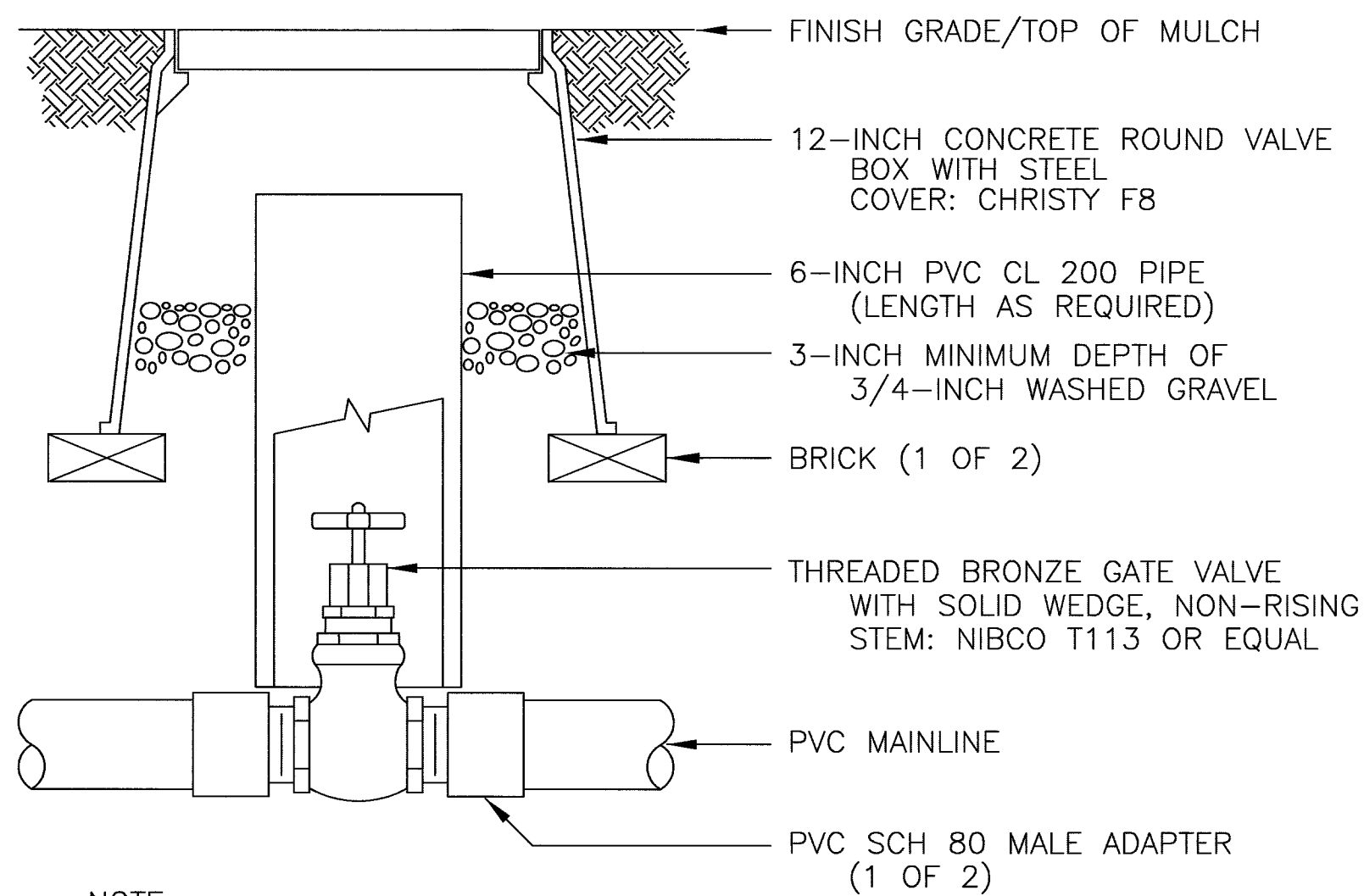




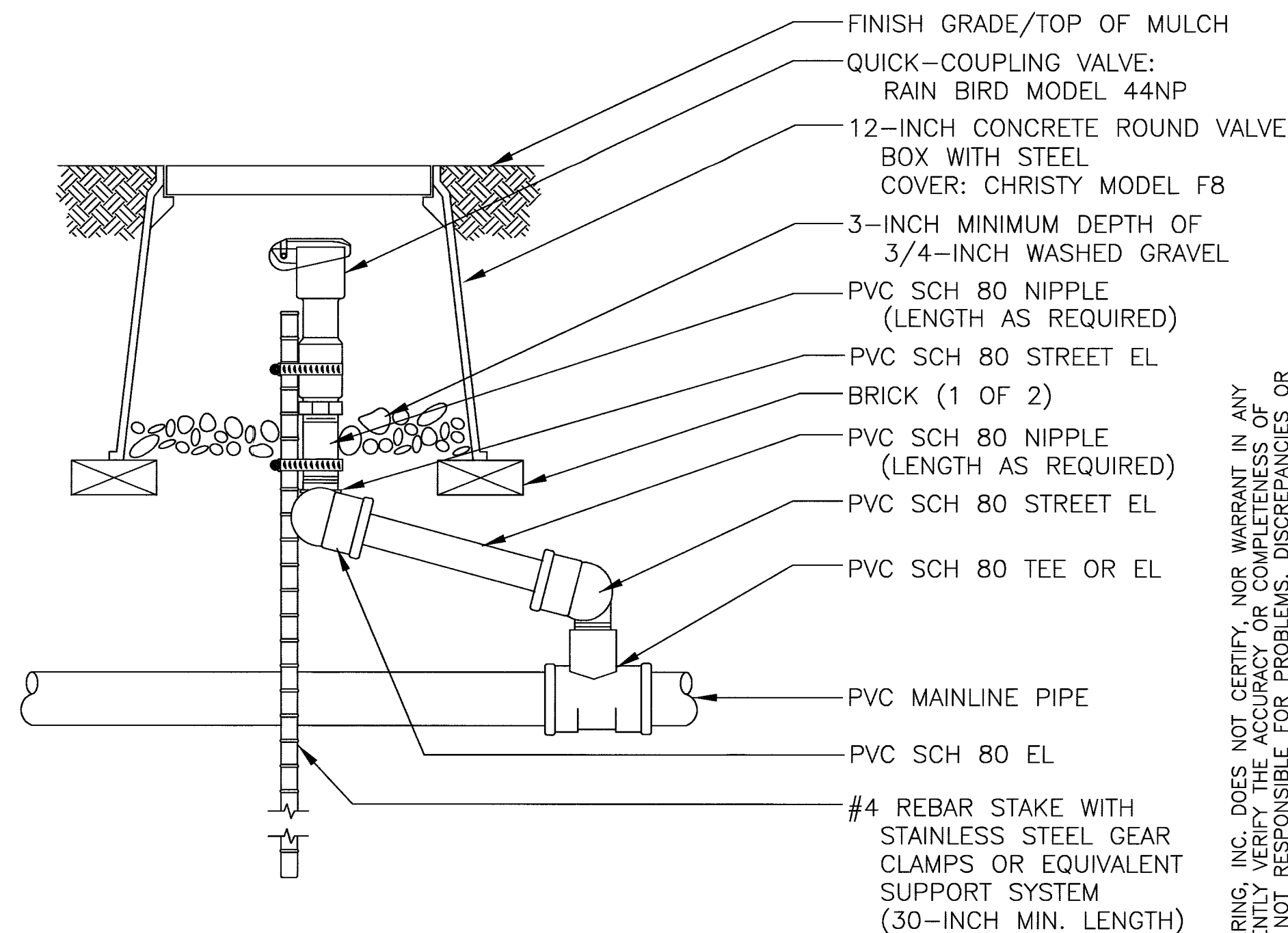
NOTES:

1. NOMINAL SIZE OF GATE VALVE TO MATCH NOMINAL MAINLINE SIZE.
2. INSTALL A 4-INCH THICK CONCRETE PAD BELOW VALVE WITH NO. 4 REBAR WHEN USING PUSH ON TYPE VALVES.
3. RESILIENT WEDGE GATE VALVE MAY HAVE EITHER MECHANICAL JOINT, PUSH-ON ENDS, OR FLANGE ENDS. VALVE SHALL BE EQUIPPED WITH SQUARE OPERATING NUT.



NOTE:

1. NOMINAL SIZE OF GATE VALVE TO MATCH NOMINAL MAINLINE SIZE.



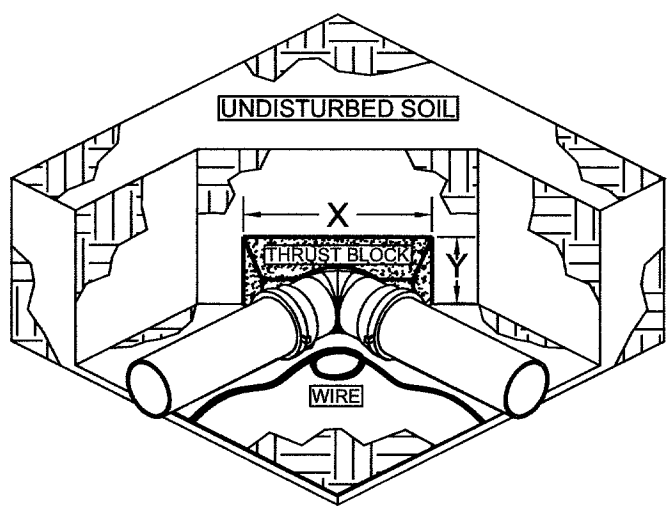
NOTES:

1. FURNISH FITTINGS AND PIPING NOMINALLY SIZED IDENTICAL TO NOMINAL QUICK COUPLING VALVE INLET SIZE.
2. FOR MAINLINE PIPE SIZES WHERE DUCTILE IRON FITTINGS ARE CALLED FOR IN THE SPECIFICATIONS, DELETE PVC SERVICE TEE SHOWN AND USE DUCTILE SERVICE TEE.
3. FOR QUICK COUPLING VALVE INSTALLATION IN TENNIS EXHIBITION COURT, COORDINATE PIPING AND VALVE LOCATION WITH CITY REPRESENTATIVE AND APPROPRIATE SUB-CONTRACTORS PRIOR TO CONSTRUCTION. PROVIDE SAND BEDDING FOR PIPE AND FITTING INSTALLATION AND COMPACT TO 95% PROCTOR DENSITY. PROVIDE TRAFFIC RATED VALVE BOX ASSEMBLY.

1 3' AND LARGER ISOLATION GATE VALVE ASSEMBLY

2 2-1/2-INCH AND SMALLER ISOLATION GATE VALVE ASSEMBLY

3 QUICK COUPLING VALVE ASSEMBLY

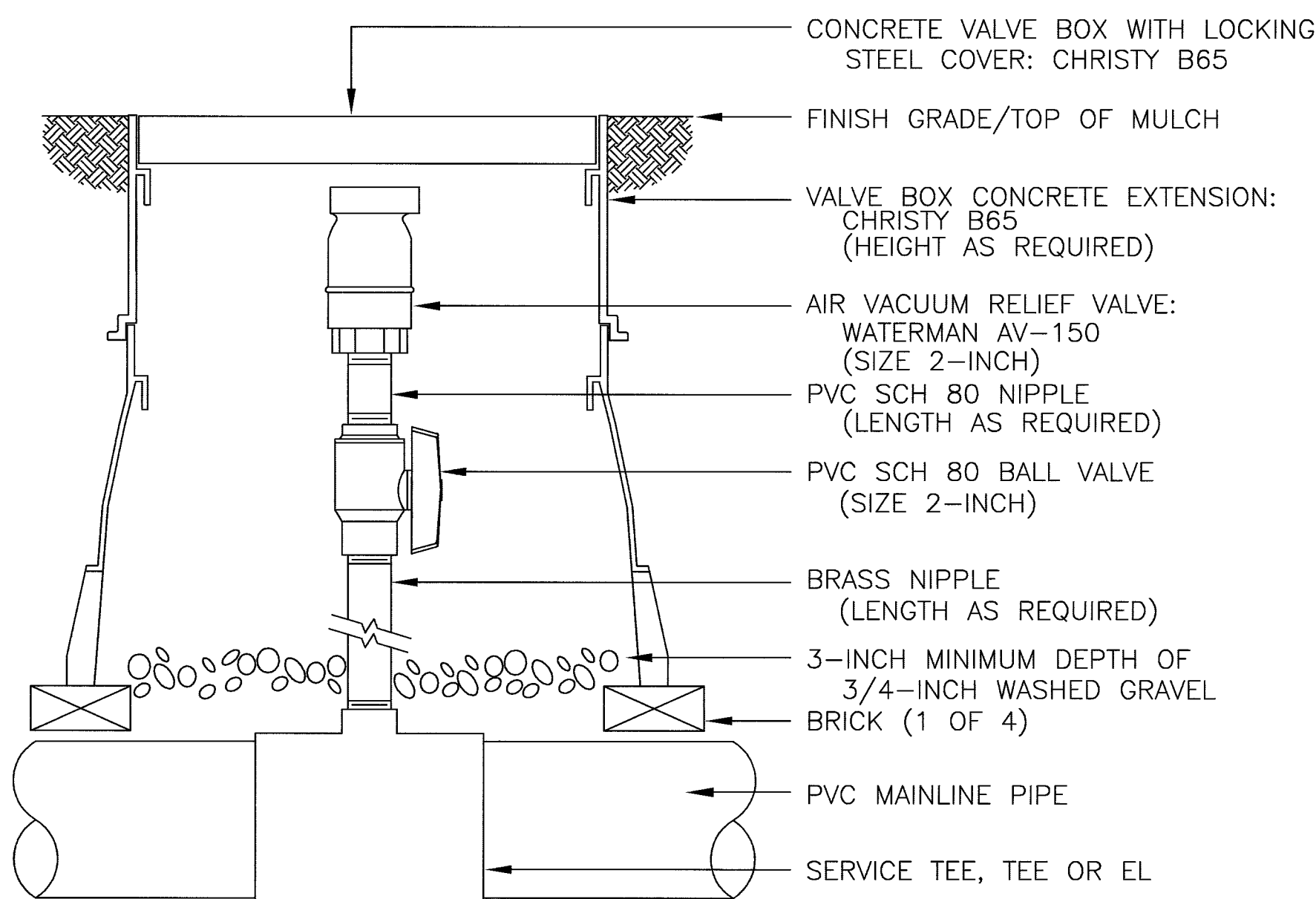


THRUST BLOCK SURFACE AREA (SF) AGAINST UNDISTURBED SOIL (X x Y) = (SF)

FITTING SIZE	45° BEND (SF)	90° BEND (SF)	TEE OR DEAD END(SF)
3"	.62	1.12	.80
4"	1.01	1.84	1.31
6"	2.18	3.99	2.83
8"	3.71	6.78	4.82
10"	5.77	10.92	7.48

NOTES:

1. INSTALL AND TEST MAINLINE ACCORDING TO MANUFACTURER'S INSTALLATION SPECIFICATIONS.
2. REFER TO SPECIFICATIONS FOR ALL TRENCH DEPTHS AND WIDTHS.
3. USE NO. 4 REBAR WITH MASTIC COATING WHERE PIPE MUST BE ANCHORED TO THRUST BLOCK.
4. INSTALL THRUST BLOCK SO THE HORIZONTAL (X) AND VERTICAL (Y) DIMENSIONS OF THE THRUST BLOCK ARE APPROXIMATELY EQUAL.
5. INSTALL THRUST BLOCK WITH A MINIMUM THICKNESS FROM THE PIPE TO THE UNDISTURBED SOIL OF TWO TIMES THE DIAMETER OF THE PIPE.
6. THRUST BLOCK SIZING ASSUMES A MAXIMUM OPERATING PRESSURE OF 100 PSI, A MAXIMUM VELOCITY OF 5 FEET PER SECOND, AND A SOIL BEARING CAPACITY OF 1500 LBS/FT².



NOTES:

1. WHEN DUCTILE IRON FITTINGS ARE CALLED FOR IN THE SPECIFICATIONS, DELETE PVC SERVICE TEE SHOWN AND USE DUCTILE IRON SERVICE TEE.
2. OPEN BALL VALVE IN ASSEMBLY 1/8 TURN UNTIL IRRIGATION SYSTEM IS FULLY CHARGED WITH WATER.

4 TYPICAL THRUST BLOCK INSTALLATION

5 AIR/VACUUM RELIEF VALVE ASSEMBLY

Aqua Engineering, Inc.
Irrigation System Design, Water Management,
and Water Feature Engineering
4803 Innovation Drive
Fort Collins, Colorado 80525
Phone (970) 229-9668, FAX (970) 226-3855



REVISIONS
CONTRACTOR REVISIONS
1-19-06

CONSULTANT

7251 W CHARLESTON BLVD
LAS VEGAS, NEVADA 89117
PHONE (702) 258-0115
FAX (702) 869-8547



Stantec

WASHINGTON BUFFALO PARK - PHASE 1A
WASHINGTON & BUFFALO, LAS VEGAS, NV

IRRIGATION DETAILS
CONTRACTOR RECORD DRAWINGS

STAMP

OWNER: CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS
ARCHITECTURAL SERVICES

400 EAST STEWART AVENUE
LAS VEGAS, NEVADA 89101
PHONE: (702) 229-6535
FAX: (702) 382-3232
TDD: (702) 386-9108

DRAWN: RJP
FILE: P-IR-05.dwg
DATE: AUGUST 2003
SCALE: N/A
BID NO: 03B34101
CLV DWG NO: 650.16.1A

SHEET NO

IR-5