

**DWG NO.****TITLE/DESCRIPTION**

WT-17 (1 of 9)	- INDEX AND GENERAL NOTES
WT-17 (2 of 9)	- VAULT ARRANGEMENT SCHEMATICS
WT-17 (3 of 9)	- VAULT SECTIONAL PLAN VIEW
WT-17 (4 of 9)	- COVER SLAB PLAN VIEW
WT-17 (5 of 9)	- VAULT SECTION "A"
WT-17 (6 of 9)	- VAULT SECTIONS "B" AND "C"
WT-17 (7 of 9)	- PIPING AND EQUIPMENT SCHEDULE
WT-17 (8 of 9)	- SPECIFIC EQUIPMENT NOTES
WT-17 (9 of 9)	- VAULT DIMENSIONS SCHEDULE

**ALL NINE (9) PRV DRAWINGS SHALL  
BE INCLUDED ON THE CONSTRUCTION PLANS.**

- A. THE VALVE SIZE AND LAYOUT SCHEME SHALL BE DETERMINED BY THE OWNER; APPROVAL WILL BE BY THE UTILITIES DEPARTMENT. PLANS MUST BE PREPARED, SEALED AND SIGNED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS.
- B. THE VAULT PIPING LAYOUT SHALL BE SHOWN IN DETAIL WT-17 (2 OF 9).
- C. THE CONTRACTOR SHALL PROVIDE SUBMITTALS FOR APPROVAL BY THE OWNER FOR ALL VAULT, PIPING, EQUIPMENT AND MATERIALS PRIOR TO ANY CONSTRUCTION.
- D. FIELD VERIFY THE DEPTH OF THE ADJACENT PIPING TO BE CONNECTED TO AND ADJUST THE VERTICAL DIMENSIONS OF THE VAULT AS REQUIRED.
- E. FIELD VERIFY THE MATERIAL AND PRESSURE CLASS OF THE ADJACENT PIPING TO BE CONNECTED TO AND PROVIDE APPROPRIATE PIPE CONNECTION FITTINGS AS REQUIRED.
- F. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND ELEVATIONS OF ANY EXISTING UTILITIES, STRUCTURES AND EQUIPMENT WHICH PERTAIN TO AND/OR AFFECT THE CONSTRUCTION OF THE VAULT.
- G. ANY EXISTING UTILITIES, PAVEMENT, FENCING, CURBS, SIDEWALKS, STRUCTURES, ETC., THAT ARE DAMAGED OR REMOVED SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR.
- H. THE LOCATION AND ORIENTATION OF THE VAULT SHALL BE APPROVED BY THE OWNER PRIOR TO CONSTRUCTION.
- I. DIMENSIONS AND ELEVATIONS SHOWN WITH AN ASTERISK (\*) SHALL BE DETERMINED AND/OR VERIFIED AFTER FINAL EQUIPMENT SELECTION AND LOCATION HAVE BEEN MADE.
- J. VERIFY ALL PIPING DIMENSIONS AND ELEVATIONS FOR EQUIPMENT AND PIPING MATERIALS ACTUALLY FURNISHED FOR THIS PROJECT.
- K. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE REVEGETATED TO A MINIMUM OF PRE-CONSTRUCTION CONDITIONS.
- L. ALL SITE AND VAULT PIPING SHALL BE DUCTILE IRON PIPE (D.I.P.) WITH BITUMINOUS COATING AND CEMENT LINING.
- M. ALL BURIED PIPING SHALL BE POLYWRAPPED, AND SHALL ALSO HAVE RESTRAINED JOINTS INSTALLED TO A MINIMUM DISTANCE OUTSIDE OF THE VAULT WALL AS SHOWN FOR NOTE NO. "29" ON DETAIL WT-17 (7 of 9).
- N. ALL BURIED PIPING SHALL BE INSTALLED WITH 4- FEET MINIMUM COVER.
- O. THE CONTRACTOR SHALL PROVIDE COUPLINGS, EXPANSION JOINTS, AND THRUST RESTRAINTS AS REQUIRED FOR ALL PIPING.
- P. ALL VALVES, FITTINGS, AND PIPE NOT DESIGNATED OTHERWISE SHALL BE EPOXY LINED AND SHALL BE NATIONAL SANITATION FOUNDATION (NSF) STANDARD 61 CERTIFIED.

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**DATE**

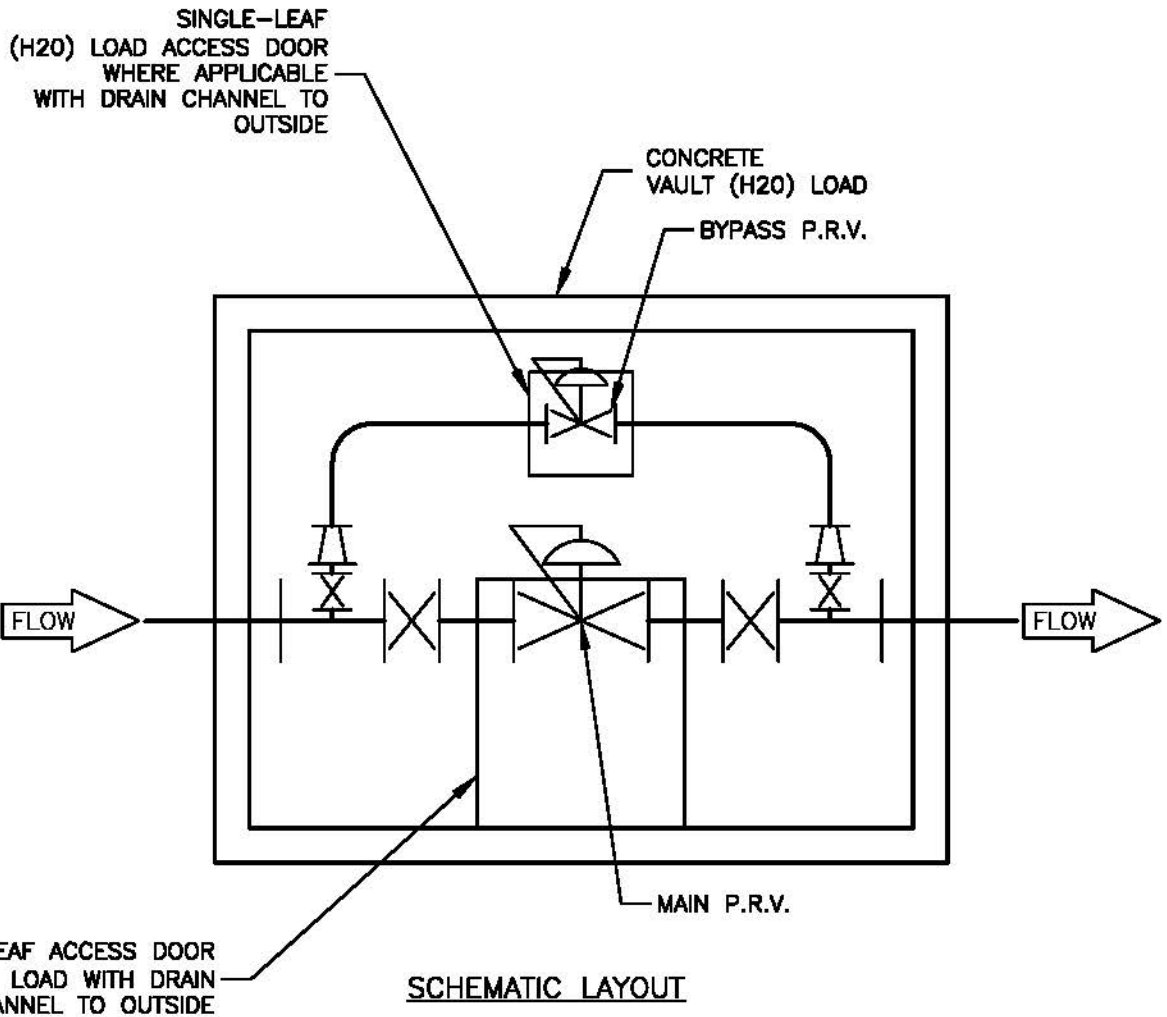
THE ARCHITECT/ENGINEER ASSUMES  
RESPONSIBILITY FOR THE APPROPRIATE  
USE OF THIS DETAIL. (NOT TO SCALE)

**CITY OF ROUND ROCK**

**PRESSURE REDUCING VALVE  
VAULT LAYOUT  
INDEX AND GENERAL NOTES**

**DRAWING NO:  
WT-17 (1 of 9)**





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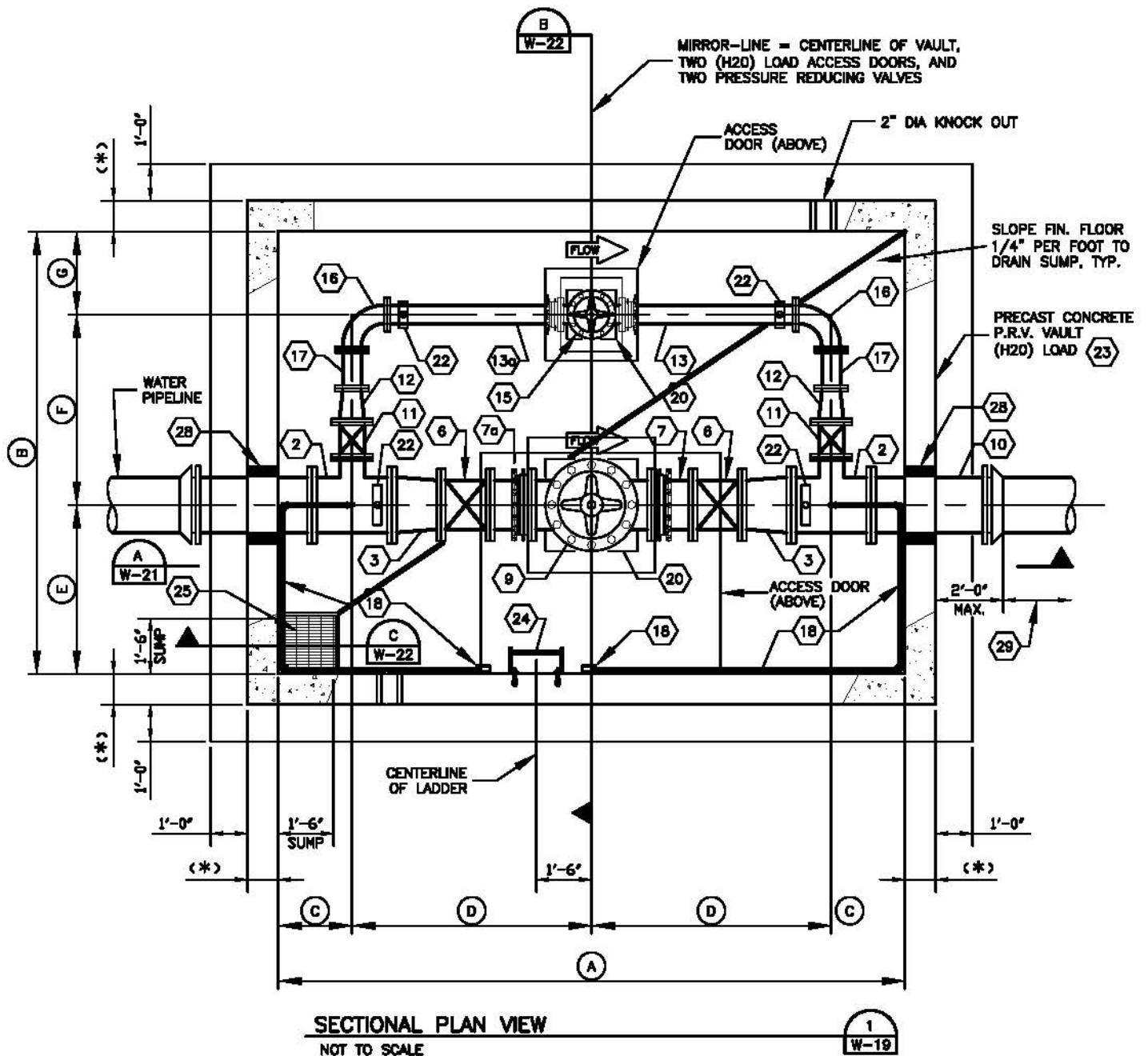
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# CITY OF ROUND ROCK

## PRESSURE REDUCING VALVE VAULT LAYOUT VAULT ARRANGEMENT SCHEMATIC

DRAWING NO:  
WT-17 (2 of 9)





**NOTE:**

SEE DETAIL DRAWING NO. WT-17 (8 of 9) FOR EQUIPMENT NOTES

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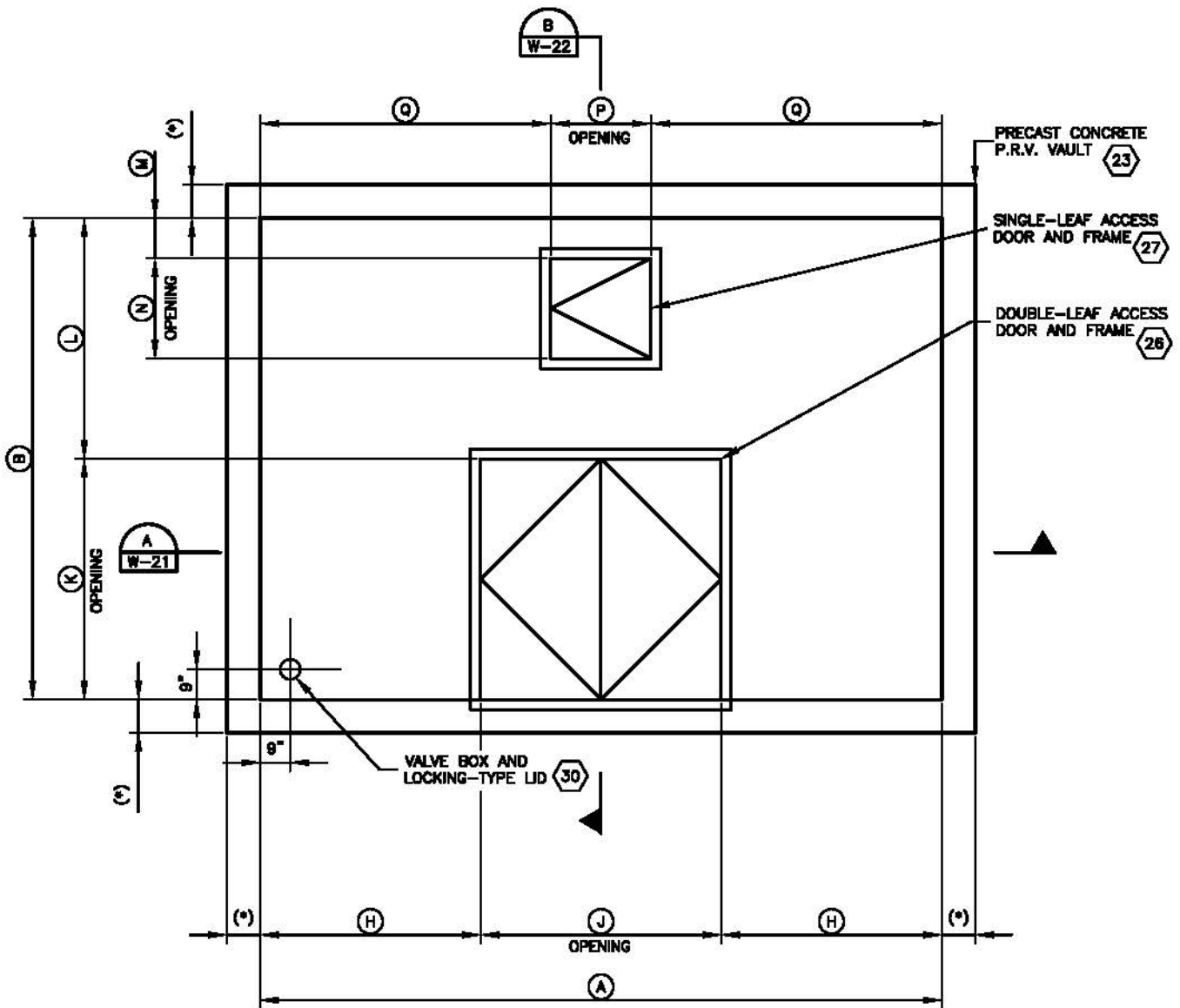
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**CITY OF ROUND ROCK**

**PRESSURE REDUCING VALVE  
VAULT LAYOUT  
VAULT SECTIONAL PLAN VIEW**

DRAWING NO:  
WT-17 (3 of 9)





**COVER SLAB PLAN VIEW**  
NOT TO SCALE



**NOTE:**

(\*) SEE NOTE "1" ON DETAIL WT-17 (1 of 9).

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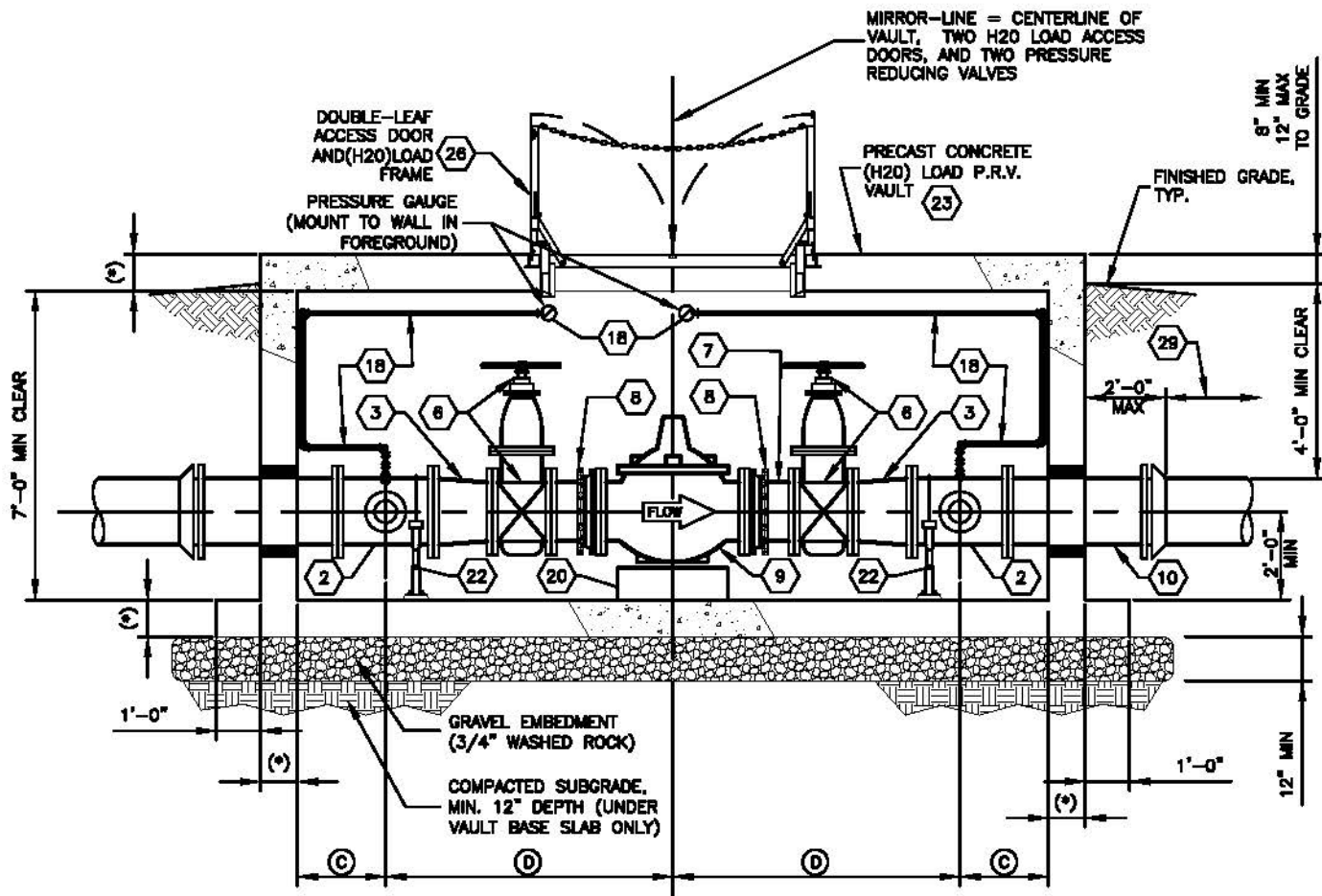
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**CITY OF ROUND ROCK**

**PRESSURE REDUCING VALVE  
VAULT LAYOUT  
COVER SLAB PLAN VIEW**

DRAWING NO:  
WT-17 (4 of 9)





VAULT SECTION "A"

NOT TO SCALE



**NOTE:**

(\*) SEE NOTE "1" ON DETAIL WT-17 (1 of 9).

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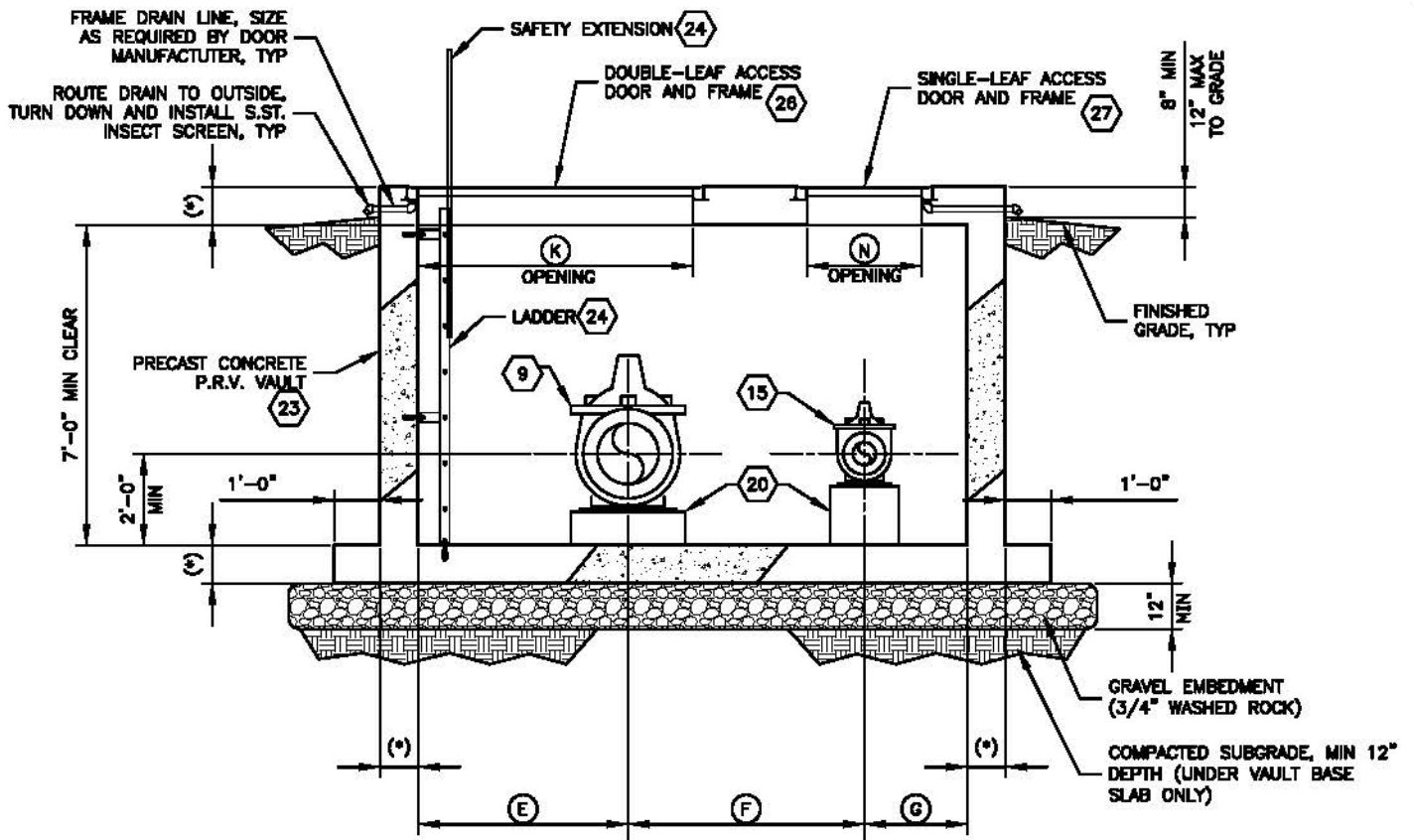
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**CITY OF ROUND ROCK**

**PRESSURE REDUCING VALVE  
VAULT LAYOUT  
VAULT SECTION "A"**

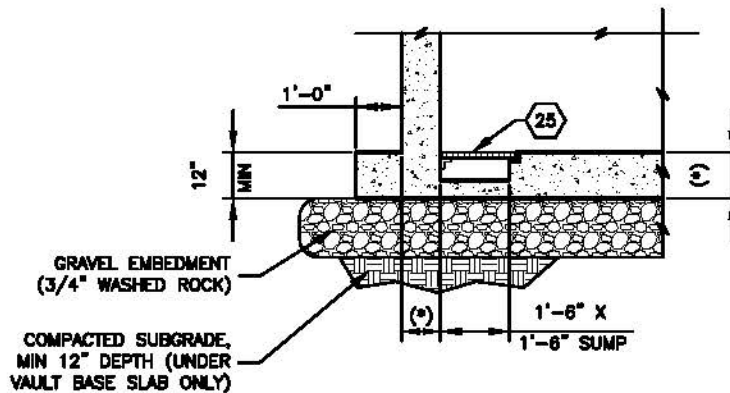
DRAWING NO:  
WT-17 (5 of 9)





**VAULT SECTION**  
NOT TO SCALE

**B**  
W-19



**SUMP SECTION**  
NOT TO SCALE

**C**  
W-19

**NOTE:**

(\*) SEE NOTE "1" ON DETAIL WT-17 (1 of 9).

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**CITY OF ROUND ROCK**

**PRESSURE REDUCING VALVE  
VAULT LAYOUT  
VAULT SECTIONS "B" AND "C"**

**DRAWING NO:**  
WT-17 (6 of 9)



TAG NO.	DESCRIPTION	NOMINAL SIZE					FITTING TYPE	SPECIFIC NOTES (SEE DRAWING DWG. W-24)
		VAULT NO. 1	VAULT NO. 2	VAULT NO. 3	VAULT NO. 4	VAULT NO. 5		
1.	SPOOL PIPE	8"	10"	12"	16"	24"	M.J. x FL.	1, 2, 3
2.	TEE W/1-1/2" THREADED TESTING PORT	8" x 4"	10" x 4"	12" x 4"	16" x 6"	24" x 12"	FL x FL	2, 3
3.	CONCENTRIC REDUCER	N.A.	N.A.	N.A.	N.A.	24" x 16"	FL x FL	2, 3
4.	SPOOL PIPE	8"	10"	12"	16"	16"	FL x FL	2, 3
5.	90° ELBOW	8"	10"	12"	16"	16"	FL x FL	2, 3
6.	RESILIENT WEDGE GATE VALVE	8"	10"	12"	16"	16"	FL x FL	3, 4
7.	SPOOL PIPE	8"	10"	12"	16"	16"	FL x P.E.	2, 3
8.	DRESSER DISMANTLING JOINT	8"	10"	12"	16"	16"	-----	5, 6
9.	PRESSURE REDUCING VALVE	8"	10"	12"	16"	16"	FL x FL	3, 7
10.	SPOOL PIPE	8"	10"	12"	16"	24"	FL x P.E.	2, 3
11.	RESILIENT WEDGE GATE VALVE	4"	4"	4"	6"	12"	FL x FL	3, 4
12.	CONCENTRIC REDUCER	4" x 3"	4" x 3"	N.A.	N.A.	N.A.	FL x FL	2, 3
13.	SPOOL PIPE	3"	3"	4"	6"	12"	FL x P.E.	2, 3
14.	DRESSER DISMANTLING JOINT	3"	3"	4"	6"	12"	-----	5, 6
15.	PRESSURE REDUCING VALVE	3"	3"	4"	6"	12"	FL x FL	3, 7
16.	90° ELBOW	3"	3"	4"	6"	12"	FL x FL	2, 3
17.	SPOOL PIPE	3"	3"	4"	6"	12"	FL x FL	2, 3
18.	PRESSURE GAUGE ASSEMBLY							8, 9
19.	CONCRETE PEDESTAL PIPE SUPPORT							10
20.	CONCRETE PEDESTAL VALVE SUPPORT							11
21.	PIPE STANCHION SADDLE SUPPORT							12
22.	PIPE STANCHION SADDLE SUPPORT WITH YOKE							13
23.	PRE-CAST CONCRETE VALVE VAULT							14
24.	ALUMINUM LADDER W/SAFETY EXTENSION							15
25.	GRATING AND FRAME							16
26.	DOUBLE-LEAF ACCESS DOOR (H2O)	72" x 72"	72" x 72"	72" x 72"	72" x 72"	72" x 72"	-----	17
27.	SINGLE-LEAF ACCESS DOOR (H2O)	N.A.	N.A.	N.A.	30" x 30"	42" x 42"	-----	18
28.	WALL PENETRATION SEAL	8"	10"	12"	16"	24"	-----	19
29.	BURIED PIPING WITH RESTRAINED JOINT FITTINGS	8" DIA. x 114 L.F., MIN.	10" DIA. x 141 L.F., MIN.	12" DIA. x 167 L.F., MIN.	16" DIA. x 220 L.F., MIN.	24" DIA. x 318 L.F., MIN.	-----	---
30.	VALVE BOX AND LOCKING LID	5 1/4" DIA.	5 1/4" DIA.	5 1/4" DIA.	5 1/4" DIA.	5 1/4" DIA.	-----	20

**VAULT DESCRIPTION NOTE:**

THE DESCRIPTION FOR THE PRESSURE REDUCING VALVE (P.R.V.) VAULTS IS AS FOLLOWS:

- VAULT NO. 1 = VAULT WITH 8" P.R.V. AND 3" P.R.V. BYPASS
- VAULT NO. 2 = VAULT WITH 10" P.R.V. AND 3" P.R.V. BYPASS
- VAULT NO. 3 = VAULT WITH 12" P.R.V. AND 4" P.R.V. BYPASS
- VAULT NO. 4 = VAULT WITH 16" P.R.V. AND 6" P.R.V. BYPASS
- VAULT NO. 5 = VAULT WITH 16" P.R.V. AND 12" P.R.V. BYPASS

ALL VAULTS AND ACCESS DOORS SHALL BE DESIGN TO WITH STAND (H2O) LOADING.  
CITY OF ROUND ROCK DETAIL NO. WT-17 (8 OF 9) MUST BE INCLUDED WITH PRV AND VAULT DETAILS

<p align="center"><b>RECORD SIGNED COPY ON FILE AT PUBLIC WORKS</b></p> <p align="center"><b>APPROVED</b></p> <p align="center"><b>04-01-10</b></p> <p align="center"><b>DATE</b></p> <p align="center"><small>THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)</small></p>	<h1 style="margin: 0;">CITY OF ROUND ROCK</h1> <h2 style="margin: 0;">PRESSURE REDUCING VALVE VAULT LAYOUT PIPING AND EQUIPMENT SCHEDULE</h2>	<p>DRAWING NO: WT-17 (7 of 9)</p> <p align="right"><small>ROUND ROCK, TEXAS PURPOSE. PASSION. PROSPERITY.</small></p>
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**NOTES:**

1. FULLY RESTRAINED JOINT FITTING.
2. DUCTILE IRON PIPE.
3. 150 P.S.I. WORKING PRESSURE.
4. NON-RISING STEM WITH HANDWHEEL OPERATOR, A.W.W.A. C509 (CLOW, MUELLER, OR APPROVED EQUAL).
5. 175 P.S.I. WORKING PRESSURE.
6. FULLY RESTRAINED (EBAA IRON SALES INC. SERIES 2100 MEGAFLANGE, OR APPROVED EQUAL).
7. GLOBE-STYLE, FULL-PORT WITH STEM INDICATOR AND 4 1/2", OIL FILLED, GAUGES ON THE INLET AND OUTLET PORTS. (WATTS ACV 115, CLA-VAL, OR APPROVED EQUAL). SEE NOTE 21 FOR REQUIRED LAYING LENGTHS.
8. PRESSURE GAUGE ASSEMBLY TO INCLUDE 1" DIA. THREADED TAP; 1/2" x 1" BUSHING; 1/2" QUARTER-TURN BALL VALVE; AND S.S.T. 316 GAUGE WITH 4 1/2" DIAL, OIL FILLED, 0-160 P.S.I. RANGE, AND 1/2" GAUGE CONNECTION; INSTALLED WITH 1/2" COPPER PIPING ROUTED ALONG WALL TO WITHIN 6" OF TOP OF VAULT, WITH GAUGE MOUNTED IN A LOCATION THAT IS READABLE BY OPENING THE ACCESS DOOR. COORDINATE INSTALLATION WITH THE OWNER'S REPRESENTATIVE.
9. SUPPORT COPPER TUBING WITH PIPE STRAP AND 3/8" EXPANSION ANCHORS, INSTALLED AT MAX. 3- FEET O.C. EQUAL SPACING (ANVIL INTERNATIONAL INCORPORATED FIG. 262, OR APPROVED EQUAL).
10. CONCRETE PEDESTAL PIPE SUPPORT WITH STEEL STRAP; MINIMUM 10" THICK CONCRETE PEDESTAL (WIDTH TO BE PIPE O.D. PLUS 10" EACH SIDE), WITH 3/4" THICK x 6" WIDE S.ST. STRAP AND TWO 1 1/4" DIA. ANCHOR BOLTS. CONCRETE REINFORCING SHALL BE NO. 5 VERTICAL REBARS AND NO. 4 HORIZONTAL HOOPS PLACED AT 8" ON-CENTERS (ALL VERTICAL BARS TO BE EMBEDDED INTO SLAB TO A DEPTH RECOMMENDED BY EPOXY SYSTEM MANUFACTURER).
11. CONCRETE PEDESTAL VALVE SUPPORT; HORIZONTAL CONCRETE DIMENSIONS AND ANCHOR BOLT SIZE, LENGTH AND LOCATIONS TO BE DETERMINED BY THE VALVE MANUFACTURER TO FIT THE VALVE MOUNTING BASE SUPPLIED WITH THE VALVE. VERIFY ALL DIMENSIONS WITH THE VALVE MANUFACTURER. CONCRETE REINFORCING SHALL BE NO. 5 VERTICAL REBARS AND NO. 4 HORIZONTAL HOOPS PLACED AT 8" ON-CENTERS (ALL VERTICAL BARS TO BE EMBEDDED INTO SLAB TO A DEPTH AS RECOMMENDED BY EPOXY SYSTEM MANUFACTURER).
12. PIPE STANCHION SADDLE SUPPORT (ANVIL INTERNATIONAL, INC., FIG. 258 AND FIG. 62, OR APPROVED EQUAL) WITH EXPANSION ANCHORS AS RECOMMENDED BY SUPPORT MANUFACTURER.
13. PIPE STANCHION SADDLE SUPPORT WITH YOKE (ANVIL INTERNATIONAL, INC., FIG. 259 AND FIG. 62, OR APPROVED EQUAL) WITH EXPANSION ANCHORS AS RECOMMENDED BY SUPPORT MANUFACTURER.
14. PRECAST CONCRETE VAULT INSTALLED ON TOP OF CRUSHED ROCK BED. DUE TO THE CONSTRAINTS OF THE CONSTRUCTION, THE CONTRACTOR MAY ELECT TO PROVIDE A CAST-IN-PLACE CONCRETE VAULT. IN EITHER CASE, SEALED AND SIGNED DRAWINGS BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS MUST BE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION. THE VAULT SHALL BE MINIMUM 4000 P.S.I. 28-DAY COMPRESSION STRENGTH CONCRETE WITH GRADE 60 REINFORCING STEEL DESIGNED FOR AASHTO H-20 WHEEL LOAD AND GRIUNDWATER AT 0- FEET BELOW FINISHED GRADE. (CONCRETE PRODUCTS INCORPORATED, OR APPROVED EQUAL).
15. LADDER, ALL ALUMINUM CONSTRUCTION, WITH 7" STAND-OFF (FOR FLAT WALL) AND FLOOR MOUNTING BRACKETS AND SAFETY EXTENSION (HALLIDAY PRODUCTS SERIES L1D LADDER AND SERIES L1E EXTENSION).
16. REMOVABLE FRP GRATING WITH FRP FRAME AND S.ST. ANCHORS.
17. ALUMINUM DOUBLE-LEAF ACCESS DOOR, RATED FOR AASHTO H-20 WHEEL LOAD (HALLIDAY PRODUCTS SERIES H2W ACCESS DOOR, OR APPROVED EQUAL).
18. ALUMINUM SINGLE-LEAF ACCESS DOOR, RATED FOR AASHTO H-20 WHEEL LOAD (HALLIDAY PRODUCTS SERIES H1W ACCESS DOOR, OR APPROVED EQUAL).
19. WALL PENETRATION SHALL BE INSTALLED WITH MECHANICAL COMPRESSION-TYPE ANNULAR SEAL (THUNDERLINE-LINK-SEAL, BY PIPELINE SEAL AND INSULATOR INCORPORATED, OR APPROVED EQUAL).
20. VALVE BOX AND LOCKING LID, 5 1/4" DIA. CAST IRON RISER SECTION OF VALVE BOX, LENGTH AS REQUIRED FOR COVER SLAB THICKNESS AND LOCKING LID WITH "PLAIN" MARKING (TYLER/UNION MODEL 148241 AND MODEL 145462, OR APPROVED EQUAL).
21. GLOBE VALVE SHALL HAVE THE FOLLOWING LAY LENGTHS: 2"-9.38", 3"-12.00", 4"-15.00", 6"-20.00", 8"-25.38", 10"-29.75", 12"-34.00", 14"-39.00", 16"-41.38", 18"-48.00", 20"-48.00" AND 24"-48.00".

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**CITY OF ROUND ROCK**

**PRESSURE REDUCING VALVE  
VAULT LAYOUT  
SPECIFIC EQUIPMENT NOTES**

DRAWING NO:  
WT-17 (8 of 9)





TAG	NOMINAL SIZE				
	VAULT NO. 1	VAULT NO. 2	VAULT NO. 3	VAULT NO. 4	VAULT NO. 5
A	14'-0"	14'-0"	14'-6"	16'-0"	20'-0"
B	10'-0"	10'-0"	10'-0"	12'-0"	13'-6"
C	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"
D	5'-0"	5'-0"	5'-3"	6'-0"	8'-0"
E	4'-6"	4'-6"	4'-6"	4'-9"	4'-9"
F	3'-6"	3'-6"	3'-6"	5'-0"	6'-3"
G	2'-0"	2'-0"	2'-0"	2'-3"	2'-6"
H	4'-0"	4'-0"	4'-3"	5'-0"	7'-0"
I	6'-0"	6'-0"	6'-0"	6'-0"	6'-0"
J	6'-0"	6'-0"	6'-0"	6'-0"	6'-0"
K	6'-0"	6'-0"	6'-0"	6'-0"	7'-6"
L	N.A.	N.A.	N.A.	1'-0"	9"
M	N.A.	N.A.	N.A.	2'-6"	3'-6"
N	N.A.	N.A.	N.A.	2'-6"	3'-6"
O	N.A.	N.A.	N.A.	6'-9"	8'-3"

**VAULT DIMENSIONS NOTE:**

VAULT DIMENSIONS SHOWN ARE MINIMUM, AND MUST BE VERIFIED FOR EQUIPMENT AND PIPING MATERIALS ACTUALLY FURNISHED FOR THE PRESSURE REDUCING VALVE VAULT TO BE CONSTRUCTED.

**VAULT DESCRIPTION NOTE:**

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- VAULT NO. 1 = VAULT WITH 8" P.R.V. AND 3" P.R.V. BYPASS
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- VAULT NO. 3 = VAULT WITH 12" P.R.V. AND 4" P.R.V. BYPASS
- VAULT NO. 4 = VAULT WITH 16" P.R.V. AND 6" P.R.V. BYPASS
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**CITY OF ROUND ROCK**

**PRESSURE REDUCING VALVE  
VAULT LAYOUT  
VAULT DIMENSIONS SCHEDULE**

**DRAWING NO:**  
WT-17 (9 of 9)

