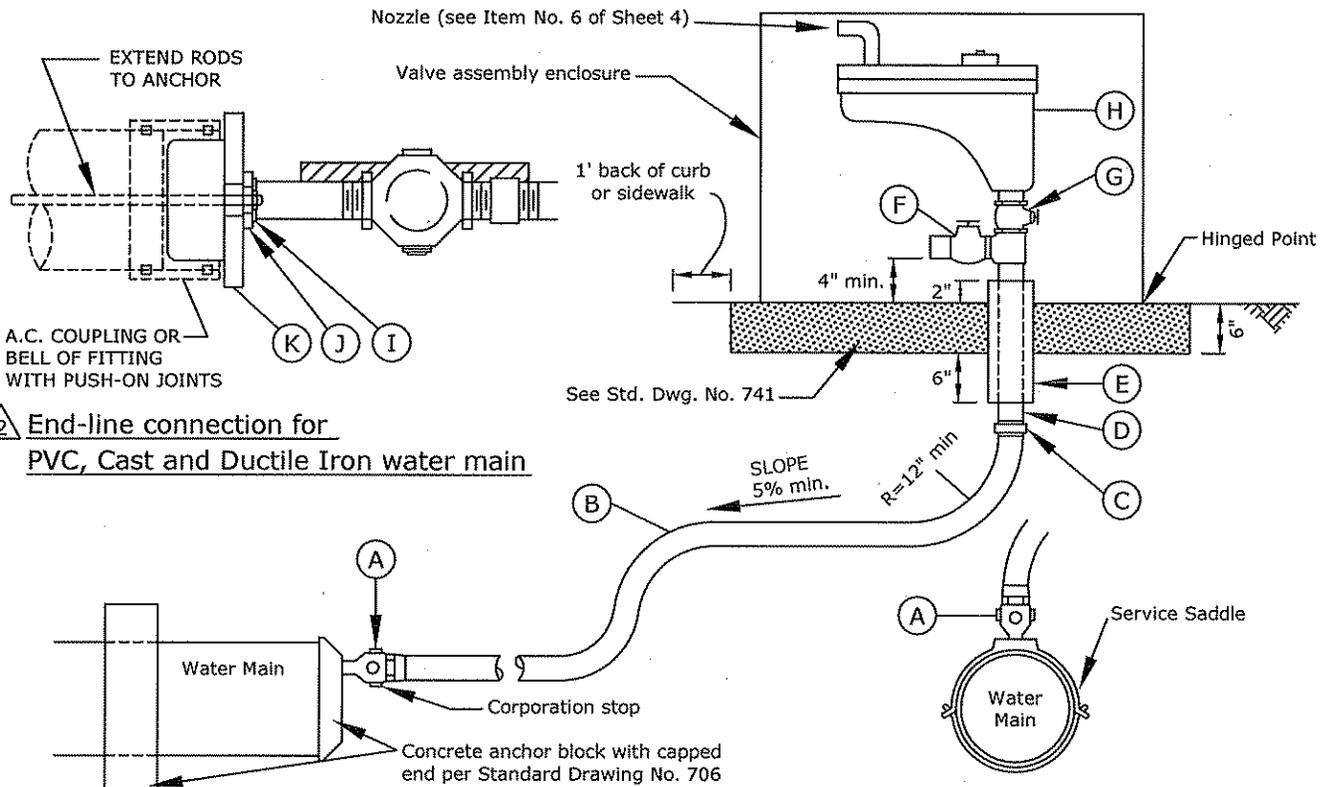


ITEM #	DESCRIPTION
①	BRASS SERVICE SADDLE
②	BRASS CORPORATION STOP AWWA I.P.T. x F.I.P.
③	FITTINGS SAME AS PIPE MATERIAL
④	SCH. 40 BRASS, DOUBLE WRAPPED WITH PVC TAPE
⑤	BRASS UNION
⑥	BRASS NIPPLE
⑦	BRASS BALL VALVE F.I.P. x F.I.P.
⑧	3/4" CLEAN DRAIN ROCK
⑨	SUPPORT BLOCK, BRICK
⑩	STREET ELBOW
⑪	COMBINATION AIR VALVE UNLESS OTHERWISE SPECIFIED ON PLANS
⑫	UNION
⑬	PVC SCH. 80
⑭	6" GALV. FLANGE ANCHORED IN CONC. W/3 HOLLOW BOLTS
⑮	6" GALV. PIPE W/ 3 VERT. ROWS OF 6 1/2" HOLES SEE SECTION A-A THIS PAGE
⑯	6" GALV. SCREW CAP
⑰	CONCRETE BOX W/ STEEL LID, SEE NOTE 8
⑱	TEE W/ 20-MESH S.S. SCREEN AFFIXED TO ENDS W/HOSE CLAMPS

**CONSTRUCTION NOTES**

1. SIZE OF PIPING SHALL MATCH SIZE OF AIR VALVE.
2. ENGINEER TO SPECIFY TYPE & SIZE OF VALVE.
3. AIR VALVES LARGER THAN 2" SHALL BE BY SPECIAL DESIGN.
4. AIR VALVE SHALL BE PLACED OUTSIDE OF TRAFFIC AREAS.
5. ALL PIPING ABOVE GROUND TO BE PAINTED OSHA SAFETY BLUE.
6. CENTER VALVE IN LONGITUDINAL DIRECTION IN BOX.
7. PAINT AND MARK VENT SIMILAR TO MARKER POST DETAIL.
8. CHRISTY B36 FOR 1" ARV, B40 FOR 2" ARV.

<b>CITY OF MILPITAS, ENGINEERING DIVISION</b>		<b>STANDARD DRAWING</b>
<b>REVISION</b>	<b>DATE</b>	<b>NO. 738</b>
①	1997	<b>DATE : 6/15/10</b>
②	2001	
③	2010	
<b>1" OR 2" AIR &amp; VACUUM RELEASE VALVE</b>		<b>SHEET 1 OF 6</b>
APPROVED BY:		
PUBLIC WORKS DIRECTOR / CITY ENGINEER RCE No. 40283		



2 End-line connection for  
PVC, Cast and Ductile Iron water main

End-line connection to welded steel water main

In-line connection to main

FITTINGS AND PARTS: *	6" Ø AND SMALLER	8" Ø AND LARGER
	AIR & VACUUM RELEASE VALVE	
ITEM NO.	1"	2"
A. Corporation Stop	Mueller N-35008	Mueller H-15025
B. Tubing	Copper Tubing Type "K" Soft	
C. Dielectric Union	Calpico insulating union	
D. Tubing	Brass Nipple	
E. PVC Sleeves	2" PVC, Class 200	3" PVC, Class 200
F. Brass Gate Valve with 2-1/2" male threaded end	Stockham B-103 or Wats WGV-1	
G. Brass Gate Valve	Mueller H-15204	
H. Comb. Air & Vacuum and Air Release Valves	APCO No. 143C	APCO No. 145C
I. 2" by 1" adaptor	* Or approved equal	
J. Bushing Insulating 2-1/2" x 2"		
K. Plug - C.I.R.T. 6" x 2-1/2" for rubber ring push-on joint		

3  
3  
3

NOTES:

1. Valve assembly enclosure shall be per Sheet 4, Type I.
2. Use same diameter tubing as that required by the size of the air & vacuum and air release valves.
3. Tubing shall be installed a minimum of 3 ft deep at the lip of the gutter.
4. Refer to Standard Drawing No. 706 for detail of each type of material.
5. Install valve assembly behind sidewalk, in easement.

NOT TO SCALE

CITY OF MILPITAS, ENGINEERING DIVISION

STANDARD DRAWING

REVISION

DATE

COMBINATION 1" OR 2"  
BLOW OFF AND AIR & VACUUM  
RELEASE VALVE (At high point)

NO. 738

1

1997

2

2001

DATE : 6/15/10

3

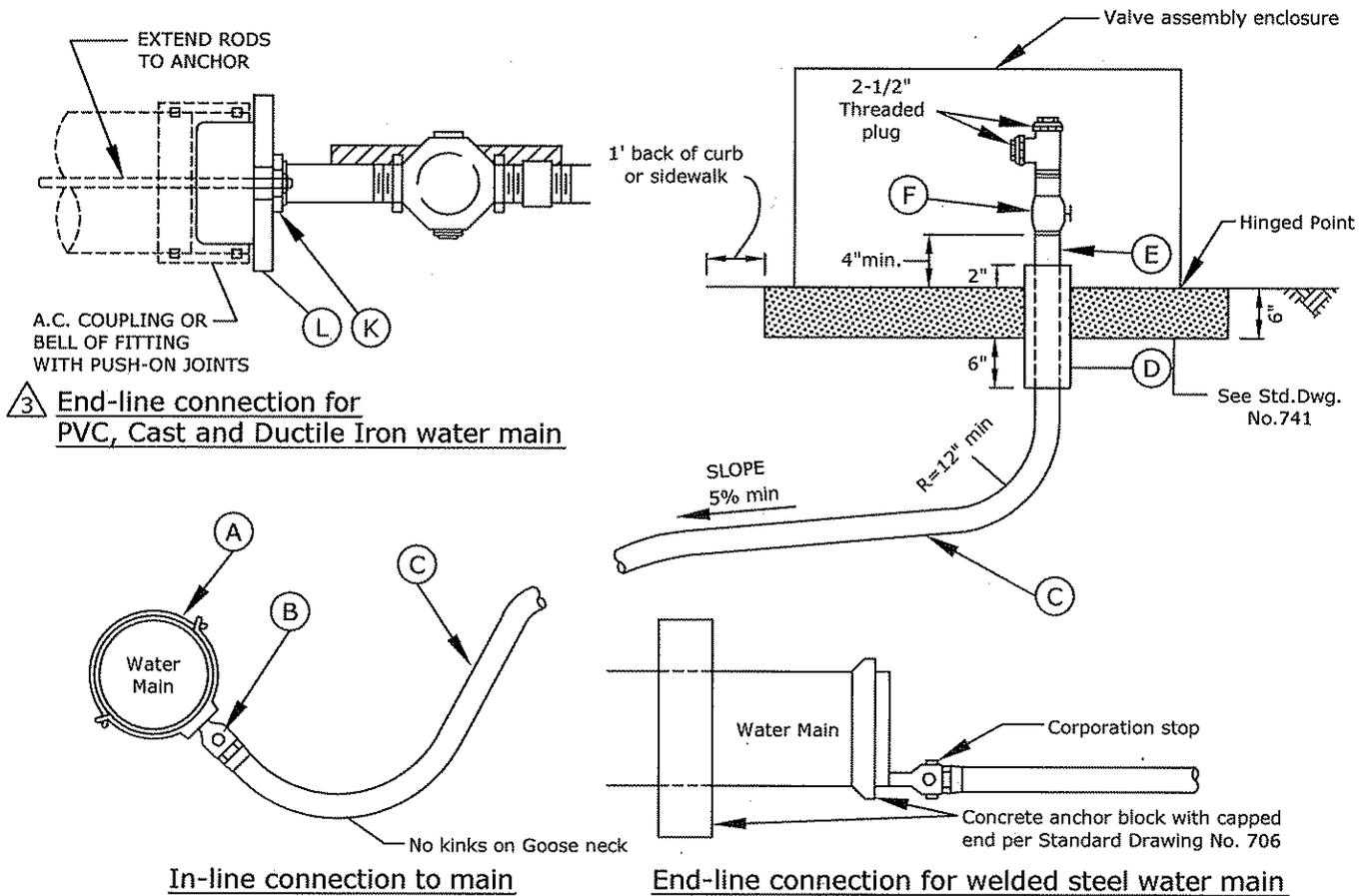
2010

3

APPROVED BY:

PUBLIC WORKS DIRECTOR / CITY ENGINEER RCE No. 40283

SHEET 2 OF 6



3 End-line connection for PVC, Cast and Ductile Iron water main

In-line connection to main

End-line connection for welded steel water main

FITTINGS AND PARTS: \*

ITEM NO.	Blow Off Assembly
A. Service Saddle	Mueller BR2B
B. Corporation Stop	Mueller H-15025
C. Tubing	Copper Tubing Type "K" Soft
D. PVC Sleeves	3" PVC, Class 200
E. Copper Coupling	Mueller H-15425
F. Brass Gate Valve	Stockham B-103 or Wats WGV-1
K. Bushing Insulating 2-1/2" x 2"	
L. Plug - C.I.R.T. 6" x 2-1/2" for rubber ring push-on joint	
* Or approved equal	

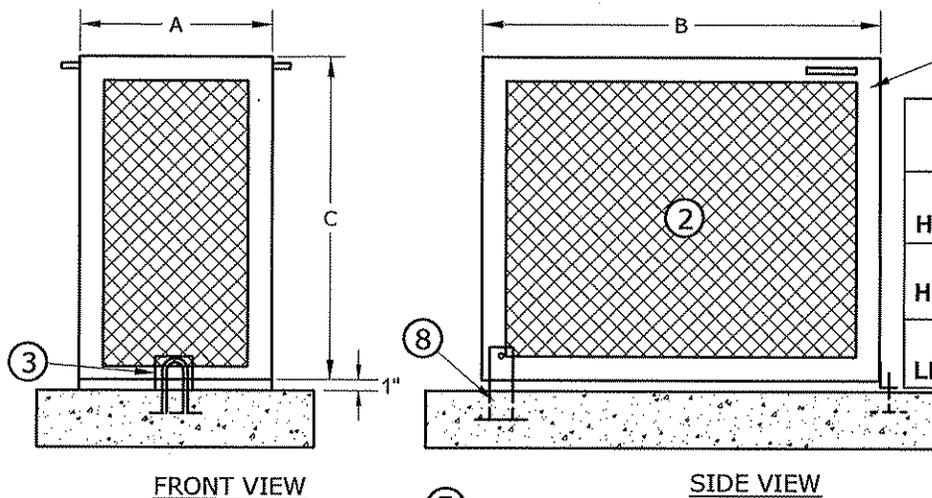
Refer to STD.#706 for detail of each type of material

NOTES:

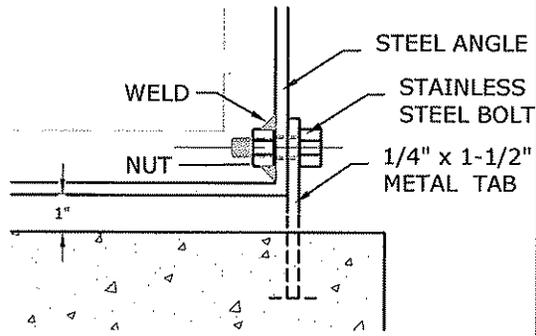
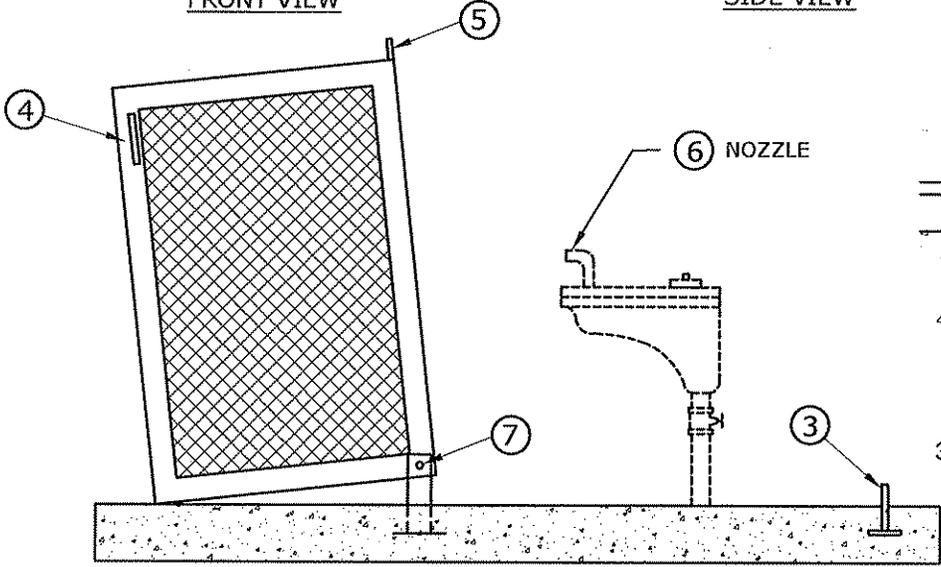
1. Valve assembly enclosure shall be per City Standard Drawing No. 741, Type I.
2. Use same diameter tubing as that required by the size of the air & vacuum release valve.
3. Tubing shall be installed a minimum of 3 ft deep at the lip of the gutter.
4. Refer to Standard Drawing No. 706 for detail of each type of material.
5. Install valve assembly behind sidewalk, in easement.

NOT TO SCALE

<b>CITY OF MILPITAS, ENGINEERING DIVISION</b>		<b>STANDARD DRAWING NO. 738</b>
REVISION	DATE	<h1 style="margin: 0;">2" BLOW OFF VALVE</h1>
1	1997	
2	2001	
3	2010	
APPROVED BY:		DATE : 6/15/10
PUBLIC WORKS DIRECTOR / CITY ENGINEER RCE No. 40283		SHEET 3 OF 6



TYPE	Dimension in Inches			Concrete Pad
	A	B	C	
I HINGED	18	36	36	3' x 7'
II HINGED	18	30	30	3' x 4'
III LIFT-UP	12	18	24	18" x 24"



HINGE DETAIL (N.T.S.)  
 NOTE: RESIDENTIAL BOX TYPE III DOES NOT PIVOT ON HINGE BUT FLUSH WITH PAD

ENCLOSURE IN OPEN POSITION

**TYPE I & II VALVE ASSEMBLY MESH BOX ENCLOSURE**  
 (FOR INDUSTRIAL/COMMERCIAL)

LIST OF PARTS

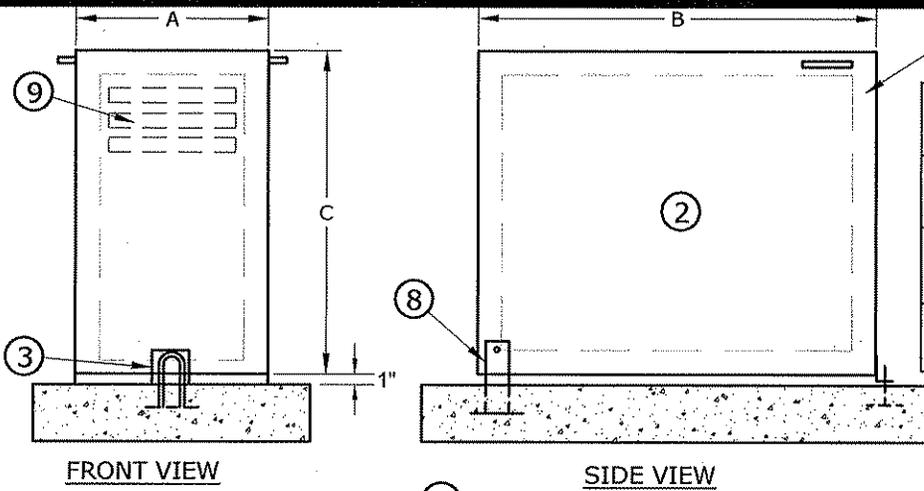
1. Frame constructed of 1 1/2" x 1 1/2" x 3/16" steel angle.
2. No. 9 flattened expanded mesh, (weld to internal steel angle).
3. 3/8" diameter U-BOLT for padlocking.
4. Lifting handles.
5. 1/4" X 1-1/2" metal tab welded to enclosure frame with hole to accommodate U-bolt loop.
6. Nozzle shall be set at a minimum of 1'-0" above 100 year Base Flood Level Elevation (BFE), or 1 foot above adjacent grade or highest recorded water level, which ever is greater. Base pad foundation may be filled to raise the air relief valve to required elevation.
7. 1/2" diameter stainless steel bolt with nut and washer. (Nut welded to internal steel angle).
8. 1/4" X 1-1/2" metal tab with 5/8" diameter holes embedded in slab.

NOTES:

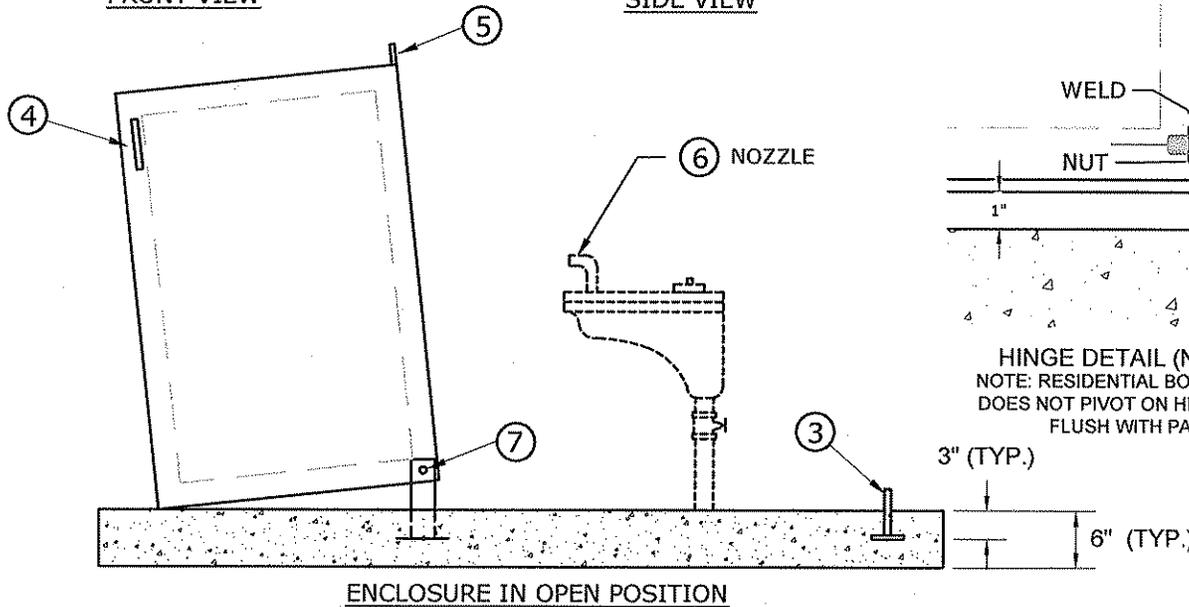
1. Confirm clearance prior to installation to verify box can be opened without restriction.
2. Valve enclosure shall be as manufactured by Le Meur or approved by Engineer.
3. All valve enclosures shall be installed per manufacturer's instruction, or as directed by the Engineer.
4. Wash enclosure assembly with degreasing cleaner, apply two coats of water based corrosion resistant, acrylic primer, one coat of acrylic enamel (forest green), anti-graffiti coating.

NOT TO SCALE

<b>CITY OF MILPITAS, ENGINEERING DIVISION</b>		<b>COMMERCIAL VALVE ASSEMBLY ENCLOSURE</b>	<b>STANDARD DRAWING NO. 738</b>
REVISION	DATE		
①	1997		
②	2001		
③	2010	APPROVED BY:	SHEET 4 OF 6
		PUBLIC WORKS DIRECTOR / CITY ENGINEER RCE No. 40283	



TYPE	Dimension in Inches			Concrete Pad
	A	B	C	
I HINGED	18	36	36	3' x 7'
II HINGED	18	30	30	3' x 4'
III LIFT-UP	12	18	24	18" x 24"



**TYPE II VALVE ASSEMBLY SOLID METAL BOX ENCLOSURE**  
(FOR ALL RESIDENTIAL)

**LIST OF PARTS**

1. Frame constructed of 1 1/2" x 1 1/2" x 3/16" steel angle.
2. 1/8" steel plate, (weld to internal steel angle).
3. 3/8" diameter U-BOLT for padlocking.
4. Lifting handles.
5. 1/4" X 1-1/2" metal tab welded to enclosure frame with hole to accommodate U-bolt loop.
6. Nozzle shall be set at a minimum of 1'-0" above 100 year Base Flood Level Elevation (BFE), or 1 foot above adjacent grade or highest recorded water level, which ever is greater. Base pad foundation may be filled to raise the air relief valve to required elevation.
7. 1/2" diameter stainless steel bolt with nut and washer. (Nut welded to internal steel angle).
8. 1/4" X 1-1/2" metal tab with 5/8" diameter holes embedded in slab.
9. Louvers 3 on center 1/2" X 6".

**NOTES:**

1. Confirm clearance prior to installation to verify box can be opened without restriction.
2. Valve enclosure shall be as manufactured by Le Meur or approved by Engineer.
3. All valve enclosures shall be installed per manufacturer's instruction, or as directed by the Engineer.
4. Wash enclosure assembly with degreasing cleaner, apply two coats of water based corrosion resistant, acrylic primer, one coat of acrylic enamel (forest green), anti-graffiti coating.

NOT TO SCALE

**CITY OF MILPITAS, ENGINEERING DIVISION**

**STANDARD DRAWING  
NO. 738**

**RESIDENTIAL VALVE  
ASSEMBLY ENCLOSURE**

DATE : 6/15/10

REVISION

DATE

1

1997

2

2001

3

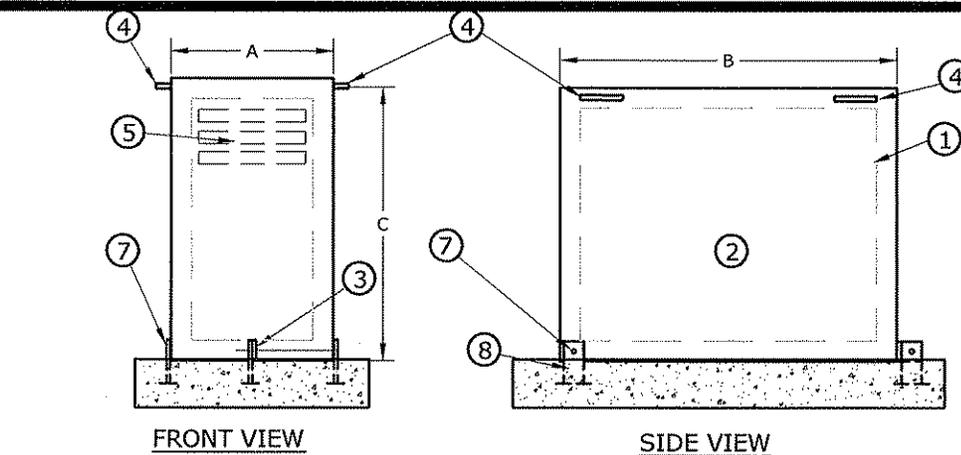
2010

3

APPROVED BY:

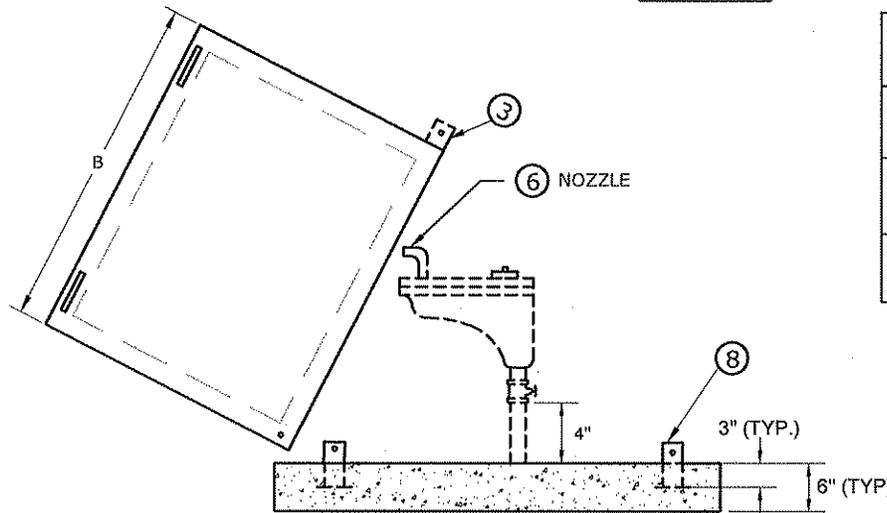
PUBLIC WORKS DIRECTOR / CITY ENGINEER RCE No. 40283

SHEET 5 OF 6



FRONT VIEW

SIDE VIEW



ENCLOSURE IN OPEN POSITION

TYPE	Dimension in Inches			Concrete Pad
	A	B	C	
I HINGED	18	36	36	3' x 7'
II HINGED	18	30	30	3' x 4'
III LIFT-UP	12	18	24	18" x 24"

**TYPE III VALVE ASSEMBLY SOLID METAL BOX ENCLOSURE**  
 (RESIDENTIAL BOX FLUSH WITH PAD,  
 LIFT-UP, DOES NOT PIVOT ON HINGE)

**LIST OF PARTS**

1. Frame constructed of 1 1/2" x 1 1/2" x 3/16" steel angle.
2. 1/8" steel plate (weld to internal steel angle).
3. 1/4" X 1-1/2" metal tab welded to enclosure frame with 5/8" diameter holes.
4. Lifting handles. (Two handles each side for Type III enclosure)
5. Louvers 3 on center 1/2" X 6".
6. Nozzle shall be set at a minimum of 1'-0" above 100 year Base Flood Level Elevation (BFE), or 1 foot above adjacent grade or highest recorded water level, which ever is greater. Base pad foundation may be filled to raise the air relief valve to required elevation.
7. 1/2" diameter stainless steel bolt with nut and washer. (Nut welded to internal steel angle).
8. 1/4" X 1-1/2" metal tab with 5/8" diameter holes embedded in slab.

**NOTES:**

1. Confirm clearance prior to installation to verify box can be opened without restriction.
2. Valve enclosure shall be as manufactured by Le Meur or approved by Engineer.
3. All valve enclosures shall be installed per manufacturer's instruction, or as directed by the Engineer.
4. Wash enclosure assembly with degreasing cleaner, apply two coats of water based corrosion resistant, acrylic primer, one coat of acrylic enamel (forest green), anti-graffiti coating.

NOT TO SCALE

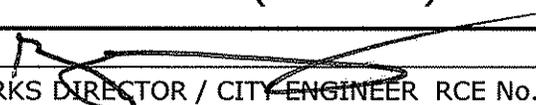
CITY OF MILPITAS, ENGINEERING DIVISION

STANDARD DRAWING  
 NO. 738

RESIDENTIAL VALVE ASSEMBLY  
 ENCLOSURE (LIFT-UP)

DATE : 6/15/10

REVISION	DATE
1	1997
2	2001
3	2010

APPROVED BY:   
 PUBLIC WORKS DIRECTOR / CITY ENGINEER RCE No. 40283

SHEET 6 OF 6