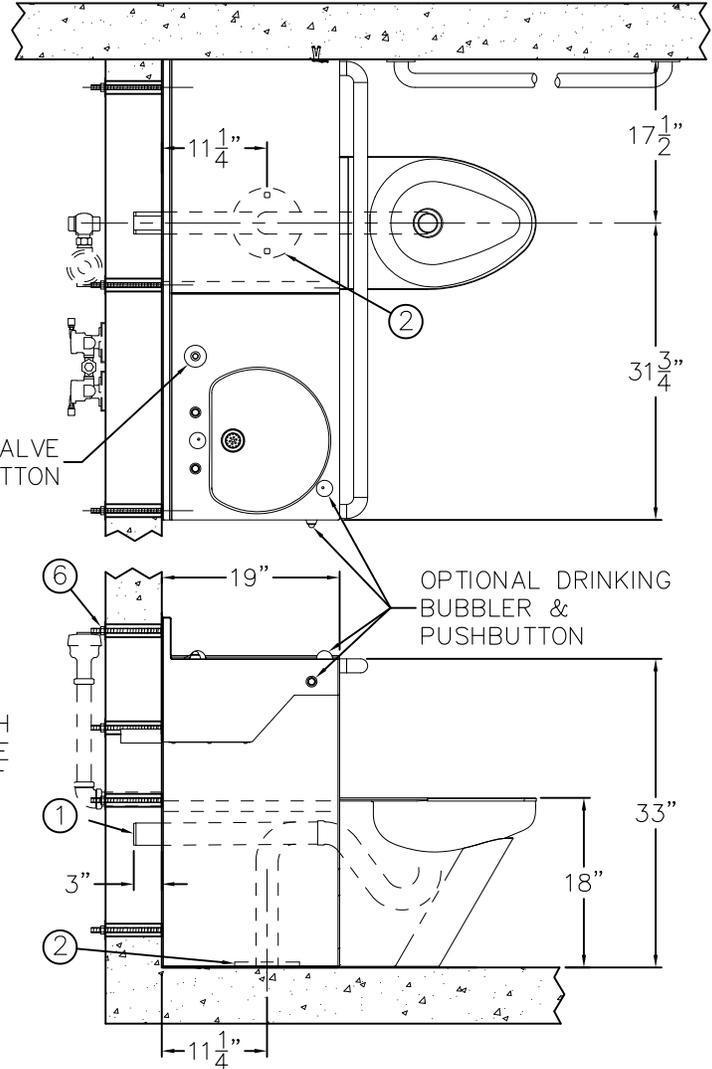
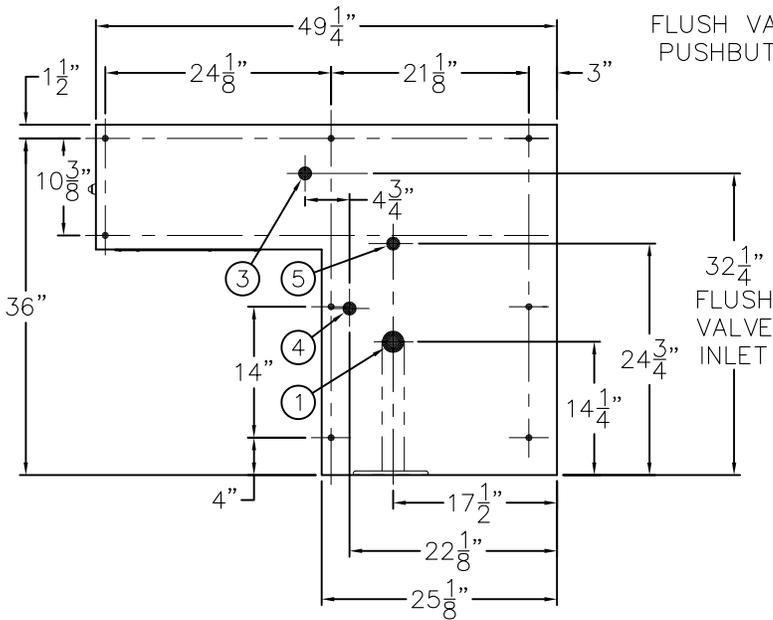




REFERENCE DRAWINGS	
ITEM	DRAWING
-04 AIR-CONTROL	9905-000-003
-03 AIR-CONTROL	9905-001-003
-SW WALL SLEEVE/-MT	9925-014-001

ROUGH-IN VIEW SHOWN FROM CELL SIDE.  
-RO UNIT SHOWN, -LO UNIT OPPOSITE.



**INSTALLATION INSTRUCTIONS:**

A- ROUGH-IN FOR THE FOLLOWING CONNECTIONS:

- TOILET WASTE WALL OUTLET: 2-3/8" OD PLAIN END (1) STANDARD. OPTIONAL 3" OD PLAIN END FOR -W03B OPTION.
- TOILET WASTE OUTLET -FLOOR: ø7-1/2" RECESSED GASKET FLANGE (2) WITH 5/16" TAPPINGS ON 6" CENTERS.
- FLUSH VALVE INLET: 1" NPTI (3). FLUSHING INLET (4) IS 1-1/2" NPTI.
- LAVY WASTE OUTLET: 1-1/2" OD PLAIN END (5). SUITABLE FOR COMPRESSION-SLIP JOINT TYPE.
- LAVY VALVE: SEE INDIVIDUAL VALVE SHEET FOR ROUGH-IN.

B- FLOOR WASTE OUTLET TYPE: BEFORE FIXING UNIT TO WALL, FIXTURE MUST BE POSITIONED ON WASTE CONNECTION (2).

- C- THREAD 1/2"-13 UNC ALL THREAD (6) INTO REAR ANCHOR TAPPINGS; MUST HAVE A MIN. OF 1/2" ENGAGEMENT. THREAD FLUSHING INLET (4) NIPPLE. THREAD LAVY WASTE CONNECTION.
- D- ALIGN ALL THREADS AND PIPES THROUGH WALL OPENINGS AND SLIDE INTO POSITION.
- E- SECURE FIXTURE TO WALL USING WASHERS AND/OR PLATES AND NUTS. INSTALL FLUSH SUPPORT PLATE ON FLUSH VALVE SIDE. TORQUE NUTS TO 60FT LBS. SEE DETAIL A.

**HYDRAULIC FLUSH VALVE NOTES:**

- DO NOT CUT LENGTH OF TUBING PROVIDED.
- DO NOT TAPE OR FIX TUBING IN A STATIONARY POSITION.

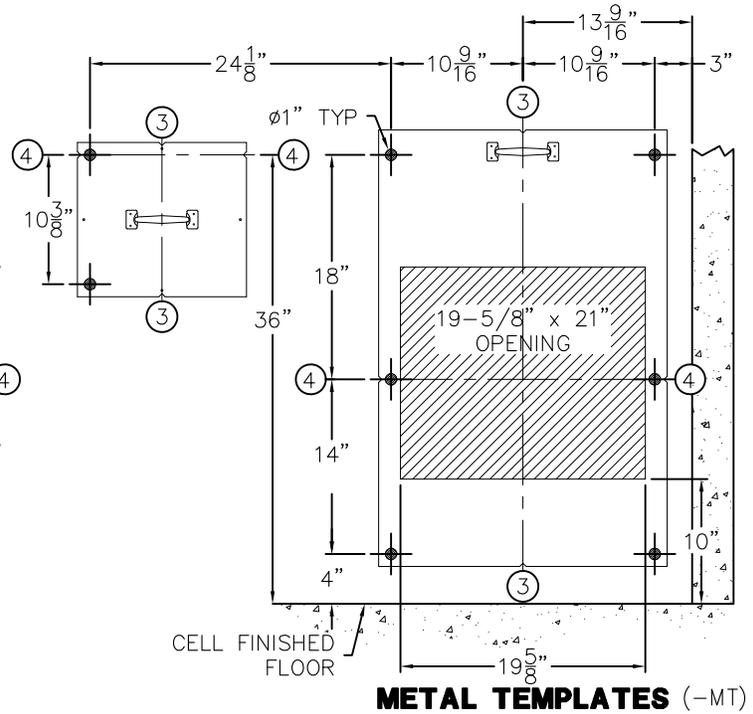
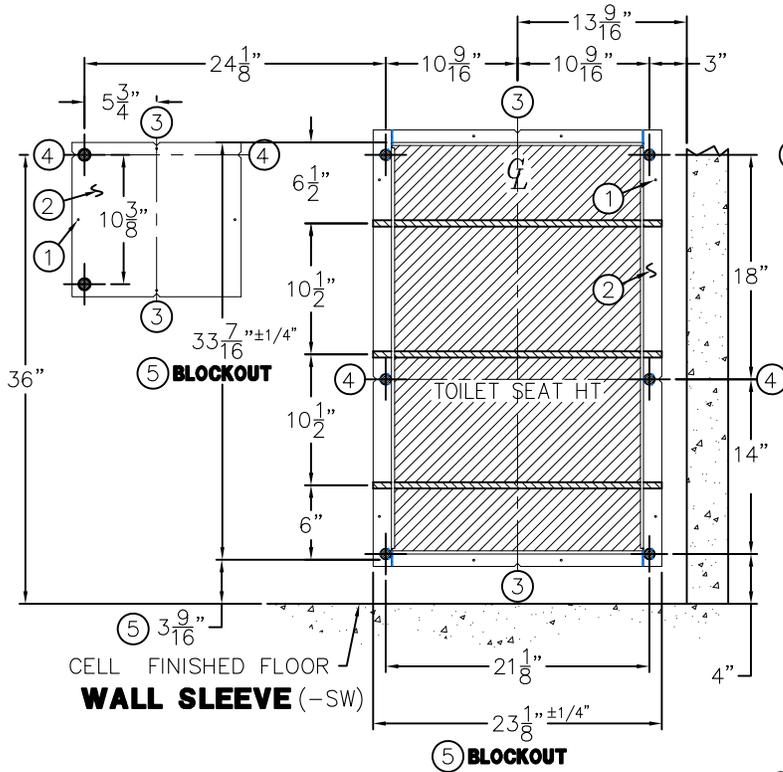


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15125 Proctor Ave Industry, CA 91746  
(626) 336-4561 FAX (626) 961-2200

TITLE <b>LAV-TOILET COMBY INSTALL INSTRUCTION *LR1449-LO/RO</b>		
MANUFACTURE DATE <b>APRIL 2017</b> <b>TO PRESENT</b>	DATE ISSUED <b>04/24/17</b>	DRAWING NUMBER <b>9925-017-001</b>
	DATE REVISED <b>11/29/21</b>	



VIEW FROM CELL SIDE  
 -RO RIGHT OFFSET FIXTURE ROUGH-IN'S SHOWN;  
 -LO LEFT OFFSET FIXTURE OPPOSITE



SHADED AREAS ARE REQUIRED WALL OPENINGS

**WALL SLEEVE**

SLEEVES ARE INSTALLED IN FORMS (USING NAIL HOLES ① PROVIDED) OR GROUTED INTO BLOCK WALLS, BECOMING A PERMANENT PART OF WALL.

- A. INSTALL SLEEVE WITH FLANGE ② ON CHASE SIDE OF WALL.
- B. LOCATE TOP AND BOTTOM NOTCHES AT VERTICAL CENTERLINE ③ OF PLUMBING FIXTURE OR CENTERLINE OF SLEEVE PLATE.
- C. LOCATE SIDE HORIZONTAL NOTCHES ④ AT DIMENSIONS SHOWN, MEASURED FROM THE FINISHED FLOOR ON CELL (FIXTURE) SIDE .

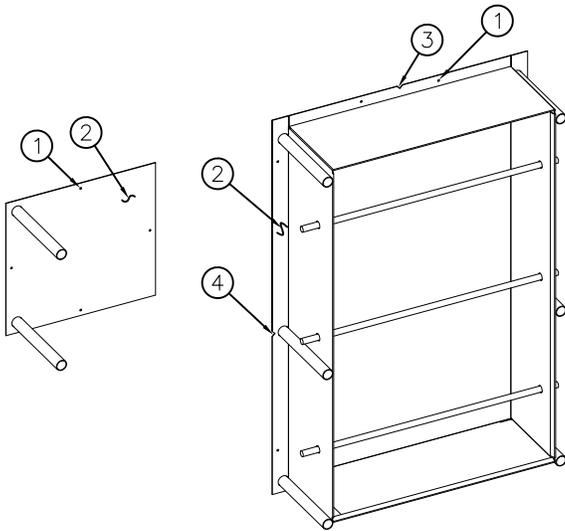
**NOTES:**

- 1. FOR POURED WALL CONSTRUCTION, TEMPORARY BRACING SHOULD BE INSTALLED WITHIN SLEEVE OPENING TO PREVENT DEFORMATION TO SLEEVE WHICH MAY OCCUR DURING POUR. DO NOT POUR CONCRETE DIRECTLY ON TOP OF WALL SLEEVE.
- 2. WHEN SLEEVES ARE NOT AVAILABLE BLOCKOUT FOR SLEEVE OPENING IN WALL PER DIMENSIONS SHOWN ⑤.

**METAL TEMPLATES (-MT)**

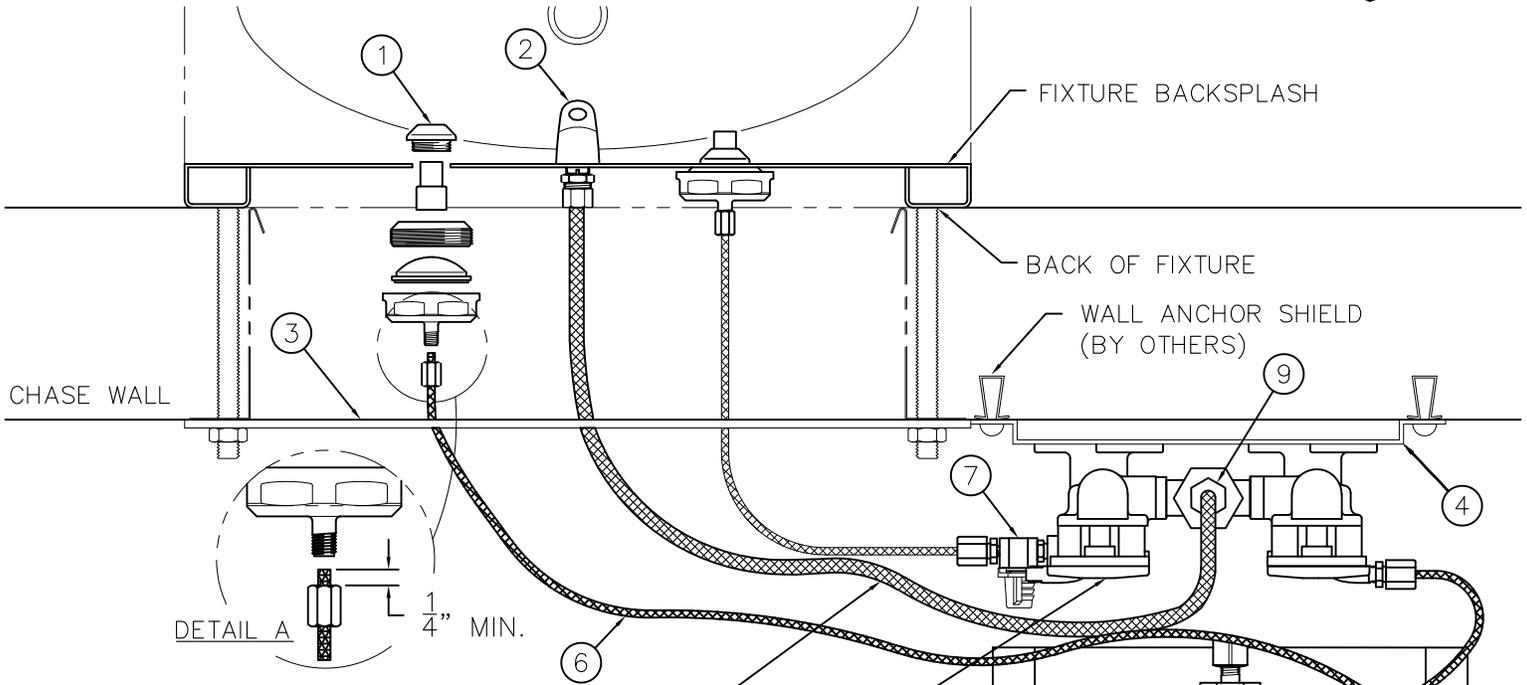
TEMPLATES ARE USED TO LAYOUT REQUIRED WALL OPENINGS FOR SUBSEQUENT FLAME CUTTING OR CORE DRILLING.

- A. STRIKE A HORIZONTAL CHALKLINES ④ ON THE WALL AT DIMENSIONS SHOWN, MEASURED FROM THE FINISHED FLOOR ON CELL (FIXTURE) SIDE. THIS WILL LOCATE CENTERLINE FOR HORIZONTAL NOTCHES ON TEMPLATES.
- B. STRIKE A VERTICAL CHALKLINE ③ ON THE WALL AT DIMENSIONS SHOWN. THIS WILL LOCATE CENTERLINE FOR VERTICAL NOTCHES ON METAL TEMPLATE.
- C. PLACE TEMPLATE AGAINST WALL. LOCATE NOTCHES ALONG CHALKLINES. MARK WALL FOR REQUIRED OPENING.



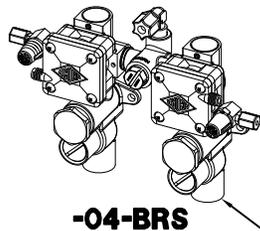
**ACORN ENGINEERING COMPANY**  
 P.O. BOX 3527 INDUSTRY, CA. 91744  
 (626) 336-4561 FAX (626) 961-2200

<b>TITLE (-SW) WALL SLEEVE &amp; (-MT) METAL TEMPLATE 1449/LR1449</b>		
MANUFACTURE DATE	DATE ISSUED	DRAWING NUMBER
<b>JANUARY 2015</b>	<b>01/31/15</b>	<b>9925-014-001</b>
<b>TO PRESENT</b>	DATE REVISED <b>04/16/20 B</b>	

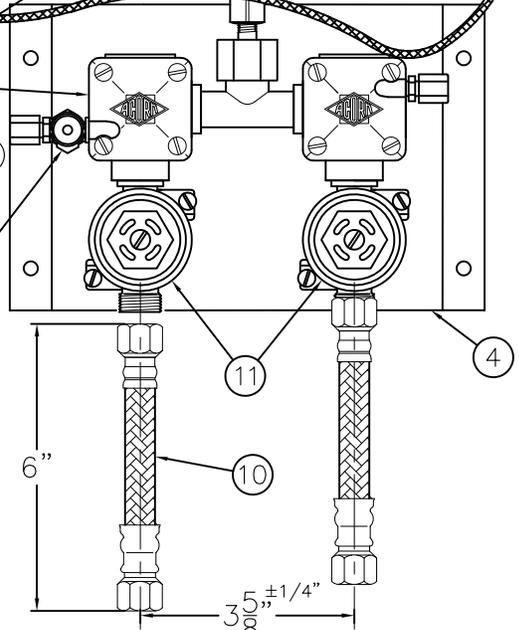


REFERENCE DRAWINGS	
ASSEMBLIES	NUMBER
VALVE BODY	9955-005-003
CHECKSTOP	9956-040-003
FIXTURE TRIM	9957-050-001
-PBH/BPH TRIM	9957-060-001
AIR-CONTROL SERVOMOTORS	
METERING	9955-000-003
NON-METERING	9955-001-003

NOTE: THIS VALVE SHOWN w/ (-MH) METERING, HOT SIDE ONLY



**-04-BRS**



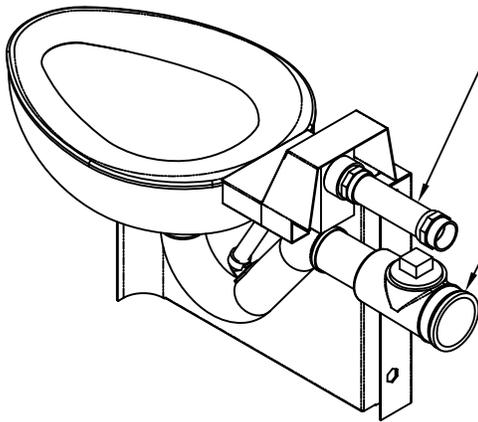
NOTE: MAXIMUM RECOMMENDED WORKING WATER PRESSURE IS 100 PSI; TEMPERATURE IS 130° F; OUTLET TEMPERATURE IS RECOMMENDED AT A MAXIMUM OF 105° F.  
 WARNING: PRIOR TO MAKING INSTALLATION, SUPPLY LINES MUST BE FLUSHED OF ALL FOREIGN MATERIAL SUCH AS PIPE DOPE, CHIPS, SOLDER, ETC. VALVE MUST BE DRAINED PRIOR TO BEING SUBJECTED TO FREEZING TEMPERATURES. MAXIMUM RECOMMENDED OUTLET WATER TEMPERATURE IS 105° F.

**INSTALLATION INSTRUCTIONS:**

- A- PRIOR TO INSTALLATION OF THE FIXTURE, MOUNT PUSHBUTTONS ① AND BUBBLER ② TO THE BACKSPLASH.
- B- INSTALL THE PLUMBING FIXTURE TO THE WALL INCLUDING UPPER SUPPORT PLATE ③.
- C- MOUNT THE AIR-CONTROL VALVE ASSEMBLY ④. LOCATE AS REQUIRED. MAXIMUM ALLOWABLE DISTANCE BETWEEN PUSHBUTTON ① AND AIR-CONTROL SERVOMOTOR ⑤ IS 10 FEET. WALL ANCHORING HARDWARE ARE BY OTHERS.
- D- CONNECT 1/8" O.D. POLYETHYLENE AIR LINES ⑥ TO PUSHBUTTONS ① AND SERVOMOTOR ⑤. HAND TIGHTEN USING FERRULE NUTS PROVIDED. SEE DETAIL A. NOTE: WHEN METERING VALVES ARE SPECIFIED, AIR LINES CONNECT DIRECTLY TO VALVE TIMER ⑦.
- E- CONNECT 1/4" O.D. POLYETHYLENE WATER LINE ⑧ TO BUBBLER ② AND COMPRESSION NUT ⑨. HAND TIGHTEN USING FERRULE NUTS PROVIDED.

- F- AFTER THOROUGHLY FLUSHING THE SUPPLY LINES, MAKE-UP 1/2" NPS FEMALE SUPPLY CONNECTIONS. NOTE: SUPPLY INLET CONNECTION WILL ACCOMODATE 1/2" NPT MALE ADAPTER. THREAD FLEX CONNECTOR HOSE ⑩ TO CHECKSTOPS ⑪ AND TO SUPPLY STUB OUTS. FOR OPTIONAL -04-BRS BRASS BODY VALVE, MAKE UP CONNECTION TO CHECK STOPS ⑫.
- G- SEE APPROPRIATE SERVOMOTOR REFERENCE DRAWING FOR DETAILS AND TIMING INSRUCTIONS.

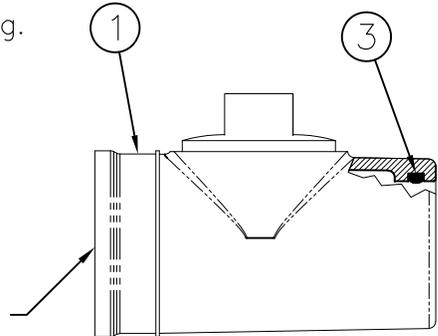
ACORN ENGINEERING COMPANY P.O. BOX 3527 Industry, CA 91744 15125 Proctor Ave Industry, CA 91746 (626) 336-4561 FAX (626) 961-2200	TITLE <b>(04-SERIES) HOT &amp; COLD AIR-CONTROL VALVE ASSEMBLY - NEW STYLE</b>		
	MANUFACTURE DATE <b>SEPT 1995 TO PRESENT</b>	DATE ISSUED <b>11/1/95</b>	DRAWING NUMBER <b>9905-000-003</b>
		DATE REVISED <b>11/18/13 F</b>	



Optional -FVT Flush Valve Thru Wall Connection. Shown For Reference.

Optional -CO1 Waste Fitting. Shown For Reference.

<b>REFERENCE DRAWING</b>	
WASTE CONNECTION WITH CLEANOUT -CO1	9985-125-002

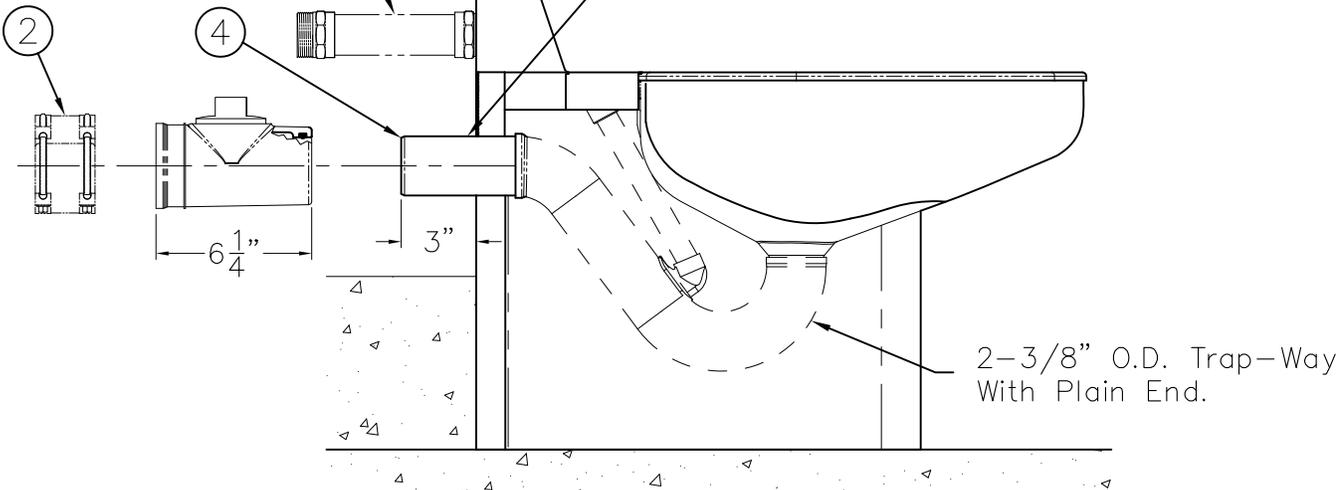


NOTE: Optional -CO1 Waste Fitting Available With 3" or 4" No-Hub

*Scaled: X 2*

Optional -FVT Flush Valve Thru Wall Connection Shown For Reference

Plain End Extends 3" Beyond Back Of Fixture. Optional Extended Waste Is Available -TWE



**MODEL #1685 SHOWN FOR REFERENCE**

**INSTALLATION INSTRUCTIONS**

A-INSERT O-RING ③ INTO GROOVE OF WASTE FITTING ①. LUBRICATE THE O-RING ③ WITH O-RING LUBRICANT.

B-INSTALL WASTE FITTING ① TO FIXTURE P-TRAP WASTE EXTENSION ④. ENGAGEMENT IS APPROXIMATELY 1-1/4". NOTE: TOILET WASTE

EXTENSION ④ IS 3" BEYOND BACK OF FIXTURE. LONGER WASTE EXTENSION IS AVAILABLE.

C-MAKE UP WASTE FITTING CONNECTION TO WASTE PIPING USING NO-HUB (BAND) CONNECTOR ② BY OTHERS.

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TITLE **NO-HUB WASTE CONNECTION WITH CLEANOUT -CO1**

MANUFACTURE DATE

**JULY 1975**  
**PRESENT**

DATE ISSUED

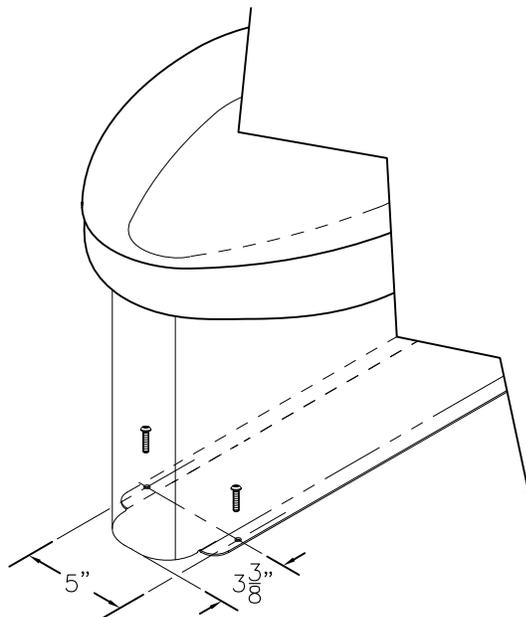
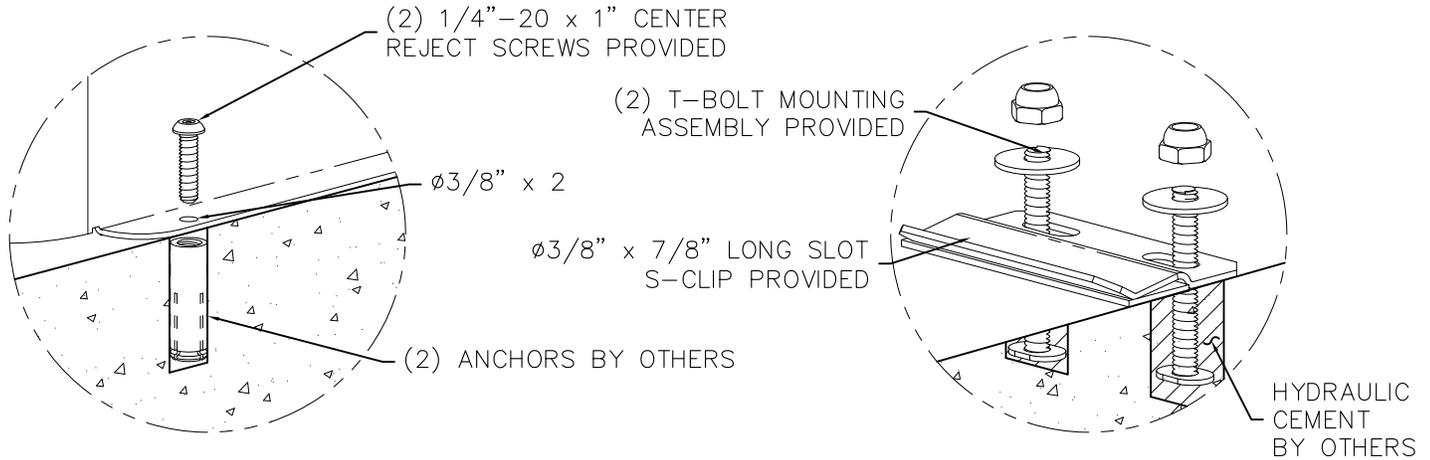
**1/29/96**

DATE REVISED

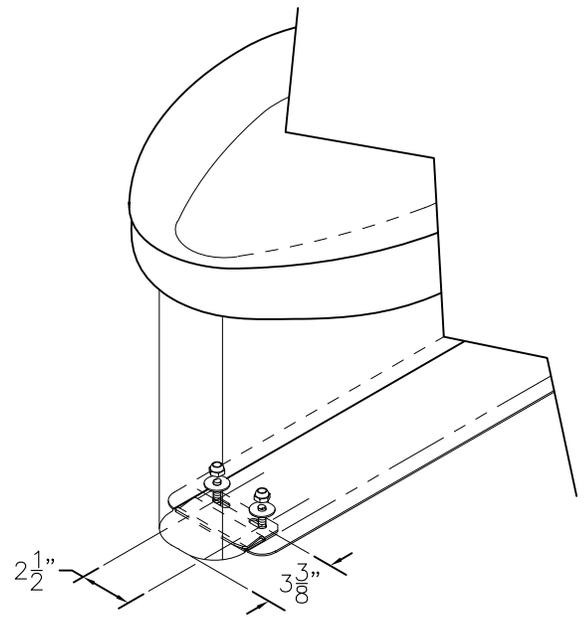
**11/08/13 D**

DRAWING NUMBER

**9925-054-001**



**FLANGE MOUNTING**



**S-CLIP MOUNTING**

-SS-SPS SUICIDE RESISTANT SKIRT OPTION IS PROVIDED WITH ADDITIONAL MOUNTING POINTS NOT NORMALLY PROVIDED WITH OUR STANDARD FIXTURES AND COME IN TWO STYLES AS INDICATED BELOW.

**FIXTURES w/ FLANGE MOUNTING:**

- A-AFTER ROUGHING IN AS REQUIRED, PLACE FIXTURE IN POSITION AND USE AS TEMPLATE TO LOCATE AND MARK FLANGE POINTS ON FLOOR.
- B-REMOVE FIXTURE AND INSTALL FLOOR ANCHORS BY OTHERS FOR 3/8" DIAMETER FLANGE PUNCHING.
- C-ALIGN WALL AND FLOOR ANCHORING POINTS AND COMPLETE FIXTURE INSTALLATION AS INDICATED BY THE FIXTURE INSTALLATION SHEET PROVIDED.

**FIXTURES w/ S-CLIP:**

- A-AFTER ROUGHING IN AS REQUIRED, PLACE FIXTURE IN POSITION AND USE AS A TEMPLATE TO LOCATE AND MARK S-CLIP MOUNTING LOCATION ON FLOOR AS INDICATED.
- B-REMOVE FIXTURE, INSTALL T-BOLTS FOR S-CLIP 3/8" x 7/8" LONG MOUNTING SLOTS AND SECURE WITH HYDRAULIC CEMENT (BY OTHERS)
- C-INSTALL S-CLIP
- D-PLACE FIXTURE ON FLOOR POSITIONING THE "NOSE" OF THE SKIRT SEVERAL INCHES IN FRONT OF S-CLIP MOUNTING LOCATION, SLIDE FIXTURE INTO PLACE ENGAGING THE S-CLIP AND ALIGNING WALL MOUNTING LOCATIONS. COMPLETE FIXTURE INSTALLATION AS INDICATED BY THE FIXTURE INSTALLATION SHEET PROVIDED.



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TITLE **-SPS MOUNTING DETAIL**

MANUFACTURE DATE  
**AUGUST 2012**  
**TO PRESENT**

DATE ISSUED  
**08/15/12**  
DATE REVISED  
**11/05/13 A**

DRAWING NUMBER  
**9925-007-001**