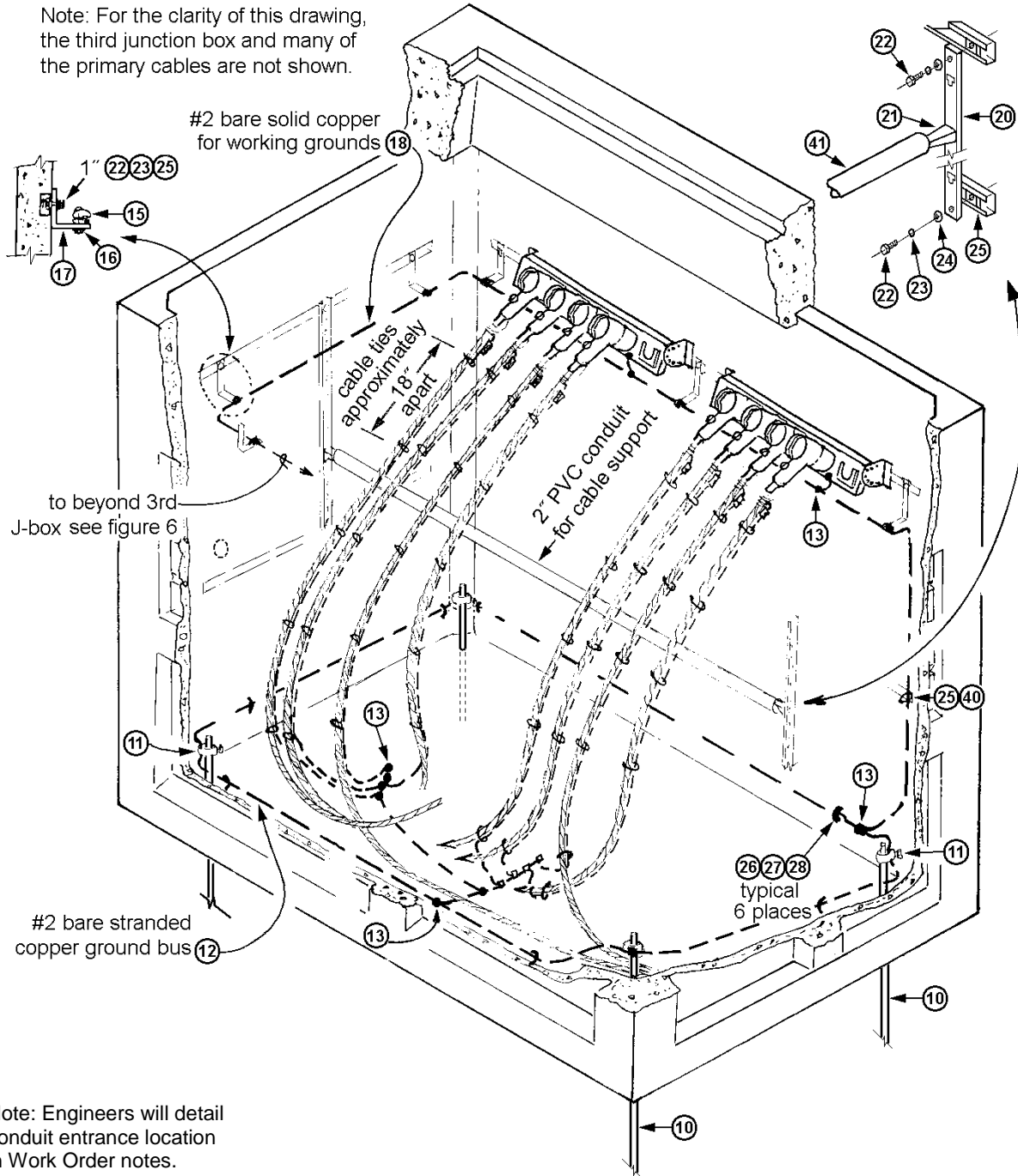


577 VAULT WITH THREE LOADBREAK JUNCTION BOXES INSTALLATION, GROUNDING AND CONNECTIONS

Note: For the clarity of this drawing, the third junction box and many of the primary cables are not shown.



Note: Engineers will detail conduit entrance location in Work Order notes.

Figure 1. Junction Box Installation

Standards Coordinator
Laura Vanderpool

Standards Supervisor
John Shipek

Unit Director
Darnell Cola

CONSTRUCTION GUIDELINE

577 Vault with Three Loadbreak Junction Boxes --
Installation, Grounding and Connections

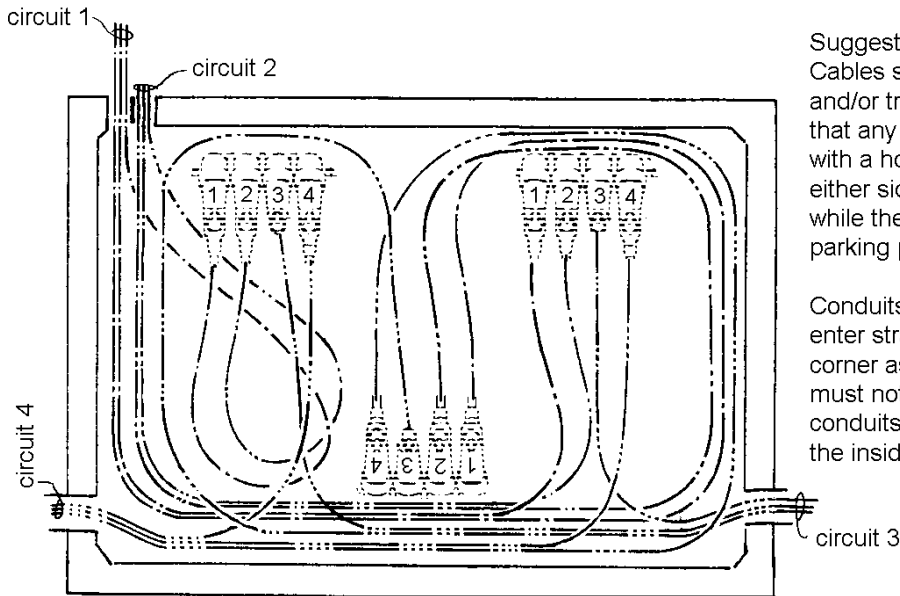


Figure 2. Cable Training and Conduit Entrance

Suggested Cable Training:
Cables shall be racked, routed and/or trained in such a manner that any elbow may be removed with a hot-stick and placed on either side with a feed-through while the feed-through is on the parking position of the J-box.

Conduits entering the vault should enter straight and as close to a corner as possible. The conduit must not interfere with any other conduits or any of the channels on the inside walls of the vault.

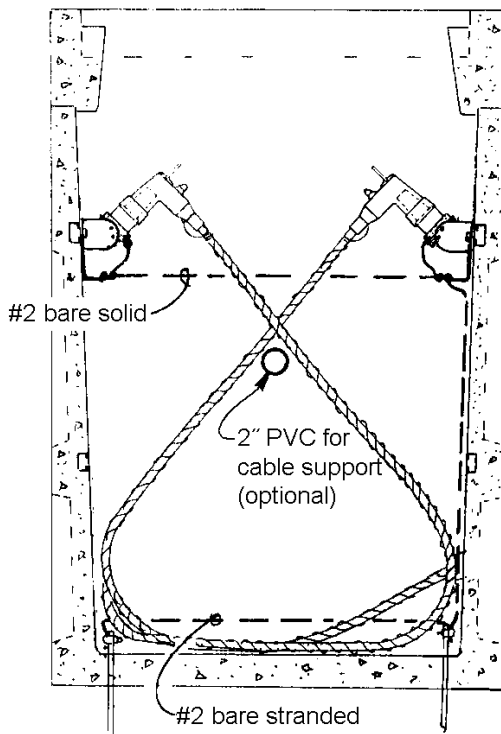


Figure 3. Cable Support

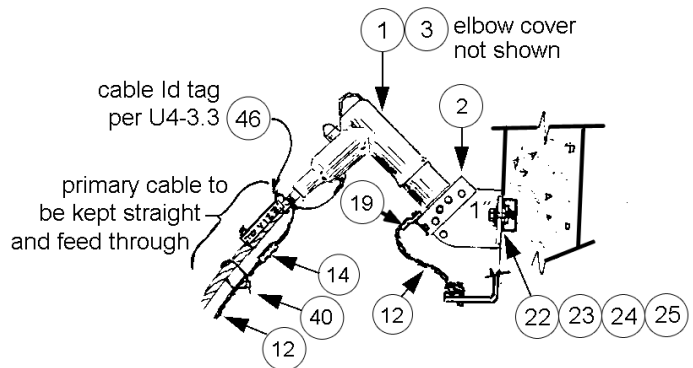


Figure 4. Elbow

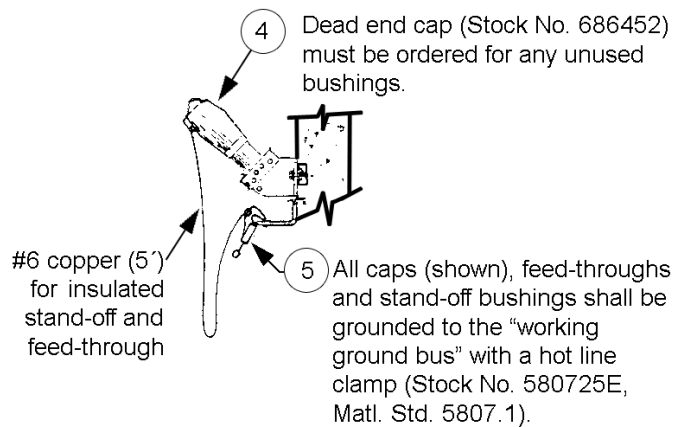
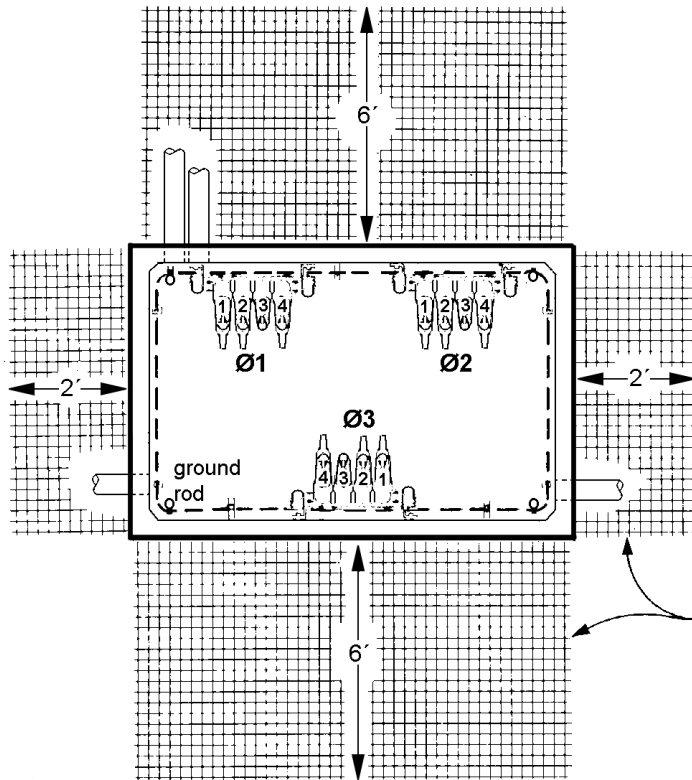


Figure 5. Dead End Cap

CONSTRUCTION GUIDELINE

577 Vault with Three Loadbreak Junction Boxes --
Installation, Grounding and Connections



Preferred J-Box Locations

- A. The J-boxes shall be located Ø1, Ø2, Ø3, in clockwise rotation.
- B. The positions on the J-boxes shall be 1, 2, 3, 4, left-to-right when facing the J-box.
- C. The number #2 bare solid wire for attaching working grounds shall be as tight as possible.

These areas are to be kept clear and level to insure proper hotstick operation. See U2-14.2 for maximum allowable grade around hatch.

Figure 6. J-Box Locations and Operating Clearances

When using either of the J-box location alternatives below, particular attention must be given to where the cables (conduits) enter the vault and to proper cable training.

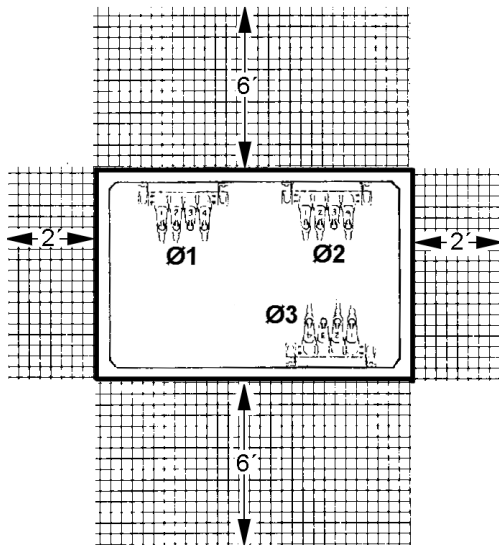


Figure 7. First Alternate J-Box Locations

Figure 8 alternative is to be used only when obstructions prevent the use of options. This option is never to be used for 5-way J-boxes.

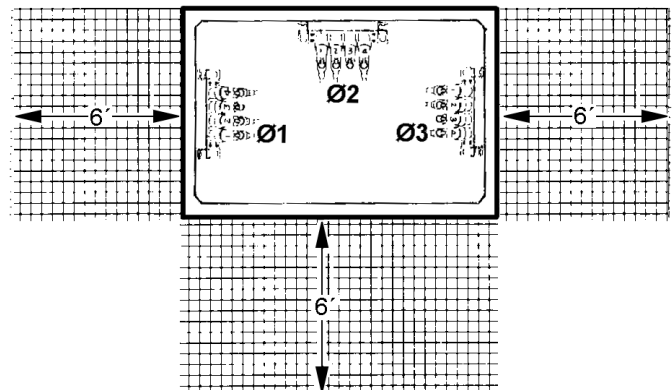


Figure 8. Second Alternate J-Box Locations

CONSTRUCTION GUIDELINE577 Vault with Three Loadbreak Junction Boxes --
Installation, Grounding and ConnectionsStandard Number: **U9-6**

Page: 4 of 4

Superseding: September 10, 2008

Effective Date: October 30, 2015

Material List

Item	Description	Quantity	Stock Number	Material Standard
Primary				
1	ELBOW, Load Break, 15.2/26.3 kV	9 or 12	686445	6864.05
2	JUNCTION BOX, Load Break	3 position	686454	6864.07
		4 position	686455	6864.07
		5 position* (see item 6)	686555	6864.07
3	COVER, Load Break Elbow, 1 per elbow	9 or 12	686467	none
4	CAP, Insulating Dead End	as required	686452	6864.07
5	CLAMP, Hot Line Tap	as required	580725	5807.1
6	BUSHING INSERT, not included with 5-position J-box	as required*	686449	6864.07
Grounding				
10	GROUND ROD, copper-covered, sectional	4	564238	6762.25
11	CLAMP for 5/8-in ground rods	4	564012	6762.15
12	WIRE, copper, bare, soft-drawn	200' (estimate)	610434	6103.90
13	CONNECTOR, Compression Tap, parallel #2 - #2 (crimpet)	18 (estimate)	677326	6773.5
14	SPLICE, Straight, copper, #2 - #2, 1 per elbow	9 or 12	677357	6773.8
15	CONNECTOR, Grounding, cable to flat, #4 - #2/0	9	676674	6766.1
16	WASHER, Cut, bronze, 3/8"	9	788024	7880.2
17	BRACKET, Ground Support, Unistrut	9	686466	none
18	WIRE, #2 Bare Solid, copper, hard drawn	20'	610006	6100.1
19	TERMINAL LUG, Compression #2	3	677071	6770.7
Racking and Mounting				
20	RACK, 18 Hole, galvanized, 30"	2 (estimate)	721666	7216.7
21	HOOKS, Cable Rack, galvanized steel	4"	as required	720625
		7-1/2"	as required	720626
		14"	2 (estimate)	720631
22	BOLT, Machine, zinc plated	1/2" x 1"	17 (estimate)	784825
		1/2" x 1-1/2"	7 (estimate)	784827
23	WASHER, Lock, galvanized, 1/2"	19 (estimate)	584255	5842.1
24	WASHER, Flat, galvanized, 1/2"	17 (estimate)	585025	5847.1
25	NUT, Unistrut, 1/2" P4010	20 (estimate)	723607	none
26	CABLE TIE, plastic, 0.184" x 7"	6 (estimate)	735805	7358.1
27	MOUNTING BASE, for cable tie, 1/2"	6 (estimate)	735852	none
28	ANCHOR, Stud Bolt, 1/4" x 1-3/4"	6 (estimate)	780091	7800.9
Miscellaneous				
40	CABLE TIE, plastic	0.184" x 7"	65 (estimate)	735805
		14"	5 (estimate)	735811
41	CONDUIT, PVC, Schedule, 40, 2"	7' (estimate)	734530	7015.05
42	CONDUIT, PVC, Schedule, 40, 4"	as required	734523	7015.05
43	CABLE PROTECTOR, nylon	as required	731801	7050.09
46	TAG, Cable Identification	9 or 12	735800	7050.09