

ATTENTION: These documents are provided for informational purposes. They provide standard configurations, general requirements, and guidelines for trenching and standard customer interconnections for APS customers. These documents do not address every possible situation. It is the responsibility of the customer to ensure that the documents provided here are the most current version. APS reserves the rights to require modifications based on site specific or system conditions.



ARIZONA PUBLIC SERVICE COMPANY
T&D CONSTRUCTION STANDARDS

BY	LDR.	MGR.	DATE	REV.
MLM	M. CAM	M. W. ADA	06/2022	1

SUBSTRUCTURES
TRAFFIC BEARING PULLBOX
REINFORCED CONCRETE
750 KCMIL FEEDER CABLE

COVER

8744
THRU
8746

8744.A

SPlicing MATERIAL ONLY

- 3** = THREE 750 KCMIL SPLICES
6 = SIX 750 KCMIL SPLICES
X = WITHOUT 750 KCMIL SPLICES

1 = ONE #1/0 AL SPLICE
2 = TWO #1/0 AL SPLICES
3 = THREE #1/0 AL SPLICES
X = WITHOUT #1/0 AL SPLICES

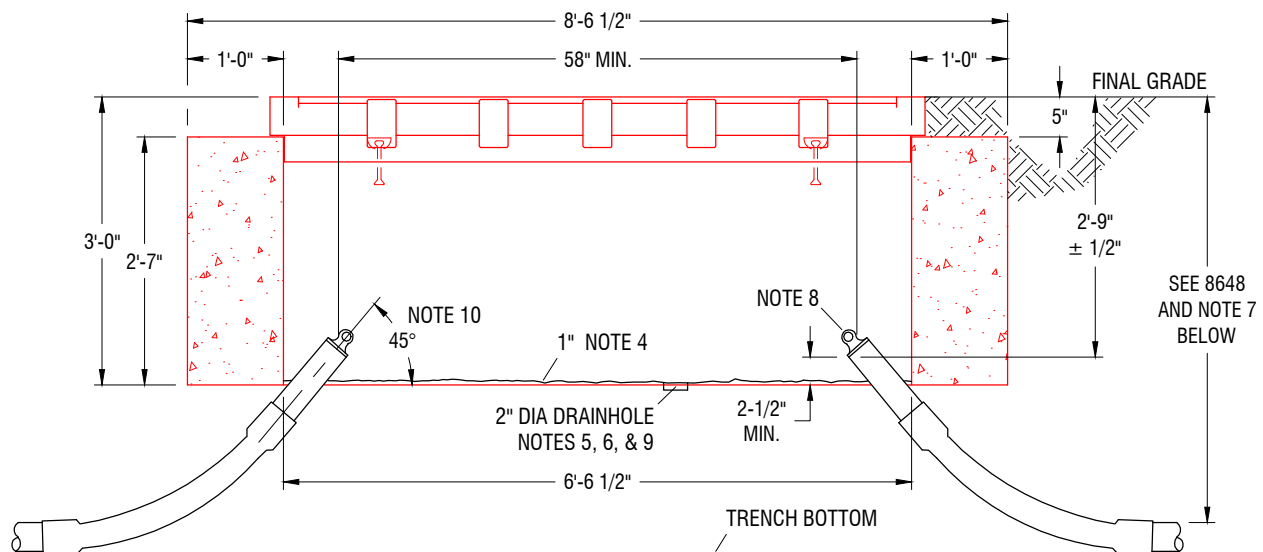
8746.A

IF APPLICABLE

G = APS GROUT PROVIDED

- 3** = THREE 750 KCMIL SPLICES
6 = SIX 750 KCMIL SPLICES
X = WITHOUT 750 KCMIL SPLICES

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**NOTES:**

- REQUIRED EXCAVATION SIZE FOR THE NEW PULLBOX IS 96 IN X 126 IN. X 38 IN. COMPLETE EXCAVATION PRIOR TO DELIVERY OF THE TRAFFIC BEARING PULL BOX. SUPPLIER WILL SET PULLBOX IN THE EXCAVATION AT TIME OF DELIVERY. FOR SCHEDULING DELIVERY CONTACT THE PRECAST SUPPLIER FIVE WORKING DAYS AHEAD.
- ADJUST SPECIFIED PULLBOX FRAME AND LID TO MATCH EXISTING OR PROPOSED GRADE.
- UNLESS OTHERWISE SPECIFIED, INSTALL THE PULLBOX TO WITHIN 1/8-INCH OF FINAL GRADE. A DEPRESSION IS PREFERABLE TO A PROJECTION (BUMP) ABOVE FINAL GRADE.
- USE PRE-MIX, APN 71301280, TO GROUT THE BOTTOM OF THE PULLBOX.
- A 2-INCH MINIMUM DIAMETER DRAIN HOLE, INSTALLED IN THE AREA OF LOWEST ELEVATION, IS REQUIRED TO ENSURE PROPER DRAINAGE.
- WHERE A GROUND ROD IS UTILIZED, IT SHALL BE DRIVEN THRU THE DRAIN HOLE TO PREVENT RODENT PENETRATION.
- ADDITIONAL TRENCH DEPTH IS USUALLY REQUIRED AT ALL REQUIRED EQUIPMENT LOCATIONS. SEE 8648 FOR THE MINIMUM TRENCH DEPTHS AND THE DEGREE OF SLOPE ALLOWED AS THE TRENCH DEPTH CHANGES.
- CONDUIT SHALL BE SEALED, CAPPED OR PLUGGED PER 8601 SECTION 18 AND 8881.
- THE PARTY RESPONSIBLE FOR THE INSTALLATION OF THE CONDUIT SYSTEM SHALL BE RESPONSIBLE FOR THE INSTALLATION OF THE GROUND ROD OR AN APPROVED ALTERNATE.
- CONDUITS MUST ENTER THE BOTTOM OF THE BOX AT A 45° ANGLE. PROPER CONDUIT SEPARATION IS CRITICAL FOR CABLE TRAINING AND SPLICING. SPACING SHALL BE 58 IN. MINIMUM.



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NOTES (CONTINUED):

11. ALL SPLICES SHALL BE INSTALLED IN STRAIGHT PORTIONS OF THE CABLE.
12. COMPACTION BENEATH AND AROUND PULLBOX SHALL BE A MINIMUM OF 90 PERCENT OF THE MAXIMUM DENSITY AS DEFINED IN 8601.
13. TOTAL WEIGHT:
BOX WITH COVER = 10,760 LBS
14. IF THE FINAL GRADE IS CONCRETE, BACKFILL WITH 5000 PSI CONCRETE TO FINAL GRADE AND FINISH SURFACE OF CONCRETE. IF FINAL GRADE IS NEITHER CONCRETE NOR ASPHALT, INSTALL FORMS 12 INCHES FROM FRAME SIDE SURFACE, BACKFILL WITH 5000 PSI CONCRETE AND FINISH SURFACE OF CONCRETE.
15. IF PULLBOX IS BEING INSTALLED IN ASPHALT, THIS BACKFILLING METHOD CAN BE USED: BACKFILL WITH 5000 PSI CONCRETE TO 3 INCHES BELOW FINAL GRADE THEN COMPLETE BACKFILLING WITH ASPHALT UP TO FINAL GRADE.
16. INSTALL PULLBOX TO WITHIN 1/8 IN. OF FINAL GRADE, UNLESS OTHERWISE SPECIFIED. A DEPRESSION IS PREFERABLE TO A PROJECTION ABOVE FINAL GRADE.
17. THE EXACT LOCATION AND ORIENTATION OF THE PULLBOX SHALL BE SPECIFIED ON THE WORK ORDER CONSTRUCTION DRAWINGS. THE PULLBOX SHALL BE POSITIONED OUTSIDE ANY DRAINAGE AREAS WHEREVER PRACTICAL.
18. CONDUIT FOR PRIMARY OR FEEDERS INSTALLED SHALLOWER THAN A 36-INCH DEPTH SHALL BE PARTIALLY ENCASED WITH A MINIMUM 4-INCH CONCRETE CAP ON TOP AND 2-INCHES ON THE SIDES. PARTIAL CONCRETE ENCASEMENT SHALL INCLUDE TOP AND SIDES OF CONDUIT, BUT NOT THE BOTTOM (SEE 8601, SECTION 23.0)
19. THIS PULLBOX IS NORMALLY USED FOR A SINGLE-CIRCUIT FEEDER, BUT MAY BE USED FOR A MAXIMUM OF SIX SPLICES, ANY COMBINATION OF PRIMARY 1/0 AL OR 750 KCMIL AL FEEDERS. THE SEPARATION BETWEEN SPLICES SHOULD BE AS SHOWN IN THE EXAMPLES ON THE FOLLOWING PAGES.
20. HIGH AND LOW-VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME PULL BOX.
21. FOR FINAL INSTALLATION OF STEEL COVERS, REPLACE MANUFACTURER SUPPLIED STEP WASHERS WITH A SINGLE COIL, HELICAL, SPLIT, GALVANIZED LOCK WASHER, APN# 33007142. THE GALVANIZED SQUARE LOCKNUT HAS AN ADJUSTABLE NYLON INSERT. MAKE SURE THIS LOCKNUT IS ADJUSTED. TURN THE INSERT INTO THE NUT UNTIL THE TIP OF THE INSERT IS FLUSH WITH THE THREADS ON THE INSIDE OF THE NUT. ALSO, CLEAN THREADS ON ALL NUTS AND BOLTS PER MANUFACTURER'S (LOCTITE) RECOMMENDATIONS AND APPLY "LOCTITE" #271 LIQUID (APN 85413420) THREADLOCKER TO BOLT THREADS. TORQUE BOLTS TO 50 FT LBS.
22. SEE 8601 FOR TRENCH BACKFILL AND COMPACTION REQUIREMENTS.
23. SEE 6210 FOR MINIMUM BENDING RADIUS FOR PRIMARY CABLE.
24. SEE 2449-2453 AND 2458-2460 FOR ALTERNATE GROUNDING METHODS.



CODE	8744	8746	MATERIAL LIST	
ITEM	QTY	QTY	DESCRIPTION	APN
1	VAR	VAR	CABLE, #2/7 STRD CU BARE	31001415
2	1	1	CLAMP GROUND ROD 5/8"	33002580
3	-	VAR	CONCRETE PRE-MIX 30#	71301280
4	VAR	VAR	CONN CU "H" 2-1/0 2-1/0	33101345
5	-	1	ROD COPPERCLAD GRD 5/8" X 8"	33004805
6	VAR	VAR	SPLICE 1/0, 4/0 - SEE 2531	
7	VAR	VAR	SPLICE 750, 1100 - SEE 2551	
8	-	1	750 SPLICE BOX HS20 RATED	00147939
9	VAR	VAR	TIE CABLE MAX 2 IN OD	00103864



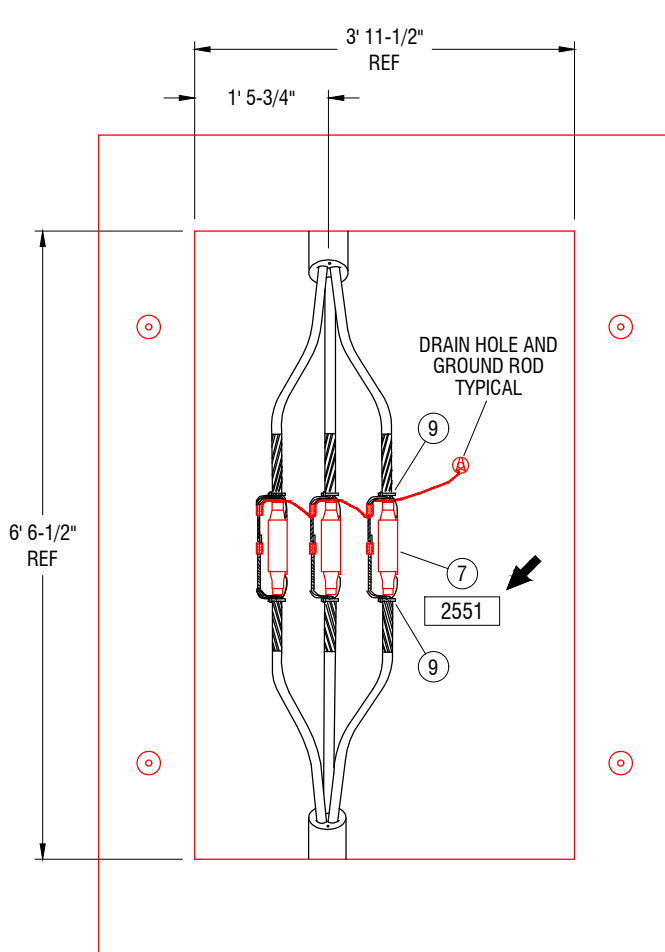
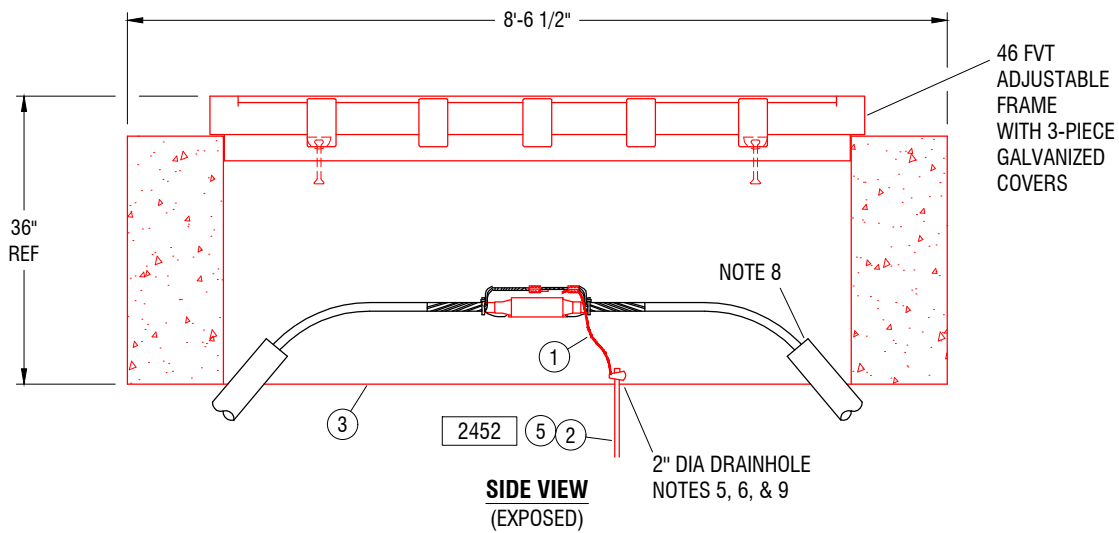
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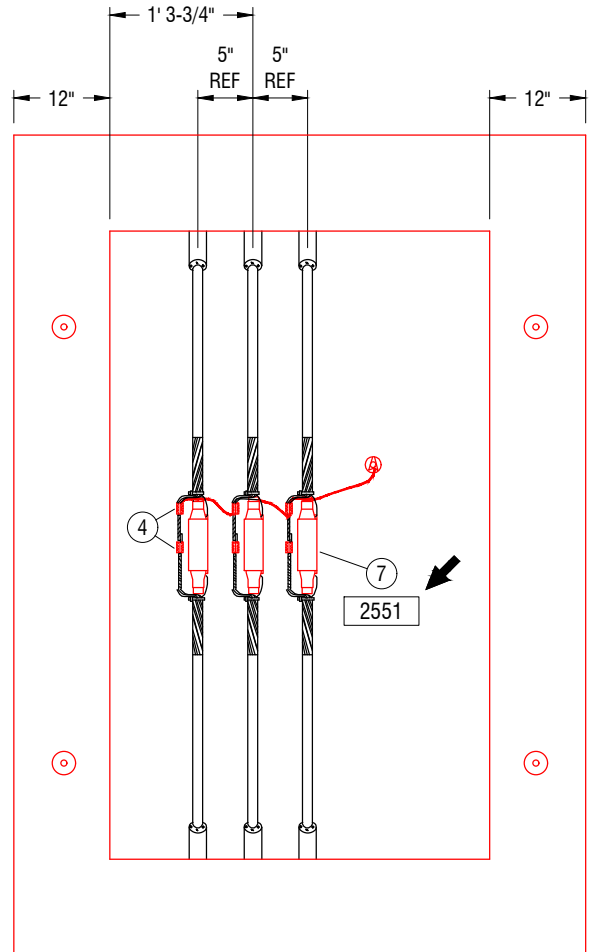
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TOP VIEW - EXAMPLE A
3-750A IN A SINGLE 5 IN. CONDUIT



TOP VIEW - EXAMPLE B
3-750A IN SEPARATE 3 IN. CONDUITS



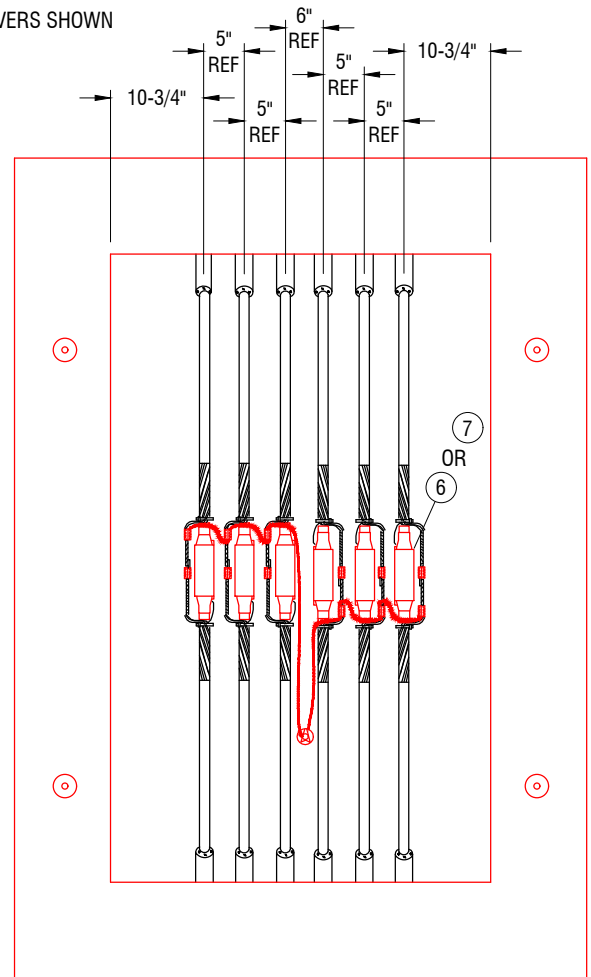
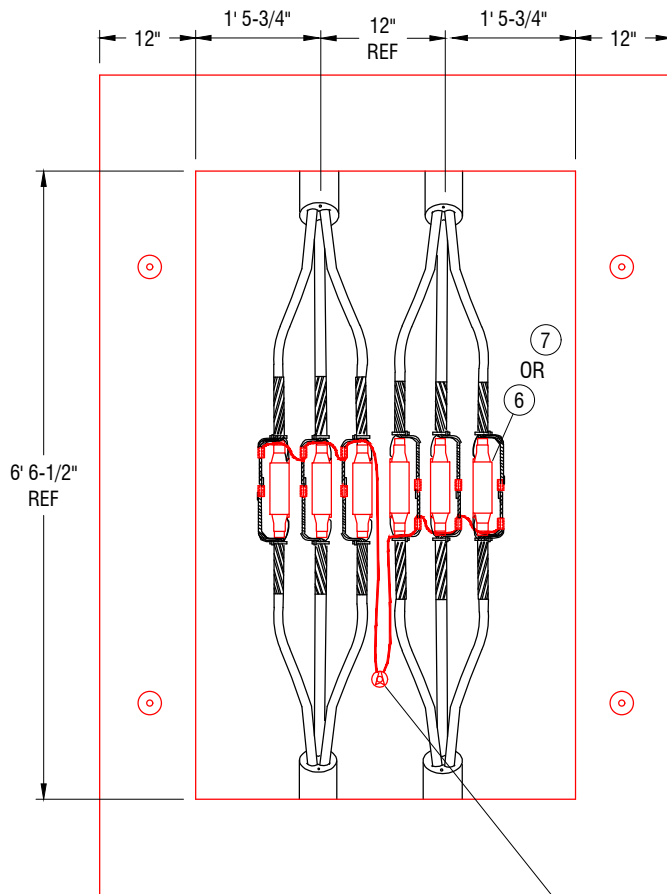
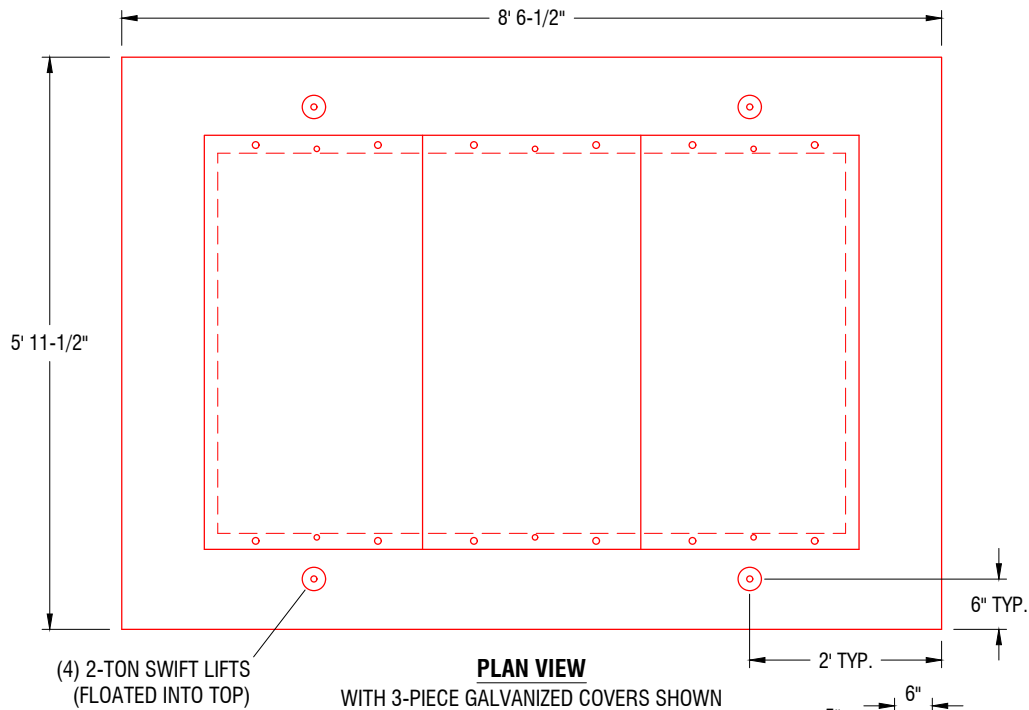
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