

NOTES:

1. PULLBOX SHALL BE PROVIDED WITH COVER AND SPECIAL CONCRETE FOOTING. COVER SHALL BE FIBERLYTE OR SEE COA APPROVED PRODUCTS LIST AND SHALL HAVE EMBOSSED NO-SKID PATTERN AND BE LABELED "TRAFFIC SIGNAL".
2. TOPS OF PULLBOXES SHALL BE FLUSH WITH SURROUNDING GRADE OR TOP OR ADJACENT CURB, EXCEPT IN UNPAVED AREAS WHERE PULLBOX IS NOT IMMEDIATELY ADJACENT TO AND PROTECTED BY A CONCRETE FOUNDATION, POLE OR OTHER PROTECTIVE CONSTRUCTION, THE BOX SHALL BE PLACED WITH ITS TOP 0.75 INCH ABOVE SURROUND GRADE. WHERE PRACTICAL, PULLBOXES SHOWN IN THE VICINITY OF CURBS SHALL BE PLACED ADJACENT TO THE BACK OF CURB, AND PULLBOXES SHOWN ADJACENT TO STANDARDS SHALL BE PLACED ON SIDE OF FOUNDATION FACING AWAY FROM TRAFFIC, UNLESS OTHERWISE NOTED.
3. ALL COVERS SHALL BE INTERCHANGEABLE BETWEEN BOXES. TOP OUTSIDE EDGE OF ALL CONCRETE COVERS AND PULLBOXES SHALL HAVE A 0.25 INCH MIN. RADIUS.
4. WHEN PULLBOX IS INSTALLED IN SIDEWALK AREA, THE DEPTH OF THE BOX SHALL BE ADJUSTED SO THAT THE TOP OF THE BOX IS FLUSH WITH THE TOP OF THE SIDEWALK.
5. PULLBOX SHALL NOT BE WITHIN THE BOUNDARIES OF NEW OR EXISTING WHEELCHAIR RAMPS.
6. ALL BENDS SHALL BE FACTORY BENDS.
7. CONTRACTOR SHALL ADAPT CONDUIT STUBOUTS FOR SPECIFIC PROJECT REQUIREMENTS FOR SPECIFIC PROJECT REQUIREMENTS. AS A MINIMUM, ONE 2-INCH CONDUIT SHALL BE STUBBED OUT AND CAPPED FOR FUTURE CITY OF AVONDALE USE.
8. ADDITIONAL CONDUIT ENTRANCES AS SHOWN ON PLANS.
9. THERE SHALL NOT BE MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS (360 DEGREES TOTAL) IN EITHER CONDUIT DUCT BETWEEN ENTRANCE LOCATIONS (PULLBOXES AND/OR VAULTS).
10. PULLBOX SHALL BE FURNISHED WITH FOUR KNOCKOUTS PER SHORT SIDE AND SIX KNOCKOUTS PER LONG SIDE.
11. ADDITIONAL CONDUIT ENTRANCES AS SHOWN ON PLANS.
12. SEE SPECIAL PROVISIONS REGARDING HOLD DOWN BOLTS FOR TRAFFIC COVERS.
13. TERMINATORS FOR COMMUNICATION DUCTS AND LATERAL STUBOUTS MAY BE PROVIDED INSTEAD OF KNOCKOUTS. WHEN KNOCKOUTS ARE USED, SPECIAL CONDUIT TERMINATORS SHALL BE PROVIDED PER THE SPECIAL PROVISIONS.
14. ALL DIMENSIONS ARE NOMINAL AND SHALL BE CONSIDERED MINIMUM. VARIATIONS ARE ALLOWABLE.
15. ALL CONDUITS SHALL BE SEALED WITH COMPATIBLE SEALANT.
16. ALL GROUND CONNECTIONS SHALL BE COATED WITH OXIDATION PROHIBITING COMPOUND.
17. ALL CABLE STRAPS SHALL BE DESIGNED TO WITHSTAND ULTRAVIOLET EXPOSURE.
18. PULL BOXES SHALL BE SPACED EVERY 250 LINEAR FEET.

DETAIL NO.

A1710

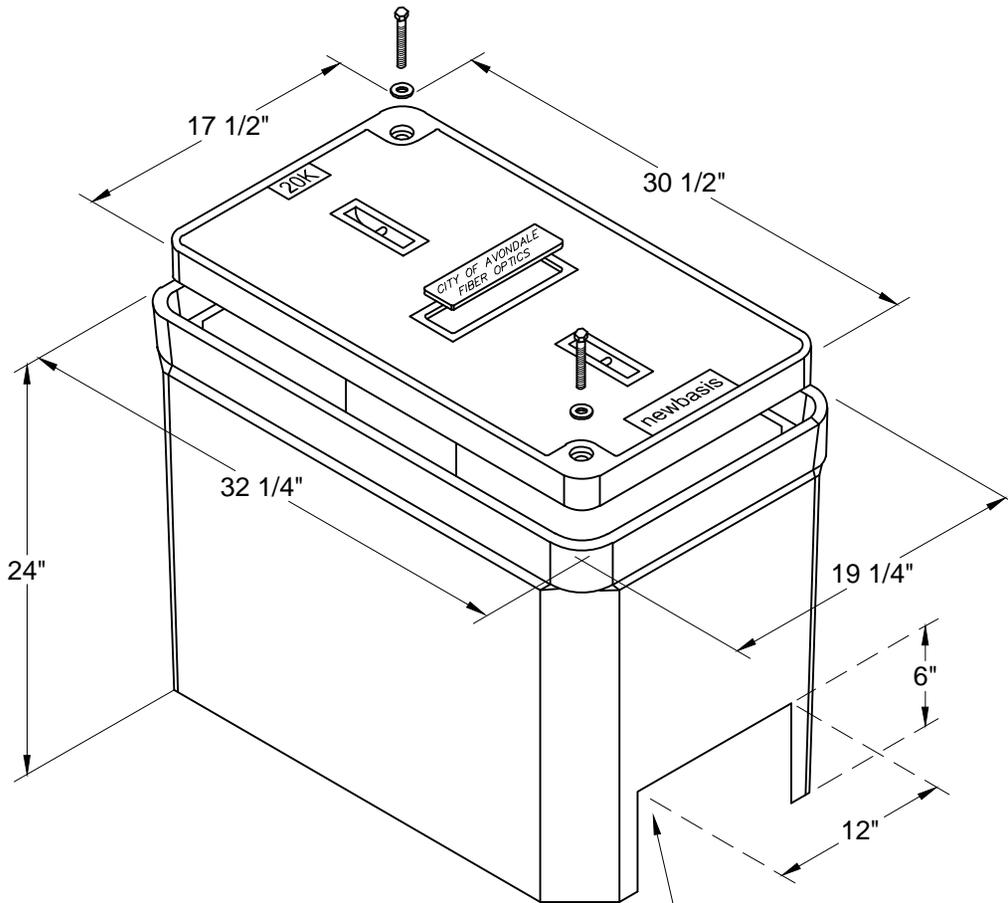
Avondale
STANDARD DETAIL

**TRAFFIC SIGNAL
JUNCTION BOX DETAIL**

APPROVED BY:

DATE:

David S. Jones
8.24.16



INSIDE DIMENSIONS

LENGTH	WIDTH	DEPTH
29 1/4"	16 1/4"	22"

NOTES:

1. TOPS OF PULL BOXS SHALL BE FLUSH WITH SURROUNDING GRADE OR TOP OR ADJACENT CURB, EXCEPT IN UNPAVED AREAS WHERE PULL BOX IS NOT IMMEDIATELY ADJACENT TO AND PROTECTED BY A CONCRETE FOUNDATION, POLE OR OTHER PROTECTIVE CONSTRUCTION, THE PULL BOX SHALL BE PLACED WITH ITS TOP 0.75 INCH ABOVE SURROUNDING GRADE. WHERE PRACTICAL, PULL BOXS SHOWN IN THE VICINITY OF CURBS SHALL BE PLACED ADJACENT TO THE BACK OF CURB, AND PULL BOXES SHOWN ADJACENT TO POLES SHALL BE PLACED ON SIDE OF FOUNDATION FACING AWAY FROM TRAFFIC, UNLESS OTHERWISE NOTED.
2. WHEN PULL BOX IS INSTALLED IN SIDEWALK AREA, THE DEPTH OF THE BOX SHALL BE ADJUSTED SO THAT THE TOP OF THE BOX IS FLUSH WITH THE TOP OF THE SIDEWALK.
3. PULL BOX SHALL NOT BE WITHIN THE BOUNDARIES OF NEW OR EXISTING WHEELCHAIR RAMP.
4. CONTRACTOR SHALL ADAPT CONDUIT STUBOUTS FOR SPECIFIC PROJECT REQUIREMENTS FOR SPECIFIC PROJECT REQUIREMENTS. AS A MINIMUM, ONE 2-INCH CONDUIT SHALL BE STUBBED OUT AND CAPPED FOR FUTURE CITY OF AVONDALE USE.
5. ALL DIMENSIONS ARE NOMINAL AND SHALL BE CONSIDERED MINIMUM. VARIATIONS ARE ALLOWABLE.
6. ALL CONDUITS SHALL BE SEALED WITH COMPATIBLE SEALANT.
7. ALL CABLE STRAPS SHALL BE DESIGNED TO WITHSTAND ULTRAVIOLET EXPOSURE.
8. PLUG EACH CONDUIT END WITH APPROVED WATERPROOF DUCT PLUG.
9. UNSPLICED CABLE SHALL HAVE 100 FEET OF SLACK CABLE. EXCESS CABLES ARE TO BE COILED AND PLACED INSIDE THE PULL BOX.

DETAIL NO.

A1717

Avondale
STANDARD DETAIL

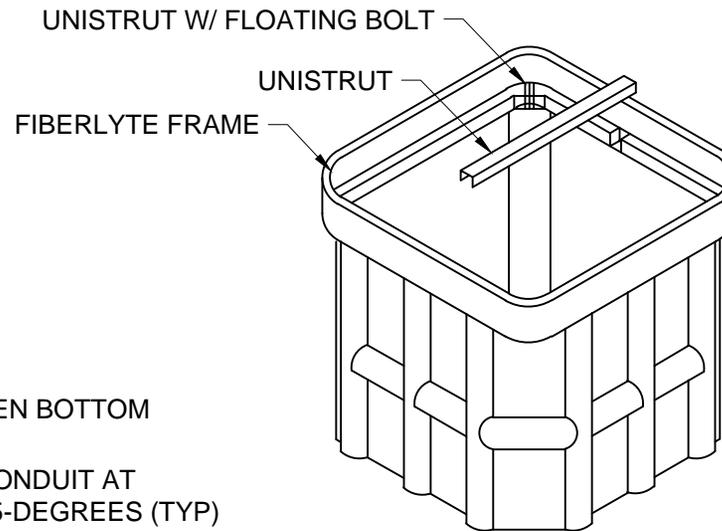
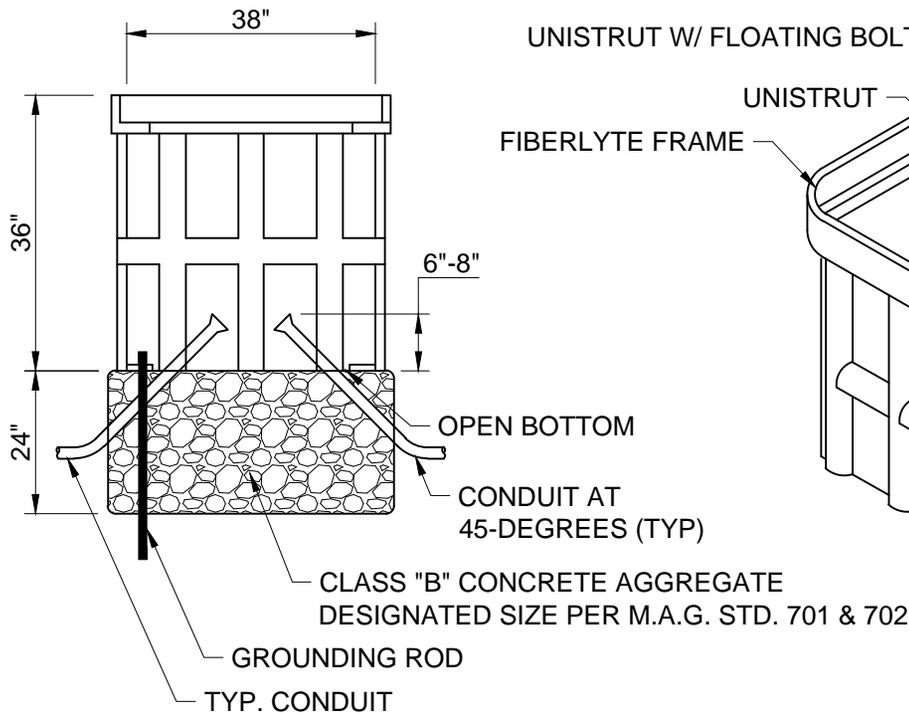
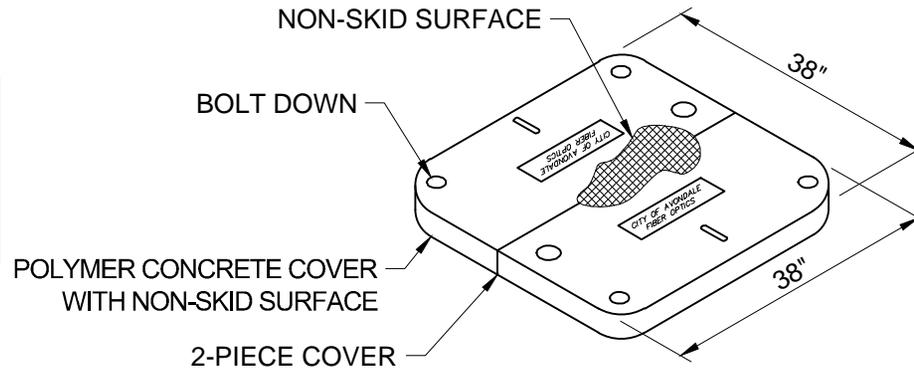
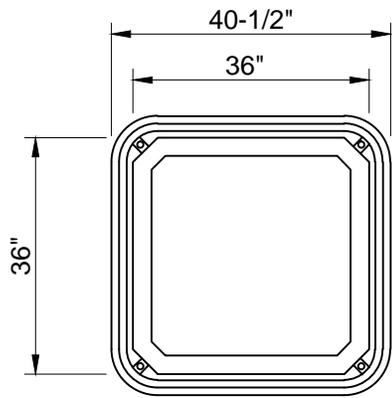
NO. 7 PULL BOX DETAIL

APPROVED BY:

David S. Jones

DATE:

8.24.16



NOTES:

1. TOPS OF VAULTS SHALL BE FLUSH WITH SURROUNDING GRADE OR TOP OR ADJACENT CURB, EXCEPT IN UNPAVED AREAS WHERE VAULT IS NOT IMMEDIATELY ADJACENT TO AND PROTECTED BY A CONCRETE FOUNDATION, POLE OR OTHER PROTECTIVE CONSTRUCTION, THE VAULT SHALL BE PLACED WITH ITS TOP 0.75 INCH ABOVE SURROUNDING GRADE. WHERE PRACTICAL, VAULTS SHOWN IN THE VICINITY OF CURBS SHALL BE PLACED ADJACENT TO THE BACK OF CURB, AND VAULTS SHOWN ADJACENT TO POLES SHALL BE PLACED ON SIDE OF FOUNDATION FACING AWAY FROM TRAFFIC, UNLESS OTHERWISE NOTED.
2. WHEN VAULT IS INSTALLED IN SIDEWALK AREA, THE DEPTH OF THE VAULT SHALL BE ADJUSTED SO THAT THE TOP OF THE VAULT IS FLUSH WITH THE TOP OF THE SIDEWALK.
3. VAULT SHALL NOT BE WITHIN THE BOUNDARIES OF NEW OR EXISTING WHEELCHAIR RAMPS.
4. CONTRACTOR SHALL ADAPT CONDUIT STUBOUTS FOR SPECIFIC PROJECT REQUIREMENTS FOR SPECIFIC PROJECT REQUIREMENTS. AS A MINIMUM, ONE 2-INCH CONDUIT SHALL BE STUBBED OUT AND CAPPED FOR FUTURE CITY OF AVONDALE USE.
5. ALL DIMENSIONS ARE NOMINAL AND SHALL BE CONSIDERED MINIMUM. VARIATIONS ARE ALLOWABLE.
6. ALL CONDUITS SHALL BE SEALED WITH COMPATIBLE SEALANT.
7. ALL CABLE STRAPS SHALL BE DESIGNED TO WITHSTAND ULTRAVIOLET EXPOSURE.
8. PLUG EACH CONDUIT END WITH APPROVED WATERPROOF DUCT PLUG.
9. UNSPLICED CABLE SHALL HAVE 100 FEET OF SLACK CABLE. EXCESS CABLES ARE TO BE COILED AND PLACED INSIDE THE VAULT.
10. "CITY OF AVONDALE FIBER OPTIC" SHALL BE THE TITLE EMBOSSED ON THE LID. ROUND AND SQUARE LIDS ARE BOTH ACCEPTABLE.

DETAIL NO.

A1719-1

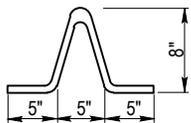
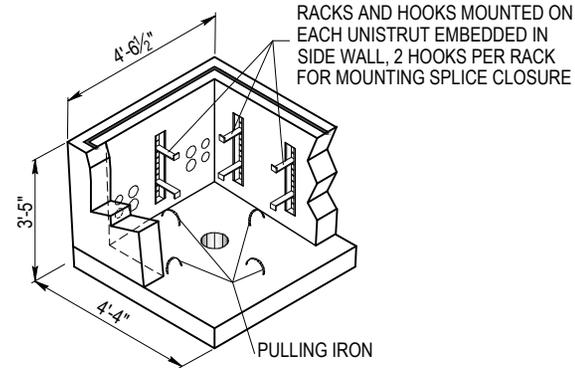
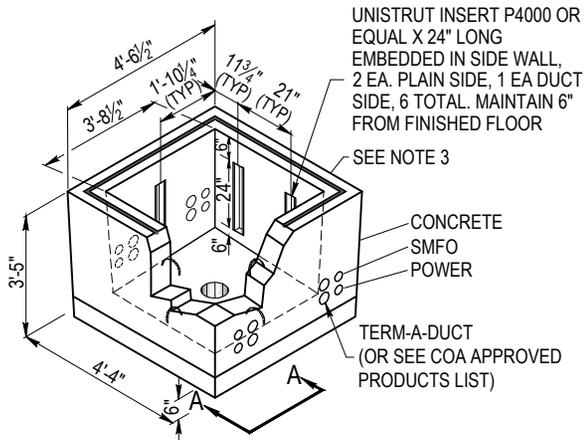
Avondale
STANDARD DETAIL

FIBER SPLICING VAULT

APPROVED BY:

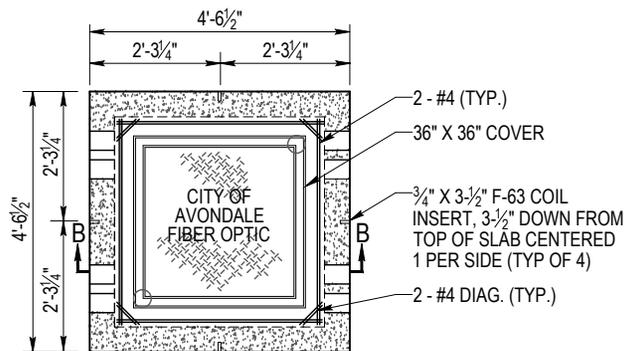
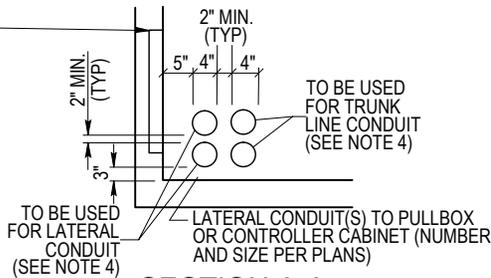
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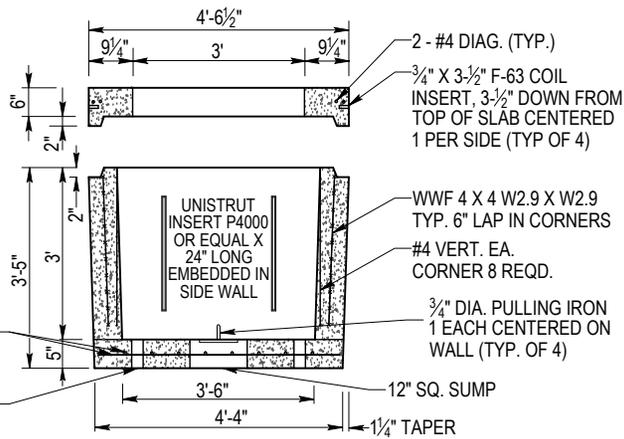


PULLING IRON DETAIL

**FIBER OPTIC
NO. 9 VAULT**
(3'-6" X 3'-6" X 3' HANDHOLE
W/ SQ. HINGED COVER)



PLAN VIEW



SECTION B-B VIEW

NOTES:

- PULLING IRONS SHALL BE CAST INTO EACH CORNER OF THE BOTTOM OF PULL BOX.
- ALL NEW PULL BOXES SHALL BE FURNISHED WITH RACKS AND HOOKS INSTALLED.
- PULL BOX SHALL BE INSTALLED WITH A LOCKING LIP WITH SEAL BETWEEN WALL & COVER ASSEMBLY.
- TERM-A-DUCT (OR SEE COA APPROVED PRODUCTS LIST) SHALL ACCEPT A 4" DIA. PVC CONDUIT, UNLESS OTHERWISE SPECIFIED.
- PULL BOX AND LID SHALL BE RATED FOR HS20-44 LIVE LOADING.
- ALL POWER AND COMMUNICATION CABLES SHALL BE TAGGED WITH CABLE IDENTIFICATION.
- "CITY OF AVONDALE FIBER OPTIC" SHALL BE THE TITLE EMBOSSED ON THE LID. ROUND AND SQUARE LIDS ARE BOTH ACCEPTABLE.
- LOCKING LID W/SEAL BETWEEN WALL AND COVER ASSEMBLY.
- SQUARE LID SHALL BE H20 GALVANIZED HINGED 36" X 36" CLEAR 180 DEGREE OPENING. DOOR SHALL BE TORSION SPRING ASSISTED WITH RECESSED LIFTING HANDLE WITH STAINLESS STEEL PENTA BOLT AND CAM LOCK.

DESIGN CRITERIA:

LIVE LOAD	HS 20-44 TRUCK LOADING
EQUIVALENT LATERAL EARTH PRESSURE	30 P.S.F. (DRY) 36 P.S.F. (SATURATED)
DEPTH: (GROUND SURFACE TO TOP OF MANHOLE)	AT GRADE
MINIMUM SOIL BEARING CAPACITY	2,000 P.S.F.

DESIGN SPECS:

CONCRETE COMPRESSIVE STRENGTH SHALL BE BASED ON 28 DAY TEST AGE AND SHALL REACH F_c OF 6,000 P.S.I. (DRY CAST).

REINFORCING STEEL GRADE 60	60,000 P.S.I.
WELDED WIRE FABRIC ASTM A185	60,000 P.S.I.

DESIGN CODES:

AMERICAN CONCRETE INSTITUTE (ACI) 318-39.

ASTM C857-82 MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND - PRECAST CONCRETE UTILITY STRUCTURES.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) HB-15TH EDITION.

GENERAL NOTES:

- ALL JOINTS BETWEEN CONCRETE UNITS SHALL BE SEALED WITH A HIGH QUALITY SEALANT TO ASSURE WATERTIGHT INTEGRITY.
- ALL REINFORCEMENT STEEL TO HAVE EQUAL COVER UNLESS OTHERWISE NOTED.
- WITH PRIOR APPROVAL FROM THE CITY OF AVONDALE, THE CONTRACTOR MAY INSTALL 3'-6" X 3'-6" HANDHOLE-NO FLOOR W/36" SQ. HINGED COVER VAULT OR SEE COA APPROVED PRODUCTS LIST.

DETAIL NO.

A1719-2

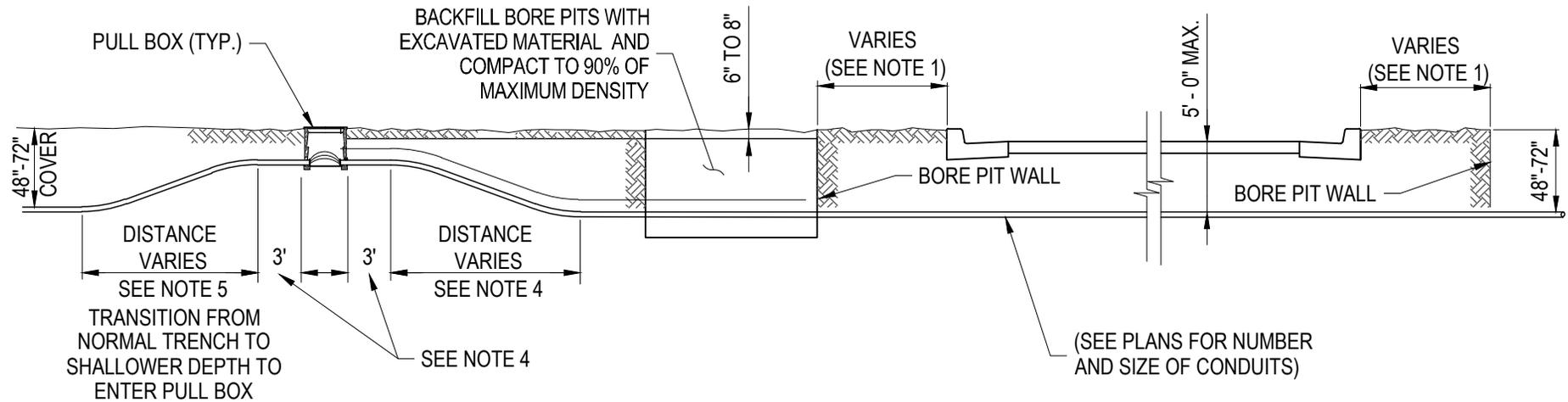
Avondale
STANDARD DETAIL

**NO. 9 VAULT WIRING
AND COVER DETAIL**

APPROVED BY:

DATE:

Daniel S. Jones
8.24.16



NOTES:

1. BORE PIT SHALL BE SET BACK FROM EDGE OF SIDEWALK OR OTHER ROADWAY BOUNDARY FEATURE A DISTANCE EQUAL TO OR GREATER THAN THE DEPTH OF THE CONDUIT.
2. A PULL BOX SHALL BE INSTALLED ON ONE END OF THE CONDUIT.
3. CONDUIT SHALL BE FLAT FOR A MINIMUM OF 3' ON EACH SIDE OF THE NO. 9 PULL BOX BEFORE STARTING A VERTICAL CONDUIT DEFLECTION.
4. CONDUIT ALIGNMENT OFFSETS ARE TO BE ACCOMPLISHED BY A UNIFORM RATE OF CONDUIT DEFLECTION OVER A DISTANCE EQUAL TO OR GREATER THAN TEN (10) TIMES THE OFFSET DISTANCE.
5. SLEEVES SHALL BE NOMINALLY SLOPED TO DRAIN. SLOPE IN SUPER ELEVATED SECTIONS MAY APPROXIMATE ROADWAY CROSS-SLOPE. SPACE IN SLEEVES NOT OCCUPIED BY CONDUIT SHALL REMAIN EMPTY.
6. DIRECTIONAL SHALL FOLLOW MAG STANDARD SPECIFICATIONS SECTION 608.

**TYPICAL CONDUIT DEPTH
(FOR 48"-72" DEPTH)**
(NTS)

SLEEVE SIZE	
NUMBER OF CONDUITS	MIN REQUIRED INSIDE DIAMETER
1-3"	6"
2-3"	8"
4-2"	8"
2-2" & 2-4"	12"

DETAIL NO.

A1719-3

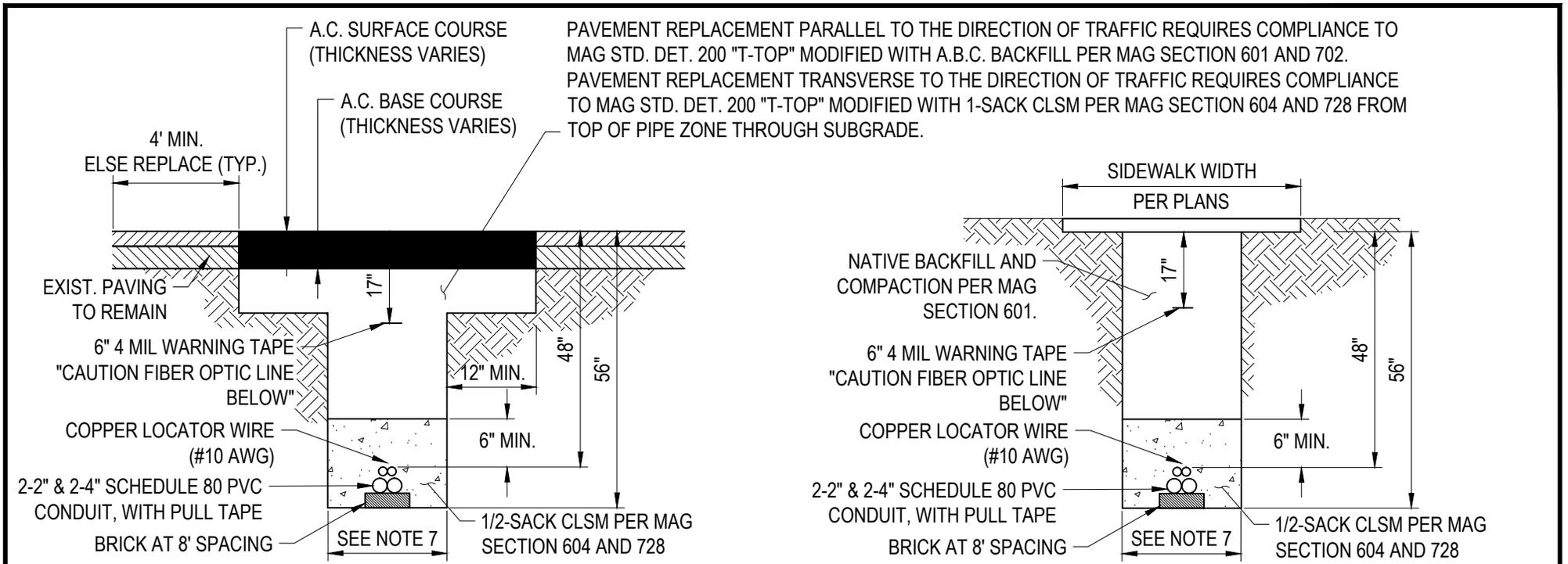
Avondale
STANDARD DETAIL

DIRECTIONAL BORE DETAILS

APPROVED BY:

DATE:

David S. Jones
8.24.16



TRENCH SECTION A

(PAVED)

TRENCH SECTION B

(UNPAVED)

NOTES:

1. TRENCH DEPTH MAY VARY BASED ON CONFLICTS WITH EXISTING UTILITIES.
2. BID ITEM FOR PROVIDING A TRENCH THAT IS A MINIMUM OF 56" DEEP INCLUDES INSTALLING FIBER OPTIC DUCT AND PROVIDING BACKFILL COMPLETE IN PLACE. THIS ITEM SHALL PROVIDE A MINIMUM COVER DEPTH OF 48" OVER THE CONDUIT DUCT. ALL WARNING TAPE, CONDUIT SPACERS, BRICKS AND COMPACTION WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE BID OF ITEM, TRENCHING (56") AND INSTALLATION OF FIBER OPTIC DUCT, AND BACKFILL, COMPLETE IN PLACE".
3. BORING SHALL BE ALLOWED WITH PRIOR APPROVAL FROM THE CITY.
4. IF THE CONDUIT ROUTING CROSSES AN EXISTING PORTLAND CEMENT CONCRETE DRIVEWAY THE CONDUITS SHALL BE PLACED BY BORING. ALL ASPHALT DRIVEWAYS MAY BE TRENCHED.
5. ALL CONDUIT BENDS SHALL BE CONCRETE ENCASED FOR A MINIMUM OF TWO (2) FEET BEYOND EACH END OF THE BEND.
6. A 1/2 SACK OF CEMENT SLURRY BACKFILL SHALL BE USED THROUGH THE PIPE ZONE WHEN BACKFILLING CONDUITS INSTALLED IN A TRENCH IN PAVEMENT. CONDUITS SHALL BE SUPPORTED AND ANCHORED IN THE TRENCH PRIOR TO BACKFILLING WITH THE CEMENT SLURRY.
7. TRENCH WIDTH MAY NOMINALLY VARY FROM 18" TO 22" BUT SHALL NOT EXCEED 24" IN WIDTH.
8. A SINGLE CONTINUOUS INSULATED COPPER LOCATOR WIRE #10 AWG SHALL BE INSTALLED ALONG THE ENTIRE LENGTH OF THE CONDUIT RUN.
9. WHEN FIBER IS PULLED, 3-3" MAXCELL PACKS (OR SEE COA APPROVED PRODUCTS LIST) INTERDUCTS SHALL BE INSTALLED.

DETAIL NO.

A1720-1

Avondale
STANDARD DETAIL

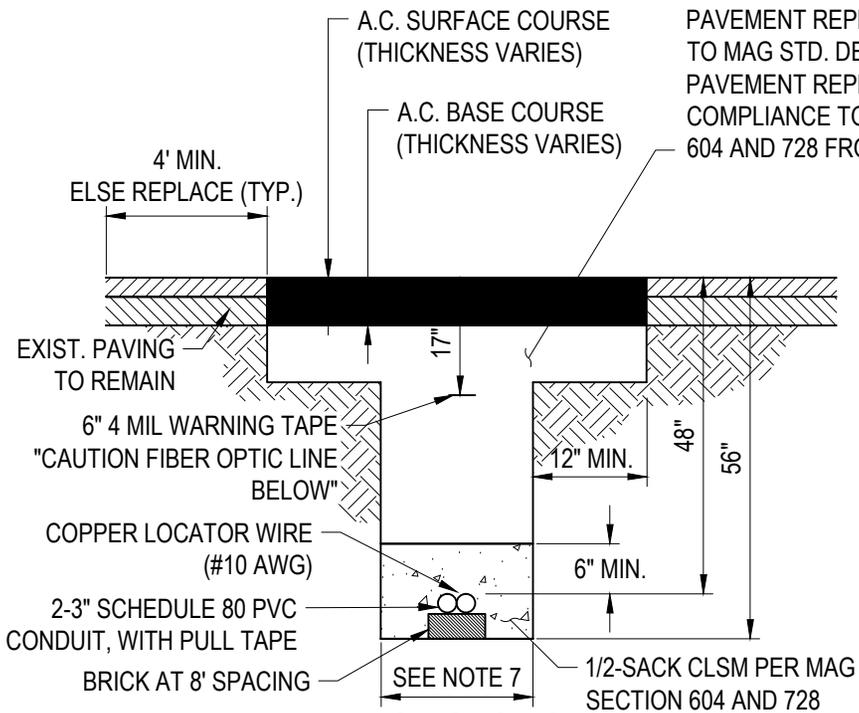
**PRIMARY COMMUNICATIONS
NETWORK CONDUIT TRENCH DETAIL**

APPROVED BY:

David S. Jones

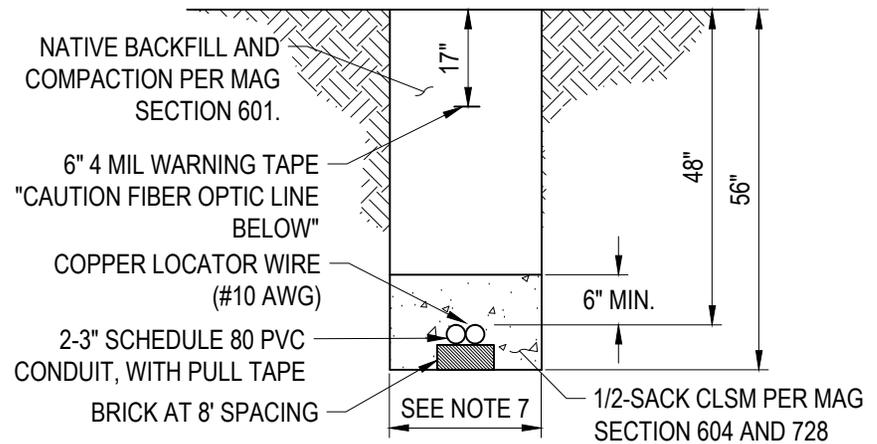
DATE:

8.24.16



TRENCH SECTION A
(PAVED)

PAVEMENT REPLACEMENT PARALLEL TO THE DIRECTION OF TRAFFIC REQUIRES COMPLIANCE TO MAG STD. DET. 200 "T-TOP" MODIFIED WITH A.B.C. BACKFILL PER MAG SECTION 601 AND 702. PAVEMENT REPLACEMENT TRANSVERSE TO THE DIRECTION OF TRAFFIC REQUIRES COMPLIANCE TO MAG STD. DET. 200 "T-TOP" MODIFIED WITH 1-SACK CLSM PER MAG SECTION 604 AND 728 FROM TOP OF PIPE ZONE THROUGH SUBGRADE.



TRENCH SECTION B
(UNPAVED)

NOTES:

1. TRENCH DEPTH MAY VARY BASED ON CONFLICTS WITH EXISTING UTILITIES.
2. BID ITEM FOR PROVIDING A TRENCH THAT IS A MINIMUM OF 56" DEEP INCLUDES INSTALLING FIBER OPTIC DUCT AND PROVIDING BACKFILL COMPLETE IN PLACE. THIS ITEM SHALL PROVIDE A MINIMUM COVER DEPTH OF 48" OVER THE CONDUIT DUCT. ALL WARNING TAPE, CONDUIT SPACERS, BRICKS AND COMPACTION WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE BID OF ITEM, TRENCHING (56") AND INSTALLATION OF FIBER OPTIC DUCT, AND BACKFILL, COMPLETE IN PLACE".
3. BORING SHALL BE ALLOWED WITH PRIOR APPROVAL FROM THE CITY.
4. ALL CONDUIT BENDS SHALL BE CONCRETE ENCASED FOR A MINIMUM OF TWO (2) FEET BEYOND EACH END OF THE BEND.
5. A 1/2 SACK OF CEMENT SLURRY BACKFILL SHALL BE USED THROUGH THE PIPE ZONE WHEN BACKFILLING CONDUITS. CONDUITS SHALL BE SUPPORTED AND ANCHORED IN THE TRENCH PRIOR TO BACKFILLING WITH THE CEMENT SLURRY.
6. TRENCH WIDTH MAY NOMINALLY VARY FROM 18" TO 22" BUT SHALL NOT EXCEED 24" IN WIDTH.
7. A SINGLE CONTINUOUS INSULATED COPPER LOCATOR WIRE #10 AWG SHALL BE INSTALLED ALONG THE ENTIRE LENGTH OF THE CONDUIT RUN.
8. WHEN FIBER IS PULLED, 3-3" MAXCELL PACKS (OR SEE COA APPROVED PRODUCTS LIST) INTERDUCTS SHALL BE INSTALLED.

DETAIL NO.

A1720-2

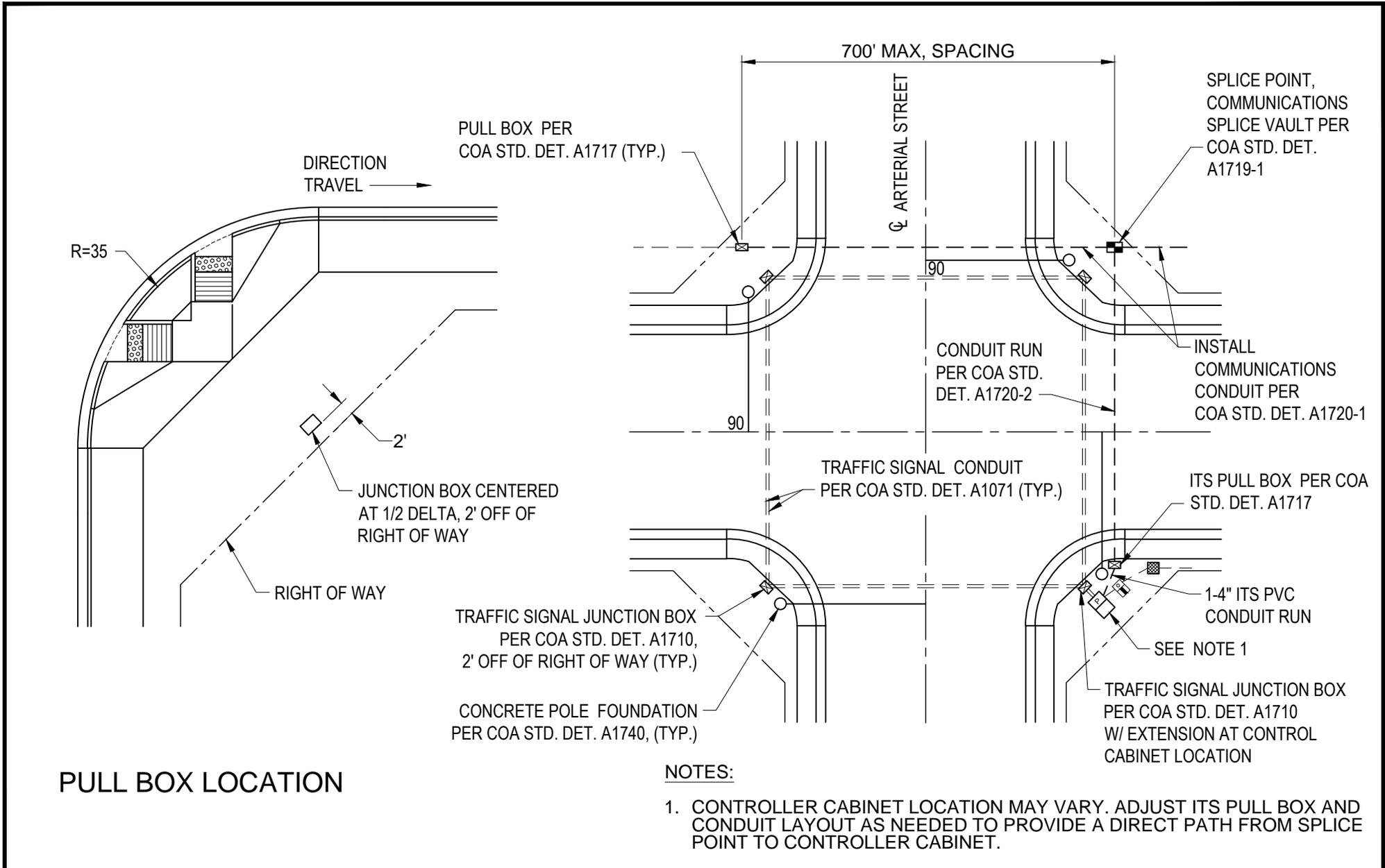
Avondale
STANDARD DETAIL

**SECONDARY COMMUNICATIONS
NETWORK CONDUIT TRENCH DETAIL**

APPROVED BY:

DATE:

David S. Jones
8.24.16

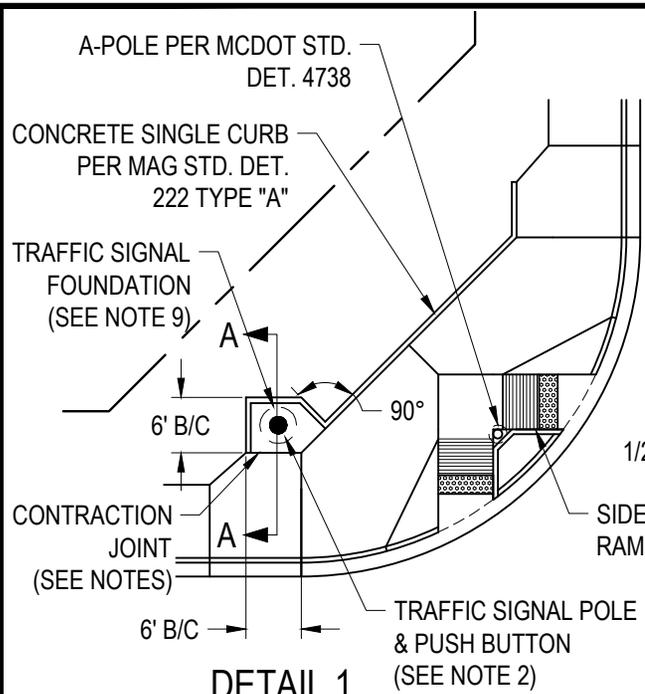


PULL BOX LOCATION

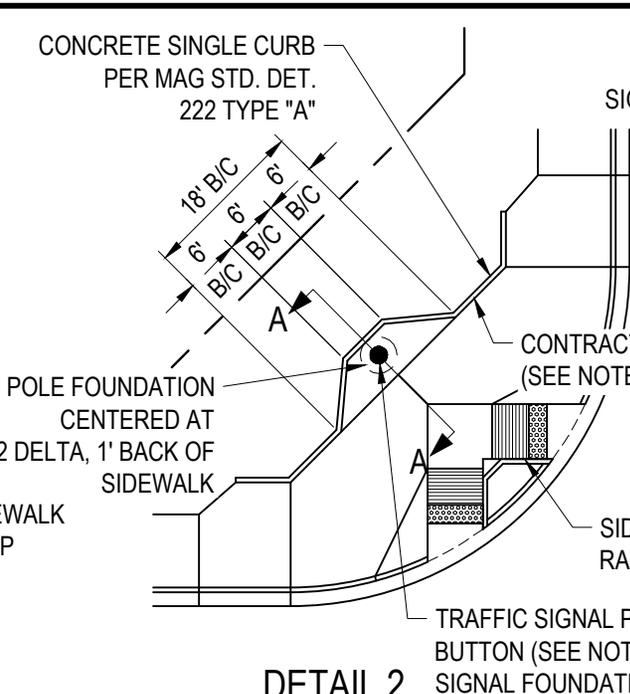
NOTES:

1. CONTROLLER CABINET LOCATION MAY VARY. ADJUST ITS PULL BOX AND CONDUIT LAYOUT AS NEEDED TO PROVIDE A DIRECT PATH FROM SPLICE POINT TO CONTROLLER CABINET.

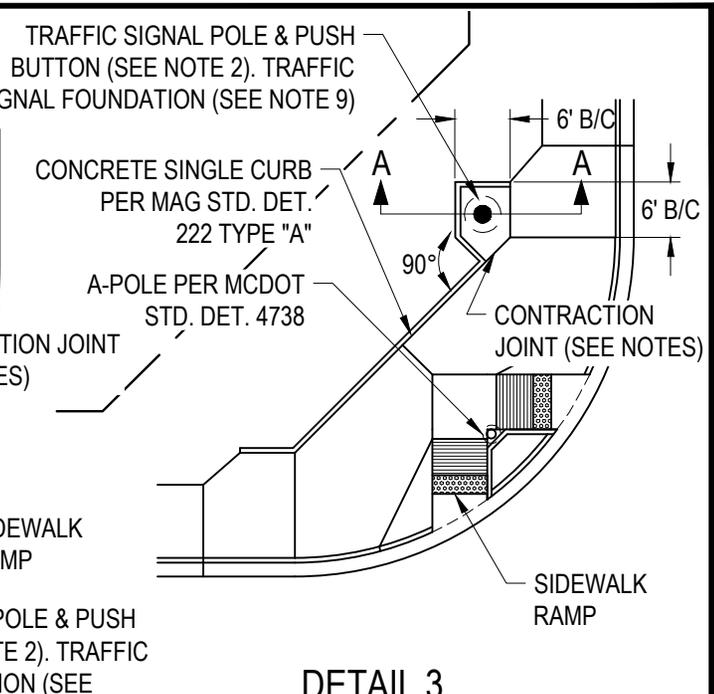
DETAIL NO. A1730	Avondale STANDARD DETAIL	TRAFFIC SIGNAL INTERCONNECT CONDUIT INSTALLATION	APPROVED BY: <i>[Signature]</i> DATE: 8.24.16
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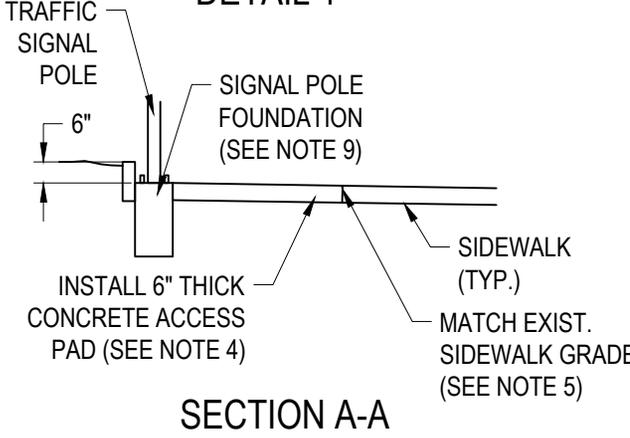
DETAIL 1



DETAIL 2



DETAIL 3



SECTION A-A

NOTES:

1. INSTALL CONCRETE ACCESS PAD IN ACCORDANCE TO THE REQUIREMENTS SPECIFIED IN MAG STD. DET. 230 FOR SIDEWALK CONSTRUCTION.
2. THE CONCRETE ACCESS PAD SHALL PROVIDE A MINIMUM 30"X48" CONCRETE SURFACE ADJACENT TO THE ADA PUSH BUTTON AS SHOWN.
3. ALL CONCRETE SHALL BE CLASS B PER MAG STD. SPECIFICATION SECTION 725.
4. SLOPE CONCRETE ACCESS PADS 1.5% TOWARDS SIDEWALK FOR DRAINAGE PURPOSES.
5. INSTALL CONTRACTION JOINT BETWEEN CONCRETE ACCESS PAD AND SIDEWALK RAMP. IF SIDEWALK IS EXISTING, INSTALL EXPANSION JOINT IN LIEU OF CONTRACTION JOINT.
6. GRADE SOILS AT 6:1 MAX. SLOPE AT PERIMETER OF CONCRETE ACCESS PAD TO MATCH EXISTING, UNLESS OTHERWISE NOTED.
7. THE TYPICAL DETAILS SHOWN ON THIS SHEET MAY REQUIRE MODIFICATIONS TO ACCOMMODATE EXISTING FIELD CONDITIONS AS DIRECTED BY THE CITY INSPECTOR.
8. NEW CONCRETE ACCESS PAD SHALL NOT COVER OR INTERFERE WITH TRAFFIC SIGNAL OR PEDESTRIAN POLE MOUNTINGS.
9. TOP OF SIGNAL POLE FOUNDATION SHALL MATCH CONCRETE ACCESS PAD (SEE SECTION A-A).

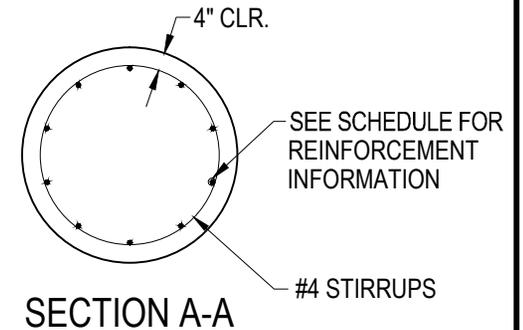
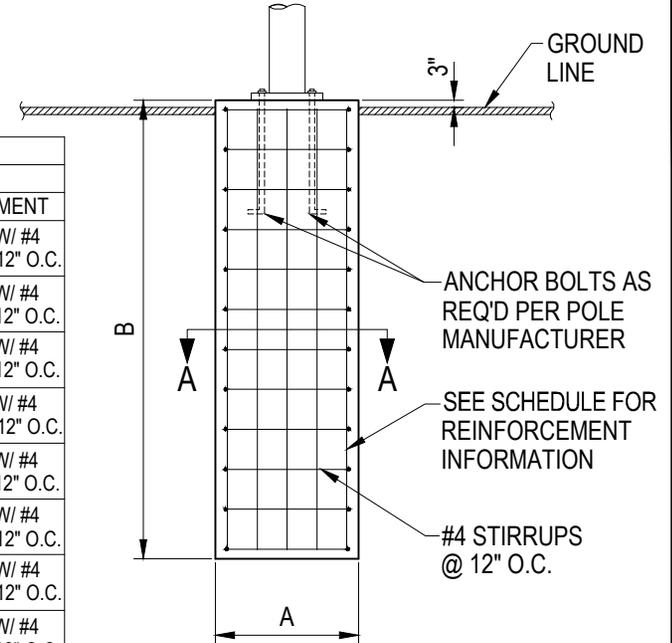
DETAIL NO.
A1733

Avondale
STANDARD DETAIL

SIGNAL POLE LOCATIONS

APPROVED BY: *David S. Jones*
DATE: 8.24.16

ALLOWABLE PASSIVE SOIL PRESSURE	100 PSF / FT			150 PSF / FT			200 PSF / FT		
MAXIMUM PASSIVE SOIL PRESSURE	1,000 PSF			1,500 PSF			2,000 PSF		
FOOTING DIMENSIONS	A	B	REINFORCEMENT	A	B	REINFORCEMENT	A	B	REINFORCEMENT
35' MAST ARM	3'-0"	20'-0"	10 - #8 BAR W/ #4 STIRRUPS AT 12" O.C.	3'-0"	15'-6"	10 - #8 BAR W/ #4 STIRRUPS AT 12" O.C.	3'-0"	13'-0"	10 - #8 BAR W/ #4 STIRRUPS AT 12" O.C.
			13 - #7 BAR W/ #4 STIRRUPS AT 12" O.C.			13 - #7 BAR W/ #4 STIRRUPS AT 12" O.C.			13 - #7 BAR W/ #4 STIRRUPS AT 12" O.C.
			18 - #6 BAR W/ #4 STIRRUPS AT 12" O.C.			18 - #6 BAR W/ #4 STIRRUPS AT 12" O.C.			18 - #6 BAR W/ #4 STIRRUPS AT 12" O.C.
40' MAST ARM	3'-0"	21'-3"	9 - #8 BAR W/ #4 STIRRUPS AT 12" O.C.	3'-0"	16'-6"	9 - #8 BAR W/ #4 STIRRUPS AT 12" O.C.	3'-0"	13'-9"	9 - #8 BAR W/ #4 STIRRUPS AT 12" O.C.
			12 - #7 BAR W/ #4 STIRRUPS AT 12" O.C.			12 - #7 BAR W/ #4 STIRRUPS AT 12" O.C.			12 - #7 BAR W/ #4 STIRRUPS AT 12" O.C.
			16 - #6 BAR W/ #4 STIRRUPS AT 12" O.C.			16 - #6 BAR W/ #4 STIRRUPS AT 12" O.C.			16 - #6 BAR W/ #4 STIRRUPS AT 12" O.C.
45' MAST ARM	3'-6"	20'-4"	10 - #8 BAR W/ #4 STIRRUPS AT 12" O.C.	3'-6"	15'-9"	10 - #8 BAR W/ #4 STIRRUPS AT 12" O.C.	3'-6"	13'-3"	10 - #8 BAR W/ #4 STIRRUPS AT 12" O.C.
			13 - #7 BAR W/ #4 STIRRUPS AT 12" O.C.			13 - #7 BAR W/ #4 STIRRUPS AT 12" O.C.			13 - #7 BAR W/ #4 STIRRUPS AT 12" O.C.
			17 - #6 BAR W/ #4 STIRRUPS AT 12" O.C.			17 - #6 BAR W/ #4 STIRRUPS AT 12" O.C.			17 - #6 BAR W/ #4 STIRRUPS AT 12" O.C.
55' MAST ARM	4'-0"	19'-9"	10 - #8 BAR W/ #4 STIRRUPS AT 12" O.C.	4'-0"	15'-3"	10 - #8 BAR W/ #4 STIRRUPS AT 12" O.C.	4'-0"	12'-9"	10 - #8 BAR W/ #4 STIRRUPS AT 12" O.C.
			13 - #7 BAR W/ #4 STIRRUPS AT 12" O.C.			13 - #7 BAR W/ #4 STIRRUPS AT 12" O.C.			13 - #7 BAR W/ #4 STIRRUPS AT 12" O.C.
			17 - #6 BAR W/ #4 STIRRUPS AT 12" O.C.			17 - #6 BAR W/ #4 STIRRUPS AT 12" O.C.			17 - #6 BAR W/ #4 STIRRUPS AT 12" O.C.



NOTE:

1. THE FOOTING DESIGN DOES NOT APPLY TO TRAFFIC SIGNALS LOCATED NEAR THE TOP OF ESCARPMENTS OR RIDGES OR IN THE UPPER HALF OF HILLS WITH ABRUPT GRADE CHANGES EXCEEDING 15 VERTICAL FEET.
2. FOOTING SIZES & REINFORCEMENT SHALL BE CONSTRUCTED USING THE "100 PSF/FT" VALUES (OUTLINED IN BOLD) UNLESS A GEOTECHNICAL EXPLORATION & RECOMMENDATION ALLOWS FOR HIGHER SOIL CAPACITIES.
3. THE FOUNDATION DESIGN IS ADEQUATE TO SUPPORT SIGNAL POLES MANUFACTURED BY VALMONT INDUSTRIES, OR AN APPROVED EQUAL PROVIDED THE MAXIMUM LOADING SHOWN ON THIS DETAIL IS NOT EXCEEDED. IF THE LOADS ARE EXCEEDED, THE CONTRACTOR SHALL HAVE THE FOUNDATION ANALYZED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF ARIZONA.

DETAIL NO.

A1740

Avondale
STANDARD DETAIL

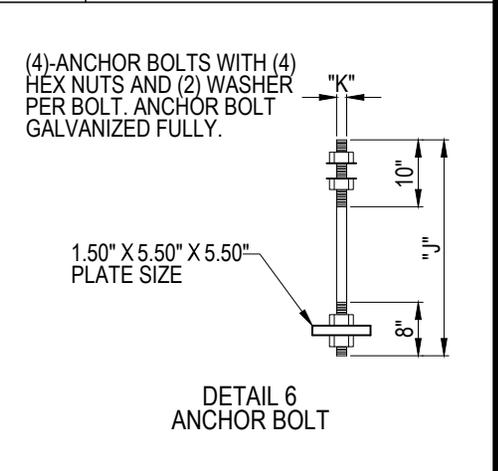
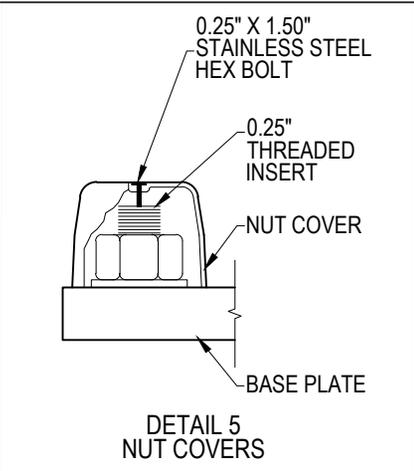
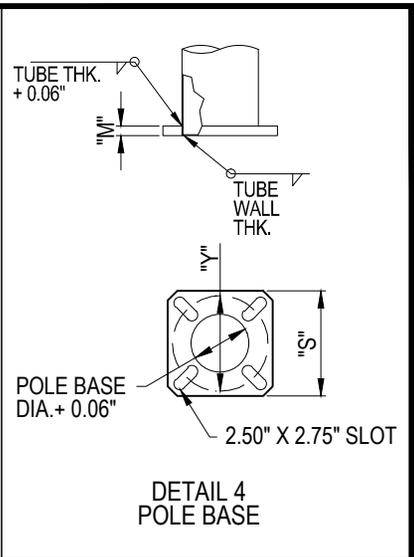
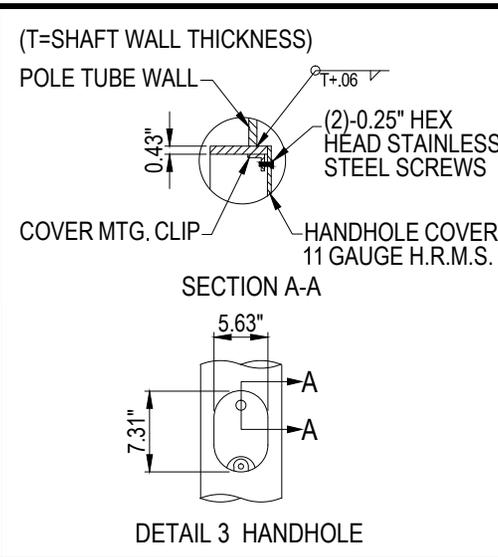
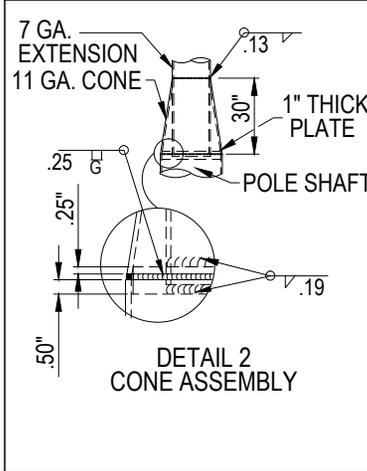
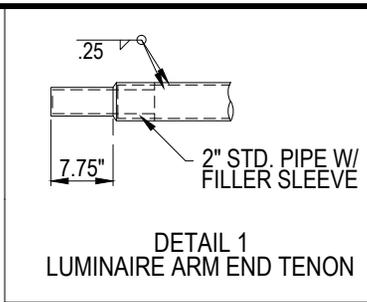
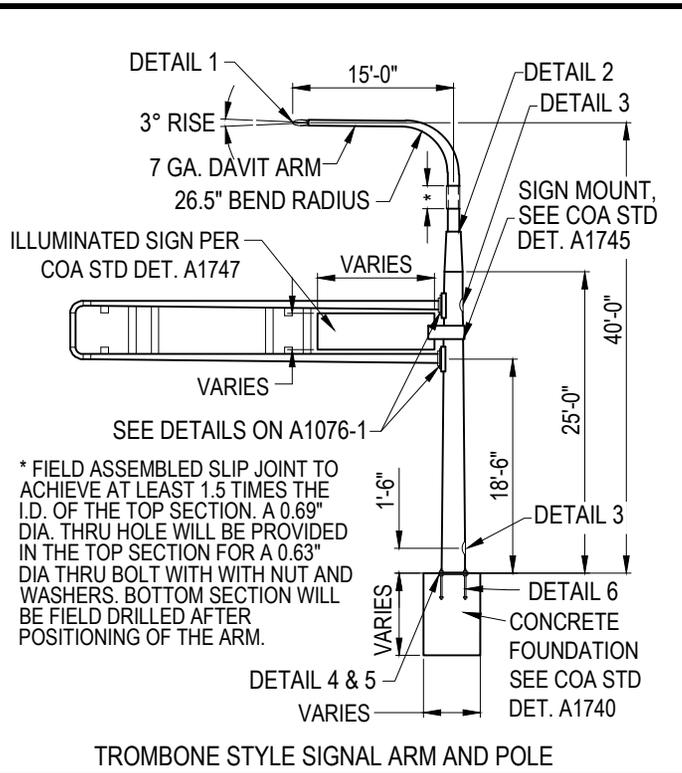
**TROMBONE STYLE TRAFFIC
SIGNAL POLE FOUNDATION**

APPROVED BY:

[Signature]

DATE:

8.24.16



- NOTES:**
1. VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO STARTING WORK. NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR INCONSISTENCIES, (I.E. BOLT CIRCLE WITH POLE MANUFACTURER).
 2. VERIFY IN FIELD ALL EXISTING CONDITIONS SHOWN ON DRAWINGS.
 3. ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE STAMP (AND SIGNATURE) OF AN ENGINEER REGISTERED IN ARIZONA.
 4. THE POLE MANUFACTURER SHALL BE RESPONSIBLE FOR SPECIFYING ALL ANCHOR BOLT INFORMATION (I.E. DIAMETER, EMBEDMENT LENGTH, BOLT CIRCLE, MATERIAL ETC.) ENSURING THE ANCHOR BOLTS ARE CAPABLE OF TRANSFERRING ALL APPLICABLE LOADS INTO THE FOUNDATION WITHOUT EXCEEDING THE MAXIMUM LOAD REQUIREMENTS SPECIFIED ON THIS DETAIL.
 5. REFER TO CITY OF AVONDALE SUPPLEMENT TO MAG SPECIFICATIONS AND DETAILS PART 900 TRAFFIC SIGNALS FOR SPECIFIC DESIGN DATA, FOUNDATION WORK, FOUNDATION CONCRETE AND SPECIAL INSPECTIONS.
 6. SEE COA STANDARD DETAIL A1742 FOR POLE AND MAST ARM SCHEDULE.

DETAIL NO.
A1741

Avondale
STANDARD DETAIL

**TROMBONE STYLE SIGNAL
POLE DETAILS**

APPROVED BY: *Daniel S. Jones*
DATE: 8.24.16

TABLE 1: POLE AND MAST ARM SCHEDULE

POLE TYPE	QTY.	SIGNAL ARM SPAN (FT)	POLE DATA				BASE PLATE DATA				ANCHOR BOLT DATA			MAST ARM DATA			
			BASE DIA.	TOP DIA.	LENGTH	(THK.)	SQUARE "S"	THK. "M"	BOLT CIRCLE RANGE		DIAMETER "K"	LENGTH "J"	BOLT CIRCLE "Y"	FIXED END DIA.	FREE END DIA.	GAUGE	LENGTH (FT)
									BC1	BC2							
Q	1	35	13.00"	9.50"	25'-0"	0.25"	25.00"	2.00"	23.50"	24.50"	2.25"	70"	24.00"	9.18"	4.00"	3	37
Q	1	40	15.50"	12.00"	25'-0"	0.44"	25.00"	2.00"	23.50"	24.50"	2.25"	70"	24.00"	12.44"	6.54"	3	42
R	1	45	15.50"	12.00"	25'-0"	0.44"	25.00"	2.00"	23.50"	24.50"	2.25"	70"	24.00"	13.00"	6.42"	3	47
R	1	50	17.00"	13.50"	25'-0"	0.44"	25.00"	2.00"	23.50"	24.50"	2.25"	70"	24.00"	13.84"	6.54"	*	52
R	4	55	17.00"	13.50"	25'-0"	0.44"	25.00"	2.00"	23.50"	24.50"	2.25"	70"	24.00"	14.54"	6.54"	*	57

* SEE DETAIL 4 ON COA STD. DET. A1075

DETAIL NO.

A1742

Avondale
STANDARD DETAIL

POLE AND MAST ARM SCHEDULE

APPROVED BY:



DATE:

8.24.16

MATERIALS				
ITEM	QTY	DESCRIPTION	MATERIAL	PART #
1	1	BASE PLATE	C10X15.5 CHANNEL, 2.6" FLANGE, STEEL	
2	20	ANGLE CUP	2 X 2 X 3/8" X 1.5" LONG, ANGLE, STEEL	
3a	1	TOP OUTSIDE CLAMP PLATE	17" X 8.5" X 3/8" THICK, STEEL PLATE	
3b	1	TOP INSIDE CLAMP PLATE	17" X 12" X 3/8" THICK, STEEL PLATE	
3c	4	LARGE GUSSET	5" X 2.5" X 3/8" THICK, STEEL PLATE	
3d	2	END PLATE	13" X 12" X 3/8" THICK, STEEL PLATE	
3e	2	SMALL GUSSET	2.5" X 2.5" X 3/8" THICK, STEEL PLATE	
3f	1	BOTTOM OUTSIDE CLAMP PLATE	17" X 8.5" X 3/8" THICK, STEEL PLATE	
3g	1	BOTTOM INSIDE CLAMP PLATE	17" X 12" X 3/8" THICK, STEEL PLATE	

NOTES:

1. SIGNS TO BE 6 FT. HORIZONTAL AND 12 FT. VERTICAL FROM HIGH VOLTAGE WIRES.
2. SIGNS TO BE U.L. LABELED AND COMPLY WITH ART. 600, NEC.
3. SIGNS TO BE ON SEPARATE CIRCUIT WITH UNDERGROUND FEEDER.
4. PROVIDE PEDESTRIAN PROTECTION DURING SIGN ERECTION PER SEC. 3306, IBC
5. STRUCTURAL ALUMINUM 6061-T6, Fb=19000. PSI.
6. RED HEAD THRU BOLT WEDGE ANCHORS OR SEE COA APPROVED PRODUCTS LIST PER ICBO # ER-1372, INSTALL PER MANUF. SPECIFICATION.
7. HILTI HY 150 EPOXY ADHESIVE OR SEE COA APPROVED PRODUCTS LIST PER ICBO 5193 INSTALL PER MANUF. SPECIFICATION.
8. HILTI KWIK BOLT-II OR SEE COA APPROVED PRODUCTS LIST PER ICBO 4627 INSTALL PER MANUF. SPECIFICATION.
9. PREDRILL ALL HOLES 1/8" Ø SMALLER THAN DIAMETER OF LAG SCREWS AND COVER WITH MASTIC
10. DESIGN WIND LOAD 90 MPH EXP. "C".

DETAIL NO.

A1745-1

Avondale
STANDARD DETAIL

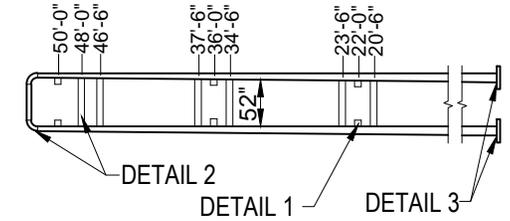
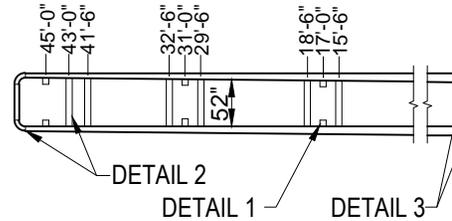
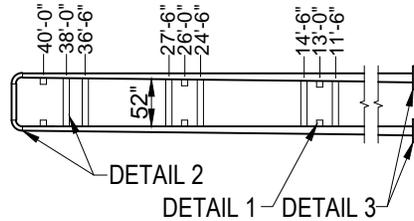
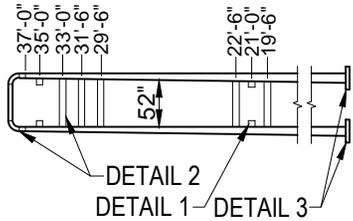
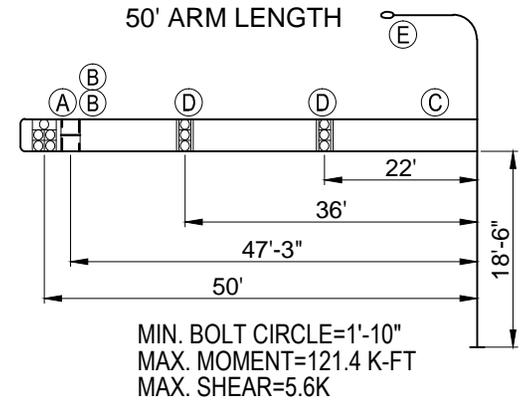
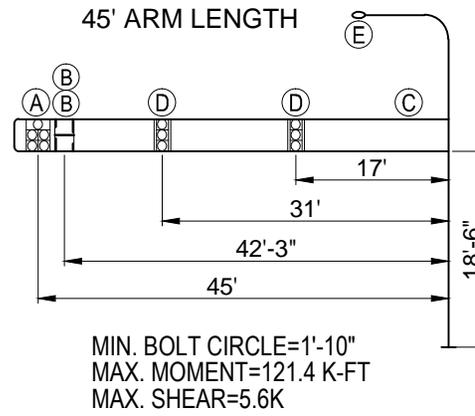
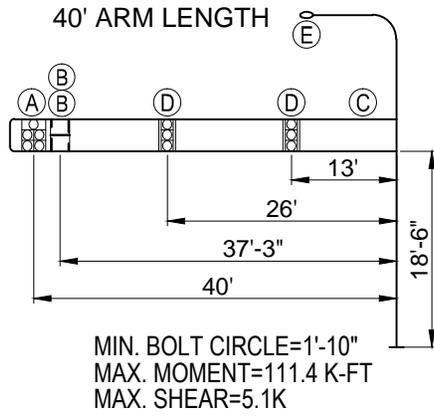
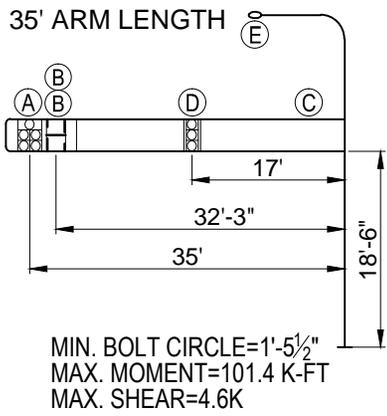
**ILLUMINATED SIGN POLE
MOUNTING DETAIL**

APPROVED BY:

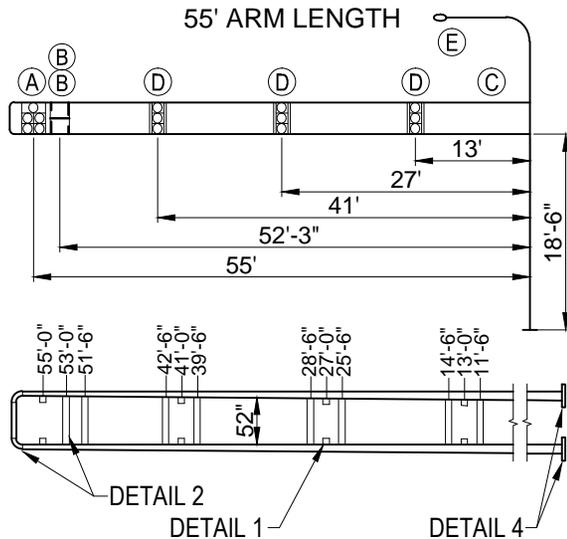


DATE:

8.24.16



NOTE:
ALL ARM ATTACHMENTS DIMENSIONED FROM
POLE SIMPLEX PLATE



MATERIAL DATA		
COMPONENT	ASTM DESIGNATION	MIN. YIELD (KSI)
TUBE - 0.25", 0.44" WALL	A572 GR.65	65
TUBE - 3 GA. & 7 GA.	A595 GR.A	55
PIPE	-	36
BASE PLATE & SIGNAL ARM ATTACHMENT	A36	36
ANCHOR BOLTS	F 1554	55
SIGNAL ARM CONNECTING BOLTS	A325	-
FINISH COAT: TGIC OR URATHANE POLYESTER POWDER		
COLOR: COCOA BROWN VALMONT SPEC: F-264D		

DESIGN CRITERIA:
1994 AASHTO STANDARD
SPECIFICATIONS FOR STRUCTURAL
SUPPORTS FOR HIGHWAY SIGNS,
LUMINAIRES, AND TRAFFIC SIGNALS

WIND VELOCITY:
80 MPH ISOTACH

LOADING CHART			
DEVICE	DESCRIPTION	PROJ. AREA (FT ²)	WEIGHT (LBS)
(A)	12"-5 SEC. SIGNAL W/ BACKPLATE	13.72	100
(B)	24" X 24" SIGN	4.00	15
(C)	48" X 120" SIGN	40.00	400
(D)	12"-3 SEC. SIGNAL W/ BACKPLATE	8.67	60
(E)	LUMINAIRE	3.30	55

DETAIL NO.

A1746

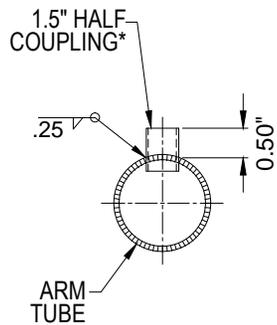
Avondale
STANDARD DETAIL

TROMBONE STYLE
SIGNAL MAST ARM

APPROVED BY:

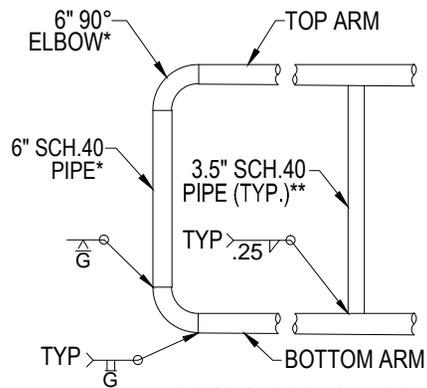
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8.24.16



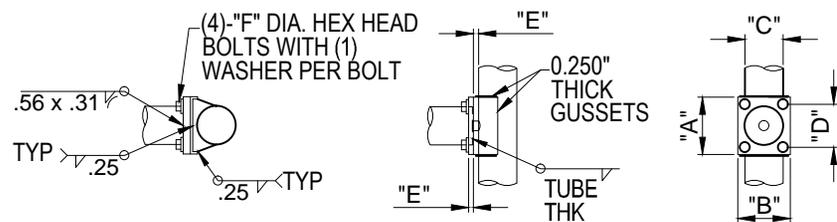
* USE 8"x1.5" ALL THREAD PIPE WITH 1.5" HEX NUT IRON ZINC TO SECURE SIGNAL HEAD.

DETAIL 1
SIGNAL ARM COUPLING



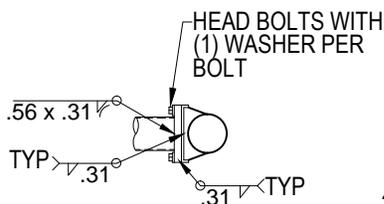
* USE 3.5" FOR 35' ARM
** USE 3" FOR 35' ARM

DETAIL 2
CONNECTING ELBOW & TYP. STRUT

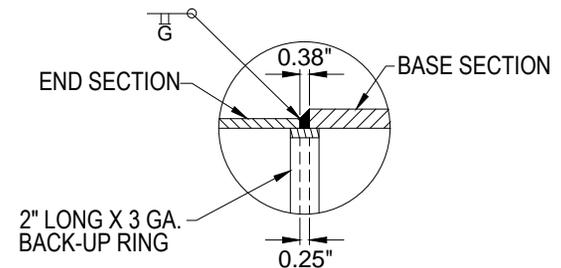


SIGNAL ARM ATTACHMENT DATA						
MAST ARM LENGTH	"A"	"B"	"C"	"D"	"E"	"F"
35'-0"	16.25"	15.00"	11.00"	12.25"	1.50"	1.50" x 3.25"
40'-0"	17.25"	16.00"	12.00"	13.25"	1.75"	1.50" x 3.75"
45'-0"	17.25"	16.00"	12.00"	13.25"	1.75"	1.50" x 3.75"

DETAIL 3
SIGNAL ARM ATTACHMENT



DETAIL 4
SIGNAL ARM ATTACHMENT (50' AND 55' ARM LENGTH)



ARM SECTION DATA				
ARM	BASE SECTION		END SECTION	
	LENGTH	THK.	LENGTH	GAUGE
45'-0"	5'-11"	0.250"	46'-1"	3
55'-0"	10'-11"	0.250"	46'-1"	3

WELDED SIGNAL ARM SPLICE

DETAIL NO.

A1746-1

Avondale
STANDARD DETAIL

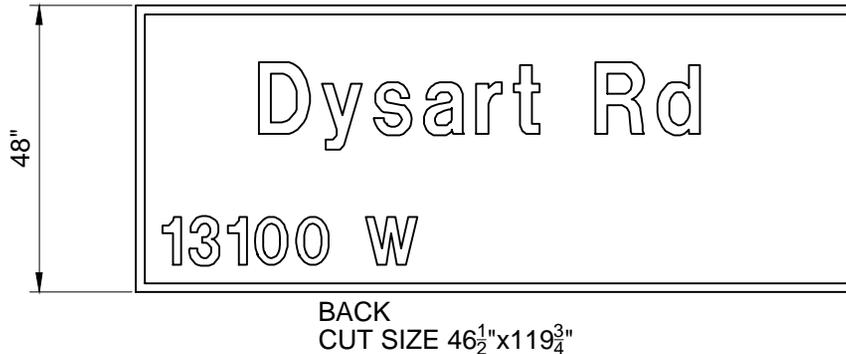
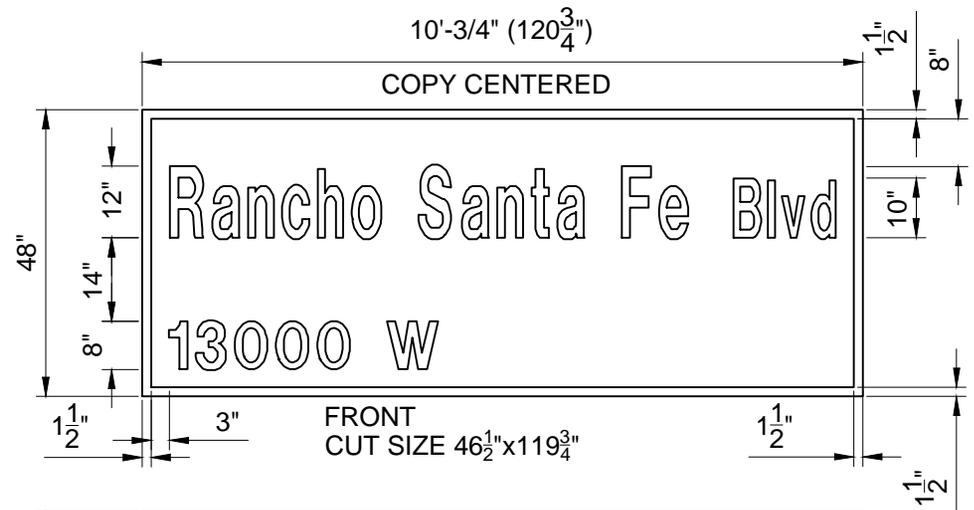
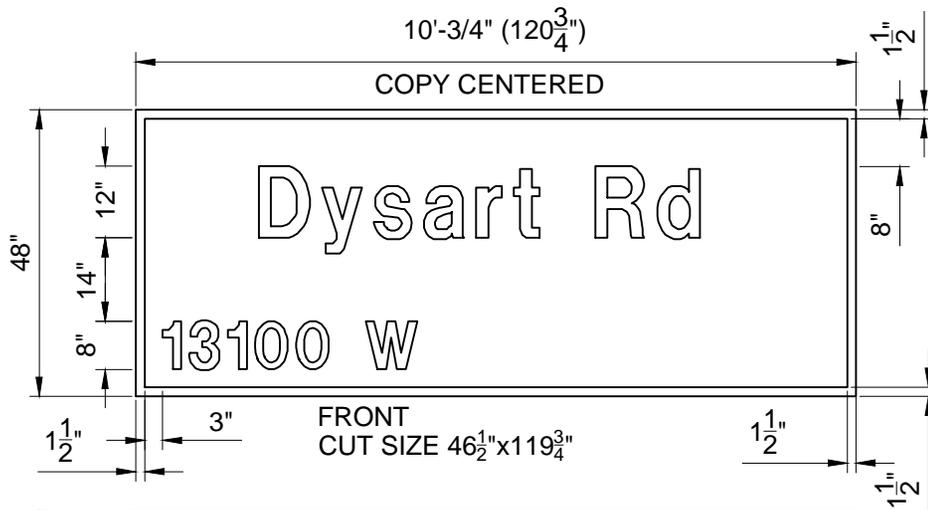
**TROMBONE STYLE SIGNAL
POLE DETAILS**

APPROVED BY:

DATE:

David S. Jones

8.24.16



DOUBLE FACE INTERNALLY ILLUMINATED STREET NAME SIGN

FACES: WHITE POLY CARBONATE, VINYL DECORATIONS APPLIED 1ST SURFACE.

VINYL(S): 3M DIAMOND GRADE #3990 WHITE APPLIED. 3M EC FILM #1177 APPLIED (COPY & LOGO BOX REVERSED OUT). DIGITAL GRAPHIC PRINTED ON CLEAR VINYL (LOGO). GRAFFITI RESISTANT FILM #1160 APPLIED (ENTIRE FACE).

FONT(S): CLEARVIEWONE CD-45 STANDARD SPACING (PREFERRED FONT). CLEARVIEWONE UC-35 STANDARD OR MODIFIED SPACING (USE THIS FONT WHEN A CONDENSED VERSION IS NECESSARY).

CABINET: ALUMINUM MMG12, 12" DEEP RETURNS, PRIME AND PAINT CHOCOLATE BROWN TO MATCH SIGNAL POLE AND MAST ARM.

RETAINERS: 1¹/₂" ALUMINUM, HINGED @ TOP WITH PROP ROD, SECURED @ BOTTOM. PAINT TO MATCH CABINET.

ILLUMINATION: GE TUBULAR L.E.D.

ELECTRICAL: 2.4 AMPS @ 120 VOLTS.

INSTALLATION: USE WITH DETAIL A1746-1

DETAIL NO.

A1747

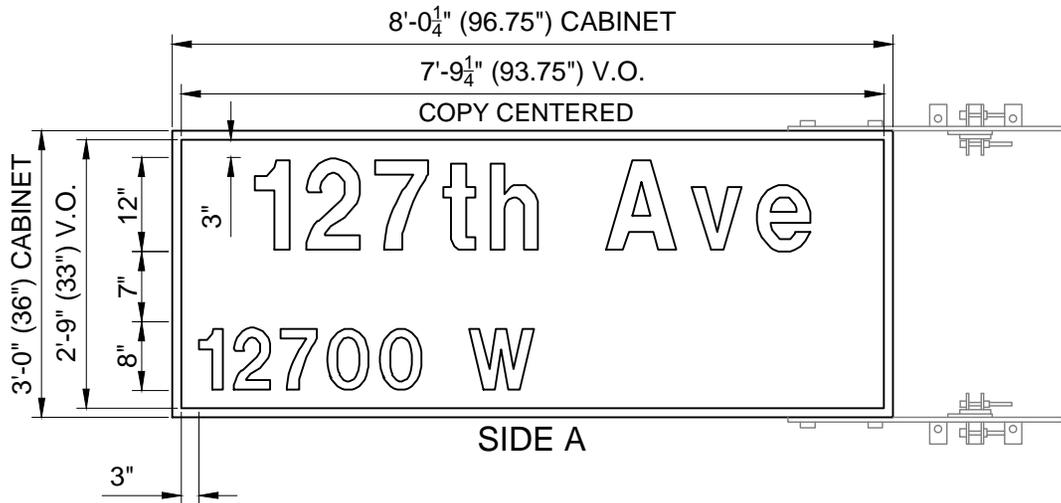
Avondale
STANDARD DETAIL

**ILLUMINATED STREET NAME SIGNS
FOR TROMBONE STYLE SIGNAL POLE**

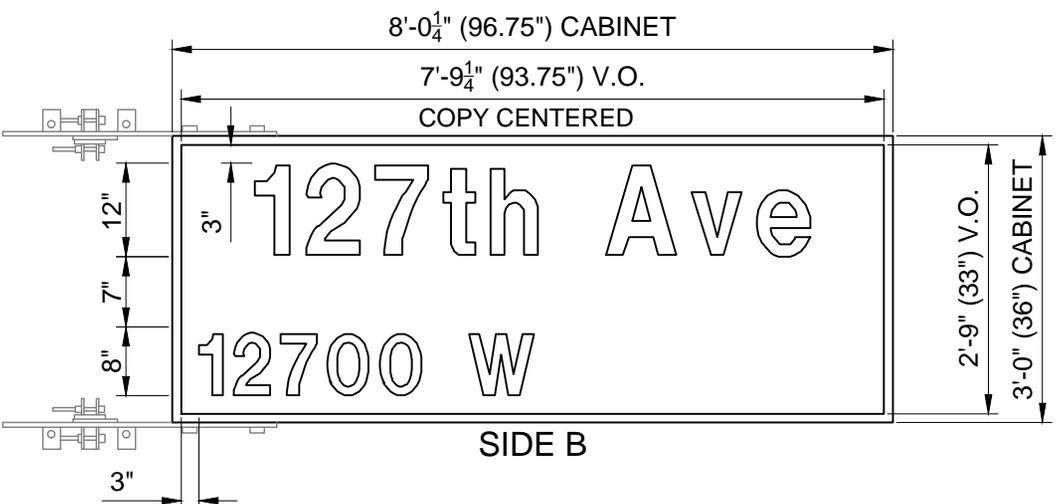
APPROVED BY:

DATE:

David S. Jones
8.24.16



SIDE A



SIDE B

DOUBLE FACE INTERNALLY ILLUMINATED STREET NAME SIGN

FACES: WHITE POLY CARBONATE, VINYL DECORATIONS APPLIED 1ST SURFACE.

VINYL(S): 3M DIAMOND GRADE #3990 WHITE APPLIED. 3M EC FILM #1177 APPLIED (COPY & LOGO BOX REVERSED OUT). DIGITAL GRAPHIC PRINTED ON CLEAR VINYL (LOGO). GRAFFITI RESISTANT FILM #1160 APPLIED (ENTIRE FACE).

FONT(S): CLEARVIEWONE CD-45 STANDARD SPACING (PREFERRED FONT). CLEARVIEWONE UC-35 STANDARD OR MODIFIED SPACING (USE THIS FONT WHEN A CONDENSED VERSION IS NECESSARY).

CABINET: ALUMINUM MMG12, 12" DEEP RETURNS, PRIME AND PAINT CHOCOLATE BROWN TO MATCH SIGNAL POLE AND MAST ARM.

RETAINERS: 1 1/2" ALUMINUM, HINGED @ TOP WITH PROP ROD, SECURED @ BOTTOM. PAINT TO MATCH CABINET.

ILLUMINATION: GE TUBULAR L.E.D.

ELECTRICAL: 2.4 AMPS @ 120 VOLTS.

MOUNTING: (2) FLAGMOUNT CLAMPS, PAINTED TO MATCH CABINET.

DETAIL NO.

A1749

Avondale
STANDARD DETAIL

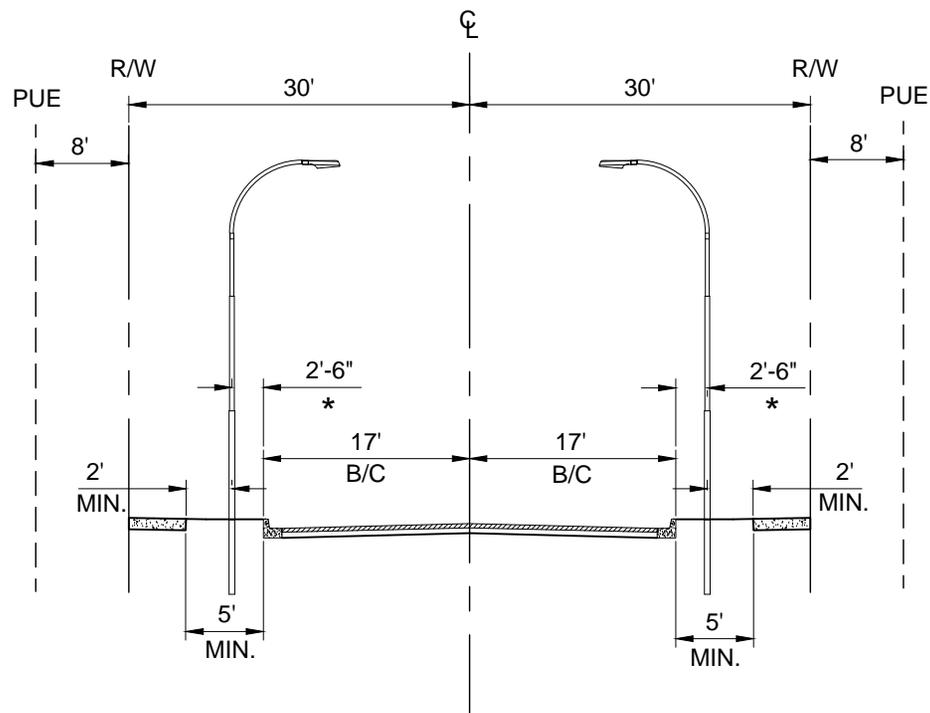
**ILLUMINATED STREET NAME SIGNS
FOR ADOT STYLE SIGNAL POLE**

APPROVED BY:

David S. Jones

DATE:

8.24.16



A1100 LOCAL STREETSCAPE SECTION

* DIMENSION TO CENTER OF POLE

DETAIL NO.

A1780

Avondale
STANDARD DETAIL

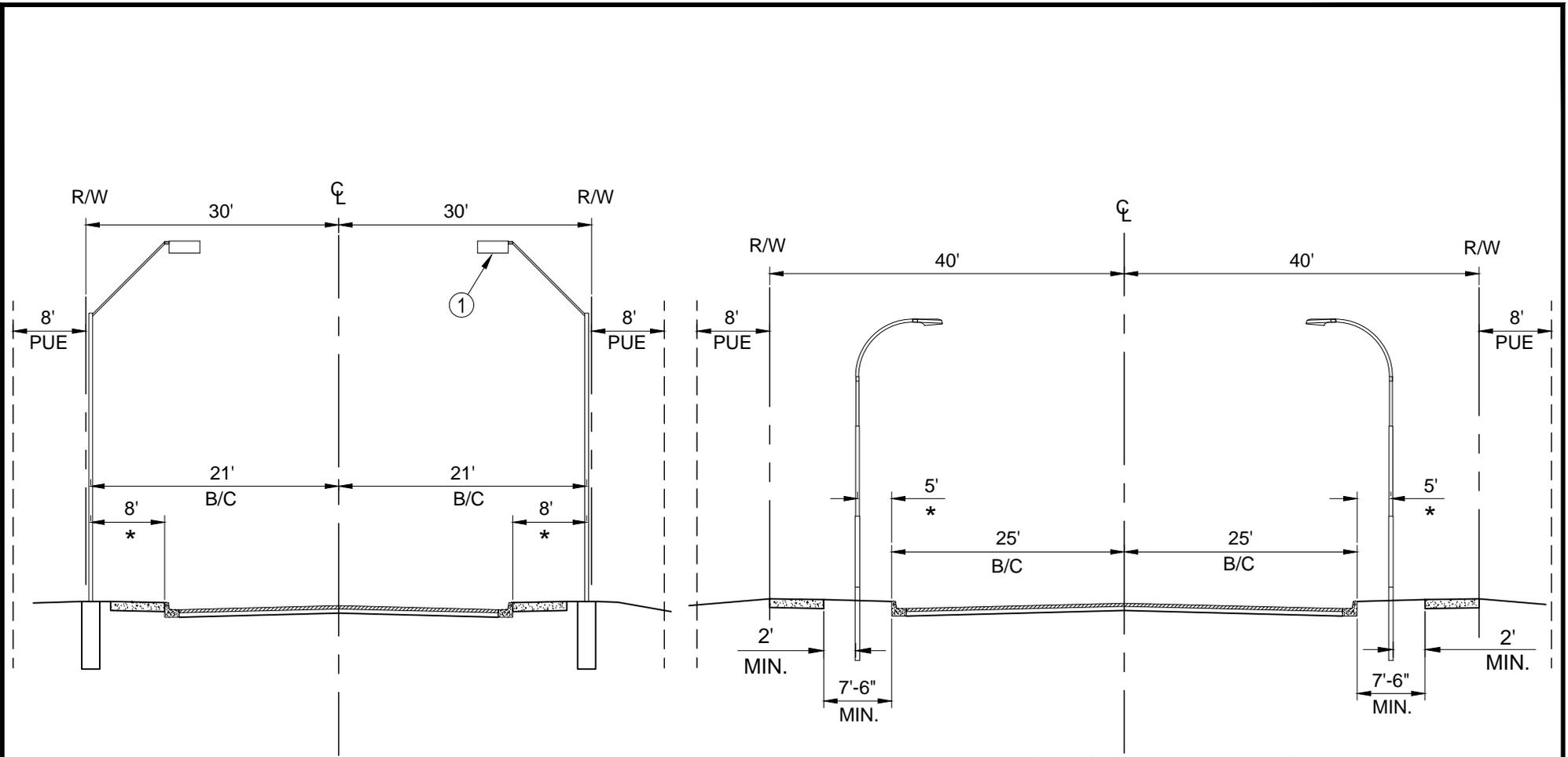
**PREFERRED STREET LIGHT
LOCATION (LOCALS)**

APPROVED BY:

David S. Jones

DATE:

8.24.16



A1101 INDUSTRIAL COLLECTOR SECTION

A1102 MINOR COLLECTOR SECTION

UNLESS OTHERWISE NOTE:
 COMMERCIAL / INDUSTRIAL COLLECTOR STREET TO USE SHOE BOX STYLE

① IN SOME CASES, AT THE DIRECTION OF THE CITY ENGINEER, STREET LIGHTS
 MAY ONLY BE REQUIRED ON ONE SIDE.

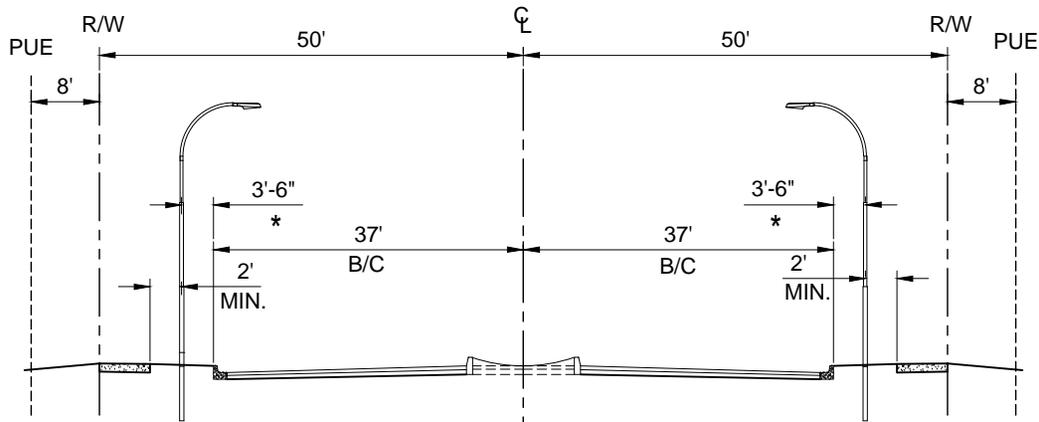
* DIMENSION TO CENTER OF POLE

DETAIL NO.
A1781

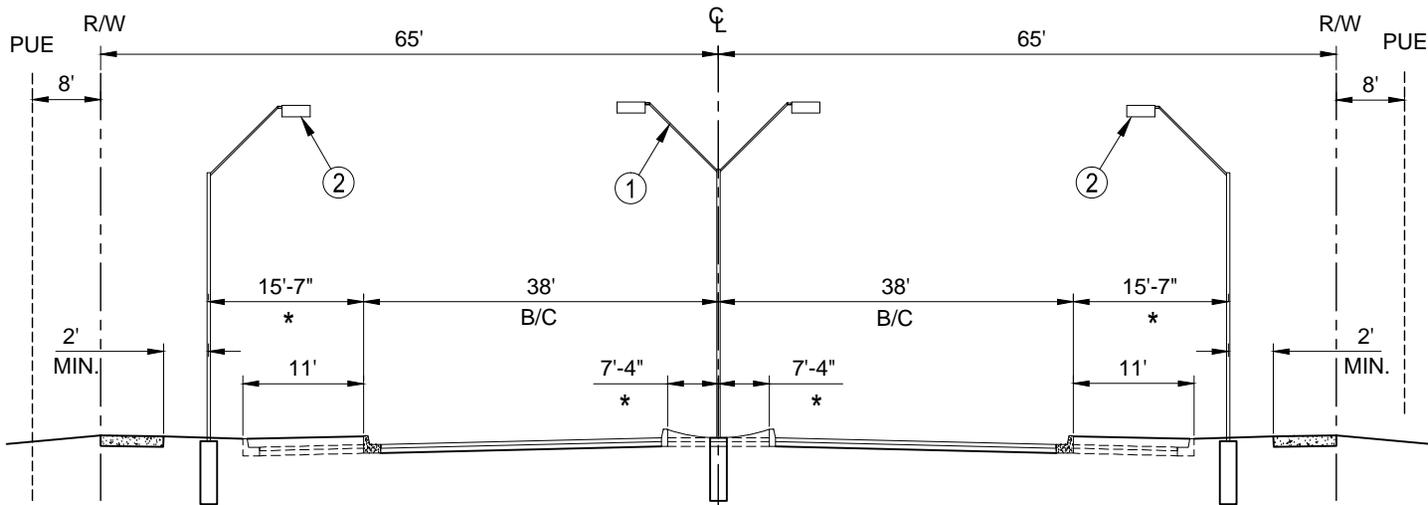
Avondale
 STANDARD DETAIL

**PREFERRED STREET LIGHT
 LOCATION (COLLECTORS)**

APPROVED BY: *David S. Jones*
 DATE: 8.24.16



A1103 MAJOR COLLECTOR SECTION



A1105 PHASED ARTERIAL OUTSIDE WIDENING SECTION

- ① MEDIAN PLACEMENT IS THE PREFERRED LOCATION FOR STREET LIGHTS.
- ② ALTERNATE PLACEMENT OF STREET LIGHTS IS BEHIND CURB AND GUTTER.

* DIMENSION TO CENTER OF POLE

DETAIL NO.

A1782

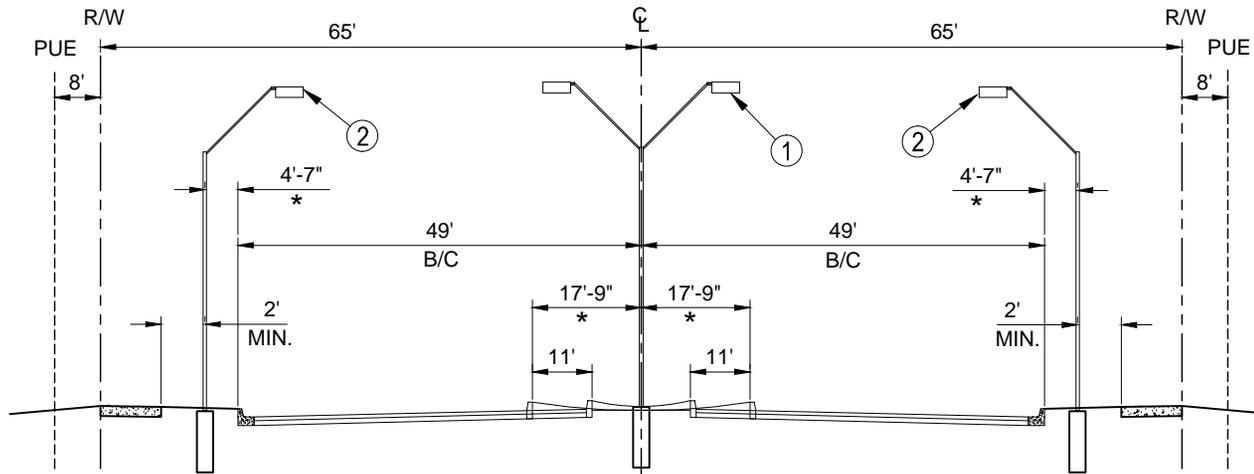
Avondale
STANDARD DETAIL

**PREFERRED STREET LIGHT LOCATION
(COLLECTOR / ARTERIAL)**

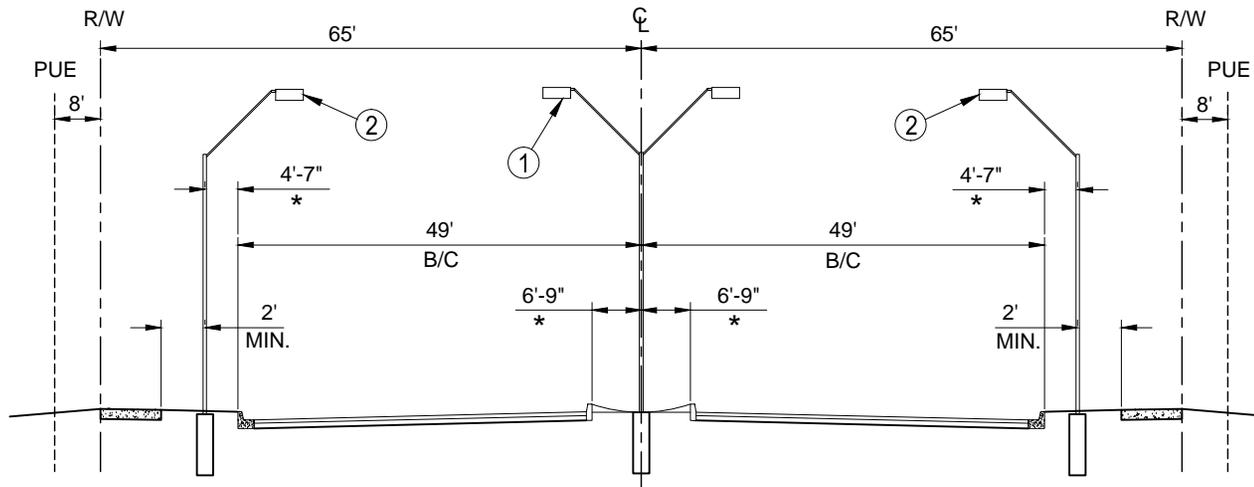
APPROVED BY:

DATE:

David S. Jones
8.24.16



A1104 PHASED ARTERIAL INSIDE WIDENING SECTION



A1106 ARTERIAL SECTION

- ① MEDIAN PLACEMENT IS THE PREFERRED LOCATION FOR STREET LIGHTS.
- ② ALTERNATE PLACEMENT OF STREET LIGHTS IS BEHIND CURB AND GUTTER.

* DIMENSION TO CENTER OF POLE

DETAIL NO.

A1783

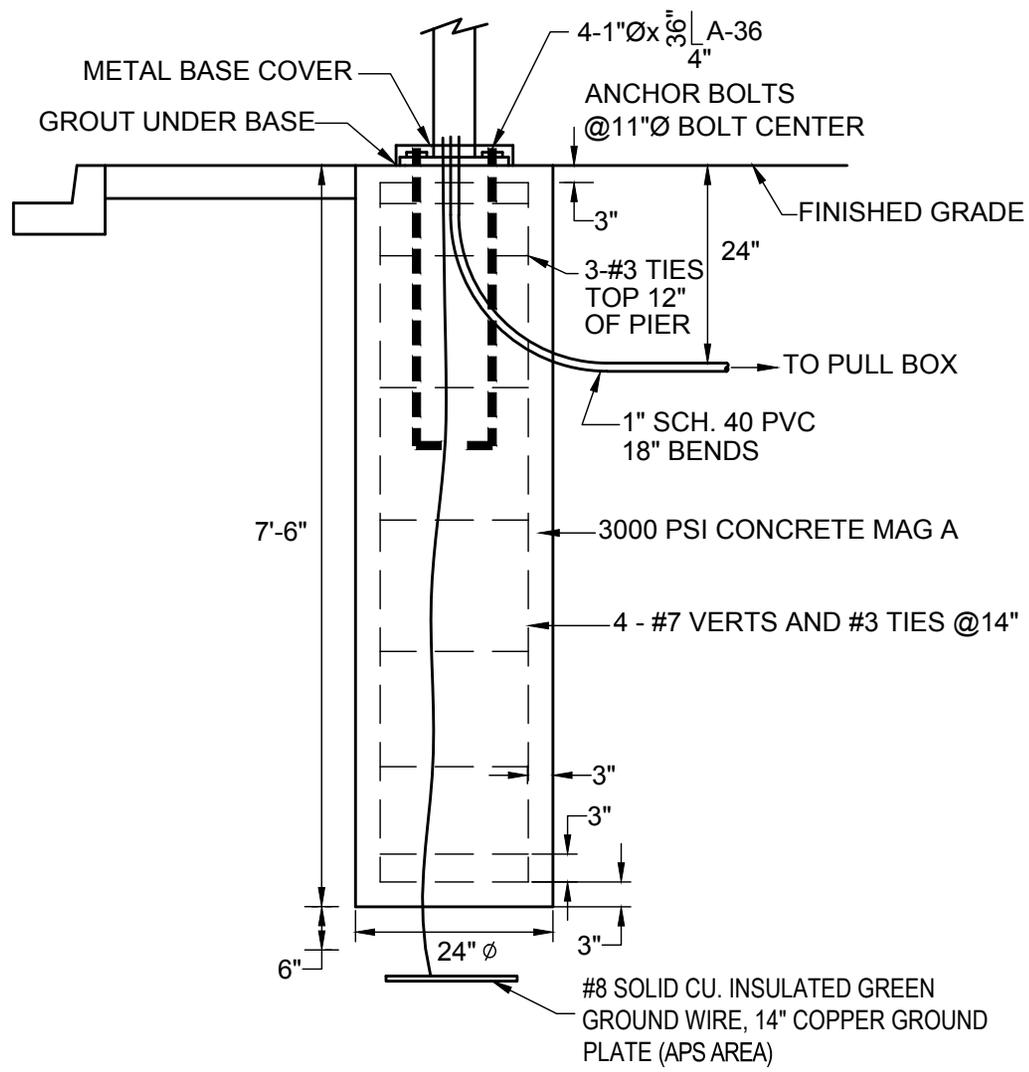
Avondale
STANDARD DETAIL

**PREFERRED STREET LIGHT
LOCATION (ARTERIALS)**

APPROVED BY:

DATE:

David S. Jones
8.24.16



NOTES:

1. REINF A615 GRADE 60 EXCEPT #3 GRADE 40
2. TOP OF FOUNDATION SHALL BE FINISHED WITH A SMOOTH SURFACE WITH A 1" CHAMFERED EDGE.
3. POLE FOUNDATION SHALL CURE FOR 14 DAYS BEFORE INSTALLING LIGHT POLES.
4. ALL FINISHED POLE FOUNDATIONS SHALL BE AT SIDEWALK GRADE.
5. ANCHOR BOLTS SHALL BE FULLY GALVINIZED PER ASTM A-153.
6. CONCRETE PLACEMENT SHALL FOLLOW MAG SPECIFICATIONS.
7. DO NOT FREEFALL CONCRETE IN EXCESS OF 5'.
8. A VIBRATOR SHALL BE USED TO DISTRIBUTE CONCRETE & REDUCE AIRVOIDS.
9. MAXIMUM SLUMP SHALL NOT EXCEED 5".
10. GROUT BASE AFTER POLE HAS BEEN LEVELED.
11. TOP 1' OF FOUNDATION SHALL HAVE A 24" Ø SONATUBE IN PLACE WHEN POURING CONCRETE. REMOVE FORM AFTER CONCRETE HAS CURED.

DETAIL NO. A1784-1	Avondale STANDARD DETAIL	ARCHITECTURAL STYLE STREET LIGHT FOUNDATION	APPROVED BY: DATE: 8.24.16
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SPECIFICATONS

DESIGN CRITERIA: POLE SHALL BE DESIGNED FOR 100 MPH STEADY WINDS

POLE SHAFT: THE POLE SHAFT IS FABRICATED FROM A WELDABLE GRADE HOT-ROLLED SQUARE TUBING THAT MEETS OR EXCEEDS THE REQUIREMENTS OF ASTM A500B. IT HAS A MINIMUM YIELD STRENGTH OF 46,000 PSI.

ANCHOR BASE: THE BASE PLATE IS FABRICATED FROM A STRUCTURAL QUALITY HOT-ROLLED CARBON PLATE THAT MEETS OR EXCEEDS THE REQUIREMENTS OF ASTM A36. IT HAS A MINIMUM YIELD STRENGTH OF 36,000 PSI.

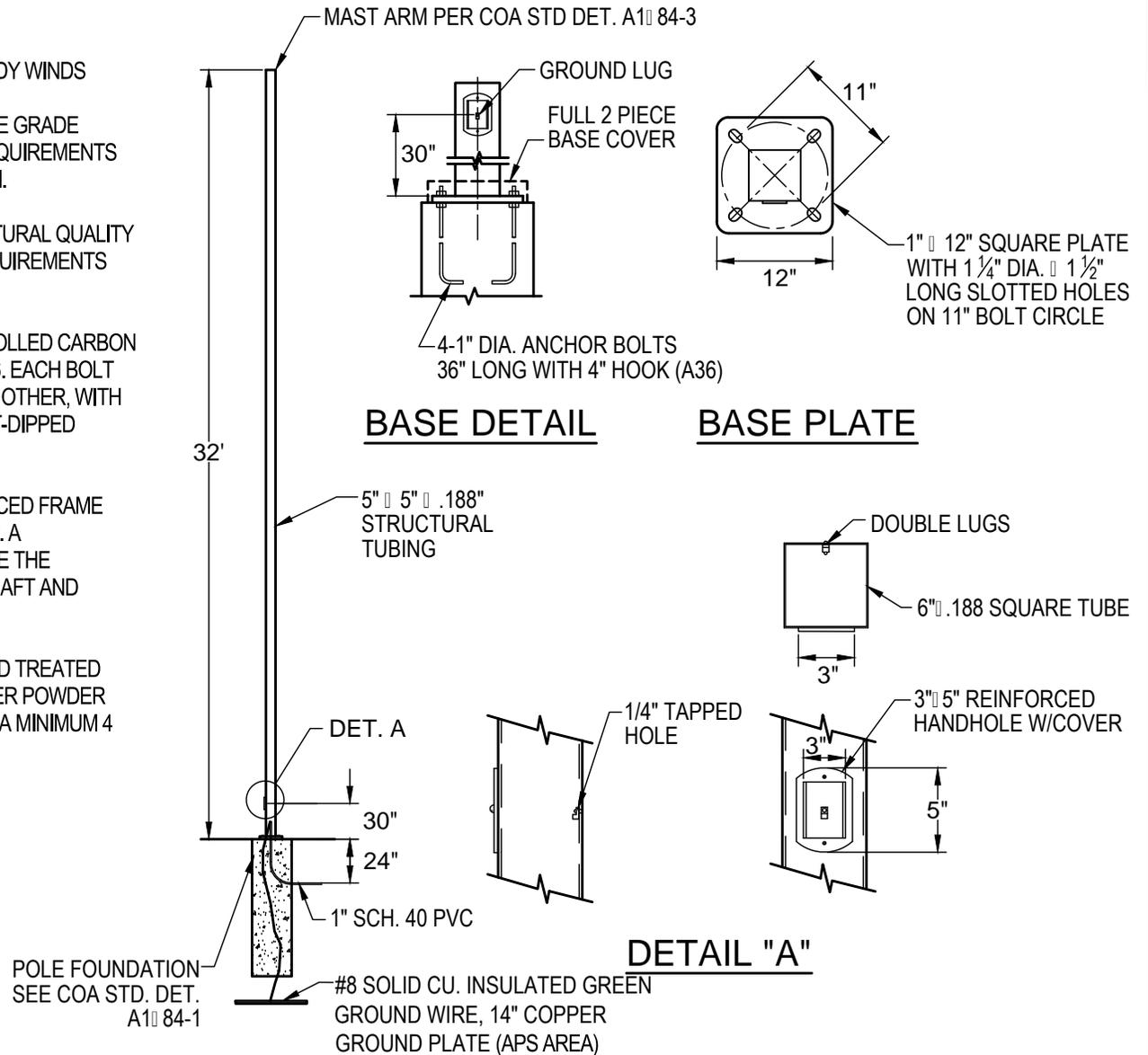
ANCHOR BOLTS: ANCHOR BOLTS ARE FABRICATED FROM HOT-ROLLED CARBON STEEL BAR THAT MEET OR EXCEED REQUIREMENTS OF ASTM A36. EACH BOLT HAS AN "L" BEND ON ONE END AND A MINIMUM 4" THREAD ON THE OTHER, WITH 2 NUTS AND 2 WASHERS (ASSEMBLED). THE ANCHOR BOLT IS HOT-DIPPED GALVANIZED PER ASTM A153.

HANDHOLE: THE HANDHOLE CONSISTS OF A 3"x5" OVAL REINFORCED FRAME WITH 16 GAUGE COVER, STEEL ATTACHMENT BAR AND 1/4" SCREW. A GROUNDING LUG IS INSTALLED INSIDE THE POLE SHAFT OPPOSITE THE HANDHOLE OPENING. THE HANDHOLE IS WELDED IN THE POLE SHAFT AND LOCATED AT 30" ABOVE THE BASE.

FINISH: THE POLE IS SAND BLASTED TO A NEAR WHITE FINISH AND TREATED WITH AN IRON PHOSPHATE SOLUTION. A HIGH QUALITY POLYESTER POWDER (BRONZE) IS THEN ELECTROSTATICALLY APPLIED AND CURED TO A MINIMUM 4 MIL. THICKNESS.

NOTES

1. ALL WELDS SHALL BE GROUND SMOOTH, AND ALL BURRS AND SHARP EDGE SHALL BE REMOVED PRIOR TO PAINTING.
2. ALL HARDWARE IS TO BE FURNISHED WITH POLE. HARDWARE SHALL BE CORROSION RESISTANT.

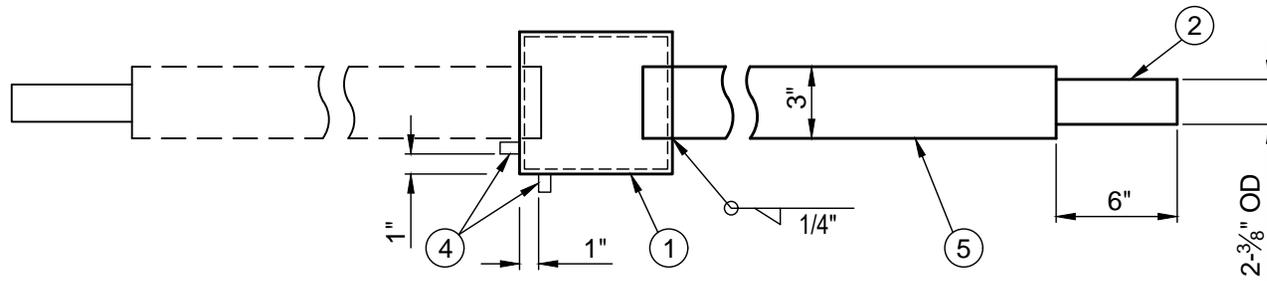


DETAIL NO.
A1784-2

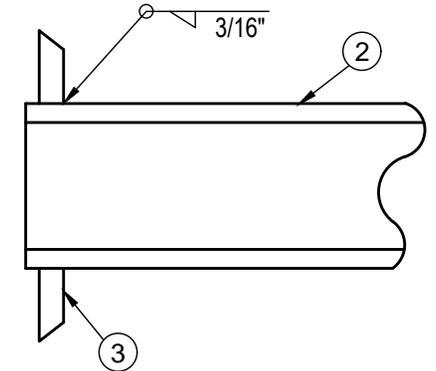
Avondale
STANDARD DETAIL

**ARCHITECTURAL STYLE
STREET LIGHT POLE**

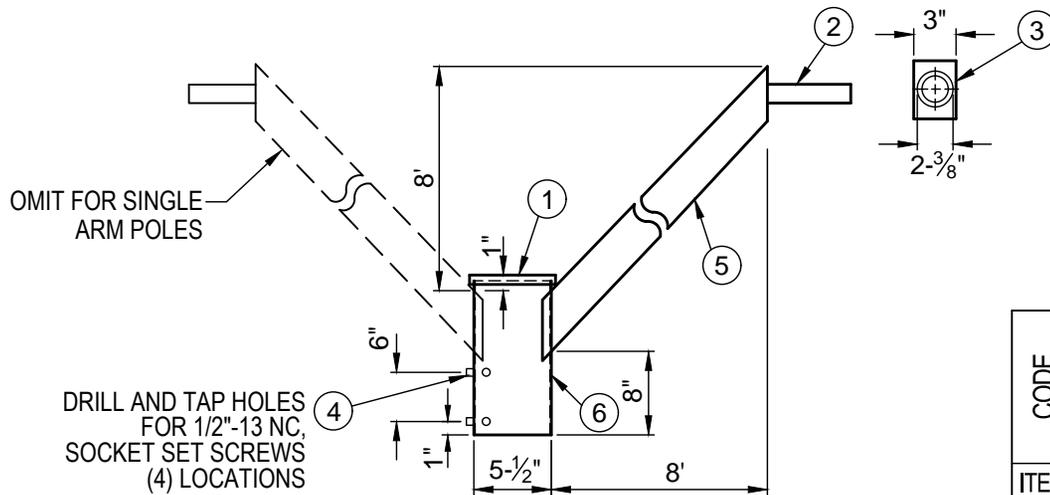
APPROVED BY: *Daniel S. Jones*
DATE: 8.24.16



TOP VIEW



DETAIL OF JOINT BETWEEN PIPE AND PLATE AT END OF TUBE



SIDE VIEW

CODE	SINGLE ARM	MATERIAL LIST
ITEM	QTY.	DESCRIPTION
①	1	CAP, METAL 5-1/2" x 5-1/2" x 3/4"
②	1	PIPE, STEEL, 2" SCHEDULE 40, 6-1/2" LONG (MAX. 2-3/8" O.D.) (42 KSI)
③	1	PLATE, 3" x 4.243" x 3/16"
④	4	SET SCREW, HEXAGON, 1/2 - 1/3 NC x 1/2", ZINC PLATED
⑤	1	TUBE, 3" x 3" x 11'-6", 0.188 WALL STEEL (ASTM A-500, GRADE B)
⑥	1	TUBE, 5-1/2" x 5-1/2" x 12", 0.188 WALL STEEL (ASTM A-500, GRADE B)

NOTES

1. ALL WIRE ENTRANCE AND EXIT HOLES SHALL BE FREE OF BURRS AND ROUGH EDGES.
2. THE MAST ARM IS SAND BLASTED TO A NEAR WHITE FINISH AND TREATED WITH AN IRON PHOSPHATE SOLUTION. A HIGH QUALITY POLYESTER POWDER (BRONZE) IS THEN ELECTROSTATICALLY APPLIED AND CURED TO A MINIMUM 4 MIL. THICKNESS.

DETAIL NO.

A1784-3

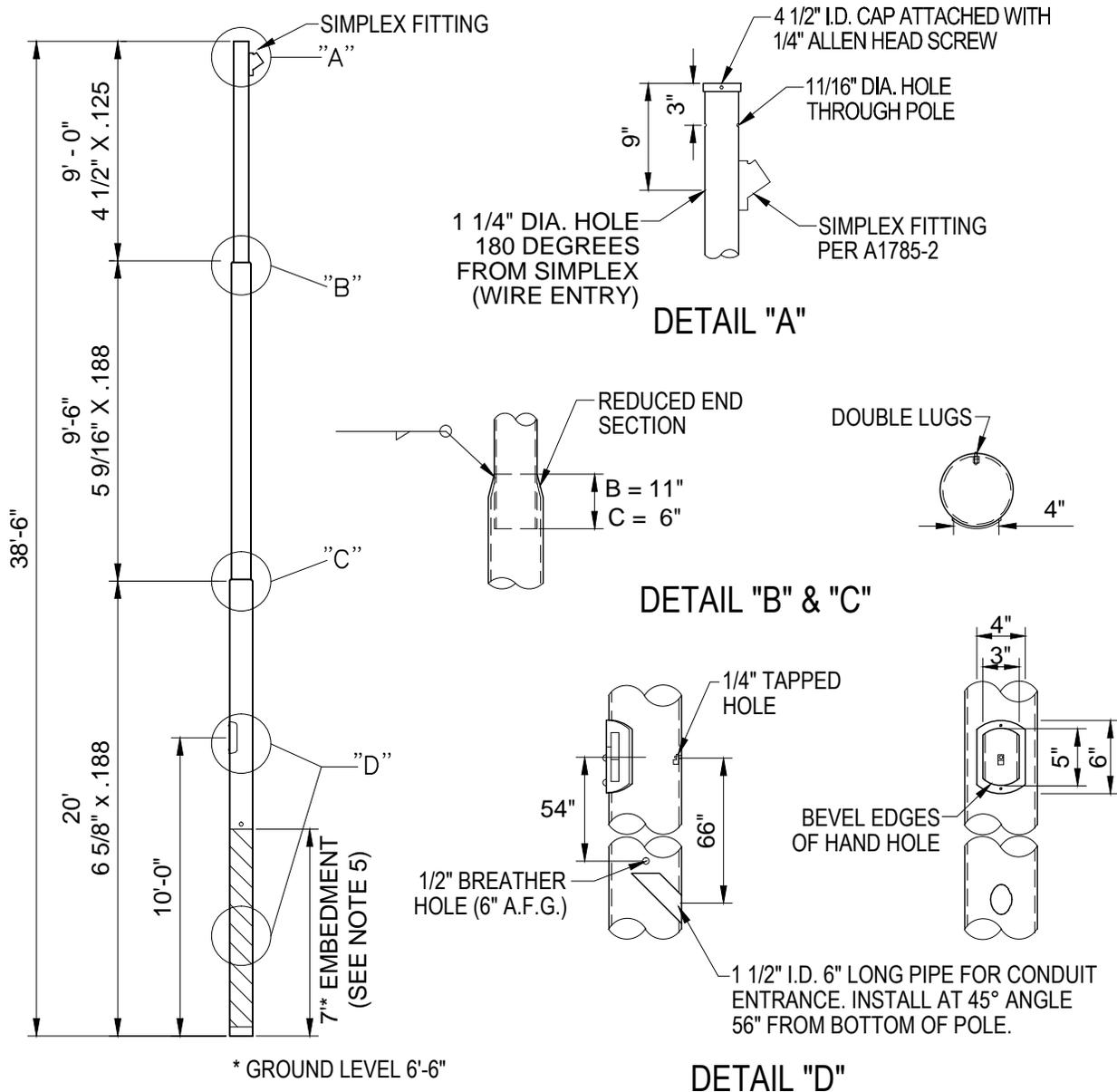
Avondale
STANDARD DETAIL

**ARCHITECTURAL STYLE
STREET LIGHT MAST ARM**

APPROVED BY:

DATE:

David S. Jones
8.24.16



NOTES:

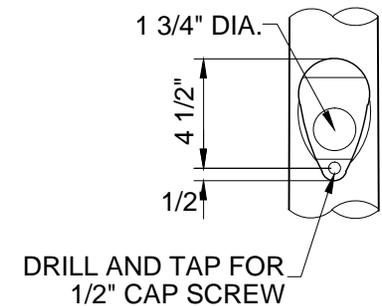
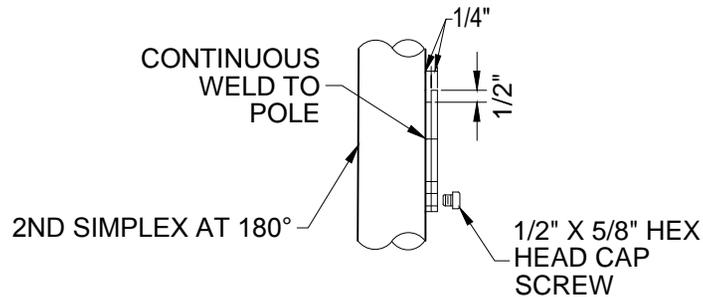
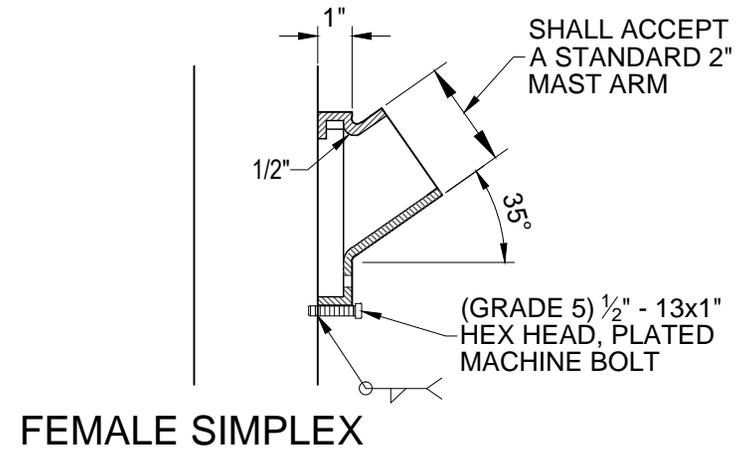
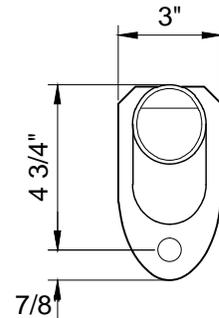
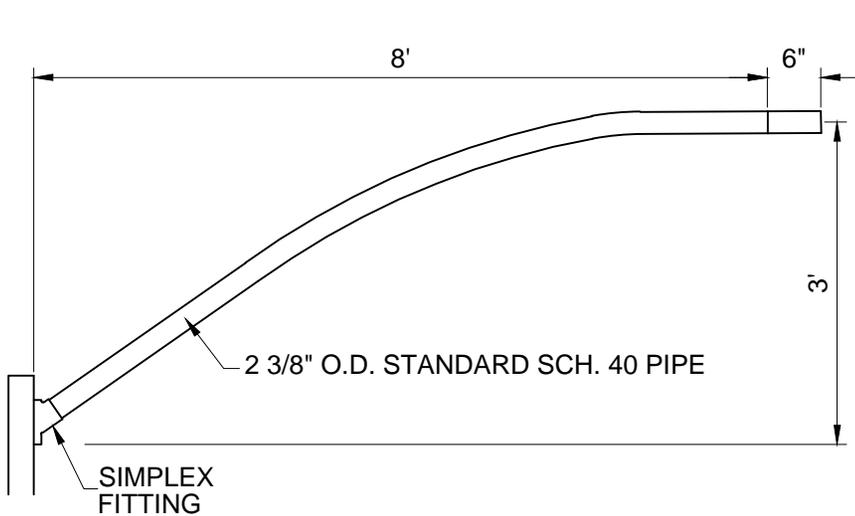
1. CONDUIT ENTRANCE TO BE MADE OF 1 1/2" MIN. I.D. PIPE. IT SHALL BE FLUSH WITH FACE OF POLE AND WELDED AT A 45 DEGREE ANGLE. REMOVE ALL BURRS.
2. THE HAND HOLE TO BE 5" X 3" WITH 1 1/2" RADII. THE HAND HOLE COVER TO BE 4" X 6" X 16 GAUGE WITH 2" RADII AND BENT SLIGHTLY SMALLER THAN THE POLE. THE COVER IS TO BE SECURED WITH (2) 1/4" STAINLESS STEEL TAMPER PROOF SCREWS, SUPPLIED BY MANUFACTURER.
3. AFTER FABRICATION, THE POLE SHALL BE SANDBLASTED TO REMOVE ALL LOOSE SCALE, RUST, CORROSION PRODUCTS, GREASE, DIRT, AND OTHER FOREIGN PRODUCTS. CLEAN POLE TO A MINIMUM OF "COMMERCIAL GRADE" SSPC SP-6.
4. AFTER SANDBLASTING THE POLE SHALL BE GALVANIZED PER ASTM A123, LATEST EDITION, ZINC (HOT GALVANIZED) COATING ON THE PRODUCTS FABRICATED FROM ROLLED, PRESSED AND FORGED STEEL, PLATES, BARS AND STRIPS AND APS "GUIDELINES FOR THE GALVANIZING OF TUBULAR TRANSMISSION POLES".
5. AFTER GALVANIZING, THE BOTTOM 7 FEET OF POLE SHALL BE CONFORMABLY HALF LAP TAPED WITH CORROSION PROTECTION TAPE PER COA SPECIFICATIONS. THIS TAPE SHALL BE UNIFORM AND WITHOUT FOLDS, WRINKLES OR GAPS.
6. POLE CONFORMS TO STRUCTURAL REQUIREMENTS PER NOTE 6 OF APS EM-339 SPECIFICATION (REV. 4)

DETAIL NO.
A1785-1

Avondale
STANDARD DETAIL

**APS STREET
LIGHT POLE**

APPROVED BY: *[Signature]*
DATE: 8.24.16



NOTES:

1. ALL WELDS SHALL BE GROUND SMOOTH, AND ALL BURRS AND SHARP EDGES SHALL BE REMOVED PRIOR TO GALVANIZING.
2. SURFACES TO BE GALVANIZED SHALL BE CLEANED OF ALL RUST, SCALE, FOREIGN MATERIAL, OIL, AND GREASE.
3. FINISH COAT SHALL BE GALVANIZED PER ASTM A-123 OR SEE COA APPROVED PRODUCTS LIST.
4. USE WITH A1785-1.

DETAIL NO.

A1785-2

Avondale
STANDARD DETAIL

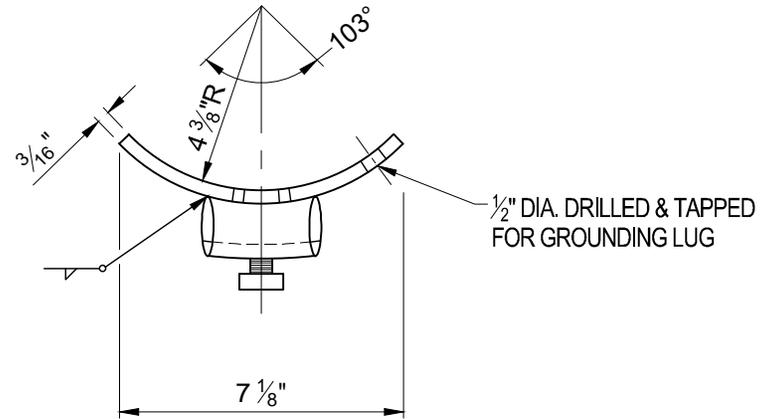
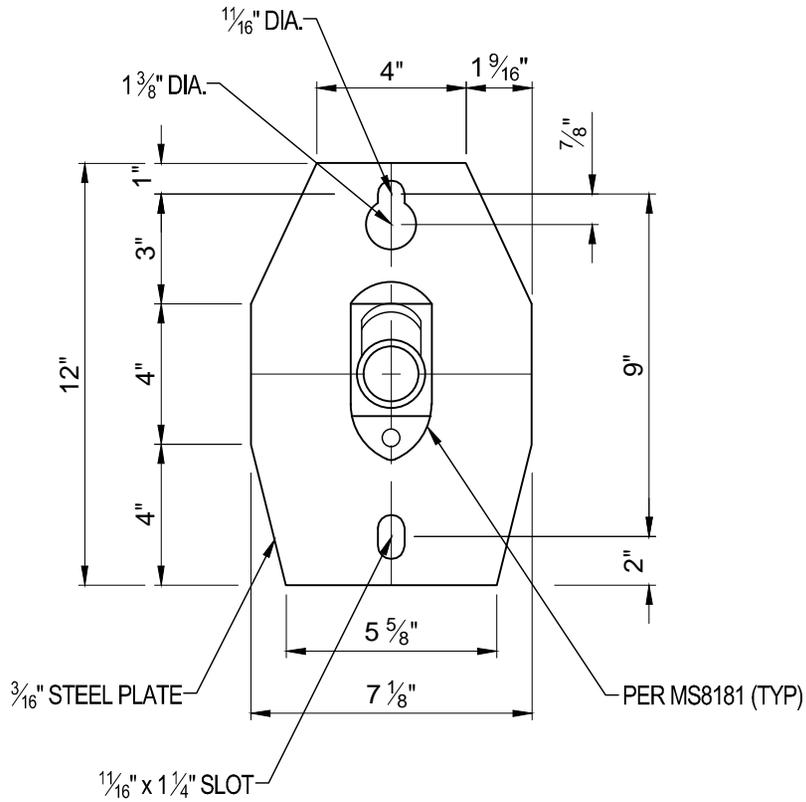
**APS STREET LIGHT
MAST ARM**

APPROVED BY:

Daniel S. Gower

DATE:

8.24.16



NOTES:

1. BRACKET AND INSTALLATION SHALL MEET ALL APS REQUIREMENTS.
2. REMOVE BURRS AND SHARP EDGES.
3. STEEL SHALL BE ASTM A36 LATEST EDITION.
4. BOLTS AND NUTS SHALL BE ASTM A307 LATEST EDITION.
5. FABRICATION SHALL CONFORM TO ASTM A143 LATEST EDITION.
6. WELDING SHALL CONFORM TO ANSI/AWS D1.1 WELD SHALL BE CAPABLE OF TRANSFERRING THE ULTIMATE ALLOWABLE LOAD FOR THE SIMPLEX FOOT TO THE PLATE ON WHICH IT IS MOUNTED.
7. ALL COMPONENTS SHALL BE GALVANIZED PER ASTM A123 OR A153 LATEST EDITIONS (WHICHEVER APPLIES) AND ASTM A143 LATEST EDITION.

DETAIL NO.

A1785-3

Avondale
STANDARD DETAIL

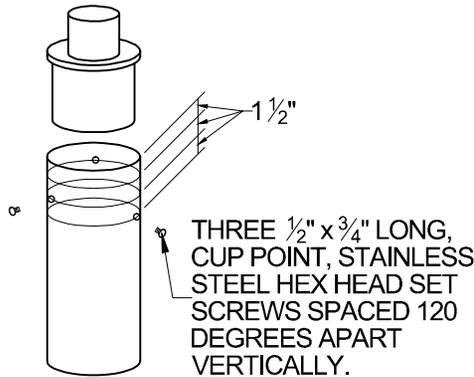
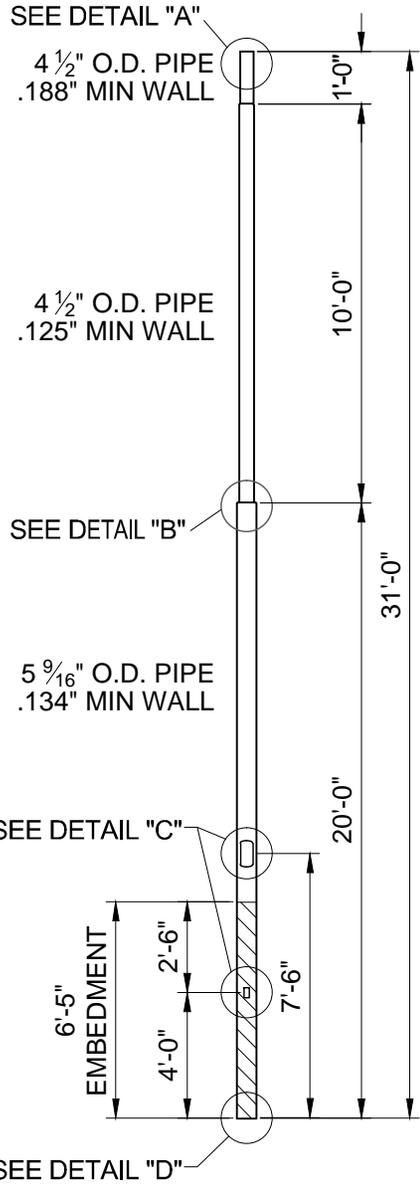
APS WOOD POLE BRACKET

APPROVED BY:

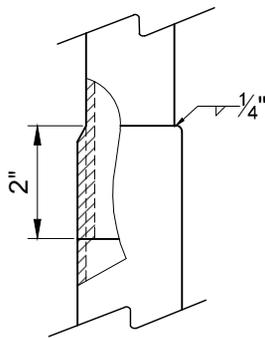
Daniel S. Jones

DATE:

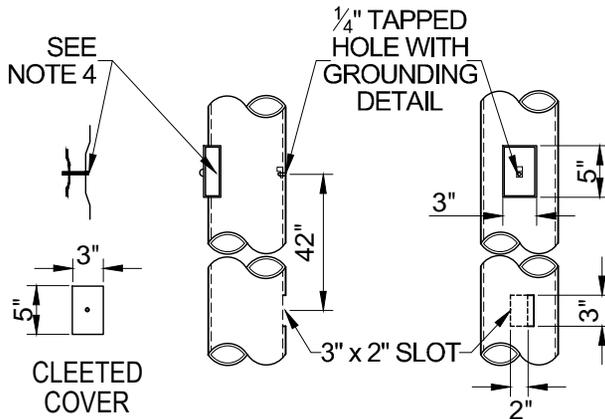
8.24.16



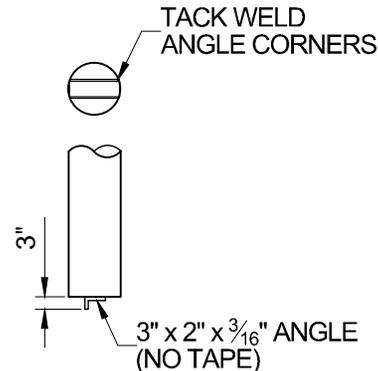
DETAIL "A"
POLE TOP



DETAIL "B"
CRIMP



DETAIL "C"
HANDHOLE



DETAIL "D"
POLE BOTTOM

NOTES:

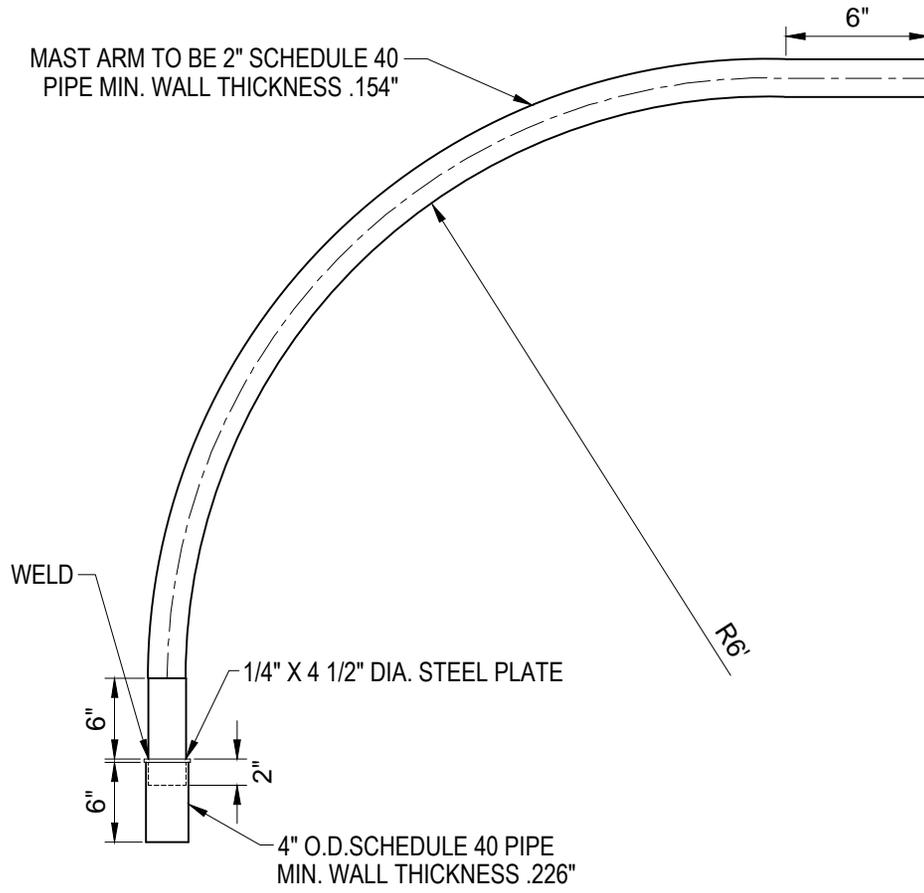
1. ALL PIPE SHALL HAVE A MINIMUM YIELD STRENGTH OF 42,000 PSI.
2. ALL WELDS SHALL BE GROUND SMOOTH, AND ALL BURRS AND SHARP EDGES SHALL BE REMOVED.
3. ALL HARDWARE IS TO BE FURNISHED WITH POLE. HARDWARE SHALL BE CORROSION RESISTANT.
4. HANDHOLE COVER WILL BE SECURED WITH 1/4" x 2" LONG HEX HEAD FULLY THREADED STAINLESS STEEL BOLTS, PER ASTM F593.
5. POLE AND MAST ARM SHALL BE CLEANED TO THE MINIMUM OF "COMMERCIAL GRADE" SSPC SP-6.
6. AFTER BLASTING, THE POLE AND MAST ARM SHALL BE GALVANIZED PER ASTM A123
7. AFTER THE POLE HAS BEEN GALVANIZED, THE POLE BUTT SHALL BE CONFORMABLY HALF LAP TAPED WITH CORROSION PROTECTION TAPE, PER COA SPECIFICATIONS, FROM A POINT 2" BELOW THE BREATHER HOLE TO THE BOTTOM OF THE POLE. TAPE SHALL BE UNIFORM AND WITHOUT FOLDS, WRINKLES OR GAPS. THE LOWER SECTION SHOULD OVERLAP THE UPPER SECTION BY AT LEAST ONE LAP. NO STRUCTURE SHALL BE EXPOSED BETWEEN LAPS.
8. FINISH COAT SHALL BE URECAL 9179 (GRAY) OF 96104 (BLACK), OR SEE COA APPROVED PRODUCTS LIST, APPLIED FROM THE TOP OF THE POLE TO A POINT ONE FOOT BELOW THE BREATHER HOLE. MINIMUM DRY COAT THICKNESS TO BE 2 MILS.
9. INSTALL GROUNDING CONNECTOR, ILSCO TA6-S OR EQUIVALENT WITH 1/4" ROUNDHEAD ALLEN DRIVE MACHINE SCREW AND NUT.
10. POLE SHALL BE SUPPLIED WITH TA2 ALUMINUM GROUNDING LUG.

DETAIL NO.
A1786-1

Avondale
STANDARD DETAIL

**SRP STREET LIGHT
POLE (31'-0")**

APPROVED BY: *[Signature]*
DATE: 8.24.16



NOTES:

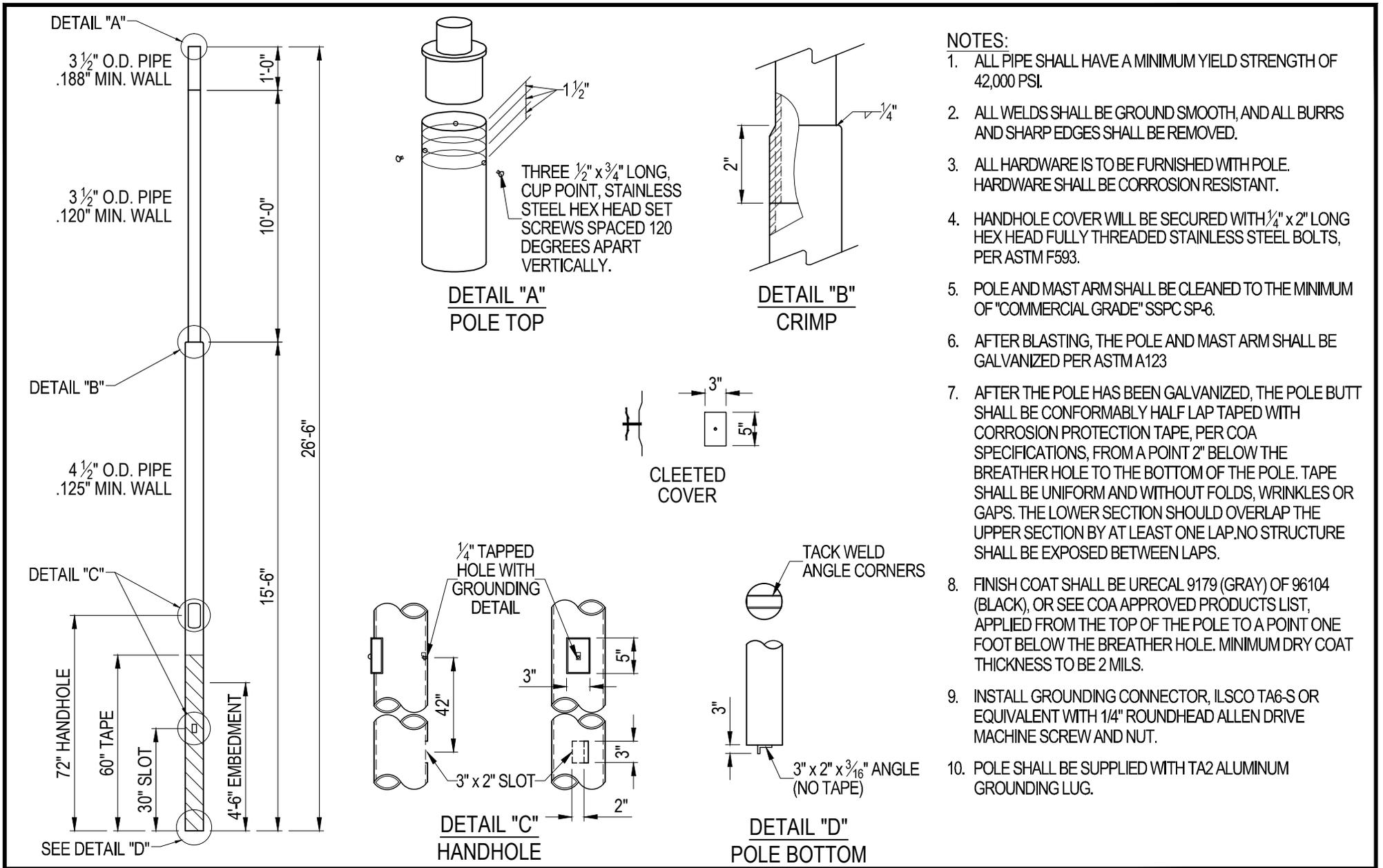
1. ALL WELDS SHALL BE GROUND SMOOTH, AND ALL BURRS AND SHARP EDGES SHALL BE REMOVED PRIOR TO GALVANIZING.
2. SURFACES TO BE GALVANIZED SHALL BE CLEANED OF ALL RUST, SCALE, FOREIGN MATERIAL, OIL, AND GREASE.
3. FINISH COAT SHALL BE GALVANIZED PER ASTM A-123.
4. USE WITH A1786-1.

DETAIL NO.
A1786-2

Avondale
STANDARD DETAIL

**SRP STREET LIGHT MAST
ARM FOR 31'-0" POLE**

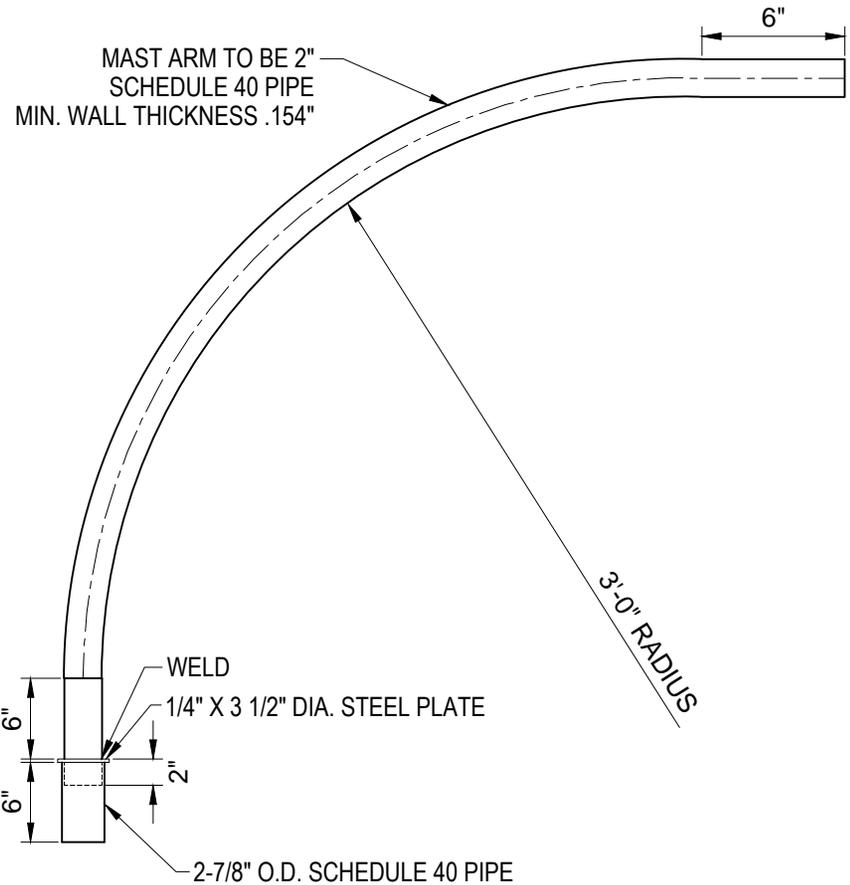
APPROVED BY: *David S. Jones*
DATE: 8.24.16



NOTES:

1. ALL PIPE SHALL HAVE A MINIMUM YIELD STRENGTH OF 42,000 PSI.
2. ALL WELDS SHALL BE GROUND SMOOTH, AND ALL BURRS AND SHARP EDGES SHALL BE REMOVED.
3. ALL HARDWARE IS TO BE FURNISHED WITH POLE. HARDWARE SHALL BE CORROSION RESISTANT.
4. HANDHOLE COVER WILL BE SECURED WITH 1/4" x 2" LONG HEX HEAD FULLY THREADED STAINLESS STEEL BOLTS, PER ASTM F593.
5. POLE AND MAST ARM SHALL BE CLEANED TO THE MINIMUM OF "COMMERCIAL GRADE" SSPC SP-6.
6. AFTER BLASTING, THE POLE AND MAST ARM SHALL BE GALVANIZED PER ASTM A123
7. AFTER THE POLE HAS BEEN GALVANIZED, THE POLE BUTT SHALL BE CONFORMABLY HALF LAP TAPED WITH CORROSION PROTECTION TAPE, PER COA SPECIFICATIONS, FROM A POINT 2" BELOW THE BREATHER HOLE TO THE BOTTOM OF THE POLE. TAPE SHALL BE UNIFORM AND WITHOUT FOLDS, WRINKLES OR GAPS. THE LOWER SECTION SHOULD OVERLAP THE UPPER SECTION BY AT LEAST ONE LAP. NO STRUCTURE SHALL BE EXPOSED BETWEEN LAPS.
8. FINISH COAT SHALL BE URECAL 9179 (GRAY) OF 96104 (BLACK), OR SEE COA APPROVED PRODUCTS LIST, APPLIED FROM THE TOP OF THE POLE TO A POINT ONE FOOT BELOW THE BREATHER HOLE. MINIMUM DRY COAT THICKNESS TO BE 2 MILS.
9. INSTALL GROUNDING CONNECTOR, ILSCO TA6-S OR EQUIVALENT WITH 1/4" ROUNDHEAD ALLEN DRIVE MACHINE SCREW AND NUT.
10. POLE SHALL BE SUPPLIED WITH TA2 ALUMINUM GROUNDING LUG.

DETAIL NO. A1786-3	Avondale STANDARD DETAIL	SRP STREET LIGHT POLE (26'-6")	APPROVED BY: <hr/> DATE: 8.24.16
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NOTES:

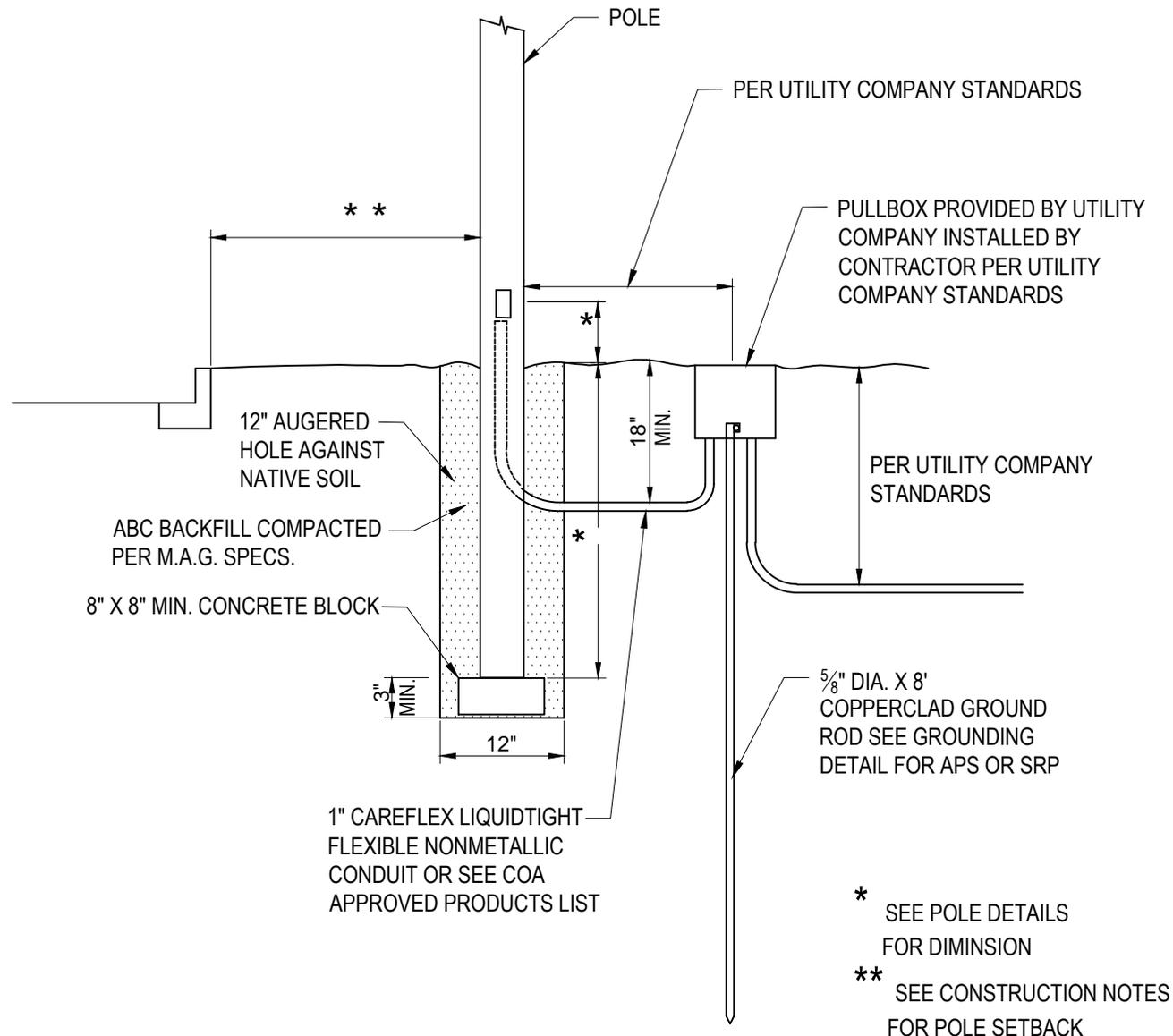
1. ALL WELDS SHALL BE GROUND SMOOTH, AND ALL BURRS AND SHARP EDGES SHALL BE REMOVED PRIOR TO GALVANIZING.
2. SURFACES TO BE GALVANIZED SHALL BE CLEANED OF ALL RUST, SCALE, FOREIGN MATERIAL, OIL, AND GREASE.
3. FINISH COAT SHALL BE GALVANIZED PER ASTM A-123.
4. USE WITH A1786-3.

DETAIL NO.
A1786-4

Avondale
STANDARD DETAIL

**SRP STREET LIGHT MAST
ARM FOR 26'-6" POLE**

APPROVED BY: *David S. Jones*
DATE: 8.24.16



- * SEE POLE DETAILS FOR DIMENSION
- ** SEE CONSTRUCTION NOTES FOR POLE SETBACK

DETAIL NO.

A1787

Avondale
STANDARD DETAIL

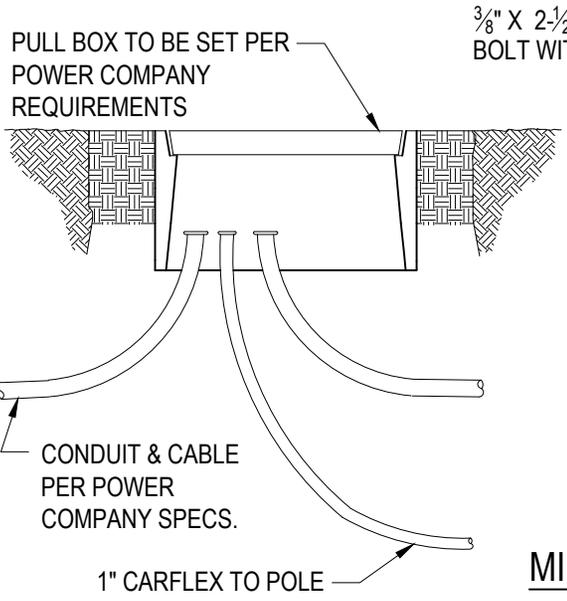
**STREET LIGHT EMBEDMENT
DETAIL**

APPROVED BY:

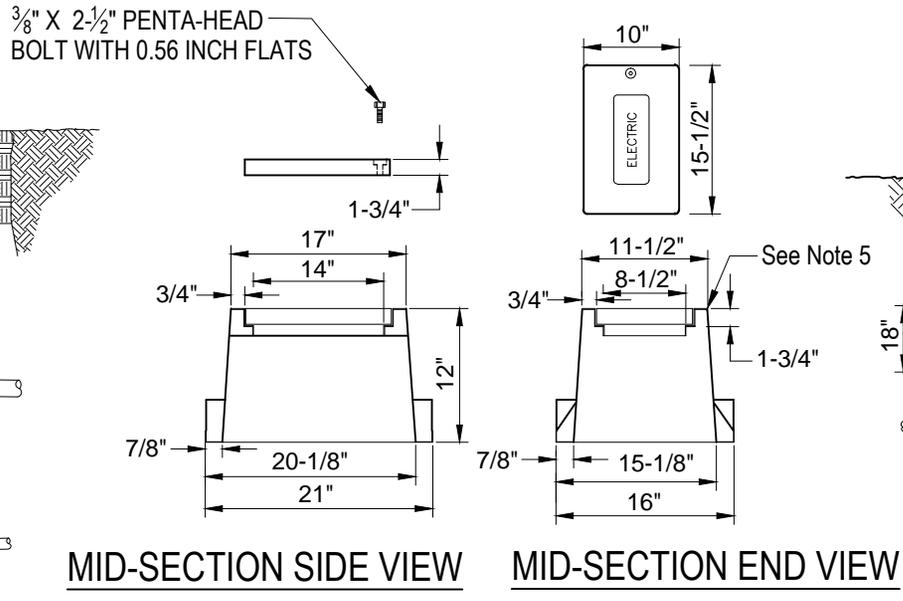
David S. Jones

DATE:

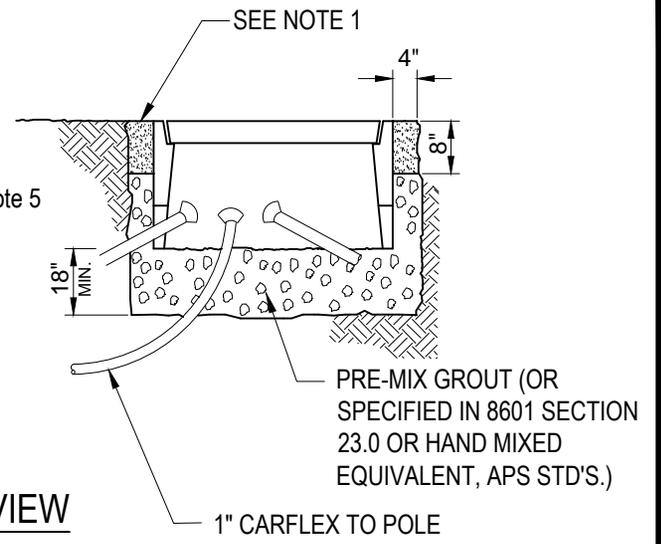
8.24.16



**JUNCTION BOX
INSTALLATION SRP AREA**



PLASTIC JUNCTION BOX



**JUNCTION BOX
INSTALLATION APS AREA**

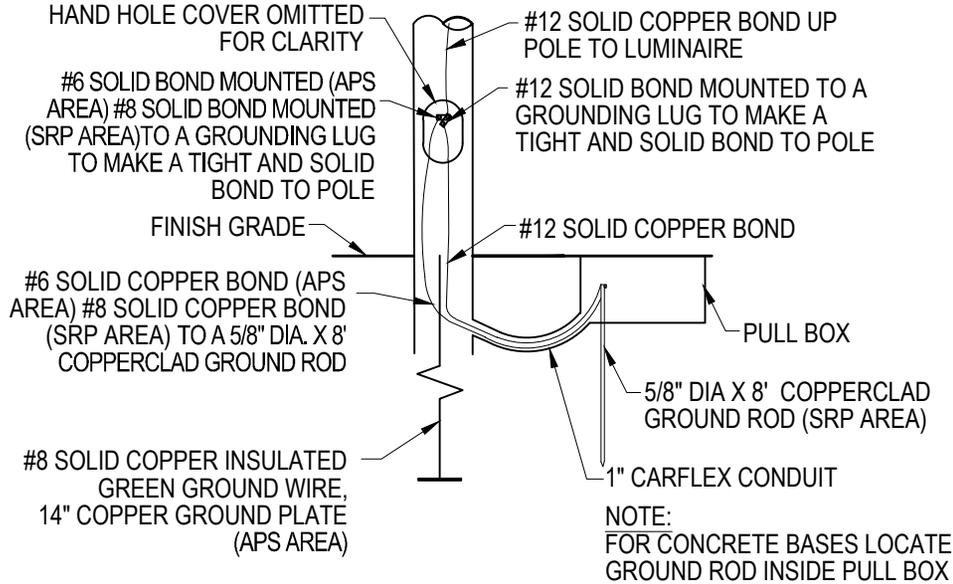
- NOTES:**
1. BACKFILL WITH EXCAVATED MATERIAL AND THOROUGHLY COMPACT.
 2. WHERE PULL BOXES ARE INSTALLED IN CONCRETE AREAS, 1/2" PRE-MOLDED EXPANSION JOINT SHALL BE INSTALLED AROUND PULL BOX.
 3. CONDUCTORS SHALL HAVE A MINIMUM OF 36" SLACK FROM CONDUIT AND BELL.
 4. WHERE A PULL BOX EXTENSION IS NEEDED, TWO PULL BOXES MAY BE STACKED ONE ON TOP OF ANOTHER.
 5. HANDHOLES ARE TO BE INSTALLED FLUSH WITH FINAL GRADE.
 6. INSTALL THIS NONTRAFFIC-BEARING HANDHOLE OUTSIDE OF CONCRETED AREAS, OR PEDESTRIAN AND VEHICULAR TRAFFIC AREAS.
 7. COMPACTION BENEATH AND AROUND HANDHOLE SHALL BE A MINIMUM OF 85 PERCENT OF THE MAXIMUM DENSITY PER MAG SPECIFICATIONS..
 8. DIMENSIONS ARE APPROXIMATE DUE TO VARIATIONS BETWEEN MANUFACTURERS.
 9. THIS HANDHOLE IS SUITABLE FOR USE WITHOUT JUNCTION BARS OR WITH THE TWO-POSITION JUNCTION BARS OR FOR MAINTENANCE OF HANDHOLES EXISTING WITH FOUR-POSITION JUNCTION BARS.

DETAIL NO.
A1790

Avondale
STANDARD DETAIL

JUNCTION BOX DETAILS

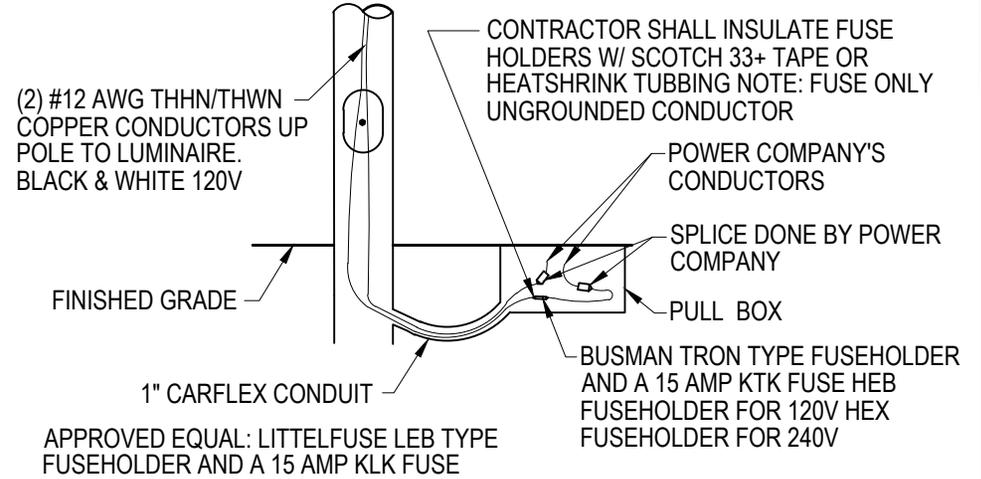
APPROVED BY: *Daniel S. Jones*
DATE: 8.24.16



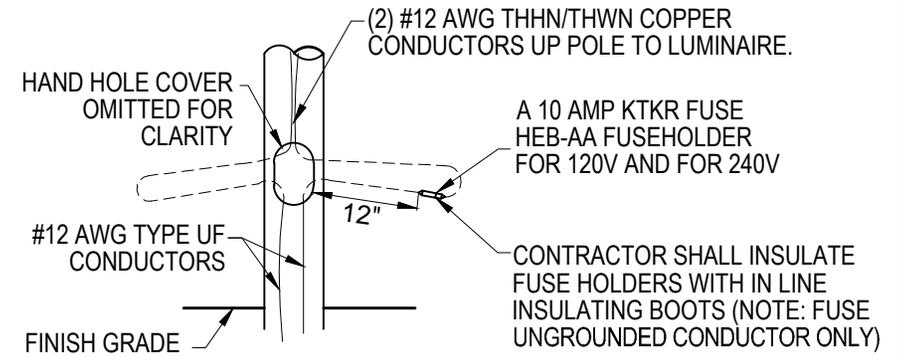
POLE GROUNDING DETAIL

NOTES:

1. ALL SPLICES SHALL BE DONE USING A BLACKBURN WR-7, WR-9, WR-189, OR WR-279 H TYPE CRIMP CONNECTOR. CRIMPING SHALL BE DONE USING A BURNDY TOOL NO. OS-50 WITH 5/8" DIE SHALL BE USED TO CRIMP THE WR-7 WR-9. A BURNDY TOOL NO. MD6-8 WITH O DIE SHALL BE USED TO CRIMP THE WR-189. A BURNDY TOOL NO. MD6-8 WITH D3 DIE SHALL BE USED TO CRIMP THE WR-279.
2. ALL POLES (APS AREA) SHALL BE WIRED USING TWO (2) #12 AWG TYPE THHN/THWN SOLID COPPER CONDUCTORS, 600 VOLT, NEC APPROVED AND ONE (1) #12 SOLID BARE COPPER BOND WIRE. WIRES SHALL RUN FROM THE LUMINAIRE TO A MINIMUM OF TWELVE (12) INCHES BELOW POLE HAND HOLE, FOR TERMINATION.
3. ALL POLES (SRP AREA) SHALL BE WIRED USING TWO (2) #12 AWG TYPE THHN/THWN SOLID COPPER CONDUCTORS, 600 VOLT, NEC APPROVED AND ONE (1) #12 SOLID BARE OR GREEN COPPER BOND WIRE. BOND WIRE SHALL RUN FROM THE LUMINAIRE TO A MINIMUM OF TWELVE (12) INCHES BELOW POLE HAND HOLE, FOR TERMINATION. CONDUCTORS SHALL RUN FROM LUMINAIRE TO PULL BOX.
4. ALL STREETLIGHT CONDUCTORS AND BOND WIRES SHALL BE COPPER. CONDUCTORS FROM PULL BOX TO HAND HOLE SHALL BE AWG TYPE UF INSULATION. CONDUCTORS FROM HAND HOLE TO LUMINAIRE SHALL BE AWG TYPE THHN/THWN. ALL CONDUCTORS SHALL BE STRANDED AND ALL BOND WIRES SHALL BE SOLID.



POLE FUSING DETAIL (SRP)



NOTE: IN ADDITION TO FUSING BEHIND HAND HOLE, INSTALL 15 AMP KTK FUSE(S) IN ADJACENT PULL BOX.

APPROVED MANUFACTURER: LITTELFUSE LEB TYPE FUSEHOLDER AND A 10 AMP KTKR FUSE, OR SEE COA APPROVED PRODUCTS LIST.

POLE FUSING DETAIL (APS)

DETAIL NO.

A1791

Avondale
STANDARD DETAIL

**FUSING AND GROUNDING
DETAILS**

APPROVED BY:

DATE:

Daniel S. Jones
8.24.16