

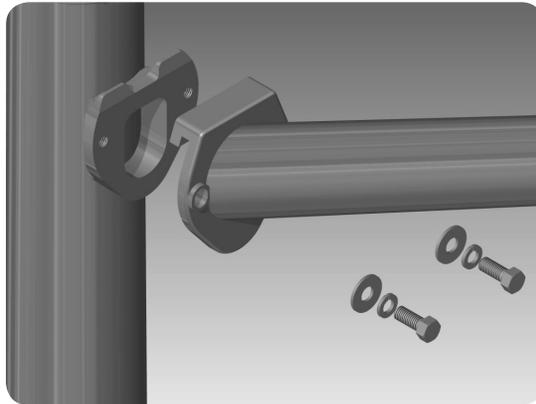
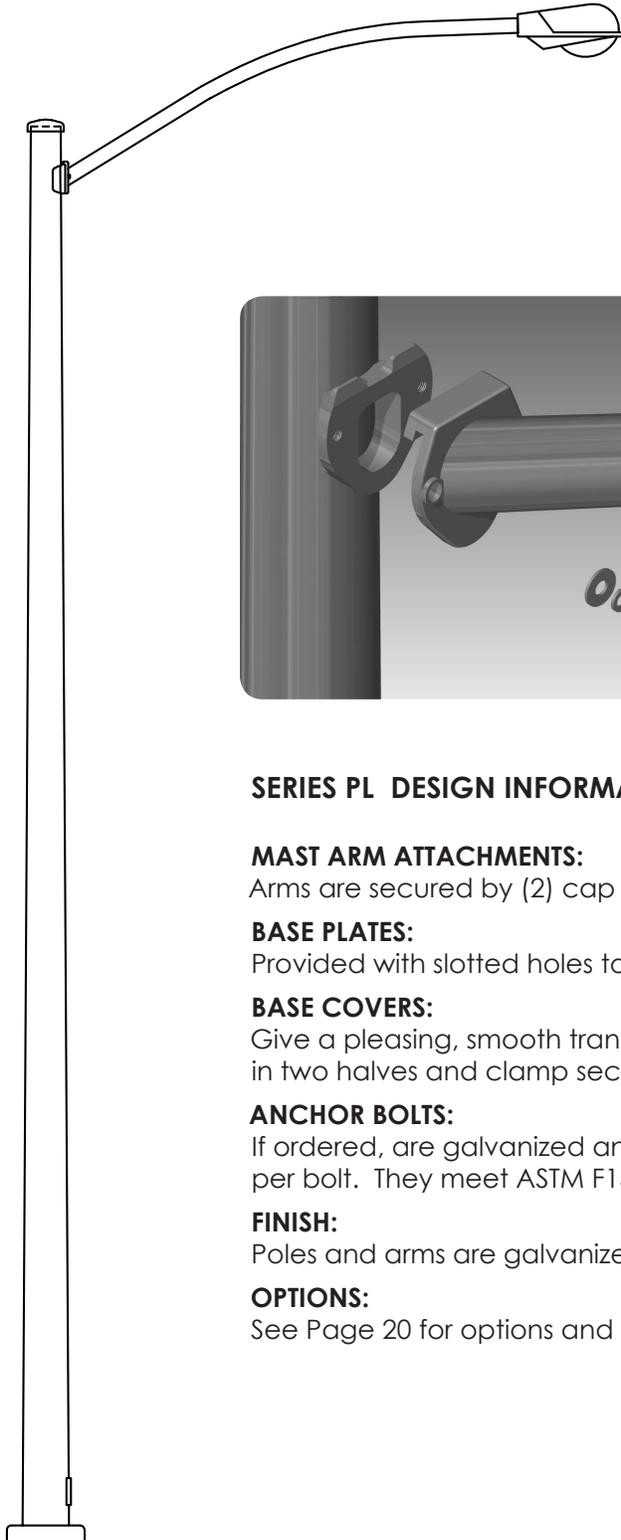


# Ameron Pole Products

## STEEL LIGHTING POLES

Quick Guide to Ameron Steel Pole Standards and Options

### Series PL Elliptical Tapered Luminaire Arm



#### SERIES PL DESIGN INFORMATION

**MAST ARM ATTACHMENTS:**

Arms are secured by (2) cap screws to a weather-resistant fitting.

**BASE PLATES:**

Provided with slotted holes to allow easy anchor bolt installation.

**BASE COVERS:**

Give a pleasing, smooth transition from shaft to base. They are supplied in two halves and clamp securely to the pole.

**ANCHOR BOLTS:**

If ordered, are galvanized and supplied with two nuts and two washers per bolt. They meet ASTM F1554 Grade 55 specification.

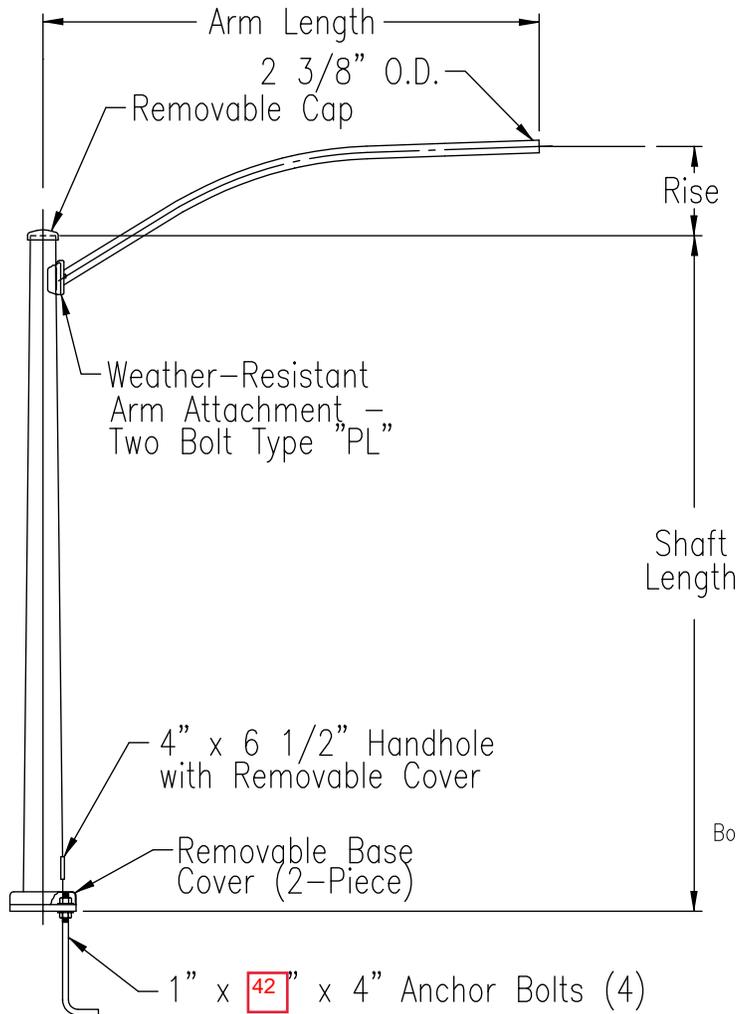
**FINISH:**

Poles and arms are galvanized in conformance to ASTM A123.

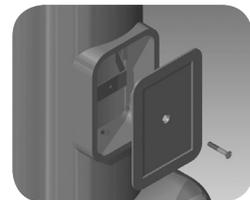
**OPTIONS:**

See Page 20 for options and accessories.

# Series PL Elliptical Tapered Arm



**POLE CAP DETAIL**  
Removable pole cup cap.

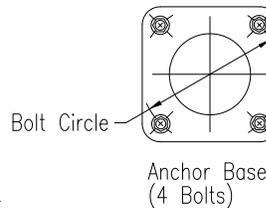


**HANDHOLE DETAIL**  
Standard handhole assembly 4" x 6-1/2"

1. Pole Design is in accordance to the 2009 AASHTO Specifications for Structural Supports of Highway Signs, Luminaires, and Traffic Signals.

2. Weights are exclusive of anchor bolts.

3. For twin arms consult Ameron.



### ORDERING NOMENCLATURE

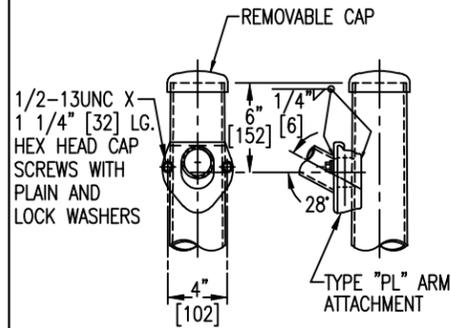
SERIES — LUMINAIRE ARM

PL-308

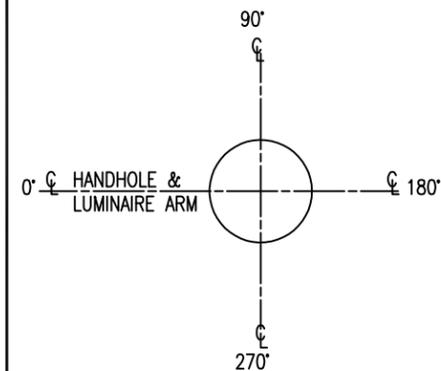
SHAFT LENGTH

### AASHTO 2009 Max EPA

Catalog Number	Shaft Length (FT)	Bolt Dia (IN)	Base OD (IN)	BC Min (IN)	BC Max (IN)	Base Square (IN)	Arm Length (FT)	Rise	Weight (LBS)	90 MPH	100 MPH	110 MPH	120 MPH
PL204	20	1	6.625	9.25	11.5	11.5	4	0' - 9"	193	3.3	3.3	3.3	3.3
PL206	20	1	6.625	9.25	11.5	11.5	6	1' - 6"	200	3.3	3.3	3.3	3.3
PL208	20	1	6.625	9.25	11.5	11.5	8	2' - 3"	210	3.3	3.3	3.3	3.3
PL254	25	1	7.313	10	11.5	11.5	4	0' - 9"	237	3.3	3.3	3.3	3.3
PL256	25	1	7.313	10	11.5	11.5	6	1' - 6"	244	3.3	3.3	3.3	3.3
PL258	25	1	7.313	10	11.5	11.5	8	2' - 3"	254	3.3	3.3	3.3	3.3
PL264	26.5	1	7.519	10	11.5	11.5	4	0' - 9"	252	3.3	3.3	3.3	3.3
PL266	26.5	1	7.519	10	11.5	11.5	6	1' - 6"	259	3.3	3.3	3.3	3.3
PL268	26.5	1	7.519	10	11.5	11.5	8	2' - 3"	269	3.3	3.3	3.3	3.3
PL284	28.5	1	7.794	10.25	11.5	11.5	4	0' - 9"	270	3.3	3.3	3.3	3.3
PL286	28.5	1	7.794	10.25	11.5	11.5	6	1' - 6"	278	3.3	3.3	3.3	3.3
PL288	28.5	1	7.794	10.25	11.5	11.5	8	2' - 3"	288	3.3	3.3	3.3	3.3
PL304	30	1	8	10.5	11.5	11.5	4	0' - 9"	285	3.3	3.3	3.3	3.3
PL306	30	1	8	10.5	11.5	11.5	6	1' - 6"	292	3.3	3.3	3.3	3.3
PL308	30	1	8	10.5	11.5	11.5	8	2' - 3"	303	3.3	3.3	3.3	3.3
PL354	35	1	8.688	11.25	11.5	11.5	4	0' - 9"	341	3.3	3.3	3.3	3.3
PL356	35	1	8.688	11.25	11.5	11.5	6	1' - 6"	348	3.3	3.3	3.3	3.3
PL358	35	1	8.688	11.25	11.5	11.5	8	2' - 3"	358	3.3	3.3	3.3	3.3
PL404	40	1	9.375	12	13	13	4	0' - 9"	429	3.3	3.3	3.3	3.3
PL406	40	1	9.375	12	13	13	6	1' - 6"	436	3.3	3.3	3.3	3.3
PL408	40	1	9.375	12	13	13	8	2' - 3"	446	3.3	3.3	3.3	3.3



DETAIL E ARM CONN. DETAIL

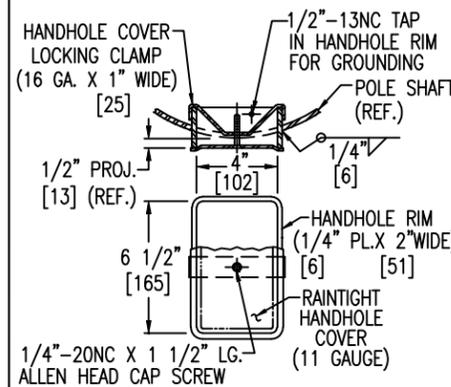


DETAIL F ORIENTATION

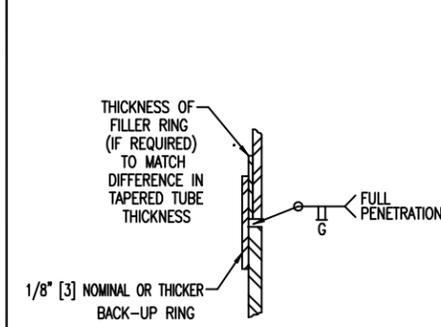
DETAIL G

DETAIL H

DETAIL I



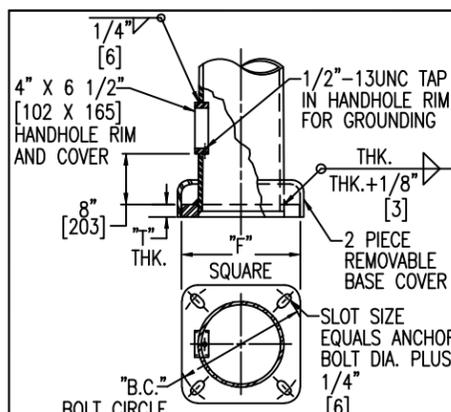
DETAIL C HANDHOLE DETAIL



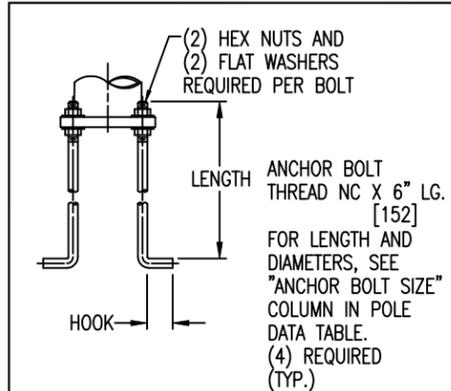
DETAIL D SPLICE DETAIL  
WHEN REQUIRED BASED UPON MATERIAL AVAILABILITY

--- LUMINAIRE ARM DATA ---

ARM LENGTH "E"	END O.D. X BASE O.D. X THICKNESS	RISE
4'-0" [1.27]	2 3/8" X 3" X .120" [60 X 76 X 3.05]	0'-9" [.23]
6'-0" [1.83]	2 3/8" X 3 5/16" X .120" [60 X 84 X 3.05]	1'-6" [.46]
8'-0" [2.44]	2 3/8" X 3 11/16" X .120" [60 X 94 X 3.05]	2'-3" [.66]



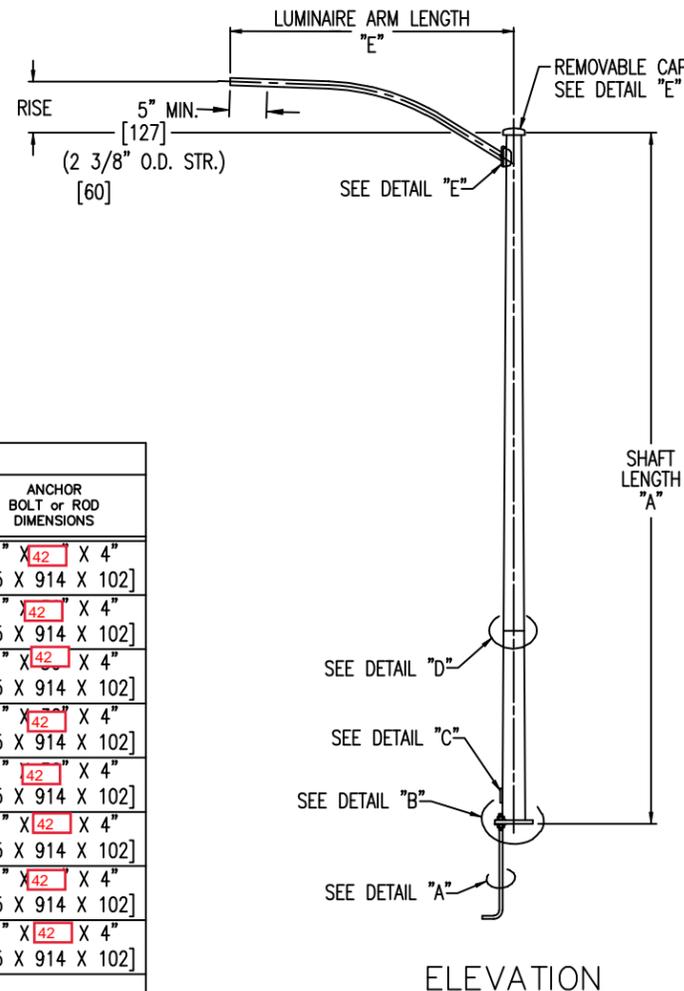
DETAIL B BASEPLATE DETAIL



DETAIL A ANCHOR BOLT DETAIL

--- POLE DATA ---

POLE DESCRIPTION	SHAFT LENGTH "A"	SHAFT DIMENSIONS TOP O.D. X BASE O.D. X THK.	MATERIAL BREAKDOWN				BASE SQ. "F"	BASE B.C. "C"	BASE THK. "D"	ANCHOR BOLT or ROD DIMENSIONS
			.120" THK.	.179" THK.	.239" THK.	.3125" THK.				
PL-250-050	25'-0" [7.62]	3 7/8" X 7 5/16" X .120" [98 X 186 X 3.05]	25'-0" [7.62]	—	—	—	11 1/2"	11 1/2"	1"	1" X 42" X 4" [25 X 914 X 102]
PL-260-050	26'-6" [8.08]	3 7/8" X 7 1/2" X .120" [98 X 191 X 3.05]	26'-6" [8.08]	—	—	—	11 1/2"	11 1/2"	1"	1" X 42" X 4" [25 X 914 X 102]
PL-280-050	28'-6" [8.69]	3 7/8" X 7 3/4" X .120" [98 X 197 X 3.05]	28'-6" [8.69]	—	—	—	11 1/2"	11 1/2"	1"	1" X 42" X 4" [25 X 914 X 102]
PL-300-050	30'-0" [9.14]	3 7/8" X 8" X .120" [98 X 203 X 3.05]	30'-0" [9.14]	—	—	—	11 1/2"	11 1/2"	1"	1" X 42" X 4" [25 X 914 X 102]
PL-310-050	31'-0" [9.45]	3 3/4" X 8" X .120" [95 X 203 X 3.05]	31'-0" [9.45]	—	—	—	11 1/2"	11 1/2"	1"	1" X 42" X 4" [25 X 914 X 102]
PL-330-050	33'-6" [10.21]	4" X 8 11/16" X .120" [102 X 221 X 3.05]	33'-6" [10.21]	—	—	—	11 1/2"	11 1/2"	1"	1" X 42" X 4" [25 X 914 X 102]
PL-350-050	35'-0" [10.67]	3 7/8" X 8 11/16" X .120" [98 X 221 X 3.05]	35'-0" [10.67]	—	—	—	11 1/2"	11 1/2"	1"	1" X 42" X 4" [25 X 914 X 102]
PL-400-050	40'-0" [12.19]	3 7/8" X 9 3/8" X .120" [98 X 238 X 3.05]	40'-0" [12.19]	—	—	—	13"	13"	1"	1" X 42" X 4" [25 X 914 X 102]



--- GENERAL NOTES ---

MATERIAL SPECIFICATIONS

SHAFT	STEEL OF 48 K.S.I. MINIMUM YIELD AFTER FABRICATION
BASEPLATES AND FLANGES	ASTM A-36
PIPE	ASTM A-53 GR. B OR A-500 GR. B
ANCHOR BOLTS	ASTM F1554 GR. 55

MANUFACTURING PROCESSES

BUTT WELDS	GROUND FLUSH WITH BASE METAL
LONGITUDINAL WELDS	BUTT WELDED BY THE ELECTRICAL RESISTANCE WELD PROCESS
CIRCUMFERENTIAL WELDS	BUTT WELD WITH PERMANENT BACK-UP RING

FINISH COATING

STRUCTURE	HOT DIP GALVANIZE PER ASTM A-123
HARDWARE	HOT DIP GALVANIZE PER ASTM A-153

DESIGN CRITERIA

STRUCTURE AND HARDWARE	IN ACCORDANCE WITH THE "SPECIFICATIONS FOR STRUCTURAL SUPPORTS OF HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS," AASHTO 1994
WELDING	IN ACCORDANCE WITH LATEST EDITION OF AWS D1.1 WELDING CODE

- NOTES:
- ORDERING NOMENCLATURE
- SERIES — LUMINAIRE ARM  
PL-266-050  
SHAFT LENGTH — DWG. NO.
- 1.) DIMENSIONS IN [ ] ARE METRIC. FEET CONVERT TO METERS, INCHES TO MILLIMETERS.
  - 2.) SINGLE ARM POLES ARE DESIGNED IN ACCORDANCE WITH 1994 AASHTO FOR A MAX. OF 100 MPH WIND ZONE WITH AN EPA OF 2.0 SQ. FT. THE COMPONENT DETAILS ARE BASED ON DESIGNS THAT HAVE BEEN REVIEWED AND STAMPED BY A PROFESSIONAL ENGINEER AND ARE ON FILE WITH THE MANUFACTURER.

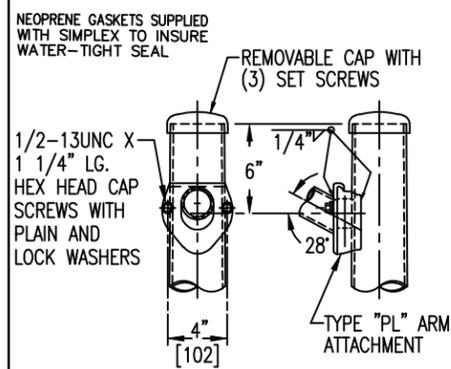
REV.	DATE	DESCRIPTION	BY	APPR
L	12/14	REV. UPDATE NOTES	RJR	MHM
K	8/12	REV. MATERIAL SPEC.	BB	JJ
J	3/12	REV. SPLICE DETAIL	BB	JJ
I	5/11	REV. BASE O.D. OF PL33	BB	JB
H	12/08	REV. PIPE MATERIAL	BB	RD

**Ameron** POLE PRODUCTS DIVISION

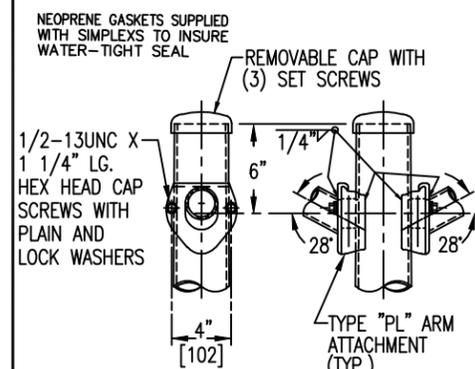
"PL" SERIES LIGHTING STANDARD

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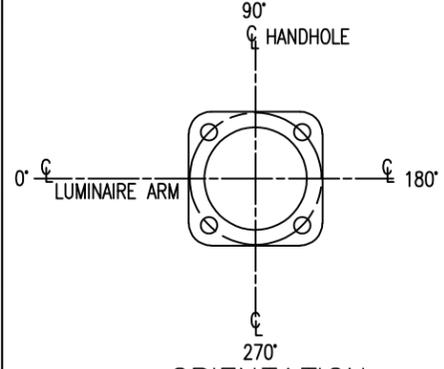
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APPR:	DATE:	N.T.S.	050 L



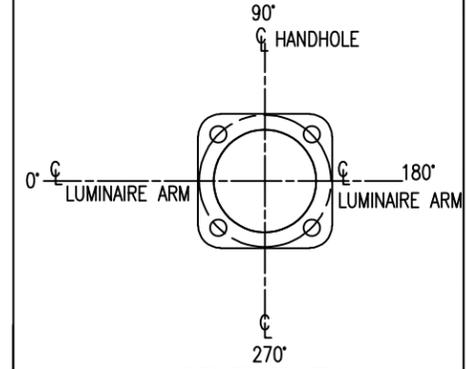
DETAIL E ARM CONN. DETAIL



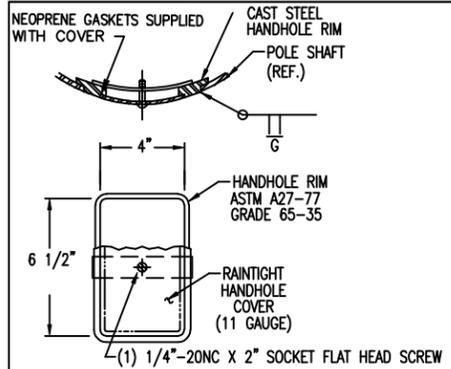
DETAIL F DBL.ARM CONN. DETAIL



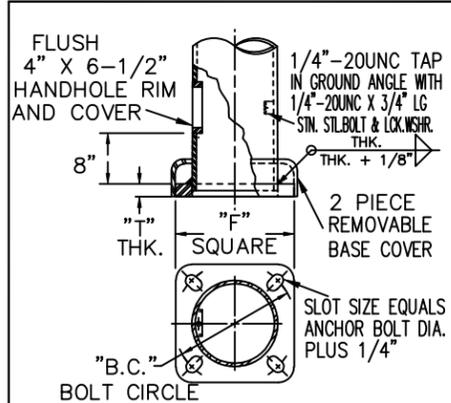
DETAIL G ORIENTATION FOR SINGLE ARM POLE



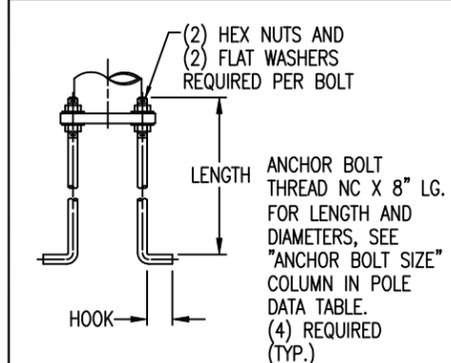
DETAIL H ORIENTATION FOR DOUBLE ARM POLE



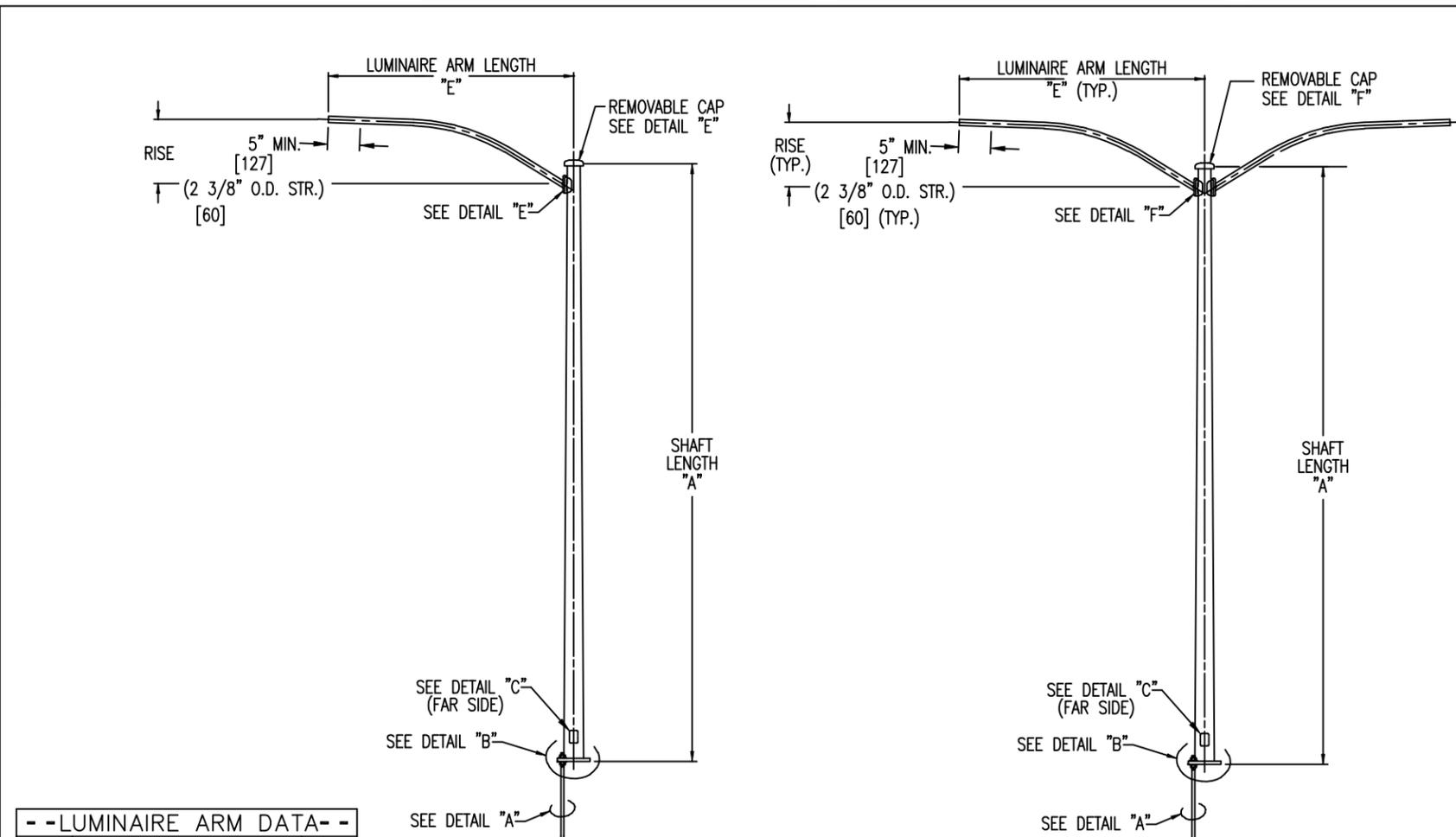
DETAIL C FLUSH HANDHOLE DETAIL



DETAIL B BASEPLATE DETAIL



DETAIL A ANCHOR BOLT DETAIL



--- LUMINAIRE ARM DATA ---

ARM LENGTH "E"	END O.D. X BASE O.D. X THICKNESS	RISE
4'-0"	2 3/8" X 3" X .120"	1'-3"
6'-0"	2 3/8" X 3 5/16" X .120"	1'-6"

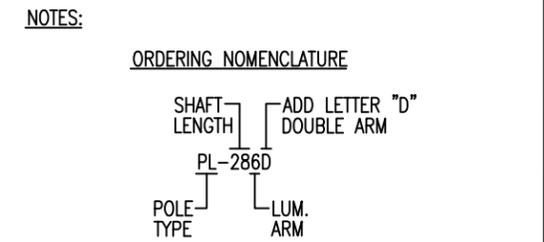
--- POLE DATA ---

POLE DESCRIPTION	SHAFT LENGTH "A"	SHAFT DIMENSIONS TOP O.D. X BASE O.D.	MATERIAL BREAKDOWN				BASE SQ. "F"	BASE B.C. "C"	BASE THK. "D"	ANCHOR BOLT or ROD DIMENSIONS	ANCHOR BLT. SETTING BOLT CIRCLE
			.120" THK.	.179" THK.	.239" THK.	.3125" THK.					
PL-25	25'-0"	3 13/16" X 7 5/16"	25'-0"	—	—	—	10 1/2"	10 1/2"	1"	1" X 42" X 4"*	10"
PL-28	28'-6"	3 13/16" X 7 3/4"	28'-6"	—	—	—	11 1/2"	11 1/2"	1"	1" X 42" X 4"*	11"

\*IF FOUNDATION IN UNPAVED AREA CONTRACTOR TO SUPPLY REQUIRED ANCHOR BOLT LENGTH.

--- GENERAL NOTES ---

MATERIAL SPECIFICATIONS	
SHAFT	STEEL OF 48 K.S.I. MINIMUM YIELD AFTER FABRICATION
BASEPLATES AND FLANGES	ASTM A-36
PIPE	ASTM A-53 GR. B or A-500 GR. B
ANCHOR BOLTS	ASTM F1554 GR. 55
MANUFACTURING PROCESSES	
BUTT WELDS	GROUND FLUSH WITH BASE METAL
LONGITUDINAL WELDS	BUTT WELDED BY THE ELECTRICAL RESISTANCE WELD PROCESS
CIRCUMFERENTIAL WELDS	BUTT WELD WITH PERMANENT BACK-UP RING
FINISH COATING	
STRUCTURE	HOT DIP GALVANIZE PER ASTM A-123
HARDWARE	HOT DIP GALVANIZE PER ASTM A-153
DESIGN CRITERIA	
STRUCTURE AND HARDWARE	IN ACCORDANCE WITH THE "SPECIFICATIONS FOR STRUCTURAL SUPPORTS OF HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS," AASHTO 2001 w/INTERIMS THRU 2006
WELDING	IN ACCORDANCE WITH LATEST EDITION OF AWS D1.1 WELDING CODE



REV	DATE	DESCRIPTION	BY	APPR
D	6/13	RISE LMA 1'-6" PER CUST.	MHM	GM
C	4/13	REV. RISE ON LMA TO 2'-0"	MHM	GM
B	4/13	ADD 4' LUM ARM	BB	MHM
A	11/12	REV. RISE ON LMA TO 1'-6"	MHM	GM

**Ameron** POLE PRODUCTS DIVISION

CITY OF SAN FRANCISCO  
"PL" SERIES LIGHTING

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DRAWN: JB	DATE: 2/11	SCALE: DWG. NO.	REV.
APPR: RD	DATE: 2/11	N.T.S. SF1101	D

## 1C3 Round Pole - Base Plate

Ameron Contemporary Series 1C3 prestressed, spun-cast concrete lighting poles are ideal for street lighting, recreational areas, parking lots, park security and walkways. Application can be post top or mast arm. These strong, durable poles are available in optional color finishes that blend attractively with the environment.

### General Information

The Ameron tapered spun-cast, prestressed concrete pole is manufactured to obtain optimum strength. Each Ameron pole features accurately placed high-tensile steel prestressing cables; a welded, spirally wrapped wire cage for torsional reinforcement; high-strength centrifugally cast concrete; and a surface treated to insure uniform texture. Ameron poles conform to applicable sections of ACI, AASHTO, ASTM and UBC standards.

### Surface Treatment

The concrete shafts are lightly blasted to expose the texture and beauty of the natural aggregates while maintaining sharp definition of details and patterns.

### Colors and Finishes

Standard, pre-formulated and custom aggregate colors are available. See separate aggregate sheet for details. Ameron offers Amershield™, a premium graffiti-resistant coating, plus an assortment of durable sealers and protectants that further enhance colors, protect the concrete surface and aid in the removal of graffiti.





# Contemporary Series 1C3 - Round Pole - Base Plate



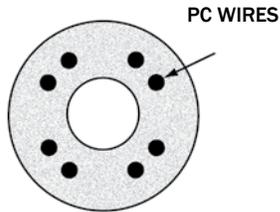
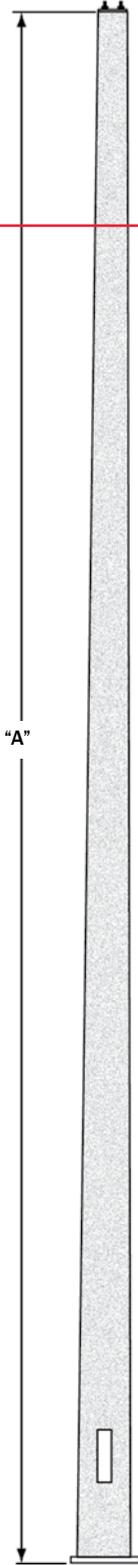
6" TOP O.D.

## BASE PLATE STYLE - INFORMATION

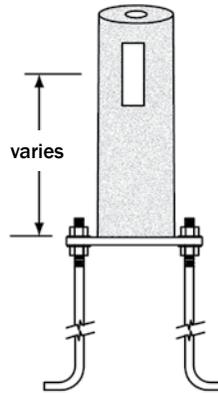
CATALOG NUMBER	POLE HEIGHT "A"	BASE O.D.	ANCHOR BOLT	BOLT CIRCLE	BASE PLATE (SQ)	ULTIMATE G.L. MOMENT (FT. LBS.)	WEIGHT (LBS.)	MAXIMUM EPA/MPH (SQ FT)*		
								80	90	100
1C3-22	22'-8"	9-3/16"	1" x 36" x 4"	12-1/2"	14"	31,400	940	18.5	16.0	14.0
1C3-25	25'-0"	9-7/16"	1" x 36" x 4"	15-1/4"	14"	34,700	1,300	18.5	16.0	14.0
1C3-28	28'-1"	9-7/8"	1" x 36" x 4"	15-1/4"	14"	38,800	1,320	18.5	16.0	13.5
1C3-30	30'-1"	10-3/16"	1" x 36" x 4"	15-1/4"	14"	41,700	1,470	18.5	16.0	13.0
1C3-33	33'-0"	10-1/2"	1" x 36" x 4"	15-1/4"	14"	46,100	1,770	18.5	16.0	12.0

\*EPA based on post top mounting. Consult your representative for other attachment methods and increased load capacity requirements.

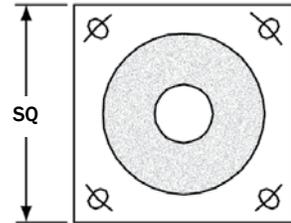
use 4- 1"X42"X4" Anchor bolts



SHAFT CROSS SECTION DETAIL



ELEVATION  
See recommended "capping details"



SLOTTED BASE PLATE

## Notes

### SPECIFICATIONS

Use Contemporary Specifications.

### COLORS & FINISHES

See Color Selection Guide.

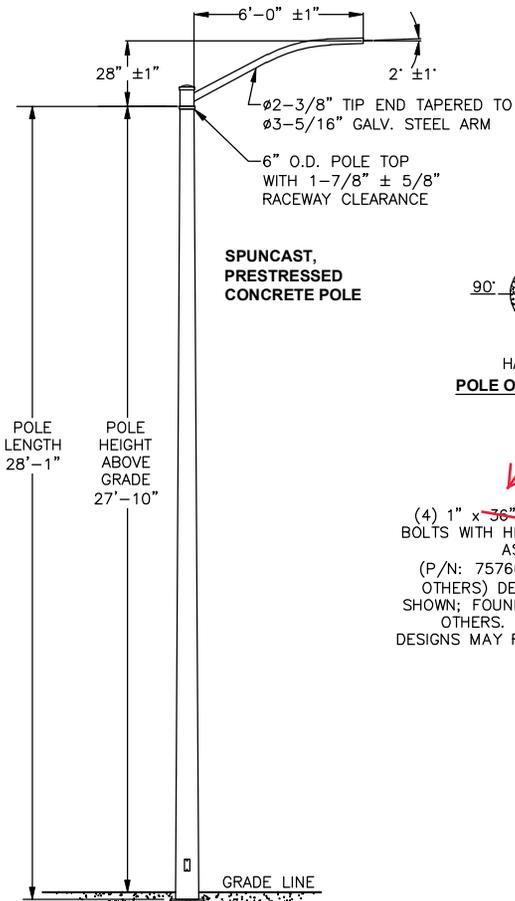
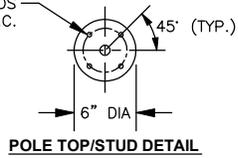
### LUMINAIRE MOUNTING

See Technical-Mounting Options Section for more information.

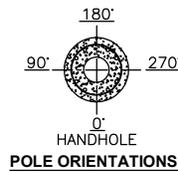
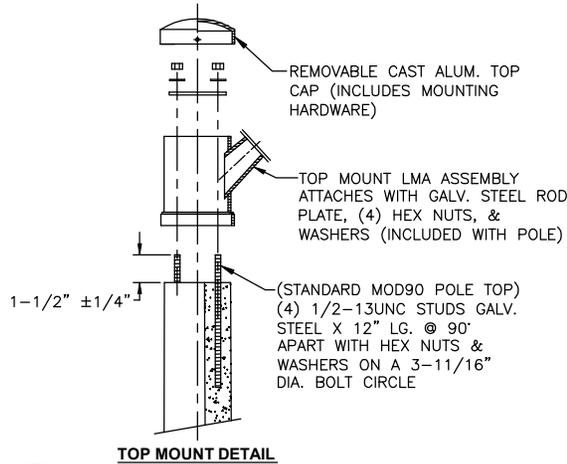
### ANTI-GRAFFITI & SEALER

Optional Coatings available for added protection.

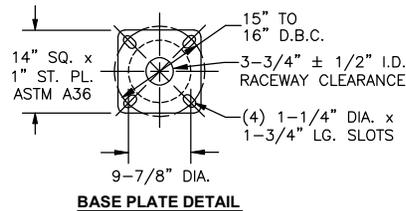
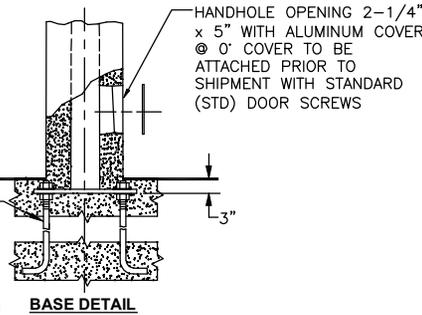
1/2"-13UNC GALV. STUDS  
ON A 3-11/16" B.C.



SPUNCAST,  
PRESTRESSED  
CONCRETE POLE



(4) 1" x 36" x 4" GALV. ANCHOR BOLTS WITH HEX NUTS & WASHERS ASTM F1554 GRADE 36 (P/N: 75766 OR EQUIVALENT BY OTHERS) DEFAULT ANCHOR BOLT SHOWN; FOUNDATION DESIGN IS BY OTHERS. SPECIFIC FOUNDATION DESIGNS MAY REQUIRE ALTERNATIVE BOLT REQUIREMENTS



REV.	DATE	DESCRIPTION	DRN.	APPR.
A	06/17	UPDATED DWG.	J.C.	

"F" LEVEL CONFIG CODES			"P" LEVEL CONFIG CODES		
OPTION CLASS	ENTRY	INFO.	OPTION CLASS	ENTRY	INFO.
COATING	I		MIX	01	
HH COVER	43025		FINISH	3	
DOOR SCRS	STD		BASEPLATE	45347	NOTE10
			POLE TOP CON.	MOD90	

CONTEMPORARY ROUND BASE PLATE POLE						
POLE DESIG-NATION	POLE HEIGHT ABOVE GRADE	OVERALL POLE LENGTH	BOLT CIRCLE	BASE O.D.	ULTIMATE G.L. MOMENT (ft.-lbs.)	POLE WEIGHT (lbs.)
1C328	27'-10"	28'-1"	15-1/4"	9-7/8"	38,800	1,320

( ) POLES REQUIRED EACH W/ 6' SINGLE GALVANIZED STEEL TAPERED ARM ASSEMBLY (P/N: 3ST6A)

NOTES:

- MIX (0131): SCE BLACK & WHITE, EXPOSED AGGREGATE FINISH WITH AMERSHIELD ANTI-GRAFFITI COATING.
- ASTM C-150 TYPE III GRAY CEMENT.
- f<sub>c</sub> @ 28 DAYS = 6,000 PSI, USING SPUN CYLINDER TEST.
- f<sub>c</sub> @ 28 DAYS = 5,000 PSI, USING ASTM C-31 CYLINDER TEST.
- POLES MANUFACTURED PER ASTM C-1089-13 SPECIFICATIONS.
- PROTECTIVE COAT EXPOSED P.C. WIRES AT POLE ENDS.
- BASEPLATE PRESTRESSED WITH (8) 5/16" DIA. A-416 (7-STRAND) CABLES.
- LMA ASSEMBLY IS DESIGNED TO ROTATE TO ANY ORIENTATION PER CUSTOMER'S REQUIREMENTS.
- THE SINGLE TOP MOUNT STEEL TAPERED LMA ASSEMBLY (NOT TO EXCEED 6' ARM LENGTH PER ARM SIDE, 2.1 SQ. FT EPA, 35 POUNDS) DEPICTED ON THIS DRAWING IS DESIGNED TO WITHSTAND THE LOADS IMPARTED BY A SINGLE ARM END TYPE LUMINAIRE (NOT TO EXCEED 2.5 SQ. FT. EPA, 50 POUNDS); THE POLE DEPICTED IS DESIGNED TO WITHSTAND THE LOADS IMPARTED BY THE ARM & THE LUMINAIRE AS DESIGNED PER THE 2013 AASHTO LTS-6 USING A 90 MPH WIND ZONE (3-SECOND GUSTS) CRITERIA FOR STREET LIGHT POLES. PLEASE ADVISE & CONTACT MANUFACTURER IF THE INTENDED LOADING EXCEEDS THESE VALUES.
- POLE SHOWN IS SUITABLE FOR CAPPED BASEPLATE (ENCASED IN CONCRETE), OTHERWISE, OTHER NON-CAPPED INSTALLATION REQUIRES A GALVANIZED BASEPLATE.
- SEE OTHER DRAWING FOR "N" COATING 1706-076.

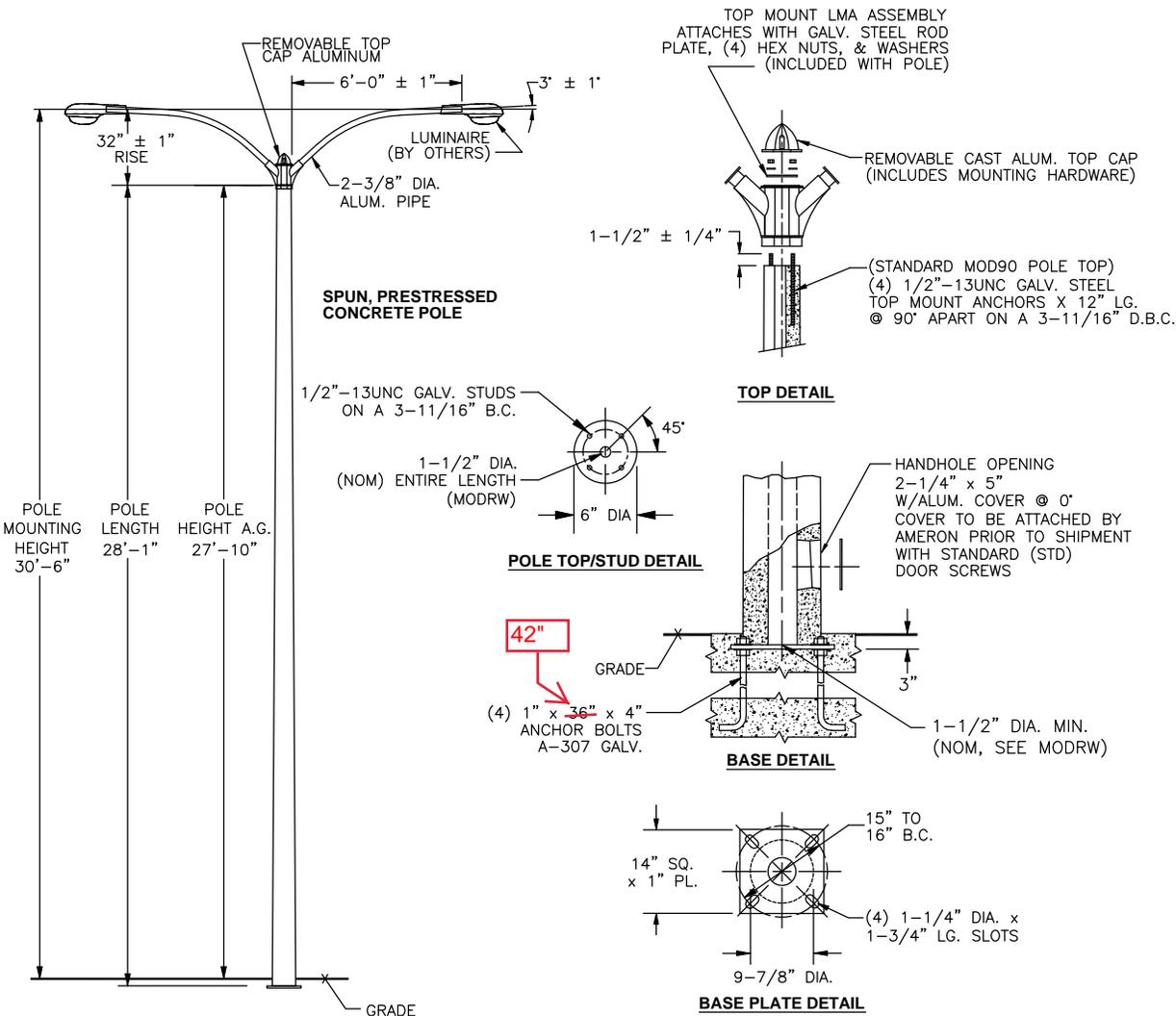
APPROVED BY \_\_\_\_\_ DATE \_\_\_\_\_

**CITY & COUNTY OF SAN FRANCISCO, CA**  
**1C328 POLE WITH 6' ARM ASSY.**

THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETARY TO NATIONAL OILWELL VARCO. IT SHALL NOT BE REPRODUCED, USED OR DISCLOSED TO ANYONE WITHOUT THE PRIOR WRITTEN PERMISSION OF NATIONAL OILWELL VARCO.

	DRAWN: M.L.	DATE: 03/06	
	SCALE: N.T.S.	DWG. NO. SK038406	REV A

COMPLIANCE TO ANY CODE NOT EXPLICITLY LISTED ON THIS DRAWING IS NOT GUARANTEED. PLEASE CONTACT NATIONAL OILWELL VARCO IF YOU HAVE SPECIFIC CODE REQUIREMENTS.



REV.	DATE	DESCRIPTION	DRN.	APPR.
A	10/05	WAS NO COATING	J.C.	
B	01/08	1AP6A ARM WAS 2SP6DA STL ADDED MODRW, UPDATED FOR ORACLE	A.C.	

"F" LEVEL CONFIG CODES		
OPTION CLASS	ENTRY	INFO
COATING	I	
HH COVER	43025	
DOOR SCR	STD	
DRILL IN MOD	MODRW	

"P" LEVEL CONFIG CODES		
OPTION CLASS	ENTRY	INFO
MIX	01	
FINISH	3	
BASE PLATE	45347	
POLE TOP CON.	MOD90	

**CONTEMPORARY ROUND BASE PLATE POLE**

POLE DESIGNATION	POLE HEIGHT A.G.	POLE LENGTH	BOLT CIRCLE	ULTIMATE C.L. MOMENT (ft.-lbs.)	WEIGHT (lbs.)
1C328	27'-10"	28'-1"	15-1/4"	38,800	1,320

( ) POLES REQD' EACH W/ DOUBLE 6' ALUMINUM TAPERED ARM ASSY. (P/N: 1AP6DA)

**NOTES:**

- MIX (013): BLACK & WHITE, EXPOSED AGGREGATE FINISH WITH AMERSHIELD ANTI-GRAFFITI COATING.
- ASTM C-150 TYPE III GRAY CEMENT.
- f'c @ 28 DAYS = 6,000 PSI, USING SPUN CYLINDER TEST.
- f'c @ 28 DAYS = 5,000 PSI, USING ASTM C-31 CYLINDER TEST.
- POLES MANUFACTURED PER ASTM C-1089-06 SPECIFICATIONS.
- PROTECTIVE COAT EXPOSED P.C. WIRES AT POLE ENDS.
- BASEPLATE PRESTRESSED WITH (8) 5/16" DIA. A-416 (7-STRAND) CABLES.
- ARM ASSY. CAN BE ROTATED IN ANY ORIENTATION.

APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

**Ameron POLE PRODUCTS DIVISION**

**CITY & COUNTY OF SAN FRANCISCO  
 SAN FRANCISCO, CA  
 1C328 W/ DOUBLE ARM ASSY.**

THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETARY TO AMERON. IT SHALL NOT BE REPRODUCED, USED OR DISCLOSED TO ANYONE WITHOUT THE PRIOR WRITTEN PERMISSION OF AMERON.

DRAWN: J.C.	10/05	SCALE	DWG. NO.	REV
CHK'D:		N.T.S.	SK102405	B

PRINTED BY: DIANNE GARNER  
 ON Tuesday, July 05, 2016

# 2B2 Round Pole - Base Plate



Ameron Contemporary Series 2B2 prestressed, spun-cast concrete lighting poles are ideal for street lighting, recreational areas, parking lots, park security and walkways. Application can be post top or mast arm. These strong, durable poles are available in optional color finishes that blend attractively with the environment.

### General Information

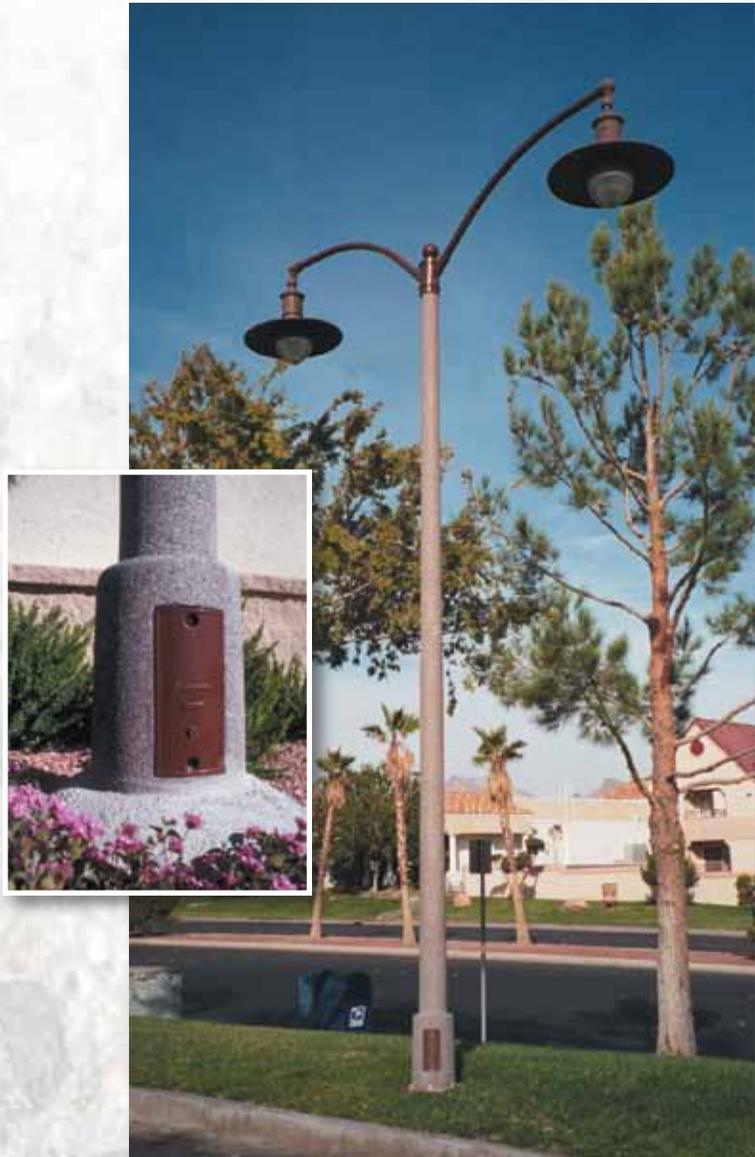
The Ameron tapered spun-cast, prestressed concrete pole is manufactured to obtain optimum strength. Each Ameron pole features accurately placed high-tensile steel prestressing cables; a welded, spirally wrapped wire cage for torsional reinforcement; high-strength centrifugally cast concrete; and a surface treated to insure uniform texture. Ameron poles conform to applicable sections of ACI, AASHTO, ASTM and UBC standards.

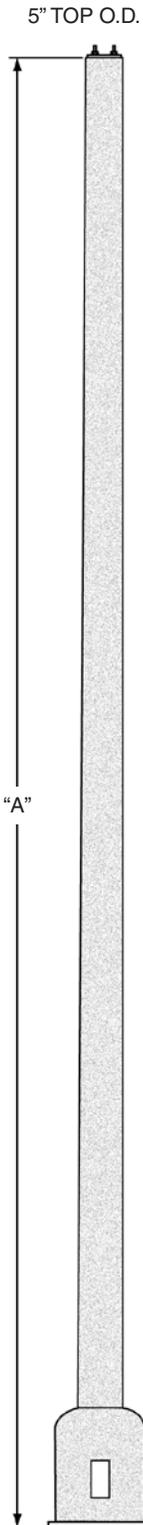
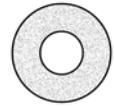
### Surface Treatment

The concrete shafts are lightly blasted to expose the texture and beauty of the natural aggregates while maintaining sharp definition of details and patterns.

### Colors and Finishes

Standard, pre-formulated and custom aggregate colors are available. See separate aggregate sheet for details. Ameron offers Amershield™, a premium graffiti-resistant coating, plus an assortment of durable sealers and protectants that further enhance colors, protect the concrete surface and aid in the removal of graffiti.



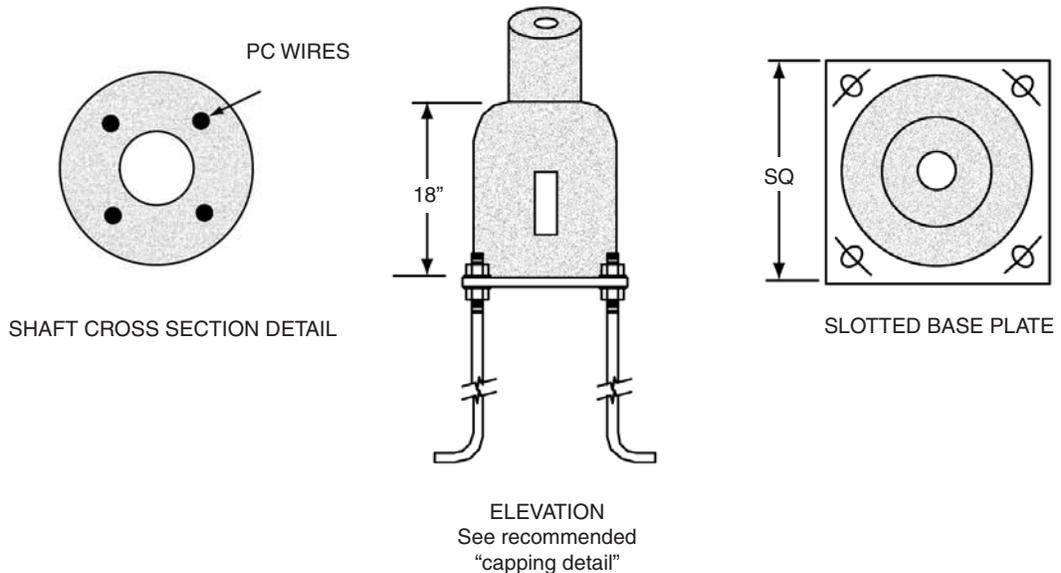


**BASE PLATE STYLE - INFORMATION**

CATALOG NUMBER	POLE HEIGHT "A"	BASE O.D.	ANCHOR BOLT	BOLT CIRCLE	BASE PLATE (SQ)	ULTIMATE G.L. MOMENT (FT. LBS.)	WEIGHT (LBS.)	MAXIMUM EPA/MPH (SQ FT)*		
								80	90	100
2B2-18	18'-7"	11-3/4"	1" x 36" x 4"	14"	13"	12,900	620	11.0	9.0	6.5
2B2-24	24'-4"	11-3/4"	1" x 36" x 4"	14"	13"	17,200	820	10.0	8.0	5.0
2B2-26	26'-7"	11-3/4"	1" x 36" x 4"	14"	13"	17,800	900	9.5	7.0	4.5

\*EPA based on post top mounting. Consult your representative for other attachment methods and increased load capacity requirements.

use 4- 1"X42"X4" Anchor bolts

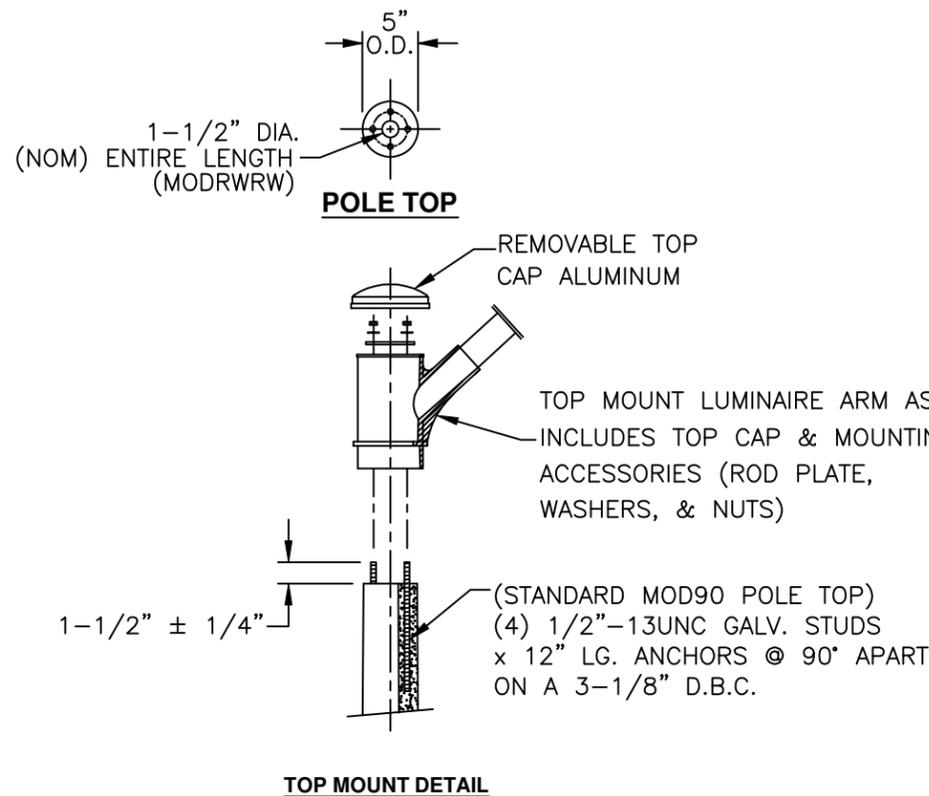
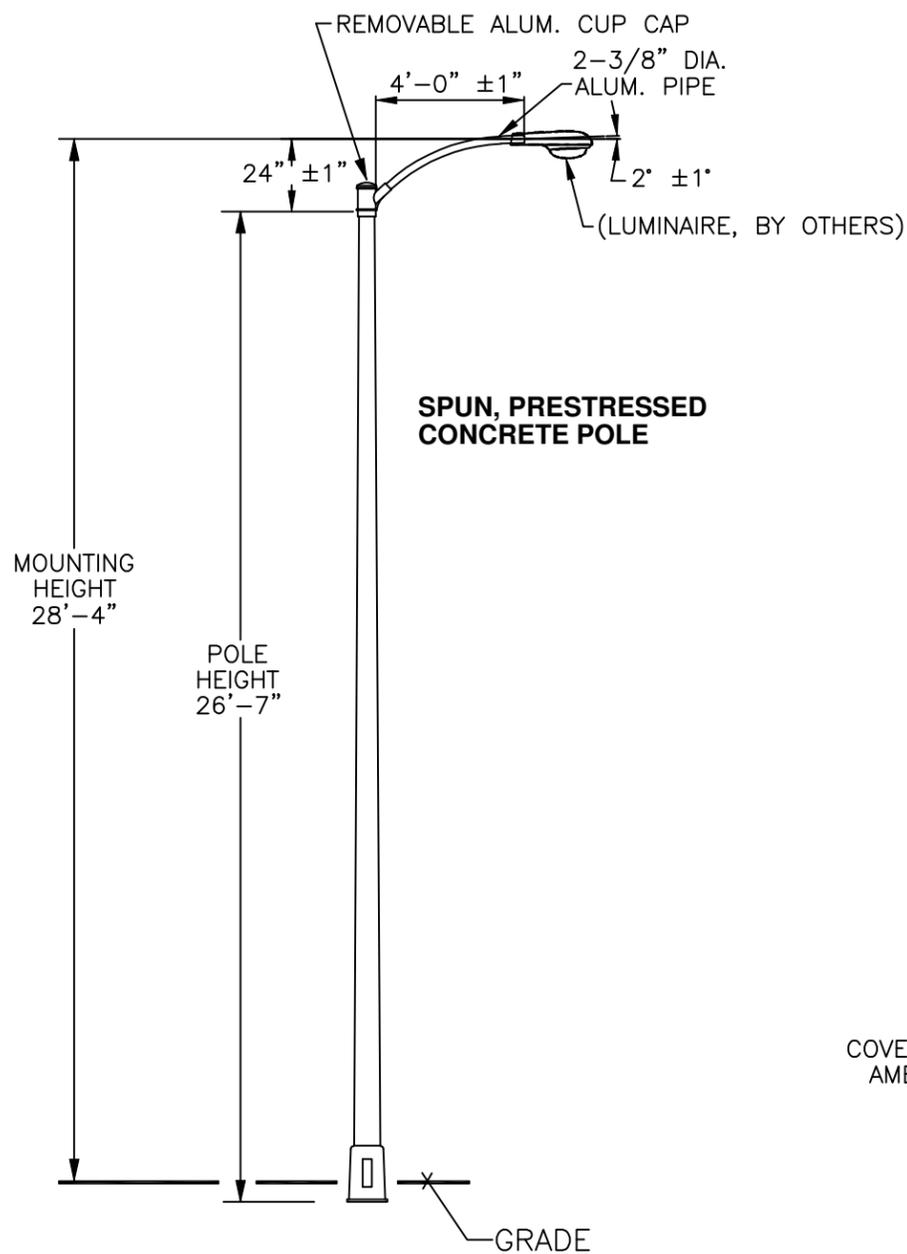


**Notes**

- SPECIFICATIONS**  
 Use Contemporary Specifications.
- LUMINAIRE MOUNTING**  
 See Technical-Mounting Options Section for more information.

- COLORS & FINISHES**  
 See Color Selection Guide.
- ANTI-GRAFFITI & SEALER**  
 Optional Coatings available for added protection.

REV.	DATE	DESCRIPTION	DRN.	APPR.
A	12/05	ADDED CITY OF SF POLE CALLOUT	M.L.	
B	01/08	ALUM ARM WAS STL. ADDED MODRWRW UPDATED FOR ORACLE.	A.C.	



"F" LEVEL CONFIG CODES		
OPTION CLASS	ENTRY	INFO
COATING	I	
HH COVER	43207	
DOOR SCR	STD	
DRILL IN MOD	MODRWRW	

"P" LEVEL CONFIG CODES		
OPTION CLASS	ENTRY	INFO
MIX	01	
FINISH	3	
BASE PLATE	45198	
POLE TOP CON.	MOD90	

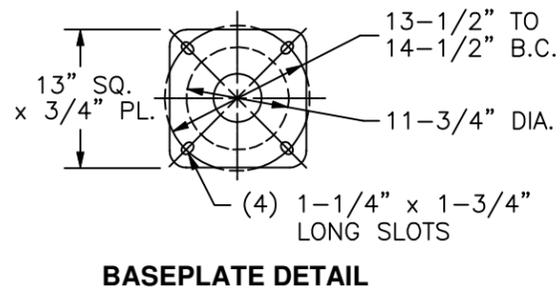
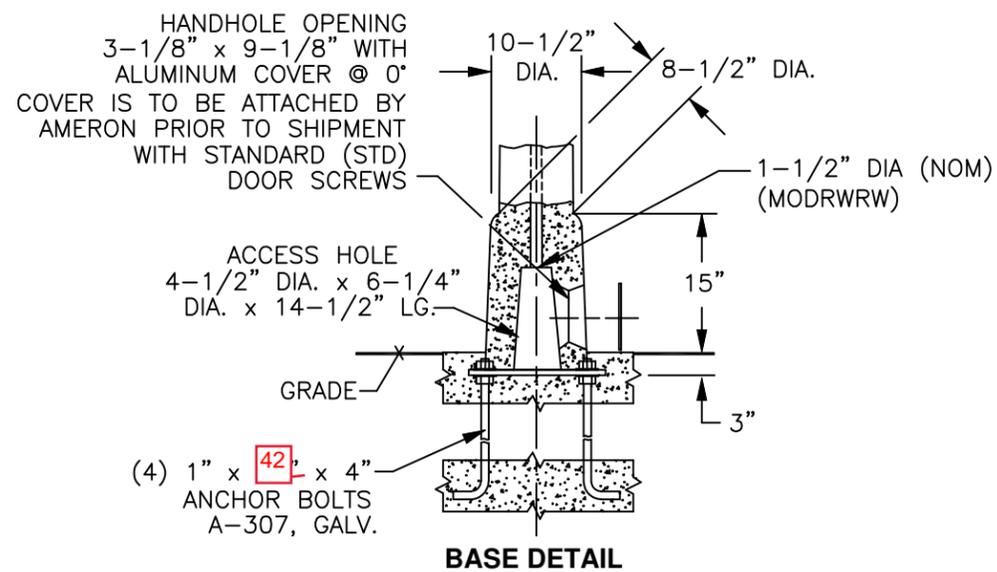
**2B2- DECORATIVE BASE- BASEPLATE- ROUND POLE**

POLE DESIGNATION	POLE HEIGHT ABOVE GROUND	BUTT DIA. ABOVE BELL	BOLT CIRCLE	ULTIMATE G.L. MOMENT (ft.-lbs.)	WEIGHT (lbs.)
2B2-26	26'-4"	8-1/2"	14"	17,800	900

( ) POLES REQD' EACH W/ 4' ALUM. PIPE ARM ASSY. (P/N: 2AP4A)

**NOTES:**

- MIX (013I): SCE BLACK/ WHITE, EXPOSED AGGREGATE FINISH WITH AMERSHIELD ANTI-GRAFFITI COATING.
- ASTM C-150 TYPE III GRAY CEMENT.
- f'c @ 28 DAYS = 6,000 PSI, USING SPUN CYLINDER TEST.
- f'c @ 28 DAYS = 5,000 PSI, USING ASTM C-31 CYLINDER TEST.
- POLES MANUFACTURED PER ASTM C1089-06 SPECIFICATIONS.
- PROTECTIVE COAT EXPOSED P.C. WIRES AT POLE ENDS.
- ASTM A-36 STEEL BASE PLATE FULLY PRE-STRESSED WITH (4) ASTM A-416 PRESTRESSING CABLES.
- ARM ASSY. MAY BE ROTATED TO ANY ORIENTATION.



APPROVED BY:

DATE:

**Ameron POLE PRODUCTS DIVISION**

**CITY OF SAN FRANCISCO #1025 -- SAN FRANCISCO, CA  
 2B226 POLE WITH LMA ASSEMBLY**

THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETARY TO AMERON. IT SHALL NOT BE REPRODUCED, USED OR DISCLOSED TO ANYONE WITHOUT THE PRIOR WRITTEN PERMISSION OF AMERON.

DRAWN: J.C.	6/05	SCALE N.T.S.	DWG. NO. SK064105	REV B
CHK'D:				

Ameron Contemporary Series 5B1 - 5B7 prestressed, spun-cast concrete lighting poles are ideal for street lighting, recreational areas, parking lots, park security and walkways. Application can be post top or mast arm. These strong, durable poles are available in optional color finishes that blend attractively with the environment.

### General Information

The Ameron tapered spun-cast, prestressed concrete pole is manufactured to obtain optimum strength. Each Ameron pole features accurately placed high-tensile steel prestressing cables; a welded, spirally wrapped wire cage for torsional reinforcement; high-strength centrifugally cast concrete; and a surface treated to insure uniform texture. Ameron poles conform to applicable sections of ACI, AASHTO, ASTM and UBC standards.

### Surface Treatment

The concrete shafts are lightly blasted to expose the texture and beauty of the natural aggregates while maintaining sharp definition of details and patterns.

### Colors and Finishes

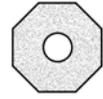
Standard, pre-formulated and custom aggregate colors are available. See separate aggregate sheet for details. Ameron offers Amershield™, a premium graffiti-resistant coating, plus an assortment of durable sealers and protectants that further enhance colors, protect the concrete surface and aid in the removal of graffiti.



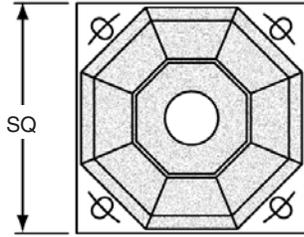
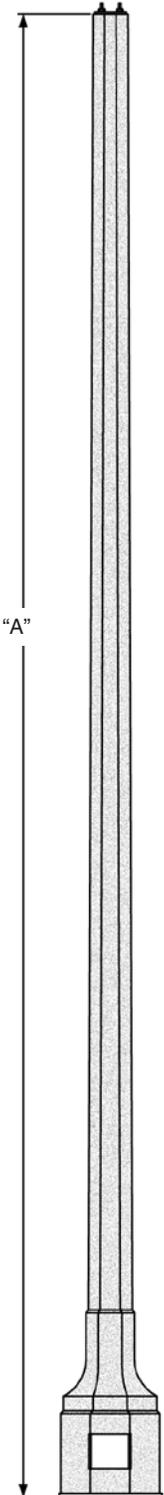


# Contemporary Series

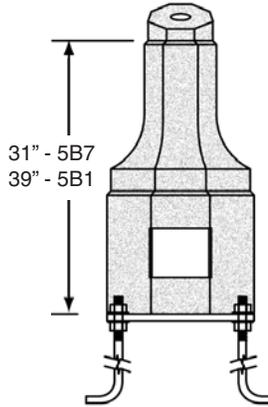
## 5B1 - 5B7 Decorative Base Octagonal Pole - Base Plate



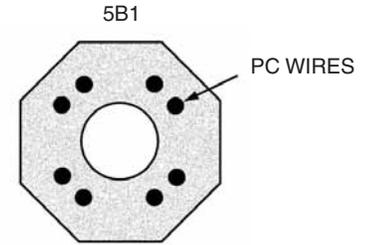
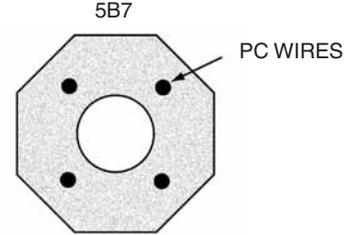
5" TOP O.D. - 5B7-13  
 4" TOP O.D. - 5B7-20  
 6" TOP O.D. - 5B1-19 - 31



SLOTTED BASE PLATE



ELEVATION  
 See recommended "capping detail"



SHAFT CROSS SECTION DETAIL

### BASE PLATE STYLE - INFORMATION

CATALOG NUMBER	POLE HEIGHT "A"	BASE O.D.	ANCHOR BOLT	BOLT CIRCLE	BASE PLATE (SQ)	ULTIMATE G.L. MOMENT (FT. LBS.)	WEIGHT (LBS.)	MAXIMUM EPA/MPH (SQ FT)*		
								80	90	100
5B7-13	13'-1"	16"	3/4" x 24" x 4"	19"	17"	10,600	560	6.0	4.0	3.0
5B7-20	20'-8"	16"	3/4" x 24" x 4"	19"	17"	10,600	900	6.0	4.0	3.0
5B1-19	19'-6"	20"	1" x 36" x 4"	23"	21"	17,000	1,125	8.0	5.0	3.0
5B1-21	21'-0"	20"	1" x 36" x 4"	23"	21"	18,400	1,270	8.0	5.0	3.0
5B1-22	22'-6"	20"	1" x 36" x 4"	23"	21"	20,000	1,420	8.0	5.0	3.0
5B1-24	24'-0"	20"	1" x 36" x 4"	23"	21"	21,200	1,440	8.0	5.0	3.0
5B1-26	26'-6"	20"	1" x 36" x 4"	23"	21"	22,200	1,550	7.5	4.5	2.5
5B1-29	29'-0"	20"	1" x 36" x 4"	23"	21"	25,400	1,700	7.5	4.5	2.5
5B1-31	31'-6"	20"	1" x 36" x 4"	23"	21"	27,400	1,880	7.5	4.5	2.5

\*EPA based on post top mounting. Consult your representative for other attachment methods and increased load capacity requirements.

use 4- 1"X42"X4" Anchor bolts

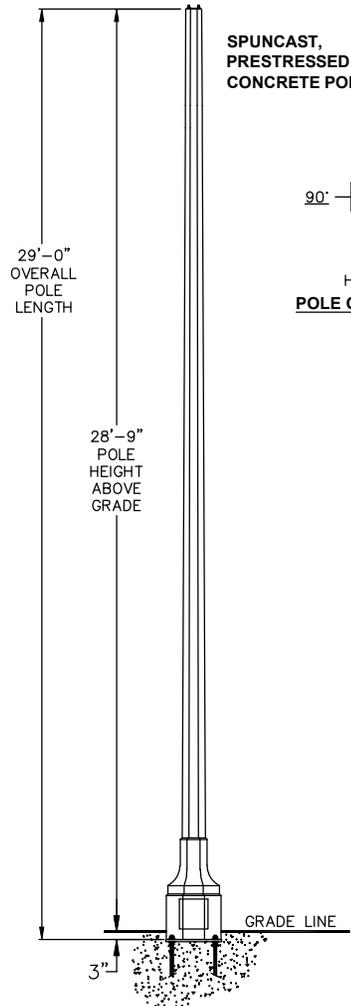
### Notes

**SPECIFICATIONS**  
 Use Contemporary Specifications.

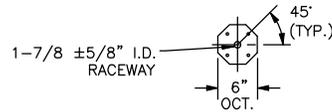
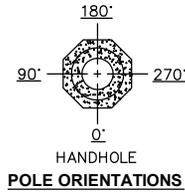
**LUMINAIRE MOUNTING**  
 See Technical-Mounting Options Section for more information.

**COLORS & FINISHES**  
 See Color Selection Guide.

**ANTI-GRAFFITI & SEALER**  
 Optional Coatings available for added protection.



SPUNCAST,  
PRESTRESSED  
CONCRETE POLE

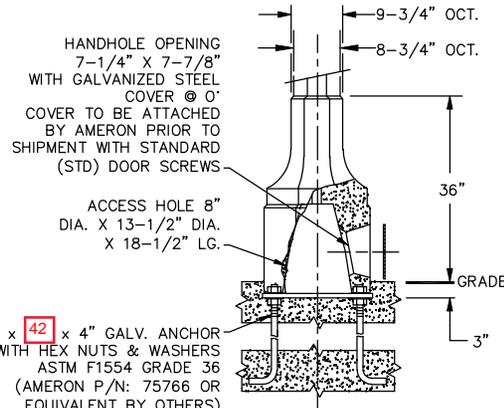


NUTS, WASHERS, & ROD  
PLATE (HOLD-DOWN WASHER)  
ALL INCLUDED WITH POLE

1-1/2" ± 1/4"  
STUD EXTENSION

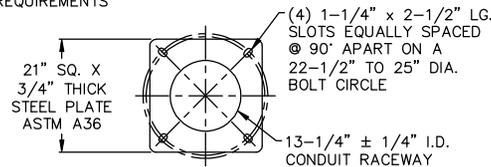
(STANDARD MOD90 POLE TOP)  
(4) 1/2"-13UNC x 12" LG.  
GALVANIZED STEEL STUDS  
⊙ 90° APART, ON A 3-11/16"  
DIA. BOLT CIRCLE

**TOP MOUNT DETAIL**



(4) 1" x 42 x 4" GALV. ANCHOR  
BOLTS WITH HEX NUTS & WASHERS  
ASTM F1554 GRADE 36  
(AMERON P/N: 75766 OR  
EQUIVALENT BY OTHERS)  
DEFAULT AMERON ANCHOR BOLT  
SHOWN; FOUNDATION DESIGN IS BY  
OTHERS. SPECIFIC FOUNDATION  
DESIGNS MAY REQUIRE ALTERNATIVE  
BOLT REQUIREMENTS

**BASE DETAIL**



COMPLIANCE TO ANY CODE NOT EXPLICITLY LISTED ON THIS DRAWING IS NOT GUARANTEED.  
PLEASE CONTACT AMERON IF YOU HAVE SPECIFIC CODE REQUIREMENTS.

REV.	DATE	DESCRIPTION	DRN.	APPR.

"F" LEVEL CONFIG CODES		
OPTION CLASS	ENTRY	INFO.
COATING	I	
HH COVER	43338G	
DOOR SCRS	STD	

"P" LEVEL CONFIG CODES		
OPTION CLASS	ENTRY	INFO.
MIX	01	
FINISH	3	
BASEPLATE	45293-1	NOTE8
POLE TOP CON.	MOD90	

**DECORATIVE BASE BASE PLATE OCTAGONAL POLE**

POLE DESIG-NATION	POLE HEIGHT ABOVE GRADE	OVERALL POLE LENGTH	BOLT CIRCLE	BASE (ACROSS FLATS)	ULTIMATE G.L. MOMENT (ft.-lbs.)	POLE WEIGHT (lbs.)
5B129	28'-9"	29'-0"	23"	20"	25,400	1,700

**( ) POLES REQUIRED EACH WITH SHAFT ONLY**

**NOTES:**

- MIX (013): EDISON BLACK & WHITE, EXPOSED AGGREGATE FINISH WITH AMERSHIELD ANTI-GRAFFITI COATING.
- ASTM C-150 TYPE III GRAY CEMENT.
- f<sub>c</sub> @ 28 DAYS = 6,000 PSI, USING SPUN CYLINDER TEST.
- f<sub>c</sub> @ 28 DAYS = 5,000 PSI, USING ASTM C-31 CYLINDER TEST.
- POLES MANUFACTURED PER ASTM C-1089-13 SPECIFICATIONS.
- PROTECTIVE COAT EXPOSED P.C. WIRES AT POLE ENDS.
- BASEPLATE PRESTRESSED WITH (8) 5/16" DIA. A-416 (7-STRAND) CABLES.
- POLE SHOWN IS SUITABLE FOR CAPPED BASEPLATE (ENCASED IN CONCRETE), OTHERWISE, OTHER NON-CAPPED INSTALLATION REQUIRES A GALVANIZED BASEPLATE.
- EVEN THOUGH THE POLE DEPICTED ON THIS DRAWING DOES NOT REFLECT ANY SHOWN ARM LOADS (AS IT IS A DRAWING OF A SHAFT-ONLY POLE FOR STOCKING PURPOSES); IT IS DESIGNED & INTENDED TO WITHSTAND THE LOADS IMPARTED BY A 8' SINGLE TOP MOUNT LMA ASSEMBLY, AMERON: 1AP8A OR EQUIVALENT, [NOT TO EXCEED 2.5 SQ. FT. EPA, 25 LBS. (ARM & CAN COMBINED)] WITH ARM HOLDING A LUMINAIRE (NOT TO EXCEED 2.5 SQ. FT. EPA, 50 LBS) PER THE 2013 AASHTO LTS-6 USING A 90 MPH WIND ZONE (3-SECOND GUSTS) CRITERIA FOR STREET LIGHT POLES. PLEASE CONTACT & ADVISE AMERON ENGINEERING IF INTENDED LOADING EXCEEDS THESE VALUES

APPROVED BY

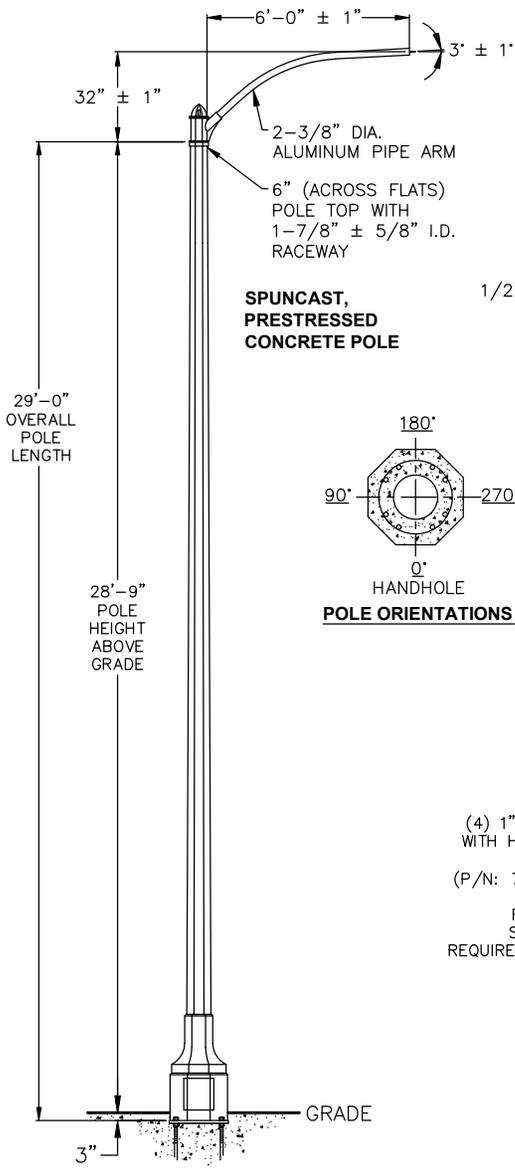
DATE

**CITY OF SAN FRANCISCO, CA  
5B129 POLE SHAFT ONLY**

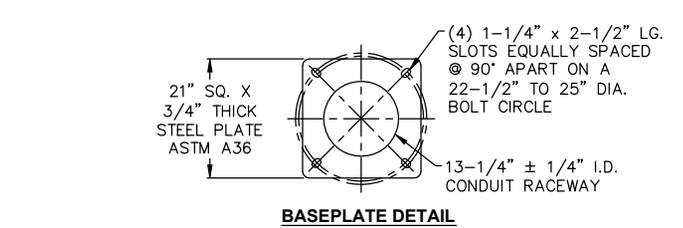
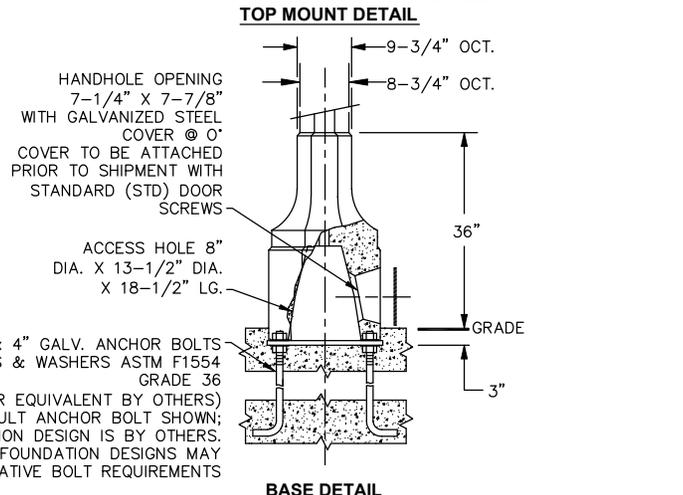
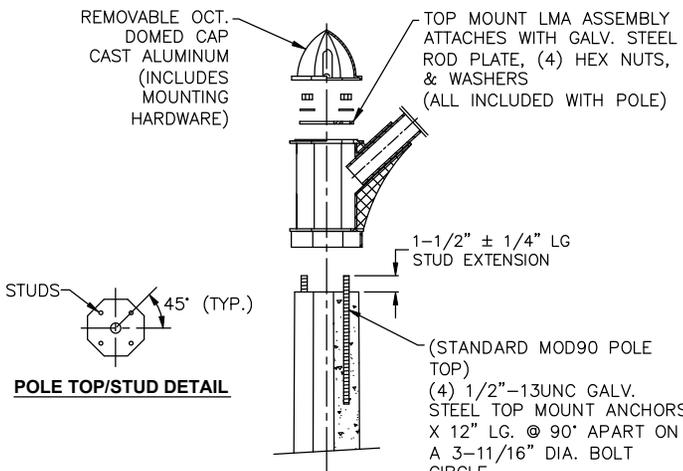
THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROPRIETARY TO AMERON. IT SHALL NOT BE REPRODUCED, USED OR DISCLOSED TO ANYONE WITHOUT THE PRIOR WRITTEN PERMISSION OF AMERON.



<b>DRAWN:</b> J.C.	<b>DATE:</b> 05/15	<b>REV</b>
<b>SCALE:</b> N.T.S.	<b>DWG. NO.:</b> 1505-025	



COMPLIANCE TO ANY CODE NOT EXPLICITLY LISTED ON THIS DRAWING IS NOT GUARANTEED. PLEASE CONTACT NATIONAL OILWELL VARCO IF YOU HAVE SPECIFIC CODE REQUIREMENTS.



REV.	DATE	DESCRIPTION	DRN.	APPR.

"F" LEVEL CONFIG CODES		
OPTION CLASS	ENTRY	INFO.
COATING	I	
HH COVER	43338G	
DOOR SCRS	STD	

"P" LEVEL CONFIG CODES		
OPTION CLASS	ENTRY	INFO.
MIX	01	
FINISH	3	
BASEPLATE	45293-1	NOTE10
POLE TOP CON.	MOD90	

POLE DESIGN-NATION	POLE HEIGHT ABOVE GRADE	OVERALL POLE LENGTH	BOLT CIRCLE	BASE (ACROSS FLATS)	ULTIMATE G.L. MOMENT (ft.-lbs.)	POLE WEIGHT (lbs.)
5B129	28'-9"	29'-0"	23"	20"	25,400	1,700

( ) POLES REQUIRED EACH  
 (1) 6' SINGLE ALUMINUM PIPE ARM ASSEMBLY (P/N: 1AP6A)  
 (4) 1"X36"X4" ANCHOR BOLTS GRADE 36 (P/N:75766) (OPTIONAL)

- NOTES:**
- MIX (0131): EDISON BLACK & WHITE, EXPOSED AGGREGATE FINISH WITH AMERSHIELD ANTI-GRAFFITI COATING.
  - ASTM C-150 TYPE III GRAY CEMENT.
  - f<sub>c</sub> @ 28 DAYS = 6,000 PSI, USING SPUN CYLINDER TEST.
  - f<sub>c</sub> @ 28 DAYS = 5,000 PSI, USING ASTM C-31 CYLINDER TEST.
  - POLES MANUFACTURED PER ASTM C-1089-13 SPECIFICATIONS.
  - PROTECTIVE COAT EXPOSED P.C. WIRES AT POLE ENDS.
  - BASEPLATE PRESTRESSED WITH (8) 5/16" DIA. A-416 (7-STRAND) CABLES.
  - TOP MOUNTED OCTAGONAL ARM BRACKET IS DESIGNED TO ALIGN WITH ANY OF THE POLES OCTAGONAL FLATS PER THE CUSTOMER'S REQUIREMENTS.
  - THE SINGLE 6' LUMINAIRE MAST ARM (NOT TO EXCEED 2.1 SQ. FT. EPA, 20 LBS) DEPICTED ON THIS DRAWING IS DESIGNED TO WITHSTAND THE LOADS IMPARTED BY A SINGLE ARM END TYPE LUMINAIRE (NOT TO EXCEED 2.5 SQ. FT. EPA, 50 LBS.); THE POLE DEPICTED IS DESIGNED TO WITHSTAND THE LOADS IMPARTED BY THE SINGLE ARM AND THE SINGLE LUMINAIRE, AS DESIGNED USING THE 2013 AASHTO LTS-6 USING A 90 MPH WIND ZONE (3-SECOND GUSTS) CRITERIA FOR STREET LIGHT POLES. PLEASE CONTACT & ADVISE MANUFACTURER IF THE INTENDED LOADING EXCEEDS THESE VALUES.
  - POLE SHOWN IS SUITABLE FOR CAPPED BASEPLATE (ENCASED IN CONCRETE), OTHERWISE, OTHER NON-CAPPED INSTALLATION REQUIRES A GALVANIZED BASEPLATE.

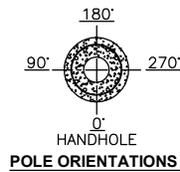
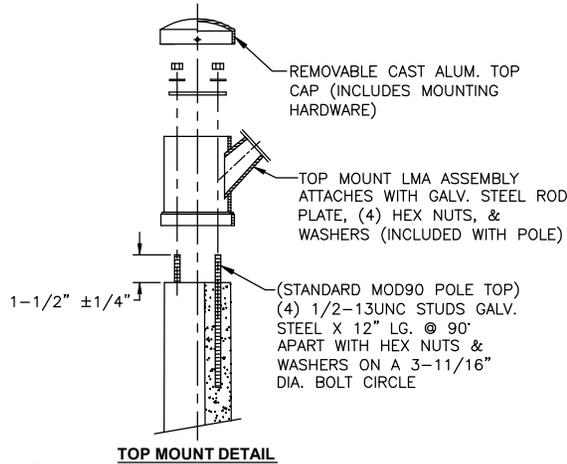
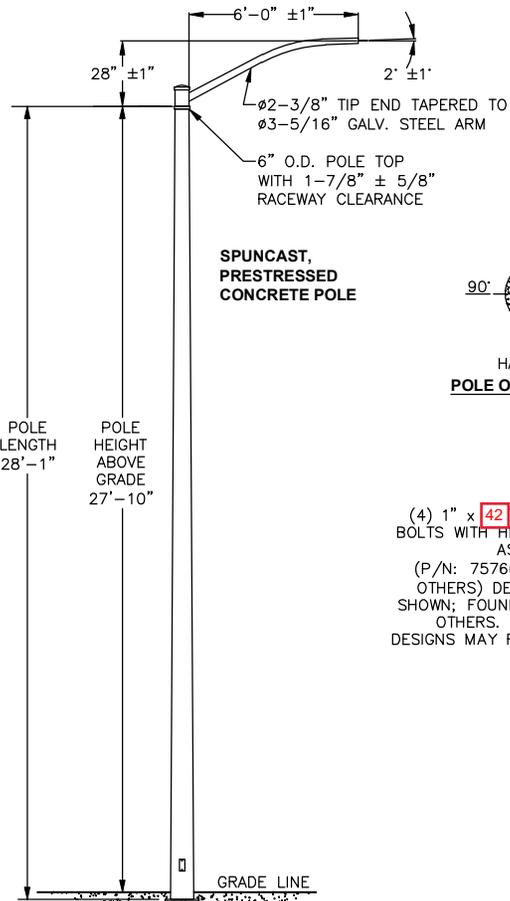
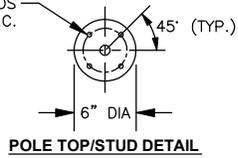
APPROVED BY \_\_\_\_\_ DATE \_\_\_\_\_

## CITY OF SAN FRANCISCO, CA 5B129 POLE WITH 1AP6A ARM

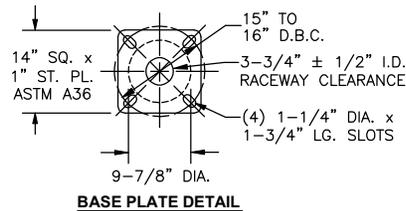
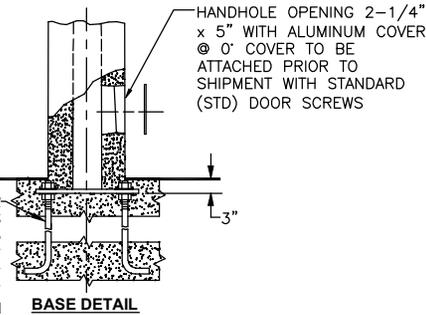
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	DRAWN: D.O.	DATE: 02/19	REV
	SCALE: N.T.S.	DWG. NO. 1902-028	

1/2"-13UNC GALV. STUDS  
ON A 3-11/16" B.C.



(4) 1" x 42 x 4" GALV. ANCHOR  
BOLTS WITH HEX NUTS & WASHERS  
ASTM F1554 GRADE 36  
(P/N: 75766 OR EQUIVALENT BY  
OTHERS) DEFAULT ANCHOR BOLT  
SHOWN; FOUNDATION DESIGN IS BY  
OTHERS. SPECIFIC FOUNDATION  
DESIGNS MAY REQUIRE ALTERNATIVE  
BOLT REQUIREMENTS



REV.	DATE	DESCRIPTION	DRN.	APPR.
A	06/17	UPDATED DWG.	J.C.	

"F" LEVEL CONFIG CODES			"P" LEVEL CONFIG CODES		
OPTION CLASS	ENTRY	INFO.	OPTION CLASS	ENTRY	INFO.
COATING	I		MIX	01	
HH COVER	43025		FINISH	3	
DOOR SCRS	STD		BASEPLATE	45347	NOTE10
			POLE TOP CON.	MOD90	

CONTEMPORARY ROUND BASE PLATE POLE						
POLE DESIG-NATION	POLE HEIGHT ABOVE GRADE	OVERALL POLE LENGTH	BOLT CIRCLE	BASE O.D.	ULTIMATE G.L. MOMENT (ft.-lbs.)	POLE WEIGHT (lbs.)
1C328	27'-10"	28'-1"	15-1/4"	9-7/8"	38,800	1,320

( ) POLES REQUIRED EACH W/ 6' SINGLE GALVANIZED STEEL TAPERED ARM ASSEMBLY (P/N: 3ST6A)

**NOTES:**

- MIX (0131): SCE BLACK & WHITE, EXPOSED AGGREGATE FINISH WITH AMERSHIELD ANTI-GRAFFITI COATING.
- ASTM C-150 TYPE III GRAY CEMENT.
- f<sub>c</sub> @ 28 DAYS = 6,000 PSI, USING SPUN CYLINDER TEST.
- f<sub>c</sub> @ 28 DAYS = 5,000 PSI, USING ASTM C-31 CYLINDER TEST.
- POLES MANUFACTURED PER ASTM C-1089-13 SPECIFICATIONS.
- PROTECTIVE COAT EXPOSED P.C. WIRES AT POLE ENDS.
- BASEPLATE PRESTRESSED WITH (8) 5/16" DIA. A-416 (7-STRAND) CABLES.
- LMA ASSEMBLY IS DESIGNED TO ROTATE TO ANY ORIENTATION PER CUSTOMER'S REQUIREMENTS.
- THE SINGLE TOP MOUNT STEEL TAPERED LMA ASSEMBLY (NOT TO EXCEED 6' ARM LENGTH PER ARM SIDE, 2.1 SQ. FT. EPA, 35 POUNDS) DEPICTED ON THIS DRAWING IS DESIGNED TO WITHSTAND THE LOADS IMPARTED BY A SINGLE ARM END TYPE LUMINAIRE (NOT TO EXCEED 2.5 SQ. FT. EPA, 50 POUNDS); THE POLE DEPICTED IS DESIGNED TO WITHSTAND THE LOADS IMPARTED BY THE ARM & THE LUMINAIRE AS DESIGNED PER THE 2013 AASHTO LTS-6 USING A 90 MPH WIND ZONE (3-SECOND GUSTS) CRITERIA FOR STREET LIGHT POLES. PLEASE ADVISE & CONTACT MANUFACTURER IF THE INTENDED LOADING EXCEEDS THESE VALUES.
- POLE SHOWN IS SUITABLE FOR CAPPED BASEPLATE (ENCASED IN CONCRETE), OTHERWISE, OTHER NON-CAPPED INSTALLATION REQUIRES A GALVANIZED BASEPLATE.
- SEE OTHER DRAWING FOR "N" COATING 1706-076.

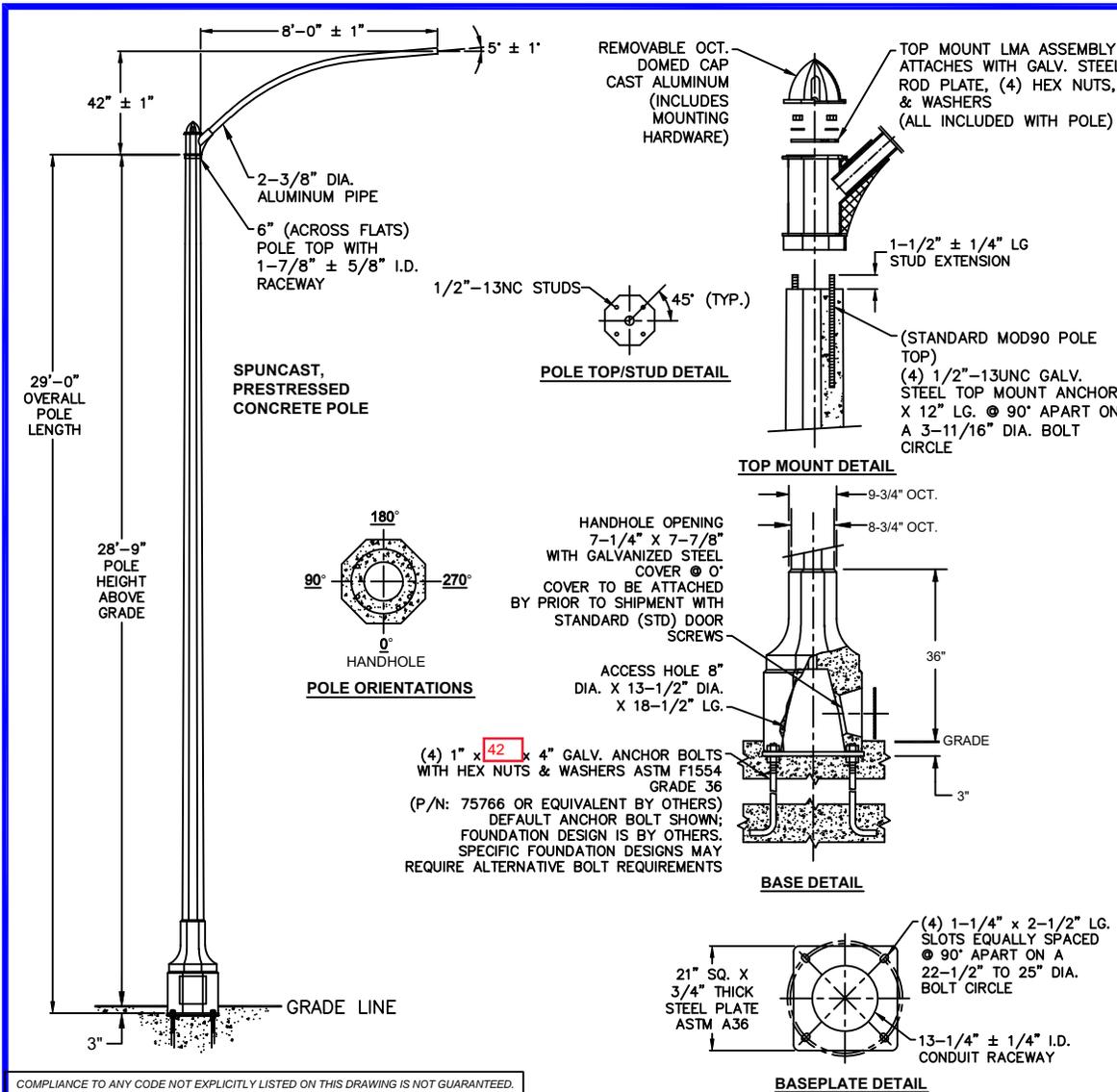
APPROVED BY \_\_\_\_\_ DATE \_\_\_\_\_

**CITY & COUNTY OF SAN FRANCISCO, CA**  
**1C328 POLE WITH 6' ARM ASSY.**

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	DRAWN: M.L.	DATE: 03/06	
	SCALE: N.T.S.	DWG. NO. SK038406	REV A

COMPLIANCE TO ANY CODE NOT EXPLICITLY LISTED ON THIS DRAWING IS NOT GUARANTEED. PLEASE CONTACT NATIONAL OILWELL VARCO IF YOU HAVE SPECIFIC CODE REQUIREMENTS.



COMPLIANCE TO ANY CODE NOT EXPLICITLY LISTED ON THIS DRAWING IS NOT GUARANTEED. PLEASE CONTACT NATIONAL OILWELL VARCO IF YOU HAVE SPECIFIC CODE REQUIREMENTS.

REV.	DATE	DESCRIPTION	DRN.	APPR.

"F" LEVEL CONFIG CODES		
OPTION CLASS	ENTRY	INFO.
COATING	I	
HH COVER	43338G	
DOOR SCRS	STD	

"P" LEVEL CONFIG CODES		
OPTION CLASS	ENTRY	INFO.
MIX	01	
FINISH	3	
BASEPLATE	45293-1	NOTE10
POLE TOP CON.	MOD90	

DECORATIVE BASE BASE PLATE OCTAGONAL POLE						
POLE DESIGNATION	POLE HEIGHT ABOVE GRADE	OVERALL POLE LENGTH	BOLT CIRCLE	BASE (ACROSS FLATS)	ULTIMATE G.L. MOMENT (ft.-lbs.)	POLE WEIGHT (lbs.)
5B129	28'-9"	29'-0"	23"	20"	25,400	1,700

- ( ) POLES REQUIRED EACH  
 (1) 8' SINGLE ALUMINUM PIPE ARM ASSEMBLY (P/N: 1AP8A)  
 (4) 1"X36"X4" ANCHOR BOLTS GRADE 36 (PN:75766) (OPTIONAL)

- NOTES:**
- MIX (013): EDISON BLACK & WHITE, EXPOSED AGGREGATE FINISH WITH AMERSHIELD ANTI-GRAFFITI COATING.
  - ASTM C-150 TYPE III GRAY CEMENT.
  - f<sub>c</sub> @ 28 DAYS = 6,000 PSI, USING SPUN CYLINDER TEST.
  - f<sub>c</sub> @ 28 DAYS = 5,000 PSI, USING ASTM C-31 CYLINDER TEST.
  - POLES MANUFACTURED PER ASTM C-1089-13 SPECIFICATIONS.
  - PROTECTIVE COAT EXPOSED P.C. WIRES AT POLE ENDS.
  - BASEPLATE PRESTRESSED WITH (8) 5/16" DIA. A-416 (7-STRAND) CABLES.
  - TOP MOUNTED OCTAGONAL ARM BRACKET IS DESIGNED TO ALIGN WITH ANY OF THE POLES OCTAGONAL FLATS PER THE CUSTOMER'S REQUIREMENTS.
  - THE SINGLE 8' LUMINAIRE MAST ARM (NOT TO EXCEED 2.5 SQ. FT. EPA, 25 LBS) DEPICTED ON THIS DRAWING IS DESIGNED TO WITHSTAND THE LOADS IMPARTED BY A SINGLE ARM END TYPE LUMINAIRE (NOT TO EXCEED 2.5 SQ. FT. EPA, 50 LBS.); THE POLE DEPICTED IS DESIGNED TO WITHSTAND THE LOADS IMPARTED BY THE SINGLE ARM AND THE SINGLE LUMINAIRE, AS DESIGNED USING THE 2013 AASHTO LTS-6 USING A 90 MPH WIND ZONE (3-SECOND GUSTS) CRITERIA FOR STREET LIGHT POLES. PLEASE CONTACT & ADVISE MANUFACTURER IF THE INTENDED LOADING EXCEEDS THESE VALUES.
  - POLE SHOWN IS SUITABLE FOR CAPPED BASEPLATE (ENCASED IN CONCRETE), OTHERWISE, OTHER NON-CAPPED INSTALLATION REQUIRES A GALVANIZED BASEPLATE.

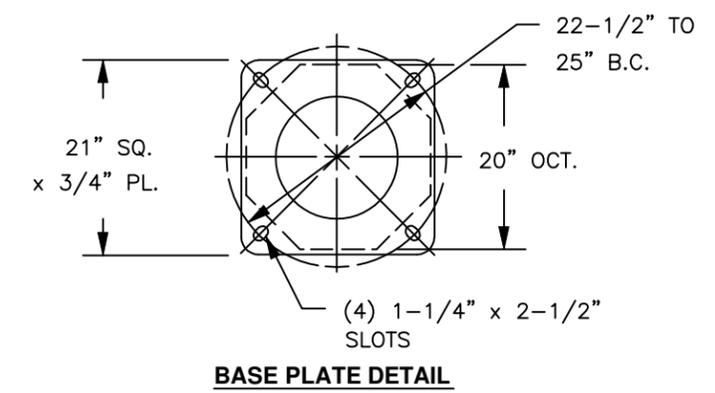
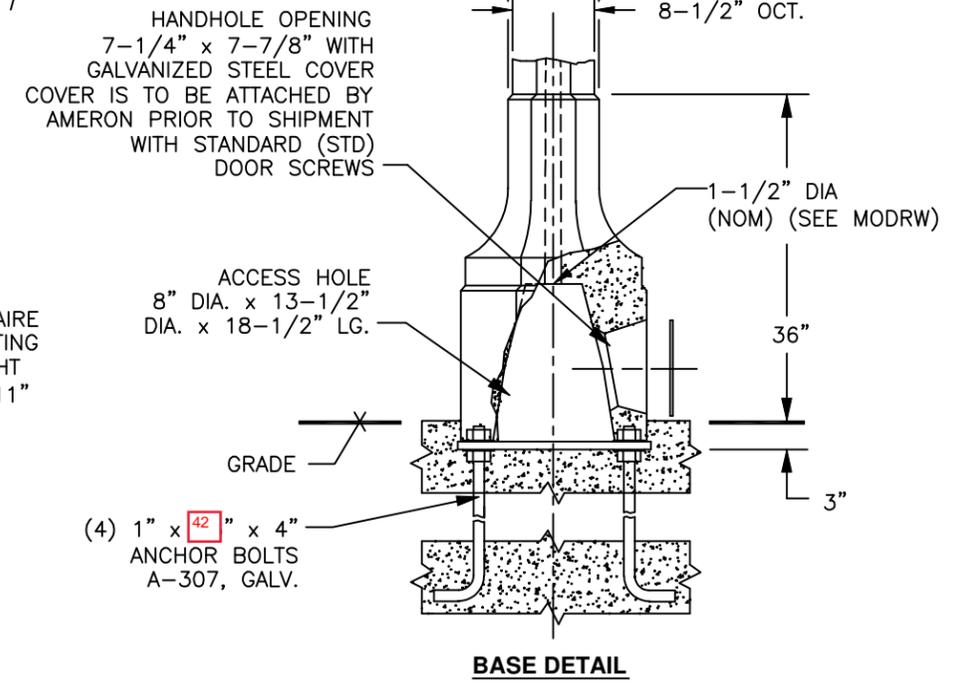
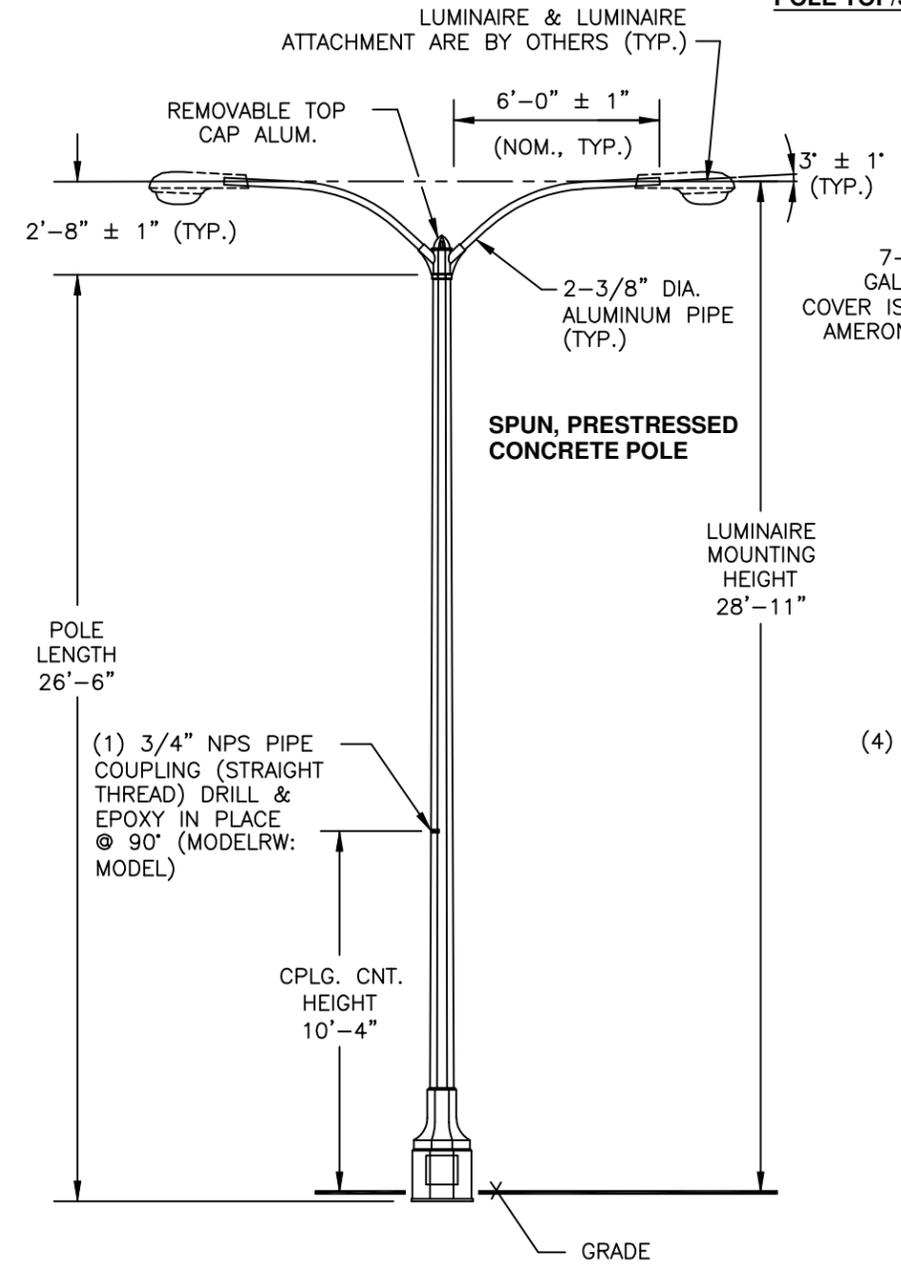
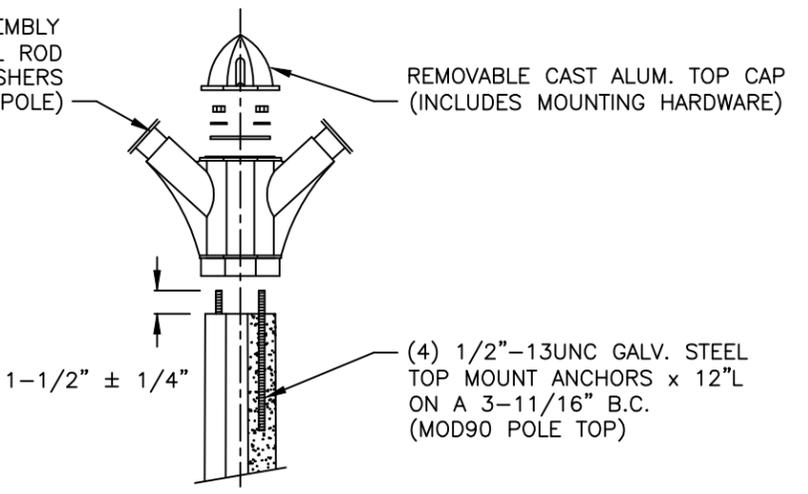
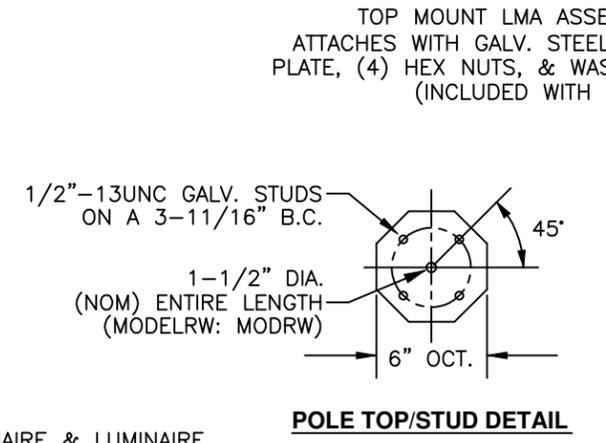
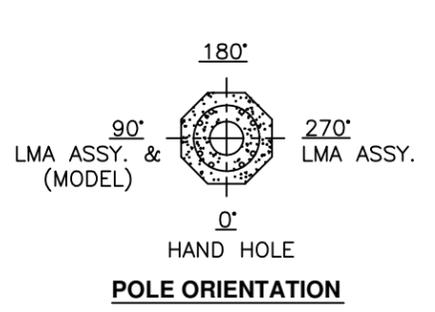
APPROVED BY \_\_\_\_\_ DATE \_\_\_\_\_

**CITY OF SAN FRANCISCO, CA**  
**5B129 POLE WITH 1AP8A ARM**

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<b>Ameron</b>	<b>DRAWN:</b> D.O.	<b>DATE:</b> 02/19	<b>REV</b>
	<b>SCALE:</b> N.T.S.	<b>DWG. NO.</b> 1902-029	

REV.	DATE	DESCRIPTION	DRN.	APPR.
A	7/04	REVISED 3/4" CPLG TO 90° & HT.	J.C.	
B	12/05	ADDED CITY OF SF POLE CALLOUT	M.L.	
C	01/08	ALUM ARM WAS STL, ADDED MODELRW UPDATED FOR ORACLE	A.C.	



"F" LEVEL CONFIG CODES		
OPTION CLASS	ENTRY	INFO
COATING	I	
HH COVER	43338G	
DOOR SCR	STD	
DRILL IN MOD	MODELRW	NOTE # 9

"P" LEVEL CONFIG CODES		
OPTION CLASS	ENTRY	INFO
MIX	40	
FINISH	3	
BASE PLATE	45293	
POLE TOP CON.	MOD90	

**DECORATIVE BASE OCTAGONAL POLE- BASEPLATE**

POLE DESIGN-NATION	POLE LENGTH	MOUNTING HEIGHT	BUTT DIA.	BOLT CIRCLE	POLE TOP DIA.	WEIGHT (lbs.)	ULTIMATE G.L. MOMENT (ft-lbs.)
5B126	26'-6"	28'-11"	20"	23"	6"	1,550	22,200

( ) POLES REQUIRED, EACH WITH 6' DOUBLE ALUM. LMA ASSEMBLY (P/N: 1AP6DA).

**NOTES:**

- MIX (4031): GRAY NATURAL, EXPOSED AGGREGATE FINISH, WITH AMERSHIELD ANTI-GRAFFITI COATING.
- ASTM C-150 TYPE III GRAY CEMENT.
- f'c @ 28 DAYS = 6,000 PSI, USING SPUN CYLINDER TEST.
- f'c @ 28 DAYS = 5,000 PSI, USING ASTM C-31 CYLINDER TEST.
- POLES MANUFACTURED PER ASTM C-1089-06 SPECIFICATIONS.
- PROTECTIVE COAT EXPOSED P.C. WIRES AT POLE ENDS.
- BASEPLATE (ASTM A-36) FULLY PRESTRESSED WITH (8) 5/16" DIA. PRESTRESSING CABLES (ASTM A-416).
- TOP MOUNT LMA ASSEMBLY IS DESIGNED TO ORIENT TO ANY OF THE OCTAGONAL FLATS PER CUSTOMER REQUIREMENTS.
- GROUP MODELRW:  
MODEL: D & E (1) 3/4" NPS (STRAIGHT) PIPE COUPLING AS SHOWN.  
MODRW: DRILL RACE WAY AS REQUIRED.

APPROVED BY

DATE

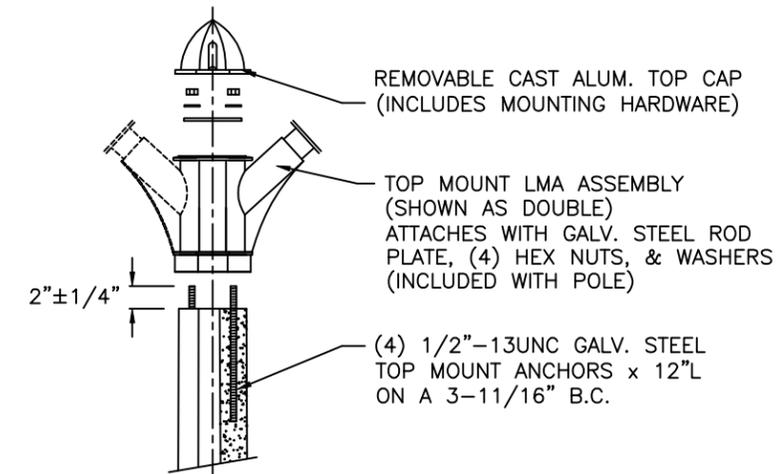
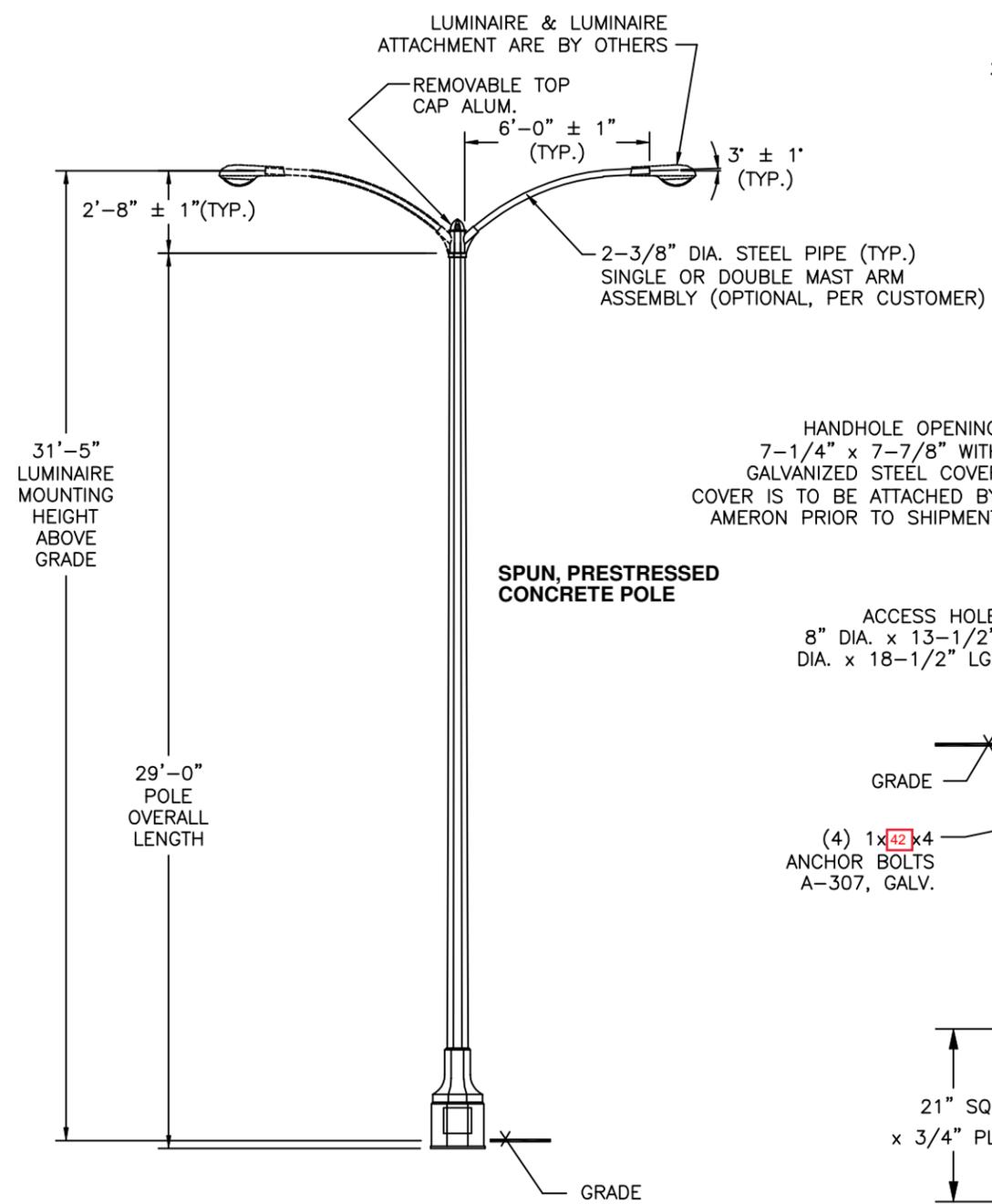


CITY OF SAN FRANCISCO #55D -- SAN FRANCISCO, CA  
5B126 POLE WITH 1AP6DA ARM ASSEMBLY

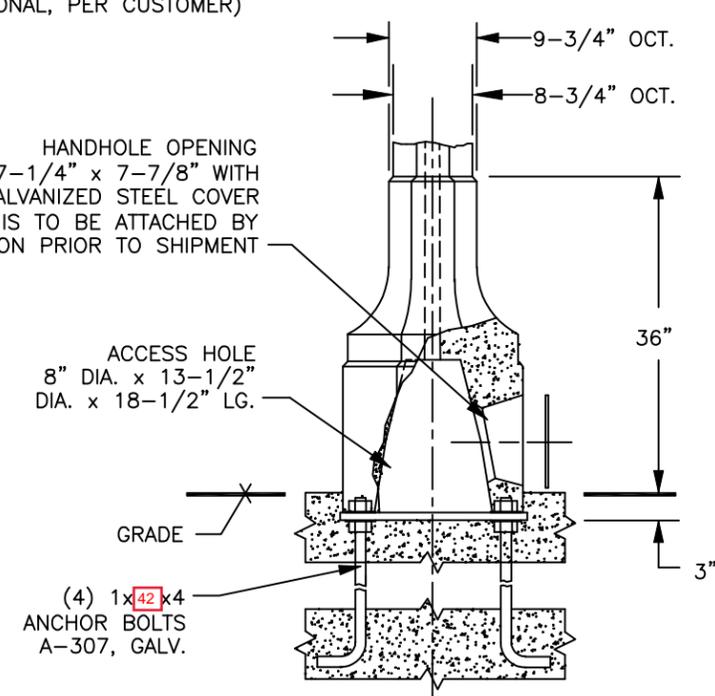
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DRAWN: J.C.	06/04	SCALE	DWG. NO.	REV
CHK'D:		N.T.S.	SK061204	C

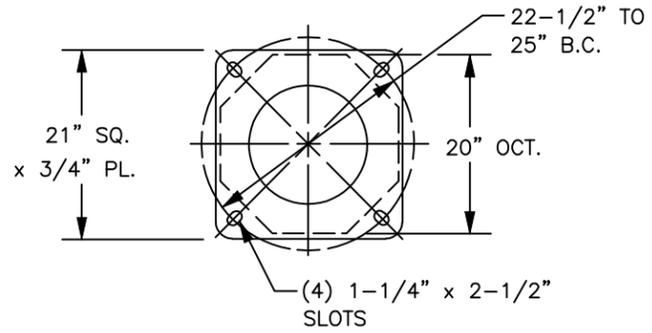
REV.	DATE	DESCRIPTION	DRN.	APPR.



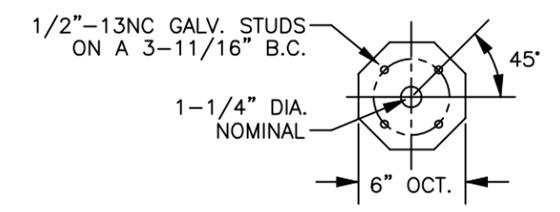
**TOP MOUNT DETAIL**



**BASE DETAIL**



**BASE PLATE DETAIL**



**POLE TOP/STUD DETAIL**

**5B1- DECORATIVE BASE- BASE PLATE- OCTAGONAL POLE**

POLE DESIGNATION	LUMINAIRE MOUNTING HEIGHT	POLE LENGTH	BOLT CIRCLE	ULTIMATE G.L. MOMENT (ft-lbs.)	WEIGHT (lbs.)
5B129	31'-5"	29'-0"	23"	25,400	1,700

( ) POLES REQUIRED, EACH WITH 6' SINGLE STEEL PIPE LMA ASSEMBLY (P/N# 1SP6A).

( ) POLES REQUIRED, EACH WITH 6' DOUBLE STEEL PIPE LMA ASSEMBLY (P/N# 1SP6DA).

**NOTES:**

- MIX (37I): BLACK & WHITE LA, EXPOSED AGGREGATE FINISH WITH AMERSHIELD ANTI-GRAFFITI COATING.
- ASTM C-150 TYPE III GRAY CEMENT.
- f'c @ 28 DAYS = 6,000 PSI, USING SPUN CYLINDER TEST.
- f'c @ 28 DAYS = 5,000 PSI, USING ASTM C-31 CYLINDER TEST.
- POLES MANUFACTURED PER ASTM C-1089-97 SPECIFICATIONS.
- PROTECTIVE COAT EXPOSED P.C. WIRES AT POLE ENDS.
- BASEPLATE (ASTM A-36) FULLY PRESTRESSED WITH (8) 5/16" DIA. PRESTRESSING CABLES (ASTM A-416).
- TOP MOUNT LMA ASSEMBLY IS DESIGNED TO ORIENT TO ANY OF THE OCTAGONAL FLATS PER CUSTOMER REQUIREMENTS.

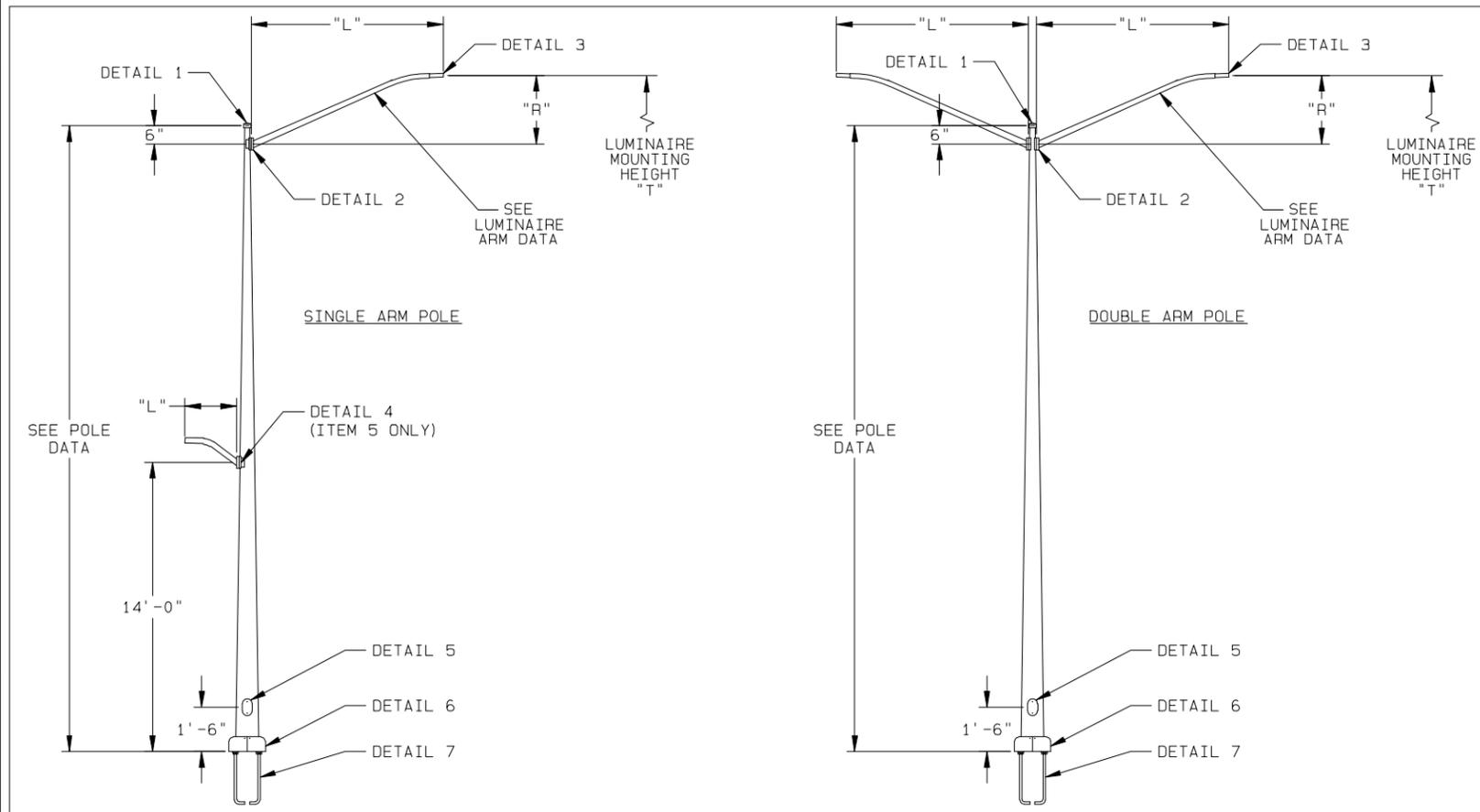
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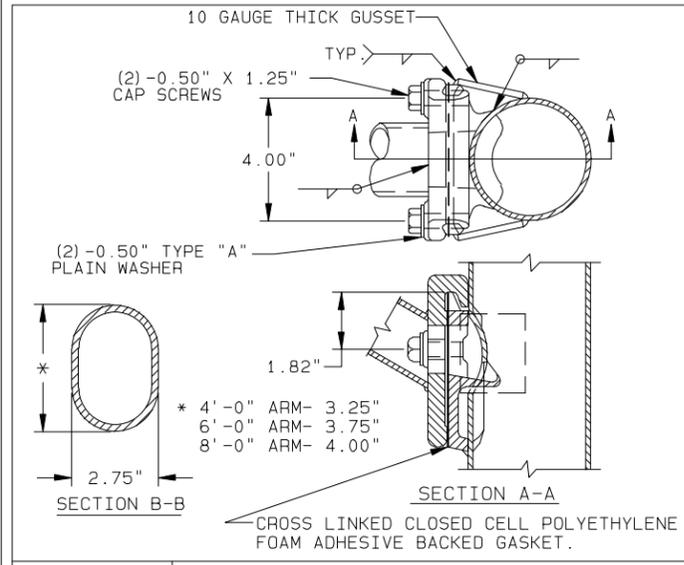
**CITY OF SAN FRANCISCO #56D -- SAN FRANCISCO, CA**  
**5B1-29 (37I) POLE WITH 6' LMA ASSEMBLY (SINGLE OR DOUBLE)**

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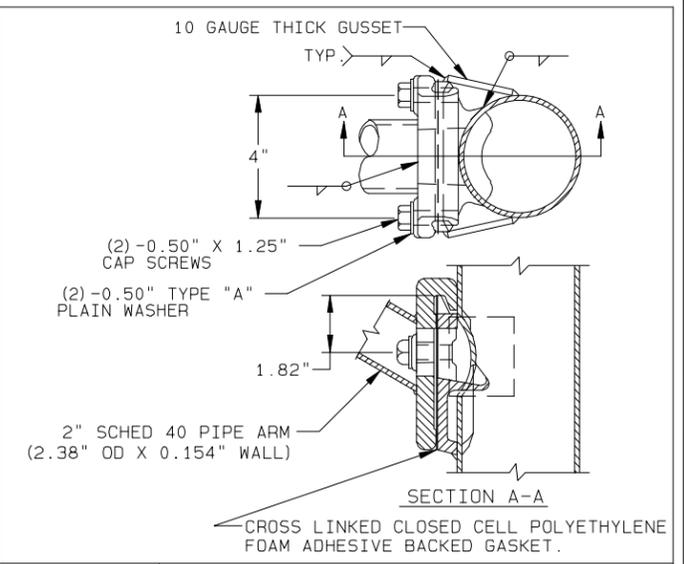
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CHK'D:		N.T.S.	SK121805	



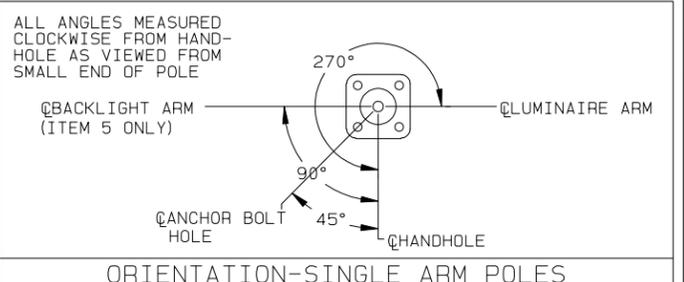
DETAIL 1 POLE TOP



DETAIL 2 LUMINAIRE ARM ATTACHMENT



DETAIL 4 BACKLIGHT LUMINAIRE ARM ATTACHMENT

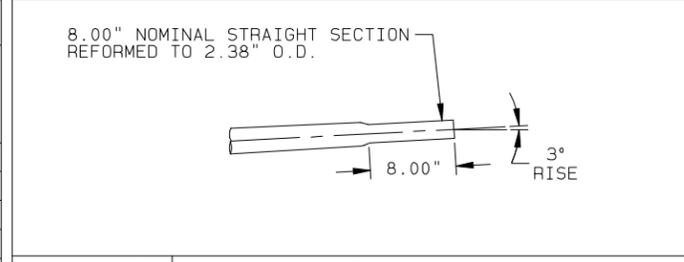


ORIENTATION-SINGLE ARM POLES

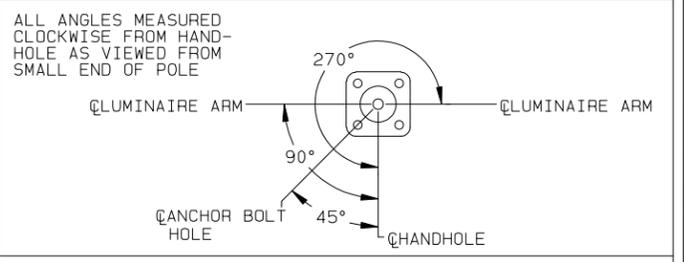
MATERIAL DATA		
COMPONENT	ASTM DESIGNATION	MIN. YIELD (KSI)
POLE SHAFT	A595 GR. A	55
BASE PLATE	A36	36
SIMPLEX ATTACHMENTS	A27 GR65-35 OR A36	36
PIPE ARMS	A501, A513, A618 A500 GR. B	36
ANCHOR BOLTS	F1554 GR. 55	55
HARDWARE COATING	HOT DIP ZINC	--

FINISH DATA	
SYSTEM:	GALVANIZED (GV)
BASE COAT:	HOT-DIP GALVANIZED TO ASTM A123
PRIME COAT:	NONE
FINISH COAT:	NONE
COLOR:	NONE
SPEC:	F-1

LUMINAIRE ARM DATA					
QTY.	ARM SPAN "L" (FT)	FIXED END DIA. (IN)	FREE END DIA. (IN)	GAUGE OR THICK (IN)	RISE HEIGHT "R" (FT)
	1.83	2.38	2.38	0.154	0.78
	4.00	3.08	2.40	11	2.00
	6.00	3.30	2.40	11	2.00
	8.00	3.57	2.40	11	2.00



DETAIL 3 REFORMED ARM END



ORIENTATION-DOUBLE ARM POLES

POLE DATA															
QTY.	ITEM	DESCRIPTION	LUMINAIRE MOUNTING HEIGHT "T" (FT)	POLE TUBE				POLE BASE				ANCHOR BOLT			
				BASE DIA. (IN)	TOP DIA. (IN)	LENGTH (FT)	GAUGE OR THICK (IN)	SQUARE "S" (IN)	BOLT CIRCLE RANGE "Y" (IN)	THK. "M" (IN)	HOLE/SLOT "Z" (IN)	DIA. "K" (IN)	LENGTH "J" (IN)	HOOK "H" (IN)	THREAD LENGTH "U" (IN)
SINGLE ARM POLES															
	1	DS36-738A160-0S	17.50	7.38	5.14	16.00	11	10.50	10.00 - 11.00	1.000	1.25 X 1.75	1.00	42.00	6.00	6.00
	2	DS36-738A220-0S	23.50	7.38	4.30	22.00	11	10.50	10.00 - 11.00	1.000	1.25 X 1.75	1.00	42.00	6.00	6.00
	3	DS36-738A250-0S	26.50	7.38	3.88	25.00	11	10.50	10.00 - 11.00	1.000	1.25 X 1.75	1.00	42.00	6.00	6.00
	4	DS36-730A286-0S	30.00	7.30	3.31	28.50	11	10.50	10.00 - 11.00	1.000	1.25 X 1.75	1.00	42.00	6.00	6.00
	5	DS36-730A286-0S-BACKLIGHT	30.00	7.30	3.31	28.50	11	10.50	10.00 - 11.00	1.000	1.25 X 1.75	1.00	42.00	6.00	6.00
	6	DS36-730A336-0S	35.00	7.30	2.61	33.50	11	10.50	10.00 - 11.00	1.000	1.25 X 1.75	1.00	42.00	6.00	6.00
DOUBLE ARM POLES															
	7	DS36-700A220-0D	23.50	7.00	3.92	22.00	11	10.50	10.00 - 11.00	1.000	1.25 X 1.75	1.00	42.00	6.00	6.00
	8	DS36-700A250-0D	26.50	7.00	3.50	25.00	11	10.50	10.00 - 11.00	1.000	1.25 X 1.75	1.00	42.00	6.00	6.00
	9	DS36-730A286-0D	30.00	7.30	3.31	28.50	11	10.50	10.00 - 11.00	1.000	1.25 X 1.75	1.00	42.00	6.00	6.00
	10	DS36-762A336-0D	35.00	7.62	2.93	33.50	11	10.50	10.00 - 11.00	1.000	1.25 X 1.75	1.00	42.00	6.00	6.00

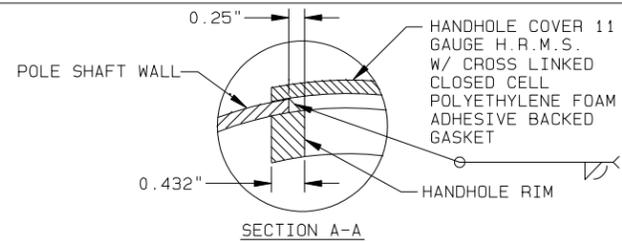
REV	DRAWN BY-DATE	CHECK BY-DATE	DESCRIPTION
F	KP6 11/05/19	BDS 11/06/19	ABS WERE 1"X42"X4" HOOK
E	KP6 03/11/19	BDS 03/12/19	BPLS RESIZED FOR ALL BC TO BE THE SAME
D	KJW5 12/11/18	KJW5 12/11/18	ADDED BACKLIGHT POLES
	JKC 08/30/85	GJM 08/30/85	

TITLE CITY & COUNTY OF SAN FRANCISCO  
 DS36 POLES SINGLE OR DOUBLE LUMINAIRE  
 LIGHTING STRUCTURES

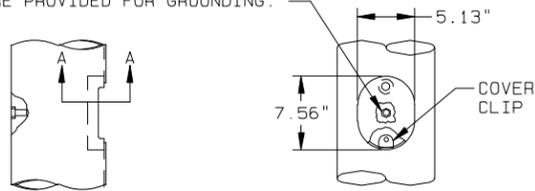
VALMONT INDUSTRIES, INC. RESERVES THE RIGHT TO INSTALL VARIOUS, ENGINEER APPROVED, MATERIAL HANGING ACCOMMODATIONS TO FACILITATE THE MANUFACTURING PROCESS.



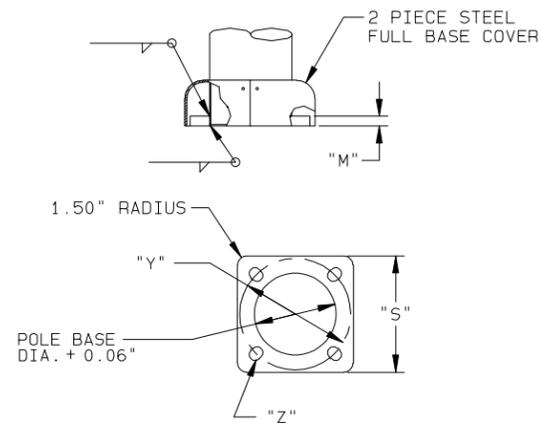
PAGE NUMBER: 1 OF 2	REV
DRAWING NUMBER	DB00125
	F



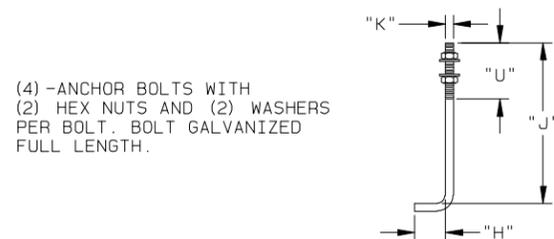
0.25" X 0.75"-20UNC STAINLESS STEEL BOLT WELDED TO INTERIOR OF POLE 180° FROM HANDHOLE. STAINLESS STEEL NUT & LOCK WASHER ARE PROVIDED FOR GROUNDING.



DETAIL 5 | FLUSH HANDHOLE



DETAIL 6 | POLE BASE



DETAIL 7 | ANCHOR BOLT

TITLE CITY & COUNTY OF SAN FRANCISCO  
DS36 POLES SINGLE OR DOUBLE LUMINAIRE  
LIGHTING STRUCTURES

VALMONT INDUSTRIES, INC. RESERVES THE RIGHT TO INSTALL VARIOUS, ENGINEER APPROVED, MATERIAL HANGING ACCOMMODATIONS TO FACILITATE THE MANUFACTURING PROCESS.

**valmont**  
Valley, NE 68064  
(402) 359-2201

PAGE NUMBER: 2	OF 2
DRAWING NUMBER	REV
DB00125	F

# Specifications

## POST DESCRIPTION

The lighting post shall consist of a decorative, octagonal clamshell base, a tapered, octagonal shaft, and an octagonal-pattern single-arm crossarm with 1 1/2" NPT fitting for luminaire mounting.

## MATERIALS

The base material shall be heavy-wall cast iron (ASTM A48, class 30), formed true to pattern with complete detail. The shaft shall high strength steel with tenon and anchor plate. The crossarm shall be heavy-wall cast aluminum (356.1 alloy), formed true to pattern with complete detail.

## DIMENSIONS

The post shall be 22'-0" in height with a 32" tall x 19-1/2" (flat-to-flat) octagonal base. The 11-gauge (.1196" wall) octagonal shaft shall taper from 9.3" at the anchor plate to 5.2" at post top. A 4-1/2"Ø x 5" tall tenon shall be at post top for crossarm mounting.

## INSTALLATION

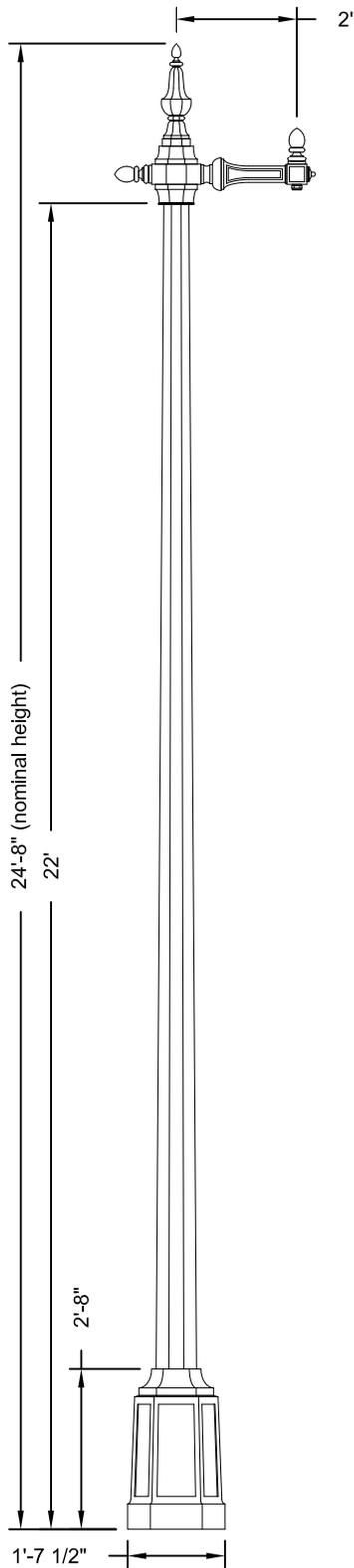
Post shall be provided with (4) Ø1-1/4" hot-dip galvanized, L-type anchor bolts to be installed on a Ø14" bolt circle. Two doors are located in the base and tamper proof screws, one coinciding with the shaft handhole, for wiring access.

## FINISH

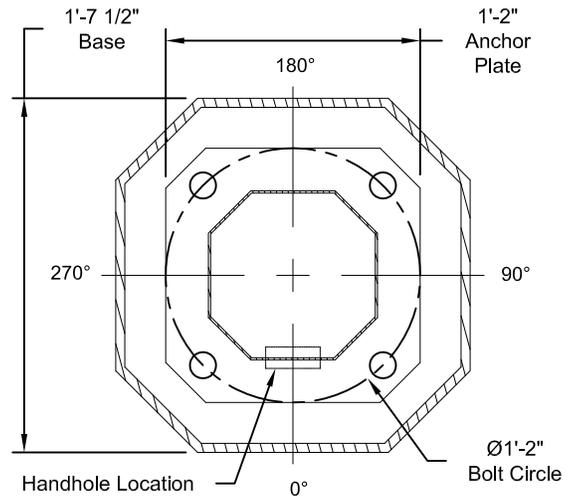
Post assembly shall be furnished with a AS powder coat finish. Shaft assembly shall be hot-dip galvanized prior to finishing.

## LUMINAIRE DESCRIPTION

For complete specifications see.



## Anchorage Detail



## Catalog #'s:

(AOL-8267-02)SF22-11GA-T-AS - SF20CI-AS - SFC24-AS - AB1.25X48



## San Francisco Streets

San Francisco, CA

ORDER #:	TYPE:	DRAWING #:
REVISION: 2	REVISION DATE: 09/01/11	<b>TSG 003216</b>
DRAWN: ACH	ORIGIN DATE: 10-09-07	

THIS DRAWING, WHEN APPROVED, SHALL BECOME THE COMPLETE SPECIFICATION FOR THE MATERIAL TO BE FURNISHED BY HOLOPHANE ON THE ORDER NOTED ABOVE. A UNIT OF SIMILAR DESIGN MAY BE SUPPLIED, BUT ONLY AFTER APPROVAL BY THE CUSTOMER IN WRITING. ON POLE ORDERS AN ANCHOR BOLT TEMPLATE PRINT WILL BE SUPPLIED WITH EACH ANCHOR BOLT ORDER TO MATCH THE POLE PROVIDED. THIS PRINT IS THE PROPERTY OF HOLOPHANE AND IS LOANED SUBJECT TO RETURN UPON DEMAND AND UPON EXPRESS CONDITION THAT IT WILL NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO OUR INTERESTS, AND ONLY IN CONNECTION WITH MATERIAL FURNISHED BY HOLOPHANE.

# Specifications

## POST DESCRIPTION

The lighting post shall consist of a decorative, octagonal clamshell base, a tapered, octagonal shaft, and an octagonal-pattern twin-arm crossarm with 1 1/2" NPT fitting for luminaire mounting.

## MATERIALS

The base material shall be heavy-wall cast iron (ASTM A48, class 30), formed true to pattern with complete detail. The shaft shall high strength steel with tenon and anchor plate. The crossarm shall be heavy-wall cast aluminum (356.1 alloy), formed true to pattern with complete detail.

## DIMENSIONS

The post shall be 27'-0" in height with a 32" tall x 19-1/2" (flat-to-flat) octagonal base. The 11-gauge (.1196" wall) octagonal shaft shall taper from 9.3" at the anchor plate to 5.2" at post top. A 4-1/2"Ø x 5" tall tenon shall be at post top for crossarm mounting.

## INSTALLATION

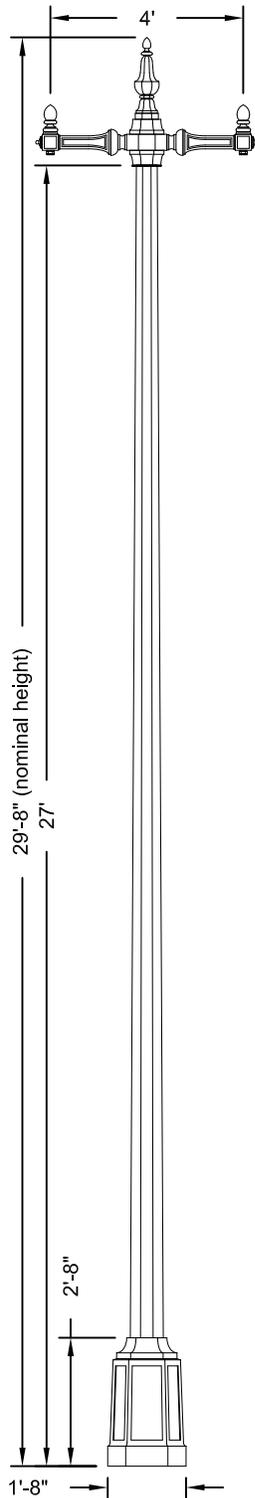
Post shall be provided with (4) Ø1-1/4" hot-dip galvanized, L-type anchor bolts to be installed on a Ø14" bolt circle. Two doors are located in the base and tamper proof screws, one coinciding with the shaft handhole, for wiring access.

## FINISH

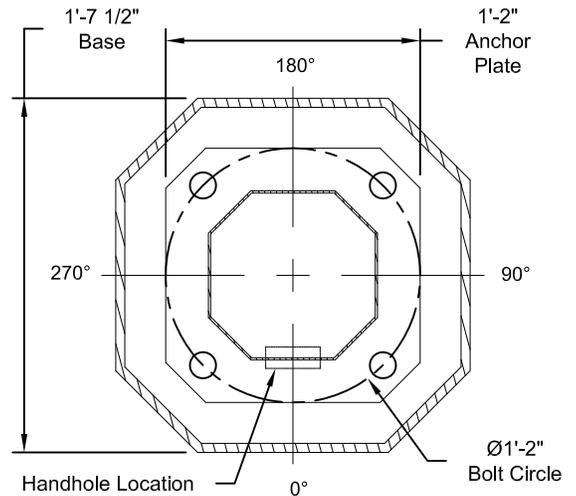
Post assembly shall be furnished with a AS powder coat finish. Shaft assembly shall be hot-dip galvanized prior to finishing.

## LUMINAIRE DESCRIPTION

For complete specifications see.



## Anchorage Detail



## Catalog #'s:

(AOL-8267-02)SF22-11GA-T-AS - SF20CI-AS - SFC48-AS - AB1.25X48

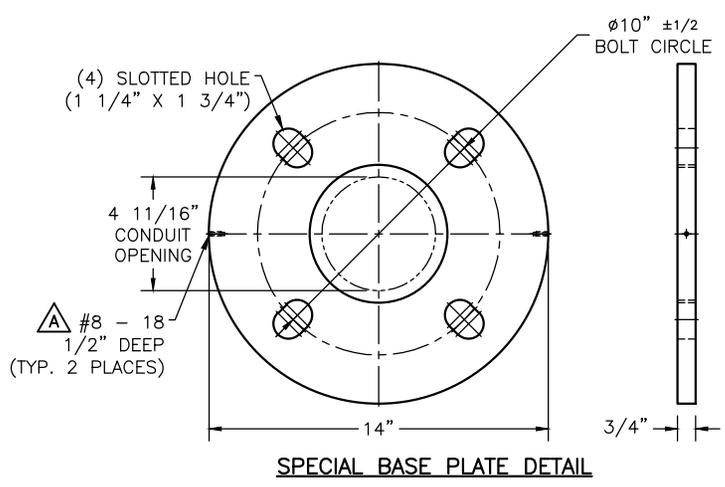
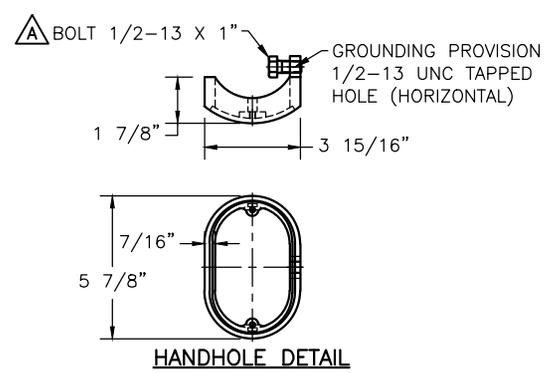
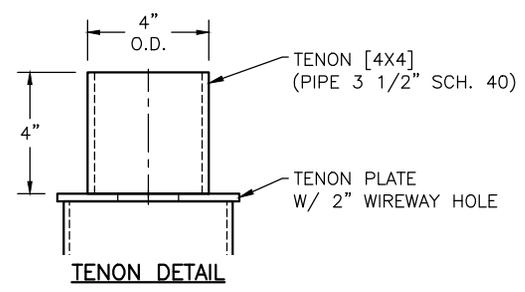
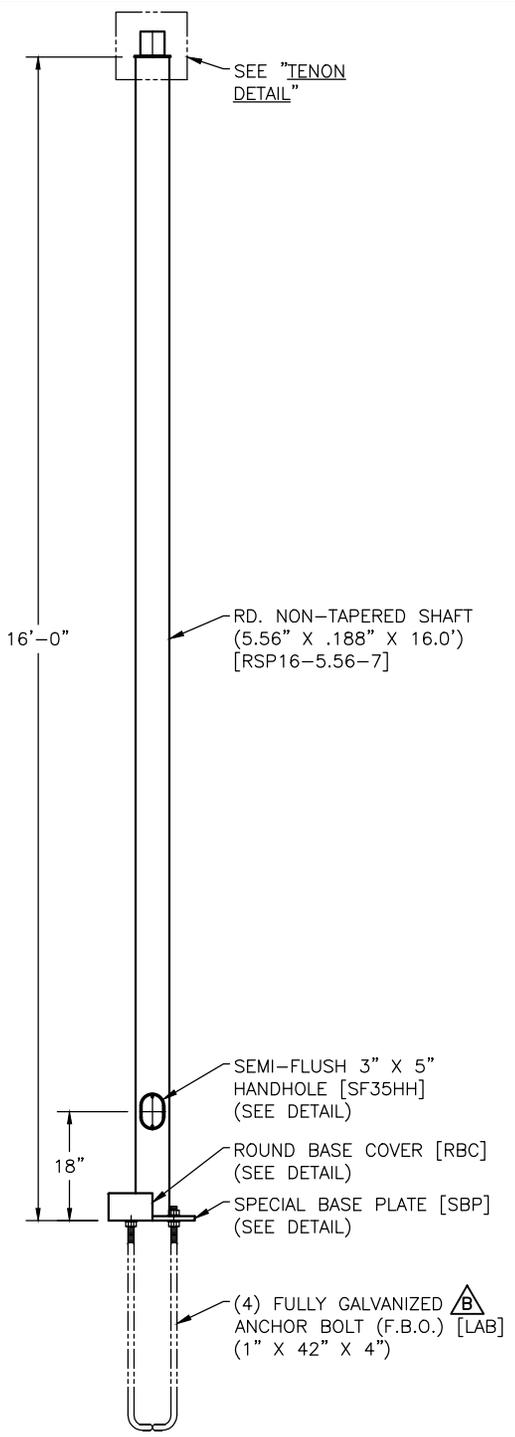


## San Francisco Streets

San Francisco, CA

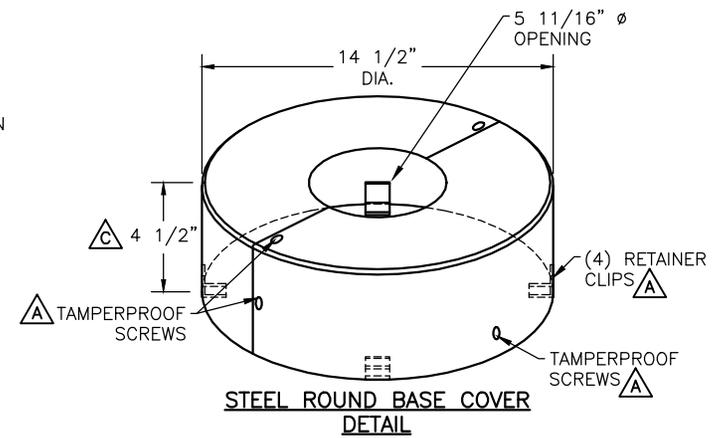
ORDER #:	TYPE:	DRAWING #:
REVISION: 2	REVISION DATE: 09/01/11	TSG 003216
DRAWN: ACH	ORIGIN DATE: 10-09-07	

THIS DRAWING, WHEN APPROVED, SHALL BECOME THE COMPLETE SPECIFICATION FOR THE MATERIAL TO BE FURNISHED BY HOLOPHANE ON THE ORDER NOTED ABOVE. A UNIT OF SIMILAR DESIGN MAY BE SUPPLIED, BUT ONLY AFTER APPROVAL BY THE CUSTOMER IN WRITING. ON POLE ORDERS AN ANCHOR BOLT TEMPLATE PRINT WILL BE SUPPLIED WITH EACH ANCHOR BOLT ORDER TO MATCH THE POLE PROVIDED. THIS PRINT IS THE PROPERTY OF HOLOPHANE AND IS LOANED SUBJECT TO RETURN UPON DEMAND AND UPON EXPRESS CONDITION THAT IT WILL NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO OUR INTERESTS, AND ONLY IN CONNECTION WITH MATERIAL FURNISHED BY HOLOPHANE.



**MATERIAL SPECIFICATIONS:**

PIPE:	ASTM A500 GR. C, 46 K.S.I. MIN. YIELD
BASE PLATE:	ASTM A36, 36 K.S.I. MIN. YIELD
ANCHOR BOLT:	ASTM F1554, 55 K.S.I. MIN. YIELD
<b>FINISH:</b>	
ENTIRE STANDARD TO BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123.	
ENTIRE STANDARD TO HAVE A THERMOSET POLYESTER POWDER COATING IN ACCORDANCE WITH KW INDUSTRIES COATING STANDARDS.	
△ FINISH COLOR TO BE K-KLAD GRAY OVER GALVANIZING. [KZ41]	



FOR APPROVAL ONLY

PRINT NAME: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

REQUIRED WITH ORDER

C CHANGED BC HEIGHT TO 4 1/2"	20383	JU	8/16/2018
B CHANGED ANCHOR BOLTS TO F.B.O.	20116	JU	6/27/2018
A ADDED FINISH COLOR, TAMPERPROOF SCREWS, RETAINING CLIPS & BOLT FOR HANDHOLE	19203	JU	1/4/2018

REV: DESCRIPTION: 19202      ERF:      BY:      DATE:

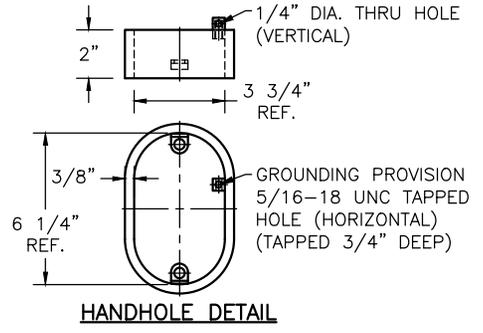
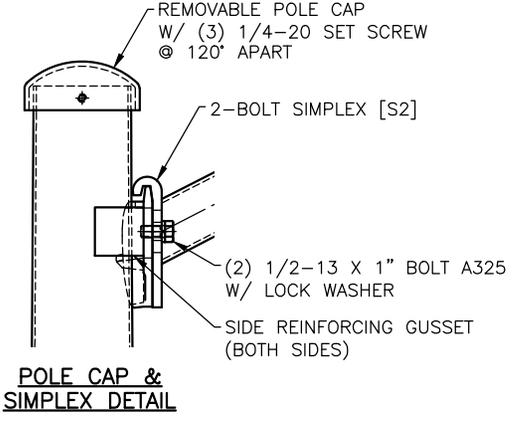
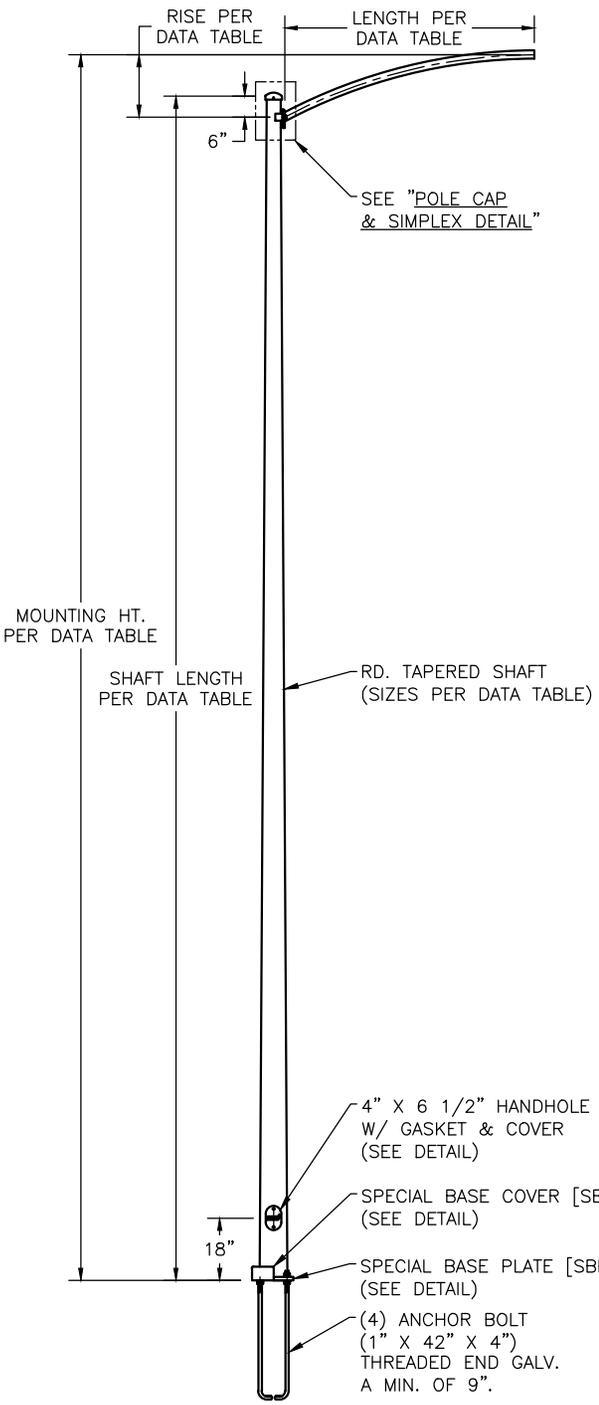
**KW**

909 INDUSTRIAL BLVD. • SUGAR LAND, TEXAS 77478

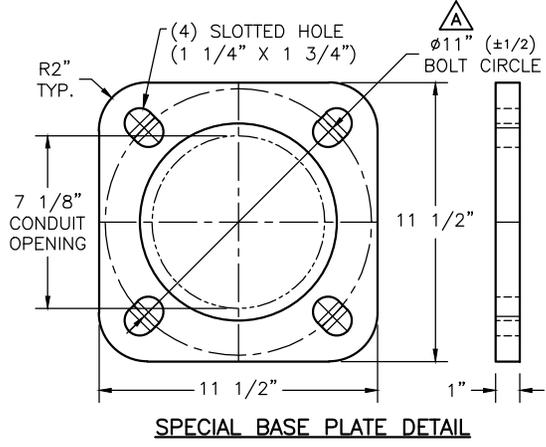
△ CITY OF SAN FRANCISCO △  
RSP16-5.56-7-KZ41-4X4-SF35HH-SBP-RBC-LAB

DRAWN BY: JU	DATE: 1/4/2018	DRAWING NO.: 010-1801041110	REV: C
CHECKED BY:	DATE:	SHEET NO.: 1 OF 1	

<b>MATERIAL SPECIFICATIONS:</b>	
POLE SHAFT:	COMM. GRADE STEEL, 55 K.S.I. MIN. YIELD
BASE PLATE:	ASTM A36, 36 K.S.I. MIN. YIELD
ANCHOR BOLT:	ASTM F1554, 55 K.S.I. MIN. YIELD
FINISH:	
ENTIRE STANDARD TO BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123. [G]	



DATA TABLE							
CATALOGUE ITEM	POLE SHAFT LENGTH	POLE SHAFT BASE O.D.	POLE SHAFT TOP O.D.	POLE SHAFT THK.	MOUNTING HT.	ARM LENGTH	ARM RISE
RTSU30-8.0-11-G-14S2	28'-6"	8.0"	4.0"	0.1196"	30'-0"	4'-0"	24"
RTSU30-8.0-11-G-16S2	28'-6"	8.0"	4.0"	0.1196"	30'-0"	6'-0"	24"



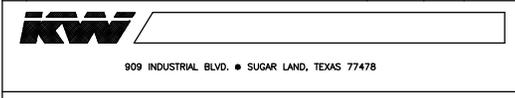
FOR APPROVAL ONLY

PRINT NAME: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

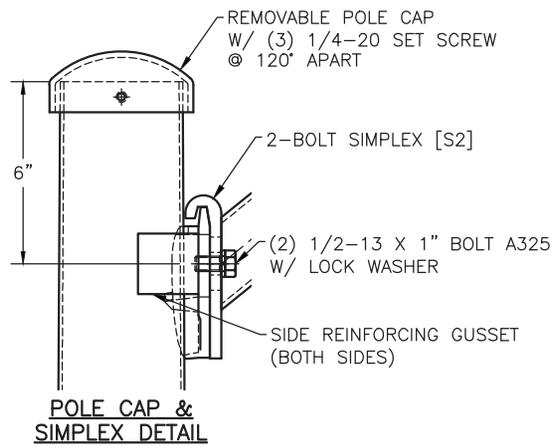
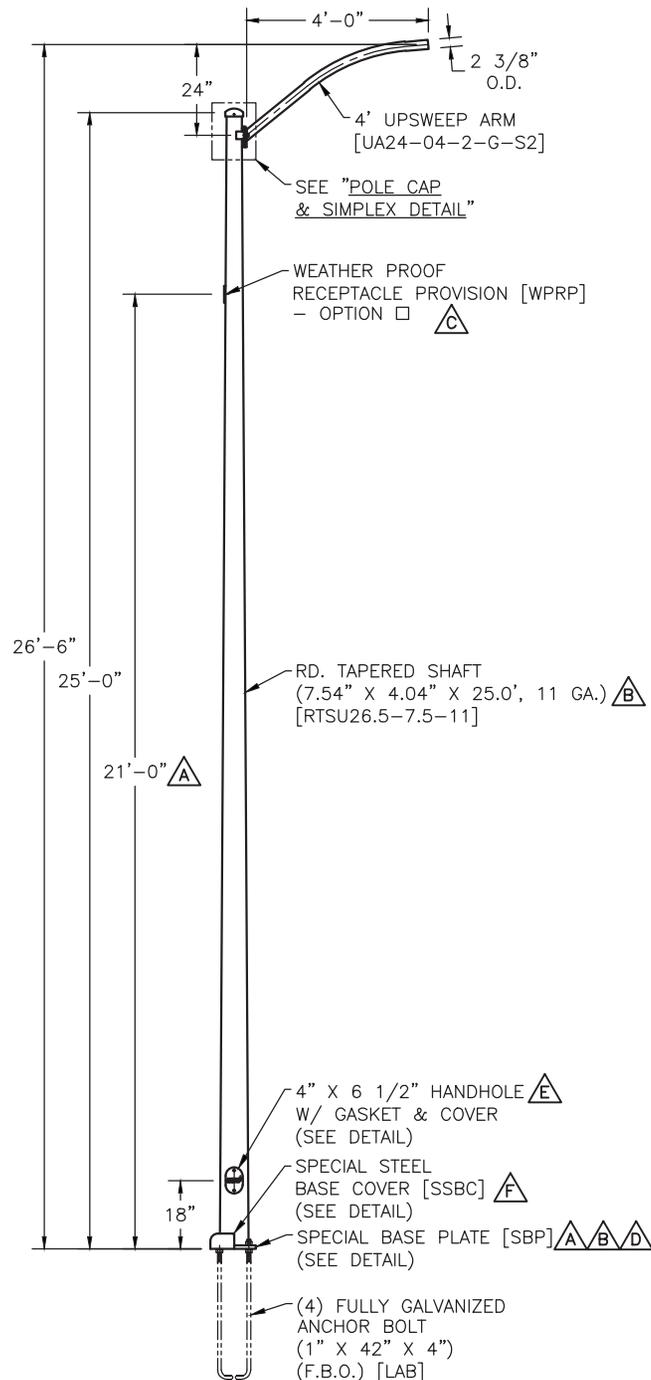
DATE: \_\_\_\_\_

REQUIRED WITH ORDER			
A CHANGED BOLT CIRCLE, ARM RISE & SHAFT LENGTH	23967	JU	4/15/2020
REV: DESCRIPTION:	REF: 23616	BY:	DATE:



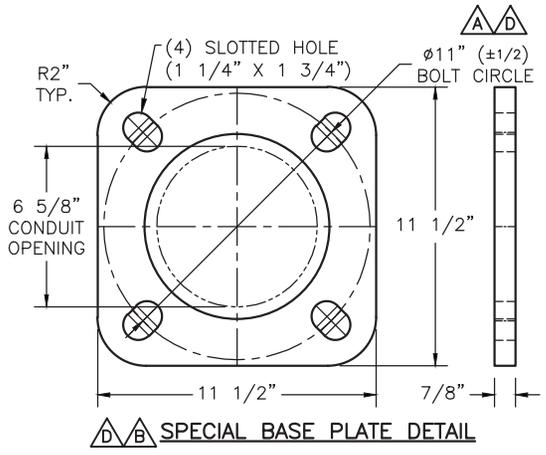
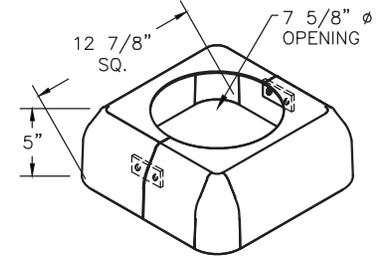
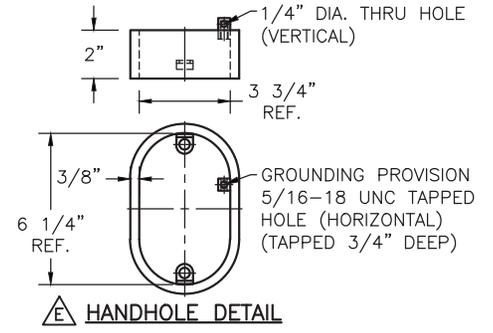
CITY OF SAN FRANCISCO  
UPSWEEP ARM POLES  
SINGLE ARMS

DRAWN BY: IF	DATE: 2/12/2020	DRAWING NO.: 010-2002121609	REV: A
CHECKED BY:	DATE:	SHEET NO.: 1 OF 2	



**MATERIAL SPECIFICATIONS:**

POLE SHAFT:	COMM. GRADE STEEL, 55 K.S.I. MIN. YIELD
BASE PLATE:	ASTM A36, 36 K.S.I. MIN. YIELD
FINISH:	
ENTIRE STANDARD TO BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123. [G]	



FOR APPROVAL ONLY

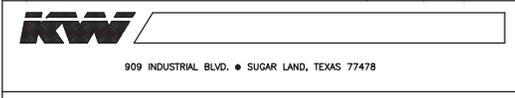
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SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

REQUIRED WITH ORDER

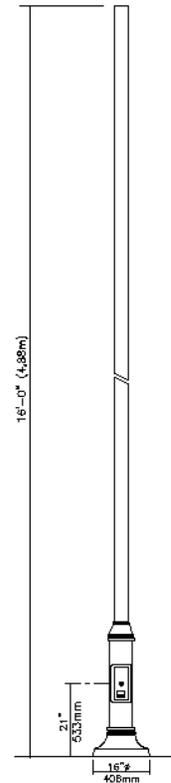
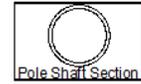
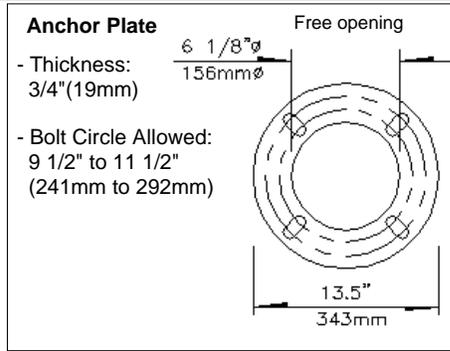
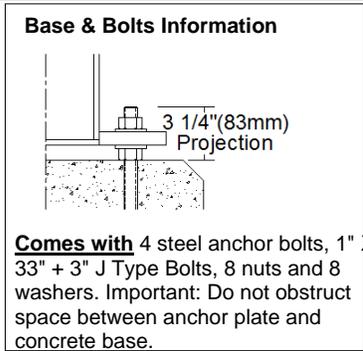
F CHANGED BASE COVER	24825	JU	9/8/2020
E CHANGED HANDHOLE TO 4X6	24709	JU	8/11/2020
D CHANGED BOLT CIRCLE	23967	JU	4/13/2020
C CHANGED PROJECT NAME & ADDED WPRP OPTION BOX	23498	JU	1/29/2020
B CHANGED POLE OD FROM 6.1"	23315	JU	12/19/2019
A CHANGED BOLT CIRCLE & MOVED WPRP	21626	JU	3/14/2019
REV: DESCRIPTION:	ERF: 21604	BY:	DATE:



△ B △ C CITY OF SAN FRANCISCO  
 RTSU26.5-7.5-11-G-14S2-WPRP-SBP-SSBC-LAB  
 W/ UA24-04-2-G-S2

DRAWN BY: JU	DATE: 3/8/2019	DRAWING NO.: 010-1903081507	REV: F
CHECKED BY:	DATE:	SHEET NO.: 2 OF 3	

**City of San Francisco - Lumec SMN 16' pole ( fits 1 x 42 x 4 bolts, 10.5 -11.5 BC, inside paint )**



Qty	Pole	[SM6N-007]-16-BLN1-IP-BKTX
-----	------	----------------------------

**Description of Components:**

**Pole Shaft:** Shall be made from a 4" (102mm) round high tensile carbon steel tubing, having a 0.188" (4.8mm) wall thickness, welded to the pole base.

**Joint Cover: One-piece** round joint cover made from cast 356 aluminum.

**Pole Base:** Shall be made from a 6 5/8" (168mm) round high tensile carbon steel tubing base having a 0.180" (4.6mm) wall thickness, welded to both the bottom and top of the anchor plate.

**Maintenance Opening:** The pole shall have a 4 1/2" x 10" (114mm x 254mm) maintenance opening centered 21" (533mm) from the bottom of the anchor plate, complete with a weatherproof embossed aluminum cover and a copper ground lug.

**Base Cover:** Two piece round base cover made from cast 356 aluminum, mechanically fastened with stainless steel screws.

**Pole Options: (BLN1)** Anchor plate accepting 1" (25mm) O.D. bolts.  
(IP) The pole inner wall will be painted.

**Note:** A tenon will be provided when the luminaire or bracket does not fit directly on pole shaft. Tenon not shown on the drawing.

**IMPORTANT:** Lumec strongly recommends the installation of the complete lighting assembly with all of its accessories upon the anchoring of the pole. This will ensure that the structural integrity of the product is maintained throughout its lifetime.

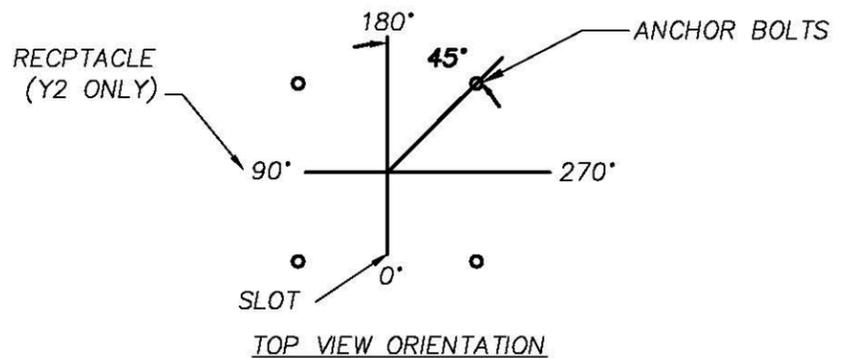
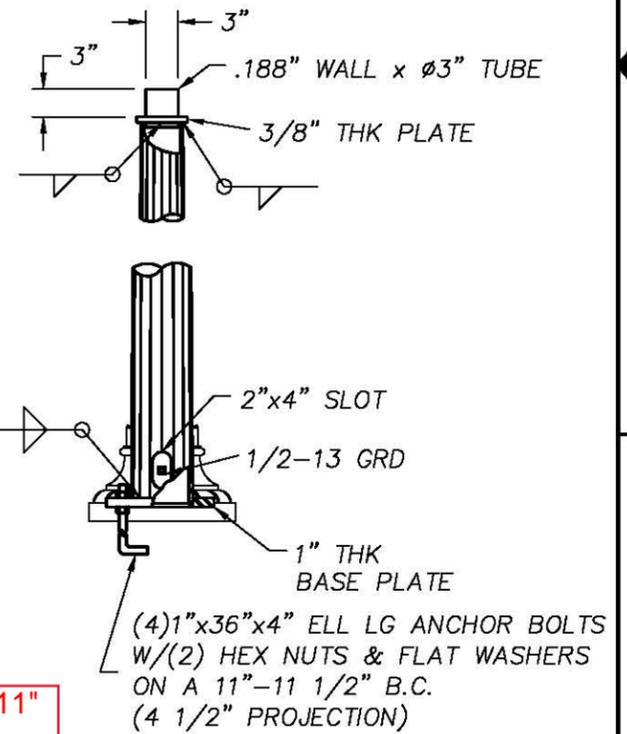
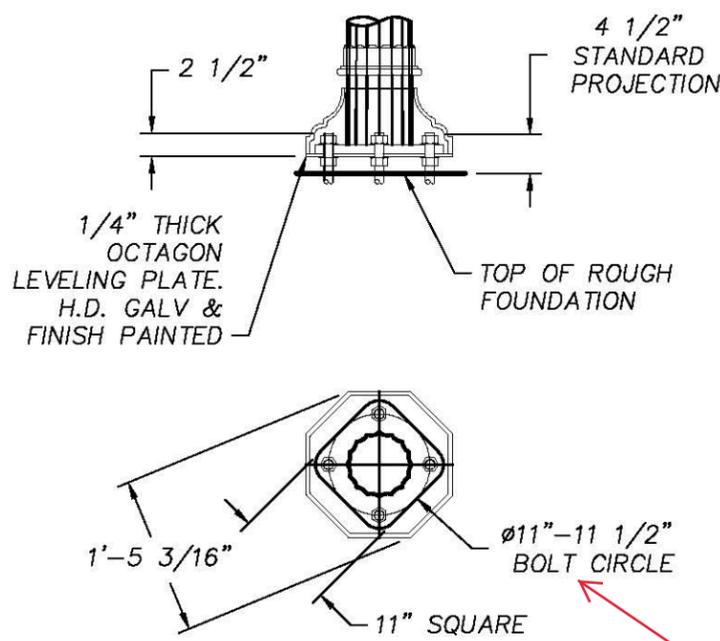
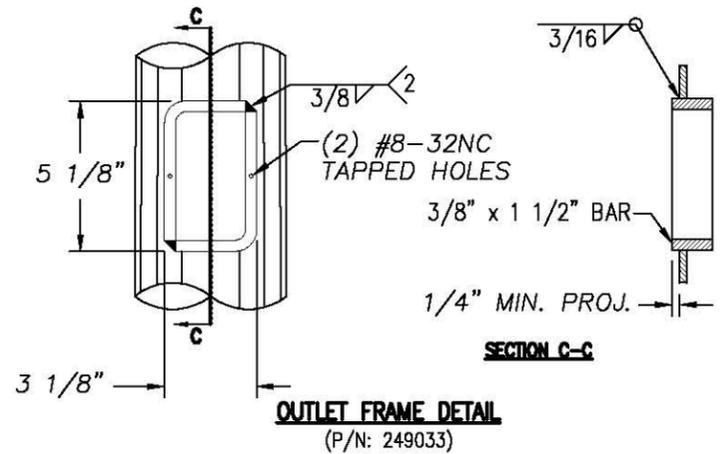
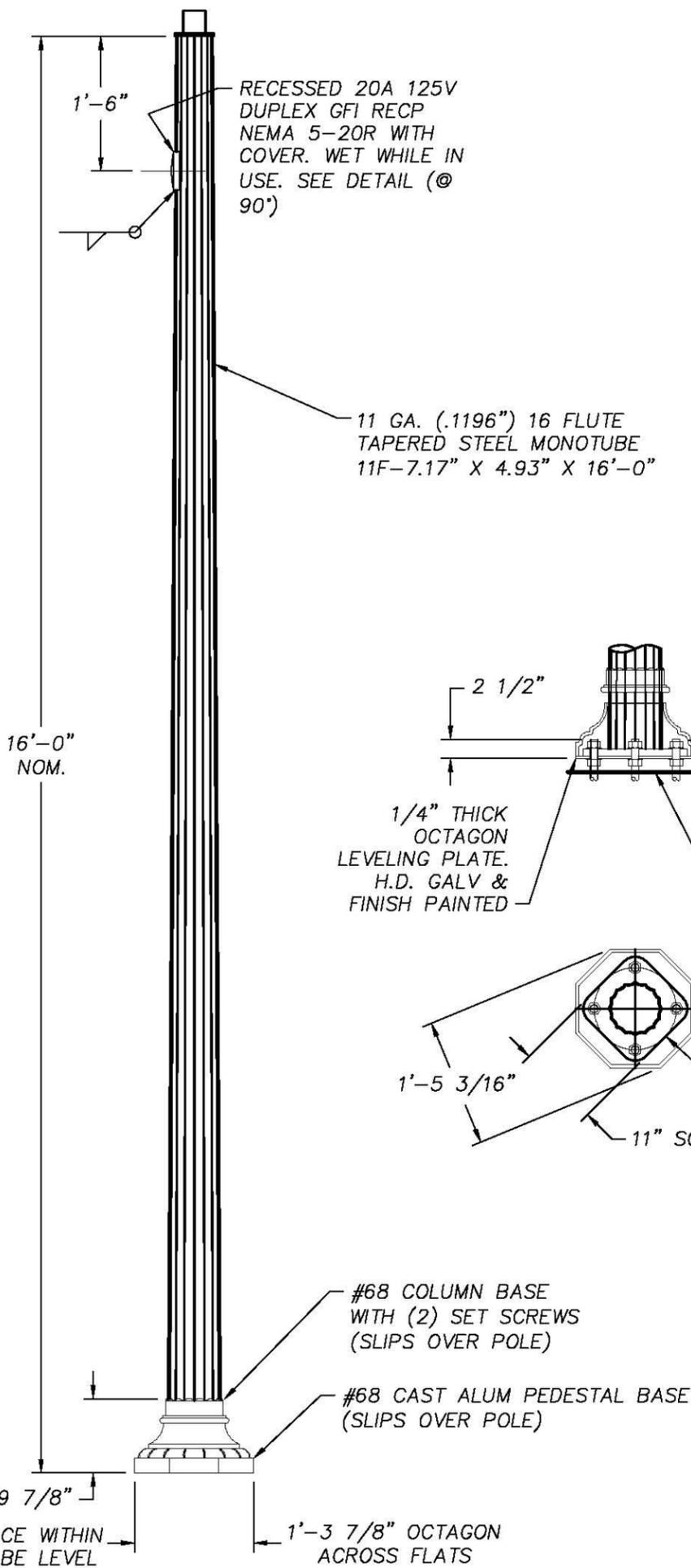
**Pole Weight:** 130 lbs (59.1 kg)

**MATERIAL SPECIFICATIONS**

TUBES: CHEM. & PHYSICAL PROP. OF ASTM A595 GR. A.  
 PLATE, BAR: ASTM A36  
 ANCHOR BOLTS: ASTM A307 TOP END GALVD. TO A153  
 ANCHOR BOLT NUTS: ASTM A563 GR. A GALVD. TO A153  
 MISC. HDWE: (STN. STL) AISI 300 SERIES (18-8)  
 STEEL TENON TUBE: ASTM A513  
 MISC. STEEL HDWE: ASTM A307 GALVD. TO ASTM A153  
 ALUMINUM CASTINGS: A319F  
 FINISH: H.D GALV TO ASTM A123 & POWDER COATED (CUSTOMER TO SPECIFY COLOR)

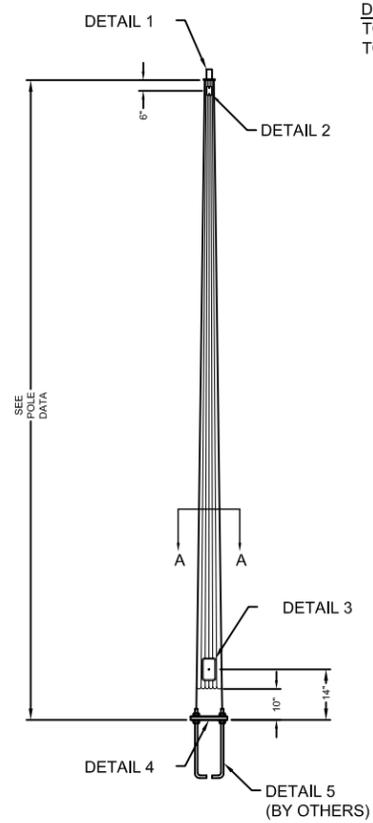
**DESIGN CRITERIA:**

- DESIGNED IN ACCORDANCE WITH 1994 AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" FOR 80 M.P.H. WIND ZONE.
- ANCHOR BOLTS ANALYZED FOR STEEL STRENGTH ONLY. THE ANCHOR BOLT EMBEDMENT LENGTH SHOWN ON THIS DRAWING SHALL BE VERIFIED BY THE FOUNDATION ENGINEER.
- CUSTOMER TO CONFIRM ALL DIMENSIONS & ORIENTATIONS BEFORE RELEASING ORDER FOR MANUFACTURING.

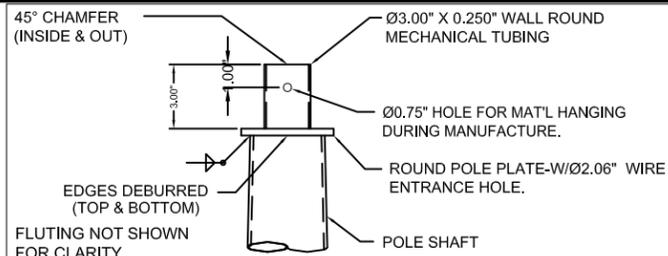


DESIGN #	DESCRIPTION
B1122-68-B60-Y1	WITHOUT RECEPTACLE
B1122-68-B60-Y2	WITH RECEPTACLE

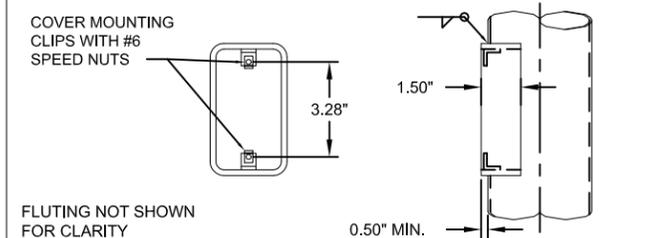
STATE: CALIFORNIA	REQ / SO# : NCA-42186-1	REV	DESCRIPTION	DATE	REV BY/CHK BY
PROJECT NAME: CITY OF SAN FRANCISCO			REVISIONS		
<b>16'-0" ORNAMENTAL LIGHTING STANDARD WITH Ø3"x3" TENON</b>					
	This document and the contents herein are proprietary and the property of Union Metal Corporation. This document is not to be copied, reproduced, or used for any reason except for the purposes which it was issued without the express written consent of Union Metal Corporation. Furthermore Union Metal Corporation reserves the right to recall this document and all copies at any time for any reason.	DESIGNED BY	CHECKED BY	DATE	SCALE
		MRB	ALB	12/8/11	
<b>N1122-68-B60</b>			REVISION	ENG REF	SHEET
			R0	B1122-68-B59	1 OF 1



DESIGN INFORMATION  
TOTAL EPA: 2.26 SQ.FT.  
TOTAL WEIGHT: 80 LBS



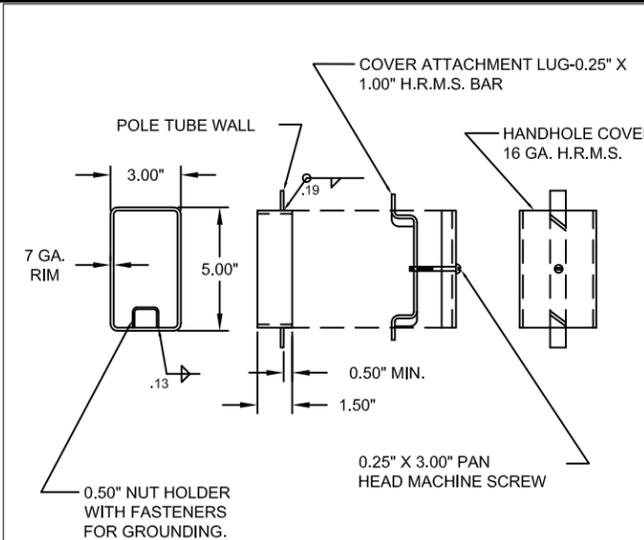
DETAIL 1 POLE TOP TENON



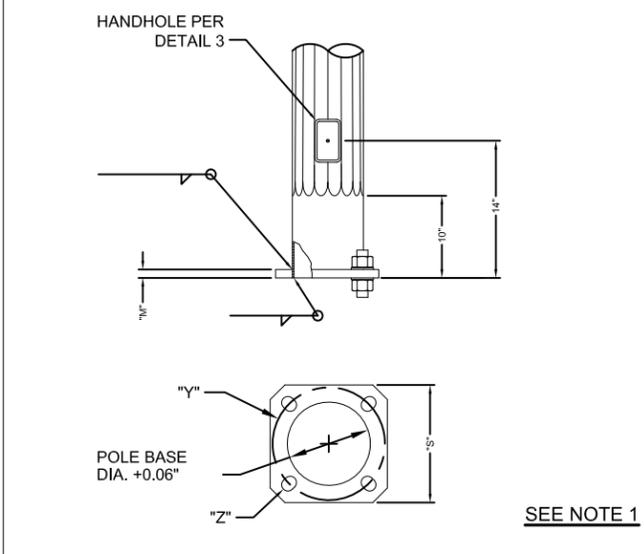
DETAIL 2 FESTOON BOX

ALTHOUGH RARE, VIBRATIONS SEVERE ENOUGH TO CAUSE DAMAGE CAN OCCASIONALLY OCCUR IN STRUCTURES OF ALL TYPES. BECAUSE THEY ARE INFLUENCED BY MANY INTERACTING VARIABLES, VIBRATIONS ARE GENERALLY UNPREDICTABLE. THE USER'S MAINTENANCE PROGRAM SHOULD INCLUDE OBSERVATION FOR EXCESSIVE VIBRATION AND EXAMINATION FOR ANY STRUCTURAL DAMAGE OR BOLT LOOSENING. THE VALMONT WARRANTY SPECIFICALLY EXCLUDES FATIGUE FAILURE OR SIMILAR PHENOMENA RESULTING FROM INDUCED VIBRATION, HARMONIC OSCILLATION OR RESONANCE ASSOCIATED WITH MOVEMENT OF AIR CURRENTS AROUND THE PRODUCT.

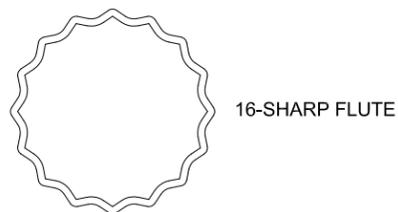
VIBRATION DISCLAIMER



DETAIL 3 HANDHOLE

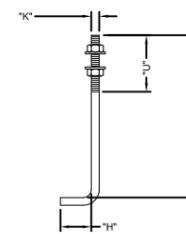


DETAIL 4 POLE BASE



SECTION A-A

(4)-ANCHOR BOLTS WITH  
(2) HEX NUTS AND (2) WASHERS  
PER BOLT WITH THREADED  
END GALVANIZED AT LEAST 12.00".



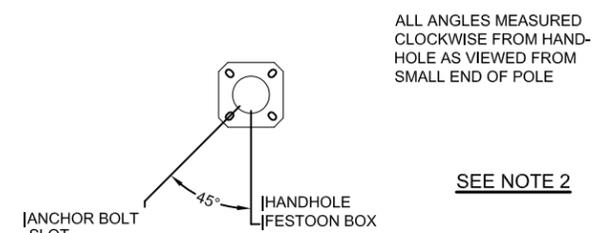
DETAIL 5 ANCHOR BOLT

ANCHOR BOLTS SUPPLIED BY OTHERS. DATA SHOWN FOR REFERENCE ONLY.

THE LIGHTING STRUCTURES SHOWN ON THIS DRAWING HAVE BEEN DESIGNED IN ACCORDANCE WITH THE LOADING AND THE ALLOWABLE STRESS REQUIREMENTS OF THE 2013 AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", SIXTH EDITION, LTS-6. THE WIND LOADS WERE CALCULATED FROM A BASIC WIND VELOCITY OF 100 MPH WITH A RECURRENCE INTERVAL OF 50 YEARS.

- PER THE CODE COMMON LIGHTING STRUCTURES ARE NOT REQUIRED TO BE ANALYZED FOR FATIGUE LOADS AS THEY HAVE NOT NORMALLY EXHIBITED FATIGUE PROBLEMS.

AASHTO 2013 SPECIFICATIONS



RADIAL INDEX

ALL ANGLES MEASURED  
CLOCKWISE FROM HAND-  
HOLE AS VIEWED FROM  
SMALL END OF POLE

SEE NOTE 2

MATERIAL DATA

COMPONENT	ASTM DESIGNATION	MIN. YIELD (KSI)	FINISH DATA
TAPERED TUBES	A595 GR.A OR A572	55	SYSTEM: FINISH PAINT/GALVANIZED (FPGV) BASE COAT: HOT-DIP GALVANIZED TO ASTM A123 PRIME COAT: NONE FINISH COAT: TGIC OR URETHANE POLYESTER POWDER COLOR: BLACK SPEC: F-283A
POLE BASE	A36	36	
ANCHOR BOLTS	F1554 GR.55	55	
GALVANIZING-HARDWARE	HOT DIP ZINC	--	

POLE DATA

ITEM	QTY.	POLE TUBE				POLE BASE				ANCHOR BOLT			
		BASE DIA. (IN)	TOP DIA. (IN)	LENGTH (FT)	GAUGE OR THK. (IN)	SQUARE "S" (IN)	BOLT CIRCLE "Y" (IN)	THK. "M" (IN)	SLOT "Z" (IN)	DIA. "K" (IN)	LENGTH "J" (IN)	HOOK "H" (IN)	THREAD LENGTH "U" (IN)
RFD305669	73	7.00	4.76	16.00	11	11.00	10.50±0.50	1.000	1.13 X 1.69	1.00	36.00	4.00	6.00
ANCHOR BOLTS BY OTHERS. DATA SHOWN FOR REFERENCE ONLY.													

16' Pole, Bolt Circle Slotted 10" to 11".

Catalog #s:  
Pole: FL210-700A160-P9-HH-FPGV-LAB-FST SLOTTED BC 10" TO 11" RFD305669  
(See Sheet 2)

Customer Signature: \_\_\_\_\_ Date: \_\_\_\_\_

NOTES FOR CUSTOMER:

- DECO BASE PROVIDED BY HOLOPHANE. HANDHOLE LOCATION AND FLUTE STOP LOCATION MUST BE VERIFIED PRIOR TO RELEASE.
- ALL OTHER LOCATIONS/ORIENTATIONS TO BE VERIFIED PRIOR TO RELEASE (SEE SHEET 2).
- VALMONT IS NOT RESPONSIBLE FOR THE STRUCTURAL ADEQUACY OF THE EXISTING ANCHORAGE.
- APPROVED, SIGNED DRAWING MUST ACCOMPANY PO.

**APPROVED**

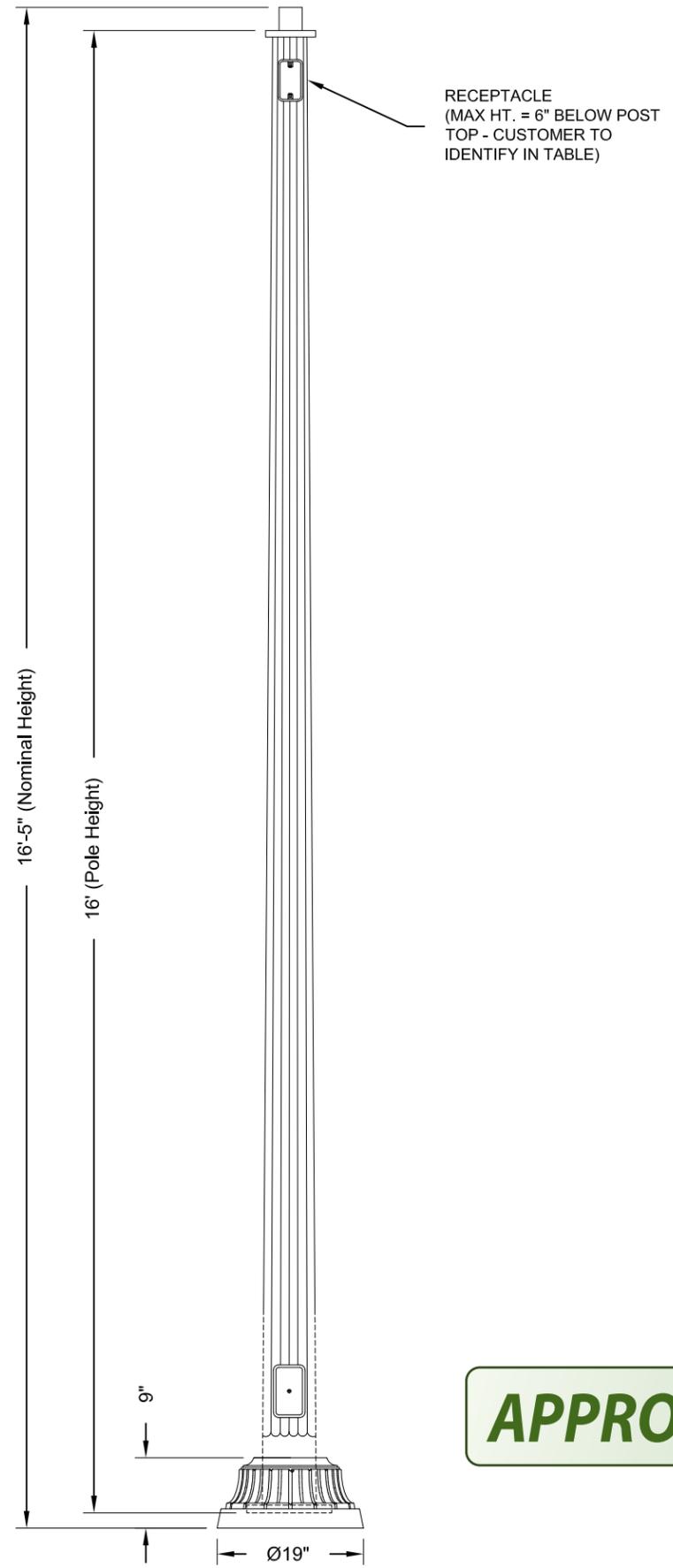


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214 OAKWOOD AVE., NEWARK, OH 43055

TS8 06/11/19	AT7 06/11/19		SOLD TO: UPPER HAIGHT STREET	JOB: UPPER HAIGHT STREET
			SHIP TO: SAN FRANCISCO, CA	SAN FRANCISCO, CA
			P.O. #: 2165-19-11171-4 (DR19011, RFD305669)	
			AGENT: PHIL HEINZ	TITLE: LIGHTING STRUCTURES

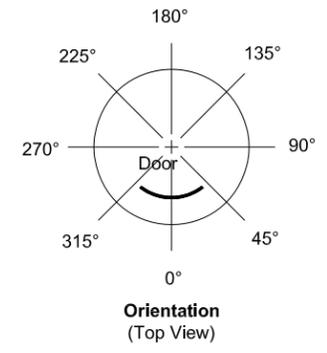
ORDER NUMBER: CA453202P1
PAGE NUMBER: 1 OF 2
DRAWING NUMBER: TSG011528
REV: -



**APPROVED**

**Accessory Mounting Detail**

	Orientation	Height
RECEPTACLE		



**Catalog #'s:**  
 Pole: FL210-700A160-P9-HH-FPGV-LAB-FST SLOTTED BC 10" TO 11" **RFD305669**  
 Anchor Bolts: AB-27-4  
 Clamshell Base: SN19CAR7CSB657A **RFD305669**  
 Receptacle: FGISU-SBKH

**Customer Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

- NOTES FOR CUSTOMER:**
1. DECO BASE PROVIDED BY HOLOPHANE. HANDHOLE LOCATION AND FLUTE STOP LOCATION MUST BE VERIFIED PRIOR TO RELEASE.
  2. ALL OTHER LOCATIONS/ORIENTATIONS TO BE VERIFIED PRIOR TO RELEASE (SEE SHEET 2).
  3. VALMONT IS NOT RESPONSIBLE FOR THE STRUCTURAL ADEQUACY OF THE EXISTING ANCHORAGE.
  4. APPROVED, SIGNED DRAWING MUST ACCOMPANY PO.

REV		TS8 06/11/19	AT7 06/11/19	SOLD TO: UPPER HAIGHT STREET		JOB: UPPER HAIGHT STREET		ORDER NUMBER: CA453202P1	
DRAWN BY-DATE		CHECK BY-DATE	DESCRIPTION	SHIP TO: SAN FRANCISCO, CA		SAN FRANCISCO, CA		PAGE NUMBER: 2 OF 2	
				P.O. #: 2165-19-11171-4 (DR19011, RFD305669)		TITLE: LIGHTING STRUCTURES		DRAWING NUMBER: TSG011528	
				AGENT: PHIL HEINZ				REV: -	

MATERIAL SPECIFICATIONS

TUBES: CHEM. & PHYSICAL PROP. OF ASTM A595 GR. A.  
 PLATE, BAR: ASTM A36  
 ANCHOR BOLTS: ASTM A307 TOP END GALVD. TO A153  
 ANCHOR BOLT NUTS: ASTM A563 GR. A GALVD. TO A153  
 MISC. HDWE: (STN. STL) AISI 300 SERIES (18-8)  
 CAST IRON: ASTM A48 CL30  
 CAST STEEL: ASTM A27 GR 65-35  
 MISC. STEEL HDWE: ASTM A307 GALVD. TO ASTM A153  
 ALUMINUM CASTINGS: ASTM-B26 - 356.0  
 ALUMINUM PIPE: ASTM B241 or B429 (6061-T6)  
 FINISH: H.D GALV TO ASTM A123 & POWDER COATED  
 (CUSTOMER TO SPECIFY COLOR)

DESIGN CRITERIA:

- DESIGNED IN ACCORDANCE WITH 1994 AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" FOR 80 M.P.H. WIND ZONE.
- ANCHOR BOLTS ANALYZED FOR STEEL STRENGTH ONLY. THE ANCHOR BOLT EMBEDMENT LENGTH SHOWN ON THIS DRAWING SHALL BE VERIFIED BY THE FOUNDATION ENGINEER.
- CUSTOMER TO CONFIRM ALL DIMENSIONS & ORIENTATIONS BEFORE RELEASING ORDER FOR MANUFACTURING.

3/8"x5" LG. HEX HEAD STN STL THROUGH BOLT, LOCK HEX NUT & (2) FLAT WASHERS EACH. ARM FACTORY DRILLED. TENON FIELD DRILLED  $\phi 7/16"$  BY OTHERS

CAST ALUM. HEAD ASSY WITH REMOVABLE FINIAL. HEAD ATTACHED TO TENON WITH (2) SETS OF (3) 3/8" SET SCREWS

CAST ALUM LEVELING ELBOW BY LUMEC

RN20 LED 67# & 2.37 EPA BY LUMEC

28'-0" NOM. MTG. HT.

HEX HEAD CAP SCREW W/ FLAT & LOCK WASHERS

1-1/2" WIDE ALUM BAR SCROLL

CLAMP ASSY W/ (2) 5/8" BOLTS & (1) 1/2" CAP NUT SCR. NUTS, FLAT WASH, & LOCK WASH INCLUDED.

OPTIONAL 20A 125V DUPLEX GFI RECEPTACLE NEMA 5-20R WITH WATERPROOF IN-USE COVER. SEE FRAME DETAIL

$\phi 2 \ 7/8"$  STEEL PIPE  
 2 1/2" SCH 80

TENON DETAIL

3/16" TOP, BOTTOM & SIDE GUSSETS

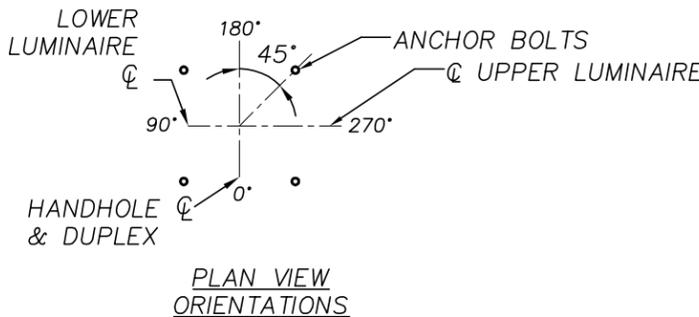
4"x6 1/2" HANDHOLE FRAME W/SQ GRD NUT RETAINER & CONTINUOUS WELDED INTO TUBE (STEEL COVER INCLUDED)

RNS20 ON [CRAT-008]-F ARM LUMEC ARM & FIXTURE

(4) 1"x<sup>42</sup>x4" ELL LG ANCHOR BOLTS W/(2) HEX NUTS & FLAT WASHERS ON A 11 1/2" B.C. (8 1/8" CTRS.) 4 1/4" PROJECTION

11 GA. (.1196") OCTAFLUTE TAPERED STEEL MONOTUBE 11D-8.50" X 4.51" X 28'-6"

CAST STEEL BASE W/ CAST IRON LEAF COVERS



DESIGN #	DESCRIPTION
B70028-B91-Y1	WITHOUT RECEPTACLE
B70028-B91-Y2	WITH RECEPTACLE

FOUNDATION SURFACE WITHIN MUST BE LEVEL

STATE: CALIFORNIA	REQ# / SO# :	R1	3 1/4" ARM PLATE DIM. WAS TO TOP OF PLATE	6/9/17	MB	MB
PROJECT NAME: DOLORES STREET LIGHT IMPROVEMENT PROJECT, SAN FRANCISCO		REV	DESCRIPTION	DATE	REV BY	CHK BY
<b>ORNAMENTAL LIGHTING STANDARD WITH 6'-0" ARM &amp; PEDESTRIAN ARM OPTIONAL GFCI DUPLEX RECEPTACLE</b>						
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		MB	M.R.B.	11/14/16		N70028-B73
<b>N70028-B91</b>				REVISION	SHEET	
				R1	1 OF 1	