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3				
2	11/24/15	DEFREITAS	GUI	COWLING
1	11/8/12	DEFREITAS	DANNA	ADCOCK
0	7/22/10	CECCONI	GUINN	ELKINS
REVISED	BY	CK'D	APPR.	

SECTION 30 - STREET AND AREA LIGHTING

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DEC	DEM	DEP	DEF
			X
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3	4/6/16	DEFREITAS	BLOCKER	COWLING
2	1/27/15	DEFREITAS	COWLING	HENSON
1	5/2/14	KATIGBAK	DANNA	ADCOCK
0	7/27/10	CECCONI	GUINN	ELKINS
REVISED	BY	CK'D	APPR.	

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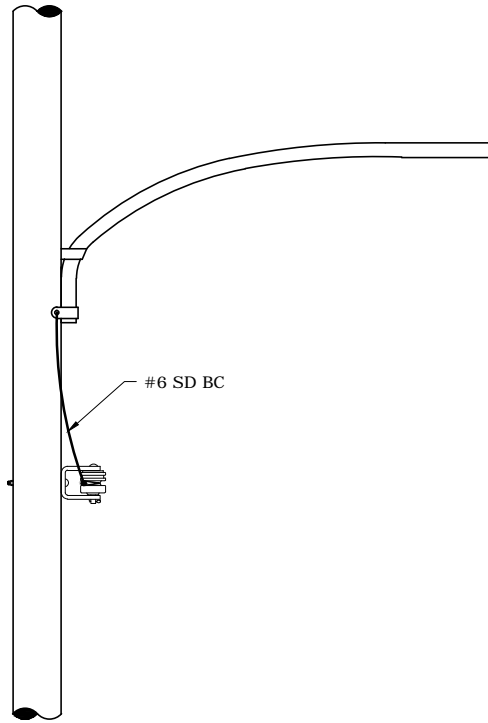
LUMINAIRE, DECORATIVE, 100W HPS & 250W HPS AND 175W MH,  
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3				
2				
1				
0	7/22/10	CECCONI	GUINN	ELKINS
REVISED	BY	CK'D	APPR.	

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**FLA** DWG.  
 30.00-00C



NOTES:

1. ALWAYS GROUND STREET AND AREA LIGHT BRACKETS BY BONDING TO NEUTRAL.

3				
2				
1				
0	11/8/12	HOFFMAN	DANNA	ADCOCK
REVISED	BY	CK'D	APPR.	

STREET AND AREA LIGHT BRACKET GROUND



**FLA**

DWG.  
30.00-01

PROGRESS ENERGY FLORIDA  
STANDARD PROCEDURES BULLETIN

HANDLING OF FAILED LIGHTING EQUIPMENT

POLES, BRACKETS, FOUNDATIONS AND MISCELLANEOUS HARDWARE: RETURN ANY FAILED MATERIAL IN THESE CATEGORIES TO THE PROGRESS ENERGY FLORIDA RECOVERY CENTER FOR ANALYSIS. IDENTIFY DEFECTIVE MATERIAL WITH A PINK DEFECTIVE MATERIAL TAG ( CN 9220099314). DEFECTIVE MATERIAL SHOULD BE MARKED "FAILED".

LUMINAIRES: LUMINAIRES THAT DO NOT WORK UPON INITIAL INSTALLATION OR FAIL WITHIN FIVE YEARS FROM THE DATE OF MANUFACTURE ARE TO BE RETURNED TO THE PROGRESS ENERGY FLORIDA MATERIAL RECOVERY CENTER FOR WARRANTY CLAIMS. LUMINAIRES THAT HAVE BEEN REMOVED FROM SERVICE AND ARE STILL OPERABLE SHOULD BE RE-STOCKED FOR INVENTORY AT THE LOCAL STORE ROOM WITH GREEN TAG ATTACHED.

PHOTOCONTROLS: PHOTOCONTROLS THAT DO NOT OPERATE PROPERLY UPON INITIAL INSTALLATION OR FAIL WITHIN EIGHT YEARS FROM THE DATE OF MANUFACTURE ARE TO BE BATCHED AND RETURNED TO THE RECOVERY CENTER. PHOTOCONTROLS OLDER THAN EIGHT YEARS SHOULD BE SCRAPPED IN THE FIELD.

LAMPS: ANY LAMP THAT DOES NOT WORK UPON INITIAL INSTALLATION OR FAILS WITHIN THREE YEARS FROM DATE OF INSTALLATION IS TO BE BATCHED AND RETURNED TO THE APPROPRIATE MATERIAL RECOVERY CENTER. IF THE INSTALLATION DATE CANNOT BE DETERMINED OR IF THE LAMP HAS BEEN IN SERVICE FOR OVER THREE YEARS, THE LAMP IS TO BE SCRAPPED IN THE FIELD.

BALLAST TRAYS: BALLAST TRAYS THAT HAVE FAILED IN THE FIELD MUST BE RETURNED TO THE RECOVERY CENTER. BALLAST TRAYS THAT FAIL DURING THE FIXTURE'S FIVE YEAR WARRANTY PERIOD SHOULD BE TAGGED BEFORE SENDING THEM BACK TO THE RECOVERY CENTER.

STARTER-AID: ANY STARTER THAT FAILED AND MUST BE REPLACED DURING THE FIXTURE'S FIVE YEAR WARRANTY PERIOD SHOULD BE TAGGED BEFORE SENDING IT BACK TO THE RECOVERY CENTER. FAILED STARTERS OLDER THAN FIVE YEARS CAN BE SCRAPPED IN THE FIELD.

NOTES:

1. ALL WARRANTY RETURNS ARE PROCESSED BY LIGHTING SOLUTIONS' UNIT FOR FULL WARRANTY REPLACEMENT FROM VENDORS AT WILDWOOD RECOVERY CENTER.
2. POLES, BRACKETS, LUMINAIRES, BALLAST TRAYS AND STARTERS ARE ONE-FOR-ONE REPLACEMENT.
3. PHOTOCONTROLS ARE FOUR-FOR-ONE FOR THE THE FIRST YEAR, THREE-FOR-ONE FOR THE SECOND YEAR, TWO-FOR-ONE FOR THE THIRD YEAR AND ONE-FOR-ONE FOR THE FOURTH THROUGH TENTH YEAR ON FAILURES.

3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

DISPOSAL OF FAILED LIGHTING EQUIPMENT



**FLA**

DWG.  
30.00-03

REMOVAL/RESTOCK LIGHT FIXTURES TRACKING SYSTEM

REMOVAL:

COMPLETE A REMOVAL/RESTOCKING LIGHT FIXTURE TAG (SEE FIGURE BELOW) AND ATTACH IT TO ALL FIXTURES REMOVED DUE TO NORMAL MAINTENANCE, UPGRADE OR IDLE REMOVAL. THE TAGGED FIXTURE MUST BE CHECKED AT THE LOCAL OPERATIONS CENTER BEFORE IT IS RESTOCKED.


IF A FIXTURE IS DEFECTIVE AND NEEDS TO BE ANALYZED BY DISTRIBUTION STANDARDS, REPLACE THIS TAG WITH A PINK DEFECTIVE MATERIAL TAG ( CN 9220099314). SEE DWG. 20.04-10. SEND TO MATERIAL RECOVERY AT WILDWOOD.

RESTOCKING:

- ANY REMOVED OPERABLE FIXTURE SHOULD BE RESTOCKED LOCALLY IF POSSIBLE.
- THE SURPLUS OF VERIFIED OPERABLE LIGHTS CAN BE TRANSFERRED TO OTHER OPERATIONS CENTERS WITHIN THE REGION.
- LEAVE THIS (GREEN) RESTOCKING TAG ON THE FIXTURE IF IT IS RETURNED TO MATERIAL RECOVERY FOR NORMAL REPAIR OR RESTOCKING.

ACCURATE RESTOCKING TAGS ENABLE EACH OPERATIONS CENTER TO REDUCE ITS MAINTENANCE BUDGET BY ALLOWING THEM TO RESTOCK AND REUSE GOOD FIXTURES.

TAG IS GREEN WITH  
BLACK LETTERS



## REMOVAL & RESTOCKING

### LIGHT FIXTURE TAG

FROM:

Florida REGION: South Coastal North Coastal North Central South Central

OPS LOCATION: \_\_\_\_\_

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

NORMAL TAKEDOWN - OPERATING

IDLE REMOVAL - OPERATING

UPGRADE LIGHT - OPERATING

---

**RESTOCKING:**

FIXTURE WAS TESTED AND VERIFIED AS OK FOR RESTOCKING    YES     NO

C/N \_\_\_\_\_

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

LIGHT RESTOCKED LOCALLY

RETURN TO MATERIAL RECOVERY FOR REPAIR OR RESTOCKING

DO NOT REMOVE THIS TAG UNTIL FIXTURE HAS BEEN REINSTALLED FROM LOCAL STOCK

THIS SECTION MUST BE FILLED OUT BY PERSON THAT REMOVES THE LIGHT FROM SERVICE

THIS SECTION MUST BE FILLED OUT BY PERSON THAT VERIFIES LIGHT IS OPERABLE FOR RESTOCKING

3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

REMOVAL AND RESTOCKING  
LIGHT FIXTURE PROCESS



**FLA**

DWG.  
30.00-05

PROGRESS ENERGY FLORIDA  
STANDARD PROCEDURES BULLETIN  
STANDARD MOUNTING HEIGHTS OF LUMINAIRES ON WOOD POLES

<u>TYPE OF LUMINAIRES</u>	<u>RECOMMENDED HEIGHTS OF LIGHT CENTER TO GROUND *</u>
5,800 LUMEN SODIUM (70 WATT) SEMI, ENC CUTOFF	25'
9,500 LUMEN SODIUM (100 WATT) SEMI, ENC CUTOFF	25'
16,000 LUMEN SODIUM (150 WATT) ENC CUTOFF	30'
20,000 LUMEN SODIUM (250 WATT METAL HALIDE) FLOOD, ENC CUTOFF	30'
22,000 LUMEN SODIUM (200 WATT) ENC CUTOFF CUTOFF	30'
28,500 LUMEN SODIUM (250 WATT) FLOOD, ENC CUTOFF	30'
50,000 LUMEN SODIUM (400 WATT) ENC, FLOOD	35' *
40,000 LUMEN METAL HALIDE (320 AND 400 WATT) FLOOD	30'
110,000 LUMEN METAL HALIDE (1000 WATT) FLOOD	35'

FOR ALL INSTALLATIONS, ENGINEER IS TO DETERMINE ACTUAL MOUNTING HEIGHTS FOR LUMINAIRES WITHIN A RANGE OF  $\pm 2\text{-}1/2'$  OF THE RECOMMENDED HEIGHTS GIVEN ABOVE. WORK ORDER IS TO SPECIFY LOCATION OF UPPER THRU BOLT HOLE FOR LIGHTING SUPPORT. SEE DWG. 30.02-25 FOR DIMENSIONS OF BRACKETS AND MAST ARMS.

FOR PLANNED SYSTEMS (LIGHTS CLOSER THAN 200'), ENGINEER IS TO DETERMINE HEIGHTS FOR PROJECT BASED ON RECOMMENDED HEIGHTS GIVEN ABOVE, TYPE OF SUPPORT, AND EXISTING OR REQUIRED OTHER DISTRIBUTION FACILITIES. WHERE JOB HAS MOSTLY NEW POLE, ACTUAL MOUNTING HEIGHTS SHOULD TEND TO BE IN THE UPPER PART OF THE RECOMMENDED RANGE (EXAMPLE, 30' TO 32.5'). WHERE EXISTING POLES DO NOT PERMIT RECOMMENDED MOUNTING HEIGHTS, THE LOWER END OF THE RANGE MAY BE USED. (EXAMPLE, 30' TO 27.5'). FOR PLANNED SYSTEMS, THE MOUNTING HEIGHTS OF ADJACENT LUMINAIRES SHOULD NOT VARY MORE THAN 6' FOR EACH 100' OF SPACING BETWEEN LIGHTING UNITS.

\* HEIGHT FROM LIGHT CENTER TO SURFACE BEING ILLUMINATED. IN SPECIFYING HEIGHT, TAKE INTO CONSIDERATION ANY DIFFERENCE IN ELEVATION OR GROUND AT POLE AND AT SURFACE DIRECTLY UNDER LIGHT. 35' MOUNTING HEIGHT RECOMMENDED. DO NOT CHANGE OUT EXISTING FACILITIES TO ACHIEVE RECOMMENDED MOUNTING HEIGHT.

<u>TYPE OF FLOODLIGHTS</u>	<u>HEIGHTS OF LIGHT CENTER TO BASE OF POLE **</u>
28,500 LUMEN SODIUM (250 WATT)	28'
50,000 LUMEN SODIUM (400 WATT)	33'
40,000 LUMEN METAL HALIDE (320 AND 400 WATT)	30'
110,000 LUMEN METAL HALIDE (1000 WATT)	35'/39'

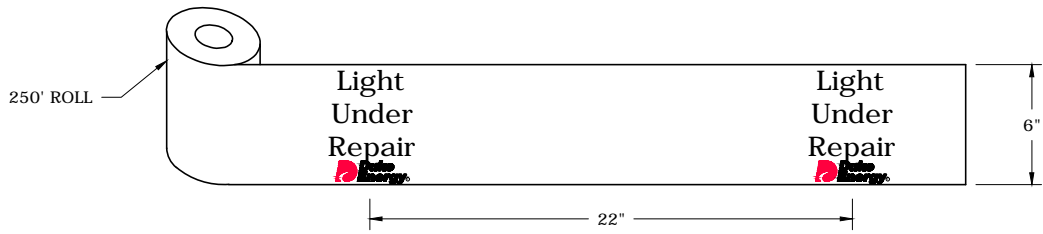
3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

MOUNTING HEIGHT FOR LUMINAIRES

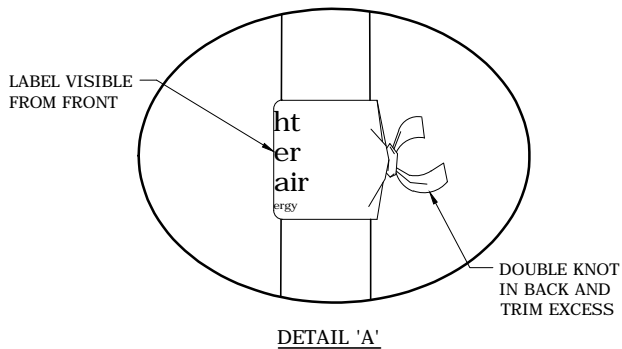
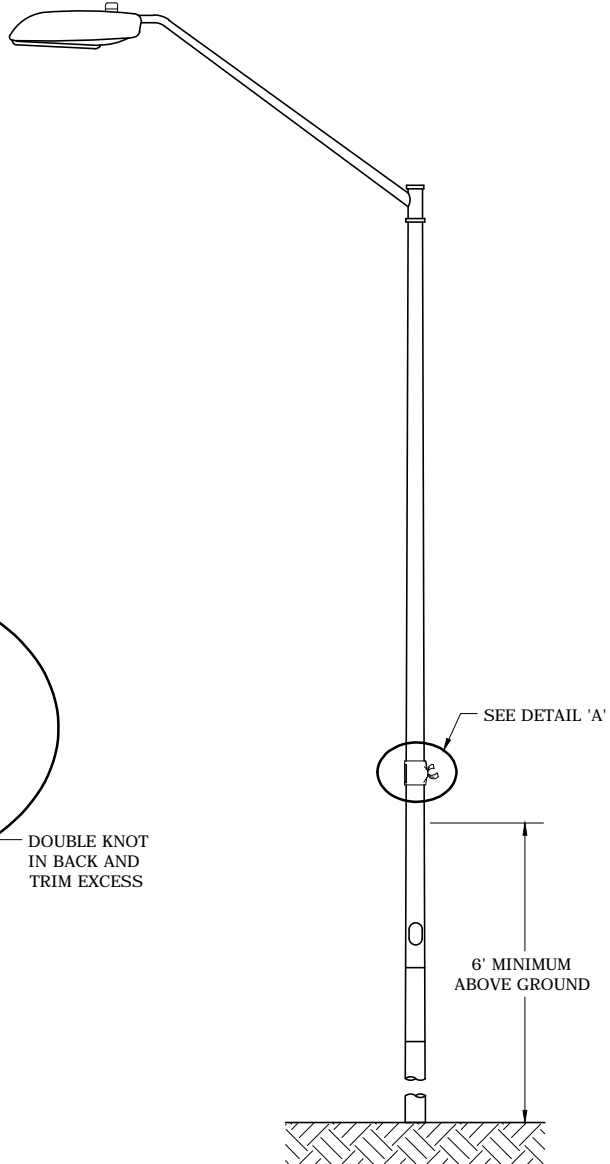


**FLA**

DWG.  
30.00-15



CN 9220104637



**NOTES:**

1. THIS LABELING TAPE IS USED TO MARK LIGHT FIXTURES THAT REQUIRE A SECOND TRIP TO COMPLETE REPAIRS DUE TO BAD WIRING, UNAVAILABLE PARTS, ETC. ONCE THE POLE HAS BEEN LABELED, REPEAT TROUBLE CALLS SHOULD BE REDUCED WHILE WAITING FOR REPAIRS TO BE FINALIZED. THE LABEL SHOULD BE REMOVED FROM THE POLE ONCE THE LIGHT IS WORKING PROPERLY.

3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

"LIGHT UNDER REPAIR" LABELING TAPE

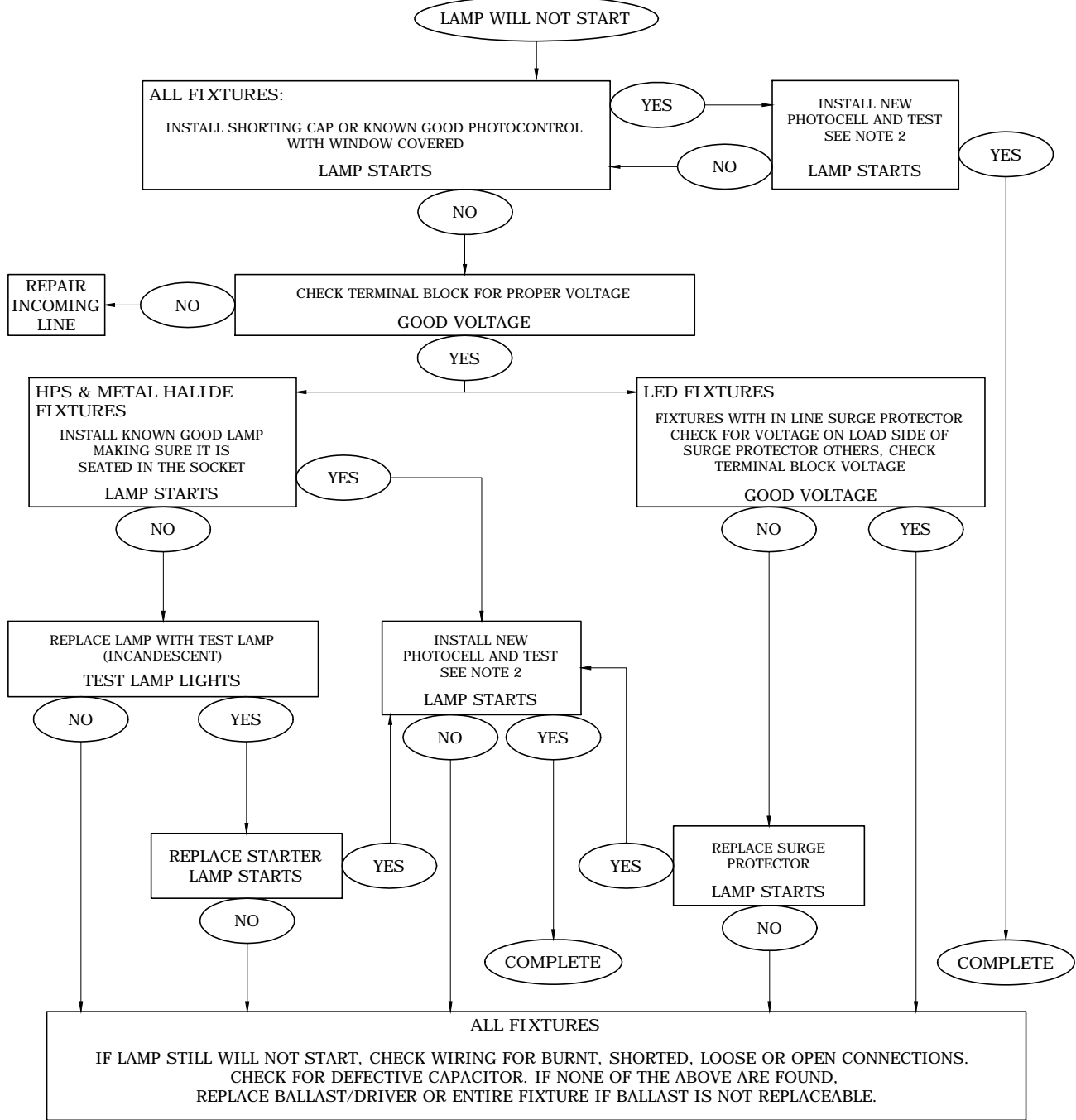


**FLA**

DWG.  
30.00-17



INSPECT OUTSIDE OF LIGHT FIXTURE FOR ANY SIGNS OF DAMAGE.  
TAP ON LIGHT FIXTURE AND LISTEN FOR ANY INDICATION OF ANIMAL INTRUSION.  
OPEN FIXTURE AND INSPECT FOR OBVIOUS PROBLEMS.



**NOTES:**

- LED LIGHT FIXTURES USE PHOTOCELL WITH A "FAIL OFF" FEATURE ( CN 9220208023).
- HPS LAMPS HOT RESTRIKE TIME IS 1 TO 3 MINUTES, WARM UP TIME IS 3 TO 4 MINUTES. METAL HALIDE HOT RESTRIKE TIME IS 10 TO 20 MINUTES, WARM UP TIME IS 2 TO 5 MINUTES.

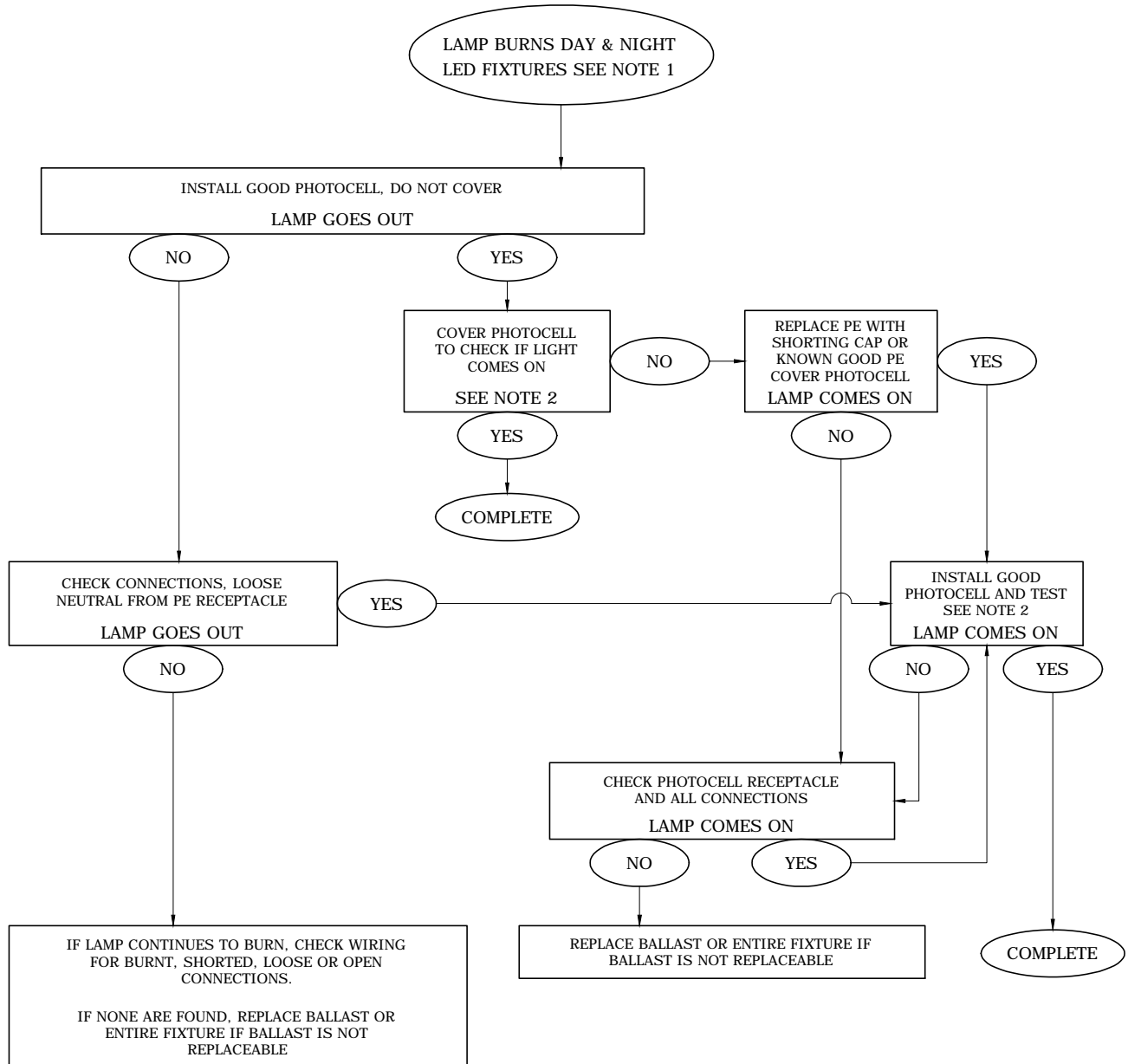
3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

LIGHT FIXTURE TROUBLESHOOTING GUIDE -  
LAMP WILL NOT START



FLA DWG. 30.00-29A

INSPECT OUTSIDE OF LIGHT FIXTURE FOR ANY SIGNS OF DAMAGE.  
TAP ON LIGHT FIXTURE AND LISTEN FOR ANY INDICATION OF ANIMAL INTRUSION.  
OPEN FIXTURE AND INSPECT FOR OBVIOUS PROBLEMS.




**NOTES:**

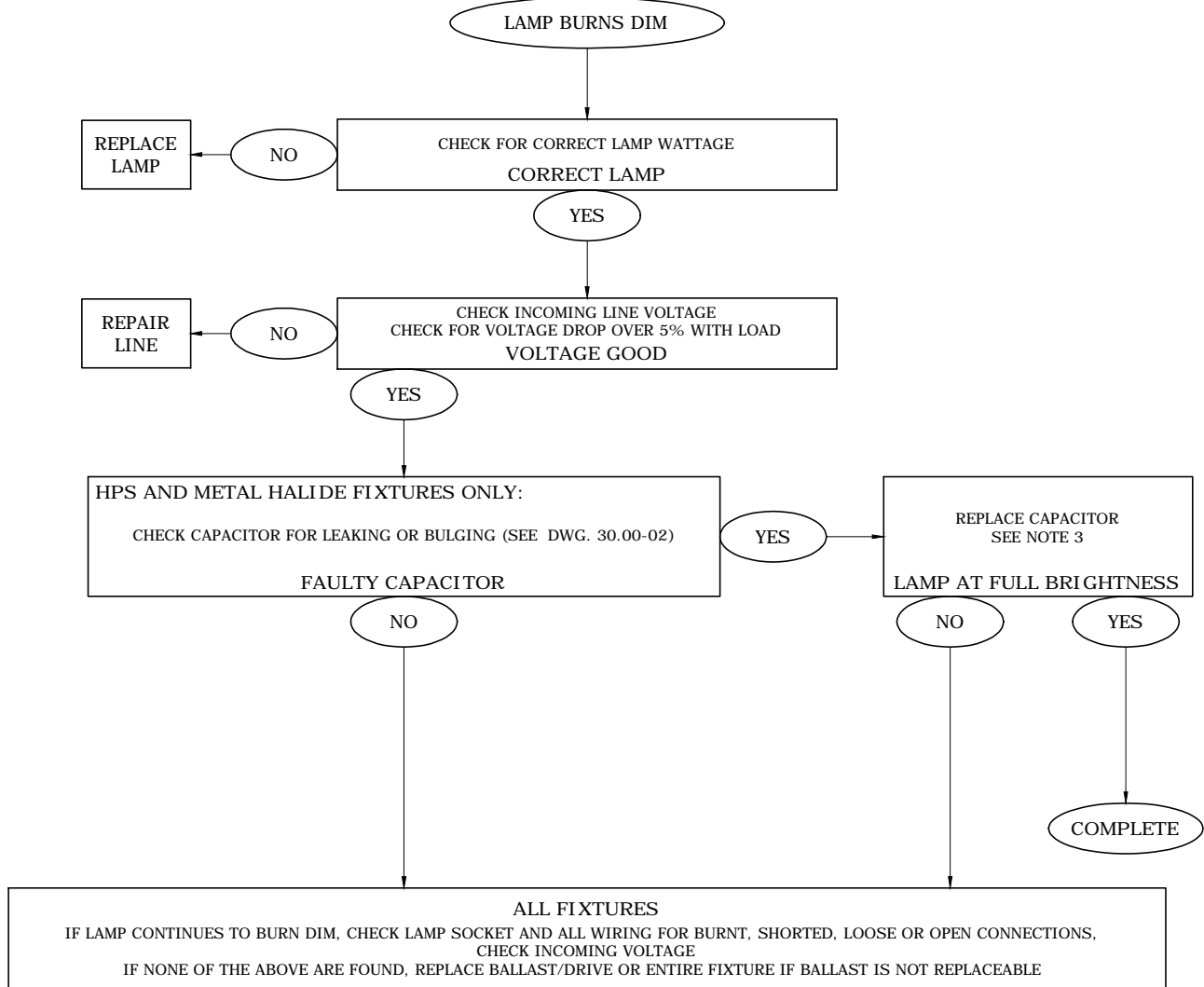
1. LED LIGHT FIXTURES USE PHOTOCELL WITH A "FAIL OFF" FEATURE ( CN 9220208023).
2. HPS LAMPS HOT RESTRIKE TIME IS 1 TO 3 MINUTES, WARM UP TIME IS 3 TO 4 MINUTES. METAL HALIDE HOT RESTRIKE TIME IS 10 TO 20 MINUTES, WARM UP TIME IS 2 TO 5 MINUTES.
3. METAL HALIDE DAY BURNERS CAN CAUSE LAMP TO SHATTER IF LEFT ON FOR AN EXTENDED PERIOD (30 DAYS).

3				
2				
1	3/6/12	DEFREITAS	JUDAH	LARSEN
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

LIGHT FIXTURE TROUBLESHOOTING GUIDE -  
LAMP BURNS DAY & NIGHT

  
**FLA** DWG. 30.00-29B

INSPECT OUTSIDE OF LIGHT FIXTURE FOR ANY SIGNS OF DAMAGE.  
TAP ON LIGHT FIXTURE AND LISTEN FOR ANY INDICATION OF ANIMAL INTRUSION.  
OPEN FIXTURE AND INSPECT FOR OBVIOUS PROBLEMS.



**NOTES:**

1. LED LIGHT FIXTURES USE PHOTOCELL WITH A "FAIL OFF" FEATURE ( CN 9220208023).
2. CYCLING IS NORMAL END OF LIFE FOR HPS LAMPS.
3. HPS LAMPS HOT RESTRIKE TIME IS 1 TO 3 MINUTES, WARM UP TIME IS 3 TO 4 MINUTES. METAL HALIDE HOT RESTRIKE TIME IS 10 TO 20 MINUTES, WARM UP TIME IS 2 TO 5 MINUTES.

3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

LIGHT FIXTURE TROUBLESHOOTING GUIDE -  
LAMP BURNS DIM



**FLA** DWG. 30.00-29C

INSPECT OUTSIDE OF LIGHT FIXTURE FOR ANY SIGNS OF DAMAGE.  
TAP ON LIGHT FIXTURE AND LISTEN FOR ANY INDICATION OF ANIMAL INTRUSION.  
OPEN FIXTURE AND INSPECT FOR OBVIOUS PROBLEMS.

LAMP CYCLES  
SEE NOTE 5

HPS AND METAL HALIDE FIXTURES:  
INSTALL GOOD LAMP, COVER PHOTOCELL  
LED FIXTURES SEE BELOW:  
LAMP CYCLING CONTINUES

NO

UNCOVER  
PHOTOCELL

YES

HPS AND METAL HALIDE FIXTURES:  
MAKE SURE LAMP IS SEATED IN SOCKET  
LAMP CYCLING CONTINUES

NO

COMPLETE

YES

ALL FIXTURES  
IF LAMP CONTINUES TO CYCLE, CHECK LAMP SOCKET AND ALL WIRING FOR BURNT, SHORTED, LOOSE OR OPEN CONNECTIONS,  
CHECK INCOMING VOLTAGE  
IF NONE OF THE ABOVE ARE FOUND, REPLACE BALLAST/DRIVE OR ENTIRE FIXTURE IF BALLAST IS NOT REPLACEABLE

NOTES:

1. LED LIGHT FIXTURES USE PHOTOCELL WITH A "FAIL OFF" FEATURE ( CN 9220208023).
2. CYCLING IS NORMAL END OF LIFE FOR HPS LAMPS.
3. LOW WATTAGE HPS LAMPS ( 50 TO 150 WATT) WITH REACTOR TYPE BALLASTS MAY CYCLE DUE TO VOLTAGE DIP FROM EQUIPMENT STARTUP.
4. HPS LAMPS HOT RESTRIKE TIME IS 1 TO 3 MINUTES, WARM UP TIME IS 3 TO 4 MINUTES. METAL HALIDE HOT RESTRIKE TIME IS 10 TO 20 MINUTES, WARM UP TIME IS 2 TO 5 MINUTES.
5. THE AGE OF A HPS LAMP CAN BE DETERMINED BY MEASURING THE VOLTAGE AT THE LAMP SOCKET. SEE DWG. 30.00-30 FOR HPS REPLACEMENT GUIDE.

3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

LIGHT FIXTURE TROUBLESHOOTING GUIDE -  
LAMP CYCLES



FLA DWG.  
30.00-29D

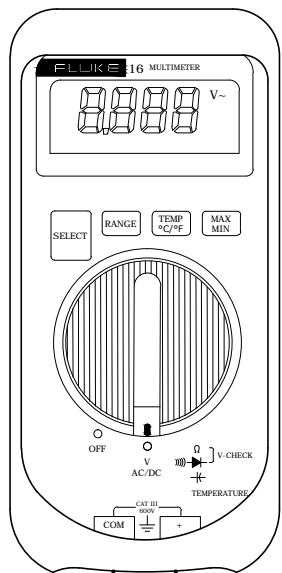


TABLE 1: HPS LAMP REPLACEMENT GUIDE

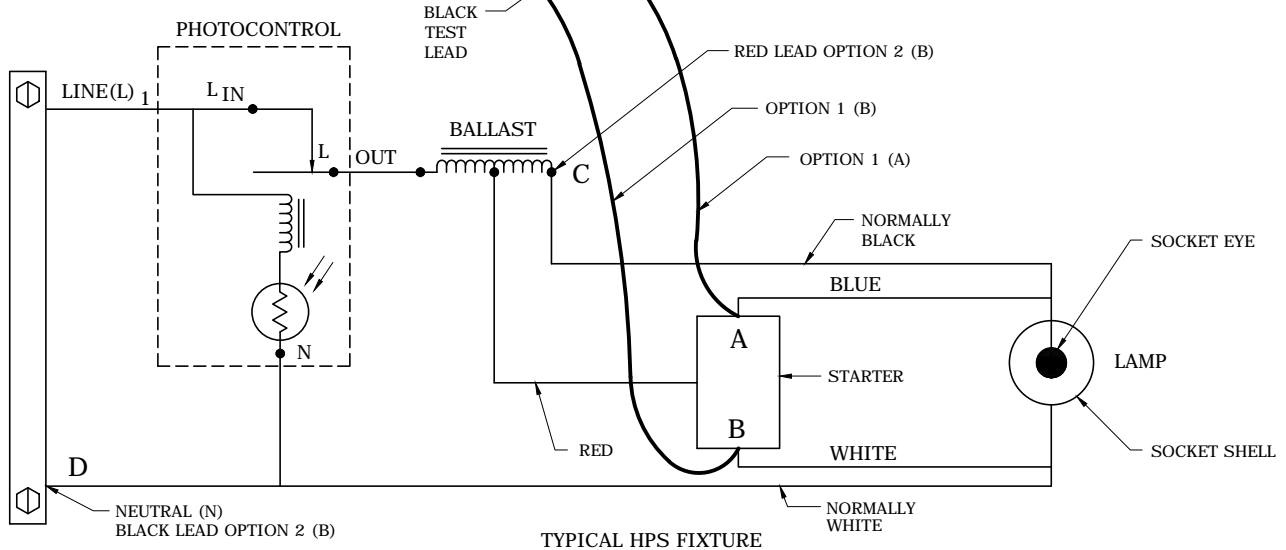
LAMP WATTAGE	LAMP LUMEN	NEW HIGH PRESSURE SODIUM VOLTAGE VALUES			RECOMMENDED VOLTAGE TO CHANGE OUT OLD HIGH PRESSURE SODIUM LAMPS
		MIN.	NOMINAL	MAX.	
70W	5800	41V	52V	62V	MORE THAN 75 VOLTS
100W	9500	42V	55V	63V	MORE THAN 75 VOLTS
150W	16000	45V	55V	64V	MORE THAN 75 VOLTS
200W	22,000	72V	100V	120V	MORE THAN 140 VOLTS
250W	28,500	72V	100V	120V	MORE THAN 140 VOLTS
400W	50,000	75V	100V	120V	MORE THAN 130 VOLTS

TABLE 2: HPS STARTER REPLACEMENT GUIDE

ANSI LAMP TYPE	LAMP WATTAGE	LAMP VOLTAGE	OPERATING VOLTAGE	DISCONNECT JUMPER	DO NOT DISCONNECT JUMPER
S62	70	55	120		X
S54	100	55			X
S55	150	55			X
S66	200	100		X	
S51	400	100	240	X	
S66	200	100		X	
S50	250	100		X	
S51	400	100		X	

**CAUTION:** FAILURE TO DISCONNECT JUMPER WHEN REQUIRED CAN CAUSE EARLY STARTER FAILURE.

**CAUTION**  
CONNECT METER TO LAMP CIRCUIT AFTER LAMP IS IGNITED. PULSES FROM THE STARTER MODULE WILL DAMAGE THE VOLTMETER.



**NOTES:**

1. USE TABLE 1 FOR CHANGING OR REPLACING HPS LAMPS.
2. USE TABLE 2 FOR REPLACING STARTER AND WHEN TO DISCONNECT RED JUMPER.

**OPTION 1 FOR READING VOLTAGE**

- A) TOUCH RED LEAD TO STARTER BOARD AT POINT "A"
- B) TOUCH BLACK LEAD TO STARTER BOARD AT POINT "B"

**OPTION 2 FOR READING VOLTAGE**

- A) TRACE THE TWO LEADS FROM THE LAMP SOCKET BACK TO POINTS "C" AND "D"
- B) TOUCH THE RED LEAD TO POINT "C" AND THE BLACK LEAD TO POINT "D"

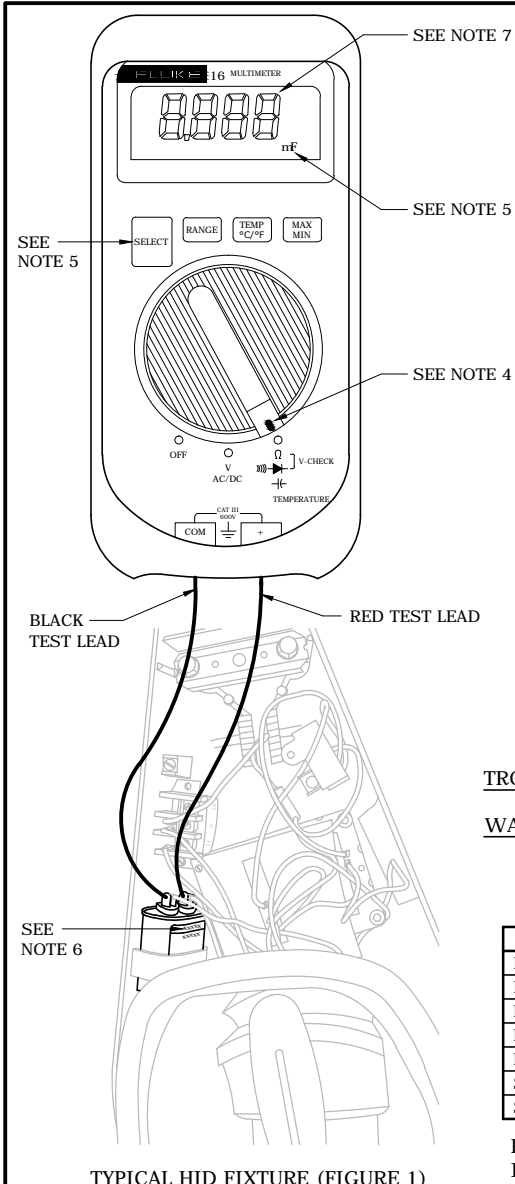
3				
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1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

MEASURING THE LAMP VOLTAGE  
OF HIGH PRESSURE SODIUM LUMINAIRES



FLA

DWG.  
30.00-30



TYPICAL HID FIXTURE (FIGURE 1)

WATTAGE & SOURCE	FIXTURE MFG.	CAP. VALUE	VOLTAGE RATING	CAPACITOR CAT. NUMBER	FIXTURE TYPE
1000W, MH/MV	COOPER	24 µF	480 VAC	9220129336	CUBE & FLOOD
1000W, MH/MV	GE	20 µF	580 VAC	9220129484	FLOOD & SHOEBOX
1000W, HPS	AEL	26 µF	525 VAC	9220142407	FLOOD, ENCL
1000W, MH/MV	AEL	24 µF	480 VAC	9220142405	FLOOD, ENCL
400W, HPS	AEL	55 µF	280 VAC	9220142411	FLOOD, ENCL
400W, HPS	GE	48 µF	280 VAC	9220136063	FLOOD, ENCL, SHOEBOX
400W, HPS	COOPER	48 µF	280 VAC	9220135809	FLOOD, ENCL, SHOEBOX
400W, MH	AEL	24 µF	400 VAC	9220142409	FLOOD, ENCL
400W, MH	COOPER	24 µF	360 VAC	9220135807	FLOOD, ENCL, SHOEBOX
400W, MH	GE	20 µF	480 VAC	9220136060	FLOOD, ENCL, SHOEBOX
250W, HPS	COOPER	35 µF	300 VAC	9220135805	FLOOD, ENCL, SHOEBOX
250W, HPS	AEL	35 µF	240 VAC	9220142413	FLOOD, ENCL
250W, HPS	GE	28 µF	330 VAC	9220136070	FLOOD, ENCL, SHOEBOX
250W, MH	COOPER	15 µF	400 VAC	9220135803	FLOOD, ENCL, SHOEBOX
250W, MH	GE	14.5 µF	580 VAC	9220136067	FLOOD, ENCL, SHOEBOX
250W, MH	AEL	15 µF	500 VAC	9220142412	FLOOD, ENCL
200W, HPS	AEL	28 µF	300 VAC	9220142414	ENCL
200W, HPS	GE	24.5 µF	280 VAC	9220136073	ENCL, SHOEBOX
150W, HPS	GE	55 µF	170 VAC	9220142417	ENCL
150W, HPS	AEL	12 µF	280 VAC	9220142416	ENCL
100W, MH	AEL	12 µF	280 VAC	9220142418	FLOOD
175W, MH	HOL	10 µF	400 VAC	9220149986	DECORATIVE
250W, HPS	HOL	32 µF	280 VAC	-	DECORATIVE

**TROUBLESHOOTING FOR DEFECTIVE CAPACITOR**

**WARNING:** DISCONNECT POWER TO THE UNIT AND DISCHARGE ALL CAPACITORS BEFORE TAKING ANY READINGS. TYPICAL CAPACITOR FAILURE INDICATION: LEAKING, BULGING, BURNED CONTACTS OR BURNED HOLES THROUGH UNIT.

LAMP CONDITION	POSSIBLE PROBLEM
DIM LAMP	CAPACITOR BELOW SPECIFICATION BY MORE THAN 5%
BRIGHT LAMP	CAPACITOR ABOVE SPECIFICATION BY MORE THAN 5%
LAMP WILL NOT LIGHT	CAPACITOR OPEN (IN CWA BALLAST)
LAMP HAS SHORT CYCLE	CAPACITOR ABOVE SPECIFICATION BY MORE THAN 5%
LAMP FLICKERING	CAPACITOR BELOW SPECIFICATION BY MORE THAN 5%
SHORT LIFE	CAPACITOR ABOVE SPECIFICATION BY MORE THAN 5%
SHORT LIFE	CAPACITOR SHORTED

REPLACING A DEFECTIVE CAPACITOR MAY NOT CORRECT THE PROBLEM IF THE ORIGINAL CAPACITOR CAUSED A BALLAST WINDING FAILURE. IN THIS CASE, A BALLAST REPLACEMENT IS REQUIRED.

HIGH REACTANCE BALLAST	
SHORT	MAY BURN UP PRIMARY WINDING
OPEN	HIGH INPUT CURRENT, PF OFF, POSSIBLE PRIMARY BALLAST WINDING BURN UP. LAMP WILL LIGHT.
LOW CAPACITANCE	INPUT CURRENT AFFECTED, PF OFF, POSSIBLE PRIMARY BALLAST WINDING BURN UP. LAMP WILL PERFORM WITHIN SPEC.
HIGH CAPACITANCE	INPUT CURRENT AFFECTED, PF OFF, POSSIBLE PRIMARY BALLAST WINDING BURN UP. LAMP WILL PERFORM WITHIN SPEC.
CWA BALLAST	
SHORT	INPUT CURRENT RUNS HIGH, POSSIBLE BALLAST BURNING UP, LAMP WILL RUN AT HIGHER VOLTAGE SHORTENING LIFE.
OPEN	LAMP WILL NOT LIGHT
LOW CAPACITANCE	NO EFFECT ON BALLAST, LAMP BURNS DIM, POSSIBLE SHORT CYCLE OF LAMP.
HIGH CAPACITANCE	INPUT CURRENT RUNS HIGH, POSSIBLE BALLAST BURNING UP. LAMP WILL RUN AT HIGHER VOLTAGE SHORTENING LIFE.

**NOTES:**

1. REMOVE PHOTOCONTROL FROM FIXTURE TO DE-ENERGIZE BALLAST. VOLTAGE MAY STILL BE PRESENT ON CERTAIN AREAS OF THE FIXTURE!
2. CONNECT METER LEADS TO CAPACITOR TERMINALS AS SHOWN IN FIGURE 1.
3. MEASURE VOLTAGE ON CAPACITOR TO VERIFY IT IS DISCHARGED.
4. ROTATE MULTIMETER DIAL TO "⌚" POSITION.
5. PRESS "SELECT" BUTTON UNTIL "µF" IS DISPLAYED.
6. MEASURE CAPACITANCE VALUE AND COMPARE IT TO VALUE ON CAPACITOR LABEL.
7. REPLACE CAPACITOR IF THE MEASURED VALUE IS MORE THAN +/- 10% OF THE LABEL VALUE.
8. CONTACT LIGHTING SOLUTIONS FOR CAPACITOR REPLACEMENT AVAILABILITY. SEE TABLE 1.
9. THE 1000W MH CAPACITOR FOR ALL MANUFACTURERS WILL WORK IN BOTH MH AND MV 1000W FIXTURES.

3				
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0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

MEASURING THE CAPACITOR VALUE  
IN HID LUMINAIRES

**FLA** DWG. 30.00-32

STREET SIGN BANDING POLICY

COMPANY AGREES TO ALLOW GOVERNMENTAL CUSTOMER TO BAND STREET SIGNS ON STANDARD OR NON-STANDARD POLES OR POSTS UNDER THE FOLLOWING CONDITIONS:

- A. THE STREET SIGN SURFACE AREA SHALL NOT EXCEED 4 SQUARE FEET AND SHALL BE CONSTRUCTED OF EITHER ALUMINUM OR FIBERGLASS. THE BANDING MATERIAL SHALL BE CONSTRUCTED OF STAINLESS STEEL, ALUMINUM OR PLASTIC AND THE ATTACHMENT SHALL NOT DAMAGE THE POLE OR POST.
- B. IF COMPANY LATER DETERMINES THAT THE STRUCTURAL INTEGRITY OF ITS POLES OR POSTS ARE BEING ADVERSELY IMPACTED OR COULD BE ADVERSELY IMPACTED BY THE ATTACHMENT OF THE STREET SIGNS TO ITS POLES OR POSTS, CUSTOMER AGREES TO REMOVE THE SIGNS AT COMPANY'S REQUEST AND AT NO COST TO COMPANY.
- C. CUSTOMER SHALL BAND THE STREET SIGNS AROUND THE POLES OR POSTS AFTER THE POLES OR POSTS HAVE BEEN INSTALLED BY THE COMPANY.
- D. COMPANY SHALL NOT BE RESPONSIBLE FOR REMOVING AND/OR REBANDING CUSTOMER'S STREET SIGNS WHENEVER POLES OR POSTS HAVE TO BE REPLACED OR REPAIRED.
- E. THE BOTTOM OF BANDED STREET SIGNS SHALL NOT BE LOWER THAN 11 FEET FROM THE GROUND AT THE BASE OF THE POLE OR POST.
- F. CUSTOMER AGREES TO INDEMNIFY, DEFEND, AND SAVE HARMLESS COMPANY FROM ALL CLAIMS, LOSSES, INJURIES, DAMAGES AND OTHER DEMANDS MADE AGAINST IT AND ALL COSTS AND EXPENSES INCURRED BY COMPANY ARISING OUT OF THIS AGREEMENT UNLESS SAME SHALL HAVE RESULTED FROM SOLE NEGLIGENCE OF COMPANY.

NOTES:

- A. THIS POLICY DOES NOT INCLUDE ATTACHMENT OF BANNER ARMS, BANNERS OR HOLIDAY DECORATIONS TO PROGRESS ENERGY DECORATIVE POLES.
- B. THE COMPANY WILL NOT ALLOW CITIES OR TOWNS TO ATTACH TRAFFIC WALK SIGNALS OR TRAFFIC CAMERAS OR DETECTION DEVICES ON STREET LIGHT POLES. FOR ADDITIONAL ASSISTANCE, CONTACT LIGHTING SELECTION UNIT.

3				
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1				
0	7/26/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

STREET SIGN BANDING POLICY



**FLA**

DWG.  
30.01-01

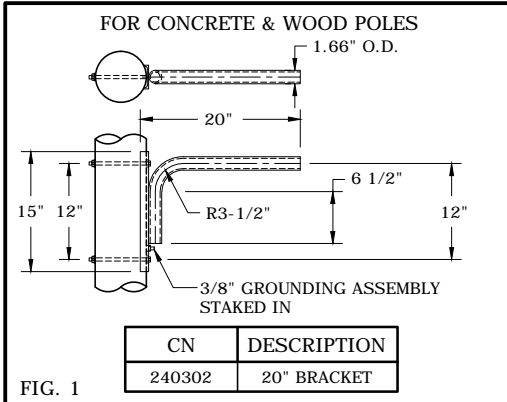


FIG. 1

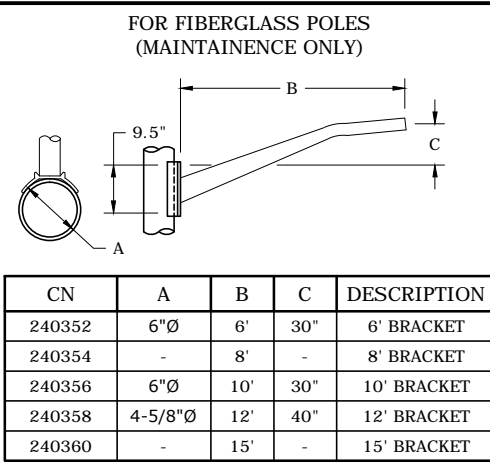


FIG. 2

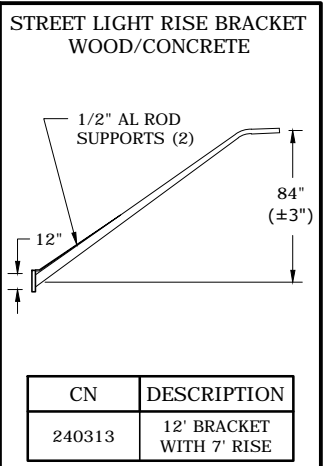


FIG. 3

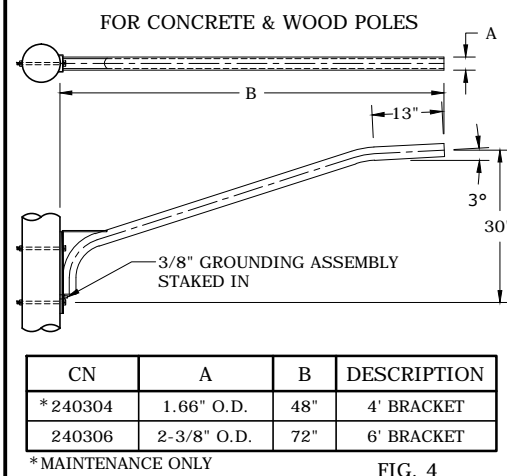


FIG. 4

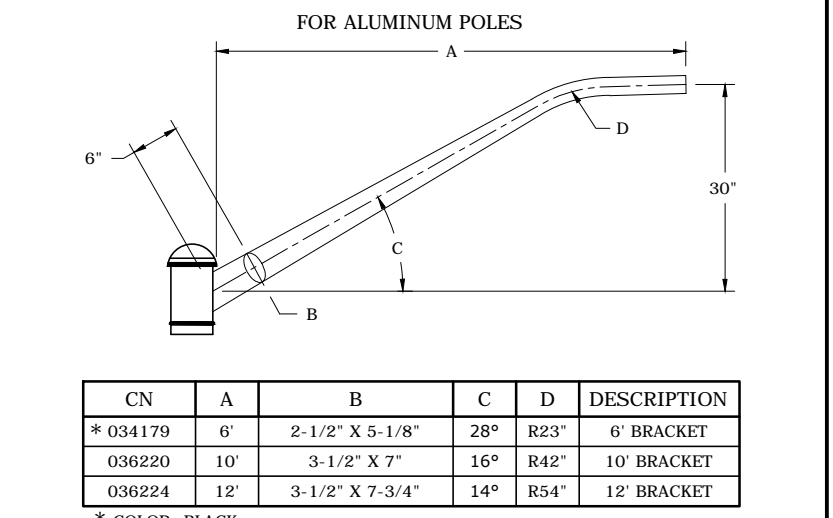


FIG. 5

\* COLOR: BLACK

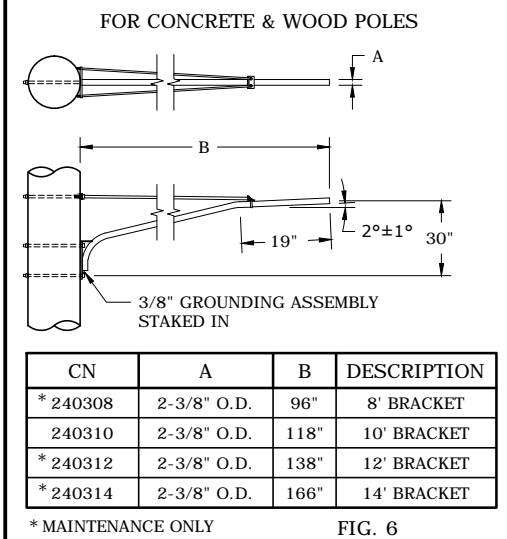
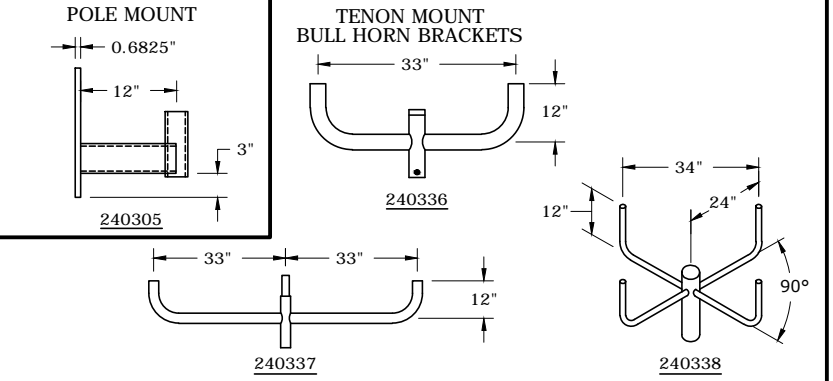


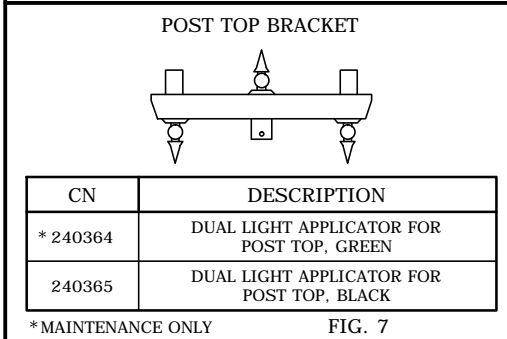
FIG. 6



CN	MAX SIZE OF EACH FLOODLIGHT		BULLHORN SIZE			POLE TENON SIZE	DESCRIPTION
	EPA (SQ. FT.)	WEIGHT (LBS.)	EPA (SQ. FT.)	WEIGHT (LBS.)	FIXED TENON SIZE		
240305*	-	-	-	-	2 3/8"	-	SINGLE
240336	16.0	130	1.1	23	2 3/8"	3"	DOUBLE
240337	10.0	130	1.8	36	2 3/8"	3"	TRIPLE
240338	7.5	130	1.6	49	2 3/8"	3"	QUADRUPLE

\* NOTE: FLOODLIGHT BRACKET (CN 240305) IS FOR SINGLE FLOODLIGHT INSTALLATION ONLY.

FIG. 8



\* MAINTENANCE ONLY

FIG. 7

3				
2				
1	3/6/12	DEFREITAS	JUDAH	LARSEN
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

STREET LIGHT BRACKETS

FLA DWG. 30.02-25



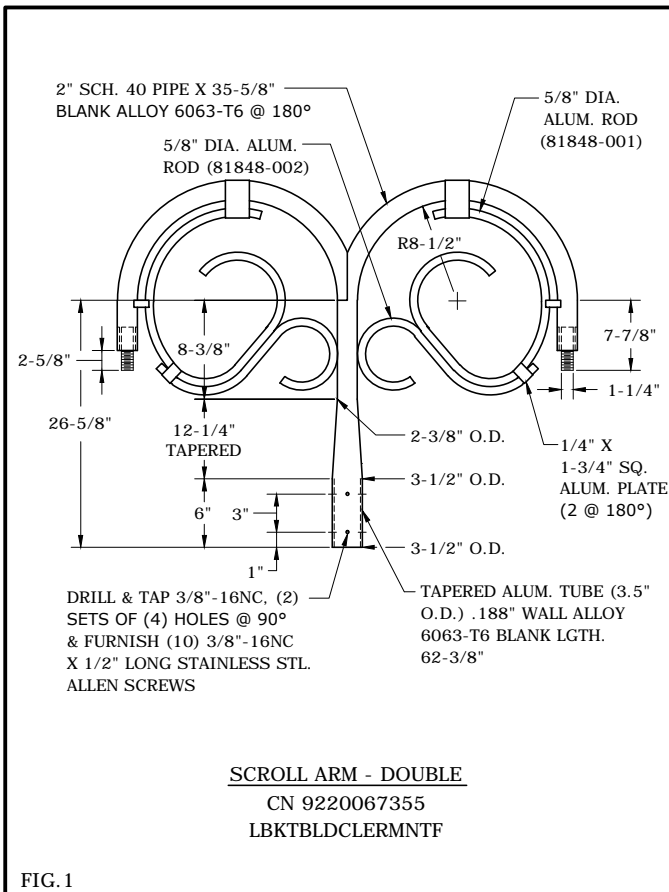


FIG. 1

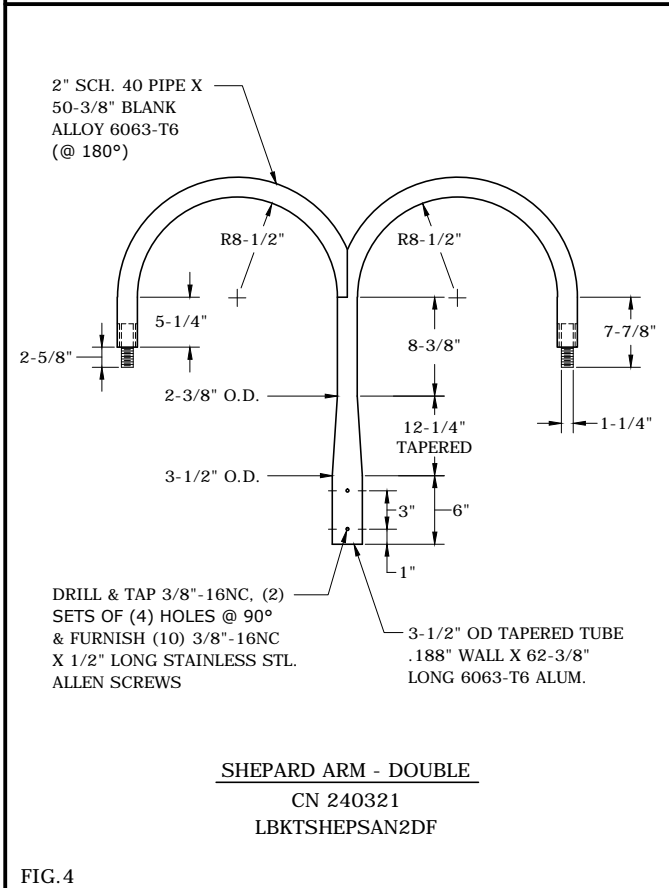


FIG. 4

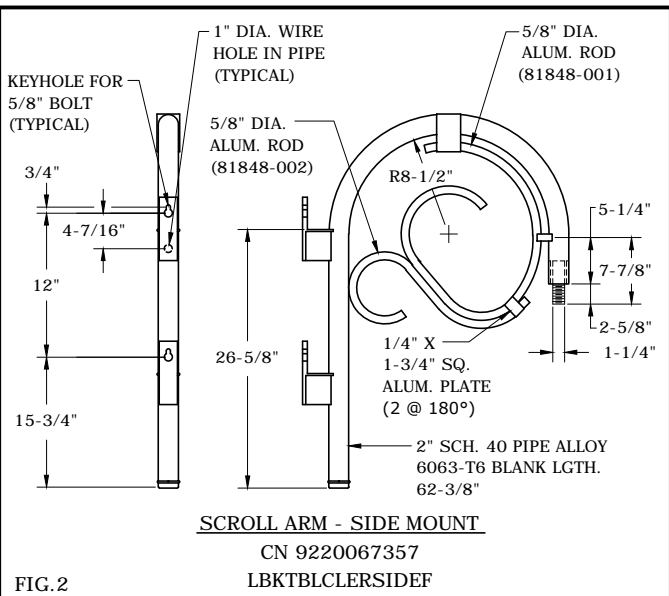


FIG. 2

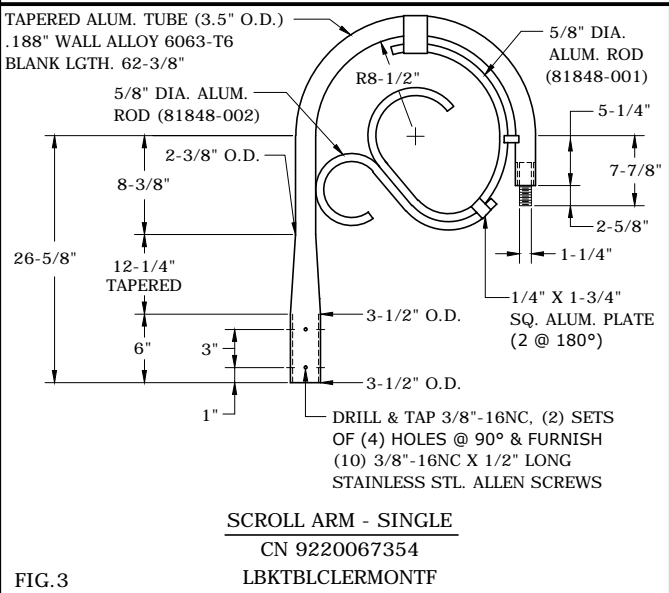


FIG. 3

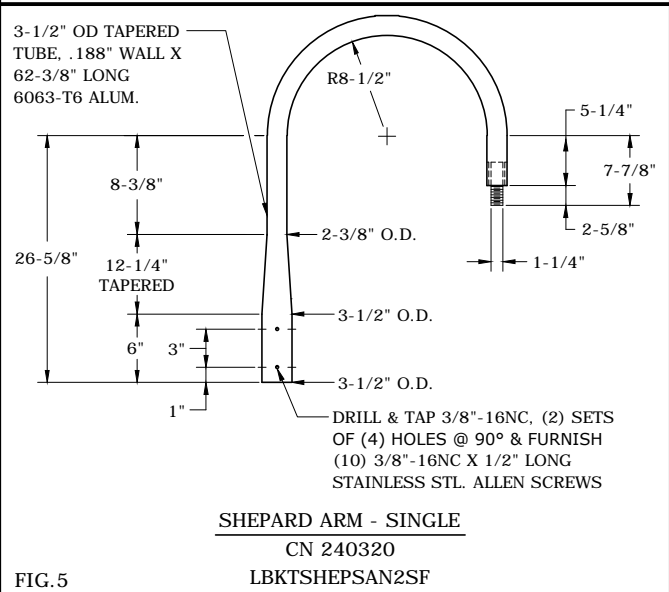


FIG. 5

3				
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1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

PIPE BRACKET ASSEMBLIES

**FLA** DWG. 30.02-26

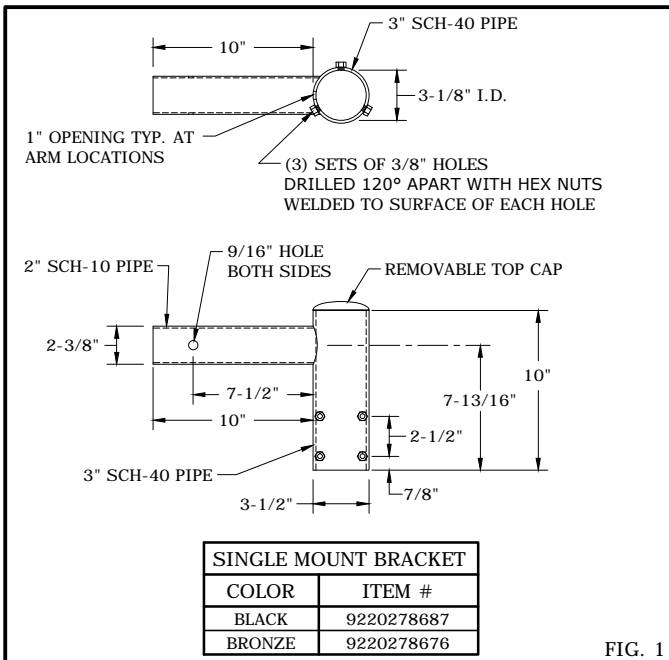


FIG. 1

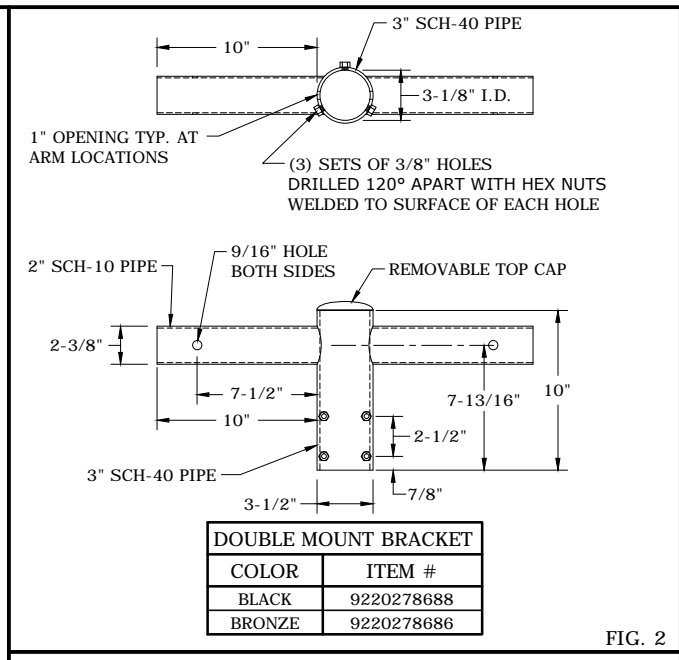


FIG. 2

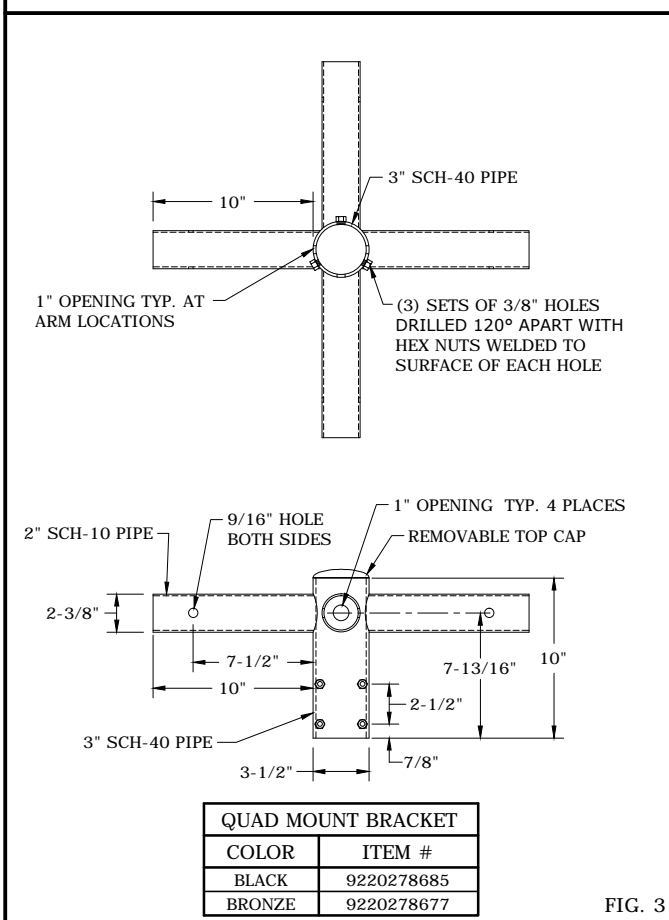


FIG. 3

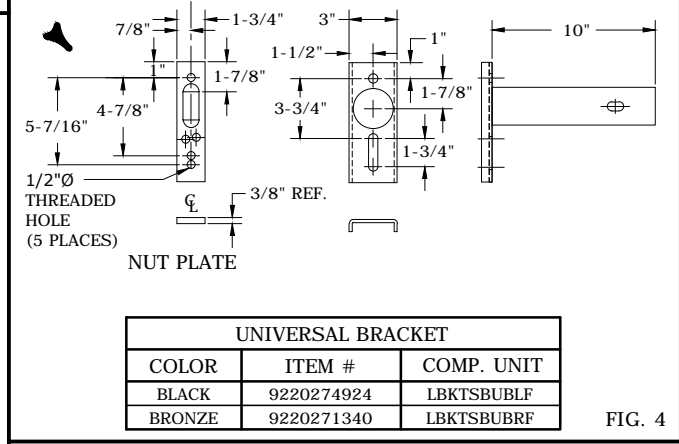


FIG. 4

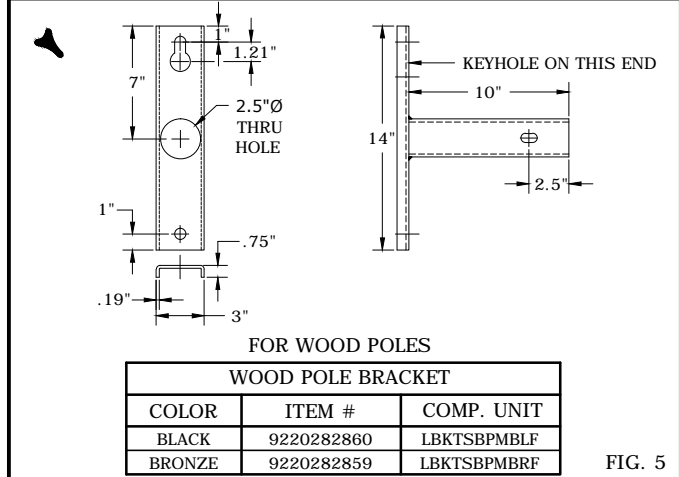


FIG. 5

NOTES:

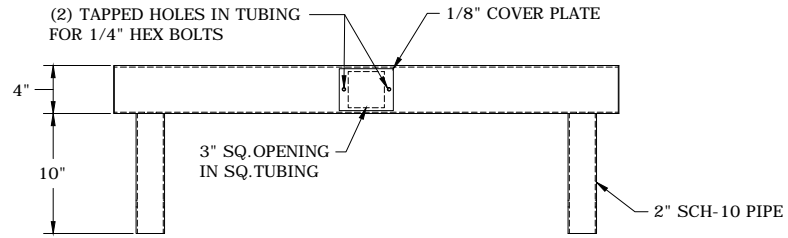
- BRACKETS IN FIG. 1-3 ARE DESIGNED FOR 3" X 4" TALL MINIMUM TENON.
- SAFETY BOLT INCLUDED WITH LUMINAIRES.
- DO NOT INSTALL LIGHT FIXTURES UNTIL POLE IS INSTALLED AND BACKFILLED.



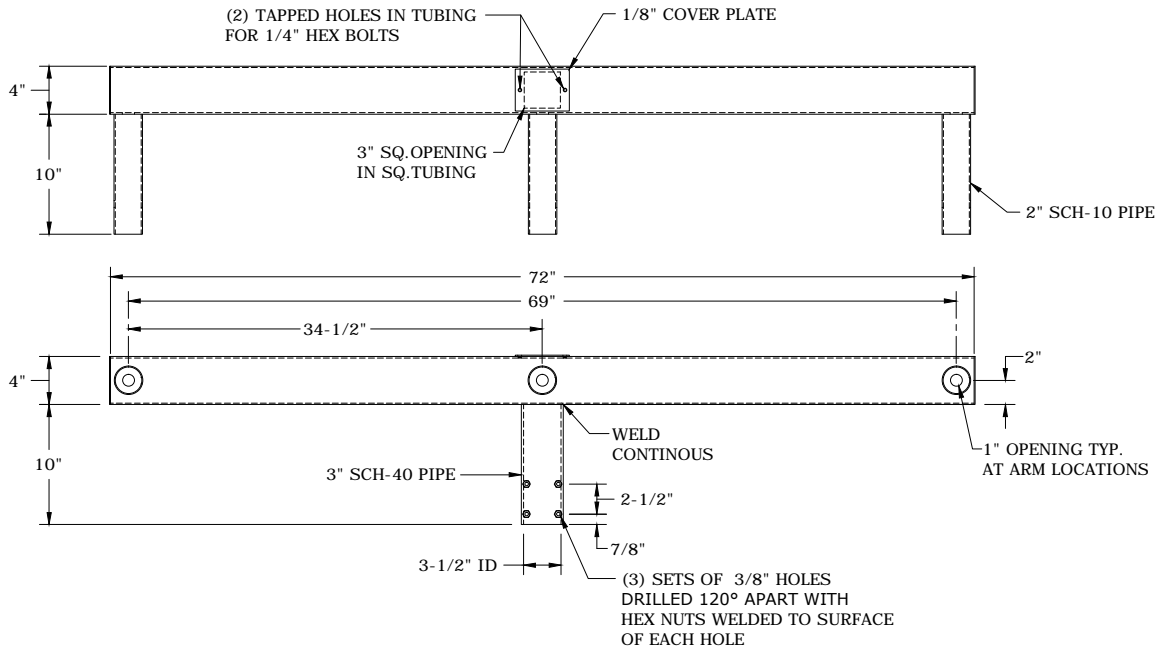
DEC	DEM	DEP	DEF
			X
30.02-27A			

3				
2				
1	7/24/15	DEFREITAS	GUY	COWLING
0	3/31/15	DEFREITAS	COWLING	HENSON
REVISED	BY	CK'D	APPR.	

BRACKETS - LARGE LED SHOEBOX LUMINAIRES



DOUBLE SIDE MOUNT BRACKET	
BLACK	9220278684
BRONZE	9220278681



TRIPLE SIDE MOUNT BRACKET	
BLACK	9220278682
BRONZE	9220278765

**NOTES:**

1. BRACKETS ARE DESIGNED FOR 3" X 4" TALL MINIMUM TENON.
2. SAFETY BOLT INCLUDED WITH LUMINAIRES.
3. DO NOT INSTALL LIGHT FIXTURES UNTIL POLE IS INSTALLED AND BACKFILLED.



DEC	DEM	DEP	DEF
			X

**BRACKETS - LARGE LED SHOEBOX LUMINAIRES**

30.02-27B

3				
2				
1				
0	3/31/15	DEFREITAS	COWLING	HENSON
REVISED	BY	CK'D	APPR.	

PROGRESS ENERGY FLORIDA

STANDARD PROCEDURES BULLETIN

INSTALLATION

PHOTOCONTROLS ARE SENSITIVE INSTRUMENTS AND CARE MUST BE EXERCISED IN THEIR HANDLING TO AVOID POSSIBLE DAMAGE. PHOTOCONTROLS SHOULD BE INSTALLED WITH THE WINDOW FACING NORTH UNLESS SUCH ORIENTATION WOULD CAUSE THE WINDOW TO FACE REFLECTED LIGHT FROM THE LUMINAIRE OR TOWARD OTHER TYPES OF LIGHTING. THE MANUFACTURERS OF THESE PHOTOCONTROLS RECOMMEND THAT THE WINDOW FACE NORTH FOR OPTIMAL TURN-ON AND TURN-OFF TIME.

FOR MOST LUMINAIRES, PROPER ORIENTATION IS ACHIEVED BY LOOSENING ONE OR TWO SCREWS IN THE PHOTOCONTROL RECEPTACLE, TURNING THE "N" ARROW TOWARD NORTH, TIGHTENING THE SCREWS, THEN INSERTING THE PHOTOCONTROL INTO THE RECEPTACLE AND TURNING CLOCKWISE TO LOCK IN POSITION. FOR OTHER LUMINAIRES, PLACE THE PHOTOCONTROL INTO THE RECEPTACLE, LIFT UPWARD AND TURN UNTIL 'N' ARROW POINTS TOWARD NORTH. THEN TURN CLOCKWISE UNTIL IT IS ORIENTED TO "NORTH". THIS ALSO LOCKS THE PHOTOCONTROL IN THE RECEPTACLE.

SOME DECORATIVE POST TOP FIXTURES REQUIRE ROTATING THE ENTIRE LUMINAIRE TO ACHIEVE A NORTHERLY ORIENTATION OF PE.

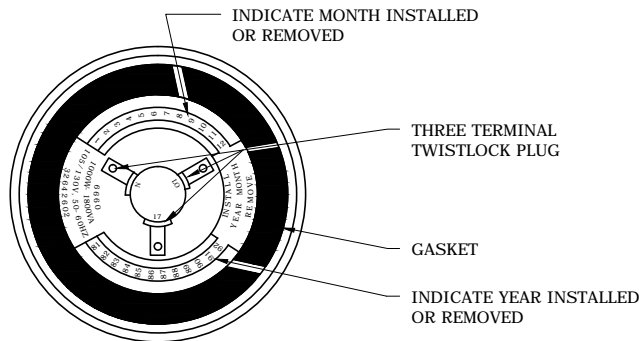
DO NOT INSERT PHOTOCONTROL INTO RECEPTACLE UNTIL THE BRACKET AND LUMINAIRE HAVE BEEN MOUNTED. THE ROUGH HANDLING ASSOCIATED WITH BRACKET AND LUMINAIRE INSTALLATION CAN CAUSE DAMAGE TO THE PHOTOCONTROL.

OPERATIONAL TESTING

AFTER THE PHOTOCONTROL IS INSERTED INTO THE RECEPTACLE, IT SHOULD BE TESTED BY SIMULATING DARKNESS. THE PE CONTROL BOXES ARE EXCELLENT TO USE TO COVER THE CONTROL FOR TESTING. A WORKMAN SHOULD NOT TAKE OFF HIS SAFETY GLOVE TO MAKE THE TEST. (REFER TO SAFETY MANUAL) THE PHOTOCONTROL SHOULD BE OPERATED A COUPLE OF TIMES TO LOOSEN THE CONTACTS AND THEN VERY SLOWLY UNCOVER THE CONTROL WINDOW. IF SEVERE CHATTERING OF THE CONTACTS IS EVIDENT, THE UNIT SHOULD BE RETURNED. A SLIGHT HUM AND CLICK ARE TO BE EXPECTED. PHOTOCONTROLS ARE PURCHASED FROM VARIOUS SUPPLIERS. SOME REACT INSTANTANEOUSLY WHILE OTHERS HAVE A BUILT-IN TIME DELAY. ALLOW UP TO 20 SECONDS FOR PROPER SWITCHING.

DATE CODING

IN ORDER TO DETERMINE PHOTOCONTROL LIFE PERFORMANCE, EACH NEW PHOTOCONTROL SHALL BE DATE CODED AS SHOWN BELOW:



SYMBOL FOR INSTALLATION SHALL BE (/) OR (\).  
SYMBOL FOR REMOVAL SHALL BE (X).

MONTH  
1 2 3 4 5 6 7 8 9 10 ~~X~~ 12

YEAR  
81 82 83 ~~X~~ THROUGH 92

INSTALLED FEBRUARY, 1981; REMOVED OCTOBER, 1984

THESE SLASHES CAN BE SCRATCHED INTO PHOTOCONTROL BASE WITH ANY POINTED INSTRUMENT; I.E., KNIFE KNIFE, SCREWDRIVER, ETC.

NOTE: SOME MANUFACTURERS OF PHOTOCONTROLS PLACE THE DATE CODING SYMBOLS AT DIFFERENT LOCATIONS OR MAY NEED TO BE HAND WRITTEN IN AN ASSIGNED SPACE. IN ALL CASES, DATE CODING IS REQUIRED.

3				
2				
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0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

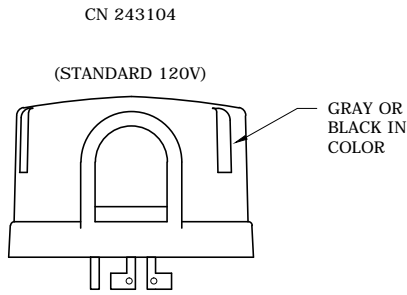
PHOTOCONTROL INSTALLATION AND TESTING



**FLA**

DWG.  
30.03-01

FIG. 1

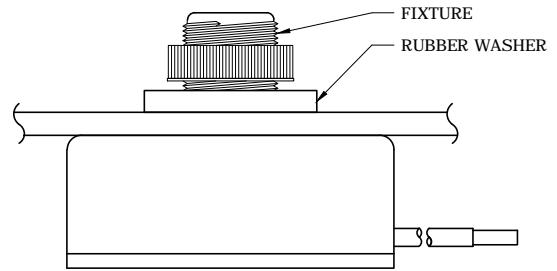


NOTES:

1. USE STANDARD BLACK/OR GRAY HIGH TEMP 120V PHOTOCONTROL ON ALL 120V INSTALLATIONS OF 70W-1000W HPS, MV, OR MH.
2. THIS STANDARD CONTROL IS REDESIGNED FOR HIGH TEMP RATING.

FIG. 4

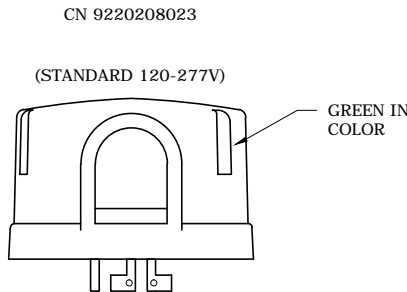
BUTTON-TYPE  
CN 243108  
\*FOR MAINTENANCE ONLY



NOTES:

1. BUTTON-TYPE HAS A 20 SEC. TIME-DELAY BEFORE OPERATING.

FIG. 2

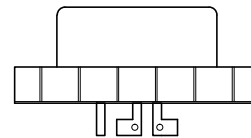


NOTES:

1. USE GREEN SSL 120-277V PHOTOCONTROL ON ALL INSTALLATIONS OF LED LUMINAIRES.
2. THIS PHOTOCONTROL IS A "FAIL-OFF" TYPE.

FIG. 5

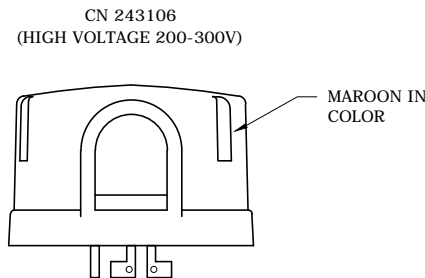
RECEPTACLE BY-PASS/SHORTING CAP  
CN 242803



NOTES:

1. USE FOR SWITCHING LIGHTS THAT ARE GROUP CONTROLLED ON A LIGHTING CIRCUIT.

FIG. 3

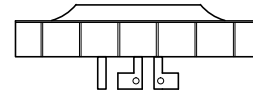


NOTES:

1. THESE HIGH VOLT-HIGH TEMPERATURE CONTROLS ARE TO BE USED ON INSTALLATIONS SERVED FROM A 277 VOLT SOURCE. A DRY TYPE TRANSFORMER IS NOT NEEDED WHEN USING THIS PHOTOCONTROL.
2. THIS HIGH VOLTAGE CONTROL WILL NOT OPERATE ON A 120 VOLT SOURCE.
3. WHEN A 277 VOLT SOURCE IS USED TO FEED A FIXTURE WITH A MULTI-VOLTAGE BALLAST. CHANGE THE VOLTAGE TAP TO 277 VOLTS AND MOVE THE COMMON LEAD TO THE N POSITION. (SEE DWG. 30.12-20, FIGURE C).

FIG. 6

RECEPTACLE OPEN-CAP  
CN 13431101

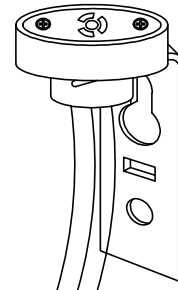


NOTES:

1. TO BE USED FOR DISCONNECTING CUSTOMER FOR NON-PAY WITHOUT REMOVING THE FIXTURE FROM SERVICE.

FIG. 7

BRACKET FOR PE RECEPTACLE  
MOUNTED ON WOOD POLES ONLY  
CN 243304



NOTES:

1. THIS CU INCLUDES A RECEPTACLE BRACKET AND A STANDARD PE CONTROL (OUTLINED IN FIG. 1).

3				
2				
1	4/2/12	DEFREITAS	JUDAH	LARSEN
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

➤ PHOTOCONTROLS, BYPASS CAPS,  
OPEN CAPS AND BRACKET

**FLA** DWG.  
30.03-05

CONVENTIONAL SODIUM VAPOR LUMINAIRES (GOLD BACKGROUND)



50 WATT, 4000 LUMEN  
CN 250603



100 WATT, 9500 LUMEN  
CN 250601



150 WATT, 16,000 LUMEN  
CN 250605



200 WATT, 22,000 LUMEN  
CN 250606



250 WATT, 28,500 LUMEN  
CN 250602

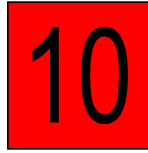


400 WATT, 50,000 LUMEN  
CN 250604

METAL HALIDE (RED BACKGROUND)



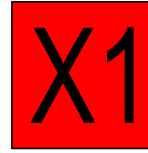
175 WATT, 14,000 LUMEN  
CN 250683



100 WATT, 9000 LUMEN  
CN 250686



400 WATT, 40,000 LUMEN  
CN 250687

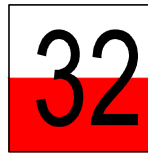


1000 WATT, 110,000 LUMEN  
CN 250688

METAL HALIDE - PULSE START (RED BACKGROUND)

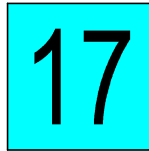


150 WATT, 12,000 LUMEN  
UNIVERSAL BURN  
CN 9220183630

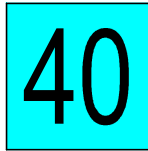


320 WATT, 30,000 LUMEN  
BASE UP HORIZONTAL BURN  
CN 9220183634

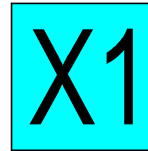
MERCURY VAPOR LUMINAIRES (BLUE BACKGROUND)



175 WATT, 7000 LUMEN  
CN 250103

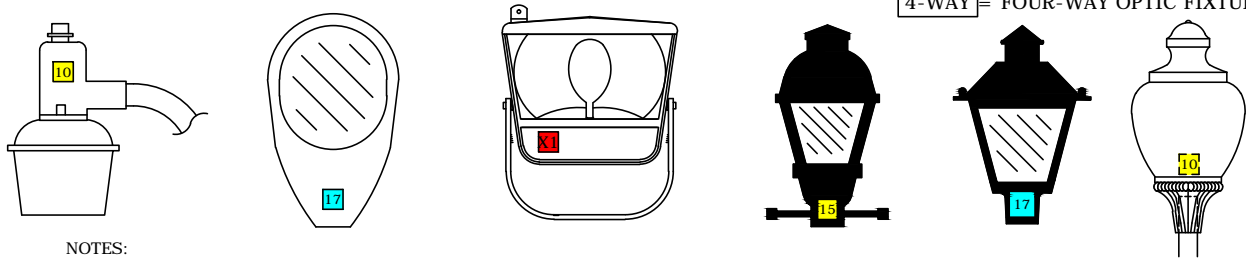


400 WATT, 21,000 LUMEN  
CN 250106



1000 WATT, 60,000 LUMEN  
CN 250108

LOCATION OF DECAL ON LUMINAIRES



FWT = FORWARD THROW  
FIXTURE

4-WAY = FOUR-WAY OPTIC FIXTURE

NOTES:

1. FIXTURE WILL COME FROM MANUFACTURER WITH DECALS ATTACHED.
2. DECAL NUMERALS ARE THE FIRST TWO DIGITS OF RATED LAMP WATTAGE, WITH THE EXCEPTION OF THE NUMERAL "X1".
3. WHEN INSTALLING A FLOODLIGHT, POST LUMINAIRE, OR AN OLDER UNIDENTIFIED ROADWAY OR SEMI-ENCLOSED LUMINAIRE, ATTACH PROPER DECAL ON LUMINAIRE IN LOCATION SHOWN. MAKE SURE SURFACE IS CLEAN AND DRY BEFORE ATTACHMENT. RUB OVER DECAL AFTER ATTACHMENT TO ELIMINATE ANY BUBBLES BENEATH THE SURFACE.
4. MOUNT DECALS ON ROADWAY LUMINAIRES SUCH THAT THEY APPEAR UPRIGHT WHEN STANDING BENEATH THE LUMINAIRE, FACING THE POLE AND LOOKING UP. DECALS ON FLOODLIGHTS, SEMI-ENCLOSED LUMINAIRES AND POST LUMINAIRES SHALL BE MOUNTED UPRIGHT AND PLUMB. DECALS ON SEMI-ENCLOSED FIXTURES SHALL BE INSTALLED ON THE SIDE FACING ONCOMING TRAFFIC.
5. DO NOT ATTACH LARGE (3" X 3") DECALS TO POST LUMINAIRES. USE SMALLER (2" X 2") DECALS AND MOUNT ON TENON SLIPFITTER. MOUNT DECAL APPROXIMATELY 1/4" FROM BOTTOM OF FIXTURE.
6. WHEN REPLACING A WORN DECAL, ATTEMPT TO REMOVE THE OLD DECAL AND REPLACE IT WITH THE PROPER DECAL IN THE SAME LOCATION. IF THE OLD DECAL CANNOT BE REMOVED, CUT OFF ALL RAISED EDGES OR CORNERS, CLEAN AND ATTACH NEW DECAL OVER THE OLD DECAL.
7. DECALS FOR LUMINAIRES OTHER THAN THOSE SHOWN ABOVE SHALL BE INSTALLED IN LOCATIONS WHERE THEY WILL BE MOST VISIBLE FROM THE ROADWAY OR OTHER AREA BEING LIGHTED.
8. CLASS CODE WILL NO LONGER BE REQUIRED.

3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

LUMINAIRE IDENTIFICATION DECALS



FLA

DWG.  
30.04-01

LED (LIGHT EMITTING DIODE) LUMINAIRES (WHITE BACKGROUND)

**95  
LED**

95W LED  
5000 DELIVERED LUMENS

**157  
LED**

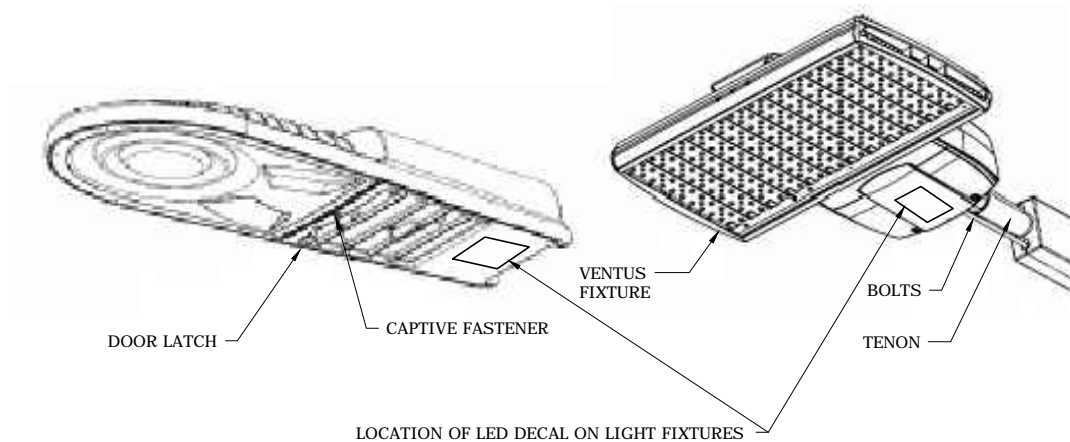
157W LED  
10,000 DELIVERED LUMENS

**206  
LED**

206W LED  
13,500 DELIVERED LUMENS

**309  
LED**

309W LED  
21,000 DELIVERED LUMENS




NOTES:

1. FIXTURE TO COME FROM MANUFACTURER WITH DECALS ATTACHED.
2. DECAL NUMBERS ARE THE FIRST TWO OF THREE DIGITS RELATED TO WATTAGE.
3. MOUNT DECALS ON FIXTURES SUCH THAT APPEAR UPRIGHT WHEN STANDING BENEATH THE FIXTURE, FACING THE POLE LOOKING UP.
4. WHEN REPLACING A WORN DECAL, ATTEMPT TO REMOVE THE OLD DECAL AND REPLACE IT WITH THE PROPER DECAL IN THE SAME LOCATION. IF THE OLD DECAL CANNOT BE REMOVED, CUT OFF THE RAISED EDGES OR CORNERS, CLEAN AND ATTACH NEW DECAL OVER THE OLD DECAL.

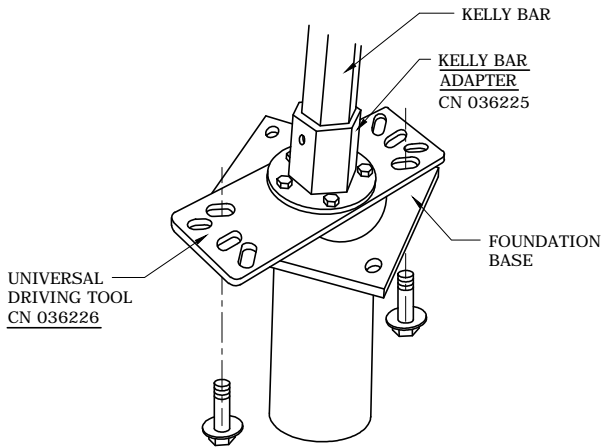
3				
2				
1				
0	4/2/12	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

LED LUMINAIRE IDENTIFICATION DECALS



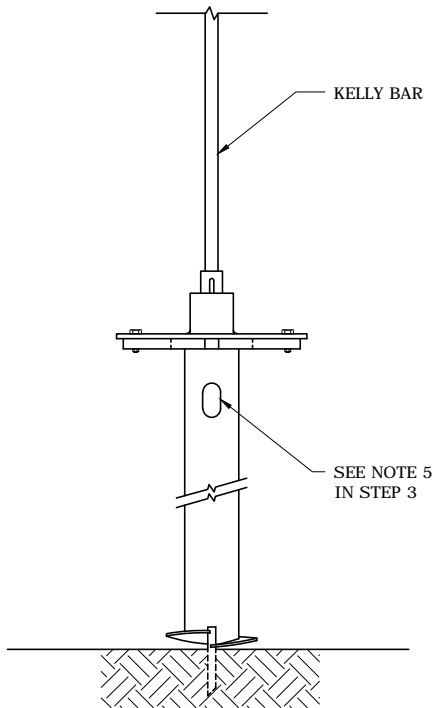
**FLA** DWG.  
30.04-02

**STEP 1**



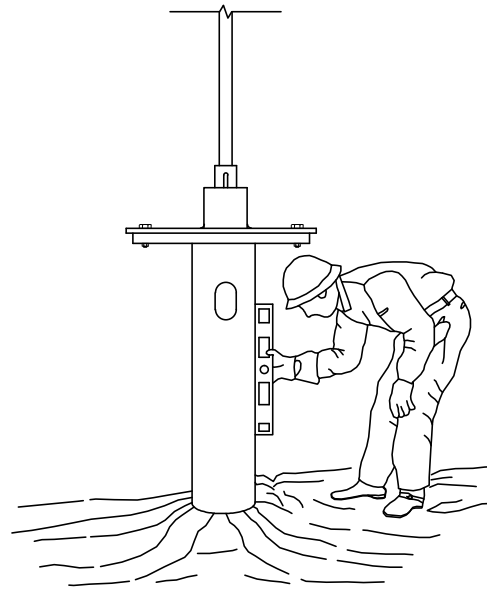
1. REMOVE AUGER IF ATTACHED.
2. ATTACH DRIVE TOOL AND KELLY BAR ASSEMBLY TO SCREW-IN FOUNDATION.
3. USE BOLTS SUPPLIED WITH FOUNDATION TO ATTACH DRIVE TOOL ASSEMBLY.

**STEP 2**



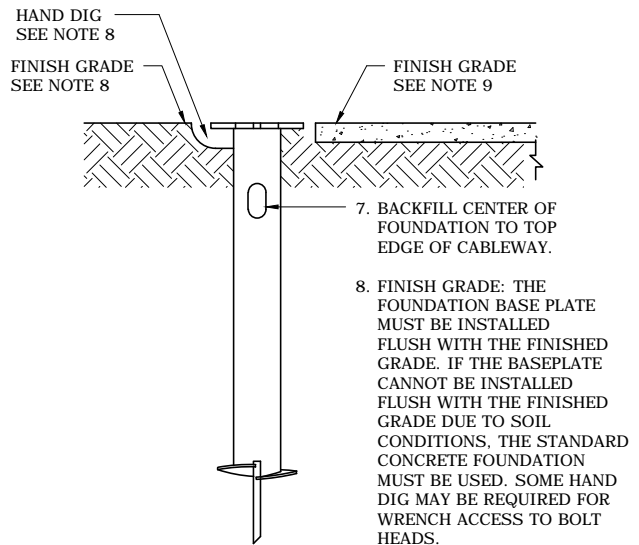
4. RAISE THE KELLY BAR UNTIL THE FOUNDATION SWINGS FREE OF THE GROUND POSITION WITH THE POINT OF THE FOUNDATION OVER THE STAKED LOCATION OF THE STREETLIGHT. LOWER THE KELLY BAR UNTIL THE POINT OF THE FOUNDATION IS FORCED INTO THE GROUND AND THE HELIX IS FLUSH WITH THE GROUND SURFACE.

**STEP 3**



5. TAPE OVER BOTH CABLE ENTRANCE HOLES (TAPE AROUND FOUNDATION) WITH BLACK VINYL ELECTRICAL TAPE TO PREVENT FILL DIRT FROM ENTERING CABLEWAY.
6. APPLY DOWNWARD PRESSURE ON THE FOUNDATION AND ROTATE IT IN THE "DIG" DIRECTION. WHEN THE HELIX HAS PENETRATED APPROXIMATELY 1'-0" INTO THE GROUND, PLUMB THE FOUNDATION USING A CARPENTER'S LEVEL. CONTINUE TO INSTALL FOUNDATION AND REPLUMB AS NECESSARY. WHEN THE BASEPLATE OF THE FOUNDATION IS TO THE CORRECT ELEVATION, REMOVE THE KELLY BAR AND DRIVE TOOL FROM THE FOUNDATION.

**STEP 4**



7. BACKFILL CENTER OF FOUNDATION TO TOP EDGE OF CABLEWAY.
8. FINISH GRADE: THE FOUNDATION BASE PLATE MUST BE INSTALLED FLUSH WITH THE FINISHED GRADE. IF THE BASEPLATE CANNOT BE INSTALLED FLUSH WITH THE FINISHED GRADE DUE TO SOIL CONDITIONS, THE STANDARD CONCRETE FOUNDATION MUST BE USED. SOME HAND DIG MAY BE REQUIRED FOR WRENCH ACCESS TO BOLT HEADS.
9. CONCRETE SIDEWALK: THE FOUNDATION MUST BE INSTALLED PRIOR TO THE SIDEWALK BEING POURED. LEVEL THE TOP OF THE BASEPLATE SO THAT IT WILL BE FLUSH WITH THE FINISHED SIDEWALK GRADE.

3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

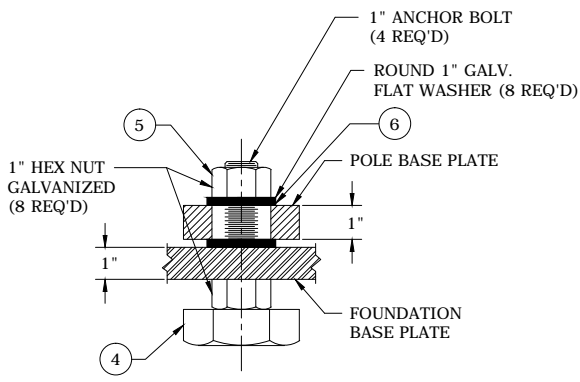
**INSTALLATION DETAILS FOR  
SCREW ANCHOR FOUNDATION  
USING ALUMINUM POLES**



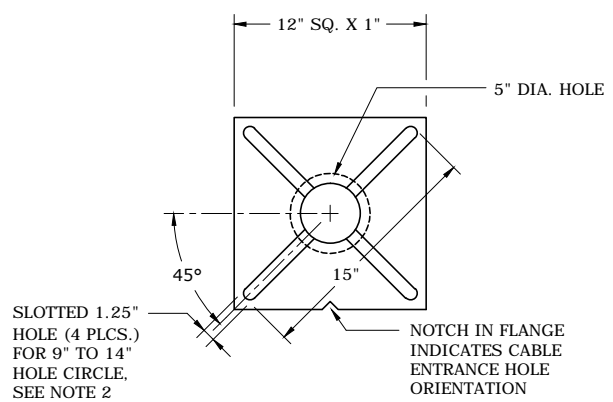
**FLA**

DWG.  
30.05-15

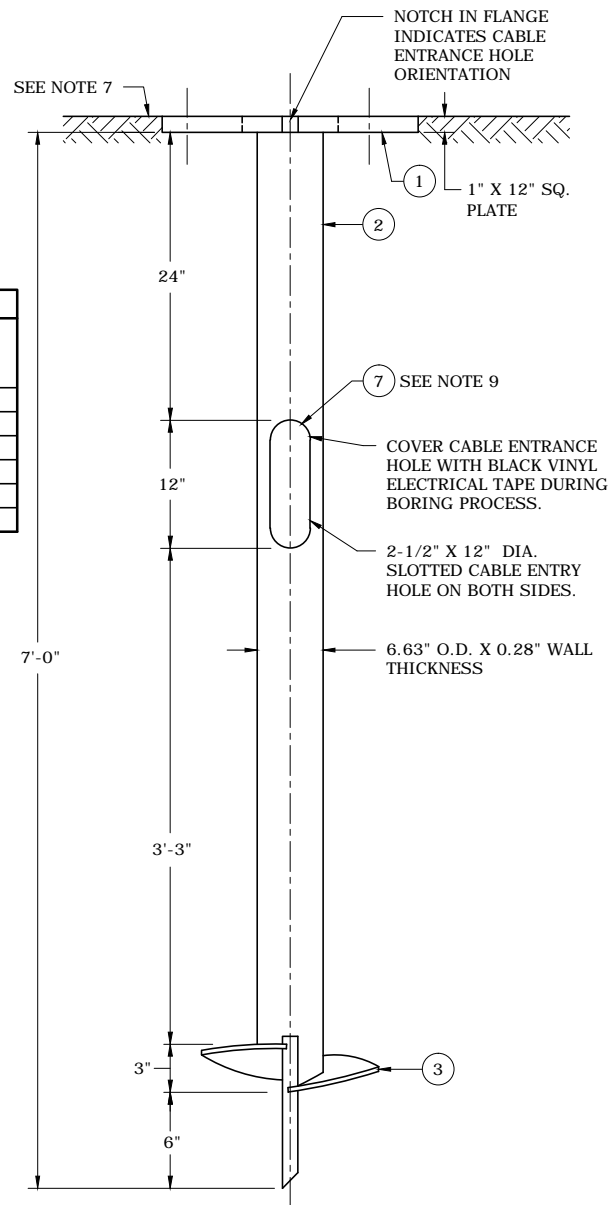




**HEX HEAD BOLT**  
NOT TO SCALE



**FOUNDATION PLATE TOP VIEW**



ITEM NO.	MATERIAL DESCRIPTION
1	TOP PLATE, STEEL, 1" X 12" SQ. X 6-VBC. BASE PLATE IS PERMANENTLY STAMPED WITH MANUFACTURER'S ID CODE AND DATE OF MANUFACTURE IN 1/2" LETTERS.
2	PIPE SHAFT, STEEL, 6.63" SCH. 84" X 6"
3	HELIX, STL. 3/8" X 12" X 6"
4	BOLT, HEX HD MACH, 1" X 4", 4 REQ'D
5	NUT, HEX, 1" X 4", 8 REQ'D
6	WASHER, PLAIN, 1" X 4", 8 REQ'D
7	RUBBER GROMMET FOR CABLE ENTRY HOLE

**NOTES:**

- HARDWARE BAG OF BOLTS, NUTS AND WASHERS TO COME ATTACHED TO EACH FOUNDATION.
- FOUR 1.25" SLOTTED HOLES FOR MOUNTING DECORATIVE POLES WITH BOLT HOLE CIRCLE OF 9" TO 14" WITH A MAXIMUM HEIGHT OF 35 FT.
- SEE DWG. 30.05-15 FOR INSTALLATION INSTRUCTIONS.
- DO NOT USE THIS FOUNDATION IN ROCKY SOIL CONDITIONS.
- DO NOT USE THIS FOUNDATION IN LOOSE FINE SOIL CONDITIONS.
- DO NOT USE THIS FOUNDATION IF THE UNIT CANNOT BE INSTALLED PER DWG. 30.05-15 OR IF THE SOIL HAS BEEN DISTURBED BELOW THE CABLE ENTRY HOLE DEPTH. IF THE HOLE IS DUG OUT THE ENTIRE DEPTH, A CONCRETE FOUNDATION MUST BE USED INSTEAD.
- DO NOT USE FOUNDATION IF TOP CANNOT BE INSTALLED FLUSH WITH FINISHED GRADE.
- NO GROUNDING ROD IS REQUIRED FOR SCREW-IN-FOUNDATION.
- INSTALL THE RUBBER GROMMET AROUND THE CABLE ENTRY HOLE TO PROTECT LIGHTING CABLE.

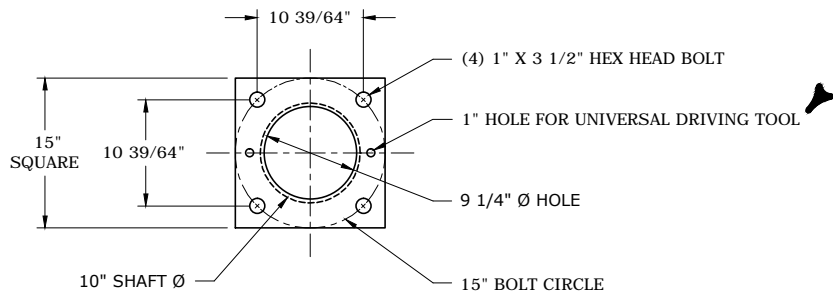
DEP CU LFNDSCREW6INC ITEM # 9220145150  
 DEF CU LFNDSCREW10BCF ITEM # 240057



3				
2				
1				
0	11/24/15	DEFREITAS	GUY	COWLING
REVISED	BY	CK'D	APPR.	

**STEEL SCREW-IN-ANCHOR FOUNDATION FOR  
 27'-6" (DEF) OR 30' (DEP) SQUARE  
 AND 35' ROUND TAPERED DECORATIVE POLES**

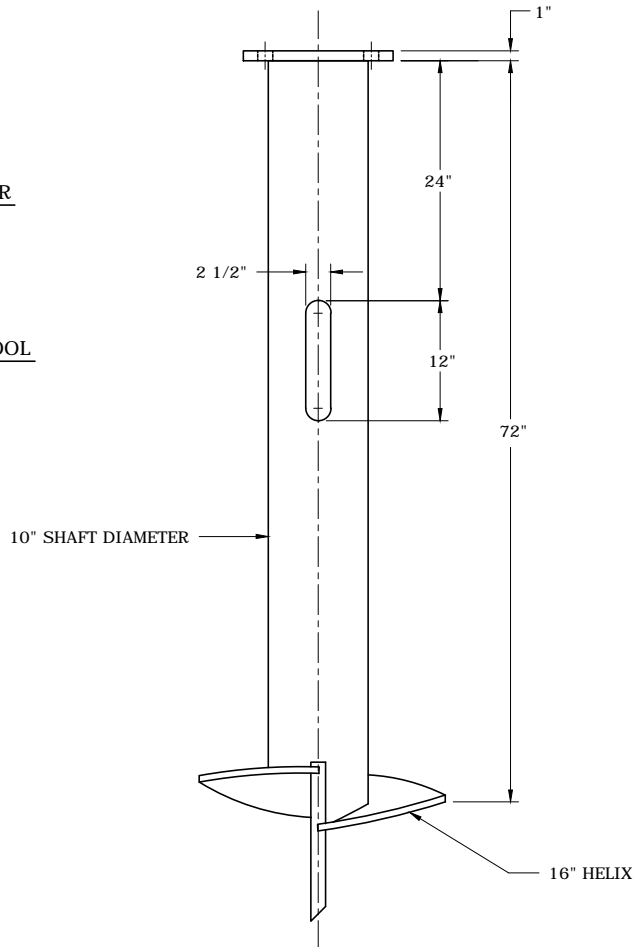
DEC	DEM	DEP	DEF
		X	X
<b>30.05-16A</b>			



FOUNDATION PLATE TOP VIEW

KELLY BAR ADAPTER  
CN 036225

UNIVERSAL DRIVE TOOL  
CN 036226



CN 036216

NOTES:

1. USE DWG. 30.05-15 TO INSTALL SCREW-IN FOUNDATION.
2. HARDWARE BAG OF BOLTS, NUTS AND WASHERS TO COME ATTACHED TO EACH FOUNDATION.
3. NO GROUNDING ROD IS REQUIRED FOR SCREW-IN-FOUNDATION.

3				
2				
1	3/6/12	DEFRIETAS	GUY	LARSEN
0	7/21/10	DEFRIETAS	GUY	LARSEN
REVISED	BY	CK'D	APPR.	

STEEL SCREW-IN-FOUNDATION FOR  
26' THROUGH 36' STEEL & ALUMINUM POLES



**FLA** DWG.  
30.05-17

PROGRESS ENERGY FLORIDA  
STANDARD PROCEDURES BULLETIN

LAMP INSTALLATION:

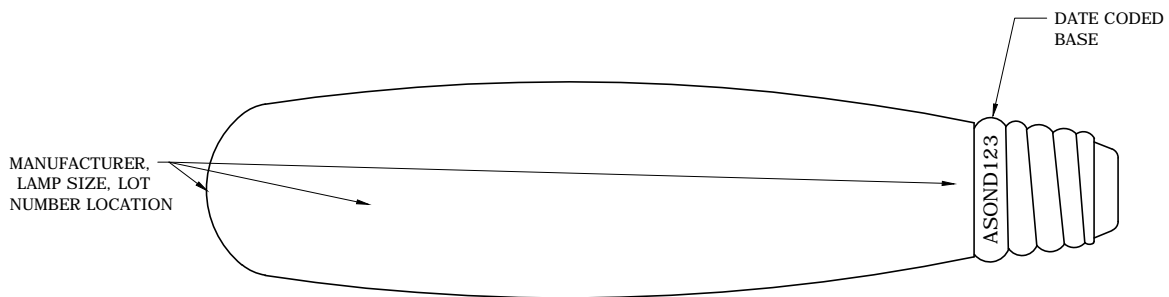
CARE SHOULD BE TAKEN WITH THE HANDLING AND STORAGE OF LAMPS PRIOR TO INSTALLATION TO PREVENT DAMAGE. IN ALL LAMP INSTALLATIONS, THE LAMP SHOULD BE SCREWED TIGHTLY INTO THE SOCKET TO INSURE A PROPER CONTACT BETWEEN THE BASE OF THE LAMP AND THE SPRING LOADED BASE OF THE LAMP SOCKET. IMPROPER INSTALLATION WILL RESULT IN ARCING AND BURNING OF THE LAMP BASE AND SOCKET AND EARLY LAMP FAILURE.

LAMP SELECTION:

CAREFUL ATTENTION SHOULD BE PAID TO THE INSTALLATION OF THE PROPER LAMP FOR THE GIVEN LUMINAIRE. AN INCORRECTLY SIZED LAMP MAY FUNCTION AT INSTALLATION BUT WILL RESULT IN IMPROPER LIGHT OUTPUT AND SHORTENED LAMP LIFE.

DATE CODING:

IN ORDER TO DETERMINE LAMP LIFE PERFORMANCE, EACH NEW LAMP INSTALLED SHOULD BE DATE CODED AS SHOWN BELOW AND LIKewise CODED UPON REMOVAL.



SYMBOL FOR INSTALLATION SHALL BE (/) OR (\).  
SYMBOL FOR REMOVAL SHALL BE (X).

<u>MONTH</u>	<u>LAST DIGIT OF YEAR</u>
J F M A M J J A S O <del>X</del> D	1 2 3 4 5 6 7 8 9 <del>X</del> 0

INSTALLED MARCH, 1978; REMOVED NOVEMBER, 1980.

J F M A M J J A S O N <del>X</del>	<del>X</del> 2 3 4 5 6 7 8 9 0
------------------------------------	--------------------------------

INSTALLED APRIL, 1981; REMOVED DECEMBER, 1981.

THESE SLASHES CAN BE SCRATCHED INTO THE LAMP BASE WITH ANY POINTED INSTRUMENT; I.E., KNIFE, SCREWDRIVER, ETC.

➤ REFLECTOR, LENS (REFRACTOR) SHALL BE CLEANED AT EACH LAMP REPLACEMENT.

3				
2				
1	3/6/12	DEFREITAS	JUDAH	LARSEN
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

LAMP INSTALLATION AND CODING



FLA

DWG.  
30.06-01

PROGRESS ENERGY FLORIDA  
STANDARD PROCEDURES BULLETIN

CONVENTIONAL HIGH PRESSURE SODIUM VAPOR LAMPS  
TYPES OFFERED AS COMPANY STANDARD

LAMP WATTAGE	TYPE	LAMP LUMENS	CATALOG NUMBER
50	HPS	4000	250603
70	HPS	5800	250608
100	HPS	9500	250601
150	HPS	16,000	250605
200	HPS	22,000	250606
250	HPS	27,500	250602
400	HPS	50,000	250604

\* MAINTENANCE ITEM ONLY


THESE LAMPS ARE TO ONLY BE USED IN CONVENTIONAL HIGH PRESSURE SODIUM VAPOR LUMINAIRES.

OPERATING CHARACTERISTICS

UNDER NORMAL OPERATING CONDITIONS, THESE LAMPS SLOWLY INCREASE IN BRIGHTNESS AND ACHIEVE FULL OUTPUT IN 4 TO 5 MINUTES. WHEN THIS LAMP TYPE REACHES END OF LIFE ITS NORMAL FAILURE MODE IS TO CYCLE ON AND OFF WITH CYCLE LASTING UP TO 20 MINUTES.

3				
2				
1	3/6/12	DEFREITAS	JUDAH	LARSEN
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

SODIUM VAPOR LAMPS



**FLA** DWG. 30.06-05

METAL HALIDE LAMPS  
TYPES OFFERED AS COMPANY STANDARD

#	LAMP WATTAGE	LAMP LUMENS	CATALOG NUMBER
A	100	9,000 (COATED)	250686
B	150	11,600 (COATED)	9220183630
C	175	14,400	250683
D	320	30,000 (COATED)	9220183634
E	400	40,000 (CLEAR)	250684
F	* 400 (RDE)	40,000 (COATED)	250687
G	1,000	110,000 (CLEAR)	250685
H	* 1,000 (RDE)	110,000 (CLEAR)	250688

NOTE:

\* SEE NOTE 4

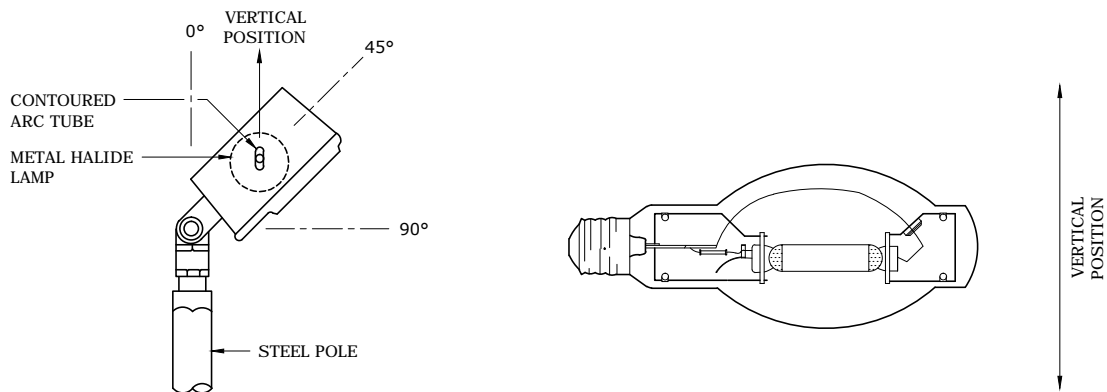
1. THE ABOVE METAL HALIDE LAMPS ARE TO BE USED WITH ONLY THE RECOMMENDED METAL HALIDE FIXTURES. SEE DWGS. 30.08-02 THROUGH 30.08-05 FOR CORRECT FIXTURES.
2. INSTALLATION INSTRUCTIONS COME WITH EACH FIXTURE FOR PROPER AIMING ANGLE.
3. A LOW PERCENTAGE OF NEWLY INSTALLED METAL HALIDE LAMPS ARE VERY SLOW IN STARTING, THEY MAY REQUIRE A STARTING TIME OF UP TO 5 MINUTES.
4. LAMPS 'F' AND 'H' ARE REDUCED SIZE ENVELOPE (RDE) LAMPS AND ARE ONLY USED IN FLAT GLASS CUBE FIXTURES.

OPERATING CHARACTERISTICS

SUPER METAL HALIDE LAMPS DIFFER VERY SIGNIFICANTLY FROM MERCURY. THE FIXTURE SHOULD BE INSTALLED WITH A 45° TILT FROM VERTICAL. THE LAMP WHEN INSTALLED MUST OPERATE WITHIN PLUS OR MINUS 15° HORIZONTAL POSITION. THE LAMP MAY REQUIRE 10 TO 20 MINUTES TO RESTART IF THERE IS A POWER INTERRUPTION. THE SUPER METAL HALIDE LAMP WILL NOT OPERATE IN A MERCURY OR SODIUM VAPOR FIXTURE. THE ARC TUBE CONTAINS METAL HALIDE COMPOUNDS TO IMPROVE COLOR APPEARANCE, INCREASE LUMINOUS EFFICIENCY AND LUMEN MAINTENANCE. THE ARC TUBE IS ENCLOSED IN A CLEAR OR PHOSPHOR-COATED HARD GLASS OUTER BULB. THE FAILURE MODE OF THESE LAMPS WILL NORMALLY BE FAILURE TO RESTRIKE. THE LAMP WILL GO OFF AT DAYBREAK AND FAIL TO COME ON THE FOLLOWING EVENING.

SAFETY: WARNING

1. THE ARC TUBES OF METAL HALIDE LAMPS ARE DESIGNED TO OPERATE UNDER HIGH PRESSURE AND AT TEMPERATURES UP TO 900°F [482°C]. IF THE ARC TUBE RUPTURES FOR ANY REASON THE OUTER BULB MIGHT BREAK AND THE PIECES OF EXTREMELY HOT GLASS MIGHT DISCHARGE WITH AN ASSOCIATED RISK OF PROPERTY DAMAGE OR PERSONAL INJURY. MAKE SURE FIXTURE DOOR IS CLOSED AND SECURE BEFORE ENERGIZING THE LAMP.
2. DAY BURNING METAL HALIDE LAMPS NEED RAPID MAINTENANCE ATTENTION WHEN REPORTED. SINCE THE LAMP NEEDS TO BE TURNED OFF AT LEAST ONCE PER WEEK FOR AT LEAST 15 MINUTES TO HELP PREVENT LAMP RUPTURE, REPAIR DAY BURNERS PROMPTLY. NEVER OPEN THE DOOR OF A DAY BURNER WHILE TROUBLE SHOOTING THE LUMINAIRE.
3. DON'T EXPOSE THE LAMP TO MOISTURE WHILE IT IS IN OPERATION.
4. ALWAYS REPLACE LAMP IF THE OUTER BULB IS SCRATCHED, CRACKED OR DAMAGED IN ANY WAY. TURN OFF FIRST AND ALLOW TIME FOR LAMP TO COOL BEFORE REPLACING.



3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

METAL HALIDE LAMPS



**FLA**

DWG.  
30.06-10

PROGRESS ENERGY FLORIDA  
STANDARD PROCEDURES BULLETIN

MERCURY VAPOR LAMPS:

TYPES OFFERED AS COMPANY STANDARD

LAMP WATTAGE	LAMP LUMENS	CATALOG NUMBER
175	7,000 (COATED)	* 250103
400	21,000 (COATED)	* 250106
1,000	60,000 (COATED)	* 250108

APPLICATION NOTES:

1. MERCURY VAPOR LAMPS ARE TO BE INSTALLED IN THE CORRECT SIZE FIXTURES. (CHECK FIXTURE WATTAGE DECAL.)
2. THE COATED (COLOR-CORRECTED) LAMP WILL BE USED IN STREET LIGHTING AND AREA LIGHTING APPLICATIONS.

EXCEPTION: 60,000 LUMEN LAMPS ARE AVAILABLE IN THE COATED STYLE ONLY, AND THEREFORE ARE USED IN ALL 60,000 LUMEN APPLICATIONS.

OPERATING CHARACTERISTICS

UNDER NORMAL OPERATING CONDITIONS THESE LAMPS SLOWLY INCREASE IN BRIGHTNESS AND ACHIEVE FULL OUTPUT IN 4-5 MINUTES. THE LAMP STOPS OPERATING COMPLETELY WHEN IT REACHES END OF LIFE AS OPPOSED TO THE CYCLING WHICH TAKES PLACE WITH THE SODIUM VAPOR.

\* MERCURY VAPOR LAMPS ARE FOR MAINTENANCE.

3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

MERCURY VAPOR LAMPS



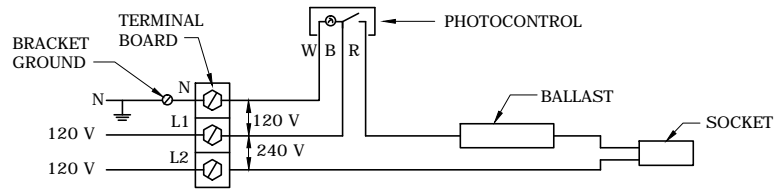
**FLA**

DWG.  
30.06-15

ROADWAY LUMINAIRES

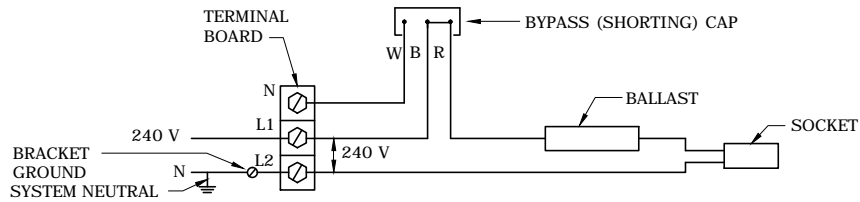
240 VOLT LUMINAIRES

CAUTION: BALLAST AND SOCKET ALWAYS ENERGIZED



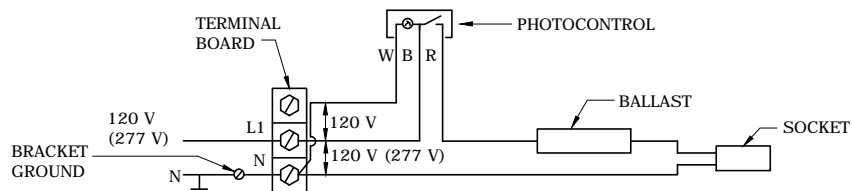
CONNECTION FOR 120/240 V INDIVIDUAL CONTROL

240/480 VOLT LUMINAIRES



CONNECTION FOR 240 V TO GROUND GROUP CONTROL (240/480 VOLT LIGHTING TRANSFORMER)

120 (277 V) VOLT LUMINAIRES



CONNECTION FOR 120 V (277 V) TO GROUND INDIVIDUAL CONTROL

FLOODLIGHTS

FLOODLIGHTS ARE CONNECTED THE SAME AS SHOWN ABOVE FOR ROADWAY LUMINAIRES. FLOODLIGHTS ARE RECEIVED PREWIRED TO OPERATE ON A 120/240 VOLT SYSTEM, BUT THE INTERNAL WIRING CAN BE CHANGED IN THE FIELD TO ALLOW FOR OPERATION ON A 120 VOLT TO GROUND SYSTEM. INSTRUCTIONS FOR THIS REWIRING ARE INCLUDED IN EACH FLOOD-LIGHT.

TO OPERATE A FLOODLIGHT ON A 240 VOLT TO GROUND GROUP SYSTEM, FIRST INSURE THAT THE INTERNAL WIRING IS CORRECT FOR A 120/240 VOLT SYSTEM. THEN CONNECT AS SHOWN ABOVE FOR GROUP CONTROL.

NOTES:

1. TERMINAL BOARD LAYOUTS ABOVE ARE TYPICAL EXAMPLES ONLY, ACTUAL LAYOUT MAY VARY.
2. FOR DISCONNECTING A CUSTOMER'S FIXTURE FOR NON-PAY USE THE OPEN CAP DISCONNECT. (CN 13431101). SEE DWG. 30.03-05.

3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

LUMINAIRE CONNECTIONS TO LIGHTING CIRCUITS

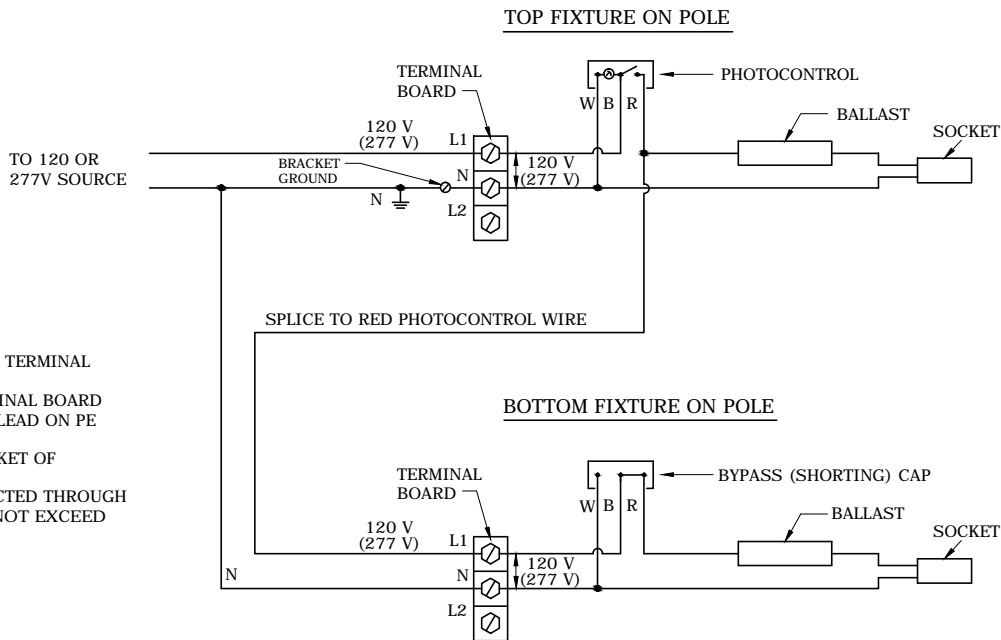


**FLA**

DWG.  
30.07-01

ROADWAY LUMINAIRES

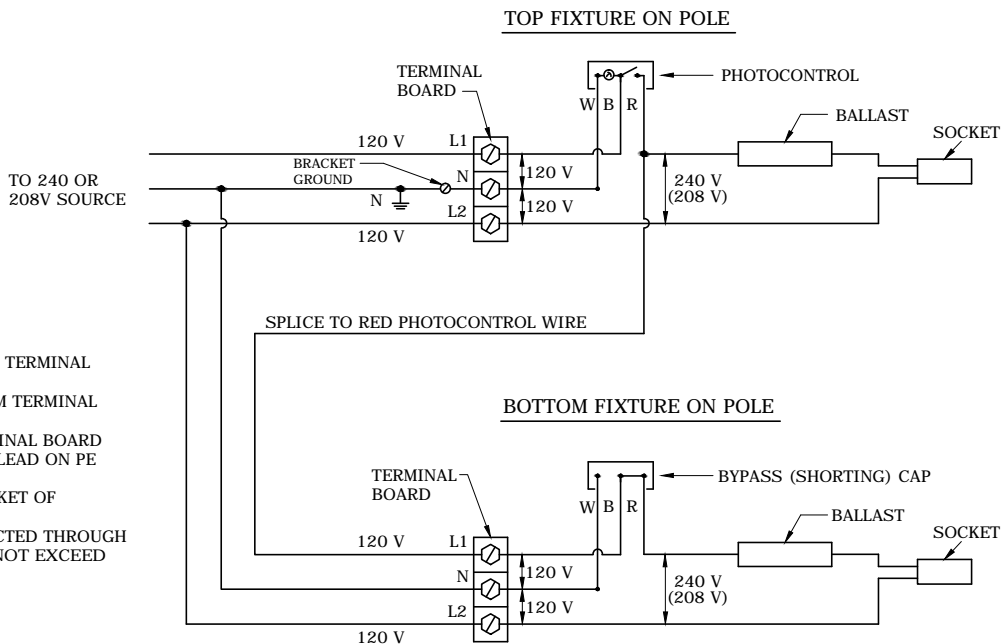
120 OR (277) VOLT LUMINAIRES



NOTES:

1. CONNECT THE (N) LEAD FROM TERMINAL BOARD TO SOURCE NEUTRAL.
2. SPLICE (L1) LEAD FROM TERMINAL BOARD OF BOTTOM FIXTURE TO RED LEAD ON PE OF TOP FIXTURE.
3. PUT A BYPASS CAP IN PE SOCKET OF BOTTOM FIXTURE.
4. TOTAL FIXTURE LOAD CONNECTED THROUGH ONE PHOTOCONTROL MUST NOT EXCEED 1800VA.

240 OR (208) VOLT LUMINAIRES



NOTES:

1. CONNECT THE (N) LEAD FROM TERMINAL BOARD TO SOURCE NEUTRAL.
2. CONNECT THE (L2) LEAD FROM TERMINAL BOARD TO SOURCE L2.
3. SPLICE (L1) LEAD FROM TERMINAL BOARD OF BOTTOM FIXTURE TO RED LEAD ON PE OF TOP FIXTURE.
4. PUT A BYPASS CAP IN PE SOCKET OF BOTTOM FIXTURE.
5. TOTAL FIXTURE LOAD CONNECTED THROUGH ONE PHOTOCONTROL MUST NOT EXCEED 1800VA.

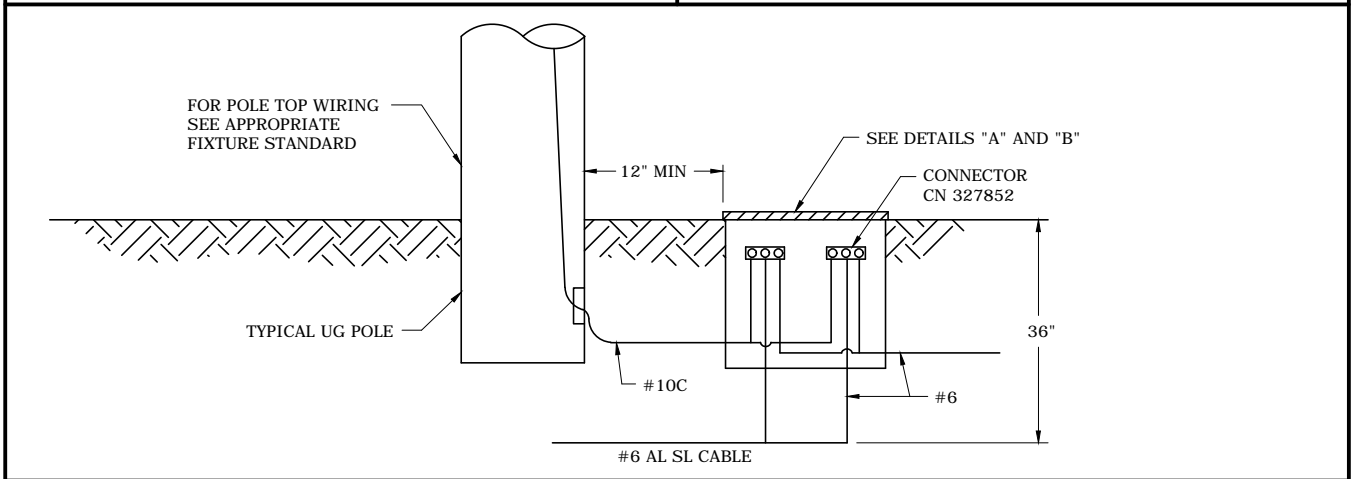
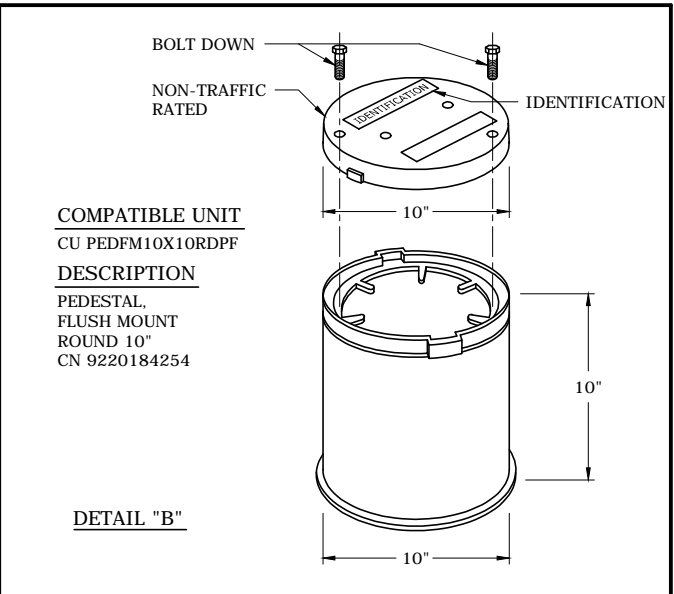
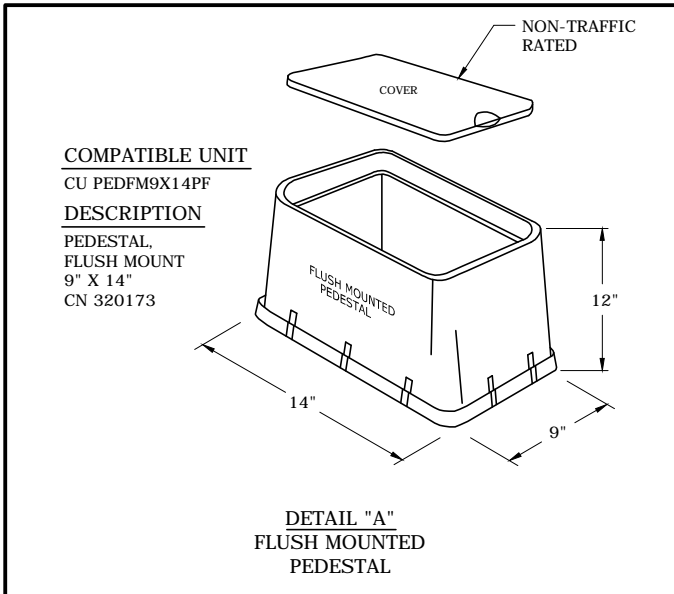
3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

CONNECTING MULTIPLE FIXTURES  
USING ONE PHOTOCONTROL



**FLA** DWG.  
30.07-03





**NOTES:**

1. SOIL ON WHICH THE PEDESTAL WILL REST SHOULD BE COMPACTED TO THAT OF UNDISTRIBUTED EARTH. WHEN COVER IS INSTALLED, THE PEDESTAL SHOULD BE FLUSH WITH FINAL GRADE.
2. TRAIN THE CABLE TO POSITION SHOWN ON DWG. 25.04-05. ALL CABLES SHOULD ENTER THE PEDESTAL AT AT ONE END. VERIFY THAT THE CABLE MAY BE BENT OVER TO A POSITION BENEATH THE PEDESTAL COVER, BUT STILL ABLE TO RETURN TO AN UPRIGHT POSITION.
3. ALL CONNECTIONS IN FLUSH MOUNTED PEDESTALS MUST BE WATERPROOF ( CN 327852).
4. FOR STREET LIGHT USE ONLY.
5. SEE DWG. 25.04-05 FOR MAXIMUM CABLE SIZE AND PROPER CABLE INSTALLATION.
6. ELECTRONIC MARKER IN LID.
7. SEE DWG. 25.04-05 FOR LIGHT TRAFFIC RATED PEDESTAL ( CN 381612).

**MAINTENANCE NOTES:**

1. EMPTY CONDUIT INSTALLED IN PEDESTAL MUST BE CAPPED UNTIL SUCH TIME CABLE IS PULLED IN.
2. CIC CONDUIT SHOULD BE CUT OFF 2" ABOVE BOTTOM OF PEDESTAL PRIOR TO INSTALLING PEDESTAL.
3. CIC MUST BE CAPPED WITH CIC CAP AFTER CUTTING TO LENGTH TO PREVENT FOREIGN MATTER FROM ENTERING DUCT.

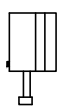
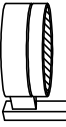

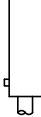
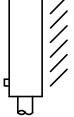
3				
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0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

TYPICAL NON-TRAFFIC RATED  
PEDESTAL CONSTRUCTION  
UNDERGROUND LIGHTING INSTALLATIONS



**FLA**

DWG.  
30.07-36

DECORATIVE FIXTURES												
FIXTURE	CN	DESCRIPTION	TYPE	WATTAGE	BALLAST	PRE-WIRED	IES TYPE	COLOR	STATUS	LUMEN	COMPATIBLE UNIT	
CUBE	241862	CUBE	MH	1000W	CWA	120V	V	BRONZE	STOCKED	110,000	L110KMHKCFG1F	
	9220183637	CUBE	MH	320	CWA	120V	V	BRONZE	STOCKED	30,000	L40KPM32CUBR1F	
	241863	CUBE	MH	400W	CWA	120V	V	BRONZE	STOCKED	36,000	L36KMH40CFGMF *	
GALLERIA												
	241717	HATBOX	HPS	250W	CWA	120V	II	BRONZE	STOCKED	28.5K	L28KSV25HBMF **	
	241717	HATBOX	HPS	400W	CWA	120V	II	BRONZE	STOCKED	50K	L50KSV40HBMF **	
	241865	HATBOX	MH	400W	CWA	120V	II	BRONZE	STOCKED	36,000	L36KMH40HB1F *	
HATBOX												
	241567	SHOEBOX	HPS	250W	CWA	120V	III	BRONZE	STOCKED	28.5K	L28KSV25SBMF	
	241567	SHOEBOX	HPS	400W	CWA	120V	III	BRONZE	STOCKED	50K	L50KSV40SBMF	
	9220183641	SHOEBOX	MH	320	CWA	120V	III	BRONZE	STOCKED	30,000	L30KPM32SBBR1F	
SHOEBOX												
	241864	SHOEBOX	MH	400W	CWA	120V	III	BRONZE	STOCKED	36,000	L38KMH40SB1F *	
	9220183643	SHOEBOX FWT	MH	320W	CWA	120V	IV	BRONZE	STOCKED	30,000	L30KPM32SFB1F	
	241867	SHOEBOX FWT	MH	400W	CWA	120V	IV	BRONZE	NON-STOCKED	36,000	L38KMH40SF1F *	
SHOEBOX FWT *												
	241857	SHOEBOX FWT	MH	1000W	CWA	120V	IV	BRONZE	NON-STOCKED	110,000	L110KMHKSF1F	

\* FWT DENOTES FORWARD THROW LIGHT DISTRIBUTION

\* THIS FIXTURE IS DISCONTINUED

\*\* THIS FIXTURE IS "FOR MAINTENANCE ONLY". THE COMPATIBLE UNIT FOR THIS FIXTURE IS INACTIVE

3				
2				
1	3/8/12	DEFREITAS	JUDAH	LARSEN
0	7/26/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

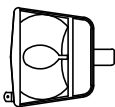



STREET AND AREA LIGHTING LUMINAIRES



FLA DWG. 30.08-02

3				
2				
1	3/8/12	DEFREITAS	JUDAH	LARSEN
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

STREET AND AREA LIGHTING LUMINAIRES

FIXTURES										
FIXTURE	CATALOG NUMBER	AVG. MTC. HEIGHT	TYPE	WATTAGE	BALLAST	PRE-WIRED	COLOR	STATUS	LUMEN	COMPATIBLE UNIT OH/UG
	241353	25'-30'	HPS	250W	CWA	120V	BRONZE	STOCKED	27,500	L28KSV25FL1F
	241353	25'-30'	HPS	250W	CWA	120V	BRONZE	STOCKED	27,500	L28KSV25UF1F **
	241357	30'-35'	HPS	400W	CWA	120V	BRONZE	STOCKED	50,000	L50KSV40FL1F
	241357	30'-35'	HPS	400W	CWA	120V	BRONZE	STOCKED	50,000	L50KSV40UF1F **
	9220183633	30'-35'	MH	320W	CWA	120V	BRONZE	STOCKED	30,000	L30KPM32FLBR1F
	241851	30'-35'	MH	400W	CWA	120V	BRONZE	STOCKED	36,000	L36KMH40FLMF *
FLOODLIGHT	241853	35'-40'	MH	1000W	CWA	120V	BRONZE	NON-STOCKED	110,000	L110KMHKFLMF
	9220157695	-	HPS	100W	CWA	120V	BLACK	NON-STOCKED	9,500	L95SV10MGBL1F
	9220107742	-	HPS	250W	CWA	120V	WHITE	STOCKED	28,500	L28KSV25MGL1F
MONGOOSE	9220162931	-	HPS	400W	CWA	120V	WHITE	STOCKED	50,000	L50KSV40SPPW1F
	9220207210	-	LED	95W	DRIVER	120V/277V	GRAY	NON-STOCKED	6,000	L06LED10RWGEMF
	9220207209	-	LED	157W	DRIVER	120V/277V	GRAY	NON-STOCKED	9,600	L10LED16RWGEMF
	9220209541	-	LED	309W	DRIVER	120V/277V	BRONZE	NON-STOCKED	20,500	L21KLED32SBCPMF
	9220209543	-	LED	206W	DRIVER	120V/277V	BRONZE	NON-STOCKED	13,500	L13KLED21SFCPMF
	9220209540	-	LED	206W	DRIVER	120V/277V	BRONZE	NON-STOCKED	14,500	L14KLED21CCPMF

\* THIS FIXTURE IS DISCONTINUED  
 \*\* UNDERGROUND FIXTURE

NOTES:

1. USE SOLID STATE "GREEN" PHOTOCELL ( CN 9220208023 ) WITH "FAIL-OFF" FEATURE FOR ALL LED LUMINAIRES.





FLA

DWG.  
30.08-03


3				
2				
1	3/8/12	DEFREITAS	JUDAH	LARSEN
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

**FIXTURES**

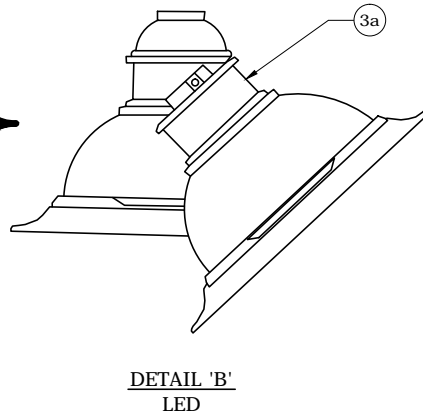
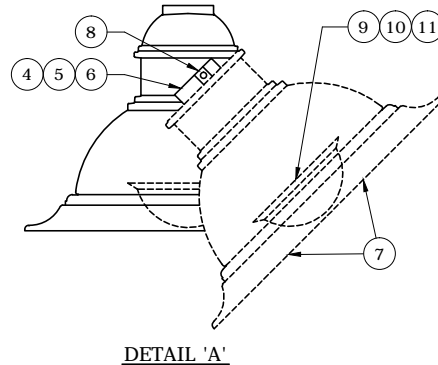
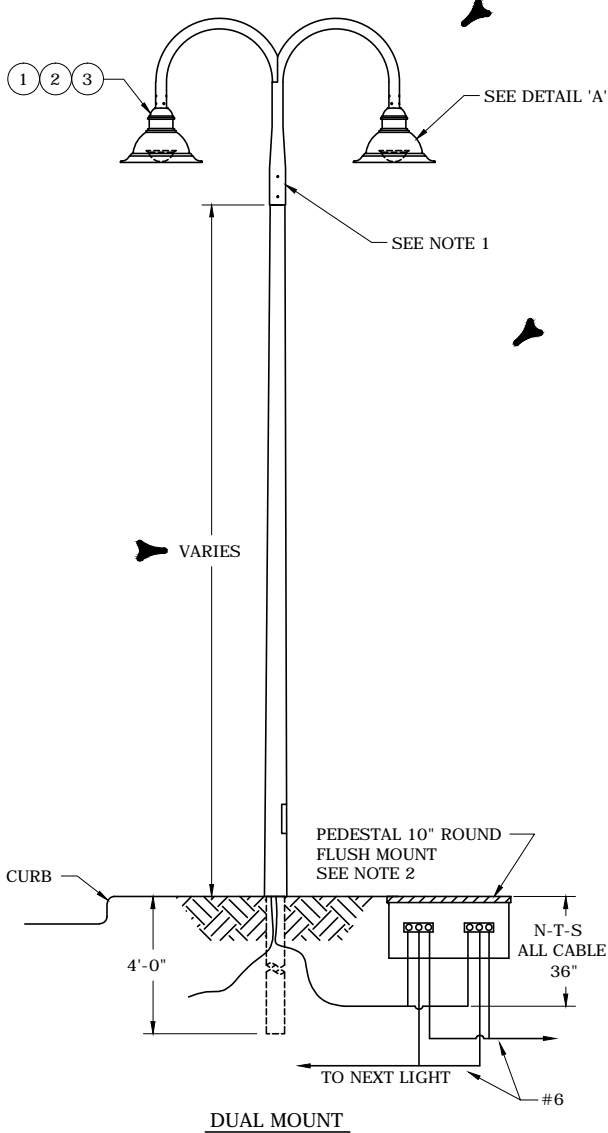
FIXTURE	CATALOG NUMBER	DESCRIPTION	TYPE	WATTAGE	BALLAST	PRE-WIRED	IES TYPE	COLOR	LUMEN	COMPATIBLE UNIT OH/UG
SEMI ENCLOSED 	241420	SEMI ENCLOSED	HPS	50W	REACTOR	120V	V	GRAY	4,000	L40SV050B1F ***
	241442	SEMI ENCLOSED	HPS	70W	REACTOR	120V	V	GRAY	6,500	L70SV070B1F ***
	241875	SEMI ENCLOSED	HPS	100W	REACTOR	120V	III	GRAY	9,500	L95SV10HT1F
ENCLOSED   NOTE: ALL SAG LENS (ENCLOSED) FIXTURES ARE DISCONTINUED. USE "CUT-OFF" TYPE FOR REPLACEMENT	241503	ENCLOSED	HPS	100W	REACTOR	120V	III	GRAY	9,500	L95SV10RW1F *
	241503	ENCLOSED	HPS	100W	REACTOR	120V	III	GRAY	9,500	L95SV10SL1F ***
	241508	ENCLOSED	HPS	100W	REACTOR	120V	II-4 WAY	GRAY	9,500	L95SV10RW4W1F **
	241529	ENCLOSED	HPS	150W	REACTOR	120V	III	GRAY	16,000	L16KSV15RW1F *
	241529	ENCLOSED	HPS	150W	REACTOR	120V	III	GRAY	16,000	L16KSV15SL1F ***
	241542	ENCLOSED	HPS	200W	CWA	120V	III	GRAY	22,000	L22KSV20RW1F *
	241542	ENCLOSED	HPS	200W	CWA	120V	III	GRAY	22,000	L22KSV20SL1F ***
	241553	ENCLOSED	HPS	250W	CWA	120V	III	GRAY	28,000	L28KSV25SL1F *
	241553	ENCLOSED	HPS	250W	CWA	120V	III	GRAY	28,000	L28KSV25SL1F ***
	241601	ENCLOSED	HPS	400W	CWA	120V	III	GRAY	50,000	L50KSV40SL1F *
	241601	ENCLOSED	HPS	400W	CWA	120V	III	GRAY	50,000	L50KSV40SL1F ***
	241401	FULL CUTOFF	HPS	50W	REACTOR	120V	III	GRAY	4,000	L40SV05RW1F
	241505	FULL CUTOFF	HPS	100W	REACTOR	120V	III	GRAY	9,500	L95SV10RW1F
	241505	FULL CUTOFF	HPS	100W	REACTOR	120V	III	GRAY	9,500	L95SV10UR1F ***
	241506	FULL CUTOFF	HPS	150W	REACTOR	120V	III	GRAY	16,000	L16KSV15RW1F
	241506	FULL CUTOFF	HPS	150W	REACTOR	120V	III	GRAY	16,000	L16KSV15UR1F ***
	241504	FULL CUTOFF	HPS	200W	CWA	120V	III	GRAY	22,000	L22KSV20RW1F ***
	241504	FULL CUTOFF	HPS	200W	CWA	120V	III	GRAY	22,000	L22KSV20UR1F ***
241507	FULL CUTOFF	HPS	250W	CWA	120V	III	GRAY	28,000	L28KSV25RW1F	
241507	FULL CUTOFF	HPS	250W	CWA	120V	III	GRAY	28,000	L28KSV25UR1F ***	
241610	FULL CUTOFF	HPS	400W	CWA	120V	III	GRAY	50,000	L50KSV40RW1F	
241610	FULL CUTOFF	HPS	400W	CWA	120V	III	GRAY	50,000	L50KSV40UR1F ***	
241888	FULL CUTOFF	HPS	400W	CWA	120V	III	BLACK	50,000	L50KSV40DRBL1F **	
241512	NO LENS	HPS	100W	REACTOR	120V	III	GRAY	9,500	L95SV10TUR1F	
241512	NO LENS	HPS	100W	REACTOR	120V	III	GRAY	9,500	L95SV10TUR1F ***	
9220144211	CLERMONT, NO BKT	MH PS	100W	REACTOR	120V	120-277V	III	BLACK	9,500	L95SV10DEC1F
9220144212	CLERMONT, NO BKT	MH PS	175W	CWA	120V	120V	III	BLACK	14,000	L14KMH17SAN1F *
9220183646	CLERMONT, NO BKT	MH PS	150W	PULSE	120V	120V	III	BLACK	12,000	L12KPM15SANBL1F
9220193839	CLERMONT, NO BKT	MH PS	150W	PULSE	120V	120V	III	WHITE	22,000	L22KPM15CTVW1F ***
9220237362	CLERMONT, NO BKT	LED	71W	NA	120-277V	120V	III	BLACK	5,500	L55LEDO7SANBLMF

HPS - HIGH PRESSURE SODIUM  
 MH - METAL HALIDE  
 MH PS - METAL HALIDE PULSE START  
 LED - LIGHT EMITTING DIODE  
 \* THIS FIXTURE IS DISCONTINUED  
 \*\* THIS FIXTURE IS FOR "MAINTENANCE ONLY". THE COMPATIBLE UNIT FOR THIS FIXTURE IS INACTIVE  
 \*\*\* UNDERGROUND INSTALLATIONS  
 \*\*\*\* SPECIAL APPLICATION - DUAL MT. SANIBEL - SEE REGIONAL LIGHTING SPECIALIST FOR USE

**STREET AND AREA LIGHTING LUMINAIRES**



**FLA** DWG. 30.08-05



**NOTES:**

1. BRACKETS FOR SANIBEL FIXTURE(S) REQUIRE POST TO HAVE A 3" DIAMETER X 6" HIGH TENON.
2. PEDESTAL DETAILS, SEE DWG. 30.07-36.
3. POLE DETAILS, SEE DWG. 30.09-28.
4. DO NOT INSTALL LIGHT FIXTURE UNTIL POLE IS INSTALLED AND BACKFILLED.
5. SEE DWG. 30.02-26 FOR BRACKET DETAILS.

**BILL OF MATERIALS**

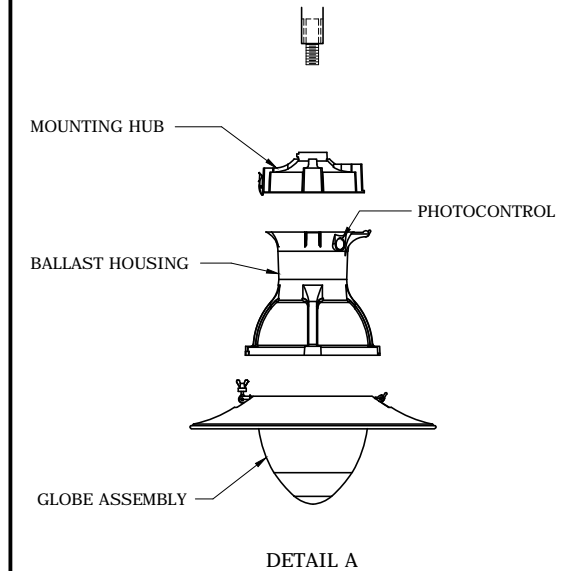
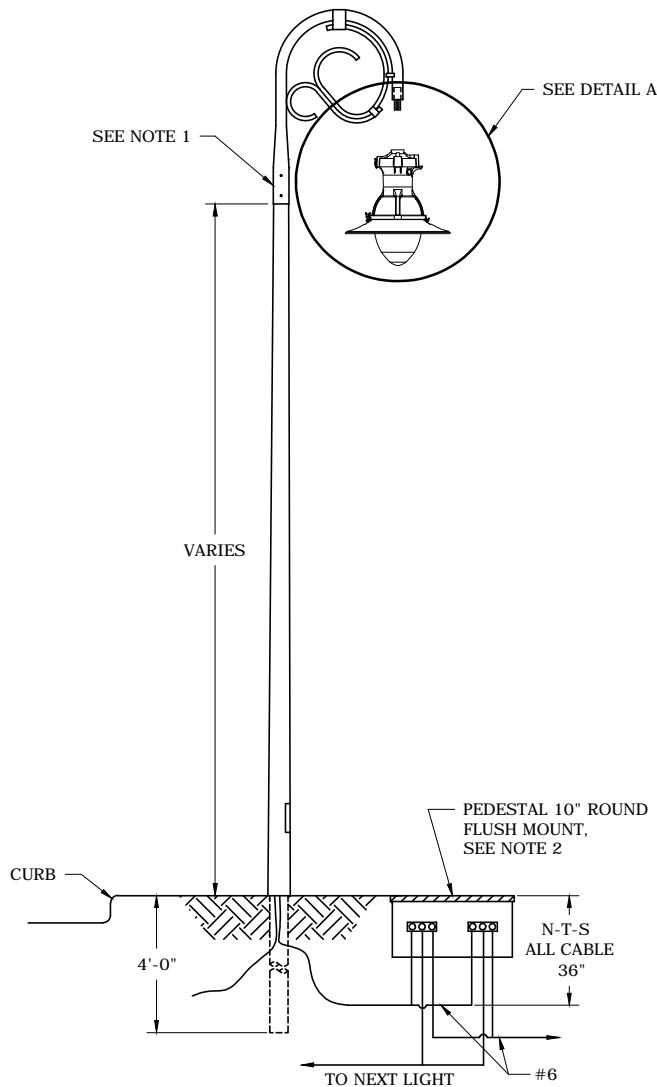
MACRO UNIT	CU/CN ITEM NO.	COMPATIBLE UNIT	QTY REQ'D	CATALOG NUMBER	QTY PER CU	DESCRIPTION
	1	L95SV10DEC1F	1	9220126156	1	SANIBEL, 120V, 100W, HPS W/FULL SIZE PE
	2	L14KMH17SAN1F	1	9220126155	1	SANIBEL, 120V, 175W, HPS W/FULL SIZE PE (REMOVAL ONLY)
	3	L12KPM15SANBL1F	1	9220183646	1	SANIBEL, 120V, 150W, MH PULSE START W/FULL SIZE PE
	3a	L55LEDO7SANBLMF	1	9220237362	1	SANIBEL, 120V, 71W, LED W/FULL SIZE SSL PE
	4	-	-	9220126799	1	BALLAST REPLACEMENT, 120V, 100W, HPS
	5	-	-	9220126800	1	BALLAST REPLACEMENT, 120V, 175W, HPS
	6	-	-	9220209551	1	BALLAST REPLACEMENT, 120V, 150W, MH PULSE START
	7	-	-	242230	1	REPLACEMENT LENS/DOOR
	8	-	-	243104	1	REPLACEMENT PE CONTROL
	9	-	-	250601	1	LAMP, 100W, HPS
	10	-	-	250683	1	LAMP, 175, MH
	11	-	-	9220173630	1	LAMP, 150W, MH PULSE START
	12	-	-	243608	1	REPLACEMENT STARTER, 100W, HPS (NOT SHOWN)
	13	-	-	9220148466	1	REPLACEMENT STARTER, 150W, MH PULSE START (NOT SHOWN)

3				
2				
1	4/2/12	DEFREITAS	JUDAH	LARSEN
0	7/26/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

LUMINAIRE, DECORATIVE SANIBEL  
(HOLOPHANE)

**FLA** DWG.  
30.08-08B

SINGLE MOUNT



INSTALLATION NOTES:

1. REMOVE CONNECTION COVER PLATE FROM BOTTOM OF MOUNTING HUB. COAT THREADS OF BRACKET AND MOUNTING HUB WITH SUPPLIED SEALANT. SCREW MOUNTING HUB ONTO BRACKET SECURELY, LINING UP LATCH PARALLEL TO STREET. TIGHTEN SET SCREW.
2. CONNECT STREET LIGHT LEAD WIRE TO TERMINAL BOARD AND REINSTALL COVER PLATE.
3. HOOK BALLAST HOUSING ONTO HINGE. INSERT PHOTOCONTROL, PLUG IN CONNECTOR AND RAISE HOUSING AND LATCH.
4. INSTALL LAMP.
5. HOOK GLOBE ASSEMBLY ONTO BALLAST HOUSING. RAISE AND TIGHTEN THUMB SCREW.
6. TEST FOR PROPER OPERATION.
7. DO NOT INSTALL BALLAST HOUSING OR GLOBE UNTIL POLE IS INSTALLED AND BACKFILLED.

NOTES:

1. THE BRACKETS FOR THE CLERMONT FIXTURE(S) REQUIRE THE POST TO HAVE A 3" X 5" TENON.
2. SEE DWG 30.07-36 FOR PEDESTAL DETAILS.
3. SEE DWG. 30.09-14 FOR POLE DETAILS.
4. SEE DWG. 30.08-09D FOR BILL OF MATERIALS.

3				
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1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

LUMINAIRE, DECORATIVE, 100W HPS,  
250W HPS AND 175W MH, THE CLERMONT  
HOLOPHANE



**FLA** DWG.  
30.08-09C

BILL OF MATERIALS					
CU ITEM NO.	COMPATIBLE UNIT	QTY REQ'D	CATALOG NUMBER	QTY PER CU	DESCRIPTION
1	L95SV10TCH1NF	1	250601	1	LAMP, HPS, 100W
			9220144211	1	LUM, CL 113, 100W, HPS, CLERMONT
2	L95SV10TCH1SRF	1	250601	1	LAMP, HPS, 100W
			9220067354	1	BRACKET, SINGLE, SCROLL ARM
3	L95S10TCH1SCF	1	9220144211	1	LUM, CL 113, 100W, HPS, CLERMONT
			240320	1	BRACKET, SINGLE, SHEPARD'S CROOK, FOR SANIB
4	L95SV10TCH1SMF	1	250601	1	LAMP, HPS, 100W
			9220067357	1	BRACKET, SIDE, SINGLE, SCROLL ARM
5	L28KSV25TCH1F	1	9220144211	1	LUM, CL 113, 100W, HPS, CLERMONT
			250601	1	LAMP, HPS, 100W
6	L28KSV25TCH1SCF	1	250602	1	LAMP, HPS, 250W
			9220144212	1	LUM, CL 114, 250W, HPS, CLERMONT
7	L28KSV25TCH1SMF	1	240320	1	BRACKET, SINGLE, SHEPARD'S CROOK, FOR SANIB
			250602	1	LAMP, HPS, 250W
8	L28KSV25TCH1SRF	1	9220067357	1	BRACKET, SIDE, SINGLE, SCROLL ARM
			9220144212	1	LUM, CL 114, 250W, HPS, CLERMONT
9	L14KMH17TCH1NF *	1	250602	1	LAMP, HPS, 250W
			9220067354	1	BRACKET, SINGLE, SCROLL ARM
10	L14KMH17TCH1SCF *	1	9220144212	1	LUM, CL 114, 250W, HPS, CLERMONT
			250683	1	LAMP, 175W, MH
11	L14KMH17TCH1SMF *	1	9220144213	1	LUM, CL 115, 175W, MH, CLERMONT
			240320	1	BRACKET, SINGLE, SHEPARD'S CROOK, FOR SANIB
12	L14KMH17TCH1SRF *	1	250683	1	LAMP, 175W, MH
			9220067357	1	BRACKET, SIDE, SINGLE, SCROLL ARM
13	L12KPM15TCBL1F	1	9220144213	1	LUM, CL 115, 175W, MH, CLERMONT
			250683	1	LAMP, 175W, MH
14	L12KPM15TCBLSCF	1	9220067354	1	BRACKET, SINGLE, SCROLL ARM
			9220144213	1	LUM, CL 115, 175W, MH, CLERMONT
15	L12KPM15TCBLSMF	1	9220183630	1	LAMP, 150W, MH
			9220183644	1	LUM, CL 115, 150W, MH, CLERMONT
16	L12KPM15TCBLSRF	1	240320	1	BRACKET, SINGLE, SHEPARD'S CROOK, FOR SANIB
			9220183630	1	LAMP, 150W, MH
			9220183644	1	LUM, CL 115, 150W, MH, CLERMONT

\*THIS FIXTURE DISCONTINUED

ADDITIONAL PARTS - REPLACEMENT					
CU/CN ITEM NO.	COMPATIBLE UNIT	QTY REQ'D	CATALOG NUMBER	QTY PER CU	DESCRIPTION
17	-	-	9220148457	1	BALLAST REPLACEMENT, 120V, 100W HPS
18	-	-	9220148458	1	BALLAST REPLACEMENT, 120V, 250W HPS
19	-	-	9220148463	1	BALLAST REPLACEMENT, 120V, 175W MH
20	-	-	9220209545	1	BALLAST REPLACEMENT, 120V, 150W, PULSE START MH
21	LPE120F	1	243104	1	REPLACEMENT PE CONTROL
22	-	-	9220148478	1	STARTER AID, 100W, HPS
23	-	-	9220148466	1	STARTER AID, 250W HPS AND 150W MH

**NOTES:**

- SEE DWG. 30.08-09C FOR DESIGN SPECIFICATIONS.

3				
2				
1	5/23/12	DEFREITAS	JUDAH	LARSEN
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

LUMINAIRE, DECORATIVE, 100W HPS,  
250W HPS AND 175W MH, THE CLERMONT  
HOLOPHANE

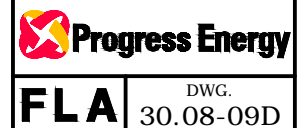


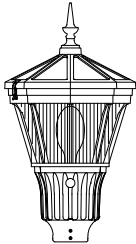
FIG. 1



FLAGLER BILL OF MATERIALS				
ITEM NO.	COMP. UNIT	CAT. NUMBER	QUANTITY	DESCRIPTION
1	L95SV10FG1F	241520	1	FLAGLER LUMINAIRE WITH ACRYLIC GLOBE, 100W, HPS
		250601	1	LAMP, HPS, 100 WATT

REPLACEMENT BALLAST				
ITEM NO.	COMP. UNIT	CAT. NUMBER	QUANTITY	DESCRIPTION
1	-	242163	1	100W, HPS FLAGLER BALLAST

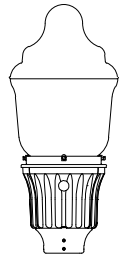
FIG. 2



MONTICELLO BILL OF MATERIALS				
ITEM NO.	COMP. UNIT	CAT. NUMBER	QUANTITY	DESCRIPTION
1	L95SV10MONT1F	241854	1	MONTICELLO W/CUTOFF OPTICS, GLASS REFRACTOR, 100W HPS
		250601	1	LAMP, HPS, 100 WATT

REPLACEMENT BALLAST				
ITEM NO.	COMP. UNIT	CAT. NUMBER	QUANTITY	DESCRIPTION
1	-	242163	1	100W, HPS MONTICELLO BALLAST

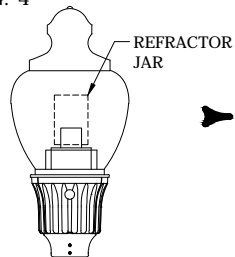
FIG. 3



BISCAYNE BILL OF MATERIALS				
ITEM NO.	COMP. UNIT	CAT. NUMBER	QTY.	DESCRIPTION
1	L95SV10BC1F	241522	1	BISCAYNE LUMINAIRE WITH GLASS GLOBE, 100W, HPS
		250601	1	LAMP, HPS, 100 WATT
2	L12KMH17BC1F	241860	1	REMOVAL ONLY, BISCAYNE, LUMINAIRE W/ GLASS GLOBE, 175W, MH
		250683	1	LAMP, MH, 175W
3	L12KPM15BCBL1F	9220188699	1	BISCAYNE, LUMINAIRE W/ GLASS GLOBE, 150W, PULSE START MH, SEE LIGHTING SPECIALIST FOR APPLICATION
		9220183630	1	LAMP, PULSE START MH, 150W, MED. BASE

REPLACEMENT BALLAST				
ITEM NO.	COMP. UNIT	CAT. NUMBER	QTY.	DESCRIPTION
1	-	242163	1	100W, HPS BISCAYNE BALLAST
2	-	242167	1	175W, MH, BISCAYNE BALLAST
3	-	9220209549	1	150W, PULSE START MH BISCAYNE, BALLAST

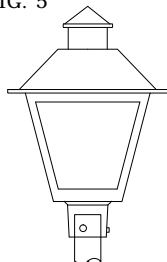
FIG. 4



OCALA BILL OF MATERIALS				
ITEM NO.	COMP. UNIT	CAT. NUMBER	QUANTITY	DESCRIPTION
1	L95SV10OC1F	241501	1	OCALA LUMINAIRE, BASE ONLY, 100W, HPS
		241502	1	ACRYLIC GLOBE
		250601	1	LAMP, HPS, 100 WATT

REPLACEMENT BALLAST				
ITEM NO.	COMP. UNIT	CAT. NUMBER	QUANTITY	DESCRIPTION
1	-	242163	1	100W, HPS OCALA BALLAST

FIG. 5



SEBRING BILL OF MATERIALS				
ITEM NO.	COMP. UNIT	CAT. NUMBER	QUANTITY	DESCRIPTION
1	L95SV10SB1F	241511	1	SEBRING LUMINAIRE, 100W, HPS
		250601	1	LAMP, HPS, 100W
2	L40SV05PT1F	241430	1	SEBRING LUMINAIRE, 50W, HPS
		250603	1	LAMP, HPS, 50W

NOTE: REPLACEMENT BALLASTS ARE NOT AVAILABLE FOR L95SV10PT1F AND L40SV05PT1F LIGHT FIXTURES.

NOTES:

1. USE PHOTOCCELL CN 243104 FOR ABOVE LUMINAIRES.
2. SEE LIGHTING SPECIALIST FOR BISCAYNE 150W PULSE START MH APPLICATION.

3				
2				
1	5/23/12	DEFREITAS	JUDAH	LARSEN
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

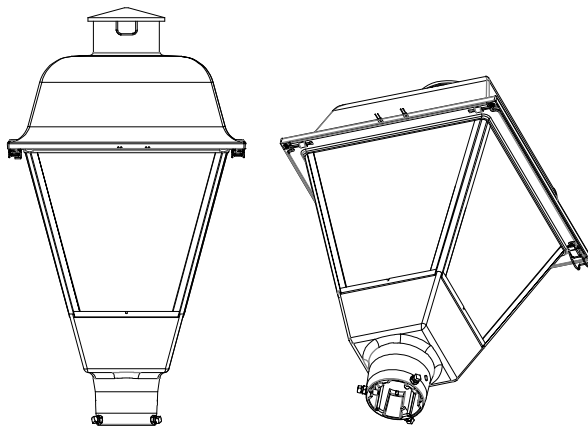
DECORATIVE POST LUMINAIRES WITH  
NON-TRAFFIC RATED PEDESTAL CONSTRUCTION



FLA

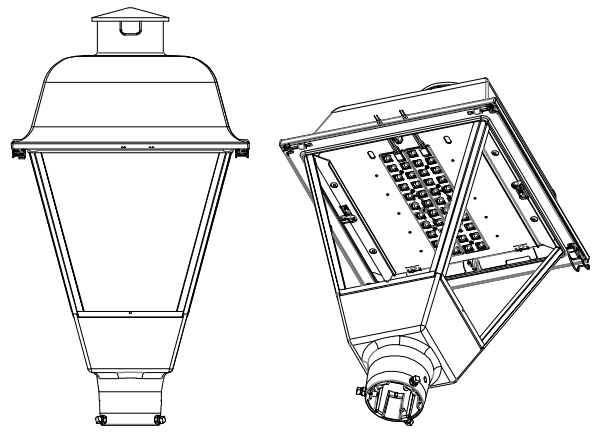
DWG.  
30.08-13





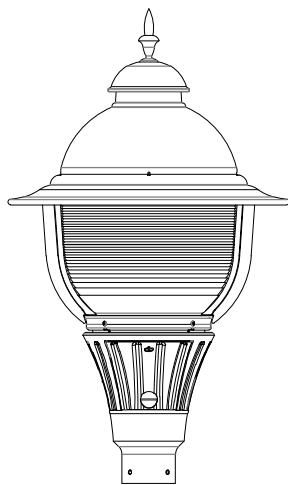
LED 50W  
 CU L24LED05TRMF  
 ITEM # 9220272280  
 TRADITIONAL (SEBRING), LED 50W

FIG. 1



LED 50W  
 CU L33LED05TROMF  
 ITEM # 9220272291  
 TRADITIONAL OPEN, LED 50W

FIG. 2

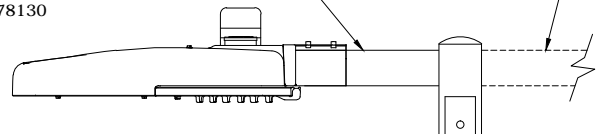


LED 50W  
 CU L29LED05BELLMF  
 ITEM # 9220272279  
 BELL LED 50W

FIG. 3

SINGLE PEDESTRIAN SHOEBX BRACKETS 2" PIPE  
 BLACK - CU LBKTSPMSBLF  
 ITEM # 9220278129  
 BRONZE - CU LBKTSPMSBRF  
 ITEM # 9220278130

DUAL PEDESTRIAN SHOEBX BRACKETS 2" PIPE  
 BLACK - CU LBKTDPMBSBLF  
 ITEM # 9220278158  
 BRONZE - CU LBKTDPMBSBRF  
 ITEM # 9220278134



LED 50W  
 L31LED05PMSBLMF  
 ITEM # 9220273342  
 SHOEBX PEDESTRIAN, 50W BLACK

LED 50W  
 L31LED05PMSBRMF  
 ITEM # 9220273343  
 SHOEBX PEDESTRIAN, 50W BRONZE

FIG. 4

NOTES:

1. USE PHOTOCCELL (ITEM # 9220208023, CU LPE3FOF) GREEN LONG LIFE FOR ALL LED LUMINAIRES.
2. ALL POST TOP LUMINAIRES REQUIRE 3" X 3" TENON.
3. DO NOT INSTALL LED POST TOP LUMINAIRES ON FIBERGLASS POLES.
4. USE POST TOP BRACKET (ITEM # 240365, CU LBKTPTOP36DBF) FOR DUAL LIGHT APPLICATION.

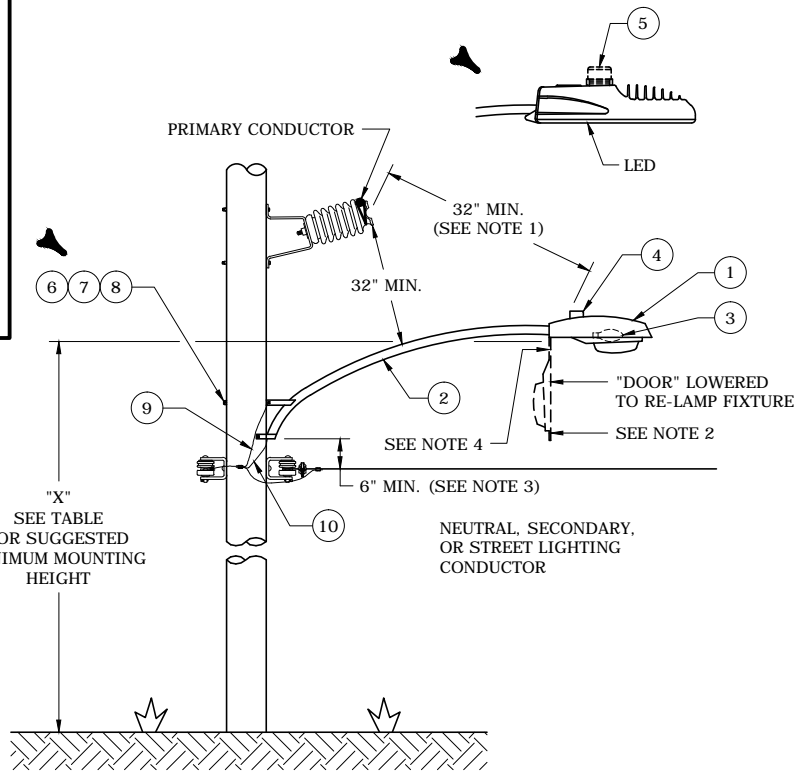
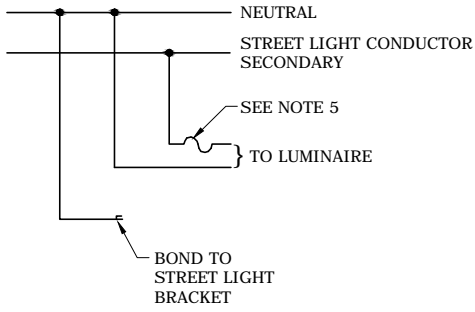


3				
2				
1				
0	4/6/16	DEFREITAS	BLOCKER	COWLING
REVISED	BY	CK'D	APPR.	

LED POST MOUNTED  
 LUMINAIRE IDENTIFICATION

DEC	DEM	DEP	DEF
			X
30.08-15			

**WIRING SCHEMATIC**



ITEM	QUANTITY		CATALOG NUMBER	DESCRIPTION
	WITH TIE RODS	W/O TIE RODS		
1	1	1	-	LUMINAIRE, ROADWAY (VARIES WITH CLASS)
2	1	1	-	BRACKET, STREET LIGHT (VARIES WITH LENGTH)
3	1	1	-	LAMP (VARIES WITH CLASS)
4	1	1	241104	PHOTOELECTRIC CELL
5	1	1	9220208023	PHOTOELECTRIC CELL, GREEN, FAIL OFF
6	3	2	013308	WASHER, SQUARE FLAT, 5/8"
7	3	2	152107	BOLT, MACHINE, 5/8" X 12"
8	3	2	013264	WASHER, SPRING COIL, 5/8"
9	1	1	190404	WIRE, COPPER, #6 SOFT DRAWN (FEET) (GROUND WIRE)
10	15	10	-	CABLE, STREET LIGHTING #6 ALUMINUM

SUGGESTED MINIMUM MOUNTING HEIGHTS			
50-100 W HPS 95 W LED		150-400 W HPS 157 W LED	
BRACKET LENGTH	X	BRACKET LENGTH	X
20"	23'-0"	20"	27'-6"
* 4'	22'-2"	* 4'	26'-0"
6'	22'-2"	6'	26'-0"
* 8'	22'-2"	* 8'	26'-0"
10'	22'-2"	10'	26'-0"
* 12'	22'-2"	* 12'	26'-0"
* 14'	22'-2"	* 14'	26'-0"

ON 40'-30" VERTICAL CONSTRUCTION "X" IS TO BE REDUCED TO PROVIDE CLEARANCE TO PRIMARY. LUMINAIRES ON OPPOSITE SIDE OF ROAD SHOULD ALSO BE LOWERED.  
\* MAINTENANCE ONLY

**NOTES:**

1. THIS MINIMUM DISTANCE (32") MUST BE MAINTAINED FROM THE PRIMARY CONDUCTORS TO ANY PART OF THIS LUMINAIRE A PERSON MUST TOUCH TO RE-LAMP OR TO REPLACE THE PHOTOCONTROL.
2. NO MINIMUM DISTANCE SPECIFIED - "DOOR" MUST NOT TOUCH AND CONDUCTOR LOCATED BELOW LUMINAIRE.
3. WHEN SPECIFIED BY ENGINEER, LIGHTING UNIT MAY BE INSTALLED AT SECONDARY LEVEL, OPPOSITE THE SECONDARY TO AVOID REPLACING AN EXISTING POLE.
4. A WATTAGE STICKER IS SUPPLIED WITH FIXTURE.
5. INSTALL 20 AMP FLAG FUSE IN SUPPLY LINE OF LUMINAIRES THAT ARE CONTROLLED BY MULTIPLE RELAY.
6. FOR SECONDARY LIGHTNING ARRESTER APPLICATIONS SEE DWG. 30.08-36.
7. SEE SECTION 09 FOR REQUIRED CLEARANCES BETWEEN BRACKET AND FOREIGN ATTACHMENTS.
8. AVOID INSTALLATIONS ON SWITCH POLES.
9. USE PHOTOCELL CN 9220208023 FAIL OFF, GREEN FOR LED LUMINAIRES.

3				
2				
1	6/26/12	DEFREITAS	JUDAH	LARSEN
0	7/26/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

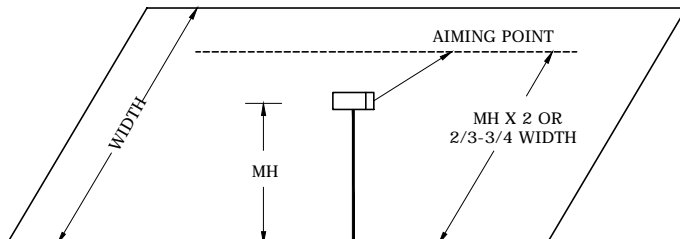
**LUMINAIRE, ROADWAY WITH BRACKET**

**FLA** DWG. 30.08-19

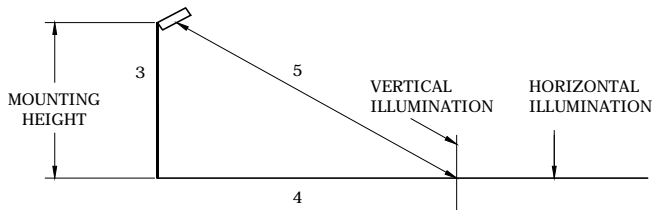
FLOODLIGHT AIMING INSTRUCTIONS

VERTICAL AIMING

FOR NORMAL AREA LIGHTING THE AIMING POINT SHOULD BE  $2/3 - 3/4$  THE DISTANCE ACROSS THE AREA OR TWICE THE MOUNTING HEIGHT WHICHEVER IS THE LOWEST VALUE. HIGHER AIMING ANGLES WILL NOT IMPROVE UTILIZATION OR UNIFORMITY.



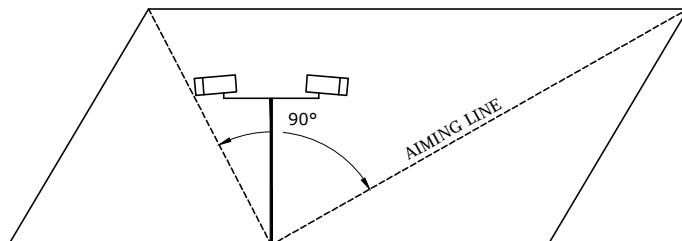
THE HIGHEST LEVEL A FLOODLIGHT CAN PRODUCE AT A DISTANCE FROM THE POLE OCCURS WHEN THE MAXIMUM INTENSITY OR CANDLEPOWER IS AIMED TO FORM APPROXIMATELY A 3, 4, 5 TRIANGLE. THIS IS USEFUL WHEN DETERMINING SETBACK FOR BUILDING FLOODLIGHTING.



ILLUMINATION ON VERTICAL SURFACES IS OFTEN AS IMPORTANT AS HORIZONTAL ILLUMINATION. THIS IS ESPECIALLY TRUE IN OUTDOOR WORK AREA AND SECURITY LIGHTING. THE VERTICAL ILLUMINATION IN LINE WITH THE FLOODLIGHT CAN BE DETERMINED BY THE RATIO OF THE HORIZONTAL DISTANCE TO THE MOUNTING HEIGHT. IF, FOR EXAMPLE, THE HORIZONTAL DISTANCE IS TWICE THE MOUNTING HEIGHT, THE VERTICAL ILLUMINATION WILL BE TWICE THE HORIZONTAL.

HORIZONTAL AIMING

COMPANY FLOODLIGHTS WILL EFFECTIVELY LIGHT AN AREA 45 DEGREES ON EITHER SIDE OF THE AIMING LINE. PERIMETER POLES THEREFORE SHOULD HAVE TWO FLOODLIGHTS TO ADEQUATELY COVER THE FULL 180 DEGREES (AREA IN FRONT OF AND TO THE SIDES OF THE FLOODLIGHT). INTERIOR POLES SHOULD HAVE FOUR FLOODLIGHTS TO COVER THE AREA IN ALL DIRECTIONS.



NOTES:

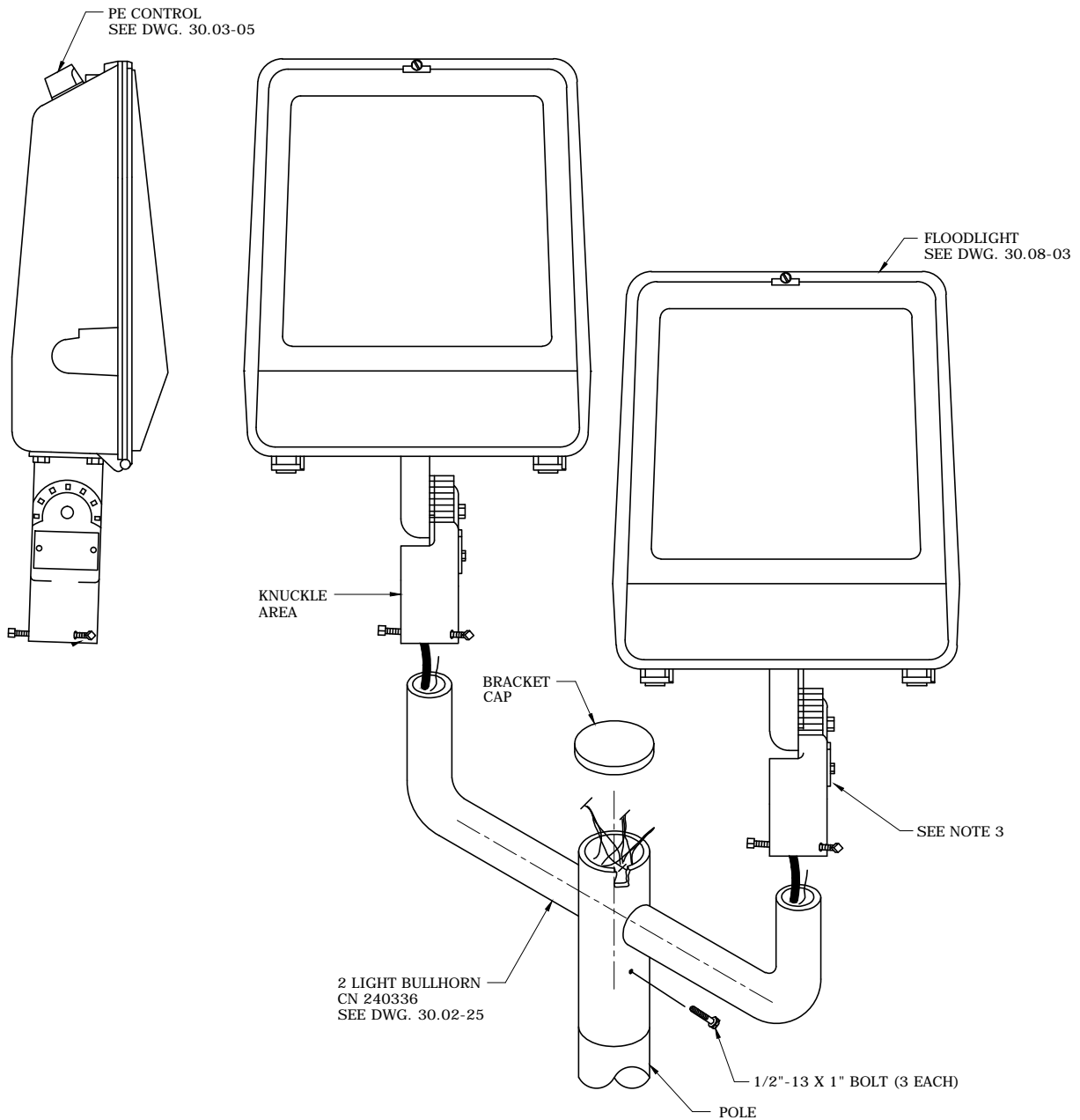
1. SEE DWG. 30.13-07 FOR SHIELD INFORMATION.

3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

FLOODLIGHT AIMING INSTRUCTIONS



**FLA** DWG. 30.08-25



**NOTES:**

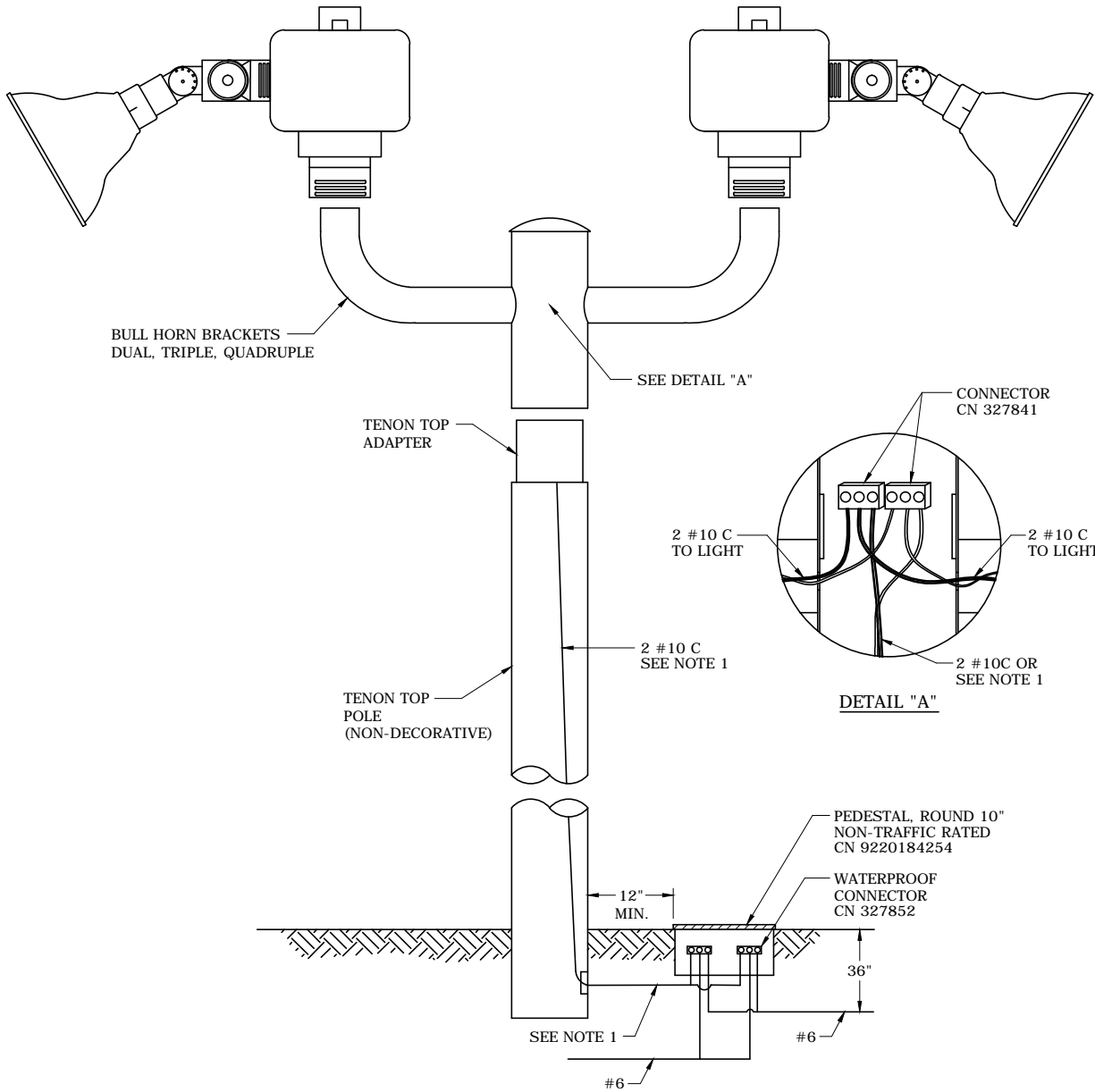
1. DO NOT MOUNT FLOODLIGHT FIXTURE DIRECTLY FACE DOWN OR DIRECTLY FACE UP POSITION, PARALLEL TO GROUND. THIS CAN CAUSE OVERHEATING OF FIXTURE, AND SUBSEQUENT PREMATURE FAILURES OF INTERNAL BALLAST AND/OR OTHER COMPONENTS.
2. FIXTURE CAN BE MOUNTED TO ANY BRACKET IN FIG. 8, SEE DWG. 30.02-25.
3. IF CONDUCTOR PIGTAILS ARE NOT REQUIRED AND SEPARATE CONDUCTOR IS PULLED TO FIXTURE, PIGTAIL CAN BE REMOVED. A WIRING ACCESS PLATE AT SIDE OF KNUCKLE AREA CAN BE REMOVED TO ACCESS CONDUCTOR CONNECTIONS. REMOVE PIGTAIL CABLE AND RECONNECT NEW SERVICE CONDUCTOR.
4. FIXTURES ARE PROVIDED WITH 36" LONG CONDUCTOR PIGTAILS.
5. SEE DWG. 30.13-07 FOR SHIELD INFORMATION.

3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

DIRECTIONAL FLOODLIGHTS WITH  
KNUCKLE-SLIPFITTER, TENON-TOP MOUNT,  
(CLASS 29 & 30, HPS) (CLASS 68 & 79 MH)



**FLA** DWG.  
30.08-27



**NOTES:**

1. WHEN THREE OR MORE SPORTS LIGHTS ARE INSTALLED ON THE SAME POLE, #6 AL IS REQUIRED.
2. FOR PEDESTAL DETAILS, SEE DWG. 30.07-36.
3. FOR BRACKET DETAILS, SEE DWG. 30.02-25.

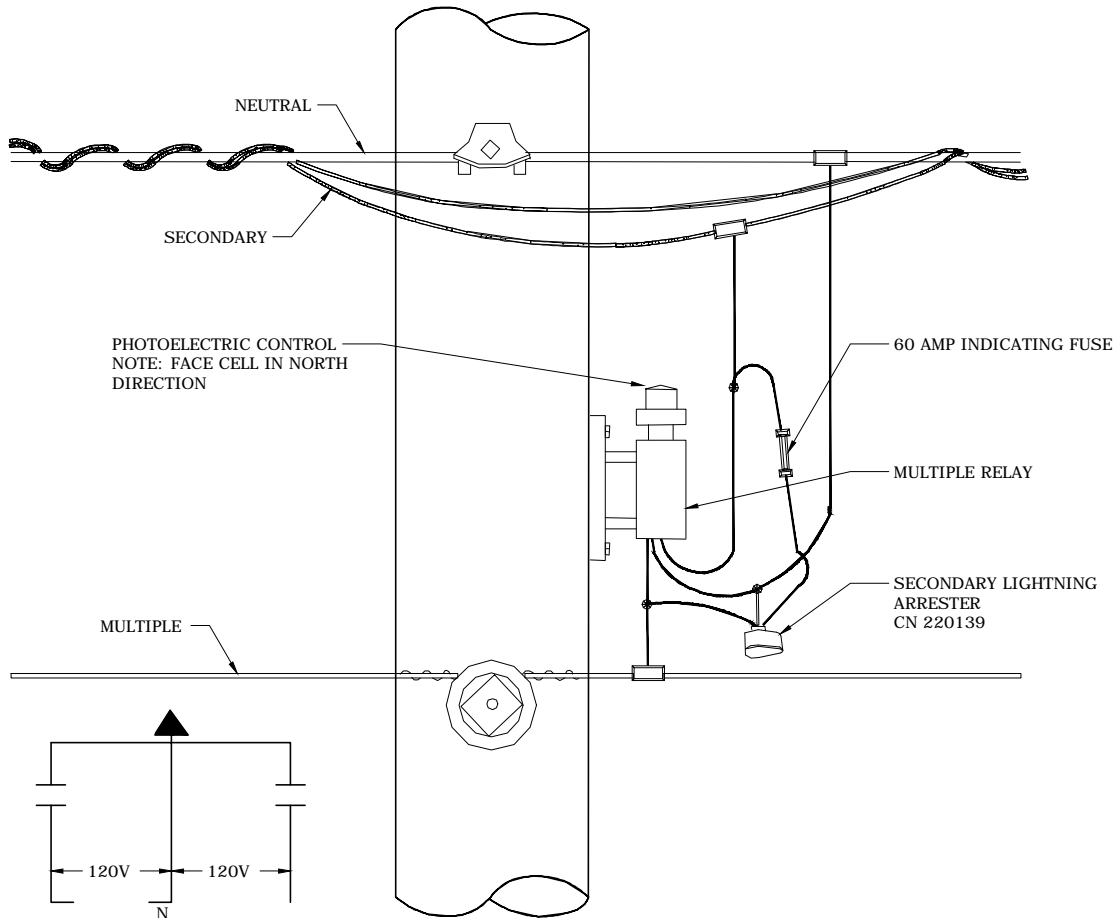
3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

METAL HALIDE SPORTS LIGHT  
(CLASS 69)



**FLA**

DWG.  
30.08-28



G.E. ARRESTER SCHEMATIC  
CN 220139

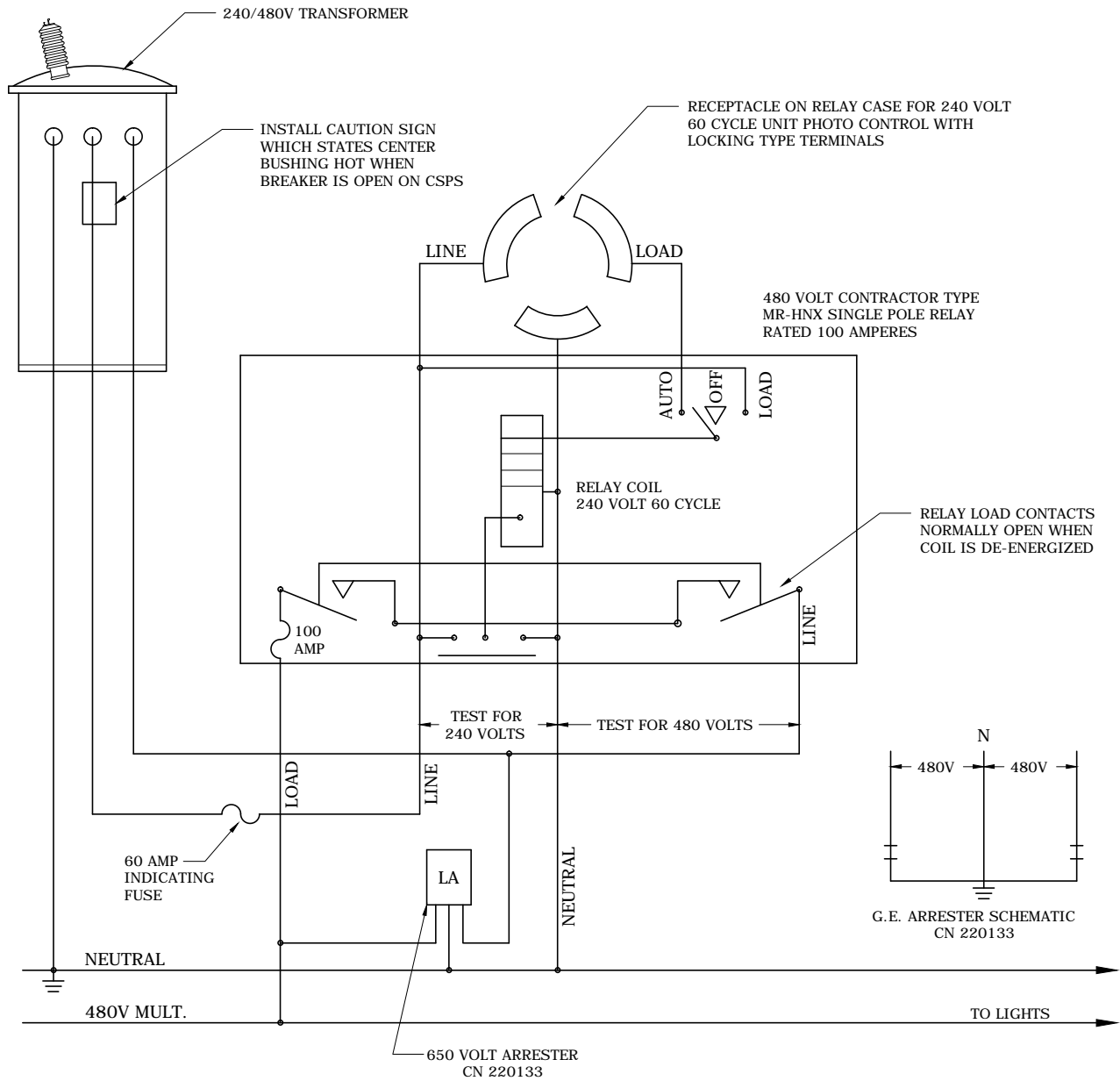
3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

INSTALLATION DETAIL,  
120 VOLT MULTIPLE RELAY  
AND P.E. CELL



**FLA**

DWG.  
30.08-31



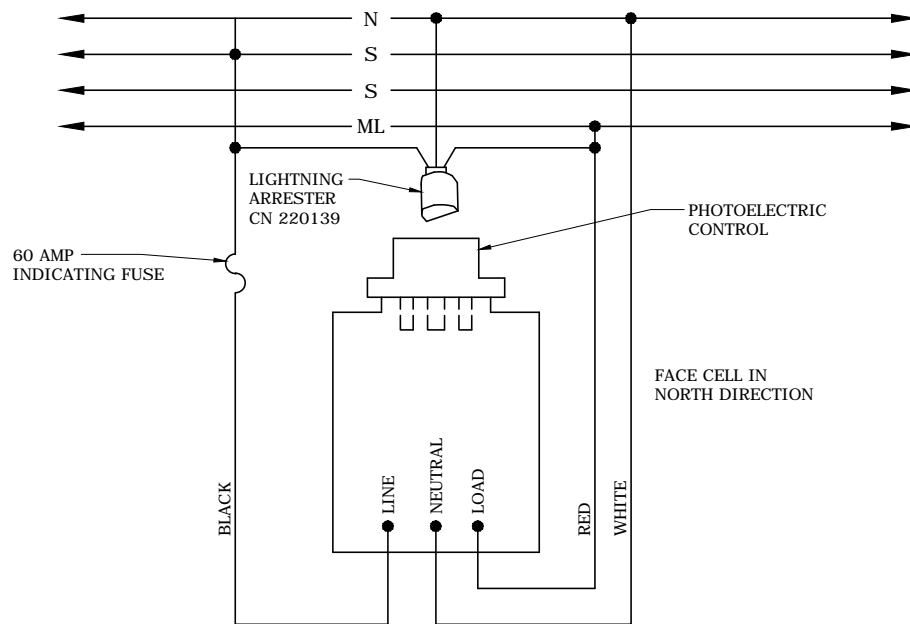
3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

INSTALLATION DETAIL,  
TWIN 100 AMP., 480 VOLT  
MULTIPLE RELAY

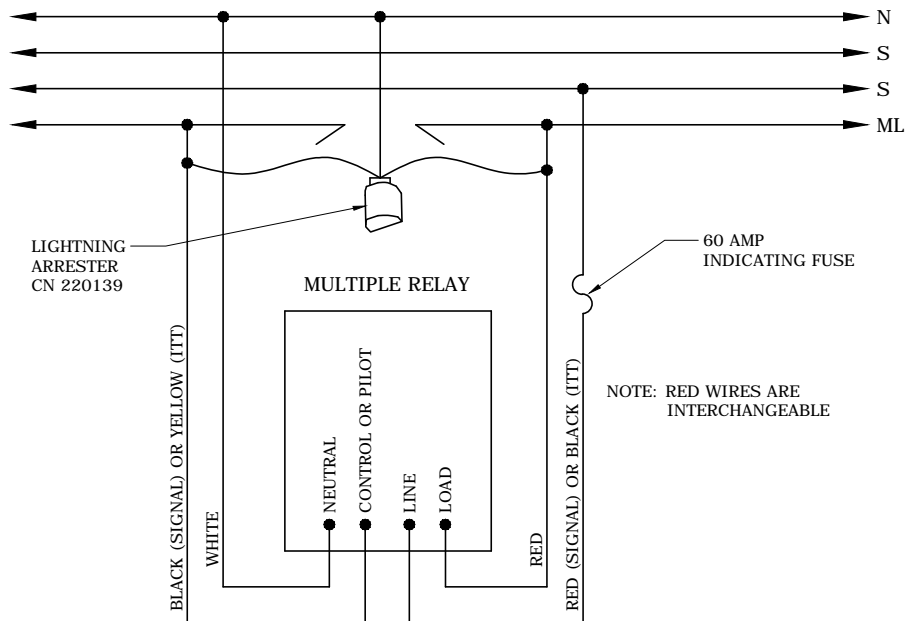


FLA

DWG.  
30.08-32



MULTIPLE RELAY CONTROLLED WITH P. E. CELL



FISHER PIERCE AND AMERICAN ELECTRIC (SIGMA INSTRUMENTS, INC) (ITT)

3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

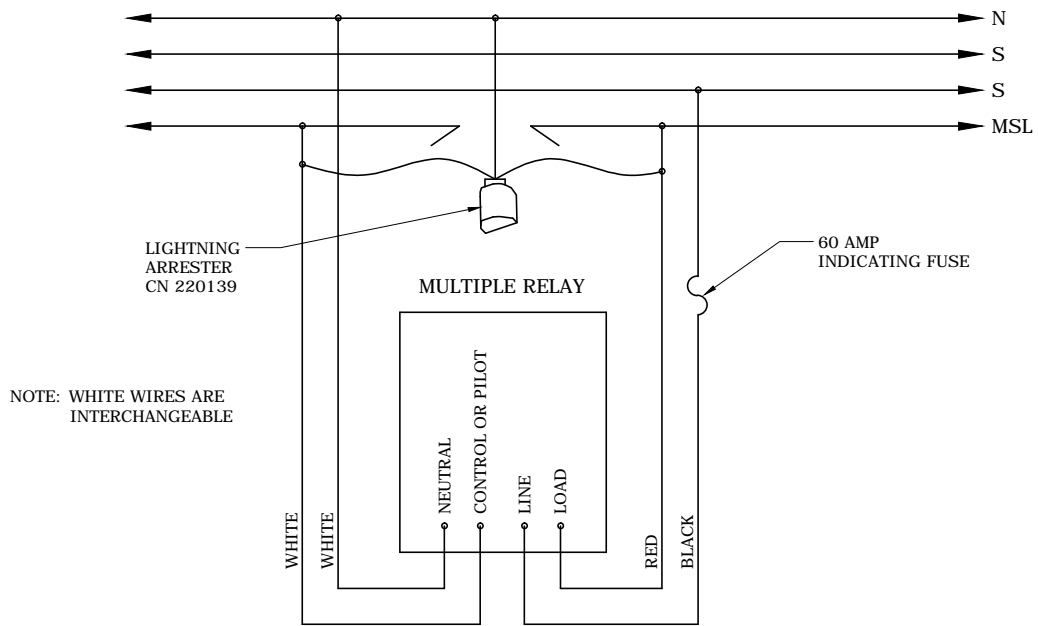
SCHEMATIC DIAGRAMS  
PHOTOELECTRIC MULTIPLE RELAY  
CONTROLS FOR 120 VOLT CIRCUITS



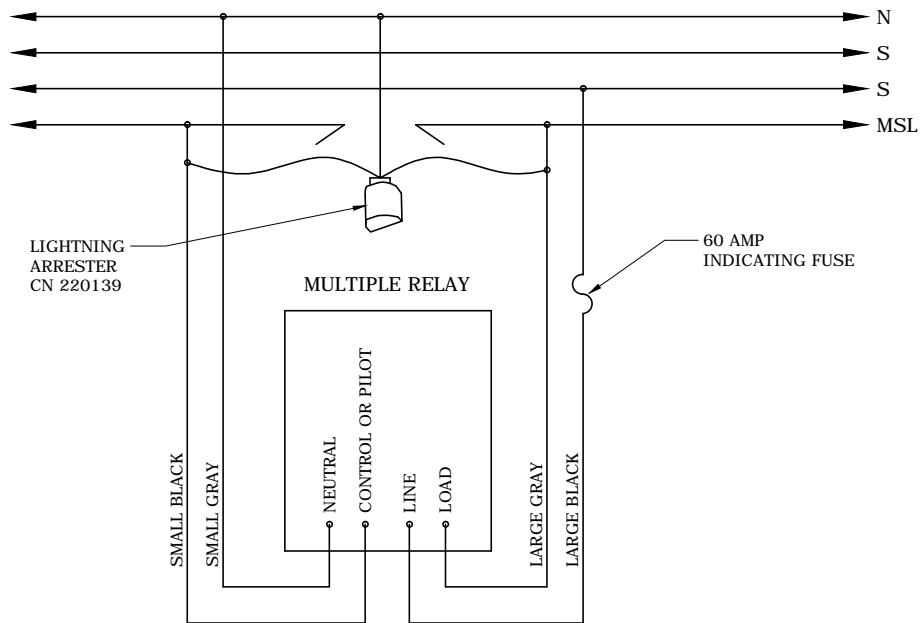
FLA

DWG.  
30.08-33





PRECISION MULTIPLE CONTROLS  
(PERMATROL)



RIPLEY CO., INC.

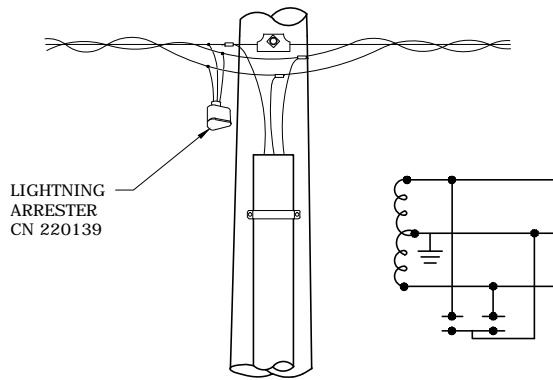
3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

SCHMATIC DIAGRAMS  
PHOTOELECTRIC MULTIPLE RELAY  
CONTROLS FOR 120 VOLT CIRCUITS



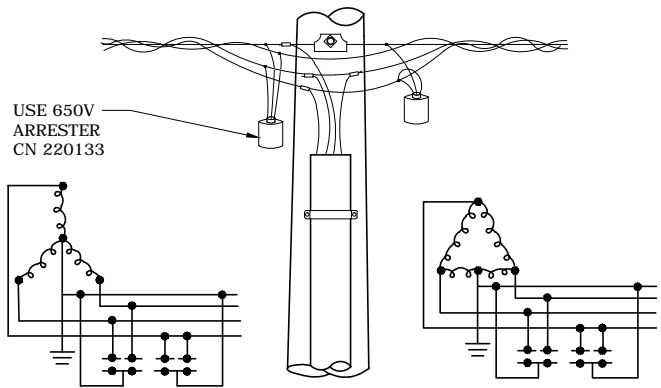
FLA

DWG.  
30.08-35



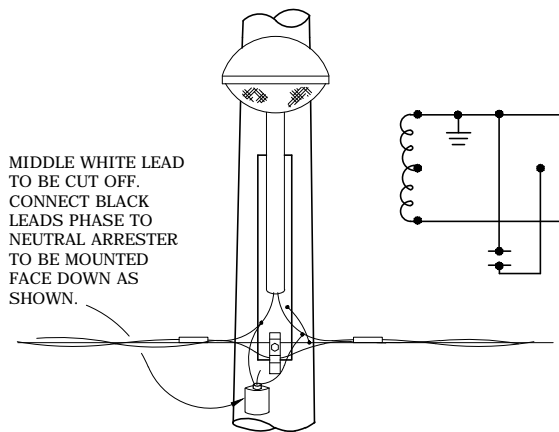
LIGHTNING ARRESTER CN 220139

SINGLE-PHASE UNDERGROUND RISER OVERHEAD FEED



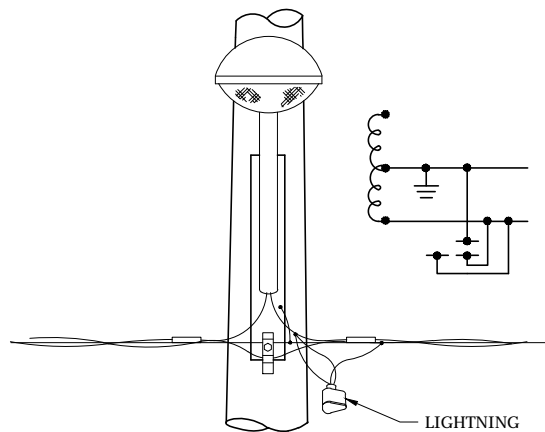
USE 650V ARRESTER CN 220133

THREE-PHASE UNDERGROUND WYE OR DELTA OVERHEAD FEED  
120/209V OR 277/480V



MIDDLE WHITE LEAD TO BE CUT OFF. CONNECT BLACK LEADS PHASE TO NEUTRAL ARRESTER TO BE MOUNTED FACE DOWN AS SHOWN.

480V MULTIPLE STREET LIGHT



LIGHTNING ARRESTER CN 220139

120V MULTIPLE STREET LIGHT

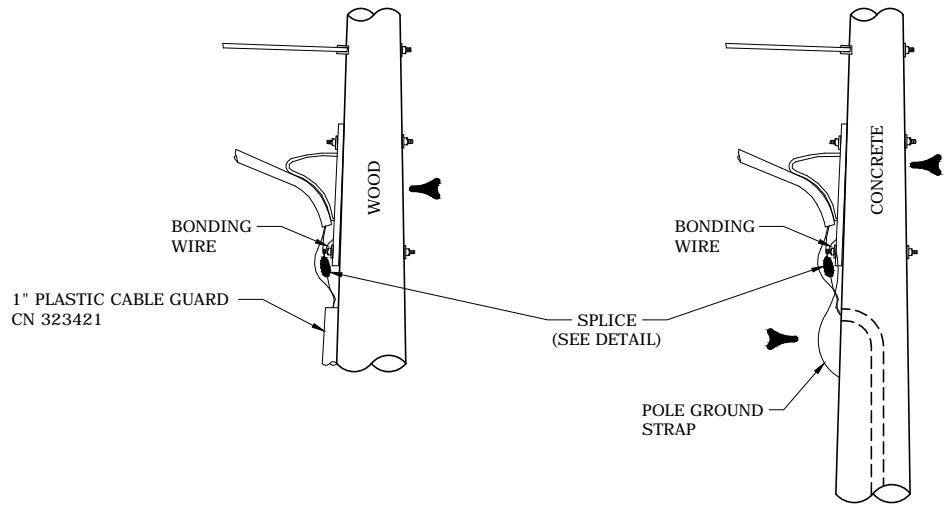
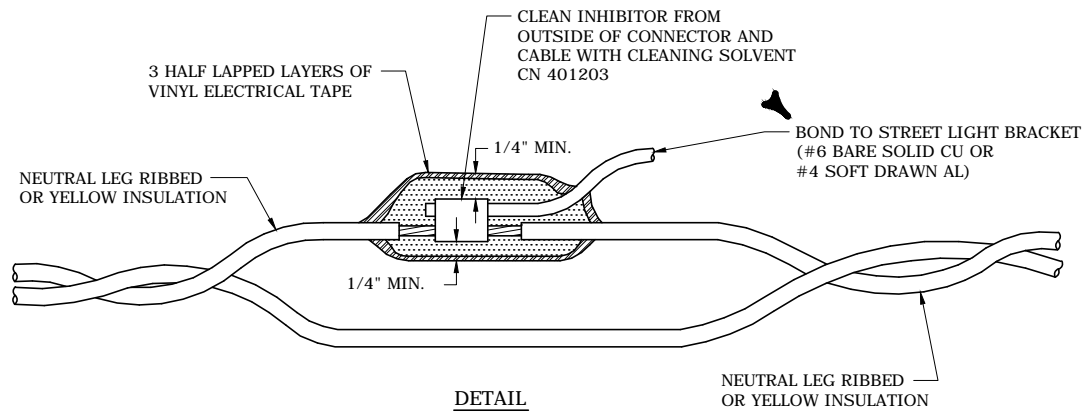
3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

PROPER INSTALLATION OF SECONDARY LIGHTNING ARRESTERS WHEN SPECIFIED



FLA

DWG.  
30.08-36




**NOTES:**

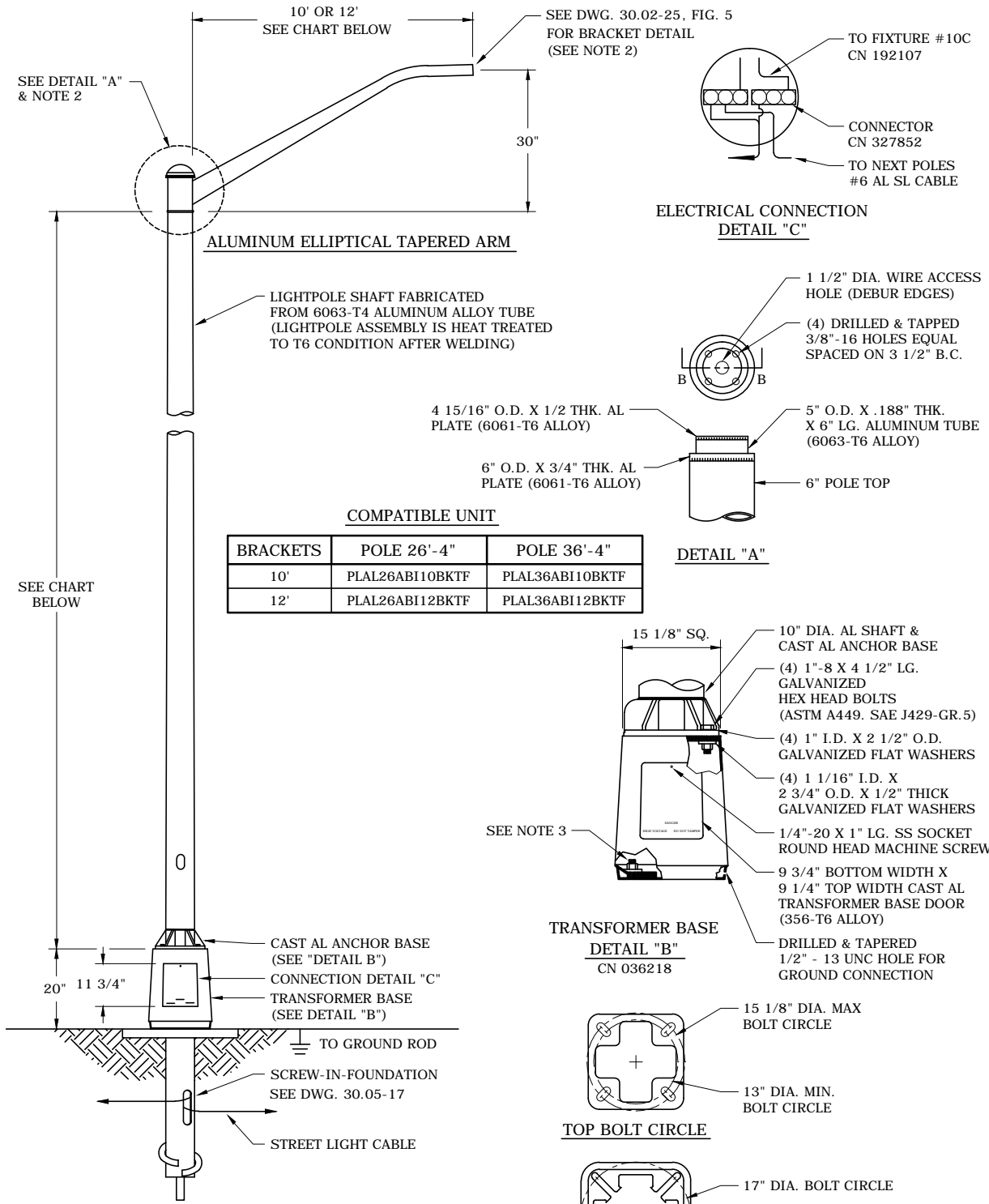
1. BOND STREET LIGHT BRACKET TO SYSTEM NEUTRAL.
2. ON CONCRETE POLES, BOND POLE GROUND STRAP TO STREET LIGHT BRACKET.

3				
2				
1	5/23/12	DEFREITAS	JUDAH	LARSEN
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

TYPICAL SPLICE FOR STREET LIGHT INSTALLATION  
USING UNDERGROUND CABLE



**FLA** DWG. 30.08-37



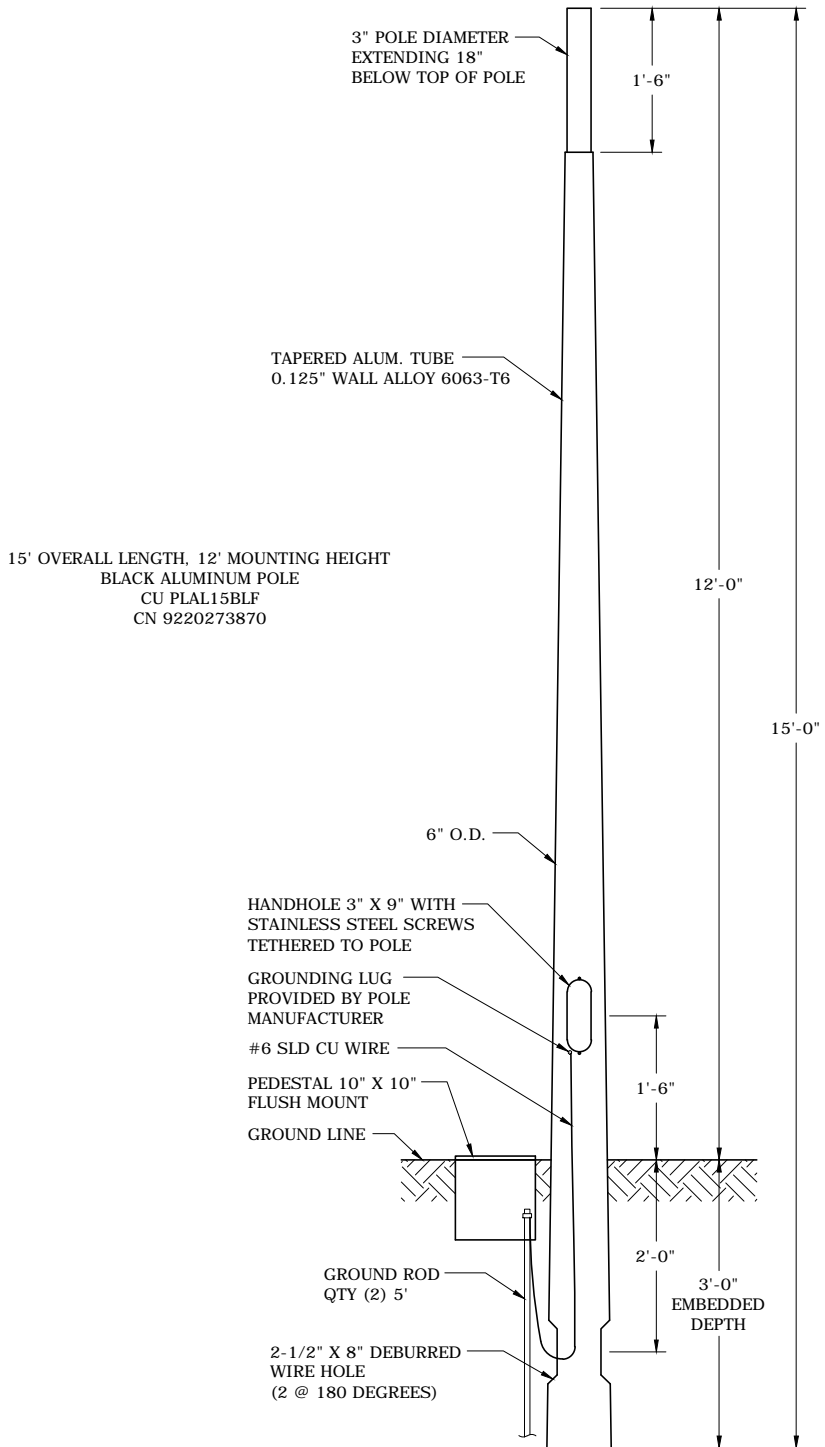
**NOTES:**

1. TRANSFORMER BASE AND LIGHTPOLE TO BE LEVELED AS ONE UNIT, USING LEVELING SHIMS IF REQUIRED.
2. BRACKET SUPPLIED WITH 3/8"-16 UNC X 2" ZP GRADE 8 HIGH STRENGTH HEX HEAD CAP SCREWS WITH (4) LOCK WASHERS AND (4) FLAT WASHERS.
3. HARDWARE FOR SECURING T-BASE TO SCREW ANCHOR IS SUPPLIED WITH SCREW ANCHOR.
4. LUMINAIRE AND BRACKET MUST BE INSTALLED IMMEDIATELY AFTER POLE INSTALLATION.

3				
2				
1	5/23/12	DEFREITAS	JUDAH	LARSEN
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

**ALUMINUM FRANGIBLE POLE**

**FLA** DWG. 30.09-06



15' OVERALL LENGTH, 12' MOUNTING HEIGHT  
 BLACK ALUMINUM POLE  
 CU PLAL15BLF  
 CN 9220273870

**NOTES:**

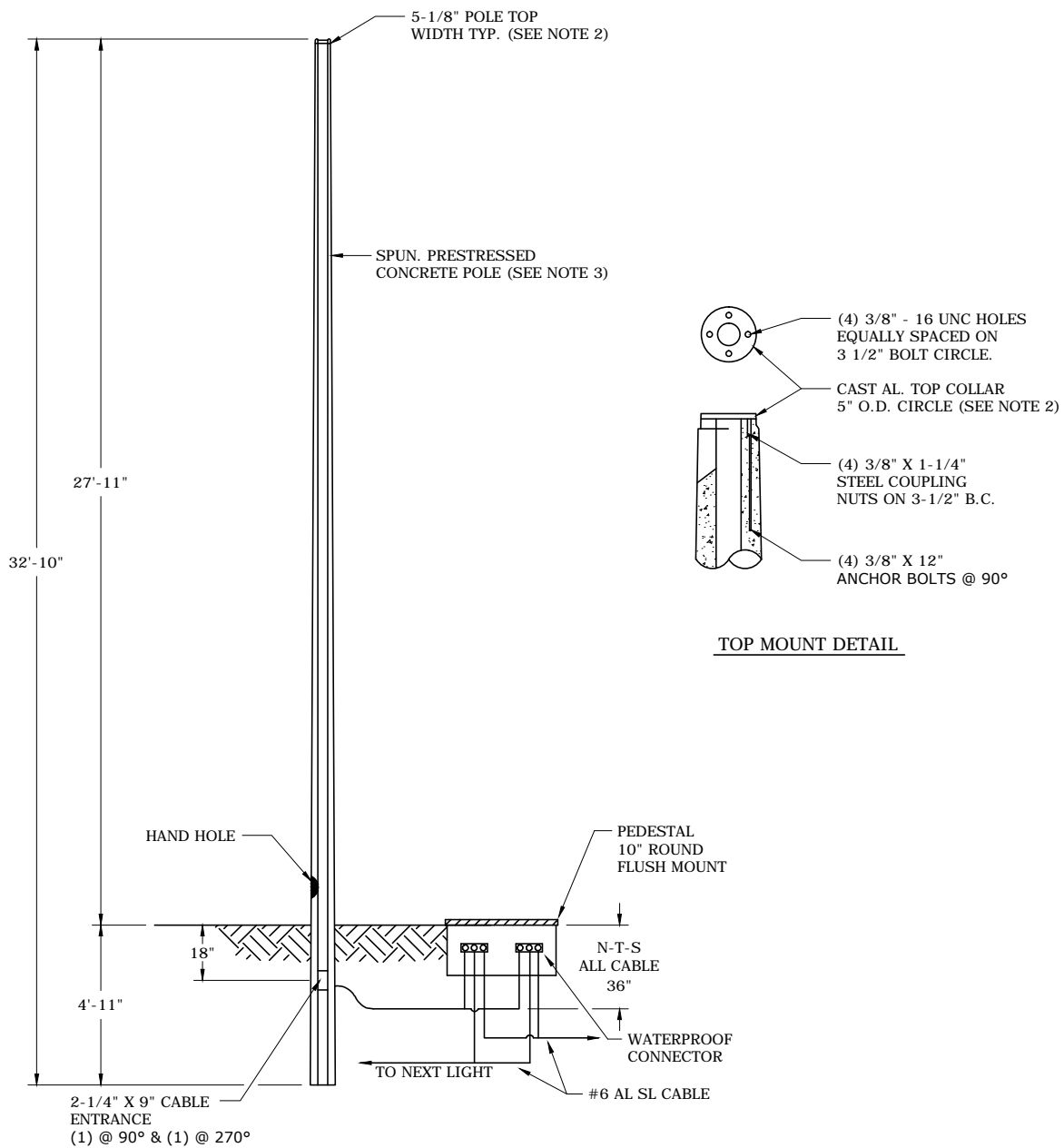
1. POLES ARE BLACK POWDER COATED.
2. NO BANNER ARM OR RECEPTACLES PERMITTED ON ALUMINUM POLES.
3. A DRIVEN GROUND, 2 - 5' RODS, SHALL BE INSTALLED AND INTERCONNECTED WITH THE NEUTRAL CONDUCTOR WITHIN THE PEDESTAL. USE CU GUAS6F (#6 SLD CU WIRE), CU GURODFRF (5' ROD AND CONNECTOR), CU GUAR1F (ADDITIONAL ROD).



3				
2				
1				
0	1/27/14	DEFREITAS	COWLING	HENSON
REVISED	BY	CK'D	APPR.	

**ALUMINUM LIGHTING POST  
 DIRECT EMBEDDED  
 15' OVERALL LENGTH WITH 3" POLE TOP**

DEC	DEM	DEP	DEF
			X
<b>30.09-07</b>			



TOP MOUNT DETAIL


NOTES:

CU PLCC32F  
CN 034145

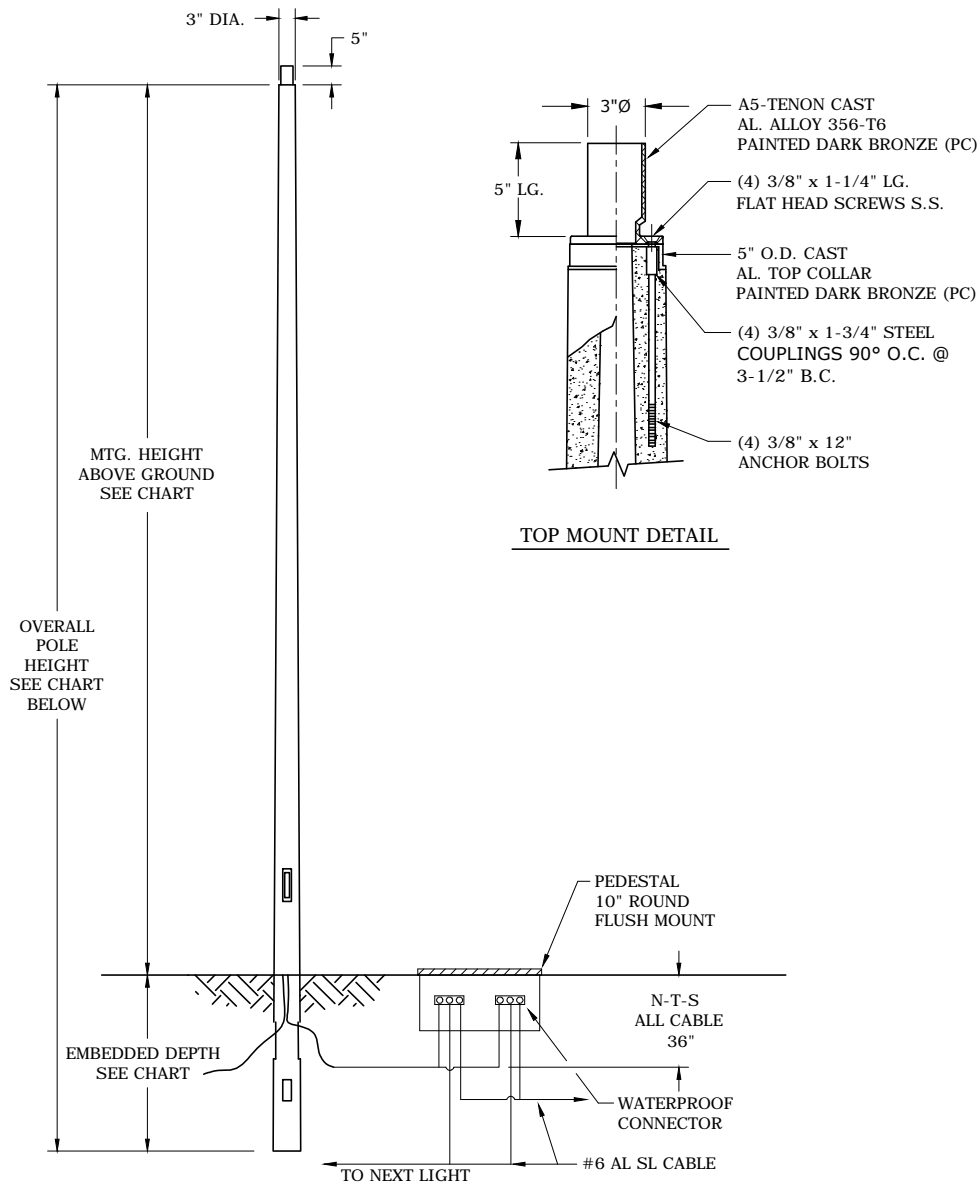
1. FINISH #6F3 AMERON COLOR MIX.
2. POLE COLLAR TO BE ROUND.
3. ANTI-GRAFFITI FINISH.
4. STREET LIGHT POLE BRACKET (NOT SHOWN), 6' ELLIPTICAL CN 034179, COLOR BLACK, SEE FIGURES ON DWG. 30.02-25.
5. POLE WEIGHT: 1,250 LBS.
6. FOR PEDESTAL CONSTRUCTION, SEE DWG. 30.07-36.
- 7. POLE FOR USE WITH 6 FT. BLACK BRACKET CN 034179 AND 250W HPS BLACK ROADWAY FIXTURE CN 241551 ONLY.

3				
2				
1	5/23/12	DEFREITAS	JUDAH	LARSEN
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

OCTAGONAL MAITLAND DECORATIVE CONCRETE  
STREET LIGHT POLE - 32'-10"



**FLA** DWG.  
30.09-12



CATALOG NUMBER	LENGTH	WEIGHT	EMBEDDED DEPTH	COMPATIBLE UNIT	COMPATIBLE UNIT W/O TENON TOP ADAPTER	MOUNTING HEIGHT
9220087189	24'-7"	710 LBS	4'-11"	PLCC25BRBZTAF	PLCC25BRF	19'-8"
034133	29'-6"	950 LBS	4'-11"	PLCC30BRBZTAF	PLCC30BRF	24'-7"
034134	34'-9"	1200 LBS	5'-3"	PLCC35BRBZTAF	PLCC35BRF	29'-6"
034135	42'-8"	1980 LBS	6'-8"	PLCC41BRBZTAF	PLCC41BRF	36'-0"

**NOTES:**

1. POLES FOR AREA LIGHTING CONSTRUCTION, SEE DWG. 30.08-02 FOR FIXTURES.
2. FOR PEDESTAL DETAILS, SEE DWG. 30.07-36.
3. USE CU "W/O TENON TOP ADAPTER" FOR CLERMONT FIXTURE.

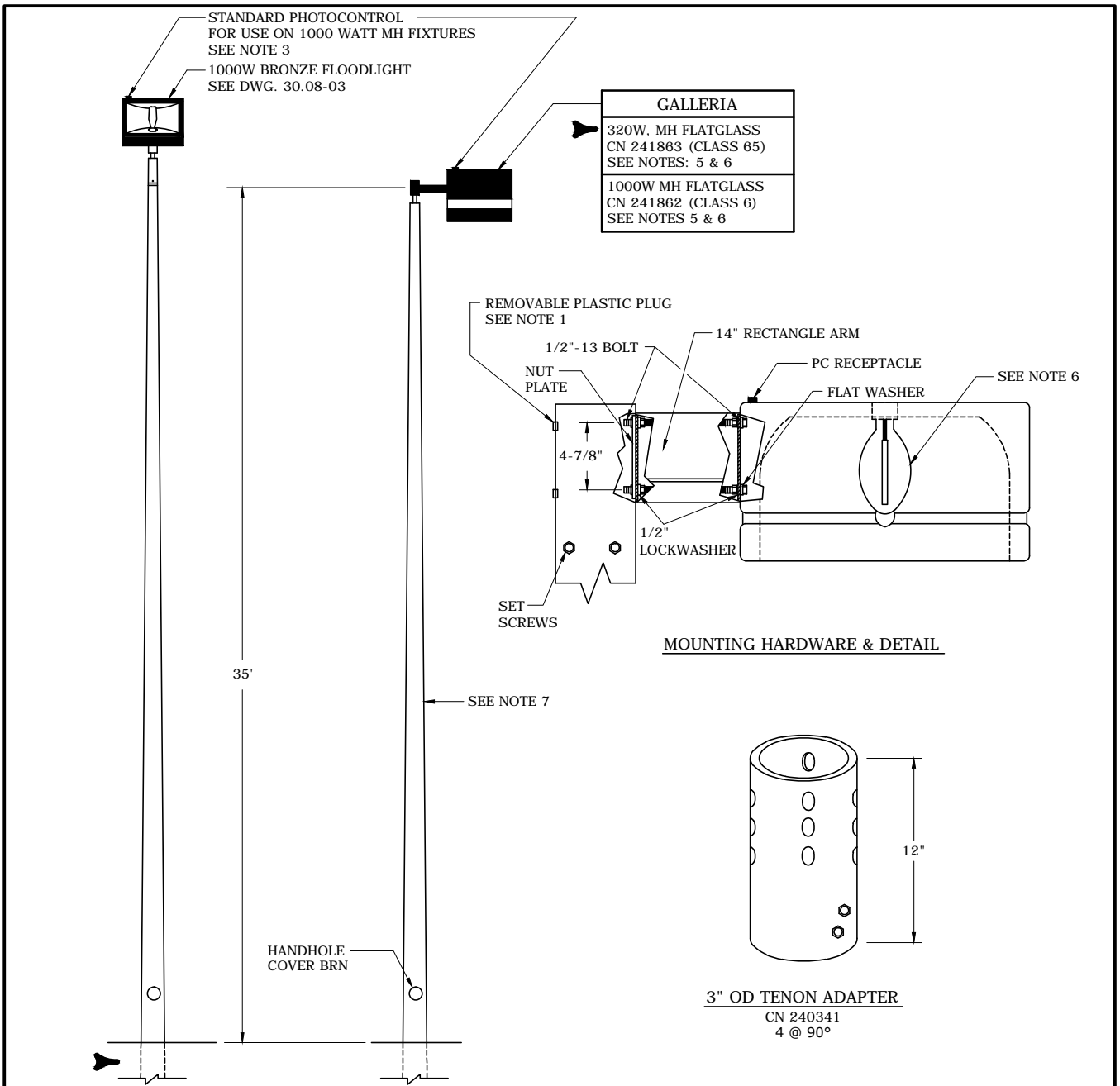
3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

**BRONZE PROMENADE SPUN CONCRETE POLES**



**FLA**

DWG.  
30.09-14




**NOTES:**

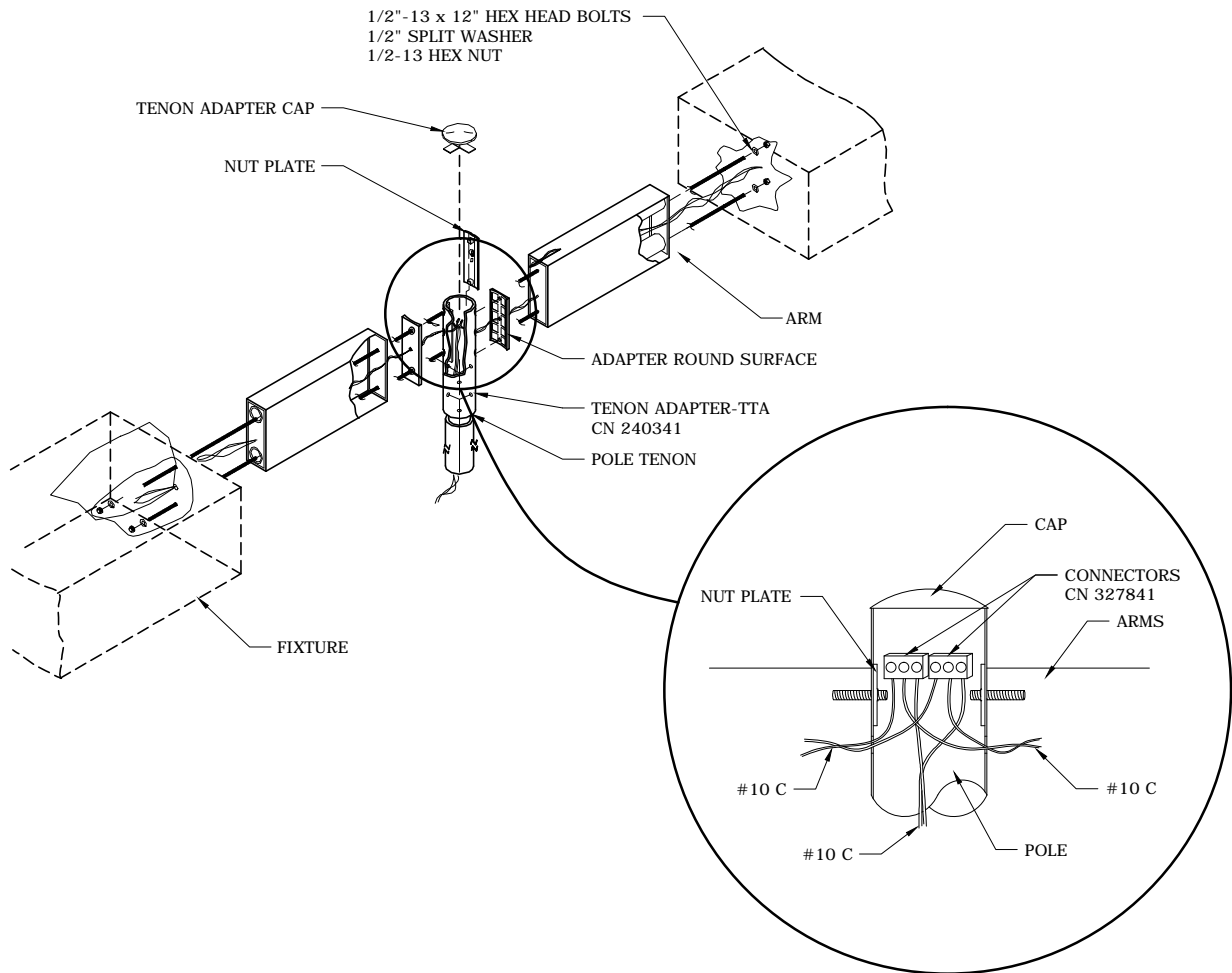
1. THE ROUND POLE TENON ADAPTER IS DRILLED ON FOUR SIDES FOR MOUNTING UP TO FOUR CUBE FIXTURES PER POLE. ONE TENON ADAPTER COMES WITH EVERY POLE ASSEMBLY.
2. WHEN APPLICABLE, POLE SHALL BE POSITIONED SUCH THAT THE HANDHOLE IS FACING AWAY FROM THE TRAFFIC.
3. THE STANDARD TEMPERATURE PHOTOCONTROL CAN BE USED ON THESE FIXTURES, SEE DWG. 30.03-05, FIG. 1.
4. CUBE FIXTURES ARE UL APPROVED.
5. GALLERIA FIXTURE MOUNT ON A 3" O.D. TENON ON A SPUN CONCRETE POLE.
6. SEE DWG. 30.06-10 FOR METAL HALIDE LAMP DATA.
7. SEE DWG. 30.09-14 FOR POLE PART NUMBERS.

3				
2				
1	5/23/12	DEFREITAS	JUDAH	LARSEN
0	7/27/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

**1000W BRONZE CUBE FIXTURE AND  
41' ROUND POLE**

  
**FLA** DWG. 30.09-15



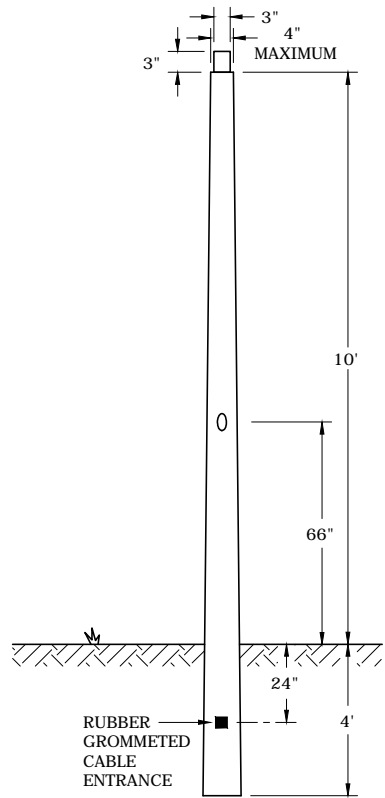
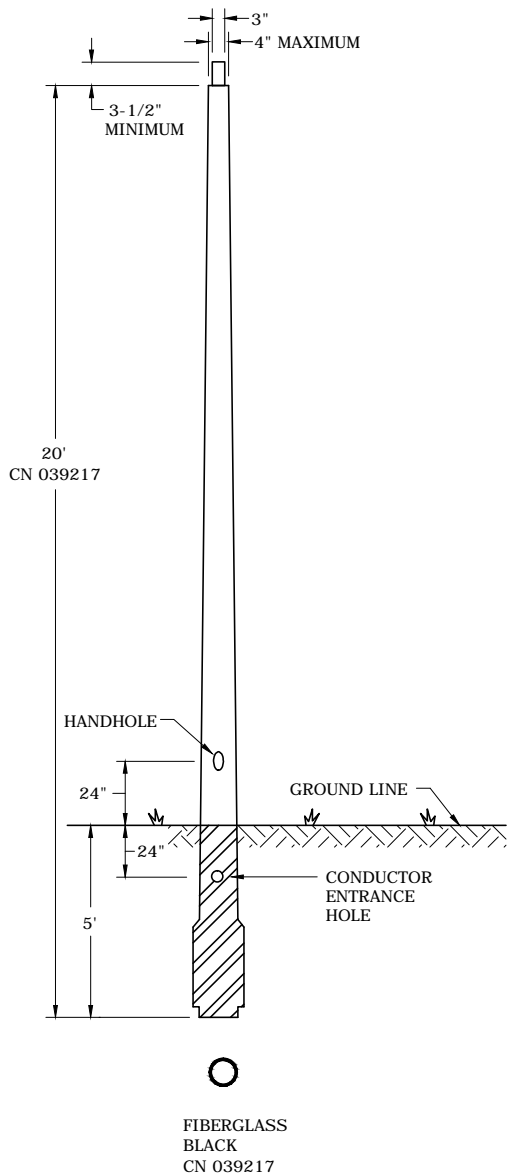


3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

TENON-TOP MOUNTED FIXTURES



**FLA** DWG.  
30.09-16



FIBERGLASS BLACK  
CN 039214  
FOR MAINTENANCE ONLY.  
SEE DWG. 30.09-28  
FOR NEW POLE INSTALLATION  
DETAILS

NOTES:

1. ALL POLES WILL BE MARKED WITH A MANUFACTURER'S I.D. TAG LOCATED 10' FROM THE BASE OF THE POLE (APPROX. 6" ABOVE GROUND) DIRECTLY ABOVE THE CONDUCTOR ENTRANCE HOLE TO FACILITATE CONDUCTOR LOCATION UPON REPAIRS.
2. APPLICABLE, POLE SHALL BE POSITIONED SUCH THAT THE HANDHOLE IS FACING AWAY FROM THE STREET.
3. INSTALL THE ANTI-ROTATION DEVICE SO AS TO KEEP POLES FROM ROTATING AFTER INSTALLATION.
4. NO BANNER CAN BE ATTACHED TO ANY OF THE ABOVE POLES.

3				
2				
1				
0	7/26/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

STANDARD FIBERGLASS LIGHTING POLES



**FLA** DWG.  
30.09-26

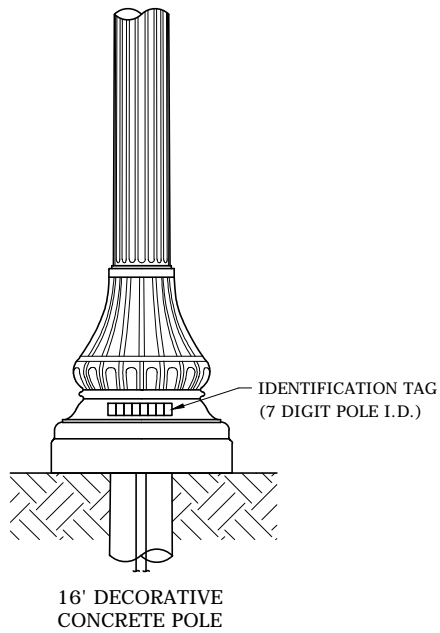


FIG. 1

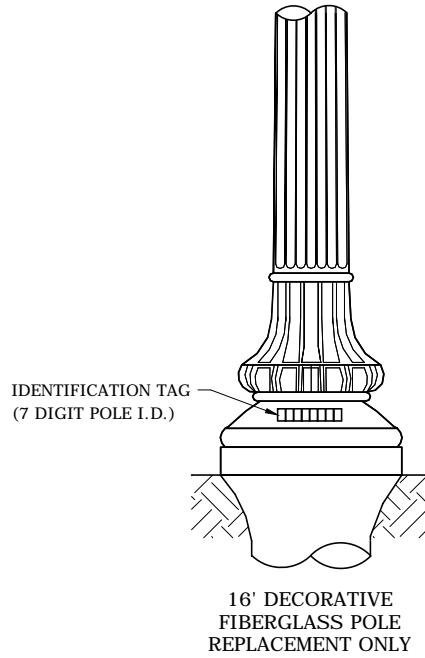
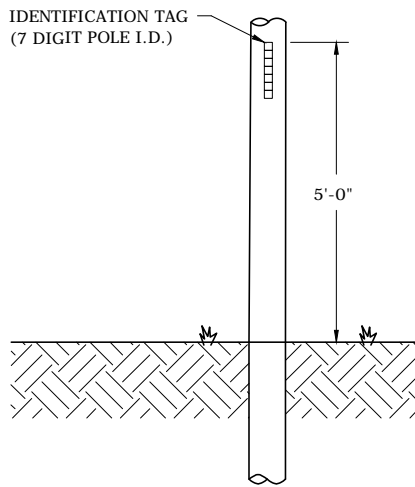
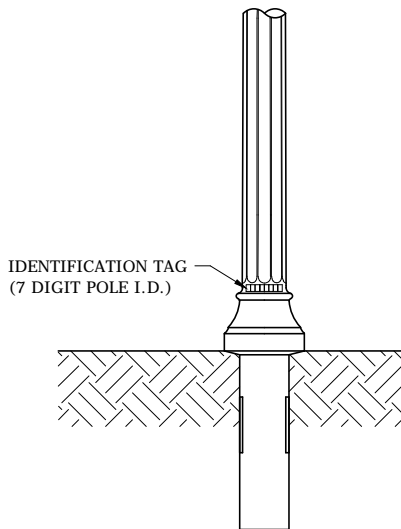


FIG. 2



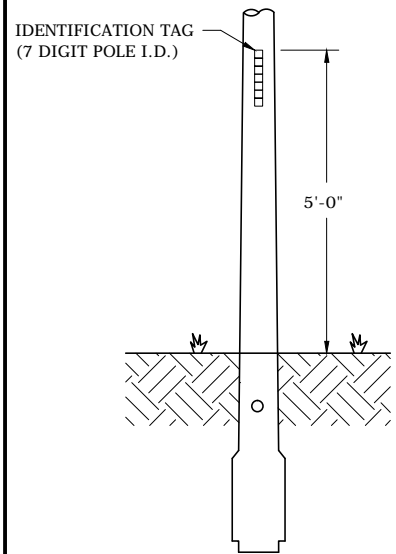
WOOD, ALUMINUM, STATIC  
CAST & SMOOTH SPUN  
CONCRETE POLES

FIG. 3



VICTORIAN EMBEDDED  
FLUTED POLE

FIG. 4



FIBERGLASS STREET LIGHT POLE

FIG. 5

**NOTES:**

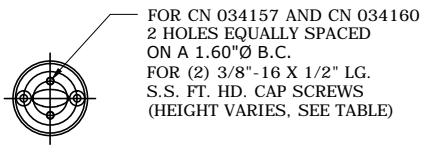
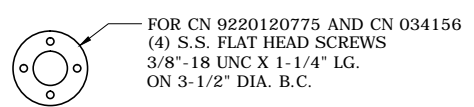
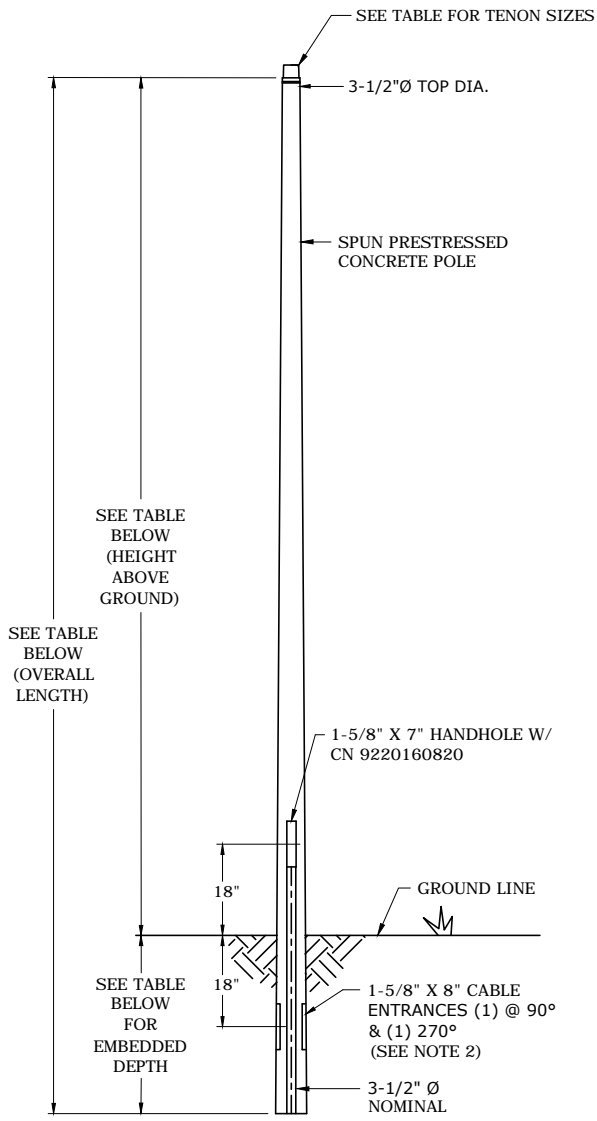
1. TAGS FOR WOOD POLES ARE TO BE INSTALLED WITH NAILS ( CN 015171). ALL OTHER POLES ARE TO USE RTV ADHESIVE (CN 152240).
2. THE CABLE ACCESS HOLE SHOULD FACE AWAY FROM THE STREET ON ALL APPLICABLE POLES.
3. THE LOCID TAG SHOULD BE LOCATED FACING THE STREET, AS SHOWN, FOR EASY IDENTIFICATION DURING MAINTENANCE OR INVENTORY EFFORTS.

3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

STREET LIGHT POST TAG LOCATION

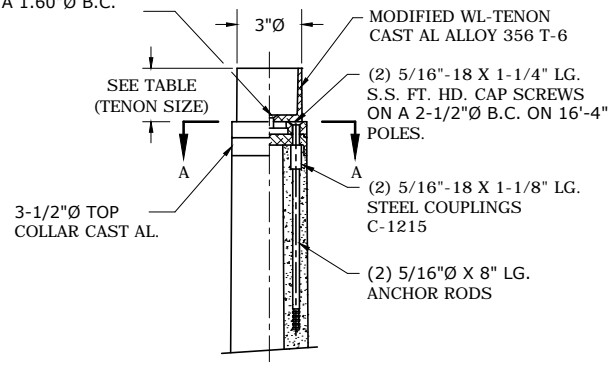


**FLA** DWG.  
30.09-27



**WL TENON BASE**  
VIEW A-A

(2) 3/8"-16 X 7/8" LG.  
S.S. FT. HD. CAP SCREWS  
ON A 1.60"Ø B.C.



**TOP MOUNT DETAIL**

**NOTES:**


1. FINISH: SMOOTH, TEXTURED, BLACK, EXPOSED FINISH WITH ANTI-GRAFFITI COATING.
2. SEE DWG. 30.07-36 FOR PEDESTAL INSTALLATION
3. COLOR IS THE SAME FOR ALL POSTS.

**EMBEDDED ROUND POLE DESCRIPTION**

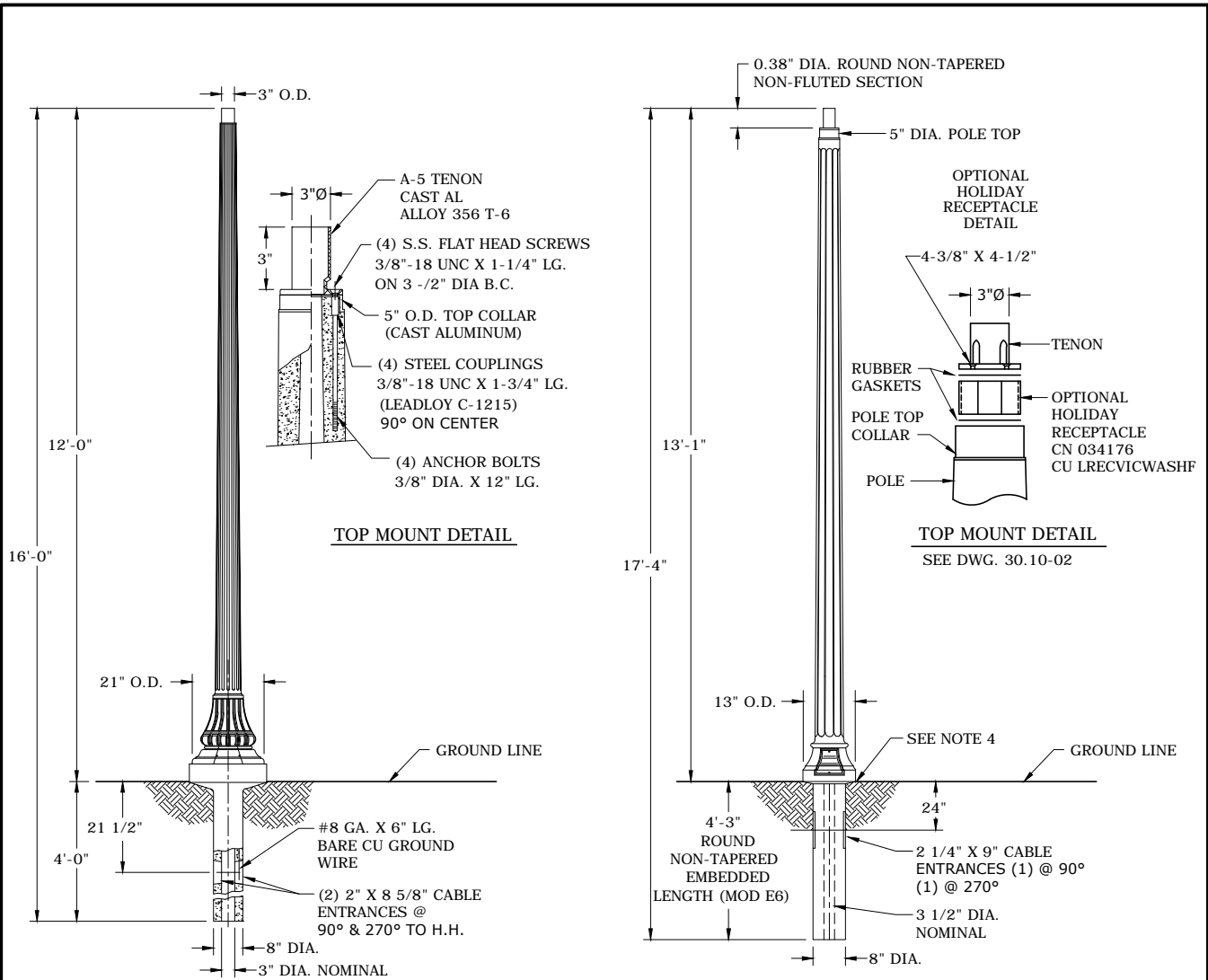
CATALOG NUMBER	POLE HT. ABOVE GND.	EMBEDDED DEPTH	OVERALL LENGTH	BUTT DIAMETER	WT. (LBS)	TENON SIZE	COMPATIBLE UNIT	DESCRIPTION
034157	12'-4"	4'-0"	16'-4"	6-1/8"	280	3"X6"	PLCC16BLSSF	16' POST FOR SINGLE SHEPHERD ARM INSTALLATION
034157	12'-4"	4'-0"	16'-4"	6-1/8"	280	3"X6"	PLCC16BLSDF	16' POST FOR DOUBLE SHEPHERD ARM INSTALLATION
034160	12'-4"	4'-0"	16'-4"	6-1/8"	280	3"X3"	PLCC16BLF	16' POST FOR SINGLE POST TOP FIXTURE
034160	12'-4"	4'-0"	16'-4"	6-1/8"	280	3"X3"	PLCC16BLDBF	16' POST FOR DOUBLE POST TOP FIXTURE (POST & BRACKET)
9220120735	17	5'	22'	7-7/8"	700	3"X3"	PLCC22F	22' POST FOR SINGLE POST TOP FIXTURE
9220120735	17	5'	22'	7-7/8"	700	3"X3"	PLCC22DBF	22' POST FOR DOUBLE POST TOP FIXTURE (POST & FIXTURE)
034156	17	5'	22'	7-7/8"	700	3"X6"	PLCC22BLSSF	22' POST FOR SINGLE SHEPARD ARM INSTALLATION
034156	17	5'	22'	7-7/8"	700	3"X6"	PLCC22BLSDF	22' POST FOR DOUBLE SHEPARD ARM INSTALLATION

3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

**COLONIAL BLACK SPUN CONCRETE POST**



**FLA** DWG. 30.09-28



WASHINGTON FLUTED DECORATIVE CONCRETE POLE

VICTORIAN FLUTED DECORATIVE CONCRETE POLE

CN	COLOR	WEIGHT (LBS)	COMP. UNIT
034164	LT BLACK	740	PLCC16WALBLF
034167	BLACK	740	PLCC16WADBKF


CN	COLOR	WEIGHT (LBS)	COMP. UNIT
034162	GRAY	550	PLCC16VICF
9220148857	BLACK	550	PLCC16VICBKF

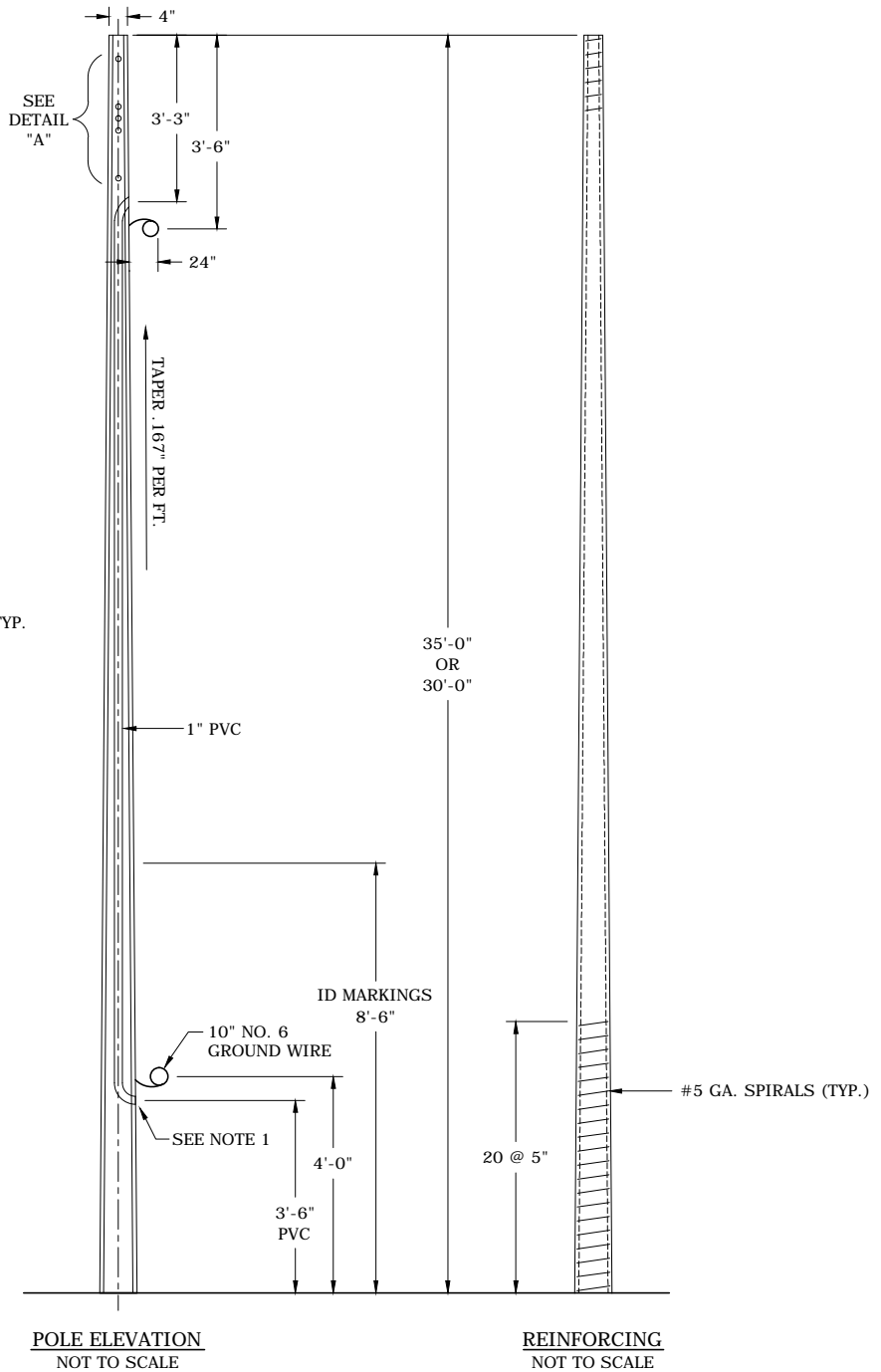
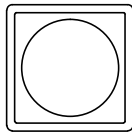
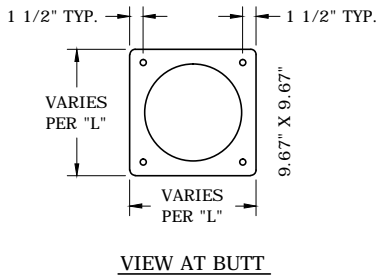
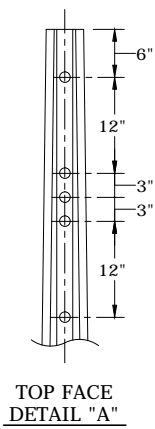
**NOTES:**

1. THE FINISH ON THE POLES IS NATURAL EXPOSED FINISH WITH ANTI-GRAFFITI COATING.
2. SEE DWG. 30.07-36 FOR USING THE PEDESTAL BOX.
3. A DUPLEX RECEPTACLE IS SUPPLIED BY THE POLE MANUFACTURER FOR WIRING DECORATIVE LIGHTS. SEE CATALOG NUMBER IN DETAIL.
4. IF FINISHED GRADE CAN NOT BE DETERMINED, USE 4"-6" ABOVE ROUGH GRADE AS A GUIDE.

3				
2				
1	5/24/12	DEFREITAS	JUDAH	LARSEN
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

DECORATIVE FLUTED CONCRETE LIGHTING POSTS

 **Progress Energy**  
**FLA** DWG. 30.09-29



CATALOG NUMBER	COLOR	COMPATIBLE UNIT	WEIGHT	OVERALL HEIGHT "A"	HEIGHT ABOVE GRADE	I.D. MARK #
034301	GRAY	PLCC30T1F	1550 LBS.	30'-0"	24'-0"	8'-6"
034351	GRAY	PLCC35T1F	1840 LBS.	35'-0"	28'-0"	8'-6"

NOTES:

1. SEE DWG 30.07-36 FOR PEDESTAL CONNECTION INSTRUCTIONS.

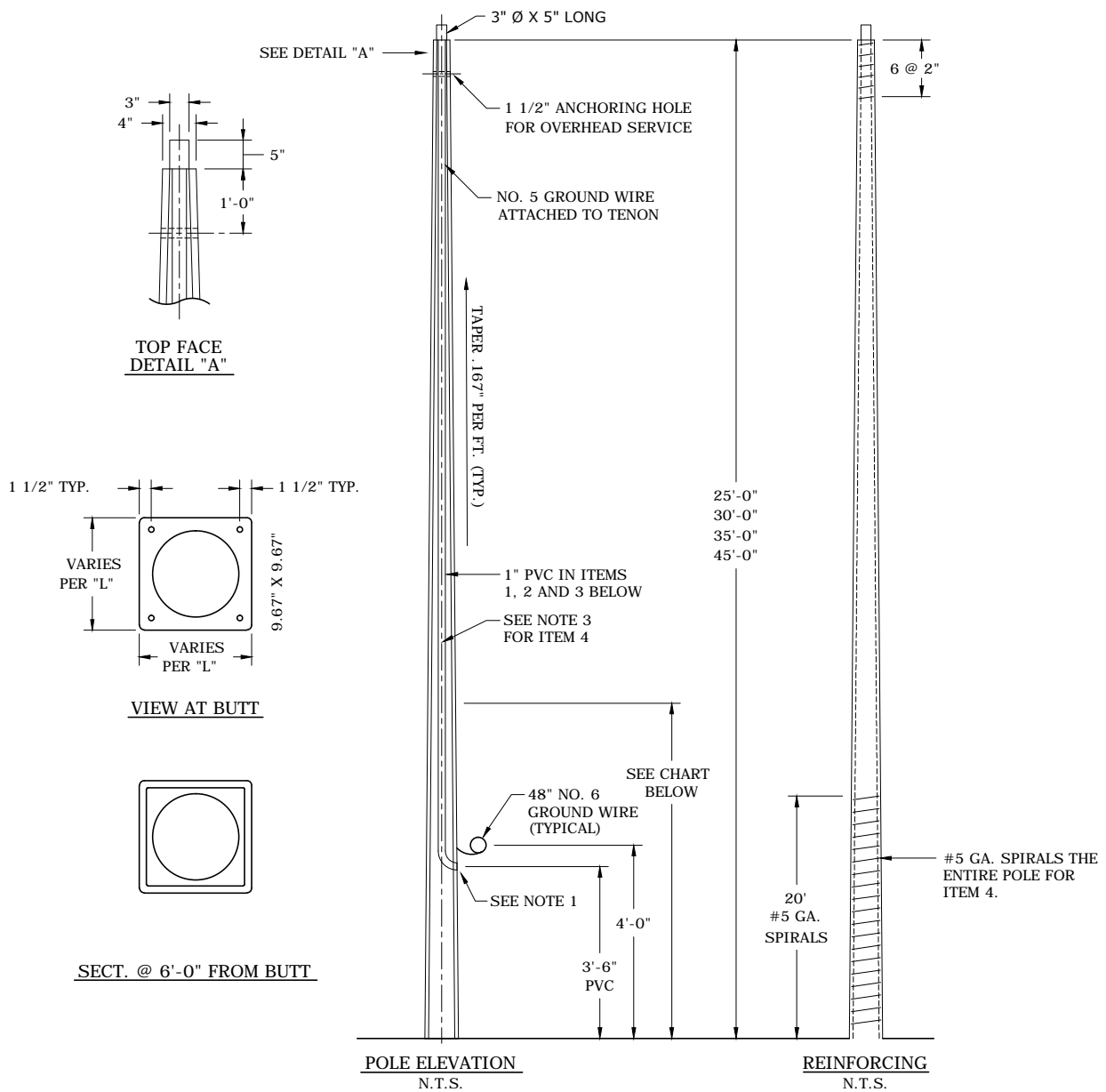
3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

(NON-TENON) CONCRETE STATIC CAST POLES



FLA

DWG.  
30.09-32



ITEM	CN	COLOR	COMP. UNIT	WEIGHT	OVERALL HEIGHT "A"	HEIGHT ABOVE GRADE	I.D. MARK #
1	034020	GRAY	PLCC25T1TNBZTAF	1050 LBS.	25'-0"	19'-6"	8'-6"
2	034302	GRAY	PLCC30T1TNBZTAF	1550 LBS.	30'-0"	24'-0"	8'-6"
3	034352	GRAY	PLCC35T1TNBZTAF	1840 LBS.	35'-0"	28'-0"	8'-6"
4	034452	GRAY	PLCC45T2TNBZTAF	3480 LBS.	45'-0"	38'-0"	12'-0"

**NOTES:**

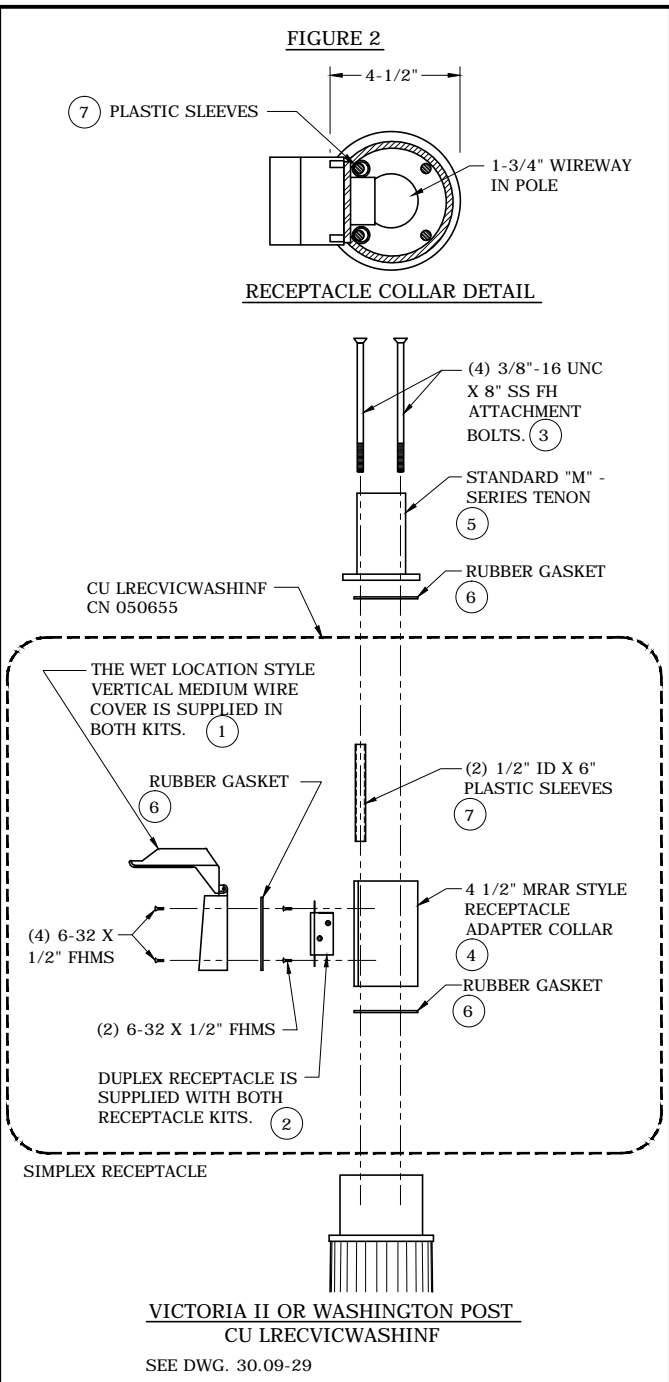
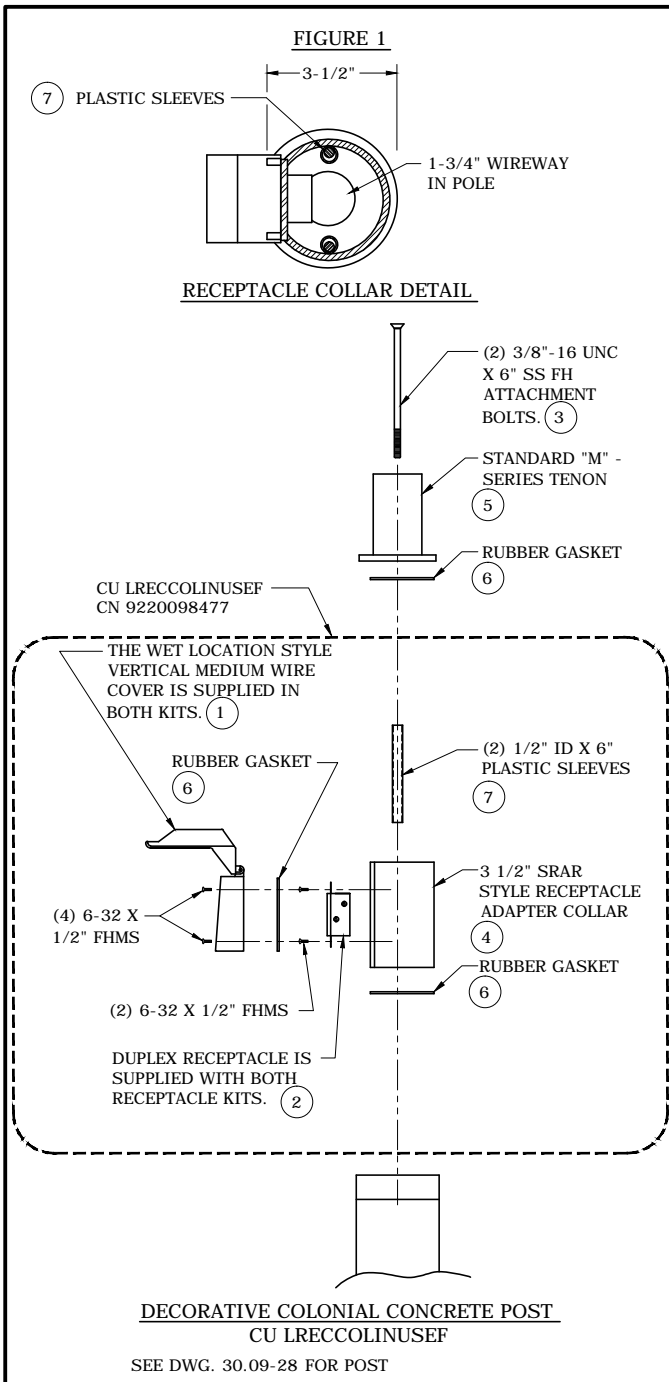
1. SEE DWG. 30.07-36 FOR PEDESTAL CONNECTION INSTRUCTIONS.
2. SEE DWG. 30.09-16 FOR SHOEBOX FIXTURES.
3. SEE DWG. 30.08-27 FOR FLOODLIGHT FIXTURES.
4. SEE DWG. 30.09-15 FOR CUBE FIXTURES.
5. SEE DWG. 30.08-28 FOR SPORTSLIGHT FIXTURES.
6. POLE MUST BE PICKED UP AND STORED AT TWO POINTS APPROX. 9 FT. FROM TOP AND 6 FT. FROM BUTT.  
CAUTION: LIFTING THIS POLE WITH A SINGLE PICK POINT WILL RESULT IN DAMAGE TO THE POLE.

3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

TENON CONCRETE STATIC CAST POLES



FLA DWG. 30.09-33



BILL OF MATERIALS			
ITEM NO.	QUANTITY FIGURE 1	QUANTITY FIGURE 2	DESCRIPTION
1	1	1	RECEPTACLE COVER COMES WITH MOUNTING FASTENERS, FOR ALL POSTS ON DWGS. 30.09-28 AND 30.09-29
2	1	1	RECEPTACLE & MTG. HARDWARE INCLUDED IN BOTH HARDWARE KITS
3	2	4	3/8"-16 UNC X 8" SS F.H. ATTACHMENT BOLTS
4	1	1	MRAR STYLE RECEPTACLE ADAPTER PAINTED SEMI-GLOSS BLACK
5	1	1	3" DIA. X 3" LONG POLE TENON
6	2	2	RUBBER GASKET
7	2	2	1/2" ID X 6" PLASTIC SLEEVES

**NOTES:**

- RECEPTACLE KITS ARE NOT TO BE INSTALLED ON POLES WITH MORE THAN ONE LUMINAIRE.

3				
2	2/25/14	DEFREITAS	COWLING	HENSON
1	5/23/12	DEFREITAS	JUDAH	LARSEN
0	7/22/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

**DUPLEX HOLIDAY ADD-ON RECEPTACLE KIT FOR  
THE VICTORIA, WASHINGTON FLUTED AND SPUN  
DECORATIVE CONCRETE POST ATTACHMENT DETAILS**



**FLA**

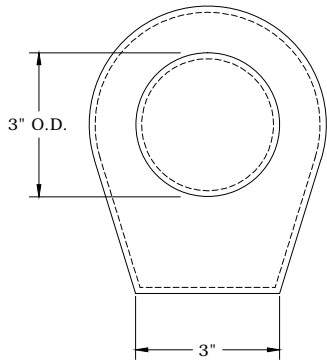
DWG.  
30.10-02



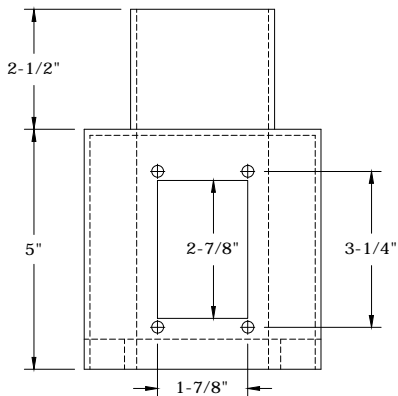
RETROFIT POLE TOP RECEPTACLE KIT

CN 9220173039

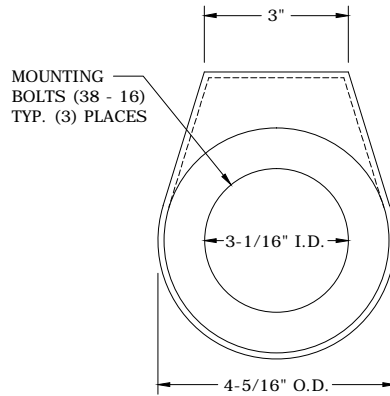
LRECTENINCF



PLAN VIEW



FRONT VIEW



BOTTOM VIEW

NOTES:

1. THE RETROFIT RECEPTACLE KIT (CN 9220173039) IS FOR CUSTOMERS WITH SINGLE MOUNT POST TOP LIGHT FIXTURES INSTALLED ON EXISTING POLES WITH 3" DIAMETER TENONS WITHOUT RECEPTACLES.
2. REMOVE EXISTING FIXTURE AND INSTALL RETROFIT KIT ON POLE TENON.
3. TENON RECEPTACLE KIT WILL ACCOMMODATE ONLY ONE LUMINAIRE.
4. AN ADDITIONAL RENTAL MUST BE CHARGED WHEN RECEPTACLE KIT IS INSTALLED.

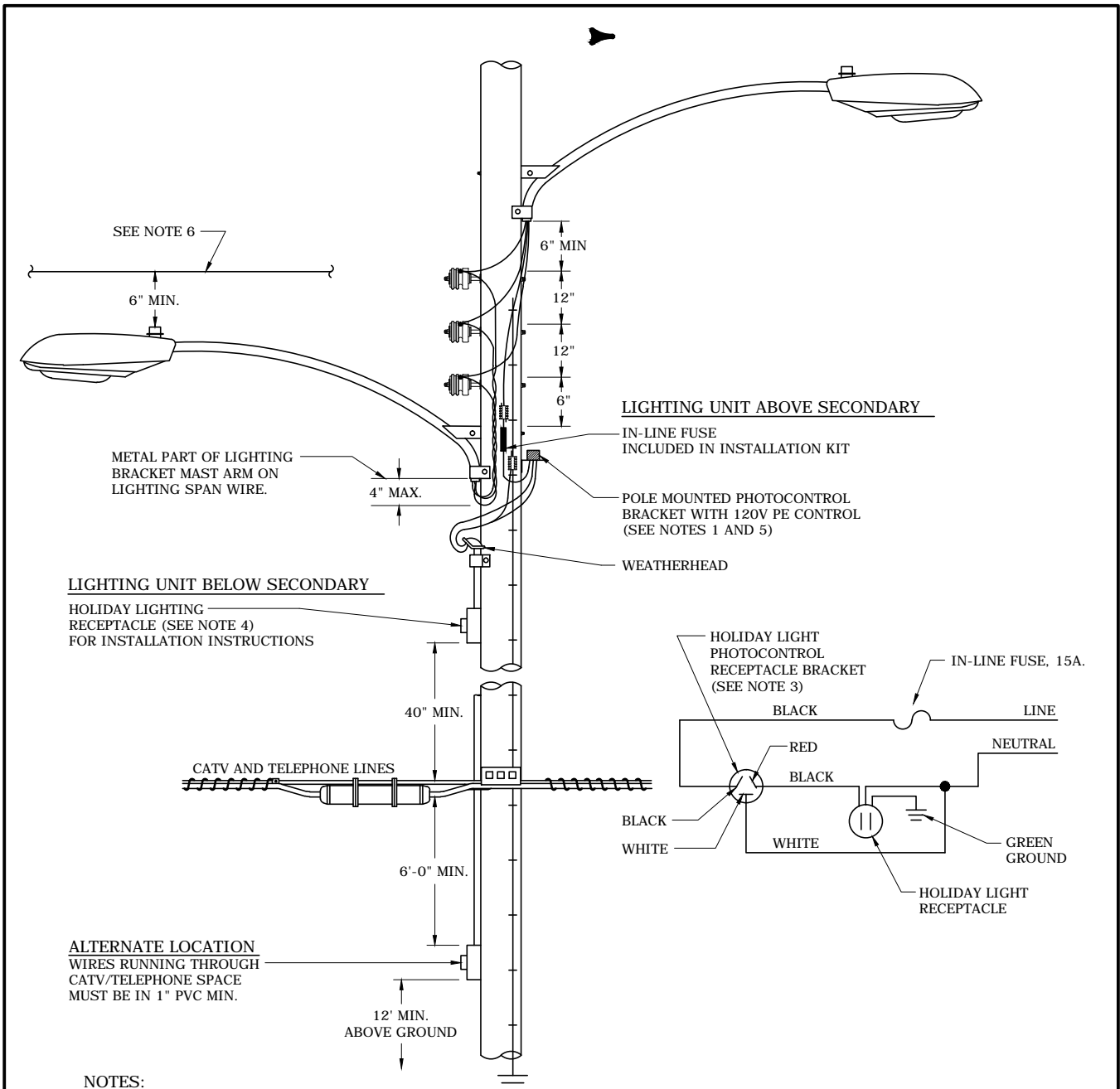


3				
2				
1				
0	5/2/14	DEFREITAS	COWLING	ADCOCK
REVISED	BY	CK'D	APPR.	

DUPLEX HOLIDAY ADD-ON RECEPTACLE KIT

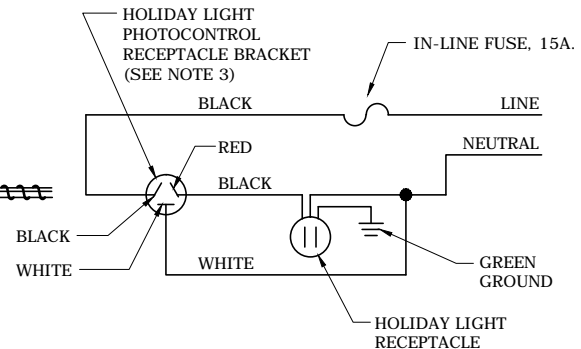
WITH 3" X 3" TENON

DEC	DEM	DEP	DEF
			X
30.10-03			



**NOTES:**

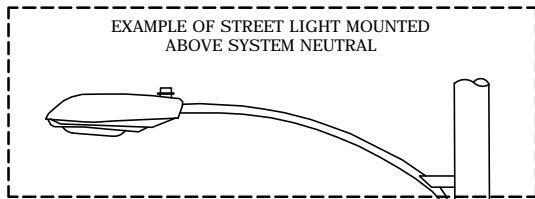
1. MOUNT THE HOLIDAY LIGHT PHOTOCONTROL RECEPTACLE BRACKET ( CN 243304) ON THE OPPOSITE SIDE OF OF POLE FROM ELECTRICAL RECEPTACLE AND LIGHT.
2. PHOTOCONTROL BRACKET MUST BE WIRED IN SERIES WITH THE RECEPTACLE; SEE WIRING DIAGRAM.
3. ALL LIGHTING BRACKETS MUST BE GROUNDED.
4. RECEPTACLE FOR HOLIDAY LIGHTS. TO INSTALL RECEPTACLES ON WOOD POLES FOR HOLIDAY LIGHTS, THE FOLLOWING CU'S WILL BE REQUIRED:  
 RECEPTACLE KIT "LRECHDAY20WCF" CUSTOMER OWNED  
 "LRECHDAY20F" DEF OWNED  
  
 BOX MUST BE A MINIMUM OF 40" CLEARANCE FROM ANY TELEPHONE OR CATV ATTACHMENTS.
5. WHEN HOLIDAY LIGHTS ARE TO BE KEPT ON CONTINUOUSLY, PLACE A SHORTING CAP IN THE HOLIDAY LIGHT PE RECEPTACLE (CN 242803).
6. ANY NEUTRAL, SECONDARY, SERVICE OR STREET LIGHT CONDUCTOR RUNNING ABOVE THE LUMINAIRE SHALL MAINTAIN A 6" MIN. CLEARANCE FROM THE TOP OF PHOTOCELL OR ANY PART OF THE FIXTURE.



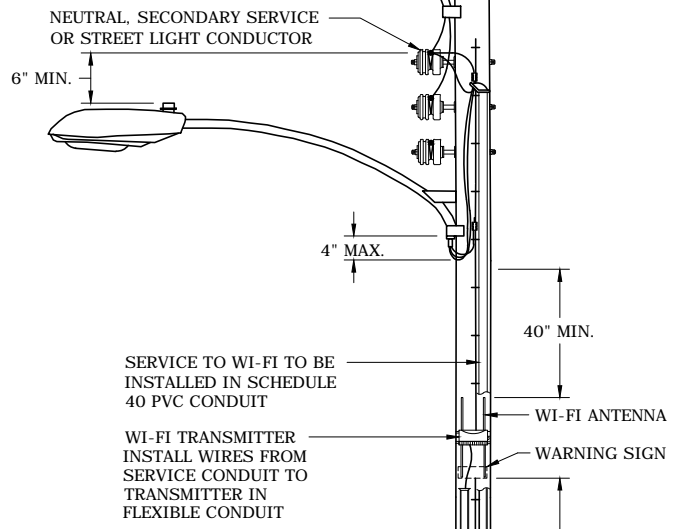
3				
2	8/6/14	EANES	EANES	ADCOCK
1	10/12/11	DEFREITAS	JUDAH	LARSEN
0	7/22/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

**HOLIDAY DECORATIONS RECEPTACLE INSTALLATION**

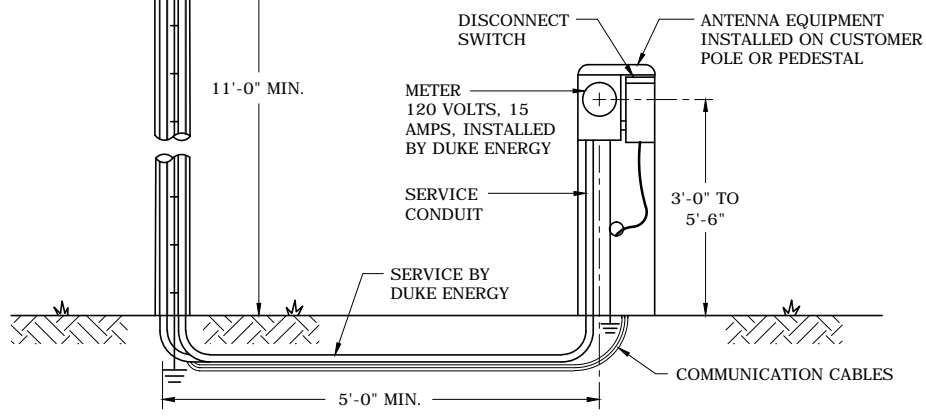
DEC	DEM	DEP	DEF
			X
<b>30.10-20</b>			



**WARNING SIGN:**  
 ANTENNA OWNER MUST INSTALL AN RF WARNING SIGN ON THE POLE AT THE LEVEL WHERE THE SAFE APPROACH DISTANCE ENDS FOR FCC OCCUPATIONAL/CONTROLLED CLASS LIMITS. WARNING SIGN - "WARNING-ANTENNA RADIATION. MINIMUM APPROACH DISTANCE IS "X" FEET.



SERVICE TO WI-FI TO BE INSTALLED IN SCHEDULE 40 PVC CONDUIT  
 WI-FI TRANSMITTER INSTALL WIRES FROM SERVICE CONDUIT TO TRANSMITTER IN FLEXIBLE CONDUIT



**NOTES:**

1. WHEN UTILIZING LIGHTING ONLY RENTAL POLES (STATIC CAST OR WOOD) CONTRACT MUST BE EXECUTED BY CUSTOMER OF RECORD FOR LIGHTING FACILITIES.
2. NO WI-FI EQUIPMENT SHALL BE INSTALLED ON DECORATIVE STREET LIGHT POLES.
3. ONLY ONE WI-FI UNIT IS ALLOWED PER POLE.
4. ALL POTENTIAL WI-FI LOCATIONS MUST BE INSPECTED FOR ELECTRICAL AND MECHANICAL SUITABILITY FOR THE SPECIFIC WI-FI EQUIPMENT THAT WILL BE INSTALLED AT THE SITE.
5. WI-FI EQUIPMENT VOLTAGE MUST MATCH THE LOCATIONS SOURCE VOLTAGE.
6. ALL WI-FI EQUIPMENT INSTALLED ON STREET LIGHT POLES MUST BE APPROVED BY DUKE ENERGY LIGHTING SOLUTIONS.
7. MANUFACTURER MUST SUPPLY THE WEIGHT OF THE EQUIPMENT AND THE EFFECTIVE PROJECTED AREA(S).
8. ALL WI-FI EQUIPMENT (INCLUDING ANTENNA) TO MAINTAIN A MINIMUM OF 40" BELOW ALL ENERGIZED CONDUCTORS INCLUDING DRIP LOOPS.
9. WHERE INSUFFICIENT SPACE RESULTS IN THE WI-FI UNIT BEING INSTALLED BELOW COMMUNICATIONS, WI-FI SERVICE WIRE TO BE INSTALLED IN 1 INCH, SCHEDULE 40 PVC CONDUIT NO CLOSER THAN 12 INCHES BELOW COMMUNICATION/CATV CABLE.
- 10. SEE DWG. 10.08-01 FOR JOINT USE ON DISTRIBUTION FACILITIES.



**INSTALLATION OF WI-FI EQUIPMENT FOR WOOD AND STATIC CAST CONCRETE STREET LIGHT POLES**

DEC	DEM	DEP	DEF
			X
30.10-22			

3				
2	8/5/14	EANES	EANES	ADCOCK
1	8/5/13	ROBESON	GUINN	ADCOCK
0	7/22/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

CATALOG NUMBER	TYPE	DESCRIPTION
30624803	POLYCARBONATE	FOR GENERAL ELECTRIC 400W AND WESTINGHOUSE 400W, 1000W MERCURY VAPOR FLOODS. TO BE USED IN CONJUNCTION WITH STANDARD GLASS LENS IN AREAS OF HIGH INCIDENCE OF VANDALISM. USE EXISTING GLASS LENS RETAINING BOLTS TO ATTACH BOTH GLASS LENS AND POLYCARBONATE LENS TO WESTINGHOUSE FLOODS.
30624902	POLYCARBONATE	FOR GENERAL ELECTRIC 1000W MERCURY VAPOR FLOOD. TO BE USED IN CONJUNCTION WITH STANDARD GLASS LENS IN AREAS OF HIGH INCIDENCE OF VANDALISM.
30625107	GLASS	FOR GENERAL ELECTRIC 400W FLOOD, TYPE P-400C, INCLUDING LENS, GASKET AND HARDWARE.
30625206	GLASS	FOR GENERAL ELECTRIC 1000W MERCURY VAPOR FLOOD, TYPE P-1000, INCLUDING LENS, GASKET AND HARDWARE. STOP PURCHASE ITEM BUT MAY BE AVAILABLE.
30625305	POLYCARBONATE	FOR AMERICAN ELECTRIC 250W SODIUM VAPOR AND 400W MERCURY VAPOR FIXTURES IN AREAS OF HIGH INCIDENCE OF VANDALISM.
30625404	GLASS	FOR CROUSE-HINDS OR WESTINGHOUSE 250W, 400W SODIUM VAPOR FLOODS, TYPE <u>VRF</u> , INCLUDING LENS, GASKET AND DOOR.
13082409	GLASS	FOR THE MCGRAW SMALL 250W, 400W SODIUM VAPOR FLOODS, TYPE <u>UF</u> , INCLUDING LENS, GASKET AND DOOR.
30625503	GLASS	FOR GENERAL ELECTRIC 100W, SODIUM VAPOR FLOODS, TYPE PE, INCLUDING LENS, GASKET AND DOOR
30625602	GLASS	FOR AMERICAN ELECTRIC 100W, SODIUM VAPOR FLOODS, TYPE FM, INCLUDING LENS, GASKET AND DOOR

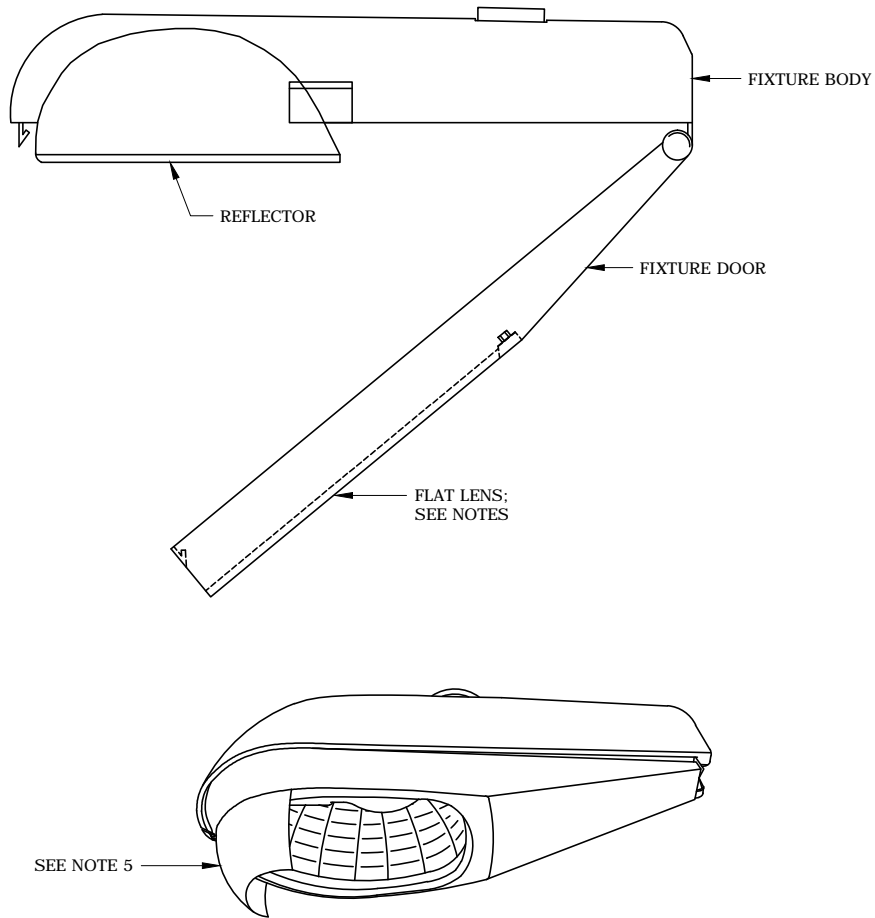
3				
2				
1				
0	7/22/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

REPLACEMENT LENSES FOR FLOODLIGHTS



**FLA**

DWG.  
30.11-10



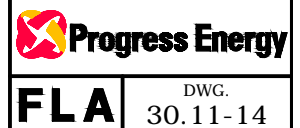
VOLTAGE	WATTAGE	CATALOG NUMBER	FIXTURE DESCRIPTION
120	100	241505	CUTOFF ENCLOSED COBRAHEAD
120	100	241512	CUTOFF ENCLOSED COBRAHEAD W/O LENS (USE FOR NEW INSTALLATIONS - ADD AMBER LENS)
120	50	241401	CUTOFF ENCLOSED COBRAHEAD

**NOTES:**

1. REMOVE EXISTING FLAT GLASS LENS.
2. REPLACE WITH AMBER ACRYLIC TURTLE LENS CN 242269.
3. RETURN ORIGINAL GLASS LENS TO STOREROOM.
4. SHIELDS AVAILABLE:
  - A. FOR POLE SIDE, USE CU LGSCCPF, CN 242705.
  - B. FOR STREET SIDE, USE CU LGSCSSF, CN 242706.
  - C. FOR SIDE FIXTURE, USE CU LGSCSF, CN 242708.
5. INSTALL ALL SHIELDS WITH A SILICONE SEALANT, CN 152240.
6. SEE SECTION 30.13 FOR ADDITIONAL INFORMATION ON LIGHT SHIELDS.
7. DO NOT USE AMBER LENS FOR FIXTURES OVER 100 WATTS.

3				
2				
1	5/24/12	DEFREITAS	JUDAH	LARSEN
0	7/22/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

**AMBER ACRYLIC REPLACEMENT LENS  
AND SHIELDS  
FOR SEA TURTLE HATCHLING AREAS**



READ THOROUGHLY BEFORE INSTALLING

WARNING: DO NOT PERFORM MAINTENANCE ON A LUMINAIRE WHILE IT IS ELECTRICALLY ENERGIZED.

GENERAL

THIS IS A HIGH QUALITY ELECTRONIC DEVICE WHICH GENERATES HIGH VOLTAGE PULSES FOR RELIABLE STARTING OF HPS LAMPS WHEN USED IN CONJUNCTION WITH THE PROPER LAMP AND BALLAST COMBINATION. RELIABILITY AND LONG LIFE ARE ACHIEVED BY STARTER DESIGN, HIGH QUALITY COMPONENTS, AND FACTORY BURN-IN TEST PERFORMED ON EACH DEVICE BEFORE SHIPMENT. THIS STARTER IS SELF-CONTAINED, AND THE HIGH VOLTAGE PULSES ARE GENERATED BY THE STARTER ITSELF AND DOES NOT REQUIRE A TAPPED COIL ON THE BALLAST AS WITH A STANDARD STARTER. THIS STARTER WILL START 35 THROUGH 400 WATT HPS LAMPS AND SHOULD ONLY BE USED IN ENCLOSURES WHERE THE TEMPERATURE DOES NOT EXCEED 90°, SEE DWG. 30.11-25 FOR CATALOG NUMBERS.

APPLICATION

THE PULSE REQUIREMENTS FOR PROPER STARTING OF 35 THROUGH 400 WATT HPS LAMPS ARE 2500 VOLTS MINIMUM PEAK WITH A PULSE WIDTH OF ONE MICROSECOND AT 2250 VOLTS. THE TWO MOST IMPORTANT FACTORS WHICH AFFECT THE LAMP STARTER OPERATION ARE THE SOCKET POLARITY AND THE WIRING LENGTHS (BALLAST TO STARTER AND STARTER TO SOCKET).

SOCKET POLARITY - THE BLUE LEAD FROM STARTER TERMINAL #3 MUST BE CONNECTED TO THE EYE OF THE SOCKET. MISWIRING COULD RESULT IN INADEQUATE STARTING PULSE TO THE LAMP.

WIRING LENGTH - THE DISTRIBUTED CAPACITANCE OF THE LEADS USED TO CONNECT HPS LAMPS AND BALLASTS REDUCES THE PULSE VOLTAGE. A MAXIMUM DISTANCE OF 10' MAY EXIST BETWEEN THE BALLAST AND THE HPS LAMP SOCKET FOR THE STARTER TO PROPERLY START THE LAMP.

INSTALLATION

1. TURN OFF THE POWER TO THE LUMINAIRE.
2. DISCONNECT AND REMOVE THE OLD STARTER.
3. DETERMINE THE HPS LAMP TYPE AND SEE TABLE #1 TO CONFIRM LAMP VOLTAGE AND WHETHER OR NOT TO CUT THE JUMPER. CAUTION: DO NOT CUT OR REMOVE JUMPER IF THE LAMP VOLTAGE IS BETWEEN 50 AND 55 VOLTS. IF THE VOLTAGE IS BETWEEN 90 AND 100 VOLTS REMOVE A SECTION OF THE STARTER JUMPER BY CUTTING IT ON BOTH ENDS OR SIDES (SEE DWG. 30.11-25).
4. IF A GE "PLUG-IN" STARTER IS BEING REPLACED, INSERT THE REPLACEMENT STARTER INTO THE EXISTING STARTER RECEPTACLE BASE. NO OTHER CHANGES ARE REQUIRED.
5. SOME SMALL FIXTURES SUCH AS THE SHOE BOX AND THE SMALL FLOODLIGHT MAY NOT HAVE ENOUGH ROOM FOR REPLACEMENT STARTER AID; MAKE THIS DETERMINATION BEFORE REMOVING BAD STARTER.
6. FOR ALL OTHER CONFIGURATIONS, CONNECT THE GE REPLACER STARTER DIRECTLY TO THE LUMINAIRE WIRING AS FOLLOWS (SEE DWG. 30.11-25).
  - A. CONNECT TERMINAL #3 (BLUE LEAD) OF THE STARTER ASSEMBLY TO THE LUMINAIRE LEAD CONNECTING THE BALLAST AND THE EYE OF THE SOCKET BY CUTTING THE LUMINAIRE LEAD, STRIPPING THE LEAD ENDS AND SPLICING ALL THREE LEAD ENDS WITH A WIRE NUT SUPPLIED IN THE KIT.
  - B. CONNECT TERMINAL #1 (WHITE LEAD) OF THE STARTER ASSEMBLY TO THE LUMINAIRE LEAD CONNECTING THE BALLAST AND THE SHELL OF THE SOCKET BY CUTTING THE LUMINAIRE LEAD, STRIPPING THE LEAD ENDS AND SPLICING ALL THREE LEAD ENDS WITH A WIRE NUT SUPPLIED IN THE KIT.
  - C. TERMINAL LEAD #3 BLUE AND #1 WHITE CAN BE CONNECTED EASIER AND DIRECTLY TO THE TERMINAL BOARD OR BALLAST BY USING PANDUIT DISCONNECTS, SPLICES, OR WIRE JOINTS, NO. DNF14-250FIM-C & DNF14-250FIB-C. THE TWO CONNECTORS COME IN QUANTITIES OF 100 PER BOX AND MAY BE OBTAINED THROUGH LOCAL ELECTRICAL DISTRIBUTORS.
  - D. TERMINATE OLD STARTER/BALLAST UNUSED LEAD(S) BY COVERING THE ENDS WITH A WIRE NUT.
  - E. SECURE THE STARTER ASSEMBLY TO THE LUMINAIRE HOUSING WITH THE SCREW(S) PROVIDED IN THE KIT. CARE SHOULD BE TAKEN IN LOCATING STARTER TO MAINTAIN A MINIMUM OF 1/2" CLEARANCE FROM OTHER ELECTRICALLY OR THERMALLY "HOT" COMPONENTS.

3				
2				
1				
0	7/22/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

G. E. UNIVERSAL REPLACEMENT STARTING AID  
INSTALLATION INSTRUCTIONS



**FLA** DWG.  
30.11-20

TABLE 1					
ANSI LAMP TYPE	LAMP WATTAGE	LAMP VOLTAGE	OPERATING VOLTAGE	REMOVE JUMPER	DO NOT REMOVE JUMPER
S62	70	55	120V		X
S54	100	55			X
S55	150	55			X
S66	200	100		X	
S50	250	100		X	
S51	400	100		X	
S66	200	100	240V	X	
S50	250	100		X	
S51	400	100		X	

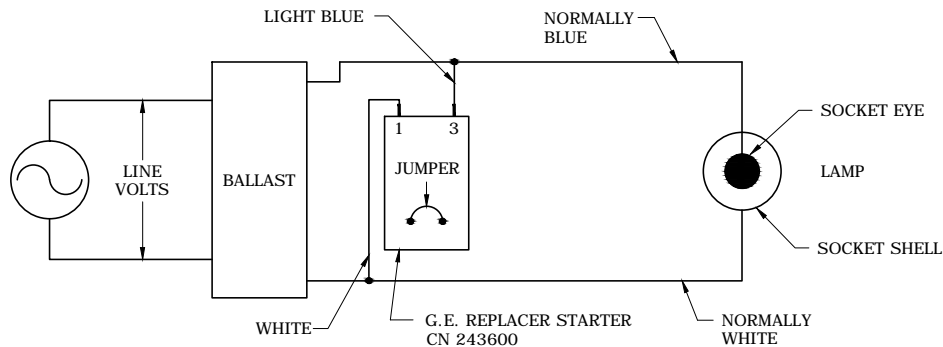
**CAUTION:** FAILURE TO REMOVE OR CUT JUMPER WHEN REQUIRED ON THE GE OR AEL CAN CAUSE EARLY STARTER FAILURES

**WARNING:** IF THIS STARTER IS USED TO START HPS LAMPS ON ANYTHING OTHER THAN A HPS BALLAST, THE BALLAST AND STARTER MAY BE DAMAGED AND THE HPS LAMP LIFE COULD BE SHORTENED. THERE ARE MANY BALLAST SYSTEM VARIATIONS AND NOT EVERY DESIGN HAS BEEN TESTED. THE GE & AEL ACCEPTS NO RESPONSIBILITY OR LIABILITY FOR THE IMPROPER APPLICATION OR INSTALLATION OF THIS STARTER. PROPER REPLACER STARTER OPERATION INSTRUCTIONS ARE ENCLOSED WITH EACH STARTER:

1. CORRECT BALLAST OPEN CIRCUIT VOLTAGE (SOCKET WITH LAMP REMOVED):
2. LOW DISTRIBUTED CAPACITANCE ON BALLAST SECONDARY:

THE BALLAST, SOCKET AND WIRING CAPACITANCE MUST BE LOWER THAN 200 PICO FARADS.  
DISTANCE BETWEEN BALLAST HPS LAMP SOCKET MUST BE NO MORE THAN 10'.

3. GOOD ELECTRICAL INSULATION INTEGRITY CAPABLE OF 2500 VOLT HI-POT.



**NOTE:** THE FOLLOWING CATALOG NUMBERS HAVE BEEN SET UP AS MAINTENANCE PARTS ONLY. THE STARTERS CAN NOW BE ORDERED THROUGH THE WILDWOOD WAREHOUSE. EACH OPERATIONS CENTER CAN STOCK FOR MAINTENANCE ONLY.

COOPER ORIGINAL REPLACEMENT STARTERS

- A. CN 243607 - 35W THROUGH 100W HPS LAMPS
- B. CN 243606 - 100W THROUGH 400W HPS
- C. CN 9220120016 - 100W METAL HALIDE
- ▶ D. CN 9220223265 - 320W METAL HALIDE PULSE START

HOLOPHANE ORIGINAL REPLACEMENT STARTERS

- A. CN 243608 - 100W THROUGH 150W HPS
- B. CN 9220122160 - 100W METAL HALIDE AND 250W/400W HPS TEARDROP
- ▶ C. CN 9220148466 - 150W METAL HALIDE PULSE START

AMERICAN ELECTRIC

- ▶ A. CN 9220144077 - 50W THROUGH 400W HPS LAMP, SEE STARTER FOR JUMPER WIRE POSITION

3				
2				
1	5/24/12	DEFREITAS	JUDAH	LARSEN
0	7/22/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

G. E. & AEL UNIVERSAL, COOPER, AND HOLOPHANE  
REPLACEMENT STARTING AID  
INSTALLATION INSTRUCTIONS

**FLA** DWG.  
30.11-25

ORIGINAL WIRING DIAGRAM

120V

G.E. 70W, 100W & 150W

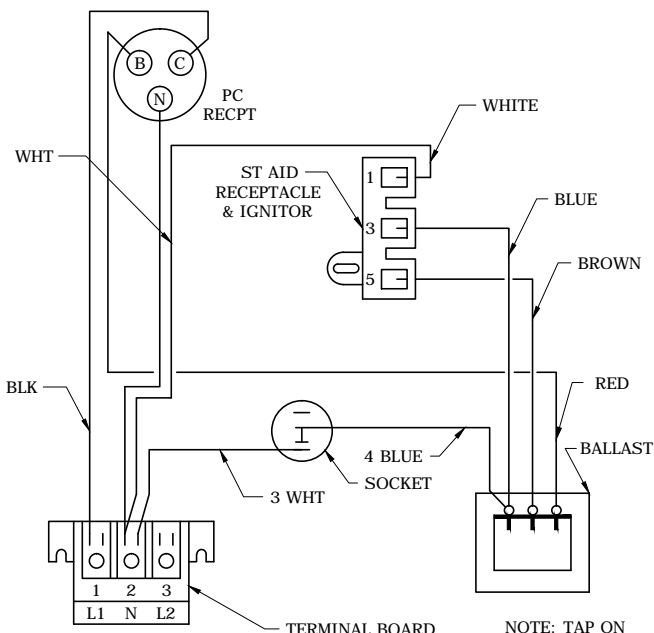
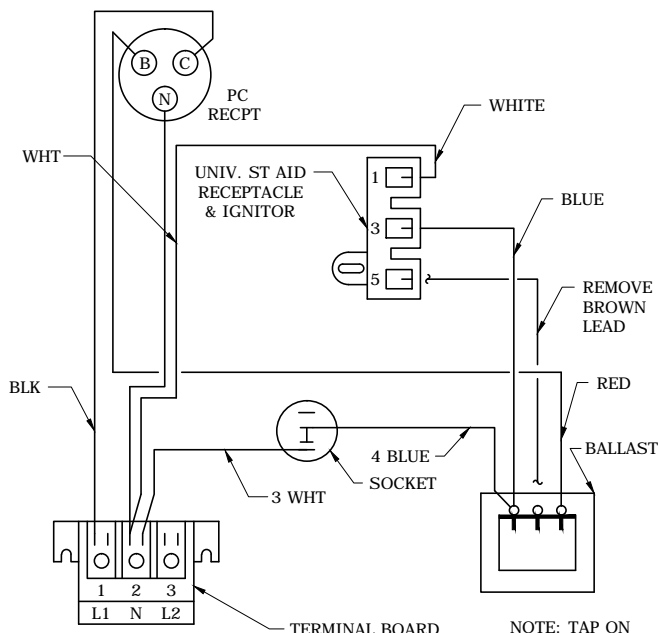


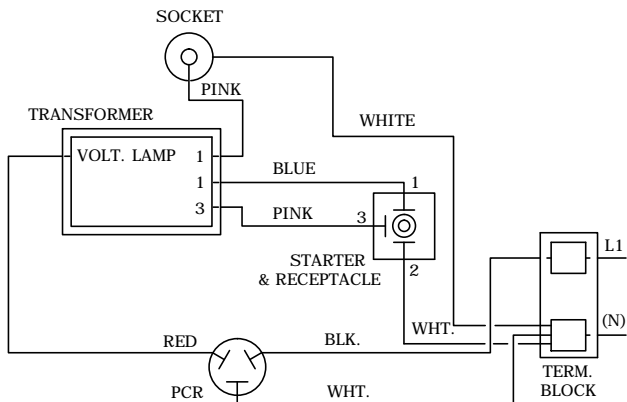
DIAGRAM AFTER REPLACEMENT

OF UNIVERSAL STARTER AID

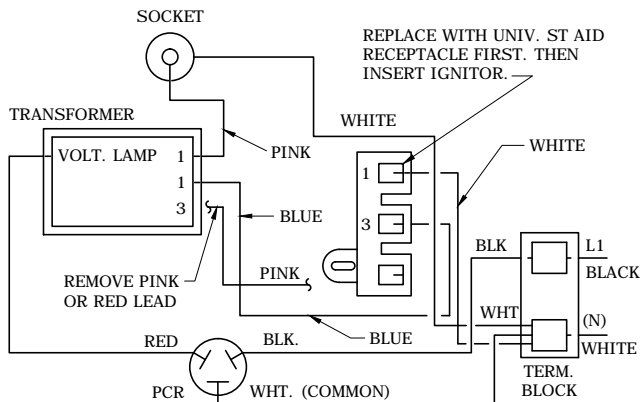
G.E. 70W, 100W & 150W, 120V



CROUSE-HINDS & MCGRAW EDISON  
70W, 100W & 150W



CROUSE-HINDS & MCGRAW EDISON  
70W, 100W & 150W



NOTES:

1. WIRING DIAGRAM WILL VARY DUE TO THE NUMBER OF WIRING CHANGES OVER THE YEARS. USE DIAGRAM IN THE FIXTURE FIRST. IF ONE IS NOT PRESENT, THEN REFER TO THESE.
2. THE UNIVERSAL STARTING AID WILL WORK IN ALL HPS LUMINAIRES UP TO 400W, JUST FOLLOW INSTRUCTIONS IN EACH BOX AND DWGS. 30.11-20 THROUGH 30.12-15.

3				
2				
1				
0	7/22/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

WIRING DIAGRAM FOR 120 VOLT HPS  
LUMINAIRES AND REPLACEMENT WITH  
UNIVERSAL (2-WIRE) STARTING AID



FLA DWG.  
30.12-01



ORIGINAL WIRING DIAGRAM  
120V

AMERICAN ELECTRIC  
70W  
100W  
150W  
200W

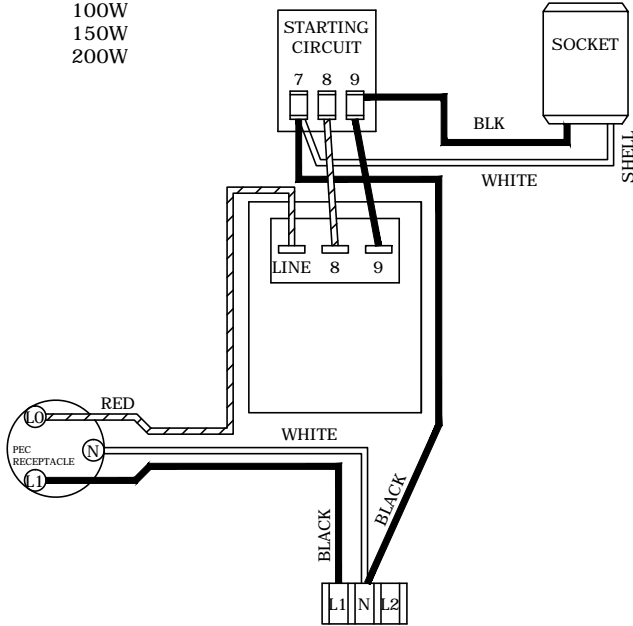
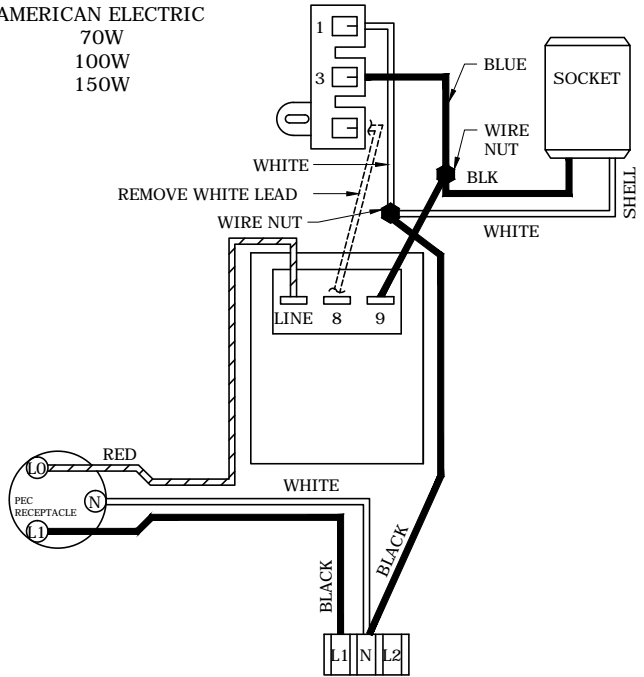
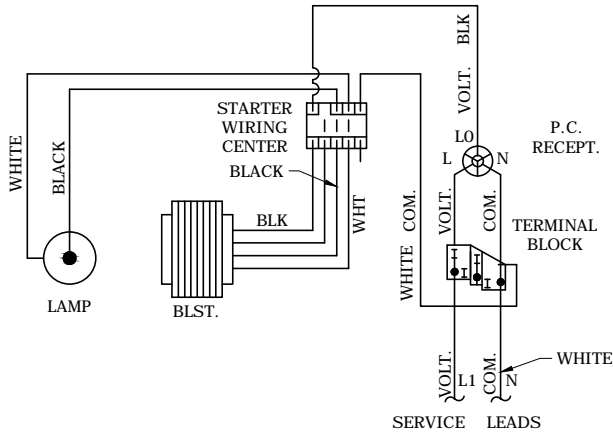


DIAGRAM AFTER REPLACEMENT  
OF UNIVERSAL STARTER AID

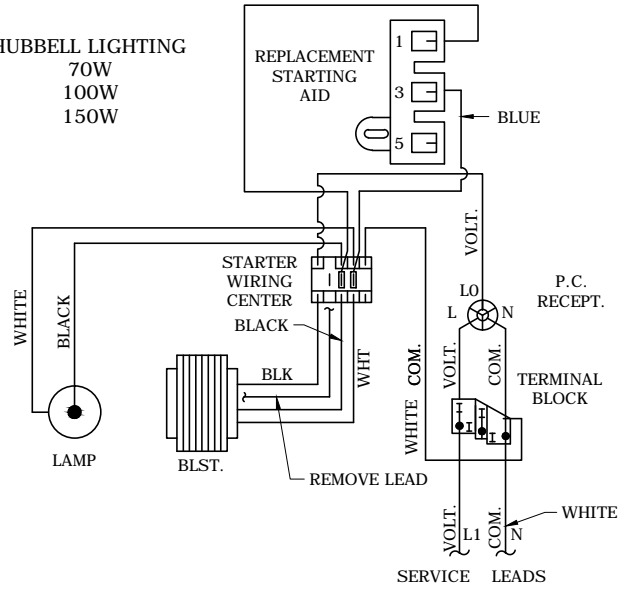
AMERICAN ELECTRIC  
70W  
100W  
150W



HUBBELL LIGHTING  
70W  
100W  
150W



HUBBELL LIGHTING  
70W  
100W  
150W



WIRING DIAGRAM FOR 120 VOLT HPS LUMINAIRES  
AND REPLACEMENT WITH UNIVERSAL  
(2-WIRE) STARTING AID



FLA

DWG.  
30.12-05

3				
2				
1				
0	7/22/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

ORIGINAL WIRING DIAGRAM  
240V

CROUSE-HINDS 200W, 400W  
AND MCGRAW

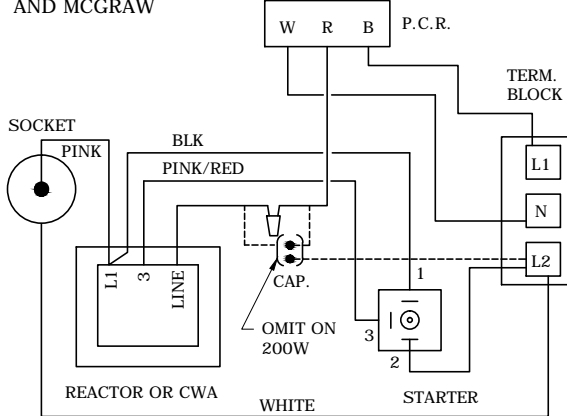
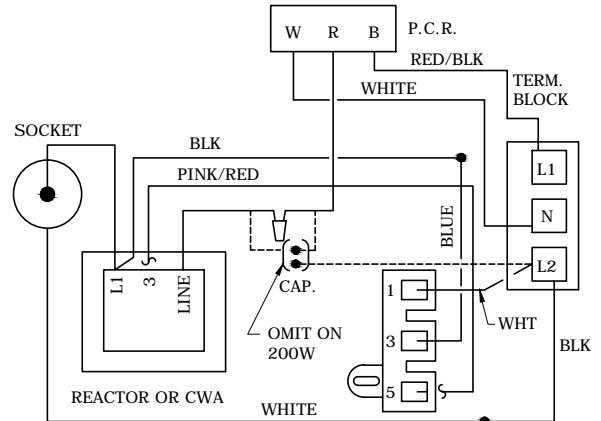
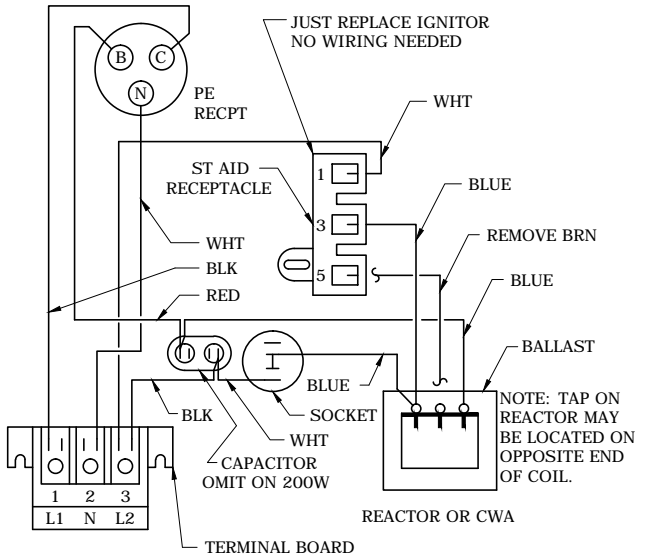
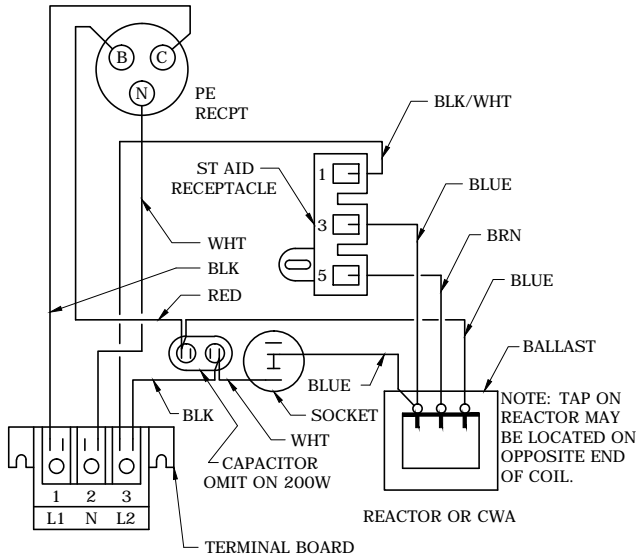


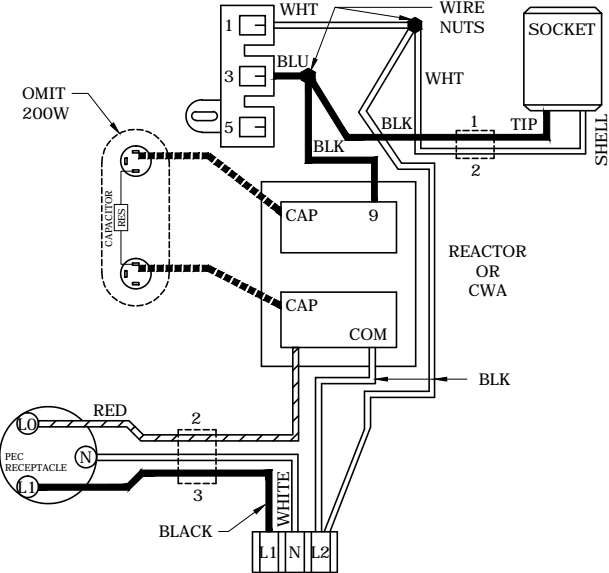
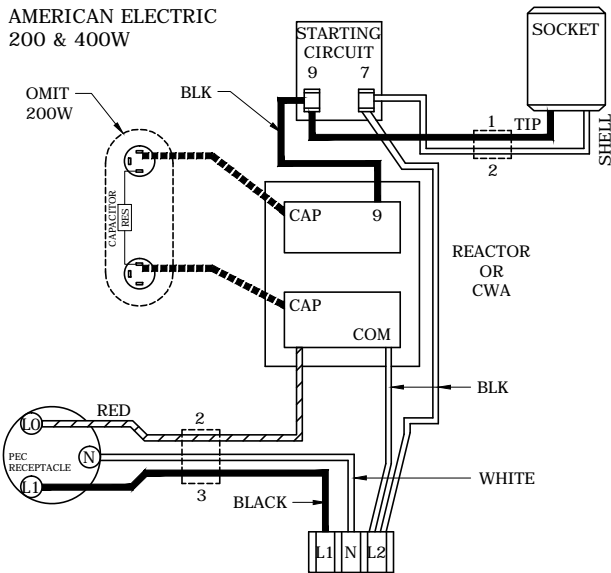
DIAGRAM AFTER REPLACEMENT  
OF UNIVERSAL STARTER AID



G.E. 240V. 200W & 400W



AMERICAN ELECTRIC  
200 & 400W



3				
2				
1				
0	7/22/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

WIRING DIAGRAM FOR 240 VOLT HPS  
LUMINAIRES AND REPLACEMENT WITH  
UNIVERSAL (2-WIRE) STARTING AID



FLA

DWG.  
30.12-10

ORIGINAL WIRING DIAGRAM  
120V & 240V

AMERICAN ELECTRIC 120V  
70W, 100W & 150W

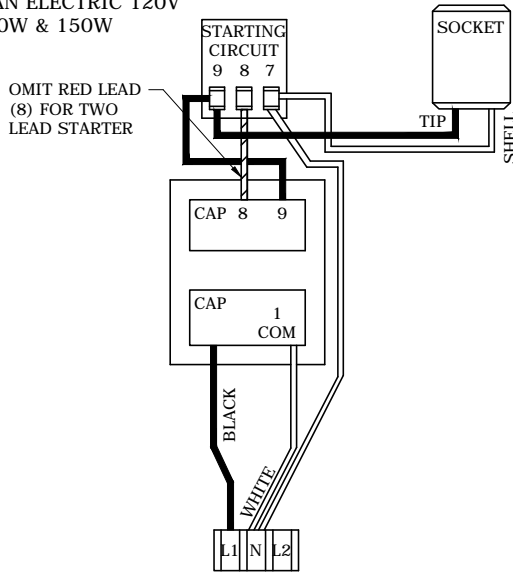
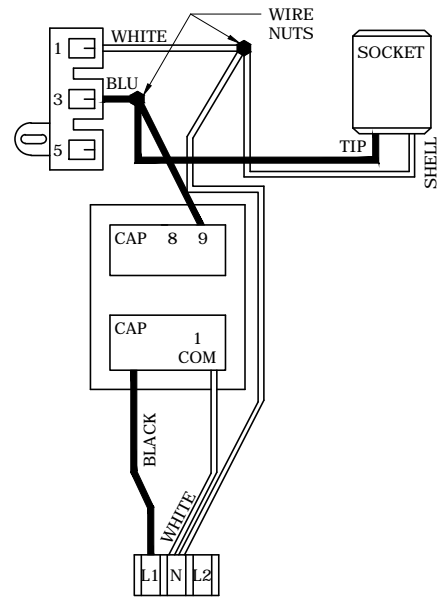
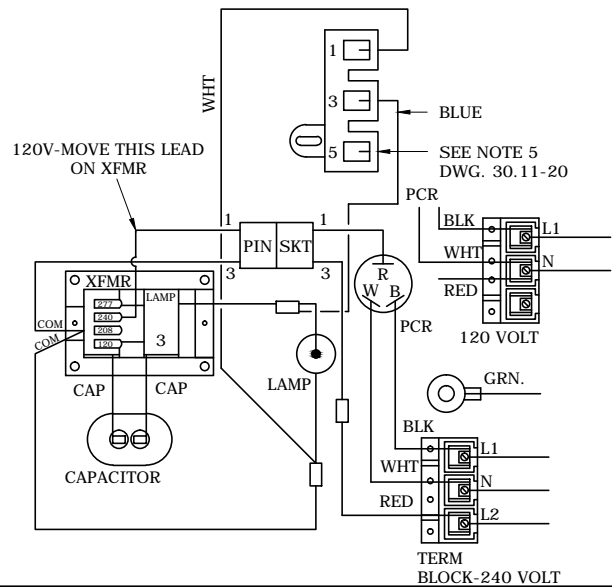
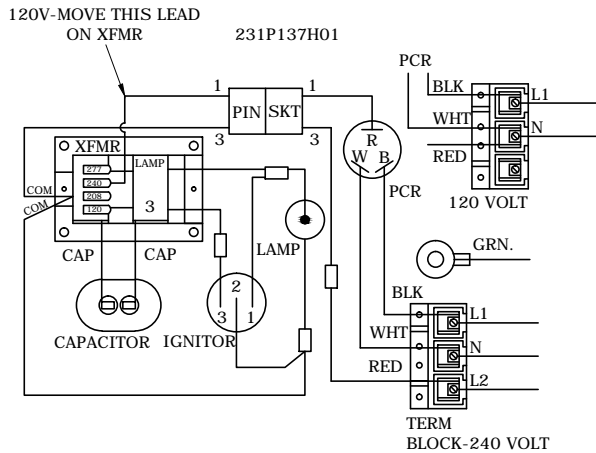


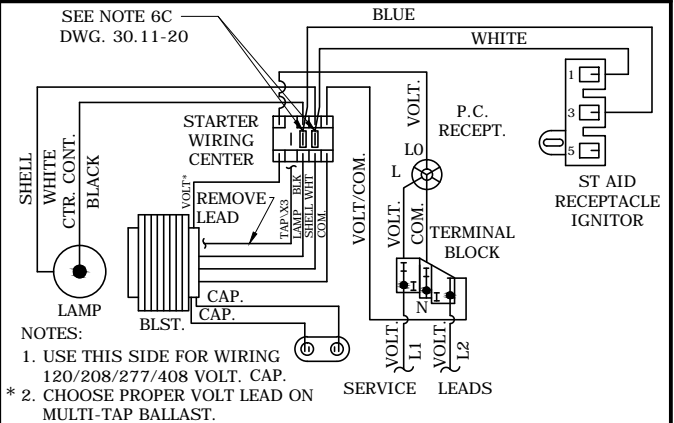
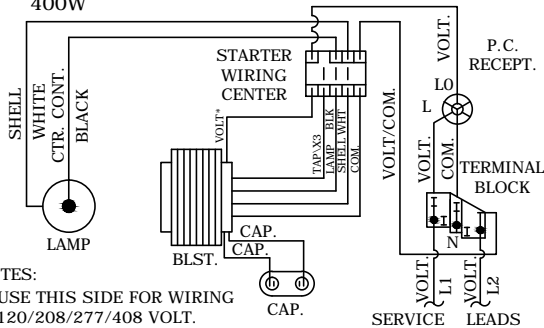
DIAGRAM AFTER REPLACEMENT  
OF UNIVERSAL STARTER AID



MCGRAW 240V  
200W, 250W & 400W  
SHOEBOX & SMALL FLOODLIGHT  
MULTI-TAP VOLTAGE BALLAST



HUBBELL LIGHTING 240V  
200W  
400W



- NOTES:  
1. USE THIS SIDE FOR WIRING  
120/208/277/408 VOLT.  
\* 2. CHOOSE PROPER VOLT LEAD ON  
MULTI-TAP BALLAST.

- NOTES:  
1. USE THIS SIDE FOR WIRING  
120/208/277/408 VOLT. CAP.  
\* 2. CHOOSE PROPER VOLT LEAD ON  
MULTI-TAP BALLAST.

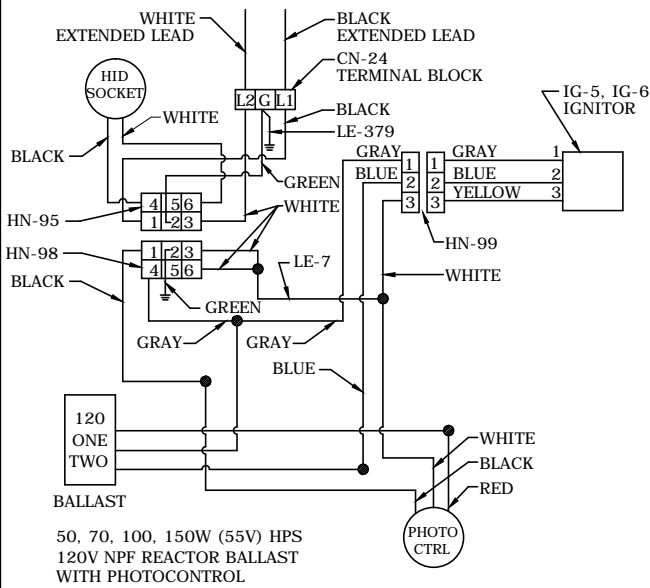
3				
2				
1				
0	7/22/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

WIRING DIAGRAM FOR 120 & 240 VOLT  
HPS LUMINAIRES AND REPLACEMENT  
WITH UNIVERSAL (2-WIRE) STARTING AID



FLA DWG.  
30.12-15

ORIGINAL WIRING DIAGRAM 120V & 240V



MITCHELL DECORATIVE POST FIXTURE

WIRING DIAGRAM FROM  
HOLOPHANE DRAWING  
NUMBER MB-2095  
HPS TEARDROP WITH  
SPADE TERMINALS  
DATED 04-30-2002

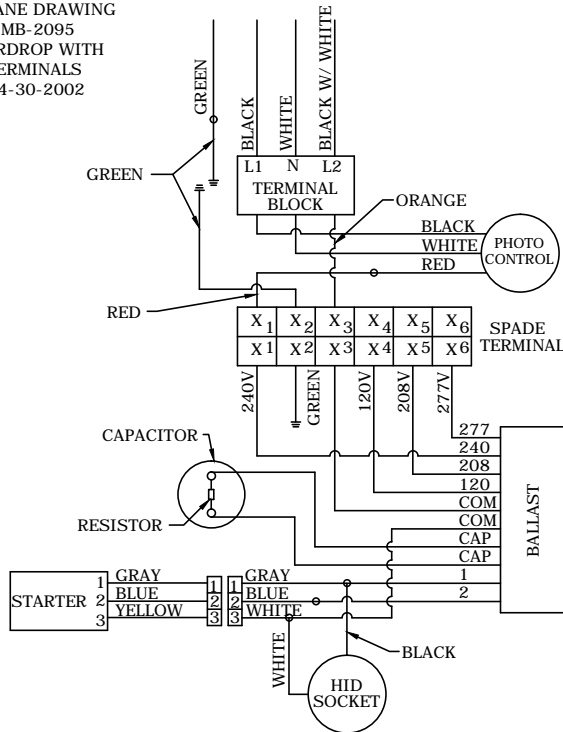
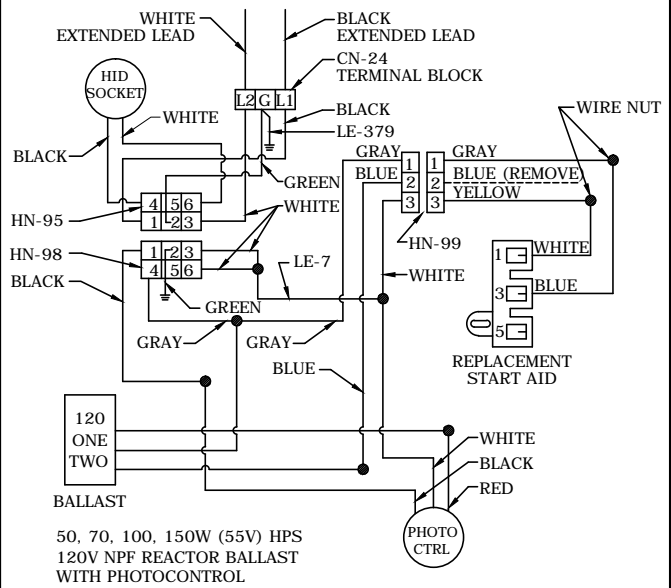
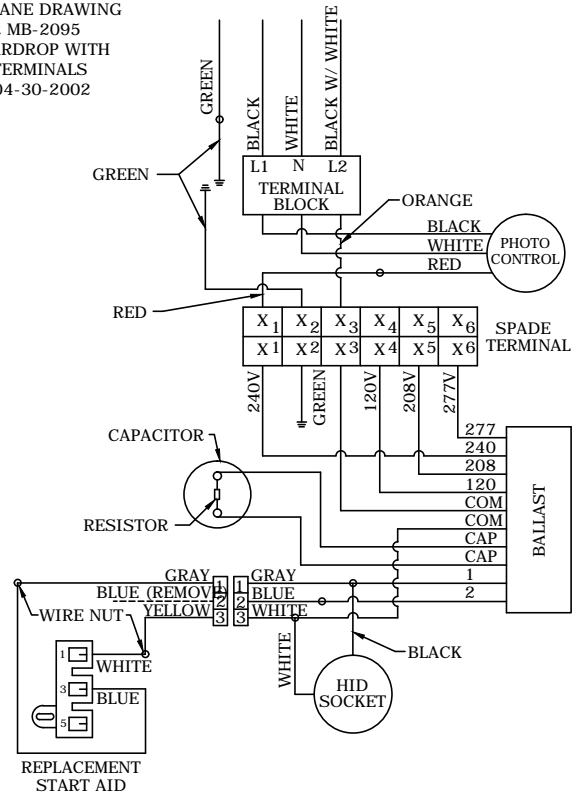


DIAGRAM AFTER REPLACEMENT OF UNIVERSAL STARTER AID



MITCHELL DECORATIVE POST FIXTURE

WIRING DIAGRAM FROM  
HOLOPHANE DRAWING  
NUMBER MB-2095  
HPS TEARDROP WITH  
SPADE TERMINALS  
DATED 04-30-2002



3				
2				
1				
0	7/22/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

WIRING DIAGRAM FOR 120 & 240 VOLT  
HPS LUMINAIRES AND REPLACEMENT  
WITH UNIVERSAL (2-WIRE) STARTING AID

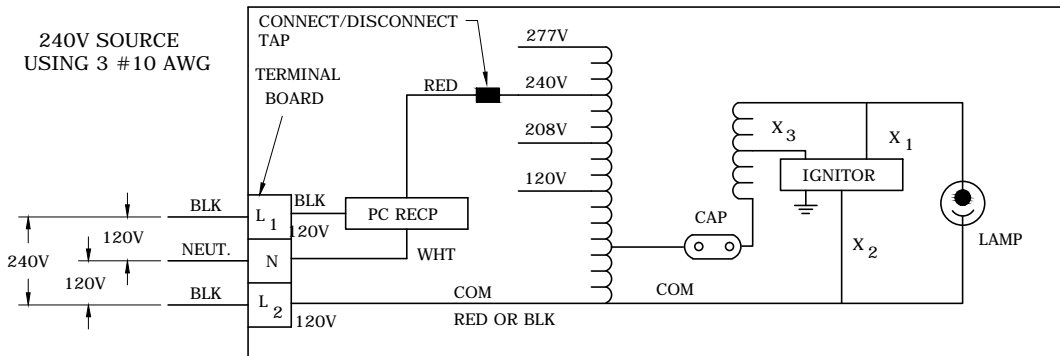


**FLA**

DWG.  
30.12-16

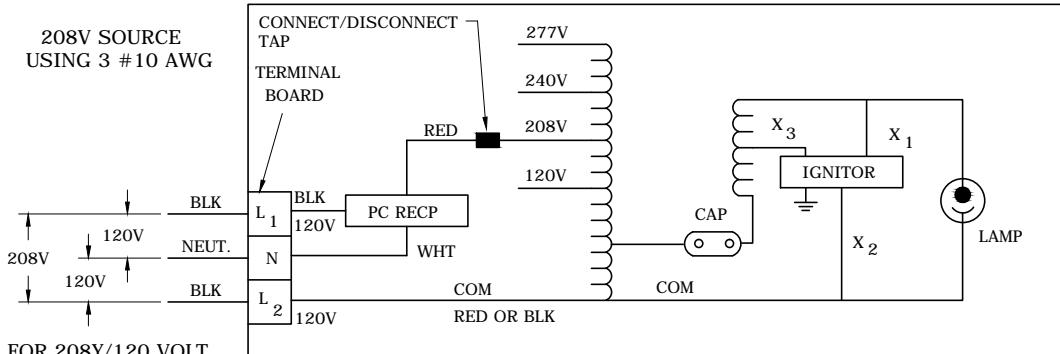
THE LUMINAIRES WITH MULTI-VOLTAGE CONNECTIONS ARE THE HPS AND METAL HALIDE 200W THROUGH 1000W, ALL TYPES. THE VOLTAGE TAPS ON THESE BALLASTS ARE 120, 208, 240 AND 277 VOLTS. THE FIXTURES COME FROM THE FACTORY CONNECTED TO THE 120V TAP. THE 120 VOLT TAP IS THE STANDARD CONNECTION. LEAVE THIS TAP AS IS WHEN SUPPLYING 120 VOLTS TO THE UNIT. SEE FIGURE C FOR 277 VOLT OPERATION.

FIGURE A. TYPICAL WIRING DIAGRAM-HPS OR MH CWA LUMINAIRE 240V BALLAST CONNECTION



CHECK TAP TO INSURE THE BALLAST IS CONNECTED FOR 240V OPERATION.

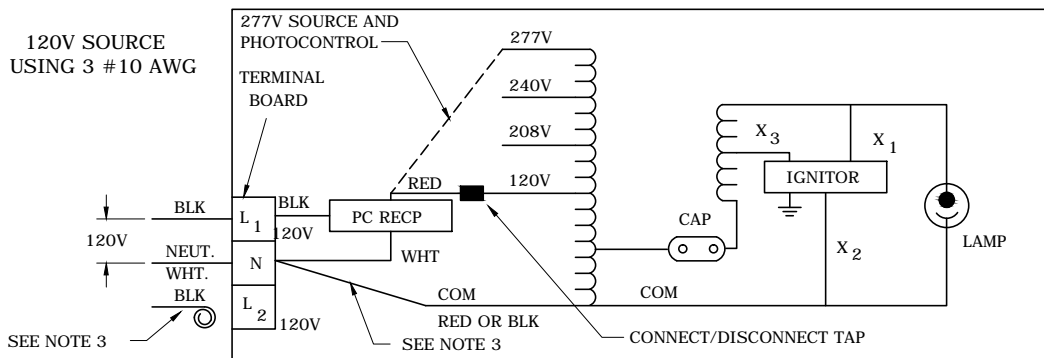
FIGURE B. TYPICAL WIRING DIAGRAM-HPS OR MH CWA LUMINAIRE 208V BALLAST CONNECTION



FOR 208V/120 VOLT AREA

RECONNECT BALLAST TAP TO 208 VOLT OPERATION AS SHOWN IN FIGURE B.

FIGURE C. TYPICAL WIRING DIAGRAM-HPS OR MH CWA LUMINAIRE 120V BALLAST CONNECTION



NOTES:

1. FOR 240V OPERATION RECONNECT BALLAST TAP AS SHOWN IN FIGURE A, RECONNECT THE TERMINAL COMMON LEAD FROM N TO L<sub>2</sub> AS SHOWN IN FIGURE A.
2. DO NOT TIE TWO HOT LEADS TOGETHER ON 120V OPERATION. THE EXTRA PHASE LEAD OF #10 AWG IS TO BE TAPED AT BOTH ENDS AND SPIRALED BACK TO MAINTAIN ELECTRICAL CLEARANCE. (NOTE: THIS LEAD MAY BE NEEDED IF THE EXISTING LUMINAIRE IS REPLACED WITH A 240V LUMINAIRE.)
3. THE SHOEBOX HAS FOUR EXTERNAL LEADS ATTACHED TO FIXTURE TERMINAL BOARD. THE L<sub>2</sub> COM LEAD MUST BE CONNECTED TO THE WHITE NEUTRAL LEAD INTERNALLY FOR 120V OR 277V OPERATION.

3				
2				
1				
0	7/26/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

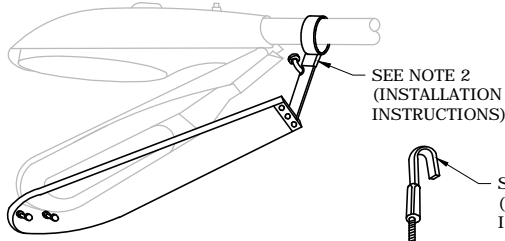
LUMINAIRE WITH MULTI-TAP BALLASTS,  
200W THROUGH 1000W, ALL TYPES



FLA

DWG.  
30.12-20

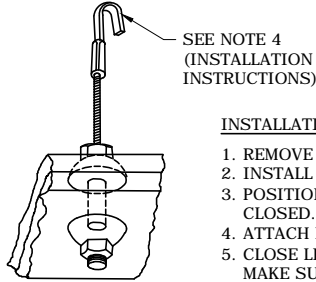
APPLICATION: TO BE USED WITH FOLLOWING LUMINAIRES.



WATTAGE	CLASS	CN
100	71	241505
150	72	241506
200	70	241504
250	73	241507
400	78	9220157694

**VANDAL PROOF SHIELD**

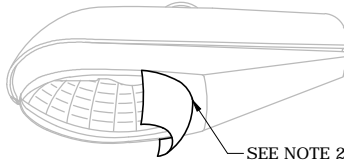
50-250W  
 CU LBPSF  
 CN 242714  
 400W  
 CU LBPMF  
 CN 9220157694



**INSTALLATION INSTRUCTIONS:**

1. REMOVE CLAMP FROM SHIELD.
2. INSTALL CLAMP ON EXISTING POLE ARM AND ATTACH SHIELD TO CLAMP.
3. POSITION LENS DOOR SO THAT IT IS ONE INCH FROM BEING CLOSED. ADJUST CARRIAGE BOLT TO TOUCH POLE ARM.
4. ATTACH HOOK TO LENS DOOR.
5. CLOSE LENS DOOR BY APPLYING PRESSURE WITH YOUR HANDS. MAKE SURE LENS DOOR IS LOCKED.
6. GO BACK TO THE CLAMP BOLT AND TIGHTEN.

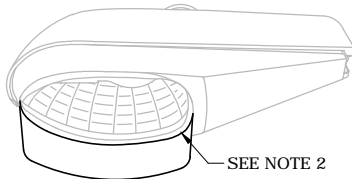
FIG. 1 THESE FIXTURES ARE FLAT GLASS "CUTOFF LUMINAIRES" WITH A REFLECTOR DESIGNED FOR FLAT GLASS INSTALLATIONS.



**POLE SIDE SHIELD**  
**100W - 250W HPS**

CU LGSCPF  
 CN 242705

FIG. 2

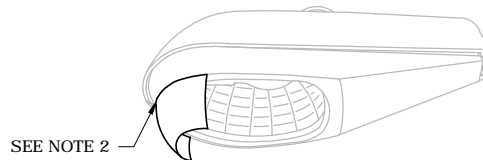


**SIDE FIXTURE SHIELD**  
**50W - 250W HPS**

**GE AND COOPER FIXTURES**  
 CU LGSCSF  
 CN 242708

**AEL FIXTURES**  
 CU LGSCSAELF  
 CN 9220152985

FIG. 3



**STREET SIDE SHIELD**  
**100W - 250W HPS**

CU LGSCSF  
 CN 242706

FIG. 4

**NOTES:**

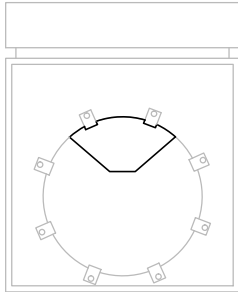
1. SEE DWG. 30.08-05 FOR STOCKED CUTOFF COBRA HEADS.
2. INSTALL ALL SHIELDS USING THE SILICONE SEALANT FOR ALL CUTOFF ENCLOSED FIXTURE SHIELDS.
3. THESE VANDAL SHIELDS FIT GE CUTOFF ENCLOSED FIXTURES ONLY. IF THESE SHIELDS ARE TO BE ADDED TO EXISTING FIXTURES THAT ARE NOT GE, THE FIXTURES MUST BE CHANGED TO GE TO ALLOW VANDAL SHIELDS TO ATTACH PROPERLY.

3				
2				
1	5/24/12	DEFREITAS	JUDAH	LARSEN
0	7/22/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

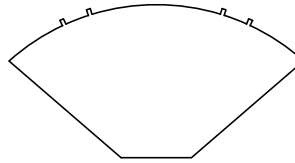
**SHIELDS AND VANDAL PROOF SHIELDS**  
**FOR CUTOFF ENCLOSED FIXTURES**  
**NON-STOCK GLARE CONTROL**

**FLA** DWG. 30.13-01

CUBE LIGHT FIXTURE



BOTTOM VIEW



INTERNAL SHIELD (COOPER ONLY)

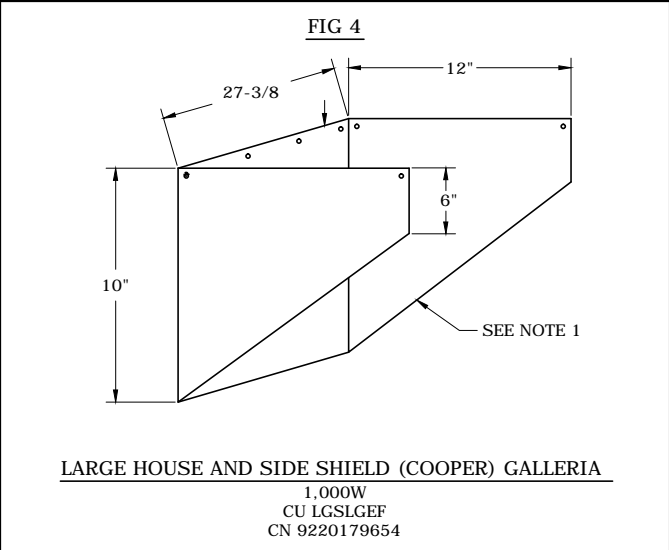
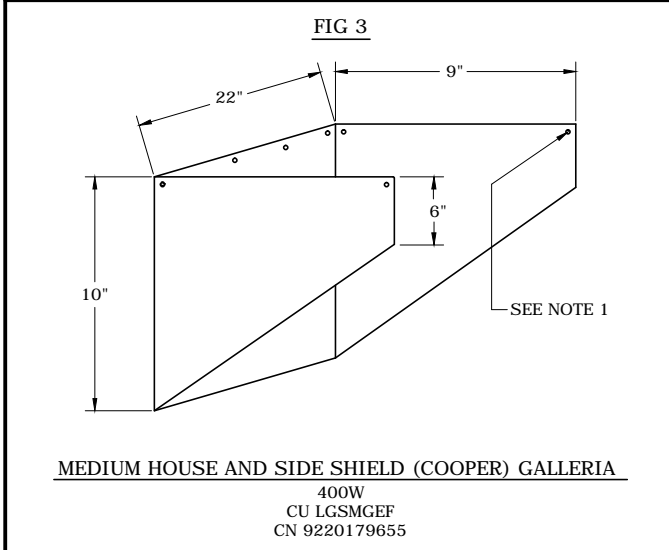
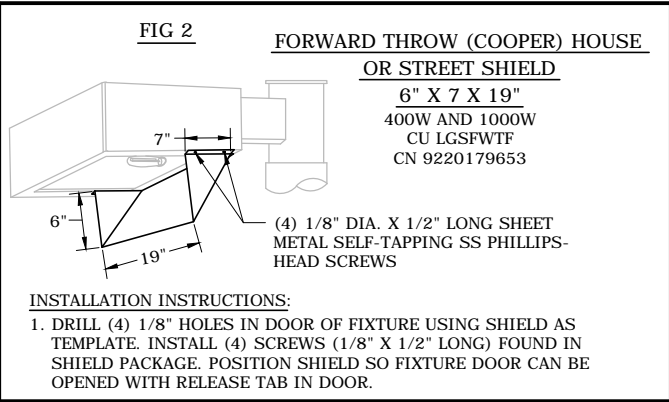
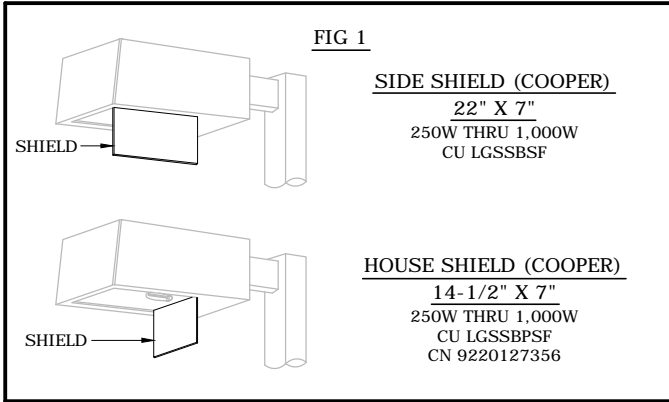
CUBE	SHIELD CU	SHIELD CN
400W, MEDIUM HOUSING	LGSMGF	242717
1000W, LARGE HOUSING	LGSLGF	242718

3				
2				
1				
0	7/22/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

SHIELDS FOR CUBE AND  
SEMI-ENCLOSED FIXTURES  
NON-STOCK GLARE CONTROL



**FLA** DWG. 30.13-03



**NOTES:**

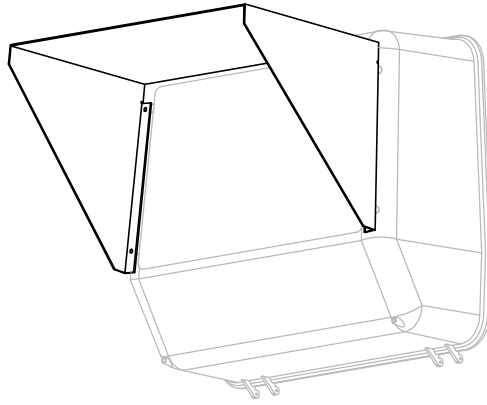
1. ATTACH GLARE SHIELD (FIG. 3 & 4) TO LIGHT FIXTURE WITH 1/2" LONG STAINLESS SELF-TAPPING SCREWS (PROVIDED BY MANUFACTURER).

3				
2				
1				
0	7/22/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

SHIELDS FOR  
SHOEBOX FIXTURES

**FLA** DWG.  
30.13-05

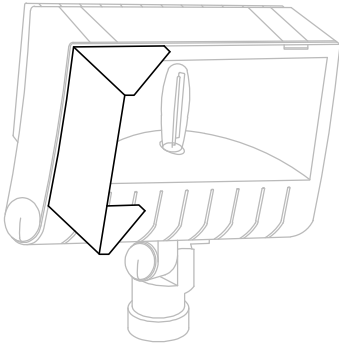




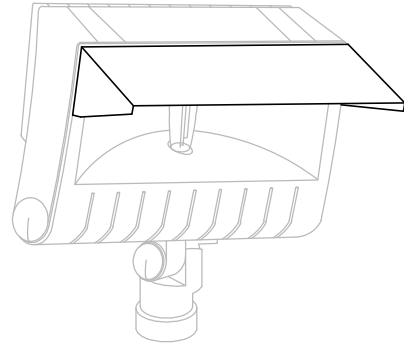
TOP AND SIDE VISOR

FLOODS	GE COMPONENTS	COOPER COMPONENTS		AEL COMPONENTS
	SHIELD CN	SHIELD CU	SHIELD CN	SHIELD CN
250W - 400W HPS AND MH	9220091611	-	-	9220198234
1000W MH	30022909	SEE BELOW	SEE BELOW	9220150110

COOPER FIXTURES



FLOOD SIDE SHIELD  
CN 242712



TOP/BOTTOM SHIELD  
CN 242711

1000W FLOODS	COOPER COMPONENTS	
	SHIELD CU	SHIELD CN
110,000 FLOOD SIDE SHIELD ONLY (1000W)	-	9220090954
110,000 FLOOD (1000W) COOPER TOP AND BOTTOM	-	9220090951

NOTES:

1. ATTACH GLARE SHIELD TO LIGHT FIXTURE WITH 1/4" LONG SELF-TAPPING SCREWS (PROVIDED BY MANUFACTURER). THE 1/8" PILOT HOLES ARE LOCATED 3/8" FROM EACH CORNER EDGE. USE THESE HOLES AS A GUIDE FOR DRILLING PILOT HOLES IN THE FIXTURE.

3				
2				
1				
0	7/26/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

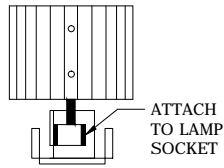
SHIELDS FOR  
FLOOD FIXTURES  
NON-STOCK GLARE CONTROL



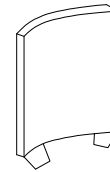
**FLA**

DWG.  
30.13-07

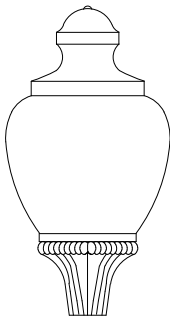
FIG. A



**SIDE SHIELD ONLY**  
 CU LGSPTF  
 CN 9220144802

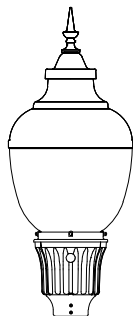


**SIDE SHIELD ONLY**  
 CU LGSOF  
 CN 242719



OCALA

STANDARD POST TOP			SHIELD	
TYPE	COMPATIBLE UNIT	FIXTURE CN	SHIELD CU	SHIELD CN
OCALA 9,500 HPS (SIDE)	L95SV10OC1F	241501	LGSOF	242719




POST TOP

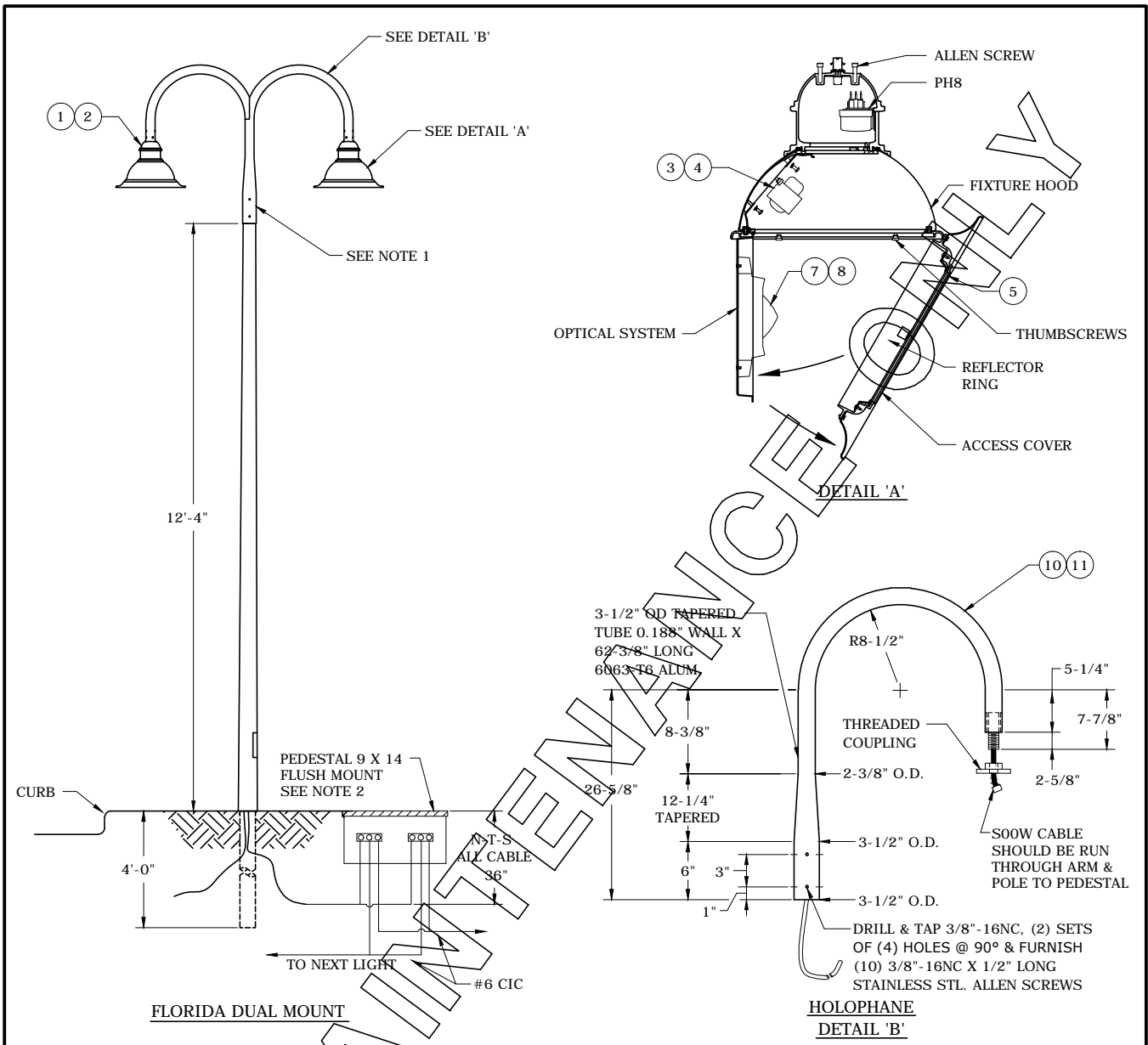
POST TOP			SHIELD	
TYPE	COMPATIBLE UNIT	FIXTURE CN	SHIELD CU	SHIELD CN
FLAGLER 9,500 (SIDE)	L95SV10FG1F	241520	LGSPTF	9220144802
BISCAYNE 9,500 (SIDE)	L95SV10BC1F	241522	LGSPTF	9220144802
MONTICELLO 9,500 (SIDE)	L95SV10MONT1F	241854	LGSPTF	9220144802

3				
2				
1	6/26/12	DEFREITAS	JUDAH	LARSEN
0	1/27/09	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

SHIELDS FOR  
 POST TOP FIXTURES  
 NON-STOCK GLARE CONTROL



**FLA** DWG.  
 30.13-09



ITEM	CN	LUMEC SANIBEL FIXTURES, 120V 100W HPS & 175W MH	ITEM	CN	OLD HOLOPHANE SANIBEL FIXTURES 120V 100W HPS
1	241890	SANIBEL FIXTURE, 120V, 100W HPS	12	241521	OLD SANIBEL FIXTURE, 120V, 100W HPS
2	241891	SANIBEL FIXTURE, 180V, 175W MH	13	240331	OLD SANIBEL SINGLE TENON SHEPHERD'S ARM
3	242054	BALLAST REPLACEMENT, 120V, 100W HPS	14	240332	OLD SANIBEL DOUBLE TENON SHEPHERD'S ARM
4	242055	BALLAST REPLACEMENT, 120V, 175W MH	15	243108	OLD SANIBEL 'BUTTON' PE REPLACEMENT
5	242230	REPLACEMENT LENS/DOOR	16	242162	OLD SANIBEL REPLACEMENT BALLAST, 120V, 100W HPS
6	243104	REPLACEMENT 'FULL SIZE' PE CONTROL	17	242246	OLD SANIBEL REPLACEMENT GLASS REFRACTOR LENS
7	250601	LAMP, 100W HPS			
8	250683	LAMP, 175W MH			
9	243610	REPLACEMENT STARTER AID			
10	240320	SINGLE TENON SHEPHERD'S ARM			
11	240321	DOUBLE TENON SHEPHERD'S ARMS			

**NOTES:**

- BRACKETS FOR SANIBEL FIXTURE(S) REQUIRE POST ( CN 034157) TO HAVE A 3" DIAMETER X 6" HIGH TENON.
- PEDESTAL DETAILS, SEE DWG. 30.07-36.
- POLE DETAILS, SEE DWG. 30.09-28.
- FIXTURE PROVIDED BY PROGRESS ENERGY.

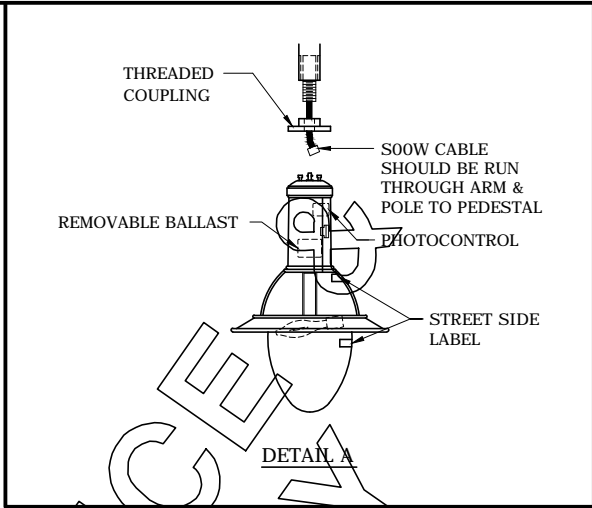
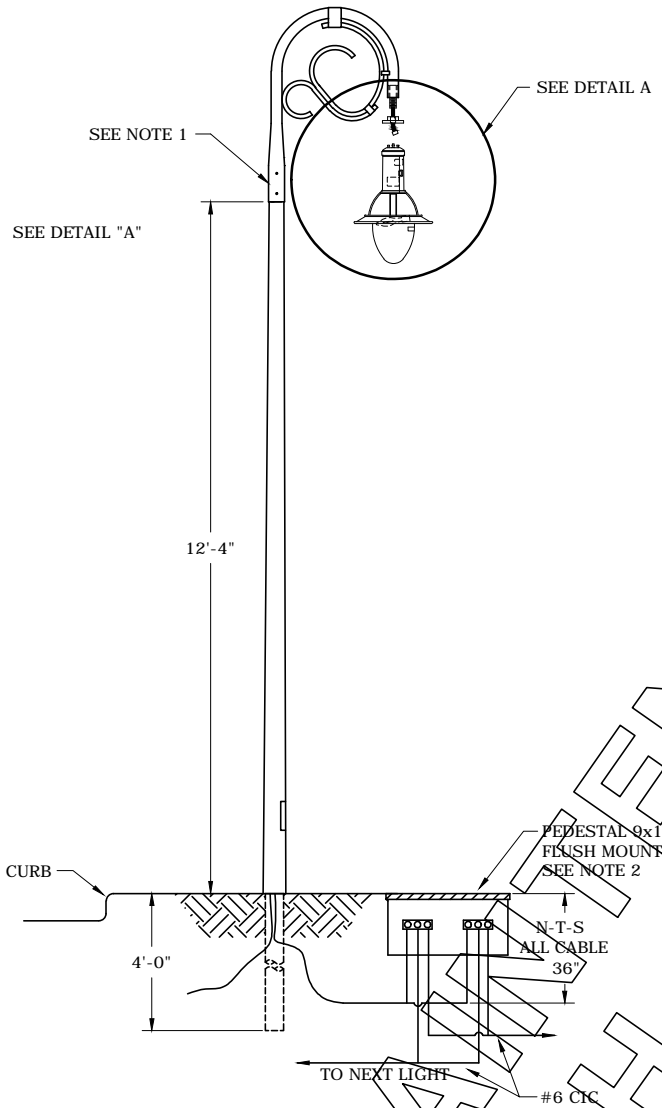
3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

LUMINAIRE, DECORATIVE 100W HPS &  
175W MH, THE SANIBEL (FMO)



**FLA** DWG. 30.08-08A

**FLORIDA SINGLE MOUNT**



**INSTALLATION NOTES:**

1. LIFT THE LUMINAIRE UNDER THE CAST-SUSPENSION RING.
2. ALIGN WITH STREET SIDE ON LUMINAIRE.
3. CONNECT THE QUICK DISCONNECT TERMINALS AND PUSH THE CONNECTION IN THE MOUNTING OPENING.
4. TURN THE LUMINAIRE CLOCKWISE TO ENGAGE THE HEAD OF THE SCREWS IN THE KEYHOLE SLOTS.
5. TIGHTEN ALL FOUR SCREWS TO FIRMLY SECURE THE LUMINAIRE IN PLACE. TORQUE: 240 LBS/IN, 20 LBS/FT.
6. SEE INSTALLATION INSTRUCTION SHEET IN FIXTURE BOX FOR ADDITIONAL DETAILS.

CLERMONT FIXTURE REPLACEMENT PARTS				
ITEM NO.	COMPATIBLE UNIT	MATERIAL ITEM	QUANTITY	DESCRIPTION
1	-	9220067348	1	BALLAST REPLACEMENT, 120V, 100W HPS
2	-	9220067353	1	BALLAST REPLACEMENT, 120V, 250W HPS
3	-	9220067351	1	BALLAST REPLACEMENT, 120V, 175W MH
4	-	9220067345	1	SKIRT, CLERMONT FIXTURE, 250W HPS
5	-	9220067346	1	SKIRT, CLERMONT FIXTURE, 100W HPS & 175W MH

**NOTES:**

1. THE BRACKETS FOR THE CLERMONT FIXTURE(S) REQUIRE THE POST TO HAVE A 3" X 5" TENON.
2. SEE DWG. 30.07-36 FOR PEDESTAL DETAILS.
3. SEE DWG. 30.09-14 FOR POLE DETAILS.
4. FIXTURE PROVIDED BY THE COMPANY.
5. SEE DWG. 30.02-26 FOR OTHER BRACKET ATTACHMENTS
6. SEE DWG. 30.08-09B FOR BILL OF MATERIALS.
7. SEE DWGS. 30.06-05 AND 30.06-10 FOR REPLACEMENT LAMPS.

3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

LUMINAIRE, DECORATIVE, 100W HPS &  
250W HPS AND 175W MH, THE CLERMONT LUMEC  
(FMO)

**FLA** DWG.  
30.08-09A

**BILL OF MATERIALS**

CU ITEM NO.	COMPATIBLE UNIT	QTY REQ'D	CATALOG NUMBER	QTY PER CU	DESCRIPTION
1	L95SV10TCR1SCF	1	9220067342	1	CLERMONT, HPS, 120V, 100W (LUMINAIRE, LAMP, SGL SHEPHERD'S ARM BRACKET) REMOVE ONLY
2	L95SV10TCR1SMF	1			CLERMONT, HPS, 120V, 100W (LUMINAIRE, LAMP, SGL SIDE SCROLL SHEPHERD'S ARM BRACKET) REMOVE ONLY
3	L95SV10TCR1SRF	1			CLERMONT, HPS, 120V, 100W (LUMINAIRE, LAMP, SINGLE TENON SCROLL ARM BRACKET) REMOVE ONLY
4	L95SV10TCLM1NF	1			CLERMONT, HPS, 120V, 100W (LUMINAIRE, LAMP, SKIRT) LUMEC MAINTENANCE ONLY
5	L28KSV25TCR1ELF	1	9220067333	1	CLERMONT, HPS, 120V, 250W (LUMINAIRE, LAMP, 6" BLACK ARM, ARM ADAPTER) REMOVE ONLY
6	L28KSV25TCR1SCF	1			CLERMONT, HPS, 120V, 250W (LUMINAIRE, LAMP, SGL SHEPHERD'S ARM BRACKET) REMOVE ONLY
7	L28KSV25TCR1SRF	1			CLERMONT, HPS, 120V, 250W (LUMINAIRE, LAMP, SGL SIDE SCROLL SHEPHERD'S ARM BRACKET) REMOVE ONLY
8	L28KSV25TCBL1SRF	1			CLERMONT, HPS, 120V, 250W (LUMINAIRE, LAMP, SINGLE TENON SCROLL ARM BRACKET) REMOVE ONLY
9	L28KSV25TCLM1NF	1	9220067343	1	CLERMONT, HPS, 120V, 250W (LUMINAIRE, LAMP, SKIRT) LUMEC MAINTENANCE ONLY
10	L14KMH17TCR1SCF	1			CLERMONT, MH, 120V, 175W (LUMINAIRE, LAMP, SGL SHEPHERD'S ARM BRACKET)
11	L14KMH17TCR1SMF	1			CLERMONT, MH, 120V, 175W (LUMINAIRE, LAMP, SGL SIDE SCROLL SHEPHERD'S ARM BRACKET)
12	L14KMH17TCR1SRF	1			CLERMONT, MH, 120V, 175W (LUMINAIRE, LAMP, SINGLE TENON SCROLL ARM BRACKET)
13	L14KMH17TCLM1NF	1			CLERMONT, MH, 120V, 175W (LUMINAIRE, LAMP, SKIRT) LUMEC MAINTENANCE ONLY

**NOTES:**

1. SEE DWG. 30.08-09A FOR DESIGN SPECIFICATIONS.

FOR MAINTENANCE MATCH-UP ONLY

3				
2				
1				
0	7/21/10	DEFREITAS	JUDAH	LARSEN
REVISED	BY	CK'D	APPR.	

LUMINAIRE, DECORATIVE, 100W HPS &  
250W HPS AND 175W MH, THE CLERMONT LUMEC  
(FMO)



**FLA** DWG.  
30.08-09B