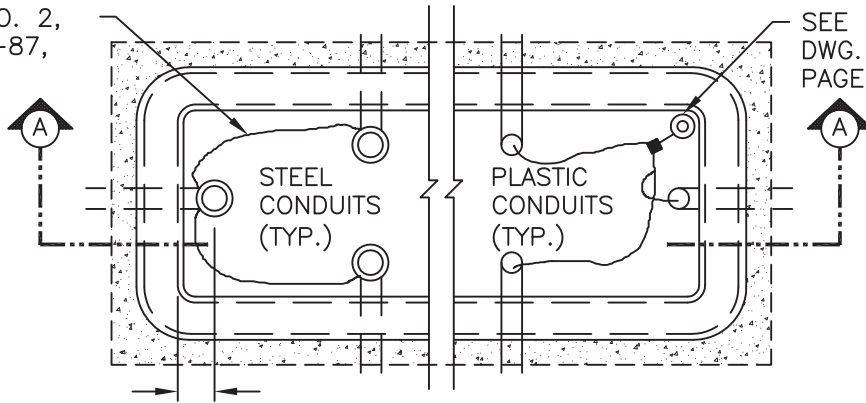


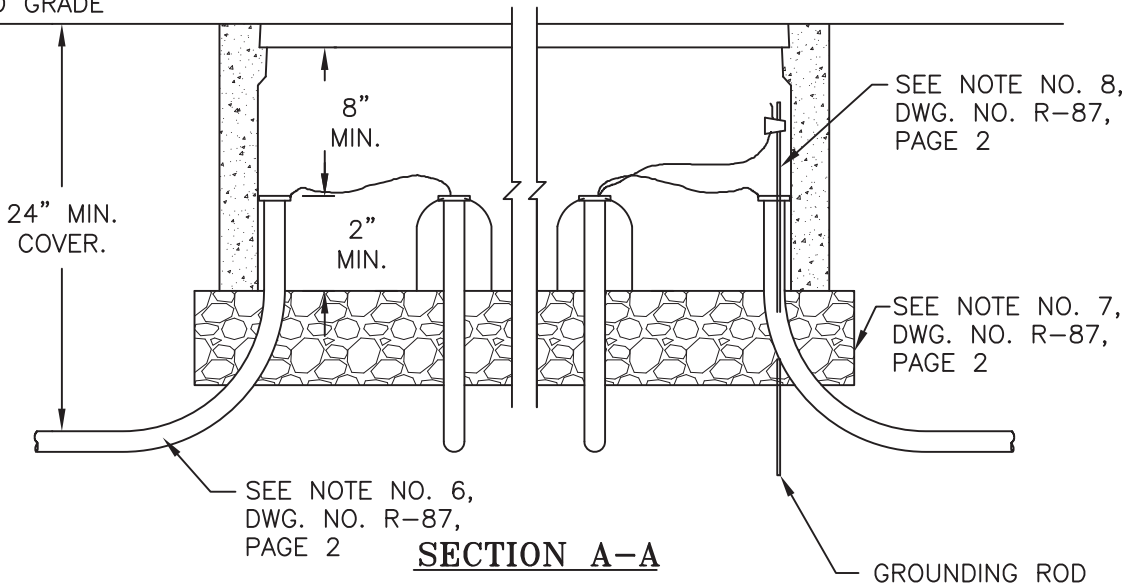
SEE NOTE NO. 2,
DWG. NO. R-87,
PAGE 2



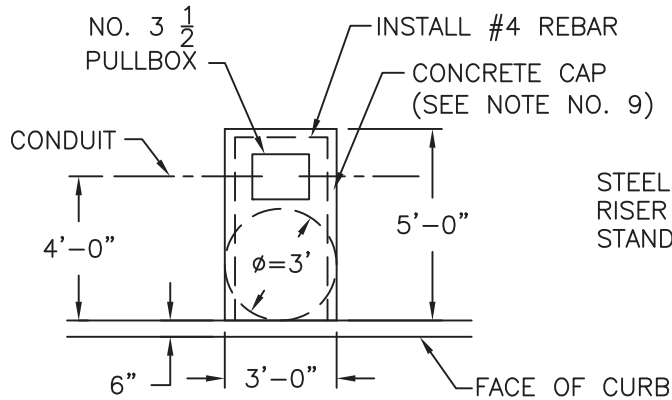
SEE NOTE NO. 1,
DWG. NO. R-87,
PAGE 2

SEE NOTE NO. 3,
DWG. NO. R-87, PAGE 2 **PLAN**

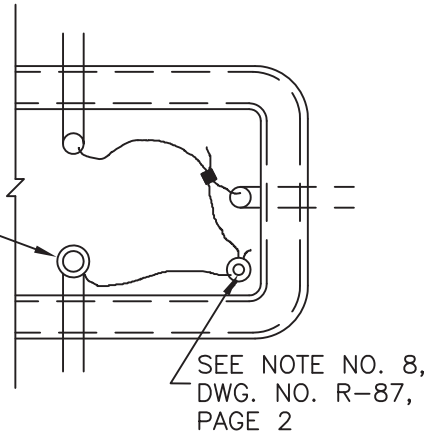
FINISHED GRADE



SECTION A-A



STEEL CONDUIT
RISER TO
STANDARD.



CONCRETE CAP FOR STREET LIGHTING

GROUNDING DETAIL

SEE DRAWING NO. R-87, PAGE 2 FOR BACKFILLING STREET LIGHT PULL BOXES

CONDUIT PULL BOX



REVISION
NO.
4

APPROVED BY CITY ENGINEER:

[Signature]
DATE: 09/27/2016

SCALE
NONE

SUPERSEDES
DWG. DATED
01/09/02

DRAWING NO.
R-87

NOTES:

1. ALL NONMETALLIC CONDUIT SHALL HAVE A NO. 8 STRANDED (WITH GREEN INSULATION) COPPER BONDED/GROUNDING WIRE. (EXCEPT THE CONDUIT BETWEEN THE P.G.&E. SERVICE POINT/POLE AND THE FIRST STREET LIGHT PULL BOX). THESE BONDING /GROUNDING WIRES SHALL BE CONNECTED IN THE PULL BOX WITH CABLE CONNECTORS – BURNDY–SERVIT NO. KS–15 OR AN APPROVED EQUAL MEETING CALTRANS SPECIFICATIONS.
2. ENDS OF ALL STEEL CONDUITS ENTERING PULL BOX SHALL BE CAPPED WITH O–Z, TYPE "GB" BRONZE GROUNDING BUSHINGS AND CONNECTED TOGETHER WITH NO. 8 SOLID COPPER WIRE.
3. CONDUIT SHALL NOT EXTEND MORE THAN 3" INTO PULL BOX (TYPICAL ON ALL LOCATIONS).
4. MIDRUN PULL BOXES SHALL BE INSTALLED AT A DISTANCE OF NO MORE THAN 2'–0" FROM THE BACK OF CURB (IF NO SIDEWALK EXISTS) OR 2'–0" FROM THE BACK OF WALK (IF SIDEWALK EXISTS).
5. AFTER CONDUCTORS HAVE BEEN INSTALLED, THE ENDS OF CONDUITS TERMINATING IN PULL BOXES SHALL BE SEALED WITH AN APPROVED SEALING COMPOUND.
6. ALL CONDUITS USE 45° SWEEPS.
7. SET PULL BOX ON TOP OF 6" OF 3/4" MAX. CLEAN CRUSHED ROCK OR 1/2" MAX. PEA GRAVEL.
8. GROUND ROD AND CLAMP SHALL BE DRIVEN INTO NATIVE SOIL IN CORNER OF PULL BOX NO MORE THAN 3" FROM EITHER INSIDE WALL. GROUND ROD SHALL BE 8'–0" X 1/2" COPPERWELD. FOR GROUND ROD DELETION, PLAN APPROVAL BY CITY ENGINEER MUST BE GIVEN PRIOR TO INSTALLATION.
9. REFER TO C.O.S. DWG. NO. R–89 FOR LIGHT POLE FOUNDATION AND DWG. NO. R–88 FOR STREET LIGHT LOCATION.

BACKFILLING NOTES, FOLLOW THESE INSTRUCTIONS:

STEP 1:

- REMOVE LOOSE MATERIAL AND RE–GRADE BOTTOM OF PULL BOX.
- ORGANIZE AND COMPRESS WIRES AT THE BOTTOM.
- CLEAN LIP (WHERE LID SITS) INSIDE OF PULL BOX.

STEP 2:

- DUST SEAL CONDUITS USING GARNER BENDER DS–110N, OR APPROVED EQUAL.

STEP 3:

- COVER WIRE WITH 6–MIL PLASTIC SHEETING TO PROTECT OPENINGS FROM SAND INTRUSTION.
- CUT SHEETING LARGE ENOUGH TO PROVIDE WRAPPING AFTER STEP 4 BELOW.

STEP 4:

- BACKFILL WITH CLEAN SAND, MINIMUM OF 3–INCHES.
- FOLD PLASTIC SHEETING OVER SAND.

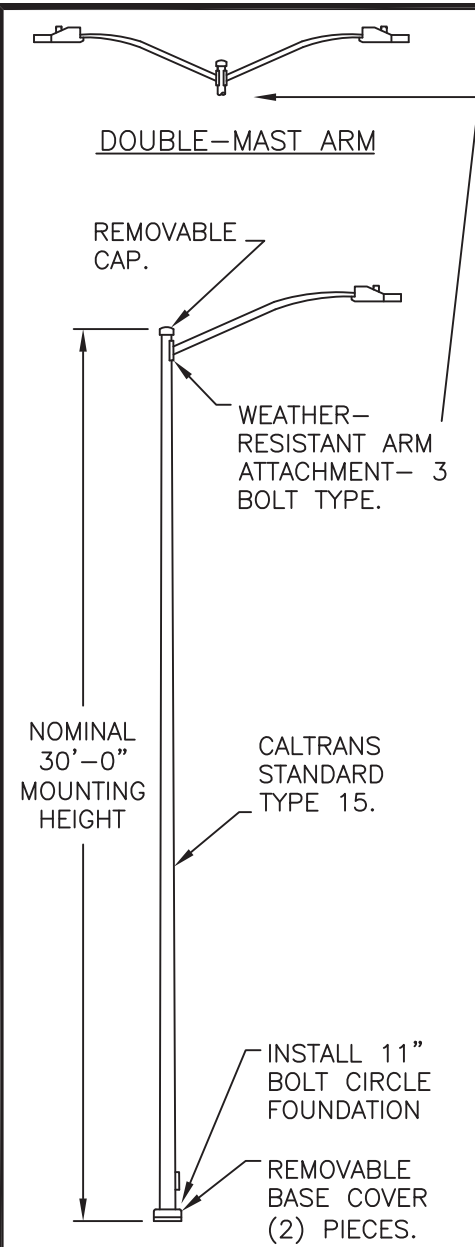
STEP 5:

- PLACE A LAYER OF #30 ROOFING PAPER ON TOP OF PLASTIC AND SAND.
- CUT ROOFING PAPER TO PROVIDE A NEAT FIT.

STEP 6:

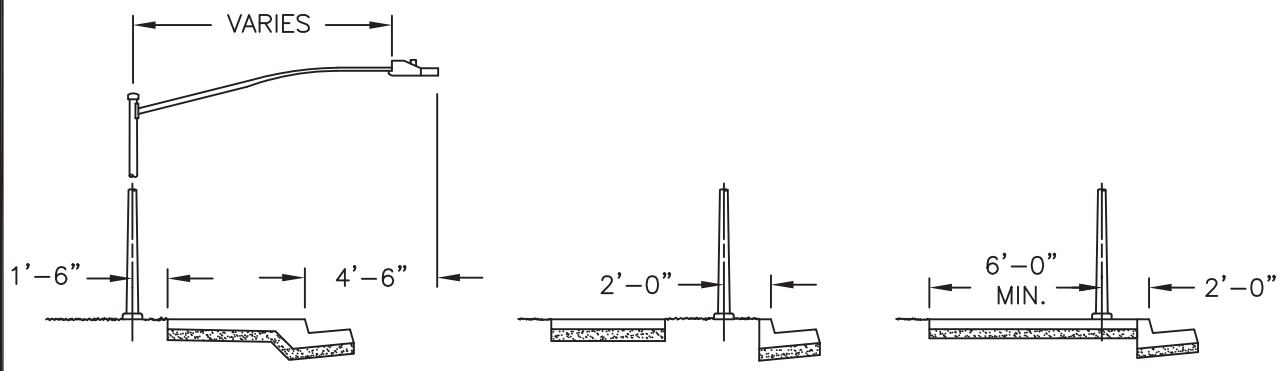
- BACKFILL WITH CONTROL–DENSITY FILL (CDF), NON–STRUCTURAL MIX WITHOUT AGGREGATE. REFER TO CITY OF STOCKTON STANDARD SPECIFICATION 19–3.031(5).
- POUR A MINIMUM OF 3–INCHES, WITH TOP OF CDF POUR FLUSH WITH THE LIP.
- PLACE LID.
- GROUT BETWEEN LID AND RIM.

	CONDUIT PULL BOX	REVISION NO. 4	APPROVED BY CITY ENGINEER:  DATE: 09/27/2016	
	SCALE NONE	SUPERSEDES DWG. DATED 01/09/02	DRAWING NO. R-87	



NOTES:

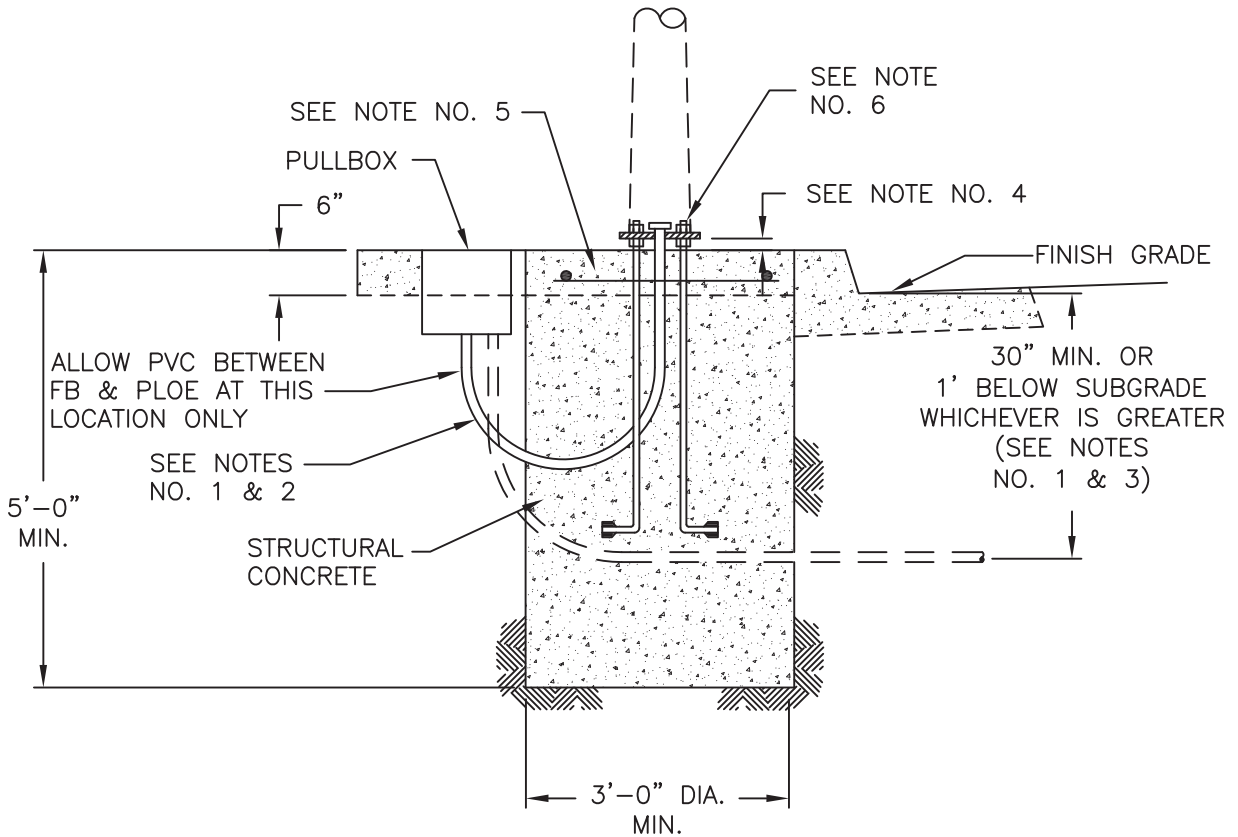
1. LUMINAIRES SHALL BE LEOTEK EC SERIES ECOBRA-HEAD LED STREET LIGHT MODEL NUMBERS:
 - EC1-6M-MV-NW-2-GY-700-WL (100-WATT HPS EQUIVALENT) AT 54 WATT W/LED
 - EC3-10M-MV-NW-2-GY-530-WL (150-WATT HPS EQUIVALENT) AT 63 WATT W/LED
 - EC3-10M-MV-NW-2-GY-700-WL (200-WATT HPS EQUIVALENT) AT 87 WATT W/LED
2. LUMINAIRES SHALL HAVE 2-BOLT INTERNAL SLIP FITTED MOUNT FOR ATTACHING TO MAST ARM.
3. PE CELLS PROVIDED WITH EACH LUMINAIRE SHALL BE SUNRISE TECHNOLOGIES S124-1.5-ST. FEATURES INCLUDE INSTANT ON/DELAY OFF OPERATION FOR TESTING, ONE LUMEN LEVEL FOR TURN ON, FOUR LUMEN LEVEL FOR TURN OFF, AND AN OPERATING RANGE FROM 105 TO 285 VOLTS. "SHUNT CAPS" SHALL ALSO BE SUNRISE TECHNOLOGIES.
4. BALLASTS SHALL BE MULTI-TAP (120/208/240/277V), REGULATOR TYPE. SINGLE POLE LIGHT INSTALLATIONS USE 120V TAP AND MULTIPLE POLE CIRCUITS USE 240V TAP UNLESS NOTED OTHERWISE ON THE PLANS OR SPECIFICATIONS.
5. STREET LIGHT STANDARDS SHALL BE PLACED AT ALL INTERSECTIONS, AND AT THE ENDS OF ALL CUL-DE-SACS AND COURTS 70'-0" OR MORE IN DEPTH. STANDARDS SHALL BE EVENLY SPACED, DEPENDING ON BLOCK LENGTHS, AT A DISTANCE OF NOT MORE THAN 250'-0" APART. ACTUAL STREET LIGHT LOCATIONS SHALL BE DETERMINED BY MAINTAINING A MIN. LUMINATION OF 0.1 FOOTCANDLE BETWEEN STREET LIGHT STANDARDS. STAGGERED SPACING SHALL BE USED WHENEVER POSSIBLE.
6. DIMENSIONS SHOWN ARE TO CL OF POLE.
7. 18" MIN. CLEARANCE FROM FOC TO FACE OF POLE.



STREET LIGHTS TYPE AND LOCATION CITY OF STOCKTON DEPARTMENT OF PUBLIC WORKS	REVISION NO. 5	APPROVED BY CITY ENGINEER: DATE: 09/27/2016	
	SCALE NONE	SUPERSEDES DWG. DATED 11/25/03	DRAWING NO. R-88

7. WIRING SHALL BE UNDERGROUND IN 1-1/2" UL APPROVED SCHEDULE 40 PVC CONDUIT (SPECIAL CONDITION MAY REQUIRE VARIATION OF CONDUIT SIZE AS APPROVED BY THE CITY ENGINEER) AND SHALL BE INSTALLED AS DIRECTED BY THE CITY OF STOCKTON. ALL CONDUCTORS SHALL BE COPPER. ALL GROUNDING CONDUCTORS SHALL BE BARE OR HAVE A GREEN INSULATION. ALL GROUNDED CONDUCTORS SHALL HAVE A WHITE OR NATURAL GREY INSULATION. PHASE TAPPING AND/OR PAINTING ARE NOT ALLOWED. (ALL COLORING MUST BE PERMANENT ALONG THE ENTIRE LENGTH OF THE CONDUCTOR.)
8. OVERHEAD SERVICE TO A STREET LIGHT IS NOT ALLOWED. REFER TO C.O.S. STANDARD DWG. NO. R-92 FOR UNDERGROUND SERVICE REQUIREMENTS.
9. CONDUIT SYSTEM SHALL BE COMPLETE FROM THE STREET LIGHT TO THE P.G.&E. SOURCE.
10. SEE C.O.S. STANDARD DWGS. NO. R-87, R-89, AND R-92 FOR ADDITIONAL DETAILS.
11. ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH SECTIONS 86-1, 86-2, AND 86-6 STATE OF CALIFORNIA STANDARD SPECIFICATIONS.
12. WATERPROOF FUSE HOLDERS AND FUSES (BAF15, BLF15) SHALL BE INSTALLED IN THE BASE OF THE POLE ADJACENT TO THE HAND HOLE IN EACH POLE. FUSE HOLDERS FOR THE 120 VOLT SERVICE SHALL BE "BUSS HEX" TYPE OR EQUAL. FUSE HOLDERS FOR 208/240 VOLT SERVICE SHALL BE "BUSS HEX TYPE" OR EQUAL. FUSE HOLDERS SHALL HAVE WIRE LUGS THAT ARE APPROPRIATE FOR THE WIRE SIZE. TYPE "AA" FOR WIRES UP TO #8 AND TYPE "AB" FOR #6 AND #4 WIRES. FUSE HOLDERS SHALL BE WATERPROOFED BY USING AN INSULATING BOOT (BUSSMAN P/N 1A0512) OR EQUAL. EACH LUMINAIRE ON A DOUBLE MAST ARM POLE SHALL HAVE A SEPARATE FUSE AND FUSE HOLDER.
13. WHEN SERVICING A SINGLE LUMINAIRE, A MINIMUM OF NO. 12 COPPER WIRE SHALL BE USED FROM THE PULLBOX TO THE FUSE HOLDER(S), AND FROM THE FUSE HOLDER(S) TO THE HEAD. WHERE MULTIPLE LUMINAIRES ARE BEING SERVED, A MINIMUM OF NO. 10 COPPER WIRE SHALL BE USED FROM THE PULLBOX TO THE FUSE HOLDER(S), AND A MINIMUM OF NO. 12 COPPER WIRE FROM THE FUSE HOLDER(S) TO EACH HEAD.
14. WIRE IN UNDERGROUND CONDUIT SHALL NOT BE SMALLER THAN NO. 10 COPPER SERVING A SINGLE LUMINAIRE WITHIN 150'-0" OF THE SERVICE POINT; NO. 8 COPPER OR LARGER SERVING 2 OR MORE LUMINAIRES.
15. THE OWNER OR CONTRACTOR OF ANY LIGHTING PROJECT IS REQ'D TO PAY P.G.&E. CO. THE CONNECTION FEE BEFORE ACCEPTANCE BY THE CITY.
16. DOUBLE-MAST ARM STREET LIGHT STANDARDS SHALL BE INSTALLED IN ALL MEDIAN STRIPS AND OTHER AREAS DESIGNATED BY THE CITY ENGINEER. ALL SINGLE-ARM LIGHTING SPECIFICATIONS SHALL ALSO APPLY TO THE DOUBLE ARM STANDARDS. EACH LUMINAIRE SHALL BE WIRED SEPARATELY.
17. ALL BONDING/GROUNDING WIRE SHALL BE INSTALLED AS SHOWN ON "CONDUIT PULLBOX" STANDARD DWG. NO. R-87.
18. ALL CONDUCTOR SPLICES SHALL BE MADE WEATHERPROOF.
19. WHEN STREET LIGHT POLES ARE PAINTED, WITH THE APPROVAL OF THE CITY ENGINEER, THE LUMINAIRES SHALL BE PAINTED THE SAME COLOR.
20. PHOTOCCELL UNIT SHALL BE INSTALLED WITH PHOTOCCELL FACING NORTH.
21. DOWNTOWN STREET LIGHTING: A TOTAL OF SIX (6) ORNAMENTAL KING FERRONITE STYLE POLES, EACH WITH TWO (2) FIXTURE HEADS REQUIRED PER BLOCK, UTILIZING 250W-MH WITH AN IES TYPE III LIGHTING DISTRIBUTION PATTERN, PROVIDING 2.5 FOOTCANDLES AVERAGE LIGHTING LEVEL.
22. INSTALL PULL TAPE IN ALL CONDUIT.

STREET LIGHTS TYPE AND LOCATION	REVISION NO. 4	APPROVED BY CITY ENGINEER:  DATE: 09/27/2016	
	SCALE NONE	SUPERSEDES DWG. DATED 01/09/02	DRAWING NO. R-88
 CITY OF STOCKTON DEPARTMENT OF PUBLIC WORKS			



NOTES:

1. SCHEDULE 40 PVC SHALL BE USED FOR ALL STREET LIGHTING, EXCEPT ALL CONDUIT BENDS SHALL BE RIGID STEEL CONDUIT WITH 18" RADIUS SWEEPS (EXCEPT AS INDICATED ABOVE).
2. INSTALL TO PULLBOX. 1-1/2" DIA. (MIN.) CONDUIT WITH 18" RADIUS BEND. CONDUIT SHALL EXTEND NOT MORE THAN 2" ABOVE THE TOP OF THE BASE PLATE. IF RIGID CONDUIT IS USED, PROVIDE GROUNDING BUSHING AT THE TOP END.
3. ANY CONDUIT IN STREET AREA SHALL BE MIN. OF 30" FINISH GRADE OR 1' BELOW SUBGRADE, WHICHEVER IS GREATER.
4. 2"±1/4" TO BOTTOM OF BASE PLATE. WHERE POLES ARE INSTALLED IN CENTERLINE MEDIANS, THE BOTTOM OF STEEL BASE PLATE MUST BE INSTALLED 2-3/4" ABOVE MEDIAN CROWN IN ORDER TO PROVIDE FOR CROSS-SLOPE ON MEDIAN PAVING.
5. TOP 6" TO BE FORMED AND POURED AS A 3'-0" x 5'-0" CAP. WITH (1) #4 REBAR EF, PER DWG R-87.
6. ANCHOR BOLTS SHALL BE GALVANIZED. A MIN. OF 1/2 THE TOTAL LENGTH FROM EACH THREADED END. BOLT SHALL BE PROVIDED WITH A LEVELING NUT, TWO WASHERS, AND A HOLD DOWN NUT. MAXIMUM LENGTH OF ANCHOR BOLT ABOVE THE TOP OF THE HOLD DOWN NUT SHALL BE 1". FOR BOLT SIZE SEE CALTRANS STANDARDS DWG ES-6D. AN 11" BOLT CIRCLE SHALL BE USED.
7. ALTERNATE FOOTINGS SUBJECT TO THE APPROVAL OF THE CITY ENGINEER.

LIGHT POLE FOUNDATION TYPE 15



REVISION NO.
4

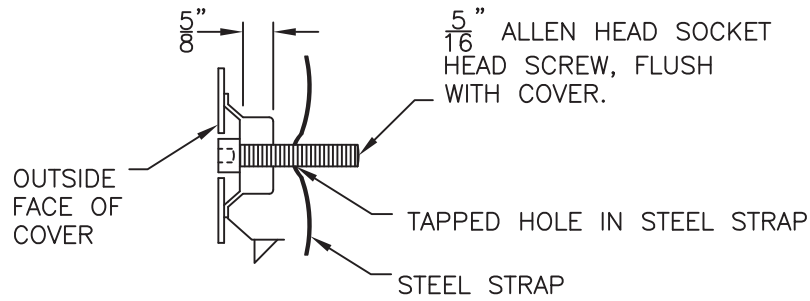
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[Signature]
DATE: 09/27/2016

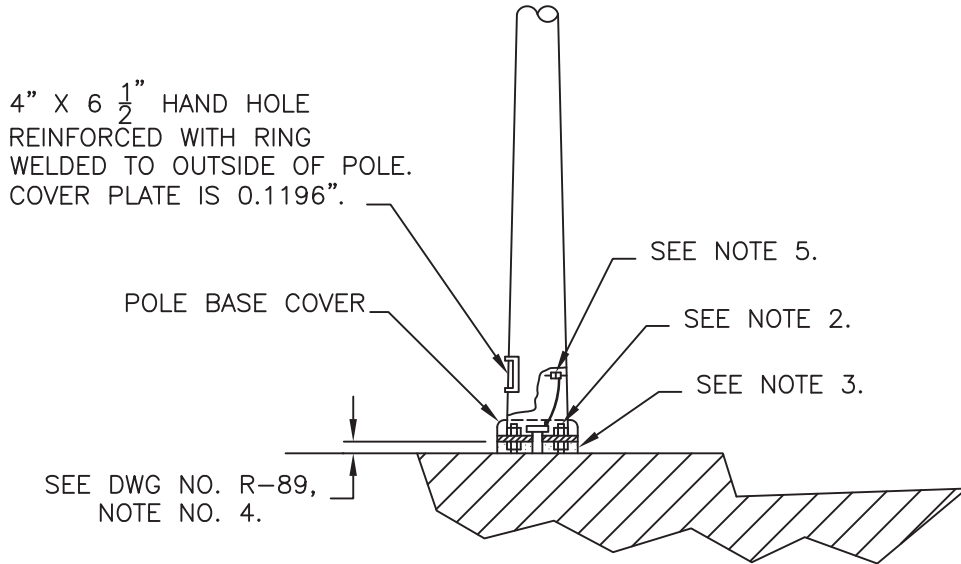
SCALE
NONE

SUPERSEDES DWG. DATED
01/09/02

DRAWING NO.
R-89



TAMPER RESISTANT HANDHOLE COVER



NOTES:

1. HAND HOLE SHALL BE LOCATED ON DOWNSTREAM SIDE OF TRAFFIC IF POLE IS NEAR FACE OF CURB. IT SHALL BE FACING THE STREET IF POLE IS BEHIND THE SIDEWALK. HAND HOLE SHALL NOT BE OBSTRUCTED BY A FIXED OBJECT.
2. MAXIMUM LENGTH OF ANCHOR BOLT ABOVE THE TOP OF THE HOLD DOWN NUT SHALL BE 1".
3. GROUT AFTER ERECTING AND LEVELING POLE. WHEN SETTING POLES WITH FLAT STEEL BASES, PROVIDE A DRAINAGE HOLE (UNDER THE STEEL PLATE) TO THE CENTER OF THE POLE. FORM HOLE BEFORE CONCRETE SETS USING A PIECE OF WELDING ROD OR EQUAL.
4. A 1/2" DIA. TAPPED HOLE IN HAND HOLE COVER HOLDING FLANGE MAY BE SUBSTITUTED.
5. 1/2" X 1" FLATHEAD STEEL MACHINE SCREW WITH COURSE THREADS WELDED TO INSIDE OF POLE FOR GROUND. PROVIDE WITH 2 HEX HEAD NUTS AND 2 WASHERS. CONNECT TO GROUNDING BUSHING OF END OF CONDUIT WITH #8 SOLID COPPER WIRE (SEE NOTE 4.). #8 SOLID COPPER WIRE SHALL CONNECT POLE TO GROUND ROD IN PULL BOX. GROUND WIRE SHALL BE TERMINATED AT THE GROUND LUG AT THE BASE OF THE POLE.

LIGHT POLE INSTALLATION



REVISION NO.
2

APPROVED BY CITY ENGINEER:

[Signature]
DATE: 09/27/2016

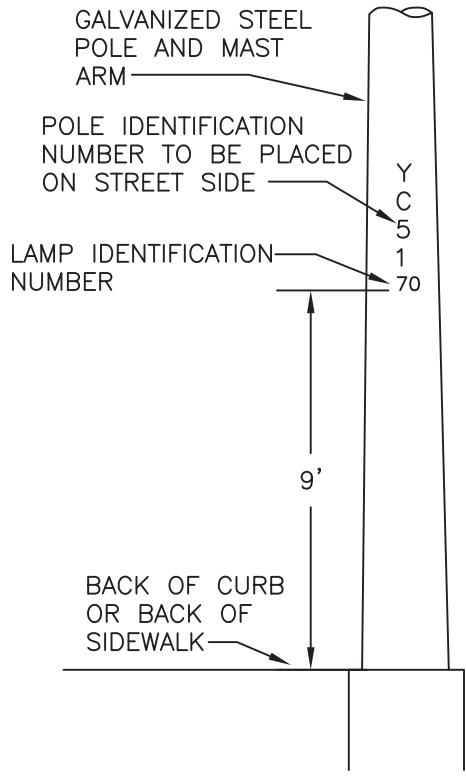
SCALE
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SUPERSEDES DWG. DATED
01/09/02

DRAWING NO.
R-90

DECAL TEXT SCHEDULE

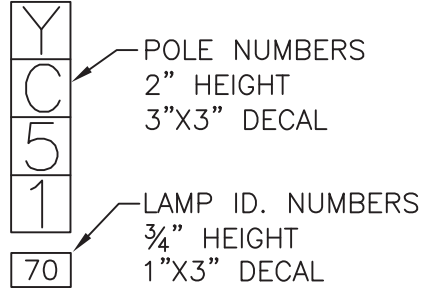
POLE SYMBOL	POLE INDENT. NO.	LAMP INDENT. NO.
Ⓐ	YC-	
Ⓑ	YC-	
Ⓒ	YC-	
Ⓓ	YC-	
Ⓔ	YC-	
Ⓕ	YC-	
Ⓖ	YC-	
Ⓗ	YC-	
Ⓘ	YC-	
Ⓝ	YC-	
Ⓙ	YC-	
Ⓚ	YC-	
Ⓛ	YC-	
Ⓜ	YC-	
Ⓝ	YC-	
Ⓞ	YC-	
Ⓟ	YC-	
	COLOR BLACK NUMBERS	COLOR BLACK & GOLD OR BLACK AND WHITE



DECAL LOCATION
N.T.S.

NOTES:

1. PROVIDE DECAL TEXT SCHEDULE SIMILAR TO ONE SHOWN ABOVE ON PLANS.
2. PLACE NUMBERS FACING STREET
3. CITY TO PROVIDE POLE NUMBERING INFORMATION.
4. CONTRACTOR IS RESPONSIBLE FOR PROVIDING MATERIAL FOR NUMBER INSTALLATION.
5. INSTALLATION INSTRUCTIONS FOR REFLECTIVE NUMERALS AND NUMBERS.
 - A. CLEAN AND THOROUGHLY DRY THE APPLICATION AREA.
 - B. PEEL BACKING PAPER OFF REFLECTIVE NUMERAL AND APPLY.
 - C. PRESS REFLECTIVE NUMERAL FIRMLY FROM CENTER OUTWARD TO REMOVE ANY ENTRAPPED AIR.

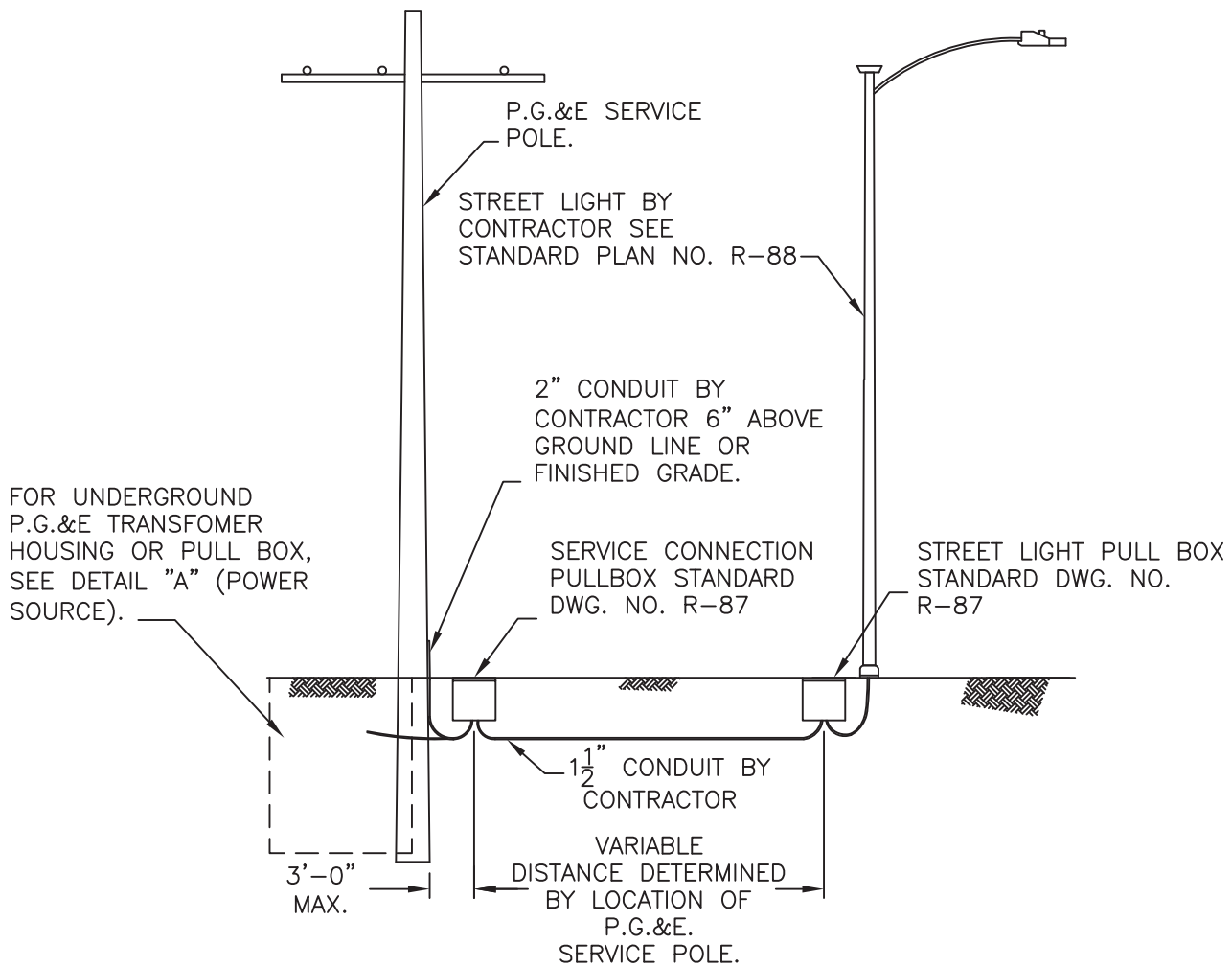


IDENTIFICATION DECAL DETAIL
N.T.S.

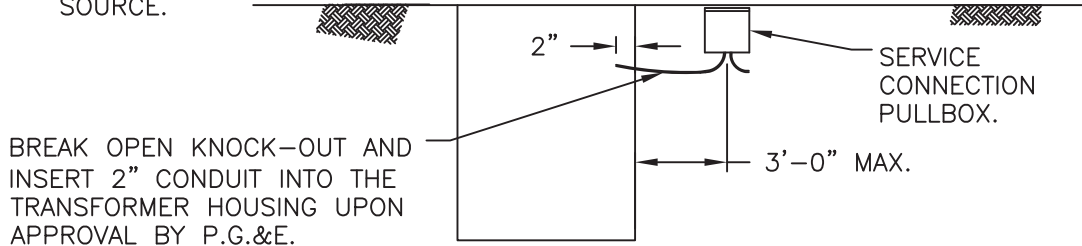
STREET LIGHT POLE IDENTIFICATION NUMBER



REVISION NO.	APPROVED BY CITY ENGINEER: <i>[Signature]</i> DATE: 09/27/2016	
SCALE NONE	SUPERSEDES DWG. DATED	DRAWING NO. R-91



P.G.&E. UNDERGROUND TRANSFORMER OR PULLBOX, OR HOUSING POWER SOURCE.



DETAIL "A"

NOTES:

1. CONTRACTOR TO FURNISH AND INSTALL BOTH PULL BOXES SHOWN. SEE STANDARD DRAWING NO. R-87.
2. CONTRACTOR TO FURNISH AND INSTALL CONDUCTORS IN CONDUIT BETWEEN THE TWO PULL BOXES SHOWN. CONTRACTOR TO LEAVE 3'-0" MIN. SLACK WIRE IN PULL BOX AT BASE OF P.G.&E. POLE.
3. P.G.&E. WILL PROVIDE CONDUCTORS DOWN SERVICE POLE TO PULL BOX AT BASE OF SERVICE POLE AND MAKE CONNECTIONS.

STREET LIGHT AND TRAFFIC SIGNAL SERVICE CONNECTION

 **CITY OF STOCKTON**
DEPARTMENT OF PUBLIC WORKS

REVISION NO.
4

APPROVED BY CITY ENGINEER:


DATE: 09/27/2016

SCALE
NONE

SUPERSEDES DWG. DATED
01/09/02

DRAWING NO.
R-92