

PROCEDURES:

1. DESIGN RESPONSIBILITIES

- A. ALL ELECTROLIER PLANS SHALL BE DESIGNED BY A LICENSED ELECTRICAL OR CIVIL ENGINEER AND THEY SHALL BE DRAWN ON A SEPERATE ELECTROLIER PLAN.
- B. PLANS SHALL INDICATE ALL EXISTING ADJACENT ELECTROLIERS.
- C. PLANS SHALL BE APPROVED BY THE CITY ENGINEER AND THE DIRECTOR OF ENGINEERING.

2. SERVICE POINTS

- A. WORK SHALL BE COORDINATED WITH PG&E TO ESTABLISH SERVICE POINTS FOR ELECTROLIERS.
- B. ALL SERVICE POINTS SHALL BE APPROVED BY PG&E.

3. DESIGN CRITERIA

- A. STREET LIGHT DETAILS SHALL BE PER STANDARD DETAILS.
- B. ILLUMINANCE LEVELS SHALL BE DESIGNED BASED UPON THE FOLLOWING:

<u>ROADWAY CLASSIFICATION</u>	<u>AVERAGE MAINTAINED HORIZONTAL ILLUMINATION</u>	<u>UNIFORMITY</u>
RESIDENTIAL/LOCAL	.3 FC	6:1
COLLECTOR	.6 FC	4:1
ARTERIAL	.9 FC	3:1

- C. LED LIGHTING SHALL BE USED ON ALL ROADWAYS AND DESIGNED FOR SITE SPECIFIC APPLICATIONS. PROPOSED LIGHTING AND MANUFACTURER SPECIFICATIONS SHALL BE SUBMITTED AND APPROVED BY THE CITY ENGINEER.

- D. LED LIGHTING FIXTURE SHALL CONFORM TO THE REQUIREMENTS OF SECTION 86 OF THE CALTRANS STANDARD SPECIAL PROVISIONS AND RELATED SECTIONS. FIXTURES SHALL BE UL-APPROVED AND SHALL BE LISTED ON THE PG&E QUALIFIED PRODUCTS LIST WITH TARRIFF RATES ESTABLISHED BY PG&E. FIXTURES SHALL HAVE GUARANTEED AVERAGE LAMP LIFE OF 50,000 HOURS AND SHALL BE FURNISHED WITH A MANUFACTURER WARRANTY PROVIDING REPLACEMENT OF FIXTURES THAT DO NOT MEET THIS PERFORMANCE REQUIREMENT. FIXTURES SHALL PRODUCE LIGHT AT 6,000K FREQUENCY, UNLESS OTHERWISE NOTED ON THE PLANS.

NOTES:

1. ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE CITY OF SAN RAMON, APPLICABLE COUNTY AND STATE REGULATIONS, AND THE LATEST APPROVED STANDARDS OF IEEE, ASA, NEMA, UL, OSHA, AND PG&E WHERE APPLICABLE. NOTHING IN THESE PLANS AND SPECIFICATIONS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE ABOVE.
2. NO SPLICES SHALL BE PERMITTED BETWEEN JUNCTION BOXES, AND THOSE WITHIN BOXES SHALL BE WATER TIGHT.
3. JUNCTION BOXES MUST BE INSTALLED ADJACENT TO, BUT NOT MORE THAN FIVE FEET AWAY FROM EVERY ELECTROLIER.
4. JUNCTION BOXES SHALL BE #3 1/2 PULL BOX WITH MCCAIN VANDAL RESISTANT PULL BOX INSERT, OR APPROVED EQUIVALENT. COVERS SHALL BE INSCRIBED "STREET LIGHTING".
5. JUNCTION BOXES SHALL BE # 5 (OR EQUAL) FROM A PG&E SERVICE POINT.
6. JUNCTION BOXES SHALL NOT BE MORE THAN 250 FEET APART ON LONG RUNS. THIS SPACING FOLLOWS THE SPACING OF THE ELECTROLIER. SEE NOTE 3
7. MINIMUM CONDUIT SIZE TO BE 1 1/2" SCHEDULE 40 PVC. ALL CONDUIT ENDS TO BE DUCT SEALED.
8. MINIMUM RADIUS OF CONDUIT BENDS TO BE AS SHOWN ON SL-4.
9. CONDUCTORS TO BE UL LISTED 600V No. 8 AWG OR LARGER WITH 7 STRAND SOFT COPPER TYPE THW OR THWN WITH 3/64" INSULATION.
10. CONDUCTORS IN STREETLIGHT POLE AND ARM TO BE UL LISTED 600V No. 10 AWG THWN OR LARGER.
11. CIRCUITS WITH TWO (2) OR MORE ELECTROLIERS SHALL BE WIRED TO BALANCE THE LOAD.

	CITY OF SAN RAMON	DRAWN BY: ELR	STANDARD DETAIL	APPROVED BY: DATE: 11-19-12
		CHECKED BY: ENGINEERING		
	DETAIL SL-1	DATE: 10/11/12	STREET LIGHTING DESIGN PROCEDURES AND NOTES	SHT 1 of 1

POLES

LUMINAIRES

GALVANIZED STEEL POLES:

MOUNTING HEIGHT

SINGLE 6' ARM

DOUBLE 6' ARMS

30'

AMERON
PL-286-2

VALMONT
DS32-7.5A286-6S-GV

AMERON
PL-286D-2

VALMONT
DS32-7.5A286-6D-GV

UNION METAL
FB-11286-E6
(MOD. 2C)

UNION METAL
FB-11286-EE6
(MOD. 2C)

SINGLE 8' ARM

DOUBLE 8' ARMS

32' - 6"

AMERON
PL-318-2

VALMONT
DS32-8.0A310-8S-GV

AMERON
PL-318D-2

VALMONT
DS32-8.0A310-8D-GV

UNION METAL
FB-11310-E8
(MOD. 2C)

UNION METAL
FB-11310-EE8
(MOD. 2C)

SINGLE 12' ARM

DOUBLE 12' ARMS

33' - 9" +/-

AMERON
N3012

VALMONT
320845808T4

UNION METAL

AMERON
N3012D

VALMONT
320860108T4

UNION METAL

SINGLE 15' ARM

DOUBLE 15' ARMS

34' - 3" +/-

AMERON
N3015

VALMONT
320845808T4

UNION METAL

AMERON
N3015D

VALMONT
320860106T4

UNION METAL

LAMP SIZE

MANUFACTURER & PRODUCT

SERIES

CATALOG NUMBER

70 WATT

AMERICAN ELECTRIC LIGHTING
POWER-PAD ROADWAY CUTOFF

313

313-562E2-DJ
313-562E3-DJ

150 WATT

AMERICAN ELECTRIC LIGHTING
POWER PAD ROADWAY CUTOFF

313

313-56262-DJ
313-56263-DJ

200 WATT

AMERICAN ELECTRIC LIGHTING
POWER PAD ROADWAY CUTOFF

313

313-062J2-DJ

250 WATT

AMERICAN ELECTRIC LIGHTING
POWER PAD ROADWAY CUTOFF

313

313-06232-DJ

200 WATT

AMERICAN ELECTRIC LIGHTING
POWER PAD ROADWAY CUTOFF

325

325-062J2-DJ
325-062J3-DJ

250 WATT

AMERICAN ELECTRIC LIGHTING
POWER PAD ROADWAY CUTOFF

325

325-06232-DJ
325-06233-DJ

NOTES:

ALL NEW ROADWAY LIGHTING SHALL BE LED LIGHTING AND SHALL BE MANUFACTURED BY ONE THE FOLLOWING COMPANIES AND APPROVED BY THE CITY OF SAN RAMON:

1. BETA LED BY RUUD LIGHTING INC.
2. PHILIPS LUMEC
3. LEOTEK ELECTRONICS USA CORP.

NOTES:

- 1) TYPICAL FOR NEW INSTALLATION.
- 2) FOR REPLACEMENT INSTALLATION, REPLACE IN KIND.



CITY OF SAN RAMON

DETAIL SL-2

DRAWN BY: ELR

CHECKED BY: ENG'G., PS

DATE: 10/11/12

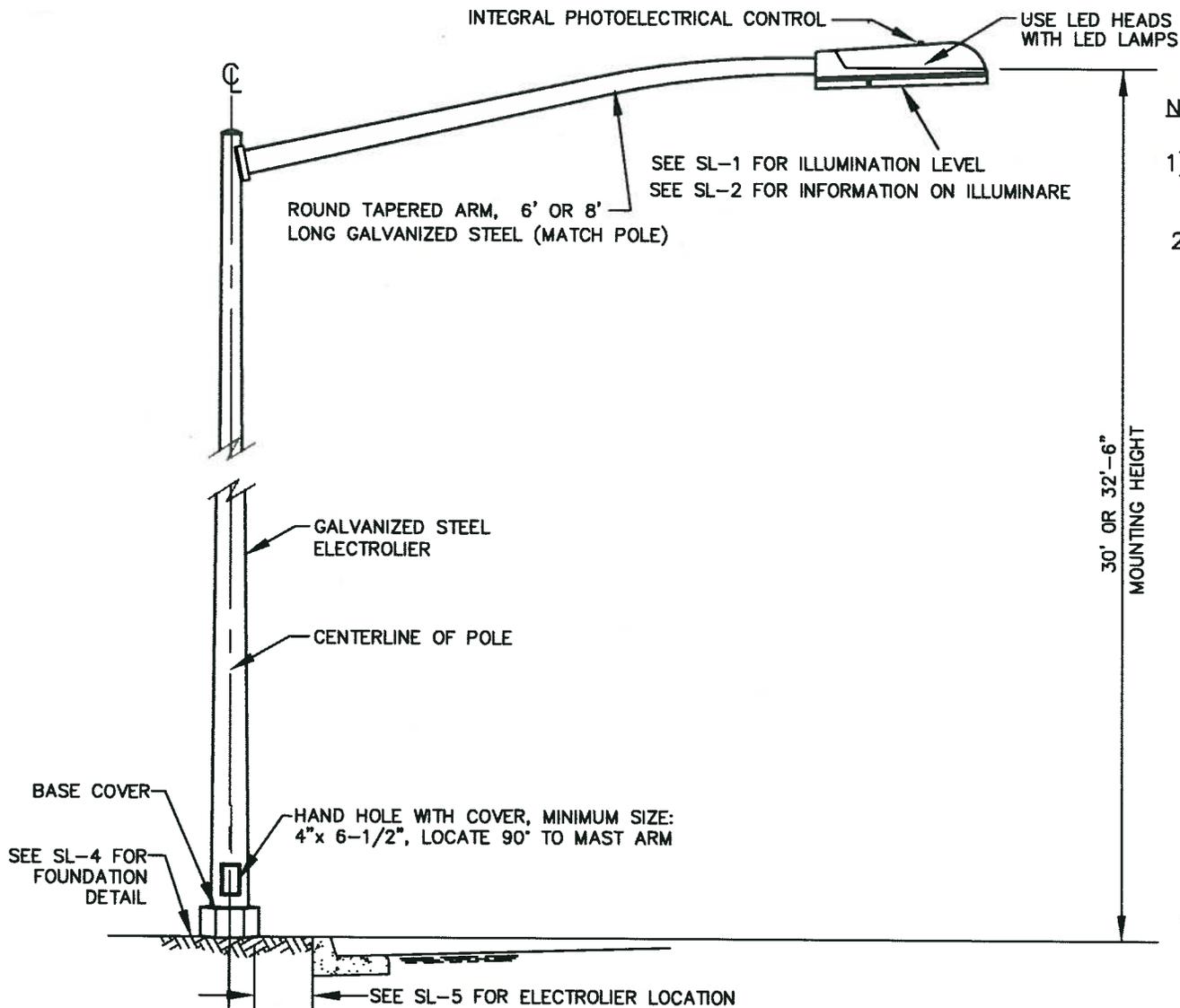
STANDARD DETAIL

POLE AND LUMINAIRE
SCHEDULE

APPROVED BY: DATE: 11-14-12

Brian R. Bannister
CITY ENGINEER

SHT 1 of 1

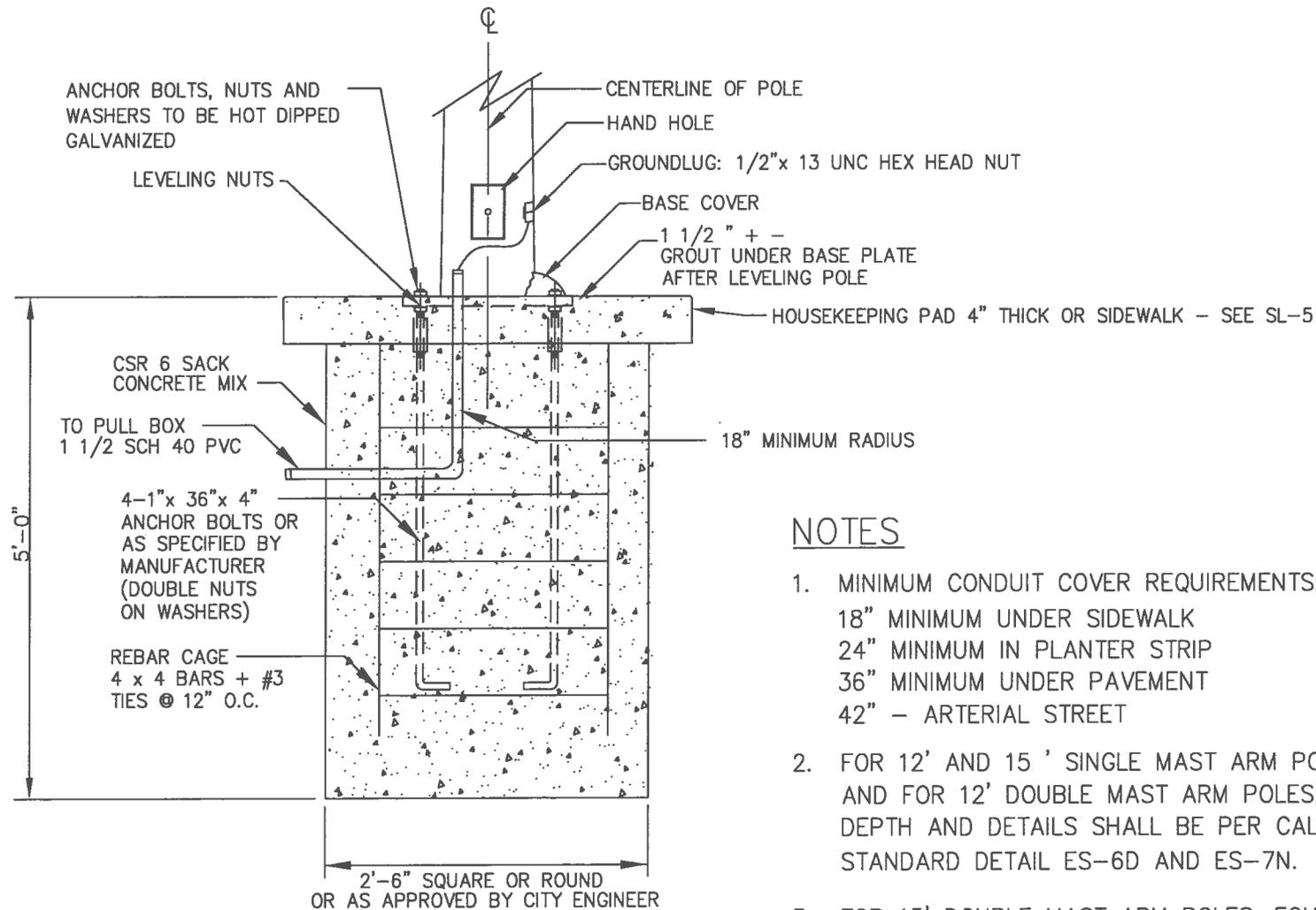


NOTES:

- 1) TYPICAL FOR NEW INSTALLATION.
- 2) FOR REPLACEMENT, INSTALLATION, REPLACE IN KIND.

NOT TO SCALE

	CITY OF SAN RAMON	DRAWN BY: ELR	STANDARD DETAIL	APPROVED BY: DATE: <i>6/1/11</i>
		CHECKED BY: ENGINEERING		ELECTROLIER
	DETAIL SL-3	DATE: 05/20/11		
				SHT 1 of 1



SECTION A-A
N.T.S.

NOTES

1. MINIMUM CONDUIT COVER REQUIREMENTS:
 18" MINIMUM UNDER SIDEWALK
 24" MINIMUM IN PLANTER STRIP
 36" MINIMUM UNDER PAVEMENT
 42" - ARTERIAL STREET
2. FOR 12' AND 15' SINGLE MAST ARM POLES, AND FOR 12' DOUBLE MAST ARM POLES, FOUNDATION DEPTH AND DETAILS SHALL BE PER CALTRANS STANDARD DETAIL ES-6D AND ES-7N.
3. FOR 15' DOUBLE MAST ARM POLES, FOUNDATION DEPTH AND DETAILS SHALL BE PER THE MANUFACTURERS SPECIFICATION OR PER THE CITY ENGINEER, OR PER CALTRANS.



CITY OF SAN RAMON

DETAIL SL-4

DRAWN BY: ELR

CHECKED BY: ENGINEERING

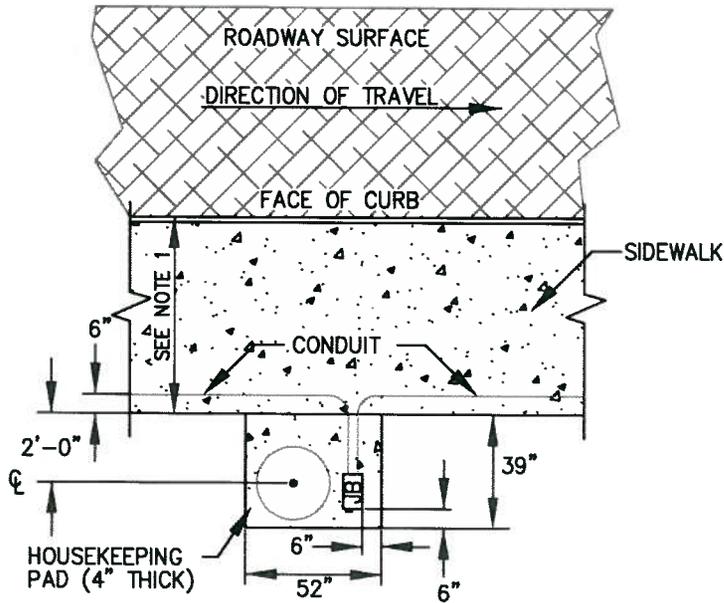
DATE: 12/17/15

STANDARD DETAIL

ELECTROLIER FOUNDATION

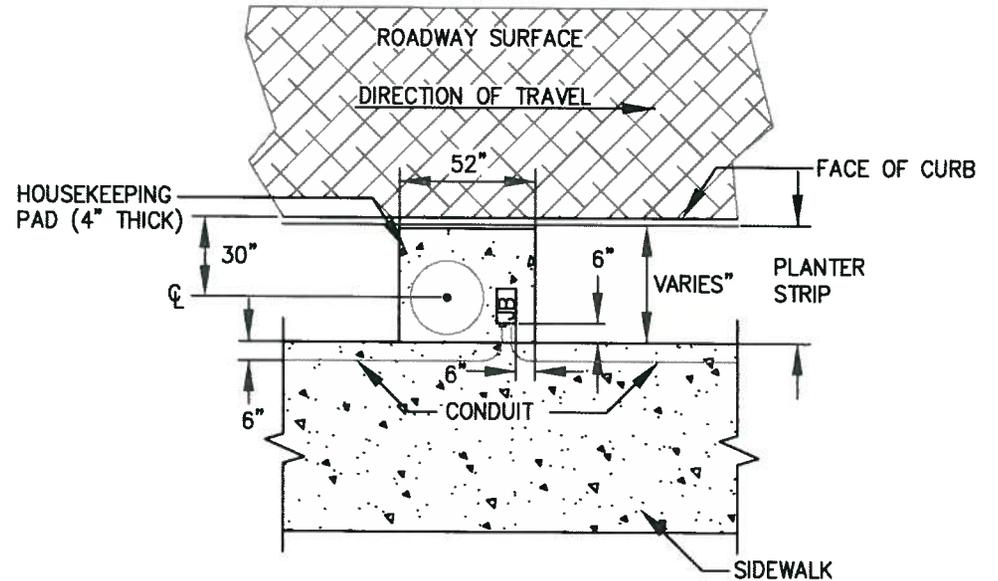
APPROVED BY: DATE: 1/26/16
Brian R. Boustien
 CITY ENGINEER

SHT 1 of 1



16" MIN. RADIUS BENDS FOR 1 1/2" CONDUIT
 18" MIN. RADIUS BENDS FOR 2" CONDUIT
 SET JUNCTION BOX PERPENDICULAR TO STREET
 POLE HAND HOLE TO FACE JUNCTION BOX

MONOLITHIC SIDEWALK



18" MIN. RADIUS BENDS IN CONDUIT
 SET JUNCTION BOX PERPENDICULAR TO STREET
 POLE HAND HOLE TO FACE JUNCTION BOX

PLANTER STRIP OR
 CURVILINEAR SIDEWALK

PLAN VIEW

N.T.S.

NOTES:

- FOR ELECTROLIERS IN SIDEWALKS, INSTALL CENTER LINE OF ELECTROLIER A MINIMUM OF 30" FROM FACE OF CURB AND PROVIDE MINIMUM OF FOUR FEET OF SIDEWALK CLEARANCE.
- HOUSEKEEPING PAD SHALL EXTEND 6" MINIMUM BEYOND STREET LIGHT FOUNDATION AND JUNCTION BOX.
- PAD OR SIDEWALK TO BE EXTENDED TO FILL ANY GAP LESS THAN 12".
- HOUSEKEEPING PAD TO BE SLOPED AT 2% TOWARDS STREET AND ELEVATION SHALL CONFORM TO ADJOINING CONCRETE.
- IN MEDIAN ISLANDS, CENTERLINE OF ELECTROLIER TO BE ON CENTERLINE OF MEDIAN.



CITY OF SAN RAMON

DETAIL SL-5

DRAWN BY: ELR

CHECKED BY: ENG'G., PUBL.SV.

DATE: 05/20/11

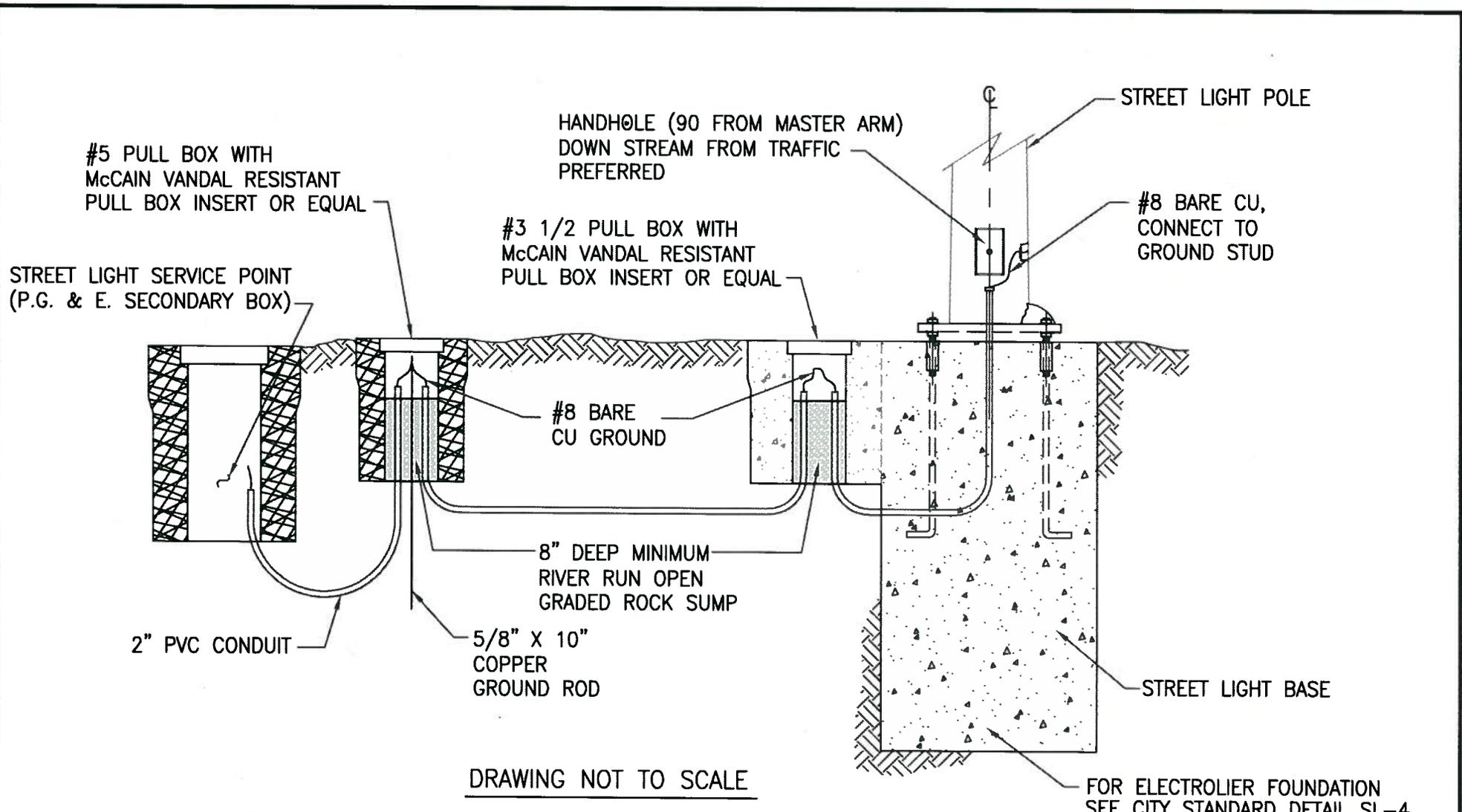
STANDARD DETAIL

ELECTROLIER
 LOCATION

APPROVED BY: DATE: 6/1/11

Brian K. Bernstein
 CITY ENGINEER

SHT 1 of 1



DRAWING NOT TO SCALE

FOR ELECTROLIER FOUNDATION
SEE CITY STANDARD DETAIL SL-4

NOTES:

1. FUSE BOX TO BE LOCATED IN THE HANDHOLE OF STREET LIGHT.
2. SEE COVERAGE NOTES ON DETAIL SL-4.



CITY OF SAN RAMON

DETAIL SL-6

DRAWN BY: ELR
CHECKED BY: ENG'G., PUBL. SV.
DATE: 05/20/11

STANDARD DETAIL

ELECTROLIER
GROUNDING DETAIL

APPROVED BY: DATE: 6/1/11
Primo V. Bantuan
CITY ENGINEER
SHT 1 of 1