

STREET LIGHTING PLANS FOR



PROJECT TITLE

PROJECT SUBTITLE

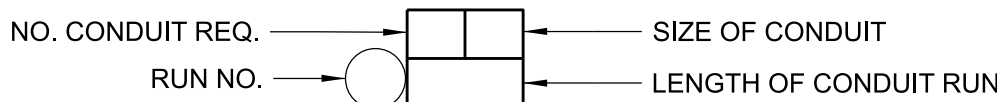
GENERAL NOTES FOR LS-2 AND LS-3 STREET LIGHTING PLANS

- THIS STREET LIGHTING PLAN EXPIRES TWO YEARS AFTER THE LATEST DATE OF APPROVAL.
- THE LOCATION OF A STREETLIGHT MAY NOT BE ADJUSTED IN THE FIELD. ANY DEVIATION MUST HAVE THE APPROVAL OF THE LOS ANGELES COUNTY PUBLIC WORKS, STREET LIGHTING SECTION. IF SUCH APPROVAL IS NOT OBTAINED, THE STREETLIGHTS PROPOSED BY THIS PLAN WILL NOT BE ACCEPTED BY COUNTY LIGHTING MAINTENANCE DISTRICT.
- REVISED STREET LIGHTING PLANS SHALL BE SUBMITTED FOR ANY CHANGES IN THE MAP, SUCH AS STREET ALIGNMENT, LOT OR PARCEL SIZES, BOUNDARIES, ETC.
- THE STREETLIGHT POLE SHALL BE CONCRETE AMERON TYPE 1-C1 SERIES OCTAGONAL POLE, COLOR MIX 01 WITH ANTI-GRAFFITI COATING OR AGENCY APPROVED EQUAL. FOR DETAILS, SEE ATTACHMENT I, EXHIBIT L-1.
- CONCRETE POLES SHALL BE ANCHORED BY 1" X 36" X 4" STEEL ANCHORED BOLTS, BASE PLATE, AND FOUNDATION CAP. FOR DETAILS, SEE ATTACHMENT I, EXHIBIT L-1.
- LUMINAIRE SHALL BE LIGHT-EMITTING DIODE (LED).
- LUMINAIRE SHALL BE PROVIDED WITH ANSI C136.41 RECEPTACLE WITH SEVEN CONTACTS, THREE TWIST LOCK CONTACTS, A SHORTING CAP, AND A 0-10V DIMMABLE DRIVER.
- ALL STREETLIGHT WIRING SHALL BE UNDERGROUND.
- ON STREETS WHERE THE SIDEWALK AND CURB ARE GREATER THAN SIX AND ONE HALF (6 ½) FEET IN WIDTH, THE MAST ARMS AND BRACKETS SHALL BE PERPENDICULAR TO THE CURB FACE. THE STREETLIGHT ELECTROLIERS SHALL BE PLACED TWENTY-FOUR (24) INCHES FROM THE CURB FACE TO THE CENTER OF THE POLE. USE A FOUR (4) FOOT LONG MAST ARM FOR 45-WATT LED STREETLIGHT AND SIX (6) FOOT LONG MAST ARM FOR ALL OTHER WATTAGE, UNLESS OTHERWISE SPECIFIED.
- ON STREETS WHERE THE SIDEWALK AND CURB ARE LESS THAN OR EQUAL TO SIX AND ONE HALF (6 ½) FEET IN WIDTH, THE STREETLIGHT ELECTROLIERS AND PULL BOXES SHALL BE PLACED OUTSIDE OF THE SIDEWALK AREA UNLESS OTHERWISE SPECIFIED. USE AN EIGHT (8) FOOT LONG MAST ARM FOR ALL WATTAGE, UNLESS OTHERWISE SPECIFIED.
- EXISTING STREET LIGHTING SYSTEMS SHALL REMAIN IN OPERATION DURING ANY MODIFICATION. ANY PROPOSED TEMPORARY STREET LIGHTING SYSTEM MUST BE APPROVED BY THE LOS ANGELES COUNTY PUBLIC WORKS.
- FOR STREETLIGHT RELOCATION, ALL SIGNS ON THE EXISTING STREETLIGHT POLES SHALL BE RELOCATED TO THE NEW STREETLIGHT POLES. ALL SIGN RELOCATION SHALL BE COORDINATED WITH THE INSPECTOR.
- FIVE (5) FOOT CLEARANCE TO BE MAINTAINED FROM FIRE HYDRANT.
- FOUR (4) FOOT CLEARANCE TO BE MAINTAINED FROM TOP OF SLOPE AT COMMERCIAL DRIVEWAY, AND TWO (2) FOOT CLEARANCE FROM RESIDENTIAL DRIVEWAY AND CURB RAMPS.
- ALL WORK SHALL BE IN ACCORDANCE TO THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, UNLESS OTHERWISE NOTED ON THE PLAN.
- ALL WORK IN THE PUBLIC RIGHT-OF-WAY SHALL BE PER THE LOS ANGELES COUNTY PUBLIC WORKS' STANDARDS, CODES, AND PERMIT REQUIREMENTS, AND TO THE SATISFACTION OF PUBLIC WORKS.
- PULL BOXES SHALL BE PLACED ADJACENT TO THE PROPOSED STREETLIGHTS WITH MINIMUM FIVE (5) FEET CLEARANCE FROM THE SIDE OF THE FOUNDATION FOR EACH STREETLIGHT STANDARD TO FACILITATE MAINTENANCE OF THE INDIVIDUAL STREETLIGHT.
- PULL BOXES LOCATED ADJACENT TO DRIVEWAYS AND ALLEYS SHALL BE INSTALLED AT A MINIMUM DISTANCE OF FIVE (5) FEET FROM THE TOP OF THE DRIVEWAY "X" OR FIVE (5) FEET FROM THE TRAVEL WAY OF THE ALLEY. PULL BOXES SHALL NOT BE INSTALLED IN ANY PART OF A DRIVEWAY, CURB RAMP AREA OR OTHER TRAVELLED WAY.
- PULL BOXES SHALL BE TYPE 2 WITH POLYMER CONCRETE COVER INSCRIBED "STREET LIGHTING HIGH VOLTAGE". PULL BOXES, COVERS, AND EXTENSION SHALL BE POLYMER CONCRETE MATERIAL, CONCRETE GRAY, SHALL BE ARMORCAST OR AGENCY APPROVED EQUAL.
- STREETLIGHTS SHALL BE ERECTED SO THAT THE BASE DOOR (HANDHOLD COVER) IS FACING THE DIRECTION OF TRAVEL.
- LS-3 STREETLIGHT FOUNDATION SHALL BE IN ACCORDANCE WITH DETAIL STANDARD AS SHOWN ON THE PLAN. FOR DETAILS, SEE ATTACHMENT I, EXHIBIT L-3.
- FOUNDATION CAPS SHALL BE THE SAME COLOR, FINISH, AND MATERIAL AS THE ADJACENT SIDEWALK, AND BE A MINIMUM OF FOUR (4) INCHES THICK. THE FOUR (4) INCHES THICK PCC CAP SHALL BE CONSTRUCTED TO THE BACK OF THE ROADWAY CURB.
- PROPOSED LS-3 STREETLIGHT FOUNDATIONS, PEDESTALS, PULL BOXES AND OTHER ASSOCIATED LS-3 STREETLIGHT SYSTEM APPURTENANCES SHALL BE INSTALLED WITHIN THE PUBLIC RIGHT-OF-WAY.
- CONTRACTOR SHALL LOCATE AND PROTECT SUBSTRUCTURE(S) AND SHALL PROVIDE A MINIMUM TWELVE (12) INCH HORIZONTAL CLEARANCE BETWEEN FOUNDATION AND SUBSTRUCTURES. IN THE EVENT THAT A TWELVE (12) INCH CLEARANCE CANNOT BE ACHIEVED, THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR RELOCATION OF SUBSTRUCTURES AT NO COST TO LOS ANGELES COUNTY PUBLIC WORKS.
- STREETLIGHTS SHALL BE CONSTRUCTED PER THE LOS ANGELES COUNTY PUBLIC WORKS APPROVED PLAN. STREETLIGHTS NOT CONSTRUCTED ACCORDING TO THE APPROVED PLAN SHALL BE REMOVED AND RELOCATED AT NO COST TO LOS ANGELES COUNTY PUBLIC WORKS.
- THE DEVELOPER AND/OR APPLICANT SHALL COORDINATE WITH SCE FOR THE LOCATION OF THE SERVICE PEDESTAL PRIOR TO THE APPROVAL THE STREET LIGHTING PLAN. VOLTAGES FOR OVERHEAD LINES IN THE VICINITY OF THE STREETLIGHTS MUST BE SHOWN ON PLANS.
- SAFETY CLEARANCE SHALL BE OBTAINED FROM THE AFFECTED UTILITY COMPANY BEFORE DOING ANY WORK IN CLOSE PROXIMITY TO ANY OVERHEAD ELECTRIC LINE. ALL STREETLIGHTS MUST MAINTAIN A 13' MINIMUM CLEARANCE IN ALL DIRECTIONS FROM ANY OVERHEAD HIGH-VOLTAGE (600 VOLTS - 50,000 VOLTS) ELECTRIC POWER LINES. MINIMUM CLEARANCE FROM ANY OVERHEAD ELECTRIC POWER LINES ABOVE 50,000 VOLTS SHALL BE SPECIFIED ON THE PLAN.
- IN THE EVENT OF OVERHEAD LINE CONFLICT WITH STREETLIGHTS, THE CONTRACTOR SHALL MAKE NECESSARY ARRANGEMENTS WITH SCE TO RAISE THEIR OVERHEAD FACILITIES IN ORDER TO PROVIDE FOR THE REQUIRED CLEARANCES WITH EXISTING AND/OR PROPOSED STREETLIGHTS AT NO COST TO LOS ANGELES COUNTY PUBLIC WORKS.
- CONTRACTOR SHALL REPAIR AT THEIR COST: THE DAMAGE CAUSED TO ANY EXISTING UNDERGROUND UTILITY DURING THE CONSTRUCTION OF STREETLIGHTS.
- ALL CONDUITS FROM PULL BOX TO STREETLIGHT SHALL BE ONE AND A HALF (1 1/2) INCHES UL APPROVED PVC SCHEDULE 80, UNLESS OTHERWISE SPECIFIED.
- ALL CONDUITS FROM PULL BOX TO PULL BOX SHALL BE THREE (3) INCHES UL APPROVED PVC SCHEDULE 80, UNLESS OTHERWISE SPECIFIED.
- ALL CONDUITS FROM SERVICE PEDESTAL TO PULL BOX SHALL BE THREE (3) INCHES UL APPROVED PVC SCHEDULE 80, UNLESS OTHERWISE SPECIFIED.
- ALL CONDUITS SHALL BE LAID TO A DEPTH OF NOT LESS THAN THIRTY (30) INCHES BELOW THE GUTTER FLOW LINE, UNLESS OTHERWISE SPECIFIED. FOR DETAILS, SEE ATTACHMENT I, EXHIBIT L-4.
- ALL SPLICES IN PULL BOXES SHALL BE WATERTIGHT, TAPED (VINYL OVER RUBBER) AND SCOTCHKOTED.
- IT WILL BE THE RESPONSIBILITY OF THE DEVELOPER AND/OR APPLICANT TO FURNISH AND CONSTRUCT ALL THE STREETLIGHTS IMPROVEMENTS INCLUDING INSTALLATION OF UNDERGROUND CONDUIT SYSTEM, PULL BOXES, PULL ROPES, STUB-OUTS, CONDUCTORS, FOUNDATIONS, POLES, MAST ARMS, SERVICE PEDESTALS AND CABINETS, STREETLIGHTS, AND ALL OTHER NECESSARY APPURTENANCES IN ACCORDANCE TO LOS ANGELES COUNTY PUBLIC WORKS STANDARDS.
- SCE OR ITS CONTRACTOR WILL INSTALL NEW TRANSFORMER, RISER, AT THE SCE SERVICE POINT, AND PROVIDE SERVICE CONNECTION. ALL COSTS TO BE PAID BY THE DEVELOPER AND/OR APPLICANT.
- ALL CONDUIT WORK BETWEEN SCE SERVICE POINT AND THE PROPOSED SERVICE PEDESTAL SHALL CONFORM TO SCE STANDARDS, PUBLISHED IN SCE'S UNDERGROUND STRUCTURES STANDARDS MANUAL (UGS), AVAILABLE AT WWW.SCE.COM AND THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, SECTION 86, UNLESS OTHERWISE NOTED ON THE PLANS.
- SERVICE PEDESTAL SHALL BE INSTALLED WITH CABINET ACCESS DOOR FACING THE DIRECTION OF TRAVEL.
- ALL STREETLIGHTS SHOWN ON THIS PLAN SHALL BE ENERGIZED PRIOR TO ACCEPTANCE OF THE LIGHTING SYSTEM TO A COUNTY LIGHTING MAINTENANCE DISTRICT. THE DEVELOPER AND/OR APPLICANT SHALL ENSURE THAT ALL REQUIRED ELECTRICAL INSPECTIONS ARE COORDINATED WITH SCE AND THE LOS ANGELES COUNTY PUBLIC WORKS' INSPECTOR PRIOR TO COVERING OR ENERGIZING THE LIGHTING SYSTEM.
- ALL STREETLIGHT IMPROVEMENTS SHALL BE COMPLETED IN ACCORDANCE TO LOS ANGELES COUNTY PUBLIC WORKS APPROVED STREET LIGHTING PLANS PRIOR TO THE ACCEPTANCE OF THE STREET LIGHTING SYSTEM TO COUNTY LIGHTING MAINTENANCE DISTRICT.
- PRIOR TO ACCEPTANCE OF THE WORK, THE DEVELOPER AND/OR APPLICANT SHALL SUBMIT ONE COMPLETE SET OF "AS BUILT" PLANS AND ANY PERTINENT DATA AS REQUIRED BY THE ENGINEER SHOWING IN DETAIL ALL CONSTRUCTION CHANGES.
- THE OPERATION AND MAINTENANCE OF THE STREETLIGHTS ON PRIVATE AND FUTURE ROADWAYS SHALL BE THE RESPONSIBILITY OF THE HOMEOWNER ASSOCIATION/DEVELOPER.
- ALL COST FOR FURNISHING AND INSTALLING ELECTRICAL WORK SHOWN ON THE ELECTRICAL PLAN FOR WHICH NO SEPARATE ITEMS ARE INCLUDED IN THE BID SHALL BE INCLUDED IN THE LUMP SUM PRICE IN THE BID FOR "ELECTRICAL WORK".
- ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE (NEC), LOCAL MUNICIPAL CODE AND STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
- ALL ELECTRICAL EQUIPMENT SHALL BE LISTED BY UL OR A COUNTY APPROVED THIRD PARTY TESTING FACILITY.
- ALL EQUIPMENT AND RACEWAYS SPECIFIED AS NEW SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
- DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF THE EQUIPMENT AND WORK INCLUDED. THE INTENTION OF THE DRAWINGS IS TO INDICATE SIZE, CAPACITY, APPROXIMATE LOCATION AND GENERAL RELATIONSHIP BUT NOT THE EXACT DETAIL OR PHYSICAL PLACEMENT.
- ALL DISTANCES SHALL BE FIELD-VERIFIED BY CONTRACTOR.
- GENERAL NOTES PERTAIN TO ELECTRICAL WORK DEPICTED ON THIS PLAN ONLY. REFER TO TRAFFIC SIGNAL PLAN FOR OTHER REQUIRED WORK.
- DESIGNER TO PROVIDE A SERVICE AGREEMENT LETTER FROM SCE INDICATING THE AVAILABLE FAULT CURRENT AT ALL SERVICE LOCATIONS. THE LETTER MUST BEAR THE PLANNER'S SIGNATURE.
- CONTRACTOR SHALL CALL DIG ALERT TO VERIFY THE LOCATION OF EXISTING UTILITIES IN THE PROJECT AREA PRIOR TO CONDUCTING ANY EXCAVATION.
- ALL CONDUCTORS FROM PULLBOX TO STREETLIGHT SHALL BE #10 GAUGE WIRE, UNLESS OTHERWISE SPECIFIED.
- TWO (2) FOOT CLEARANCE FROM TOP OF CURB RAMPS.
- A MINIMUM OF TWENTY (20) FOOT CLEARANCE FROM CENTER OF TREE OR A MINIMUM OF FIVE (5) FOOT CLEARANCE FROM THE ULTIMATE TREE CANOPY.
- ALL EXISTING AND PLANNED TREES TO BE SHOWN ON STREET LIGHTING PLAN.
- ALL STREETLIGHTS SHALL HAVE A DECAL INDICATING THE LAMP WATTAGE ON THE LUMINAIRE DOORS.
- CONDUCTORS FOR EACH STREETLIGHT SHALL BE PROTECTED BY IN-LINE FUSES INSTALLED IN THE POLE BASE OR THE ADJACENT PULL BOX.

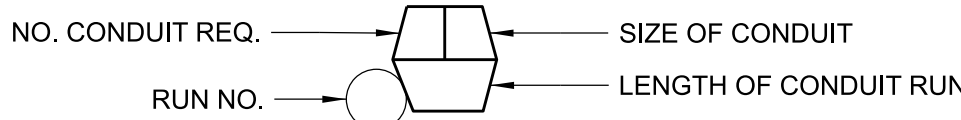
LEGEND

- 1-  PROPOSED LED EQUIVALENT FOR (100 WATT) HPSV STREETLIGHTS ON CONCRETE POLES (2700K)
-  EXISTING STREETLIGHT, TYPE OF POLE, SIZE OF LAMP AND POLE NUMBER AS INDICATED

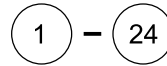
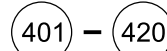
MAIN LINE CONDUIT



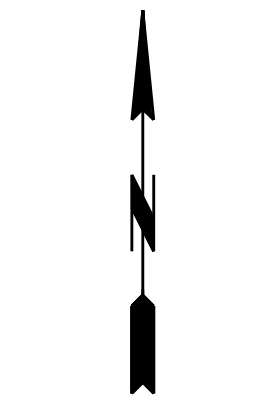
STREETLIGHT CONDUIT



RUN NUMBER CALL-OUTS AS FOLLOWS:

-  MAINLINE CONDUIT
-  STREETLIGHT CONDUIT

ILLUMINATION DESIGN GUIDELINES FOR LS-1 STREETLIGHTS



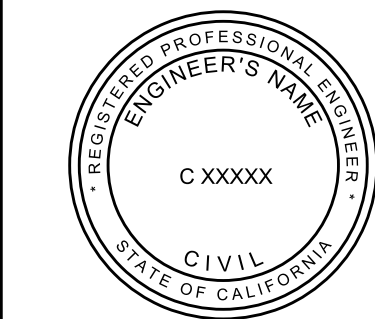
SCALE: X"=XX'

VICINITY MAP

NO.	REVISIONS	REVISED BY	APPROVED BY	DATE

LOS ANGELES COUNTY PUBLIC WORKS
APPROVAL FOR INSTALLATION
BY _____ STREET LIGHTING SECTION _____ DATE _____

COMPANY NAME
& ADDRESS



PROJECT ENGINEER _____ DATE _____

LOS ANGELES COUNTY PUBLIC WORKS

STREET LIGHTING PLAN
PROJECT TITLE

PROJECT DESCRIPTION / LOCATION

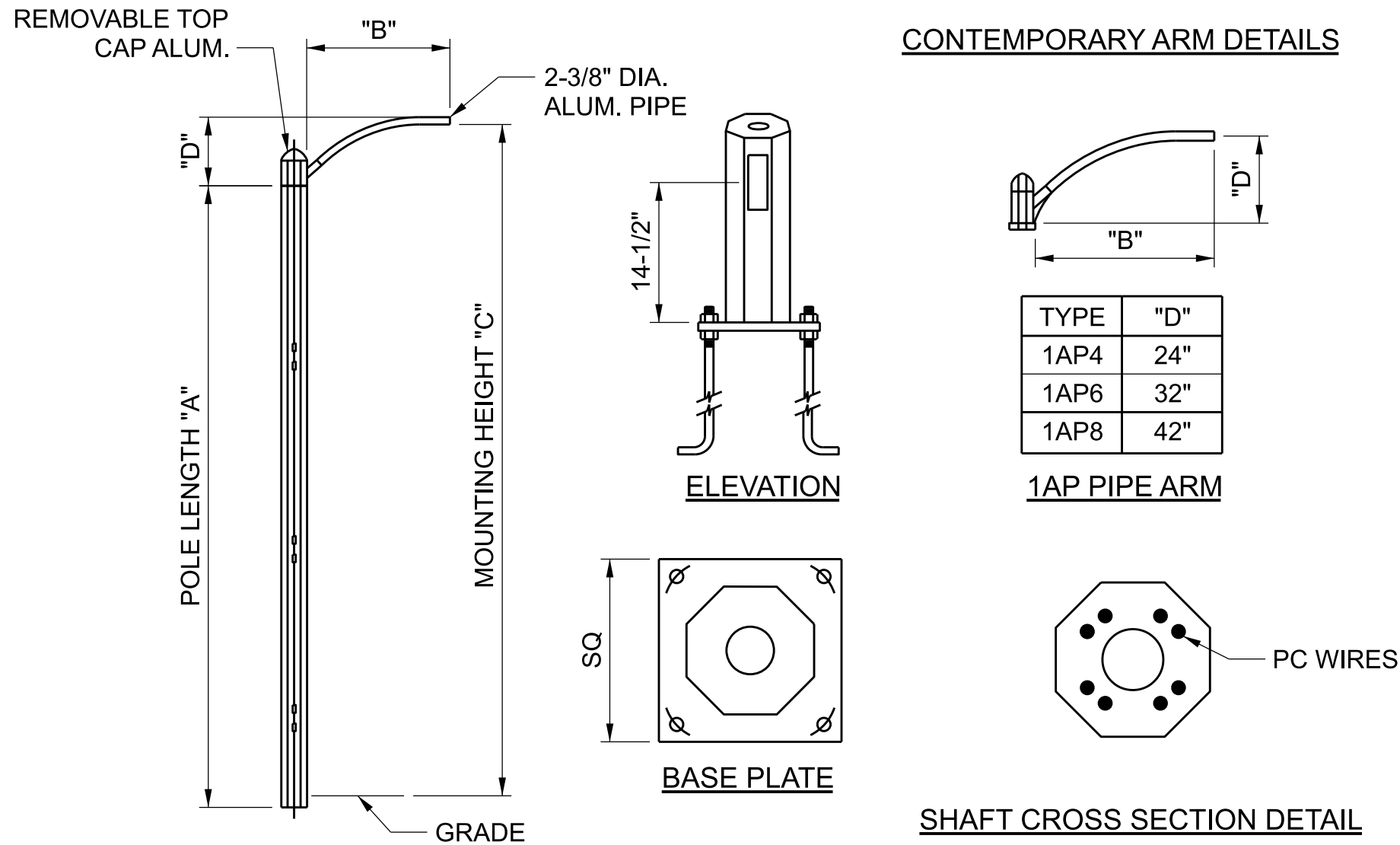
COUNTY OWNED AND MAINTAINED STREETLIGHTS

L XXX-XXXX EIMP XXXXXXXXXXXX LS2 / LS3 CLMD 1687 SHEET # OF #

LS2-LS3-SLC-DT - 06/2023

ATTACHMENT I

EXHIBIT L-1
AMERON TYPE 1-C1 STREETLIGHT POLE AND MAST ARM



AMERON CATALOG NUMBER	POLE HEIGHT "A"	"C" (PER ARM LENGTH)			BASE PLATE (SQ)
		4'-0" (1.22m)	6'-0" (1.83m)	8'-0" (2.44m)	
1C1-23	23' - 3"	25' - 0"	25' - 8"	26' - 6"	12"
1C1-28	28' - 3"	30' - 0"	30' - 8"	31' - 6"	12"

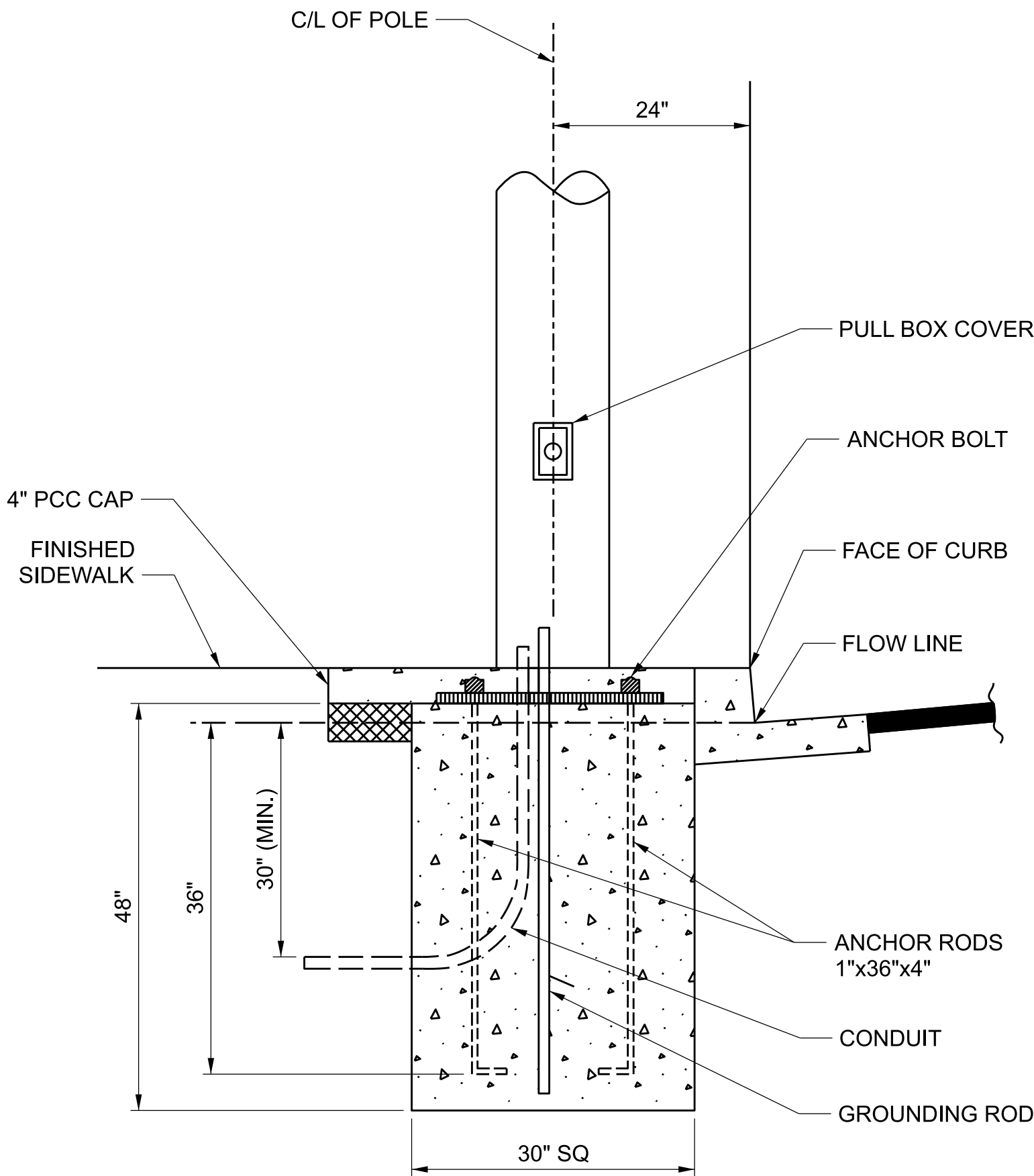
AMERON CATALOG NUMBER	ANCHOR BOLT	BOLT CIRCLE	ULTIMATE G.L. MOMENT (Ft. LBS.)	WEIGHT (LBS.)
1C1-23	1" x 36" x 4"	12 - 1/2"	22,000	940
1C1-28	1" x 36" x 4"	12 - 1/2"	27,400	1,240

NOTES:

CONCRETE TO BE 6,000 PSI COMPRESSION MINIMUM IN 28 DAYS.
MANUFACTURED TO ASTM C 1089-88.
BASEPLATE ASTM A-36 FULLY PRESTRESSED WITH (8) 5/15" DIA.
(8) A-416 WIRES.
DIMS IN BRACKETS ARE MILLIMETERS UNLESS NOTED OTHERWISE.

ATTACHMENT I

EXHIBIT L-3
LS-2 AND LS-3 STREETLIGHT FOUNDATIONS

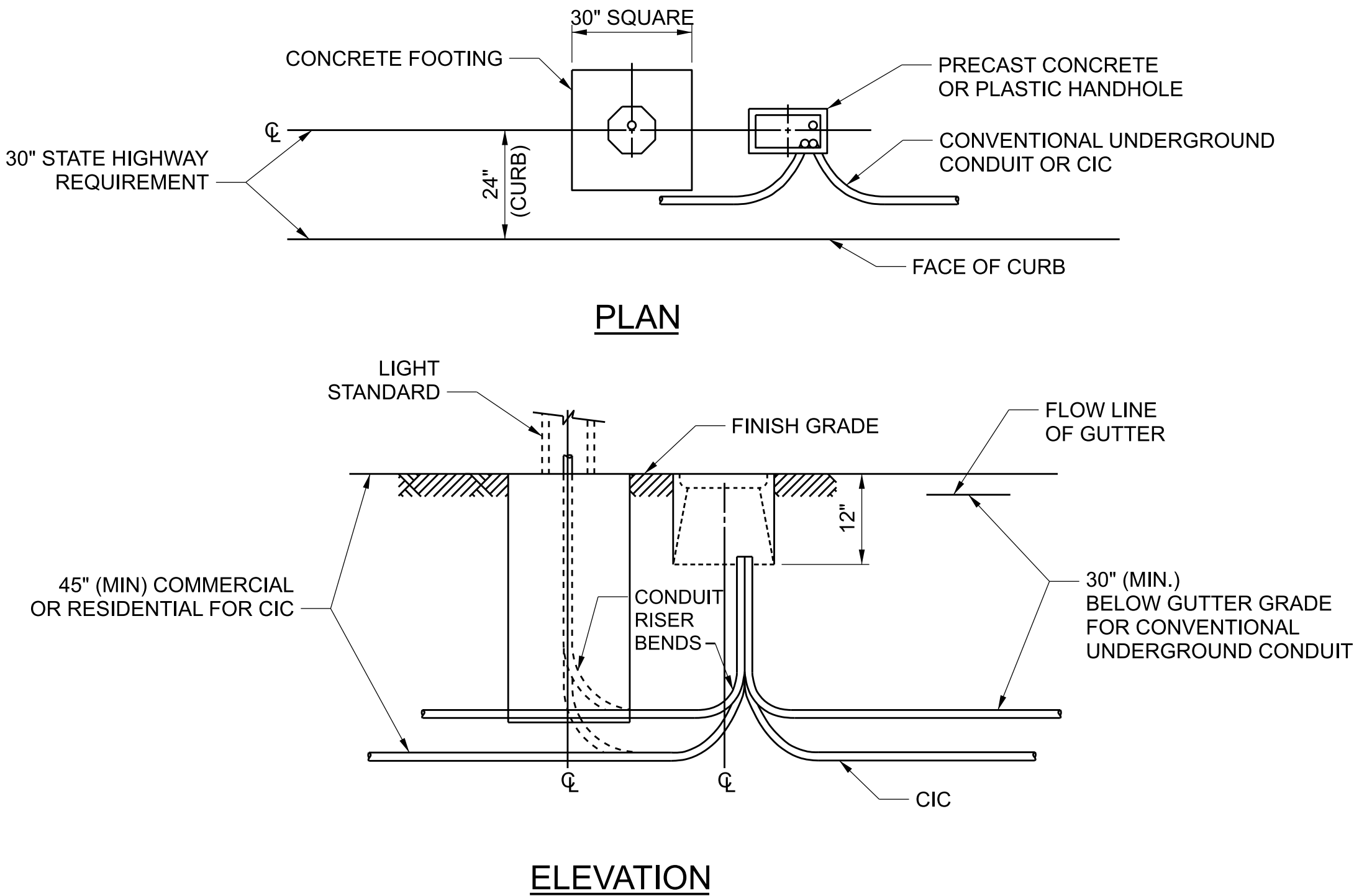


NOTE:

CONSTRUCTION SHALL CONFORM TO THESE REQUIREMENTS UNLESS OTHERWISE DIRECTED BY THE COUNTY ENGINEER. FOUNDATION BOLTS SHALL NOT BE CUT OFF FOR ANY REASON. EXTENSION COUPLERS SHALL NOT BE PERMITTED. ANCHOR BOLT DIMENSIONS PER MANUFACTURERS SPECIFICATION.

ATTACHMENT I

EXHIBIT L-4
TYPICAL CONDUIT AND RISER BEND INSTALLATION FOR PULL BOX THROUGH SERVICE TO STREETLIGHT STANDARDS



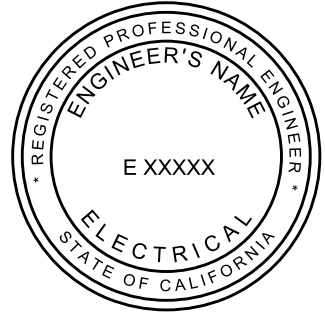
LOS ANGELES COUNTY PUBLIC WORKS

APPROVAL FOR INSTALLATION

BY _____ STREET LIGHTING SECTION _____ DATE _____

NO.	REVISIONS	REVISED BY	APPROVED BY	DATE

COMPANY NAME
& ADDRESS



PROJECT ENGINEER _____ DATE _____

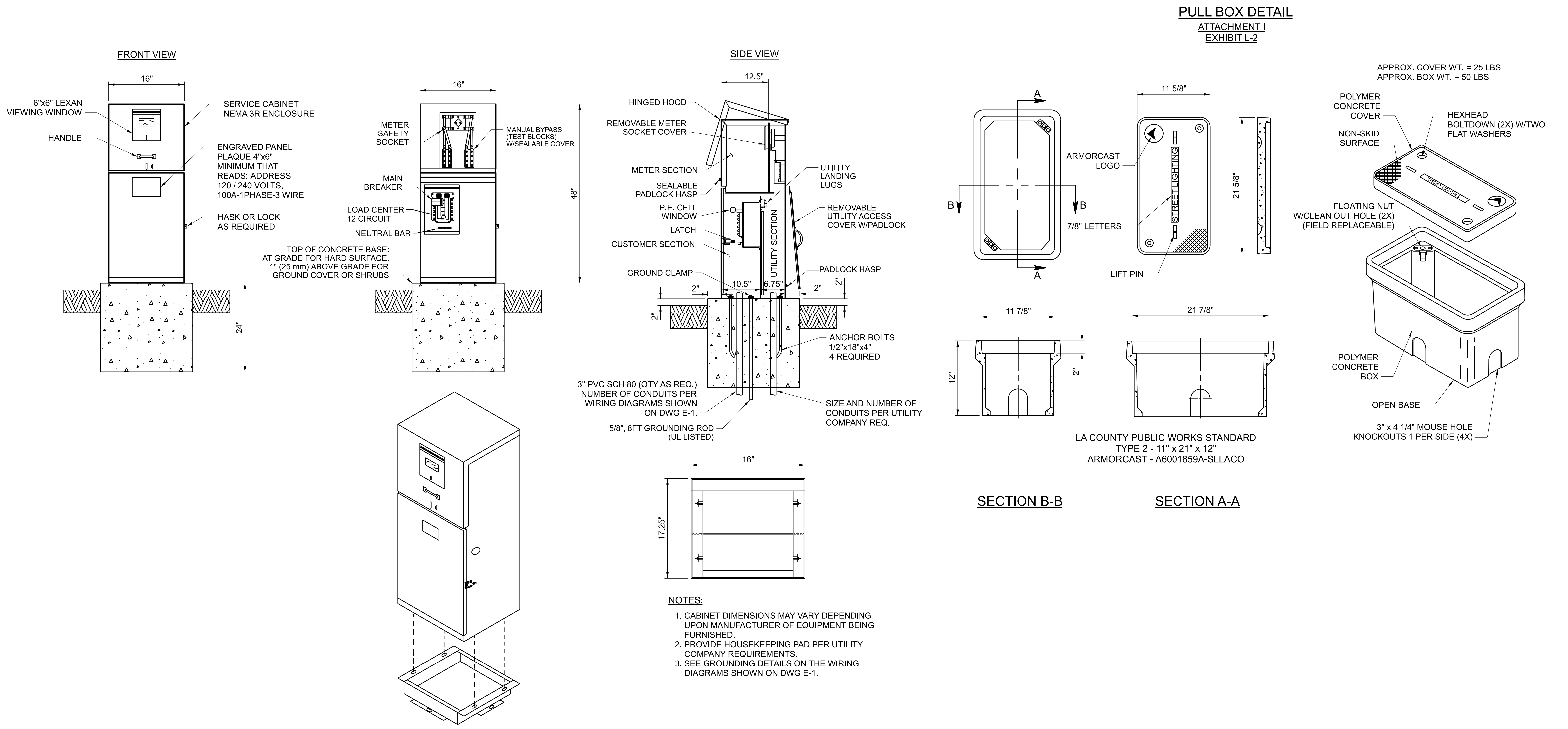
LOS ANGELES COUNTY PUBLIC WORKS

STREET LIGHTING PLAN
PROJECT TITLE

PROJECT DESCRIPTION / LOCATION

COUNTY OWNED AND MAINTAINED STREETLIGHTS

L XXX-XXXX EIMP XXXXXXXXXXXX LS2 / LS3 CLMD 1687 SHEET # OF #



- NOTES:**
- 1. CABINET DIMENSIONS MAY VARY DEPENDING UPON MANUFACTURER OF EQUIPMENT BEING FURNISHED.
 - 2. PROVIDE HOUSEKEEPING PAD PER UTILITY COMPANY REQUIREMENTS.
 - 3. SEE GROUNDING DETAILS ON THE WIRING DIAGRAMS SHOWN ON DWG E-1.

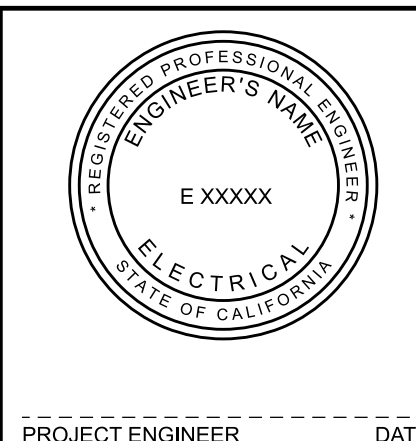
LOS ANGELES COUNTY PUBLIC WORKS

APPROVAL FOR INSTALLATION

BY _____ STREET LIGHTING SECTION _____ DATE _____

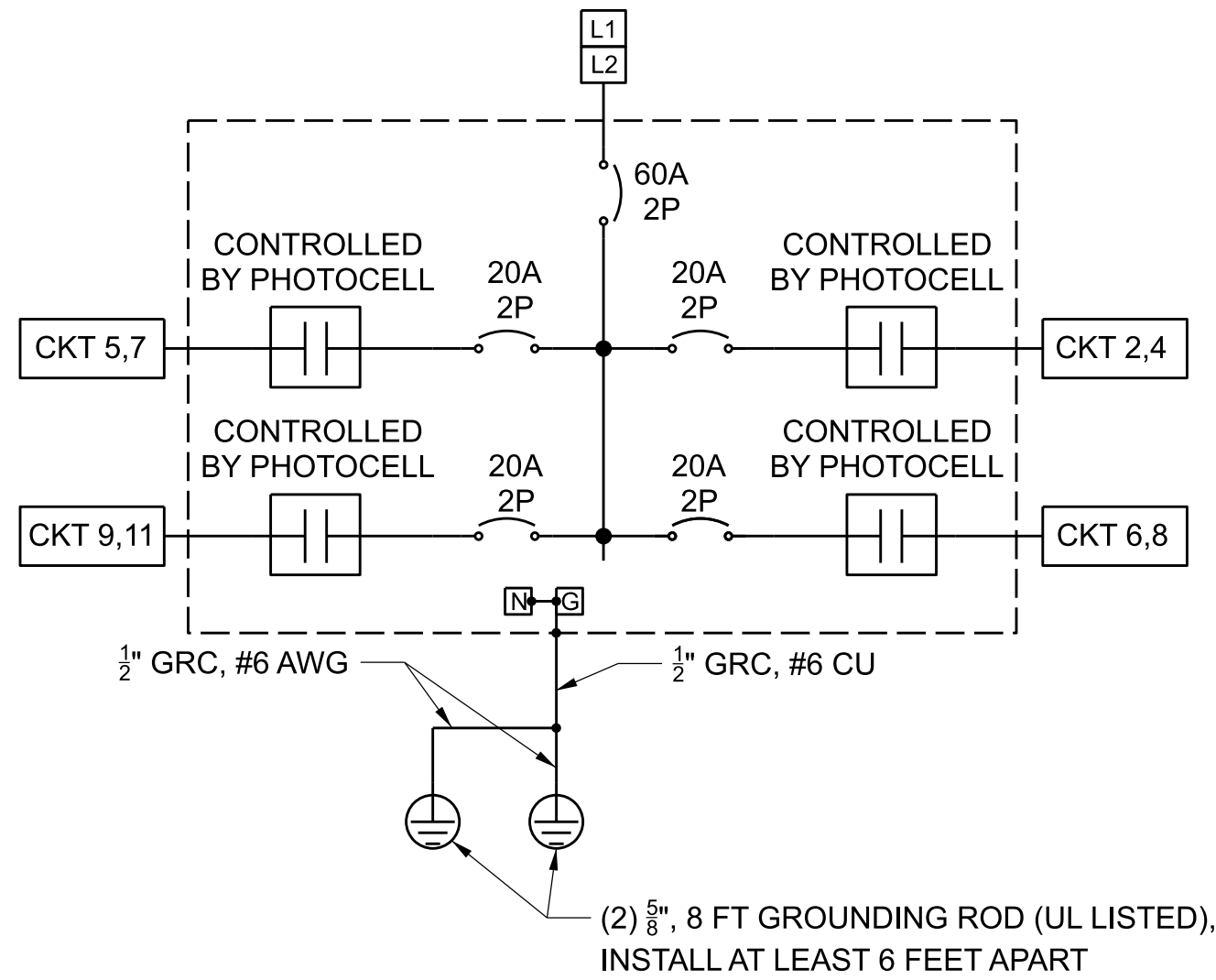
NO.	REVISIONS	REVISED BY	APPROVED BY	DATE

COMPANY NAME
& ADDRESS

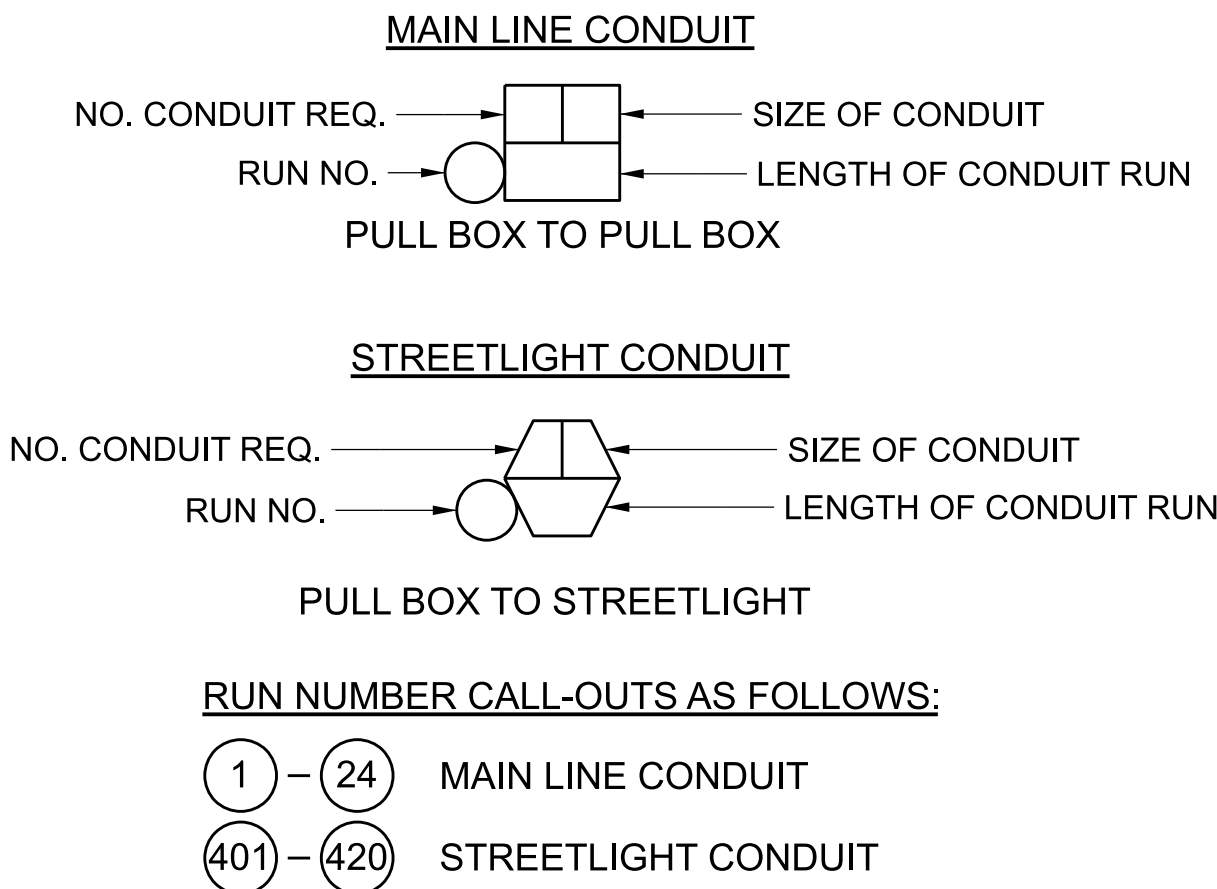


LOS ANGELES COUNTY PUBLIC WORKS				
STREET LIGHTING PLAN PROJECT TITLE				
PROJECT DESCRIPTION / LOCATION				
COUNTY OWNED AND MAINTAINED STREETLIGHTS				
PROJECT ENGINEER	DATE	L XXX-XXXX	EIMP XXXXXXXXXXXX	LS2 / LS3 CLMD 1687 SHEET # OF #

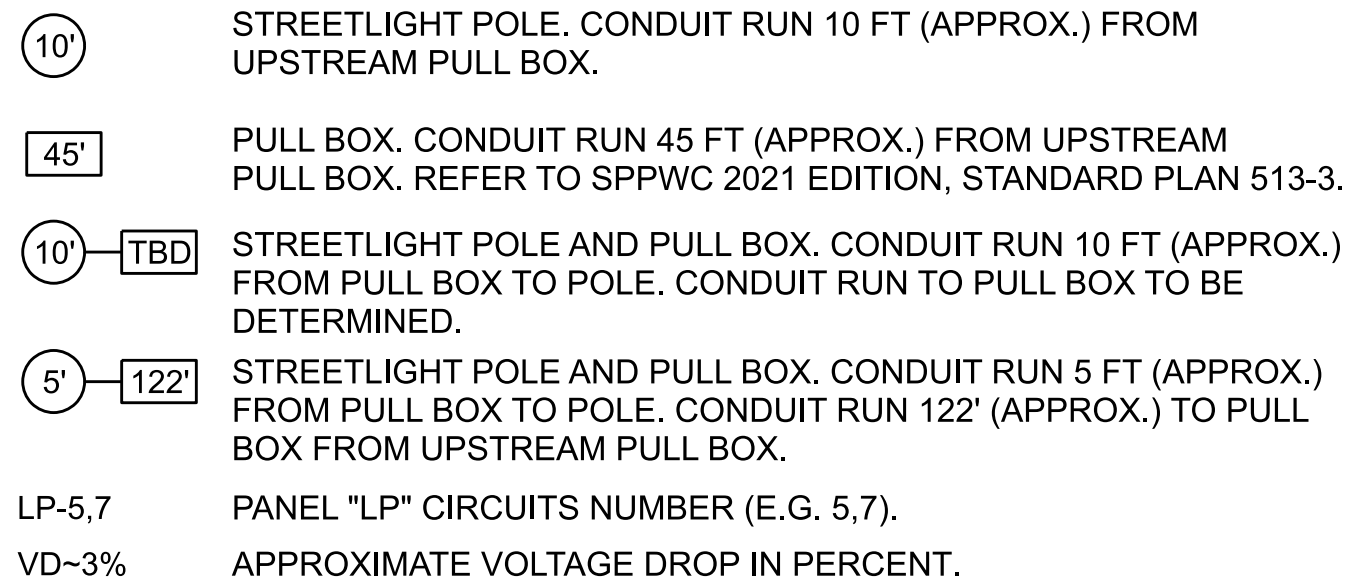
ATTACHMENT O
EXHIBIT E-4 (PANEL WIRING DIAGRAM)
PANEL WIRING DIAGRAM DETAIL (TYPICAL)



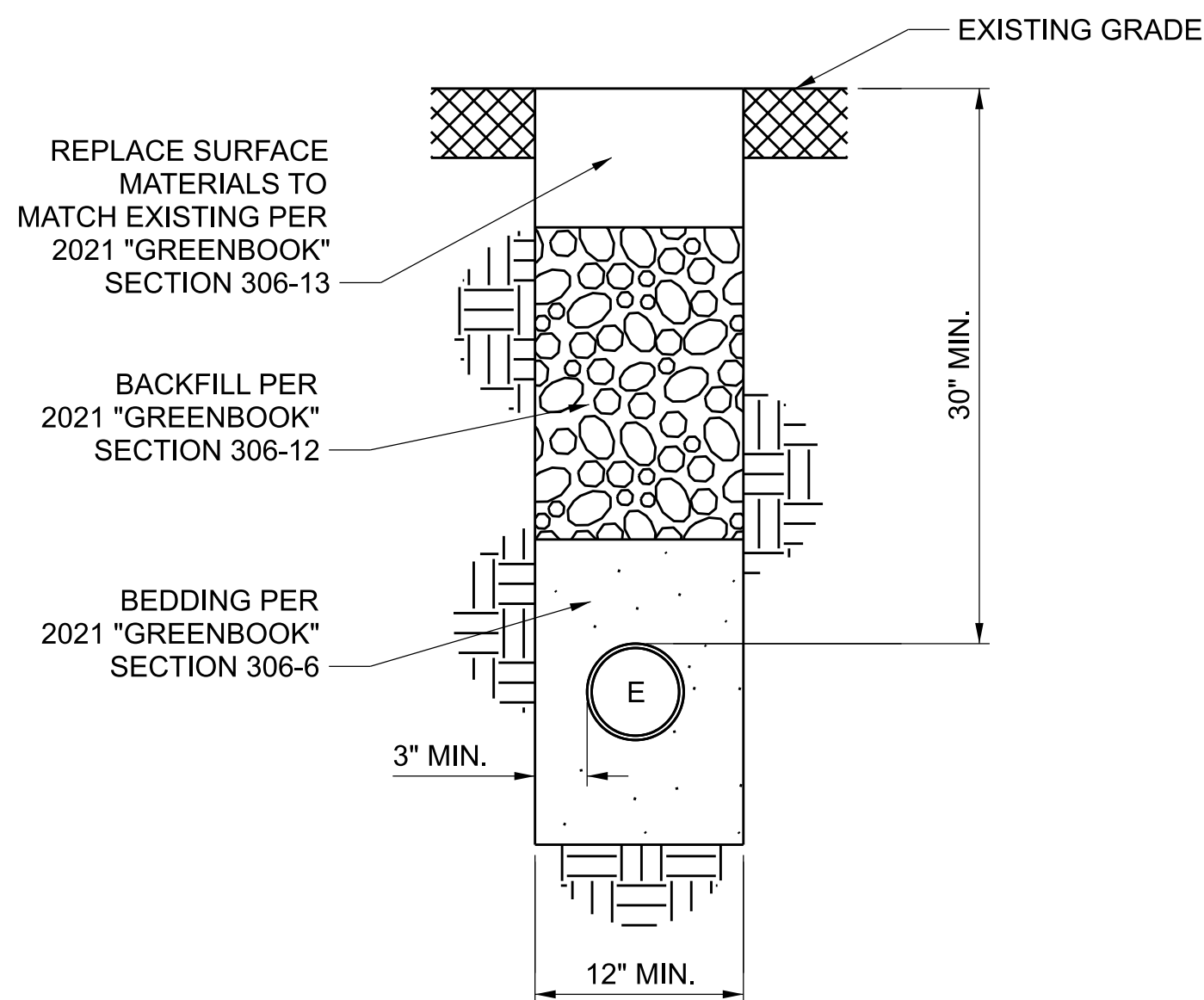
LEGEND OF CONDUIT SYMBOLS



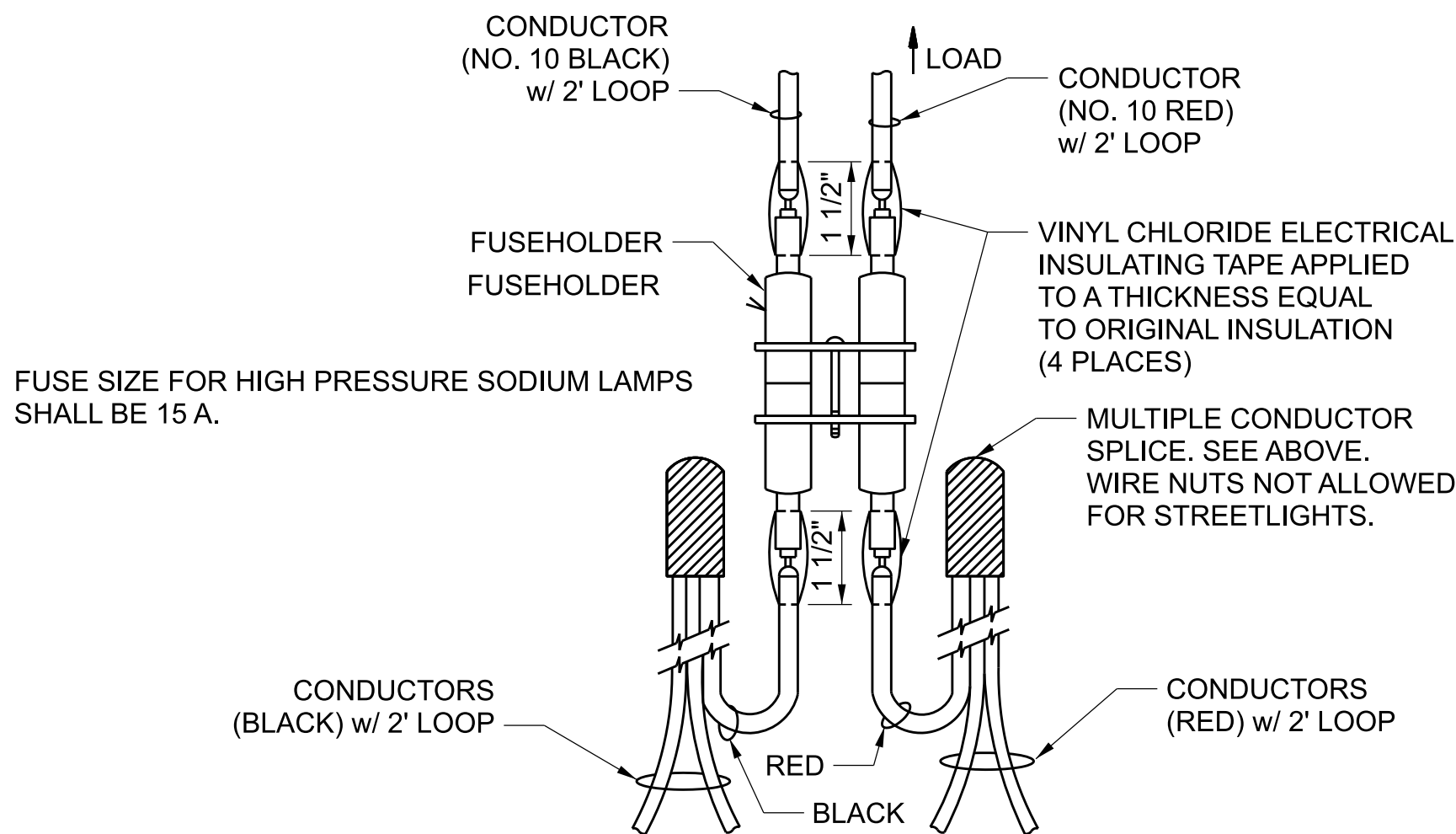
ATTACHMENT O
EXHIBIT E-2 (WIRING DIAGRAM LEGEND)



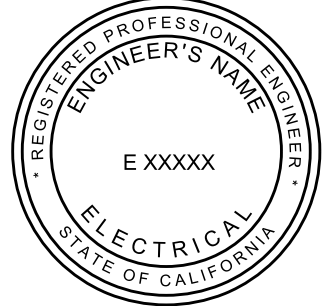
TRENCH DETAIL (TYPICAL)
NOT TO SCALE



IN-LINE FUSE HOLDER DETAIL



- NOTES:
1. MAINTAIN 12" SEPARATION DISTANCE FROM ANY UTILITY LINE.
 2. NO ENCASEMENT REQUIRED UNLESS OTHERWISE SPECIFIED.
 3. REFER TO S.C.E. STANDARD FOR ELECTRICAL UTILITY CONDUIT INSTALLATION REQUIREMENT.
 4. REFER TO 2021 STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION SECTION 306 - FOR BEDDING, BACKFILL, TEMPORARY AND PERMANENT RESURFACING.

						COMPANY NAME & ADDRESS		<div></div> <div>PROJECT ENGINEER _____ DATE _____</div>		LOS ANGELES COUNTY PUBLIC WORKS									
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BY _____ STREET LIGHTING SECTION _____ DATE _____										L XXX-XXXX		EIMP XXXXXXXXXXXX		LS2 / LS3		CLMD 1687		SHEET # OF #	