

**CITY OF ELK GROVE  
SMUD SERVICES REQUEST  
FOR TELECOMMUNICATOINS  
SERVICE PROVIDER**



Date of Request:

Approximate Date Service Connection is Needed:

START  DISCONNECT  TRANSFER OF SERVICE   
OTHER \_\_\_\_\_

Telecommunications Service Provider (TSP) Name: **AT&T**

TSP Billing Address: **AT&T Mobility c/o Engie Insight MS 7372 P.O. Box 2241 Spokane, WA 99210**

TSP Tax ID:

Contact Person and Number: **Engie Insight (866) 322-4547**

Point of Connection (POC): City Service#: **Not Available**

SMUD POC to City Conductor:

1. Descriptive Address: Measurements must be from the street center line and must be listed as x feet, the side of the street, and include north/south and east/west directions. For example: 50 feet of East Street and 10 feet South of J Street.

Meter #: 2005873

Address: 8407 Greentrails Way, Elk Grove, CA 95624

Description: East side of Power Inn Rd 40 feet from the centerline; 68 feet North from the centerline of Villa Serena Drive.

2. California State, Zone 2, NAD83 in Feet: X,Y coordinate of the connection point:

NAD83:0402, 6735521.049ftUSE 1925008.868ftUSN

Decimal: 38.446502,-121.392964

3. Attach City Map with SMUD POC to City Conductor with an X or highlight on the map. (Note: please only submit the drawing with this location. Do not submit all drawing pages.)

City Pole Number: Pole #: SLT-35222L

Location of TSP Devices on City Street lights:

1. Descriptive Address: Measurements must be from the street center line and must be listed as x feet, the side of the street, and include north/south and east/west directions. For example: 50 feet of East Street and 10 feet South of J Street.  
Address: 8611 Power Inn Rd  
Description: North 42 Feet from the centerline of Power Inn Rd.; 1,126 Feet East from the centerline of Auberry Drive
2. California State, Zone 2, NAD83 in Feet: X,Y coordinate of the connection point:  
NAD 83: Zone 0402, 6734761.854ftUSE 1925558.102ftUSN  
Decimal: 38.448024, -121.395602
3. California State, Zone 2, NAD83 in Feet: X,Y coordinate of the connection point where the antenna is being powered from:  
NAD 83: 0402 6735538.223ftUSE 1925010.439ftUSN  
Decimal: 38.446506, -121.392904
4. Attach City Map with locations of 1) TSP devices on City Street light with an X or highlight on the map and 2) where the device is getting power from. (Note: please only submit the drawing with these locations. Do not submit all drawing pages.)

Number/Type of Devices: (How many transmitters, antennae, etc.)

2 Transmitters (RRU's) and 1 antenna

Make and Model of Devices:

Ericsson RRU 4415, Ericsson RRU 4426, Commscope VVSSP-360S-F

Maximum Nameplate AC Wattage of each Device:

Ericsson RRU 4415 = 1100W, Ericsson RRU 4426 = 1100W

Small cell attachment equipment specification sheet attached  X

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This area reserved for SMUD use only

SAC01\_017

**Legend**

- City Service POC (SAC01\_017) (38.446506, -121.392904)
- SMUD POC (SAC01\_017) (38.446502, -121.392964)
- Street Light/Devices (SAC01\_017) (38.448024, -121.395602)





## SMALL CELL LOAD SUMMARY – Elk Grove

Vendor Name: Vinculums  
 City Project Number:  
 Date: 11/4/19

<b>Project:</b>	
<b>Location Address:</b>	8661 POWER INN RD
<b>Pole Coordinates:</b>	38.448024, -121.395602
<b>City Service Coordinates:</b>	38.446506, -121.392904
<b>Node Number:</b>	SAC01_017
<b>Street Light Pole Number:</b>	SLT-35222L (MA-LED)
<b>City Service Address:</b>	8407 Greentrails Way, Elk Grove, CA 95624
<b>SMUD Point of Connect:</b>	Meter #2005873
<b>City Service Number:</b>	Need Service Number from City
<b>RF Config:</b>	MICRO
<b>Radio Load:</b>	2200W
<b>Future Radio Load:</b>	
<b>Circuit Breaker:</b>	Position #3, Lighting 3; 40 AMP
<b>Voltage:</b>	<input checked="" type="checkbox"/> 120 V <input type="checkbox"/> 240 V <input type="checkbox"/> 277 V <input type="checkbox"/> 480 V
<b>Number of Existing Loads:</b>	<b>MA-LED:</b> 4
	<b>MA-HPS:</b>
<b>ORN-LED:</b>	
<b>ORN-HPS:</b>	
<b>PT-LED:</b>	
<b>PT-HPS:</b>	
<b>Description of Existing Loads (Street Light Numbers):</b>	
35222L	35222M
35222F	35222G

Total Existing Loads:		
4	MA-LED X 110 W	440 W
	MA-HPS X 200 W	W
	ORN-LED X 110 W	W
	ORN-HPS X 100 W	W
	PT-LED X 110 W	W
	PT-HPS X 100 W	W
	Radio Load	2200 W
<b>New Load Total (RP):</b>		2640 W
<b>Total Load on Circuit:</b>		3.3 KVA
<b>*Minimum Circuit Overcurrent Protection Required:</b>		27.5AMP
<b>Radio Load Pico kWh/Yr.:</b>		19,272

Recircuiting Required:		
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
<b>Existing Circuit Breaker</b>	40 AMPS	
<b>Percentage Overcurrent Protection Used</b>	55%	
<b>Difficulty Level:</b>	1	
1. No Constructability Issues	2. Difficult	3. Very Difficult
<b>Pass or Fail:</b>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
<b>Notes:</b>		
*Per NEC Regulation, the Real Power (RP) will not exceed 80% of the Overcurrent Protection.		



Street Light No.		GPS		Light Type			Comments
Site Pole	Others	Latitude	Longitude	Lamp Post	Post Top	Mast Arm	(LED, HPS, SIGNAL, COBRA, ETC.)
35222L	X	38.44812	-121.395609			X	EDL
	35222M	38.447974	-121.397138			X	LED
	35222F	38.446949	-121.393743			X	LED
	35222G	38.447727	-121.394764			X	LED



*Penso Engineering*  
**Joshua Penso, PE-EE**

Date: 11/20/2019

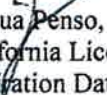
To Whom It May Concern:

In coordination with RLS-CMC & Vinculum/AT&T drawings for node SAC01\_017. I have reviewed the OEM specifications for the proposed equipment listed below. Based on the data sheets for the equipment listed, I have calculated the power consumption, apparent power, and yearly usage listed for the typical radio equipment configuration powered solely by this equipment. This calculation is based on a single power supply powered by a 120V 2-wire service and all proposed radio loads will be powered only by this single supply.

Equipment	Description	Max Power (Watts)	Max Current (Amps)	KVA	KWh/Yr
PSU AC 08	Rectifier Power Supply	2200	18.34	2.2	19272

I, Joshua Penso, affirm that the design presented in this document meets the 2016 California Electric Code, the 2014 NEC and the 2014 National Electric Safety Code (NESC).

Sincerely,

  
Joshua Penso, PE-EE  
California License E-16741  
Expiration Date: 9/30/2020





**SITE ID: CRAN\_RSFR\_SAC01\_017**  
**NODE FA: 14807730    NODE USID: 187849**  
**PACE: MRSFR044371**  
**IN THE PUBLIC R.O.W.**  
**ADJACENT TO 8661 POWER INN RD**  
**ELK GROVE, CA 95624**  
**STREET LIGHT ID #: 352221**  
**PROJECT TYPE: MICRO**



LOCATION NO: 14807730  
DRAWN BY: EZG  
CHECKED BY: MM

REV	DATE	DESCRIPTION
T	12/04/2019	100% CD'S FOR SUBMITTAL
D	11/21/2019	100% CD'S FOR REVIEW
B	11/01/2019	95% CD'S FOR REVIEW
A	09/16/2019	90% CD'S FOR REVIEW

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**CRAN\_RSFR\_SAC01\_017**

POLE # 352221  
IN THE PUBLIC R.O.W.  
8661 POWER INN RD  
ELK GROVE, CA 95624

SHEET TITLE  
**TITLE SHEET**

SHEET NUMBER  
**T-1**

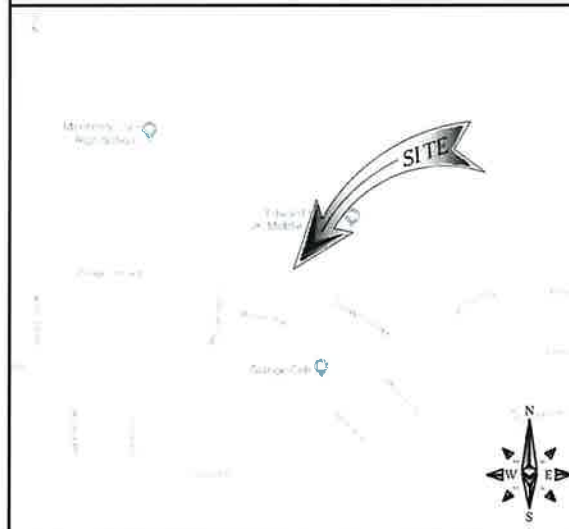
**CONSULTING TEAM**

**ENGINEERING COMPANY:** M SQUARED WIRELESS  
1387 CALLE AVANZADO  
SAN CLEMENTE, CA 92673  
CONTACT: MICHAEL MONTELLA  
PHONE: (949) 391-6824

**PLANNING CONSULTANT:** VINCULUMS SERVICES  
1200 DEL PASO RD, STE 150  
SACRAMENTO, CA 95843  
CONTACT: DIAN TARDIFF  
PHONE: (209) 662-4217  
EMAIL: DTARDIFF@VINCULUMS.COM

**CONSTRUCTION MANAGER:** VINCULUMS SERVICES  
1200 DEL PASO RD, STE 150  
SACRAMENTO, CA 95843  
CONTACT: ROBERT FLYNT  
PHONE: (916) 768-9699  
EMAIL: RFLYNT@VINCULUMS.COM

**VICINITY MAP**



**POLE # 352221**



**PROJECT DESCRIPTION**

THIS IS UNMANNED WIRELESS TELECOMMUNICATION FACILITY FOR AT&T MOBILITY CONSISTING OF THE INSTALLATION AND OPERATION OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON AN (E) STREET LIGHT POLE IN THE PUBLIC RIGHT OF WAY. SCOPE OF WORK & SITE COMPLETION CHECKLIST:

- INSTALL A (N) TELECOMMUNICATION ANTENNA & EQUIPMENT BOXES ON AN (E) STREET LIGHT POLE. INSTALLATION CONSISTS OF (1) CYLINDRICAL ANTENNA IN A 10-1/2"Ø FIBERGLASS SHROUD WITH A 10-3/4"Ø CAP & (1) RRUS-4426, (1) RRUS-4415 & (2) DIPLEXERS.
- DURABLE PAINT – ANTENNA SHROUD, CABLING & RADIO RELAY UNITS TO BE PAINTED TO MATCH (E) STREET LIGHT POLE USING A DURABLE PAINT (E.G. SHERWIN WILLIAMS FRAZEE OR EQUIVALENT).
- CABLING – CABLING TO BE INSTALLED IN A TIDY MANNER WITHOUT EXCESS CABLE LOOPS.
- SPACING OF SUPPORT ELEMENTS – SUPPORT EQUIPMENT (E.G. RRUS) TO BE CLUSTERED AS CLOSE AS TECHNICALLY FEASIBLE ON POLE.
- LOGO REMOVAL – ALL EQUIPMENT LOGOS, OTHER THAN THOSE REQUIRED BY REGULATION (E.G. NODE IDENTIFICATION OR SHUTDOWN SIGNAGE) OR PG&E REGULATIONS SHALL BE PAINTED OVER OR REMOVED. RAISED/DEPRESSED LOGOS/TEXT ON RRUS OR OTHER EQUIPMENT, IF PRESENT, TO BE SANDED OFF OR SIMILARLY REMOVED/ FILLED.
- UTILITY LINES – PROPOSED UTILITY LINES BETWEEN (E) POINT OF CONNECTION TO BE UNDERGROUND.
- INSTALL (1) NEW COMMERCIAL METER PEDESTAL.
- INSTALL (1) NEW PULLBOX & CONDUITS FOR ASSOCIATED POWER & FIBER.

**DO NOT SCALE DRAWINGS**

SUBCONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS & FIELD CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.



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Call Two Working Days Before You Dig!  
811 / 800-227-2600  
usanorth.org

**CONTRACTOR NOTES**

CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT AND/OR ENGINEERS IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR THE SAME.

**PROJECT INFORMATION**

OWNER: CITY OF ELK GROVE  
APPLICANT: AT&T MOBILITY  
5001 EXECUTIVE PARKWAY  
SAN RAMON, CA 94583  
ADJACENT APN#: 115-C150-077  
LATITUDE: 38° 26' 52.9"N 38.448024°  
LONGITUDE: 121° 23' 44.2"W -121.395602°  
JURISDICTION: CITY OF ELK GROVE  
PUBLIC RIGHT-OF-WAY  
ZONING: PUBLIC RIGHT-OF-WAY  
PROPOSED USE: UNMANNED TELECOMMUNICATIONS FACILITY  
POWER COMPANY: SMUD

**DRIVING DIRECTIONS**

DIRECTIONS FROM SACRAMENTO INTERNATIONAL AIRPORT:

- GET ON I-5 S FROM AVIATION DR AND AIRPORT BLVD
- CONTINUE ON I-5 S
- TAKE CA-99 S TO CALVINE RD IN SACRAMENTO
- TAKE EXIT 289 FROM CA-99 S
- DRIVE TO POWER INN RD IN ELK GROVE
- USE LEFT 2 LANES TO TURN LEFT ONTO CALVINE RD
- TURN RIGHT ONTO POWER INN RD
- MAKE A U-TURN
- DESTINATION WILL BE ON THE RIGHT

**APPLICABLE CODES**

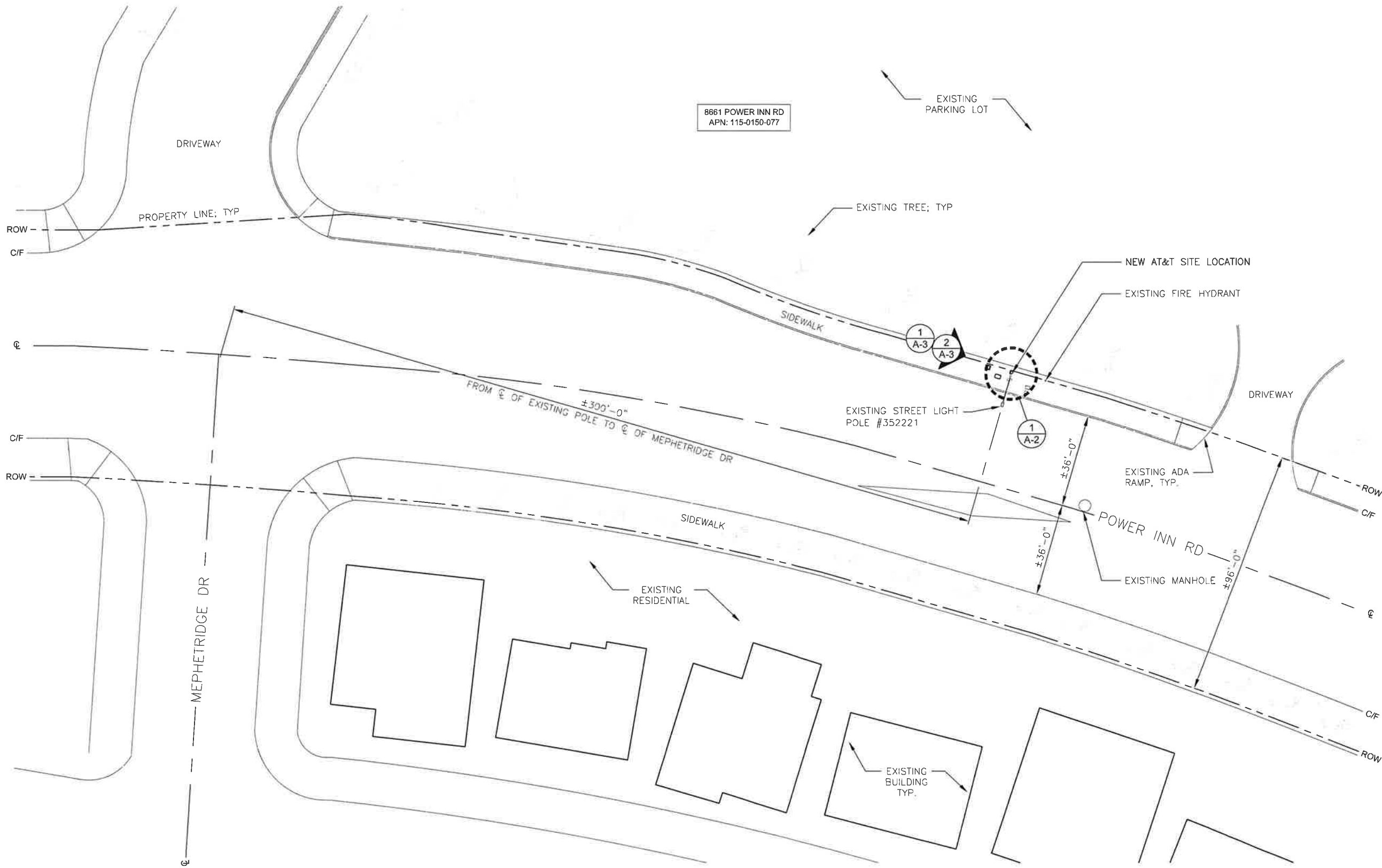
ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES.

- CALIFORNIA ADMINISTRATIVE CODE (INCL TITLE 24 & 25)
- 2016 CALIFORNIA BUILDING CODE
- 2016 MECHANICAL CALIFORNIA CODE
- 2016 CALIFORNIA ELECTRICAL CODE
- 2016 GREEN BUILDING CODE
- 2016 CALIFORNIA ENERGY CODE
- GENERAL ORDER 95 (JUNE 2009 EDITION)
- CURRENT SACRAMENTO CITY CODE AMENDMENTS

**SHEET INDEX**

SHEET	DESCRIPTION
T-1	TITLE SHEET
A-1	SITE PLAN
A-2	ENLARGED SITE PLAN
A-3	ELEVATIONS
D-1, D-2, D-3	EQUIPMENT DETAILS
E-1, E-2	ELECTRICAL DETAILS
TCP-1	TRAFFIC CONTROL PLAN NOTES
TCP-2	TRAFFIC CONTROL PLAN





1387 CALLE AVANZADO  
SAN CLEMENTE CA 92673 (949) 381-8824

LOCATION NO:	14807730
DRAWN BY:	EZG
CHECKED BY:	MM

REV	DATE	DESCRIPTION
1	12/04/2019	100% CD'S FOR SUBMITTAL
0	11/21/2019	100% CD'S FOR REVIEW
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CRAN\_RSFR\_SAC01\_017

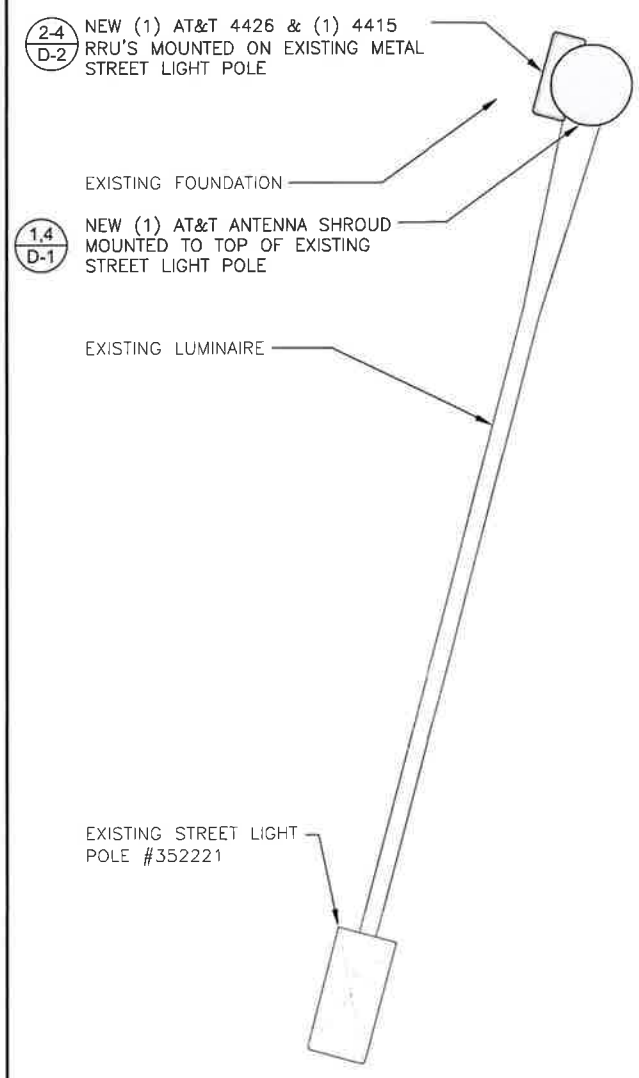
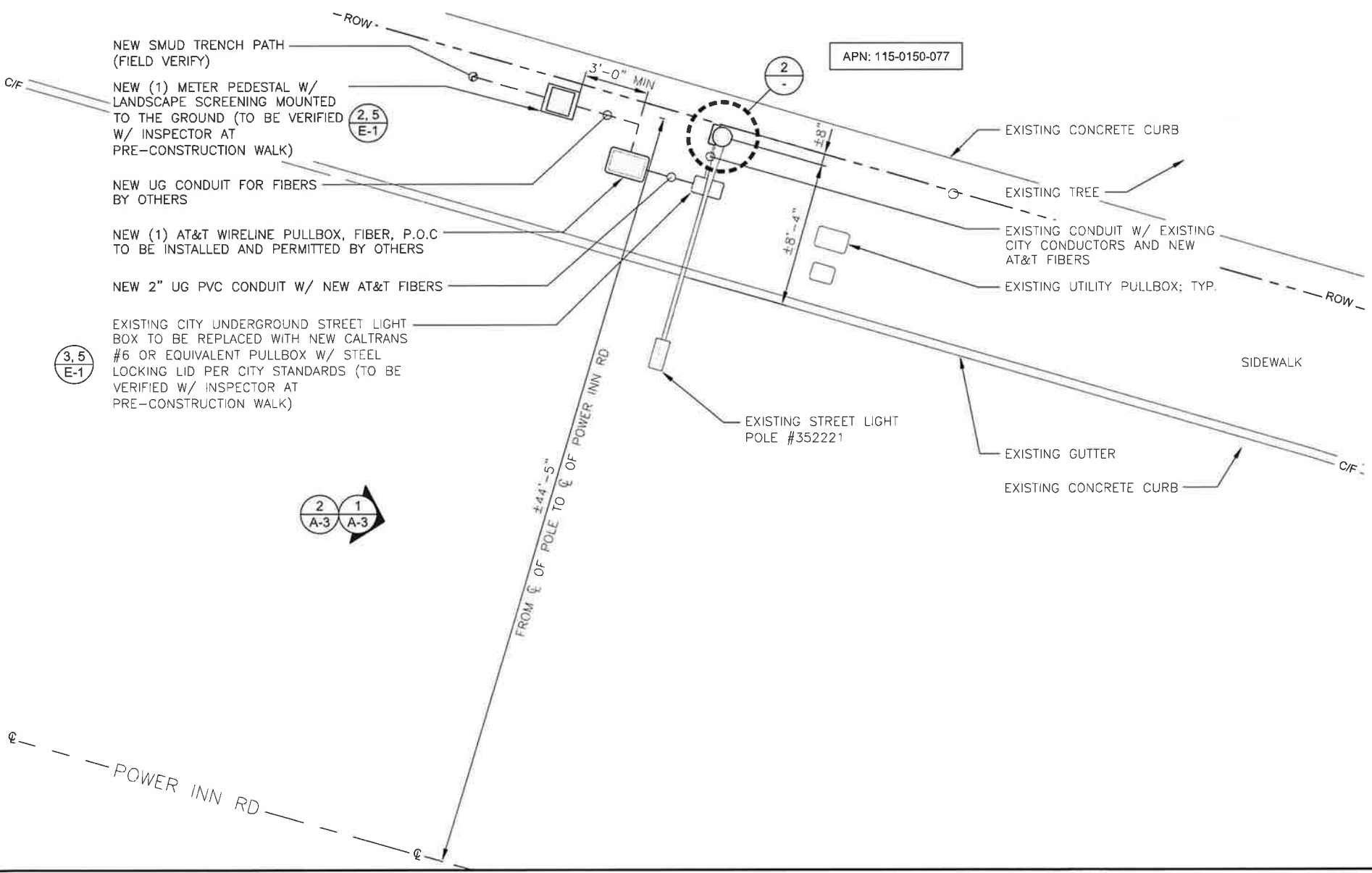
POLE # 352221  
IN THE PUBLIC R.O.W.  
8661 POWER INN RD  
ELK GROVE, CA 95624

SHEET TITLE  
**SITE PLAN**

SHEET NUMBER  
**A-1**



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**ANTENNA LAYOUT** 24"x36" SCALE: 3/4" = 1'-0" 0" 6" 1" 2"  
 11"x17" SCALE: 3/8" = 1'-0" 2



LOCATION NO:	14807730
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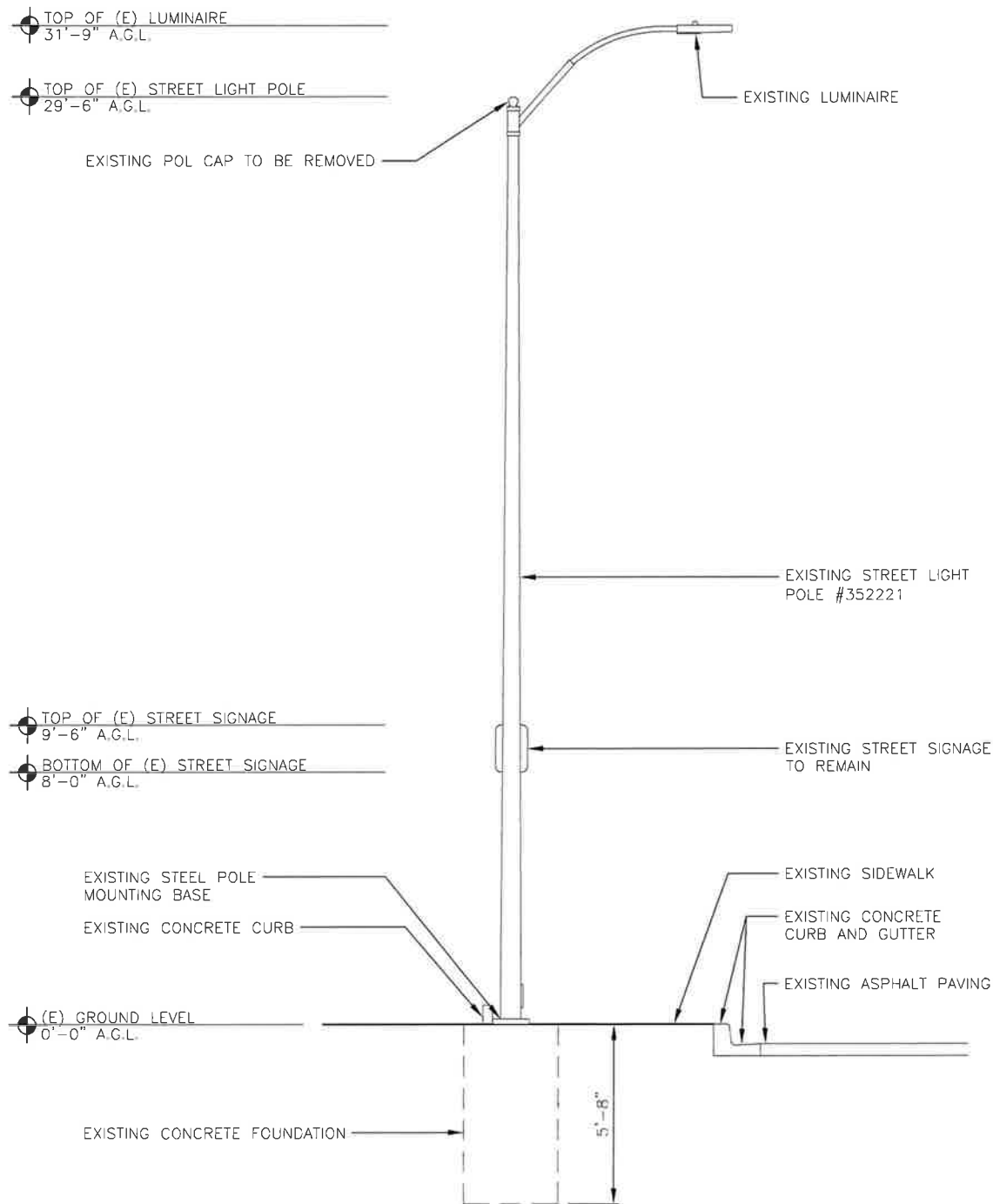
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POLE # 352221  
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 8661 POWER INN RD  
 ELK GROVE, CA 95624

SHEET TITLE  
**ENLARGED SITE PLAN**

SHEET NUMBER  
**A-2**



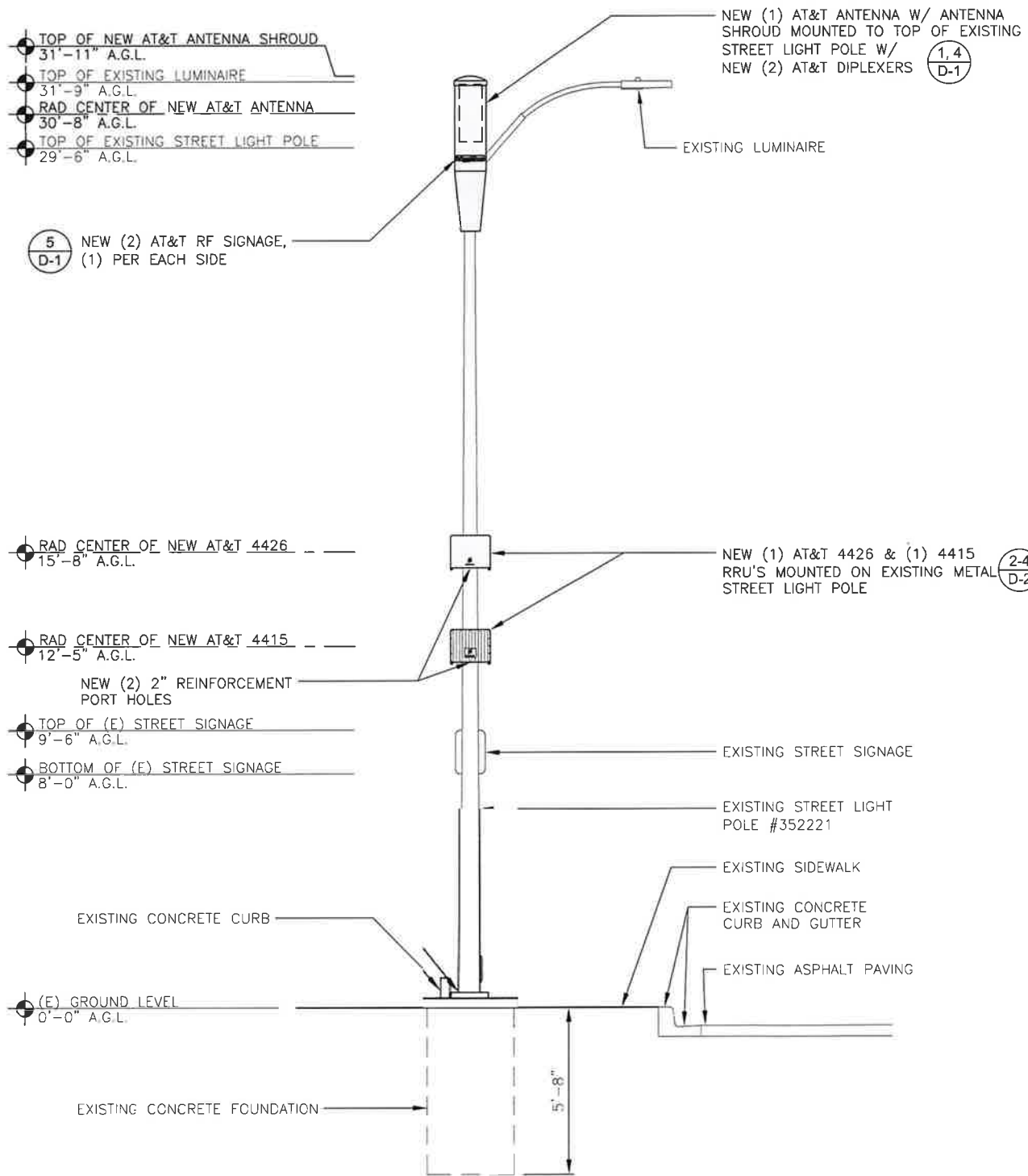
**EXISTING WEST ELEVATION**

24"x36" SCALE 3/8" = 1'-0"  
11"x17" SCALE 3/16" = 1'-0"



**2**

**NEW WEST ELEVATION**



NOTE:  
ALL NEW EQUIPMENT TO BE PAINTED TO MATCH EXISTING POLE COLOR USING DURABLE NON-REFLECTIVE PAINT (E.G. SHWERWIN WILLIAMS, FRAZEE OR EQUIVALENT)

NEW (1) AT&T ANTENNA W/ ANTENNA SHROUD MOUNTED TO TOP OF EXISTING STREET LIGHT POLE W/ NEW (2) AT&T DIPLEXERS (1,4) D-1

(5) D-1 NEW (2) AT&T RF SIGNAGE, (1) PER EACH SIDE

NEW (1) AT&T 4426 & (1) 4415 RRU'S MOUNTED ON EXISTING METAL STREET LIGHT POLE (2-4) D-2

RAD CENTER OF NEW AT&T 4426 15'-8" A.G.L.

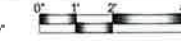
RAD CENTER OF NEW AT&T 4415 12'-5" A.G.L.

TOP OF (E) STREET SIGNAGE 9'-6" A.G.L.

BOTTOM OF (E) STREET SIGNAGE 8'-0" A.G.L.

(E) GROUND LEVEL 0'-0" A.G.L.

24"x36" SCALE 3/8" = 1'-0"  
11"x17" SCALE 3/16" = 1'-0"

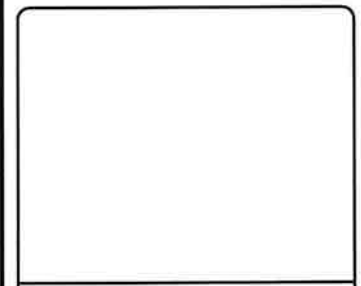


**1**



LOCATION NO:	14807730
DRAWN BY:	EZG
CHECKED BY:	MM

REV	DATE	DESCRIPTION
1	12/04/2019	100% CD'S FOR SUBMITAL
0	11/21/2019	100% CD'S FOR REVIEW
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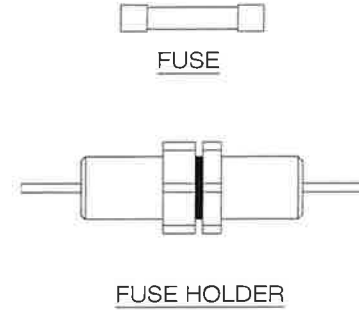
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CRAN\_RSFR\_SAC01\_017  
  
POLE # 352221  
IN THE PUBLIC R.O.W.  
8661 POWER INN RD  
ELK GROVE, CA 95624

SHEET TITLE  
**POLE ELEVATIONS**

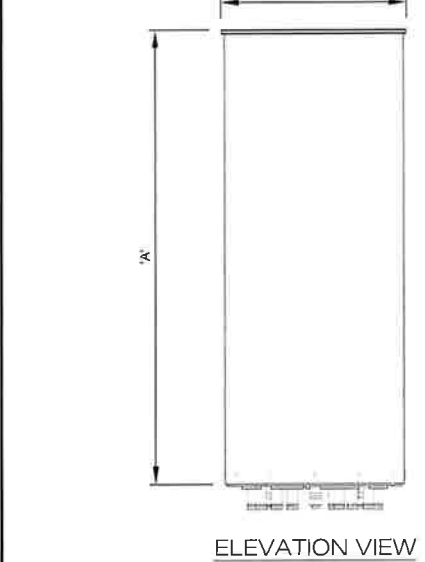
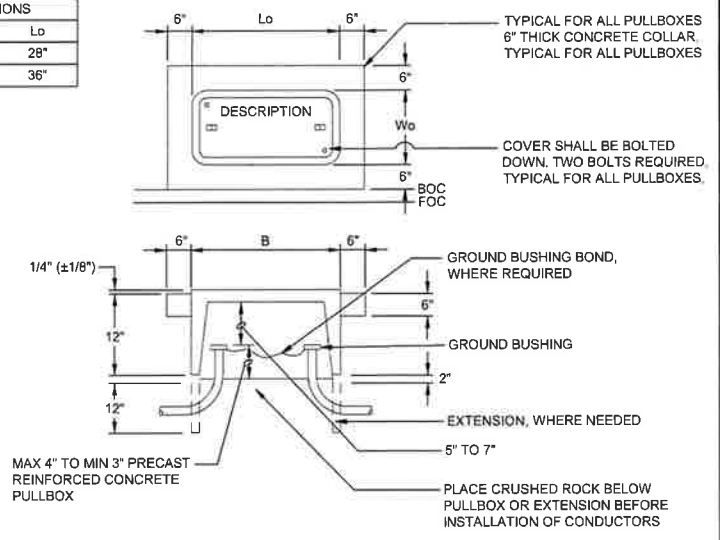
SHEET NUMBER  
**A-3**

MANUFACTURER: EATON/BUSSMAN  
 FUSE MFG P/N: FNM-7 AMP, 7  
 MANUFACTURER: EATON/BUSSMAN  
 FUSE HOLDER MFG P/N: HEB-AA  
 AMPS RATING: 30A



NOTE:  
 DETAIL IS SHOWN FOR  
 REFERENCE ONLY, AND NOT FOR  
 CONSTRUCTION, REFER TO  
 EQUIPMENT MANUFACTURER  
 SPECIFICATIONS AND  
 INSTALLATION PROCEDURES FOR  
 ADDITIONAL INFORMATION

PULLBOX DIMENSIONS		
PULLBOX	W <sub>D</sub>	L <sub>D</sub>
5	18"	28"
6	23"	36"



MANUFACTURER: COMMSCOPE		TOTAL WEIGHT: 15.4 LBS
MODEL: VVSSP-360S-F		
DIMENSIONS		
A	23.6"	
B	7.9"	



**M SQUARE**  
 WIRELESS  
 1387 CALLE AVANZADO  
 SAN CLEMENTE CA 92673 (949) 391-8824

IN-LINE FUSE W/ FUSE HOLDER

24"x36" SCALE: NTS  
 11"x17" SCALE: NTS

5

CALTRANS #5 OR #6 PULLBOX

24"x36" SCALE: NTS  
 11"x17" SCALE: NTS

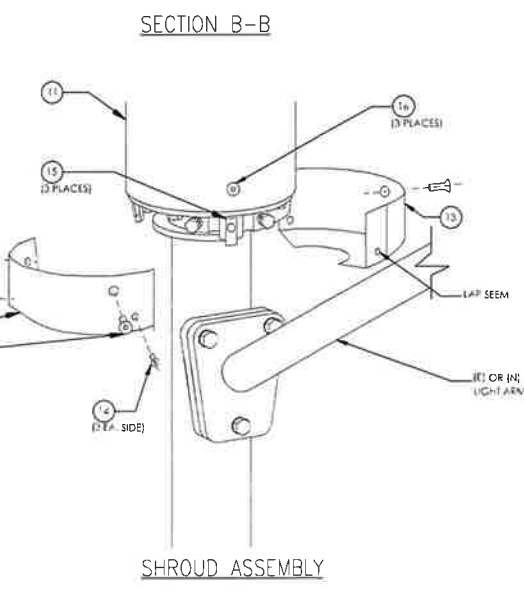
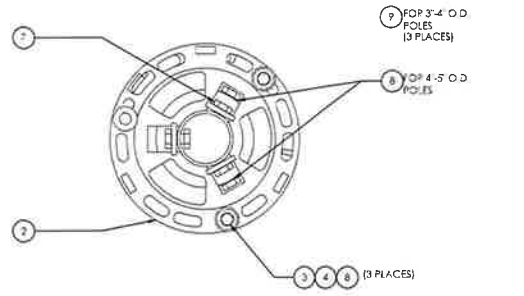
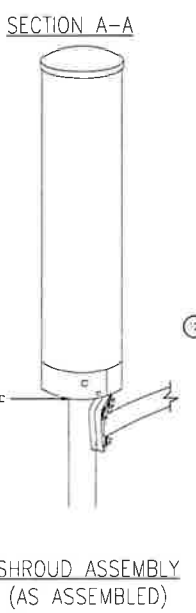
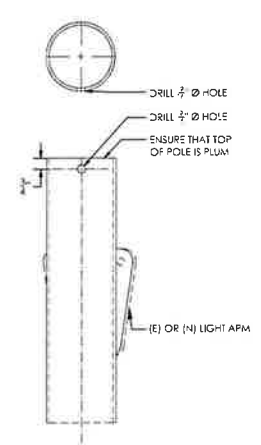
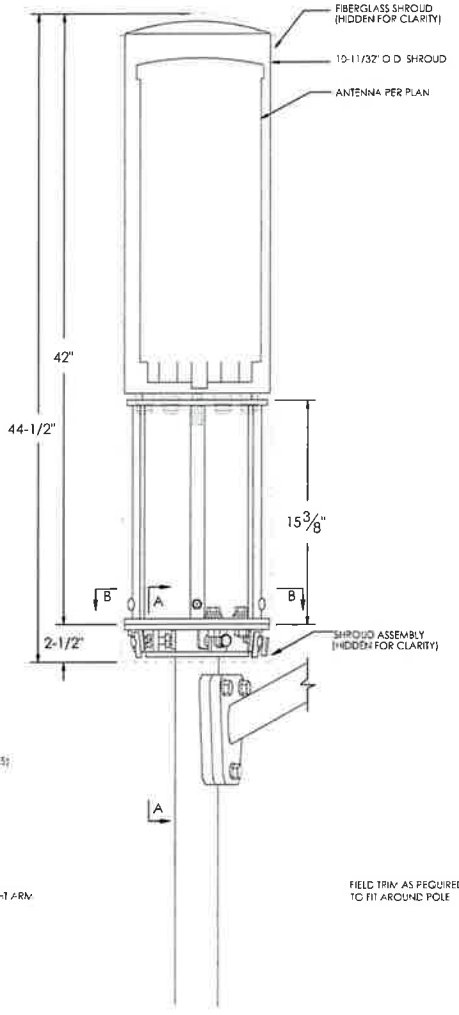
3

OMNI-DIRECTIONAL ANTENNA

24"x36" SCALE: NTS  
 11"x17" SCALE: NTS

1

ITEM NO.	DESCRIPTION	QTY
CLAMP-ON BRACKET PARTS / HARDWARE		
1	2"x10" O.D. ANTENNA CAGE	1
2	1/2"x9-7/8" O.D. MOUNTING BRACKET	1
3	1/2" O.D. x 1.032" O.D. x 121" FLAT WASHERS S.S.	1
4	1/2" LOCK WASHERS S.S.	7
5	1/2" FLAT WASHER TEFLON	3
6	1/2" FLAT WASHER S.S.	3
7	1/2" JAM NUT S.S.	5
8	1/2" O.D. x 1-1/2" FULLY THD'D BOLT S.S.	3
9	1/2" O.D. x 2-1/2" FULLY THD'D BOLT S.S.	2
10	1/2" O.D. x 3" LONG S.S. THREADED ROD	1
SHROUD ASSEMBLY & COVER PLATE PARTS / HARDWARE		
11	10-11/32" O.D. x 42" FIBERGLASS SHROUD ASSEMBLY	1
12	1/2" GA x 10-1/8" x 23-3/8" METAL SHROUD	1
13	1/2" GA x 10-1/8" x 23-3/8" METAL SHROUD	1
14	1/2" O.D. x 1" FHCS S.S.	6
15	1/2" x 1/2" SPRING NUT	3
16	1/2" O.D. x 1-1/2" FHCS S.S.	6



BASE MOUNT ON BRACKET  
 (ANTENNA NOT SHOWN FOR CLARITY)

ELEVATION VIEW

SHROUD ASSEMBLY  
 (AS ASSEMBLED)

SHROUD ASSEMBLY

LIGHT STANDARD ANTENNA MOUNT FOR 3"-5" O.D. POLES

24"x36" SCALE: NTS  
 11"x17" SCALE: NTS

4

NOT USED

2

LOCATION NO:	1480773D
DRAWN BY:	EZG
CHECKED BY:	MM

REV	DATE	DESCRIPTION
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A	09/16/2019	90% CD'S FOR REVIEW

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 THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED  
 PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

CRAN\_RSFR\_SAC01\_017

POLE # 352221  
 IN THE PUBLIC R.O.W.  
 8661 POWER INN RD  
 ELK GROVE, CA 95624

SHEET TITLE  
 EQUIPMENT DETAILS

SHEET NUMBER  
**D-1**



NOTE:  
APPLY TWO NOTICE STICKERS OPPOSITE EACH OTHER AROUND THE BOTTOM OF THE RADOME.



### NOTICE

RF energy emitted by this device may exceed the FCC's general public exposure limits. Stay at least 1 foot away from the device. Call AT&T at 800-638-2822, 9 then 3 for help if you need access within 1 foot

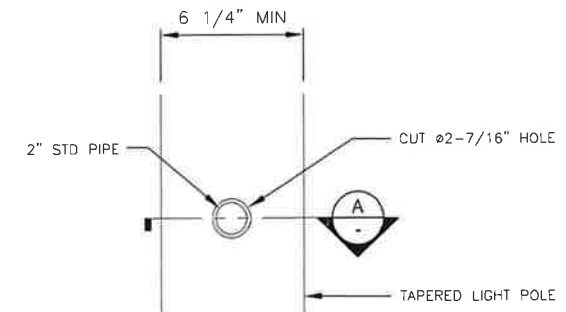
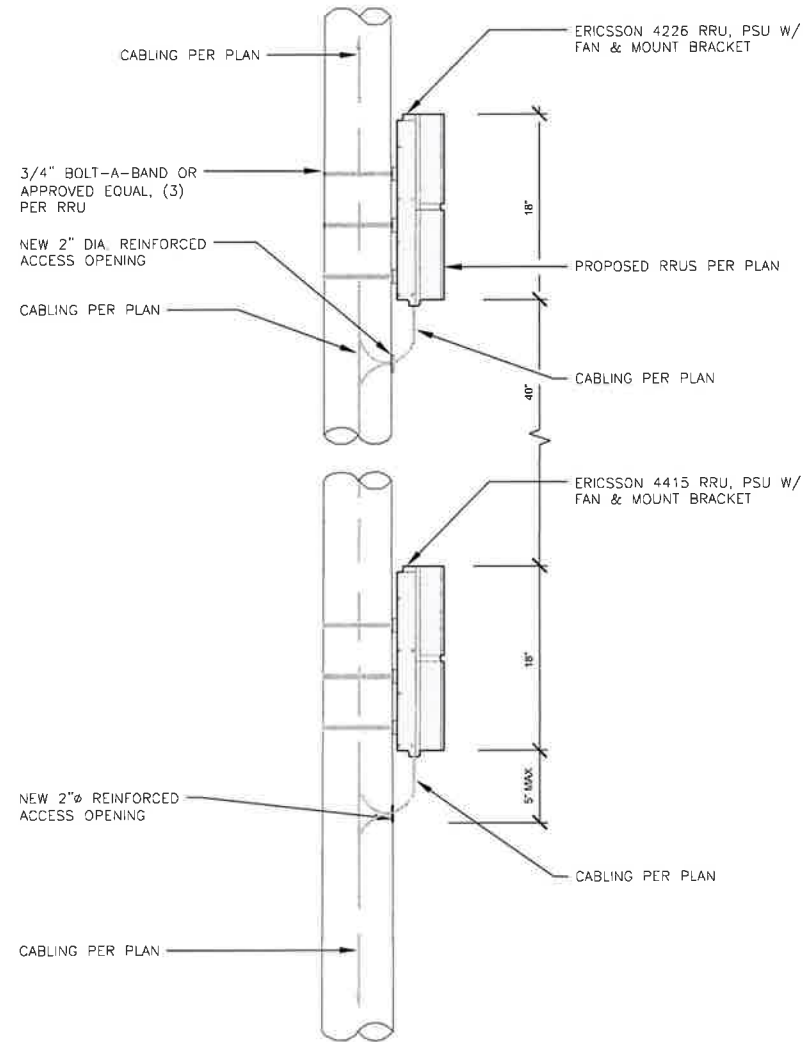
RF SIGNAGE

24"x36" SCALE: NTS  
11"x17" SCALE: NTS

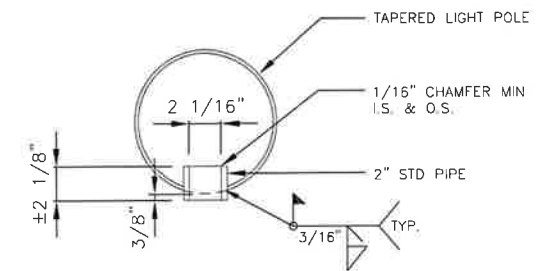
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NOTE:

MOUNTING BRACKETS AND POLE MOUNTED EQUIPMENT TO BE PAINTED TO MATCH EXISTING POLE COLOR.



CUT DETAIL



SECTION A-A

FIELD WELDING NOTES:

1. WELDING TO BE PERFORMED BY AN AWS CERTIFIED WELDER FOR THE TYPE OF AND POSITION INDICATED. ALL WORK MUST BE IN CONFORMANCE WITH LATEST EDITION OF ASIC & AWS D 1.1
2. GRIND SURFACES TO BE WELDED WITH A SILICONE CARBIDE WHEEL PRIOR TO WELDING TO REMOVE ALL GALVANIZING WHICH MAY OTHERWISE BE CONSUMED IN THE WELD METAL. APPLY ANTI-SPATTER COMPOUND AFTER GRINDING.
3. WELDING TECHNIQUE MUST MINIMIZE TEMPERATURE RISE ON THE INSIDE SURFACE OF THE MONOPOLE AND ALSO VOLATIZE ANY REMAINING ZINC WITHIN THE BASE METAL WITH MINIMUM SPATTER. USE AN E70 (LOW HYDROGEN) ELECTRODE. USE LARGEST DIAMETER ELECTRODE COMPATIBLE WITH WELDING POSITION AND MATERIAL THICKNESS. STRICTLY FOLLOW ALL MANUFACTURER'S INSTRUCTIONS FOR STORAGE AND USE OF ELECTRODES. AVOID REMOVING ELECTRODES FROM MANUFACTURER'S PACKAGING UNTIL READY IMMEDIATE USE.
4. WELDING MAY PRODUCE TOXIC FUMES. REFER TO ANSI STANDARD Z49.1 "SAFETY IN WELDING AND CUTTING" FOR PROPER PRECAUTIONS.
5. UPON COMPLETION OF WELDING, APPLY GALV-A-STICK ZINC COATING TO ALL UNPROTECTED SURFACES. APPLY A SECOND LAYER OF COLD GALVANIZING SPRAY COMPOUND CONTAINING A MINIMUM ZINC CONTENT OF 95%. IF NECESSARY, APPLY A FINAL COAT OF COMPATIBLE PAINT TO MATCH SURROUNDING SURFACES.

NOT USED

6

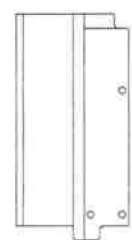
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11"x17" SCALE: NTS

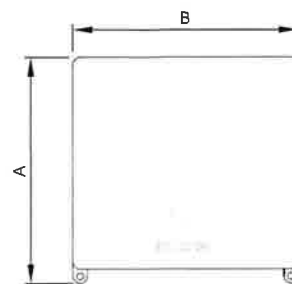
MANUFACTURER:	ERICSSON
MODEL NO.:	RRU 4415
DIMENSIONS:	COLOR:
A 16.54"	GRAY
B 13.46"	TOTAL WEIGHT:
C 6.30"	±44 LBS



TOP VIEW



SIDE VIEW



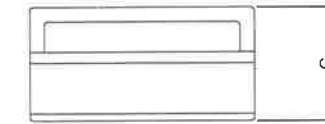
FRONT VIEW

3

### ACCESS PORTS

24"x36" SCALE: NTS  
11"x17" SCALE: NTS

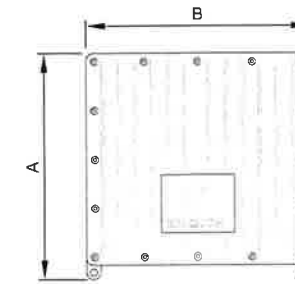
MANUFACTURER:	ERICSSON
MODEL NO.:	RRU 4426
DIMENSIONS:	COLOR:
A 16.54"	GRAY
B 13.50"	TOTAL WEIGHT:
C 6.30"	±46 LBS



TOP VIEW



SIDE VIEW



FRONT VIEW

NOT USED

7

### ERICSSON RRU 4415

24"x36" SCALE: NTS  
11"x17" SCALE: NTS

4

### ERICSSON RRU 4426

24"x36" SCALE: NTS  
11"x17" SCALE: NTS

2



1387 CALLE AVANZADO  
SAN CLEMENTE CA 92673 (949) 391-8824

LOCATION NO:	14807730
DRAWN BY:	EZG
CHECKED BY:	MM

REV	DATE	DESCRIPTION
1	12/04/2019	100% CD'S FOR SUBMITTAL
D	11/21/2019	100% CD'S FOR REVIEW
B	11/01/2019	95% CD'S FOR REVIEW
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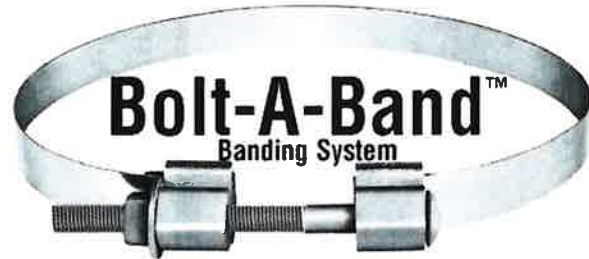
CRAN\_RSFR\_SAC01\_017

POLE # 352221  
IN THE PUBLIC R.O.W.  
8661 POWER INN RD  
ELK GROVE, CA 95624

SHEET TITLE  
EQUIPMENT DETAILS

SHEET NUMBER

**D-2**



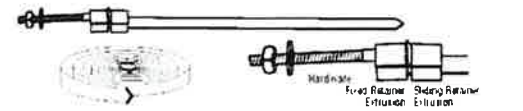
**Bolt-A-Band™**  
Banding System  
*For Mounting Equipment on Most Steel, Wood, or Concrete Poles*

Bolt-A-Band™ lets you mount equipment on round, square or irregular shaped poles without drilling holes. Bolt-A-Band™ features a pre-cut, high quality stainless steel band with accompanying installation hardware. Adjusts easily to fit most any size pole. Installs in just minutes with no special tools required. Use it as shown for equipment mounting... or create your own applications! Call Aluma-Form inside sales for more information.



**How to Select Proper Size**

**Band Width** - Bolt-A-Band™ is available in 1/2" and 1 1/4" band widths and many lengths for mounting a variety of equipment. Generally, use 1/2" band for lighter loads (cables, telephone drops, U-Guards, coaxial cable, etc.) and 1 1/4" band for high tension loads.  
**Band Length** - Proper length is easily determined by placing equipment to be mounted against pole or structure at mounting position. Measure total length needed around structure, add six (6) inches and round up to next standard length to determine correct length to order. Installation instructions are always included with each Bolt-A-Band™ order.



**STANDARD LENGTH SINGLE BAND**

CATALOG #	WEIGHT EA.	STD. CARTON	HARDWARE	LENGTH	BAND
PAP-1034	75 lb	24	1"	50'	1/2"
PAP-3040	80 lb	24	1"	40'	1/2"
PAP-3041	80 lb	24	1"	45'	1/2"
PAP-3042	80 lb	24	1"	50'	1/2"
PAP-3070	80 lb	24	1"	70'	1/2"
PAP-3084	1.00 lb	24	1"	84'	1/2"
PAP-3090	1.00 lb	24	1"	90'	1/2"
PAP-3096	1.00 lb	24	1"	96'	1/2"
PAP-3102	1.00 lb	24	1"	102'	1/2"
PAP-3108	1.00 lb	24	1"	108'	1/2"
PAP-3114	1.00 lb	24	1"	114'	1/2"
PAP-3120	1.00 lb	24	1"	120'	1/2"
PAP-3126	1.00 lb	24	1"	126'	1/2"
PAP-3132	1.00 lb	24	1"	132'	1/2"
PAP-3138	1.00 lb	24	1"	138'	1/2"
PAP-3144	1.00 lb	24	1"	144'	1/2"
PAP-3150	1.00 lb	24	1"	150'	1/2"
PAP-3156	1.00 lb	24	1"	156'	1/2"
PAP-3162	1.00 lb	24	1"	162'	1/2"
PAP-3168	1.00 lb	24	1"	168'	1/2"
PAP-3174	1.00 lb	24	1"	174'	1/2"
PAP-3180	1.00 lb	24	1"	180'	1/2"
PAP-3186	1.00 lb	24	1"	186'	1/2"
PAP-3192	1.00 lb	24	1"	192'	1/2"
PAP-3198	1.00 lb	24	1"	198'	1/2"
PAP-3204	1.00 lb	24	1"	204'	1/2"
PAP-3210	1.00 lb	24	1"	210'	1/2"
PAP-3216	1.00 lb	24	1"	216'	1/2"
PAP-3222	1.00 lb	24	1"	222'	1/2"
PAP-3228	1.00 lb	24	1"	228'	1/2"
PAP-3234	1.00 lb	24	1"	234'	1/2"
PAP-3240	1.00 lb	24	1"	240'	1/2"
PAP-3246	1.00 lb	24	1"	246'	1/2"
PAP-3252	1.00 lb	24	1"	252'	1/2"
PAP-3258	1.00 lb	24	1"	258'	1/2"
PAP-3264	1.00 lb	24	1"	264'	1/2"
PAP-3270	1.00 lb	24	1"	270'	1/2"
PAP-3276	1.00 lb	24	1"	276'	1/2"
PAP-3282	1.00 lb	24	1"	282'	1/2"
PAP-3288	1.00 lb	24	1"	288'	1/2"
PAP-3294	1.00 lb	24	1"	294'	1/2"
PAP-3300	1.00 lb	24	1"	300'	1/2"

**SPECIFICATIONS**  
**Stainless Steel Band** - Type 304 (AISI 304) Stainless Steel with minimum tensile strength of 50,000 PSI and minimum yield strength of 20,000 PSI. Band thickness is .048" (1.219 mm) and width is 1 1/4" (31.75 mm).  
**Aluminum Hardware Extrusions** - 6061 T6 Aluminum Extrusions. The aluminum hardware is ASTM B221. Aluminum tensile strength is 40,000 PSI and minimum yield strength is 20,000 PSI.  
**Carriage Bolt** - Hex Head with Square Carriage End (ASTM A440). Hex Head diameter is 1/2" (12.7 mm) and length is 1 1/2" (38.1 mm).

**STANDARD 100' LENGTH BANDS**

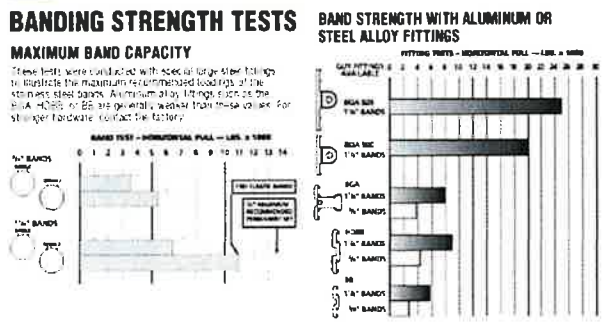
CATALOG #	WEIGHT EACH	STD. CARTON	HARDWARE	LENGTH	BAND
100-SSP-100	8.00 lb	1	1"	100'	1/2"
100-SSP-100	18.00 lb	1	1"	100'	1 1/4"

**BUCKLES FOR 100' BANDS**

CATALOG #	WEIGHT EACH	STD. CARTON
BAP-100	3.00 lb	24
BAP-100	8.25 lb	24

**STANDARD LENGTH DOUBLE BAND**

CATALOG #	WEIGHT EA.	STD. CARTON	HARDWARE	LENGTH	BAND
PAB-1030-2	3.30 lb	24	1"	30'	1/2"
PAB-1042-2	4.00 lb	24	1"	42'	1/2"
PAB-1054-2	5.00 lb	24	1"	54'	1/2"



**ALL PURPOSE MTG. BRACKET (LOCATES 1/4" BOLT)**

CATALOG #	WEIGHT EA.	STD. CARTON	DESCRIPTION
BB-211-1	80 lb	24	Light Duty Mount with Standard 1/4" x 2" Bolt
BB-211-1H	80 lb	24	Heavy Duty Mount with Standard 1/4" x 2" Bolt
BB-211-1H-10	1.00 lb	24	Heavy Duty Mount with Standard 1/4" x 10" Bolt
BB-211-1H-20	1.00 lb	24	Heavy Duty Mount with Standard 1/4" x 20" Bolt
BB-211-1H-30	1.00 lb	24	Heavy Duty Mount with Standard 1/4" x 30" Bolt
BB-211-1H-40	1.00 lb	24	Heavy Duty Mount with Standard 1/4" x 40" Bolt
BB-211-1H-50	1.00 lb	24	Heavy Duty Mount with Standard 1/4" x 50" Bolt
BB-211-1H-60	1.00 lb	24	Heavy Duty Mount with Standard 1/4" x 60" Bolt
BB-211-1H-70	1.00 lb	24	Heavy Duty Mount with Standard 1/4" x 70" Bolt
BB-211-1H-80	1.00 lb	24	Heavy Duty Mount with Standard 1/4" x 80" Bolt
BB-211-1H-90	1.00 lb	24	Heavy Duty Mount with Standard 1/4" x 90" Bolt
BB-211-1H-100	1.00 lb	24	Heavy Duty Mount with Standard 1/4" x 100" Bolt
BB-211-1H-110	1.00 lb	24	Heavy Duty Mount with Standard 1/4" x 110" Bolt
BB-211-1H-120	1.00 lb	24	Heavy Duty Mount with Standard 1/4" x 120" Bolt
BB-211-1H-130	1.00 lb	24	Heavy Duty Mount with Standard 1/4" x 130" Bolt
BB-211-1H-140	1.00 lb	24	Heavy Duty Mount with Standard 1/4" x 140" Bolt
BB-211-1H-150	1.00 lb	24	Heavy Duty Mount with Standard 1/4" x 150" Bolt
BB-211-1H-160	1.00 lb	24	Heavy Duty Mount with Standard 1/4" x 160" Bolt
BB-211-1H-170	1.00 lb	24	Heavy Duty Mount with Standard 1/4" x 170" Bolt
BB-211-1H-180	1.00 lb	24	Heavy Duty Mount with Standard 1/4" x 180" Bolt
BB-211-1H-190	1.00 lb	24	Heavy Duty Mount with Standard 1/4" x 190" Bolt
BB-211-1H-200	1.00 lb	24	Heavy Duty Mount with Standard 1/4" x 200" Bolt

**BANDED GUY ATTACHMENT WITH CLEVIS**

CATALOG #	WEIGHT EA.	STD. CARTON	DESCRIPTION
BGA-100	1.90 lb	24	Heavy Duty Clevis Attachment with Clevis
BGA-520	2.00 lb	24	Heavy Duty Clevis Attachment with Clevis
BGA-525	4.20 lb	24	Heavy Duty Clevis Attachment with Clevis

**CONDUIT AND U-GUARD STRAPS**

CATALOG #	WEIGHT EA.	STD. CARTON	DESCRIPTION
CS-1	0.7 lb	24	1" x 1" x 1/2" U-Guard Strap
CS-2	1.1 lb	24	2" x 2" x 1/2" U-Guard Strap
CS-3	1.5 lb	24	3" x 3" x 1/2" U-Guard Strap
CS-4	2.1 lb	24	4" x 4" x 1/2" U-Guard Strap
CS-5	2.8 lb	24	5" x 5" x 1/2" U-Guard Strap
CS-6	3.5 lb	24	6" x 6" x 1/2" U-Guard Strap

**BANDED SERVICE DROP ATTACHMENT**

CATALOG #	WEIGHT EA.	STD. CARTON	DESCRIPTION
BSD-25	0.25 lb	50	Banded Service Drop Attachment with Standard 1/4" x 2" Bolt

**BANDED CABLE TIE RETAINER**

CATALOG #	WEIGHT EA.	STD. CARTON	DESCRIPTION
CTR	0.10 lb	100	Banded Cable Tie Retainer for use with standard 1/4" x 1" Cable Ties

**GENERAL PURPOSE MOUNT**

CATALOG #	WEIGHT EA.	STD. CARTON	DESCRIPTION
GPM-100	0.5 lb	5	Mounting bracket with 1/4" x 2" Standard Bolt with 1/4" x 1" Spacing Hole
GPM-101	0.75 lb	5	1 1/2" x 1" Mounting bracket with 1/4" x 2" Standard Bolt
GPM-102	1.0 lb	5	1 1/2" x 1" Mounting bracket with 2.5" Spacing Hole

**TRANSFORMER MOUNTING BRACKET**

CATALOG #	WEIGHT EA.	STD. CARTON	DESCRIPTION
TMB-100	0.5 lb	5	Transformer Mounting Bracket with 1/4" x 2" Standard Bolt



LOCATION NO: 14807730  
DRAWN BY: EZG  
CHECKED BY: MM

REV	DATE	DESCRIPTION
1	12/04/2019	100% CD'S FOR SUBMITTAL
0	11/21/2019	100% CD'S FOR REVIEW
B	11/01/2019	95% CD'S FOR REVIEW
A	09/16/2019	90% CD'S FOR REVIEW

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POLE # 352221  
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8661 POWER INN RD  
ELK GROVE, CA 95624

SHEET TITLE  
**BOLT-A-BAND DETAIL**

SHEET NUMBER  
**D-3**



Typical Streetlight Pico/Micro Site

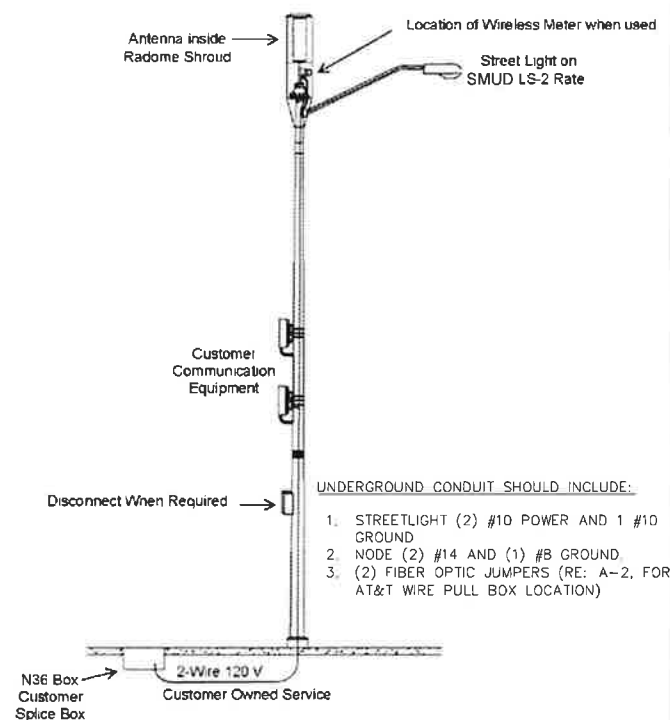


Figure 1 - Customer Owned (Non-PG&E) Steel Streetlight Pole with Antenna and Communication Equipment

STREETLIGHT POLE

24"x36" SCALE: NTS  
11"x17" SCALE: NTS

3 NOT USED

2

NOT USED

1

UNDERGROUND ELECTRIC SERVICE NOTES:

UL APPROVED SCHEDULE 40 OR 80 PVC SCHEDULE 40 PVC SHALL NOT BE USED IF THE CONDUIT IS LOCATED SO THAT IT IS SUBJECT TO PHYSICAL DAMAGE. TO AVOID CABLE INSULATION DAMAGE, THE END OF THE CONDUIT SHALL BE PROVIDED WITH A SUITABLE TERMINATION FITTING SUCH AS A BUSHING, NIPPLE, END BELL, OR CABLE PROTECTOR, ETC. NOTE: CONDUITS SHALL NOT PASS UNDER OR THROUGH ONE BUILDING TO SUPPLY ADJACENT BUILDINGS

PRIOR TO CABLE INSTALLATION, PROVE ALL CONDUITS FREE AND CLEAR BY MEANS OF A MANDREL OR OTHER METHOD ACCEPTABLE TO PG&E. A PG&E-APPROVED POLYESTER, FLAT PULLING TAPE, WHITE WITH SEQUENTIAL FOOTAGE MARKINGS EVERY FOOT, AND 2,500-POUND MINIMUM TENSILE STRENGTH (CODE 560154), SHALL BE INSTALLED IN ALL CONDUITS AND ATTACHED TO AN END CAP.

PG&E WILL FURNISH AND INSTALL THE UNDERGROUND SERVICE CONDUCTORS AND MAKE CONNECTIONS IN THE APPLICANT'S SERVICE TERMINATION ENCLOSURE.

WHEN THE INTRUSION OF WATER CAN REASONABLY BE EXPECTED, THE FOLLOWING ACTIONS ARE REQUIRED:

1) PG&E IS RESPONSIBLE FOR SEALING THE CONDUIT AT THE METER TERMINATION FACILITIES AS SHOWN IN DOCUMENT 062288. IF THE METER TERMINATION FACILITIES ARE SIGNIFICANTLY LOWER THAN THE SOURCE SIDE FACILITIES, THEN THE CONDUIT SHOULD BE SEALED AT BOTH ENDS. THE RAYFLATE DUCT SEALING SYSTEM (RDSS) CONDUIT SEALING SYSTEM CAN BE ORDERED FOR THIS PURPOSE. SEE DOCUMENT 062288.

2) THE APPLICANT IS RESPONSIBLE FOR PROVIDING A MEANS TO PREVENT THE ACCUMULATION OF EXCESS WATER OR WATER PRESSURE IN THE SERVICE CONDUIT SYSTEM. THIS IS ACCOMPLISHED BY INSTALLING A SPLICE BOX AT THE BASE OF THE RISER TO THE METER PANEL, OR AT A MAXIMUM OF 6 FEET AWAY TO THE METER PANEL ALONG THE SERVICE RUN.

MAIN SERVICE PANEL RATING (AMPS)	CONDUIT SIZE AND NUMBER	CABLES REQUIRED TO SERVE MAXIMLV LOAD			
		ALUMINUM		COPPER	
		PER PHASE	NEUTRAL	PER PHASE	NEUTRAL
100	1"-3"	1-1/0	#2	NA	NA
CONDUIT DIAMETER		VERTICAL RADIUS		HORIZONTAL	
3"		24"		36"	

ELECTRICAL SERVICE NOTES

24"x36" SCALE: NTS  
11"x17" SCALE: NTS

6 NOT USED

5

NOT USED

4



LOCATION NO: 14807730  
DRAWN BY: EZG  
CHECKED BY: MM

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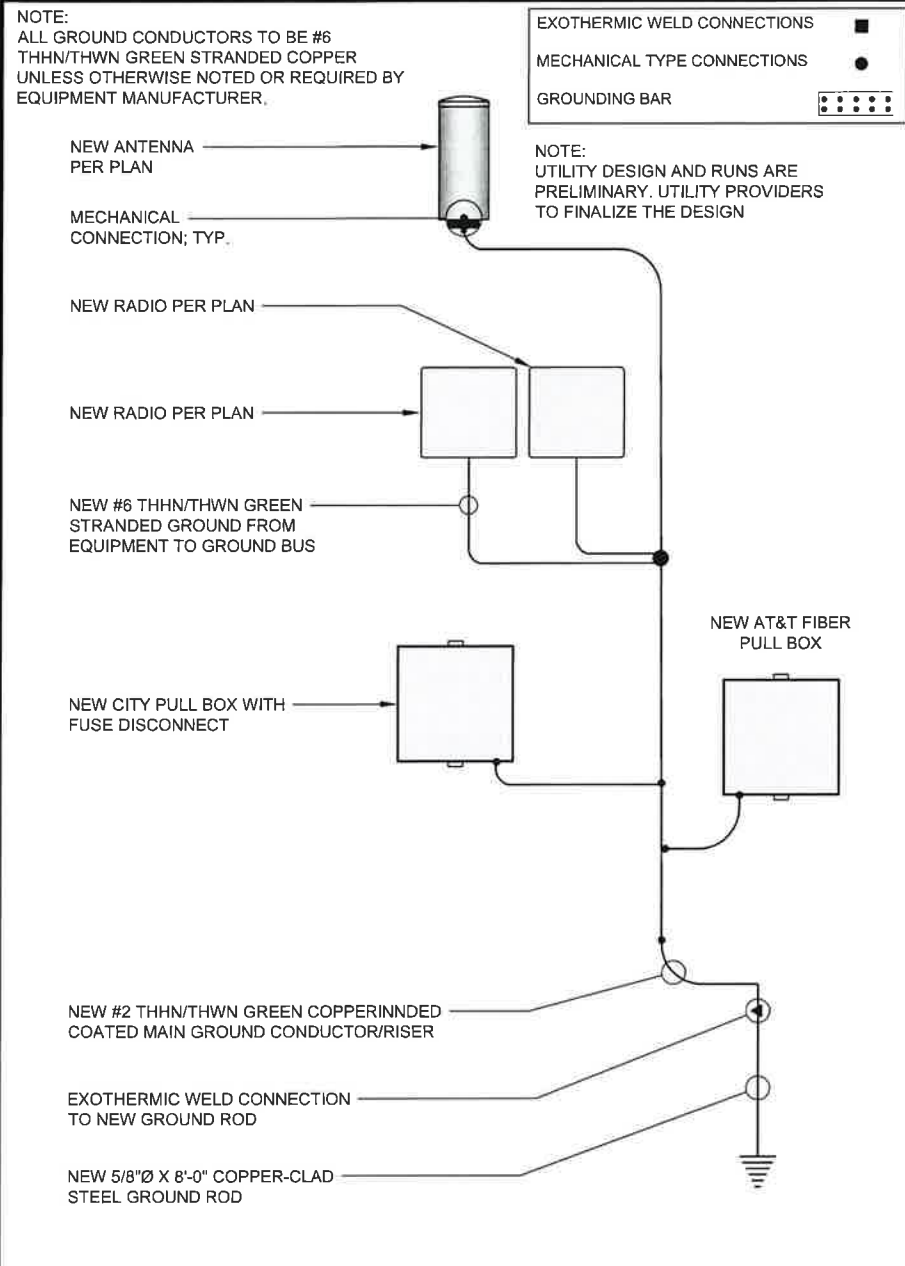
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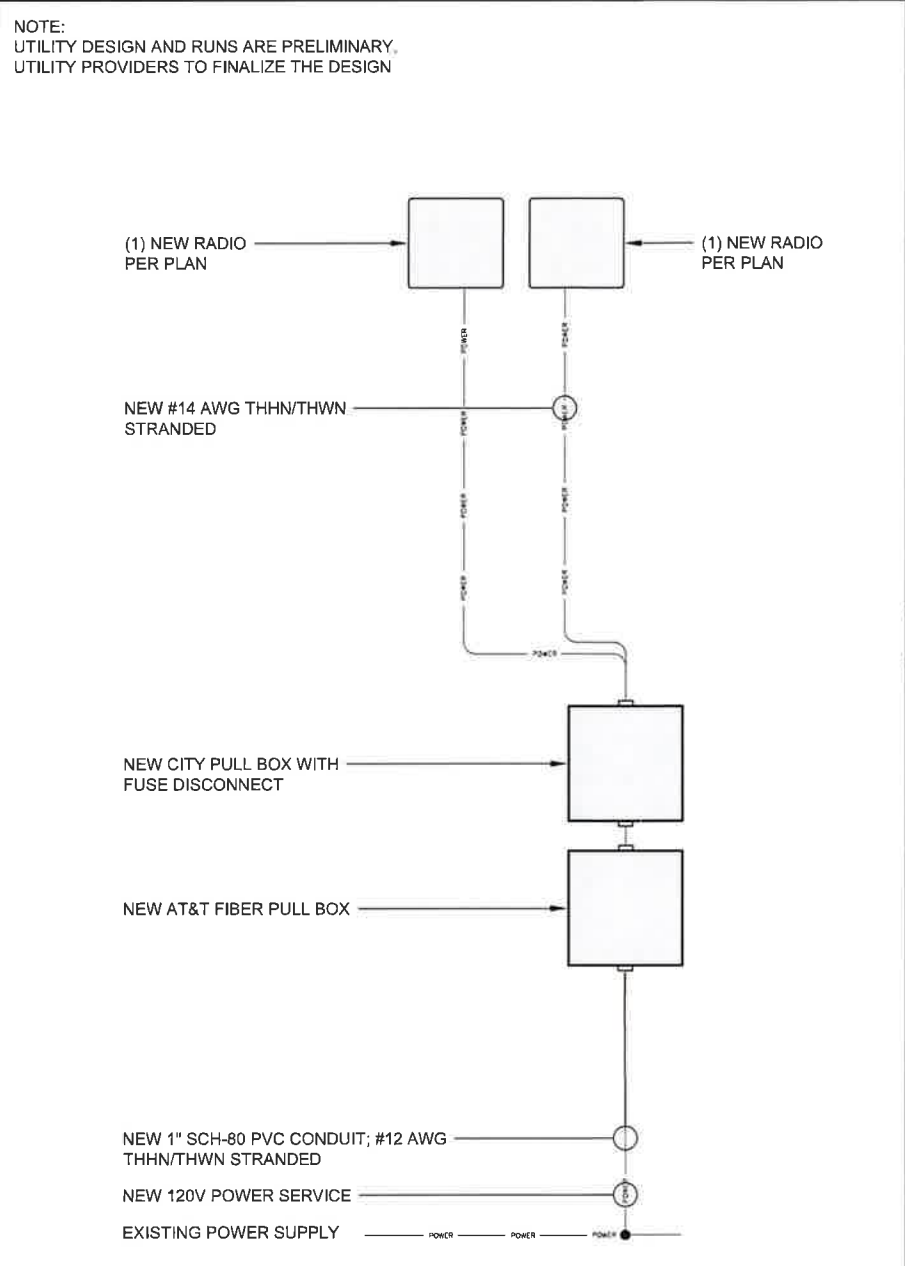
SHEET TITLE  
ELECTRICAL DETAILS

SHEET NUMBER  
E-1



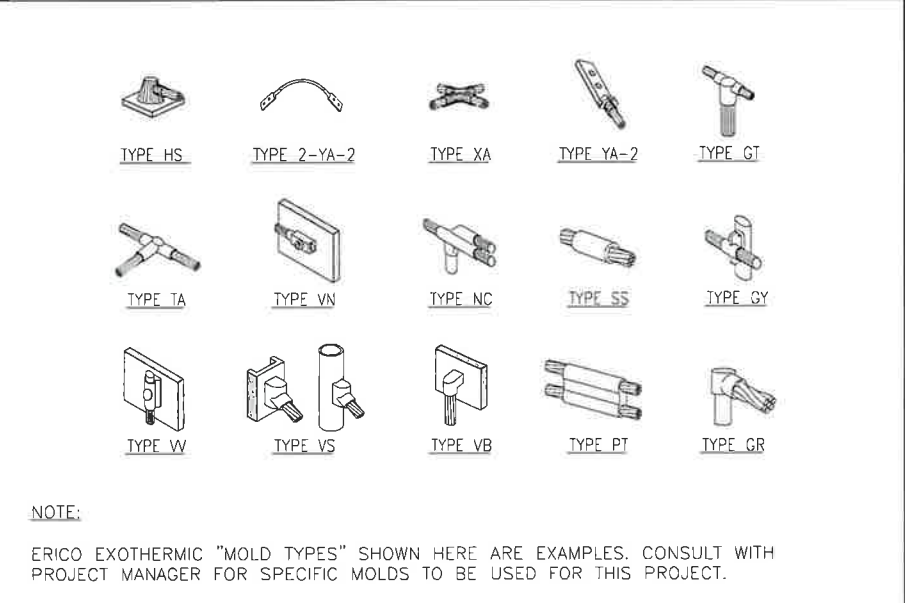


GROUNDING SCHEMATIC 24"x36" SCALE: NTS 11"x17" SCALE: NTS 6

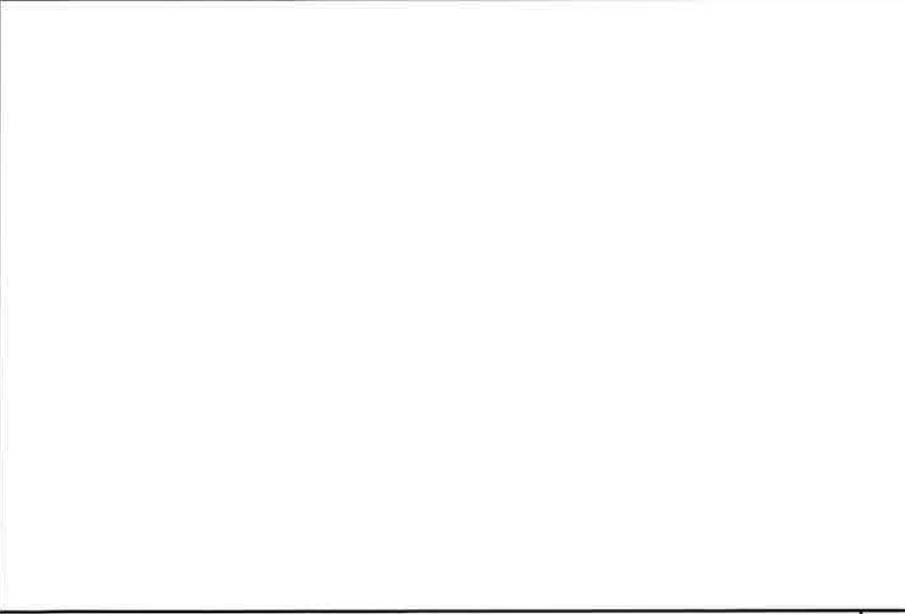


SINGLE LINE DIAGRAM 24"x36" SCALE: NTS 11"x17" SCALE: NTS 4

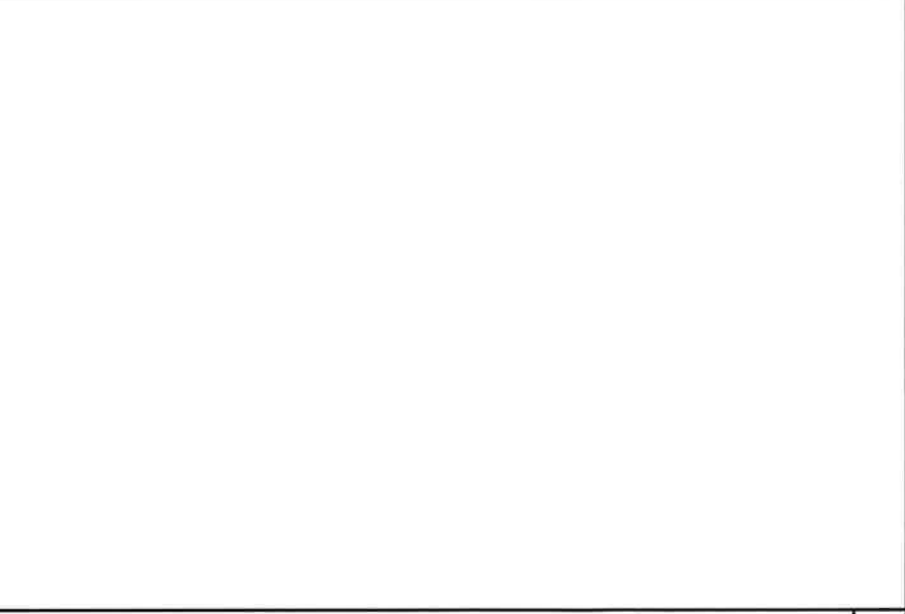
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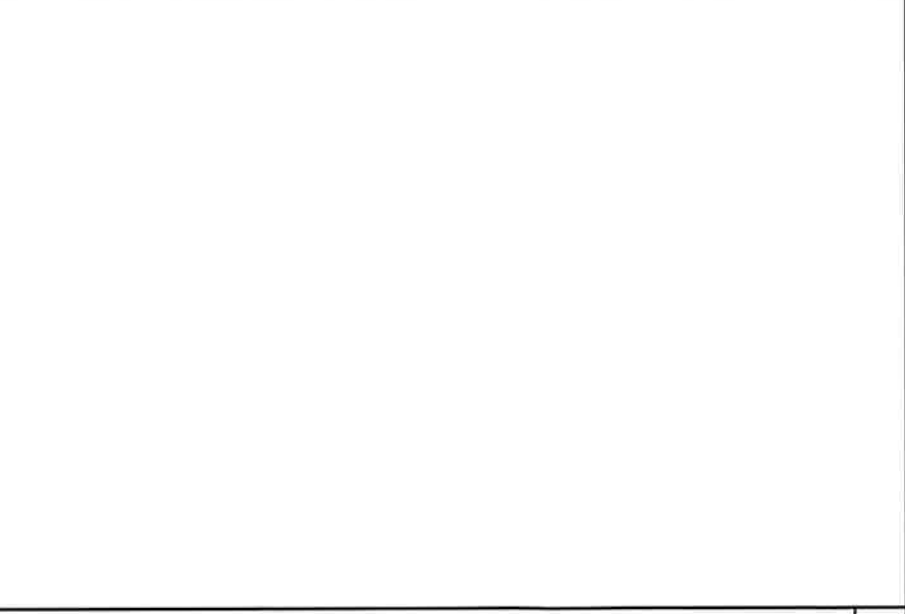
CADWELDS 24"x36" SCALE: NTS 11"x17" SCALE: NTS 2



NOT USED 7



NOT USED 5

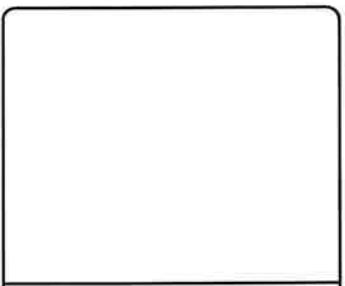


NOT USED 3



LOCATION NO:	14807730
DRAWN BY:	EZG
CHECKED BY:	MM

REV	DATE	DESCRIPTION
1	12/04/2019	100% CD'S FOR SUBMITAL
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B	11/01/2019	95% CD'S FOR REVIEW
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ELK GROVE, CA 95624

SHEET TITLE  
ELECTRICAL DETAILS

SHEET NUMBER  
E-2

MUTCD REFERENCE GUIDE:

- NOTHING ALLOWED IN THE BUFFER AND TRANSITION AREAS AT ALL TIMES.
- SIGNS ARE ONLY SHOWING TO THE PUBLIC WHEN IN USE.
- SIGNS AND CHANNELIZING DEVICES MUST BE RETROREFLECTIVE OR ILLUMINATED DURING NIGHT OPERATIONS.
- SIGN PANEL SIZES 36"x36" MIN, ON ROADS <50MPH, 48"x48" ON ROADS >50MPH.
- SIGNS ARE SPACED PER THE CA 2014 MUTCD (REVISION 2) MANUAL.
- CHANNELIZING DEVICES SPACING AND TAPER LENGTHS ARE BASED ON THEIR RESPECTIVE CHARTS.
- NOTIFY THE LOCAL LAW ENFORCEMENT, FIRE AND AMBULANCE COMPANIES WITHIN 72 HOURS BEFORE CONSTRUCTION BEGINS.
- CONTRACTOR TO MAKE SURE ALL TRAFFIC CONTROL EQUIPMENT MEETS ALL AGENCY REQUIREMENTS.
- REMOVE ALL CONFLICTING MARKINGS FOR LONG TERMS OPERATIONS (3 DAYS OR LONGER).
- THE LOCATION OF THE SIGNS AS SHOWN ON THE ILLUSTRATIONS ARE GUIDELINES AND ACTUAL LOCATIONS WILL DEPEND UPON ALIGNMENT, GRADE, LOCATIONS OF STREET INTERSECTIONS AND 85% TILE POSTED SPEED LIMITS.
- WHILE CROSSING INTERSECTIONS DURING MOBILE WORK, WORK MUST FOLLOW THE FLOW OF TRAFFIC AND PROCEED ON A GREEN LIGHT.
- FULL COMPLIANCE IS REQUIRED WITH THE CITY AGENCY.
- PEDESTRIAN ACCESS MUST BE MAINTAINED AS PER THE CA 2014 MUTCD (REVISION 2) STANDARDS AND ADA REQUIREMENTS.
- C30 SIGNS ARE PERMITTED IN BUFFER AREAS.
- SIGN SPACING IS PROVIDED IN THE CA MUTCD 2014 EDITION (REVISION 2), PART 6, TRAFFIC SPEEDS ARE BASED UPON RADAR MEASUREMENTS OF MOTORISTS. THE MUTCD ALLOWS FOR A "RANGE" IN SIGN PLACEMENT AND WILL BE PROVIDED BY DOT. THE 85% TILE IS USED WHEN AVAILABLE TO PROVIDE A MORE ACCURATE PRESENTATION OF MOTORISTS SPEEDS.
- ANY WORK WITHIN 200FT OF A SIGNALIZED INTERSECTION WILL REQUIRE CONTACT AND COORDINATION WITH CITY AGENCY PRIOR TO ANY WORK.
- QUALITY STANDARDS TO MEET REQUIREMENTS OF SECTION 1A-2 OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ALL TRAFFIC CONTROL DEVICES INCLUDING: SIGNS, BARRICADES, VERTICAL PANELS, DRUMS, WARNING LIGHTS, ARROWBOARDS, CHANGEABLE MESSAGE SIGNS, CONES AND TUBULAR MARKERS THAT MEET THE REQUIREMENTS OF AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA). CA MUTCD 2014 (REVISION 2) SHALL BE USED ON THIS PROJECT/THIS WORK.
- THE NCHRP REPORT 473 PROVIDES GUIDELINES FOR DESIGN AND OPERATION OF NIGHTTIME TRAFFIC CONTROL FOR HIGHWAY MAINTENANCE AND CONSTRUCTION. SEE TYPICAL APPLICATIONS NWT-1 THROUGH NWT-7. COMPLY WITH ANSI 107-2004 FOR APPAREL HIGHWAY CONSTRUCTION WORK LIGHTING SHALL BE PER CONSTRUCTION SAFETY ORDER 1523 - ILLUMINATIONS.
- SIDEWALKS AT THE CONSTRUCTION LOCATION MAY BE CLOSED WITH ADEQUATE DETOURS, SIDEWALKS MAY ONLY BE CLOSED TO THROUGH TRAFFIC AND SHALL NOT PREVENT LOCAL PEDESTRIANS ACCESS. DETOURS SHALL NOT INCREASE THE PATH OF TRAVEL BY MORE THAN 500FT. DETOUR ROUTES SHALL BE LIMITED TO EXISTING SIDEWALKS, PRIVATE PROPERTIES (SEE BELOW REQUIREMENTS) AND CROSSINGS AT ROADWAY INTERSECTIONS. TO THE MAXIMUM EXTENT FEASIBLE, THE ALTERNATE CIRCULATION PATH SHALL BE PROVIDED ON THE SAME SIDE OF THE STREET AS THE DISRUPTED ROUTE. WHERE IT IS FEASIBLE TO PROVIDE A SAME-SIDE ALTERNATE CIRCULATION PATH AND PEDESTRIANS WILL BE DETOURED, SECTION 60.02 OF THE CA 2014 MUTCD (REVISION 2) SPECIFIES THAT THE ALTERNATE PATH PROVIDE A SIMILAR LEVEL OF ACCESSIBILITY TO THEAT OF THE EXISTING DISRUPTED ROUTE. THIS MAY INCLUDE THE INCORPORATION OF ACCESSIBLE PEDESTRIAN SIGNS (APS), CURB RAMPS, OR OTHERS ACCESSIBILITY FEATURES.
- PEDESTRIANS MAY BE DETOURED ONTO PRIVATE PROPERTY ONLY IF WRITTEN PERMISSION FROM THE PROPERTY WONDER IS OBTAINED ALONG WITH DOCUMENTATION INDICATING THAT THE CITY WOULD NOT BE LIABLE (HOLD HARMLESS) IN THE EVENT OF AN ACCIDENT.
- DURING WORK HOURS, AT LEAST ONE WORKER SHALL BE ASSIGNED THE RESPONSIBILITY TO ESCORT ELDERLY, DISABLED OR ANY OTHER PEDESTRIANS IN NEED OF ASSISTANCE THROUGH THE CONSTRUCTION SITE. A WORKER ASSIGNED WITH THIS RESPONSIBILITY MAY ALSO PARTICIPATE IN OTHER CONSTRUCTION ACTIVITIES; HOWEVER, THE ASSIGNED WORKER SHALL BE AWARE OF HIS OR HERS RESPONSIBILITIES FOR PROVIDING THIS ASSISTANCE. MEASURES THAT SIMPLY CLOSE THE SIDEWALK, WITH THE EXCEPTION THAT PEDESTRIANS WILL CROSS SOMEWHERE ELSE DOES NOT ADEQUATELY SATISFY PEDESTRIAN ACCESS. PEDESTRIANS SHOULD NEVER BE DIRECTED/EXPECTED TO CROSS A MULTILANE ROADWAY AT ANY LOCATION OTHER THAN AT A SIGNAL (OR ALL-WAY STOP). ACCOMMODATIONS SHOULD BE MADE ON THE SAME SIDE OF ROADWAY AS WORK.

TRAFFIC CONTROL NOTES:

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR PERFORMING WORK ON A PUBLIC STREET TO INSTALL AND MAINTAIN THE TRAFFIC CONTROL DEVICES AS SHOWN HEREIN, AS WELL AS ANY ADDITIONAL TRAFFIC CONTROL DEVICES THAT MAY BE REQUIRED TO INSURE THE SAFE MOVEMENT OF TRAFFIC AND PEDESTRIANS THROUGH OR AROUND THE WORK AREA AND PROVIDE MAXIMUM PROTECTION AND SAFETY TO CONSTRUCTION WORKERS.
- ALL DELINEATORS SHALL BE EQUIPPED WITH REFLECTORS AT NIGHT TIME.
- THE CONTRACTOR SHALL NOTIFY THE CITY/COUNTY OF RECORD AND CALTRANS PERMIT INSPECTOR AT LEAST FIVE WORKING DAYS IN ADVANCE OF IMPLEMENTING ANY CONSTRUCTION DETOUR.
- ALL SIGNS, DELINEATORS, BARRICADES, ETC. AND THEIR INSTALLATION SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION) AND THE MUTCD CALIFORNIA SUPPLEMENT, STATE OF CALIFORNIA STANDARD SPECIFICATIONS, SPECIAL PROVISIONS, AND STAMPED PLANS.
- THE CITY/COUNTY OF RECORD AND CALTRANS RESERVE THE RIGHT TO OBSERVE THESE TRAFFIC CONTROL PLANS IN USE AND TO MAKE ANY NECESSARY CHANGES AS FIELD CONDITIONS WARRANT. ANY CHANGES SHALL SUPERSEDE THESE PLANS. EXACT LOCATION OF ALL EQUIPMENT AND TRAFFIC CONTROL DEVICES SHALL BE DETERMINED BY THE ENGINEER.
- ALL TRAFFIC CONTROL DEVICES, STRIPES, MARKINGS, LEGENDS AND RAISED PAVEMENT MARKERS SHALL CONFORM TO THE MUTCD AND THE CALIFORNIA SUPPLEMENT (LATEST EDITION), THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS (LATEST EDITION), SPECIAL PROVISIONS, AND STAMPED PLANS.
- ALL TRAFFIC CONTROL DEVICES SHALL BE KEPT IN THEIR POSITION AT ALL TIMES AND SHALL BE REPAIRED, REPLACED OR CLEANED AS NECESSARY TO PRESERVE THEIR APPEARANCE AND CONTINUITY.
- ALL TRAFFIC LANES SHALL HAVE A MINIMUM OF 5 FEET CLEARANCE FROM OPEN EXCAVATIONS AND A MINIMUM OF 2 FEET FROM VERTICAL OBSTRUCTIONS.
- CONTRACTOR SHALL PROVIDE FLAGGERS AS DEEMED NECESSARY BY THE CITY/COUNTY INSPECTOR OR CALTRANS PERMIT INSPECTOR.
- ALL ADVANCE WARNING SIGNS SHALL BE EQUIPPED WITH FLAGS.
- TRAFFIC SIGNALS SHALL REMAIN IN OPERATION AT ALL TIMES. SIGNAL OPERATION DURING EACH CONSTRUCTION PHASE SHALL BE COORDINATED WITH AND APPROVED BY THE CITY/COUNTY OF RECORD AND/OR CALTRANS INSPECTOR.
- PLACE ADDITIONAL "LANE CLOSED", (C30) SIGNS ON TYPE II BARRICADES AT 100 FOOT INTERVALS THROUGHOUT EXTENDED WORK AREAS IN EACH LANE THAT IS CLOSED, INSTALL "OPEN TRENCH" (C27) SIGNS WHENEVER AN OPEN EXCAVATION AREA EXISTS ADJACENT TO THE TRAVELED WAY.
- ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE REMOVED FOLLOWING COMPLETION OF EACH CONSTRUCTION STAGE AND THE PERMANENT TRAFFIC CONTROL DEVICES SHALL BE RESTORED BY THE CONTRACTOR UPON COMPLETION OF PROJECT.
- CONTRACTOR SHALL REPLACE/REPAIR ALL DAMAGED STRIPING AT THE END OF EACH WORKING DAY.
- CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN DISABILITY ACT AS RELATED TO PEDESTRIAN ACCESS AND SHALL MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES PER ADA REQUIREMENTS. SIDEWALK CLOSURE/DETOUR SHALL COMPLY WITH THE WATCH STANDARDS AND MUST OBTAIN APPROVAL FROM THE CITY/COUNTY OF RECORD.
- CONTRACTOR SHALL COVER OR REMOVE ALL CONFLICTING SIGNS.
- CONTRACTOR SHALL POST "SYMBOL" UNEVEN LANES, "STEEL PLATES AHEAD" OR "BUMP" SIGNS FOR PAVEMENT SURFACE DISRUPTIONS OF 1/2" OR GREATER. PAVEMENT DISRUPTIONS FOR 1" OR GREATER SHALL HAVE A BEVELED EDGE OF FOUR (4) HORIZONTAL TO ONE (1) VERTICAL.
- CONTRACTOR SHALL INSTALL "CAUTION STEEL PLATES AHEAD" AND/OR "ROUGH ROAD" SIGNS IN ADVANCE OF STEEL PLATE BRIDGING.
- CONTRACTOR SHALL VERIFY ALL NECESSARY EQUIPMENT NEEDED FOR OVERHEAD CONSTRUCTION PRIOR TO THE START OF CONSTRUCTION.
- WORK HOURS SHALL COMPLY WITH CITY OF ELK GROVE CONSTRUCTION CODE AND SCC CHAPTER 10.16 TRAFFIC CONTROL DEVICES.
- RESIDENTS TO BE NOTIFIED OF DATES AND TIMES OF CONSTRUCTIONS TWO (2) WEEKS PRIOR TO THE START OF WORK.
- A 5'-0" MIN. PEDESTRIAN CLEARANCE TO BE MAINTAINED AT EXISTING SIDEWALKS.
- POSTED SPEED 30MPH ON POWER INN RD

Posted Speed	Formula	Buffer Space	Minimum Taper Lengths									Maximum *Cone Spacing		Sign Spacing △	LIDG (Ft) △
			L			1/2 L			1/3 L			L	1/2 L		
			L	1/2 L	1/3 L	L	1/2 L	1/3 L	L	1/2 L	1/3 L				
25	L = WS <sup>2</sup> 60	155'	104'	52'	35'	115'	57'	38'	125'	63'	42'	25'	13'	100' To 200'	94'
30		200'	150'	75'	50'	165'	83'	55'	180'	90'	60'	30'	15'	120' To 250'	113'
35		250'	204'	102'	68'	225'	112'	75'	245'	123'	82'	35'	18'	140' To 280'	131'
40		305'	267'	133'	89'	293'	147'	98'	320'	160'	107'	40'	20'	160' To 320'	150'
45	L = WS	360'	450'	225'	150'	495'	248'	165'	540'	270'	180'	45'	23'	360' To 540'	169'
50		425'	500'	250'	167'	550'	275'	183'	600'	300'	200'	50'	25'	400' To 600'	197'
55		495'	550'	275'	183'	605'	303'	202'	660'	330'	220'	50'	28'	440' To 660'	210'
60		570'	600'	300'	200'	660'	330'	220'	720'	360'	240'	50'	30'	480' To 720'	225'
65		645'	650'	325'	217'	715'	358'	238'	780'	390'	260'	50'	33'	520' To 700'	244'
70		730'	700'	350'	233'	770'	385'	257'	840'	420'	280'	50'	35'	560' To 820'	263'



LOCATION NO:	14807730
DRAWN BY:	EZG
CHECKED BY:	MM

REV	DATE	DESCRIPTION
1	12/04/2019	100% CD'S FOR SUBMITAL
0	11/21/2019	100% CD'S FOR REVIEW
B	11/01/2019	95% CD'S FOR REVIEW
A	09/16/2019	90% CD'S FOR REVIEW

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT

CRAN\_RSFR\_SAC01\_017

POLE # 352221  
IN THE PUBLIC R.O.W.  
8661 POWER INN RD  
ELK GROVE, CA 95624

SHEET TITLE  
TRAFFIC CONTROL  
PLAN NOTES

SHEET NUMBER  
**TCP-1**

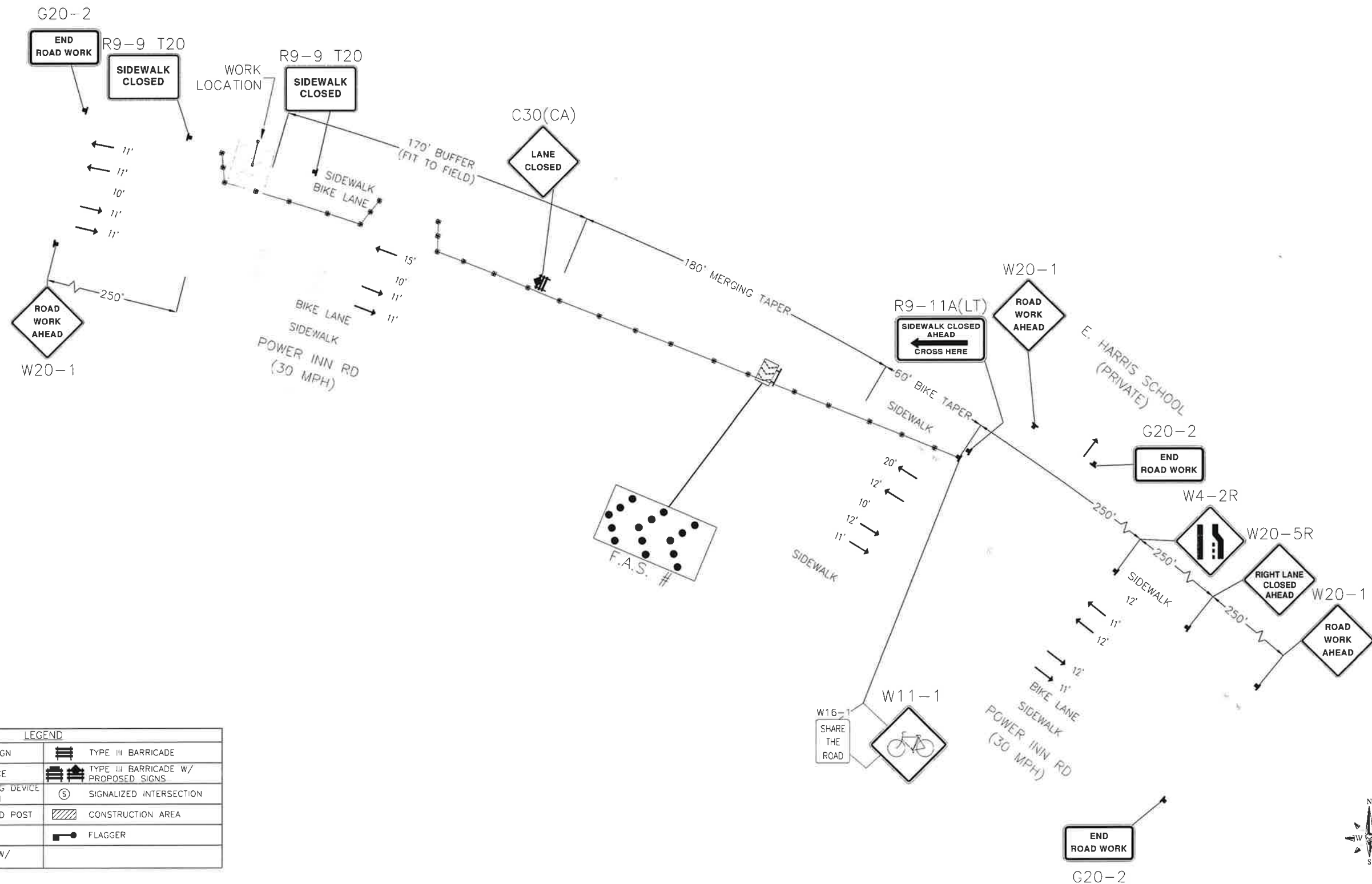
NOTE:  
ALL TRAFFIC CONTROL SHALL COMPLY WITH ALL CITY OF ELK GROVE REQUIREMENTS. SEE ATTACHED MUTCD REFERENCE GUIDE FOR INFORMATION ON SIGN SPACING, LOCATION, OF CONSTRUCTION SIGNAGE, FLAGGERS, AND CHANNELING DEVICES.

ALLOWABLE WORKING HOURS  
M-F: 8:30AM - 3:30PM  
SAT: 7:00AM - 5:00PM

NOTE:  
CONTRACTOR TO PROVIDE PEDESTRIAN ESCORT

NOTE:  
MAINTAIN ACCESS TO R/T BUS STOPS OR COORDINATE WITH R/T TO RELOCATE BUS STOP LOCATIONS. CONTRACTOR SHALL COORDINATE THE BUS STOP WITH R/T REPRESENTATIVE. (916) 321-2800

\*POST TEMPORARY NO PARKING SIGN ON TYPE BARRICADE 72 HRS IN ADVANCED.  
TRAFFIC CONTROL TO BE ARRANGED 72 HOURS IN ADVANCE OF CONSTRUCTION



LEGEND			
	FLASHING ARROW SIGN		TYPE III BARRICADE
	CHANNELIZING DEVICE		TYPE III BARRICADE W/ PROPOSED SIGNS
	HIGH LEVEL WARNING DEVICE W/ PROPOSED SIGN		SIGNALIZED INTERSECTION
	PROPOSED SIGN AND POST		CONSTRUCTION AREA
	TYPE I BARRICADE		FLAGGER
	TYPE I BARRICADE W/ PROPOSED SIGNS		



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SHEET TITLE  
TRAFFIC CONTROL PLAN

SHEET NUMBER  
**TCP-2**