

# TESLA



## SUPERCHARGING STATION

OLEMA

CA123\_OLEMA  
10005 COASTAL HIGHWAY  
OLEMA, CA 94950

RECEIVED

MAR 21 2019

COUNTY OF MARIN  
COMMUNITY DEVELOPMENT AGENCY  
PLANNING DIVISION



3500 DEER CREEK RD  
PALO ALTO, CA 94304  
(650) 681-5000

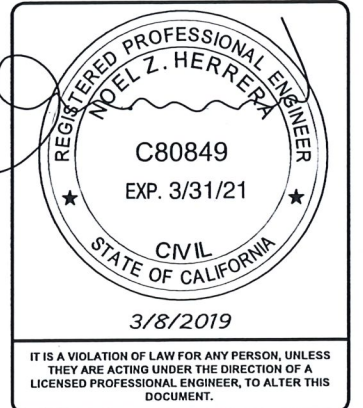


BLACK & VEATCH

6800 W 115th St, Suite 2292  
OVERLAND PARK, KS 66211  
(913) 458-2000

PROJECT NO: 192745  
DRAWN BY: AKJ  
CHECKED BY: CNS

REV	DATE	DESCRIPTION
1	03/08/19	ISSUED FOR CONSTRUCTION
0	11/07/18	ISSUED FOR PERMITTING



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.

CA123\_OLEMA  
OLEMA  
10005 COASTAL HIGHWAY  
OLEMA, CA 94950

SHEET TITLE  
TITLE SHEET &  
PROJECT DATA

SHEET NUMBER  
T-1

### SITE INFORMATION

**PROPOSED TESLA EV SITE ADDRESS:**  
TBD

**EXISTING SITE ADDRESS:**  
10005 COASTAL HIGHWAY  
OLEMA, CA 94950

**PROPERTY OWNER:**  
MARTIN SACKS/ PROPRIETOR  
1350 HOLIDAY LANE  
FAIRFIELD, CA 94534  
(415) 672-4647

**EQUIPMENT SUPPLIER:**  
TESLA MOTORS, INC.  
3500 DEER CREEK RD  
PALO ALTO, CA 94304  
(650) 681-5000

**POWER COMPANY:**  
PG&E  
CONTACT: MARK ANDERSON  
(925) 459-8052

**COUNTY:**  
MARIN

**LATITUDE (NAD83):**  
38° 2' 24.80" N  
38.04022°

**LONGITUDE (NAD83):**  
122° 47' 18.40" W  
-122.78844°

**CONTACT ENGINEER:**  
RUSSELL POLLOM  
(913) 458-6274  
POLLOMRE@BV.COM

### FLOOD HAZARD AREA NOTE

THIS SITE IS LOCATED IN FLOOD ZONE "X".  
NO BASE FLOOD ELEVATION.  
AREA DETERMINED TO BE OUTSIDE 500-YEAR  
FLOOD PLAIN.

### CONTRACTOR NOTE

CONTRACTOR SHALL COMPLETE INSTALL PER  
THE SIGNED AND SEALED SET OF DRAWINGS.  
ANY NECESSARY DEVIATIONS FROM THE  
DRAWINGS MUST BE SUBMITTED THROUGH AN  
RFI REQUEST PROCESS WITH ENGINEERING  
FOR AN APPROVAL PRIOR TO CONTRACTOR  
PROCEEDING WITH A DEVIATION OF THE  
SIGNED AND SEALED SET OF DRAWINGS.

### APPLICABLE CODES

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

- 2016 CALIFORNIA BUILDING CODE
- 2016 CALIFORNIA ELECTRICAL CODE
- 2016 CALIFORNIA MECHANICAL CODE
- 2016 CALIFORNIA PLUMBING CODE
- 2016 CALIFORNIA FIRE CODE
- 2016 CALIFORNIA ENERGY CODE

IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL

### PROJECT DESCRIPTION

- INSTALL (3) TESLA SUPERCHARGER CABINETS
- INSTALL (6) TESLA CHARGING STATIONS
- INSTALL (1) QED SWITCHGEAR ASSEMBLY
- INSTALL (1) UTILITY TRANSFORMER
- INSTALL (1) PEDESTRIAN LIGHT POLE AND FIXTURE(S)
- INSTALL (3) AUTOTRANSFORMERS
- INSTALL (1) LEVEL 2 CHARGER
- INSTALL (1) STEPDOWN TRANSFORMER
- INSTALL (1) DISTRIBUTION PANELBOARD

### ZONING INFORMATION

PERMITTING JURISDICTION: COUNTY OF MARIN PLANNING DEPARTMENT

ZONING CLASS: C-VCR

### DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS,  
EXISTING DIMENSIONS & CONDITIONS ON THE  
JOB SITE & SHALL IMMEDIATELY NOTIFY THE  
ENGINEER IN WRITING OF ANY DISCREPANCIES  
BEFORE PROCEEDING WITH THE WORK.

11"x17" PLOT WILL BE HALF SCALE UNLESS NOTED

### DRAWING INDEX

SHEET NO:	SHEET TITLE	REV NO:
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E-3	ELECTRICAL DETAILS	1
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D-1	INSTALLATION DETAILS	1
D-2	INSTALLATION DETAILS	1
D-3	INSTALLATION DETAILS	1
D-4	INSTALLATION DETAILS	1
LS-1	LANDSCAPING PLAN, DETAILS & PLANT SCHEDULE	1
GN-1	GENERAL NOTES 1	0
GN-2	GENERAL NOTES 2	1
GN-3	GENERAL NOTES 3	1

### FOR REFERENCE ONLY

QED SWITCHGEAR ASSEMBLY	
-------------------------	--

### ENGINEER OF RECORD

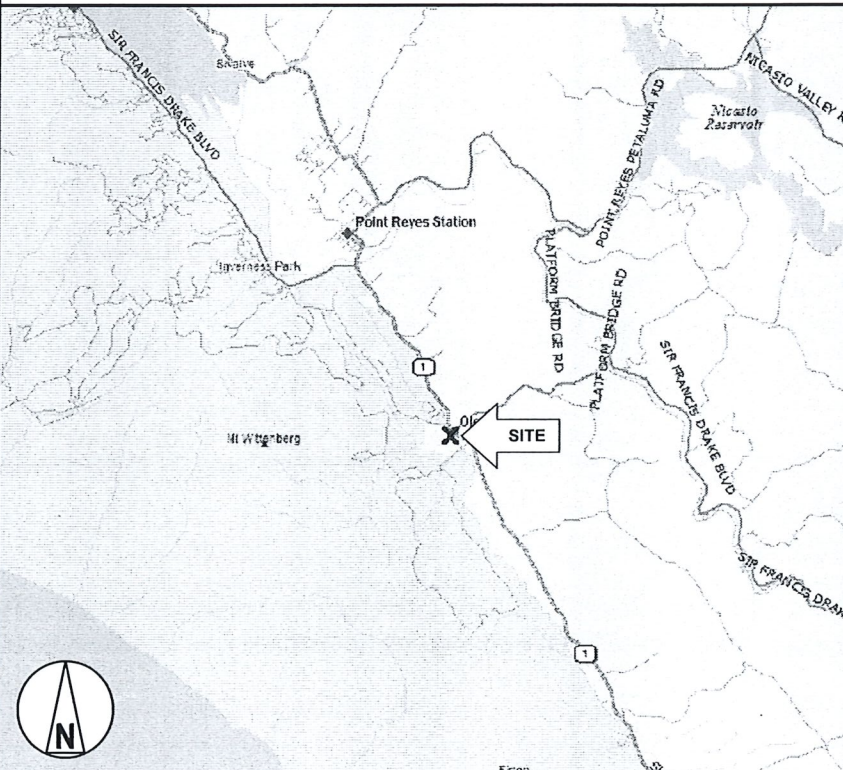
NOEL HERRERA  
PE # C 80849  
BLACK & VEATCH CORPORATION

### CALL BEFORE YOU DIG

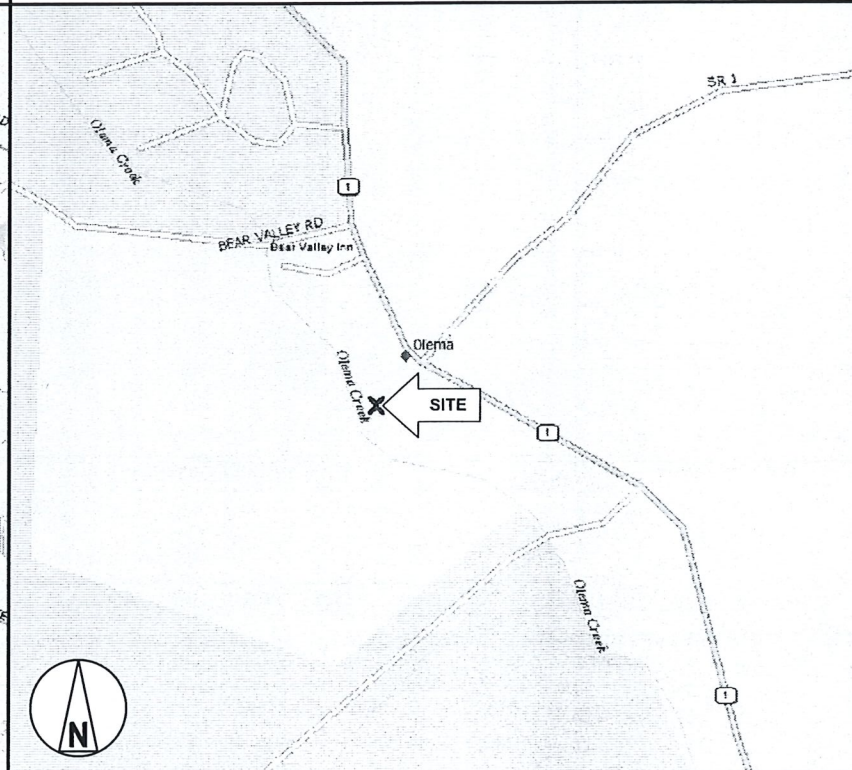
UNDERGROUND SERVICE ALERT  
UTILITY NOTIFICATION CENTER OF CALIFORNIA  
811 OR 1-800-642-2444

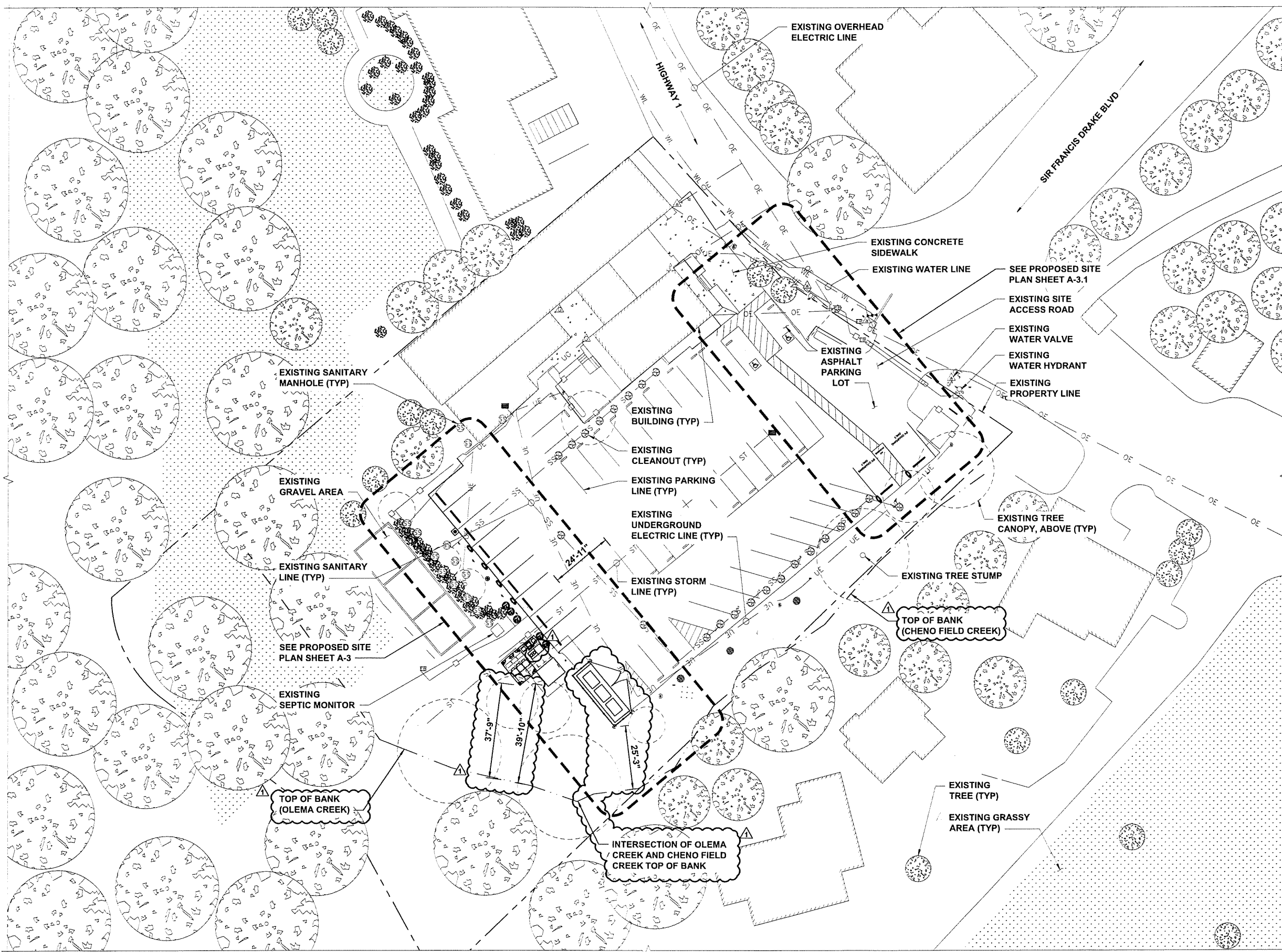
3 WORKING DAYS UTILITY NOTIFICATION PRIOR TO CONSTRUCTION

### AREA MAP



### LOCATION MAP





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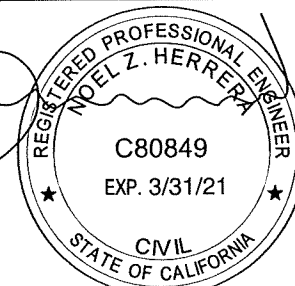


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3/8/2019

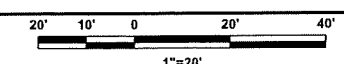
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CA123, OLEMA  
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OLEMA, CA 94950

SHEET TITLE  
**OVERALL SITE PLAN**

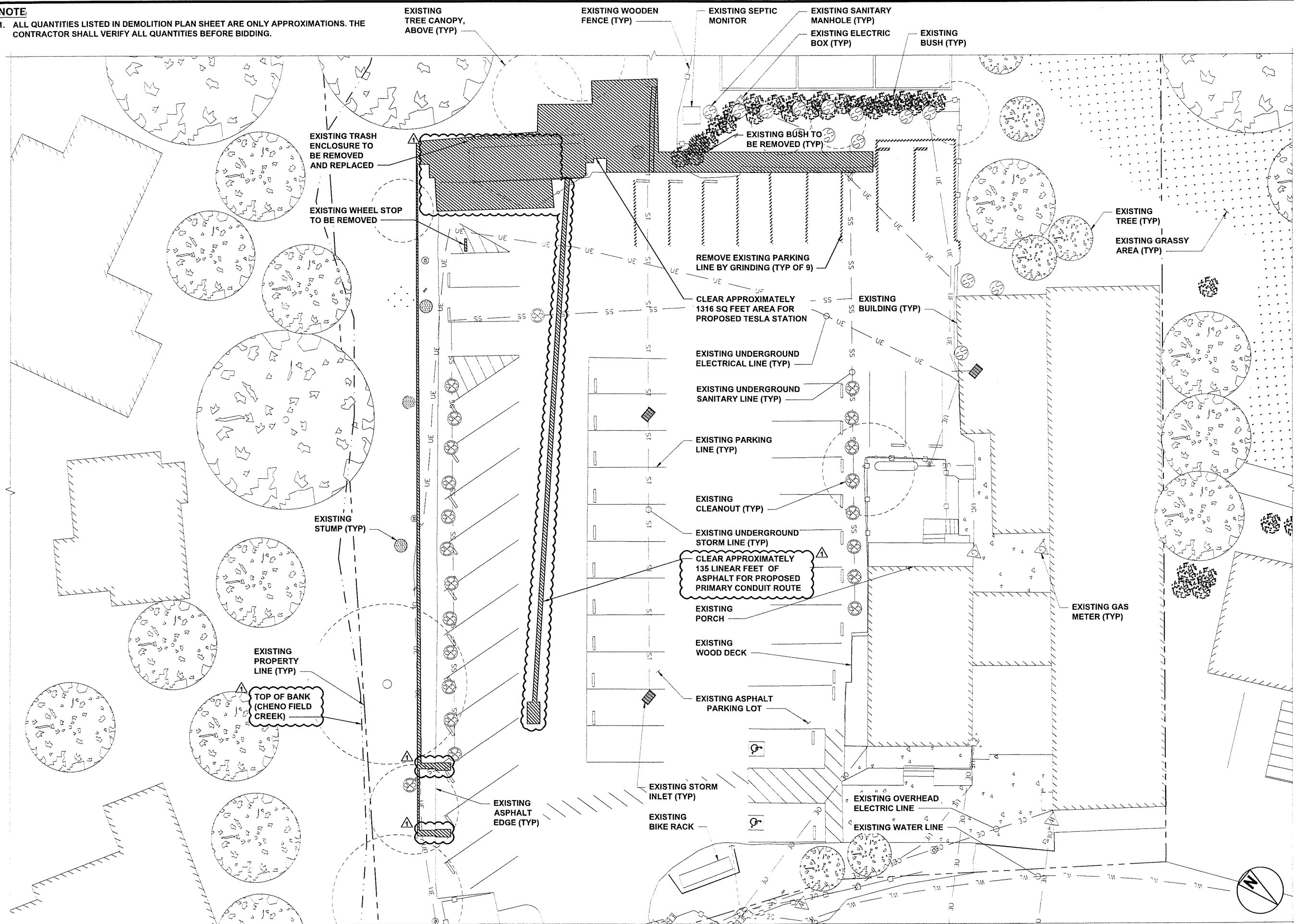
SHEET NUMBER  
**A-1**

OVERALL SITE PLAN



**NOTE**

1. ALL QUANTITIES LISTED IN DEMOLITION PLAN SHEET ARE ONLY APPROXIMATIONS. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES BEFORE BIDDING.



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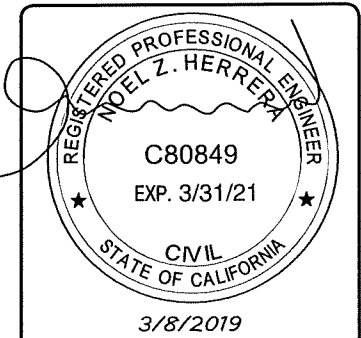


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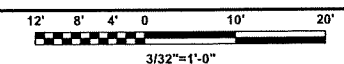
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SHEET TITLE  
**DEMOLITION SITE PLAN**

SHEET NUMBER  
**A-2**

DEMOLITION SITE PLAN




**NOTES**

- SOD PLANTED IN THE FALL MUST ESTABLISH ITS ROOTS BEFORE THE FIRST WINTER FROST. DETERMINE WHEN THE FIRST FROST USUALLY OCCURS, AND PLANT THE SOD NO LATER THAN ONE MONTH BEFORE THE FIRST FROST. IF THE CONSTRUCTION IS FINISHED LATER THAN ONE MONTH BEFORE THE FIRST FROST, USE STRAW UNTIL SOD CAN BE INSTALLED.
- FOR SIGNAGE INFORMATION SEE SHEET A-5.
- DEMO OR PLACE ASPHALT TO MEET DIMENSIONS PROVIDED.
- PRECAST FOUNDATION PART NUMBER AND DIMENSIONS SHALL BE VERIFIED WITH TESLA SUPPLIER PRIOR TO BIDDING OR ORDERING.

PROJECT AREA STALL COUNT	
EXISTING STALL COUNT	8
PROPOSED TESLA CHARGING STALLS	7
STALL LOSS	1

TESLA EQUIPMENT SCHEDULE			
TESLA EQUIPMENT	DESCRIPTION	PART NUMBER	QUANTITY
SUPERCHARGER CABINETS	GEN 2 L-N SUPERCHARGER	1033026-04-6	3
SUPERCHARGING POST	GEN 2	1133419-11-A	6
SC CABINET CONCRETE BASE	VER 1	SEE NOTE 4	3
SC CABINET METAL RACK	VER 1	SEE NOTE 4	3




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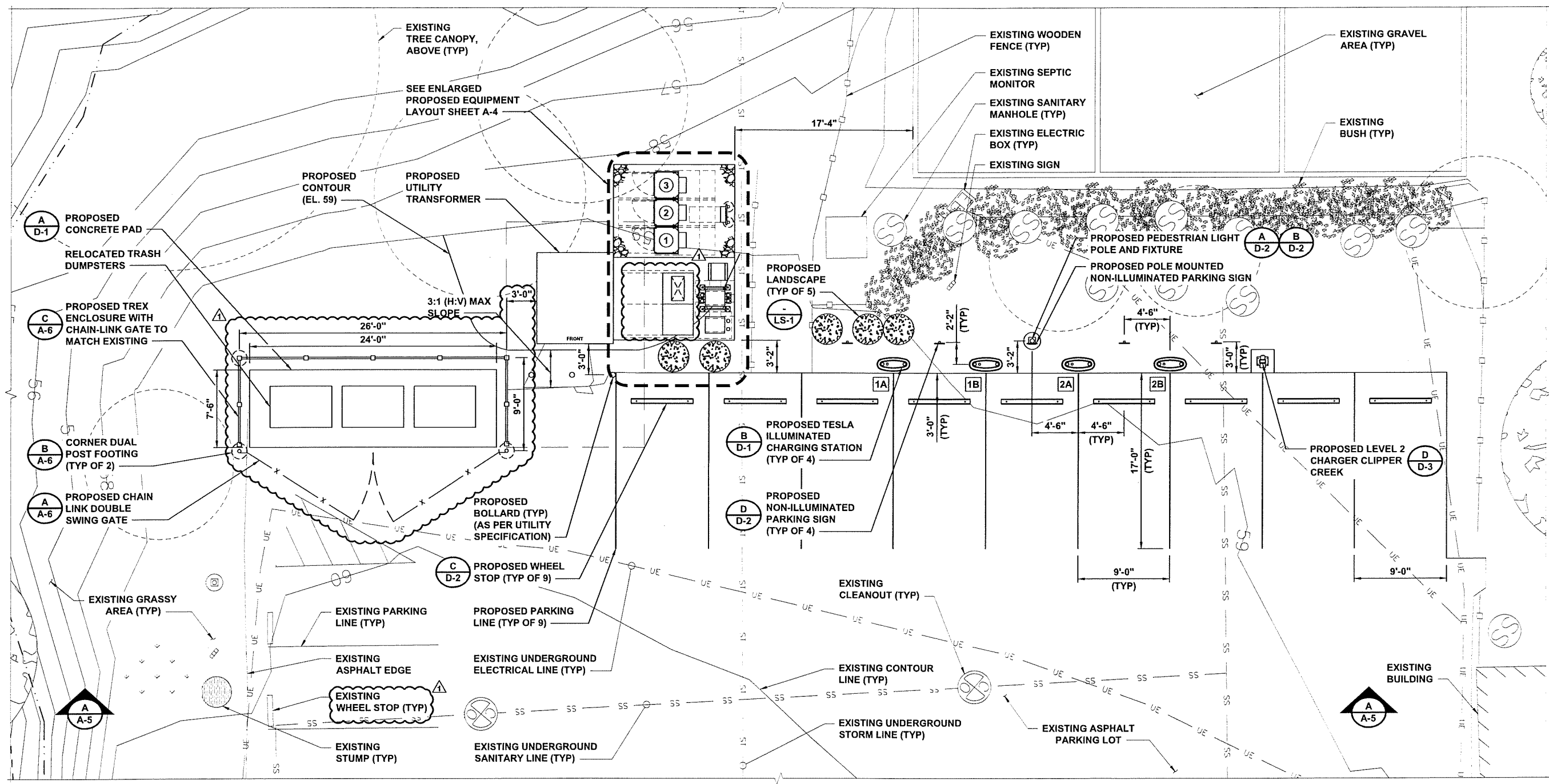
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SHEET TITLE  
**PROPOSED SITE PLAN**

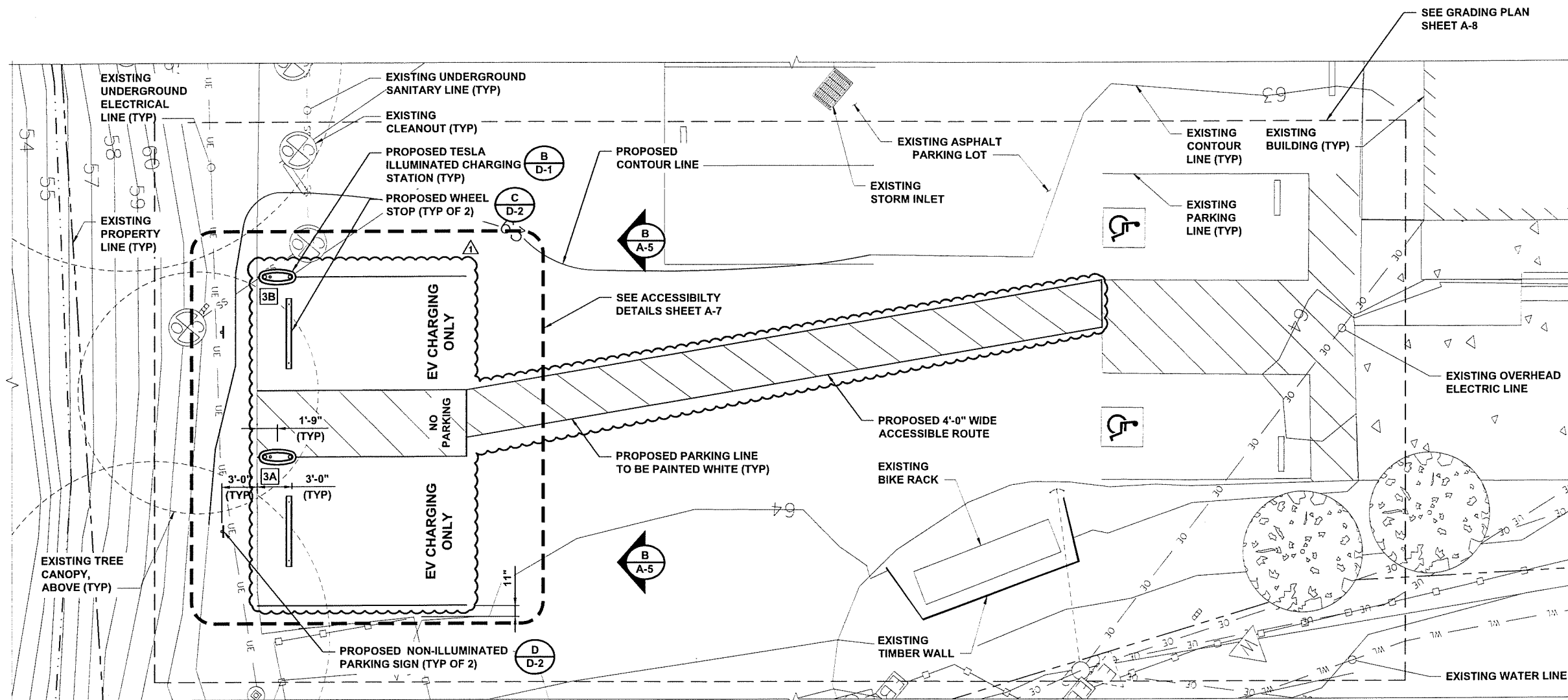
SHEET NUMBER  
**A-3**



PROPOSED SITE PLAN

**NOTES**

1. SOD PLANTED IN THE FALL MUST ESTABLISH ITS ROOTS BEFORE THE FIRST WINTER FROST. DETERMINE WHEN THE FIRST FROST USUALLY OCCURS, AND PLANT THE SOD NO LATER THAN ONE MONTH BEFORE THE FIRST FROST. IF THE CONSTRUCTION IS FINISHED LATER THAN ONE MONTH BEFORE THE FIRST FROST, USE STRAW UNTIL SOD CAN BE INSTALLED.
2. FOR SIGNAGE INFORMATION SEE SHEET A-5.
3. DEMO OR PLACE ASPHALT TO MEET DIMENSIONS PROVIDED.
4. PROPOSED ADA STALLS SHALL BE 2% MAX SLOPE IN ALL DIRECTIONS. SLIGHT REGRADING MAY BE REQUIRED.



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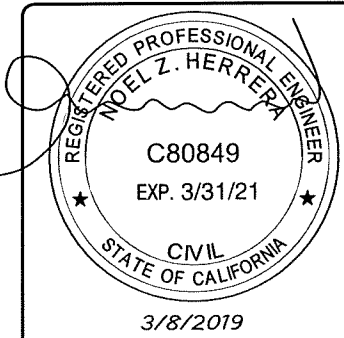


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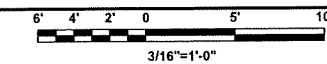
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**PROPOSED SITE PLAN**

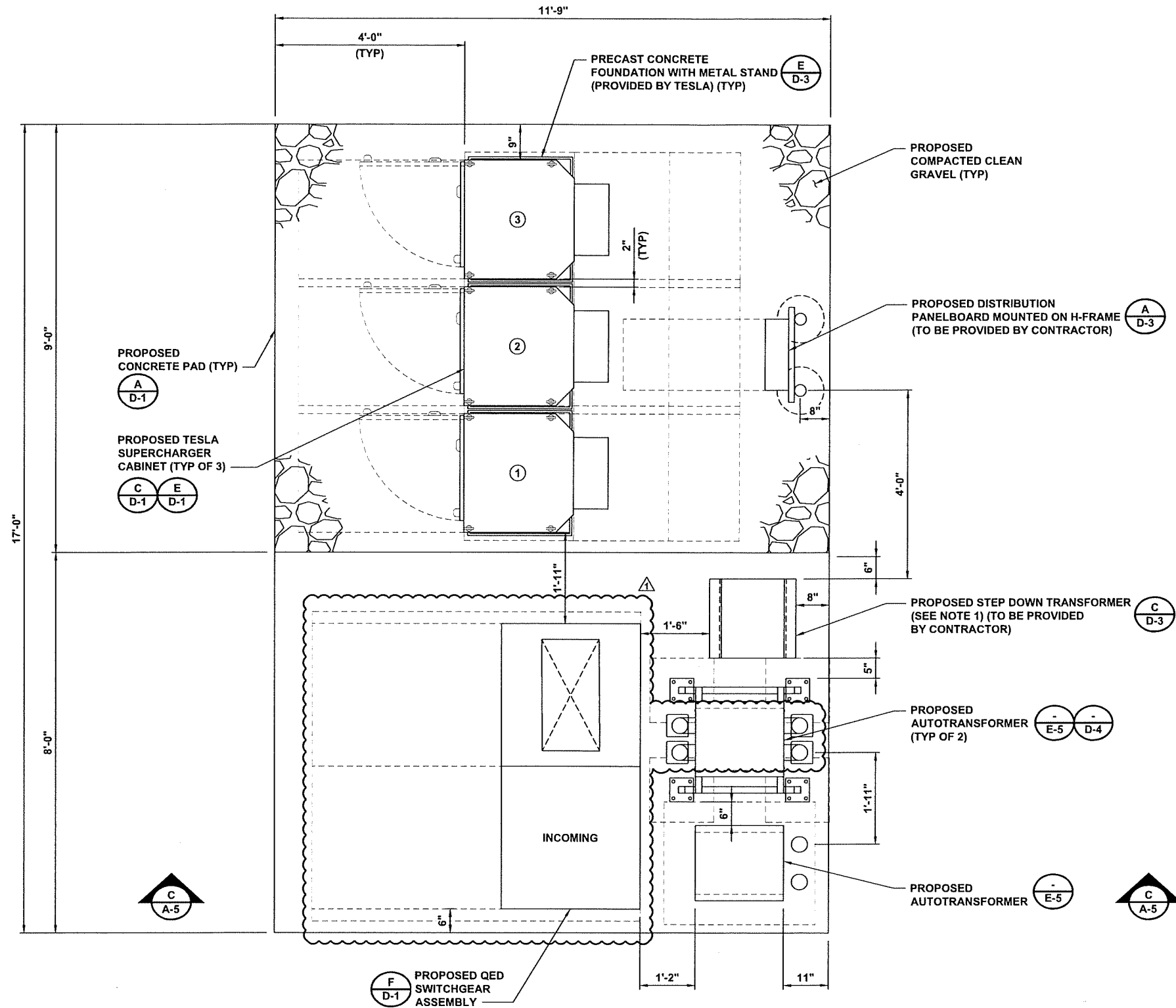
SHEET NUMBER  
**A-3.1**

PROPOSED SITE PLAN



**NOTE**

1. TRANSFORMER TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.



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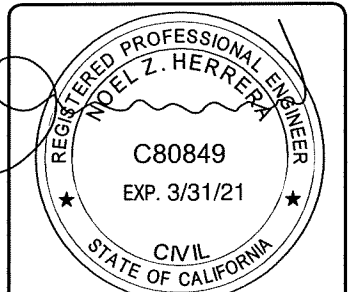


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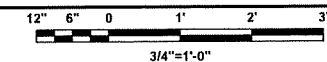
CA123 OLEMA  
OLEMA  
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OLEMA, CA 94950

SHEET TITLE  
**ENLARGED PROPOSED  
EQUIPMENT LAYOUT**

SHEET NUMBER

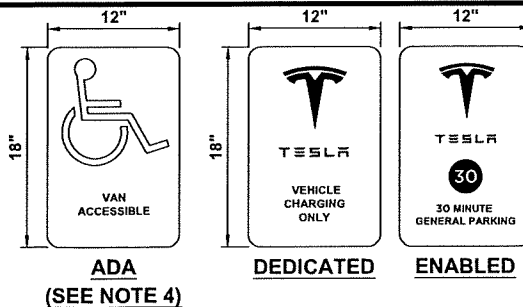
**A-4**

ENLARGED PROPOSED EQUIPMENT LAYOUT



**NOTES**

1. BOTTOM OF LOWEST SIGN TO BE INSTALLED 60" ABOVE GRADE.
2. SEE SHEET GN-3 FOR SIGN POST NOTES.
3. ADDITIONAL PARKING SIGNS TO BE INSTALLED 2" ABOVE TOP OF PREVIOUS SIGN.
4. ACCESSIBILITY (ADA) SIGNAGE SHALL COMPLY WITH REQUIREMENTS OUTLINED IN CBC SECTION 11B.703.7.2.1. THE SYMBOL SHALL CONSIST OF A WHITE FIGURE ON A BLUE BACKGROUND. THE COLOR BLUE SHALL APPROXIMATE FS 15090 IN FEDERAL STANDARD 595C.
5. DO NOT ANCHOR SIGNAGE OR PENETRATE SIDE OF SWITCHGEAR ASSEMBLY.
6. SIGNAGE TO BE REFLECTIVE VINYL.
7. SIGNAGE SHALL BE PRINTED WITH RED LETTERING ON A WHITE BACKGROUND.
8. ALL TEXT SHALL BE CAPITAL LETTERS. LABEL FONT SHALL BE ARIAL (OR SIMILAR) AND IS NOT TO BE BOLD.
9. CONTRAST BETWEEN CHARACTERS, SYMBOLS AND THEIR BACKGROUND SHALL BE 70% MINIMUM AND HAVE A NON GLARE FINISH.



CHARGING POST SIGNAGE SCHEDULE		
SUPERCHARGER	CHARGE POST	SIGN(S) TO INSTALL
①	1A	DEDICATED
	1B	DEDICATED
②	2A	DEDICATED
	2B	DEDICATED
③	3A	ENABLED/ADA
	3B	ENABLED

**TESLA** MOTORS, INC.

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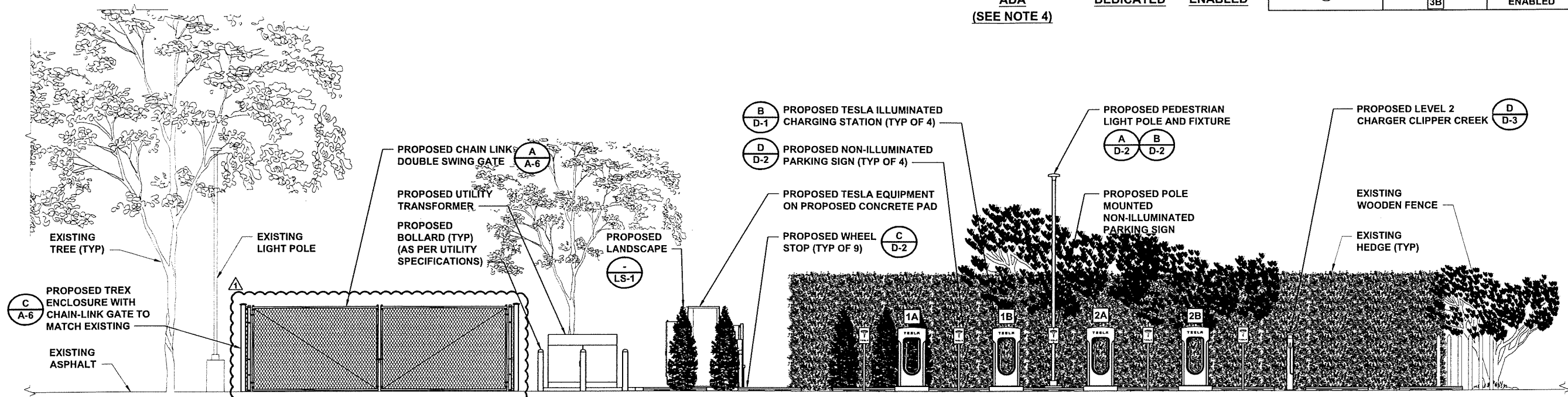
REGISTERED PROFESSIONAL ENGINEER  
NOEL Z. HERRERA  
C80849  
EXP. 3/31/21  
CIVIL  
STATE OF CALIFORNIA  
3/8/2019

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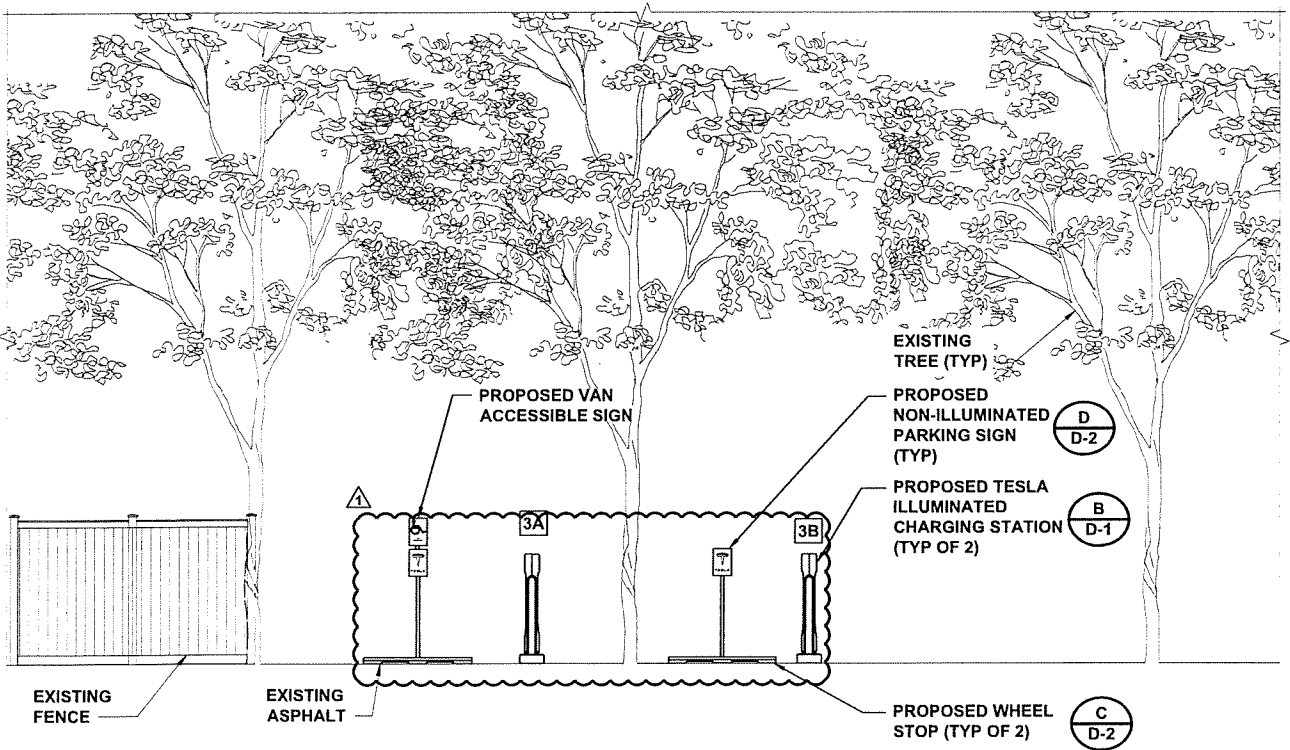
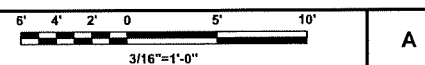
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SHEET TITLE  
**SITE ELEVATIONS**

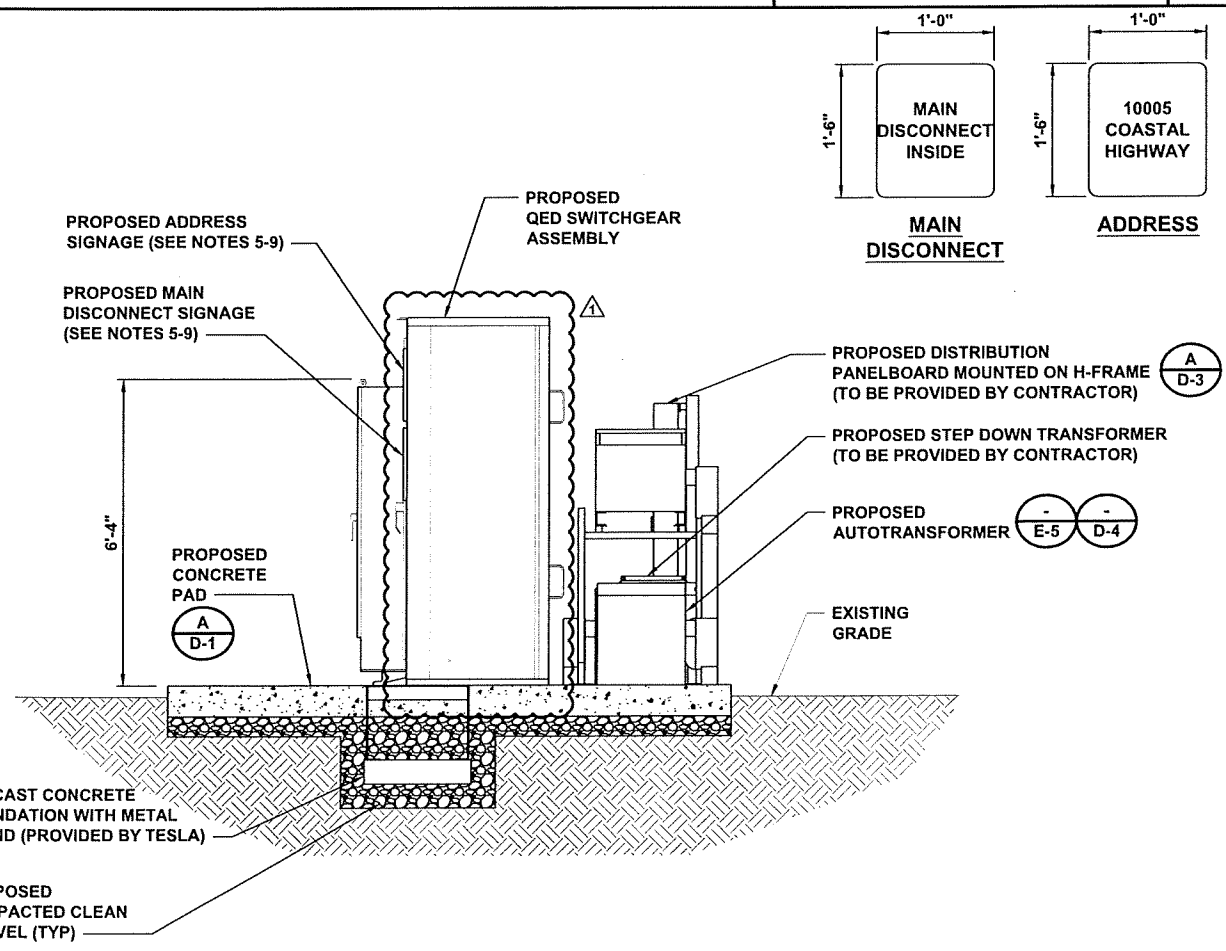
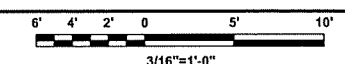
SHEET NUMBER  
**A-5**



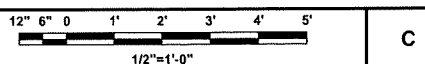
**SITE ELEVATION**



**SITE ELEVATION**

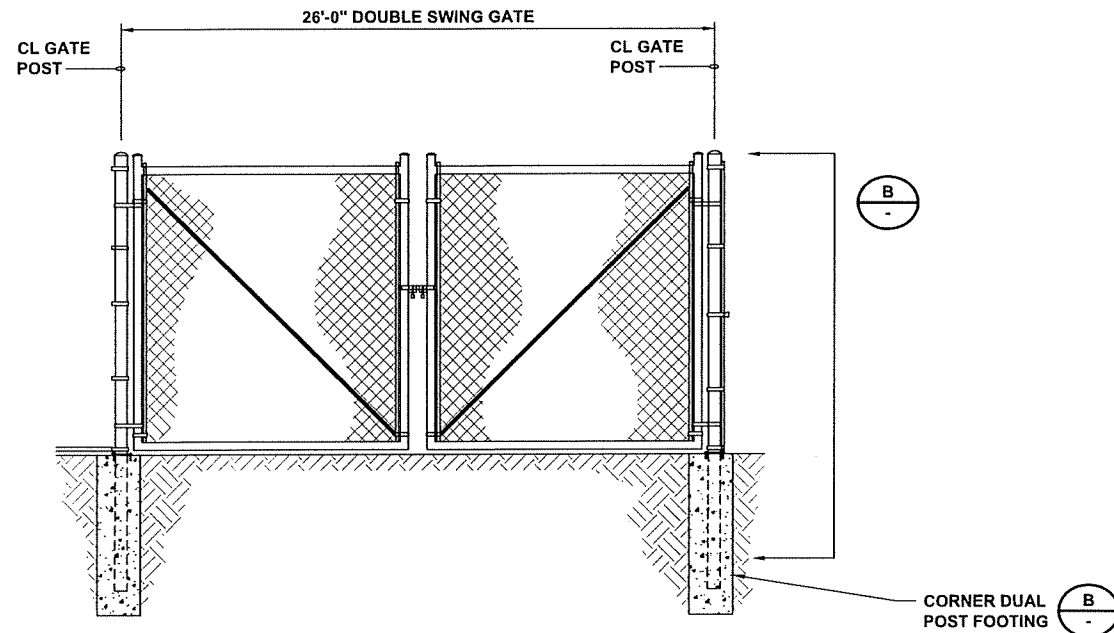


**SITE ELEVATION**



**NOTES**

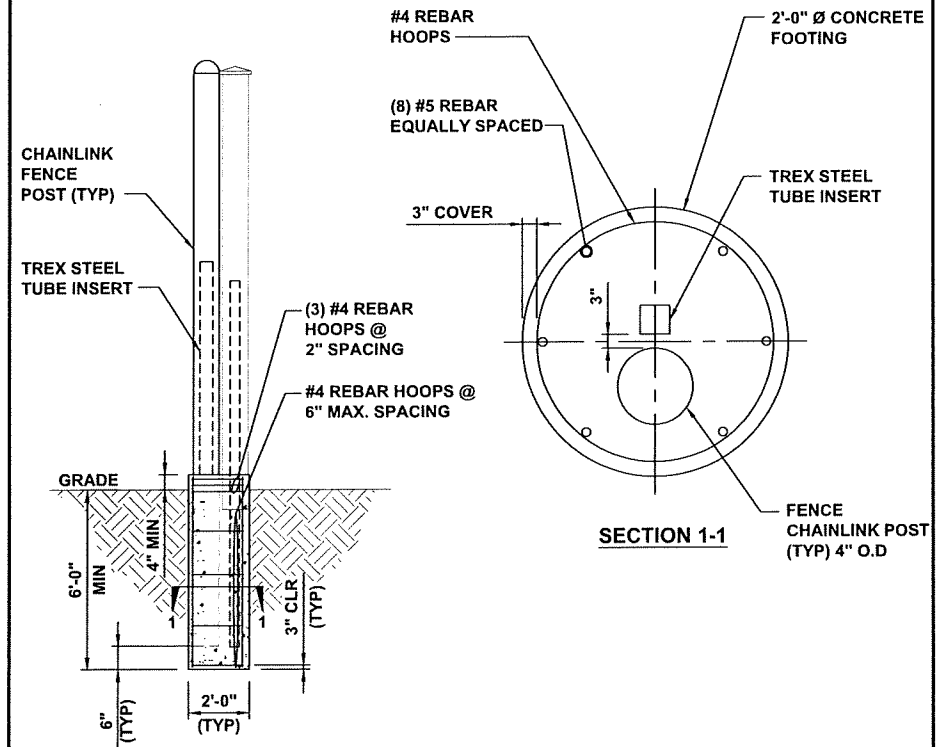
1. CONTRACTOR TO INSTALL NEW PROPOSED CHAIN-LINK FENCE TO MATCH EXISTING DIMENSIONS. THE HEIGHT OF THE NEW PROPOSED CHAIN-LINK FENCE SHALL MATCH THE HEIGHT OF THE EXISTING CHAIN-LINK FENCE.
2. DOUBLE SWING GATE TO MATCH EXISTING DIMENSIONS AND ACCESSIBILITY. NO OBSTRUCTIONS SHALL BE PRESENT WHEN DOUBLE SWING GATE ARE FULLY OPEN.
3. CHAIN-LINK FENCE TO BE PAINTED BLACK.
4. PRIVACY SLATS TO BE INSTALL TO MATCH EXISTING CONDITIONS.



TYPICAL CHAINLINK GATE DETAIL

NO SCALE

A



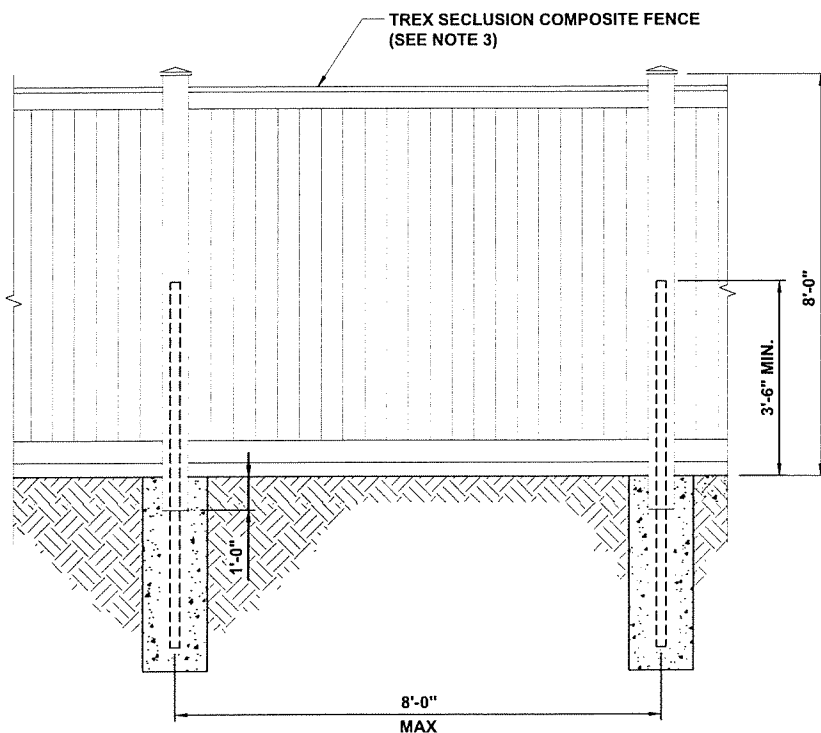
TYPICAL CORNER DUAL POST FOOTING ELEVATION

NO SCALE

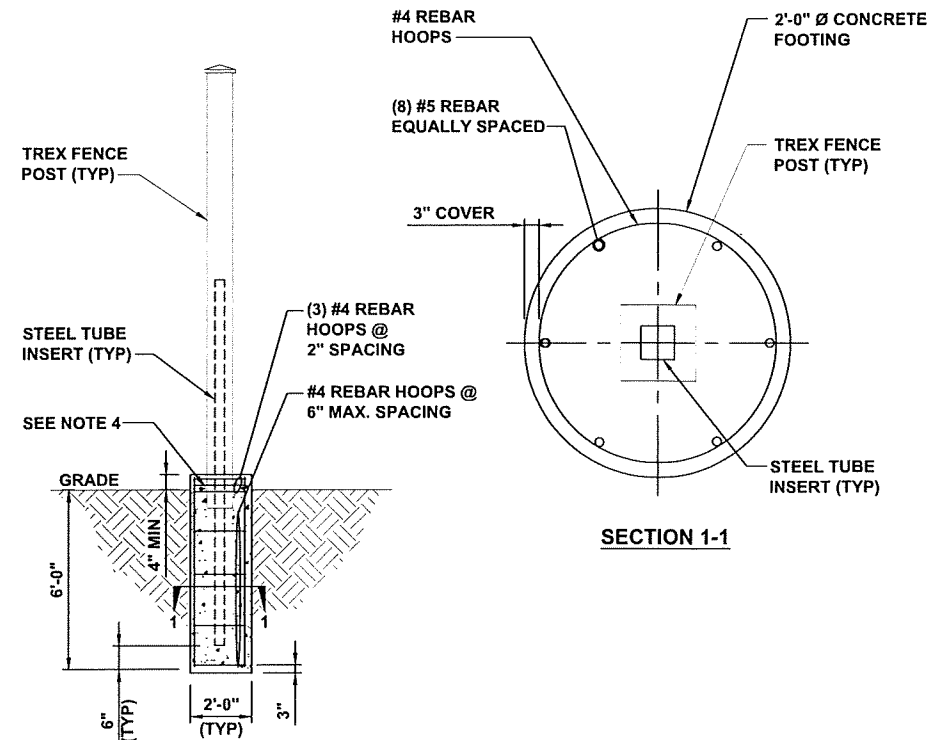
B

**NOTES:**

1. COLOR: "WOODLAND BROWN"
2. PICK TREX SECLUSION COMPOSITE FENCE THAT MEETS THESE REQUIREMENTS. WIND SPEED = 110 MPH, SEISMIC: SDS = 1.742G, RISK CATEGORY II
3. TREX FENCING TO BE PROVIDED BY TESLA AND INSTALLED BY CONTRACTOR



TREX FENCE ELEVATION



TYPICAL TREX FENCE ELEVATION

TYPICAL TREX FENCE DETAIL

NO SCALE

C

DETAIL NOT USED

NO SCALE

D



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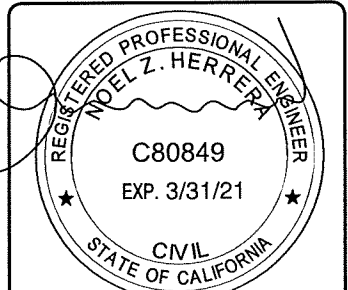


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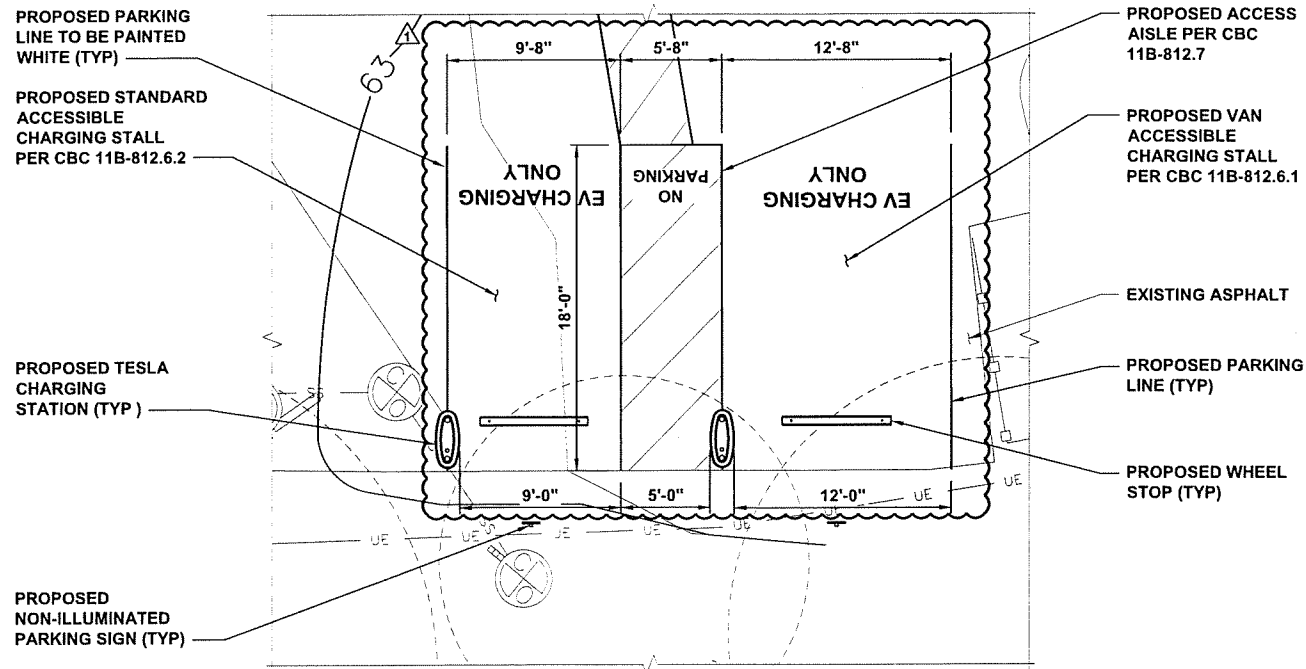
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FENCE DETAILS

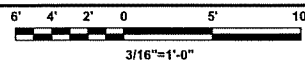
SHEET NUMBER  
A-6





**NOTES**

- REFER TO SHEET A-3.1 FOR PROPOSED SITE PLAN.
- PROPOSED ACCESSIBLE STALLS AND ACCESS AISLE SHALL BE 2% MAX SLOPE IN ALL DIRECTIONS.



**PROPOSED ACCESSIBLE STALL PLAN**

A

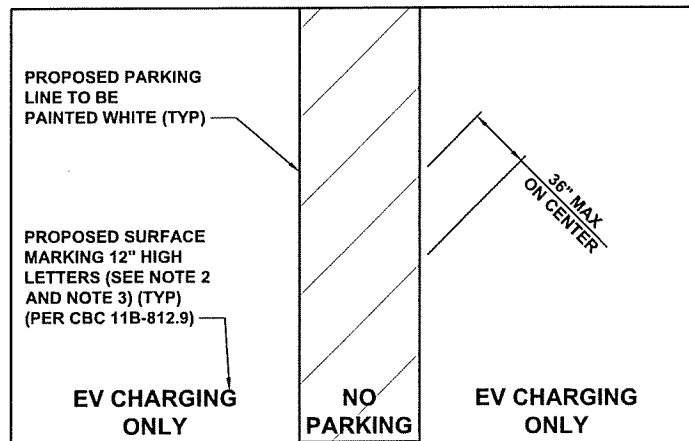
DETAIL NOT USED

NO SCALE

B

**NOTES**

- PROPOSED ACCESSIBLE STALLS AND ACCESS AISLE SHALL BE 2% MAX SLOPE IN ALL DIRECTIONS.
- REFER TO SHEET A-3 FOR PROPOSED SITE PLAN.
- LOWER SIDE OF MARKING SHOULD BE ALIGNED WITH THE END OF THE PARKING SPACE.
- THE CENTER OF THE TEXT SHALL BE A MAXIMUM OF 6 INCHES FROM THE CENTERLINE OF THE VEHICLE SPACE.



**EVCS ACCESSIBLE STALL SURFACE MARKING PLAN**

NO SCALE

C

DETAIL NOT USED

NO SCALE

D

DETAIL NOT USED

NO SCALE

E



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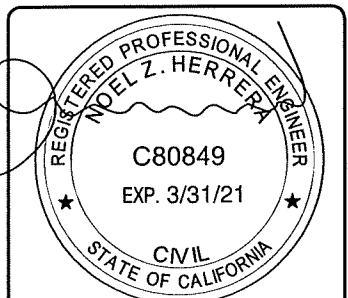


**BLACK & VEATCH**

6800 W 115th St, Suite 2292  
OVERLAND PARK, KS 66211  
(913) 458-2000

PROJECT NO:	192745
DRAWN BY:	AKJ
CHECKED BY:	CNS

REV	DATE	DESCRIPTION
1	03/08/19	ISSUED FOR CONSTRUCTION
0	11/07/18	ISSUED FOR PERMITTING



3/8/2019

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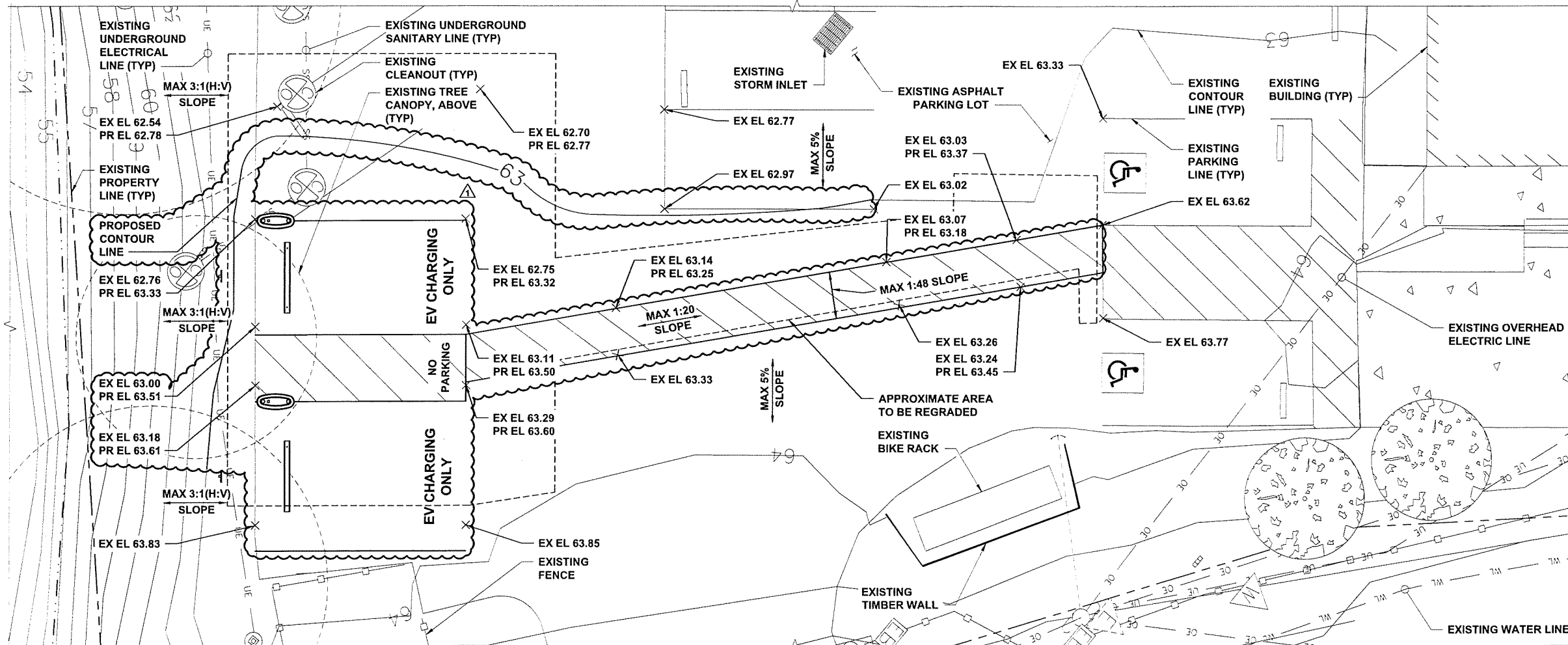
CA123 OLEMA  
OLEMA  
10005 COASTAL HIGHWAY  
OLEMA, CA 94950

SHEET TITLE  
**ACCESSIBILITY DETAILS**

SHEET NUMBER  
**A-7**

**LEGEND**

PR EL. - PROPOSED ELEVATION  
EX EL. - EXISTING ELEVATION



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PALO ALTO, CA 94304  
(650) 681-5000

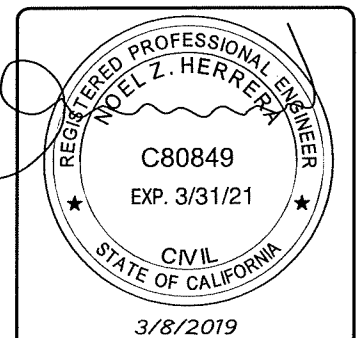


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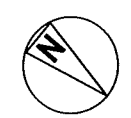
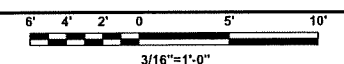
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OLEMA  
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OLEMA, CA 94950

SHEET TITLE  
**GRADING PLAN**

SHEET NUMBER  
**A-8**

GRADING PLAN

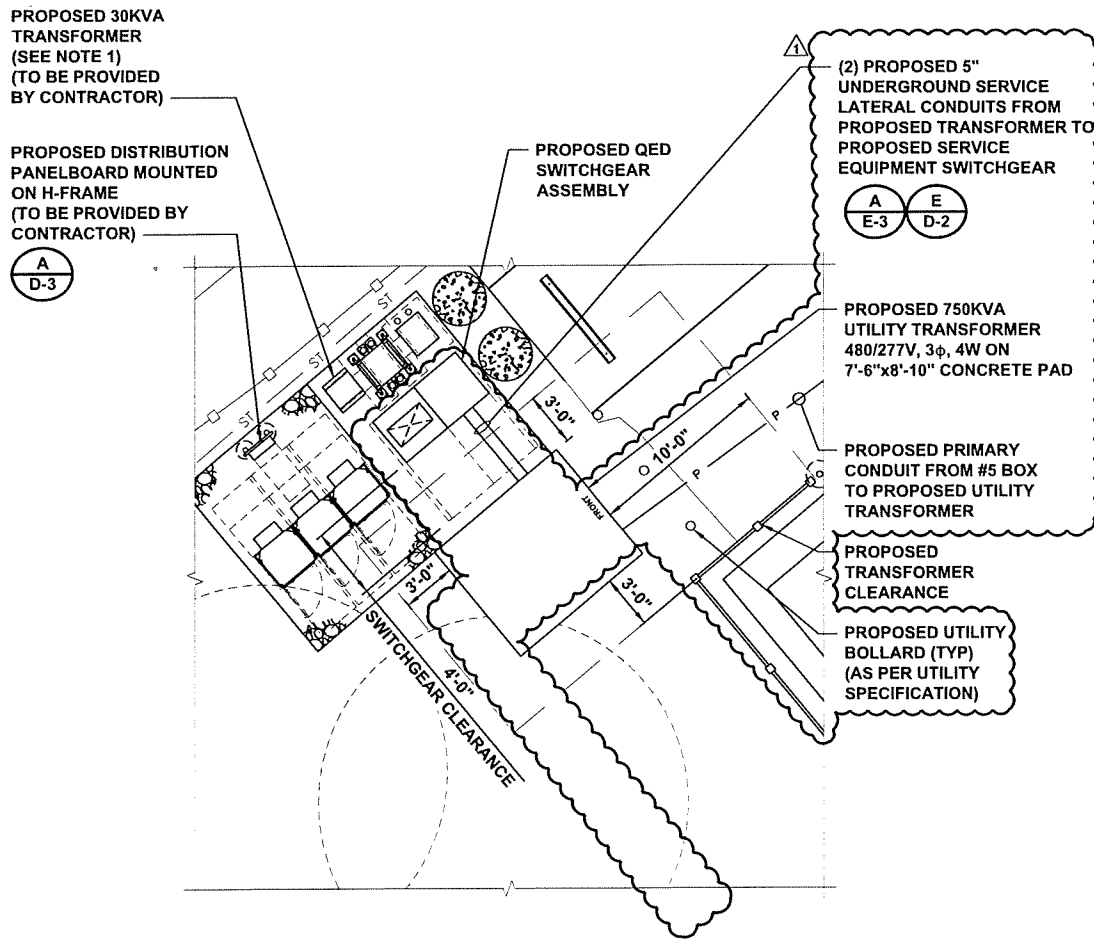


**NOTES**

- \* AC UTILITY SERVICE CONDUCTORS: 22 FEET IS ADDED TO THE HORIZONTAL RUN LENGTH TO ACCOUNT FOR BURIED DEPTH.
- 1. THE UTILITY DESIGN DETAILS SUMMARIZED ON THIS SHEET ARE FOR PROPERTY OWNER REVIEW. THE CONTRACTOR SHALL REFERENCE THE UTILITY DESIGN PACKAGE (UDP), PROVIDED WITH THE "ISSUED FOR CONSTRUCTION" DRAWINGS FOR BIDDING. THE CONTRACTOR SHALL INSTALL THE UTILITY RELATED SCOPE OF WORK PER UTILITY CONSTRUCTION SPECIFICATION REQUIREMENTS.
- 2. UTILITY EQUIPMENT INSTALLATIONS AND PREP WORK AND TERMINATION OF SERVICE CONDUCTORS SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY ENGINEER AT TIME OF PRECONSTRUCTION MEETING TO ENSURE ACCURACY OF INSTALLATIONS.
- 3. TRANSFORMER BOLLARD PROTECTION TO BE INSTALLED PER UTILITY SPECIFICATION. ADDITIONAL BOLLARD PROTECTION MAY BE REQUIRED AT THE DISCRETION OF THE UTILITY FIELD INSPECTION PERSONNEL.

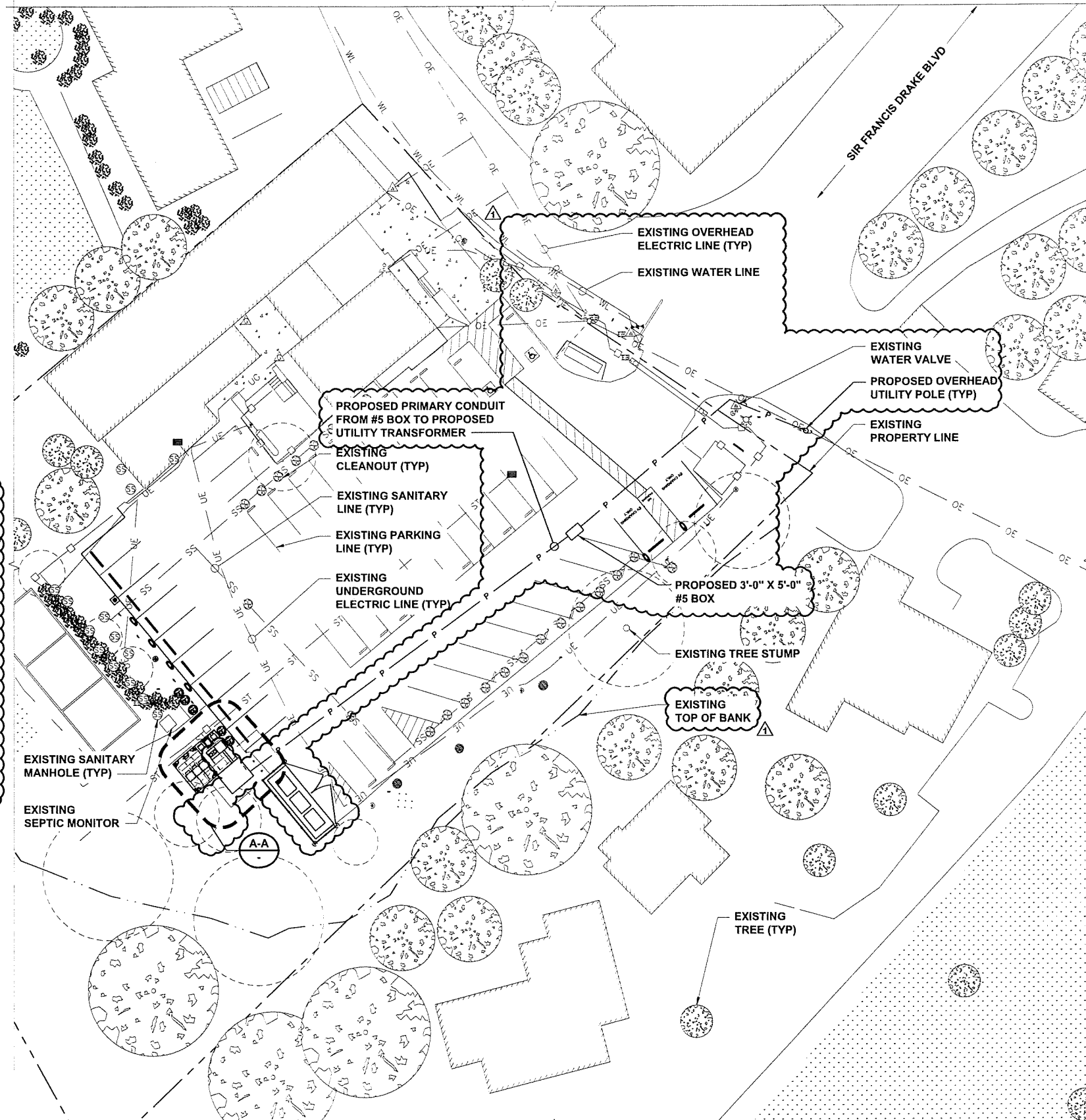
UTILITY SERVICE LATERAL LENGTHS		
UTILITY TRANSFORMER TO SERVICE EQUIPMENT	LINEAR LENGTH (FT)	*ESTIMATED LENGTH (FT)*
	5	27
TOTAL LENGTH OF Cu WIRE PER CONDUIT =		108
NUMBER OF WIRE FILLED CONDUITS		2
TOTAL LENGTH OF Cu WIRE =		216

(SEE SHEET E-3 FOR WIRE CONFIGURATION)  
 \*TOTAL LENGTH OF Cu WIRE = 4 WIRES PER CONDUIT  
 x ESTIMATED LENGTH  
 x NUMBER OF FILLED CONDUITS

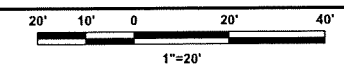


PLAN A-A  
SCALE: NO SCALE

UTILITY DESIGN REV DATE: 12/12/18



UTILITY PLAN



3500 DEER CREEK RD  
PALO ALTO, CA 94304  
(650) 681-5000



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CA123\_OLEMA  
OLEMA  
10005 COASTAL HIGHWAY  
OLEMA, CA 94950

SHEET TITLE  
UTILITY PLAN

SHEET NUMBER  
E-1

**NOTES**

- \*\* AC CONDUCTORS: 16 FEET IS ADDED TO THE HORIZONTAL RUN LENGTH TO ACCOUNT FOR BURIED DEPTH.
- \*\*\* DC CONDUCTORS: 22 FEET IS ADDED TO THE HORIZONTAL RUN LENGTH TO ACCOUNT FOR BURIED DEPTH.
- 1. CONDUCTOR LENGTHS ARE ESTIMATES ONLY. LENGTHS ARE BASED ON DIAGRAMMATICAL MEASUREMENTS AND APPROXIMATED BURIED DEPTHS. THE EXACT ROUTING PATH AND CONDUCTOR RUN LENGTHS SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD BASED ON PHYSICAL MEASUREMENTS. CONTRACTOR TO ORDER CONDUCTOR BASED ON FIELD MEASUREMENTS (MUST BE APPROVED BY TESLA INSTALLATION MANAGER).
- 2. ALL ELECTRICAL WORK AND RELATED ACTIVITIES PERFORMED ON-SITE SHALL BE DONE IN ACCORDANCE WITH NATIONAL ELECTRIC CODE (NEC) STANDARDS BEING ENFORCED BY ALL APPLICABLE JURISDICTIONAL REQUIREMENTS AT THE TIME OF CONSTRUCTION.
- 3. THE MAXIMUM RUN LENGTH BETWEEN SUPERCHARGER CABINET AND CHARGING POST, INCLUDING BURIED DEPTH IS NOT TO EXCEED 160'. ANY LENGTH BEYOND THIS MAXIMUM SHALL INCLUDE AN RG-6 COAX CABLE RUN IN A SEPARATE 1" CONDUIT.
- 4. CONTRACTOR TO STUB UP 6" AND CAP OFF.

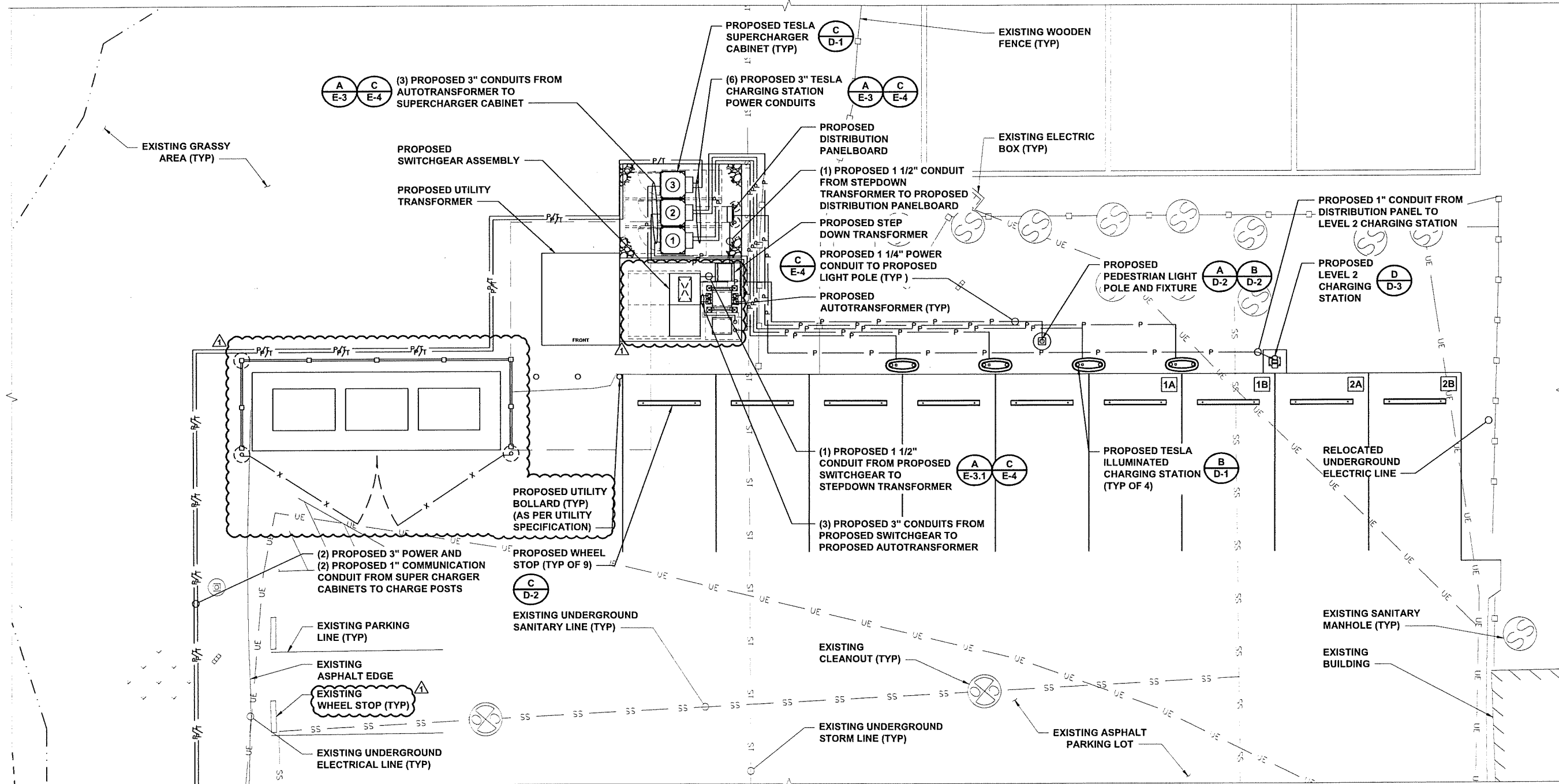
AC SUPERCHARGER LENGTHS			
SUPERCHARGER/AUTO-TRANS.	LINEAR LENGTH SWGR TO AUTO-TRANS.	LINEAR LENGTH AUTO-TRANS. TO SUPERCHARGER	*****ESTIMATED LENGTH
** ①	5	19	40
** ②	1	21	38
** ③	1	28	45
TOTAL LENGTH OF Cu WIRE PER CONDUIT			492
NUMBER OF WIRE FILLED CONDUIT =			4
TOTAL LENGTH OF Cu WIRE =			1968

\*\*\*\*\* (SEE SHEET E-3 FOR WIRE CONFIGURATION)  
 TOTAL LENGTH OF AC Cu WIRE = SUM OF ESTIMATED LENGTH x 4 WIRES PER SUPERCHARGER

DC CHARGING POST LENGTHS			
SUPERCHARGER	CHARGE POST	LINEAR LENGTH (FT)	***ESTIMATED LENGTH (FT)***
①	1A	46	68
	1B	56	78
②	2A	63	85
	2B	72	94
③	3A	212	234
	3B	228	250
TOTAL LENGTH OF DC AL WIRE =			3236
TOTAL LENGTH OF #3 AWG GND Cu & COMM CABLE WIRE =			809

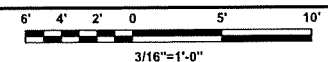
(SEE SHEET E-3 FOR WIRE CONFIGURATION)  
 \*\*\*TOTAL LENGTH OF DC AL WIRE = SUM OF ESTIMATED LENGTH x 4 WIRES PER CHARGE POST  
 \*\*\*TOTAL LENGTH OF GND Cu AND COMM CABLE WIRE = SUM OF ESTIMATED LENGTHS

TOTAL LENGTH GND Cu WIRE = SUM OF ESTIMATED LENGTHS



REFERENCE SHEET E-1 FOR A SUMMARY OF THE UTILITY RELATED CONSTRUCTION RESPONSIBILITIES AND DESIGN DETAILS

**ELECTRICAL PLAN**



3500 DEER CREEK RD  
 PALO ALTO, CA 94304  
 (650) 681-5000



**BLACK & VEATCH**

6800 W 115th St, Suite 2292  
 OVERLAND PARK, KS 66211  
 (913) 456-2000

PROJECT NO: 192745  
 DRAWN BY: AKJ  
 CHECKED BY: CNS

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 OLEMA  
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 OLEMA, CA 94950

SHEET TITLE  
**ELECTRICAL PLAN**

SHEET NUMBER  
**E-2**

**NOTES**

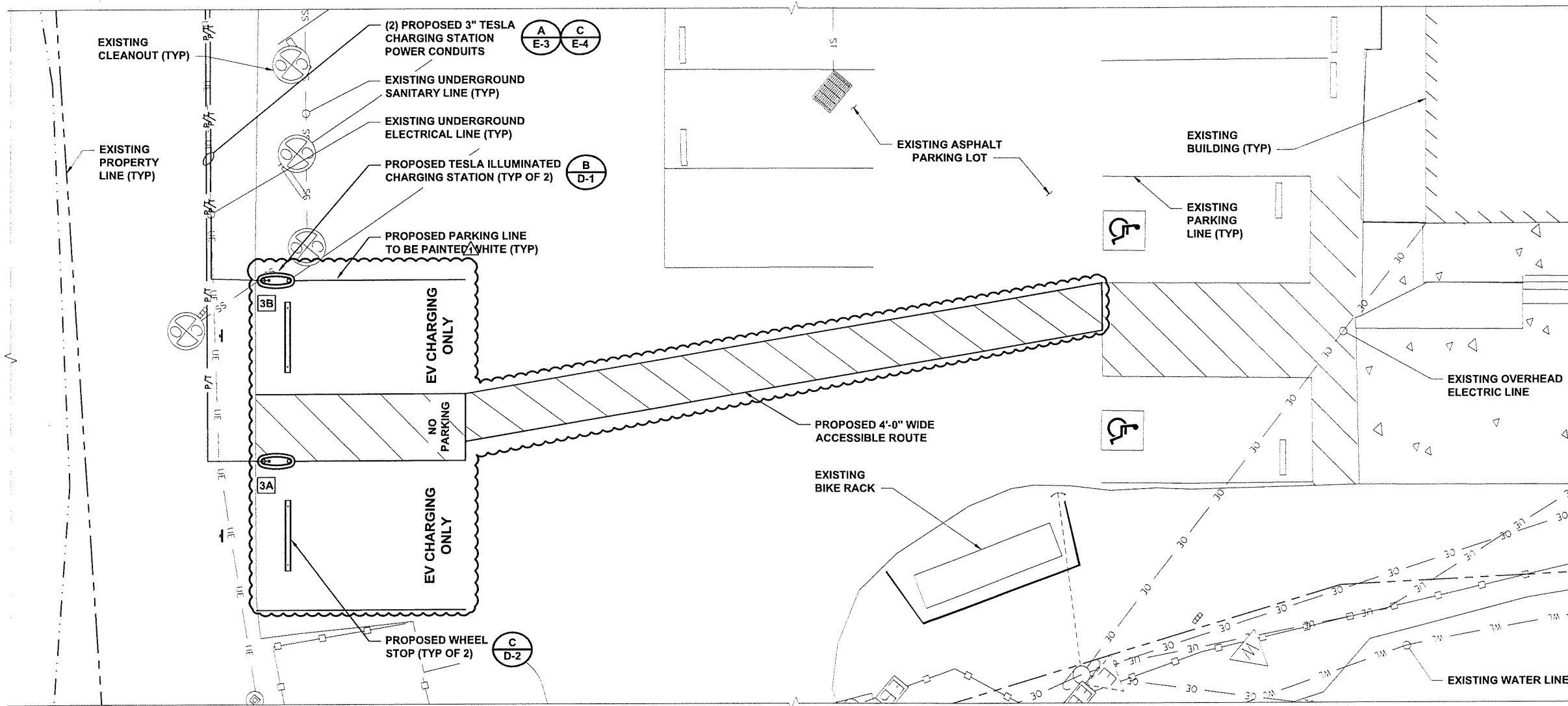
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- \*\*\* DC CONDUCTORS: 22 FEET IS ADDED TO THE HORIZONTAL RUN LENGTH TO ACCOUNT FOR BURIED DEPTH.
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- 2. ALL ELECTRICAL WORK AND RELATED ACTIVITIES PERFORMED ON-SITE SHALL BE DONE IN ACCORDANCE WITH NATIONAL ELECTRIC CODE (NEC) STANDARDS BEING ENFORCED BY ALL APPLICABLE JURISDICTIONAL REQUIREMENTS AT THE TIME OF CONSTRUCTION.
- 3. THE MAXIMUM RUN LENGTH BETWEEN SUPERCHARGER CABINET AND CHARGING POST, INCLUDING BURIED DEPTH IS NOT TO EXCEED 160'. ANY LENGTH BEYOND THIS MAXIMUM SHALL INCLUDE AN RG-6 COAX CABLE RUN IN A SEPARATE 1" CONDUIT.
- 4. CONTRACTOR TO STUB UP 6" AND CAP OFF.

AC SUPERCHARGER LENGTHS			
SUPERCHARGER/AUTO-TRANS.	LINEAR LENGTH SWGR TO AUTO-TRANS.	LINEAR LENGTH AUTO-TRANS. TO SUPERCHARGER	****ESTIMATED LENGTH
** ③	15	20	51
TOTAL LENGTH OF Cu WIRE PER CONDUIT			204
NUMBER OF WIRE FILLED CONDUIT =			4
TOTAL LENGTH OF Cu WIRE =			816

\*\*\*\*(SEE SHEET E-3 FOR WIRE CONFIGURATION)  
 TOTAL LENGTH OF AC Cu WIRE = SUM OF ESTIMATED LENGTH x 4 WIRES PER SUPERCHARGER  
 TOTAL LENGTH GND Cu WIRE = SUM OF ESTIMATED LENGTHS

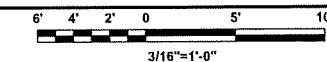
DC CHARGING POST LENGTHS			
SUPERCHARGER	CHARGE POST	LINEAR LENGTH (FT)	***ESTIMATED LENGTH (FT)***
③	3A	231	253
	3B	212	234
TOTAL LENGTH OF DC AL WIRE =			1948
TOTAL LENGTH OF #3 AWG GND Cu & COMM CABLE WIRE =			487

(SEE SHEET E-3 FOR WIRE CONFIGURATION)  
 \*\*\*TOTAL LENGTH OF DC AL WIRE = SUM OF ESTIMATED LENGTH x 4 WIRES PER CHARGE POST  
 \*\*\*TOTAL LENGTH OF GND Cu AND COMM CABLE WIRE = SUM OF ESTIMATED LENGTHS



REFERENCE SHEET E-1 FOR A SUMMARY OF THE UTILITY RELATED CONSTRUCTION RESPONSIBILITIES AND DESIGN DETAILS

**ELECTRICAL PLAN**



**TESLA**  
 MOTORS, INC.

3500 DEER CREEK RD  
 PALO ALTO, CA 94304  
 (650) 681-5000

**BLACK & VEATCH**

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 OVERLAND PARK, KS 66211  
 (913) 458-2000

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CHECKED BY:	CNS

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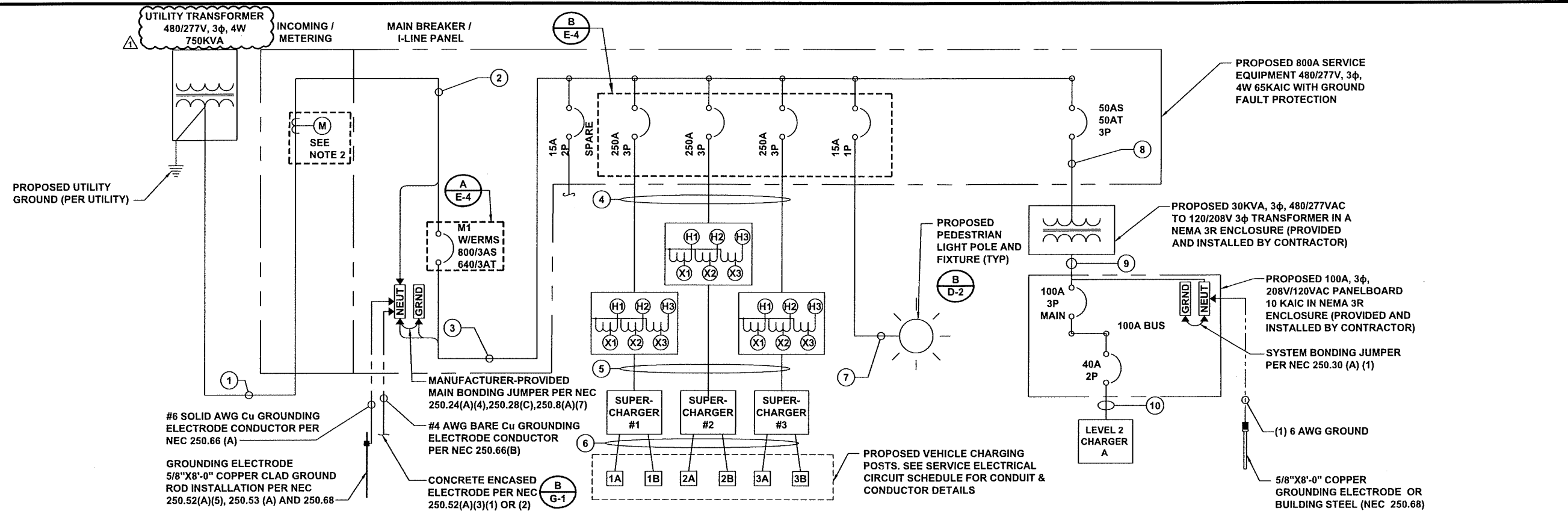
LICENSED PROFESSIONAL ENGINEER  
 DAVID C. HINTON  
 E 20383  
 David C. Hinton Mar 8 2019 10:41 AM  
 EXP 9/30/2019  
 ELECTRICAL  
 STATE OF CALIFORNIA

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CA123\_OLEMA  
 OLEMA  
 10005 COASTAL HIGHWAY  
 OLEMA, CA 94950

SHEET TITLE  
**ELECTRICAL PLAN**

SHEET NUMBER  
**E-2.1**



SYSTEM ONE-LINE DIAGRAM

NO SCALE A

SERVICE ELECTRICAL CIRCUIT SCHEDULE			
NO	FROM	TO	CONFIGURATION
1	UTILITY TRANSFORMER	PROPOSED SERVICE EQUIPMENT; INCOMING	(2) RUNS OF 750MCM AL (THWN-2) IN EACH OF (2) 5" CONDUIT
2	PROPOSED SERVICE EQUIPMENT; INCOMING	PROPOSED SERVICE EQUIPMENT; 800A TRIP MAIN BREAKER	FACTORY INSTALLED 800A BUSS
3	PROPOSED SERVICE EQUIPMENT; 800A TRIP MAIN BREAKER	PROPOSED SERVICE EQUIPMENT; BRANCH CIRCUIT DISTRIBUTION I-LINE PANEL	FACTORY INSTALLED 800A BUSS
4	PROPOSED SERVICE EQUIPMENT; CIRCUIT 1 I-LINE PANEL (250 AMP)	PROPOSED AUTOTRANSFORMER #1	C1
	PROPOSED SERVICE EQUIPMENT; CIRCUIT 2 I-LINE PANEL (250 AMP)	PROPOSED AUTOTRANSFORMER #2	C1
	PROPOSED SERVICE EQUIPMENT; CIRCUIT 3 I-LINE PANEL (250 AMP)	PROPOSED AUTOTRANSFORMER #3	C1

SERVICE ELECTRICAL CIRCUIT SCHEDULE CONTINUED			
NO	FROM	TO	CONFIGURATION
5	PROPOSED AUTOTRANSFORMER #1	PROPOSED TESLA SUPERCHARGER #1	C1
	PROPOSED AUTOTRANSFORMER #2	PROPOSED TESLA SUPERCHARGER #2	C1
	PROPOSED AUTOTRANSFORMER #3	PROPOSED TESLA SUPERCHARGER #3	C1
6	PROPOSED TESLA SUPER CHARGER #1	PROPOSED TESLA CHARGING PAST	1A C2
		PROPOSED TESLA CHARGING PAST	1B C2
	PROPOSED TESLA SUPER CHARGER #2	PROPOSED TESLA CHARGING PAST	2A C2
		PROPOSED TESLA CHARGING PAST	2B C2
7	PROPOSED TESLA SUPER CHARGER #3	PROPOSED TESLA CHARGING PAST	3A C2/C3
		PROPOSED TESLA CHARGING PAST	3B C2/C3
7	PROPOSED SERVICE EQUIPMENT; CIRCUIT I LINE PANEL (15AMP)	PROPOSED PEDESTRIAN LIGHTING	(2) #12 CU (THWN-2) AWG + (1) #12 CU AWG GND IN 1/4" CONDUIT

SERVICE ELECTRICAL CIRCUIT SCHEDULE CONTINUED			
NO	FROM	TO	CONFIGURATION
8	PROPOSED SERVICE EQUIPMENT; 150A MAIN BREAKER	30KVA; 480/208V/120VAC TRANSFORMER	(3) #8 AWG CU (THWN-2) + (1) #10 AWG CU EGC IN (1) 1" CONDUIT
9	30KVA; 480/208V/120VAC TRANSFORMER	120/208V 3φ 100A DISTRIBUTION PANEL ON H-FRAME	(3) 1 AWG (CU)(THWN-2) + (1) 1 AWG, (CU) NEUT + (1) 6 AWG (CU) SUPPLY SIDE BONDING JUMPER IN 1 1/2" CONDUIT
10	120/208V 3φ 100A DISTRIBUTION PANEL ON H-FRAME	PROPOSED TESLA LEVEL 2 CHARGER	(2) #8 CU (THWN-2) AWG + (1) #10 CU AWG EGC IN 1" CONDUIT

NOTES

- NEUTRAL MUST BE INCLUDED FOR PROPER OPERATION OF TESLA SUPERCHARGERS.
- PROPOSED UTILITY CTS SHALL BE LOCATED WITHIN APPROVED CT COMPARTMENTS APPROVED BY UTILITY AS SHOWN IN THIS DRAWING PACKAGE.
- ALL CONDUCTORS TO RECEIVE ANTI-OXIDATIVE COATING DURING INSTALLATION.
- CONTRACTOR TO USE 'SIMPULL THWN-2' ALUMINUM WIRING PER TESLA'S REQUIREMENTS WHEN ALUMINUM IS INDICATED IN THE CIRCUIT SCHEDULE ABOVE.
- AUTOTRANSFORMER NEUTRAL IS NOT TO BE BONDED TO EQUIPMENT GROUND.

LEGEND

- C1 (3) 350MCM AL (THWN-2) + (1) 350MCM AL (THWN-2) NEUT + (1) #4 AWG Cu EGC IN 3" CONDUIT
- C2 (4) - 250 MCM AL (THWN-2) / (2) PER DC (+/-) 120KW POST + #3 AWG Cu EGC + COMM CABLE (PER TESLA) IN 3" CONDUIT
- C3 (1) RG-6 COAX CABLE IN (1) 1" CONDUIT

**TESLA**  
MOTORS, INC.

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**BLACK & VEATCH**

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DRAWN BY:	AKJ
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LICENSED PROFESSIONAL ENGINEER  
DAVID C. HINTON  
E 20383  
David C. Hinton March 8 2019 10:41 AM  
EXP 9/30/2019  
ELECTRICAL  
STATE OF CALIFORNIA

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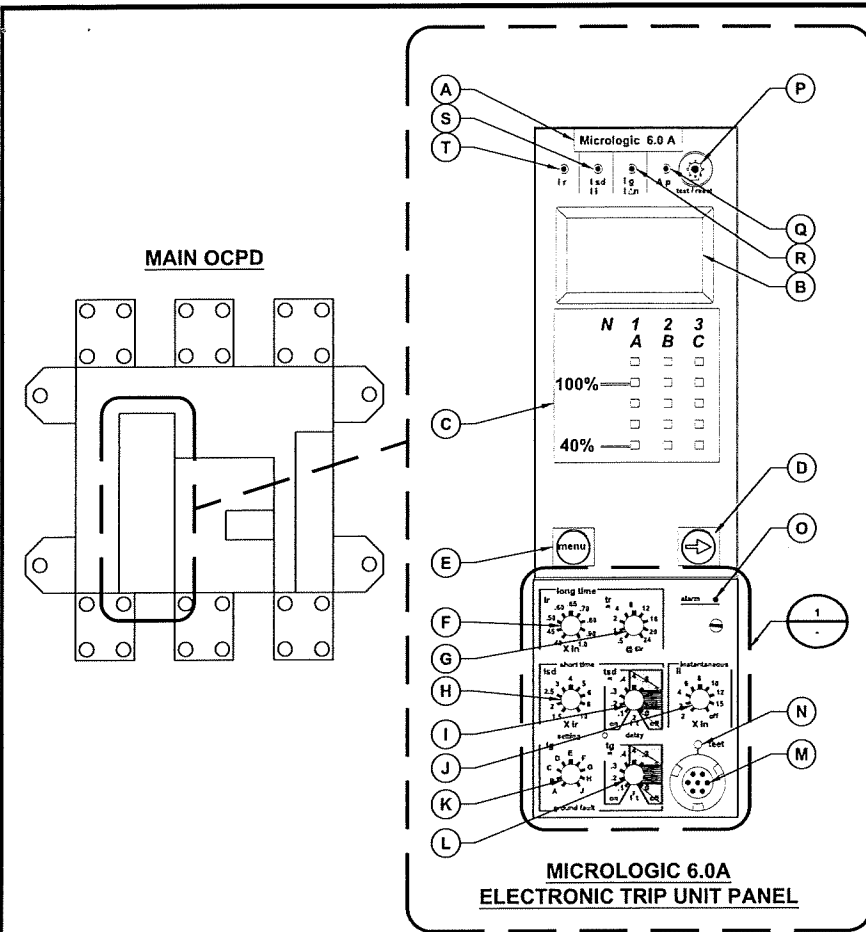
CA123\_OLEMA  
OLEMA  
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SHEET TITLE  
ELECTRICAL DETAILS

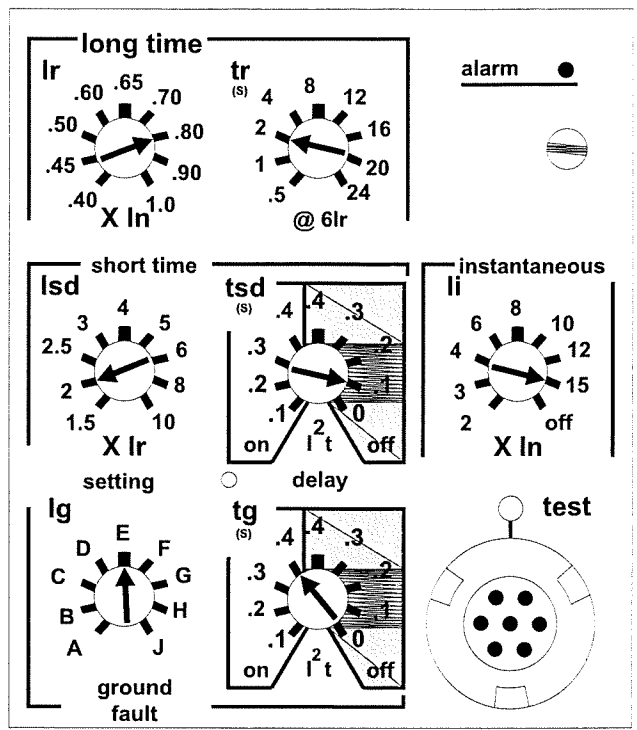
SHEET NUMBER  
E-3

SERVICE ELECTRICAL CIRCUIT SCHEDULE

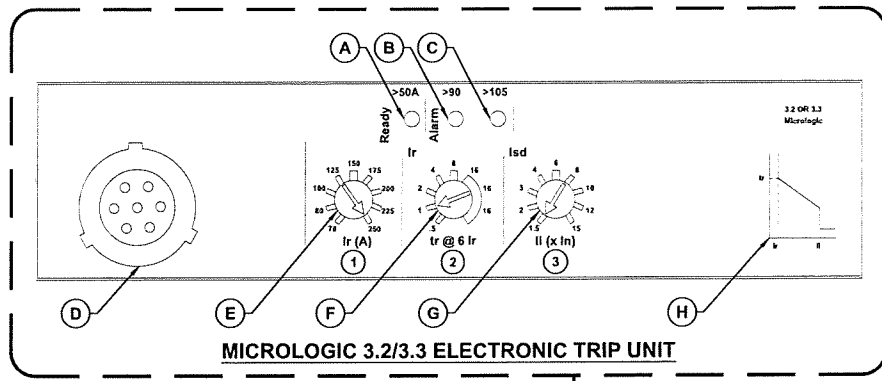
NO SCALE B



- THE MICROLOGIC 6.0A TRIP UNIT PROVIDES SELECTIVE AND GROUND-FAULT PROTECTION FOR EQUIPMENT ( $\geq 1000$  A) (LSIG) AND A BUILT-IN AMMETER.
- A. TRIP UNIT NAME
  - B. ALPHANUMERIC DISPLAY
  - C. THREE-PHASE BAR GRAPH
  - D. SCROLL BUTTON
  - E. MENU BUTTON
  - F. LONG-TIME PICKUP (lr) SWITCH
  - G. LONG-TIME DELAY (tr) SWITCH
  - H. SHORT-TIME PICKUP (lsd) SWITCH
  - I. SHORT-TIME DELAY (tsd) SWITCH
  - J. INSTANTANEOUS PICKUP (li) SWITCH
  - K. GROUND-FAULT PICKUP (lg) SWITCH
  - L. GROUND-FAULT DELAY (tg) SWITCH
  - M. TEST PLUG RECEPTACLE
  - N. GROUND FAULT PUSH-TO-TRIP BUTTON
  - O. OVERLOAD INDICATOR LIGHT
  - P. RESET BUTTON FOR BATTERY STATUS CHECK AND TRIP INDICATOR LED
  - Q. SELF-PROTECTOR INDICATOR LIGHT
  - R. GROUND-FAULT INDICATOR LIGHT
  - S. SHORT-TIME OR INSTANTANEOUS TRIP INDICATOR LIGHT
  - T. LONG-TIME TRIP INDICATOR LIGHT



- SECTION 1**
- NOTES**
- THE PLUG SETTINGS DEPICTED WITHIN THIS DETAIL SHALL BE USED ON ALL R-FRAME CIRCUIT BREAKERS REGARDLESS OF AMP RATING.
  - THESE CIRCUIT BREAKER TRIP SETTINGS ARE NOT COORDINATED WITH UTILITY TRIP SETTINGS.
  - BREAKERS 1200A AND GREATER INCLUDE ENERGY REDUCING MAINTENANCE SWITCHING (ERMS).

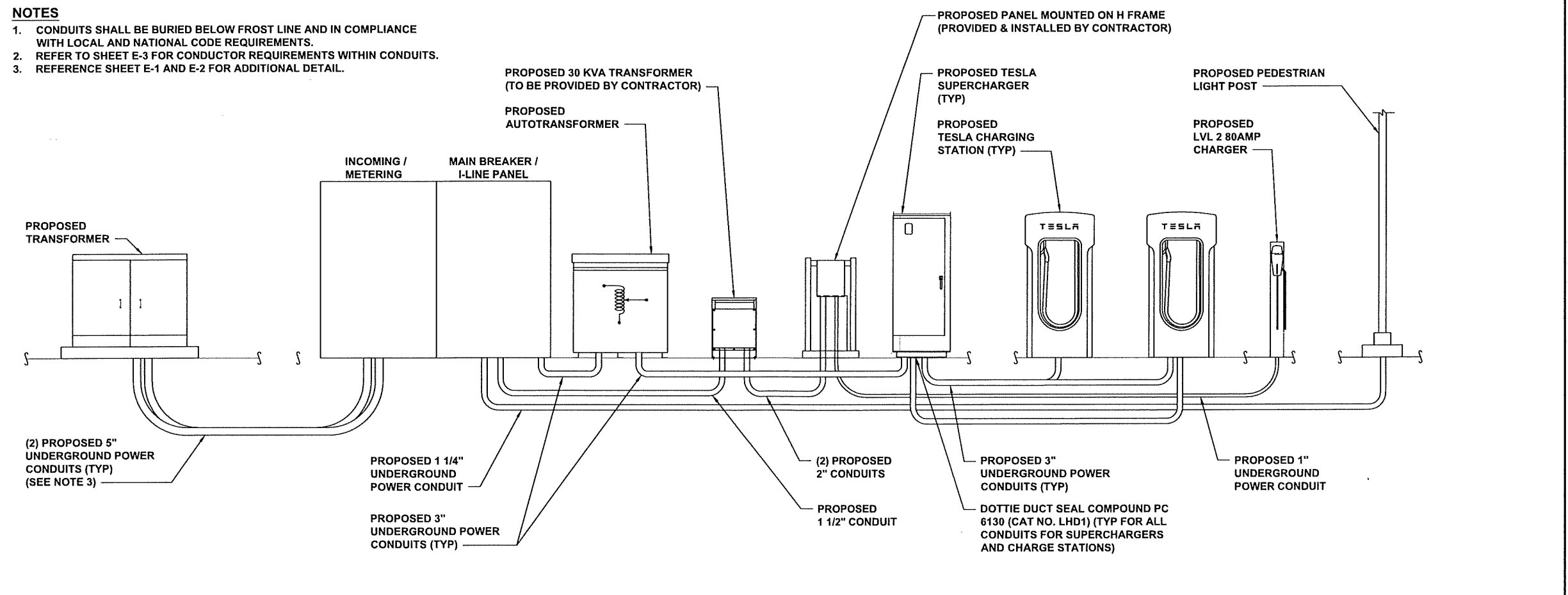


- \* JJ CIRCUIT BREAKER**  
480VAC L-L
- A. READY LED (GREEN)
  - B. OVERLOAD PRE-ALARM LED (ORANGE):90% lr
  - C. OVERLOAD ALARM LED (RED): 105% lr THE TRIP UNIT'S In RATING CORRESPONDS TO THE MAXIMUM VALUE OF THE ADJUSTMENT RANGE
  - D. TEST PORT
  - E. ADJUSTMENT DIAL FOR LONG-TIME PROTECTION DELAY tr
  - F. ADJUSTMENT DIAL FOR SHORT-TIME PROTECTION PICKUP lsd
  - G. ADJUSTMENT DIAL FOR INSTANTANEOUS PROTECTION PICKUP li
  - H. TRIP CURVE
- \* BREAKERS ARE RATED FOR 80%**

MICROLOGIC 6.0A ELECTRONIC TRIP UNIT DETAIL (FOR SWITCHBOARDS 1000A AND LARGER, REQUIRING GROUND FAULT PROTECTION) NO SCALE A

MICROLOGIC 3.2/3.3 ELECTRONIC TRIP UNIT DETAIL NO SCALE B

- NOTES**
- CONDUITS SHALL BE BURIED BELOW FROST LINE AND IN COMPLIANCE WITH LOCAL AND NATIONAL CODE REQUIREMENTS.
  - REFER TO SHEET E-3 FOR CONDUCTOR REQUIREMENTS WITHIN CONDUITS.
  - REFERENCE SHEET E-1 AND E-2 FOR ADDITIONAL DETAIL.



CAR CHARGER CONDUIT ELEVATION NO SCALE C

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SHEET TITLE  
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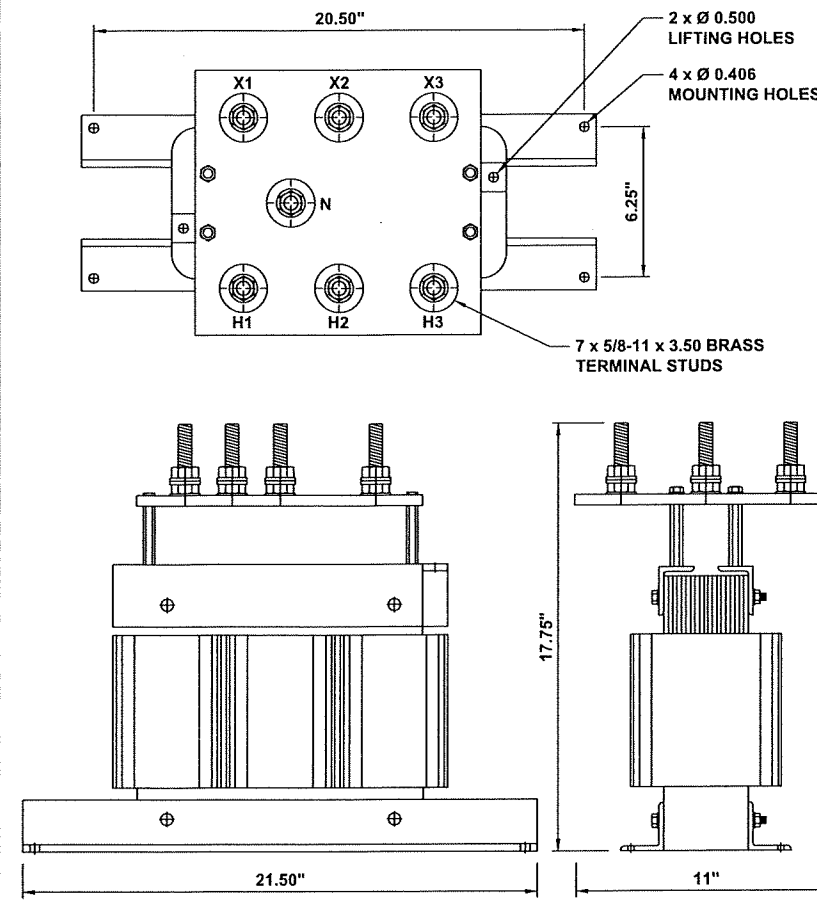
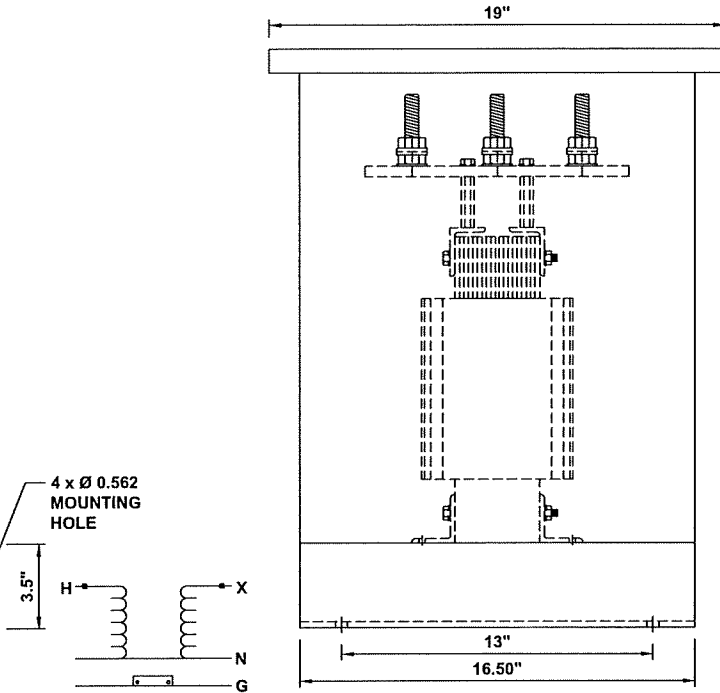
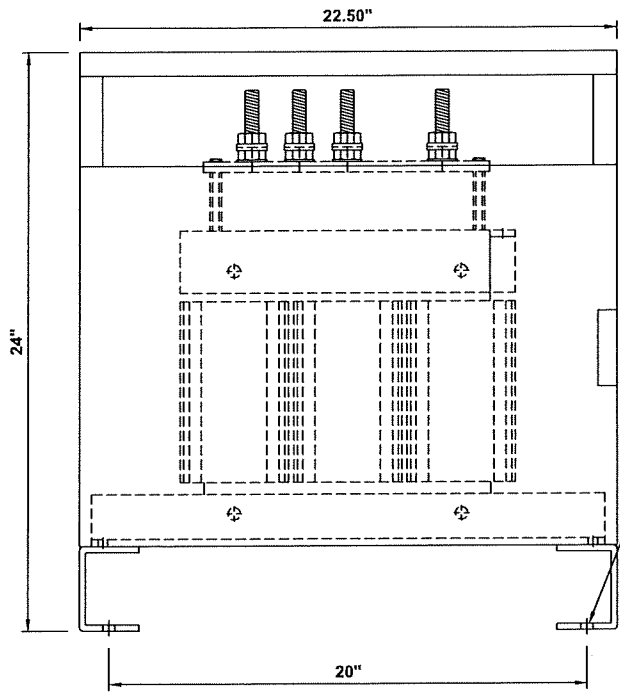
SHEET NUMBER  
E-4

MANUFACTURER: QUALITY TRANSFORMER AND ELECTRONICS, INC.  
OR ENGINEER APPROVED EQUAL  
DESCRIPTION: 160 KVA STAND ALONE AUTOTRANSFORMERS  
THREE-PHASE, 50/60HZ  
INPUT = 504 VRMS  
OUTPUT = 480 VRMS@192 ARMS  
ENCLOSURE: NEMA3R

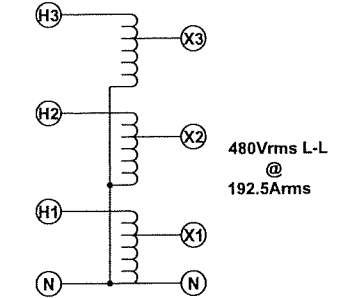
THE LISTED TRANSFORMER IS MARKED UNDER THE FOLLOWING LICENSE NUMBERS:

CE  
EN 60076-1 - T72140712  
EN 61558-1 - T72140712

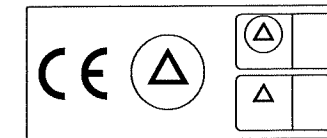
NRTL TO UL  
1561- CU 72140835



- 1.0 - ELECTRICAL:
- 1.1 - RATED POWER = 160 KVA.
- 1.2 - NUMBER OF PHASES = THREE.
- 1.3 - FREQUENCY = 50/60 Hz.
- 1.4 - ELECTRIC WITHSTANDING VOLTAGE = 4.0 kVrms.
- 1.5 - SCHEDULE DIAGRAM:



- 2.0 - MECHANICAL
- 2.1 - ESTIMATED WEIGHT = 200 LBS.
- 2.2 - TRANSFORMER SHALL BE VACUUM IMPREGNATED IN PROXY RESIN AND BAKED AFTER ASSEMBLY.
- 2.3 - FINISH:
- 2.4.1 - AUTOFORMER = BLACK PAINT.
- 2.4.2 - ENCLOSURE = ANSI #61 GRAY PAINT.
- 2.4 - MARKING:
- 2.4.1 - TERMINAL DESIGNATIONS IN WHITE INK PER 9852-800.
- 2.4.2 - ENCLOSURE SILKSCREEN PER 9852-850.
- 3.0 - ADDITIONAL:
- 3.1 - SUGGESTED SOURCE OF SUPPLY: QUALITY TRANSFORMER AND ELECTRONICS P/N 9852. OR ENGINEER APPROVED EQUAL
- 3.2 - TRANSFORMER SHALL BE MANUFACTURED AND TESTED IN ACCORDANCE WITH TUV RHEINLAND LICENSE NUMBER US 7214071102.
- 3.3 - NRTL LISTED TO UL 1561.



**TESLA**  
MOTORS, INC.

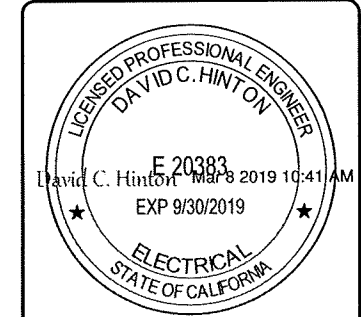
3500 DEER CREEK RD  
PALO ALTO, CA 94304  
(650) 681-5000

**BLACK & VEATCH**

6800 W 115th St, Suite 2292  
OVERLAND PARK, KS 66211  
(913) 458-2000

PROJECT NO:	192745
DRAWN BY:	AKJ
CHECKED BY:	CNS

REV	DATE	DESCRIPTION
1	03/08/19	ISSUED FOR CONSTRUCTION
0	11/07/18	ISSUED FOR PERMITTING



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CA123\_OLEMA  
OLEMA  
10005 COASTAL HIGHWAY  
OLEMA, CA 94950

SHEET TITLE  
**AUTOTRANSFORMER DETAILS**

SHEET NUMBER  
**E-5**

AUTOTRANSFORMER

NO SCALE

A

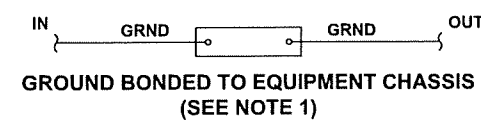
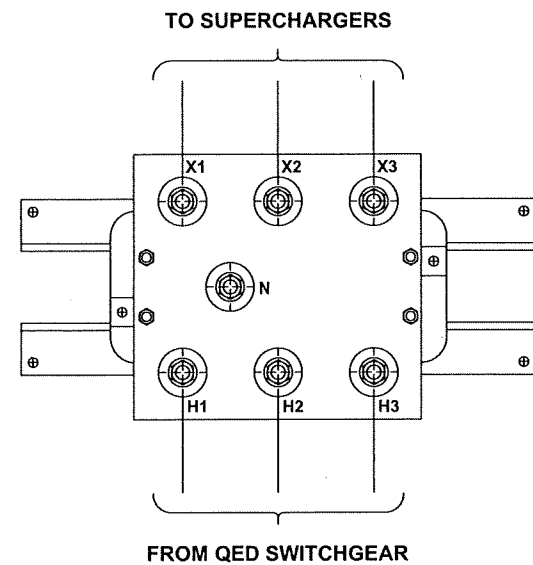
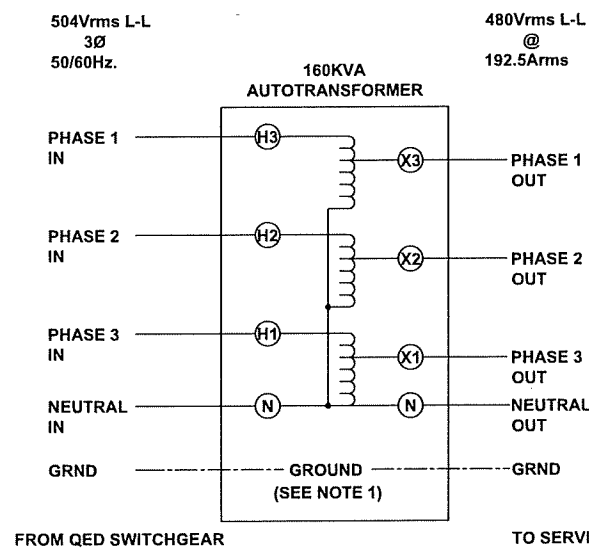
160KVA AUTOTRANSFORMER

NO SCALE

B

**NOTE**

- 1. NEUTRAL IS NOT TO BE BONDED TO EQUIPMENT GROUND.



CONNECTION DIAGRAM FOR AUTOTRANSFORMER

NO SCALE

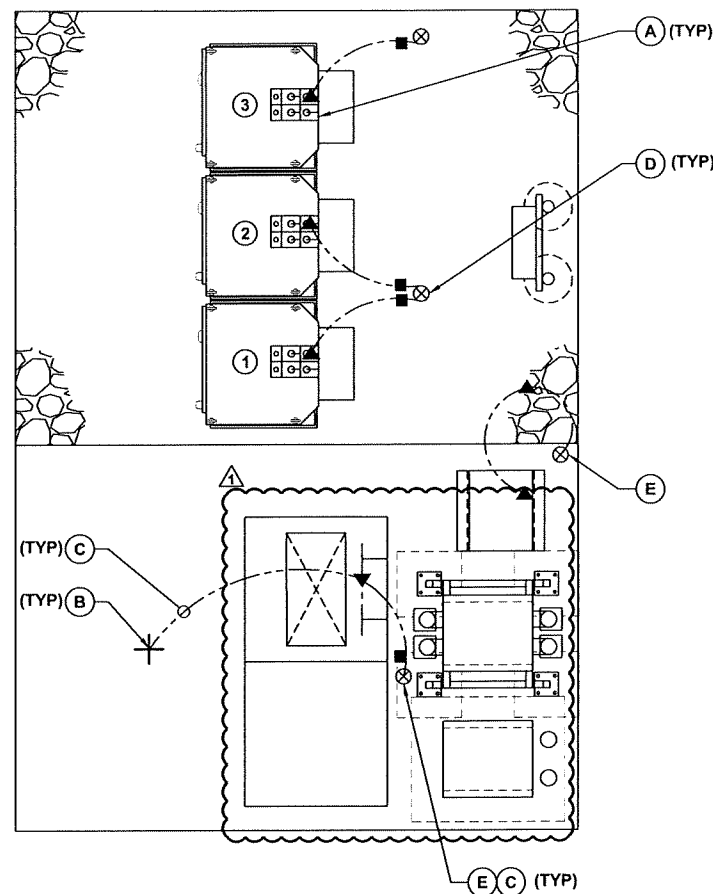
C

DETAIL NOT USED

NO SCALE

D



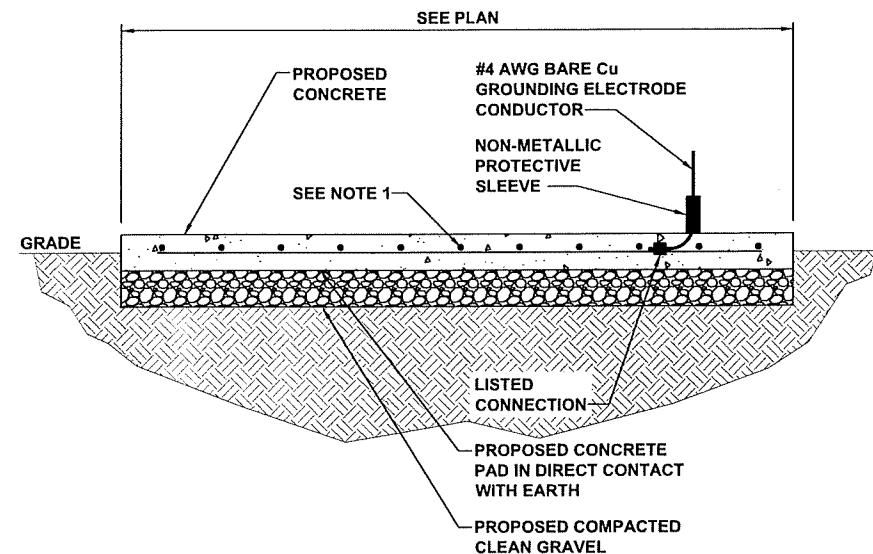


**GROUNDING LEGEND**

- (A) GROUND BAR/LUG WITH PROPOSED EQUIPMENT
- (B) POINT ON PROPOSED CONCRETE ENCASED REBAR GRID
- (C) PROPOSED SERVICE GROUND
- (D) PROPOSED SUPERCHARGER CABINET GROUND FOR EMC
- (E) PROPOSED 5/8"x8'-0" GROUND ROD
- PROPOSED GROUND CONDUCTOR
- CADWELD CONNECTION (EXOTHERMIC WELD)
- ▲ MECHANICAL CONNECTION
- ⊗ GROUND ROD
- + POINT ON PROPOSED CONCRETE ENCASED REBAR GRID

**NOTE**

1. REBAR BONDED TOGETHER WITH STEEL TIE WIRES OR EXOTHERMIC WELDING



**GROUNDING PLAN**

NO SCALE

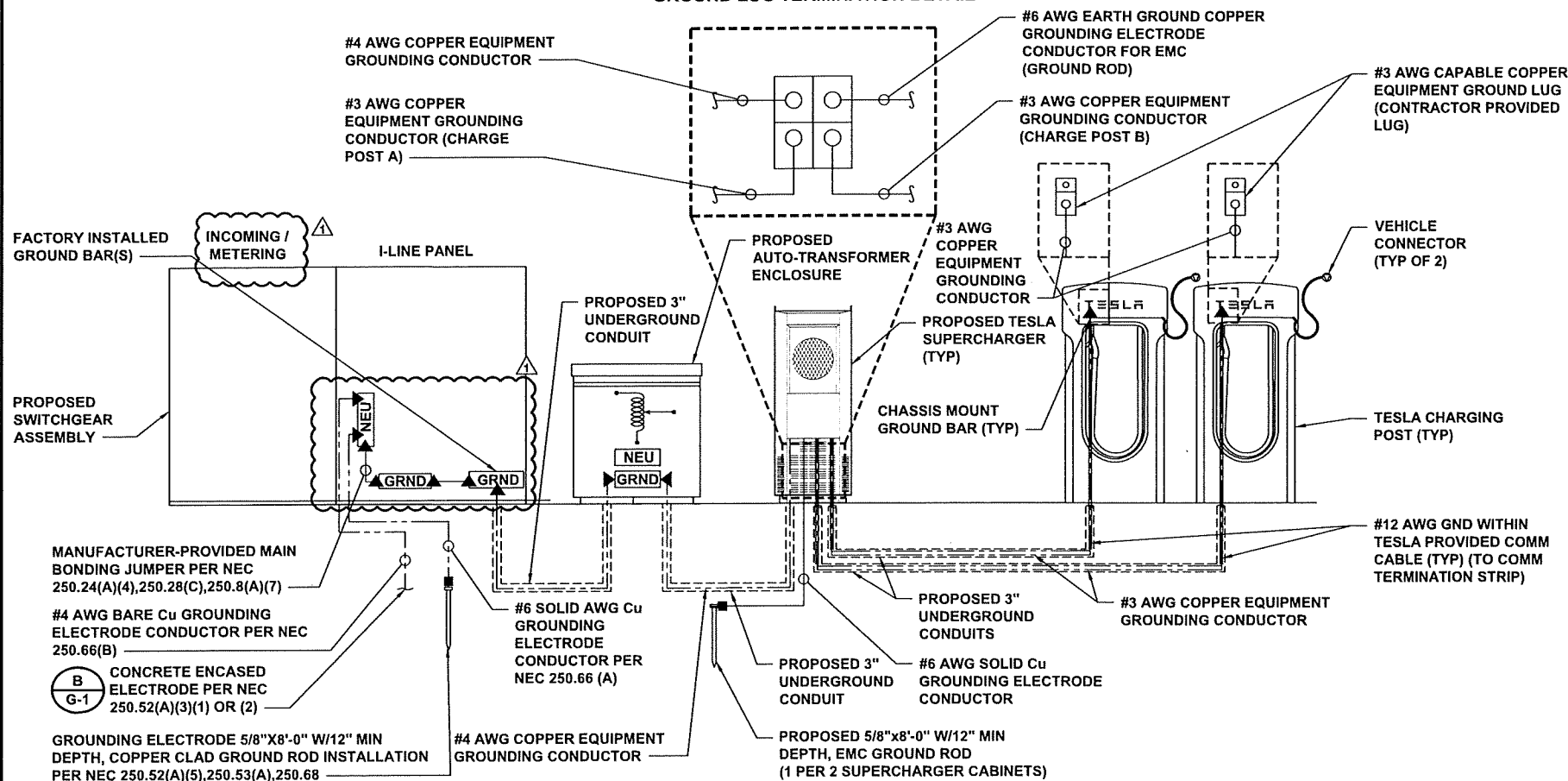
A

**CONCRETE ENCASED ELECTRODE DETAIL**

NO SCALE

B

**GROUND LUG TERMINATION DETAIL**



**GROUNDING SCHEMATIC**

NO SCALE

C

**DETAIL NOT USED**

NO SCALE

D



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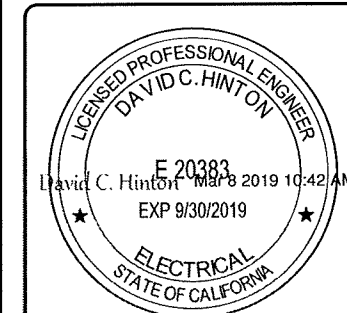


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(913) 458-2000

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CA123 OLEMA  
OLEMA  
10005 COASTAL HIGHWAY  
OLEMA, CA 94950

SHEET TITLE  
**GROUNDING DETAILS**

SHEET NUMBER  
**G-1**



3500 DEER CREEK RD  
PALO ALTO, CA 94304  
(650) 681-5000

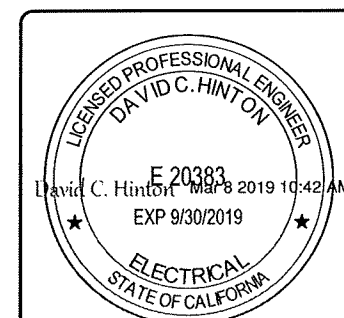


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OVERLAND PARK, KS 66211  
(913) 458-2000

PROJECT NO:	192745
DRAWN BY:	AKJ
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OLEMA  
10005 COASTAL HIGHWAY  
OLEMA, CA 94950

SHEET TITLE  
**GROUNDING DETAILS**

SHEET NUMBER  
**G-1.1**

DETAIL NOT USED

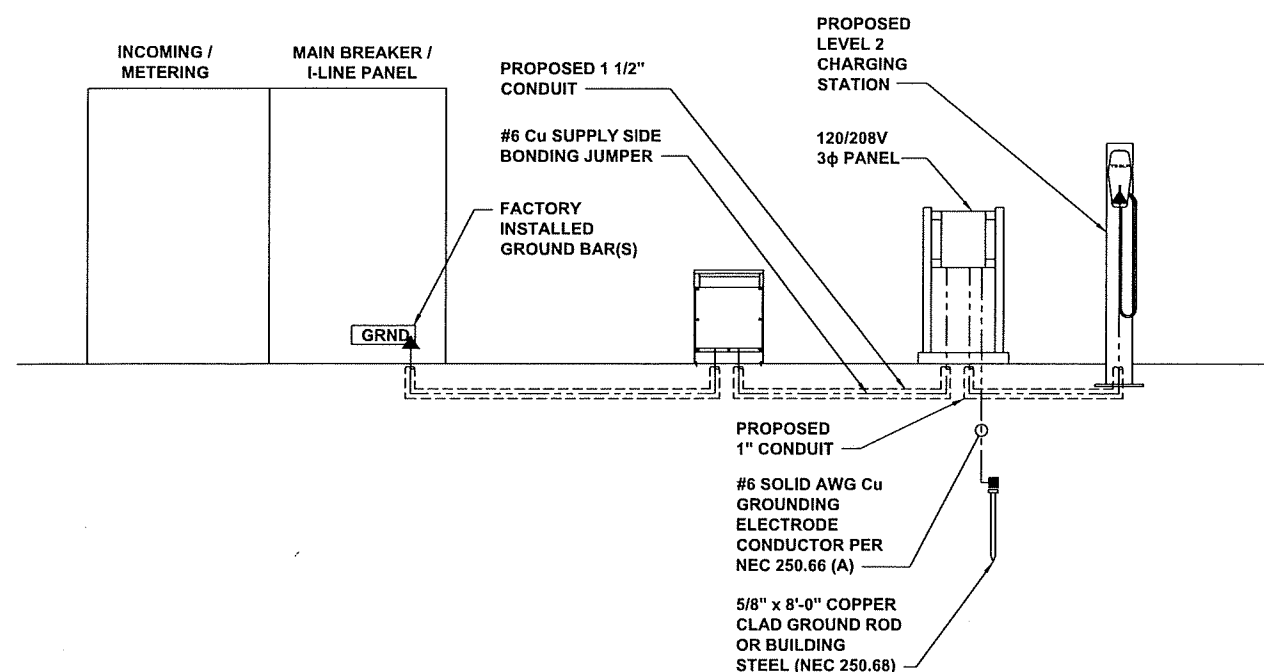
NO SCALE

A

DETAIL NOT USED

NO SCALE

B



GROUNDING PLAN

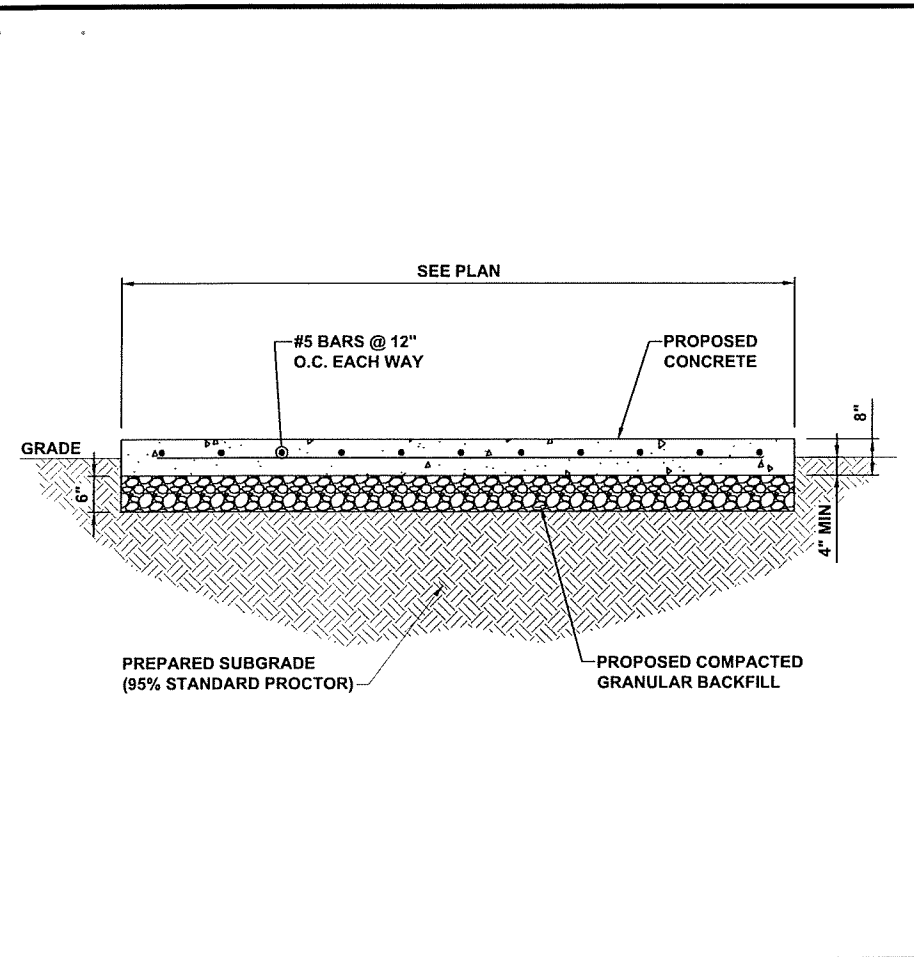
NO SCALE

C

DETAIL NOT USED

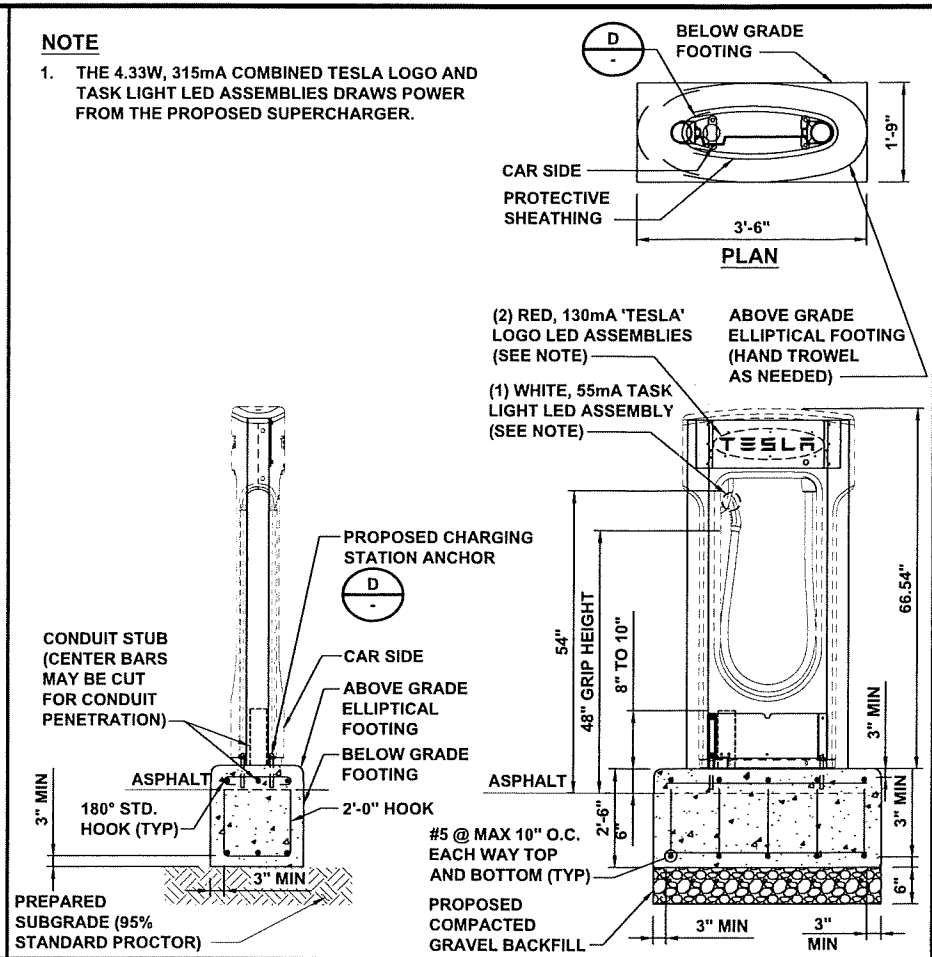
NO SCALE

D



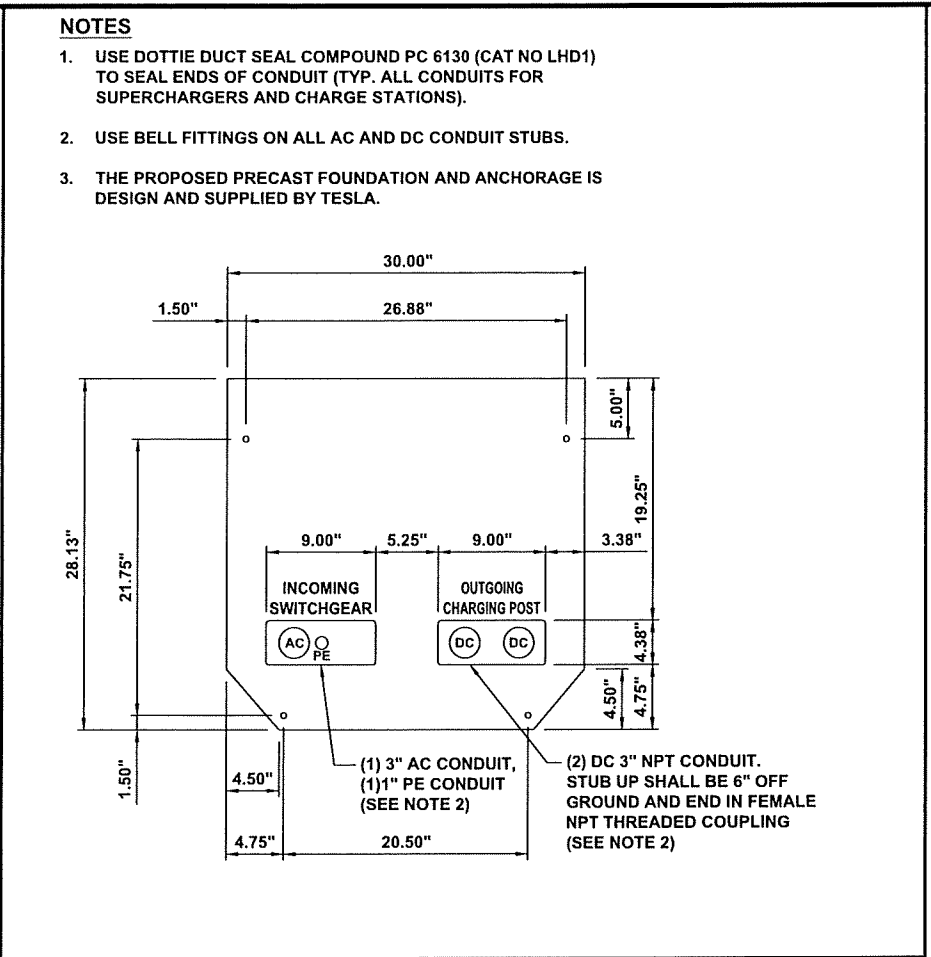
CONCRETE PAD DETAIL

NO SCALE A



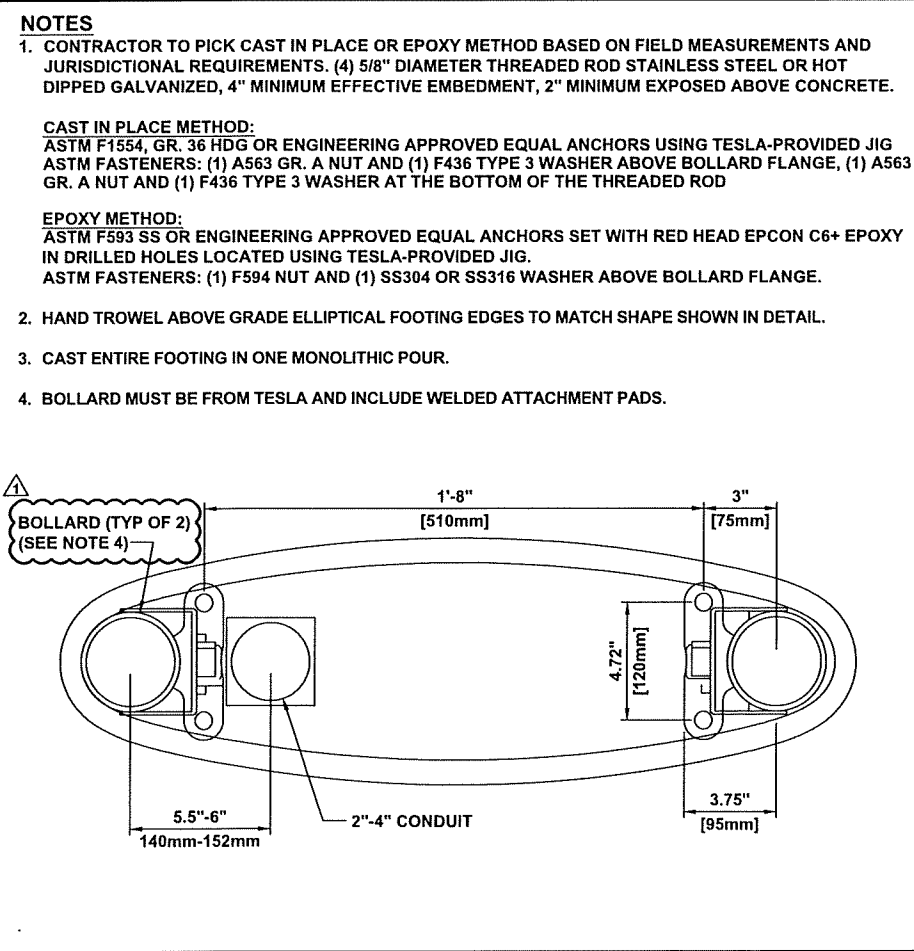
ILLUMINATED CHARGING STATION FOOTING DETAIL

NO SCALE B



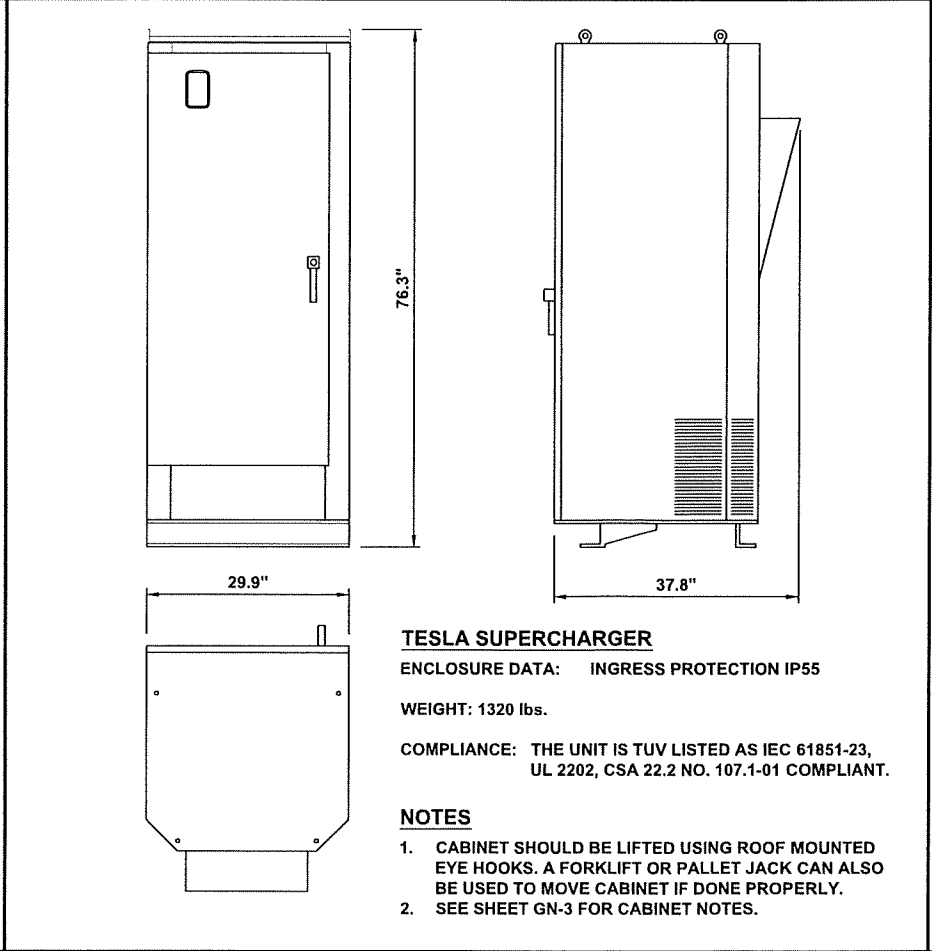
TESLA SUPERCHARGER ANCHOR BOLT & CONDUIT ENTRY DETAIL

NO SCALE C



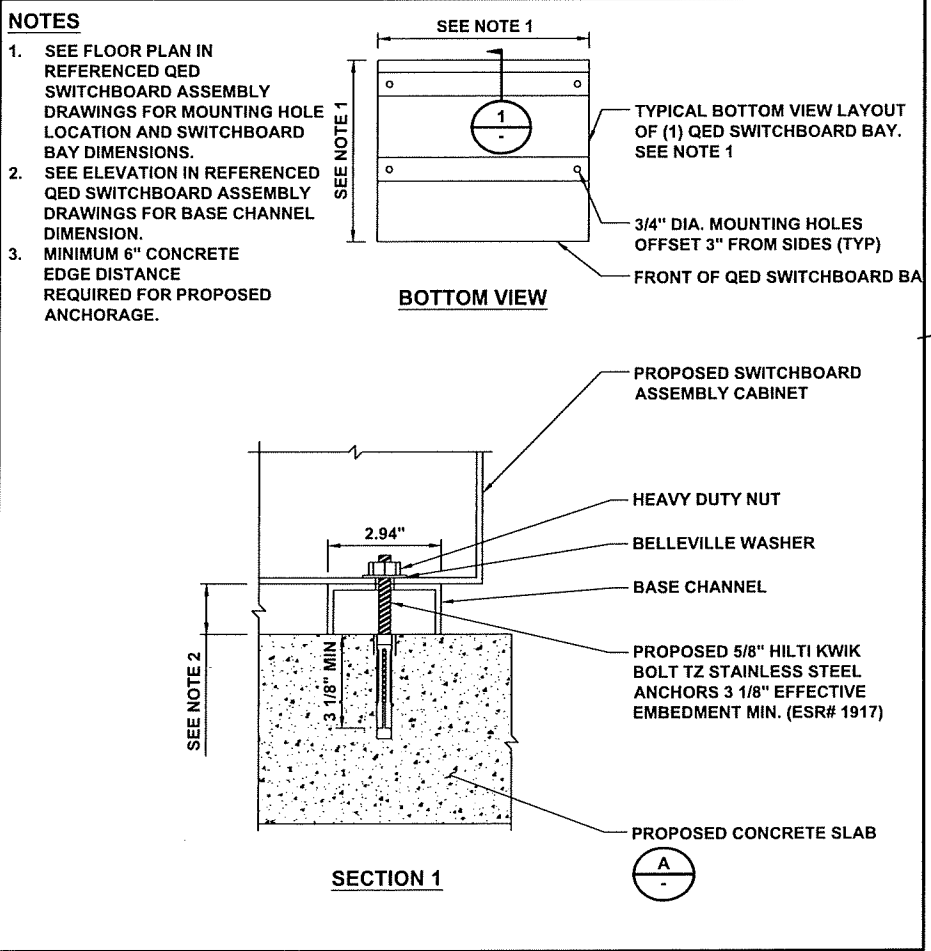
BOLTDOWN DETAIL

NO SCALE D



TESLA SUPERCHARGER CABINET DETAIL

NO SCALE E



QED SWITCHBOARD MOUNTING DETAIL

NO SCALE F

**NOTE**  
1. THE 4.33W, 315mA COMBINED TESLA LOGO AND TASK LIGHT LED ASSEMBLY DRAWS POWER FROM THE PROPOSED SUPERCHARGER.

**NOTES**  
1. USE DOTTIE DUCT SEAL COMPOUND PC 6130 (CAT NO LHD1) TO SEAL ENDS OF CONDUIT (TYP. ALL CONDUITS FOR SUPERCHARGERS AND CHARGE STATIONS).  
2. USE BELL FITTINGS ON ALL AC AND DC CONDUIT STUBS.  
3. THE PROPOSED PRECAST FOUNDATION AND ANCHORAGE IS DESIGN AND SUPPLIED BY TESLA.

**NOTES**  
1. CONTRACTOR TO PICK CAST IN PLACE OR EPOXY METHOD BASED ON FIELD MEASUREMENTS AND JURISDICTIONAL REQUIREMENTS. (4) 5/8" DIAMETER THREADED ROD STAINLESS STEEL OR HOT DIPPED GALVANIZED, 4" MINIMUM EFFECTIVE EMBEDMENT, 2" MINIMUM EXPOSED ABOVE CONCRETE.  
**CAST IN PLACE METHOD:**  
ASTM F1554, GR. 36 HDG OR ENGINEERING APPROVED EQUAL ANCHORS USING TESLA-PROVIDED JIG  
ASTM FASTENERS: (1) A563 GR. A NUT AND (1) F436 TYPE 3 WASHER ABOVE BOLLARD FLANGE, (1) A563 GR. A NUT AND (1) F436 TYPE 3 WASHER AT THE BOTTOM OF THE THREADED ROD  
**EPOXY METHOD:**  
ASTM F593 SS OR ENGINEERING APPROVED EQUAL ANCHORS SET WITH RED HEAD EPCON C6+ EPOXY IN DRILLED HOLES LOCATED USING TESLA-PROVIDED JIG.  
ASTM FASTENERS: (1) F594 NUT AND (1) SS304 OR SS316 WASHER ABOVE BOLLARD FLANGE.  
2. HAND TROWEL ABOVE GRADE ELLIPTICAL FOOTING EDGES TO MATCH SHAPE SHOWN IN DETAIL.  
3. CAST ENTIRE FOOTING IN ONE MONOLITHIC POUR.  
4. BOLLARD MUST BE FROM TESLA AND INCLUDE WELDED ATTACHMENT PADS.

**NOTES**  
1. SEE FLOOR PLAN IN REFERENCED QED SWITCHBOARD ASSEMBLY DRAWINGS FOR MOUNTING HOLE LOCATION AND SWITCHBOARD BAY DIMENSIONS.  
2. SEE ELEVATION IN REFERENCED QED SWITCHBOARD ASSEMBLY DRAWINGS FOR BASE CHANNEL DIMENSION.  
3. MINIMUM 6" CONCRETE EDGE DISTANCE REQUIRED FOR PROPOSED ANCHORAGE.

PROJECT NO:	192745
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CHECKED BY:	CNS

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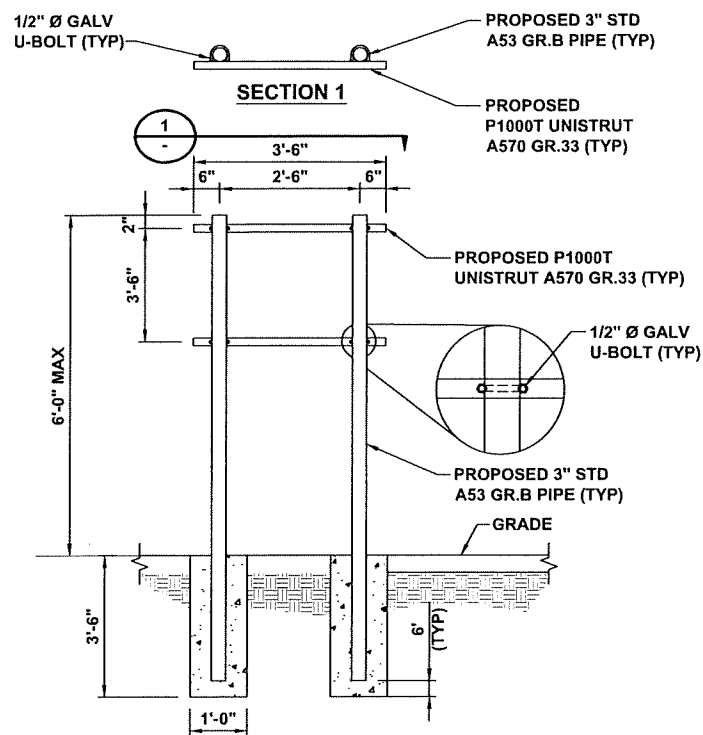
CA123\_OLEMA  
OLEMA  
10005 COASTAL HIGHWAY  
OLEMA, CA 94950

SHEET TITLE  
**INSTALLATION DETAILS**

SHEET NUMBER  
**D-1**



**NOTE**  
1. UNISTRUT CHANNELS, FITTINGS, NUTS, AND BOLTS SHALL BE HOT DIPPED GALVANIZED (HDG).



H-FRAME DETAIL

NO SCALE

A

DETAIL NOT USED

NO SCALE

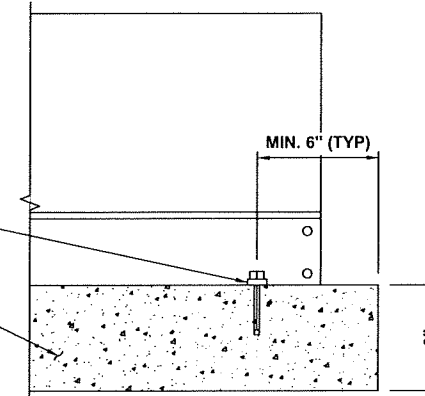
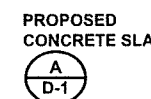
B

STEPDOWN TRANSFORMER ANCHORAGE DETAIL

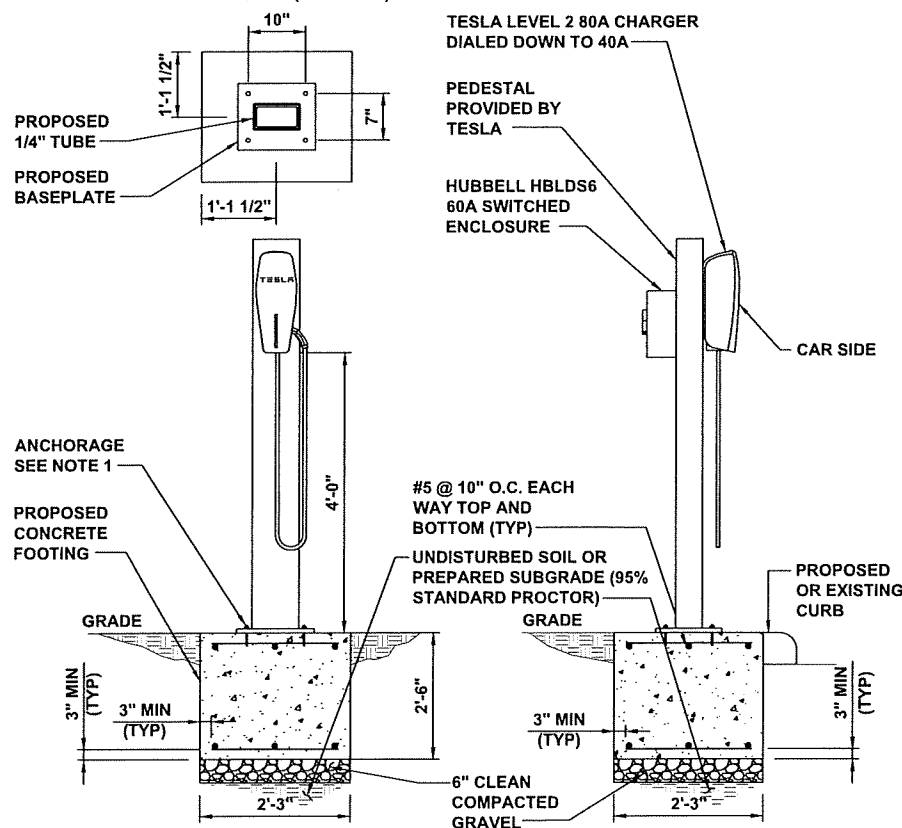
NO SCALE

C

USE (4) 3/8" DIA. HILTI KWIK BOLT-TZ SS MECHANICAL ANCHORS, EMBEDMENT OF 3" (ESR-1917) OR ENGINEER APPROVED EQUAL



**NOTE**  
1. CONTRACTOR TO USE MIN. (4) 5/8" DIA HILTI KWIK BOLT TZ - SS 316 WITH MINIMUM EFFECTIVE EMBEDMENT OF 3 1/8" OR ENGINEER APPROVED EQUAL. (ESR# 1917)

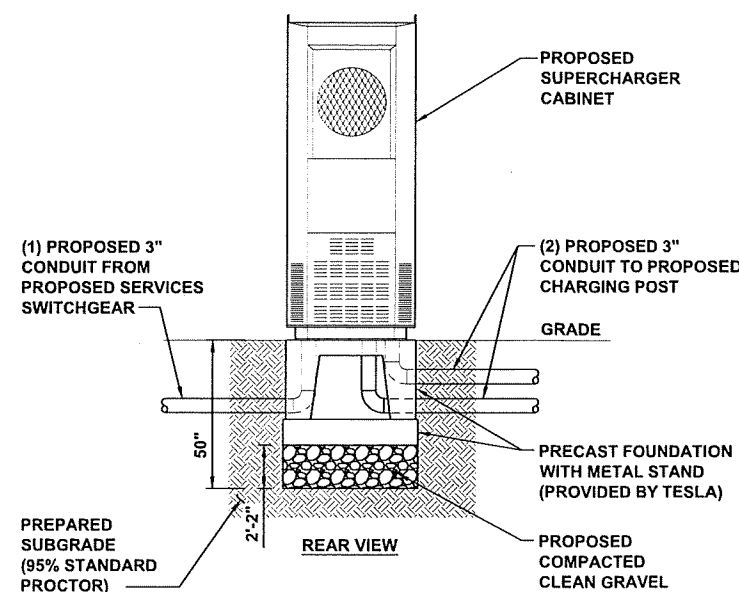


PROPOSED LEVEL 2 CHARGING STATION DETAIL

NO SCALE

D

**NOTES**  
1. THE PROPOSED PRE-CAST FOUNDATION WITH METAL STAND IS DESIGNED AND SUPPLIED BY TESLA. THESE DRAWINGS WERE CREATED BASED ON THE ASSUMPTION THAT THE PROPOSED FOUNDATION AND ANCHORAGE HAS SUFFICIENT CAPACITY TO SUPPORT THE PROPOSED EQUIPMENT IN CONFORMANCE WITH LOCAL JURISDICTIONAL REQUIREMENTS.  
2. PRECAST FOUNDATION PART NUMBER AND DIMENSIONS SHALL BE VERIFIED WITH TESLA SUPPLIER PRIOR TO BIDDING ORDERING.



SUPERCHARGER CABINET FOOTING DETAIL

NO SCALE

E

DETAIL NOT USED

NO SCALE

F



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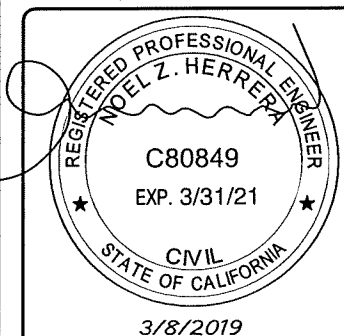


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OVERLAND PARK, KS 66211  
(913) 458-2000

PROJECT NO: 192745  
DRAWN BY: AKJ  
CHECKED BY: CNS

REV	DATE	DESCRIPTION
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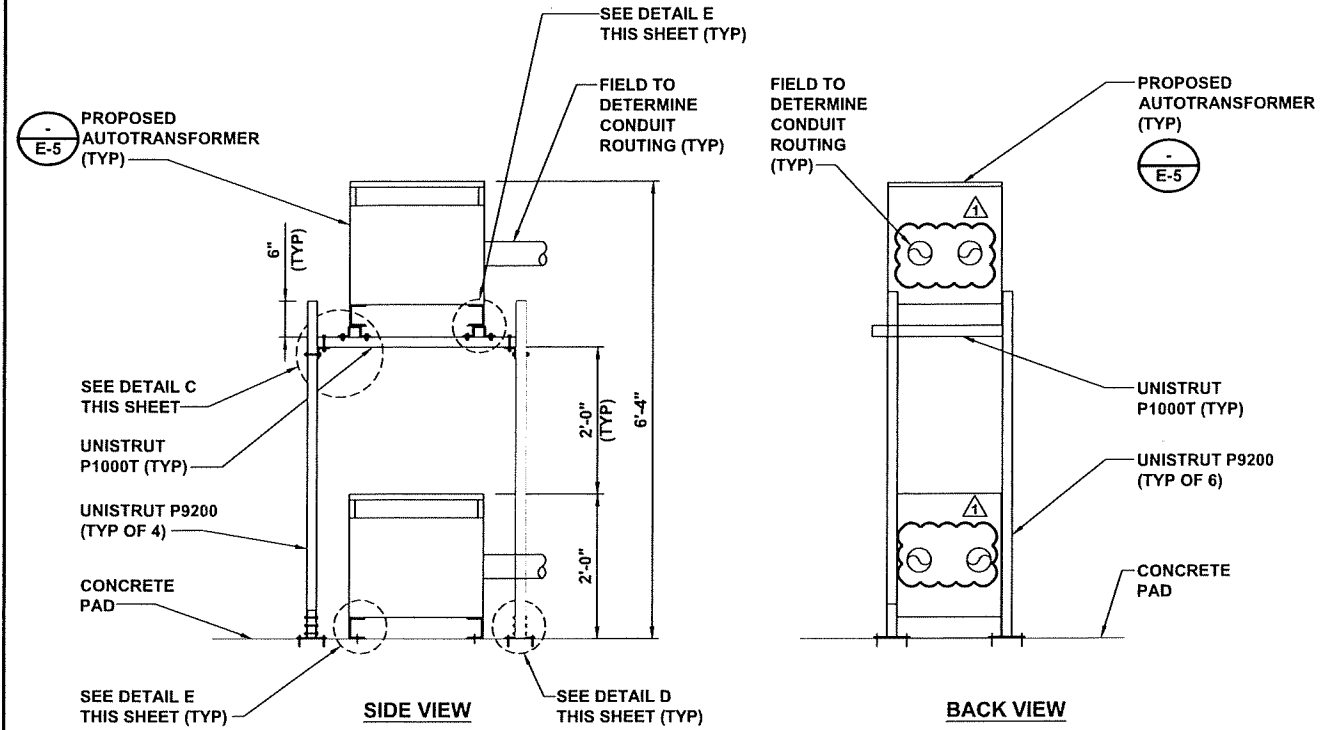
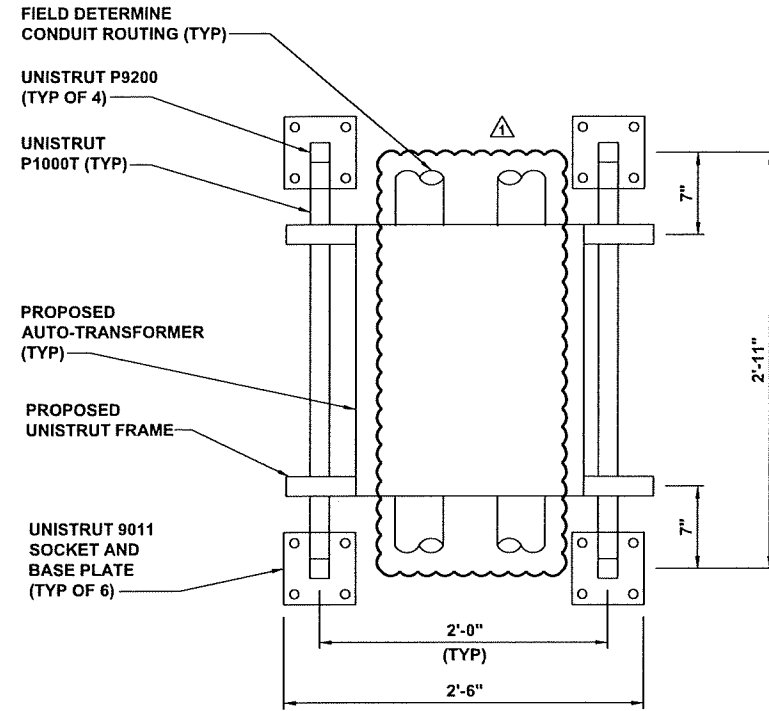
CA123\_OLEMA  
OLEMA  
10005 COASTAL HIGHWAY  
OLEMA, CA 94950

SHEET TITLE  
INSTALLATION DETAILS

SHEET NUMBER  
D-3

**NOTE:**

1. THE EXACT CONDUIT ROUTING PATH AND CONDUCTOR RUN LENGTHS SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD BASED ON PHYSICAL MEASUREMENTS. CONTRACTOR TO ORDER CONDUIT BASED ON FIELD MEASUREMENTS. CONTRACTOR TO SUPPLY FIELD TERMINAL BOX TO BE PLACED OVER EXISTING FIELD STUB UPS.



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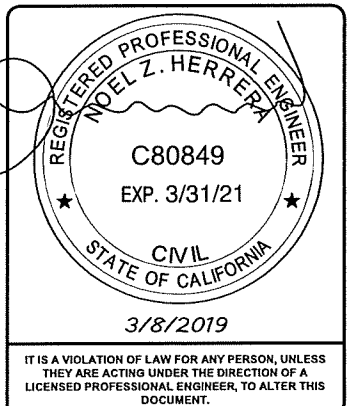


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OVERLAND PARK, KS 66211  
(913) 458-2000

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CA123 OLEMA  
OLEMA  
10005 COASTAL HIGHWAY  
OLEMA, CA 94950

SHEET TITLE  
**INSTALLATION DETAILS**

SHEET NUMBER  
**D-4**

UNISTRUT FRAME MOUNTED AUTOTRANSFORMERS - TOP VIEW

NO SCALE

A

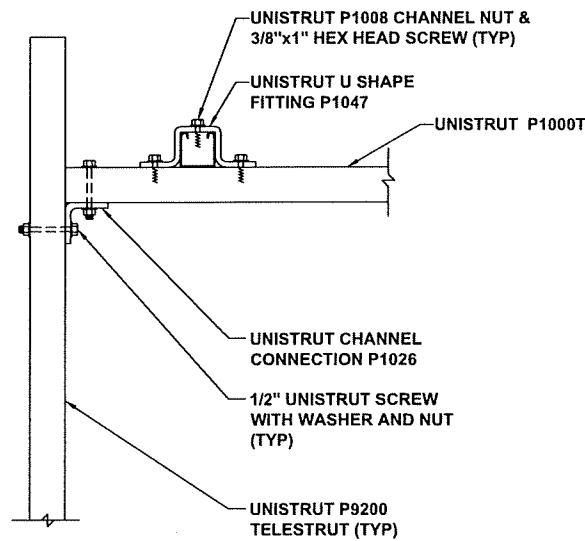
UNISTRUT FRAME MOUNTED AUTOTRANSFORMERS

NO SCALE

B

**NOTE**

1. MINIMUM CONCRETE EDGE DISTANCE FOR ANCHORAGE IS 6" INCHES.



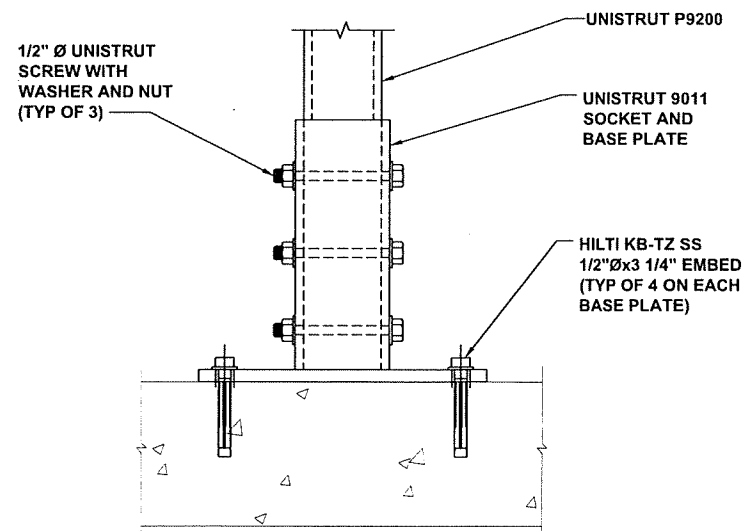
CONNECTION DETAIL

NO SCALE

C

**NOTE**

1. MINIMUM EDGE DISTANCE FOR ANCHOR IS 6".



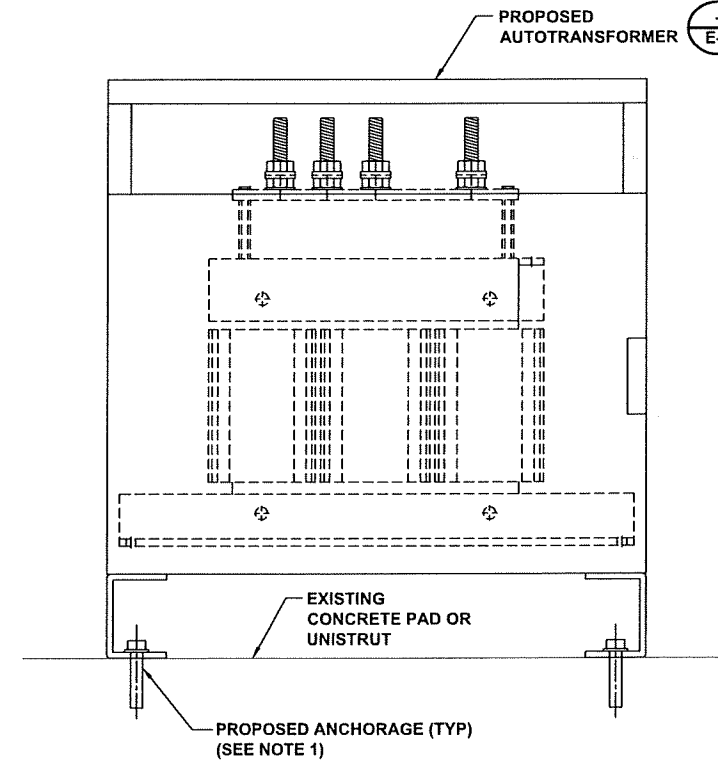
POST ANCHORAGE DETAIL

NO SCALE

D

**NOTE**

1. PROPOSED ANCHORAGE:  
USE (4) 1/2" DIA HILTI BOLT TZ-SS 316 AND MINIMUM EFFECTIVE EMBEDMENT OF 3 1/4" OR ENGINEER APPROVED EQUAL. MINIMUM CONCRETE EDGE DISTANCE FOR ANCHORAGE IS 6 INCHES.  
ANCHORING TO UNISTRUT: 1/2" UNISTRUT HEX HEAD SCREW WITH SPRING NUT (TYP AT 4 LOCATIONS).



AUTOTRANSFORMER ANCHORAGE DETAIL

NO SCALE

E

**TREE PLANTING NOTES**

1. SITUATE ROOT BALL SO THAT TOP OF ROOT BALL IS 2" ABOVE FINISHED GRADE.
2. SCARIFY SIDES AND BOTTOM OF TREE PIT.
3. BACKFILL TREE PIT WITH EXISTING SOIL AND WATER UNTIL NO MORE WATER IS ABSORBED.
4. DO NOT ALLOW AIR POCKETS TO FORM WHILE BACKFILLING.
5. INSTALL A MIN. 4'-0" DIAMETER MULCH RING AT A MIN. DEPTH OF 3" FOR TREES IN LAWN AREA.
6. TREES NEED TO BE STAKED ONLY WHEN EXTREME WIND MAKES SUCH SUPPORT NECESSARY. IF STAKING IS NECESSARY CONTACT THIS OFFICE AND A DETAIL WILL BE PROVIDED.

ROPES AT TOP OF ROOT BALL SHALL BE CUT, REMOVE TOP 1/3 OF BURLAP. ALL NON-BIODEGRADABLE MATERIAL SHALL BE COMPLETELY REMOVED

COMPACT SUBSOIL TO FORM 6" PEDESTAL TO PREVENT SETTLING

FINISHED GRADE

MIN 45° SLOPE ON SIDES OF TREE PIT

MULCH TO A DEPTH OF 3" (KEEP MULCH 6" AWAY FROM TREE TRUNK)

BACKFILL WITH EXISTING SOIL (IN SOME INSTANCES LAWN WILL BE PLANTED OVER THIS AREA)

3 TIMES  
ROOT BALL DIAMETER  
TREE PLANTING DETAIL

**GENERAL NOTE**

1. ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24 HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL THEN BE WATERED WEEKLY, AND MORE FREQUENTLY DURING TIMES OF EXTREME HEAT, FOR THE DURATION OF THE FIRST GROWING SEASON.

**PLANT SCHEDULE**

CODE	BOTANICAL NAME	COMMON NAME	QTY	SIZE (AT CONSTRUCTION)	SPACING	SPECIFICATIONS (AT FULL SIZE)
TREES	PODOCARPUS MACROPHYLLUS "MAKI"	SHRUBBY YEW PODOCARPUS	5	FULL	AS SHOWN	8-10 FT TALL, 3-4 FT WIDE
SHRUBS						
GROUND COVER						
OTHER						



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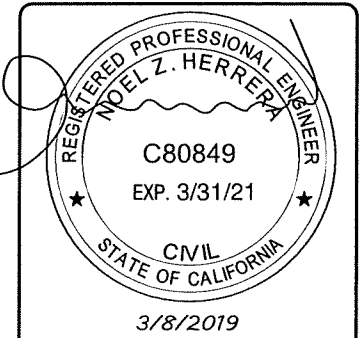


**BLACK & VEATCH**

6800 W 115th St, Suite 2292  
OVERLAND PARK, KS 66211  
(913) 458-2000

PROJECT NO:	192745
DRAWN BY:	AKJ
CHECKED BY:	CNS

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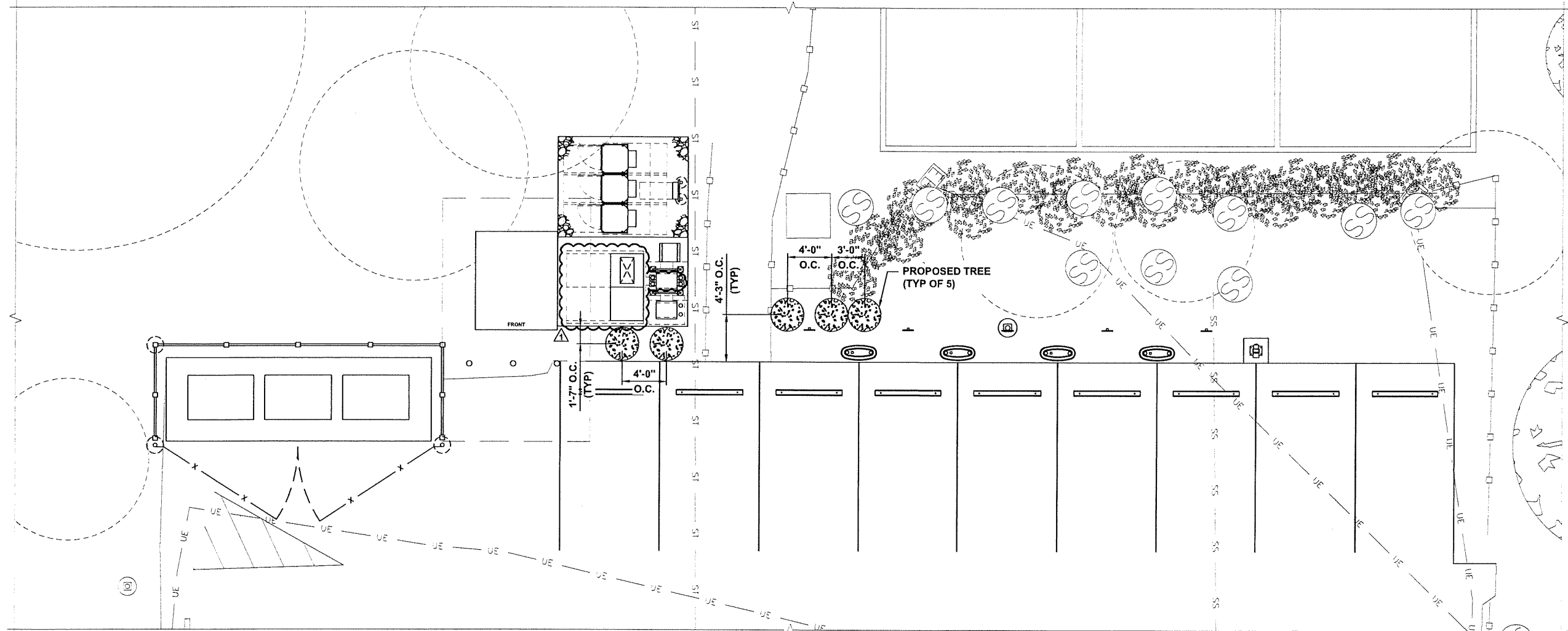


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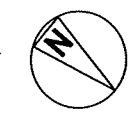
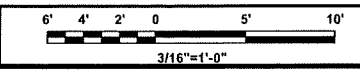
CA123\_OLEMA  
OLEMA  
10005 COASTAL HIGHWAY  
OLEMA, CA 94950

SHEET TITLE  
**LANDSCAPING PLAN,  
DETAILS & PLANT SCHEDULE**

SHEET NUMBER  
**LS-1**



**LANDSCAPING PLAN**



**GENERAL CONSTRUCTION NOTES**

- FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY  
GENERAL CONTRACTOR: OVERLAND CONTRACTING INC. (BLACK & VEATCH)  
CONTRACTOR: (CONSTRUCTION)  
OWNER: TESLA
- ALL SITE WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS.
- THE GENERAL CONTRACTOR SHALL VISIT THE SITE AND SHALL FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS, DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. GENERAL CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF WORK.
- ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS THE MINIMUM REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS, SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF WORK AND PREPARED BY THE ENGINEER PRIOR TO PROCEEDING WITH WORK.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE ENGINEER PRIOR TO PROCEEDING.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL OSHA REQUIREMENTS AND THE LOCAL JURISDICTION.
- THE GENERAL CONTRACTOR SHALL COORDINATE WORK AND SCHEDULE WORK ACTIVITIES WITH OTHER DISCIPLINES.
- CONSTRUCTION SHALL BE DONE IN A WORKMANLIKE MANNER BY COMPETENT EXPERIENCED WORKMAN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST ACCEPTED PRACTICE.
- WORK PREVIOUSLY COMPLETED IS REPRESENTED BY LIGHT SHADED LINES AND NOTES. THE SCOPE OF WORK FOR THIS PROJECT IS REPRESENTED BY DARK SHADED LINES AND NOTES. CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR OF ANY EXISTING CONDITIONS THAT DEVIATE FROM THE DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.
- THE CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CONSTRUCTION MANAGER 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
- THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- THE GENERAL CONTRACTOR SHALL COORDINATE AND MAINTAIN ACCESS FOR ALL TRADES AND CONTRACTORS TO THE SITE AND/OR BUILDING.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY OF THE SITE FOR THE DURATION OF CONSTRUCTION UNTIL JOB COMPLETION.
- THE GENERAL CONTRACTOR SHALL MAINTAIN IN GOOD CONDITION ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES.
- THE CONTRACTOR SHALL PROVIDE PORTABLE FIRE EXTINGUISHERS WITH A RATING OF NOT LESS THAN 2-A:10-B:C AND SHALL BE WITHIN 25 FEET OF TRAVEL DISTANCE TO ALL PORTIONS OF WHERE THE WORK IS BEING COMPLETED DURING CONSTRUCTION.
- ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY THE ENGINEER. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. THE CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS SHALL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION, B) CONFINED SPACE, C) ELECTRICAL SAFETY, AND D) TRENCHING & EXCAVATION.

**GENERAL CONSTRUCTION NOTES CONT.**


- ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED, CAPPED, PLUGGED OR OTHERWISE DISCONNECTED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, AS DIRECTED BY THE ENGINEER, AND SUBJECT TO THE APPROVAL OF THE OWNER AND/OR LOCAL UTILITIES.
- THE AREAS OF THE OWNER'S PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION.
- CONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE FEDERAL AND LOCAL JURISDICTION FOR EROSION AND SEDIMENT CONTROL.
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- THE SUBGRADE SHALL BE BROUGHT TO A SMOOTH UNIFORM GRADE AND COMPACTED TO 95 PERCENT STANDARD PROCTOR DENSITY UNDER PAVEMENT AND STRUCTURES AND 80 PERCENT STANDARD PROCTOR DENSITY IN OPEN SPACE. ALL TRENCHES IN PUBLIC RIGHT OF WAY SHALL BE BACKFILLED WITH FLOWABLE FILL OR OTHER MATERIAL PRE-APPROVED BY THE LOCAL JURISDICTION.
- ALL NECESSARY RUBBISH, STUMPS, DEBRIS, STICKS, STONES, AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LAWFUL MANNER.
- ALL BROCHURES, OPERATING AND MAINTENANCE MANUALS, CATALOGS, SHOP DRAWINGS, AND OTHER DOCUMENTS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR AT COMPLETION OF CONSTRUCTION AND PRIOR TO PAYMENT.
- THE CONTRACTOR SHALL SUBMIT A COMPLETE SET OF AS-BUILT REDLINES TO THE GENERAL CONTRACTOR UPON COMPLETION OF PROJECT AND PRIOR TO FINAL PAYMENT.
- THE CONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION.
- THE PROPOSED FACILITY WILL BE UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SEWER SERVICE, AND IS NOT FOR HUMAN HABITATION (NO HANDICAP ACCESS REQUIRED).
- NO OUTDOOR STORAGE OR SOLID WASTE CONTAINERS ARE PROPOSED.
- CONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR CONSTRUCTION. IF CONTRACTOR CANNOT OBTAIN A PERMIT, THEY MUST NOTIFY THE GENERAL CONTRACTOR IMMEDIATELY.
- THE CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
- INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM SITE VISITS AND/OR DRAWINGS PROVIDED BY THE SITE OWNER. CONTRACTORS SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.

**ELECTRICAL NOTES**


- THE ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ANY/ALL ELECTRICAL WORK INDICATED. ANY/ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS AND ANY/ALL APPLICABLE SPECIFICATIONS. IF ANY PROBLEMS ARE ENCOUNTERED BY COMPLYING WITH THESE REQUIREMENTS, CONTRACTOR SHALL NOTIFY 'CONSTRUCTION MANAGER' AS SOON AS POSSIBLE, AFTER THE DISCOVERY OF THE PROBLEMS, AND SHALL NOT PROCEED WITH THAT PORTION OF WORK, UNTIL THE 'CONSTRUCTION MANAGER' HAS DIRECTED THE CORRECTIVE ACTIONS TO BE TAKEN.
- THE ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE THEMSELVES WITH ANY/ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATION INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. THE CONDITION OF EXISTING ELECTRICAL EQUIP., LIGHT FIXTURES, ETC., THAT ARE PART OF THE FINAL SYSTEM, SHALL BE VERIFIED BY THE CONTRACTOR, PRIOR TO THE SUBMITTAL OF HIS BID. FAILURE TO COMPLY WITH THIS PARAGRAPH WILL IN NO WAY RELIEVE CONTRACTOR OF PERFORMING ALL WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC AND ALL CODES AND LOCAL ORDINANCES OF THE LOCAL POWER COMPANIES HAVING JURISDICTION AND SHALL INCLUDE BUT NOT BE LIMITED TO:
  - A. UL - UNDERWRITERS LABORATORIES
  - B. NEC - NATIONAL ELECTRICAL CODE
  - C. NEMA - NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
  - D. OSHA - OCCUPATIONAL SAFETY AND HEALTH ACT
  - E. SBC - STANDARD BUILDING CODE
  - F. NFPA - NATIONAL FIRE PROTECTION ASSOCIATION
- DO NOT SCALE ELECTRICAL DRAWINGS, REFER TO SITE PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT, BUT CONFIRM WITH 'CONSTRUCTION MANAGER' ANY SIZES AND LOCATIONS WHEN NEEDED.
- EXISTING SERVICES: THE CONTRACTOR SHALL NOT INTERRUPT EXISTING SERVICES WITHOUT WRITTEN PERMISSION OF THE OWNER.
- THE CONTRACTOR SHALL PAY FOR ANY/ALL PERMITS, FEES, INSPECTIONS AND TESTING. THE CONTRACTOR IS TO OBTAIN PERMITS AND APPROVED SUBMITTALS PRIOR TO THE WORK BEGINNING OR ORDERING THE EQUIPMENT.
- THE TERM "PROVIDE" USED IN CONSTRUCTION DOCUMENTS AND SPECIFICATIONS, INDICATES THAT THE CONTRACTOR SHALL FURNISH AND INSTALL.

**ELECTRICAL NOTES CONT.**

- THE CONTRACTOR SHALL CONFIRM WITH LOCAL UTILITY COMPANY ANY/ALL REQUIREMENTS SUCH AS THE: LUG SIZE RESTRICTIONS, CONDUIT ENTRY, SIZE OF TRANSFORMERS, SCHEDULED DOWNTIME FOR THE OWNERS' CONFIRMATION, ETC. ANY/ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER, PRIOR TO BEGINNING ANY WORK.
- CONDUCTORS: CONTRACTOR SHALL USE 98% CONDUCTIVITY COPPER OR ALUMINUM WITH TYPE (THWN-2) INSULATION, 600 VOLT, COLOR CODED UNLESS SPECIFIED DIFFERENTLY ON DRAWINGS.
- ALL (THWN-2) WIRING INSTALLATIONS TO FOLLOW MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
- OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET/DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
- IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF THE CONSTRUCTION. CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER. CONTRACTOR IS TO PROVIDE ALL ELECTRICAL EQUIPMENT UNLESS OTHERWISE DIRECTED.
- ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS, WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIONAL AND SUBJECT TO REGULATORY INSPECTION AND APPROVAL BY CONSTRUCTION MANAGER.
- ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
- CONTRACTOR SHALL GUARANTEE ANY/ALL MATERIALS AND WORK FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE.
- THE CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ANY ADDITIONAL CHARGE AND SHALL INCLUDE THE REPLACEMENT OR THE REPAIR OF ANY OTHER PHASE OF THE INSTALLATION, WHICH MAY HAVE BEEN DAMAGED THEREIN.
- ADEQUATE AND REQUIRED LIABILITY INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LOSS AND ANY/ALL PROPERTY DAMAGE FOR THE DURATION OF WORK.
- PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES AND DEVICES FOR ALL OUTLETS AS INDICATED.
- TRENCHING AND BACKFILL: THE CONTRACTOR SHALL PROVIDE FOR ALL UNDERGROUND INSTALLED CONDUIT AND/OR CABLES INCLUDING EXCAVATION AND BACKFILLING AND COMPACTION. REFER TO GENERAL SITE WORK NOTES.
- MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SHALL APPEAR ON THE LIST OF U.L. APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF THE NEC, NEMA AND IEEE.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR MANUFACTURERS CATALOG INFORMATION OF ANY/ALL LIGHTING FIXTURES, SWITCHES AND ALL OTHER ELECTRICAL ITEMS FOR APPROVAL BY THE CONSTRUCTION MANAGER PRIOR TO INSTALLATION.
- ANY CUTTING OR PATCHING DEEMED NECESSARY FOR ELECTRICAL WORK IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY AND SHALL BE INCLUDED IN THE COST FOR WORK AND PERFORMED TO THE SATISFACTION OF THE 'CONSTRUCTION MANAGER' UPON FINAL ACCEPTANCE.
- THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS WITH ONLY TYPEWRITTEN DIRECTORIES.
- DISCONNECT SWITCHES SHALL BE H.P. RATED HEAVY-DUTY, QUICK-MAKE AND QUICK-BREAK ENCLOSURES, AS REQUIRED BY EXPOSURE TYPE.
- ALL CONNECTIONS EXCEPT THE EV CHARGE CABLE TERMINATION IN THE CHARGE POST SHALL BE MADE WITH A PROTECTIVE COATING OF AN ANTI-OXIDE COMPOUND SUCH AS "NOALOX" BY IDEAL INDUSTRIAL INC., COAT ALL WIRE SURFACES BEFORE CONNECTING. EXPOSED ALUMINUM & COPPER SURFACES, INCLUDING GROUND BARS, SHALL BE TREATED - NO SUBSTITUTIONS.
- ALL EXTERIOR AND INTERIOR ABOVE GROUND CONDUIT SHALL BE RIGID UNLESS SPECIFIED OTHERWISE. ALL BURIED CONDUITS SHALL BE SCH 40 PVC UNLESS SPECIFIED OTHERWISE.
- RACEWAYS: CONDUIT SHALL BE SCHEDULE 40 PVC, MEETING OR EXCEEDING NEMA TC2 - 1990. THE CONTRACTOR SHALL PLUG AND CAP EACH END OF SPARE AND EMPTY CONDUITS AND PROVIDE TWO SEPARATE PULL STRINGS - 200 LBS TEST POLYETHYLENE CORD. ALL CONDUIT BENDS SHALL BE A MINIMUM OF 3 FT. RADIUS. RGS CONDUITS WHEN SPECIFIED, SHALL MEET UL-6 FOR GALVANIZED STEEL. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID CONDUIT. COAT ALL THREADS WITH 'BRITZ ZINC' OR 'GOLD GALV'.
- SUPPORT OF ALL ELECTRICAL WORK SHALL BE AS REQUIRED BY NEC.
- CONNECTORS FOR POWER CONDUCTORS: CONTRACTOR SHALL USE PRESSURE TYPE INSULATED TWIST-ON CONNECTORS FOR NO. 10 AWG AND SMALLER. USE SOLDERLESS MECHANICAL TERMINAL LUGS FOR NO. 8 AWG AND LARGER.
- THE CONTRACTOR SHALL PLACE TWO LENGTHS OF WARNING TAPE AT A DEPTH OF 12" BELOW GROUND AND DIRECTLY ABOVE ELECTRICAL SERVICE CONDUITS. CAUTION TAPE TO READ "CAUTION BURIED ELECTRIC".
- WHEN DIRECTIONAL BORING IS REQUIRED, CONTRACTOR SHALL INSTALL A LOOSE TONING WIRE WITHIN INSTALLED CONDUIT TO ALLOW FOR IDENTIFICATION OF UNDERGROUND CONDUITS.
- ALL BOLTS SHALL BE STAINLESS STEEL.
- ALL MATERIALS AND EQUIPMENT SUPPLIED AND INSTALLED BY THE CONTRACTOR SHOULD BE NEW AND UNUSED.




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PROJECT NO:	192745
DRAWN BY:	AKJ
CHECKED BY:	CNS

REV	DATE	DESCRIPTION
1	03/08/19	ISSUED FOR CONSTRUCTION
0	11/07/18	ISSUED FOR PERMITTING



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.

CA123 OLEMA  
OLEMA  
10005 COASTAL HIGHWAY  
OLEMA, CA 94950

SHEET TITLE  
**GENERAL NOTES 1**

SHEET NUMBER  
**GN-1**



**REINFORCED CONCRETE NOTES**

- CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI IN 28 DAYS UNLESS OTHERWISE NOTED; CONTINUOUS INSPECTION IS NOT REQUIRED.  
SLUMP: 4" MIN./6" MAX.  
AIR ENTRAINMENT: 4 1/2% - 7% BY VOLUME
- REINFORCEMENT SHALL BE A NEW BILLET STEEL DEFORMED BARS CONFORMING TO ASTM SPECIFICATION A615 GRADE 60. MAXIMUM COARSE AGGREGATE SIZE SHALL BE 3/4".
- REINFORCEMENT SHALL COMPLY WITH THE LATEST EDITION OF ACI-318 FOR MINIMUM CLEARANCES AND CONCRETE COVER.
- ALL EMBEDDED ITEMS SHALL BE SECURELY HELD IN POSITION PRIOR TO PLACEMENT OF CONCRETE. ALL CONCRETE SHALL BE READY-MIXED IN ACCORDANCE WITH ASTM C94.
- MAINTAIN TEMPERATURE OF CAST IN PLACE CONCRETE BETWEEN 50 DEGREES AND 90 DEGREES FAHRENHEIT.
- DO NOT USE RETEMPERED CONCRETE, OR ADD WATER TO READY-MIX CONCRETE AT THE JOB SITE.
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
- EXCEPT AS DETAILED OR AUTHORIZED. MAKE BARS CONTINUOUS AROUND CORNERS. WHERE PERMITTED, SPLICES MADE BY CONTACT LAPS SHALL BE CLASS "B" TENSION LAPS UNLESS NOTED OTHERWISE.
- DETAIL BARS IN ACCORDANCE WITH "ACI DETAILING MANUAL - 2004, PUBLICATION SP-66" AND "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", ACI 318, LATEST EDITION.
- PROVIDE ACCESSORIES NECESSARY TO PROPERLY SUPPORT REINFORCING.
- THE PROPOSED PRE-CAST FOUNDATION AND ANCHORAGE IS DESIGNED AND SUPPLIED BY TESLA. THESE DRAWINGS WERE CREATED BASED ON THE ASSUMPTION THAT THE PROPOSED FOUNDATION AND ANCHORAGE HAS SUFFICIENT CAPACITY TO SUPPORT THE PROPOSED EQUIPMENT IN CONFORMANCE WITH LOCAL JURISDICTIONAL REQUIREMENTS.

**GENERAL SITE WORK NOTES**

**PART 1 - GENERAL**

CLEARING, GRUBBING, STRIPPING, EROSION CONTROL, SURVEY, LAYOUT, SUBGRADE PREPARATION AND FINISH GRADING AS REQUIRED TO COMPLETE THE PROPOSED WORK SHOWN IN THESE PLANS.

**1.1 REFERENCES:**

- A. DOT (STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION-CURRENT EDITION).
- B. ASTM (AMERICAN SOCIETY FOR TESTING AND MATERIALS).
- C. OSHA (OCCUPATION SAFETY AND HEALTH ADMINISTRATION).

**1.2 INSPECTION AND TESTING:**

- A. GENERAL CONTRACTOR SHALL PERFORM ALL WORK IN CONFORMANCE WITH THE PLANS AND SPECIFICATIONS. PERFORM INSPECTIONS BEFORE CONCEALING WORK WITH FOLLOW-ON ACTIVITIES (BACKFILL, CONCRETE POUR, ETC).

**1.3 SITE MAINTENANCE AND PROTECTION:**

- A. PROVIDE ALL NECESSARY JOB SITE MAINTENANCE FROM COMMENCEMENT OF WORK UNTIL COMPLETION OF THE CONTRACT.
- B. AVOID DAMAGE TO THE SITE AND TO EXISTING FACILITIES, STRUCTURES, TREES, AND SHRUBS DESIGNATED TO REMAIN. TAKE PROTECTIVE MEASURES TO PREVENT EXISTING FACILITIES THAT ARE NOT DESIGNATED FOR REMOVAL FROM BEING DAMAGED BY THE WORK.
- C. KEEP SITE FREE OF ALL PONDING WATER.
- D. PROVIDE EROSION CONTROL MEASURES IN ACCORDANCE WITH STATE DOT, LOCAL PERMITTING AGENCY AND EPA REQUIREMENTS.
- E. PROVIDE AND MAINTAIN ALL TEMPORARY FENCING, BARRICADES, WARNING SIGNALS AND SIMILAR DEVICES NECESSARY TO PROTECT AGAINST THEFT FROM PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION. REMOVE ALL SUCH DEVICES UPON COMPLETION OF THE WORK.
- F. EXISTING UTILITIES: DO NOT INTERRUPT EXISTING UTILITIES SERVING FACILITIES OCCUPIED BY THE OWNER OR OTHERS, EXCEPT WHEN PERMITTED IN WRITING BY THE CONSTRUCTION MANAGER AND THEN ONLY AFTER ACCEPTABLE TEMPORARY UTILITY SERVICES HAVE BEEN PROVIDED.
- G. PROVIDE A MINIMUM 48-HOUR NOTICE TO THE CONSTRUCTION MANAGER AND RECEIVE WRITTEN NOTICE TO PROCEED BEFORE INTERRUPTING ANY UTILITY SERVICE.
- H. SOD PLANTED IN THE FALL MUST ESTABLISH ITS ROOTS BEFORE THE FIRST WINTER FROST. DETERMINE WHEN THE FIRST FROST USUALLY OCCURS, AND PLANT THE SOD NO LATER THAN ONE MONTH BEFORE THE FIRST FROST. IF THE CONSTRUCTION IS FINISHED LATER THAN ONE MONTH BEFORE THE FIRST FROST, USE STRAW UNTIL SOD CAN BE INSTALLED.

**GENERAL SITE WORK NOTES CONT.**

**PART 2 - PRODUCTS**

**2.1 GRANULAR BACKFILL: SHALL MEET THE FOLLOWING GRADATION:**

SIEVE SIZE	TOTAL PERCENT PASSING
1 1/2 INCH (37.5 MM)	100
1 INCH (25.0 MM)	75 TO 100
3/4 INCH (19.0 MM)	80 TO 100
3/8 INCH (9.5 MM)	35 TO 75
NO. 4 (4.75 MM)	30 TO 60
NO. 30 (0.600 MM)	7 TO 30
NO 200 (0.075 MM)	3 TO 15

- 2.2 GRANULAR BEDDING AND TRENCH BACKFILL: WELL-GRADED SAND MEETING THE GRADATION REQUIREMENTS OF ASTM D2487 (SE OR SW-SM).
- 2.3 COARSE AGGREGATE FOR ACCESS ROAD SUBBASE COURSE SHALL CONFORM TO ASTM D2940.
- 2.4 UNSUITABLE MATERIAL: IF SUPPORTING SOIL IS DETERMINED TO BE OF A MUD, ORGANIC MATERIAL, OR PEAT CONSISTENCY, CONTACT ENGINEERING.

**PART 3 - EXECUTION**

**3.1 GENERAL:**

- A. BEFORE STARTING GENERAL SITE PREPARATION ACTIVITIES, INSTALL EROSION AND SEDIMENT CONTROL MEASURES. THE WORK AREA SHALL BE CONSTRUCTED AND MAINTAINED IN SUCH CONDITION THAT IN THE EVENT OF RAIN THE SITE WILL BE DRAINED AT ALL TIMES.
- B. BEFORE ALL SURVEY, LAYOUT, STAKING, AND MARKING, ESTABLISH AND MAINTAIN ALL LINES, GRADES, ELEVATIONS AND BENCHMARKS NEEDED FOR EXECUTION OF THE WORK.
- C. CLEAR AND GRUB THE AREA WITHIN THE LIMITS OF THE SITE. REMOVE TREES, BRUSH, STUMPS, RUBBISH AND OTHER DEBRIS AND VEGETATION RESTING ON OR PROTRUDING THROUGH THE SURFACE OF THE SITE AREA TO BE CLEARED.
- D. REMOVE THE FOLLOWING MATERIALS TO A DEPTH OF NO LESS THAN 12 INCHES BELOW THE ORIGINAL GROUND SURFACE: ROOTS, STUMPS, AND OTHER DEBRIS, BRUSH, AND REFUSE EMBEDDED IN OR PROTRUDING THROUGH THE GROUND SURFACE, RAKE, DISK OR PLOW THE AREA TO A DEPTH OF NO LESS THAN 6 INCHES, AND REMOVE TO A DEPTH OF 12 INCHES ALL ROOTS AND OTHER DEBRIS THEREBY EXPOSED.
- E. REMOVE TOPSOIL MATERIAL COMPLETELY FROM THE SURFACE UNTIL THE SOIL NO LONGER MEETS THE DEFINITION OF TOPSOIL. AVOID MIXING TOPSOIL WITH SUBSOIL OR OTHER UNDESIRABLE MATERIALS.
- F. EXCEPT WHERE EXCAVATION TO GREATER DEPTH IS INDICATED, FILL DEPRESSIONS RESULTING FROM CLEARING, GRUBBING AND DEMOLITION WORK COMPLETELY WITH SUITABLE FILL.
- G. REMOVE FROM THE SITE AND DISPOSE IN AN AUTHORIZED LANDFILL ALL DEBRIS RESULTING FROM CLEARING AND GRUBBING OPERATIONS. BURNING WILL NOT BE PERMITTED.
- H. PRIOR TO EXCAVATING, THOROUGHLY EXAMINE THE AREA TO BE EXCAVATED AND/OR TRENCHED TO VERIFY THE LOCATIONS OF FEATURES INDICATED ON THE DRAWINGS AND TO ASCERTAIN THE EXISTENCE AND LOCATION OF ANY STRUCTURE, UNDERGROUND STRUCTURE, OR OTHER ITEM NOT SHOWN THAT MIGHT INTERFERE WITH THE PROPOSED CONSTRUCTION. NOTIFY THE CONSTRUCTION MANAGER OF ANY OBSTRUCTIONS THAT WILL PREVENT ACCOMPLISHMENT OF THE WORK AS INDICATED ON THE DRAWINGS.
- I. SEPARATE AND STOCK PILE ALL EXCAVATED MATERIALS SUITABLE FOR BACKFILL. ALL EXCESS EXCAVATED AND UNSUITABLE MATERIALS SHALL BE DISPOSED OF OFF-SITE IN A LEGAL MANNER.
- J. DURING EXCAVATION, THE CONTRACTOR SHALL PROVIDE SHORING, SHEETING, AND BRACING AS REQUIRED TO PREVENT CAVING OR SLOUGHING OF EXCAVATION.
- K. DISTURBED SUGRADE SHALL BE COMPACTED TO MATCH DENSITY OF EXISTING NATIVE SOIL. BACKFILL SHALL BE COMPACTED TO A DENSITY EQUAL TO OR GREATER THAN THAT OF THE EXISTING UNDISTURBED MATERIAL, BUT NOT LESS THAN MINIMUM OF 90 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 1557, MODIFIED PROCTOR, IN LIFTS NOT EXCEEDING 12 INCHES IN DEPTH.

**3.2 BACKFILL:**

- A. AS SOON AS PRACTICAL, AFTER COMPLETING CONSTRUCTION OF THE RELATED STRUCTURE, INCLUDING EXPIRATION OF THE SPECIFIED MINIMUM CURING PERIOD FOR CAST-IN-PLACE CONCRETE, BACKFILL THE EXCAVATION WITH APPROVED MATERIAL TO RESTORE THE REQUIRED FINISHED GRADE.

**GENERAL SITE WORK NOTES CONT.**

- B. PRIOR TO PLACING BACKFILL AROUND STRUCTURES, ALL FORMS SHALL BE REMOVED AND THE EXCAVATION CLEANED OF ALL TRASH, DEBRIS, AND UNSUITABLE MATERIALS.
  - C. DO NOT PLACE FROZEN MATERIAL IN AS BACKFILL.
  - D. BACKFILL BY PLACING AND COMPACTING SUITABLE BACKFILL MATERIAL OR SELECT GRANULAR BACKFILL MATERIAL WHEN REQUIRED IN UNIFORM HORIZONTAL LAYERS OF NO GREATER THAN 8-INCHES LOOSE THICKNESS AND COMPACTED. WHERE HAND OPERATED COMPACTORS ARE USED, THE FILL MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED 4 INCHES IN LOOSE DEPTH AND COMPACTED.
  - E. WHENEVER THE DENSITY TESTING INDICATES THAT THE CONTRACTOR HAS NOT OBTAINED THE SPECIFIED DENSITY, THE SUCCEEDING LAYER SHALL NOT BE PLACED UNTIL THE SPECIFICATION REQUIREMENTS ARE MET UNLESS OTHERWISE AUTHORIZED BY THE CONSTRUCTION MANAGER. THE CONTRACTOR SHALL TAKE WHATEVER APPROPRIATE ACTION IS NECESSARY, SUCH AS DISKING AND DRYING, ADDING WATER, OR INCREASING THE COMPACTIVE EFFORT TO MEET THE MINIMUM COMPACTION REQUIREMENTS.
  - F. DISTURBED SUGRADE SHALL BE COMPACTED TO MATCH DENSITY OF EXISTING NATIVE SOIL. BACKFILL SHALL BE COMPACTED TO A DENSITY EQUAL TO OR GREATER THAN THAT OF THE EXISTING UNDISTURBED MATERIAL, BUT NOT LESS THAN MINIMUM OF 90 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 1557, MODIFIED PROCTOR, IN LIFTS NOT EXCEEDING 12 INCHES IN DEPTH.
- 3.3 TRENCH EXCAVATION:**
- K. UTILITY TRENCHES SHALL BE EXCAVATED TO THE LINES AND GRADES SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE GENERAL CONTRACTOR. PROVIDE SHORING, SHEETING AND BRACING AS REQUIRED TO PREVENT CAVING OR SLOUGHING OF THE TRENCH WALLS.
  - L. EXTEND THE TRENCH WIDTH A MINIMUM OF 6 INCHES BEYOND THE OUTSIDE EDGE OF THE OUTERMOST CONDUIT.
  - M. WHEN SOFT YIELDING, OR OTHERWISE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, EXCAVATE THE REQUIRED TRENCH TO A DEPTH OF NO LESS THAN 12 INCHES BELOW THE REQUIRED ELEVATION, THEN BACKFILL WITH 12" OF GRANULAR BEDDING MATERIAL.

**3.4 TRENCH BACKFILL:**

- A. PROVIDE GRANULAR BEDDING MATERIAL IN ACCORDANCE WITH THE DRAWINGS AND THE UTILITY REQUIREMENTS.
- B. NOTIFY THE GENERAL CONTRACTOR 24 HOURS IN ADVANCE OF BACKFILLING.
- C. CONDUCT UTILITY CHECK TESTS BEFORE BACKFILLING. BACKFILL AND COMPACT TRENCH BEFORE ACCEPTANCE TESTING.
- D. PLACE GRANULAR TRENCH BACKFILL UNIFORMLY ON BOTH SIDES OF THE CONDUITS IN 6-INCH UNCOMPACTED LIFTS UNTIL 12 INCHES OVER THE CONDUITS. SOLIDLY RAM AND TAMP BACKFILL INTO SPACE AROUND CONDUITS.
- E. PROTECT CONDUIT FROM LATERAL MOVEMENT, IMPACT DAMAGE, OR UNBALANCED LOADING.
- F. ABOVE THE CONDUIT EMBEDMENT ZONE, PLACE AND COMPACT SATISFACTORY BACKFILL MATERIAL IN 8-INCH MAXIMUM LOOSE THICKNESS LIFTS TO RESTORE THE REQUIRED FINISHED SURFACE GRADE.
- G. DISTURBED SUGRADE SHALL BE COMPACTED TO MATCH DENSITY OF EXISTING NATIVE SOIL. BACKFILL SHALL BE COMPACTED TO A DENSITY EQUAL TO OR GREATER THAN THAT OF THE EXISTING UNDISTURBED MATERIAL, BUT NOT LESS THAN MINIMUM OF 90 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 1557, MODIFIED PROCTOR, IN LIFTS NOT EXCEEDING 12 INCHES IN DEPTH.

**3.5 FINISH GRADING:**

- K. PERFORM ALL GRADING TO PROVIDE POSITIVE DRAINAGE AWAY FROM STRUCTURES AND SMOOTH, EVEN SURFACE DRAINAGE OF THE ENTIRE AREA WITHIN THE LIMITS OF CONSTRUCTION. GRADING SHALL BE COMPATIBLE WITH ALL SURROUNDING TOPOGRAPHY AND STRUCTURES.
- L. UTILIZE SATISFACTORY FILL MATERIAL RESULTING FROM THE EXCAVATION WORK IN THE CONSTRUCTION OF FILLS, EMBANKMENTS AND FOR REPLACEMENT OF REMOVED UNSUITABLE MATERIALS.
- M. REPAIR ALL ACCESS ROADS AND SURROUNDING AREAS USED DURING THE COURSE OF THIS WORK TO THEIR ORIGINAL CONDITION.

**3.6 ASPHALT PAVING ROAD:**

CALIFORNIA STANDARD SPECIFICATIONS

SECTION 39 - CALIFORNIA DEPARTMENT OF TRANSPORTATION PAVEMENT

- A. CONTRACTOR RESPONSIBLE FOR RE-STRIPING AND APPLYING SEALCOATING, UNLESS OTHERWISE SPECIFIED.



3500 DEER CREEK RD  
PALO ALTO, CA 94304  
(650) 681-5000

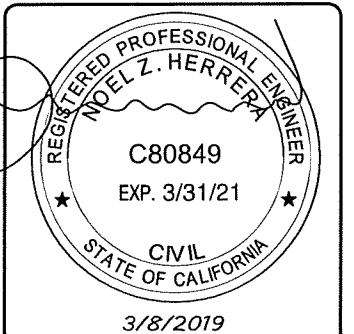


**BLACK & VEATCH**

6800 W 115th St, Suite 2292  
OVERLAND PARK, KS 66211  
(913) 458-2000

PROJECT NO:	192745
DRAWN BY:	AKJ
CHECKED BY:	CNS

REV	DATE	DESCRIPTION
1	03/08/19	ISSUED FOR CONSTRUCTION
0	11/07/18	ISSUED FOR PERMITTING



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.

CA123 OLEMA  
OLEMA  
10005 COASTAL HIGHWAY  
OLEMA, CA 94950

SHEET TITLE  
**GENERAL NOTES 2**

SHEET NUMBER  
**GN-2**

**FULL DEPTH ASPHALT DESIGN : MATERIAL AND CONSTRUCTION NOTES**

**MATERIALS**

- CRUSHED AGGREGATE BASE COURSE SHALL BE ANGULAR CRUSHED STONE OR CRUSHED GRAVEL MEETING THE SPECIFICATION FOR [DOT BASE COURSE] [IF USED].
- ASPHALT BINDER SHALL BE AASHTO MP 1, PERFORMANCE GRADED BINDER PG 64-22 [MAY BE VARIED FOR IN DIFFERENT AREAS OF COUNTRY].
- HOT MIX ASPHALT (HMA) BASE COURSE SHALL HAVE A NOMINAL AGGREGATE SIZE OF 0.75 INCH WITH VOIDS IN THE MINERAL AGGREGATE (VMA) OF 12 PERCENT.
- HOT MIX ASPHALT SURFACE COURSE SHALL HAVE A NOMINAL AGGREGATE SIZE OF 0.38 INCH WITH A VMA OF 14 PERCENT.

**CONSTRUCTION**

- PROOFROLL SUBGRADE WITH HEAVY CONSTRUCTION EQUIPMENT TO LOCATE UNSTABLE AREAS. REMOVE SOFT, WET, OR OTHERWISE UNSTABLE AREAS AND REPLACE WITH COMPACTED FILL.
- COMPACT PAVEMENT SUBGRADE TO A MINIMUM DENSITY OF 95% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-698.
- GRADE SUBGRADE TO LINES AND GRADES SHOWN ON THE DRAWINGS AND REMOVE LOOSE OR DELETERIOUS MATERIAL.
- A. APPLY TACK COAT TO SUBGRADE [THIS IS FOR FULL DEPTH ASPHALT].  
OR  
B. PLACE CRUSHED AGGREGATE BASE COURSE TO THE THICKNESS SHOWN. GRADE AND COMPACT BASE COURSE TO A MINIMUM DENSITY OF 95% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-698.
- PLACE HMA COURSE MIXES TO THE THICKNESS SHOWN ON THE DRAWINGS. MACHINE PLACE THE HMA MIXES, SPREAD UNIFORMLY, COMPACT TO 92 PERCENT OF THE THEORETICAL DENSITY IN ACCORDANCE WITH ASTM D-2041.

**TYPICAL THICKNESS WILL BE EITHER**

- A. FULL DEPTH ASPHALT = 4.5-INCH HMA BASE COURSE AND 2.0-INCH HMA SURFACE COURSE
- B. WITH AGGREGATE BASE = 6-INCH CRUSHED AGGREGATE BASE, 2-INCH HMA BASE COURSE, AND 2-INCH OF HMA SURFACE COURSE.

**STRUCTURAL STEEL NOTES**

- STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS, UNLESS NOTED OTHERWISE: WIDE FLANGE SHAPE: A992, 50ksi  
ANGLE AND CHANNEL SHAPE: ASTM A36, 36 ksi  
PLATE: ASTM A36, 36ksi  
PIPE: ASTM A53 GRADE B, 35 ksi  
HSS: ASTM A500 GRADE B, 46ksi
- HIGH-STRENGTH BOLTS SHALL CONFORM TO ASTM A325: ONE HIGH-STRENGTH BOLT ASSEMBLY SHALL CONSIST OF A HEAVY HEX STRUCTURAL BOLT, A HEAVY NUT, A HARDENED WASHER CONFORMING TO ASTM F436. THE HARDENED WASHER SHALL BE INSTALLED AGAINST ELEMENT TURNED IN TIGHTENING. UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL CONNECTIONS SHALL BE BEARING TYPE CONNECTIONS.
- WELDING ELECTRODES SHALL COMPLY WITH AWS D1.1 USING A5.1 OR A5.5 E70XX AND SHALL BE COMPATIBLE WITH THE WELDING PROCESS SELECTED. WELDERS SHALL BE QUALIFIED AS PRESCRIBED IN AWS D1.1.
- UNLESS NOTED OTHERWISE ON THE DRAWING, ALL ANCHOR BOLTS SHALL CONFORM TO ASTM F1554 WITH HEAVY HEXAGONAL NUT.
- FABRICATE ITEMS OF STRUCTURAL STEEL IN ACCORDANCE WITH AISC SPECIFICATION.
- ALL EXPOSED STRUCTURAL STEEL AND BOLTS SHALL BE HOT DIP GALVANIZED PER ASTM A123.
- SUBMIT FABRICATION AND ERECTION DRAWINGS SHOWING ALL DETAILS, CONNECTIONS, MATERIAL DESIGNATIONS, AND TOP STEEL ELEVATIONS FOR APPROVAL. THE SHOP DRAWINGS WILL BE REVIEWED FOR GENERAL CONFORMANCE TO THE CONTRACT DRAWINGS. SUCH APPROVAL SHALL NOT RELIEVE THE FABRICATOR/CONTRACTOR OF THE RESPONSIBILITY FOR EITHER THE ACCURACY OF THE DETAILED DIMENSIONS IN THE SHOP AND ERECTION DRAWINGS OR THE GENERAL FIT-UP OF PARTS THAT ARE TO BE ASSEMBLED IN THE FIELD.
- PRIMER SHALL BE RED OXIDE-CHROMATE PRIME COMPLYING WITH STEEL STRUCTURES PAINTING COUNCIL (SSPC) PAINT SPECIFICATION NUMBER 11

**CONCRETE MASONRY NOTES**

- CONCRETE MASONRY UNITS SHALL BE MEDIUM WEIGHT UNITS CONFORMING TO ASTM C90, GRADE N-1, (F'M=1,500 PSI). MEDIUM WEIGHT. (115 PCF)
- MORTAR SHALL BE TYPE "S" ABOVE GRADE, TYPE "M" BELOW GRADE CONFORMING TO ASTM C270. (MINIMUM 1,800 PSI AT 28 DAYS)
- GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AT 28 DAYS CONFORMING TO ASTM C476.
- ALL CELLS CONTAINING REINFORCING STEEL OR EMBEDDED ITEMS AND ALL CELLS IN RETAINING WALLS AND WALLS BELOW GRADE SHALL BE SOLID GROUTED.
- ALL HORIZONTAL REINFORCEMENT SHALL BE PLACED IN BOND BEAM OR LINTEL BEAM UNITS.
- WHEN GROUTING IS STOPPED FOR ONE HOUR OR LONGER, HORIZONTAL CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE GROUT POUR 1-1/2" BELOW TOP OF THE UPPERMOST UNIT.
- ALL BOND BEAM BLOCK SHALL BE "DEEP CUT" UNITS.
- PROVIDE INSPECTION AND CLEAN-OUT HOLES AT BASE OF VERTICAL CELLS HAVING GROUT LIFTS IN EXCESS OF 4'-0" OF HEIGHT.
- ALL GROUT SHALL BE CONSOLIDATED WITH A MECHANICAL VIBRATOR.
- CEMENT SHALL BE AS SPECIFIED FOR CONCRETE.
- REINFORCING BARS - SEE NOTES UNDER "REINFORCED CONCRETE NOTES" FOR REQUIREMENTS. REINFORCEMENT SHALL BE PLACED PRIOR TO GROUTING. LAP SPLICES SHALL BE 48 BAR DIAMETERS, MINIMUM.
- PROVIDE ONE BAR DIAMETER (A MINIMUM OF 1/2") GROUT BETWEEN MAIN REINFORCING AND MASONRY UNITS.
- LOW LIFT CONSTRUCTION, MAXIMUM GROUT POUR HEIGHT IS 4 FEET.
- HIGH LIFT GROUTED CONSTRUCTION MAY BE USED IN CONFORMANCE WITH PROJECT SPECIFICATIONS AND SECTION 2104 OF IBC.
- ALL CELLS IN CONCRETE BLOCKS SHALL BE FILLED SOLID WITH GROUT, EXCEPT AS NOTED IN THE DRAWINGS OR SPECIFICATIONS.
- CELLS SHALL BE IN VERTICAL ALIGNMENT, DOWELS IN FOOTINGS SHALL BE SET TO ALIGN WITH CELLS CONTAINING REINFORCING STEEL.
- REFER TO DRAWINGS FOR SURFACE AND HEIGHT OF UNITS, LAYING PATTERN AND JOINT TYPE.
- SAND SHALL BE CLEAN, SHARP AND WELL GRADED, FREE FROM INJURIOUS AMOUNTS OF DUST, LUMPS, SHALE, ALKALI OR ORGANIC MATERIAL.
- ALL MORTAR FIN OBSTRUCTIONS AND DEBRIS SHALL BE CLEANED FROM INSIDE OF CELLS PRIOR TO GROUTING.

**CONCRETE SIDEWALK CONSTRUCTION REQUIREMENTS**

- PLACING AND FINISHING CONCRETE  
THE CONTRACTOR SHALL PROVIDE ADEQUATE TOOLS AND EQUIPMENT TO PRODUCE QUALITY WORKMANSHIP IN PLACING AND FINISHING CONCRETE. THE SIDEWALK AND RAMPS SHALL BE FINISHED TO THE TOP OF THE FORMS AND THE SURFACE FINISHED WITH A WOOD OR STEEL FLOAT AND SURFACE TEXTURE SHALL BE A COURSE BROOM FINISH TRANSVERSE TO THE SLOPE OF THE SIDEWALK OR RAMP. NO "PLASTERING" OF THE SURFACE SHALL BE PERMITTED.
- CONTRACTION JOINTS  
THE SIDEWALK SURFACE SHALL BE MARKED OFF INTO NOMINAL SQUARES OF DIMENSIONS EQUAL TO THE WIDTH OF THE SIDEWALK WITH A MAXIMUM DISTANCE BETWEEN JOINTS OF SEVEN FEET. SAWING JOINTS, THE CONTRACTOR SHALL BEGIN AS SOON AS THE CONCRETE HARDENS SUFFICIENTLY TO PREVENT EXCESSIVE RAVELING ALONG THE SAW CUT AND SHALL FINISH BEFORE CONDITIONS INDUCE UNCONTROLLED CRACKS, REGARDLESS OF THE TIME OR WEATHER.
- EXPANSION JOINTS  
EXPANSION JOINTS SHALL BE CONSTRUCTED AT LOCATIONS WHERE THE SIDEWALK ABUTS EXISTING CONCRETE CURBS, DRIVEWAYS, AND SIMILAR STRUCTURES, AND EVERY TWO HUNDRED FIFTY FEET AND AS SHOWN ON APPROVED PLANS. EXPANSION JOINTS SHALL BE FORMED WITH ONE-HALF INCH PREFABRICATED NON-EXTRUDING FILLER AND SHALL EXTEND THE FULL DEPTH OF THE SLAB.

**SUPERCHARGER CABINET NOTE**

- PER NEC 625.22 - THE USER INTERFACE (CHARGE POST) IS CONTROLLED BY THE ELECTRICAL EQUIPMENT (SUPERCHARGER CABINET) AND THE FOLLOWING PRECAUTIONS HAVE BEEN TAKEN TO ENSURE THE SAFETY OF CUSTOMERS AND THOSE AROUND THE EQUIPMENT. BEFORE ANY VOLTAGE OR CURRENT IS APPLIED TO THE CHARGE POST, THE CABINET MUST COMMUNICATE WITH THE TESLA VEHICLE. THERE IS A 'HANDSHAKE' BETWEEN THE CAR AND THE CABINET CONFIRMING THAT THE VEHICLE IS ACTUALLY A TESLA AND THAT THE VEHICLE CAN HANDLE THE SUPERCHARGING. VOLTAGE IS THEN APPLIED TO THE POWER SOCKETS IN THE CHARGE POST AND ONCE THE VOLTAGE READING FROM THE CAR IS VERIFIED AS THE SAME IN THE CHARGING CABINET, THEN CURRENT BEGINS TO FLOW. IF AT ANY POINT IN THIS PROCESS A FAULT IS DETECTED, THE CHARGING WILL STOP IMMEDIATELY, WITHIN A MATTER OF MILLISECONDS. DURING THE NORMAL CHARGING CYCLE, IF ANY FAULT OR IRREGULARITY IS DETECTED, THE CHARGING WILL AGAIN STOP WITHIN MILLISECONDS OF DETECTION. BEYOND THIS LOGIC PROTECTION, THERE IS PHYSICAL PROTECTION FROM OVER-CURRENT OR OVER-VOLTAGE WITHIN EACH OF THE CHARGERS. BEYOND THAT, FAST ACTING FUSES ALSO PROTECT THE VEHICLE OUTPUTS FROM OUTPUTTING TOO HIGH OF A CURRENT.

**SIGN POST NOTES**

- ACCEPTABLE COLOR SUBSTITUTIONS:

PAINT COLOR SUBSTITUTIONS	
BRAND	COLOR
PANTONE	COOL GREY #7 #a3a19e
BENJAMIN MOORE	FUSION / Af-675 #a6a3a1
BEHR	EQUINOX FF31-1 #9fa29d
SHERWIN-WILLIAMS	STAMPED CONCRETE - 7655 #a2a29b
VALSPAR	STONE MASON GREY #a19c99

- OTHER ACCEPTABLE COLORS CAN BE FOUND ON ENCYCOLORPEDIA.COM
- REFER TO INSTALLATION GUIDE FROM MANUFACTURER.
- BOTTOM OF ADA PARKING SIGN SHALL BE LOCATED AT A MINIMUM HEIGHT OF 60"
- D/F NON-ILLUMINATED POLE MOUNT PARKING SIGN FACES AND RETURNS TO BE .090" ALUMINUM PANELS WITH #680-82 RED REFLECTIVE VINYL APPLIED (VERIFY REFLECTIVITY WITH OWNER).
- LOGO TO BE #280-10 REFLECTIVE WHITE VINYL (VERIFY REFLECTIVITY WITH OWNER).
- SIGN TO BE OWNER PROVIDED AND CONTRACTOR INSTALLED. CONTRACTOR TO PROVIDE SIGN POST. CONTRACTOR TO PROVIDE SIGN POST FASTENERS IF REQUIRED AND PAINTED TO MATCH.
- IF PAINT FINISH IS DAMAGED DURING INSTALLATION, CONTRACTOR SHALL REPAIR AS REQUIRED.
- CONTRACTOR SHALL COORDINATE WITH CITY WHEN SPECIAL JURISDICTIONAL/CITY REQUESTS ARE NECESSARY FOR ANY SIGN POST INSTALLATIONS, I.E. POST MATERIAL, PAINT COLORS, HARDWARE, ETC. CONTRACTOR IS RESPONSIBLE FOR ENSURING CITY APPROVES ALL MATERIALS PRIOR TO INSTALLATION.

**GROUNDING NOTES**

- ALL GROUND BARS SHALL HAVE STAMPED IN TO THE METAL "IF STOLEN DO NOT RECYCLE."
- ALL HARDWARE SHALL BE STAINLESS STEEL 3/8" DIAMETER OR LARGER. ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING LOCK WASHERS, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
- FOR GROUND BOND TO STEEL ONLY: INSERT A CADMIUM FLAT WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
- NUT & WASHER SHALL BE PLACED ON THE FRONT SIDE OF THE GROUND BAR AND BOLTED ON THE BACK SIDE. INSTALL BLACK HEAT-SHRINKING TUBE, 600 VOLT INSULATION, ON ALL GROUND TERMINATIONS. THE INTENT IS TO WEATHERPROOF THE COMPRESSION CONNECTION.
- SUPPLIED AND INSTALLED BY CONTRACTOR.
- ENSURE THE WIRE INSULATION TERMINATION IS WITHIN 1/8" OF THE BARREL (NO SHINERS).
- TESLA CHARGERS HAVE INTERNAL HIGH IMPEDANCE GROUND FAULT PROTECTION (10MΩ).
- EMC - ELECTROMAGNETIC COMPATIBILITY



3500 DEER CREEK RD  
PALO ALTO, CA 94304  
(650) 681-5000

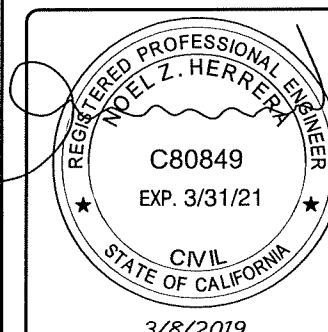


**BLACK & VEATCH**

6800 W 115th St, Suite 2292  
OVERLAND PARK, KS 66211  
(913) 458-2000

PROJECT NO:	192745
DRAWN BY:	AKJ
CHECKED BY:	CNS

REV	DATE	DESCRIPTION
1	03/08/19	ISSUED FOR CONSTRUCTION
0	11/07/18	ISSUED FOR PERMITTING



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CA123\_OLEMA  
OLEMA  
10005 COASTAL HIGHWAY  
OLEMA, CA 94950

SHEET TITLE  
**GENERAL NOTES 3**

SHEET NUMBER  
**GN-3**

REV	DESCRIPTION	BY	DATE						
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**SWITCHBOARD GENERAL NOTES**  
**PRODUCT DESCRIPTION & RATINGS**

**Power System Data**

480Y/277V 3Ph 4W 60Hz / 3 Phase Wye  
Solidly Grounded  
System Short Circuit Current Rating: 65kA RMS  
Incoming Section 2 Cable Through the Bottom Right of Lineup

**Bus System Data**

800A Silver Plated Copper Main Bus  
(2) .25x1.50 IN/6x38 mm Cu Bus Bar Per Phase/Neutral  
(1) .25x.875 IN/6x22 mm Cu Ground Bus

**Enclosure Data**

Type 3R Free Standing  
Exterior Paint Color: ANSI 49  
Front & Rear Accessibility Required  
Handling: Rollers  
Rodent barriers  
1.5H Corrosion Resist Base Channels  
Strip Heater w. Thermostat  
Base channels cannot be removed from EUSERC switchboard line-ups  
Utility sealing hardware installed for unmetered bus compartments

**Estimated Shipping Weight**

Shipping Split 1 1790.00 lbs / 811.94 kgs  
Complete Lineup 1790.00 lbs / 811.94 kgs

**Code Standards**

U.L. Deadfront and suitable for use as Service Entrance  
when not more than six (6) disconnecting means are provided.

**Rating Nameplates**

ST1- Service Entrance - Section Bus 800A  
ST2- Deadfront - Section Bus 800A

**PRODUCT INFORMATION**

**Wiring**

All wiring to be Machine Tool Wire type

**Instruction Bulletins**

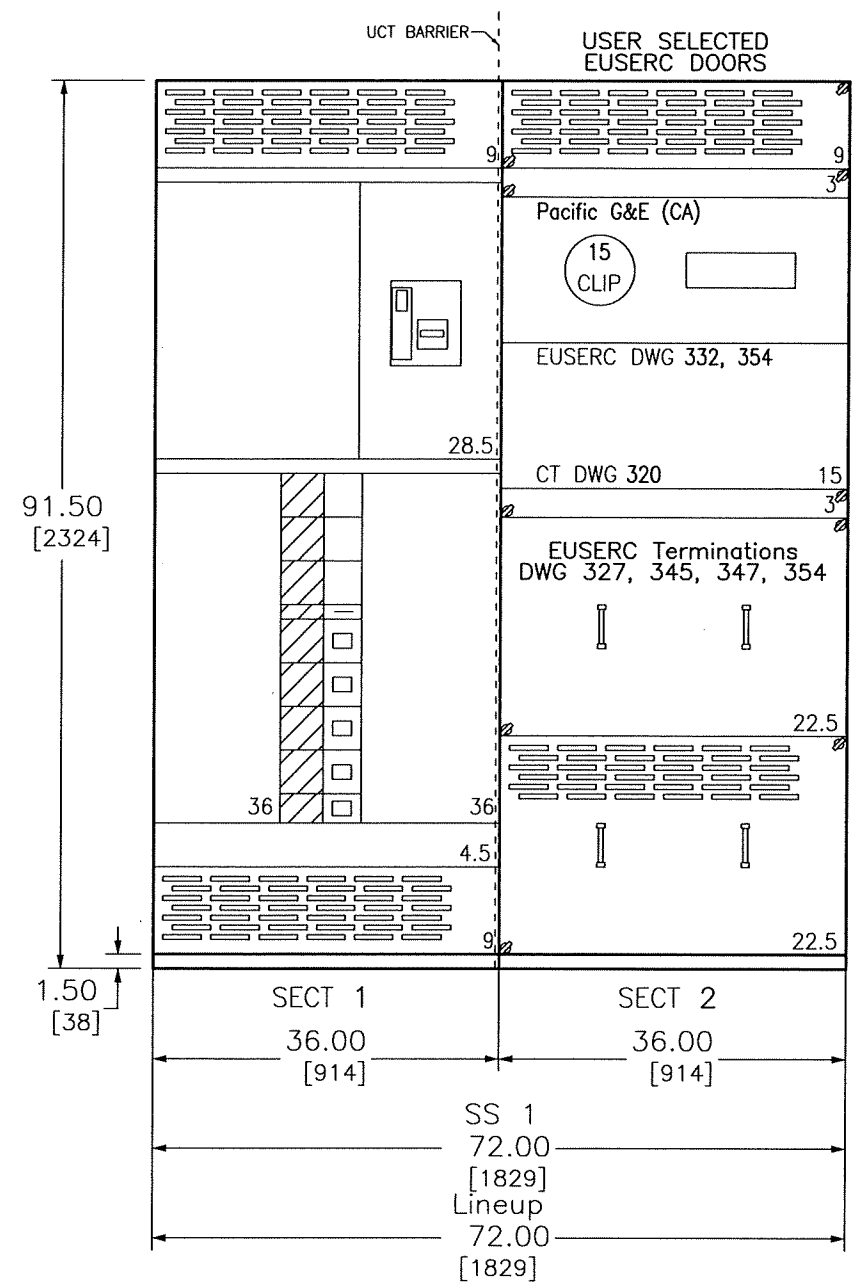
Reference 80043-055 For Handling, Installation,  
Anchoring, Inspection And Maintenance Information

**Product Accessories/Options**

T-bus  
19.5 in

T-bus  
19.5 in

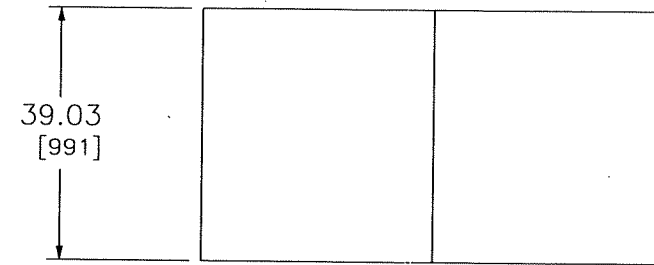
Ø : DENOTES SEALING SCREWS



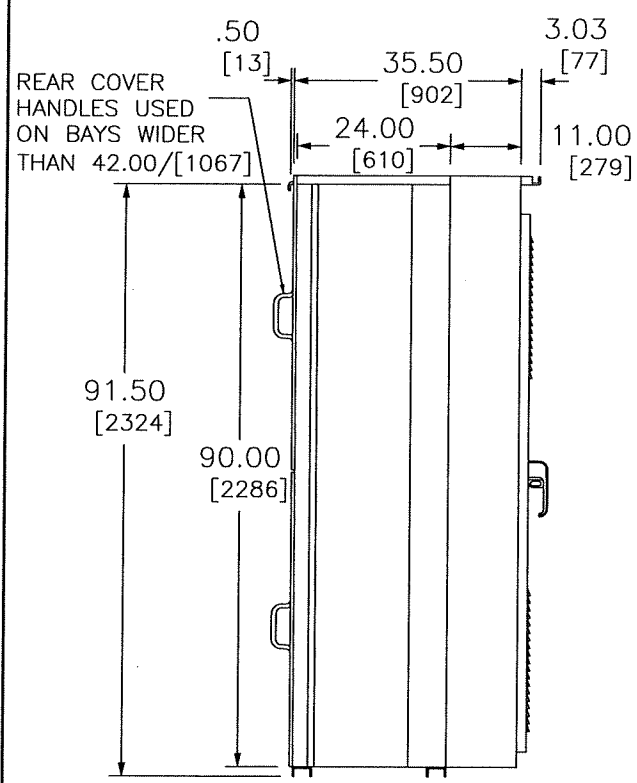
DUAL DIMENSIONS: INCHES  
MILLIMETERS

JOB NAME: TESLA	EQUIPMENT DESIGNATION: -----
JOB LOCATION: HOUSTON TX	EQUIPMENT TYPE: QED-2 SWITCHBOARD
DRAWN BY: EDWIN LOPEZ TINOCO	DRAWING TYPE: ELEVATION VIEW
ENGR: EL	<b>SQUARE D</b> by Schneider Electric
DATE: NOVEMBER 21, 2018	
DRAWING STATUS: RECORD	DWG# F41695972-001-01

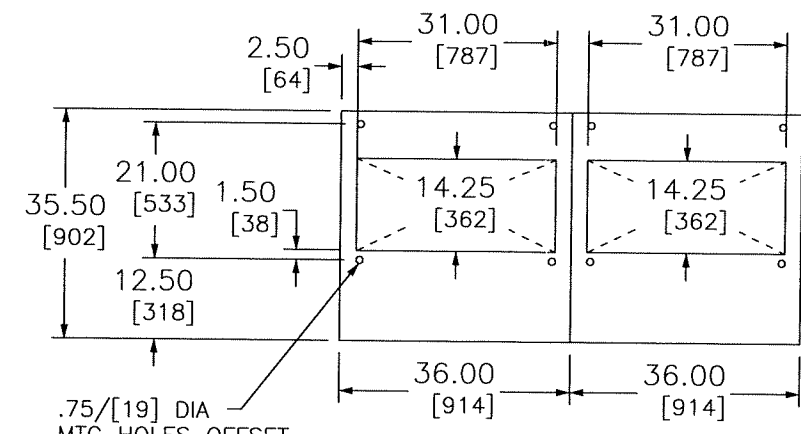
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TOP VIEW - FRONT



LEFT SIDE VIEW



FLOOR PLAN - FRONT

NOTE:  
A MINIMUM OF 2.00/[51]  
CLEARANCE BEHIND THE  
SWITCHBOARD IS REQUIRED  
FOR TOP COVER OVERHANG.

NOTE: ALL DEVICES REQUIRING DRILLING OR INSERTION IN MOUNTING PAD  
SUCH AS CONDUIT, ANCHORING STUDS, SLEEVE INSERTS, ETC.  
SHOULD BE INSTALLED BEFORE SETTING EQUIPMENT IN PLACE.

DUAL DIMENSIONS: INCHES  
MILLIMETERS

JOB NAME:	TESLA	EQUIPMENT DESIGNATION:	----
JOB LOCATION:	HOUSTON TX	EQUIPMENT TYPE:	QED-2 SWITCHBOARD
DRAWN BY:	EDWIN LOPEZ TINOCO	DRAWING TYPE:	SIDE, TOP VIEW & FLOOR PLAN
ENGR:	EL	<b>SQUARE D</b> by Schneider Electric	
DATE:	NOVEMBER 21, 2018		
DRAWING STATUS:	RECORD	DWG# F41695972-001-01	PG 2 OF 2 REV -