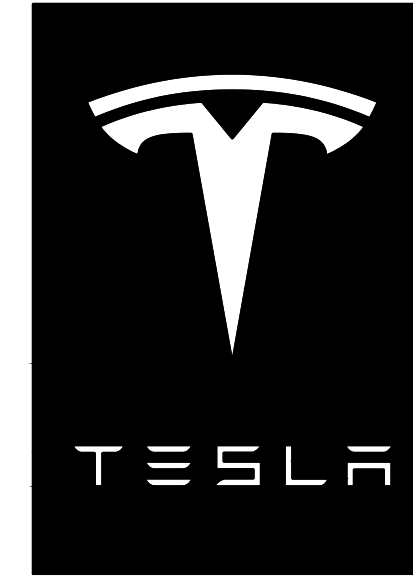


# TESLA

**SUPERCHARGING STATION**  
 3100 28TH STREET (TESLA STATION)  
 BOULDER, CO 80301  
 TRT18997



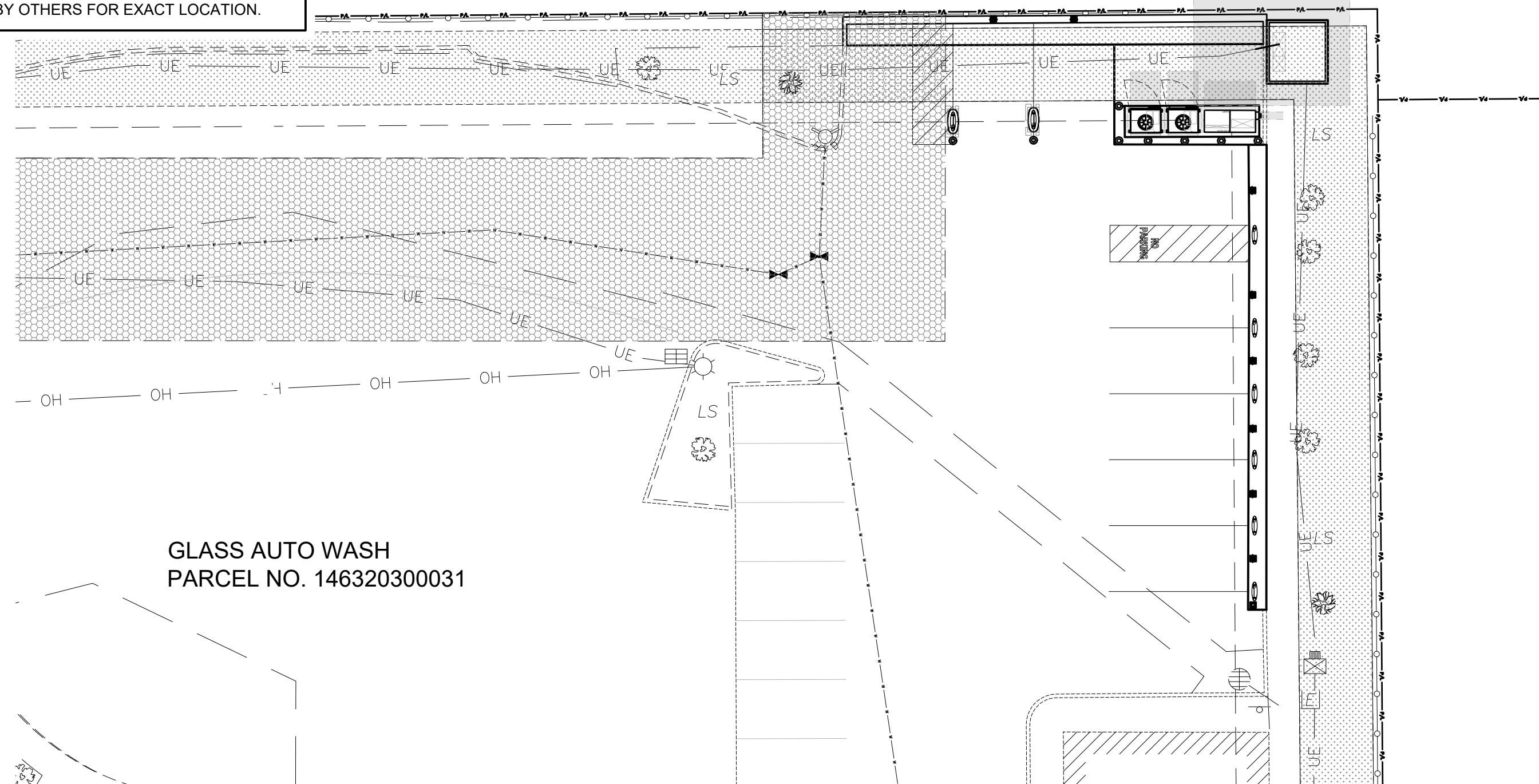
520 South Main Street, Suite 2531  
 Akron, OH 44311  
 330.572.2100 Fax 330.572.2101



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

## SITE LAYOUT

**NOTE:**  
 PROPERTY LINE AND RIGHT-OF-WAY  
 BOUNDARIES ARE SHOWN FOR  
 REFERENCE ONLY. REFER TO SURVEY  
 BY OTHERS FOR EXACT LOCATION.

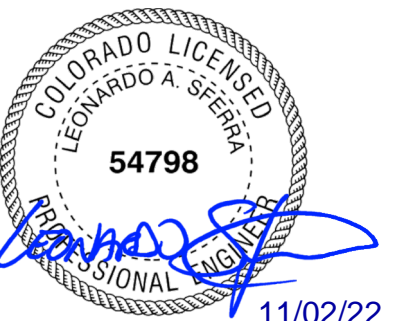


## AERIAL MAP



MAP DATA ©2022 GOOGLE

REV.	DATE	DESCRIPTION
A	10/14/2022	SITE SKETCH
B	10/21/2022	ISSUED FOR 80% REVIEW
C	11/02/2022	ISSUED FOR SIGN & SEAL



### SITE INFORMATION

**ADDRESS:**  
 3100 28TH STREET  
 (TESLA STATION)  
 BOULDER, CO 80301

**POWER COMPANY:**  
 XCEL ENERGY  
 CONTACT: HAYDEN HOGOBOOM  
 (720) 560-0577  
 WORK ORDER #: 1511831

**PROPERTY OWNER:**  
 ANTHONY PIGLIACAMPO  
 CONTACT: GLASS AUTO WASH  
 (303) 442-0125

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

**LATITUDE (NAVD88)**  
 N 40°1'53.56"  
 40.031544°

**LONGITUDE (NAVD88)**  
 W 105°15'26.38"  
 -105.25732°

**PERMITTING JURISDICTION:**  
 CITY OF BOULDER  
 CONTACT: PLANNING AND  
 DEPARTMENT SERVICES  
 (303) 441-1880

**COUNTY:**  
 BOULDER

### APPLICABLE CODES

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:  
 2018 INTERNATIONAL BUILDING CODE  
 2020 NATIONAL ELECTRICAL CODE

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



### DESIGN LOADING

**SNOW LOADS:**  
 GROUND SNOW LOAD ( $P_g$ ) 40 PSF

**LATERAL LOAD DESIGN DATA:**  
 WIND DESIGN DATA (ASCE 7-16):

BASIC WIND SPEED ( $V_{ult}$ ): 107 MPH  
 RISK CATEGORY II  
 EXPOSURE CATEGORY C

**SEISMIC DESIGN DATA (ASCE 7-16):**  
 1.0 SEISMIC IMPORTANCE FACTOR (I)  
 RISK CATEGORY II  
 SITE CLASS (ASSUMED) D  
 MAPPED SPECTRAL RESPONSE

SHORT PERIODS ( $S_s$ ) 0.237  
 1 SEC. PERIODS ( $S_1$ ) 0.062

SPECTRAL RESPONSE COEFF.  
 SHORT PERIODS ( $S_{ps}$ ) 0.253  
 1 SEC. PERIODS ( $S_{p1}$ ) 0.099

SEISMIC DESIGN CATEGORY B

FROST DEPTH: 50"

### DRAWING INDEX

REV.	TITLE
T-1	TITLE SHEET & PROJECT DATA
-	TESLA DATASHEET
CIVIL	SHEET TITLE
--	TOPOGRAPHIC SURVEY
GN-1	GENERAL NOTES
C-1	DEMOLITION PLAN
C-2	SITE PLAN
C-3	CIVIL DETAILS
C-4	CIVIL DETAILS
ELECTRICAL	SHEET TITLE
EN-1	ELECTRICAL GENERAL NOTES
E-1	ELECTRICAL EQUIPMENT PLAN
E-2	ONE-LINE DIAGRAM
E-3	ELECTRICAL DETAILS

### PROJECT DESCRIPTION

- INSTALL (2) V3 SUPERCHARGER CABINETS
- INSTALL (8) TESLA SUPERCHARGER POSTS
- INSTALL (1) SWITCHGEAR ASSEMBLY W/ INTEGRATED MASTER CONTROLLER
- INSTALL (1) UTILITY TRANSFORMER
- INSTALL (1) UTILITY METER

### BEFORE SCALING & PLAN REPRODUCTION WARNING

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

### FLOOD HAZARD AREA NOTE

THE SITE IS LOCATED IN FLOOD ZONE "X" (AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) PER FLOOD INSURANCE MAP NUMBER 08013C0392J, EFFECTIVE DATE - 12/18/2012.

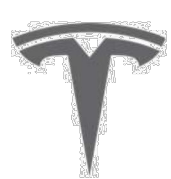
TESLA SUPERCHARGER STATION  
 3100 28TH STREET  
 BOULDER, CO 80301

TITLE SHEET & PROJECT DATA

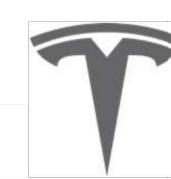
PROJECT MANAGER	DESIGNER
ZS	ELH

JOB NO.  
 2022241.03

T-1



V3 SUPERCHARGER DATASHEET



### V3 SUPERCHARGER DATASHEET

### V3 Supercharger Charge Post

#### V3 Supercharger Cabinet

AC INPUT (Electrical)	Input (V <sub>AC</sub> )	480	440	415	400	380	
	Peak AC Input Power	Power (kVA)	387	354	334	322	306
	AC Input Voltage	380 V <sub>AC</sub> – 480 V <sub>AC</sub> (-5%, +10%), 4-wire 3AC+N					
	AC Input current	465 A <sub>AC</sub> Max.					
	Frequency	50 Hz / 60 Hz					
	Power Factor	≥ 0.99					
	Current THD	< 3%					
	Voltage THD	< 2%					
AC INPUT (Mechanical)	Conductor Sizes	L1, L2, L3, N: 150 – 400 mm <sup>2</sup> , 250 MCM – 750 MCM					
	Conductor Material Type	PE: 10 – 70 mm <sup>2</sup> , #8 AWG - 2/0					
	L1, L2, L3, N: Cu, Al	PE: Cu					
	Mfr. Termination Temp Rating	90° C					
SHARED DC BUS (ELECTRICAL)	Input (V <sub>AC</sub> )	480	440	415	400	380	
	Max Rated DC Bus Power	Power (kW)	575	575	575	575	575
	Max Rated DC Bus Current	Current (A <sub>DC</sub> )	640	640	640	640	640
	DC Bus Voltage Range	880 - 1000 V <sub>DC</sub>					
	Conductor Sizes	V+, V- (2x/pole): 150 – 300 mm <sup>2</sup> , 250 MCM – 600 MCM					
SHARED DC BUS (MECHANICAL)	Mid: 16 – 150 mm <sup>2</sup> , 6 AWG – 250 MCM						
	PE: 10 – 70 mm <sup>2</sup> , #8 AWG - 2/0						
	Conductor Material Type	V+, V-, Mid: Cu, Al PE: Cu					
	Conductor Voltage Rating	1000 V					
	Mfr. Termination Temp Rating	90° C					
	DC POST (ELETRICAL)	Max. Rated Post Power	250 kW				
DC POST (MECHANICAL)	Post Rated Voltage Range	0-500 V <sub>DC</sub>					
	Post Rated Current @T <sub>a</sub> =35° C	Tesla Handle: 350 A <sub>DC</sub> , CCS2 & GB Handle: 450 A <sub>DC</sub>					
	Number of Charge Posts	1 - 4					
	Max Voltage Drop	10 V <sub>DC</sub>					
SYSTEM	Conductor Size	V+, V- (2x/pole): 350 MCM or 185 mm <sup>2</sup> AL (certified equipment wiring)					
	Conductor Material Type	PE: 10 – 70 mm <sup>2</sup> , #8 AWG - 2/0					
	Conductor Voltage Rating	1000 V					
	Mfr. Termination Temp Rating	90° C					
PROTECTION	Efficiency	96%					
	AC Input side: Class 1	DC Output side: Isolated DC Output					
	Over Voltage/Current/Temperature, Surge Protection, Isolation Monitoring						
	Short-Circuit Protection	External Electronic Trip Circuit Breaker					
ENVIRONMENTAL	Short Circuit Current Rating	85 kA RMS symmetrical					
	Operating Temperature	-30°C to 50°C, -22°F to 122°F					
	Ingress Protection	IP66 (Cabinet), IP2X (Cooling)					
	Ventilation Requirements	Ventilation Not Required					
NOISE	Typical noise at 1m	35 dB(A)					
STANDARDS	UL 2202, CSA C22.2#107.1, FCC, ICES-003-B, IEC 61851-1, EN 61000-6-2 EN 55011, GB/T 18487.1, GB/T 27930, NB/T 33008.1, NB/T 33001						
	LAYOUT	Max. Distance to Charge Post	100 m, 340 ft.				
WEIGHT	Supercharger Cabinet Weight	4 Post Cabinet: 1110 kg (2448 lbs)					
		3 Post Cabinet: 1039kg (2291 lbs)					
DIMENSIONS	Depth, Width, Height	1000, 1250, 2200 mm; 39 12/32, 49 7/8, 86 20/32 in.					
		4 kN					
MOUNTING	Per-anchor min. Tension Strength	11 kN					

POST INPUT/OUTPUT (ELECTRICAL)	Max. Rated Post Power	250 kW	
	Post Rated Voltage Range	0 - 500 V <sub>DC</sub>	
	Post Rated Current @T <sub>a</sub> =35° C	Tesla Handle: 350 A <sub>DC</sub> , CCS2 & GB Handle: 450 A <sub>DC</sub>	
DC INPUT (MECHANICAL)	Power Conductors	V+, V- (2x/pole): 350 MCM or 185 mm <sup>2</sup> AL (certified equipment wiring)	
	PE Conductor	PE: 25 – 50 mm <sup>2</sup> , 3 AWG – 2/0	
	Conductor Material Type	V+, V- : Al, Cu PE: Al, Cu	
	Conductor Voltage Rating	1000 V	
PROTECTION	Mfr. Termination Temp Rating	90° C	
	Over Current/Temperature, Uneven Current Split		
ENVIRONMENTAL	Operating Temperature	-40°C to 50°C, -40°F to 122°F	
	Ingress Protection	IP44	
STANDARDS	UL 2202, CSA 22.2#107.1-16, FCC, ICES-003, EN 61000-6-2, EN 61000-6-4, IEC 61851-1, IEC 61851-23, GB/T 18487.1, GB/T 27930, GB/T 20234.1, GB/T 20234.3, GB/T 34658		
	LAYOUT	Max. Distance to Cabinet	100 m, 340 ft.
WEIGHT	Charge Post Weight	64 kg, 140 lbs.	
DIMENSIONS	Depth, Width, Height	250, 810, 1687 mm; 9 27/32, 31 7/8, 66 13/32 in.	
	MOUNTING	Per-anchor min. Shear Strength	1 kN
Per-anchor min. Tension Strength		11 kN	

Drawing Name: O:\2022\202224103 - TRT 18997 Boulder, CO\dwg\2022241\_03 - Boulder, CO - Glass Auto Wash - CD90.dwg  
November 2, 2022 3:4 PM - RVineyard

CONFIDENTIAL INFORMATION – SHARED NDA ONLY

CONFIDENTIAL INFORMATION – SHARED NDA ONLY

Page 5 of 6



REV.	DATE	DESCRIPTION
A	10/14/2022	SITE SKETCH
B	10/21/2022	ISSUED FOR 80% REVIEW
C	11/02/2022	ISSUED FOR SIGN & SEAL

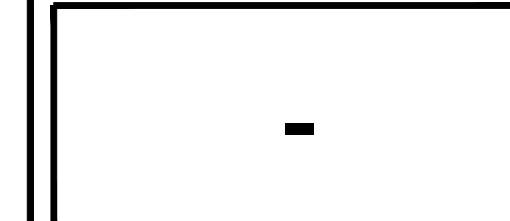
FOR REFERENCE ONLY

TESLA SUPERCHARGER STATION  
3100 28TH STREET  
BOULDER, CO 80301

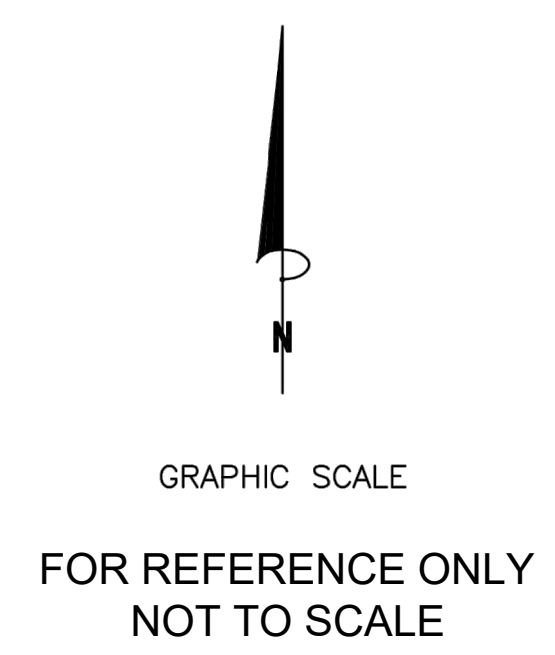
TESLA DATASHEET

PROJECT MANAGER	DESIGNER
ZS	ELH

JOB NO.  
2022241.03

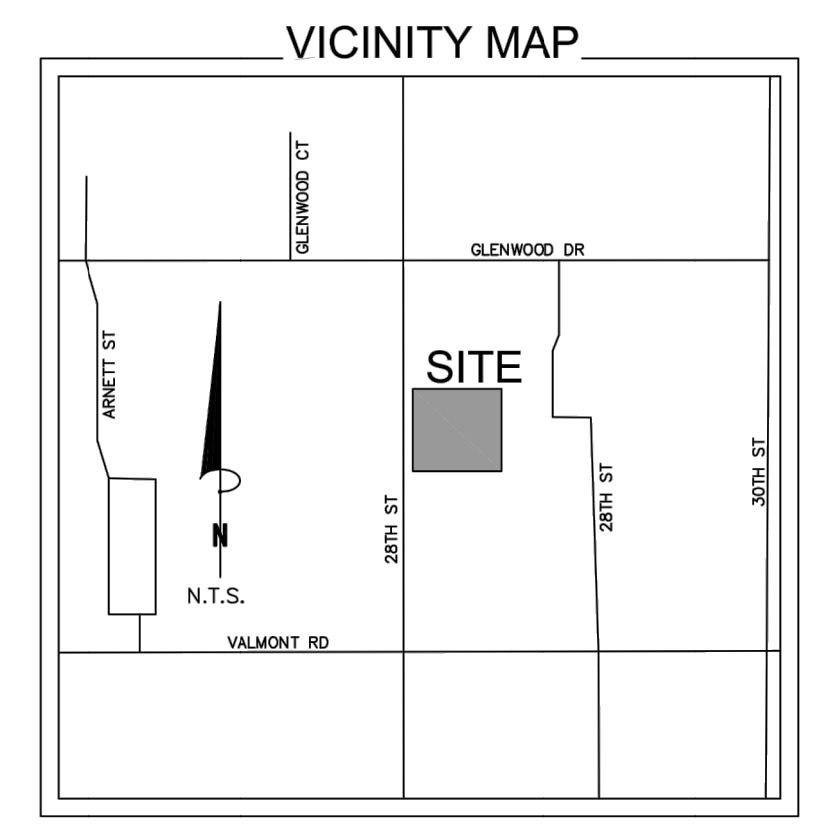


3500 DEER CREEK RD.  
PALO ALTO, CA 94304  
(650) 681-5000



**LEGEND**

LS	LANDSCAPED AREA
●	BOLLARD
—	SIGN
ST	STORM LINE (UNDERGROUND)
—	CULVERT
SS	SANITARY LINE (UNDERGROUND)
WL	WATER LINE (UNDERGROUND)
UG	GAS LINE (UNDERGROUND)
UE	ELECTRIC LINE (UNDERGROUND)
OE	ELECTRIC LINE (OVERHEAD)
FO	FIBEROPTIC LINE (UNDERGROUND)
—	PICKET FENCE
—	CONCRETE AREA
X	EXCEPTION NUMBER
X	AREA OF CONCERN



**LEGAL DESCRIPTION:**

That parcel described in that Deed recorded on December 29, 1967 in Reception No. 867401 in the Official Records of Boulder County, Colorado.

**SCHEDULE B2 EXCEPTIONS:**

- Item No.
1. GRANT OF EASEMENT AND RIGHT-OF-WAY, RECORDED ON 04/26/1972 IN INSTRUMENT NO. 16156  
-IS NOT LOCATED ON THE SURVEY AREA.
  2. AGREEMENT, RECORDED ON 12/04/1972 IN INSTRUMENT NO. 45690  
-IS LOCATED ON THE SURVEY AREA, BLANKET IN NATURE AND AS SHOWN HEREON.
  3. GRANT OF EASEMENT, RECORDED ON 01/31/1973 IN INSTRUMENT NO. 52656  
-IS NOT LOCATED ON THE SURVEY AREA.
  4. GRANT OF EASEMENT, RECORDED ON 03/06/1973 IN INSTRUMENT NO. 56996  
-IS NOT LOCATED ON THE SURVEY AREA.
  5. UTILITY EASEMENT, RECORDED ON 09/24/1973 IN INSTRUMENT NO. 81656  
-IS NOT LOCATED ON THE SURVEY AREA.
  6. ORDER FOR INCLUSION OF LANDS OF MUNICIPAL SUBDISTRICT, RECORDED ON 10/04/1973 IN INSTRUMENT NO. 82790  
-IS LOCATED ON THE SURVEY AREA, BLANKET IN NATURE.
  7. GRANT OF EASEMENT, RECORDED ON 11/22/1974 IN INSTRUMENT NO. 122415  
-IS NOT LOCATED ON THE SURVEY AREA.
  8. AGREEMENT REGARDING ENCUMBRANCE OF LEASEHOLD INTEREST, RECORDED ON 04/10/1984 IN INSTRUMENT NO. 542033  
-IS LOCATED ON THE SURVEY AREA, BLANKET IN NATURE.
  9. UTILITY EASEMENT, RECORDED ON 09/17/1985 IN INSTRUMENT NO. 00713406  
-IS LOCATED ON THE SURVEY AREA, AS SHOWN HEREON.
  10. DEVELOPMENT AGREEMENT, RECORDED ON 09/30/1985 IN INSTRUMENT NO. 00716059  
-IS LOCATED ON THE SURVEY AREA, BLANKET IN NATURE.
  11. CITY OF BOULDER MONITORING WELL. REVOCABLE PERMIT REV2018-00017, RECORDED ON 10/14/2019 IN INSTRUMENT NO. 03742119  
-IS LOCATED ON THE SURVEY AREA, BLANKET IN NATURE AND AS SHOWN HEREON.
- Items not listed above are determined non-survey related items and are not plotted hereon.

**AREAS OF CONCERN:**

1. Location, direction, and/or terminus of underground water utility lines indeterminate.

Surveyor may revise underground utilities shown hereon; if provided with as-built drawings or utility plans.

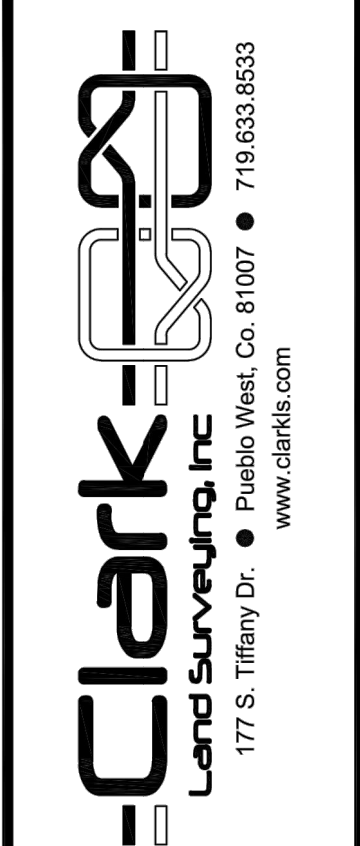
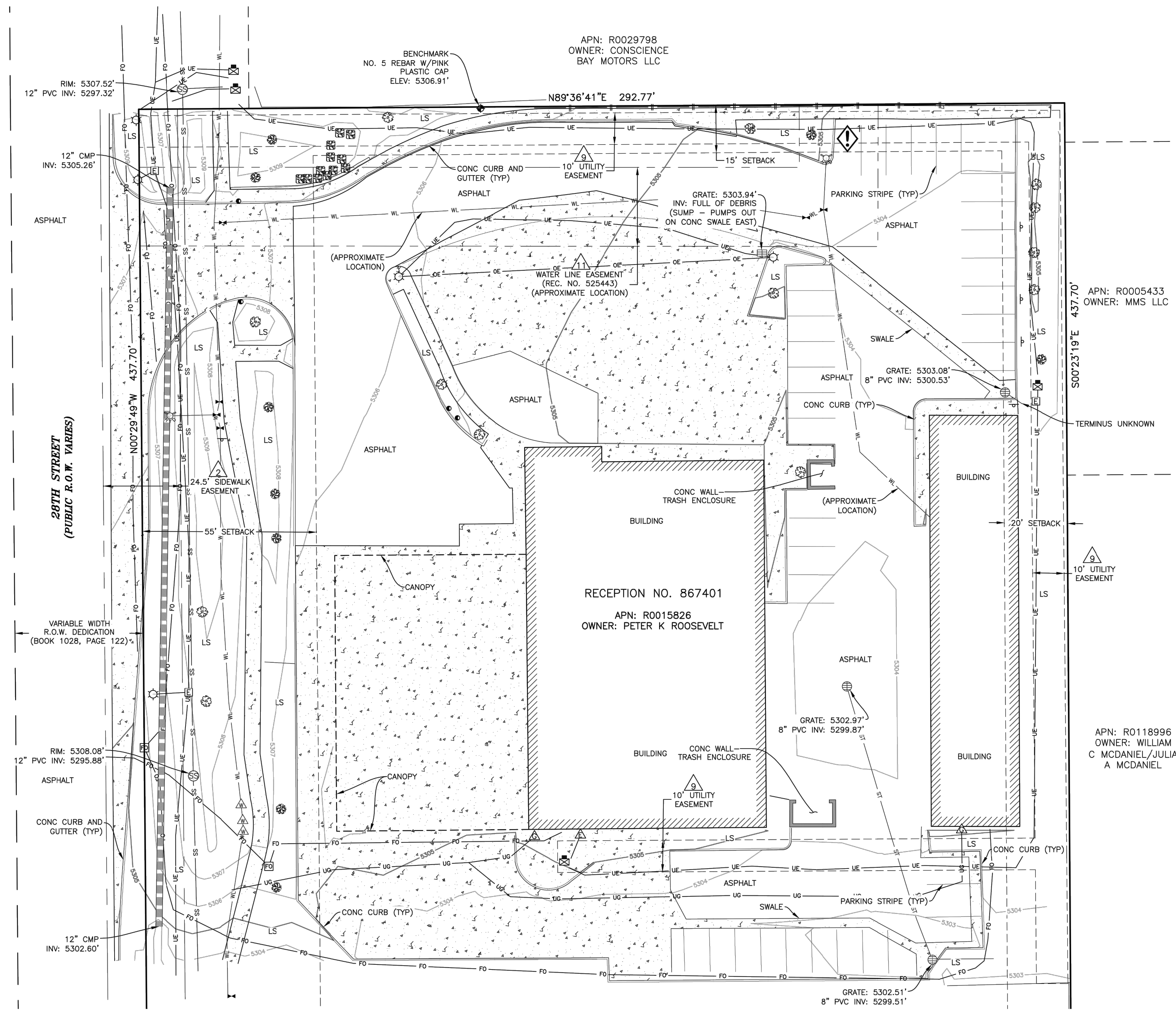
**NOTES:**

1. This is a topographic map. This is not a boundary survey and is only intended to depict those topographic features or improvements shown. The property lines shown are for graphical reference only.
2. Any underground utilities shown have been located from field survey information. The surveyor makes no guarantee that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from the information available. This site was located by standard RF methods.
3. FEDERAL EMERGENCY MANAGEMENT AGENCY, FEMA FIRMette published August 30, 2022, referencing Flood Insurance Rate Map, Map Number 08013C0394K effective date December 7, 2017, indicates this survey area is located in Zone X (Area of minimal flood hazard).
4. This survey does not constitute a title search by Clark Land Surveying, Inc. to determine ownership or easements of record. For all information regarding easements, rights of way and title of record, Clark Land Surveying, Inc. relied upon a Search Report, prepared by ProTitleUSA with an order number of 911410, dated August 9, 2022.
5. Elevations are based on NAVD 88 datum.
6. BENCHMARK: NO. 5 rebar with pink plastic cap in dirt, as shown. Elevation: 5306.91' (NAVD 88).
7. BASIS OF BEARINGS: Bearings are based upon NAD 83, Colorado State Plane Coordinate System, Colorado North Zone (0501).
8. Field work for this survey was completed on August 22, 2022.
9. The owner names and tax parcel data shown hereon are based upon the public records available at the original date of this survey. Current ownership and tax parcel data should be verified for accuracy.
10. This site is zoned "BC-1" (Business - Community 1) per City of Boulder Planning Department.  
Building Setbacks:  
Front: 55', Side: 15', Rear: 20'.  
No zoning information provided by the client. Any Zoning setbacks shown hereon are the interpretation of the surveyor. For clarification of exact zoning designations and setback locations, please, contact the City of Boulder Planning and Zoning Department at (303) 441-1880.

**SURVEYOR'S STATEMENT:**

On the basis of my knowledge, information and belief, I hereby state and declare that this drawing was prepared under my direct supervision to the standard of care of surveyors practicing in the State of Colorado and that the information shown hereon is true and correct to the best of my knowledge and belief.  
This statement is neither a warranty nor a guarantee, either expressed or implied.

Justin A. Crosson  
Colorado Professional Land Surveyor No. 38066  
For and on behalf of Clark Land Surveying, Inc.



No.	Description	By	Date
1	Added additional utility data.		09/12/2022

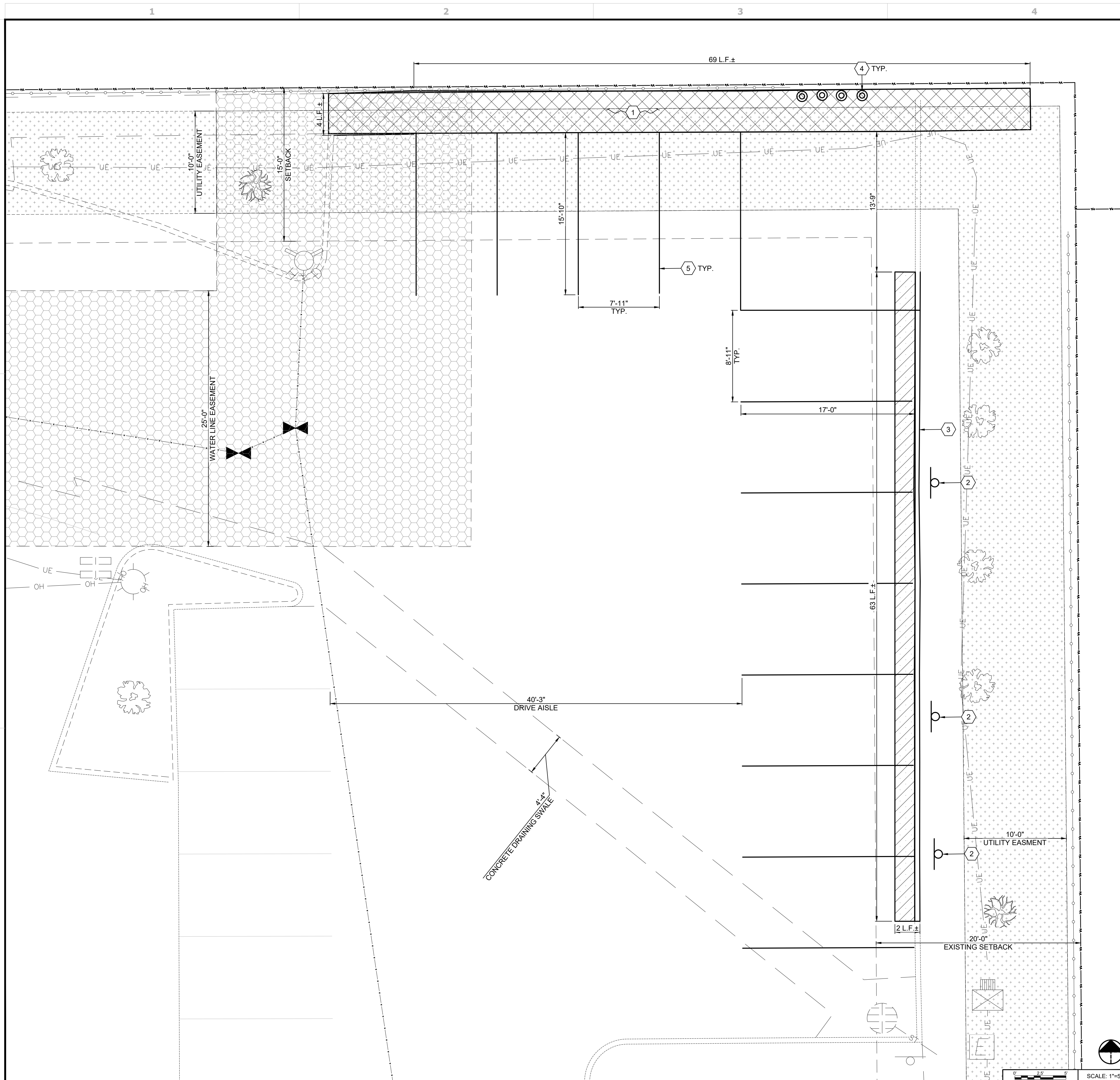
**SITE NAME:**  
Boulder, CO -  
28th St

**ENGINEERING DESIGN SURVEY**  
A PORTION OF THE SW 1/4 OF SECTION 20,  
TOWNSHIP 1 NORTH, RANGE 70 WEST OF SIXTH P.M.,  
CITY OF BOULDER, BOULDER COUNTY, STATE OF COLORADO

Project No. 222104  
Drawn By: RJR  
Checked By: JAC  
Date: 08/30/2022  
Sheet 1 of 1

**Notice:** According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown hereon.





DEMOLITION KEYNOTES AND LEGEND (#)

- EXISTING SIDEWALK TO BE REMOVED.
- EXISTING SIGNAGE TO BE REMOVED.
- EXISTING CURB TO BE REMOVED.
- EXISTING BOLLARDS TO BE REMOVED.
- EXISTING PAVEMENT MARKINGS TO BE REMOVED. CONTRACTOR SHALL REMOVE MARKINGS WITH SMALL HANDHELD GRINDERS, SCARIFIERS, BEAD BLASTING, SAND BLASTING, WATER BLASTING OR OTHER METHODS, WITH THE APPROVAL OF THE ENGINEER OF RECORD. TAKE CARE DURING MARKING REMOVAL TO NOT SCAR, DISCOLOR, OR OTHERWISE DAMAGE THE PAVEMENT SURFACE. DO NOT OVER PAINT OR USE OTHER METHODS OF COVERING MARKINGS IN LIEU OF REMOVAL. WATER BLASTING METHOD SHALL NOT BE USED DURING FREEZING WEATHER CONDITIONS.

- EXISTING CONCRETE TO BE REMOVED TRENCHING NOT INCLUDED. REMOVE UP TO EXISTING JOINT.
- EXISTING 10' UTILITY EASEMENT
- EXISTING 25' WATER EASEMENT
- DENOTES LIMITS OF SAWCUT
- EXISTING ASPHALT TO BE REMOVED TRENCHING NOT INCLUDED

GENERAL SHEET NOTES

- CONTRACTOR SHALL REMOVE EXISTING PAVEMENT AND/OR CURB USING CLEAN SAWCUTS TO INSTALL PROPOSED UNDERGROUND CONDUITS AND REPLACE PAVEMENT AND/OR CURB AFTER CONDUITS HAVE BEEN INSTALLED. SEE ELECTRICAL SHEETS FOR CONDUIT ROUTING, APPROXIMATE CONDUIT RUN LENGTHS AND TRENCH DETAIL. CONTRACTOR SHALL MEET OR EXCEED EXISTING PAVEMENT COMPOSITION AND THICKNESS. NOTIFY TESLA OF ANY DISCREPANCIES PRIOR TO PERFORMING WORK.
- APPLY LIQUID ASPHALT AT ALL JOINTS BETWEEN CONCRETE AND ASPHALT AND WHERE PROPOSED ASPHALT MEETS EXISTING, INCLUDING SAW CUT JOINTS.
- FOR TRAFFIC CONTROL PROCEDURES (IF APPLICABLE), SEE TRAFFIC CONTROL NOTES ON SHEET GN-1.
- PROPERTY LINE AND RIGHT-OF-WAY BOUNDARIES ARE SHOWN FOR REFERENCE ONLY. REFER TO SURVEY BY CLARK, DATED 09.12.2022 FOR EXACT LOCATION.

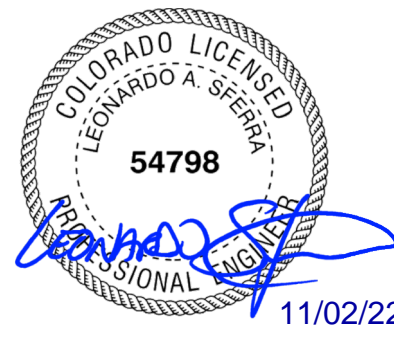


520 South Main Street, Suite 2531  
 Akron, OH 44311  
 330.572.2100 Fax 330.572.2101



3500 DEER CREEK RD.  
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 (650) 681-5000

REV.	DATE	DESCRIPTION
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11/02/22

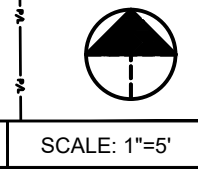
TESLA SUPERCHARGER STATION  
 3100 28TH STREET  
 BOULDER, CO 80301

DEMOLITION PLAN

PROJECT MANAGER	DESIGNER
ZS	ELH

JOB NO.  
 2022241.03

C-1

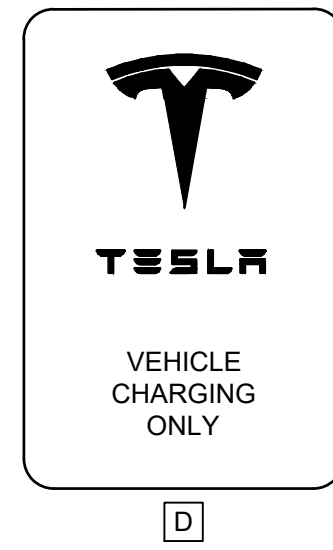


SCALE: 1"=5'

CHARGING STALL DETAILS

SIGNAGE SCHEDULE		
CABINET #	POST #	SIGN TYPE
1	1A	D
	1B	D
	1C	V
	1D	D
2	2A	D
	2B	D
	2C	D
	2D	D

PARKING STALL ANALYSIS	
EXISTING STANDARD STALLS UTILIZED AS A RESULT OF THIS PROJECT	13
PROPOSED TESLA STALLS	8
PROPOSED STANDARD STALLS	2
NET STALL COUNT	-3



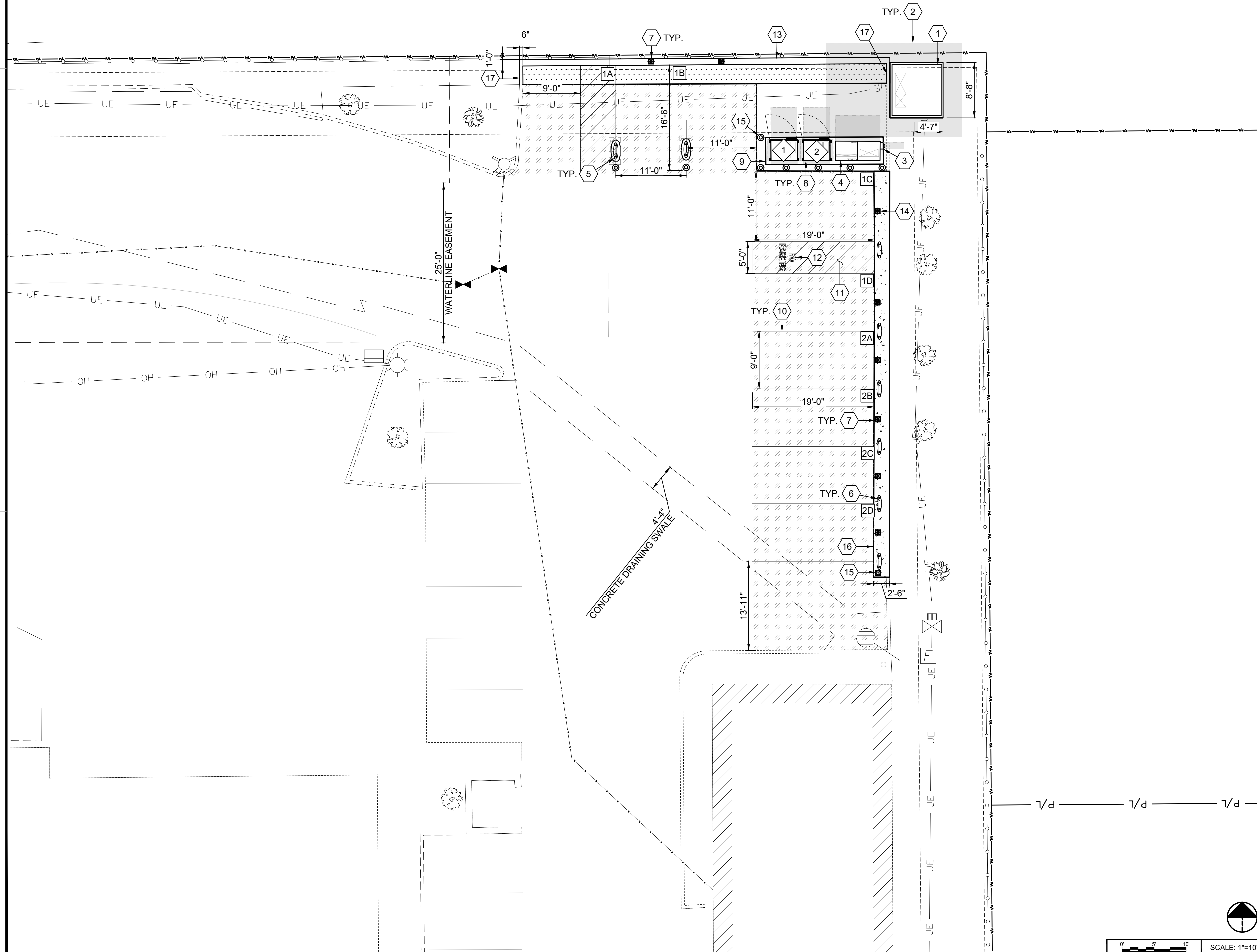
CONSTRUCTION KEYNOTES AND LEGEND (#)

- PROPOSED PAD MOUNTED ELECTRICAL UTILITY TRANSFORMER (BY UTILITY). CONTRACTOR SHALL PROVIDE CONCRETE PAD PER UTILITY SPECIFICATIONS. COORDINATE FINAL LOCATION WITH UTILITY. SEE ELECTRICAL PLANS FOR PROPOSED ROUTING.
- PROPOSED EQUIPMENT CLEAR SPACE (TYPICAL).
- PROPOSED ELECTRIC METER MOUNTED TO SWITCHGEAR PER ELECTRIC COMPANY SPECIFICATIONS AND DETAILS ON ELECTRICAL SHEETS.
- PROPOSED SWITCHGEAR ASSEMBLY PER ELECTRICAL DRAWINGS WITH INTEGRATED MASTER CONTROLLER. SEE SHEET C-3 FOR ANCHORAGE DETAIL.
- PROPOSED TESLA CHARGE POST WITH INDIVIDUAL PRECAST CONCRETE FOUNDATION (TYPICAL OF 2). SEE DETAILS ON SHEET C-3.
- PROPOSED TESLA CHARGE POST WITH INDIVIDUAL CAST IN PLACE CONCRETE FOUNDATION (TYPICAL OF 6). SEE DETAILS ON SHEET C-3.
- PROPOSED TESLA NON-ILLUMINATED PARKING SIGN MOUNTED ON McCUE FLEX BOLLARD SUPPLIED BY TESLA (TYPICAL OF 8). SEE CHARGING POST SCHEDULE, THIS SHEET, FOR SIGN TYPE.
- PROPOSED TESLA CHARGING CABINET (TYPICAL OF 2). SEE DETAILS ON SHEETS C-3.
- PROPOSED CONCRETE PAD. SEE DETAIL ON SHEET C-3.
- PROPOSED PAINTED 4" WIDE SOLID WHITE STRIPE. SEE PAVEMENT MARKING NOTES ON SHEET GN-1.
- PROPOSED PAINTED 4" WIDE WHITE TRANSVERSE STRIPING. STRIPING SHALL BE 3'-0" O.C. SEE PAVEMENT MARKING NOTES ON SHEET GN-1 AND DETAIL ON SHEET C-3.
- PROPOSED 12" CONCRETE CURB. SEE DETAIL ON SHEET C-3.
- PROPOSED ADA VAN SIGN ON McCUE FLEX BOLLARD SUPPLIED BY TESLA. SEE DETAIL ON SHEET C-4.
- PROPOSED McCUE FLEX BOLLARD SUPPLIED BY TESLA (TOTAL OF 9).
- PROPOSED 2.5' WIDE CONTINUOUS CURB. SEE DETAILS ON SHEET C-3.
- PROPOSED 6" CONCRETE CURB AND GUTTER. SEE DETAIL ON SHEET C-3.

- PROPOSED CONCRETE, SEE SPECIFICATIONS ON SHEET GN-1 TRENCHING NOT INCLUDED
- PROPOSED ASPHALT PAVEMENT TO MATCH EXISTING IN TYPE AND DEPTH. INCLUDE ENGINEERED COMPACTED BACKFILL BELOW PAVEMENT SECTION. TRENCHING NOT INCLUDED
- SEAL COAT EXISTING ASPHALT PER CODOT SPECIFICATION SECTION 407

GENERAL SHEET NOTES

- CONTRACTOR SHALL REMOVE EXISTING PAVEMENT AND/OR CURB USING CLEAN SAWCUTS TO INSTALL PROPOSED UNDERGROUND CONDUITS AND REPLACE PAVEMENT AND/OR CURB AFTER CONDUITS HAVE BEEN INSTALLED. SEE ELECTRICAL SHEETS FOR CONDUIT ROUTING, APPROXIMATE CONDUIT RUN LENGTHS AND TRENCH DETAIL. CONTRACTOR SHALL MEET OR EXCEED EXISTING PAVEMENT COMPOSITION AND THICKNESS. NOTIFY TESLA OF ANY DISCREPANCIES PRIOR TO PERFORMING WORK.
- APPLY LIQUID ASPHALT AT ALL JOINTS BETWEEN CONCRETE AND ASPHALT AND WHERE PROPOSED ASPHALT MEETS EXISTING, INCLUDING SAW CUT JOINTS.
- PROPERTY LINE AND RIGHT-OF-WAY BOUNDARIES ARE SHOWN FOR REFERENCE ONLY. REFER TO SURVEY OR DESIGN DRAWINGS BY CLARK, DATED 09/12/2022 FOR EXACT LOCATION.
- SEE CLARK SURVEY FOR ALL APPLICABLE BENCHMARKS.
- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING SLOPES AND GRADES PRIOR TO CONSTRUCTION. FINAL GRADES SHALL BE DETERMINED IN FIELD BY THE CONTRACTOR AND APPROVED BY THE CONSTRUCTION MANAGER.
- THE CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE TOWARDS THE NEAREST EXISTING DRAINAGE STRUCTURE AND ENSURE NO PONDING OCCURS ON SITE.
- CONTRACTOR SHALL ENSURE SLOPES OF PARKING STALL 1C AND ADJACENT TRANSVERSE STRIPED AREA CONFORM WITH ADA SLOPE REQUIREMENTS. NO SLOPE SHALL EXCEED 2% IN ANY DIRECTION WITHIN PARKING STALL 1C AND ADJACENT TRANSVERSE STRIPED AREA. CONTRACTOR SHALL REMOVE AND RE-GRADE PAVEMENT AS REQUIRED TO ACHIEVE NECESSARY SLOPES PER AHJ ACCESSIBILITY REGULATIONS. CONTRACTOR SHALL INSTALL FINAL PAVEMENT MARKINGS IN ACCORDANCE WITH THE CURRENT AHJ'S REGULATIONS.

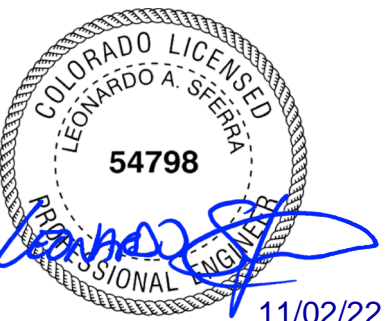


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PALO ALTO, CA 94304  
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REV.	DATE	DESCRIPTION
A	10/14/2022	SITE SKETCH
B	10/21/2022	ISSUED FOR 80% REVIEW
C	11/02/2022	ISSUED FOR SIGN & SEAL



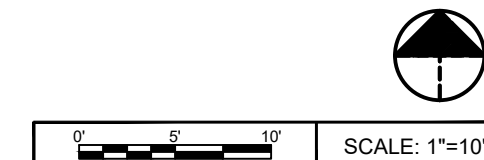
TESLA SUPERCHARGER STATION  
3100 28TH STREET  
BOULDER, CO 80301

SITE PLAN

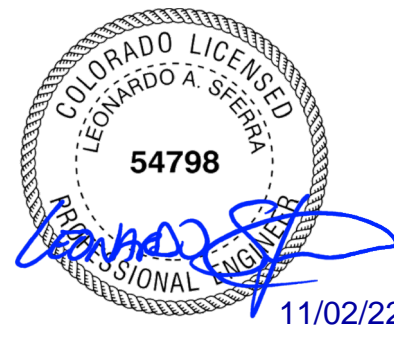
PROJECT MANAGER	DESIGNER
ZS	ELH

JOB NO.  
2022241.03

C-2



REV.	DATE	DESCRIPTION
A	10/14/2022	SITE SKETCH
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C	11/02/2022	ISSUED FOR SIGN & SEAL



**TESLA SUPERCHARGER STATION**  
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BOULDER, CO 80301

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ZS	ELH

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**C-3**

CIVIL DETAILS

<p><b>NOTES:</b> 1. REFER TO PAVEMENT MARKING NOTES ON SHEET GN-1 FOR ADDITIONAL SPECIFICATIONS.</p>	<p><b>PRECAST CONCRETE FOUNDATION BY UNIVERSAL</b></p> <p><b>NOTES:</b> 1. PRECAST CONCRETE FOUNDATION DESIGNED AND ENGINEERED BY UNIVERSAL. 2. PRECAST CONCRETE FOUNDATION SUPPLIED BY TESLA AND INSTALLED BY CONTRACTOR. 3. CHARGING POST SHALL BE ANCHORED TO PRE-INSTALLED THREADED INSERTS ON PRECAST FOUNDATION WITH 5/8" STAINLESS STEEL HARDWARE SUPPLIED BY TESLA AND INSTALLED BY CONTRACTOR. 4. PRECAST CONCRETE FOUNDATION DIMENSIONS SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL COORDINATE WITH TESLA FOR EXACT DIMENSIONS AND SPECIFICATIONS. 5. SEE FROST NOTES ON SHEET GN-1 FOR FOUNDATION PREPARATION.</p>	<p><b>CONCRETE PAD DETAIL</b></p> <p><b>CONCRETE PAD NOTES &amp; CONCRETE SPECIFICATIONS:</b> 1. FOUNDATION AREA SHALL BE EXCAVATED TO THE DEPTH AND DIMENSIONS SHOWN ON THE PLANS. OTHER UNSUITABLE MATERIAL SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF-SITE. THE SUBGRADE SHALL BE ROLLED WITH A 1-TON, VIBRATORY, WALK-BEHIND ROLLER AT A SPEED OF LESS THAN 2 FPS, 6 PASSES MINIMUM, TO PROVIDE UNYIELDING SURFACE. 2. UNDERCUT SOFT OR "WEAVING" AREAS A MINIMUM OF 12 INCHES DEEP. BACKFILL UNDERCUT AREA WITH FILL MEETING THE SPECIFICATIONS OF STRUCTURAL FILL. 3. CONCRETE TO HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH (f'c)=4500 psi. 4. REINFORCING BAR TO BE ASTM A615 GRADE 60. 5. ALL REINFORCING TO HAVE MINIMUM CONCRETE COVER PER ACI SPECIFICATIONS. 6. ALL CONCRETE MATERIALS AND WORKMANSHIP SHALL CONFORM TO ACI 318-14 AND APPLICABLE STATE BUILDING CODE. 7. PAD SHALL BE A MINIMUM OF 8" IN THICKNESS. THICKNESS OF PAD SHALL INCREASE AS THE PERIMETER SOIL SURFACE SLOPES TO MAINTAIN A MINIMUM OF 6" OF SOIL COVER TO THE BOTTOM OF THE PAD.</p>	<p><b>TESLA CHARGING CABINET ANCHOR BOLT PLAN</b></p> <p><b>NOTE:</b> 1. TESLA PROVIDED TEMPLATE PLATE TO BE USED TO LAYOUT CHARGING CABINET ANCHORING BOLT LOCATIONS AND CONDUIT STUB UP LOCATIONS. 2. BOLT HOLES FOR REFERENCE ONLY. 3. USE DOTTIE DUCT SEAL COMPOUND PC 6130 (CAT NO LHD1) TO SEAL ENDS OF CONDUIT (TYP. ALL CONDUITS FOR CHARGING CABINETS AND CHARGE POSTS) 4. USE BELL FITTINGS ON ALL AC AND DC CONDUIT STUBS 5. SEE DETAIL THIS SHEET FOR FOUNDATION DETAIL IF APPLICABLE</p> <p><b>CAST-IN-PLACE FOUNDATION:</b> (4) 5/8" DIA. HILTI KWIK BOLT TZ STAINLESS STEEL ANCHORS, 3-1/8" MIN. EMBEDMENT PROVIDED AND INSTALLED BY CONTRACTOR</p> <p><b>PRECAST FOUNDATION:</b> (4) 5/8" DIA. STAINLESS GRADE 304 BOLTS PROVIDED BY TESLA AND INSTALLED BY CONTRACTOR</p> <p><b>OUTGOING TO POSTS:</b> STUB UP SHALL BE 6" OFF GROUND AND END IN FEMALE NPT THREADED COUPLING (SEE NOTE 4). SEE FEEDER SCHEDULE FOR CONDUIT SIZE/QUANTITY.</p> <p><b>INCOMING FROM SOURCE:</b> (2) AC CONDUITS. STUB UP SHALL BE 6" OFF GROUND AND END IN FEMALE NPT THREADED COUPLING (SEE NOTE 4). SEE FEEDER SCHEDULE FOR CONDUIT SIZE/QUANTITY</p>
<p><b>TRANSVERSE STRIPING DETAIL</b></p> <p>N.T.S 10</p>	<p><b>CHARGING POST CONCRETE FOUNDATION</b></p> <p>N.T.S 7</p>	<p><b>CONCRETE PAD DETAIL</b></p> <p>N.T.S 4</p>	<p><b>TESLA CHARGING CABINET ANCHOR BOLT PLAN</b></p> <p>N.T.S 1</p>
<p><b>6" P.C.C CURB DETAIL</b></p> <p><b>NOTE:</b> CONTRACTOR TO ASSESS EXISTING CURBS AND INSTALL PROPOSED CURBS TO MATCH. ABOVE DETAILS TO BE USED AS MINIMUM STANDARDS.</p>	<p><b>12" P.C.C CURB DETAIL</b></p> <p><b>NOTE:</b> CONTRACTOR TO ASSESS EXISTING CURBS AND INSTALL PROPOSED CURBS TO MATCH. ABOVE DETAILS TO BE USED AS MINIMUM STANDARDS.</p>	<p><b>SWITCHGEAR MOUNTING DETAIL</b></p> <p><b>NOTES:</b> 1. REFER TO SWITCHGEAR MANUFACTURER DRAWINGS FOR MOUNTING HOLE LOCATIONS, SWITCHGEAR BAY DIMENSIONS, AND BASE CHANNEL DIMENSIONS. 2. MINIMUM EDGE DISTANCE FOR PROPOSED ANCHORAGE SHALL BE 8".</p>	<p><b>TESLA CHARGING CABINET DIMENSIONS</b></p> <p><b>ENCLOSURE:</b> INGRESS PROTECTION IP66 <b>WEIGHT:</b> 1110 kg, 2448 lbs. <b>COMPLIANCE:</b> UL 2202</p> <p><b>NOTES:</b> 1. CABINET SHOULD BE LIFTED USING ROOF MOUNTED EYE HOOKS. A FORKLIFT OR PALLET JACK CAN ALSO BE USED TO MOVE CABINET IF DONE PROPERLY. 2. VERIFY CABINET PART# AND ASSOCIATED DIMENSIONS PRIOR TO CONSTRUCTION</p>
<p><b>CHARGING POST ELEVATION</b></p> <p>N.T.S 12</p>	<p><b>CHARGE POST CONTINUOUS CURB REINFORCEMENT DETAIL</b></p> <p>N.T.S 9</p>	<p><b>CHARGING POST CONTINUOUS CURB FOUNDATION</b></p> <p>N.T.S 6</p>	<p><b>CHARGING CABINET FOUNDATION TEMPLATE DETAIL</b></p> <p>N.T.S 3</p>







GENERAL SHEET NOTES

- "# " DENOTES FEEDER REFERENCE. REFER TO SHEET E-2 FOR FEEDER/CIRCUIT SCHEDULE.
- CONTRACTOR SHALL REFER TO CIVIL SHEETS FOR EXISTING LANDSCAPING TO REMAIN AND PROPOSED LANDSCAPING.
- CONTRACTOR SHALL HAND DIG AROUND ALL EXISTING UTILITIES.
- CONDUIT ELBOWS SHALL BE SIZED PER NEC. CONTRACTOR SHALL VERIFY MANUFACTURER ALLOWABLE FILL AND MINIMUM CONDUCTOR BENDING RADIUS. SEE FEEDER SCHEDULE FOR CONDUIT & CONDUCTOR SPECIFICATIONS.
- ALL CONDUITS ACCESSIBLE TO THE PUBLIC OR WHICH CAN BE DAMAGED SHALL BE RIGID GALVANIZED STEEL.
- PROPERTY LINE AND RIGHT-OF-WAY BOUNDARIES ARE SHOWN FOR REFERENCE ONLY. REFER TO SURVEY BY OTHERS FOR EXACT LOCATION.
- UTILITY EQUIPMENT INSTALLATIONS AND PREP WORK SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY ENGINEER TO ENSURE ACCURACY OF INSTALLATION.
- ALL PROPOSED CONDUITS MUST MEET MINIMUM DEPTH REQUIREMENTS AS OUTLINED IN TRENCH DETAILS. AS WELL AS MAINTAIN A MINIMUM OF 18" CLEAR OF ALL EXISTING OBSTRUCTIONS INCLUDING (BUT NOT LIMITED TO) STORM PIPES, SANITARY PIPES, WATER LINES AND OTHER UNDERGROUND UTILITIES.

ELECTRICAL SCOPE OF WORK RESPONSIBILITIES

SCOPE	BY UTILITY	BY CONTRACTOR
PROVIDE PRIMARY SIDE TRENCHING	X	
PROVIDE & INSTALL PRIMARY SIDE CONDUITS W/ PULLWIRE	X	
PROVIDE & INSTALL PRIMARY SIDE CONDUCTORS	X	
PROVIDE & INSTALL UTILITY TRANSFORMER PAD	X	
PROVIDE UTILITY TRANSFORMER	X	
INSTALL UTILITY TRANSFORMER	X	
INSTALL CONNECTIONS AT UTILITY TRANSFORMER (PRIMARY)	X	
INSTALL CONNECTIONS AT UTILITY TRANSFORMER (SECONDARY)		X
PROVIDE METER BASE		X
INSTALL METER BASE		X
PROVIDE METER	X	
INSTALL METER	X	
PROVIDE CTs	X	
INSTALL CTs (INSIDE SWITCHGEAR)		X
PROVIDE SECONDARY SIDE TRENCHING		X
PROVIDE & INSTALL SECONDARY SIDE CONDUITS W/ PULLWIRE		X
PROVIDE & INSTALL SECONDARY SIDE CONDUCTORS		X
PROVIDE ROAD CUTS / ROAD BORES	X*	X**
PROVIDE & INSTALL PAVEMENT REPLACEMENT	X*	X**

NOTE: SCOPE SHOWN ABOVE WAS PROVIDED BY XCEL ENERGY. FIELD VERIFY PRIOR TO CONSTRUCTION.  
 \*FOR PRIMARY CONDUIT ONLY  
 \*\*FOR SECONDARY CONDUITS ONLY

POWER COMPANY CONTACTS  
 XCEL ENERGY  
 ATTN: HAYDEN HOGOBOOM  
 (720) 560-0577  
 HAYDEN.C.HOGOBOOM@EXCELENERGY.COM

REV.	DATE	DESCRIPTION
A	10/14/2022	SITE SKETCH
B	10/21/2022	ISSUED FOR 90% REVIEW
C	11/02/2022	ISSUED FOR SIGN & SEAL



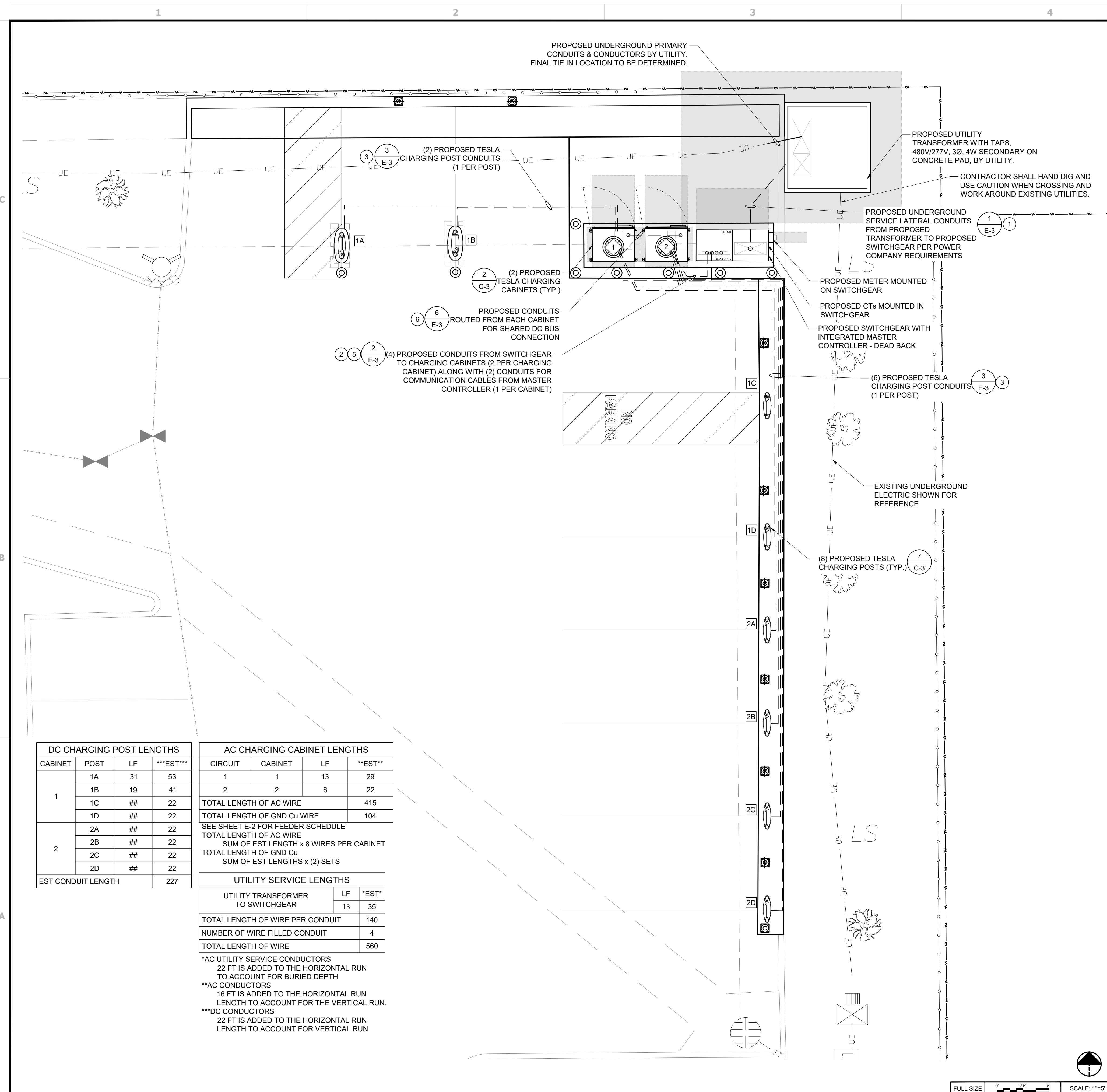
11/02/22

TESLA SUPERCHARGER STATION  
 3100 28TH STREET  
 BOULDER, CO 80301

PROJECT MANAGER	DESIGNER
ZS	ELH

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E-1



DC CHARGING POST LENGTHS

CABINET	POST	LF	***EST***
1	1A	31	53
	1B	19	41
	1C	##	22
	1D	##	22
2	2A	##	22
	2B	##	22
	2C	##	22
	2D	##	22
EST CONDUIT LENGTH			227

AC CHARGING CABINET LENGTHS

CIRCUIT	CABINET	LF	**EST**
1	1	13	29
2	2	6	22
TOTAL LENGTH OF AC WIRE			415
TOTAL LENGTH OF GND Cu WIRE			104

SEE SHEET E-2 FOR FEEDER SCHEDULE  
 TOTAL LENGTH OF AC WIRE  
 SUM OF EST LENGTH x 8 WIRES PER CABINET  
 TOTAL LENGTH OF GND Cu  
 SUM OF EST LENGTHS x (2) SETS

UTILITY SERVICE LENGTHS

UTILITY TRANSFORMER TO SWITCHGEAR	LF	*EST*
	13	35
TOTAL LENGTH OF WIRE PER CONDUIT		140
NUMBER OF WIRE FILLED CONDUIT		4
TOTAL LENGTH OF WIRE		560

\*AC UTILITY SERVICE CONDUCTORS  
 22 FT IS ADDED TO THE HORIZONTAL RUN TO ACCOUNT FOR BURIED DEPTH  
 \*\*AC CONDUCTORS  
 16 FT IS ADDED TO THE HORIZONTAL RUN LENGTH TO ACCOUNT FOR THE VERTICAL RUN  
 \*\*\*DC CONDUCTORS  
 22 FT IS ADDED TO THE HORIZONTAL RUN LENGTH TO ACCOUNT FOR VERTICAL RUN

REV.	DATE	DESCRIPTION
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11/02/22

**TESLA SUPERCHARGER STATION**  
3100 28TH STREET  
BOULDER, CO 80301

**ONE-LINE DIAGRAM**

PROJECT MANAGER	DESIGNER
ZS	ELH

JOB NO.  
**2022241.03**

**E-2**

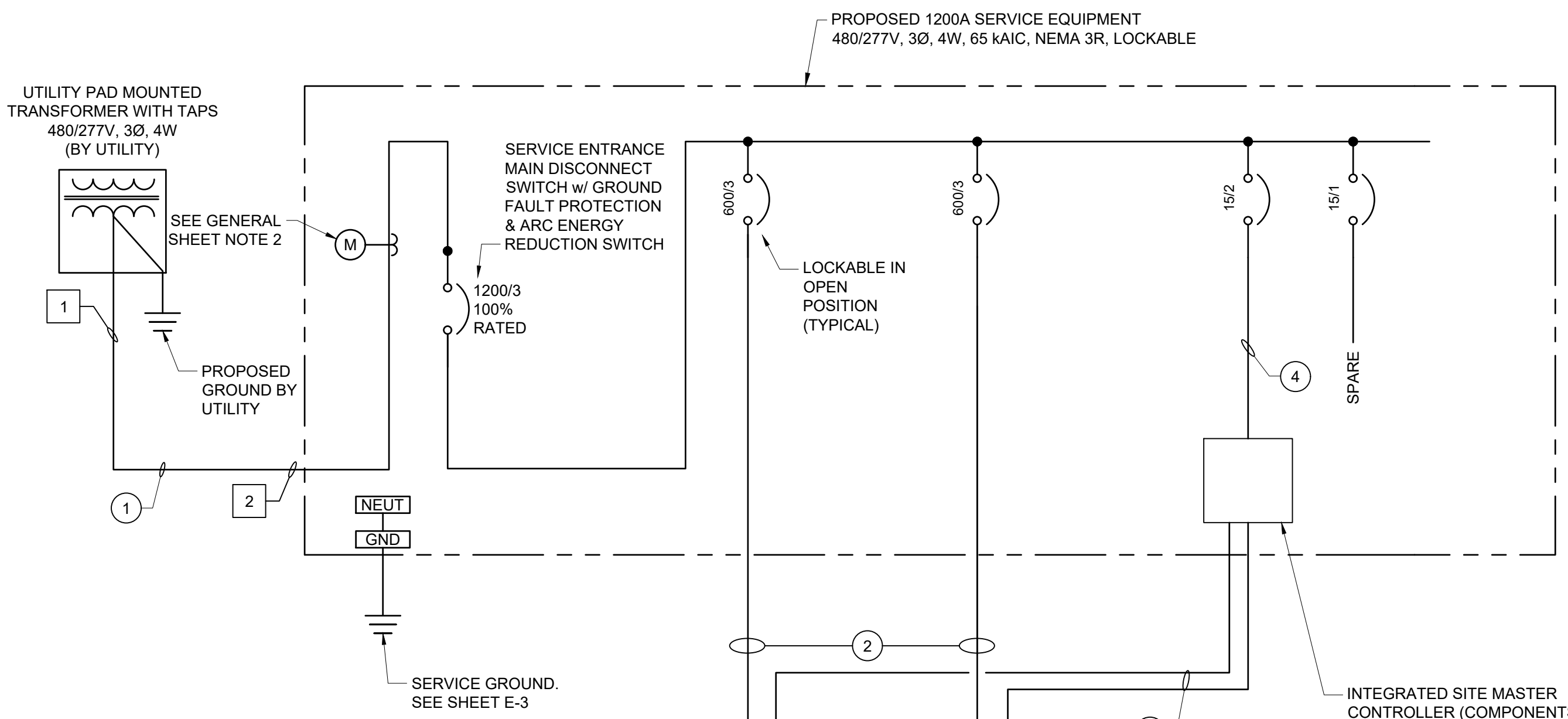
FEEDER/CIRCUIT SCHEDULE	
NO	CONFIGURATION
1	(4) SETS - EACH IN 4" CONDUIT (3) 500 MCM AI (1) 500 MCM AI NEUT
2	(2) SETS - EACH IN 4" CONDUIT (3) 500 MCM AI (1) 500 MCM AI NEUT (1) #1 AWG Cu GND OR #2/0 AWG AI GND
3	(1) SET - EACH IN 4" CONDUIT (4) 350 MCM AI (TWO + TWO -) (1) #1 AWG Cu GND OR #2/0 AWG AI GND (1) 1000V, CLASS 1, COMM CABLE
4	FACTORY INSTALLED WIRING
5	OUTDOOR RATED/SHIELDED CAT5e OR CAT6 COMMUNICATION CABLE IN 1" CONDUIT.
6	(2) SETS - EACH IN 3" CONDUIT. (2) 600 MCM AI (ONE + ONE -) (1) #3/0 AWG AI DC MID (1) #1/0 AWG Cu GND (1) #3/0 AWG AI DC MID DISC. 36" LONG IN EA. CABINET, NOT Routed IN CONDUIT

- NOTE:
- ALL AC CONDUCTORS SHALL BE XHHW-2, 600V RATED, U.N.O.
  - ALL DC CONDUCTORS SHALL BE XHHW-2, 1000V RATED, U.N.O. FOR APPROVED COPPER/ALUMINUM EQUIPMENT GROUNDING CONDUCTOR EQUIVALENTS. SEE TABLE BELOW. ALL ALUMINUM EQUIPMENT GROUND CONDUCTORS SHALL BE TERMINATED IN OUTDOOR ENCLOSURES LISTED AND IDENTIFIED FOR THE ENVIRONMENT PER NEC 2020, ARTICLE 250.64(A)(2).
  - SEE "RACEWAY AND BOXES" NOTES ON SHEET EN-1 FOR CONDUIT USE TYPES FOR ABOVE AND BELOW GRADE APPLICATIONS.

MINIMUM EQUIPMENT GROUNDING CONDUCTOR SIZE		
AMPERE RATING OR SETTING OF OCPD IN CIRCUIT AHEAD OF EQUIPMENT	COPPER SIZE	ALUMINUM SIZE
15	12	12
20	12	10
60	10	8
100	8	6
200	6	4
300	4	2
400	3	1
500	2	1/0
600	1	2/0
800	1/0	3/0
1000	2/0	4/0
1200	3/0	250
1600	4/0	350
2000	250	400
2500	350	600
3000	400	600
4000	500	750

**GENERAL SHEET NOTES**

- NEUTRAL MUST BE INCLUDED FOR PROPER OPERATION OF TESLA SUPERCHARGERS.
- PROPOSED UTILITY CTs SHALL BE LOCATED IN UTILITY APPROVED CT COMPARTMENTS MOUNTED IN SWITCHGEAR. PROPOSED METER SHALL BE MOUNTED ON SWITCHGEAR.
- ALL CONDUIT FURNISHED AND INSTALLED BY CONTRACTOR.
- ALL WIRING FURNISHED BY TESLA AND INSTALLED BY CONTRACTOR UNLESS NOTED OTHERWISE. SEE SHEET E-1 FOR UTILITY/CONTRACTOR SCOPE OF WORK.
- THE TESLA PROVIDED CHARGING CABINETS AND THE CHARGING POSTS USED ON THIS PROJECT COMPLY WITH THE FOLLOWING STANDARDS:
  - TUV CERTIFIED TO UL 2202
- ALL ELECTRICAL EQUIPMENT SHALL BE LABELED, LISTED, OR CERTIFIED BY A NATIONALLY RECOGNIZED TESTING LABORATORY ACCREDITED BY THE UNITED STATES OCCUPATIONAL SAFETY HEALTH ADMINISTRATION.
- REFER TO THIS SHEET FOR FAULT CURRENT CALCULATIONS. CONTRACTOR SHALL MARK ON ALL EQUIPMENT AS REQUIRED PER N.E.C.
- REFER TO SHEET E-3 FOR ARC FLASH LABEL DETAILS. CONTRACTOR SHALL LABEL ALL EQUIPMENT AS REQUIRED PER N.E.C.



AVAILABLE FAULT CURRENT (AMPS)	
1	45,100
2	43,550
3	42,850

NOTE: FAULT CURRENT CALCULATIONS PERFORMED USING INFINITE BUS CALCULATION WITH AN ASSUMED 750KVA TRANSFORMER IMPEDANCE OF 2%.

PANEL 'MDP'									
DESCRIPTION	Phase A kVA	Phase B kVA	Phase C kVA	CKT. BKR / Poles		Phase A kVA	Phase B kVA	Phase C kVA	DESCRIPTION
CHARGING CABINET #1	129.00	129.00	129.00	600/3	1				SPACE
CHARGING CABINET #2	129.00	129.00	129.00	600/3	2				SPACE
SPACE	0.00	0.00	0.00		3				SPACE
SPACE	0.00	0.00	0.00		4				SPACE
SPACE	0.00	0.00	0.00		5				SPACE
SPACE	0.00	0.00	0.00		6				SPACE
SPACE	0.00	0.00	0.00		7				SPACE
SPACE	0.00	0.00	0.00		8				SPACE
SPACE	0.00	0.00	0.00		9				SPACE
SPACE	0.00	0.00	0.00		10				SPACE
SPACE	0.00	0.00	0.00		11				SPACE
SPACE	0.00	0.00	0.00		12				SPACE
SPACE	0.00	0.00	0.00		13				SPACE
SPACE	0.00	0.00	0.00		14				SPACE
SPACE	0.00	0.00	0.00		15				SPACE
SPACE	0.00	0.00	0.00		16				SPACE
SPACE	0.00	0.00	0.00		17				SPACE
SPACE	0.00	0.00	0.00		18				SPACE
SPACE	0.00	0.00	0.00		19				SPACE
SPACE	0.00	0.00	0.00		20				SPACE
SPACE	0.00	0.00	0.00		21				SPACE
SPACE	0.00	0.00	0.00		22				SPACE
SPACE	0.00	0.00	0.00		23				SPACE
SPACE	0.00	0.00	0.00		24				SPACE
SPACE	0.00	0.00	0.00		25				SPACE
SPACE	0.00	0.00	0.00		26				SPACE
SPACE	0.00	0.00	0.00		27				SPACE
SPACE	0.00	0.00	0.00		28				SPACE
SPACE	0.00	0.00	0.00		29				SPACE
SPACE	0.00	0.00	0.00		30				SPACE
SPACE	0.00	0.00	0.00		31				SPACE
SPACE	0.00	0.00	0.00		32				SPACE
SPACE	0.00	0.00	0.00		33				SPACE
SPACE	0.00	0.00	0.00		34				SPACE
SPACE	0.00	0.00	0.00		35				SPACE
MASTER CONTROLLER	0.10	0.10	0.00	15/2	36				SPACE
SPACE	0.00	0.00	0.00	15/1	37				SPACE
SPACE	0.00	0.00	0.00	15/1	38				SPACE
SPACE	0.00	0.00	0.00	15/1	39				SPACE
SPACE	0.00	0.00	0.00	15/1	40				SPACE
SPACE	0.00	0.00	0.00	15/1	41				SPACE
SPACE	0.00	0.00	0.00	15/1	42				SPACE

CONNECTED

kVA	258.10	258.10	258.00
AMPS	931.77	931.77	931.41

TOTAL kVA 774.20  
TOTAL AMPS 931.22

\*\*\*125% CONT. LOAD CALC.\*\*\*  
TOTAL kVA 967.75  
TOTAL AMPS 1164.02

VOLTAGE 480 Y/ 277 PHASE 3 No OF WIRES 4 NEMA 3R ENCLOSURE  
MAIN C/B 3 POLES LLCS BUS 1200 AMPS 65 KAIC  
SERVICE ENTRANCE RATED 100% RATED SPD ISOLATED GROUNDED BUS SURFACE  
200% RATED NEUTRAL FULLY RATED FLUSH

\*\*\*THE SUM OF THE TOTAL CONNECTED LOADS (NON-CONTINUOUS LOAD PLUS THE CONTINUOUS LOAD) TERMINATE IN AN OVERCURRENT DEVICE WHERE BOTH THE OVERCURRENT DEVICE AND ITS ASSEMBLY ARE LISTED FOR OPERATION AT 100% OF THEIR RATING.

- CIRCUITS SHALL BE REARRANGED AS REQUIRED TO MAINTAIN THE MOST BALANCED LOADS ON EACH PHASE WITHIN EACH PANEL. PROVIDE TYPED PANEL DIRECTORY MOUNTED PER MANUFACTURERS RECOMMENDATIONS WITH SERVICE EQUIPMENT.
- OCPD FOR CHARGING CABINETS ARE CALCULATED AS FOLLOWS: 465A AC INPUT TO CABINET x 1.25 = 581.25A ==> 600A BRANCH REQUIRED
- CONTRACTOR SHALL COORDINATE WITH THE POWER COMPANY TO DETERMINE MAXIMUM SHORT CIRCUIT AMPS (SCA), AND PROVIDE CALCULATIONS IN ORDER TO PROVIDE PROPERLY RATED EQUIPMENT. PROVIDE LABELS ON ELECTRICAL EQUIPMENT PER NEC 110.16 AND LOCAL JURISDICTION REQUIREMENTS

BREAKER SETTINGS								
BREAKER USE	BREAKER SIZE	LONG DELAY	LONG DELAY TIME	SHORT DELAY	SHORT DELAY TIME	INSTANTANEOUS	GROUND SETTING	GROUND TIME
MCB	1200A	0.8(960A)	20.0	6.0	0.2 (FT OFF)	M1	0.5	0.5 (FT OFF)
V3 BRANCH CIRCUIT	600A	X	X	X	X	5	X	X

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ZS	ELH

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**2022241.03**

**E-3**

<p><b>DC BUS CIRCUIT TRENCH</b></p> <p>NOTES:          1. ANY EXCAVATION LEFT OPEN SHOULD BE SECURELY FENCED OFF. ALL TRENCHING SHALL BE ACCORDING TO THE LATEST OSHA STANDARDS.          2. ANY PAVEMENT DAMAGE DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR TO PRE-CONSTRUCTION CONDITIONS OR BETTER.          3. CONTRACTOR SHALL INSTALL CONDUITS BELOW LOCAL FROST LINE. SHOULD FIELD CONDITIONS VARY, CONTRACTOR SHALL COORDINATE WITH TESLA CONTACT LISTED ON SHEET T-1.          4. VERIFY WIDTH OF TRENCH REQUIRED. REFER TO SITE ELECTRICAL DRAWING FOR APPROXIMATE ROUTING.          5. THE CONTRACTOR SHALL FURNISH FLOWABLE FILL WITH A 28 DAY COMPRESSIVE STRENGTH RANGING FROM 50 PSI TO 100 PSI PER THE STATE DEPARTMENT OF TRANSPORTATION'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, CURRENT EDITION, LATEST REVISION.          6. DC BUS CONDUITS ARE NOT TO BE STACKED UNDER ANY CIRCUMSTANCES.</p>	<p><b>TYPICAL GROUNDING DIAGRAM</b></p> <p>NOTES:          1. ANY EXCAVATION LEFT OPEN SHOULD BE SECURELY FENCED OFF. ALL TRENCHING SHALL BE ACCORDING TO THE LATEST OSHA STANDARDS.          2. ANY PAVEMENT DAMAGE DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR TO PRE-CONSTRUCTION CONDITIONS OR BETTER.          3. CONTRACTOR SHALL INSTALL CONDUITS BELOW LOCAL FROST LINE. SHOULD FIELD CONDITIONS VARY, CONTRACTOR SHALL COORDINATE WITH TESLA CONTACT LISTED ON SHEET T-1.          4. VERIFY WIDTH OF TRENCH REQUIRED. REFER TO SITE ELECTRICAL DRAWING FOR ROUTING.          5. VERIFY ALL REQUIREMENTS WITH POWER COMPANY          6. THE CONTRACTOR SHALL FURNISH FLOWABLE FILL WITH A 28 DAY COMPRESSIVE STRENGTH RANGING FROM 50 PSI TO 100 PSI PER THE STATE DEPARTMENT OF TRANSPORTATION'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, CURRENT EDITION, LATEST REVISION.</p>	<p><b>SECONDARY FEEDERS TRENCH DETAIL</b></p> <p>NOTES:          1. ANY EXCAVATION LEFT OPEN SHOULD BE SECURELY FENCED OFF. ALL TRENCHING SHALL BE ACCORDING TO THE LATEST OSHA STANDARDS.          2. ANY PAVEMENT DAMAGE DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR TO PRE-CONSTRUCTION CONDITIONS OR BETTER.          3. CONTRACTOR SHALL INSTALL CONDUITS BELOW LOCAL FROST LINE. SHOULD FIELD CONDITIONS VARY, CONTRACTOR SHALL COORDINATE WITH TESLA CONTACT LISTED ON SHEET T-1.          4. VERIFY WIDTH OF TRENCH REQUIRED. REFER TO SITE ELECTRICAL DRAWING FOR APPROXIMATE ROUTING.          5. THE CONTRACTOR SHALL FURNISH FLOWABLE FILL WITH A 28 DAY COMPRESSIVE STRENGTH RANGING FROM 50 PSI TO 100 PSI PER THE STATE DEPARTMENT OF TRANSPORTATION'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, CURRENT EDITION, LATEST REVISION.</p>	<p>DETAIL NOT USED</p> <p>N.T.S</p> <p>9</p> <p>DC BUS CIRCUIT TRENCH</p> <p>N.T.S</p> <p>6</p> <p>TYPICAL GROUNDING DIAGRAM</p> <p>N.T.S</p> <p>4</p> <p>SECONDARY FEEDERS TRENCH DETAIL</p> <p>N.T.S</p> <p>1</p>
<p><b>DANGER</b>          NO SAFE PPE EXISTS          ENERGIZED WORK PROHIBITED</p> <p>FLASH PROTECTION SHOCK PROTECTION          Working Distance: 18 in Shock risk when cover is removed 480 VAC          Glove Class: 00          Arc Flash Boundary: 360 in          PPE: NO SAFE PPE Limited Approach 42 in          Min. Arc Rating: NO SAFE PPE          DO NOT WORK ON LIVE! Restricted Approach 12 in</p> <p>Bus: INCOMING SECTION-MAIN Prot: MaxTripTime @2.0s</p> <p>INCOMING UTILITY SECTION</p>	<p><b>WARNING</b>          Arc Flash and Shock Risk          Appropriate PPE Required</p> <p>FLASH PROTECTION SHOCK PROTECTION          Working Distance: 18 in Shock risk when cover is removed 480 VAC          Glove Class: 00          Arc Flash Boundary: 30 in          PPE: CAT 2 Limited Approach 42 in          Min. Arc Rating: 8 cal/cm² Restricted Approach 12 in</p> <p>Bus: CHARGING CABINETS Prot: 600A BREAKER</p> <p>CHARGING CABINETS</p>	<p><b>TYPICAL TRENCH DETAIL</b></p> <p>NOTES:          1. ANY EXCAVATION LEFT OPEN SHOULD BE SECURELY FENCED OFF. ALL TRENCHING SHALL BE ACCORDING TO THE LATEST OSHA STANDARDS.          2. ANY PAVEMENT DAMAGE DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR TO PRE-CONSTRUCTION CONDITIONS OR BETTER.          3. CONTRACTOR SHALL INSTALL CONDUITS BELOW LOCAL FROST LINE. SHOULD FIELD CONDITIONS VARY, CONTRACTOR SHALL COORDINATE WITH TESLA CONTACT LISTED ON SHEET T-1.          4. VERIFY WIDTH OF TRENCH REQUIRED. REFER TO SITE ELECTRICAL DRAWING FOR APPROXIMATE ROUTING.          5. THE CONTRACTOR SHALL FURNISH FLOWABLE FILL WITH A 28 DAY COMPRESSIVE STRENGTH RANGING FROM 50 PSI TO 100 PSI PER THE STATE DEPARTMENT OF TRANSPORTATION'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, CURRENT EDITION, LATEST REVISION.</p>	<p>DETAIL NOT USED</p> <p>N.T.S</p> <p>7</p> <p>DETAIL NOT USED</p> <p>N.T.S</p> <p>5</p> <p>TYPICAL TRENCH DETAIL</p> <p>N.T.S</p> <p>2</p>
<p>NOTES:          1. FOR ANY QUESTIONS OR CLARIFICATIONS REGARDING LABELS, CONTACT TESLA.          2. ARC FLASH INCIDENT ENERGY ANALYSIS COMPLETED PER NFPA 70E 2018.          3. ARC FLASH CALCULATIONS PER IEEE 1584, 2018.          4. LABELS SHALL BE PRINTED WITH PERMANENT INK ON WEATHERPROOF LABELS WITH SELF STICKING ADHESIVE.          5. INSTALL LABELS PER NEC SECTION 110.16.          6. FOR EACH SWITCHGEAR SECTION, CONTRACTOR SHALL PROVIDE (1) APPLICABLE LABEL ON EXTERIOR DOOR AND (1) APPLICABLE LABEL ON INTERIOR FRONT FACING SECTION. CONTRACTOR SHALL FIELD VERIFY SPECIFIC LOCATION FOR LABEL PLACEMENT(S).          7. CONTRACTOR SHALL PROVIDE LABELS WITH ANY ADDITIONAL INFORMATION AS REQUIRED BY LOCAL JURISDICTION, STATE AND FEDERAL CODES AND LAWS.</p>	<p><b>DC POST CONDUIT TRENCH DETAIL</b></p> <p>NOTES:          1. DUCT BANK DESIGNED AND CERTIFIED BY TESLA. SEE NOTE 6 FOR ADDITIONAL INFORMATION.          2. ANY EXCAVATION LEFT OPEN SHOULD BE SECURELY FENCED OFF. ALL TRENCHING SHALL BE ACCORDING TO THE LATEST OSHA STANDARDS.          3. ANY PAVEMENT DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR TO PRE-CONSTRUCTION CONDITIONS OR BETTER.          4. CONTRACTOR SHALL INSTALL CONDUITS BELOW LOCAL FROST LINE. SHOULD FIELD CONDITIONS VARY, CONTRACTOR SHALL COORDINATE WITH TESLA CONTACT LISTED ON SHEET T-1.          5. FIELD VERIFY WIDTH OF TRENCH REQUIRED. REFER TO SITE ELECTRICAL DRAWING FOR ROUTING.          6. DC POST CONDUIT DUCT BANK DESIGN BY TESLA. CONTRACTOR SHALL FURNISH FLOWABLE FILL WITH A 28 DAY COMPRESSIVE STRENGTH RANGING FROM 50 PSI TO 100 PSI PER THE STATE DEPARTMENT OF TRANSPORTATION'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, CURRENT EDITION, LATEST REVISION. TRENCHES WITH UP TO 16 DC POST CONDUITS MAY BE INSTALLED WITH NO CONDUIT SPACING. ENGINEERED FILL WITH A RHO VALUE LESS THAN 100 MUST BE USED FOR BACKFILL. TRENCHES WITH MORE THAN 16 DC POST CONDUITS MUST INCLUDE A 24" SEPARATION BETWEEN CONDUIT GROUPS OF NOT MORE THAN 16 CONDUITS. GROUPINGS OF 4 OR FEWER DC POST CONDUITS MAY BE INSTALLED WITHOUT ENGINEERED FILL. THIS CONDUIT CONFIGURATION HAS NOT BEEN REVIEWED BY THE STAMPING PARTY. THEREFORE, THE STAMPING PARTY SHALL NOT BE HELD LIABLE FOR ITS USE. ANY RELIANCE ON THIS DETAIL SHALL BE AT THE RELYING PARTY(IES)'S OWN RISK AND HEREBY WAIVES ANY AND ALL CLAIM(S) RELATED TO THE EXISTENCE OF THE STAMP OR OTHERWISE.          7. THIS DETAIL REQUIRED FOR USE WITH 350MCM AI DC CONDUCTORS ONLY. WHEN INSTALLING 600 MCM AI DC CONDUCTORS, USE REQUIREMENTS DETAILED IN TYPICAL TRENCH DETAIL, THIS SHEET.</p>	<p>DETAIL NOT USED</p> <p>N.T.S</p> <p>8</p> <p>DETAIL NOT USED</p> <p>N.T.S</p> <p>10</p> <p>DETAIL NOT USED</p> <p>N.T.S</p> <p>8</p> <p>DC POST CONDUIT TRENCH DETAIL</p> <p>N.T.S</p> <p>3</p>	

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