

CACHE CREEK SUPERCHARGER SITE 1270 STAGE ROAD CACHE CREEK, BC

SITE INFORMATION		
	JASE ZAMPINI, ing. P.Eng.	
TESLA SITE CONTACT	JZAMPINI@TESLA.COM	
	(514) 758-4694	
PROPERTY OWNER	VILLAGE OF CACHE CREEK	
	MARTIN DALSIN	
PROPERTY CONTACT	CAO@CACHECREEK.INFO	
	(250) 457-6237	
ELECTRICAL UTILITY	BC HYDRO	
	CHRIS CHOLEWA	
UTILITY CONTACT	CHRIS.CHOLEWA@BCHYDRO.COM	
	(250) 371-6985	

	CONSULTING TEAM
	AES ENGIN
	CHRIS FON
CONSULTANT	CHRIS.FONTAINI
	(604) 4
	SENSE EN
	Y.J. (YONG-J
STRUCTURAL	YJLEE@SENSEE
	(604) 9

	DRAWING LIST		
E-00	COVER PAGE, SYMBOL LEGEND, DRAWING LIST AND KEY PLAN		
E-01	SITE PLAN AND EQUIPMENT LAYOUT		TESLA V3
E-02	TRENCHING LAYOUT	#X	TESLA V3
E-03	TRENCHING DETAILS (1 OF 2)	٦ پ	CIRCUIT E
E-04	TRENCHING DETAILS (2 OF 2)	M	METER
E-05	CHARGEPOST STUB UP DETAIL AND ELEVATION	<u></u>	UTILITY T
E-06	STRUCTURAL FOOTING CONDUIT STUB UP DETAILS	\bigcirc	AUTOTRA
E-07	GROUNDING LAYOUTS AND DETAILS	XX	LIGHT
E-08	SIGNAGE AND CHARGEPOST PLACEMENT		•
E-09	APPROXIMATE CABLE AND CONDUIT LENGTHS TABLES		TESLA V3
E-10	UTILITY LAYOUT & RESPONSIBILITIES BREAKDOWN AND PROCUREMENT TABLE		TESLA V3
E-11	SINGLE LINE DIAGRAM	-@-	TESLA CC
E-12	SERVICE ENTRANCE SWITCHBOARD DETAILS		TESLA CC
E-13	TESLA V3 SUPERCHARGER CABINET DETAILS (1 OF 2)	Q	SINGLE H
E-14	TESLA V3 SUPERCHARGER CABINET DETAILS (2 OF 2)		FLO SMAF
E-15	TESLA V3 CHARGEPOST AND SITE CONTROLLER DETAILS		BOLLARD
E-16	STALL, TESLA SIGNAGE, LIGHT POST DETAILS AND LUMINAIRE SCHEDULE		BOLLARD
E-17	ELECTRICAL SPECIFICATIONS		•
S1	GENERAL NOTES & EQUIPMENT BASE DETAILS		
S2	EQUIPMENT BASE DETAILS		
\$04-U07-07010	BC HYDRO DESIGN DRAWINGS		

APPENDIX A SWITCHBOARD, 450kVA AND 75kVA TRANSFORMER SHOP DRAWINGS (TEN SHEETS)

	SYMBOL LEGEND
	SINGLE LINE
$\sim =$	TESLA V3 SUPERCHARGER CABINET
#X	TESLA V3 SUPERCHARGER POST
ړ ۱	CIRCUIT BREAKER
M	METER
	UTILITY TRANSFORMER
\bigcirc	AUTOTRANSFORMER
XX	LIGHT
	LAYOUT
	TESLA V3 SUPERCHARGER CABINET
	TESLA V3 SUPERCHARGER POST
<u> </u>	TESLA COMBINATION BOLLARD/SIGN POST
	TESLA COMBINATION BOLLARD/SIGN POST WITH
¢	SINGLE HEADED LIGHT POST WITH SIGNAGE
	FLO SMARTDC DC FAST CHARGER
\bigcirc	BOLLARD
	BOLLARD WITH BURIED CONCRETE BASE



- NEERING LTD. NTAINE, P.Eng. E@AESENGR.COM 445-8504
- INGINEERING
- JOON) LEE, P.Eng.
- ENGINEERING.COM

BURIED CONCRETE BASE



1 SUPERCHARGER SITE LOCATION E-00 NTS



E-00 NTS

Contractor must check and verify all dimensions and conditions on site and report any discrepancies to designer and/or engineer prior to proceeding with work

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PROJECT NORTH



PROJECT NAME:

REV DESCRIPTION

TESLA CACHE CREEK SUPERCHARGER **INSTALLATION**

DATE

PROJECT ADDRESS: 1270 STAGE ROAD CACHE CREEK, BC V0K 1H0

DRAWING TITLE:

COVER PAGE, SYMBOL LEGEND, DRAWING LIST AND KEY PLAN

DATE:	AUGUST 2020
SCALE:	N/A
DRAWN BY:	SX
CHECKED BY:	CF
JOB NUMBER:	2-20-363

DRAWING NUMBER:





1200A, 600Y/347V

- NEW CONCRETE SIDEWALK RAMP (16)

- EXISTING LIGHT POST (TYP.) 2A (7)a) 2B V -¢Đ 2C ۲ 2D



KEYNOTES:

- (1) NEW 450kVA 600V:480Y/277V TESLA AUTOTRANSFORMER (TOTAL OF 2).PROVIDE STRUCTURAL FOOTING FOR NEW AUTOTRANSFORMER (TOTAL OF 2). AUTOTRANSFORMER WEIGHT IS APPROXIMATELY 318kg (700lbs). REFER TO STRUCTURAL DRAWING FOR STRUCTURAL FOOTING DETAILS.
- CURB ZONE IN FRONT OF TESLA SUPERCHARGER CABINET. REFER TO DETAIL 4 ON E-14.
- DRAWINGS E-13 AND E-15 FOR DETAILS.
- FOR SWITCHBOARD. SWITCHBOARD WEIGHT IS APPROXIMATELY 1086kg (2393lbs). REFER TO STRUCTURAL DRAWING FOR STRUCTURAL FOOTING DETAILS.
- STRUCTURAL DRAWING FOR FURTHER DETAILS.
- STRUCTURAL FOOTING DETAILS. SUPERCHARGER POST WEIGHT IS APPROXIMATELY 64kg (140lbs).
- STONE IS NOT SHOWN ON FOLLOWING SHEETS EXCEPT ON E-05).
- DETAIL 3 ON E-16 FOR DETAILS.
- TRANSFORMER SECONDARY TO THE METER AND FUSE BLOCKS.
- (1) CONTRACTOR TO RELOCATE IRRIGATION VALVE AND IRRIGATION LINES AS NECESSARY TO FACILITATE CONSTRUCTION.
- SHALL BE ALLOWED FOR ACCESS FROM STREET SIDE TO CONDUCT BC HYDRO ROUTINE MAINTENANCE. PRECAST CONCRETE PAD TO BE SUPPLIED BY BC HYDRO. REFER TO BC HYDRO CIVIL GUIDE ES54 F3-05.01 FOR DETAILS.
- (675lbs). AUTOTRANSFORMER 3 WEIGHT IS APPROXIMATELY 123kg (270lbs).
- (13) NEW BC HYDRO 50/2 POLE TO BE SUPPLIED AND INSTALLED BY BC HYDRO. CONTRACTOR SHALL PROVIDE PILASTER FOR THE SUPPORT WIRES.
- (14) CONCRETE BASE FOR PROTECTIVE BOLLARDS SHALL BE PLACED BELOW EQUIPMENT STRUCTURAL FOOTING WHEN THEY ARE IN CLOSE PROXIMITY.
- CLEAR ZONE WORKING AREA IN ES54 WITH A GRADUAL RETURN BACK TO THE PARKING LOT GRADE (TO AVOID TRIPPING HAZARD). REFER TO BC HYDRO DRAWINGS FOR FURTHER DETAILS.
- (16) CONTRACTOR TO CONSTRUCT NEW CONCRETE SIDEWALK RAMP CONNECTING TO THE PARKING LOT.
- (17) CONTRACTOR TO REVISE SIDEWALK LAYOUT AS INDICATED.

GENERAL NOTES:

- CONTAINS MULTIPLE SOURCES OF POWER. DO NOT OPEN ENCLOSURE UNLESS ALL SOURCES OF POWER ARE DE-ENERGIZED."
- B. PROVIDE STRUCTURAL FOOTINGS FOR EQUIPMENT AS INDICATED IN STRUCTURAL DRAWINGS. REFER TO E-06 (STRUCTURAL FOOTING STUB UP DETAILS) FOR ADDITIONAL INFORMATION.
- INSTALLED BY THIS CONTRACTOR.

(2) NEW TESLA V3 SUPERCHARGER CABINET (TOTAL OF 2). REFER TO DRAWINGS E-13 AND E-14 FOR DETAILS. CONTRACTOR TO PROVIDE STRUCTURAL FOOTING FOR NEW TESLA V3 SUPERCHARGER CABINET (TOTAL OF 2). SUPERCHARGER CABINET WEIGHT IS APPROXIMATELY 1110kg (2448lbs). REFER TO STRUCTURAL DRAWING FOR STRUCTURAL FOOTING DETAILS. CONTRACTOR TO ENSURE NEW CURB IS NOT LOCATED WITHIN NO

3 NEW TESLA V3 SUPERCHARGER SITE CONTROLLER. SITE CONTROLLER TO BE MOUNTED AND SECURED ON H-FRAME VERTICAL AND HORIZONTAL STRUTS ON THE STAR-CENTRE SUPERCHARGER CABINET. REFER TO

(4) NEW 1200A, 600Y/347V SWITCHBOARD. REFER TO DRAWING E-12 FOR DETAILS. A MINIMUM OF 1000mm SHALL BE MAINTAINED IN FRONT OF NEW SERVICE ENTRANCE SWITCHBOARD. PROVIDE STRUCTURAL FOOTING

(5) NEW TESLA COMBINATION BOLLARD SIGNPOST (TOTAL OF 6). PROVIDE CONCRETE BOLLARD, SIGNPOST AND ALL MOUNTING HARDWARE TO SECURE SIGNPOSTS TO GROUND. TESLA TO SUPPLY ELECTRIC VEHICLE CHARGING SIGNAGE. CONTRACTOR SHALL PROVIDE ALL MOUNTING HARDWARE TO SECURE SIGNAGE TO SIGNPOST AND SHALL INSTALL SIGNAGE. REFER TO DETAIL 2 ON DRAWING E-16 FOR DETAILS. REFER TO

6 NEW TESLA V3 SUPERCHARGER POSTS (TOTAL OF 8). REFER TO DETAILS 1 AND 2 ON DRAWING E-15 FOR DETAILS. PROVIDE CONCRETE BASE FOR SUPERCHARGER POSTS. REFER TO STRUCTURAL DRAWING FOR

(7) CONTRACTOR TO PROVIDE 3/4" CRUSHED FINISHING STONE AROUND NEW EQUIPMENT WITHIN THIS PROPERTY LINE. REFER TO DETAIL 1 ON DRAWING E-05 FOR FURTHER DETAILS. (NOTE: CRUSHED FINISHING

(8) EXISTING LIGHT POSTS TO BE REMOVED. NEW TESLA LIGHT POSTS WITH TESLA SIGNAGE MOUNTED ON THE POST TO BE INSTALLED AT THE LOCATIONS INDICATED (TOTAL OF 2). CONTRACTOR TO MOUNT TESLA SIGNAGE ON THE LIGHT POSTS TO BE ALIGNED WITH OTHER SIGNAGES. PROVIDE CAST IN PLACE CONCRETE BASE FOR NEW LIGHT POST. REFER TO STRUCTURAL DRAWING FOR FURTHER BASE DETAILS. REFER TO

(9) UTILITY METER TO BE MOUNTED ON THE LEFT SIDE OF SERVICE ENTRANCE SWITCHBOARD. REFER TO BC HYDRO SECONDARY VOLTAGE REVENUE METERING GUIDE (750V AND LESS) 5.3.1.2, 5.3.2.2, 5.4.1.2 AND 5.4.2.2. CONTRACTOR SHALL USE BC HYDRO APPROVED METER SOCKET CT130PW-BC OR CT113-L. BC HYDRO WILL SUPPLY THE VTS, CTS AND TEST SWITCH FOR THE SERVICE. BC HYDRO WILL CONNECT THE INSTRUMENT

(11 UTILITY TRANSFORMER TO BE SUPPLIED BY BC HYDRO AND INSTALLED BY CONTRACTOR. PADMOUNT TRANSFORMER PRIMARY AND SECONDARY CABLES TO BE SUPPLIED, INSTALLED AND MAINTAINED BY BC HYDRO. DUCT INSTALLATION SHALL BE IN ACCORDANCE WITH BC HYDRO STANDARDS ES54 H1-01 AND ES54 H1-03. THE DIMENSIONS OF UNOBSTRUCTED AREA INDICATED THE MINIMUM CLEARANCE. ANY VEGETATION ON THE PERIMETER OF THE AREA MUST BE OF THE TYPE THAT CAN BE TRIMMED ANNUALLY TO MAINTAIN CLEARANCE. MINIMUM WORK CLEARANCE SHOWN ON BC HYDRO STANDARD ES54 F3-08.01

(12) PROVIDE STRUCTURAL FOOTING FOR FLO SMARTDC CHARGER AND AUTOTRANSFORMER 3. REFER TO STRUCTURAL DRAWINGS FOR FURTHER DETAILS. FLO SMARTDC CHARGER WEIGHT IS APPROXIMATELY 300kg

(15) CONTRACTOR TO DEMOLISH EXISTING CONCRETE SIDEWALK RAMP AND PROVIDE SOD TO MATCH. FINAL GRADE TO BE BROUGHT UP TO THE SIDEWALK LEVEL ALL AROUND THE PMT FOR AT LEAST THE ENTIRE

A. CONTRACTOR SHALL PROVIDE CLEARLY VISIBLE WARNING LABEL ABOVE DOOR HANDLE ON EACH V3 SUPERCHARGER CABINET (TOTAL OF 2). WARNING LABEL SHALL STATE "DANGER: SUPERCHARGER CABINET

C. CONTRACTOR SHALL SUPPLY AND INSTALL NEW 178mm (7") DIAMETER BOLLARDS AS INDICATED. BOLLARDS FOR PROTECTION OF BC HYDRO PADMOUNT TRANSFORMER TO BE SUPPLIED BY BC HYDRO AND

D. CONTRACTOR TO INSTALL NEW SERVICE ENTRANCE SWITCHBOARD IN ACCORDANCE WITH BC HYDRO STANDARDS ES54 S2-01.03 AND ES54 S2-01.08.

E. CONTRACTOR TO REMOVE/RELOCATE TREES WHERE NEEDED TO FACILITATE NEW INSTALLATION (NOTE: REMOVED TREES NOT SHOWING ON FOLLOWING SHEETS.)

Contractor must check and verify all dimensions and conditions on site and report any discrepancies to designer and/or engineer prior to proceeding with work

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PROJECT NORTH



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6	ISSUED FOR PRICING	FEB 5, 2021
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2	ISSUED FOR INFORMATION	NOV 13, 2020
1	ISSUED FOR COORDINATION	AUG 26, 2020
REV	DESCRIPTION	DATE

PROJECT NAME:

TESLA CACHE CREEK SUPERCHARGER INSTALLATION

PROJECT ADDRESS: 1270 STAGE ROAD CACHE CREEK, BC VOK 1H0

DRAWING TITLE: SITE PLAN AND EQUIPMENT LAYOUT

DATE:	AUGUST 2020
SCALE:	AS NOTED
DRAWN BY:	SX
CHECKED BY:	CF
JOB NUMBER:	2-20-363

DRAWING NUMBER:

E-0'



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1	ISSUED FOR COORDINATION	AUG 26, 202
FV	DESCRIPTION	DATE

PROJECT NAME:

TESLA CACHE CREEK SUPERCHARGER INSTALLATION

PROJECT ADDRESS: 1270 STAGE ROAD CACHE CREEK, BC V0K 1H0

— MATCH EXISTING GRADE SURFACE

— 150mm OF PIT RUN GRAVEL

-75mm WIDE PLASTIC WARNING MARKER TAPE

— 3 x 78mm (3") EMPTY RIGID PVC CONDUITS C/W PULLSTRING FOR BC HYDRO PRIMARY CABLING

-75mm WIDE PLASTIC WARNING MARKER TAPE

— MATCH EXISTING GRADE SURFACE

— 150mm OF PIT RUN GRAVEL

— GRANULAR SUB-BASE

- UNDISTURBED SOIL

300mm ^{_}

+ 130+130 +

-00(

_____ 300mm ^{_}

+ 130+130 +

O (

150

- 75

- 150mm ABOVE AND 75mm BELOW CLEAN SAND BEDDING — 3 x 103mm (4") EMPTY RIGID PVC CONDUITS C/W
 PULLSTRING FOR BC HYDRO SECONDARY CABLING - UNDISTURBED SOIL

3 E-02 NTS TRENCHING FROM PADMOUNT TRANSFORMER TO SWITCHBOARD

TRENCHING BETWEEN AUTOTRANSFORMER 2 AND CABINET 2 3 IR

AC LINE VOLTAGE CABLING BETWEEN AUTOTRANSFORMER 2 AND CABINET 2

AC LINE VOLTAGE CABLING BETWEEN SWITCHBOARD AND LIGHTPOST 2

AC LINE VOLTAGE CABLING BETWEEN SWITCHBOARD AND SITE CONTROLLER

- 4 x 78mm (3") RIGID PVC CONDUITS FOR AC LINE VOLTAGE CABLING

1219

TRENCHING BETWEEN CABINET 1 AND CABINET 2 NTS

1219

- 2 X 78mm (3") CONDUITS BETWEEN AUTOTRANSFORMER 1 AND CABINET 1 TO RUN MINIMUM 50mm BELOW THE 2 X 28mm (1") CONDUITS BETWEEN SWITCHBOARD AND THE CABINET 2, AND SWITCHBOARD AND LIGHTPOST 2.
- 27mm (1") CONDUIT BETWEEN SWITCHBOARD AND LIGHTPOST 2. 3 53mm (2") CONDUIT BETWEEN SWITCHBOARD AND 75kVA AUTOTRANSFORMER AND 27mm (1") CONDUIT BETWEEN SWITCHBOARD AND LIGHTPOST 1 TO RUN 300mm BELOW PADMOUNT TRANSFORMER SECONDARY CONDUITS.

GENERAL NOTES:

KEYNOTES:

- A. CONDUIT ROUTING AND TRENCHES ARE INDICATIVE ONLY. CONTRACTOR TO DETERMINE FINAL INSTALL LOCATIONS BASED ON SITE CONDITIONS.

- B. CONDUIT SPACING IN TRENCHES MUST BE IN ACCORDANCE WITH CSA C22.1-18.

Contractor must check and verify all dimensions and conditions on site and report any discrepancies to designer and/or engineer prior to proceeding with work

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PROJECT NORTH

CLIENT:		
TESLA		
ELECTRICAL ENGINEERS: Designing A Better Tomorrow Designing A Better Tomorrow Sof Burrard Street, Suite 950, Vancouver, BC V7X 1MA 604.569.6500 www.aesengr.com		
	C. L. FONTAINE # 47844 C. SPATSH / C. L. FONTAINE # 47844 C. L. FONTAINE # 2021-02-19	
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1	ISSUED FOR COORDINATION	AUG 26, 2020
REV	DESCRIPTION	DATE
PROJECT NAME: TESLA CACHE CREEK		

SUPERCHARGER INSTALLATION

PROJECT ADDRESS: 1270 STAGE ROAD CACHE CREEK, BC V0K 1H0

DRAWING TITLE: **TRENCHING DETAILS** (1 OF 2)

DATE:	AUGUST 2020
SCALE:	AS NOTED
DRAWN BY:	SX
CHECKED BY:	CF
JOB NUMBER:	2-20-363

E-03

DRAWING NUMBER:

- 75mm WIDE PLASTIC WARNING MARKER TAPE - 100mm OF 3/4" CRUSHED FINISHING STONE — 150mm OF PIT RUN GRAVEL

- GRANULAR SUB-BASE

- 150mm ABOVE AND 75mm BELOW CLEAN SAND BEDDING - 1 x 27mm (1") RIGID PVC CONDUIT FOR ETHERNET CABLING BETWEEN SITE CONTROLLER AND CABINET 1 - UNDISTURBED SOIL - 2 x 78mm (3") RIGID PVC CONDUITS FOR DC BUS CABLING BETWEEN CABINET 1 AND CABINET 2

- 75mm WIDE PLASTIC WARNING MARKER TAPE - 100mm OF 3/4" CRUSHED FINISHING STONE — 150mm OF PIT RUN GRAVEL - GRANULAR SUB-BASE

150mm ABOVE AND 75mm BELOW CLEAN SAND BEDDING UNDISTURBED SOIL - 1 x 27mm (1") RIGID PVC CONDUIT FOR AC LINE VOLTAGE CABLING BETWEEN SWITCHBOARD AND LIGHTPOST 2 - 1 x 53mm (2") RIGID PVC CONDUIT FOR AC LINE VOLTAGE CABLING BETWEEN SWITCHBOARD AND 75kVA AUTOTRANSFORMER FOR FLO DCFC

TRENCHING BETWEEN SWITCHBOARD AND AUTOTRANSFORMER 3, LIGHTPOST 1

- 4 53mm (2") CONDUIT BETWEEN 75kVA AUTOTRANSFORMER TO FLO DCFC.
- 27mm (1") CONDUIT BETWEEN SWITCHBOARD AND LIGHTPOST 2.

GENERAL NOTES:

- KEYNOTES:
- B. CONDUIT SPACING IN TRENCHES MUST BE IN ACCORDANCE WITH CSA C22.1-18.

50 50 150 - 2A 2B 2C 2D 75 75 ----

300mm -

2 TR E-04 NTS

1219

3 TR E-04 NTS

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1	ISSUED FOR COORDINATION	AUG 26, 2020
REV	DESCRIPTION	DATE

TESLA CACHE CREEK

DRAWING TITLE: TRENCHING DETAILS (2 OF 2)

DATE:	AUGUST 2020
SCALE:	NTS
DRAWN BY:	SX
CHECKED BY:	CF
JOB NUMBER:	2-20-363

DRAWING NUMBER:

Engineering Solutions Ltd.

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1	ISSUED FOR COORDINATION	AUG 26, 2020
REV	DESCRIPTION	DATE

PROJECT NAME:

SUPERCHARGER INSTALLATION

PROJECT ADDRESS: 1270 STAGE ROAD CACHE CREEK, BC V0K 1H0

A. CONDUIT ROUTING AND TRENCHES ARE INDICATIVE ONLY. CONTRACTOR TO DETERMINE FINAL INSTALL LOCATIONS BASED ON SITE CONDITIONS.

53mm (2") CONDUIT BETWEEN SWITCHBOARD AND AUTOTRANSFORMER 3 TO RUN MINIMUM 50mm BELOW CONDUITS BETWEEN CABINET 1 AND CHARGEPOST 1A TO 1D.

3 27mm (1") CONDUIT BETWEEN SWITCHBOARD AND LIGHTPOST 1 TO RUN MINIMUM 50mm BELOW CONDUITS BETWEEN CABINET 1 AND CHARGEPOST 1A TO 1B.

- MATCH NATIVE SOD & PAVEMENT - 150mm OF PIT RUN GRAVEL - GRANULAR SUB-BASE

1 x 27mm (1") RIGID PVC CONDUIT FOR
 AC LINE VOLTAGE CABLING BETWEEN SWITCHBOARD AND LIGHTPOST 1

 4 x103mm (4") RIGID PVC CONDUITS FOR DC VOLTAGE & COMMS CABLING BETWEEN CABINET 1 AND ITS POSTS - 150mm ABOVE AND 75mm BELOW CLEAN SAND BEDDING - UNDISTURBED SOIL

TRENCHING DETAIL BETWEEN CABINET 1 AND ITS POSTS

- MATCH NATIVE SOD & PAVEMENT - 150mm OF PIT RUN GRAVEL - GRANULAR SUB-BASE

 4 x103mm (4") RIGID PVC CONDUITS FOR DC VOLTAGE & COMMS CABLING BETWEEN CABINET 2 AND ITS POSTS - 150mm ABOVE AND 75mm BELOW CLEAN SAND BEDDING - UNDISTURBED SOIL

TRENCHING DETAIL BETWEEN CABINET 2 AND ITS POSTS

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PROJECT NORTH

TESLA CACHE CREEK SUPERCHARGER INSTALLATION

PROJECT ADDRESS: 1270 STAGE ROAD CACHE CREEK, BC V0K 1H0

DRAWING TITLE: CHARGEPOST

STUB UP DETAIL AND ELEVATION

DATE:	AUGUST 2020
SCALE:	AS NOTED
DRAWN BY:	SX
CHECKED BY:	CF
JOB NUMBER:	2-20-363

DRAWING NUMBER:

11 4 SETS OF 103mmC(4") FROM TESLA V3 SUPERCHARGER CABINET TO SUPERCHARGER POSTS (TYP.).

AUTOTRANSFORMER 3 CONCRETE PAD STUB UP PROFILE

Contractor must check and verify all dimensions and conditions on site and report any discrepancies to designer and/or engineer prior to proceeding with work

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SUPERCHARGER INSTALLATION

PROJECT ADDRESS: 1270 STAGE ROAD CACHE CREEK, BC V0K 1H0

DRAWING TITLE:

STRUCTURAL FOOTING CONDUIT STUB UP DETAILS

DATE:	AUGUST 2020
SCALE:	AS NOTED
DRAWN BY:	SX
CHECKED BY:	CF
JOB NUMBER:	2-20-363

DRAWING NUMBER:

Contractor must check and verify all dimensions and conditions on site and report any discrepancies to designer and/or engineer prior to proceeding with work

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PROJECT NORTH

NG INEE 2021-02-19

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PROJECT NAME:

TESLA CACHE CREEK SUPERCHARGER INSTALLATION

PROJECT ADDRESS: 1270 STAGE ROAD CACHE CREEK, BC V0K 1H0

DRAWING TITLE: **GROUNDING LAYOUTS** AND DETAILS

DATE:	AUGUST 2020
SCALE:	AS NOTED
DRAWN BY:	SX
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DRAWING NUMBER:

SIGNAGE AND CHARGE POST PLACEMENT

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PROJECT NAME:

TESLA CACHE CREEK SUPERCHARGER INSTALLATION

PROJECT ADDRESS: 1270 STAGE ROAD CACHE CREEK, BC V0K 1H0

DRAWING TITLE: SIGNAGE AND CHARGEPOST PLACEMENT

DATE:	AUGUST 2020
SCALE:	NTS
DRAWN BY:	SX
CHECKED BY:	CF
JOB NUMBER:	2-20-363

DRAWING NUMBER:

DESCRIPTION	CABLE TYPE	LENGTH OF RUN (m)	# OF SETS	TOTAL CABLE LE (m)
	PRIMARY FEEDER			
NEW BC HYDRO 50/2 POLE TO PROPOSED BC HYDRO PADMOUNT		20	TBD BY BC HYDRO	TBD BY BC HYD
BOND	SUPPLIED AND INSTALLED BY BC HYDRO	20	TBD BY BC HYDRO	TBD BY BC HYD
	TRANSFORMER TO SWITCHBC	ARD		
BC HYDRO PADMOLINT TRANSFORMER TO SWITCHBOARD		11		
BOND	SUPPLIED AND INSTALLED BY BC HYDRO	11	TBD BY BC HYDRO	TBD BY BC HYD
	DC BUSSING			
	2#600 komil Al	5	2	
MID	1#3/0 AWG AI	5	2	
BOND	1#3 AWG Cu	5	2	10
	SWITCHBOARD TO AUTOTRANSF	ORMER	11	
AUTOTRANSFORMER 1	4#300 kcmil Al	6	2	48
BOND	1#4 AWG Cu	6	2	12
AUTOTRANSFORMER 2	4#300 kcmil Al	8	2	64
BOND	1#4 AWG Cu	8	2	16
	AUTOTRANSFORMER TO SUPERCHARG	GER CABINET	,	
CABINET 1	4#500 kcmil Al	5	2	40
BOND	1#3 AWG Cu	5	2	10
CABINET 2	4#500 kcmil Al	5	2	40
BOND	1#3 AWG Cu	5	2	10
	SWITCHBOARD TO SITE CONTRO	DLLER		
SITE CONTROLLER	2#12 AWG AI	8	1	16
BOND	1#12 AWG Cu	8	1	8
	SWITCHBOARD TO LIGHTPOS	STS		
LIGHT POST 1	2 #12 AWG AI	20	1	40
BOND	1 #12 AWG Cu	20	1	20
LIGHT POST 2	2 #12 AWG AI	27	1	54
BOND		21	1	21
	CHARGING POSTS			
	2#350 kcmil Al	24	2	96
18	2#350 kcmil Al	24	2	92
BOND	1#1 AWG Cu	23	1	23
1C	2#350 kcmil Al	20	2	80
BOND	1#1 AWG Cu	20	1	20
1D	2#350 kcmil Al	18	2	72
BOND	1#1 AWG Cu	18	1	18
2A	2#350 kcmil Al	16	2	64
BOND	1#1 AWG Cu	16	1	16
28	2#350 kcmil Al	19	2	76
BOND	1#1 AWG Cu	19	1	
BOND	2#350 KCMII AI	22	1	
2D	2#350 kcmil Al	25	2	100
BOND	1#1 AWG Cu	25	1	25
	SITE CONTROLLER TO SUPERCHARGE	R CABINETS	I	
CABINET 1	SHIELDED CAT6	6	1	6
CABINET 2	SHIELDED CAT6	4	1	4
	SWITCHBOARD TO AUTOTRANSFO	DRMER 3	I	
AUTOTRANSFORMER 3	4#1 AWG AI	27	1	108
BOND	1#6 AWG Cu	27	1	27
	AUTOTRANSFORMER 3 TO FLO SMARTI	DC CHARGER	I	
		4	1 I	16
BOND	1#6 AWG Cu	4	1	4

	APPROXIMATE CONDUIT LENGTHS	S BY APPLICATION
DESCRIPTION	CONDUIT SIZE	LENGTH OF (m)
	NEW BC HYDRO 50/2 POLE	TO PMT
РМТ	78mm (3") RIGID PVC	20
	PMT TO SWITCHBOAF	RD
SWITCHBOARD	103mm (4") RIGID PVC	11
	DC BUSSING	
BUS BAR FROM CABINET 1 TO 2	78mm (3") RIGID PVC	5
	SWITCHBOARD TO AUTOTRANSFO	ORMER 1 AND 2
AUTOTRANSFORMER 1	78mm (3") RIGID PVC	6
AUTOTRANSFORMER 2	78mm (3") RIGID PVC	8
	SWITCHBOARD TO LIGHT	POSTS
LIGHT POST 1	27mmC (1"C)	20
LIGHT POST 2	27mmC (1"C)	27
	AUTOTRANSFORMER TO SUPERCH	ARGER CABINET
CABINET 1	103mm (4") RIGID PVC	5
CABINET 2	103mm (4") RIGID PVC	5
	SWITCHBOARD TO SITE CON	TROLLER
SITE CONTROLLER	27mm (1") RIGID PVC	8
	CHARGING POSTS	
1A	103mm (4") RIGID PVC	24
1B	103mm (4") RIGID PVC	23
1C	103mm (4") RIGID PVC	20
1D	103mm (4") RIGID PVC	18
2A	103mm (4") RIGID PVC	16
2B	103mm (4") RIGID PVC	19
2C	103mm (4") RIGID PVC	22
2D	103mm (4") RIGID PVC	25
	SITE CONTROLLER TO SUPERCHAP	RGER CABINETS
CABINET 1	27mm (1") RIGID PVC	6
CABINET 2	27mm (1") RIGID PVC	4
	SWITCHBOARD TO AUTOTRAN	SFORMER 3
AUTOTRANSFORMER 3	53mm (2") RIGID PVC	27
	AUTOTRANSFORMER 3 TO FLO SMA	RTDC CHARGER
FLO SMARTDC	53mm (2") RIGID PVC	4
	SWITCHBOARD METERING COMPARTMENT T	O METERING ENCLOSU
METERING ENCLOSURE	35mm (1-1/4") RIGID PVC	5
	PROXIMATE CONDUIT LENG	

GENERAL NOTES:

A. TOTAL CABLE LENGTHS REPRESENT EQUIVALENT CABLE RUN USING SINGLE CONDUCTORS. REFER TO SINGLE LINE DIAGRAM FOR NUMBER OF CABLES AND PARALLEL SETS.

B. CABLE LENGTHS ARE APPROXIMATE IN NATURE AND ARE PROVIDED SOLELY FOR THE BENEFIT OF ASSISTING THE CONTRACTOR IN PRICING THE WORKS. THE CONTRACTOR IS STILL RESPONSIBLE FOR CONFIRMING THE EXACT CABLE LENGTHS REQUIRED AND PROVIDING ALL NECESSARY CABLING TO COMPLETE THE PROJECT.

C. CABLE LENGTH IS SUBJECT TO CHANGE UPON FURTHER COORDINATION.

D. CONDUITS AND ROUTING ARE SHOWN TO INDICATE DESIGN INTENT. COORDINATE FINAL INSTALLATION WITH SITE CONDITIONS AND FINAL SELECTIONS OF EQUIPMENT. E. INSTALLATION OF UNDERGROUND CONDUITS MUST BE IN ACCORDANCE WITH CSA C22.1-18. REFER TO ELECTRICAL DRAWINGS E-03 AND E-04 FOR ADDITIONAL DETAILS.

APPROXIMATE CABLE LENGTHS BY TYPE & SIZE		
CABLE TYPE	LENGTH OF CABLE (m)	
SHIELDED CAT6	10	
#12 AWG AI	110	
#12 AWG Cu	55	
#6 AWG Cu	29	
#4 AWG Cu	28	
#3 AWG Cu	30	
#2/0 AWG AI	16	
#1 AWG AI	108	
#1 AWG Cu	167	
#3/0 AWG AI	10	
#300kcmil Al	112	
#350kcmil Al	668	
#500kcmil Al	80	
#600kcmil Al	20	

APPROXIMATE CABLE LENGTHS BY TYPE E-09

APPROXIMATE CONDUIT LENGTHS BY SIZE		
CONDUIT TYPE	LENGTH OF CONDUIT (m)	
27mm (1") RIGID PVC	65	
35mm (1-1/4") RIGID PVC	5	
53mm (2") RIGID PVC	31	
78mm (3") RIGID PVC	98	

APPROXIMATE CONDUIT LENGTHS BY TYPE

220

103mm (4") RIGID PVC

Contractor must check and verify all dimensions and conditions on site and report any discrepancies to designer and/or engineer prior to proceeding with work

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DATE

3') RIGID PVC 20 3 60 PMT TO SWITCHBOARD 4'') RIGID PVC 11 3 33 DC BUSSING 3'') RIGID PVC 5 2 10 3'') RIGID PVC 5 2 10 ARD TO AUTOTRANSFORMER 1 AND 2 3'') RIGID PVC 6 2 12 3'') RIGID PVC 8 2 16 CLIENT: TITCHBOARD TO LIGHTPOSTS mmC (1''C) 20 1 20 nmC (1''C) 20 1 20 1 27 FORMER TO SUPERCHARGER CABINET 4'') RIGID PVC 5 2 10 4'') RIGID PVC 5 2 10 10	
PMT TO SWITCHBOARD 4") RIGID PVC 11 3 33 DC BUSSING 3") RIGID PVC 5 2 10 aRD TO AUTOTRANSFORMER 1 AND 2 3") RIGID PVC 6 2 12 3") RIGID PVC 8 2 16 3") RIGID PVC 8 2 16 STTCHBOARD TO LIGHTPOSTS 0 1 20 nmC (1*C) 20 1 20 nmC (1*C) 27 1 27 FORMER TO SUPERCHARGER CABINET 2 10 4") RIGID PVC 5 2 10	
(4') RIGID PVC 11 3 33 DC BUSSING 3') RIGID PVC 5 2 10 3') RIGID PVC 5 2 10 ARD TO AUTOTRANSFORMER 1 AND 2 3') RIGID PVC 6 2 12 3'') RIGID PVC 6 2 12 12 3'') RIGID PVC 8 2 16 CLIENT: 'ITCHBOARD TO LIGHTPOSTS 1 20 1 20 nmC (1''C) 20 1 20 1 20 nmC (1''C) 27 1 27 10 FORMER TO SUPERCHARGER CABINET 2 10 40 4'') RIGID PVC 5 2 10	
DC BUSSING 3") RIGID PVC 5 2 10 ARD TO AUTOTRANSFORMER 1 AND 2 3") RIGID PVC 6 2 12 3") RIGID PVC 6 2 12 16 CLIENT: 1TCHBOARD TO LIGHTPOSTS 0 1 20 1 20 nmC (1"C) 20 1 20 1 27 FORMER TO SUPERCHARGER CABINET 4") RIGID PVC 5 2 10	
3") RIGID PVC 5 2 10 ARD TO AUTOTRANSFORMER 1 AND 2	
ARD TO AUTOTRANSFORMER 1 AND 2 3") RIGID PVC 6 2 12 3") RIGID PVC 8 2 16 ITCHBOARD TO LIGHTPOSTS ItCHBOARD TO LIGHTPOSTS CLIENT: ITC(1"C) 20 1 20 nmC (1"C) 27 1 27 FORMER TO SUPERCHARGER CABINET 4") RIGID PVC 5 2 10	
3") RIGID PVC 6 2 12 3") RIGID PVC 8 2 16 ITCHBOARD TO LIGHTPOSTS CLIENT: ITCHBOARD TO LIGHTPOSTS InmC (1"C) 20 1 20 ITCHBOARD TO LIGHTPOSTS ImmC (1"C) 20 1 20 ITCHBOARD TO LIGHTPOSTS ImmC (1"C) 20 1 CLIENT: ITCHBOARD TO LIGHTPOSTS ImmC (1"C) 20 1 CLIENT: ITCHBOARD TO SUPERCHARGER CABINET 2 10 ITCHBOARD TO SUPERCHARGER CABINET 10	
3") RIGID PVC 8 2 16 ITCHBOARD TO LIGHTPOSTS ITCHBOARD TO LIGHTPOSTS CLIENT: nmC (1"C) 20 1 20 nmC (1"C) 27 1 27 FORMER TO SUPERCHARGER CABINET	
//TCHBOARD TO LIGHTPOSTS nmC (1"C) 20 nmC (1"C) 27 1 20 nmC (1"C) 27 former to supercharger cabinet (4") RIGID PVC 5 2 10 (4") RIGID PVC 5	
nmC (1"C) 20 1 20 nmC (1"C) 27 1 27 FORMER TO SUPERCHARGER CABINET	
nmC (1"C) 27 1 27 FORMER TO SUPERCHARGER CABINET	
FORMER TO SUPERCHARGER CABINET	
(4") RIGID PVC 5 2 10	
CHBOARD TO SITE CONTROLLER	
1") RIGID PVC 8 1 8 ELECTRICAL ENGINEERS:	
CHARGING POSTS	
(4") RIGID PVC 24 1 24	=5
Yes Yes <thyes< th=""> <thyes< th=""> <thyes< th=""></thyes<></thyes<></thyes<>	Setter Tomorrow
(4") RIGID PVC 20 1 20 CALGARY VANCOUVER	R VICTORIA
(4") RIGID PVC 18 1 18	° c c
(4") RIGID PVC 16 1 16	NA CECEC
(4") RIGID PVC 19 1 19	
(4") RIGID PVC 22 1 22	2021-02-19
(4") RIGID PVC 25 1 25 7 ISSUED FOR INFORMATIC	ON FEB 19,
OLLER TO SUPERCHARGER CABINETS 6 ISSUED FOR PRICING	FEB 5,
1") RIGID PVC 6 1 6 5 ISSUED FOR INFORMATIO	ON FEB 2, 1
4 ISSUED FOR INFORMATIO	JAN 28,
3 ISSUED FOR INFORMATIO	DN DEC 10,
BOARD TO AUTOTRANSFORMER 3	
2") RIGID PVC 27 1 27	
FORMER 3 TO FLO SMARTDC CHARGER	DAI
2") RIGID PVC 4 1 4 PROJECT NAME:	
	E CREEK
1/4") RIGID PVC 5 1 5 SUPERCHAR(
	JER

TOTAL CONDUIT LENGTH (m)

4 APPROXIMATE CONDUIT LENGTHS BY APPLICATION

LENGTH OF RUN

OF SETS

DRAWING TITLE: APPROXIMATE CABLE AND CONDUIT LENGTHS TABLES

DATE:	AUGUST 2020
SCALE:	N/A
DRAWN BY:	SX
CHECKED BY:	CF
JOB NUMBER:	2-20-363

DRAWING NUMBER:

PROJECT ADDRESS: 1270 STAGE ROAD

CACHE CREEK, BC V0K 1H0

	TEOLA	
EQUIPMENT	IESLA	CONTRACTOR
1200A SWITCHBOARD (INCLUDING CIRCUIT BREAKERS)	X	
TESLA V3 SUPERCHARGER CABINETS (x2)	X	
TESLA V3 SUPERCHARGER POSTS (x8)	X	
TESLA SITE CONTROLLER (x1)	X	
450kVA AUTOTRANSFORMERS (x2)	X	
75kVA AUTOTRANSFORMER (x1)	X	
FLO SMARTDC CHARGER (x1)	X	
IDENTIFICATION LAMACOIDS (WHITE LETTERS, BLACK BACKGROUND)		Х
H-FRAME STRUT FOR MOUNTING SITE CONTROLLER (x1)		Х
ALL MATERIALS NECESSARY FOR SECURING SITE CONTROLLER TO H-FRAME STRUT		Х
UNISTRUT FOR MOUNTING UTILITY METER ENCLOSURE (x1)		Х
ALL MATERIALS NECESSARY FOR SECURING UTILITY METER ENCLOSURE TO UNISTRUT FRAME		Х
COMBINATION SIGN POST-BOLLARD (x6)		Х
LUMINAIRE (X2), LIGHTPOST (X2) AND MOUNTING HARDWARE/ANCHORS	X	
LIGHTPOST CAST-IN-PLACE BASE (X2)		Х
TESLA ELECTRIC VEHICLE CHARGE SIGNAGE (x8)	x	
RED POLY COVERS FOR COMBINATION SIGN POST-BOLLARDS (x6)	x	
GROUNDING RODS		Х
#6 AWG Cu GROUNDING CONDUCTORS		Х
#600kcmil AI CABLING (REFER TO CABLE LENGTH TABLE FOR APPROXIMATE LENGTH)*		Х
#500kcmil AI CABLING (REFER TO CABLE LENGTH TABLE FOR APPROXIMATE LENGTH)*		Х
#350kcmil AI CABLING (REFER TO CABLE LENGTH TABLE FOR APPROXIMATE LENGTH)*		Х
#300kcmil AI CABLING (REFER TO CABLE LENGTH TABLE FOR APPROXIMATE LENGTH)*		Х
#3/0 AI CABLING (REFER TO CABLE LENGTH TABLE FOR APPROXIMATE LENGTH)*		X
#2/0 AI CABLING (REFER TO CABLE LENGTH TABLE FOR APPROXIMATE LENGTH)*		Х
#1 AWG AI CABLING (REFER TO CABLE LENGTH TABLE FOR APPROXIMATE LENGTH)*		Х
#12 AWG AI CABLING (REFER TO CABLE LENGTH TABLE FOR APPROXIMATE LENGTH)*		Х
#1 AWG Cu CABLING (REFER TO CABLE LENGTH TABLE FOR APPROXIMATE LENGTH)*		X
#3 AWG Cu CABLING (REFER TO CABLE LENGTH TABLE FOR APPROXIMATE LENGTH)*		X
#4 AWG Cu CABLING (REFER TO CABLE LENGTH TABLE FOR APPROXIMATE LENGTH)*		X
#6 AWG Cu CABLING (REFER TO CABLE LENGTH TABLE FOR APPROXIMATE LENGTH)*		X
#12 AWG Cu CABLING (REFER TO CABLE LENGTH TABLE FOR APPROXIMATE LENGTH)*		х Х
		×
	v	~
	^	Y
		X
78mm (3) RPVC SCHEDULE 40 CONDUIT (REFER TO CONDUIT LENGTH TABLE FOR APPROXIMATE LENGTH)*		X
		X
35mm (1-1/4") RPVC SCHEDULE 40 CONDULL (REFER TO CONDULL LENGTH TABLE FOR APPROXIMATE LENGTH)*		Χ
2/mm (1") RPVC SCHEDULE 40 CONDUIT (REFER TO CONDUIT LENGTH TABLE FOR APPROXIMATE LENGTH)*		Χ
ALL MATERIALS NECESSARY FOR A COMPLETE CIVIL INSTALLATION		Χ
ALL MATERIALS NECESSARY FOR SECURING EQUIPMENT TO STRUCTURAL FOOTING		Х
ALL MATERIALS NECESSARY FOR BACKFILLING OF CABLE TRENCHES		Х
ANY OTHER MATERIALS NOT ALREADY LISTED WHICH ARE REQUIRED FOR A COMPLETE INSTALLATION		Х

*CONTRACTOR SHALL PROVIDE A SEPARATE BREAKOUT PRICE FOR CABLING SUPPLY COST

PROCUREMENT RESPONSIBILITY TABLE

DISCLAIMER: COORDINATE FINAL PRIMARY AND SECONDARY CONDUIT ROUTE WITH BC HYDRO. DO NOT PROCEED WITH CONSTRUCTION UNTIL BC HYDRO DESIGN & CIVIL DRAWINGS HAVE BEEN ISSUED FOR CONSTRUCTION.

GENERAL NOTES: AND RESPONSIBILITY BREAKDOWN

Contractor must check and verify all dimensions and conditions on site and report any discrepancies to designer and/or engineer prior to proceeding with work

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PROJECT NORTH

7	ISSUED FOR INFORMATION	FEB 19, 2021
6	ISSUED FOR PRICING	FEB 5, 2021
5	ISSUED FOR INFORMATION	FEB 2, 2021
4	ISSUED FOR INFORMATION	JAN 28, 2021
3	ISSUED FOR INFORMATION	DEC 10, 2020
2	ISSUED FOR INFORMATION	NOV 13, 2020
1	ISSUED FOR COORDINATION	AUG 26, 2020
REV	DESCRIPTION	DATE

PROJECT NAME:

TESLA CACHE CREEK SUPERCHARGER INSTALLATION

PROJECT ADDRESS: 1270 STAGE ROAD CACHE CREEK, BC V0K 1H0

DRAWING TITLE:

RESPONSIBILITIES BREAKDOWN AND

PROCUREMENT TABLE

DATE:	AUGUST 2020
SCALE:	AS NOTED
DRAWN BY:	SX
CHECKED BY:	CF
JOB NUMBER:	2-20-363

DRAWING NUMBER:

UTILITY LAYOUT &

E-10

A. REFER TO BC HYDRO UTILITY DRAWINGS FOR ADDITIONAL INFORMATION REGARDING UTILITY DESIGN

PROVIDE UNISTRUT MOUNTING FOR BC HYDRO METER ENCLOSURE; PROVIDE 35mm (1-1/4") EMPTY RIGID PVC CONDUIT COMPLETE WITH PULLSTRING BETWEEN

- PROVIDE AN INSTRUMENT TRANSFORMER ENCLOSURE; PROVIDE A HYDEL MODEL CTS130PW-BC (13 JAW) OR MICROELECTRIC MODEL CT113-L
- (13-JAW) TRANSFORMER-TYPE METER SOCKET;

MAKE THE VT PRIMARY CONNECTIONS;

SUPPLY AND INSTALL THE TEST SWITCH, METER AND METERING WIRING.

CONTRACTOR RESPONSIBILITIES: - PROVIDE PADMOUNT TRANSFORMER SECONDARY SIDE CABLE TRENCH TO SWITCHBOARD; PROVIDE CONDUIT AS INDICATED IN BC HYDRO DESIGN (3 SETS OF 103mm RIGID PVC CONDUIT

PROVIDE CABLING AS INDICATED IN BC HYDRO DESIGN;

MAKE FINAL CONNECTIONS TO SWITCHBOARD TERMINATION BLOCK.

INSTALL PRE-CAST STRUCTURAL FOOTING FOR BC HYDRO PADMOUNT TRANSFORMER;

INSTALL PADMOUNT TRANSFORMER. INSTALL PROTECTIVE BOLLARDS FOR PADMOUNT TRANSFORMER AS INDICATED IN BC

<u>C HYDRO RESPONSIBILITIES:</u> - SUPPLY NEW 1000kVA, 24.94kV:600Y/347V PADMOUNT TRANSFORMER; SUPPLY PRE-CAST STRUCTURAL FOOTING FOR PADMOUNT TRANSFORMER;

MAKE ALL CABLE CONNECTIONS TO PADMOUNT TRANSFORMER PRIMARY BUSHINGS; MAKE ALL CABLE CONNECTIONS TO PADMOUNT TRANSFORMER SECONDARY BUSHINGS; SUPPLY GROUNDING KIT, GROUNDING ROD AND 20m COUNTERPOISE FOR THE

PROVIDE PADMOUNT TRANSFORMER PRIMARY SIDE CABLE TRENCH;

- PROVIDE CONDUIT AS INDICATED IN BC HYDRO DESIGN (3 SETS OF 78mm RIGID PVC
- PROVIDE RED FLAG INDICATORS FOR BC HYDRO WHERE CONDUITS END AT THE
- INSTALL PILASTER FOR THE SUPPORT WIRE FOR THE NEW BC HYDRO POLE;
- PROVIDE ALL MATERIAL TO BACKFILL TRENCH, AND PAVEMENT/ASPHALT REPLACEMENT,

SUPPLY NEW BC HYDRO 50/2 POLE AS INDICATED IN BC HYDRO DESIGN; PERFORM ALL WORK AND PROVIDE ALL MATERIALS NECESSARY FOR A COMPLETE INSTALLATION BETWEEN NEW BC HYDRO 50/2 POLE AND THE NEW PADMOUNT

UTILITY LAYOUT & RESPONSIBILITIES BREAKDOWN

TRANSFORMER AS INDICATED IN BC HYDRO DESIGN.

Contractor must check and verify all dimensions and conditions on site and report any discrepancies to designer and/or engineer prior to proceeding with work

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TESLA

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ELECTRICAL ENGINEERS:

A. REFER TO TESLA SUPERCHARGER INSTALLATION MANUAL FOR DETAILED INFORMATION REGARDING THE COMMS CABLE BETWEEN V3 SUPERCHARGER CABINETS AND CHARGE POSTS.

B. ALL CIRCUIT BREAKERS ARE 3-PHASE 80% RATED UNLESS OTHERWISE INDICATED.

C. UTILITY METER TO BE UNISTRUT MOUNTED ON THE SIDE OF THE SWITCHBOARD INCOMER WIREWAY CELL.

IN ACCORDANCE WITH CSA C22.1-18 (CANADIAN ELECTRICAL CODE, PART I):

CE CAPACITY OF THE ELECTRICAL SYSTEM: RVICE: 1200A, 600Y/347V, 80% RATED	997.7kW
CONNECTED LOADS INCLUDE: RICAL VEHICLE EQUIPMENT (8 TESLA V3 SUPERCHARGER STALLS): E CHARGING EQUIPMENT (1 FLO SMART DC CHARGER STALLS): ONTROLLER: POSTS (2):	774kW 54kW 0.1kW <u>0.2kW</u>
LOAD:	828.3kW
HTY:	169.4kW

		50kA
•) 15A, 1P	
Cu IN 27mmC (1"C)	> 2#12 AWG AI + 1#12 AWG BOND Cu IN 27mmC (1"C)	
>	< 2.5kA	

L1 109W

ISSUED FOR INFORMATION ISSUED FOR INFORMATION ISSUED FOR COORDINATION

CLIENT:

PROJECT NAME:

REV DESCRIPTION

TESLA CACHE CREEK SUPERCHARGER INSTALLATION

PROJECT ADDRESS: 1270 STAGE ROAD CACHE CREEK, BC V0K 1H0

DRAWING TITLE:

SINGLE LINE DIAGRAM

DATE:	AUGUST 2020
SCALE:	N/A
DRAWN BY:	SX
CHECKED BY:	CF
JOB NUMBER:	2-20-363

DRAWING NUMBER:

2324

- 1. REFER TO BC HYDRO CIVIL GUIDE ES54 S2-01.10 AND ES54 S2-01.04 FOR SERVICE ENTRANCE SWITCHBOARD REQUIREMENTS.
- 2. PROVIDE 1 X 35mm (1-1/4") RIGID PVC CONDUIT BETWEEN THE TRANSFORMER TYPE METER SOCKET AND THE SWITCHBOARD METERING COMPARTMENT. CONDUIT LOCATION SHOWN IS DIAGRAMMATIC IN NATURE. ENSURE CONDUIT INSTALLATION IS IN CONFORMANCE WITH BC HYDRO REQUIREMENTS FOR SECONDARY VOLTAGE REVENUE METERING (750V AND LESS).

NOTES:

- 1. REFER TO BC HYDRO REQUIREMENTS FOR SECONDARY VOLTAGE REVENUE METERING GUIDE (750V AND LESS) 5.3.1.2, 5.3.2.2, <u>5.4.1.2, 5.4.2.2</u>.
- 2. APPROVED SOCKETS, CTS130PW-BC OR CT113-L.
- 3. BC HYDRO WILL SUPPLY THE VT's, CT's AND TEST SWITCH FOR A 347/600V, 3PH, 4W SERVICE.

5 SWITCHBOARD LEFT SIDE VIEW E-12 NTS

Contractor must check and verify all dimensions and conditions on site and report any discrepancies to designer and/or engineer prior to proceeding with work

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PROJECT NAME:

TESLA CACHE CREEK SUPERCHARGER INSTALLATION

PROJECT ADDRESS: 1270 STAGE ROAD

CACHE CREEK, BC V0K 1H0

DRAWING TITLE: SERVICE ENTRANCE SWITCHBOARD DETAILS

DATE:	AUGUST 2020
SCALE:	NTS
DRAWN BY:	SX
CHECKED BY:	CF
JOB NUMBER:	2-20-363

DRAWING NUMBER:

SIDE VIEW

Contractor must check and verify all dimensions and conditions on site and report any discrepancies to designer and/or engineer prior to proceeding with work

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DEC 10, 2020

NOV 13, 2020

AUG 26, 2020

DATE

AUGUST 2020

NTS

SX

CF

E-13

2-20-363

TOP VIEW

4 V3 SUPERCHARGER CABINET CLEARANCES

5 E-14 V3 SUPERCHARGER CABINET NO CURB ZONE DETAILS NTS

FRONT VIEW

TOP VIEW

FROM -

Contractor must check and verify all dimensions and conditions on site and report any discrepancies to designer and/or engineer prior to proceeding with work

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FRONT OF CABINET

SIDE VIEW

CLI	ENT:	
		•
ELI	T = 5 L F	ī
Designing A Better Tomorrow 505 Burrard Street, Suite 950, Vancouver, BC V7X 1M4 604.569.6500 www.aesengr.com CALGARY VANCOUVER VICTORIA		
	C. L. FONTAINE # 47844 VG I NEER 2021-02-19	
7	ISSUED FOR INFORMATION	FEB 19, 2021
6	ISSUED FOR PRICING	FEB 5, 2021
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3	ISSUED FOR INFORMATION	DEC 10, 2020
2	ISSUED FOR INFORMATION	NOV 13, 2020
1	ISSUED FOR COORDINATION	AUG 26, 2020
REV	DESCRIPTION	DATE
PROJECT NAME: TESLA CACHE CREEK SUPERCHARGER INSTALLATION		

PROJECT ADDRESS: 1270 STAGE ROAD CACHE CREEK, BC V0K 1H0

DRAWING TITLE: TESLA V3 SUPERCHARGER CABINET DETAILS (2 OF 2)

DATE:	AUGUST 2020
SCALE:	NTS
DRAWN BY:	SX
CHECKED BY:	CF
JOB NUMBER:	2-20-363

DRAWING NUMBER:

FRONT VIEW

GENERAL NOTES:

A. REFER TO CHARGEPOST BASE DETAILS ON STRUCTURAL DRAWINGS.

U3 CHARGEPOST CONDUIT ENTRY DETAIL

SIDE VIEW

REAR OF POST

GENERAL NOTES:

741

SIDE VIEW

FRONT VIEW

Contractor must check and verify all dimensions and conditions on site and report any discrepancies to designer and/or engineer prior to proceeding with work

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A. ANCHOR USING 5/8" DIAMETER, EMBEDDED HILTI HAS-RE500 V3 EPOXY BOLTS WITH MINIMUM BURIED DEPTH OF 5.5", OR APPROVED EQUIVALENT. REFER TO TESLA V3 SUPERCHARGER INSTALLATION MANUAL FOR FURTHER DETAILS. B. MAXIMUM INCOMING CONDUIT SIZE IS 103mm (4"). BELL ENDS ARE NOT PERMITTED.

2 V3 CHARGEPOST BASE DETAIL E-15 NTS

CL	IENT:			
	TESLA			
ELECTRICAL ENGINEERS:				
	2021-02-19			
7	ISSUED FOR INFORMATION	FEB 19, 2021		
6	ISSUED FOR PRICING	FEB 5, 2021		
5	ISSUED FOR INFORMATION	FEB 2, 2021		
4	ISSUED FOR INFORMATION	JAN 28, 2021		
3	ISSUED FOR INFORMATION	DEC 10, 2020		
2	ISSUED FOR INFORMATION	NOV 13, 2020		
1	ISSUED FOR COORDINATION	AUG 26, 2020		
REV	DESCRIPTION	DATE		

PROJECT NAME:

TESLA CACHE CREEK SUPERCHARGER INSTALLATION

PROJECT ADDRESS: 1270 STAGE ROAD CACHE CREEK, BC V0K 1H0

DRAWING TITLE: TESLA V3 CHARGEPOST AND SITE CONTROLLER DETAILS

DATE:	AUGUST 2020
SCALE:	NTS
DRAWN BY:	SX
CHECKED BY:	CF
JOB NUMBER:	2-20-363

DRAWING NUMBER:

FRONT VIEW

3 TYPICAL TESLA LIGHTPOST DETAILS NTS

TYPE MANUFACTURER PRODUCT POLE MOUNTIN $\langle L1 \rangle$ RSX1 LED P3 50K R3 347V RPA HS PE LITHONIA 5RS-16-X.X RPA DM19A DNAXD

LUMINAIRE NOTE:

1. LUMINAIRES TO BE COMPLETE WITH INTEGRAL DAYLIGHT SENSORS.

GENERAL NOTES:

- A. MOUNT LUMINAIRES IN ORIENTATION INDICATED IN THIS DESIGN.
- B. ALL CONTROLS INTEGRATED WITH LUMINAIRES TO BE COMMISSIONED ON SITE AFTER INSTALL. CONTRACTOR TO ENSURE THAT ALLOWANCE IS MADE FOR ADJUSTING AND COMMISSIONING OF ALL CONTROLS AS REQUIRED.

Contractor must check and verify all dimensions and conditions on site and report any discrepancies to designer and/or engineer prior to proceeding with work

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SIDE VIEW

IG	LAMP				
	WATTS (W)	TYPE	COLOR	QTY	VOLTAGE
AS	109W	LED P3	5000K	2	347V

CL	IENT:		
		•	
TESLA			
EL	ECTRICAL ENGINEERS:		
Designing A Better Tomorrow 505 Burrard Street, Suite 950, Vancouver, BC V7X 1M4 604.569.6500 www.aesengr.com CALGARY VANCOUVER VICTORIA			
	C. L. FONTAINE # 47844		
7	ISSUED FOR INFORMATION	FEB 19, 2021	
6	ISSUED FOR PRICING	FEB 5, 2021	
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3	ISSUED FOR INFORMATION	DEC 10, 2020	
2	ISSUED FOR INFORMATION	NOV 13, 2020	
1	ISSUED FOR COORDINATION	AUG 26, 2020	
REV	DESCRIPTION	DATE	
PROJECT NAME:			

TESLA CACHE CREEK SUPERCHARGER INSTALLATION

PROJECT ADDRESS: 1270 STAGE ROAD CACHE CREEK, BC V0K 1H0

DRAWING TITLE:

STALL, TESLA SIGNAGE, LIGHT POST DETAILS AND LUMINAIRE SCHEDULE

AUGUST 2020 DATE: SCALE: NTS DRAWN BY: SX CHECKED BY: CF 2-20-363 JOB NUMBER:

DRAWING NUMBER:

ELECTRICAL SPECIFICATION

- 1. GENERAL
 - .1 GENERAL REQUIREMENTS, INSTRUCTIONS TO BIDDERS, THIS SPECIFICATION AND ANY ADDENDA HERETO FORM PART OF THE CONTRACT DOCUMENTS AND SHALL BE READ IN CONJUNCTION WITH THEM. WORK TO INCLUDE THE FURNISHING OF ALL LABOR AND MATERIALS, UNLESS SPECIFIED OTHERWISE, TO COMPLETE AND PUT INTO OPERATING CONDITION ALL ELECTRICAL SYSTEMS AS INDICATED ON THE DRAWINGS AND SPECIFIED HEREIN.
 - .2 THE WORD "PROVIDE" SHALL MEAN "SUPPLY AND INSTALL" PRODUCTS AND SERVICES SPECIFIED. "AS INDICATED" MEANS THAT THE ITEM(S) SPECIFIED ARE SHOWN ON THE DRAWINGS.
 - .3 IT IS THE INTENT OF THE WORK TO PROVIDE COMPLETE, NEATLY FINISHED, AND OPERATIONAL SYSTEMS AND ANY LABOR, MATERIAL, PERMITS, LICENSES, APPROVALS AND INSPECTIONS REQUIRED FOR COMPLETION OF THE WORK, WHETHER SPECIFICALLY MENTIONED IN THE DRAWINGS OR SPECIFICATIONS OR NOT, ARE TO BE INCLUDED IN THE PRICE.
 - .4 THE DRAWINGS AND SPECIFICATIONS FOR THE COMPLETE WORKS ARE TO BE EXAMINED BEFORE SUBMITTING PRICING. ALL ELECTRICAL AND COMMUNICATIONS REQUIREMENTS INDICATED ARE TO BE INCLUDED IN THE SCOPE OF THE WORK.
 - .5 PROVIDE ALL NECESSARY TEMPORARY POWER AND LIGHTING.
 - .6 ALL NOISY WORK SUCH AS (BUT NOT RESTRICTED TO) WIRING AND CABLING PULLING, INSTALLATION OF CONDUIT AND MOVING LARGE EQUIPMENT SHALL BE COORDINATED WITH THE LANDLORD TO MINIMIZE DISRUPTION AND NEGATIVE IMPACTS TO OCCUPANTS.
- 2. DRAWINGS AND SPECIFICATIONS
 - .1 DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY TO EACH OTHER AND WHAT IS CALLED FOR BY ONE IS TO BE BINDING AS IF CALLED FOR BY BOTH.
 - .2 SHOULD ANY DISCREPANCY APPEAR BETWEEN DRAWINGS AND SPECIFICATIONS THAT LEAVES THE ELECTRICAL CONTRACTOR IN DOUBT AS TO TRUE INTENT AND MEANING. OBTAIN RULING FROM THE ENGINEER BEFORE SUBMITTING PRICING, OR ALLOW FOR THE MOST EXPENSIVE ALTERNATIVE.
- 3. UNIFORMITY OF EQUIPMENT
 - .1 UNLESS OTHERWISE SPECIFIED, UNIFORMITY OF MANUFACTURE IS TO BE MAINTAINED FOR ANY PARTICULAR ITEM THROUGHOUT.
- 4. STANDARDS OF MATERIAL AND WORKMANSHIP
 - .1 ALL MATERIALS ARE TO BE NEW AND OF THE QUALITY SPECIFIED, AND SHALL BE APPROVED BY CSA OR EQUIVALENT AGENCY RECOGNIZED IN BRITISH COLUMBIA.
 - .2 ALL WORK SHALL BE EXECUTED IN A NEAT AND WORKMANLIKE MANNER BY QUALIFIED TRADESMEN. THE ELECTRICAL CONTRACTOR SHALL KEEP A COMPETENT FOREMAN AND NECESSARY ASSISTANTS ON THE SITE DURING THE PROGRESS OF THE WORK.
 - .3 ALL MATERIAL AND INSTALLATION SHALL MATCH TESLA STANDARD UNLESS IT IS NOTED OTHERWISE ON THE DRAWINGS.
- 5. RECORD PLANS & MAINTENANCE MANUALS
 - .1 THE ELECTRICAL CONTRACTOR SHALL UTILIZE ONE SET OF DRAWINGS TO BE USED FOR RECORD PURPOSES. THE ELECTRICAL CONTRACTOR IS TO ACCURATELY RECORD ON THESE PRINTS ALL REVISIONS TO THE ORIGINAL PLANS THAT ARE MADE ON SITE DURING CONSTRUCTION.
 - .2 THE ELECTRICAL CONTRACTOR IS TO PRODUCE AT THEIR OWN EXPENSE A SET OF RED LINE MARK-UP DRAWINGS, INCLUDING ALL CHANGES TO THE ORIGINAL PRICING DRAWINGS COVERED BY ADDENDA, CHANGE ORDERS, FIELD CHANGES, AND JOB CONDITIONS, AND TURN THESE OVER TO THE ENGINEER IN SOFT COPY FORM. COMPLETED RECORD DRAWINGS ARE TO BE CLEARLY MARKED "RECORD DRAWINGS". REFER TO LINE ITEM 3.
 - .3 THIS CONTRACTOR SHALL BE RESPONSIBLE FOR TRANSFERRING RED LINE MARK-UPS TO ELECTRONIC AUTOCAD RECORD DRAWINGS. A COPY OF THE RED LINE MARK-UPS AND FINAL ELECTRONIC AUTOCAD RECORD DRAWINGS SHALL BE PROVIDED TO AES UPON PROJECT COMPLETION.
 - .4 THIS CONTRACTOR SHALL PROVIDE 1 SOFT COPY OF MAINTENANCE MANUALS. MANUALS SHALL CONTAIN ALL WARRANTIES, SHOP DRAWINGS, INSPECTION LETTERS, PANEL SCHEDULES, ETC. CONTRACTOR SHALL ALSO PROVIDE 1 HARD COPY OF ALL INSPECTION AND TEST RECORDS.
- 6. SHOP DRAWINGS
 - .1 TESLA IS TO SUBMIT TO THE ENGINEER, FOR REVIEW, SHOP DRAWINGS OF MAJOR ELECTRICAL EQUIPMENT. SUCH EQUIPMENT SHALL INCLUDE, BUT NOT BE LIMITED TO DISTRIBUTION BOARDS, TRANSFORMERS AND EQUIPMENT MOUNTING DETAILS WITH DIMENSIONS.
 - .2 ALL SHOP DRAWINGS ARE TO BE SUBMITTED IN SOFT COPY. SUBMIT ADDITIONAL COPIES FOR APPROVAL AS MAY BE REQUIRED.
 - .3 THE ENGINEER'S REVIEW OF SHOP DRAWINGS IS TO BE FOR GENERAL DESIGN ONLY AND WILL NOT RELIEVE TESLA OR SUPPLIERS FROM RESPONSIBILITY FOR ERRORS, PROPER FITTING, CONSTRUCTION OF WORK, AND FURNISHING OF MATERIALS. REVIEW WILL NOT BE CONSTRUED AS APPROVING DEPARTURES FROM CONTRACT DOCUMENT REQUIREMENTS IF SUCH DEPARTURES ARE NOT SPECIFICALLY NOTED. TESLA IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS.
- GUARANTEE WARRANTY
- .1 THE ELECTRICAL CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE WARRANTY, SIGNED BY AUTHORIZED PERSONNEL, STATING:
- .1 THAT ALL WORK EXECUTED UNDER THIS CONTRACT WILL BE FREE FROM DEFECTS OF MATERIAL AND WORKMANSHIP FOR A PERIOD OF 1 YEAR FROM DATE OF FINAL ACCEPTANCE.
- .2 THE ABOVE PARTIES FURTHER AGREE TO, AT THEIR OWN EXPENSE, REPAIR AND REPLACE ALL SUCH DEFECTIVE WORK, AND OTHER WORK DAMAGED THEREBY, WHICH FAILS OR BECOMES DEFECTIVE DURING THE TERM OF THE GUARANTEE WARRANTY PROVIDED THAT SUCH FAILURE IS NOT DUE TO IMPROPER USAGE.
- .3 THE PERIOD OF THE GUARANTEE SPECIFIED WILL IN NO WAY SUPPLANT ANY OTHER GUARANTEE OF A LONGER PERIOD BUT BE BINDING ON WORK NOT OTHERWISE COVERED.
- 8. SETTING OUT OF THE WORK
 - .1 THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR CORRECTING ALL WORK COMPLETED CONTRARY TO THE INTENT OF DRAWINGS AND SPECIFICATIONS AND SHALL BEAR ALL COSTS INVOLVED IN MAKING THE CORRECTIONS. WHERE INTENT OF DRAWINGS AND SPECIFICATIONS IS NOT CLEAR, OBTAIN CLARIFICATION FROM THE ENGINEER BEFORE PROCEEDING WITH WORK.
 - .2 THE ELECTRICAL CONTRACTOR IS TO GIVE WORK THEIR PERSONAL SUPERVISION, LAY OUT THEIR OWN WORK, DO ALL NECESSARY LEVELING AND MEASURING. FIGURES, FULL SIZE AND DETAIL DRAWINGS TO TAKE PRECEDENCE OVER SCALE MEASUREMENTS.
 - .3 THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE OWNER BY IMPROPER LOCATION OR CARRYING OUT OF THEIR WORK.

- 9. EXAMINATION OF THE SITE
 - ACCOUNTED FOR DURING A THOROUGH EXAMINATION OF THE SITE.
- 10. CUTTING AND PATCHING
 - ELECTRICAL INSTALLATION.
- 11. CLEANUP
- - DEPARTMENT.
- 13. TESTS
- 14. PAINTING AND FINISHES

LOADS.

- 15. WIRE AND CABLE
- .1 ALL WIRING IS TO BE RW90, 600V, COPPER, EXCEPT WHERE NOTED OTHERWISE.
- .2 A MINIMUM CONDUCTOR SIZE OF #12 AWG COPPER IS TO BE USED, EXCEPT WHERE NOTED OTHERWISE.
- EQUIPMENT GROUNDING & BONDING CONDUCTOR GREEN - NEUTRAL CONDUCTOR - WHITE - AC PHASE WIRES - RED, BLACK, AND BLUE
- DC (3-WIRE) RED. BLACK. AND GRAY (OR WHITE WITH COLORED STRIPE)
- BETWEEN V3 SUPERCHARGER CABINETS AND V3 SUPERCHARGER POSTS MUST BE RATED FOR A MINIMUM OF 1000V
- 16. WIRING DEVICES & BOXES
- 17. PULL BOXES
- 18. SUPPORTS
- SUPPORTED. IN ACCORDANCE WITH CSA C22.1-18.
- 19. GROUNDING AND BONDING
 - CSA C22.1-18 AND THE ELECTRICAL INSPECTION DEPARTMENT.
- 20. DISTRIBUTION SWITCHBOARD
 - PROTECTION.
- 21. UNDERGROUND CONDUITS AND TRENCHING

- CONDUIT.
- ANY CONDUIT.

- CONDITION TO THE SATISFACTION OF THE ENGINEER.
- 12. CODES, PERMITS AND INSPECTION

.1 PRIOR TO SUBMITTING PRICING, THE ELECTRICAL CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE AND ASCERTAIN ALL CONDITIONS WHICH MAY AFFECT THEIR TRADE. NO ADDITIONAL MONEY WILL BE ALLOWED FOR WORK RESULTING FROM CONDITIONS THAT SHOULD HAVE BEEN AND COULD HAVE BEEN NOTICED AND

.1 THE ELECTRICAL CONTRACTOR WILL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED FOR

.1 THE ELECTRICAL CONTRACTOR IS TO KEEP THE SITE FREE DURING CONSTRUCTION OF DEBRIS, BOXES, PACKING, AND OTHER MATERIALS ASSOCIATED WITH THE WORK OF THIS TRADE. ALL WASTE MATERIAL IS TO BE DISPOSED OF IN A SAFE AND ENVIRONMENTALLY RESPONSIBLE MANNER.

.2 UPON COMPLETION OF WORK, THE ELECTRICAL INSTALLATION SHALL BE LEFT IN A CLEAN AND FINISHED

.1 THE ENTIRE INSTALLATION, INCLUSIVE OF MATERIAL AND LABOR, IS TO COMPLY WITH ALL THE REQUIREMENTS OF ALL BUILDING CODES AND AUTHORITIES HAVING JURISDICTION, CSA C22.1-18 (THE CANADIAN ELECTRICAL CODE, PART 1, 2018), BRITISH COLUMBIA BUILDING CODE 2018 AND REGULATIONS OF THE LOCAL INSPECTION

.2 THE ELECTRICAL CONTRACTOR IS TO OBTAIN ALL PERMITS REQUIRED FOR EACH STAGE OF WORK, AND AFTER COMPLETION OF THE ENTIRE INSTALLATION FURNISH TO THE ENGINEER A CERTIFICATE OF FINAL INSPECTION AND APPROVAL FROM THE ELECTRICAL INSPECTION DEPARTMENT OF THE LOCAL AUTHORITY.

.1 ALL PORTIONS OF ELECTRICAL WORK ARE TO BE TESTED FOR SATISFACTORY OPERATION.

.2 BEFORE ENERGIZING ANY PORTION OF THE ELECTRICAL SYSTEM, THE ELECTRICAL CONTRACTOR SHALL PERFORM MEGGER TESTS ON ALL FEEDERS AND BRANCH CIRCUITS. ANY PROBLEMS DISCOVERED BY SUCH TESTING ARE TO BE CORRECTED BY THE ELECTRICAL CONTRACTOR AND THE CIRCUITS IN QUESTION RETESTED. THE RESULTS OF ALL FINAL TESTING SHALL BE PROVIDED TO THE ENGINEER IN REPORT FORM.

.3 UPON PROJECT COMPLETION, AND IMMEDIATELY PRIOR TO FINAL INSPECTION AND TAKEOVER, THE ELECTRICAL CONTRACTOR SHALL CHECK THE LOAD BALANCE ON APPLICABLE FEEDERS AND PANELS. THESE CHECKS ARE TO BE CARRIED OUT BY TURNING ON ALL LOADS AND CHECKING LOAD CURRENT BALANCE. IF LOAD UNBALANCE EXCEEDS 15%, THE CIRCUITS ARE TO BE RECONFIGURED AS NECESSARY TO BALANCE THE

.1 ALL ELECTRICAL FITTINGS, SUPPORTS, PULLBOXES, OUTLET BOXES, BRACKETS, AND CLAMPS ARE TO HAVE A GALVANIZED FINISH OR A PAINT FINISH OVER CORROSION-RESISTANT PRIMER.

.3 ALL CONDUCTORS ARE TO BE COLOR CODED THROUGHOUT THE INSTALLATION AS FOLLOWS:

.4 CABLES USED FOR DC BUSSING BETWEEN V3 SUPERCHARGER CABINETS AND FOR DC VOLTAGE & COMMS

.1 ALIGN ALL DEVICES AND PLATES PLUMB AND LEVEL WITH SITE STRUCTURAL LINES.

.1 THE ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL PULLBOXES AS REQUIRED TO SUIT JOB CONDITIONS. PULLBOXES SHALL CONFORM TO CSA C22.1-18 REQUIREMENTS. PULLBOXES TO BE FINISHED IN ENAMEL OVER CORROSION-RESISTANT PRIMER WITH SCREW-ON OR HINGED COVER.

.1 ALL CONDUIT, RACEWAYS, AND OTHER ELECTRICAL EQUIPMENT SHALL BE SECURELY AND ADEQUATELY

.1 A COMPLETE GROUNDING AND BONDING SYSTEM SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH

.2 ALL METAL PARTS NOT CARRYING CURRENT, INCLUDING BUT NOT LIMITED TO, EQUIPMENT AND PANELBOARD ENCLOSURES, METAL RACEWAYS, PULL AND JUNCTION BOXES, SHALL BE PROPERLY BONDED TO GROUND.

.3 A SEPARATE BONDING CONDUCTOR SHALL BE INSTALLED IN ALL RACEWAY FEEDER RUNS AND IN FLEXIBLE

.4 THIS CONTRACTOR IS RESPONSIBLE FOR THE GROUNDING AND BONDING OF ALL ELECTRICAL EQUIPMENT AND

.1 NEW DISTRIBUTION SWITCHBOARD AND CIRCUIT BREAKERS, AS INDICATED ON THE DRAWINGS, WILL BE PROVIDED BY TESLA. CONTRACTOR SHALL INSTALL SUPPLIED EQUIPMENT AS PER THE RECOMMENDATIONS OF THE MANUFACTURER. NEW 1200A DISTRIBUTION SWITCHBOARD SHALL BE SCHNEIDER QED-2 SWITCHBOARD. NEW CIRCUIT BREAKERS RATED 1000A OR ABOVE SHALL BE COMPLETE WITH INTEGRAL GROUND FAULT

.1 ALL UNDERGROUND CONDUIT SYSTEMS ARE TO BE OF APPROVED RPVC SCHEDULE 40 CONDUIT, COMPLETE WITH INSTALLED BONDING CONDUCTOR, AND INSTALLED AT OR BELOW THE DEPTH REQUIRED BY AUTHORITIES HAVING JURISDICTION. PROVIDE 150mm CLEAN SAND BEDDING ABOVE AND 75mm BELOW CONDUITS AND CONTINUOUS MARKING TAPE 300mm BELOW GRADE. PROVIDE SUITABLE BACKFILL AND COMPACTION.

.2 PROVIDE X-RAY/SCANNING, IF REQUIRED, FOR THE AFFECTED AREAS PRIOR TO ALL TRENCHING WORKS.

- 22. TRANSFORMERS
 - .1 450kVA TRANSFORMERS SHALL BE SUPPLIED BY TESLA AND MANUFACTURED BY HAMMOND POWER SOLUTIONS.
 - .2 75kVA TRANSFORMER IS TO BE SUPPLIED BY TESLA AND MANUFACTURED BY HAMMOND POWER SOLUTIONS
 - .3 TRANSFORMERS SHALL HAVE AN IMPEDANCE AS PER ANSI RECOMMENDATIONS.
 - .4 ENCLOSURES TO BE AIR VENTILATED CSA TYPE 3R, HAVE A REMOVABLE METAL FRONT PANEL, AND WEATHER PROOF DESIGN.
- 23. SEISMIC PROTECTION
 - .1 THE ELECTRICAL TRADE SHALL PROVIDE SEISMIC RESTRAINT AND ANCHORAGE FOR ALL EQUIPMENT AND SERVICES IN ACCORDANCE WITH BRITISH COLUMBIA BUILDING CODE 2018.
 - .2 IF REQUESTED PROVIDE CERTIFIED PROFESSIONALLY SEALED SHOP AND PLACEMENT DRAWINGS WHERE APPLICABLE FOR ALL ELECTRICAL EQUIPMENT AND EQUIPMENT ASSEMBLIES SHOWING THE METHODS OF ATTACHMENT TO THE PARTICULAR STRUCTURE FOR EACH PIECE OF EQUIPMENT AND ASSEMBLY AND PROVIDE ANCHORAGE/ATTACHMENT DETAILS APPROVED AND SEALED BY A BRITISH COLUMBIA REGISTERED PROFESSIONAL ENGINEER.
- 24. IDENTIFICATION
 - .1 IDENTIFY ALL MAJOR PIECES OF EQUIPMENT, INCLUDING BUT NOT LIMITED TO THE DISTRIBUTION SWITCHBOARD, TESLA V3 SUPERCHARGER CABINETS AND BREAKERS IN THE DISTRIBUTION SWITCHBOARD WITH ENGRAVED LAMACOID LABELS, WHITE LETTERING ON BLACK BACKGROUND PER TESLA SPECIFICATION.
 - .2 PROVIDE LAMACOID NAMEPLATE ON THE DISTRIBUTION BOARD COVER TO IDENTIFY NAME, NUMBER OF PHASES, VOLTAGE, CURRENT RATING AND SOURCE OF FEEDER.
 - .3 IDENTIFY BRANCH CIRCUIT WIRES TO MEET CSA C22.1-18 AND TESLA SPECIFICATION REQUIREMENTS.

25. ALTERNATES

.1 THE ELECTRICAL CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ENSURING THAT ALTERNATE PRODUCTS MEET ALL SPACE, WEIGHT, CONNECTION, POWER, WIRING, AND PERFORMANCE REQUIREMENTS.

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PROJECT ADDRESS: 1270 STAGE ROAD CACHE CREEK, BC V0K 1H0

DRAWING TITLE: ELECTRICAL SPECIFICATIONS

DATE:	AUGUST 2020
SCALE:	N/A
DRAWN BY:	SX
CHECKED BY:	CF
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DRAWING NUMBER:

