

PANEL EV1															
Mounting Method		Fed From		Panel Information											
PAD		300KVA XFMR		Voltage: 480/277			Bus Rating: 400 AMP			Main Breaker: 400 AMP					
Panel Status		Panel Options		Phase: 3			Wire: 4			AIC Rating: 30,000					
NEW		NEMA 3R ENCLOSURE SERVICE RATED													
Ckt #	Notes	Code	Description	Load VA	Bkr	P	Ph	Ph	Ph	Bkr	Description	Code	Notes	Ckt #	
1			TRANSFORMER T-EV2	41600			A	B	C	3	125			7	2
3															4
5															6
7															8
9															10
11															12
13															14
15															16
17															18
19															20
21															22
23															24
25			EV DC FAST CHARGER 1	12000			A				1			1	26
27															28
29															30

Code	Description	Load VA	Dem	Per	Phase	Load Summary
1	EV Charger	12000	125%			
2	Rec up to 10,000		100%	Ph A	53867 VA	
	Rec over 10,000		50%	Ph B	13867 VA	
3	Motor		100%	Ph C	13867 VA	
	Largest Motor		125%			
4	Heater		100%	Connected		161600 VA
5	Kitchen		100%	Code Demand		191600 VA
6	Other		100%			
7	Sub Panel	41600	100%	Code Demand		230.73 Amps

NOTES:
 A ALL EQUIPMENT AND BREAKERS TO BE RATED ABOVE THE AT FAULT CURRENT SHOWN ON THE SHORT CIRCUIT CALCULATION
 A PROVIDE FIXED BREAKER LOCKOUTS ON DEAD FRONT.

PANEL EV2															
Mounting Method		Fed From		Panel Information											
PAD		PANEL EV1/TRANSF.		Voltage: 208/120			Bus Rating: 225 AMP			Main Breaker: 225 AMP					
Panel Status		Panel Options		Phase: 3			Wire: 4			AIC Rating: 22,000					
NEW		NEMA 3R ENCLOSURE													
Ckt #	Notes	Code	Description	Load VA	Bkr	P	Ph	Ph	Ph	Bkr	Description	Code	Notes	Ckt #	
1			EV CHARGER 1	16640			A	B	C	2				1	2
3															4
5			EV CHARGER 2	16640			A	B	C	2				1	6
7															8
9															10
11															12
13															14
15															16
17															18
19															20
21															22
23															24
25															26
27															28
29															30

Code	Description	Load VA	Dem	Per	Phase	Load Summary
1	EV Charger	33280	125%			
2	Rec up to 10,000		100%	Ph A	16640 VA	
	Rec over 10,000		50%	Ph B	8320 VA	
3	Motor		100%	Ph C	8320 VA	
	Largest Motor		125%			
4	Heater		100%	Connected		33280 VA
5	Kitchen		100%	Code Demand		41600 VA
6	Other		100%			
7	Sub Panel		100%	Code Demand		115.61 Amps

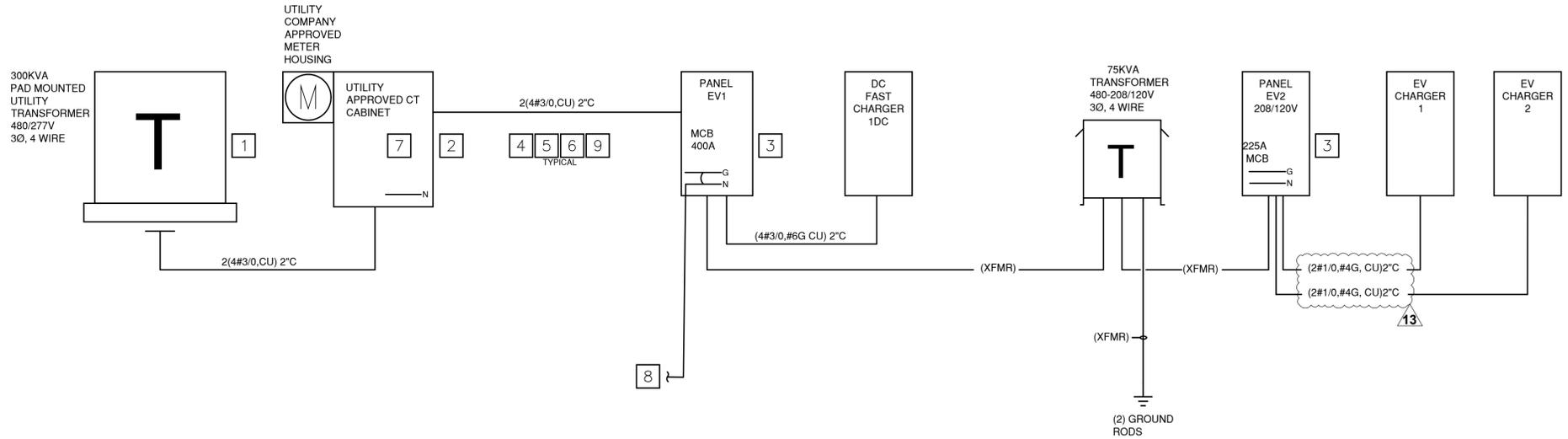
NOTES:
 A ALL EQUIPMENT AND BREAKERS TO BE RATED ABOVE THE AT FAULT CURRENT SHOWN ON THE SHORT CIRCUIT CALCULATION
 A PROVIDE FIXED BREAKER LOCKOUTS ON DEAD FRONT.

Short Circuit Calculation												
Fault "X"												
	Isc Available	Feeder Wire Size	Conduit Steel	PVC	Wire Type	Constant "C"	Number of Sets	Length	Volts L to L	"f" Factor	"M" multiplier	Isc at Fault
UTILITY	22,500				CU	13923	2	25	480	0.0729	0.9321	20,971
METER/CT CABINET	22,500	3/0	X	X	CU	13923	2	5	480	0.0136	0.9866	20,690
PANEL EV1	20,971	3/0	X	X	CU	13923	1	225	480	1.2065	0.4532	9,377
DC FAST CHARGER 1DC TRANSFORMER	20,690											5,175
PANEL EV2	5,175	4/0	X	X	CU	16673	1	10	208	0.0258	0.9748	5,045
EV CHARGER 1	5,045	1/0	X	X	CU	9317	1	315	208	1.4202	0.4132	2,084
EV CHARGER 2	5,045	1/0	X	X	CU	9317	1	335	208	1.5104	0.3983	2,010

NOTES: 1. SHORT CIRCUIT CURRENT RATING (SCCR) FOR TALLUS POWER GREEN DC FAST CHARGER IS 20ka.

TRANSFORMER TABLE 480V - 208/120V												
T	PRIMARY SIDE				GROUND				SECONDARY SIDE			
KVA	BREAKER	FEEDER (CU)	WIRE (CU) PER 250.66	CONDUIT	WIRE (CU) PER 250.104 & 250.102(C)(1)	CONDUIT	FLA	BREAKER	FEEDER (CU)	%Z	MAX KAIC	
75	125	(3#1,#6G) 1-1/2" C	2	3/4"	2	3/4"	207	225	(4#4/0,#2G) 2-1/2" C	4%	5,175	

1. FEEDERS ARE SIZED PER NEC. ELECTRICAL CONTRACTOR TO NOTIFY ENGINEER IF EXISTING SITE CONDITIONS REQUIRE DIFFERENT FEEDERS.



1 ELECTRICAL ONE-LINE DIAGRAM
 SCALE: NONE
 DESIGN AND INSTALL SHALL COMPLY WITH 2023 NEC . DESIGN COMPLIES WITH OR EXCEEDS ALL PREVIOUS NEC CODES YEARS.

- GENERAL NOTES:**
- ELECTRICAL CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR AND THE BUILDING ENGINEERING DEPARTMENT PRIOR TO START-UP OF THE CONSTRUCTION PROJECT FOR RULES AND REGULATIONS. SAFETY, NEC, LOCAL CODES AND OTHER APPLICABLE CODES ARE TO BE UNDERSTOOD AS MINIMUM REQUIREMENTS.
 - THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC IN CHARACTER. LOCATIONS SHOWN FOR ELECTRICAL EQUIPMENT, DEVICES, CIRCUITING, ETC. ARE APPROXIMATE. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING EXACT DEVICE LOCATIONS WITH ARCHITECTURAL PLANS, ELEVATIONS, DETAILS, AND MILLWORK SHOP DRAWINGS. ALL DIMENSIONS ARE TO BE TAKEN OFF OF ARCHITECTURAL PLANS OR MANUFACTURER'S SHOP DRAWINGS. DO NOT SCALE OFF OF ELECTRICAL PLANS.
 - SAFETY DISCONNECT SWITCHES - HEAVY DUTY TYPE, RATED FOR MOTORS OR HEATING AS INDICATED ON PLANS; STANDARD ENCLOSURE INDOORS AND WEATHER-TIGHT NEMA 3R ENCLOSURE OUTDOORS; FUSED OR NON-FUSED AS REQUIRED. FUSE SIZES TO BE AS RECOMMENDED BY EQUIPMENT MANUFACTURER. ELECTRICAL CONTRACTOR SHALL PROVIDE SAFETY DISCONNECT SWITCHES FOR ALL MECHANICAL EQUIPMENT, EXCEPT WHERE OTHERWISE SPECIFICALLY INDICATED ON MECHANICAL PLANS. (REFER TO MECHANICAL PLANS AND EQUIPMENT SCHEDULES FOR OTHER REQUIREMENTS.) WHERE FUSED DISCONNECTS ARE UTILIZED, FUSE SIZE SHALL BE VERIFIED WITH MANUFACTURER'S CUT SHEETS AND UNIT NAMEPLATE DATA WHEN UNIT ARRIVES ON SITE OR AS REQUIRED BY LOCAL CODE AND ORDINANCES. SHOULD FUSE REQUIREMENTS BE OTHER THAN SHOWN, NOTIFY ENGINEER IMMEDIATELY.
 - ELECTRICAL PANELS - DOOR-IN-DOOR TYPE WITH QUICK-MAKE, QUICK-BREAK CIRCUIT BREAKERS AND PROVIDED WITH FULL SIZE GROUND BUS AND NEUTRAL BUS. ALL BUSES SHALL BE COPPER UNLESS OTHERWISE NOTED. IF REQUIRED, PROVIDE A FULL SIZE ISOLATED GROUND BUS BAR AND CONNECT PER N.E.C. REQUIREMENTS. REFER TO ELECTRICAL ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION. LOAD CENTERS ARE NOT ALLOWED AND WILL BE REPLACED BY THE ELECTRICAL CONTRACTOR, AT THEIR EXPENSE IF THE LOAD CENTERS ARE INSTALLED.
 - CIRCUIT BREAKERS - MOLDED CASE TYPE WITH THERMAL MAGNETIC TRIPS. FRAME SIZE, NUMBER OF POLES, AND TRIP SETTING AS SHOWN ON PLANS OR SCHEDULES.
- KEY NOTES:**
- COORDINATE FINAL REQUIREMENTS FOR UTILITY TRANSFORMER WITH UTILITY COMPANY.
 - COORDINATE FINAL REQUIREMENTS FOR CT CABINET AND METER WITH UTILITY COMPANY.
 - PROVIDE NEW NEMA 3R PANEL WITH A MAIN CIRCUIT BREAKER. SEE PANEL SCHEDULE FOR MORE INFORMATION.
 - PROVIDE ALL NECESSARY CONNECTIONS AND EQUIPMENT FOR NEW EV CHARGING STATION.
 - SEE SHORT CIRCUIT CALCULATION FOR DISTANCES. ALL DISTANCES ASSUMED FOR SHORT CIRCUIT CALCULATIONS. IF INSTALLED AT SHORTER DISTANCES THAN SHOWN ON SHORT CIRCUIT CALCULATION, CONTACT ENGINEER.
 - ELECTRIC VEHICLE CHARGES WILL BE BILLED AT A DIFFERENT RATE PER UTILITY COMPANY TARIFF RATES FOR ELECTRIC VEHICLE CHARGERS. PER 230.2(D) ADDITIONAL SERVICES SHALL BE PERMITTED FOR DIFFERENT RATE SCHEDULES.
 - PROVIDE SSBJ PER NEC 250.92. PROVIDE #10 CU CONDUCTOR PER NEC TABLE 250.102(C)(1) FROM GROUNDED CONDUCTOR TO METAL ENCLOSURE.
 - PROVIDE #10 AWG CU G.E.C. TO EXISTING GROUND BAR. CONFIRM BUILDING STEEL, COLD WATER AND CONCRETE ELECTRODE CONNECTION ARE PRESENT. ALL AVAILABLE G.E.C. CONNECTIONS PRESENT MUST BE MADE PER NEC 250.50.
 - PROVIDE PERMANENT PLAQUE AT EACH SERVICE IDENTIFYING ALL SERVICE DISCONNECTS LOCATIONS PER 230.2 (E). PROVIDE IDENTIFICATION OF SERVICE DISCONNECT PER 230.70(B).



CMTA
A LEGENTEC Company
formerly KLOK Group

EV CHARGING

14500 E COLFAX AVE
 AURORA, CO 80011

DRAWN BY: KM
CHECKED BY: LR

REVISIONS:

No.	DESCRIPTION	DATE
1	SDP DETAIL	2023.05.30
2	LAYOUT CHANGES	2024.06.05

ISSUE RECORD:

No.	DESCRIPTION	DATE
1	PERMIT SET	2023.04.20

SHEET TITLE:
ELECTRICAL ONE-LINE AND SCHEDULES



42212
 PROFESSIONAL ENGINEER
 2024.06.05

DATE: 2023.03.15
DRAWING NO.:
E0.1

EV CHARGING

14500 E COLFAX AVE
AURORA, CO 80011

DRAWN BY: KM
CHECKED BY: LR

REVISIONS:

No.	DESCRIPTION	DATE
1	SDP DETAIL	2023.05.30
2	LAYOUT CHANGES	2024.06.05

ISSUE RECORD:

No.	DESCRIPTION	DATE
1	PERMIT SET	2023.04.20

SHEET TITLE:
ELECTRICAL SITE LAYOUT



DATE: 2023.03.15

DRAWING NO.:
E0.2



1 ELECTRICAL SITE LAYOUT
SCALE: 1"=30'

EV CHARGING

14500 E COLFAX AVE
AURORA, CO 80011

DRAWN BY: KM
CHECKED BY: LR

REVISIONS:

No.	DESCRIPTION	DATE
1	SDP DETAIL	2023.05.30
2	LAYOUT CHANGES	2024.06.05

ISSUE RECORD:

No.	DESCRIPTION	DATE
1	PERMIT SET	2023.04.20

SHEET TITLE:
ELECTRICAL DETAILS

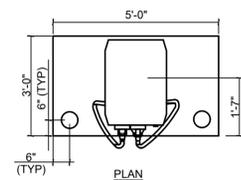


2024.06.05

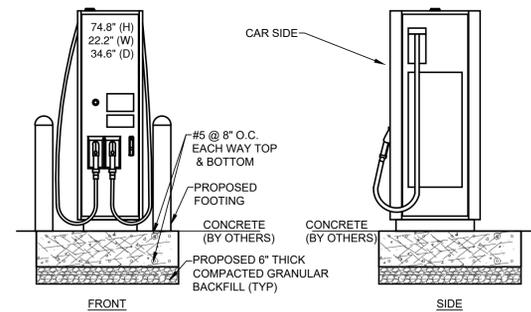
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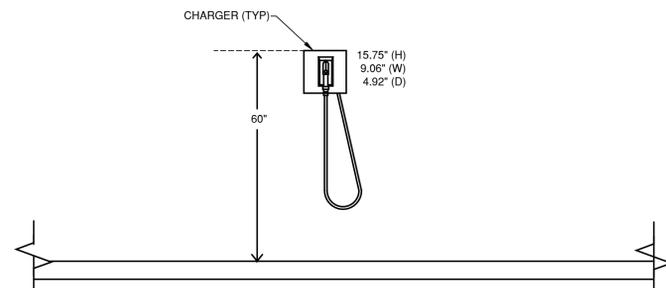
E0.3



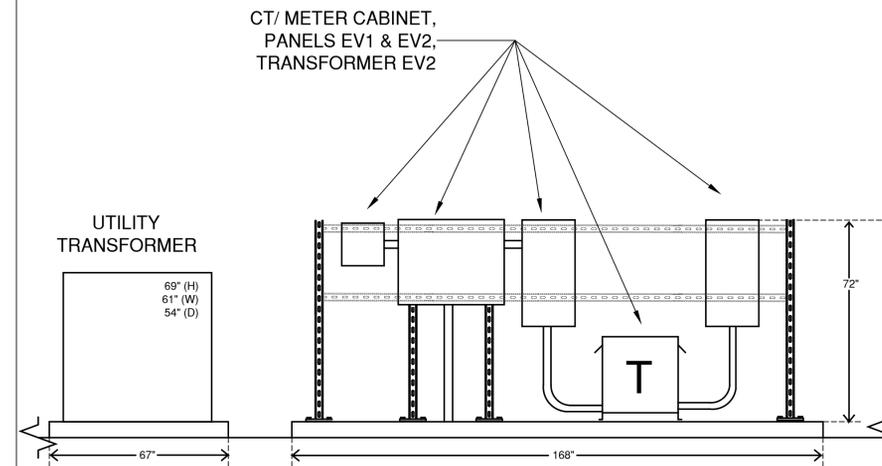
- NOTES**
- OPERABLE PARTS OF DISPENSER TO FRONT OF CURB SHALL BE 10" MAX.
 - OPERABLE PARTS OF DISPENSER SHALL NOT EXCEED 54" ABOVE PARKING SURFACE WHEN DISPENSER IS ON A CURB.
 - BOLLARDS ARE FOR WARNING PURPOSE ONLY.



A EV CHARGER ELEVATION DETAIL
NTS



B EV CHARGER ELEVATION DETAIL
NTS



C EVSE EQUIPMENT ELEVATION DETAIL
NTS