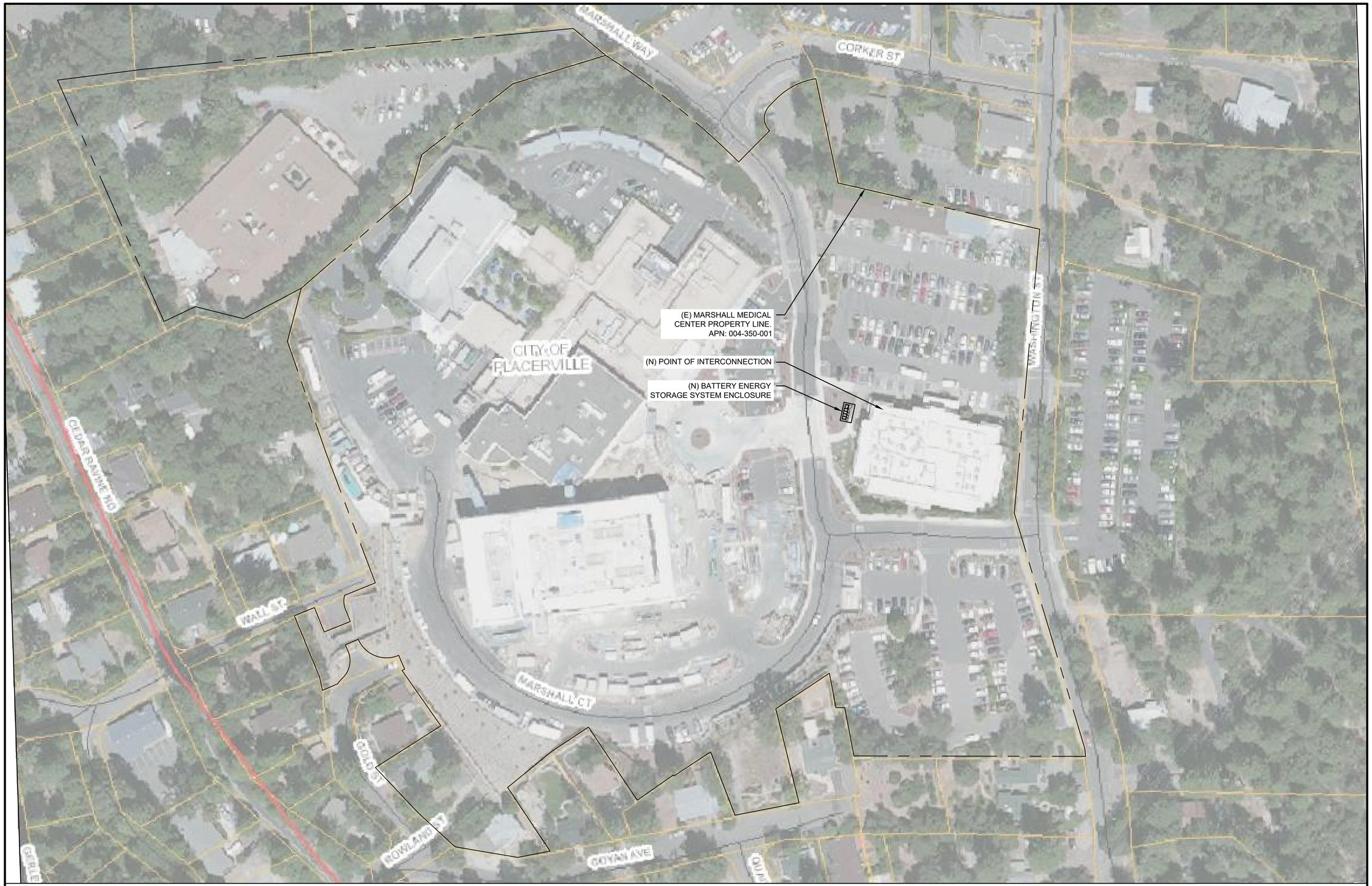

H G F E D C B A

6 5 4 3 2 1

GRAPHIC PLAN

1" = 50'-0"

0 50' 100'

N W E S

PLOT DATE: 6/8/2021 2:09 PM RSEEBOTH

TESLA

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

ORIGINAL SIZE 24"X36"
SHEET SIZE ARCH "D"

0 1/2" 1"

PROFESSIONAL STAMP

TESLA - MARSHALL MED CENTER
ENERGY STORAGE SYSTEM

1095 MARSHALL WAY
PLACERVILLE, CA 95667

NO.	REVISION	DATE
A	AHJ COMMENTS	2/9/21

GRAPHIC PLAN

E-102

JB-95620974

REV: A | PERMIT

TESLA - MARSHALL MED CENTER
ENERGY STORAGE SYSTEM
APN: 004-350-001

VICINITY MAP

AERIAL MAP

ABBREVIATIONS

AC	ALTERNATING CURRENT
ADA	AMERICANS WITH DISABILITIES ACT
BLDG	BUILDING
CLR	CLEAR
CONC	CONCRETE
COMM	COMMUNICATION
DC	DIRECT CURRENT
DIA	DIAMETER
DIST	DISTANCE
EQ	EQUAL
EGC	EQUIPMENT GROUNDING CONDUCTOR
(E)	EXISTING
EA.	EACH
EMT	ELECTRICAL METALLIC TUBING
ESS	ENERGY STORAGE SYSTEM
EV	ELECTRIC VEHICLE
GAB	GRADED AGGREGATE BASE
GALV	GALVANIZED
GEC	GROUNDING ELECTRODE CONDUCTOR
GND	GROUND
HVAC	HEATING, VENTILATION, & AIR CONDITIONING
I	CURRENT
IMP	CURRENT AT MAX POWER
INV	INVERTER
ISC	SHORT CIRCUIT CURRENT
KVA	KILOVOLT AMPERE
KW	KILOWATT
KWH	KILOWATT-HOUR
LV	LOW-VOLTAGE
MAX	MAXIMUM
MIN	MINIMUM
MV	MEDIUM-VOLTAGE
(N)	NEW
NEC	NATIONAL ELECTRIC CODE
NIC	NOT IN CONTRACT
NRTL	NATIONALLY-RECOGNIZED TESTING LABORATORY
NTS	NOT TO SCALE
OC	ON CENTER
PCC	POINT OF COMMON COUPLING
PL	PROPERTY LINES
PLC	POWER LINE COMMUNICATION
PV	PHOTOVOLTAIC
PP	POWERPACK
PVC	POLYVINYL CHLORIDE
RSD	RAPID SHUTDOWN
SCH	SCHEDULE
SQ. IN.	SQUARE INCHES
SS	STAINLESS STEEL
SSD	SEE STRUCTURAL DRAWINGS
STC	STANDARD TESTING CONDITIONS
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VIF	VERIFY IN FIELD
W	WATT

PROJECT TEAM

PROJECT DESIGNER:
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DESIGN CRITERIA

1. WIND DESIGN
   - DESIGN WIND SPEED = 95 MPH (ULTIMATE)
   - RISK CATEGORY = II
   - WIND EXPOSURE = C
2. SEISMIC DESIGN
   - RISK CATEGORY = II
   - SEISMIC IMPORTANCE FACTOR = 1.0
   - S_S = 0.441 g, S_1 = 0.206 g
   - SITE CLASS = D
   - S_DS = 0.425 g, S_D1 = 0.302 g
   - SEISMIC DESIGN CATEGORY = D
   - BASIC SEISMIC-FORCE-RESISTING SYSTEM = NON-STRUCTURAL COMPONENT
   - R = 2.5 / a_p = 1.0
3. GROUND SNOW = 30 PSF

APPLICABLE CODES
2019 CEC BASED ON NFPA 70-2017
2019 CBC/ASCE 7-16
2019 CFC

REFERENCED DOCUMENTS
POWERPACK 2 SYSTEM INSTALLATION MANUAL
MICROGRID ISLANDING CONTROL SPECIFICATION

SYSTEM SUMMARY

BATTERY ENERGY STORAGE SYSTEM (BESS)

SYSTEM TOTALS	
NAMEPLATE POWER	210 kVA
OUTPUT POWER	210 kW
ENERGY RATING	892 kWh
BATTERY (LITHIUM)	
POWERPACK TYPE	PP 2, 2 HR
PART #	1490026-00-A
QTY	4
DISCHARGE	4.25 HR
INVERTER 1	
MANUFACTURER	TESLA
PART #	1134768-C1-A
OUTPUT RATING	210 kVA
QUANTITY	1

(E) BUILDING DATA

OCCUPANCY DESCRIPTION:
- OSHPD 3:

OCCUPANCY CLASSIFICATION:
B

PROJECT SCOPE

INSTALLATION OF ENERGY STORAGE SYSTEM.

NEW CONCRETE SLAB WITH TESLA ENERGY STORAGE EQUIPMENT.

THE EXISTING MAIN BREAKER WILL BE DERATED TO 1000A AND IT WILL BE RETROFITTED WITH MOTOR OPERATOR FOR REMOTE CLOSE/OPEN CAPABILITY VIA THE TESLA MICROGRID ISLANDING CONTROLLER.

TESLA ENERGY STORAGE SYSTEM IS NOT A PART OF THE FACILITIES LIFE-SAFETY EMERGENCY SYSTEM.

AS A NON-EMERGENCY SYSTEM IT IS NOT REQUIRED TO REMAIN OPERABLE FOLLOWING THE DESIGN EARTHQUAKE GROUND MOTION. SPECIAL SEISMIC CERTIFICATION OF SYSTEM EQUIPMENT IS NOT REQUIRED PER CBC 1705.13.3, CBC 1705A.13.3, AND ASCE 7 SECTION 13.2.2.

SHEET INDEX

SHEET #	SHEET TITLE
G-001	COVER PAGE
G-002	NOTES
E-101	ELECTRICAL SITE PLAN
E-111	EQUIPMENT PLAN
E-201	SINGLE LINE DIAGRAM
E-211	COMMUNICATION DIAGRAM
E-241	GROUNDING DIAGRAM
E-501	ELECTRICAL DETAILS
E-601	CUTSHEETS
E-701	LABELS & PLACARDS
S-101	STRUCTURAL SITE PLAN
S-102	STRUCTURAL ELEVATIONS
S-501	STRUCTURAL DETAILS

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REGISTERED PROFESSIONAL ENGINEER
ALEXANDER MARTIN SHORTS
3/16/2021
E 21782
ELECTRICAL
EXP: 03 - 31 - 21
STATE OF CALIFORNIA

TESLA - MARSHALL MED CENTER
ENERGY STORAGE SYSTEM

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COVER PAGE

G-001

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GENERAL NOTES

ALL WORK SHALL COMPLY WITH ALL STATE AND LOCAL CODES AND ANY OTHER REGULATING AUTHORITIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK.

PRIOR TO COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND NOTIFY THE DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE FROM TESLA OF ANY DISCREPANCIES. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS SHALL BE CORRECTED AT THE SUBCONTRACTORS SOLE EXPENSE.

SUBCONTRACTOR INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO TESLA FOR APPROVAL BEFORE MAKING ANY CHANGES. DEVIATION FROM PLANS BEFORE WRITTEN APPROVAL FROM TESLA PLACES LIABILITY ON THE SUBCONTRACTOR.

ALL EQUIPMENT SHALL BE MOUNTED AS SHOWN. WHERE DETAILS ARE NOT PROVIDED, CONTRACTOR SHALL USE STANDARD CONSTRUCTION PRACTICES.

ALL SURFACES SHALL BE PATCHED AND PAINTED AROUND NEW DEVICES AND EQUIPMENT TO MATCH EXISTING FINISHES.

ANY METAL SHAVINGS FROM SITE WORK SHALL BE CLEANED FROM ALL SURFACES WHERE OXIDIZED OR CONDUCTIVE METAL SHAVINGS MY CAUSE RUST, ELECTRICAL SHORT CIRCUITS, OR OTHER DAMAGE.

APPROVALS FROM BUILDING INSPECTORS SHALL NOT CONSTITUTE AUTHORITY TO DEVIATE FROM THE DRAWINGS.

NEW PAVEMENT INSTALLED AS PART OF THIS PROJECT SHALL MATCH EXISTING PAVEMENT SECTION. ASPHALT AND GAB DEPTHS SHALL BE MAINTAINED.

ELECTRICAL NOTES

GENERAL NOTES

1. ALL ELECTRICAL WORK SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE AS AMENDED BY APPLICABLE STATE AND LOCAL CODES.
2. ALL WIRING SHALL BE MANAGED IN A PROFESSIONAL, WORKMAN-LIKE MANNER AND MUST BE SUPPORTED, SECURED, AND PROTECTED TO PREVENT DAMAGE.
3. AC CIRCUIT CONDUCTORS SHALL BE IDENTIFIED BY PHASE AND SYSTEM PER ART 210.5 OR 215.12. UNLESS OTHERWISE REQUIRED BY ART 210.5(1) OR AHJ, COLOR-CODING OF POWER CONDUCTORS SHALL BE AS FOLLOWS:

CONDUCTOR	277/480V	120/208V
PHASE A	BROWN	BLACK
PHASE B	ORANGE	RED
PHASE C	YELLOW	BLUE
NEUTRAL	GRAY	WHITE

4. DC CIRCUIT CONDUCTORS SHALL BE IDENTIFIED PER ART 210.5 OR 215.12:

CONDUCTOR	STD COLOR	ALT COLOR
DC+	RED	RED-STRIPED
DC-	BLACK	BLACK-STRIPED

5. TERMINATIONS OF AC, DC, AND COMMUNICATIONS CONDUCTORS SHALL BE PROFESSIONALLY AND LEGIBLY LABELED WITH CIRCUIT SCHEDULE IDENTIFIER, CONDUCTOR SIZE (AS APPLICABLE) AND TERMINATION TORQUE.
6. ALL EQUIPMENT SHALL BE LISTED BY A NRTL IN COMPLIANCE WITH ART 110.3. WHERE EXISTING NRTL LISTING CANNOT BE MAINTAINED, ENGINEERING APPROVAL SHALL BE OBTAINED PRIOR TO EQUIPMENT MODIFICATION, AND THE EQUIPMENT SHALL BE RELISTED BY A SUITABLE NRTL.
7. UNDERGROUND CONDUCTORS & CABLES TO BE INSTALLED IN CONDUIT UON.
8. ALL WIRES SHALL BE PROVIDED WITH STRAIN RELIEF AT ALL ENTRY INTO BOXES AS REQUIRED BY NRTL LISTING.
9. REFER TO MANUFACTURER'S CURRENT PLANNING AND INSTALLATION MANUAL FOR TORQUE SPECS FOR ALL BOLTS AND TERMINAL CONNECTIONS.
10. ALL CONDUCTOR TERMINATIONS ON BUSSING OR TRANSFORMER SPADES SHALL BE MADE WITH HIGH-PRESS CRIMP LUGS UON.
11. ALL TERMINATIONS OF ALUMINUM CONDUCTORS SHALL BE PROPERLY INSTALLED WITH BEST PRACTICES INCLUDING BUT NOT LIMITED TO:
    - USE OF TERMINATION EQUIPMENT RATED FOR ALUMINUM AT THE CONDUCTOR TEMPERATURE, CURRENT, AND VOLTAGE
    - ALLOWANCE FOR MOVEMENT DUE TO THERMAL EXPANSION/CONTRACTION
    - PROPER COATING OF EXPOSED ALUMINUM WITH ANTI-OXIDIZATION COMPOUND
    - USE OF CALIBRATED DEVICES TO TORQUE AND MARK TERMINALS TO REQUIRED SETTINGS
17. DUCT SEAL COMPOUND SHALL BE APPLIED WHEREVER CONDUITS TRANSITION INDOOR/OUTDOOR OR UNDERGROUND/ABOVEGROUND. REFER TO EQUIPMENT NOTES FOR ADDITIONAL DUCT SEAL REQUIREMENTS.
18. BELL ENDS SHALL BE INSTALLED WHEREVER CONDUIT ENTERS EQUIPMENT FROM UNDERGROUND AND WHEREVER POTENTIAL FOR DAMAGE TO CONDUCTORS IS PRESENT AT ANY POINT. BELL ENDS SHALL NOT PREVENT THE USE OF GROUNDING FITTINGS OR COUPLERS WHEN REQUIRED.
19. ALL STUB-UPS WITHIN FLOOR-MOUNTED EQUIPMENT SHALL BE 3-5" ABOVE FINISHED GRADE.
20. ALL CONDUITS EXPOSED TO VEHICULAR OR EQUIVALENT PHYSICAL DAMAGE SHALL BE RIGID GALVANIZED STEEL.
21. GROUND LUGS SHALL BE RATED FOR THEIR ENVIRONMENT AND CONDITION OF USE.

UTILITY-INTERACTIVE INVERTER LOAD-SIDE INTERCONNECTION NOTES

1. LOAD SIDE INTERCONNECTIONS SHALL COMPLY WITH NEC ART 705.12(B).
2. WHERE THE INTERCONNECTION POINT OCCURS ON FEEDERS, THE FEEDER AMPACITY SHALL NOT BE LESS THAN THE SUM OF ALL THE SOURCES CONNECTED TO THE FEEDER UNLESS THE FEEDER IS PROTECTED ON THE LOAD SIDE OF THE INTERCONNECTION POINT WITH OVERCURRENT PROTECTION NO GREATER THAN THE AMPACITY OF THE FEEDER.
3. TAP CONNECTIONS SHALL COMPLY WITH ART 240.21(B).
4. WHERE THE SUM OF ALL THE OVERCURRENT DEVICE RATINGS ON THE PANEL LOAD SIDE OF A MAIN OVERCURRENT PROTECTION DEVICE ARE LESS THAN THE RATING OF THE PANEL, PERMANENT WARNING LABELS WITH THE FOLLOWING WORDING MUST BE APPLIED:

   WARNING:
   THIS EQUIPMENT FED BY MULTIPLE SOURCES. TOTAL RATING OF ALL OVERCURRENT DEVICES EXCLUDING MAIN SUPPLY OVERCURRENT DEVICE SHALL NOT EXCEED THE AMPACITY OF THE BUSBAR.
5. WHERE THE SUM OF THE UTILITY OVERCURRENT DEVICE AND 125% OF INVERTER OUTPUT CIRCUIT CURRENT DOES NOT EXCEED 120% OF THE RATING OF THE BUSBAR, THE INTERCONNECTION POINT MUST BE ON THE OPPOSITE END OF THE BUSBAR FROM THE INCOMING UTILITY SOURCE AND A PERMANENT WARNING LABEL MUST BE APPLIED TO THE INTERCONNECTION POINT.
6. LOAD SIDE INTERCONNECTIONS SHALL BE MADE IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S INSTRUCTIONS AND SHALL NOT INVALIDATE THE NRTL LISTING OF THE EQUIPMENT. WHERE EXISTING NRTL LISTING CANNOT BE MAINTAINED, EQUIPMENT MUST BE RELISTED BY AN APPROVED NRTL SUITABLE FOR THE EQUIPMENT.

COMMUNICATION NOTES

1. CAT5E/6 SHIELDED CABLE RUNS, WHICH INCLUDE INDIVIDUAL DAISY CHAINS OF INVERTERS FOR DIRECT MONITORING, HAVE A MAXIMUM TOTAL DISTANCE OF 328 FEET (100M) PER CHAIN.
2. RS485 CABLE RUNS, WHICH INCLUDE INDIVIDUAL DAISY CHAINS OF INVERTERS FOR DIRECT MONITORING, HAVE A MAXIMUM TOTAL DISTANCE OF 3280 FEET (1000M) PER CHAIN.
3. SWITCHES, METERS, POWERPACK CONTROLLERS, CT'S, AND PT'S, AND CONDUCTORS MARKED "PRE-INSTALLED" IN THE LINE DIAGRAM WILL ARRIVE TO SITE PRE-INSTALLED WITHIN THE SWITCHBOARD, AND WILL NOT REQUIRE ANY FIELD INSTALLATION OR MODIFICATION OF ANY KIND.

ESS NOTES

GENERAL NOTES

1. REFER TO THE SPECIFIC PRODUCT MANUFACTURER'S INSTALLATION AND OPERATION MANUAL FOR MORE INFORMATION.
2. ENERGY STORAGE SYSTEM (ESS) SHALL BE SERVICED ONLY BY MANUFACTURER-CERTIFIED TECHNICIANS.
3. SECONDARY CONTAINMENT IS NOT REQUIRED FOR THE BATTERY ESS.
4. BATTERY PACK DC CONNECTIONS TO ESS INVERTER SHALL ONLY BE MADE WITH MANUFACTURER-PROVIDED CONDUCTOR HARNESSES.
5. ESS DISCONNECTING MEANS SHALL BE LABELED PER ART 706.7(D). ESS AND INTERCONNECTION SHALL BE LABELED PER ART 706.11.

SITE LEGEND

- (E) ACCESSIBLE PARKING SPACE
- (E) TREE
- (E) LIGHT POLE
- (E) UTILITY POLE
- (E) FIRE HYDRANT
- (E) ELECTRIC MANHOLE
- (E) GAS MANHOLE
- (E) SANITARY SEWER MANHOLE
- (E) STORM MANHOLE
- (E) TELEPHONE MANHOLE
- (E) TELEVISION MANHOLE
- (E) UNKNOWN MANHOLE
- (E) POTABLE WATER MANHOLE
- (E) FIRE HYDRANT
- (E) CLEANOUT
- (E) GUY WIRE - ELECTRIC
- (E) UTILITY POLE - ELECTRIC
- (E) GUY WIRE
- (E) UTILITY POLE - TELEPHONE
- (E) SPRINKLER HEAD
- (E) WATER RISER
- (E) GAS VALVE
- (E) HOSE BIB
- (E) IRRIGATION VALVE
- (E) SPRINKLER HEAD
- (E) WATER VALVE
- (E) SKYLIGHT
- (E) OPERABLE SKYLIGHT
- (E) HVAC UNIT
- (E) VENT PIPE
- (E) ROOF ACCESS HATCH
- (E) EXHAUST FAN
- (E) CONDENSATION CONDUIT LINE
- (E) GAS CONDUIT LINE
- (E) ELECTRICAL CONDUIT LINE
- (E) UNDERGROUND ELECTRIC LINE
- (E) UNDERGROUND STORM DRAIN LINE
- (E) UNDERGROUND WATER LINE
- (E) UNDERGROUND GAS LINE
- (E) OVERHEAD ELECTRIC LINE
- (E) UNDERGROUND TELEPHONE LINE
- (E) UNDERGROUND SANITARY SEWER LINE

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NOTES

G-002

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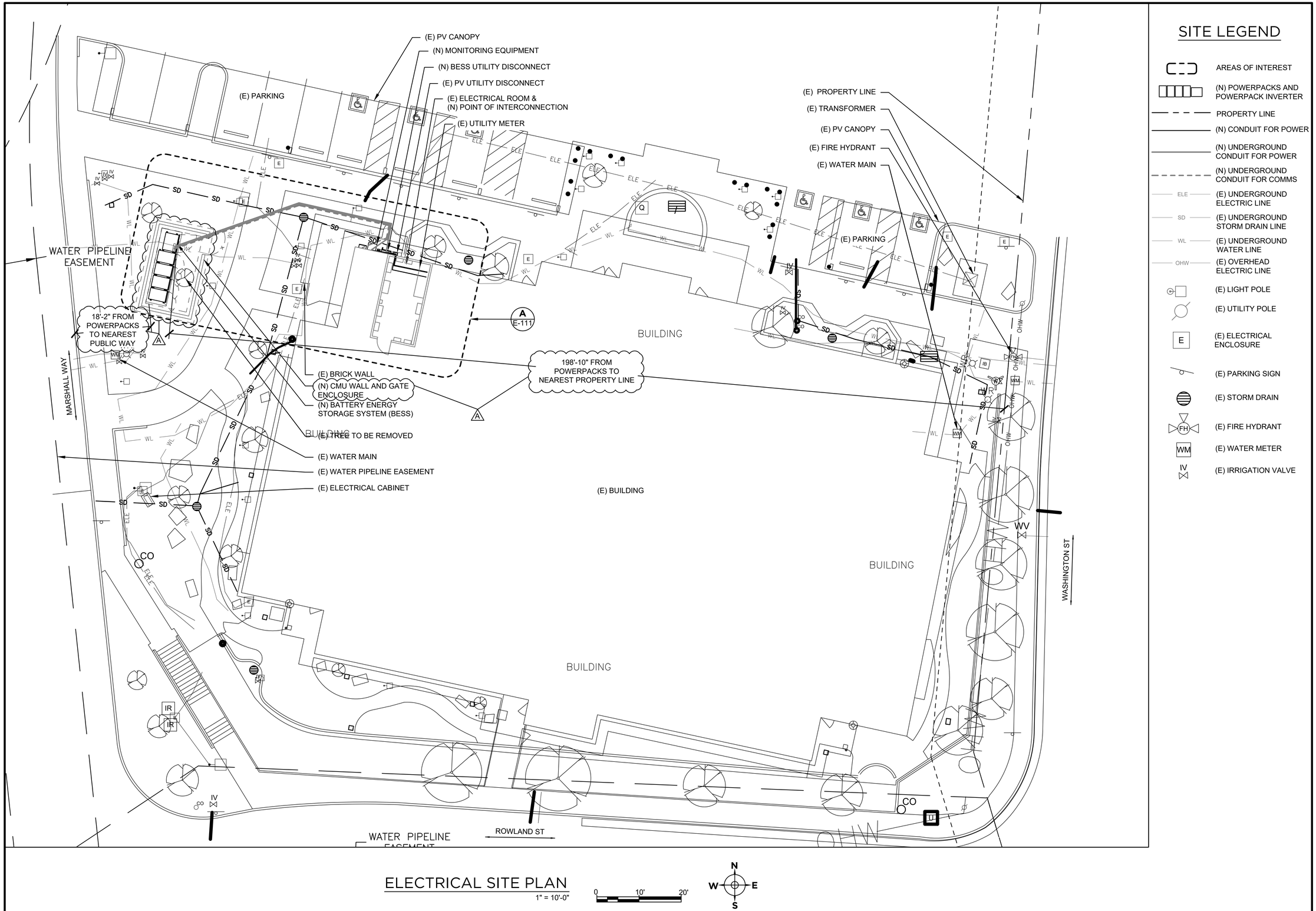

ELECTRICAL SITE PLAN

1" = 10'-0"

0 10' 20'

N W E S

SITE LEGEND

- AREAS OF INTEREST
- (N) POWERPACKS AND POWERPACK INVERTER
- PROPERTY LINE
- (N) CONDUIT FOR POWER
- (N) UNDERGROUND CONDUIT FOR POWER
- (N) UNDERGROUND CONDUIT FOR COMMS
- ELE — (E) UNDERGROUND ELECTRIC LINE
- SD — (E) UNDERGROUND STORM DRAIN LINE
- WL — (E) UNDERGROUND WATER LINE
- OHW — (E) OVERHEAD ELECTRIC LINE
- (E) LIGHT POLE
- (E) UTILITY POLE
- E — (E) ELECTRICAL ENCLOSURE
- (E) PARKING SIGN
- (E) STORM DRAIN
- FH — (E) FIRE HYDRANT
- WM — (E) WATER METER
- IV — (E) IRRIGATION VALVE

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ELECTRICAL SITE PLAN

E-101

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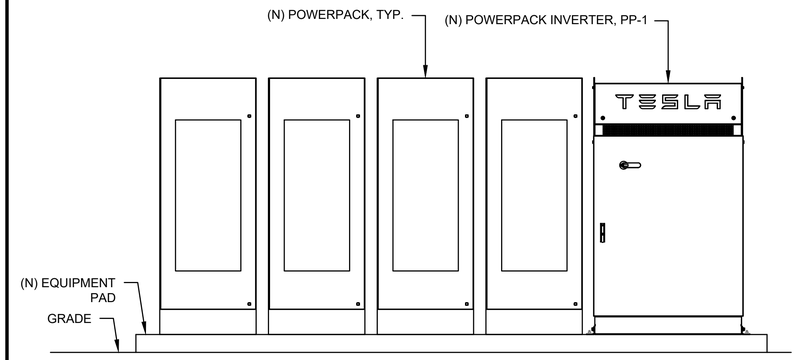
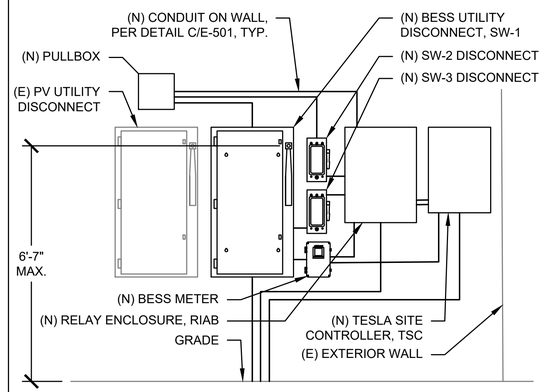
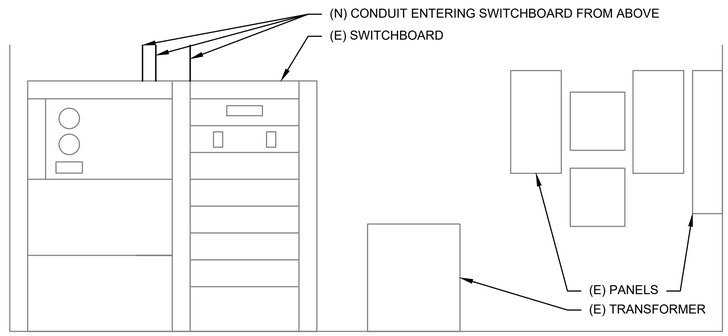


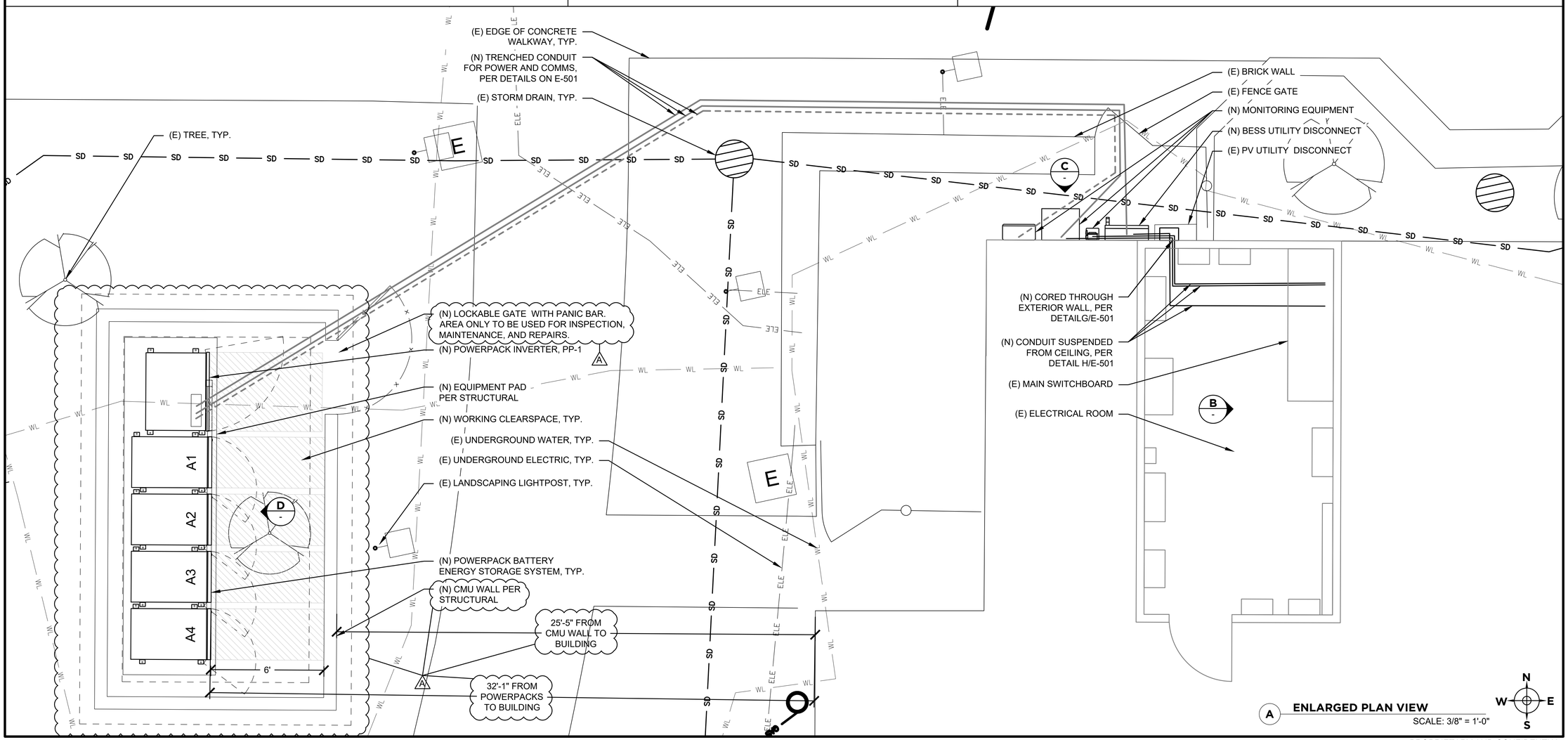
D **ESS EQUIPMENT - ELEVATION VIEW**
SCALE: 1/2" = 1'-0"



C **ESS EQUIPMENT - ELEVATION VIEW**
SCALE: 1/2" = 1'-0"



B **SWITCHBOARD - ELEVATION VIEW**
SCALE: 1/2" = 1'-0"



A **ENLARGED PLAN VIEW**
SCALE: 3/8" = 1'-0"

N W E S

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EQUIPMENT PLAN

E-111

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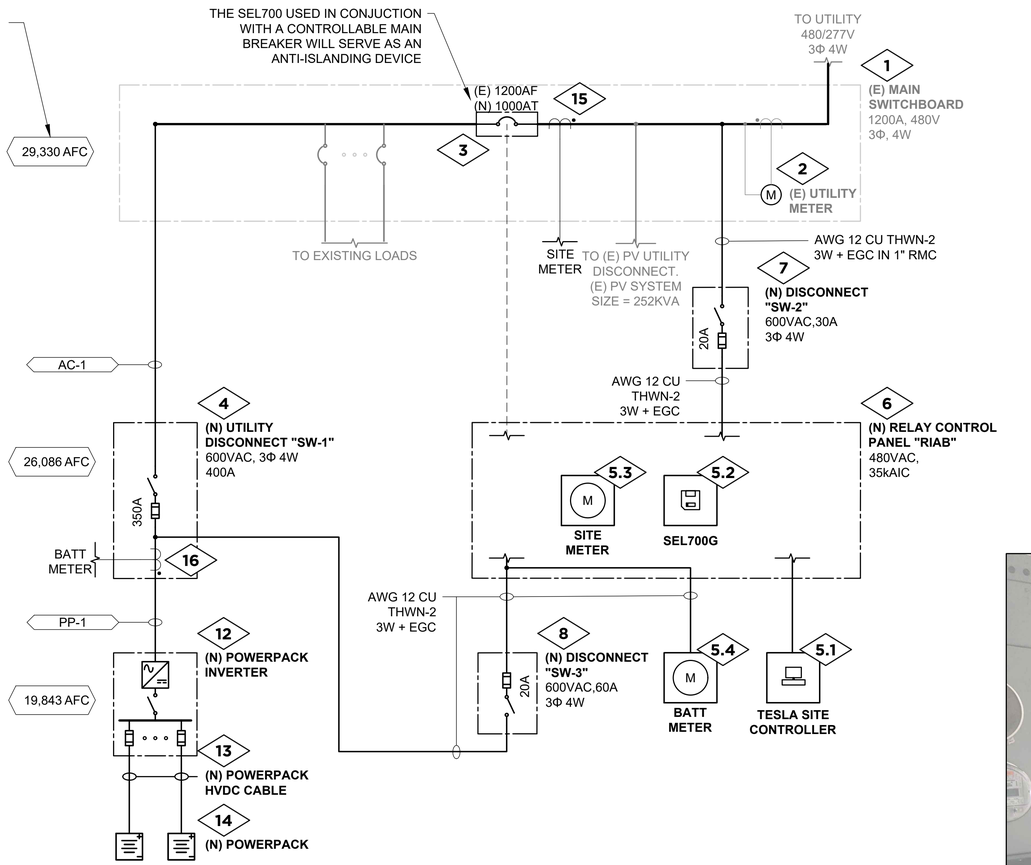


LEGEND

- BUSSING
- CONDUCTORS
- CIRCUIT BREAKER
- SWITCH
- FUSE
- FUSIBLE SWITCH
- GROUNDING ELECTRODE
- CURRENT TRANSFORMER
- POWER TRANSFORMER
- INVERTER
- METER (M)

NEW EQUIPMENT | EXISTING EQUIPMENT

SYSTEM SUMMARY

BATTERY ENERGY STORAGE SYSTEM (BESS)	
SYSTEM TOTALS	
NAMEPLATE POWER	210 kVA
OUTPUT POWER	210 kW
ENERGY RATING	892 kWh
BATTERY (LITHIUM)	
POWERPACK TYPE	PP 2.5, 2 HR
PART #	1490026-00-A
QTY	4
DISCHARGE	4.25 HR
INVERTER 1	
MANUFACTURER	TESLA
PART #	1134768-C1-A
OUTPUT RATING	210 kVA
QUANTITY	1

POINT OF INTERCONNECTION, MSB

(N) POINT OF INTERCONNECTION, LOAD SIDE TAP

AC CIRCUIT SCHEDULE

CIRCUIT #	CURRENT PER CONDUCTOR	NOMINAL VOLTAGE	TEMP DERATE	CONDUIT FILL DERATE	CONDUCTOR METAL UON	# OF CONDUITS	# PHASE CONDUCTORS PER CONDUIT	PHASE CONDUCTOR SIZE	NEUTRAL CONDUCTOR SIZE	EGC SIZE	SSBJ SIZE	CIRCUIT LENGTH	VOLTAGE DROP	WIRE INSUL	CONDUIT TYPE(S)	MIN CONDUIT SIZE (IN)
AC-1	258.0 A	480 V	1.00	0.80	AL	1	3	600 KCMIL	600 KCMIL	AWG 01	-	25 FT	0.08%	THWN-2	PVC,EMT	4
PP-1	258.0 A	480 V	1.00	0.80	AL	1	3	600 KCMIL	600 KCMIL	AWG 01	-	70 FT	0.23%	THWN-2	PVC,EMT	4

EQUIPMENT NOTES

1	**(E) MAIN SWITCHBOARD** • 480/277VAC, 1200A RATED • (E) 1200A MAIN BREAKER GE #SKLB36BD1200 DERATED TO 1000A VIA (N) 1000A TRIP PLUG, #SRPK1200B1000 • (N) AUXILLIARY CONTACTS FOR BREAKER STATUS, 1 FORM C, #SAUXPAB1 • 65kAIC RATED
2	**(E) UTILITY METER** • METER #: 1009510027
3	**(N) MOTOR OPERATOR ATTACHMENT** • 120VAC RATED MOTOR OPERATES MAIN BREAKER VIA CONTROLS FROM TSC • SKMOM8
4	**(N) BESS UTILITY DISCONNECT (SW-1)** • SQUARE-D # H365NRB • 400A, 600VAC • 100kAIC W/ CLASS R FUSING • (3) 350A CLASS R FUSES • NEMA 3R • LOCKABLE • VISIBLE BLADES
5.1	**(N) TESLA SITE CONTROLLER** • INTERNALLY FUSED • INTEGRATED AXIOMTECH COMPUTER WITH ANTENNA • INTEGRATED HIRSCHMANN RSP20 ETHERNET SWITCH • NEMA 4 RATED
5.2	**(N) ISLANDING CONTROLER** • SEL-700G GENERATOR ANTI-ISLANDING PROTECTION RELAY • 480Y/277V VOLTAGE REFERENCE • MOUNTED INSIDE RIAB ENCLOSURE
5.3	**(N) SITE METER (MTR-1)** • ACCUENERGY # ACUVIM-II METER • USES ACCUENERGY ACCUCT R CT'S • 480Y/277V VOLTAGE REFERENCE • MOUNTED INSIDE RIAB
5.4	**(N) BESS METER (MTR-2)** • ACCUENERGY # ACUVIM-IR METER • NEMA 4X ENCLOSURE INCLUDED • USES ROGOWSKI COILS • 480Y/277V VOLTAGE REFERENCE
6	**(N) RELAY CONTROLL ENCLOSURE (RIAB)** • ZPOWER RELAY IN A BOX • 480VAC, 35kAIC RATED • NEMA 3R
7	**(N) DISCONNECT (SW-2)** • SQUARE-D # H361NRB • 30A, 600VAC • 100kAIC W/ CLASS R FUSING • (3) 20A CLASS R FUSES • NEMA 3R
8	**(N) DISCONNECT (SW-3)** • SQUARE-D # H362NRB • 60A, 600VAC • 100kAIC W/ CLASS R FUSING • (3) 20A CLASS R FUSES • NEMA 3R
9	**NOT USED**
10	**NOT USED**
11	**NOT USED**
12	**(N) POWERPACK INVERTER (PP-1)** • (3) POWER STAGES, 70KVA EACH, 210KVA TOTAL • TESLA PART # 1134768-C1-A • 480VAC 3-PH, 4-W, 900VDC RATED • BI-DIRECTIONAL, INTEGRATED ISOLATION TRANSFORMER • NEMA 3R RATED, UL 1741 LISTED
13	**(N) POWERPACK HVDC CABLE** • TESLA PROVIDED DC BATTERY HARNESS • EGC INSTALLED BY CONTRACTOR • 5 BATTERIES MAX PER EGC PER INSTALLATION MANUALS, AHJ, AND NEC REQUIREMENTS
14	**(N) POWERPACK ENERGY STORAGE** • TESLA POWERPACK 2, 2 HR INDUSTRIAL BATTERY SYSTEM • TESLA PART # 1490026-00-A • (4) POWERPACKS • 223KWH EACH, 892KWH TOTAL • UL 1973 LISTED, INCLUSIVE OF CABLE HARNESS AND DC COMBINER PANEL • NEMA 3R
15	**(N) CURRENT TRANSFORMERS** • ACCUENERGY AcuCT-3135R-100-5 • 1000:5A • 3.1" X 3.5" WINDOW • 2 METER LEAD LENGTH
16	**(N) ACCUENERGY ROGOWSKI COILS** • RCT16-1000 • 4.17" Window • 5 METER LEAD LENGTH • 5A-50kA RANGE

TESLA

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

ORIGINAL SIZE 24"X36"
SHEET SIZE ARCH "D"
0 1/2" 1"

PROFESSIONAL STAMP
REGISTERED PROFESSIONAL ENGINEER
ALEXANDER MARTIN SHORTS
3/16/2021
E 21782 ELECTRICAL
EXP: 03 - 31 - 21
STATE OF CALIFORNIA

TESLA - MARSHALL MED CENTER
ENERGY STORAGE SYSTEM

1095 MARSHALL WAY
PLACERVILLE, CA 95667

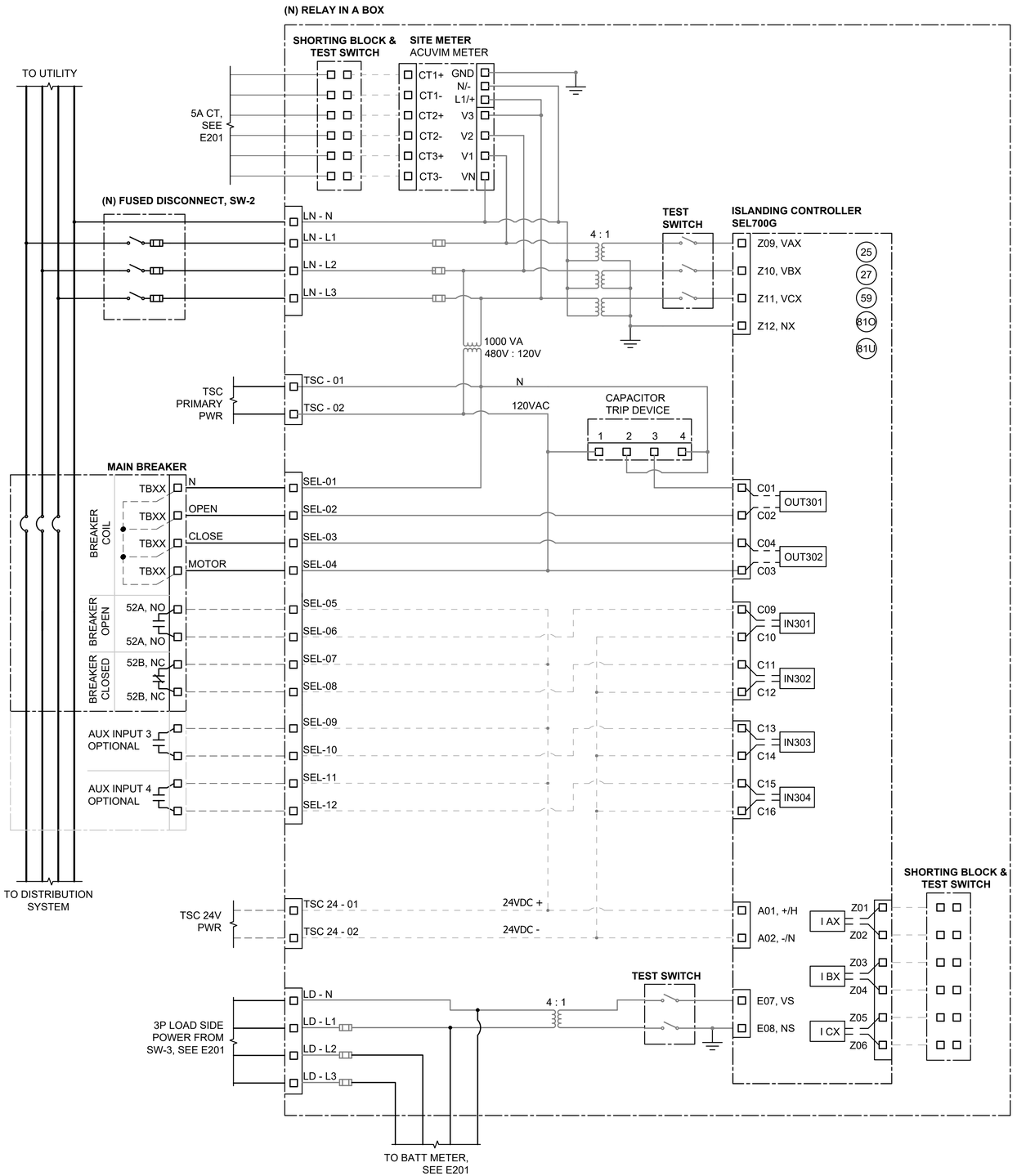
NO.	REVISION	DATE
A	ADDED CMU WALL ENCLOSURE, AHJ COMMENTS	3/19/21

SINGLE LINE DIAGRAM

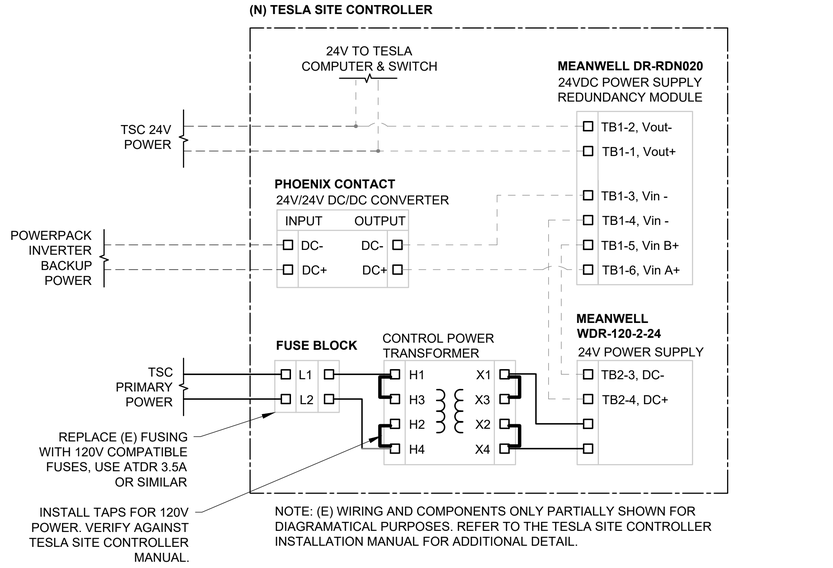
E-201

JB-95620974

REV: A | PERMIT



B **THREE LINE DIAGRAM**



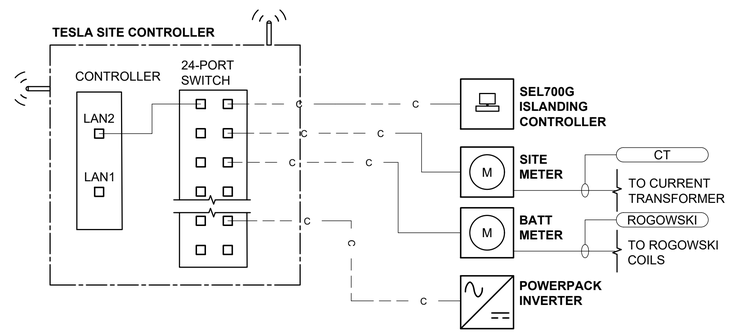
LEGEND

- BUSSING
- (N) CONDUCTORS
- PRE-WIRED CONDUCTORS
- (N) CONTROL CONDUCTORS
- PRE-WIRED CONTROL CONDUCTORS
- 51G 81U — RELAY SETTINGS
- TERMINAL
- — C — — CAT5E OR CAT6 CABLE
- ROGOWSKI
- CT

CAT5E OR CAT6 CABLE
- SHEILDED AND OUTDOOR RATED
- INSTALL IN CONDUIT SEPARATELY FROM POWER CONDUCTORS IN A 1" CONDUIT
- METAL CONNECTORS FOR THE CAT CABLES TERMINATING AT THE TESLA SITE CONTROLLER ARE REQUIRED. CONNECTORS AT CONTROL DEVICES ARE TO BE PLASTIC.

ROGOWSKI COIL LEADS
- ROGOWSKI COIL LEADS CANNOT BE EXTENDED OR SHORTENED. ORDER TO LENGTH, UP TO 50M AVAILABLE.

CONTROL TRANSFORMER COIL LEADS
- DEFAULT LEAD LENGTH IS 8FT. LEADS MAY BE EXTENDED UP TO 20 METERS USING A MIN. OF 22AWG SHIELDED CONDUCTORS.



A **COMMUNICATION DIAGRAM**

PROPRIETARY AND CONFIDENTIAL

PLOT DATE: 3/16/2021 11:55 AM MSTERN

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ORIGINAL SIZE 24"X36"
SHEET SIZE ARCH "D"

PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER — ALEXANDER MARTIN SHORTS — 3/16/2021 — # E 21782 ELECTRICAL EXP: 03 - 31 - 21 — STATE OF CALIFORNIA

NO.	REVISION	DATE
A	ADDED CMU WALL ENCLOSURE, AHJ COMMENTS	3/19/21

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ENERGY STORAGE SYSTEM

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COMM DIAGRAM

E-211

JB-95620974

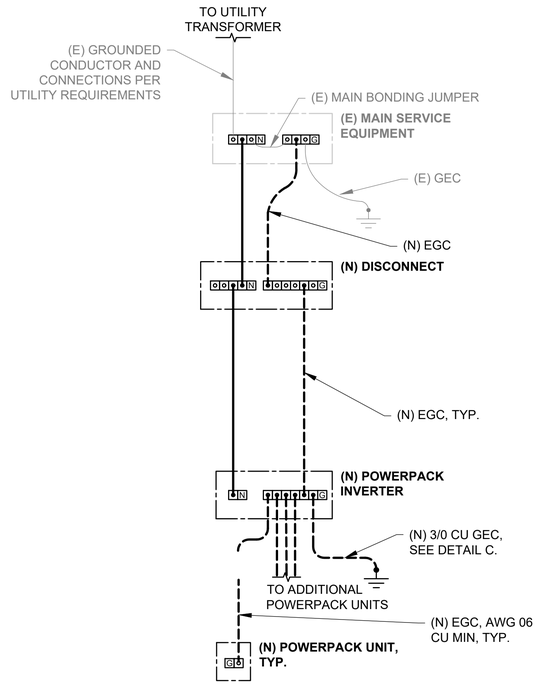
REV: A | PERMIT

NOTES

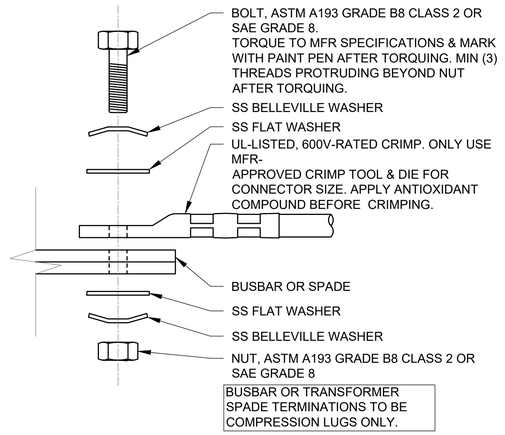
- REFER TO ONE-LINE DIAGRAM FOR SPECIFIC CIRCUIT IDENTIFIERS BETWEEN EQUIPMENT.
- REFER TO AC & DC CIRCUIT SCHEDULES FOR NEUTRAL/GROUND SIZING PER CIRCUIT.

LEGEND

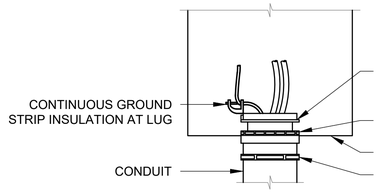
- N — NEUTRAL BUSBAR
- G — GROUND BUSBAR
- PRIMARY OR SECONDARY COMMON TERMINAL, AS APPLICABLE
- TERMINAL ON NEUTRAL OR GROUND BUSBAR
- IRREVERSIBLE SPLICE OR CRIMP PER NEC 250.64(C)
- NEC 250.52(A)-COMPLIANT GROUNDING ELECTRODE



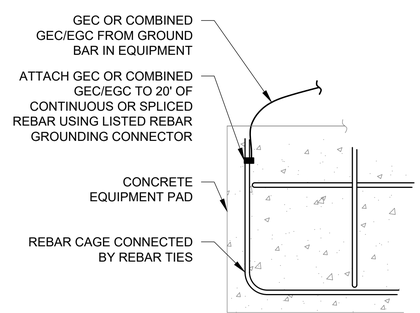
E GROUNDING DIAGRAM



D COMPRESSION LUG TERMINATION DETAIL
ES01.101 COMPRESSION LUG TERMINATION DETAIL RA
NTS



B CONDUIT GROUNDING AT ENCLOSURE
ES11.100 CONDUIT GROUNDING AT ENCLOSURE DETAIL RA
NTS



C CONCRETE-ENCASED ELECTRODE
ES01.100 REBAR CAGE INSPECTION BOX AND GROUND ROD DETAIL RA
NTS

A NOT USED
NTS

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ORIGINAL SIZE 24"X36"
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PROFESSIONAL STAMP
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TESLA - MARSHALL MED CENTER
ENERGY STORAGE SYSTEM

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NO.	REVISION	DATE
A	ADDED CMU WALL ENCLOSURE. AHJ COMMENTS	3/19/21

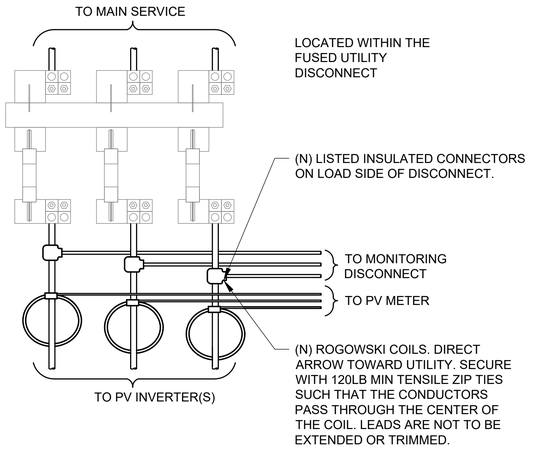
GROUNDING DIAGRAM

E-241

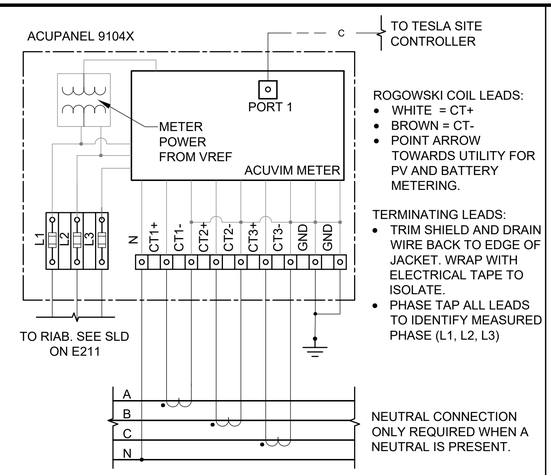
JB-95620974

REV: A | PERMIT

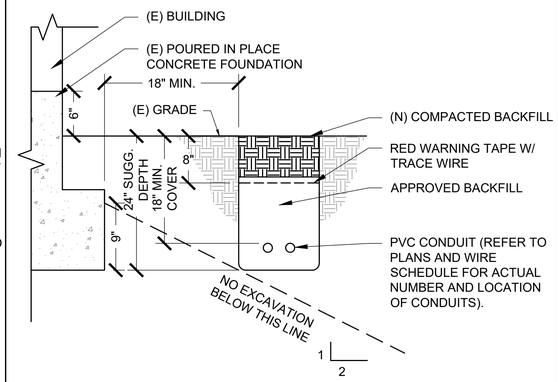
PLOT DATE: 3/16/2021 11:55 AM MSTERN



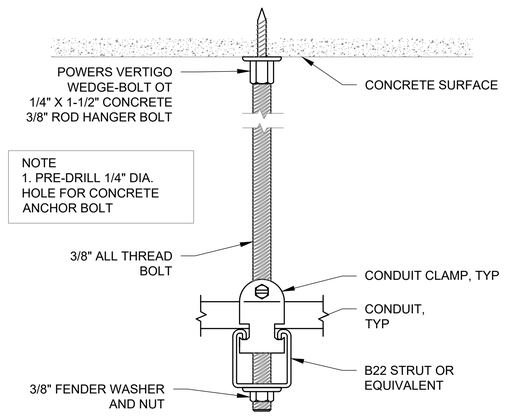
I **BATTERY METER MONITORING VOLTAGE TAP**
E251.101 MEDIUM VOLTAGE TAP DETAIL RA
NTS



F **BATT METER WIRING DIAGRAM**
E251.103 ACCUENERGY METER WIRING CATS DETAIL RB
NTS

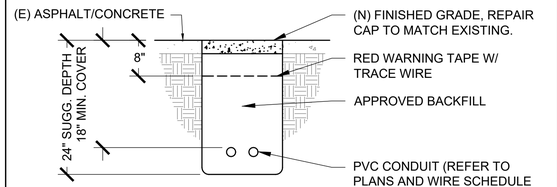


C **TRENCH THROUGH SOIL NON-TRAFFIC**
E511.120 TRENCH - SOIL NON-TRAFFIC DETAIL RB
NTS



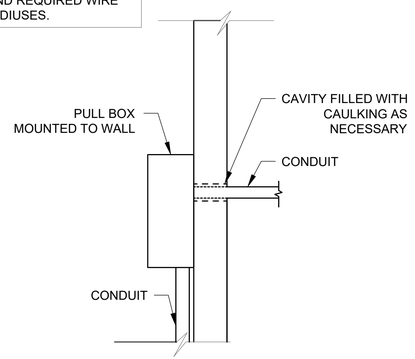
H **STRUT RACK SUSPENDED FROM CONCRETE**
E511.114 STRUT RACK SUSPENDED FROM CONCRETE DETAIL RA
NTS

E **NOT USED**
NTS



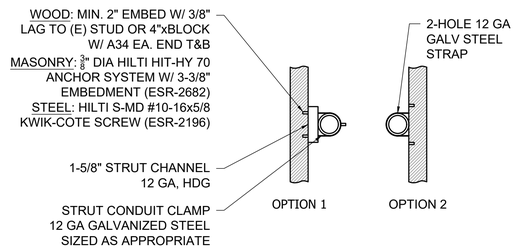
B **TRENCH THROUGH PAVEMENT NON-TRAFFIC**
E511.122 TRENCH - PAVEMENT NON-TRAFFIC DETAIL RB
NTS

NOTE
1. PULL BOX SIZE TO BE BASED ON CONDUITS ENTERING THE PULL BOX AND REQUIRED WIRE BENDING RADIUSES.

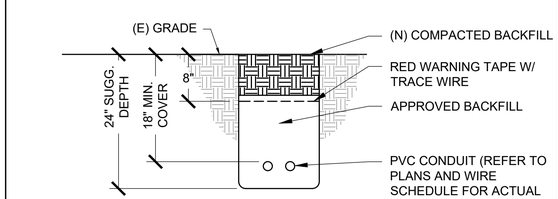


G **CONDUIT THROUGH CONCRETE WALL W/PULLBOX**
E511.112 CONDUIT THROUGH WALL WITH PULLBOX DETAIL RA
NTS

NOTE: ALL HOLES FOR CONDUIT SHALL BE PROVIDED WITH CONDUIT FITTINGS HAVING AN ENVIRONMENTAL RATING APPROVED TO MAINTAIN NEMA 3R ENCLOSURE RATING (UL508A, TABLE 19.2). IN GENERAL COMPONENTS MARKED "WEATHERPROOF" OR "RAINPROOF" SHALL BE INSTALLED ONLY BELOW THE LOWEST UNINSULATED LIVE PARTS WITHIN THE ENCLOSURE. CONDUIT OPENINGS ABOVE THE LOWEST UNINSULATED LIVE PARTS SHALL BE PROVIDED WITH CONDUIT FITTINGS MARKED "WET LOCATION" OR "RAINTIGHT".



D **CONDUIT SUPPORT - WALL**
E511.111 CONDUIT SUPPORT - WALL DETAIL RA
NTS



A **TRENCH THROUGH SOIL NON-TRAFFIC**
E511.120 TRENCH - SOIL NON-TRAFFIC DETAIL RB
NTS

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ELECTRICAL DETAILS

E-501

JB-95620974

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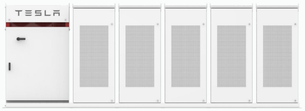
POWERPACK SYSTEM

Tesla has been building integrated battery systems in cars for over 10 years. The same degree of expertise, quality control, and technological innovation has informed our process of developing high-performance energy storage systems.

The Powerpack System scales to the space, power and energy requirements of any site from 100 kWh+ to 100 MWh+.

Tesla includes a 10-year warranty at no additional cost. Extensions are also available under certain conditions.



Powerpack System includes an Inverter and DC Battery Packs

FULLY INTEGRATED SYSTEM

A complete energy storage system including DC batteries, bi-directional inverter, and a Tesla Site Controller with intelligent software. This turnkey system is designed to maximize savings and prolong battery life.

OPTIMIZATION SOFTWARE

Powerpack Systems have the most advanced battery technology and dispatch optimization software to quickly learn and predict a facility's energy patterns. Tesla's proprietary storage dispatch software can charge and discharge autonomously to maximize customer value.

ENHANCED SYSTEM SAFETY

Powerpack's battery architecture consists of a low voltage battery with a DC/DC converter for added electrical isolation and safety. It also has an integrated liquid cooling and heating system for thermal safety and enhanced performance and reliability.

APPLICATIONS

- **PEAK SHAVING** — Discharge at times of peak demand to reduce expensive demand charges
- **EMERGENCY BACKUP** — Powers a facility when the grid goes down
- **CAPACITY FIRMING** — Smooth out the intermittency of renewables by storing and dispatching when needed
- **LOAD SHIFTING** — Shift energy consumption from one point in time to another
- **MICROGRID** — Build a localized grid that can disconnect from the main power grid
- **TRANSMISSION AND DISTRIBUTION SUPPORT** — Supply power at a distributed location to defer the need to upgrade aging infrastructure
- **DEMAND RESPONSE** — Discharge or charge in response to signals from a demand response administrator
- **ANCILLARY SERVICES** — Provide service to the grid in response to signals sent

POWERPACK SPECIFICATIONS

- One Powerpack Unit includes 16 battery Pods
- Each Pod has an isolated DC/DC converter and sensors to monitor cell level performance in real time
- Standard configurations:
  - 4-hour discharge duration
  - 2-hour discharge duration
    - High Power Mode*
    - Frequency Regulation Mode*
    - Peak Power Mode*

*Available under certain conditions

INVERTER RATINGS

AC Voltage	400–480 VAC 3-phase
Nominal Frequency	50 or 60 Hz
Inverter Size (at 480 V)	Scalable up to 700 kVA

POWERPACK RATINGS

Part Number	Configuration	Power/Energy[1]	Roundtrip[1] System
1083932-00-F	Peak Power [2]	130 kW / 160 kWh	84.5%
	High Power	109 kW / 174 kWh	86.0%
	2 hr	90 kW / 180 kWh	87.5%
1083931-00-E	4 hr	55 kW / 220 kWh	89.5%
1490027-XX-Y [3]	Peak Power [2]	130 kW / 166 kWh	83.5%
	High Power	118 kW / 169 kWh	85.5%
	2 hr	90 kW / 174 kWh	88.0%
1490026-XX-Y [3]	2 hr	111.5 kW / 223 kWh	85.5%
1490025-XX-Y [3]	4 hr	58 kW / 232 kWh	89.5%

Note: All ratings provided are AC and factor in all parasitic loads.
[1] Net energy delivered at 25°C (77°F) including thermal control
[2] Represents frequency regulation and peak power options, available under certain conditions
[3] Where X is a digit between 0 and 9, and Y is a letter

COMMUNICATIONS

Protocol	Modbus TCP DNP3 Rest API

MECHANICAL AND MOUNTING

Enclosure	IP67 (Pod) NEMA 3R / IP35 (Powerpack) NEMA 4 / IP66 (Inverter)
Powerpack Unit Dimensions	L: 1317 mm (51.9 in) W: 968 mm (38.1 in) H: 2187 mm (86.1 in)
Powerpack Unit Max Shipped Weight	2199 kg (4847 lbs)
Inverter Dimensions	L: 1044 mm (41.1 in) W: 1390 mm (54.7 in) H: 2189 mm (86.2 in)
Inverter Max Shipped Weight	1120 kg (2470 lbs)
Operating Ambient Temperature	-30°C to 50°C (-22°F to 122°F)

REGULATORY

Lithium-Ion Cells	NRTL listed to UL 1642
System	NRTL listed to UL 1973, 9540, 1741 SA IEEE 1547 Compliant to grid codes and safety standards of all major markets. Full list provided upon request.

Product Data Sheet

H365NR
SWITCH FUSIBLE HD 600V 400A 3P NEUTRAL

SQUARE D by Schneider Electric

List Price $5,765.00 USD

Availability **Stock Item: This item is normally stocked in our distribution facility.**

Technical Characteristics

Enclosure Material	Galvannealed Steel
Approvals	UL Listed
Electrical Interlock	None
Action	Single Throw
Enclosure Rating	NEMA 3R
Ampere Rating	400A
Enclosure Type	Rainproof and Sleet/Ice proof (Indoor/Outdoor)
Factory Installed Neutral	Yes
Number of Poles	3-Pole
Wire Size	#1/0 to 750 AWG/kcmil(Al/Cu)
Disconnect Type	Fusible
Terminal Type	Lugs
Short Circuit Current Rating	10kA (Class H or K) - 200kA (Class R or J)
Type of Duty	Heavy Duty
Maximum Voltage Rating	600V
Mounting Type	Surface

Shipping and Ordering

Category	00054 - Safety Switch, Heavy Duty, NEMA3R, 400 - 1200 Amp, fused and unfused
Discount Schedule	DE1
GTIN	00785901026686
Package Quantity	1
Weight	186 lbs.
Availability Code	Stock Item: This item is normally stocked in our distribution facility.
Returnability	Y
Country of Origin	US

As standards, specifications, and designs change from time to time, please ask for confirmation of the information given in this document.

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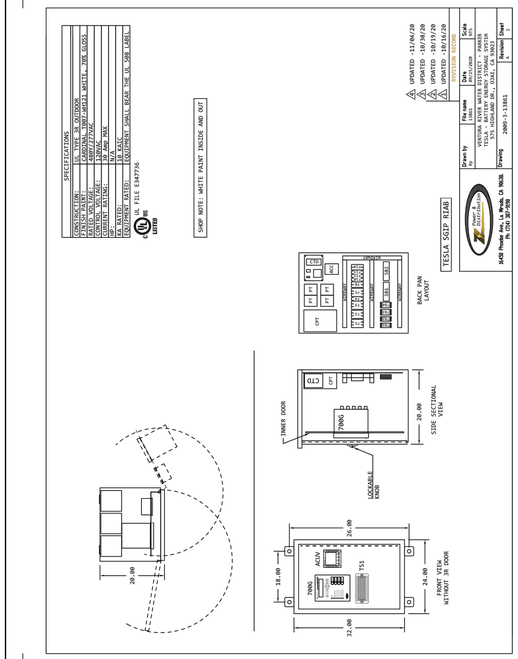
Schneider Electric

1



TESLA SITE CONTROLLER

The Tesla Site Controller is a site-level interface that controls Tesla Battery Energy Storage Systems and commercial solar projects. The Tesla Site Controller interacts with each inverter block in a site, collects feedback data and runs algorithms to optimize system operations.

The Tesla Site Controller:
- Communicates with overall systems through each Inverter or other access point to control the entire energy site
- Hosts the control algorithm that dictates advanced charge and discharge functions
- Is the single point of interaction with external parties
- Supports a number of site configurations, including grid-tied and microgrid

Tesla offers a 10-year warranty at no additional cost. Extensions are also available under certain conditions.

Fully-loaded Tesla Site Controller

ELECTRICAL

Nominal Input Voltage Range	120–480 VAC
Nominal Frequency	50 or 60 Hz
Operating Power Consumption	100 W maximum
Overvoltage Protection	Category III

MECHANICAL AND MOUNTING

Ingress Rating	IP67/ NEMA 4
Dimensions	L: 255 mm (10 in) W: 530 mm (20.9 in) H: 730 mm (28.7 in)
Weight	21.4 kg (47.2 lbs)
Operating Ambient Temperature	-30°C to 50°C (-22°F to 122°F)
Maximum Altitude	3000 m
Relative Humidity	100% condensing, wet location rated

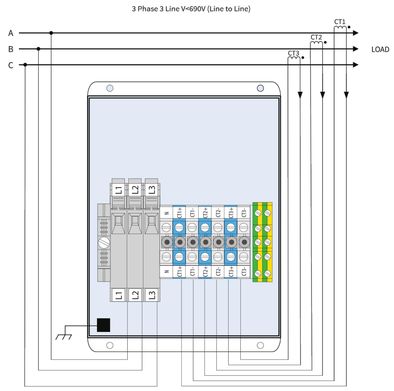
REGULATORY

Certifications	UL 61010-1 CSA-22.2 IEC-61010-1

COMMUNICATIONS

Protocol	Modbus TCP DNP3 Rest API
Communications	Ethernet Cellular

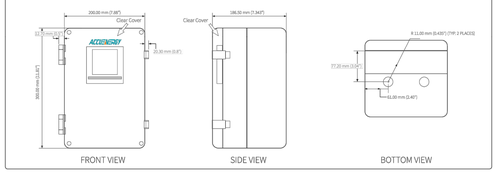
WIRING DIAGRAMS



DIMENSIONS

NEMA4X Waterproof Plastic Panel

Unit: mm (inches)



ORDERING INFORMATION

To measure current with split core current transformers:

Tesla Part Number	Tesla Name	Input Voltage Range	Manufacturer	Manufacturer Part Number
1041301-00-B	ASY, METER, ACUVIM-IIR, NEMA-4X, SSTR	480VAC Line-Line	Accuenergy	AcuPanel 9104X-IIR-60-5A-P3-WEB-TESLA
1041300-00-B	ASY, METER, ACUVIM-IIR, NEMA-4X, SSTR	120VAC-415VAC Line-Line	Accuenergy	AcuPanel 9104X-IIR-60-5A-P1-WEB-TESLA

Ensure to order 3 CT's per meter sized to the installation.

To measure current with flexible Rogowski coils:

Tesla Part Number	Tesla Name	Input Voltage Range	Manufacturer	Manufacturer Part Number
1041301-01-B	ASY, METER, ACUVIM-IIR, 4X, ROGO, SSTR	480VAC Line-Line	Accuenergy	AcuPanel 9104X-IIR-60-RCT-P3-WEB-TESLA
1041300-01-B	ASY, METER, ACUVIM-IIR, 4X, ROGO, SSTR	120VAC-415VAC Line-Line	Accuenergy	AcuPanel 9104X-IIR-60-RCT-P1-WEB-TESLA

Ensure to order 3 RCT16, Rogowski Coils, per meter.

CAUTION
- Rogoski coils are only rated to 1000V.
- CTs sold by AccuEnergy are only rated to 600V.
- If bus voltage is greater than 1000V, purchase the CT version of this meter and separately acquire CTs rated for the higher bus voltage.

Split core CT ordering information:

Part Number	Window Size	Rated Input
AcuCT-0812-200-5	0.83"x1.22"	200A
AcuCT-0812-250-5	0.83"x1.22"	250A
AcuCT-0812-300-5	0.83"x1.22"	300A
AcuCT-0812-400-5	0.83"x1.22"	400A
AcuCT-2031-400-5	1.97"x3.15"	400A
AcuCT-2031-600-5	1.97"x3.15"	600A
AcuCT-2031-800-5	1.97"x3.15"	800A
AcuCT-2031-1000-5	1.97"x3.15"	1000A
AcuCT-3147-1000-5	3.15"x4.72"	1000A
AcuCT-3147-1200-5	3.15"x4.72"	1200A
AcuCT-3163-1600-5	3.15"x6.30"	1600A
AcuCT-3163-2000-5	3.15"x6.30"	2000A
AcuCT-3163-2500-5	3.15"x6.30"	2500A
AcuCT-3163-3000-5	3.15"x6.30"	3000A
AcuCT-3163-4000-5	3.15"x6.30"	4000A
AcuCT-3163-5000-5	3.15"x6.30"	5000A

Note: Please contact Accuenergy if CTs in other sizes and ratios are needed.

Rogowski Coil ordering information:

Unit: mm (inches)

Part Number	Length	Window Size	Input Range
RCT16	400 (15.75")	106 (4.17")	5A-50,000A
RCT24	600 (23.62")	178 (7.01")	
RCT36	900 (35.43")	271 (10.67")	
RCT47	1200 (47.24")	369 (14.53")	

Communication
- Modbus RTU and DNP3 via RS485
- Modbus TCP/IP via Ethernet

ACCUENERGY

Accuenergy Corp.
Los Angeles-Toronto-Beijing
North America Toll Free: 1-877-721-8908
Web: www.accuenergy.com
Email: marketing@accuenergy.com

Revision Date: Mar., 2016
Document # V1.11

Product data sheet
Characteristics

H361RB
SWITCH FUSIBLE HD 600V 30A 3P NEMA3R

Product availability : Stock - Normally stocked in distribution facility

SQUARE D by Schneider Electric

Green Premium

Price* : 899.00 USD

Main

Product or component type	Single Throw Safety Switch
Line Rated Current	30 A
Product certifications	UL listed
NEMA degree of protection	NEMA 3R galvannealed steel
Device composition	None
Disconnector device type	Fusible disconnect
Short-circuit current	10 kA H or K 200 kA R, J or L
Device mounting	Surface
Number of poles	3
Electrical connection	Lugs
Series name	Heavy duty
System Voltage	600 V AC/DC
AWG gauge	AWG 14...AWG 6 (copper) AWG 12...AWG 6 (aluminium)

Ordering and shipping details

Category	00009 - H&HU SW,2&3P,N3R,30-200A
Discount Schedule	DE1
GTIN	00785901481966
Nbr. of units in pkg.	1
Package weight(Lbs)	8.5
Returnability	Y
Country of origin	US

Offer Sustainability

Sustainable offer status	Green Premium product

Feb 21, 2018

Life Is On Schneider Electric

1

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

ORIGINAL SIZE 24"X36"
SHEET SIZE ARCH "D"
0 1/2" 1"

PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER
ALEXANDER MARTIN SHORTS
3/16/2021
E 21782
ELECTRICAL
EXP: 03 - 31 - 21
STATE OF CALIFORNIA

TESLA - MARSHALL MED CENTER
ENERGY STORAGE SYSTEM

1095 MARSHALL WAY
PLACERVILLE, CA 95667

NO.	REVISION	DATE
A	ADDED CMU WALL ENCLOSURE, AHJ COMMENTS	3/19/21

CUTSHEETS

E-601

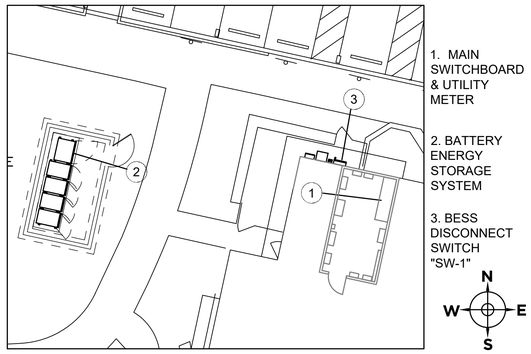
JB-95620974

REV: A | PERMIT

PLOT DATE: 3/16/2021 11:55 AM MSTERN

CAUTION

NON-SEPARATELY DERIVED
(FLOATING NEUTRAL)
STANDBY POWER SOURCE CONNECTED



1095 MARSHALL WAY
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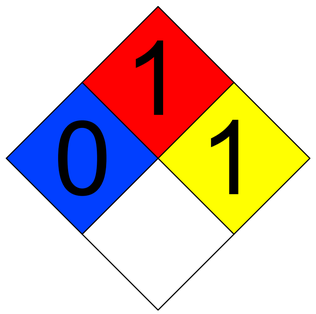
NOTE: PLACE AT (E) SERVICE DISCONNECT

8 SITE PLACARD

NTS



NOTE:
1. PLACE AT GATE TO ENERGY STORAGE SYSTEM AREA

7 NFPA 704 LABEL

NTS

NOTE:
1. MARKING PER ART CFC 1206.2.8.6
2. PLACE AT GATE TO ENERGY STORAGE SYSTEM AREA
3. RED BACKGROUND
4. WHITE LETTERING
5. TEXT HEIGHT: 1/8" MIN.

3.21

WARNING
AREA CONTAINS ENERGIZED BATTERY SYSTEM WITH LITHIUM-ION CELLS

WARNING
AREA CONTAINS ENERGIZED ELECTRICAL CIRCUITS

6 ENTRANCE TO ENERGY STORAGE AREA

NTS

NOTE:
1. MARKING PER ART 702.12(B)
2. PLACE AT EXISTING SERVICE DISCONNECT
3. ORANGE BACKGROUND

3.21

WARNING
SHOCK HAZARD EXISTS IF GROUNDING ELECTRODE CONDUCTOR OR BONDING JUMPER CONNECTION IN THIS EQUIPMENT IS REMOVED WHILE ALTERNATE SOURCE(S) IS ENERGIZED

5 EXISTING SERVICE EQUIPMENT

NTS

3" [0.08m]

WARNING
ELECTRIC SHOCK HAZARD
IF A GROUND FAULT IS INDICATED
NORMALLY GROUNDED
CONDUCTORS MAY BE
UNGROUNDED AND ENERGIZED

#LB-070004-10X

NOTE:
1. MARKING PER ART 690.5(C)
2. RED BACKGROUND
3. WHITE LETTERING
4. TEXT HEIGHT: 1/8" MIN.

4 INVERTER GROUND-FAULT WARNING

E701.107 INVERTER GROUND-FAULT WARNING RA

NTS

3.21

WARNING
POWER TO THIS BUILDING IS ALSO SUPPLIED FROM THE FOLLOWING SOURCES WITH DISCONNECT LOCATED AS SHOWN

NOTE:
1. RED BACKGROUND
2. WHITE LETTERING
3. TEXT HEIGHT: 1/8" MIN.

3 MAIN SERVICE WITH REMOTE BESS DISCONNECT

E701.109 BACKUP GENERATOR BREAKER RA

NTS

3.21

MAXIMUM AC OPERATING CURRENT 258 A
MAXIMUM AC OPERATING VOLTAGE 480 V

#LB-040007-10X

WARNING
ELECTRIC SHOCK HAZARD
DO NOT TOUCH TERMINALS
TERMINALS ON BOTH LINE AND
LOAD SIDES MAY BE ENERGIZED
IN THE OPEN POSITION

#LB-070005-10X

GENERATOR DISCONNECT SWITCH

#LB-040013-10X

NOTE:
1. MARKING PER ART 690.13(C)(2), 690.17, 690.54
2. RED BACKGROUND
3. WHITE LETTERING
4. TEXT HEIGHT: 1/8" MIN.

2 BATTERY ENERGY STORAGE SYSTEM DISCONNECT FOR UTILITY OPERATION

E701.101 PV SYSTEM UTILITY AC DISCONNECT RA

NTS

3.75

POINT OF INTERCONNECTION
BATTERY ENERGY STORAGE SYSTEM

#LB-020003-10X

MAXIMUM AC OPERATING CURRENT 258 A
MAXIMUM AC OPERATING VOLTAGE 480 V

#LB-040007-10X

WARNING
ELECTRIC SHOCK HAZARD
DO NOT TOUCH TERMINALS
TERMINALS ON BOTH LINE AND
LOAD SIDES MAY BE ENERGIZED
IN THE OPEN POSITION

#LB-070005-10X

NOTE:
1. MARKING PER ART 230.2(E), 690.17, 690.54
2. RED BACKGROUND
3. WHITE LETTERING
4. TEXT HEIGHT: 1/8" MIN.

1 POINT OF INTERCONNECTION

E701.100 POINT OF INTERCONNECTION RA

TESLA

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E 21782
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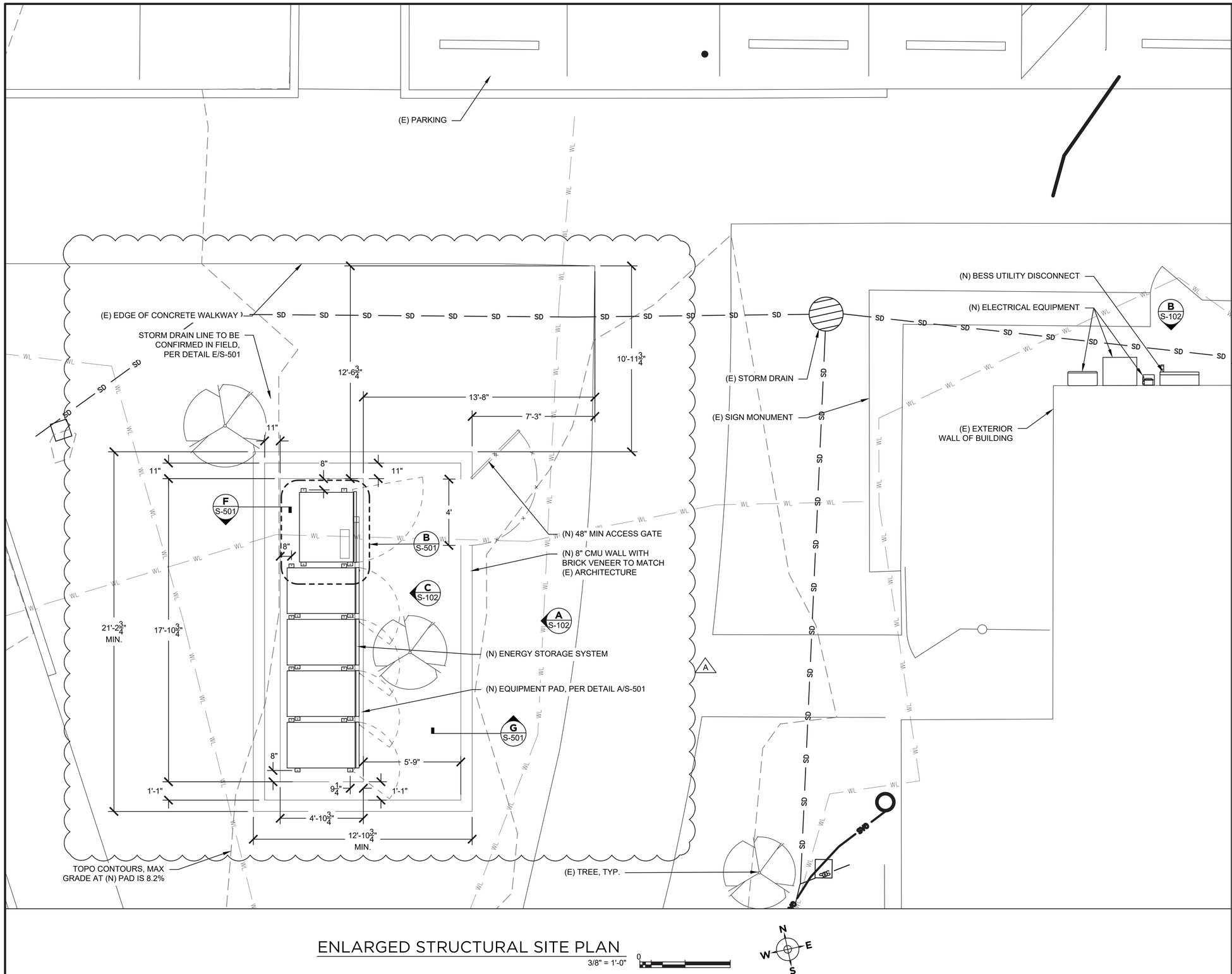
LABELS & PLACARDS

E-701

JB-95620974

REV: A | PERMIT



ENLARGED STRUCTURAL SITE PLAN

3/8" = 1'-0"

SITE LEGEND

(N) POWERPACKS AND POWERPACK INVERTER

SD (E) UNDERGROUND STORM DRAIN LINE

STRUCTURAL DESIGN CRITERIA:

DESIGN CODE:

- 2019 CBC

DESIGN CRITERIA:

1. WIND DESIGN
   - DESIGN WIND SPEED = 95 MPH (ULTIMATE)
   - RISK CATEGORY = II
   - WIND EXPOSURE = C
2. SEISMIC DESIGN
   - RISK CATEGORY = II
   - SEISMIC IMPORTANCE FACTOR = 1.0
   - S_S = 0.441 g, S_1 = 0.206 g
   - SITE CLASS = D
   - S_DS = 0.425 g, S_D1 = 0.302 g
   - SEISMIC DESIGN CATEGORY = D
   - BASIC SEISMIC-FORCE-RESISTING SYSTEM = NON-STRUCTURAL COMPONENT
   - R = 2.5 / a_p = 1.0
3. GEOTECHNICAL INFORMATION
   - ALLOWABLE BEARING PRESSURE = 1,500 PSF USED FOR EQUIPMENT FOUNDATION
4. GROUND SNOW = 30 PSF

NOTES

1. SWITCHBOARD DIMENSIONS AND ANCHOR LOCATIONS ARE LIABLE TO CHANGE. VERIFY AGAINST VENDOR FINAL SHOP DRAWINGS.

2. THE PAD EXTENTS AND FOOTPRINT TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

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PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER
TOO JIN KIM
S 5771
STRUCTURAL
STATE OF CALIFORNIA

Digitally signed by Too Jin Kim
Date: 2021.03.16 15:27:58 -07'00'

NO.	REVISION	DATE
A	ADDED CMU WALL ENCLOSURE, AHJ COMMENTS	3/19/21

TESLA - MARSHALL MED CENTER
ENERGY STORAGE SYSTEM

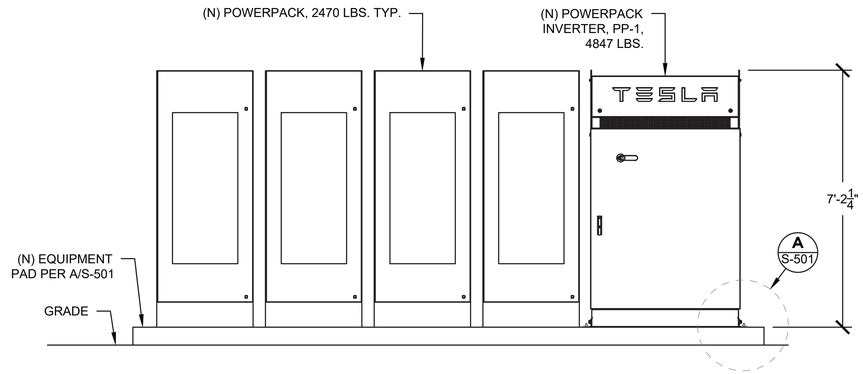
1095 MARSHALL WAY
PLACERVILLE, CA 95667

STRUCTURAL SITE PLAN

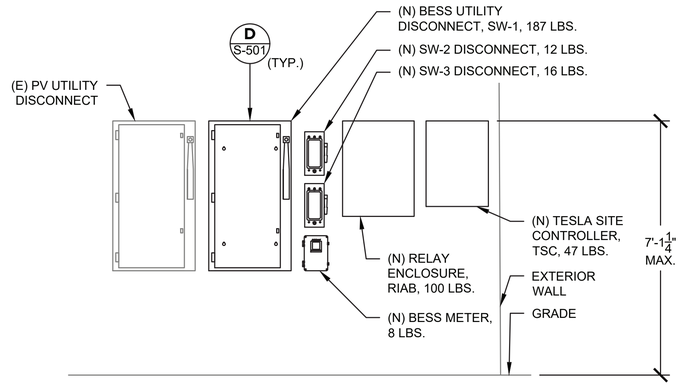
S-101

JB-95620974

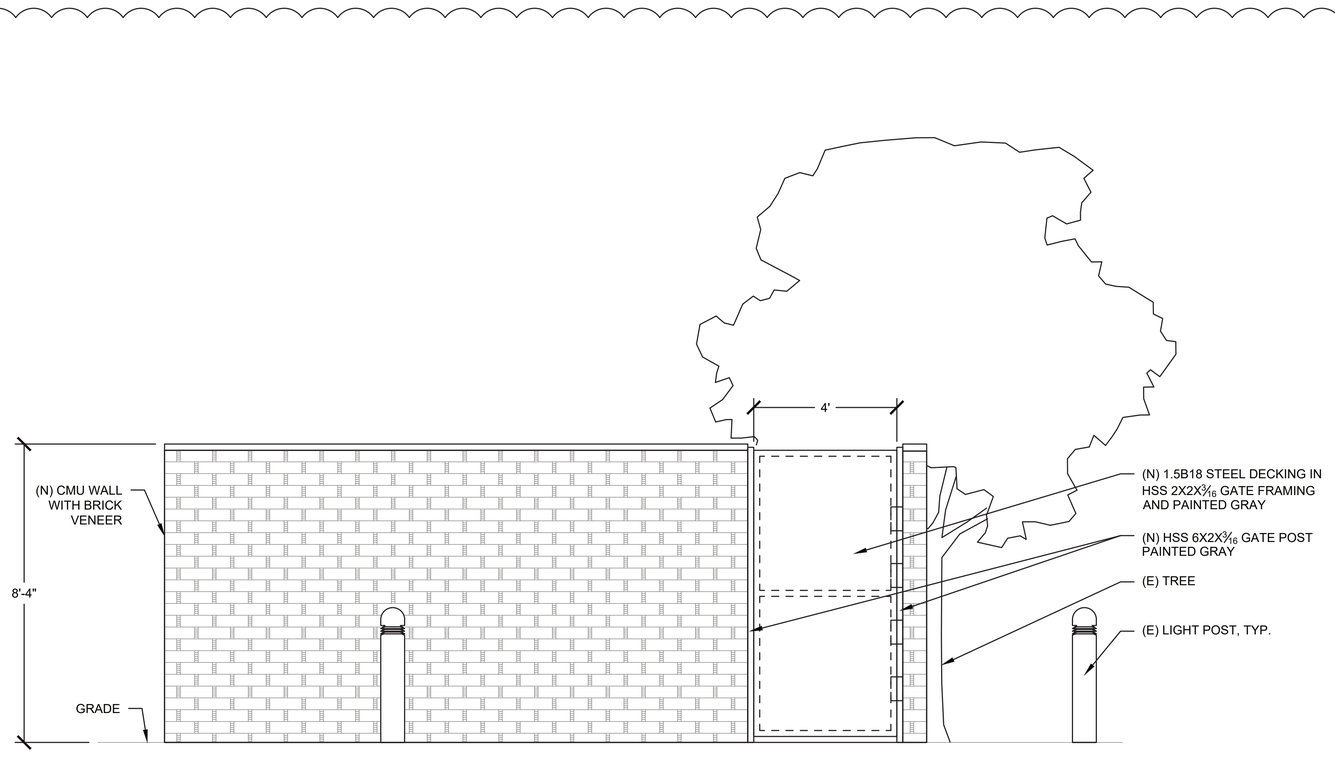
REV: A | PERMIT



C **ESS EQUIPMENT - ELEVATION VIEW**
SCALE: 1/2" = 1'-0"



B **WALL MOUNTED EQUIPMENT - ELEVATION VIEW**
SCALE: 1/2" = 1'-0"



A **ELECTRICAL ENCLOSURE ELEVATION**
SCALE: 1/2" = 1'-0"

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PALO ALTO, CA 94304
(650) 681-5000

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0 1/2" 1"

PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER
YOO JIN KIM
S 5771
STRUCTURAL
STATE OF CALIFORNIA

Digitally signed by Yoo Jin Kim
Date: 2021.03.16 15:27:53 -07'00'

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ENERGY STORAGE SYSTEM

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PLACERVILLE, CA 95667

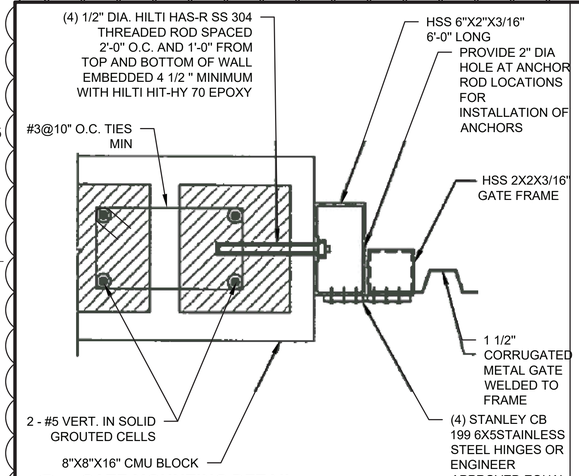
NO.	REVISION	DATE
A	ADDED CMU WALL ENCLOSURE, AHJ COMMENTS	3/19/21

STRUCTURAL ELEVATIONS

S-102

JB-95620974

REV: A | PERMIT

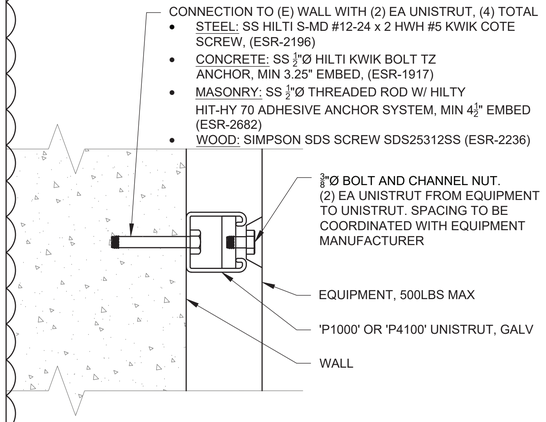


H GATE MOUNTING DETAIL

NTS

MASONRY NOTES

1. CONCRETE MASONRY MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE (ACI) 530.
2. CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C 90 AND SHALL BE MADE WITH LIGHTWEIGHT AGGREGATE. MINIMUM NET AREA COMPRESSIVE STRENGTH OF MASONRY UNITS SHALL BE 1,900 PSI AT 28 DAYS. COMPRESSIVE STRENGTH OF MASONRY SHALL BE DETERMINED BY THE UNIT STRENGTH METHOD AS SET FORTH IN ACI 530.1.
3. COMPRESSIVE STRENGTH OF MASONRY, f'm, SHALL BE AT 1,500 PSI AT 28 DAYS.
4. MORTAR SHALL BE TYPE M OR S AND SHALL COMPLY WITH ASTM C270, PROPORTIONS OR PROPERTIES SPECIFICATION. MIN. COMPRESSIVE STRENGTH OF MORTAR SHALL BE 2,000 PSI AT 28 DAYS.
5. GROUT SHALL COMPLY WITH ASTM C 476 PROPERTIES SPECIFICATION, OR SHALL BE PROPORTIONED TO OBTAIN A DOCUMENTED 28 DAY COMPRESSIVE STRENGTH OF 2,000 PSI.
6. REINFORCING STEEL SHALL COMPLY WITH ASTM A 615, GRADE 60. SHOP FABRICATE REINFORCING BARS WHICH ARE SHOWN TO BE BENT OR HOOKED.
7. ALL BOND BEAMS, REINFORCED CELLS AND CELLS WITH EXPANSION BOLTS, EMBED PLATES OR OTHER ANCHORS AND ALL CELLS BELOW GRADE SHALL BE GROUTED SOLID. GROUT PROCEDURE SHALL COMPLY WITH ACI 530.1.
8. PROVIDE REINFORCING BARS OF THE GIVEN SIZE AND SPACING SHOWN. LAP CONTINUOUS REINFORCING STEEL 40 BAR DIAMETERS UNLESS NOTED. PROVIDE MECHANICAL SPLICES FOR ALL BARS AT CONTRACTOR'S OPINION.
9. PROVIDE REINFORCING STEEL DOWELS OF THE SAME SIZE AND SPACING AS VERTICAL REINFORCING FROM THE SUPPORTING STRUCTURE. DOWELS SHALL HAVE STANDARD ACI HOOKS. LAP LENGTH DOWNS FROM FOUNDATION NOT OTHERWISE NOTED MAY BE 36 X BAR DIAMETER.



D WALL MOUNTED STRUT

S501 104 WALL MOUNTED STRUT DETAIL R/A

NTS

CONCRETE DESIGN

1. CONCRETE STRENGTH -PROVIDE CONCRETE WITH THE FOLLOWING STRENGTHS AT THE LOCATIONS NOTED. MIX DESIGN, SLUMP, AIR ENTRAINMENT, AGGREGATE SIZE, ETC. SHALL BE IN CONFORMANCE WITH THE ACI CODE, LATEST EDITION.
   LOCATION: ANY

   STRENGTH AT 28 DAYS: 2500 PSI

   A. ALL CONCRETE AGGREGATE IS HARD ROCK UON
   B. DESIGN MIX SHALL CONTAIN 5-1/2 SACKS OF CEMENT, MIN.
   C. TYPE I/II CEMENT TO MEET ASTM C150.
   D. MAX AGGREGATE SIZE SHALL BE 3/4"
   E. MAX WATER/CEMENT RATIO SHALL BE 0.45
   F. MAX SLUMP SHALL BE 4"

2. REINFORCING STEEL -ASTM A615 WITH THE FOLLOWING STRENGTHS:

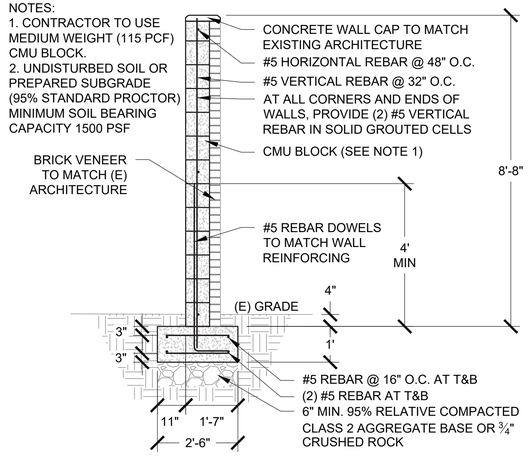
SIZE	STRENGTH:
#4 AND SMALLER	GRADE 60 (fy = 60000 PSI)
#5 AND LARGER	GRADE 60 (fy = 60000 PSI)

3. FABRICATE AND PLACE REINFORCEMENT IN ACCORDANCE WITH ACI PUBLICATION SP-66, ACI DETAILING MANUAL - LATEST EDITION.
4. PLACE CONCRETE IN COMPLIANCE WITH ACI 304. ALL CONCRETE SHALL BE MECHANICALLY VIBRATED.
5. CONCRETE COVER FOR REINFORCEMENT FOR NON-PRESTRESSED, CAST IN PLACE CONCRETE SHALL BE AS FOLLOWS:

CONDITION	COVER
CAST AGAINST EARTH	3"
EXPOSED TO WEATHER	
#5 AND SMALLER	1-1/2"
#6 AND LARGER	2"
SLAB-ON-GRADE	2"

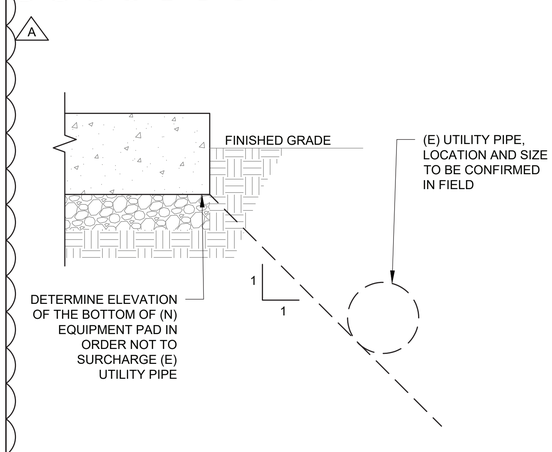
6. EMBEDS -ALL ITEMS TO BE CAST INTO CONCRETE SUCH AS REINFORCING DOWELS, BOLTS, ANCHORS, PIPES, SLEEVES, ETC., SHALL BE SECURELY AND ACCURATELY POSITIONED INTO THE FORMS PRIOR TO PLACING THE CONCRETE.
7. MAX. CONTINUOUS SLAB LENGTH SHOULD NOT EXCEED 50 FT W/O EXPANSION JOINT

NOTES:
1. CONTRACTOR TO USE MEDIUM WEIGHT (115 PCF) CMU BLOCK.
2. UNDISTURBED SOIL OR PREPARED SUBGRADE (95% STANDARD PROCTOR) MINIMUM SOIL BEARING CAPACITY 1500 PSF



G CMU WALL DETAIL (EAST WALL)

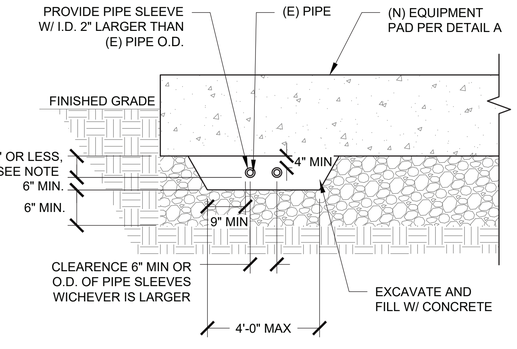
1/2" = 1'-0"



E PIPE UTILITIES ADJACENT TO EQUIPMENT PAD

NTS

NOTE: FOR PIPES MORE THAN 3'-0" BELOW CONCRETE PAD USE 90% COMPACTED BACKFILL.



C PIPE UTILITIES UNDER EQUIPMENT PAD

NTS

NOTES:
1. CONTRACTOR TO USE MEDIUM WEIGHT (115 PCF) CMU BLOCK.
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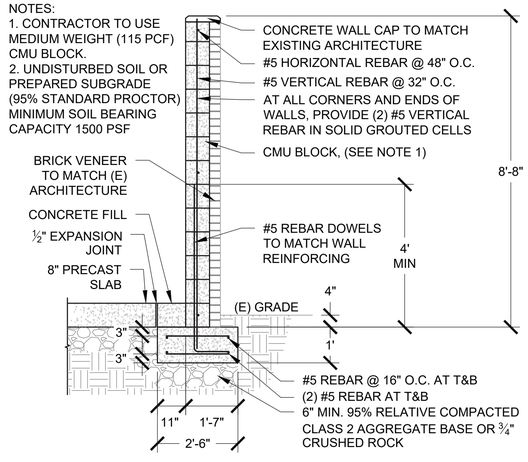
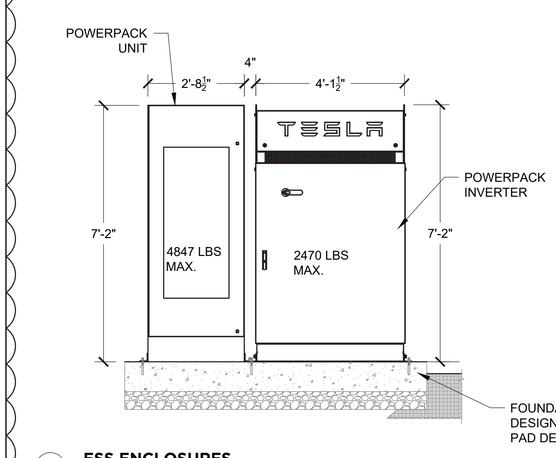


F CMU WALL DETAIL (CLOSE PROXIMITY)

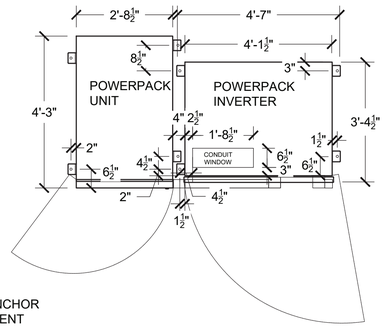
1/2" = 1'-0"



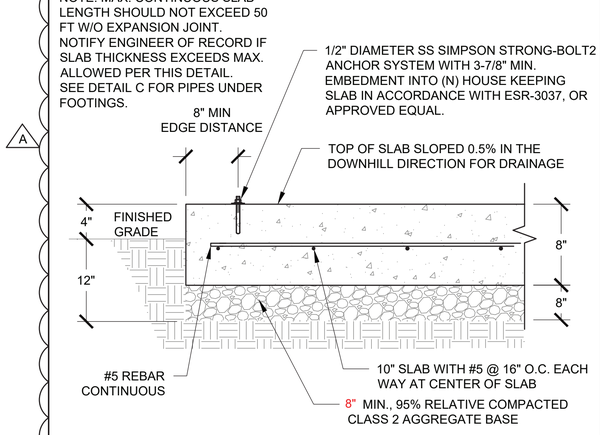
B ESS ENCLOSURES

NTS

NOTE: THE POWERPACK UNIT MAY BE PLACED ON THE LEFT OR RIGHT OF THE POWERPACK INVERTERS. CONTRACTOR TO OBTAIN CONDUIT WINDOW TEMPLATE PRIOR TO COMMENCING CONSTRUCTION AND UTILIZE TEMPLATE WHEN LAYING OUT CABINETS



NOTE: MAX. CONTINUOUS SLAB LENGTH SHOULD NOT EXCEED 50 FT W/O EXPANSION JOINT.
NOTIFY ENGINEER OF RECORD IF SLAB THICKNESS EXCEEDS MAX. ALLOWED PER THIS DETAIL.
SEE DETAIL C FOR PIPES UNDER FOOTINGS.



A PRECAST EQUIPMENT PAD & ANCHOR SECTION

NTS

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PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER YOO JIN KIM S 5771 STRUCTURAL STATE OF CALIFORNIA

Digitally signed by Yoo Jin Kim
Date: 2021.03.16 15:27:41 -07'00'

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STRUCTURAL DETAILS

S-501

JB-95620974

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