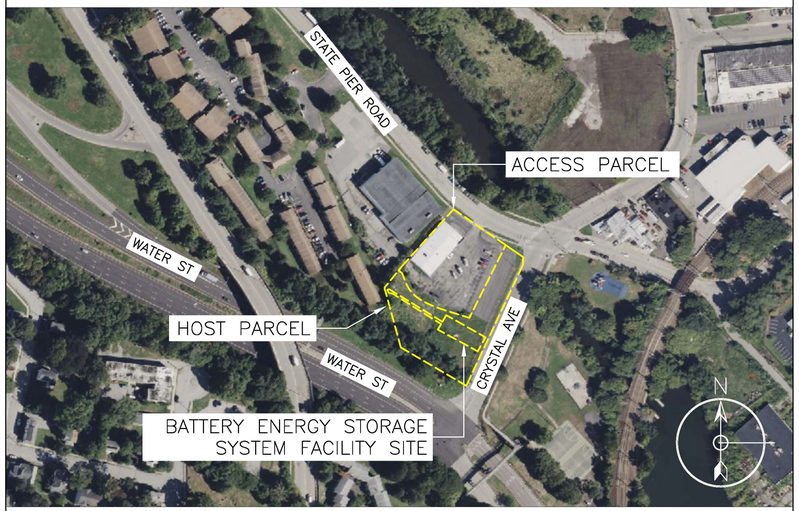
Q CELLS – STATE PIER RD
STATE PIER RD, NEW LONDON, CT 06320
4,896KW/19,584KWH BATTERY ENERGY STORAGE SYSTEM

SITE



SYSTEM SPECIFICATION

BESS	QTY	KW	KWH
TESLA MEGAPACK 2XL	5	979.2	3916.8
TOTAL	5	4896	19584

APPLICABLE CODES:
1. 2020 NATIONAL ELECTRIC CODE (NEC)
2. 2021 INTERNATIONAL BUILDING CODE (IBC)
3. 2022 CONNECTICUT STATE FIRE SAFETY CODE – BASED ON 2021 INTERNATIONAL FIRE CODE (IFC)
4. 2023 NFPA 855
5. 2022 NFPA 110
6. 2022 NFPA 111
7. 2023 NESC

PROJECT TEAM

ENGINEER:
HENRY HOLBROOK HYDE III
HYDE RENEWABLES, INC.
4735 WALNUT STREET, SUITE #110
BOULDER, CO 80301
WWW.HYDERENEWABLES.COM
P: (720) 900–1009

SCOPE OF WORK

INSTALLATION OF A NEW BATTERY ENERGY STORAGE SYSTEM AND ASSOCIATED EQUIPMENT. THE SYSTEM WILL BE INTERCONNECTED IN AN EXISTING MEDIUM VOLTAGE UTILITY VAULT.

HYDE RENEWABLES
ADVANCED ENGINEERING SOLUTIONS

qcells
Completely Clean Energy

STATE OF CONNECTICUT · HENRY HOLBROOK HYDE III · No. 32042 · LICENSED PROFESSIONAL ENGINEER

SCALE: AS NOTED
(PRINT ON 36"X24")

FK	N	REDESIGN	06/26/24
RK	M	AHJ COMMENTS	03/13/23
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RK	G	60% UPDATE	07/27/23
ST	F	REDLINES	06/12/23
ST	E	REDLINES	05/23/23
CB	D	60%	05/11/23
CB	C	30%	04/12/23
CB	B	INTXN DRAFT 2	02/09/23
CB	A	INTXN DRAFT 1	02/08/23
BY	REV	ISSUE	DATE

FIRM NAME AND ADDRESS
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STATE PIER RD

STATE PIER RD
NEW LONDON, CT 06320
LAT=N 41° 21'38.4"
LON=W 72° 05'56.0"

PROJECT #: 069–1000

SHEET TITLE
TITLE PAGE

DRAWN BY	SHEET #
CB	E.000
DATE 02/08/23	
CHECKED BY TRIPP HYDE	

CONSTRUCTION NOTES

1. DISRUPTION OF ANY BUILDING SYSTEMS, INCLUDING POWER, TELEPHONE, HVAC, ETC., MUST BE COORDINATED AND APPROVED.
2. ALL ENERGY STORAGE COMPONENTS AND ELECTRICAL EQUIPMENT MUST BE ANCHORED AND SEISMICALLY BRACED PER APPLICABLE CODES.
3. PROJECT SITE MUST BE MAINTAINED IN A CLEAN AND ORDERLY FASHION. ALL TRASH AND DEBRIS MUST BE COLLECTED AND REMOVED ON A DAILY BASIS. ALL MUD AND DEBRIS MUST BE KEPT OUT OF PUBLIC RIGHT-OF-WAYS.
4. CONSTRUCTION MATERIALS ON SITE MUST BE PROPERLY STACKED AND PROTECTED IN A SAFE MANNER AS TO PREVENT DAMAGE AND DETERIORATION UNTIL USE.
5. PROVIDE BARRIERS TO PREVENT UNAUTHORIZED ENTRY INTO CONSTRUCTION AREAS WHILE MAINTAINING SITE ACCESS TO EMPLOYEES.
6. ALL FINISHES AND CONSTRUCTION MUST BE PROTECTED BY THE CONTRACTOR FROM POTENTIAL DAMAGE CAUSED BY CONSTRUCTION ACTIVITY. DAMAGE TO FINISHES OR CONSTRUCTION MUST BE REPAIRED OR REPLACED (OWNER'S DECISION) BY THE CONTRACTOR WITH IDENTICAL MATERIAL AND/OR FINISHES. CONTRACTOR MUST MAKE AND MAINTAIN A PHOTOGRAPHIC RECORD NOTEBOOK DATED/INDEXED PHOTOS.
7. ALL TRENCHES AND EXCAVATIONS MUST BE CONSTRUCTED IN STRICT COMPLIANCE WITH THE APPLICABLE SECTIONS OF STATEAND FEDERAL O.S.H.A. REQUIREMENTS AND OTHER APPLICABLE SAFETY ORDINANCES. CONTRACTOR MUST BEAR FULL RESPONSIBILITY FOR TRENCH SHORING DESIGN AND INSTALLATION.
8. PROTECTIVE BARRICADES, FENCING, HANDRAILS, AND BRIDGES, TOGETHER WITH WARNING AND GUIDANCE DEVICES AND SIGNS, MUST BE UTILIZED SO THAT PASSAGEWAY FOR PEDESTRIANS, ESPECIALLY DISABLED PERSONS, IS SAFE AND WELL DEFINED.
9. WALKWAYS IN CONSTRUCTION AREAS MUST BE MAINTAINED AT LEAST 4 FEET IN WIDTH OR EQUAL TO SIDEWALK/ENTRY WAY WIDTH, WHICHEVER IS GREATER, UNLESS EXPRESSLY PERMITTED OTHERWISE BY THE CUSTOMER IN WRITING; AND MUST BE FREE OF ABRUPT CHANGES IN THE GRADE. THESE WALKWAYS MUST BE CLEARLY MARKED AND PROVIDE SAFE PASSAGE FOR PEDESTRIANS. OBSTRUCTIONS WITHIN THE WALKWAYS MUST BE ILLUMINATED DURING HOURS OF DARKNESS. MINIMUM VERTICAL CLEARANCE TO ANY OBSTRUCTION WITHIN THE WALKWAY MUST BE 6'-8'.
10. WHERE WALKWAYS, PATHWAYS, OR ACCESS WAYS ARE CLOSED BY THE WORK, AN ADA COMPLIANT, OR ALTERNATE WALKWAY MUST BE PROVIDED, PREFERABLY WITHIN THE IMMEDIATE LOCATION OF THE PATHWAY OR ACCESS WAY TO BE CLOSED. WHERE IT IS NECESSARY TO DIVERT PEDESTRIANS INTO MAJOR DETOUR AND/OR INTO A PARKING LANE OR TRAFFIC AREA, AT NO TIME SHOULD PEDESTRIANS BE DIVERTED INTO A PORTION OF A STREET USED FOR VEHICULAR TRAFFIC. ANY DEVIATION FROM THE ABOVE MUST HAVE PRIOR APPROVAL OF THE CUSTOMER.
11. AT LOCATIONS WHERE ADJACENT ALTERNATE WALKWAYS CANNOT BE PROVIDED, ADA COMPLIANT DETOURS WILL BE CLEARLY PLANNED, MARKED, AND CONSTRUCTED. APPROPRIATE SIGNS AND BARRICADES MUST BE INSTALLED AT THE LIMITS OF CONSTRUCTION AND IN ADVANCE OF THE CLOSURE (OR DETOUR) IN ORDER TO DIVERT PEDESTRIANS TO THE APPROPRIATE WALKWAY OR DETOUR
12. ASPHALT AND CONCRETE BARRIERS: ALL ASPHALT TRAFFIC IS RATED. ALL ASPHALT REPAIRS MUST BE REPAIRED TO MATCH ADJACENT BASE COURSE, BINDER COURSE, AND WEARING COURSES. CONTRACTOR MUST COVER ASPHALT TRENCHES WITH HOT MIX ASPHALT, ROLL FOR COMPACTION, AND COVER THE WIDTH OF THE TRENCH WITH A SLURRY SEAL AFTER THE CURE PERIOD. CONCRETE MUST BE REPLACED "JOINT-TO-JOINT" WHEN DISTURBED DURING CONSTRUCTION.
13. UNDERGROUND BUILDUP IN FIRE LANES WILL MEET EXISTING FIRE LANE SPECS AND ROADWAYS WILL MEET EXISTING ROADWAY SPECS. CONTRACTOR MUST SUBMIT CUT SHEETS FOR THESE REPAIRS.
14. ENSURE THAT ALL REMAINING ACTIVE AND NEW DRAINAGE AND UTILITY LINES ARE PROTECTED AND UNDAMAGED FROM TRENCHING AND FOOTING EXCAVATIONS FOR NEW FOOTINGS, PARTICULARLY FOR NEW FENCING AND WALLS.
15. DELIVERIES MUST BE KEPT AWAY FROM EMPLOYEES BY SEPARATING THE DELIVERY AREA OR ESCORTING THE DELIVERIES WHILE ON SITE.
16. ALL SIGNAGE REMOVED DURING THE COURSE OF CONSTRUCTION MUST BE RELOCATED OR REPLACED.
17. ALL LANDSCAPING DAMAGED DURING THE COURSE OF CONSTRUCTION MUST BE REPAIRED BACK TO ITS ORIGINAL CONDITION.
18. ALL EXTERIOR STEEL MUST BE CORROSION RESISTANT, HOT DIPPED GALVANIZED OR GALVANIZED WITH COATED FINISH.
19. OPENINGS AROUND ELECTRICAL PENETRATIONS INTO OR THROUGH FIRE-RESISTANT RATED WALLS, PARTITIONS, FLOORS OR CEILINGS SHALL BE FIRESTOPPED USING APPROVED METHODS AND MATERIALS ACCORDING TO MANUFACTURER'S INSTALLATION REQUIREMENTS TO MAINTAIN FIRE RESISTANCE RATINGS PER NEC 300.21 AND IBC 714.4.
20. PIPING, DUCTS OR EQUIPMENT FOREIGN TO ELECTRICAL EQUIPMENT SHALL NOT BE PERMITTED TO BE LOCATED WITHIN THE DEDICATED SPACE ABOVE THE ELECTRICAL EQUIPMENT PER NEC 110.26(E)(1)(A).
21. CONTRACTOR SHALL ADHERE TO 2002 CONNECTICUT GUIDELINES FOR EROSION AND SEDIMENT CONTROL, AS AMENDED.

WIRING AND WIRING METHODS

1. ALL GROUNDED CONDUCTORS MUST BE COLOR-CODED IN COMPLIANCE WITH NEC ARTICLE 200.6.
2. ALL DC EQUIPMENT AND COMPONENTS MUST BE LISTED FOR USE AT 1000VDC UON.
3. ALL CONDUCTORS IN VERTICAL RACEWAYS MUST COMPLY WITH NEC ARTICLE 300.19(A), 300.19(B), 376.30(B), AND TABLE 300.19(A).
4. ALL CONNECTIONS AND CONNECTORS MUST BE TORQUED PER DEVICE LISTING OR MANUFACTURER'S RECOMMENDATIONS.
5. WIRE NUTS MUST NOT BE USED ON ENERGY STORAGE CONDUCTORS. SPLICES AND CONNECTORS MUST BE INSULATED BY APPROVED MEANS. UL LISTED ELECTRICAL TAPE ALONE IS NOT SUITABLE AS THE ONLY INSULATION MEANS.
6. ENERGY STORAGE OUTPUT CIRCUITS, AND INVERTER OUTPUT CIRCUITS MUST BE PROTECTED IN ACCORDANCE WITH NEC ARTICLE 240.
7. PROTECTIVE BUSHINGS MUST BE USED FOR ALL CONDUIT CONNECTIONS.

WIRING AND BONDING METHODS

1. GROUND AND BOND ALL EQUIPMENT, SUPPORTING STRUCTURES, MOUNTS, RACEWAYS, PANELBOARDS, SWITCHBOARDS, ETC., IN ACCORDANCE WITH NEC ARTICLE 250 AND 690.43.
2. THE EQUIPMENT GROUNDING CONNECTION TO ANY MODULE OR COMPONENT OF THIS STORAGE SYSTEM MUST BE ARRANGED SUCH THAT REMOVAL FROM THE SYSTEM DOES NOT INTERRUPT THE GROUND FAULT PATH OF ANY COMPONENT WITHIN THE SYSTEM.
3. ALL GROUNDING AND BONDING EQUIPMENT MUST BE LISTED AND USED IN ACCORDANCE WITH ITS LISTING.

INVERTER NOTES

1. INVERTER MUST HAVE GROUND FAULT DETECTION NOTIFICATION AND INTERRUPTION FOR DC CIRCUITS SUPPLYING POWER TO IT PER NEC 690.41(B).
2. THE INVERTERS MUST AUTOMATICALLY DE-ENERGIZE THEIR OUTPUT TO THE CONNECTED ELECTRICAL SYSTEM UPON LOSS OF VOLTAGE IN THAT SYSTEM, AND MUST REMAIN IN THAT STATE UNTIL THE VOLTAGE HAS BEEN RESTORED IN COMPLIANCE WITH NEC ARTICLE 690.61.
3. ALL SOLAR AND STORAGE INVERTERS MUST BE UL-LISTED OR MUST OBTAIN UL FIELD CERTIFICATION.

EQUIPMENT NOTES

1. ALL EQUIPMENT MUST BE LISTED/LABELED BY A NATIONALLY RECOGNIZED TESTING LABORATORY.
2. ALL DEVICES AND EQUIPMENT INSTALLED OUTDOORS OR EXPOSED TO THE WEATHER MUST BE OF WEATHERPROOF CONSTRUCTION AND RATED FOR UV EXPOSURE.
3. ALL FIELD-INSTALLED JUNCTION, PULL, AND OUTLET BOXES LOCATED BEHIND MODULES MUST BE ACCESSIBLE DIRECTLY OR BY DISPLACEMENT OF THE MODULE(S) SECURED BY REMOVABLE FASTENERS.
4. PROVIDE "WARNING: POTENTIAL ARC FLASH HAZARD" LABEL FOR ALL SWITCHBOARDS, PANELBOARDS, METER SOCKET ENCLOSURES, AND MOTOR CONTROL CENTERS PER NEC ARTICLE 110.16. "FLASH PROTECTION" APPLIES TO DESIGNATED SCOPE OF WORK ONLY.

EQUIPMENT PADS AND CONDUIT ROUTING

1. CONDUIT ROUTING IS DIAGRAMMATIC IN NATURE. EXACT ROUTING AND LOCATIONS WILL BE COORDINATED IN FIELD UON.
2. FOR EXPANSION COUPLING REFER NEC 300.7(B)

CODES

1. ALL COMPONENTS MUST BE DESIGNED, MANUFACTURED, AND TESTED IN ACCORDANCE WITH THE LATEST APPLICABLE STANDARDS OF NEMA, ANSI, NEC, AND UL.
2. SPECIFIC REQUIREMENTS FOR INDIVIDUAL COMPONENTS OF ANY POWER SYSTEMS INCLUDE BUT ARE NOT LIMITED TO THE GUIDELINES SHOWN HEREIN.
3. THE WORK ON THE PROJECT MUST BE DESIGNED AND INSTALLED IN ACCORDANCE WITH BASED ON THE NATIONAL ELECTRIC CODE AND WITH THE LATEST EDITION OF ALL APPLICABLE CODES, STANDARDS, AND RECOMMENDATIONS OF THE FOLLOWING AGENCIES:

* ANSI – AMERICAN NATIONAL STANDARDS INSTITUTE
* ASCE – AMERICAN SOCIETY OF CIVIL ENGINEERS
* ADA – AMERICAN DISABILITIES ACT
* ASME – AMERICAN SOCIETY OF MECHANICAL ENGINEERS
* ASTM – AMERICAN SOCIETY FOR TESTING AND MATERIALS
* CBMA – CERTIFIED BALLAST MANUFACTURERS ASSOCIATION
* EIA – ELECTRONIC INDUSTRIES ASSOCIATION
* ETL – ELECTRICAL TESTING LABORATORIES
* IBC – INTERNATIONAL BUILDING CODE
* IEEE – INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS
* IESNA – ILLUMINATION ENGINEERING SOCIETY OF NORTH AMERICA
* ICEA – INSULATED CABLE ENGINEERS ASSOCIATION
* IAEI – INTERNATIONAL ASSOCIATION OF ELECTRICAL INSPECTORS
* IPCEA – INSULATED POWER CABLE ENGINEERS ASSOCIATION
* IPMVP – INTERNATIONAL PERFORMANCE MEASUREMENTS AND VERIFICATION PROTOCOL
* NFPA – NATIONAL FIRE PROTECTION ASSOCIATION
* NEMA – NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
* NESC – NATIONAL ELECTRICAL SAFETY CODE
* NETA – NATIONAL ELECTRICAL TESTING ASSOCIATION
* NEC – NATIONAL ELECTRICAL CODE
* NECA – NATIONAL ELECTRIC CONTRACTORS ASSOCIATION
* OSHA – OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
* UL – UNDERWRITERS LABORATORY

INSPECTIONS

ALL THIRD PARTY TESTING, INSPECTIONS, AND LABELING OF SERVICE EQUIPMENT TO BE PERFORMED BY A NRTL SUCH AS INTERTEK.

ABBREVIATIONS

AC – ALTERNATING CURRENT
AFC – AVAILABLE FAULT CURRENT
AFG – ABOVE FINISH GRADE
AFF – ABOVE FINISH FLOOR
AIC – AMPERES INTERRUPT CURRENT
AL – ALUMINUM CONDUCTOR OR BUS
ATS – AUTOMATIC TRANSFER SWITCH
AWG – AMERICAN WIRE GAUGE
BSCW – BARE STRANDED COPPER WIRE
BTCW – BARE TINNED COPPER WIRE
C – CONDUIT
CE – CONCRETE ENCASED
CO – CONDUIT ONLY
COMM – COMMUNICATIONS CIRCUIT OR CONDUIT AS NOTED
COU – CONDITIONS OF USE
CPY – CANOPY
CT – CURRENT TRANSFORMER
CU – COPPER CONDUCTOR OR BUS
DAS – DATA ACQUISITION SYSTEM
DC – DIRECT CURRENT
DB – DIRECT BURIED
DISC – DISCONNECT
(E) – EXISTING
EGC – EQUIPMENT GROUND CONDUCTOR
EQ – EQUAL
EMT – ELECTRICAL METALLIC TUBING
ESS – ENERGY STORAGE SYSTEM
FBO – FURNISHED BY OTHERS
FIBO – FURNISHED AND INSTALLED BY OTHERS
FLA – FULL LOAD AMPS
FMT – FLEXIBLE METALLIC TUBING
GEC – GROUND ELECTRODE CONDUCTOR
GFCI – GROUND FAULT CURRENT INTERRUPTER
GFP – GROUND FAULT PROTECTION
GND – GROUND
GRC – GALVANIZED RIGID CONDUIT
HH – HANDHOLE
IBO – INSTALLED BY OTHERS
IG – ISOLATED GROUND CONDUCTOR
IMC – INTERMEDIATE METAL CONDUIT
ISC – SHORT CIRCUIT CURRENT
ISCW – INSULATED STRANDED COPPER WIRE
KAIC – KILOAMPERES INTERRUPT CURRENT
KVA – KILOVOLT-AMPERES
KW – KILOWATTS
LFMC – LIQUIDTIGHT FLEXIBLE METAL CONDUIT
MCA – MINIMUM CIRCUIT AMPERES
MLO – MAIN LUGS ONLY
MLPE – MODULE LEVEL POWER ELECTRONICS
MT – MONITORING
MVPS – MEDIUM VOLTAGE POWER STATION
(N) – NEW
NC – NORMALLY CLOSED
NIC – NOT IN CONTRACT
NIS – NOT IN SCALE
NTS – NOT TO SCALE
NEC – NATIONAL ELECTRICAL CODE
NO – NORMALLY OPEN
NRTL – NATIONALLY RECOGNIZED TESTING LABORATORY
NS – NO SCALE
NL – NIGHT LIGHT, TIME CLOCK, OR PHOTOCELL CONTROLLED LUMINAIRE
OAE – OR APPROVED EQUIVALENT
OC – ON CENTER
OCP – OVERCURRENT PROTECTION
OCPD – OVERCURRENT PROTECTION DEVICE
O/H – OVERHEAD
OVP – OVERVOLTAGE PROTECTION
PG&E – PACIFIC GAS & ELECTRIC
PT – POTENTIAL TRANSFORMER
PV – PHOTOVOLTAIC
PVC – POLYVINYL CHLORIDE CONDUIT
PMRS – PERFORMANCE MONITORING AND REPORTING
POCC – POINT OF COMMON COUPLING
POT – PATH OF TRAVEL
RAC – RIGID ALUMINUM CONDUIT
RMT – RIGID METAL CONDUIT
RSD – RAPID SHUTDOWN DEVICE
RSS – RAPID SHUTDOWN SYSTEM
(R) – REMOVE
(RL) – RELOCATE, RELOCATED
SLD – SINGLE LINE DIAGRAM
SPD – SURGE PROTECTIVE DEVICE
S/S – STAINLESS STEEL
STP – SHIELDED TWISTED PAIR
SSBJ – SUPPLY SIDE BONDING JUMPER
STC – STANDARD TEST CONDITIONS
TYP – TYPICAL
TVSS – TRANSIENT VOLTAGE SURGE SUPPRESSOR
U/G – UNDERGROUND
UON – UNLESS OTHERWISE NOTED
UTP – UNSHIELDED TWISTED PAIR
VD – VOLTAGE DROP
VOC – OPEN CIRCUIT VOLTAGE
W – WALL MOUNTED
WP – EQUIPMENT OF WEATHERPROOF CONSTRUCTION OR DESIGN
WW – WIREWAY
XFMR – TRANSFORMER

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SHEET TITLE
GENERAL

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CB	E.001
DATE 02/08/23	
CHECKED BY TRIPP HYDE	

SINGLE LINE DIAGRAM

— AC —	AC CABLE
— DC —	DC CABLE
— GND —	GROUND CABLE
— UGE —	UNDERGROUND ELECTRIC LINE
———∃	CONDUIT CAP
———)	CONTINUATION
— FO —	FIBER OPTIC CABLE
N / G	"N" INDICATES NEUTRAL BUS "G" INDICATES GROUND BUS
G	GENERATOR
400A 3P3N	AUTOMATIC TRANSFER SWITCH 400A, 3–POLE, SOLID NEUTRAL
400A 4P	AUTOMATIC TRANSFER SWITCH WITH ISOLATION BYPASS, 400A, 4–POLE
PANEL HA 225A MCB | SEC 2	PANELBOARD "HA" (2 SECTIONS) 225A MAIN CIRCUIT BREAKER
PANEL LA 225A MLO	PANELBOARD "LA" 225A MAIN LUGS ONLY
	TRANSFORMER VOLTAGE AND RATING AS NOTED
	NEUTRAL GROUNDING RESISTOR
	EARTH GROUND
	COPPER CLAD GROUND ROD
C/T	CABLE TAP BOX
	INVERTER/RECTIFIER
	DC–DC CONVERTER
	BATTERY
Y: ZMR X2–X4	CURRENT TRANSFORMER "Y" = PRIMARY CURRENT "Z" = SECONDARY CURRENT X2=X4 = TAP SETTING
(3) PT 4:1	POTENTIAL TRANSFORMER "(2)" INDICATES QUANTITY "4:1" INDICATES RATIO
Y: ZMR X2–X4	GROUND FAULT CURRENT XFMR
M	"M" = METER "T" = TEMP PROBE "ST" = SHUNT TRIP

SINGLE LINE DIAGRAM

	MOTOR START WITH OPTIONAL HOA AND OVERLOAD
V	VARIABLE FREQUENCY DRIVE
100AF 100AT 10KAIC	FIXED–MOUNT ENCLOSED CIRCUIT BREAKER, AIC AS NOTED
100AF 100AT	FIXED–MOUNT CIRCUIT BREAKER "F" = FRAME RATING "T" = TRIP RATING
100AS	DISCONNECT SWITCH "S" = SWITCH RATING
100AS 100AF	FUSED DISCONNECT SWITCH CLASS L OR R FUSES AS NOTED "S" SWITCH, "F" FUSE RATINGS
(3) 800AF 600AT LSIG	DRAWOUT CB – LOW VOLTAGE INSULATED CASE OR AIR TYPE LSIG = ELECTRONIC TRIP DEVICE "L" = LONG TIME TRIP "S" = SHORT TIME TRIP "I" = INSTANTANEOUS TRIP "G" = GROUND FAULT
100A	DRAWOUT FUSE LOW VOLTAGE INSULATED CASE OR AIR TYPE
52 2000AF 1600AT	DRAWOUT CIRCUIT BREAKER – MED VOLTAGE VACUUM OR ARC RESISTANT TYPE "F" FRAME, "T" TRIP RATING
• •	TAP CONNECTORS
	CABLE LIMITERS
	MEDIUM VOLTAGE LOAD/DEAD–BREAK ELBOW OR STRESS CONE
	SURGE ARRESTOR AIR GAP
	SURGE ARRESTOR MOV
	THERMAL OVERLOAD
	GROUNDED BAR WITH EARTH CONNECTION

ANNOTATION SYMBOLS

X	NOTE REFERENCE SYMBOL
X	REVISION REFERENCE SYMBOL
	RELOCATE EXISTING DEVICE
A X	LIGHT FIXTURE TAG "A" TYPE, "X" QUANTITY

PHASE	240/120V, 1ϕ	240/120V, 3ϕ, HIGH–LEG	208/120V, 3ϕ	480/277V, 3ϕ
A	BLACK	BLACK	BLACK	BROWN
B	RED	RED	RED	PURPLE
C	N/A	ORANGE	BLUE	YELLOW
NEUTRAL	WHITE	WHITE	WHITE	WHITE
GROUND	GREEN	GREEN	GREEN	GREEN

PHASE	DC (600V)	DC (1000V)	DC (1500V)	DC (2000V)
POSITIVE	RED	RED	RED	RED
NEGATIVE	BLACK	BLACK	BLACK	BLACK
GROUND	GREEN	GREEN	GREEN	GREEN

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LEGEND

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CB	E.002
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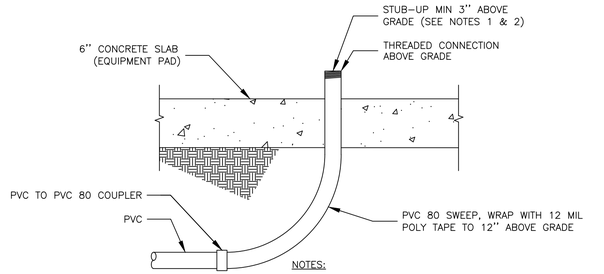
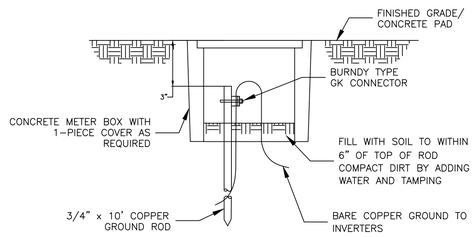
CHECKED BY: TRIPP HYDE	



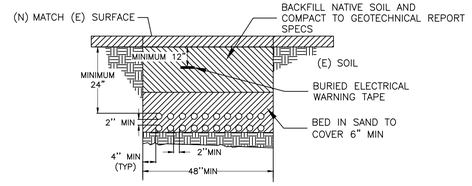
NOTES:

1. INITIALLY INSTALL COUPLING AND CAP TO PREVENT DAMAGE TO STUB-UP UNTIL GEAR IS SET.
2. INSTALL ROUNDED FITTING BEFORE PULLING CABLES TO AVOID DAMAGE TO CABLES.
3. FOR MV CONDUCTORS USE MIN 18" SWEEP AND RMC

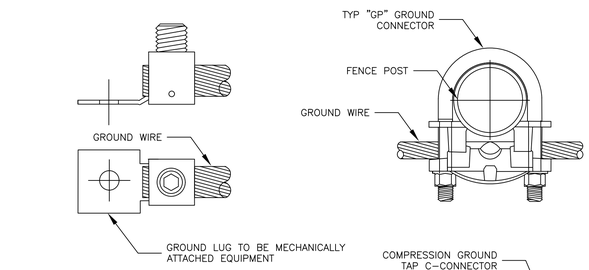
A EQUIPMENT PAD STUB UP DETAIL
SCALE: N.T.S



B TYPICAL GROUND WELL DETAIL
SCALE: N.T.S

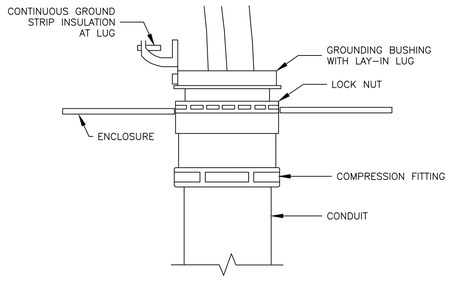


C DC TRENCH DETAIL
SCALE: N.T.S

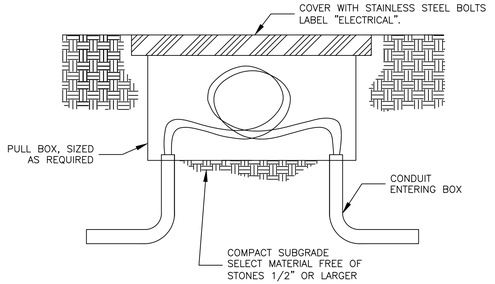


NOTE:
BURNDY HYGROUND FITTING OR SIMILAR

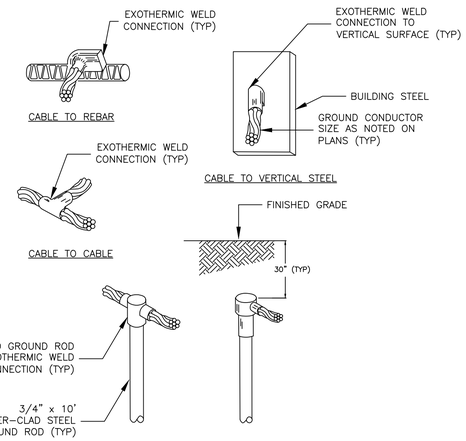
D GROUNDING CONNECTION DETAILS
SCALE: N.T.S



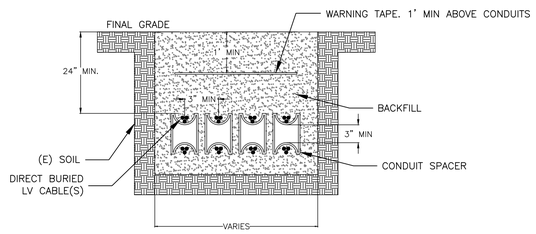
E CONDUIT GROUNDING DETAIL
SCALE: N.T.S



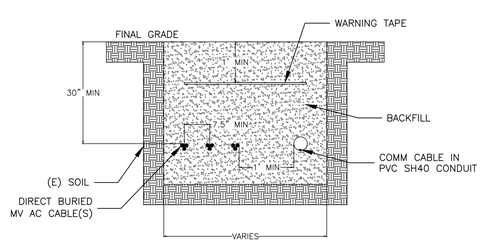
F UNDERGROUND PULLBOX SECTION DETAIL
SCALE: N.T.S



G GROUNDING CONNECTION DETAILS
SCALE: N.T.S



H TWO LAYER DIRECT BURIED LV CABLES
SCALE: N.T.S



I MV CABLES WITH COMM CABLES TRENCH DETAIL
SCALE: N.T.S

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STATE OF CONNECTICUT · MATTHEW HOLBROOK HYDE · No. 32042 · LICENSED PROFESSIONAL ENGINEER

SCALE: AS NOTED
(PRINT ON 36"X24")

BY	REV	ISSUE	DATE
FK	N	REDESIGN	06/26/24
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AR	L	90%	01/03/24
RK	K	REDLINES	12/07/23
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CB	B	INTXN DRAFT 2	02/09/23
CB	A	INTXN DRAFT 1	02/08/23

FIRM NAME AND ADDRESS
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720-900-1009
WWW.HYDERENEWABLES.COM

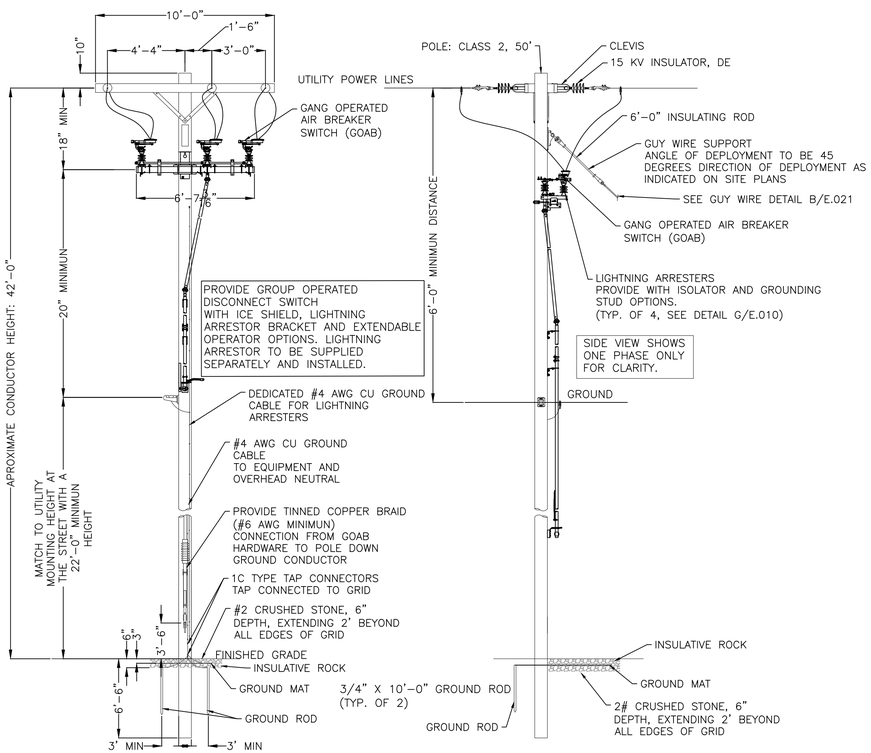
PROJECT NAME AND ADDRESS
Q CELLS
STATE PIER RD

STATE PIER RD
NEW LONDON, CT 06320
LAT=N 41° 21'38.4"
LON=W 72° 05'56.0"

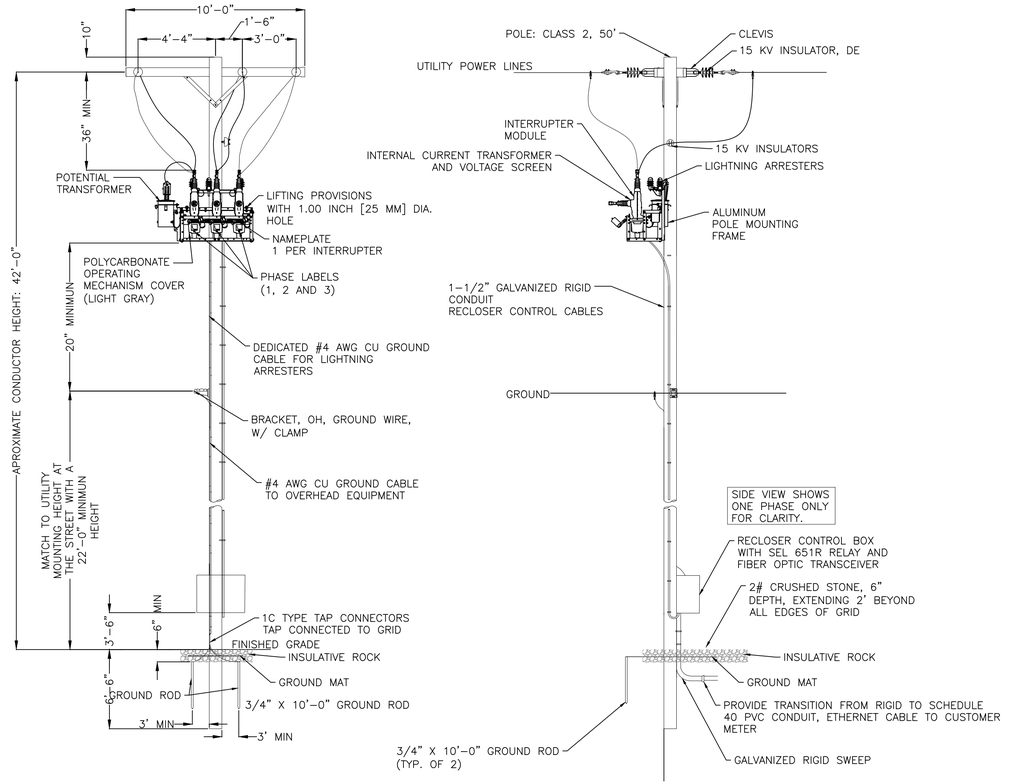
PROJECT #: 069-1000

SHEET TITLE
DETAILS 01

DRAWN BY	SHEET #
CB	E.010
DATE 02/08/23	
CHECKED BY TRIPP HYDE	



A GENERATOR DISCONNECT
SCALE: N.T.S



B CUSTOMER RECLOSER
SCALE: N.T.S

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Q CELLS
STATE PIER RD

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NEW LONDON, CT 06320
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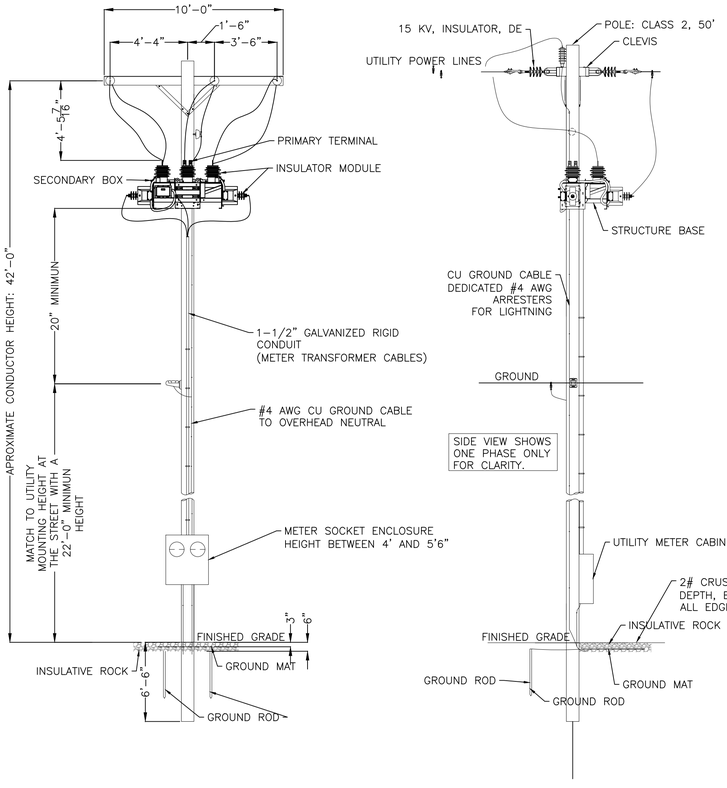
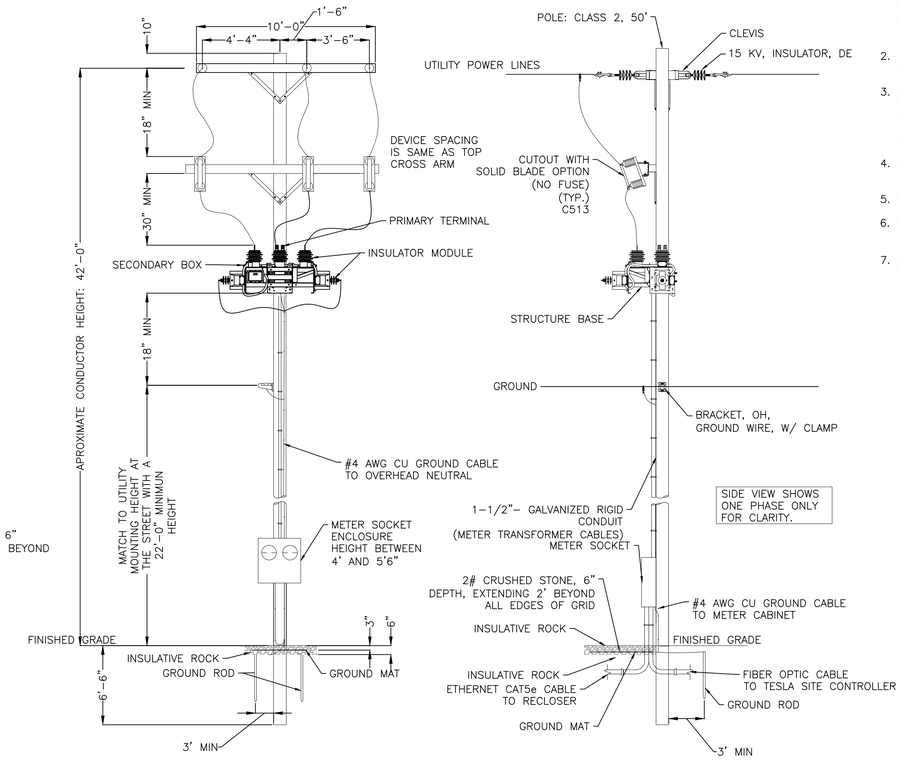
PROJECT #: 069-1000

SHEET TITLE
DETAILS 02 N

DRAWN BY	SHEET #
CB	E.011
DATE 02/08/23	
CHECKED BY TRIPP HYDE	



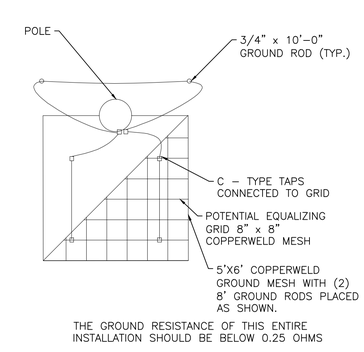
A UTILITY METER POLE
SCALE: N.T.S



B CUSTOMER METER WITH DISCONNECT POLE
SCALE: N.T.S

GENERAL NOTES

1. DETAILS SHOWN ARE PROVIDED FOR INFORMATION ONLY. EQUIPMENT CLEARANCES AND CONFIGURATION WILL VARY BASED ON EQUIPMENT SELECTION. FINAL DESIGN TO COMPLY WITH NATIONAL ELECTRIC CODE AND NATIONAL ELECTRIC SAFETY CODE. CLEARANCES ARE TO MEET NATIONAL ELECTRIC SAFETY CODE TABLE 232-1.
2. ALL CABLES AND EQUIPMENT INSTALLED ON POLE TO MEET RATINGS AS CALLED FOR ON 3-LINE DIAGRAM.
3. PROVIDE GROUND CONNECTION FOR POLE MOUNTED EQUIPMENT INCLUDING BUT NOT LIMITED TO: GROUP OPERTATED DISCONNECT SWITCH HARDWARE, METERING TRANSFORMER MOUNTING BRACKET, METER ENCLOSURE AND EXPOSED RIGID METALLIC CONDUITS.
4. RECLOSER TO BE PROVIDED WITH TRANSFORMER OPTION FOR SUPPLY OF 120V SINGLE PHASE POWER TO CONTROL BOX.
5. PROVIDE PULL CORDS IN ALL EMPTY CONDUITS.
6. PROVIDE SEPARATE GROUND CONNECTION FOR LIGHTNING ARRESTERS. #4 AWG CU.
7. PROVIDE EXPANSION JOINTS FOR ALL PVC CONDUITS PENETRATING GRADE.



THE GROUND RESISTANCE OF THIS ENTIRE INSTALLATION SHOULD BE BELOW 0.25 OHMS

C GROUND MAT - TOP VIEW
SCALE: N.T.S

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THESE DRAWINGS AND SPECIFICATIONS HAVE BEEN PREPARED BY HYDE RENEWABLES, INC. FOR THEIR EXCLUSIVE USE IN ACCORD WITH TITLE 20 SEC. 20-300-10 OF THE CONNECTICUT ADMINISTRATIVE CODE.

STATE OF CONNECTICUT · HENRY HOLBROOK HYDE · No. 32042 · LICENSED PROFESSIONAL ENGINEER

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PROJECT NAME AND ADDRESS
Q CELLS
STATE PIER RD

STATE PIER RD
NEW LONDON, CT 06320
LAT=N 41° 21'38.4"
LON=W 72° 05'56.0"

PROJECT #: 069-1000

SHEET TITLE
DETAILS 03

DRAWN BY	SHEET #
CB	E.012
DATE 02/08/23	
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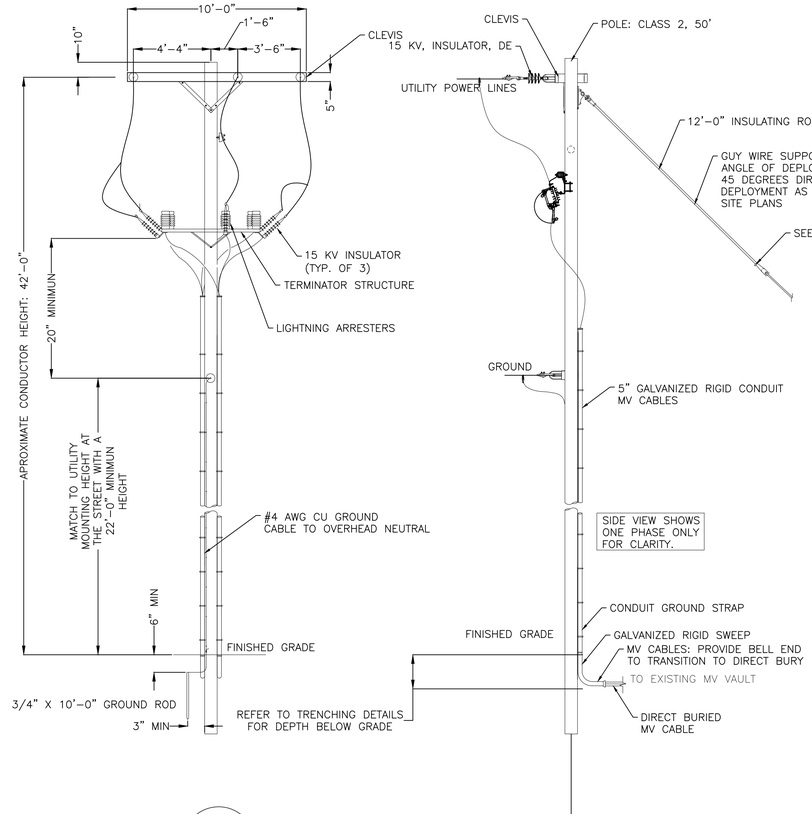
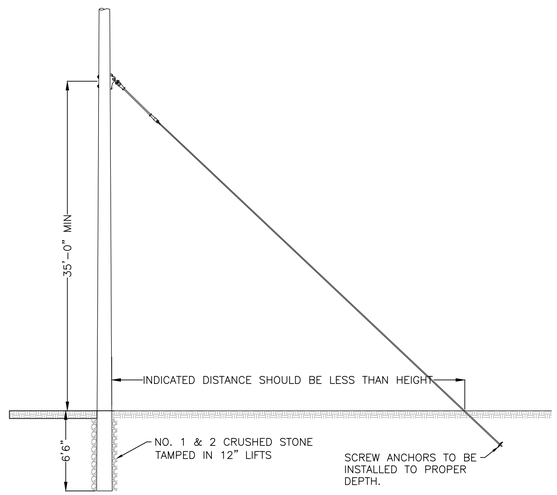


A RISER POLE
SCALE: N.T.S



B GUY WIRE DETAIL
SCALE: N.T.S

DETAIL NOTES

1. GUY WIRES SHALL BE 25' MINIMUM LEAD WITH INSULATOR.
2. GUY WIRES SHALL UTILIZE AN INSULATING ROD THAT IS MINIMUM 54" LONG, BUT LONGER IF THERE IS THE POTENTIAL TO COME INTO CONTACT WITH ENERGIZED EQUIPMENT UPON FAILURE OF THE GUY WIRE ANCHOR.
3. THE SECTION OF THE GUY WIRE BELOW THE INSULATING ROD SHALL BE BONDED TO NEUTRAL.
4. CLEARANCE FROM THE INSULATING ROD TO THE PRIMARY CONDUCTOR SHALL BE A MINIMUM OF 6" FOR DOWN GUYS, OR 11" MINIMUM FOR SPAN GUYS.
5. ANCHOR SHALL BE BURIED 6 FT. IN GROUND MINIMUM.
6. 16M, 7 STRAND, UTILITIES GRADE, CONFORMING TO ANSI C7.46, ASTM A475.

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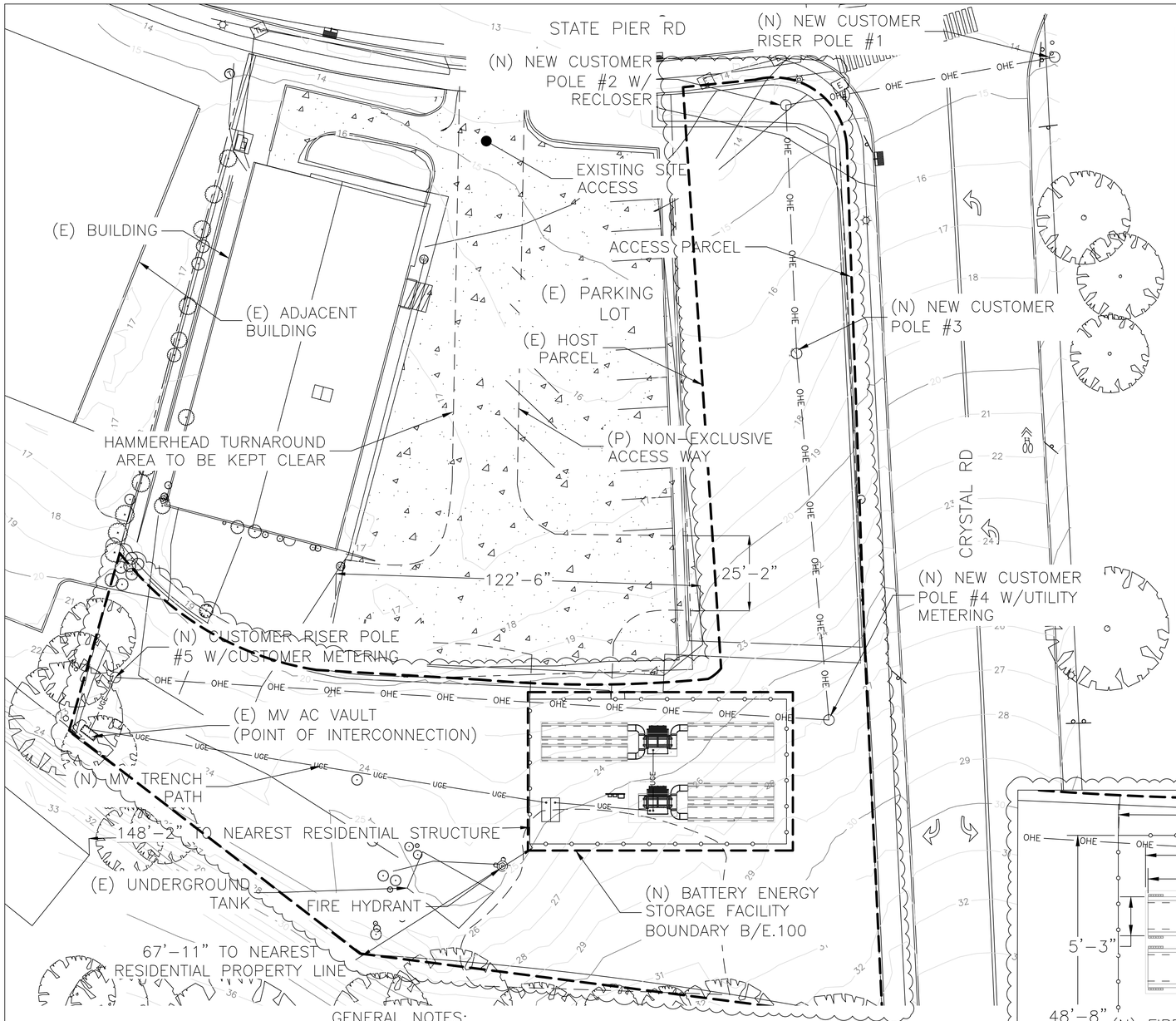
PROJECT NAME AND ADDRESS
Q CELLS
STATE PIER RD

STATE PIER RD
NEW LONDON, CT 06320
LAT=N 41° 21'38.4"
LON=W 72° 05'56.0"

PROJECT #: 069-1000

SHEET TITLE
DETAILS 04 (N)

DRAWN BY	SHEET #
CB	E.013
DATE: 02/08/23	
CHECKED BY: TRIPP HYDE	



SITE PLAN
SCALE: 1" = 20'

0 20 40 80

GENERAL NOTES:

1. EMERGENCY AND SERVICE VEHICLES WILL BE ABLE TO PARK WITHOUT OBSTRUCTING THE INGRESS AND EGRESS FROM SITE TO STATE PIER ROAD

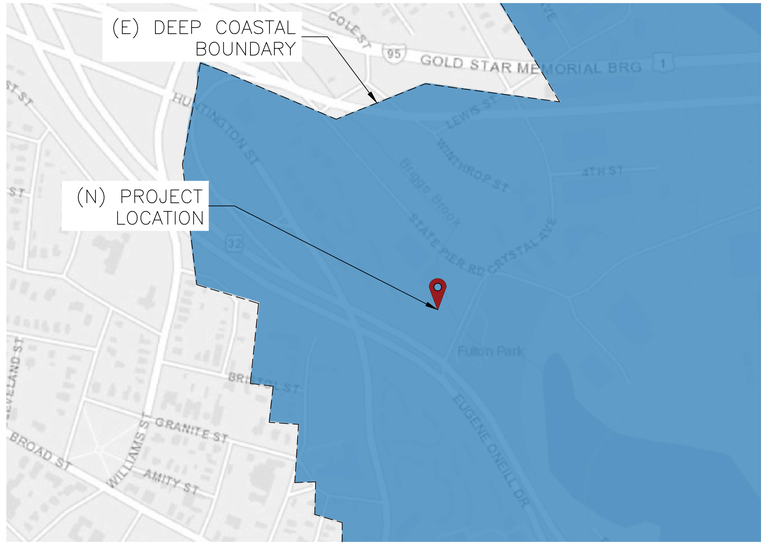
2. OWNER WILL ENSURE TO KEEP THE INGRESS, EGRESS, AND PATHWAY CLEAR FOR EMERGENCY AND SERVICE VEHICLES

3. EMERGENCY AND SERVICE VEHICLES WILL HAVE SUFFICIENT SPACE TO TURN AROUND ON THE GRAVEL ROAD

4. FINAL POLE LOCATIONS TO BE DETERMINED BY UTILITY

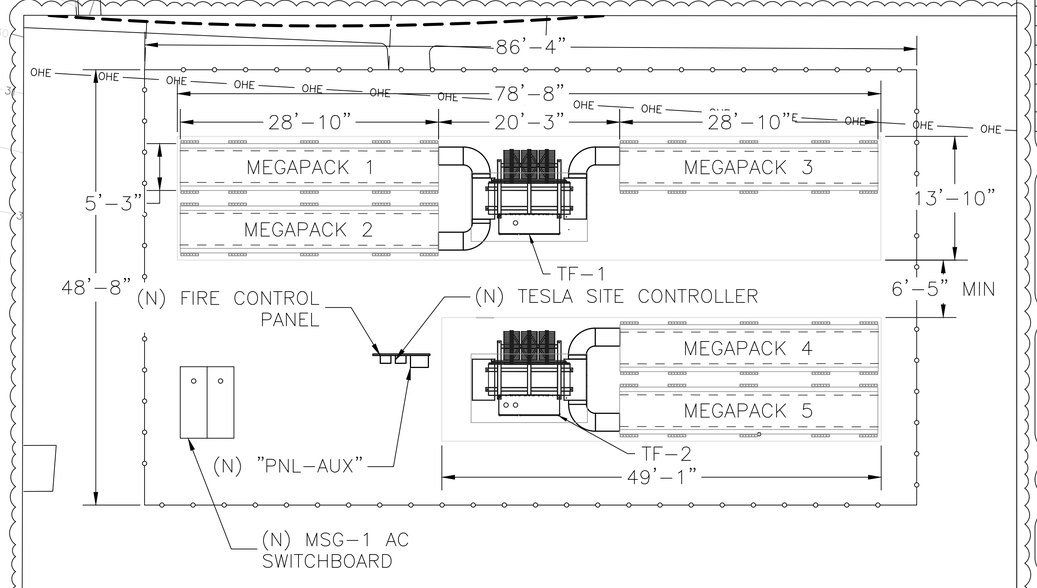
SHEET NOTES:

1 DETAIL A/E.100 SHOWS THE EXTENT OF LANDS AND COASTAL WATERS AS DEFINED BY C.G.S. 22A-93(5) WITHIN CONNECTICUT'S COASTAL AREA (DEFINED BY C.G.S. 22A-94(C)). SOURCE: DEEP (DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION).



A KEY MAP – DEEP COASTAL BOUNDARY 1
SCALE: NOT TO SCALE

N



B BESS AREA
SCALE: 1/8"=1'-0"

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BY	REV	ISSUE	DATE

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PROJECT NAME AND ADDRESS
Q CELLS
STATE PIER RD

STATE PIER RD
NEW LONDON, CT 06320
LAT=N 41° 21'38.4"
LON=W 72° 05'56.0"

PROJECT #: 069-1000

SHEET TITLE
SITE PLAN

DRAWN BY	SHEET #
CB	E.100
DATE 02/08/23	
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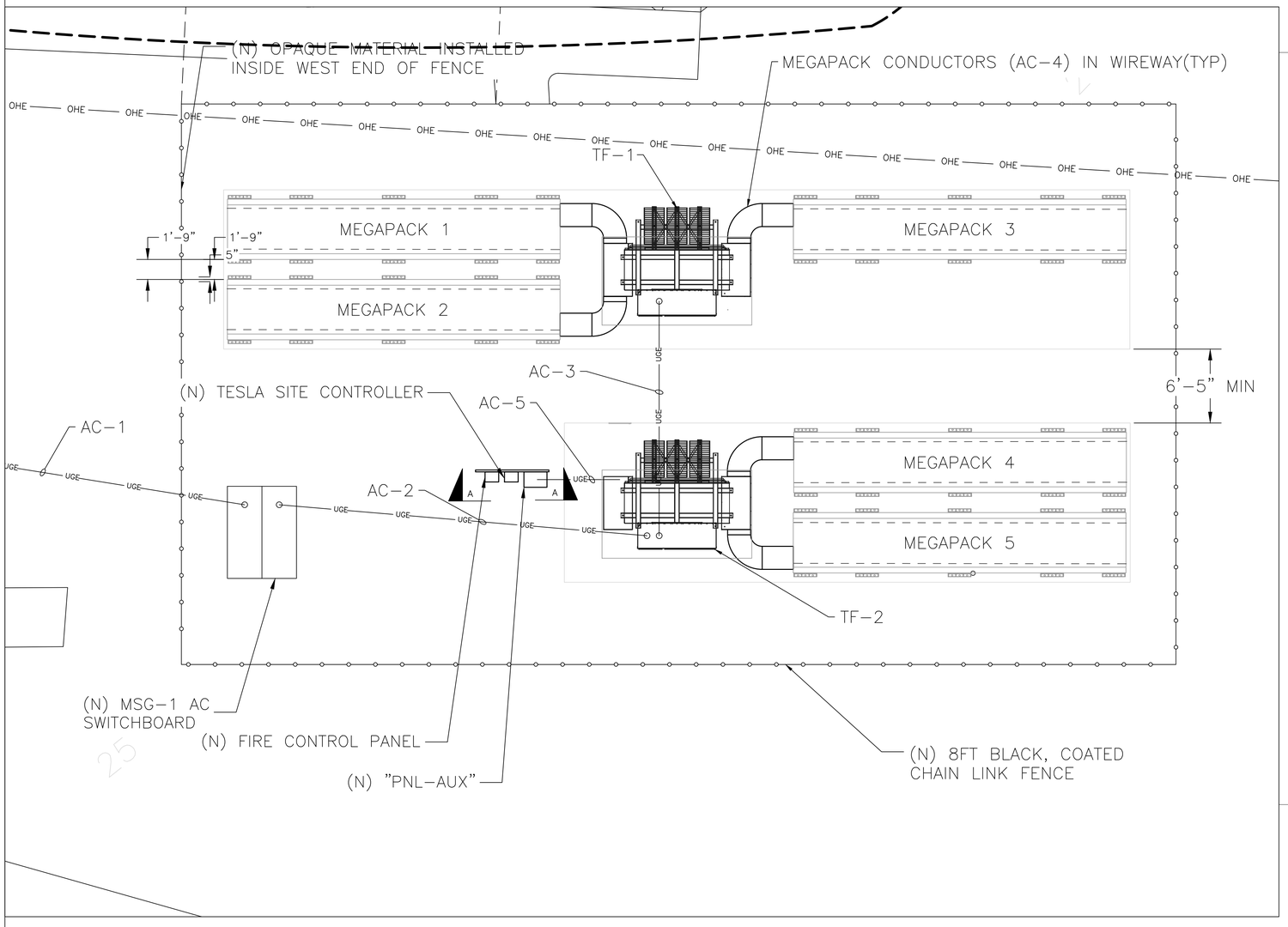
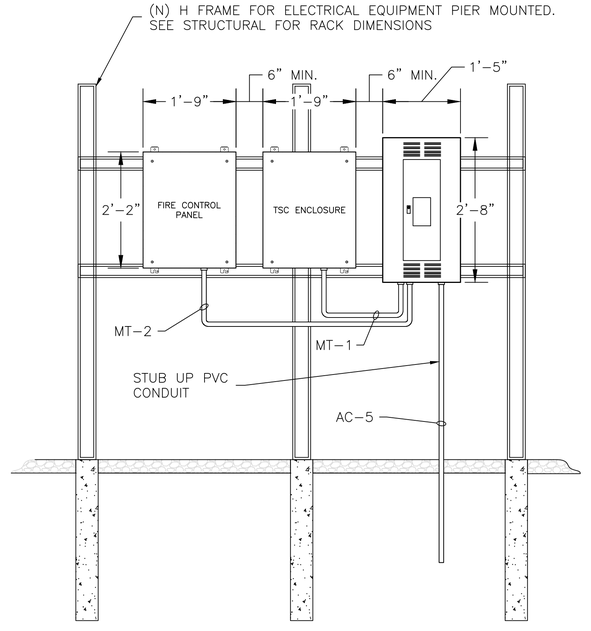
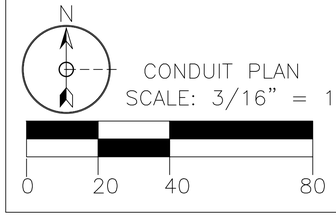




NOTES:
1) DISTRIBUTION PANEL SHALL BE INSTALLED PER NEC 404.8(A). WHICH STATES THAT CIRCUIT BREAKERS SHOULD BE INSTALLED SO THAT THE CENTER OF THE GRIP OF THE OPERATING HANDLE OF THE CIRCUIT BREAKER, WHEN IN THE HIGHEST POSITION WILL NOT BE MORE THAN 6'-7" ABOVE THE FLOOR

A EQUIPMENT RACK ELEVATION
SCALE: N.T.S



CONDUIT PLAN
SCALE: 3/16" = 1'

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PROJECT NAME AND ADDRESS
Q CELLS
STATE PIER RD

STATE PIER RD
NEW LONDON, CT 06320
LAT=N 41° 21'38.4"
LON=W 72° 05'56.0"

PROJECT #: 069-1000

SHEET TITLE
CONDUIT PLAN

DRAWN BY	SHEET #
CB	E.101
DATE 02/08/23	
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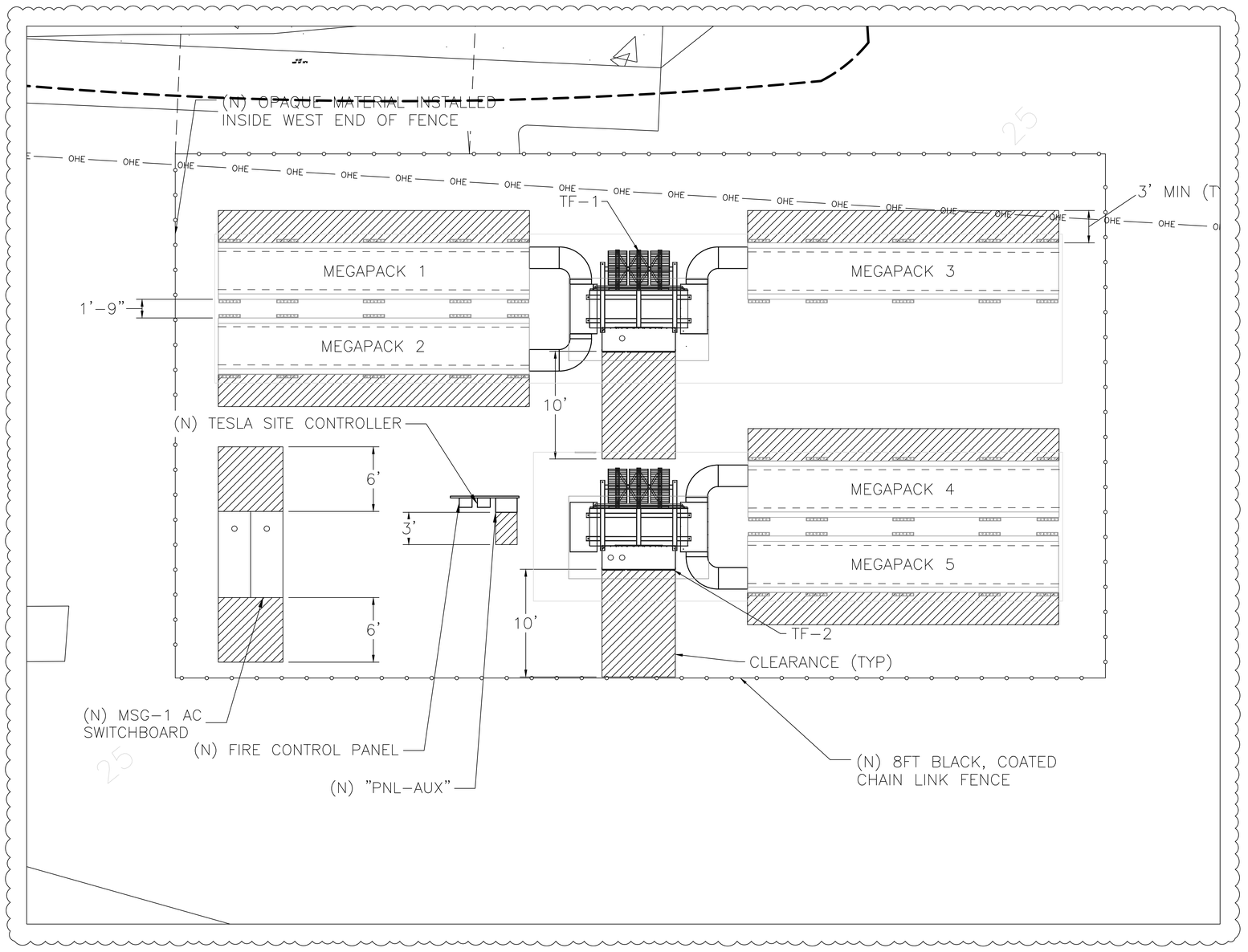

N

FIRE AND SAFETY
SCALE: 3/16" = 1'

0 20 40 80

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Q CELLS
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NEW LONDON, CT 06320
LAT=N 41° 21'38.4"
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PROJECT #: 069-1000

SHEET TITLE
FIRE & SAFETY

DRAWN BY	SHEET #
CB	E.110
DATE: 02/08/23	
CHECKED BY: TRIPP HYDE	

LEGEND:

PARCEL BOUNDARY

BESF BOUNDARY

INTERCONNECTION CABLE PATH

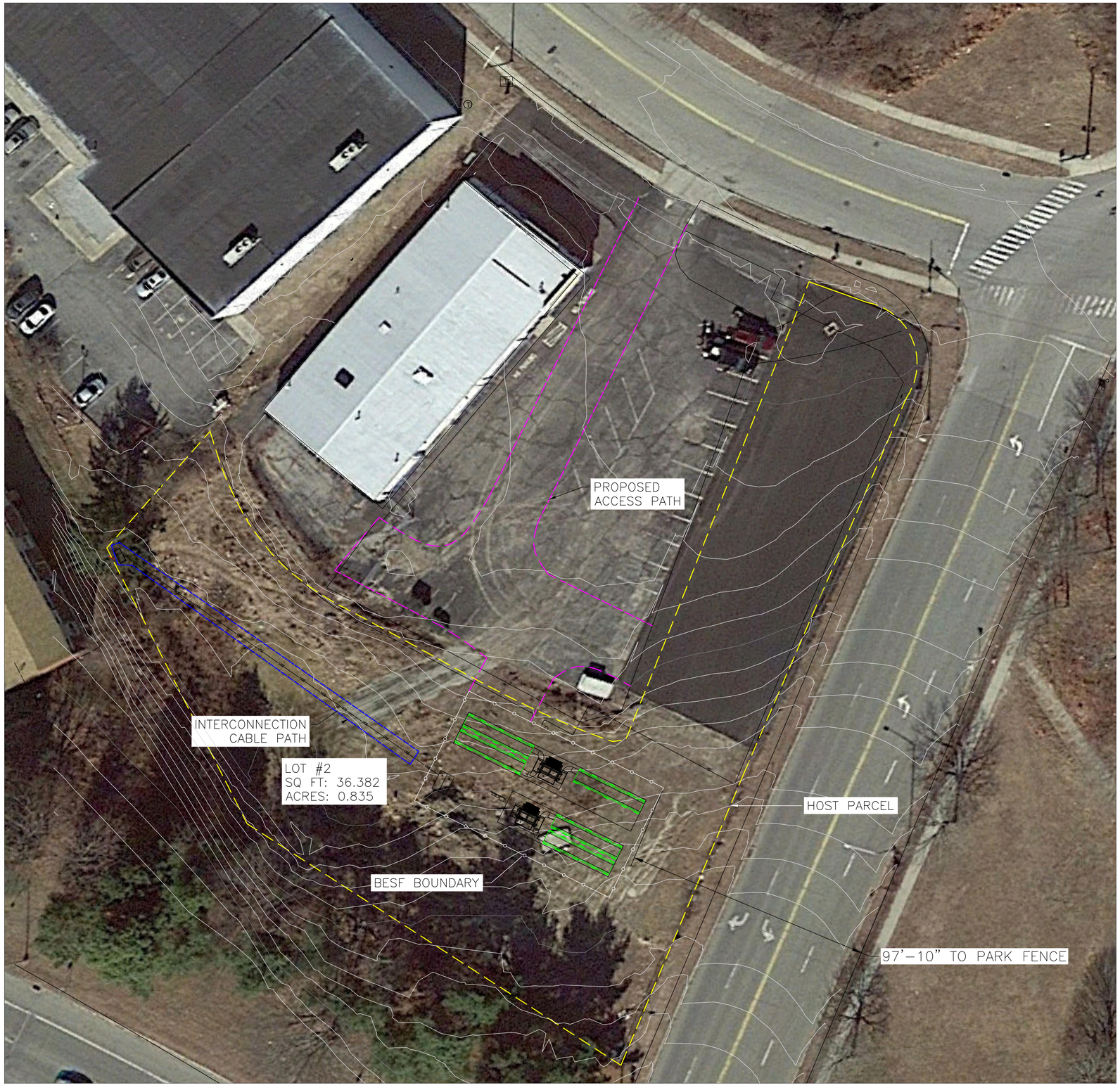
PROPOSED ACCESS WAY

BESS EQUIPMENT

N

SITE PLAN
SCALE: 1:20

0 20 40 80



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SHEET TITLE

N

SITE VICINITY PLAN

DRAWN BY	SHEET #
CB	E.120
DATE 02/08/23	
CHECKED BY TRIPP HYDE	

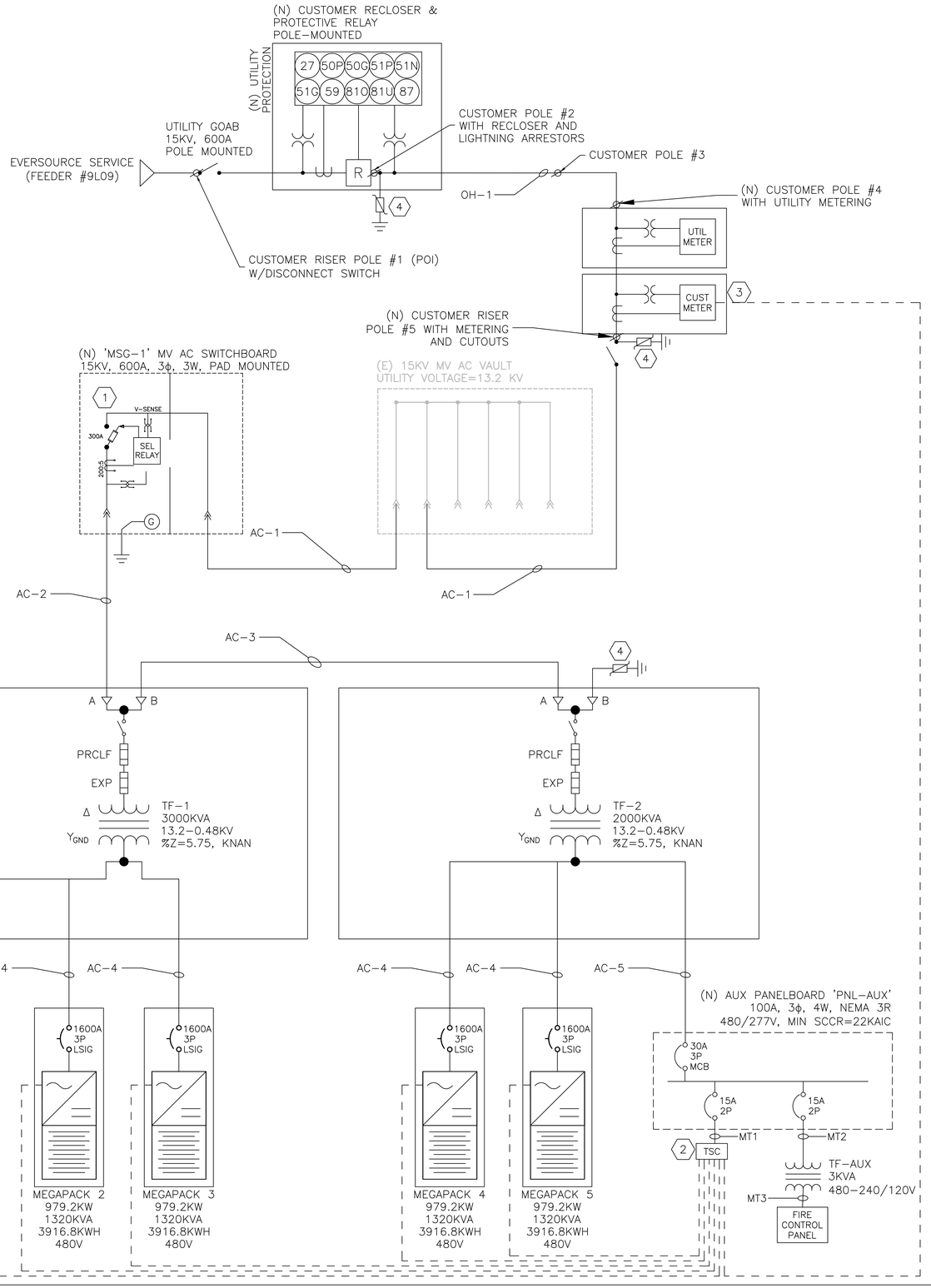
GENERAL NOTES:

1. ALL EQUIPMENT MUST BE UL LISTED BY A RECOGNIZED BY NRTL
2. ALL EQUIPMENT WIRING AND GROUNDING SHALL CONFORM TO THE MANUFACTURER'S RECOMMENDED PRACTICES. REFER TO THE INSTALLATION AND USER MANUALS FOR GUIDANCE.
3. EXPOSED NON-CURRENT CARRYING METAL PARTS OF MODULE FRAMES, EQUIPMENT, AND ENCLOSURES SHALL BE GROUNDED IN ACCORDANCE WITH NEC 250.134 AND 250.136. CONTRACTOR TO REFER TO MANUFACTURES INSTALLATION MANUAL FOR APPROVED METHOD OF GROUNDING.
4. ALL EXPOSED RACEWAY OPENINGS SHALL BE SEALED USING A SUITABLE METHOD TO PREVENT ENTRY OF INSECTS.
5. NEW OCPD SHALL HAVE THE SAME INTERRUPTING CURRENT RATING(KAIC) AS THE RATING OF THE PANELBOARD OR SWITCHBOARD IN WHICH THEY ARE LOCATED.
6. THE UTILITY COMPANY MUST BE NOTIFIED PRIOR TO USE.
7. HYDE RENEWABLES IS NOT RESPONSIBLE FOR ENGINEERING ON EXISTING CIRCUITS
8. BONDING SHALL BE PROVIDED WHERE NECESSARY TO ENSURE ELECTRICAL CONTINUITY AND CAPACITY TO CONDUCT SAFETY.
9. SYSTEM INCLUDING CONDUIT AND CONDUCTORS SHALL BE INSTALLED IN A NEAT AND A WORKMANLIKE MANNER IN ACCORDANCE WITH NEC 110.12.
10. ALL ELECTRICAL EQUIPMENT EXPOSED RACEWAYS, CONDUCTORS, AND CONNECTIONS SHALL BE MECHANICALLY SECURED VIA HARDWARE RATED FOR OUTDOOR AND UV LIGHT EXPOSURE AND WITH A DESIGN LIFE GREATER THAN ANTICIPATED LIFE EXPECTANCY OF THE SYSTEM.
11. RACEWAY SHALL BE PROVIDED WITH EXPANSION, EXPANSION DEFLECTION OR DEFLECTION FITTINGS WHERE NECESSARY TO COMPENSATE FOR THERMAL EXPANSION, DEFLECTION AND CONTRACTION AS PER NEC 300.7(B)
12. ALL PARALLEL CONDUCTORS MUST BE COLOR CODED.

SHEET NOTES:

1. THE UTILITY ISOLATION DEVICE SHALL BE GANGED, MANUALLY-OPERATED & LOCKABLE WITH VISIBLE BLADE SEPARATION, PERMANENT SIGNAGE INDICATING THE OPEN & CLOSED POSITION, AND BE ACCESSIBLE TO UTILITY PERSONNEL 24 HOURS A DAY PER UTILITY REQUIREMENTS.
2. TESLA SITE CONTROLLER.
3. METER COMMUNICATES WITH TESLA SITE CONTROLLER. SEE E.230 FOR DETAIL.
4. (N) SURGE ARRESTERS 15KV, 12.7MCOV

15KV CONDUCTORS
OH-1 - OVERHEAD SETS OF EACH WITH: (3) 556 ϕ AL TREE WIRE (BY UTILITY)
AC-1 - DIRECT BURIED SETS OF EACH WITH: (3) #350KCMIL ϕ AL MV-105 (CONCENTRIC SHIELD GROUND)
AC-2 - DIRECT BURIED SETS OF EACH WITH: (3) #350KCMIL ϕ AL MV-105 (CONCENTRIC SHIELD GROUND)
AC-3 - DIRECT BURIED SETS OF EACH WITH: (3) #350KCMIL ϕ AL MV-105 (CONCENTRIC SHIELD GROUND)
<600V CONDUCTORS
AC-4 - 3.5" PVC 40 HDPE WITH: (3) #600KCMIL ϕ AL THWN-2 (1) #4/0AWG EGC THWN-2
AC-5 - 0.75" PVC 40 HDPE WITH: (3) #10AWG ϕ CU THWN-2 (1) #10AWG N CU 600V THWN-2 (1) #10AWG EGC THWN-2
MT-1 - 0.75" PVC 40 HDPE WITH: (3) #12AWG ϕ CU THWN-2 (1) #12AWG N CU 600V THWN-2 (1) #14AWG EGC THWN-2
MT-2 - 0.75" PVC 40 HDPE WITH: (3) #12AWG ϕ CU THWN-2 (1) #12AWG N CU 600V THWN-2 (1) #14AWG EGC THWN-2
MT-3 - 0.75" PVC 40 HDPE WITH: (3) #12AWG ϕ CU THWN-2 (1) #12AWG N CU 600V THWN-2 (1) #14AWG EGC THWN-2



HYDE RENEWABLES
ADVANCED ENGINEERING SOLUTIONS

qcells
Completely Clean Energy

STATE OF CONNECTICUT · MATTHEW HOLBROOK HYDE · No. 32042 · LICENSED PROFESSIONAL ENGINEER

SCALE: AS NOTED (PRINT ON 36"X24")

BY	REV	ISSUE	DATE
FK	N	REDESIGN	06/26/24
RK	M	AHJ COMMENTS	03/13/23
AR	L	90%	01/03/24
RK	K	REDLINES	12/07/23
RK	J	60% UPDATE	10/05/23
RK	H	60% UPDATE	7/31/23
RK	G	60% UPDATE	07/27/23
ST	F	REDLINES	06/12/23
ST	E	REDLINES	05/23/23
CB	D	60%	05/11/23
CB	C	30%	04/12/23
CB	B	INTXN DRAFT 2	02/09/23
CB	A	INTXN DRAFT 1	02/08/23

FIRM NAME AND ADDRESS
HYDE RENEWABLES, INC
4735 WALNUT ST, SUITE #110
BOULDER, CO 80301

INFO@HYDERENEWABLES.COM
720-900-1009
WWW.HYDERENEWABLES.COM

PROJECT NAME AND ADDRESS
Q CELLS
STATE PIER RD

STATE PIER RD
NEW LONDON, CT 06320
LAT=N 41° 21'38.4"
LON=W 72° 05'56.0"

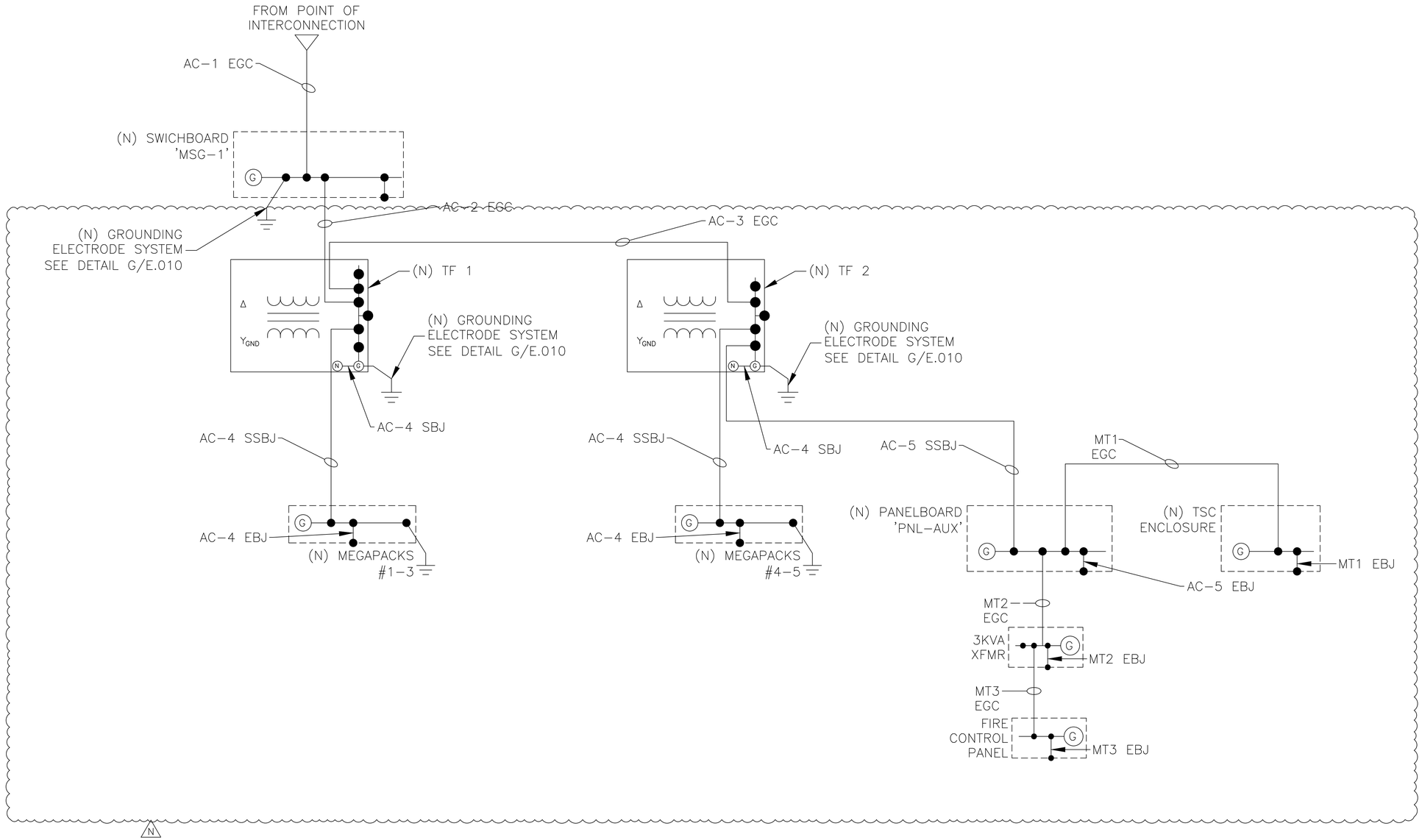
PROJECT #: 069-1000

SHEET TITLE
SLD N

DRAWN BY	SHEET #
CB	E.200
DATE 02/08/23	
CHECKED BY TRIPP HYDE	

GENERAL NOTES:

1. SEE SINGLE LINE FOR ADDITIONAL INFORMATION ON E.200.
2. GROUND WIRE TO BE PROTECTED FROM PHYSICAL DAMAGE, PER NEC 250.120(C)
3. GROUNDING EARTH RESISTANCE SHALL NOT EXCEED 25 OHMS. IF A SINGLE ROD, PIPE OR PLATE HAS AN EARTH RESISTANCE IN EXCESS OF 25 OHMS, SUPPLEMENTAL GROUNDING ELECTRODES SHALL BE ADDED AT 6 FEET MAXIMUM INTERVALS TO ACHIEVE EARTH RESISTANCE LESS THAN 25 OHMS.
4. EQUIPMENT BONDING JUMPERS TO BE CU OR EQUIV. TYPE LISTED IN NEC 250.102.
5. GROUNDING CONDUCTORS NOT ROUTED IN RACEWAYS TO BE MIN. #6AWG CU.



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PROJECT #: 069-1000

SHEET TITLE
GND

DRAWN BY: CB
DATE: 02/08/23
CHECKED BY: TRIPP HYDE
SHEET #: E.210

CONDUCTORS							AMPACITY CHECK						
FROM	TO	CONDUCTOR ID	# OF PHASES	NEUTRAL	OPERATING VOLTAGE [V]	CONTINUOUS LOAD [A]	125% CONTINUOUS LOAD [A]	OCPD RATING [A]	TEMP DERATE	BUNDLE DERATE	105°C AMPACITY [A]	105°C AMP. DERATED FOR C.O.U. [A]	90°C AMPACITY [A]
UTILITY	RISER POLE	OH-1	3-PHASE	NO NEUTRAL	13200	218.8	273.5	NA	1	1	726	726	#N/A
UTILTIY	MSG-1	AC-1	3-PHASE	NO NEUTRAL	13200	218.8	273.5	NA	1	1	330	305	#N/A
MSG-1	TF-1	AC-2	3-PHASE	NO NEUTRAL	13200	218.8	273.5	NA	1	1	330	305	#N/A
TF-1	TF-2	AC-3	3-PHASE	NO NEUTRAL	13200	175	218.8	NA	1	1	330	305	#N/A

CONDUCTORS							AMPACITY CHECK						
FROM	TO	CONDUCTOR ID	# OF PHASES	NEUTRAL	OPERATING VOLTAGE [V]	CONTINUOUS LOAD [A]	125% CONTINUOUS LOAD [A]	OCPD RATING [A]	TEMP DERATE	BUNDLE DERATE	90°C AMPACITY [A]	90°C AMP. DERATED FOR C.O.U. [A]	75°C AMPACITY [A]
TF-1 & TF-2	MEGPACK 1 - 5	AC-4	3-PHASE	NO NEUTRAL	480	1200	1500.0	1600	1	1	385	1925	1700
TF-2	PNL-AUX	AC-5	3-PHASE	FULL SIZE	480	24	30.0	30	1	0.8	40	32	35
PNL-AUX	TSC	MT-1	1-PHASE	FULL SIZE	480	12	15.0	15	1	0.8	30	24	25
PNL-AUX	TF-AUX	MT-2	1-PHASE	FULL SIZE	480	6.25	7.8	15	1	0.8	30	24	25
TF-AUX	FIRE CONTROL PANEL	MT-3	1-PHASE	FULL SIZE	480	12	15.0	15	1	0.8	30	24	25

CONDUITS				
#	SIZE	TYPE	CONDUIT FILL [%]	CONDUCTOR ID
OVERHEAD				OH-1
DIRECT BURIED				AC-1
DIRECT BURIED				AC-2
DIRECT BURIED				AC-3

CONDUITS				
#	SIZE	TYPE	CONDUIT FILL [%]	CONDUCTOR ID
1	3.5"	PVC 40 HDPE	30.07	AC-4
1	0.75"	PVC 40 HDPE	20.67	AC-5
1	0.75"	PVC 40 HDPE	12.20	MT-1
1	0.75"	PVC 40 HDPE	12.20	MT-2
1	0.75"	PVC 40 HDPE	12.20	MT-3

CONDUCTOR SPECS																
CONDUCTOR ID	PHASE CONDUCTORS				PARALLEL CONDUCTORS	NEUTRAL CONDUCTOR				GROUND CONDUCTOR					LENGTH (FT)
OH-1	3	556	TREE WIRE	AL 15KV ACSR	1					BY UTILITY					600
AC-1	3	#350KCMIL	MV-105	AL 15KV MV-105	1					CONCENTRIC SHIELD GROUND					100
AC-2	3	#350KCMIL	MV-105	AL 15KV MV-105	1					CONCENTRIC SHIELD GROUND					30
AC-3	3	#350KCMIL	MV-105	AL 15KV MV-105	1					CONCENTRIC SHIELD GROUND					20

CONDUCTOR SPECS															
CONDUCTOR ID	PHASE CONDUCTORS				PARALLEL CONDUCTORS	NEUTRAL CONDUCTOR				GROUND CONDUCTOR					LENGTH (FT)
AC-4	3	#600KCMIL	THWN-2	AL 600V	5	0				1	#4/0AWG	THWN-2	CU 600V	EGC	20
AC-5	3	#10AWG	THWN-2	CU 600V	1	1	#10AWG	THWN-2	CU 600V	1	#10AWG	THWN-2	CU 600V	EGC	20
MT-1	3	#12AWG	THWN-2	CU 600V	1	1	#12AWG	THWN-2	CU 600V	1	#14AWG	THWN-2	CU 600V	EGC	10
MT-2	3	#12AWG	THWN-2	CU 600V	1	1	#12AWG	THWN-2	CU 600V	1	#14AWG	THWN-2	CU 600V	EGC	10
MT-3	3	#12AWG	THWN-2	CU 600V	1	1	#12AWG	THWN-2	CU 600V	1	#14AWG	THWN-2	CU 600V	EGC	11

TEMPERATURE CONSIDERATIONS	
STC TEMPERATURE [°C]	25.00
ASHRAE 2% HIGH AMBIENT TEMPERATURE [°C]	30.00
ASHRAE EXTREME MIN. LOW AMBIENT TEMPERATURE [°C]	-14.00
TEMPERATURE DIFFERENCE LOW TEMP [°C]	39.00
TEMPERATURE DIFFERENCE HIGH TEMP [°C]	5.00

AFC CALCULATION					
CONDUCTOR ID	VOLTAGE (V)	LENGTH	RESISTANCE (OHM/1000FT)	STARTING POINT AFC	END POINT AFC
AC-4	800	20	0.038	41239.00	40686.83
AC-5	480	20	2	1019.20	888.49

N

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STATE PIER RD
NEW LONDON, CT 06320
LAT=N 41° 21'38.4"
LON=W 72° 05'56.0"

PROJECT #: 069-1000

SHEET TITLE
CALCS

DRAWN BY	SHEET #
CB	E.220
DATE: 02/08/23	
CHECKED BY: TRIPP HYDE	

LABELS AND WARNINGS:

NOTE:
THE WARNING SIGN(S) OR LABEL(S) SHALL COMPLY WITH NEC ARTICLE 110.21(B). PLAQUES WILL HAVE LETTER ENGRAVED ON A METAL OR PLASTIC PLAQUE. PLAQUES SHALL HAVE A RED BACKGROUND WITH ENGRAVED LETTERING. ATTACH PLAQUE USING OUTDOOR RATED ADHESIVE OR WITH RIVETS OR SCREWS WHILE MAINTAINING ENCLOSURE RATING. THE LABEL SHALL BE PERMANENTLY AFFIXED TO THE EQUIPMENT OR WIRING METHOD AND SHALL NOT BE HAND WRITTEN. THE LABEL SHALL BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED UNLESS OTHERWISE SPECIFIED ALL LETTERING HEIGHT FOR LABELS AND WARNING SHALL BE 1/4". FONT TYPE TO BE AERIAL NARROW. PLAQUES CONTAINING THE WORD 'WARNING' LETTERING HEIGHT WILL BE 3/4" AERIAL BOLD.

SCHEDULE OF LABELS	
SIGN ID	PLACEMENT LOCATION(S)
L01	DISCONNECT(S), DISTRIBUTION PANEL(S), JUNCTION BOX(ES), COMBINER BOX(ES), SWITCHBOARD(S), MAIN SERVICE
L02	EXPOSED RACEWAYS, CABLE TRAYS, AND OTHER WIRING METHODS
L03	MAIN SERVICE DISCONNECT
L04	MAIN SERVICE DISCONNECT
L05	MAIN SERVICE BESS / PV DISCONNECTS
L06	TESLA AC DISCONNECT
L07	MAIN SERVICE DISCONNECT
L08	MAIN SERVICE DISCONNECT
L09	TESLA AC DISCONNECT

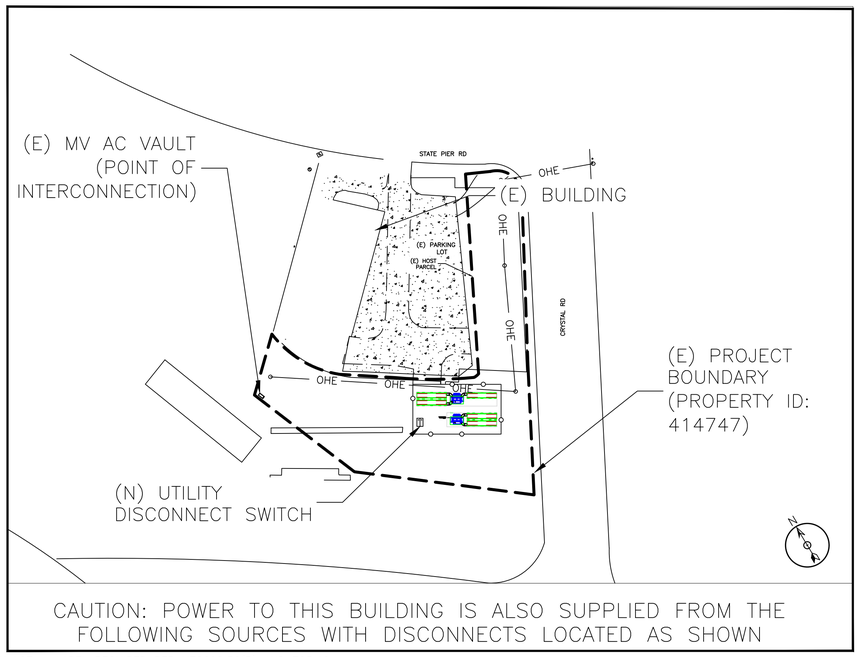
LABELING REQUIREMENTS

1. SIGNS MUST BE WEATHER RESISTANT AND IN ACCORDANCE WITH UL 969. MARKINGS MUST HAVE ALL CAPTALIZED LETERS WITH AN ARIAL OR SIMILAR FONT, NON-BOLD.

2. REFER TO TABLE FOR SIGNAGE LOCATIONS.

3. ALL LABELS 6" X 4" UNLESS OTHERWISE NOTED

4. ALL SIGNAGE TO BE FURNISHED AND INSTALLED BY CONTRACTOR



SIGN L07 – LABEL REQUIRED PER NEC690.56(B) AND 705.10
NOTE: MAPS SHALL BE LOCATED AT THE MAIN SERVICE. MAPS LOCATED OUTDOORS SHALL BE ENGRAVED LETTERS ON A METAL OR PLASTIC PLAQUE. MAPS LOCATED INDOORS MAY BE LAMINATED PRINTS. MAPS SHALL HAVE A RED BACKGROUND WITH THE WHITE LETTERING AND ATTACHED USING A SUITABLE ADHESIVE OR WITH RIVETS OR SCREWS WHILE MAINTAINING ENCLOSURE RATING

WARNING

ELECTRIC SHOCK HAZARD

DO NOT TOUCH TERMINALS. TERMINALS ON BOTH THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

SIGN L01 – REQ'D PER NEC 690.13(B)
APPLY TO: DISCONNECT(S), DISTRIBUTION PANEL(S), JUNCTION BOX(ES), COMBINER BOX(ES), SWITCHBOARD(S), MAIN SERVICE

WARNING

DO NOT DISCONNECT UNDER LOAD

SIGN L02 – LABEL REQUIRED PER NEC 690.15(C)
APPLY TO: CABLES, ISOLATING DEVICES PER NEC 690.33, FUSE HOLDER

WARNING

THIS EQUIPMENT FED BY MULTIPLE SOURCES. TOTAL RATING OF ALL OVERCURRENT DEVICES EXCLUDING RATING OF MAIN SUPPLY OVERCURRENT DEVICE SHALL NOT EXCEED RATING OF BUSBAR

SIGN L03 – LABEL REQUIRED PER NEC 705.12(B)(2)(3)(C)
APPLY TO: MAIN SERVICE

WARNING

ARC FLASH HAZARD

APPROPRIATE PPE REQUIRED

FAILURE TO COMPLY MAY RESULT IN INJURY OR DEATH

REFER TO NFPA 70E

SIGN L04 – REQ'D BY NEC 110.16
APPLY TO: MAIN SERVICE

WARNING

POWER SOURCE OUTPUT CONNECTION

DO NOT RELOCATE THIS OVERCURRENT DEVICE

SIGN L05 – LABEL REQUIRED PER NEC 705.12(B)(2)(3)(B)
APPLY TO: MAIN SERVICE

WARNING

ENERGY STORAGE SYSTEM DISCONNECT

SIGN L06 – LABEL REQUIRED PER NEC 706.15(C)
APPLY TO: TESLA BESS AC DISCONNECT

WARNING

NUMBER OF POWER SOURCES: 2ND SOURCE IS BESS

AN ADDITIONAL POWER SOURCE IS PRESENT IN THIS EQUIPMENT:
SEE "LOCATION OF FACILITY'S POWER SYSTEMS DISCONNECTING MEANS" FOR LOCATION OF POWER SOURCE.
TURN OFF DISCONNECT PRIOR TO SERVICING THIS EQUIPMENT

SIGN L08 – LABEL REQUIRED PER NEC 690.54
PLACED ADJACENT TO MAIN SERVICE DISCONNECT

WARNING

ARC FLASH AND SHOCK HAZARD
APPROPRIATE PPE REQUIRED

FLASH PROTECTION

INCIDENT ENERGY AT: 18"
MIN. ARC RATING : 1.8CAL/CM^2
ARC FLASH BOUNDARY: 22.8"
HAZARD RISK CATEGORY: 1
GLOVE CLASS: 00

SHOCK PROTECTION

SHOCK RISK WHEN COVER IS REMOVED: 480VAC
LIMITED APPROACH BOUNDARY: 42"
RESTRICTED APPROACH BOUNDARY: 12"

PPE:
1. SHIRT & PANTS OR COVERALL NONMELTING (ASTM F1506) OR UNTREATED FIBER
2. HARD HAT
3. SAFETY GLASSES
4. HEARING PROTECTION

EQUIPMENT ID:
TESLA AC DISCONNECT

SIGN L09 – LABEL REQUIRED PER NEC 110.16
APPLY TO: TESLA BESS AC DISCONNECT SWITCH

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PROJECT #: 069-1000

SHEET TITLE
SIGNAGE 01

DRAWN BY	SHEET #
CB	E.300
DATE 02/08/23	
CHECKED BY TRIPP HYDE	

MEGAPACK 2 XL DATASHEET

TESLA.COM/MEGAPACK

Grid transformation for the world's largest energy projects
- Best-in-class energy density and round-trip efficiency
- Industry-leading power electronics and thermal system performance
- Rapid and cost-effective deployment with factory-assembled and pre-tested solution

Scaled and rigorously tested product safety and reliability
- Comprehensive in-house reliability testing by the leading experts in the industry
- Engineered for safety and performance at every level
- Continuous improvement based on large-scale operational experience

Designed with flexibility and configurability in mind
- Modular architecture that allows for a range of configurations across multiple applications
- Industry experts available to identify site-specific needs
- Integrated solution that allows for battery augmentation over time

POWER AND ENERGY

Megapack duration is configurable. Standard configurations are 2-Hour, 3-Hour, and 4-Hour durations. Nominal energy is specified at 25°C (77°F).

	AC Power per Megapack	Energy per Megapack
2-Hour	1927 kW	3854 kWh
3-Hour	1281.6 kW	3847.2 kWh
4-Hour	979 kW	3916 kWh

ELECTRICAL

Nominal AC Voltage	480 V AC 3-phase
Nominal Frequency	50 or 60 Hz
Inverter Power per Megapack[1]	2-Hour Max: 2400 kVA 3-Hour Max: 1512 kVA 4-Hour Max: 1512 kVA
Round-Trip Efficiency[2]	2-Hour: 92.0% 3-Hour: 92.5% 4-Hour: 93.5%

[1] Scalable from 400 kVA minimum in increments of 50 kVA
[2] Full-depth cycle including all power conversion and thermal system losses, at 25°C (77°F)

WARRANTY

Coverage	All-inclusive, equipment and energy retention
Term	15 years standard, extendable to 20 years

PART NUMBER

1848844-XX-Y Where X is a number between 0-9 and Y is a letter

TESLA

MECHANICAL AND MOUNTING

Ingress Ratings	IP66/NEMA 3R (Main Enclosure) IP20 (Thermal System)
Enclosure Dimensions +/- 13 mm (½ in)	Width: 8800 mm (346 ½ in) Depth: 1650 mm (65 in) Height: 2785 mm (110 in)
Maximum Weight	38,100 kg (84,000 lb)
Operating Ambient Temperature	2-Hour/4-Hour: -30°C to 50°C (-22°F to 122°F) 3-Hour: -30°C to 40°C (-22°F to 104°F)

REGULATORY

System is compliant to grid codes and safety standards of all major markets.

System	NRTL listed to UL 1973, UL 9540, UL 9540A, UL 1741 SB, IEC 62619, IEEE 1547
Cells	NRTL listed to UL 1642

CONTROLS AND COMMUNICATIONS

Protocols	Modbus TCP / DNP3 / REST API
Core Control Modes	Direct Real Power, Ramp Rate Control Direct Reactive Power, Site Control Frequency Support, Power Factor Control Virtual Inertia, Voltage Control

MONITORING

Powerhub	Free-to-use cloud monitoring portal
Powerhub API	REST API providing event-based controls and site level monitoring

MEDIUM VOLTAGE CABLE

Aluminum Conductor 15KV, MV-105, 133%/100% EPR/PVC Copper Tape Shield

APPLICATION:

15KV Shielded MV-105 cable is primarily used for power circuits in commercial, industrial, refinery and petro-chemical plants; utility power generation and substations. The cable can be installed in wet or dry applications and is for use in aerial, conduit, open tray, and underground duct installations. It can be used in direct burial if installed with a ground conductor in close proximity. The cable is approved for temperature up to 105°C and voltages up to 15000 volts.

CONDUCTORS:

- Stranded 1350 series aluminum, compact Class B stranding per ASTM

CONDUCTOR SHIELD:

- Extruded thermoset semi-conducting stress-control layer over conductor

INSULATION:

- High dielectric strength lead-free EPR insulation, contrasting in color to the black semi-conducting shield layers

INSULATION SHIELD:

- Extruded thermoset semi-conducting polymeric layer free stripping from insulation

METALLIC SHIELD:

- Helically applied 5 mil annealed copper tape over the insulation shield with an overlap of 25%

JACKET:

- Black low-friction, lead-free, flame-retardant, moisture and sunlight resistant polyvinyl chloride (PVC) jacket tightly applied over the copper tape

STANDARDS:

- UL 1072
- UL Listed as Type MV-105 for use in accordance with NEC
- AEIC CS8
- ICEA S-93-639/NEMA WC74
- ICEA S-97-682
- IEEE 1202 Flame Test (70,000 BTU/hr)/CSA FT4
- EPA 40 CFR, Part 261 for leachable lead content per TCLP method
- OSHA Acceptable
- UL 1685 (Sizes 1/0 AWG and larger) UL Flame Exposure Test
- Sizes 1/0 AWG and larger are listed and marked "Sunlight-Resistant FOR CT USE" in accordance with NEC

Part Number	Conductor Size	Conductor Diameter	Insulation Thickness	Insulation Diameter	Jacket Thickness	Overall Diameter	Cable Weight	Ampacity					
								Conduit in Air*		Underground Duct**		Tray***	
	AWG/kcmil	inches	mils	inches	inches	inches	lbs/kft	90°C	105°C	90°C	105°C	90°C	105°C
2-0115KVALEPMV105	2	0.27	0.22	0.74	0.080	0.99	515	115	130	120	130	-	-
1/0-0115KVALEPMV105	1/0	0.34	0.22	0.81	0.080	1.06	598	150	170	155	165	150	170
2/0-0115KVALEPMV105	2/0	0.38	0.22	0.86	0.080	1.10	652	175	200	175	190	175	195

All values are nominal and subject to correction
** Ampacities are in accordance with Table 310.60(C)(74) of the NEC for triplexed or three single conductor aluminum cables in isolated conduit in air based on a conductor temperature of 90˚C (194˚F) or 105˚C (221˚F), temperature denoted in column header, and an ambient air temperature of 40˚C (104˚F).*
*** Ampacities are in accordance with Table 310.60(C)(78) of the NEC for triplexed or three single conductor aluminum cables in underground ducts (three conductors per duct), based on a conductor temperature of 90˚C (194˚F) or 105˚C (221˚F), temperature denoted in column header, and an ambient earth temperature of 20˚C (68˚F), electrical duct arrangement per Figure 310.60 Detail 1, 100% load factor, and earth thermal resistance (rho) of 90.*
**** Ampacities are based on single conductor Type MV-105 sizes #1/0 AWG and larger in an uncovered tray in accordance with Section 392.80(B)(2) of the NEC at an ambient air temperature of 40˚C (104˚F) the ampacities are based on 75% of the values per Table 310.60(C)(70), operating temperature denoted in column header. For cable trays with unventilated covers for more than 6 feet, the ampacities shall not exceed 70% of the values per Table 310.60(C)(70).*

#2180-05

1-800-945-5542
www.PriorityWire.com

PRIORITY WIRE & CABLE, INC.

MEDIUM VOLTAGE CABLE

Aluminum Conductor 15KV, MV-105, 133%/100% EPR/PVC Copper Tape Shield

Part Number	Conductor Size	Conductor Diameter	Insulation Thickness	Insulation Diameter	Jacket Thickness	Overall Diameter	Cable Weight	Ampacity					
								Conduit in Air*		Underground Duct**		Tray***	
	AWG/kcmil	inches	mils	inches	inches	inches	lbs/kft	90°C	105°C	90°C	105°C	90°C	105°C
4/0-0115KVALEPMV105	4/0	0.48	0.22	0.96	0.080	1.21	807	230	260	230	245	235	265
250-0115KVALEPMV105	250	0.53	0.22	1.01	0.080	1.25	869	255	290	250	270	260	290
350-0115KVALEPMV105	350	0.62	0.22	1.11	0.080	1.35	1031	310	350	305	330	325	360
500-0115KVALEPMV105	500	0.74	0.22	1.23	0.080	1.47	1255	385	430	370	400	400	450
750-0115KVALEPMV105	750	0.91	0.22	1.41	0.080	1.65	1621	485	540	455	490	515	585
1000-0115KVSEPVC-AL	1000	1.06	0.22	1.57	0.110	1.86	2068	565	640	525	565	620	705

All values are nominal and subject to correction
** Ampacities are in accordance with Table 310.60(C)(74) of the NEC for triplexed or three single conductor aluminum cables in isolated conduit in air based on a conductor temperature of 90˚C (194˚F) or 105˚C (221˚F), temperature denoted in column header, and an ambient air temperature of 40˚C (104˚F).*
*** Ampacities are in accordance with Table 310.60(C)(78) of the NEC for triplexed or three single conductor aluminum cables in underground ducts (three conductors per duct), based on a conductor temperature of 90˚C (194˚F) or 105˚C (221˚F), temperature denoted in column header, and an ambient earth temperature of 20˚C (68˚F), electrical duct arrangement per Figure 310.60 Detail 1, 100% load factor, and earth thermal resistance (rho) of 90.*
**** Ampacities are based on single conductor Type MV-105 sizes #1/0 AWG and larger in an uncovered tray in accordance with Section 392.80(B)(2) of the NEC at an ambient air temperature of 40˚C (104˚F) the ampacities are based on 75% of the values per Table 310.60(C)(70), operating temperature denoted in column header. For cable trays with unventilated covers for more than 6 feet, the ampacities shall not exceed 70% of the values per Table 310.60(C)(70).*

#2180-05

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STATE OF CONNECTICUT · TIMOTHY HOLBROOK HYDE · No. 32042 · LICENSED PROFESSIONAL ENGINEER

SCALE: AS NOTED
(PRINT ON 36"X24")

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CB	C	30%	04/12/23
CB	B	INTXN DRAFT 2	02/09/23
CB	A	INTXN DRAFT 1	02/08/23

FIRM NAME AND ADDRESS

HYDE RENEWABLES, INC
4735 WALNUT ST, SUITE #110
BOULDER, CO 80301

INFO@HYDERENEWABLES.COM
720-900-1009
WWW.HYDERENEWABLES.COM

PROJECT NAME AND ADDRESS

Q CELLS
STATE PIER RD

STATE PIER RD
NEW LONDON, CT 06320
LAT=N 41° 21'38.4"
LON=W 72° 05'56.0"

PROJECT #: 069-1000

SHEET TITLE
SPECS 01

DRAWN BY	SHEET #
CB	E.400
DATE: 02/08/23	
CHECKED BY: TRIPP HYDE	

LITELINK®

The LiteLink® Slat is one of the most economical chain-link enhancement products available in the market today.

Manufactured using the same durable outdoor plastic as our standard tubular fence slats, this single wall "M" shaped slat will give you the visual screening and color enhancement you desire at a very affordable price. LiteLink also uses our innovative Bottom Locking system for fast and easy installation.

Design
Compact and lightweight, LiteLink's unique shape enables the slat to self stack. It comes in a box (2" x 5" x slat length) making it easy to ship and efficient to store.

Standard Heights
4, 5, 6, 7, 8, 10 and 12 feet. Special heights available upon request.

Slat Length
3½" shorter than the overall height of fence.

Bottom Locking Channel
10 feet provided in each bag.

Wind Load & Privacy Factor
Approximately 75%.

SLAT PROFILE:

Colors*
White | Green | Brown | Black | Beige | Gray | Redwood | Royal Blue | Light Blue

* Exact representation of slat colors in printing is difficult. Please refer to actual color samples for final matching.
Covered by one or more of the following patents: US Patent 6,068,243 / 5,165,664 / 5,234,199

Made in the USA

www.PrivacySlatKing.com | (800) 878-7829 | Sales@PrivacySlatKing.com

PRODUCT SPECIFICATIONS

Slat Type	Slat Width	Mesh Size	Wire Gauge	Slats Per Bag	Approx. Coverage Per Box
LiteLink®	1¼"	2", 2¼" or 2⅜"	9, 11 or 11½	82	10 linear feet

Materials
The LiteLink product is extruded from High Density Polyethylene (HDPE), color pigments and ultra violet (UV) inhibitors, specifically designed to retard the harmful effects of the sun and lengthen the life of the product.

Durability
Pexco PDS® HDPE Fence Products are resistant to: severe weather conditions, salt water, sand, road dirt, most acids, alcohol, alkaline, ammonia, petroleum distillates, and common environmental pollutants.

Maintenance
Pressure cleaning of surface contaminants is quickly accomplished with plain water.

Wind Load Disclaimer
Pexco will not be responsible for damage due to wind load conditions resulting from insufficient structural support.

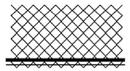
Limited Warranty
LiteLink carries a 7-year, pro-rata warranty against breakage under normal conditions. Write Pexco for full warranty information.

HDPE Technical Properties

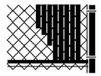
Property	Value
Melt Idex	(.35) Optimum extrusion processing conditions for Fence Slats
Density	(.945) Polyethylene ranges anywhere from .914 to .960 in density
Minimum Temp.	(-70°) Under no stress, HDPE remains flexible at this temperature
Maximum Temp.	(180°) Under no stress, HDPE will not distort at this temperature
Tensile Strength	(3,700 psi) HDPE will not distort at lesser loads or impacts

Installation Instructions

Step 1
Insert rail horizontally in first full diamond at bottom of fence with open side facing up.



Step 2
Insert vertical slats with interlocking tab downward. Slat engages and interlocks with bottom rail.



Step 3
Push the vertical slat into the horizontal channel to lock-in place.

www.PrivacySlatKing.com | (800) 878-7829 | Sales@PrivacySlatKing.com

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THESE DRAWINGS AND SPECIFICATIONS HAVE BEEN PREPARED BY HYDE RENEWABLES, INC. FOR THEIR EXCLUSIVE USE IN ACCORD WITH TITLE 20 SEC. 20-300-10 OF THE CONNECTICUT ADMINISTRATIVE CODE.

STATE OF CONNECTICUT · HENRY HOLBROOK HYDE · No. 32042 · LICENSED PROFESSIONAL ENGINEER

SCALE: AS NOTED
(PRINT ON 36"X24")

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CB	A	INTXN DRAFT 1	02/08/23

FIRM NAME AND ADDRESS

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4735 WALNUT ST, SUITE #110
BOULDER, CO 80301

INFO@HYDERENEWABLES.COM
720-900-1009
WWW.HYDERENEWABLES.COM

PROJECT NAME AND ADDRESS

Q CELLS
STATE PIER RD

STATE PIER RD
NEW LONDON, CT 06320
LAT=N 41° 21'38.4"
LON=W 72° 05'56.0"

PROJECT #: 069-1000

SHEET TITLE
SPECS 02

DRAWN BY: CB
DATE: 02/08/23
CHECKED BY: TRIPP HYDE
SHEET #: E.401

<GOVERNING CODE>
- INTERNATIONAL BUILDING CODE (IBC 2021)
- CALIFORNIA BUILDING CODE (CBC 2022)
- MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES (ASCE 7-16)
- AMERICAN CONCRETE INSTITUTE (ACI 318-19)

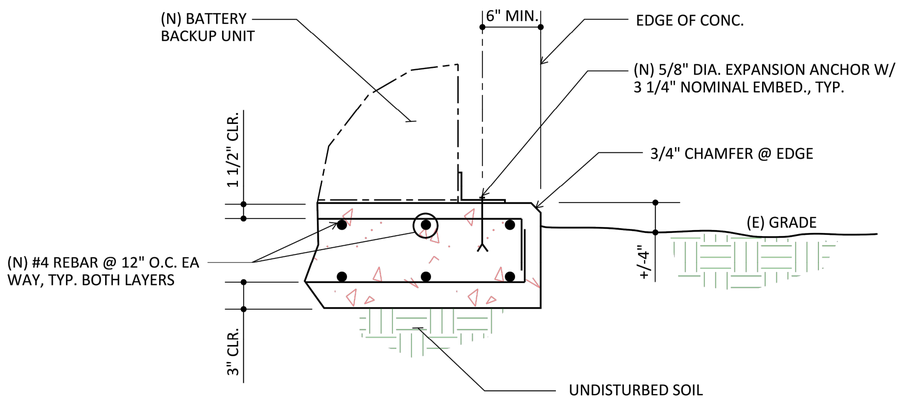
<STRUCTURAL SPECIFICATIONS>
1. CONCRETE & REINFORCING STEEL
   - CONCRETE PAD SHALL ACHIEVE MIN. 28-DAY COMPRESSIVE STRENGTH OF 2,500 psi
   - MAX WATER-CEMENT RATIO BY WEIGHT SHALL BE 0.45
   - MAINTAIN CONCRETE IN A MOIST CONDITION FOR A SUITABLE PERIOD AFTER PLACEMENT IN ACCORDANCE WITH ACI, CHAPTER 12
   - CEMENT SHALL BE TYPE II AND CONFORM TO ASTM C150, AGGREGATE SHALL CONFORM TO ASTM C33
   - REBAR SHALL BE GRADE 60 DEFORMED BARS
   - LAB SPLICES SHALL BE CLASS B. STANDARD HOOKS SHALL BE IN ACCORDANCE WITH ACI 318-19

2. EXPANSION ANCHORS
   - ADHESIVE ANCHOR SHALL BE 'HILTI KB-TZ2 STAINLESS' U.N.O.
   - INSTALLATION SHALL CONFORM TO ICC ESR-4266 AND MANUFACTURER'S RECOMMENDATIONS
   - SPECIAL INSPECTION IS REQ'D DURING INSTALLATION

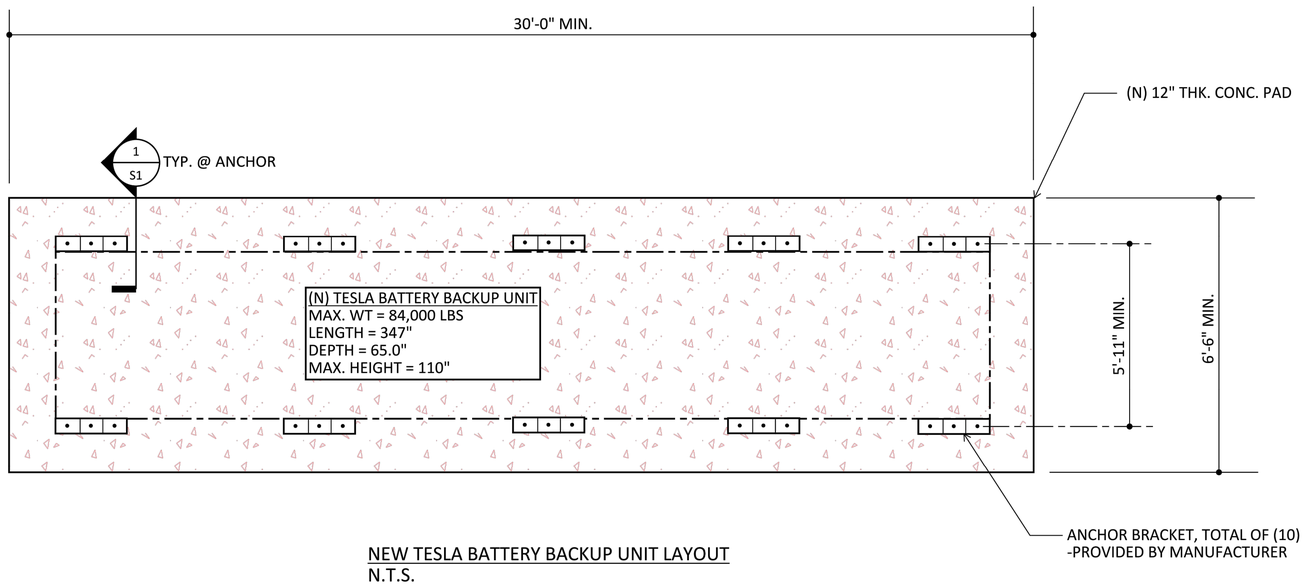
DESIGN INPUT
BASIC WIND SPEED = 127 mph
S_{DS} = 0.204g
I_p = 1.0
a_h = 1.0
R_p = 2.5

NOTES:
1. ANCHOR DISTANCE BETWEEN DIFFERENT BATTERY BACKUP UNITS SHALL BE MIN. OF 12" IN RADISU.
2. FOR AN APPROPRIATE PAD SIZE, MULTIPLE NUMBER OF UNITS TO LENGTH AND/OR WIDTH OF THE PAD. FOR INSTANCE, LENGTH OF A PAD FOR (2) BATTERY BACK UP UNITS LAID OUT SIDE-BY-SIDE SHALL BE 2x MIN. REQUIRED PAD LENGTH.

NOTES:
1. NEED (1) ANCHOR PER (1) BRACKET.
2. USE WASHER AS NEEDED.



1 / - SECTION
N.T.S.



NEW TESLA BATTERY BACKUP UNIT LAYOUT
N.T.S.

S1

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FIRM NAME AND ADDRESS
HYDE RENEWABLES, INC
4735 WALNUT ST, SUITE #110
BOULDER, CO 80301

INFO@HYDERENEWABLES.COM
720-900-1009
WWW.HYDERENEWABLES.COM

PROJECT NAME AND ADDRESS
Q CELLS
STATE PIER RD

STATE PIER RD
NEW LONDON, CT 06320
LAT=N 41° 21'38.4"
LON=W 72° 05'56.0"

PROJECT #: 069-1000

SHEET TITLE
STRUCTURAL N

DRAWN BY	SHEET #
CB	S.000
DATE 02/08/23	
CHECKED BY TRIPP HYDE	

SITE VICINITY MAP		
BUSINESS NAME	ADDRESS	PROPERTY ID
CEFALU NEW LONDON LLC	163 STATE PIER ROAD	F10-247-5
CITY OF NEW LONDON	40 CRYSTAL AVENUE	F09-246-1
KERNOZEK HOLDING COMPANY LLC	6 STATE PIER ROAD	G09-244-22
CITY OF LONDON	CRYSTAL AVENUE	F10-237-1
STATE OF CONNECTICUT	CONNECTICUT STATE ROUTE 32	STATE ROUTE
VESTA WINTHROP	59 FEDERAL STREET	F11-206-2
CHILD AND FAMILY AGENCY OF SOUTHEASTERN CT	255 HEMPSTEAD STREET	F10-247-1
STATE OF CONNECTICUT	264 HEMPSTEAD STREET	F10-248-15
VESTA WINTHROP GROUP LLC	HUNTINGTON STREET	F09-247-07
ERIC FILARDI REALTY LLC	145 STATE PIER ROAD	F09-247-4

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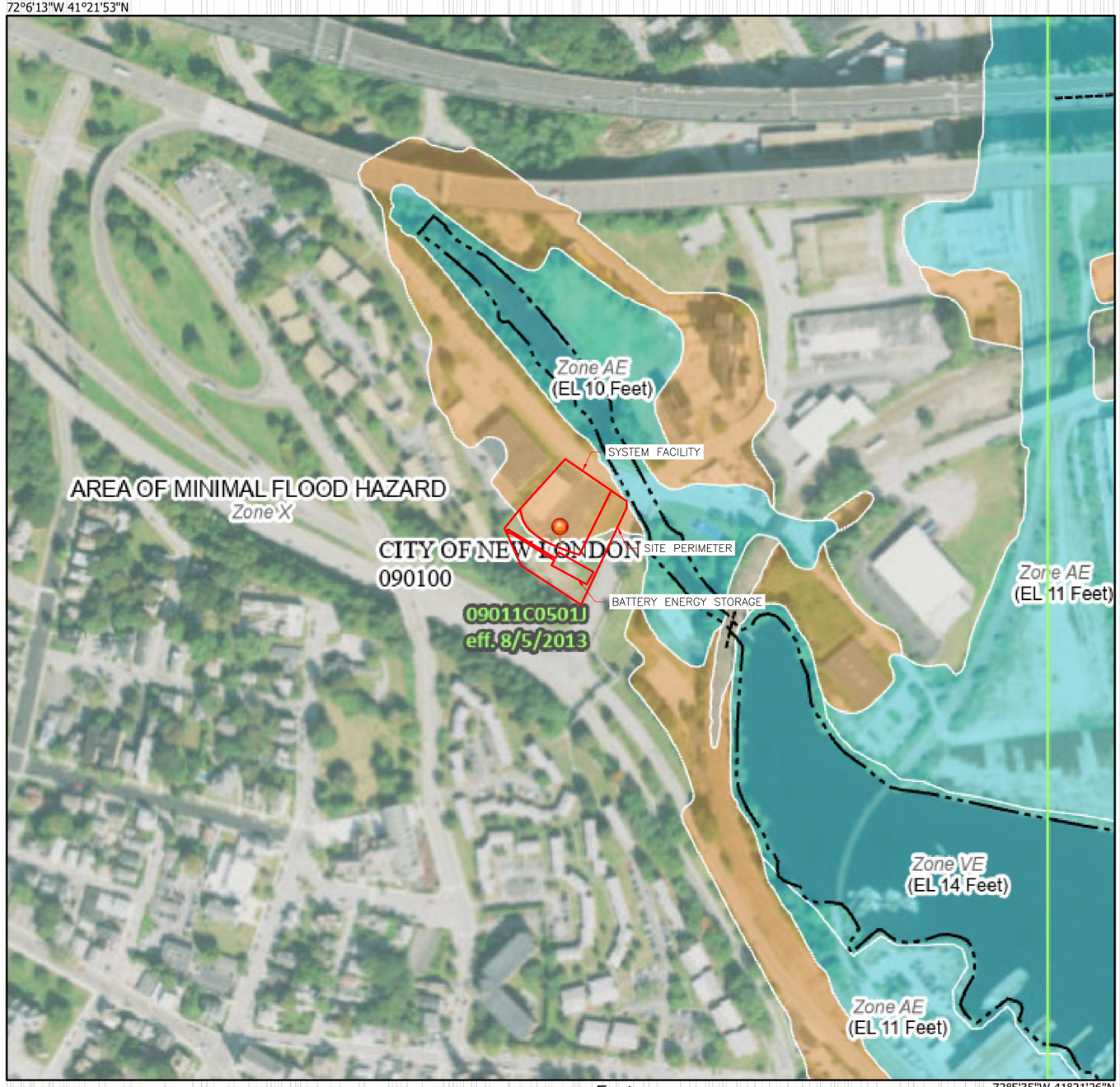
SHEET TITLE
SITE VICINITY MAP

DRAWN BY	SHEET #
CB	E.500
DATE: 02/08/23	
CHECKED BY: TRIPP HYDE	

National Flood Hazard Layer FIRMette

FEMA

72°6'13"W 41°21'53"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

72°5'35"W 41°21'26"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- 8 Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/6/2024 at 12:26 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

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Q CELLS
STATE PIER RD

STATE PIER RD
NEW LONDON, CT 06320
LAT=N 41° 21'38.4"
LON=W 72° 05'56.0"

PROJECT #: 069-1000

SHEET TITLE
ENVIRONMENTAL RESOURCES

DRAWN BY	SHEET #
CB	E.501
DATE: 02/08/23	
CHECKED BY: TRIPP HYDE	

SCCOG December 21, 2023

Watersheds

Property Information

Property ID	95-F10-247-5A
Location	STATE PIER RD
Owner	CEFALU NEW LONDON LLC

SCCOG

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

SCCOG makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 05/31/2017
Data updated 09/21/2023

Print map scale is approximate. Critical layout or measurement activities should not be done using this resource.

Map Theme Legends

Watersheds

- Major Basin
- Regional Basin
- Subregional Basin
- Local Basin

Local Drainage Basins Line

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PROJECT NAME AND ADDRESS

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STATE PIER RD

STATE PIER RD
NEW LONDON, CT 06320
LAT=N 41° 21'38.4"
LON=W 72° 05'56.0"

PROJECT #: 069-1000

SHEET TITLE
ENVIRONMENTAL RESOURCES 2

DRAWN BY: CB	SHEET #: E.502
DATE: 02/08/23	
CHECKED BY: TRIPP HYDE	

SCCOG December 21, 2023

State Wetlands

Property Information

Property ID	95-F10-247-5A
Location	STATE PIER RD
Owner	CEFALU NEW LONDON LLC

SCCOG

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Geometry updated 05/31/2017
Data updated 09/21/2023

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Map Theme Legends

State Wetlands

- Poorly Drained and Very Poorly Drained Soils
- Alluvial and Floodplain Soils

CT DEEP

HYDE RENEWABLES
ADVANCED ENGINEERING SOLUTIONS

qcells
Completely Clean Energy

THESE DRAWINGS AND SPECIFICATIONS HAVE BEEN PREPARED BY HYDE RENEWABLES, INC. FOR THEIR EXCLUSIVE USE IN ACCORD WITH TITLE 20 SEC. 20-300-10 OF THE CONNECTICUT ADMINISTRATIVE CODE.

STATE OF CONNECTICUT · TIMOTHY HOLBROOK HYDE · No. 32042 · LICENSED PROFESSIONAL ENGINEER

SCALE: AS NOTED
(PRINT ON 36"X24")

BY	REV	ISSUE	DATE
FK	N	REDESIGN	06/26/24
RK	M	AHJ COMMENTS	03/13/23
AR	L	90%	01/03/24
RK	K	REDLINES	12/07/23
RK	J	60% UPDATE	10/05/23
RK	H	60% UPDATE	7/31/23
RK	G	60% UPDATE	07/27/23
ST	F	REDLINES	06/12/23
ST	E	REDLINES	05/23/23
CB	D	60%	05/11/23
CB	C	30%	04/12/23
CB	B	INTXN DRAFT 2	02/09/23
CB	A	INTXN DRAFT 1	02/08/23

FIRM NAME AND ADDRESS

HYDE RENEWABLES, INC
4735 WALNUT ST, SUITE #110
BOULDER, CO 80301

INFO@HYDERENEWABLES.COM
720-900-1009
WWW.HYDERENEWABLES.COM

PROJECT NAME AND ADDRESS

Q CELLS
STATE PIER RD

STATE PIER RD
NEW LONDON, CT 06320
LAT=N 41° 21'38.4"
LON=W 72° 05'56.0"

PROJECT #: 069-1000

SHEET TITLE
ENVIRONMENTAL RESOURCES 3

DRAWN BY	SHEET #
CB	E.503
DATE: 02/08/23	
CHECKED BY: TRIPP HYDE	