Appendix B

Site Plan & Electrical Diagram, Technical Specs

Mountain Peak Energy Storage
Conditional Use Permit Application
September 2025

LEGEND:

1. PROPOSED MOUNTAIN PEAK BES FACILITY
2. PROPOSED MOUNTAIN PEAK COLLECTOR SUBSTATION
3. PROPOSED MOUNTAIN PEAK SUBSTATION DEAD END TOWER
4. PROPOSED 345 KV TRANSMISSION LINE FROM COLLECTOR SUBSTATION TO UTILITY STATION
5. PROPOSED UTILITY EQUIPMENT REQUIRED FOR INTERCONNECTION (NOTE 7)
6. PROPOSED DRAINAGE DETENTION BASIN (NOTE 5)
7. EXISTING HIGH VOLTAGE TRANSMISSION LINES WITH VOLTAGE INDICATED
8. EXISTING RESIDENCE
9. ENVIRONMENTALLY SENSITIVE AREA TO BE PROTECTED: INTERMITTENT STREAM AND 100 FT SETBACK LINE
10. PROPOSED TESLA OPERATIONS & MAINT TRAILER, STORAGE & SERVICE AREA, AND PARKING
11. PROPOSED ACCESS ROAD
12. PROPOSED LAYDOWN AND SOIL STOCKPILE AREA – BORDERED BY THE TRANSMISSION R O W AND THE 100 FT SETBACK LINES – AREA SHOWN IS APPROX 5.7 ACRES (NOTE 8)
13. ABOVE GROUND WATER TANK FOR FIRE PROTECTION, 24,000 GAL CAPACITY (NOTE 8/250)
14. ABOVE GROUND TORNADO SHELTER – APPROX 50 PERSON CAPACITY (NOTE 8/250)

PROPERTY/LEASE LINE (NOTE 2)
SETBACK LINE (NOTE 3)
YELLOW COLOR — EXISTING CONDITIONS, ESPECIALLY TRANSMISSION LINES AND R O W
WHITE COLOR — PROPOSED CONDITIONS
POCO — POINT OF CHANGE OF OWNERSHIP

NOTES:

1. THE PROJECT IS LOCATED IN SALINE COUNTY, KANSAS. APPROX COORDINATES ARE 38°43'30" N LAT AND 97°37'35" W LONG.
2. PROPERTY BOUNDARIES ARE TAKEN FROM THE PRELIMINARY SURVEY PREPARED BY COOKPLS NATIONAL, INC. OF OKLAHOMA CITY, OKLAHOMA, DATED 08/2021 (NO JOB NO.).
3. PER THE ALTA SURVEY, THE PROPERTY IS ZONED "AGRICULTURAL." SETBACKS ARE MAINTAINED AS FOLLOWS:
   - FROM CENTERLINE OF COUNTY ROADS: 75' 25'
   - FROM OTHER PROPERTY BOUNDARIES
4. A 100 FT. SETBACK IS REQUIRED TO CLASSIFY THE OUTDOOR BESS INSTALLATION AS A "REMOTE LOCATION" IN ACCORDANCE WITH NFPA 855 SECTION 4.4.3 1(1). THIS SETBACK IS MAINTAINED.
5. THE DRAINAGE DETENTION BASIN IS SHOWN FOR ILLUSTRATIVE PURPOSES. CIVIL DESIGN IS BY OTHERS.
6. THE SUPPLY AND INSTALLATION OF THE POCO POLE(S) IS TO BE DETERMINED. DEVELOPER TO STRING WIRES FROM BES SUBSTATION DEAD END TOWER TO POCO POLE. UTILITY TO STRING WIRES FROM POCO POLE TO UTILITY DEAD END TOWER. FIBER SPLICE BOX(ES) TO BE LOCATED AT THIS STRUCTURE. THE USE OF ADSS AND/OR OPGW FIBER IS TO BE DETERMINED.
7. THE POINT OF INTERCONNECTION (POI) SHOWN IS ASSUMED THE EXACT POI IS TO BE CONFIRMED WITH THE INTERCONNECTING UTILITY.
8. NO WILDLIFE CORRIDORS ARE PROPOSED ON THE PARCEL DUE TO THE SIZE AND NATURE OF THE PROPOSED USE.
9. THE PARCEL AREA EAST OF THE EXISTING TRANSMISSION LINE EASEMENT IS PROPOSED TO BE USED FOR TEMPORARY CONSTRUCTION LAYDOWN AND SPOILS STOCKPILE. PROPOSED DISPLACED TOPSOIL NOT TO BE REMOVED FROM SITE (EXCEPT AS REQUIRED TO REMEDIATE CONTAMINATION). THIS LAYDOWN AREA TO BE RESEEDED POST-CONSTRUCTION WITH NO PERMANENT FACILITIES PRESENT.
10. PRELIMINARY PROPOSED CONSTRUCTION PHASING SCHEDULE
    - Q4 2029 – LAND CLEARING, LEVELING 1 MONTH / GRUBBING EQUIPMENT: BULLDOZER EXCAVATOR, BACKHOE, DUMP TRUCK, 15-25 WORKERS
    - Q1 2030 – GRADING: 3 MONTHS / BULLDOZER, EXCAVATOR, GRADER, BACKHOE, DUMP TRUCK, 15-25 WORKERS
    - Q1/Q3 2030 – EXCAVATION FOR DRAINAGE, FOUNDATIONS, AND ELECTRICAL INFRASTRUCTURE, BACKFILL, COMPACT, AND STONE TOPPING: 7 MONTHS / EXCAVATOR, TELEHANDLER, BACKHOE, DUMP TRUCK: 15-25 WORKERS
    - Q1/Q3 2030 – CONCRETE FOUNDATIONS: 6 MONTHS / CONCRETE DELIVERY VEHICLE, CONCRETE PUMP TRUCK, BACKHOE, TELEHANDLER 20-30 WORKERS
    - Q2/Q3 2030 – EQUIPMENT INSTALLATION/ERECTION 3 MONTHS / CRANE, BACKHOE, TELEHANDLER: 30-80 WORKERS
    - Q3 2030 – CABLING/WIRING/TERMINATIONS 3 MONTHS / BACKHOE, TELEHANDLER 20-80 WORKERS
    - Q4 2030/Q1 2031 – TESTING/COMMISSIONING 4 MONTHS / TELEHANDLER: 10-15 WORKERS

-- PRELIMINARY --
NOT FOR CONSTRUCTION

350 MW, 1400 MWH (POI)

300' 150' 0 150' 300' 450' 600'

SCALE: 1"=150'

E	08/22/25	PER REVIEW COMMENTS	BMS	MDY	MDY
D	07/18/25	PER CLIENT COMMENTS	BMS	MDY	MDY
B	04/18/25	REVISED PER BATTERY O&M REQUIREMENTS	BMS	MDY	MDY
A	12/06/24	FOR CLIENT SUBMITTAL	MDY	MDY	BMS
NO.	DATE	DESCRIPTION	DRN	CKD	APP

STAMP

OWNER:
MOUNTAIN PEAK ENERGY STORAGE LLC
17180 HUGHES LANDING BLVD.
STE 875
THE WOODLANDS, TX 77380

QUALUS

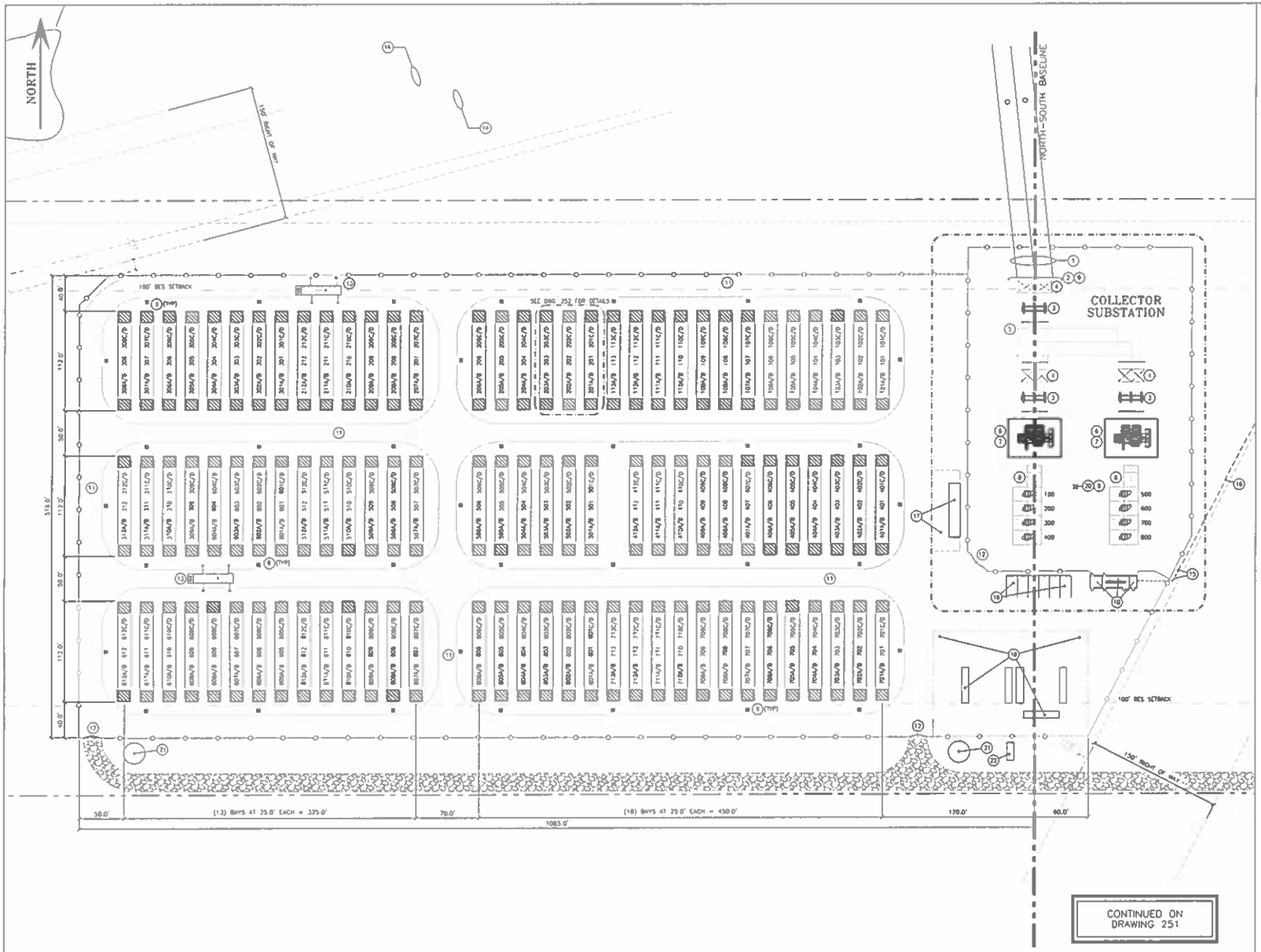
SCALE: 1"=150'
DATE: 12/06/24
DRAWN: MDY
CHECKED: MDY
APPROVED: BMS

PROJECT: MOUNTAIN PEAK ENERGY STORAGE

TITLE: BES FACILITY SITE PLAN

LOCATION: ASSARIA, SALINE COUNTY, KANSAS

FILE NAME: 24214_BESS
JOB NUMBER: 24214
DRAWING NUMBER: 150



LEGEND:

1. 345 KV TRANSMISSION LINE TO UTILITY STATION
2. 345 KV DEAD END TOWER
3. 345 KV CIRCUIT BREAKER
4. 345 KV DISCONNECT SWITCH
5. 345 KV INSTRUMENT TRANSFORMERS
6. BES FACILITY MAIN POWER TRANSFORMER
7. TRANSFORMER OIL CONTAINMENT AND FIRE WALL (WHERE REQUIRED)
8. 34.5 KV OPEN AIR COLLECTOR BUS
9. SITE LIGHTING (NOTE 5)
10. SUBSTATION PROT. & CONTROL ENCLOSURE
11. 25/20 FT. WIDE PERIMETER/INTERIOR ROAD WITH 45 FT. RADIUS
12. 20 FT WIDE DOUBLE SWING GATE
13. 300 TON CRANE WITH OUTRIGGERS (NOTE 4)
14. EXISTING HIGH VOLTAGE TRANSMISSION LINES
15. STATION SERVICE TRANSFORMER, METER, AND U/G SERVICE FROM LOCAL DSP
16. NEW MEDIUM VOLTAGE DISTRIBUTION LINE FROM LOCAL DSP TO MOUNTAIN PEAK
17. OPERATIONS AND MAINTENANCE TRAILER (12' x 60') WITHIN OVERALL 32' x 80' AREA
18. STORAGE AND SERVICE AREA (113' x 173') WITH FIVE STORAGE CONTAINERS
19. PARKING AREA (25' x 72')
20. STATIC MAST
21. ABOVE GROUND WATER TANK FOR FIRE PROTECTION, 24,000 GAL. CAPACITY (NOTE 6)
22. ABOVE GROUND TORNADO SHELTER – APPROX. 50 PERSON CAPACITY (NOTE 6)

- PROPERTY/LEASE LINE (NOTE 3)
- SETBACK LINE (NOTE 3)
- 101-812 INVERTER STEP-UP TRANSFORMERS
- 101A-812A BATTERY CONTAINERS
- SPACE RESERVED FOR CAPACITY MAINTENANCE (AUGMENTATION)

GENERAL NOTES:

1. REFER TO QUALUS'S ELECTRICAL SYSTEM STUDY DATED DECEMBER 6, 2024 FOR DETAILS REGARDING THE ELECTRICAL PARAMETERS OF THE FACILITY.
2. THE PROJECT FENCED AREA, INCLUDING THE BES SUBSTATION, IS APPROX. 633,724 SF (14.5 ACRE) THE RESULTING POWER AND ENERGY DENSITIES DELIVERED AT THE P.O.I. AT 0.95 P.F. ARE APPROX.
   POWER 0.55 KW/SF (24 I MW/ACRE)
   ENERGY 2.21 KWH/SF (96.8 MWH/ACRE)
3. SEE DRAWING 150 FOR INFORMATION REGARDING PROPERTY LINES, ZONING AND SETBACK REQUIREMENTS, ETC.
4. APPROXIMATE CRANE REACHES ARE AS FOLLOWS;
   80–85 FT TO ANY INVERTER STEP-UP TRANSFORMER
   55–60 FT TO ANY BATTERY CONTAINER
   35–40 FT TO ANY AUGMENTATION UNIT
5. LIGHTING IN THE BES YARD CONSISTS OF LED FIXTURES MOUNTED ON 15 FT TALL POLES LIGHTING IN THE SUBSTATION CONSISTS OF LED FIXTURES MOUNTED 15 FT ABOVE GRADE ON THE DEAD-END TOWER AND STATIC MAST.
6. THE DESIGN AND SPECIFICATION OF THIS EQUIPMENT IS BY OTHERS.

-- PRELIMINARY --
NOT FOR CONSTRUCTION

350 MW, 1400 MWH (POI)

100' 50' 0 50' 100' 150' 200'

SCALE: 1"=50'

REV	DATE	DESCRIPTION	DRN	CHD	APP
E	08/22/25	PER REVIEW COMMENTS	BWS	MDY	MDY
D	07/31/25	PERMIT APPLICATION SUBMITTAL	BWS	MDY	MDY
C	07/18/25	PER CLIENT COMMENTS	BWS	MDY	MDY
B	04/18/25	REVISED PER BATTERY O&M REQUIREMENTS	BWS	MDY	MDY
A	12/06/24	FOR CLIENT SUBMITTAL	MDY	MDY	BWS

STAMP

OWNER
MOUNTAIN PEAK ENERGY STORAGE LLC
17780 HUGHES LANDING BLVD
STE 675
THE WOODLANDS, TX 77380

QUALUS

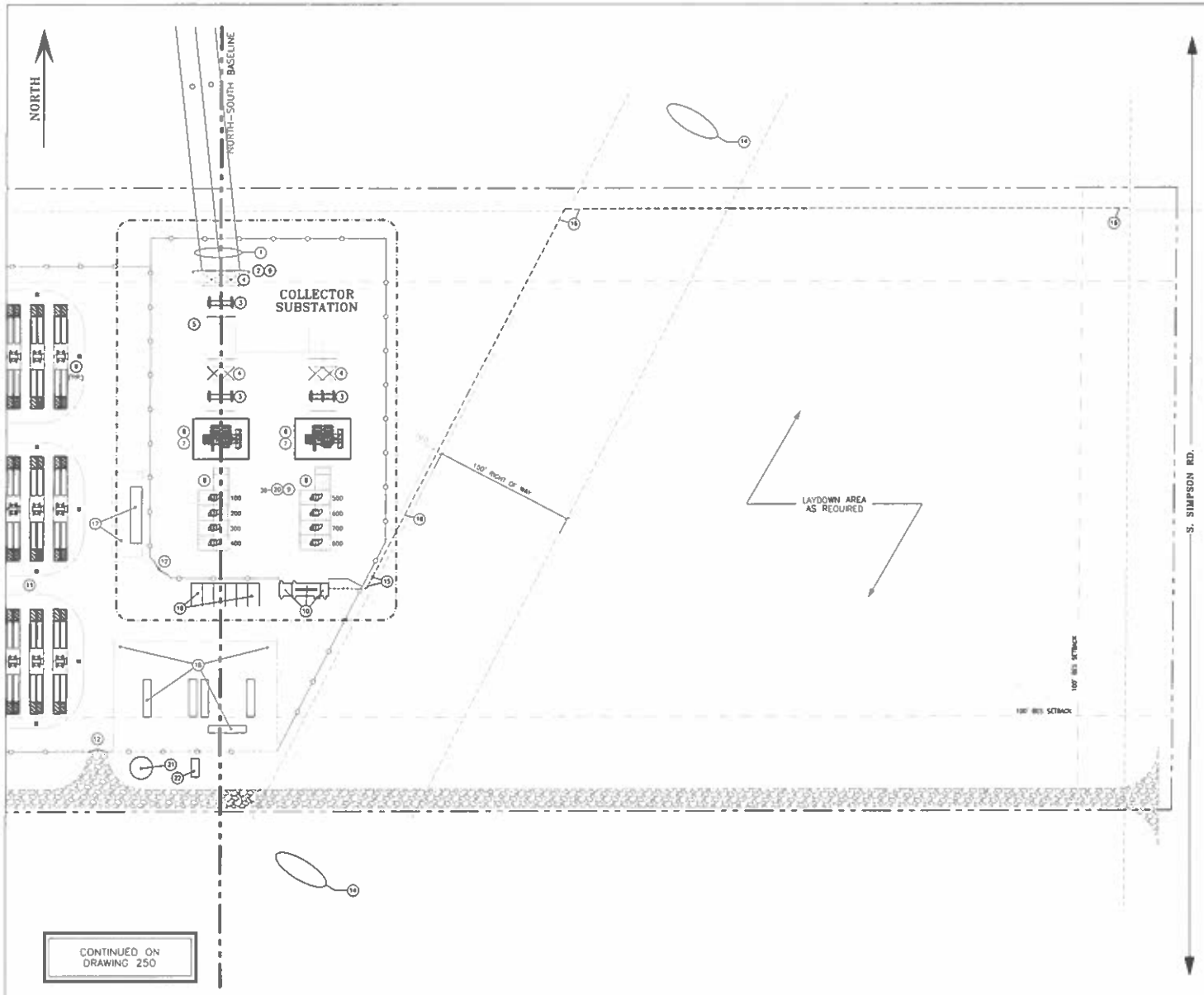
SCALE	1"=50'
DATE	12/06/24
DRAWN	MDY
CHECKED	MDY
APPROVED	BWS

PROJECT: MOUNTAIN PEAK ENERGY STORAGE

TITLE: BES FACILITY
GENERAL ARRANGEMENT PLAN

LOCATION: ASSARIA, SALINE COUNTY, KANSAS

FILE NAME	24214_BESS
JOB NUMBER	24214
DRAWING NUMBER	250



LEGEND:

1. 345 KV TRANSMISSION LINE TO UTILITY STATION
2. 345 KV DEAD END TOWER
3. 345 KV CIRCUIT BREAKER
4. 345 KV DISCONNECT SWITCH
5. 345 KV INSTRUMENT TRANSFORMERS
6. BES FACILITY MAIN POWER TRANSFORMER
7. TRANSFORMER OIL CONTAINMENT AND FIRE WALL (WHERE REQUIRED)
8. 34.5 KV OPEN AIR COLLECTOR BUS
9. SITE LIGHTING (NOTE 5)
10. SUBSTATION PROT & CONTROL ENCLOSURE
11. 25/20 FT WIDE PERIMETER/INTERIOR ROAD WITH 45 FT. RADIUS
12. 30 FT. WIDE DOUBLE SWING GATE
13. 300 TON CRANE WITH OUTRIGGERS (NOTE 4)
14. EXISTING HIGH VOLTAGE TRANSMISSION LINES
15. STATION SERVICE TRANSFORMER, METER, AND U/G SERVICE FROM LOCAL DSP
16. NEW MEDIUM VOLTAGE DISTRIBUTION LINE FROM LOCAL DSP TO MOUNTAIN PEAK
17. OPERATIONS AND MAINTENANCE TRAILER (12' x 80') WITHIN OVERALL 33' x 90' AREA
18. STORAGE AND SERVICE AREA (117' x 173') WITH FIVE STORAGE CONTAINERS
19. PARKING AREA (25' x 72')
20. STATIC MAST
21. ABOVE GROUND WATER TANK FOR FIRE PROTECTION, 24,000 GAL. CAPACITY (NOTE 8/250)
22. ABOVE GROUND TORNADO SHELTER - APPROX. 50 PERSON CAPACITY (NOTE 8/250)

PROPERTY/LEASE LINE (NOTE 3)
SETBACK LINE (NOTE 3)
101-112 INVERTER STEP-UP TRANSFORMERS
101A-112A BATTERY CONTAINERS
SPACE RESERVED FOR CAPACITY MAINTENANCE (AUGMENTATION)

NOTES:

1. SEE DRAWING 250 FOR GENERAL NOTES

-- PRELIMINARY --
NOT FOR CONSTRUCTION

350 MW, 1400 MWH (POI)

100' 50' 0 50' 100' 150' 200'

SCALE: 1"=50'

REV	DATE	DESCRIPTION	DRN	CKD	APP
E	08/22/25	PER REVIEW COMMENTS	BMS	MDY	MDY
D	07/31/25	PERMIT APPLICATION SUBMITTAL	BMS	MDY	MDY
C	07/18/25	PER CLIENT COMMENTS	BMS	MDY	MDY
B	04/18/25	REVISED PER BATTERY O&M REQUIREMENTS	BMS	MDY	MDY
A	12/06/24	FOR CLIENT SUBMITTAL	MDY	MDY	BMS

STAMP

OWNER:
MOUNTAIN PEAK ENERGY STORAGE LLC
1780 HUGHES LANDING BLVD.
STE 875
THE WOODLANDS, Tx 77380

QUALUS

SCALE: 1"=50'
DATE: 12/06/24
DRAWN: MDY
CHECKED: MDY
APPROVED: BMS

PROJECT: MOUNTAIN PEAK ENERGY STORAGE
TITLE: BES FACILITY GENERAL ARRANGEMENT PLAN
LOCATION: ASSARIA, SALINE COUNTY, KANSAS

FILE NAME: 24214_BESS
JOB NUMBER: 24214
DRAWING NUMBER: 251

LEGEND:

① QTY (4) THERMAL CAMERA – FLIR FC-SERIES AI – MODEL FLIR FC-610 AI

② QTY (23) 4K DOME CAMERA – FLIR QUASAR PREMIUM MINI-DOME AI ULTRA HD 4K WIDE – MODEL CM-3408-AA-IA

PROPERTY/LEASE LINE
SETBACK LINE

10° VIEW ANGLE PROVIDED BY THERMAL CAMERAS

57° VIEW ANGLE PROVIDED BY DOME CAMERAS; 131 FT. RANGE SHOWN

GENERAL NOTES:

1. THIS SYSTEM IS SIMILAR TO OTHERS PROPOSED FOR OTHER BESS FACILITIES.
2. CCVT EQUIPMENT IS TO BE MOUNTED ON LIGHT POLES WHERE POSSIBLE. SEPARATE POLES TO BE INSTALLED WHERE REQUIRED.
3. CONDUITS AND CABLE FOR AC POWER AND DATA STREAMS TO BE PROVIDED AS PART OF THE BESS DESIGN.
4. THE NETWORK INFRASTRUCTURE FOR REMOTE COMMUNICATIONS TO CCTV SYSTEM IS TO BE DETERMINED.

-- PRELIMINARY --
NOT FOR CONSTRUCTION

350 MW, 1400 MWH (POI)

100' 50' 0 50' 100' 150' 200'

SCALE: 1"=50'

REV	DATE	DESCRIPTION	DRN	CKD	APP
C	08/22/25	PER REVIEW COMMENTS	BWS	MDY	MDY
B	07/31/25	PERMIT APPLICATION SUBMITTAL	BWS	MDY	MDY
A	07/18/25	FOR CLIENT SUBMITTAL	BWS	MDY	MDY

STAMP

OWNER
MOUNTAIN PEAK ENERGY STORAGE LLC
1780 HUGHES LANDING BLVD
STE 675
THE WOODLANDS, TX 77380

QUALUS

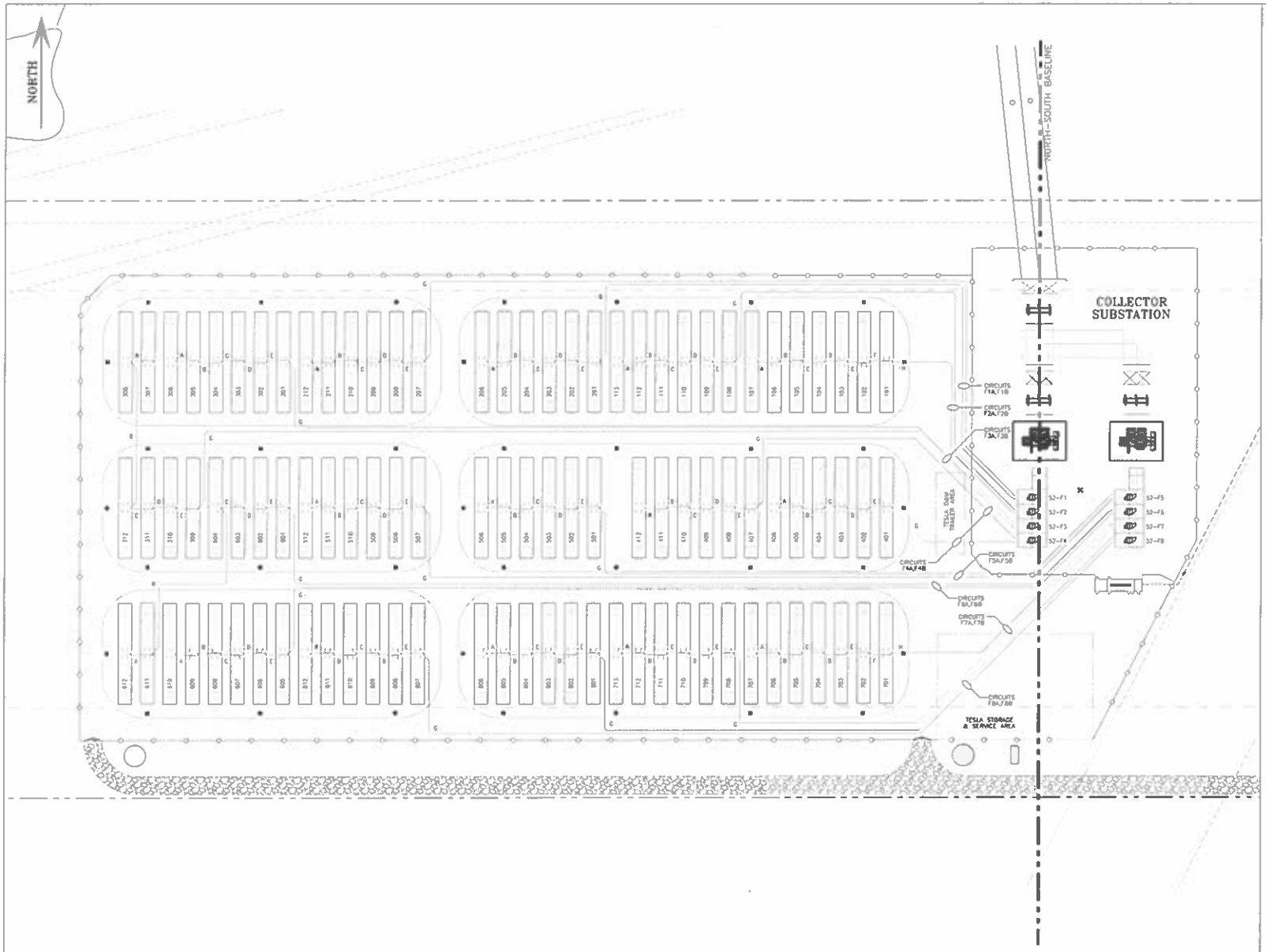
SCALE 1"=50'
DATE 07/18/25
DRAWN BWS
CHECKED MDY
APPROVED MDY

PROJECT
MOUNTAIN PEAK ENERGY STORAGE

TITLE
BES FACILITY
CCTV SYSTEM DESIGN

LOCATION
ASSARIA, SALINE COUNTY, KANSAS

FILE NAME 24214_BESS
JOB NUMBER 24214
DRAWING NUMBER 270



NOTES:

1. THE ⊏ SYMBOL INDICATES MEDIUM VOLTAGE CABLE. SEE DRAWINGS 102 AND 103 FOR THE MEDIUM VOLTAGE CABLE SCHEDULE
2. ALL CABLES ARE IN CONDUITS SIZED 6 INCH DIAMETER, EXCEPT THAT THE COLLECTOR CIRCUIT "HOME RUNS" ARE DIRECT BURIED
3. UNDERGROUND 480 V CABLE FROM LOCAL DSP FOR MOUNTAIN PEAK SERVICE.

-- PRELIMINARY --
NOT FOR CONSTRUCTION

350 MW, 1400 MWH (POI)

100' 50' 0 50' 100' 150' 200'

SCALE: 1"=50'

REV	DATE	DESCRIPTION	DRN	CKD	APP
E	08/22/25	PER REVIEW COMMENTS	BWS	MDY	MDY
D	07/31/25	PERMIT APPLICATION SUBMITTAL	BWS	MDY	MDY
C	07/18/25	PER CLIENT COMMENTS	BWS	MDY	MDY
B	04/18/25	REVISED PER BATTERY O&M REQUIREMENTS	BWS	MDY	MDY
A	12/06/24	FOR CLIENT SUBMITTAL	MDY	MDY	BWS

STAMP

OWNER
MOUNTAIN PEAK ENERGY STORAGE LLC
17180 HUGHES LANDING BLVD
STE 875
THE WOODLANDS, TX 77380

QUALUS

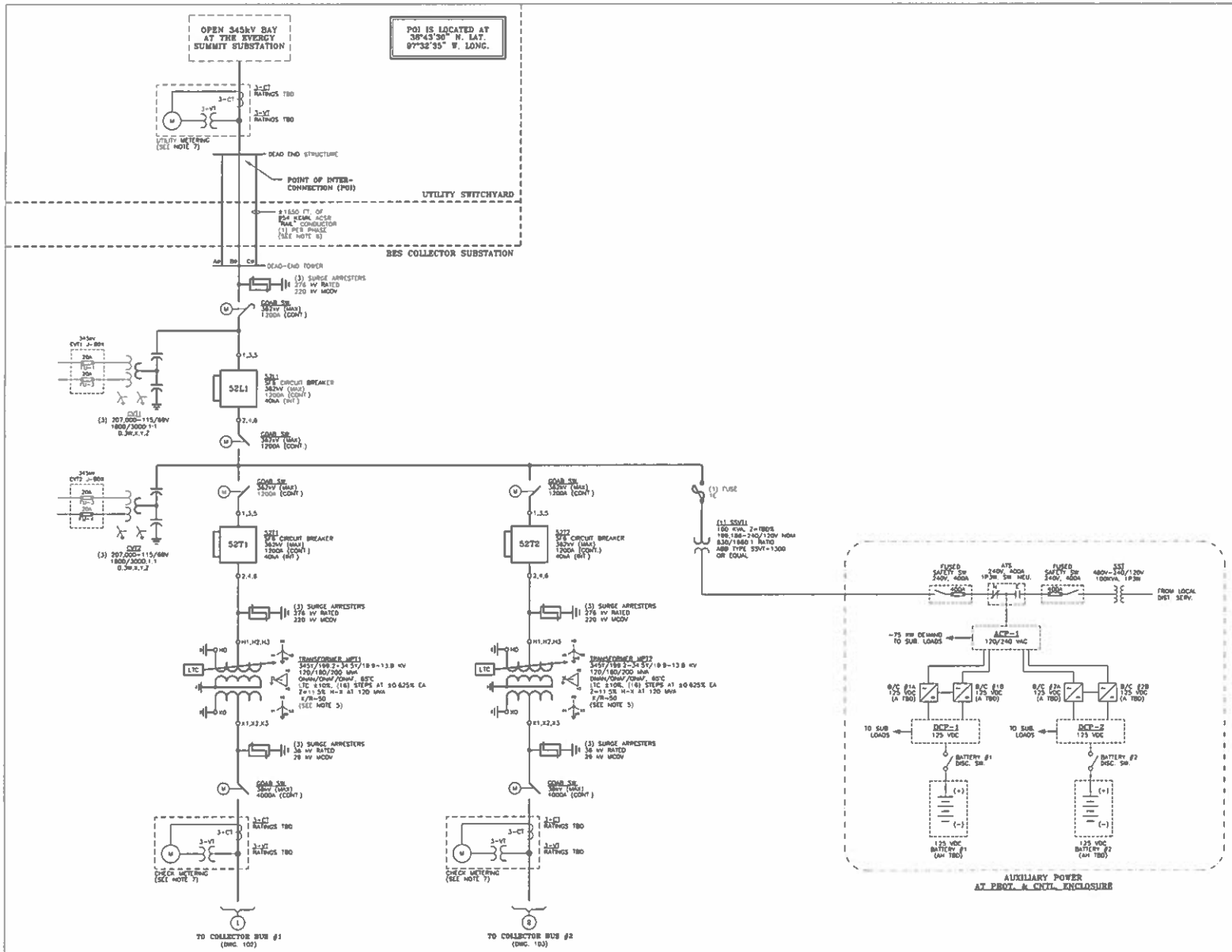
SCALE	1"=50'
DATE	12/06/24
DRAWN	MDY
CHECKED	MDY
APPROVED	BWS

PROJECT: MOUNTAIN PEAK ENERGY STORAGE

TITLE: BES FACILITY
MEDIUM VOLTAGE CABLE PLAN

LOCATION: ASSARIA, SALINE COUNTY, KANSAS

FILE NAME	24214_BESS
JOB NUMBER	24214
DRAWING NUMBER	470



NOTES

1. THE PROJECT INCLUDES NINETY-EIGHT (98) ENERGY STATIONS WITH FOUR (4) ESS UNITS PER STATION INITIALLY INSTALLED. AUGMENTATION UNITS WILL BE INSTALLED OVER TIME FOR CAPACITY MAINTENANCE. THE DESIGN PROVIDES 350 MW OF POWER AT 0.95 POWER FACTOR FOR A 4-HOUR DURATION
2. A FULL COMPLIMENT OF CURRENT TRANSFORMERS (CT'S) WILL BE PROVIDED ON THE MAIN POWER TRANSFORMERS AND ALL 345 kV & 34.5 kV CIRCUIT BREAKERS
3. THE HIGH VOLTAGE SYSTEM IS 345 kV NOMINAL AND IS ASSUMED TO OPERATE IN A NORMAL RANGE OF +/-5% OF NOMINAL. THE WORST CASE CONTINGENCY OPERATING RANGE IS NOT KNOWN
4. THE MAXIMUM AVAILABLE FAULT CURRENTS AT THE UTILITY 345 kV P.O.I ARE: T.B.D. AMPS, T.B.D. X/R (THREE PHASE) T.B.D AMPS, T.B.D X/R (SINGLE LINE-TO-GROUND)
5. THE TRANSFORMER IMPEDANCE IS SET TO 11.5% TO MATCH PRELIMINARY SYSTEM MODELING. THE X/R RATIO SHALL BE AS LOW AS PRACTICAL. THE TRANSFORMER NO BUSHING IS SHOWN SOLIDLY GROUNDING BUT IMPEDANCE GROUNDING MIGHT BE REQUIRED (T.B.D BY STUDY)
6. THE TRANSMISSION CONDUCTOR SIZE AND QUANTITY ARE ASSUMED AND CAN BE REVISED TO BETTER MEET UTILITY STANDARD SIZES AND CONSTRUCTION.
7. UTILITY METERING REQUIREMENTS, CHECK METERING, AND METER LOCATIONS ARE TO BE CONFIRMED.
8. SURGE ARRESTER RATINGS TO BE CONFIRMED BY INSULATION COORDINATION STUDY

-- PRELIMINARY --
NOT FOR CONSTRUCTION

350 MW, 1400 MWH (POI)

EQUIPMENT RATINGS AND CONFIGURATIONS ARE PRELIMINARY AND SUBJECT TO CHANGE DURING THE DETAIL DESIGN.

REV	DATE	DESCRIPTION	DRN	CKD	APP
C	07/31/25	PERMIT APPLICATION SUBMITTAL	BMS	MDY	MDY
B	07/18/25	PER CLIENT COMMENT	BMS	MDY	MDY
A	12/06/24	FOR CLIENT SUBMITTAL	MDY	MDY	BMS

STAMP

OWNER
MOUNTAIN PEAK ENERGY STORAGE LLC
17380 HUGHES LANDING BLVD
STE 675
THE WOODLANDS, TX 77389

QUALUS

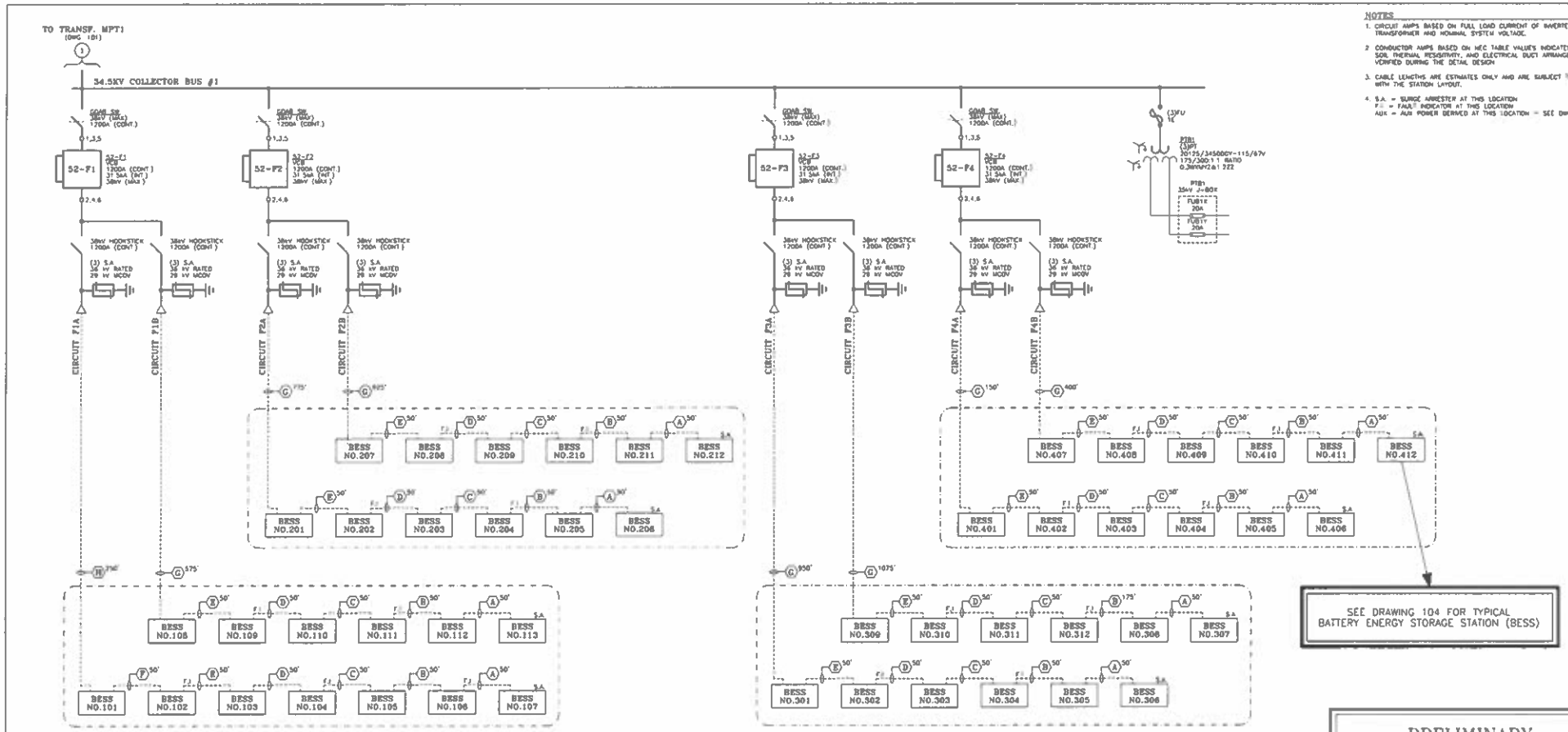
SCALE	N.T.S.
DATE	12/06/24
DRAWN	MDY
CHECKED	MDY
APPROVED	BMS

PROJECT: MOUNTAIN PEAK ENERGY STORAGE

TITLE: SINGLE LINE DIAGRAM COLLECTOR SUBSTATION

LOCATION: ASSARIA, SALINE COUNTY, KANSAS

FILE NAME	24214-101
JOB NUMBER	24214
DRAWING NUMBER	101



NOTES

1. CIRCUIT AMPS BASED ON FULL LOAD CURRENT OF INVERTER STEP-UP TRANSFORMER AND NOMINAL SYSTEM VOLTAGE.
2. CONDUCTOR AMPS BASED ON NEC TABLE VALUES INDICATED LOAD FACTOR, SOIL THERMAL RESISTIVITY, AND ELECTRICAL DUCT ARRANGEMENT TO BE VERIFIED DURING THE DETAIL DESIGN
3. CABLE LENGTHS ARE ESTIMATES ONLY AND ARE SUBJECT TO CHANGE WITH THE STATION LAYOUT.
4. S.A. = SURGE ARRESTER AT THIS LOCATION
   F.I. = FAULT INDICATOR AT THIS LOCATION
   AUX = AUX POWER DERIVED AT THIS LOCATION - SEE DWG 104

MEDIUM VOLTAGE CABLE SCHEDULE (PRELIMINARY)

ID	SIZE	QTY. PER PH.	MATERIAL	SPECIFICATION	NO. PH.	CIRC. AMPS (NOTE 1)	COND. AMPS (NOTE 2)	2020 NEC CONDUCTOR RATING	
A	300 KCMIL	ONE (1)	ALUM	35 KV, TYPE MV-105, TR-XLPE, 1000 INSUL, 1/3 CN	1	73.8	370	TABLE 311.60(C)(78), 90°C, (3) 1/C CABLES IN DUCT, ONE CIRCUIT	
B	300 KCMIL	ONE (1)	ALUM	DITTO	2	147	370	DITTO	
C	300 KCMIL	ONE (1)	ALUM	DITTO	3	221	370	DITTO	
D	300 KCMIL	ONE (1)	ALUM	DITTO	4	294	370	DITTO	
E	1000 KCMIL	ONE (1)	ALUM	DITTO	5	368	525	DITTO	
F	1000 KCMIL	ONE (1)	ALUM	DITTO	6	442	525	DITTO	
G	1000 KCMIL	ONE (1)	ALUM	DITTO	6	442	680	TABLE 311.60(C)(82), 90°C, (3) 1/C CABLES, DIRECT BURY, TWO CIRCUITS	(HOME RUN)
H	1000 KCMIL	ONE (1)	ALUM	DITTO	7	515	680	DITTO	(HOME RUN)

-- PRELIMINARY --
NOT FOR CONSTRUCTION

350 MW, 1400 MWH (POI)

EQUIPMENT RATINGS AND CONFIGURATIONS ARE PRELIMINARY AND SUBJECT TO CHANGE DURING THE DETAIL DESIGN.

REV	DATE	DESCRIPTION	DRN	CHD	APP
C	07/31/25	PERMIT APPLICATION SUBMITTAL	BMS	MDY	MDY
B	07/18/25	PER CLIENT COMMENT	BMS	MDY	MDY
A	12/06/24	FOR CLIENT SUBMITTAL	MDY	MDY	BMS

STAMP

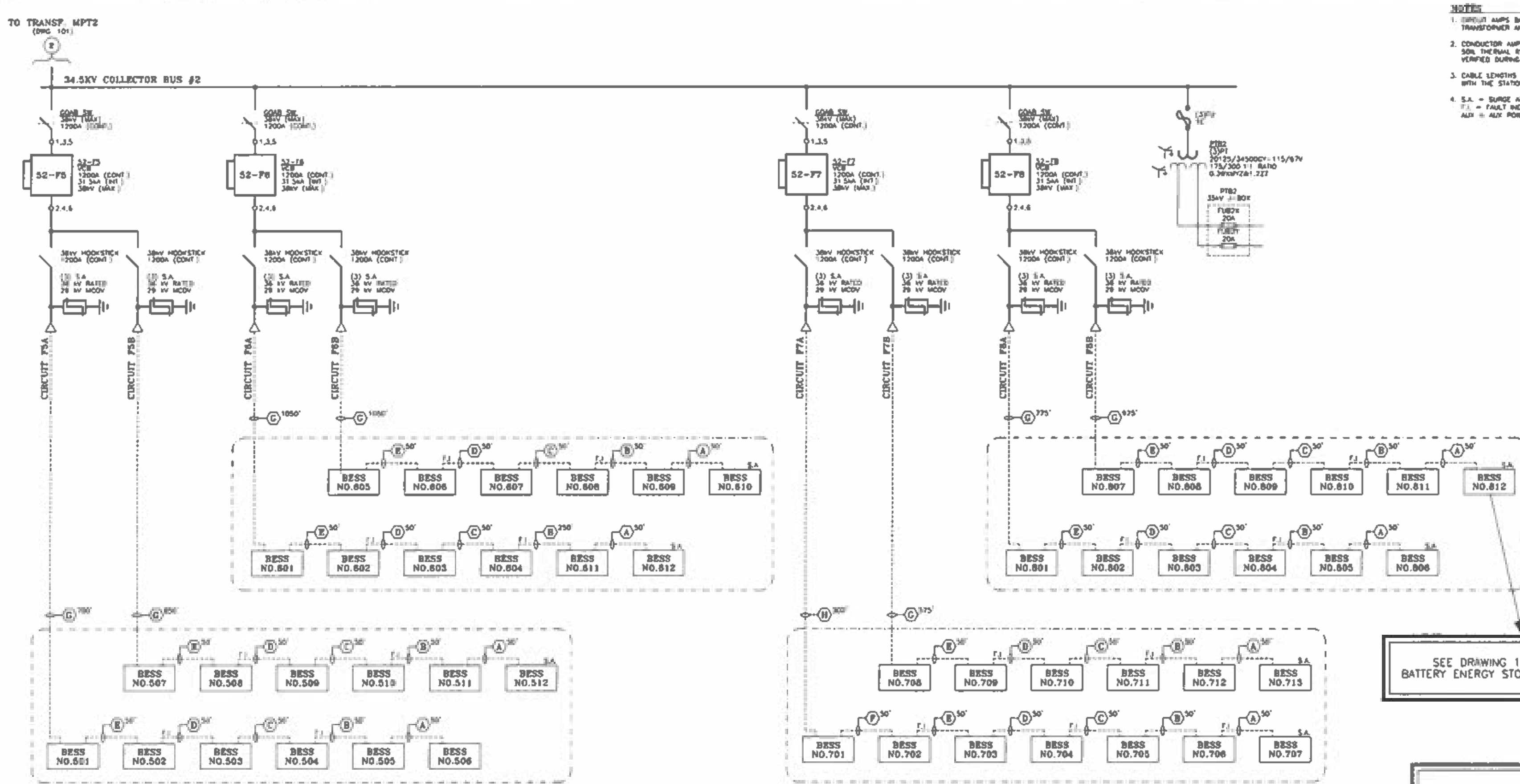
OWNER:
MOUNTAIN PEAK ENERGY STORAGE LLC
1790 HUGHES LANDING BLVD.
STE 575
THE WOODLANDS, TX 77380

QUALUS

SCALE: N.T.S.
DATE: 12/06/24
DRAWN: MDY
CHECKED: MDY
APPROVED: BMS

PROJECT: MOUNTAIN PEAK ENERGY STORAGE
TITLE: SINGLE LINE DIAGRAM 34.5kV COLLECTOR AND BESS
LOCATION: ASSARIA, SALINE COUNTY, KANSAS

FILE NAME: 24214-102
JOB NUMBER: 24214
DRAWING NUMBER: 102



SEE DRAWING 104 FOR TYPICAL
BATTERY ENERGY STORAGE STATION (BESS)

NOTES

1. [illegible] AMPS BASED ON FULL LOAD CURRENT OF INVERTER STEP-UP TRANSFORMER AND NOMINAL SYSTEM VOLTAGE.
2. CONDUCTOR AMPS BASED ON NEC TABLE VALUES INDICATED. LOAD FACTOR, SOIL THERMAL RESISTIVITY, AND ELECTRICAL DUCT ARRANGEMENT TO BE VERIFIED DURING THE DETAIL DESIGN.
3. CABLE LENGTHS ARE ESTIMATES ONLY AND ARE SUBJECT TO CHANGE WITH THE STATION LAYOUT.
4. S.A. = SURGE ARRESTER AT THIS LOCATION
   F.I. = FAULT INDICATOR AT THIS LOCATION
   AUX = AUX POWER DERIVED AT THIS LOCATION – SEE DWG 104

MEDIUM VOLTAGE CABLE SCHEDULE (PRELIMINARY)

ID	SIZE	QTY PER PH	MATERIAL	SPECIFICATION	NO. INV.	CIRC. AMPS (NOTE 1)	COND. AMPS (NOTE 2)	2020 NEC CONDUCTOR RATING	
A	500 KCMIL	ONE (1)	ALUM	35 KV, TYPE MV-105, TR-XLPE, 100% INSUL, 1/3 CN	1	73.6	370	TABLE 311 [illegible], 90°C, (3) 1/C CABLES IN DUCT, ONE CIRCUIT	
B	500 KCMIL	ONE (1)	ALUM	DITTO	2	147	370	DITTO	
C	500 KCMIL	ONE (1)	ALUM	DITTO	3	221	370	DITTO	
D	500 KCMIL	ONE (1)	ALUM	DITTO	4	294	370	DITTO	
E	1000 KCMIL	ONE (1)	ALUM	DITTO	5	368	525	DITTO	
F	1000 KCMIL	ONE (1)	ALUM	DITTO	6	442	525	DITTO	
G	1000 KCMIL	ONE (1)	ALUM	DITTO	6	442	580	TABLE 311 [illegible], 90°C, (3) 1/C CABLES, DIRECT BURY, TWO CIRCUITS	(HOME RUN)
H	1000 KCMIL	ONE (1)	ALUM	DITTO	7	515	580	DITTO	(HOME RUN)

-- PRELIMINARY --
NOT FOR CONSTRUCTION

350 MW, 1400 MWH (POI)

EQUIPMENT RATINGS AND CONFIGURATIONS ARE PRELIMINARY AND SUBJECT TO CHANGE DURING THE DETAIL DESIGN.

REV	DATE	DESCRIPTION	DRN	CHK	APP
C	07/31/25	PERMIT APPLICATION SUBMITTAL	BMS	MDY	MDY
B	07/18/25	PER CLIENT COMMENT	BMS	MDY	MDY
A	12/06/24	FOR CLIENT SUBMITTAL	MDY	MDY	BMS

STAMP

OWNER:
MOUNTAIN PEAK ENERGY STORAGE LLC
1780 HUGHES LANDING BLVD
STE 675
THE WOODLANDS, TX 77380

QUALUS

SCALE: N.T.S.
DATE: 12/06/24
DRAWN: MDY
CHECKED: MDY
APPROVED: BMS

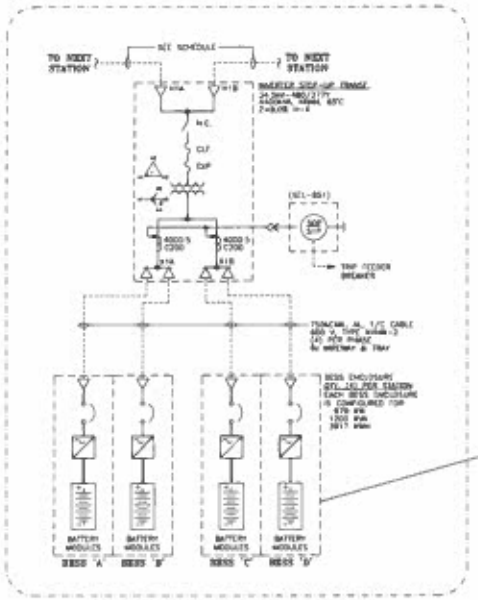
PROJECT: MOUNTAIN PEAK ENERGY STORAGE

TITLE: SINGLE LINE DIAGRAM
34.5kV COLLECTOR AND BESS

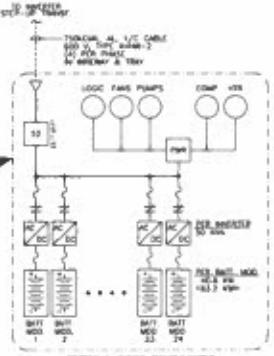
LOCATION: ASSARIA, SALINE COUNTY, KANSAS

FILE NAME: 24214-103
JOB NUMBER: 24214
DRAWING NUMBER: 103

NOTES:
1. LATER



TYP. BATTERY ENERGY STORAGE STATION (BESS)



TYPICAL BESS ENCLOSURE

-- PRELIMINARY --
NOT FOR CONSTRUCTION

350 MW, 1400 MWH (POI)

EQUIPMENT RATINGS AND CONFIGURATIONS ARE PRELIMINARY AND SUBJECT TO CHANGE DURING THE DETAIL DESIGN.

REV	DATE	DESCRIPTION	DRN	CHD	APP
C	07/31/25	PERMIT APPLICATION SUBMITTAL	BMS	MDY	MDY
B	07/18/25	PER CLIENT COMMENT	BMS	MDY	MDY
A	12/06/24	FOR CLIENT SUBMITTAL	MDY	MDY	BMS

STAMP

OWNER
MOUNTAIN PEAK ENERGY STORAGE LLC
1780 HUGHES LANDING BLVD.
STE 675
THE WOODLANDS, Tx 77380

QUALUS

SCALE: N.T.S.
DATE: 12/06/24
DRAWN: MDY
CHECKED: MDY
APPROVED: BMS

PROJECT: MOUNTAIN PEAK ENERGY STORAGE
TITLE: SINGLE LINE DIAGRAM
BATTERY ENERGY STORAGE STATION (BESS)
LOCATION: ASSARIA, SALINE COUNTY, KANSAS

FILE NAME: 24214-104
JOB NUMBER: 24214
DRAWING NUMBER: 104

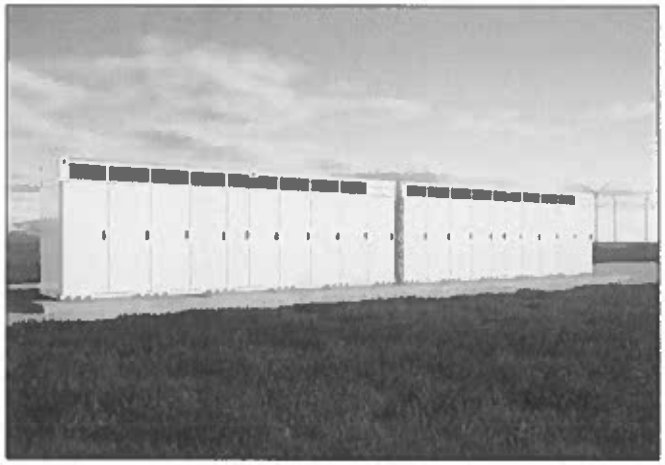
MEGAPACK 2 XL DATASHEET

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 and industry-first Archetypes
- Industry experts available to identify site-specific needs
- Integrated solution that allows for battery augmentation over time



POWER AND ENERGY

Megapack is configurable. Standard configurations are 2-Hour cell option C010 or C011, 4-Hour cell option C010 or C011, and 4-Hour cell option C012. Nominal energy is specified at 25°C (77°F).

	AC Power per Megapack	Energy per Megapack
2-Hour C010 / C011	1927 kW	3854 kWh
4-Hour C010 / C011	979 kW	3916 kWh
4-Hour C012	1042 kW	4170 kWh

ELECTRICAL

Nominal AC Voltage	480 V AC 3-phase	
Nominal Frequency	50 or 60 Hz	
Inverter Power per Megapack[1]	2-Hour Max - C010 / C011: 4-Hour Max - C010 / C011: 4-Hour Max - C012:	2400 kVA 1320 kVA 1320 kVA
Round-Trip Efficiency[2]	2-Hour - C010 / C011: 4-Hour - C010 / C011: 4-Hour - C012:	91.7% 93.7% 91.8%

[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

MECHANICAL AND MOUNTING

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

REGULATORY

System is designed to be 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

Archetypes

Available for both Utility-Scale and Commercial and Industrial (C&I) projects, Archetypes provide advanced control functions and unique design requirements based on the project's electrical topology:
- Utility Battery Only
- Utility Co-Located Plant (Battery Only)
- Utility Hybrid
- C&I Battery Dispatch Only
- C&I Grid-Connected Only
- C&I Backup
- C&I Off-Grid Microgrid
- C&I Grid-Connected Microgrid

