

DESIGN SPECIFICATIONS:

- ROOF TOTAL LOAD = 80 PSF
ROOF LIVE LOAD = 50 PSF
CEILING DEAD LOAD = 10 PSF
GROUND SNOW LOAD = 100 PSF (PER ASCE 7-22)
- WIND SPEED = 124 MPH (3 SEC GUST)
- FLOOR LOAD = 150 PSF
BATTERY FLOOR LOAD = 300 PSF
- SEISMIC DESIGN CATEGORY = C
STATE = VA
- BUILDING CONSTRUCTION TYPE = II-B
APPROXIMATE BUILDING SECTION 1 WEIGHT = 80,000#
(INCLUDES 40,000# OF SWITCHGEAR)
APPROXIMATE BUILDING SECTION 2 WEIGHT = 40,000#
APPROXIMATE BUILDING TOTAL WEIGHT = 120,000#
- USE GROUP = U
RISK CATEGORY = IV
- ELECTRICAL CLASSIFICATION = NON-CLASSIFIED

COLOR CHART:

DOOR LEAF	ASH GRAY
DOOR TRIM	ASH GRAY
ROOF SHEETING	ASH GRAY
ROOF TRIM	ASH GRAY
WALL SHEETING	ASH GRAY
WALL TRIM	ASH GRAY
STRUCTURAL BASE FRAME	STRUCTURAL GRAY (STANDARD)
INTERIOR LINER PANEL AND TRIM	REGAL WHITE (STANDARD)

THIS BUILDING CONFORMS TO THE FOLLOWING CODES:

2018 INTERNATIONAL BUILDING CODE W/VA AMENDMENTS
2018 INTERNATIONAL MECHANICAL CODE W/VA AMENDMENTS
2018 INTERNATIONAL ENERGY CONSERVATION CODE W/VA AMENDMENTS
SECTION C405.2, EXCEPTION 1
SECTION C405.3.1, EXCEPTION 16
2017 NATIONAL ELECTRICAL CODE W/VA AMENDMENTS
2022 ASCE 7, MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES, FOR SNOW LOAD ONLY.

THIS BUILDING DOES NOT CONTAIN PLUMBING FACILITIES. PLUMBING FACILITIES SHALL BE PROVIDED ON SITE SUBJECT TO THE LOCAL AUTHORITY HAVING JURISDICTION.

STRUCTURAL STEEL:

ASTM A572 GRADE 50 STEEL BEAMS & CHANNELS @ Fy = 50KSI, Fu = 66KSI
ASTM A583 STEEL PERIMETER ANGLES @ Fy = 36KSI, Fu = 58KSI
ASTM A36 1/4" STEEL PLATE DECKING @ Fy = 36KSI, Fu = 58KSI

COLD-FORMED STEEL:

ASTM A653 4033M GRADE 50 STEEL SHEET, ZINC-COATED (GALVANIZED) OR ZINC-IRON ALLOY-COATED (GALVANNEAL) BY THE HOT-DIP PROCESS @ Fy = 50KSI

HOT-ROLLED STEEL:

ASTM A1011/A1011M GRADE 50 STEEL SHEET, HOT ROLLED CARBON STEEL @ Fy = 50KSI

WELDS:

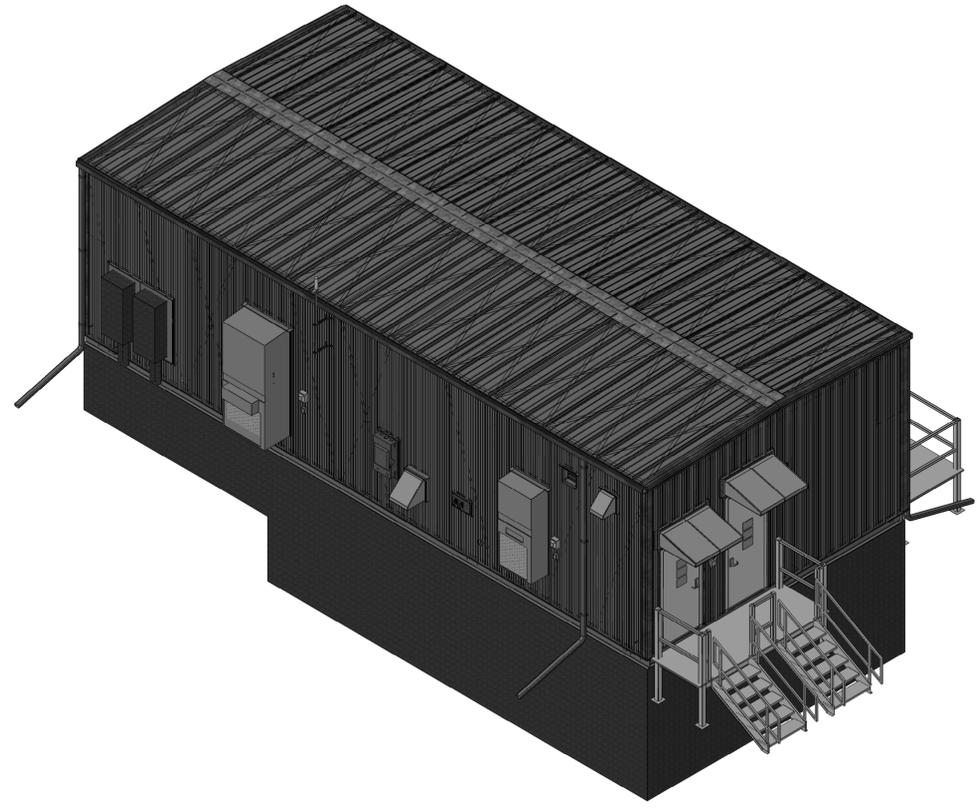
ALL WELDS TO BE PERFORMED PER AWS D1.1 AND D1.3 STRUCTURAL WELDING CODE AND PER TRACHTE LLC WELDING MANUAL.

DISCLAIMERS:

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**SIEMENS
DOMINION ENERGY
GTP FAIRFAX SUBSTATION
21'-6" x 47'-0" x 12'-5"
TRACHTE PROJECT #35193
FAIRFAX, VA**



STRUCTURAL INDEX

C	COVER & INDEX
S1	FOUNDATION REQUIREMENTS, STEEL FLOOR, DECKING LAYOUT & RELAY RACK SUPPORT CHANNEL LAYOUT
S2	WALL FRAMING & ROOF FRAMING
S3	BUILDING SECTION & INTERIOR ELEVATIONS
S4	EXTERIOR ELEVATIONS
S5	CABLE TRAY & UNISTRUT LAYOUTS
SD1	STRUCTURAL DETAILS

REVISION TABLE

REV.	DESCRIPTION	DATE	REVISED BY	APPROVED BY
J	STATE COMMENTS	02/06/2024	PMA	TEG
H	ENGINEER COMMENTS	01/19/2024	BGH	TEG
G	STATE COMMENTS	12/21/2023	JB	TEG
F	PRODUCTION COMMENTS	12/07/2023	BGH	TEG
E	MFGWARE	10/31/2023	BGH	TEG
D	CUSTOMER COMMENTS	10/12/2023	BGH	TEG
C	CUSTOMER COMMENTS	10/02/2023	RSS	TEG
B	CUSTOMER COMMENTS	08/04/2023	BGH	TEG
A	INITIAL STRUCTURAL DRAWINGS	06/16/2023	BGH	TEG



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SIEMENS
DOMINION ENERGY
GTP FAIRFAX SUBSTATION
FAIRFAX, VA
21'-6" x 47'-0" x 12'-5"

SIZE
D
SCALE
1:48
IN PRODUCTION
REVISION NO. J 2024/02/06
PROJECT NO. 35193
CUSTOMER DRAWINGS COMPLETE BUILDING_35193
SHEET NO. S2147

PRODUCT ID: 35193
SHEET TITLE: COVER & INDEX
SHEET NO: 029423-1-1
REVISION NO: J 2024/02/06
PROJECT NO: 35193
CUSTOMER DRAWINGS COMPLETE BUILDING_35193
SHEET NO: S2147

- SHIPPING & EQUIPMENT NOTES:**
- OUTSIDE BUILDING SHIPPING DIMENSIONS NOT TO EXCEED 2@ 11'-1" x 47'-8" x 13'-4".
 - EXTERIOR ITEMS REMOVED FOR SHIPPING:
 - (1) STANDING SEAM FALL PROTECTION ROOF CLAMPS
 - HOODS
 - HVACS
 - CABLE RISER
 - DOOR CANOPES
 - GUTTERS, DOWNSPOUTS, AND DOWNSPOUT EXTENSIONS
 - IF APPLICABLE, ALL HVAC UNITS TO RECEIVE HVAC FOIL TAPE MEETING UL181A-P REQUIREMENT.
 - EACH EXTERIOR DOOR INCLUDES THE FOLLOWING:
 - WEATHERSTRIP, THRESHOLD, SWEEP, & (2) KEYS PER LOCKSET.
 - WATERSHEDS: (1) PER DOOR FRAME & (1) PER DOOR LEAF.
 - PANIC DEVICE, INCLUDES INTERIOR PULL HANDLE.

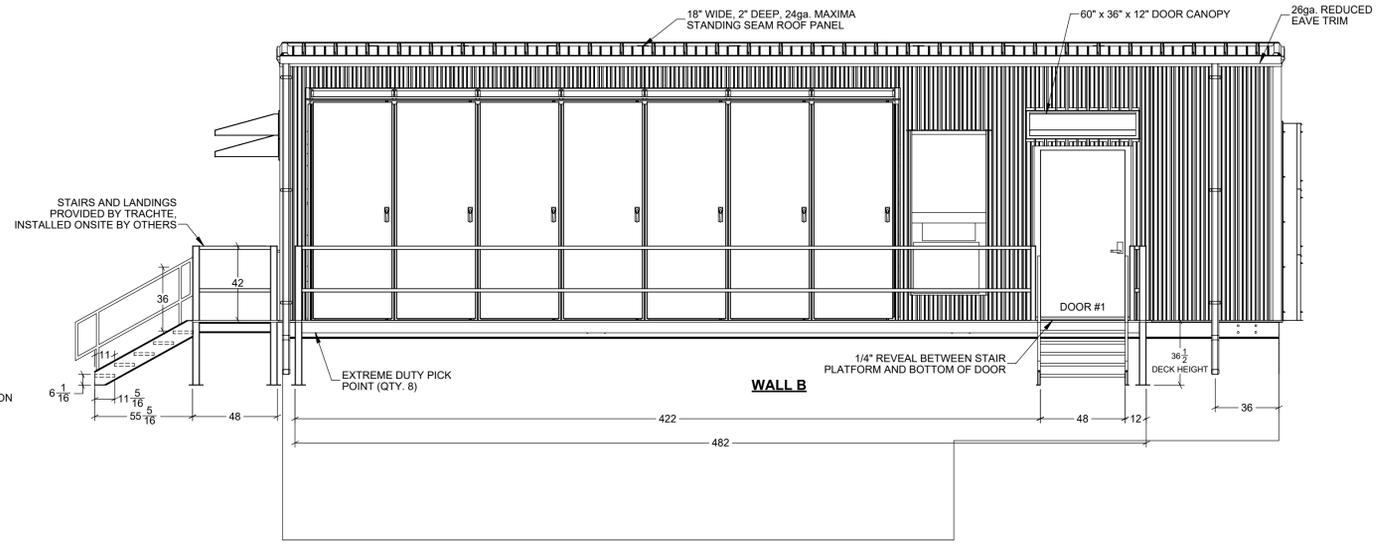
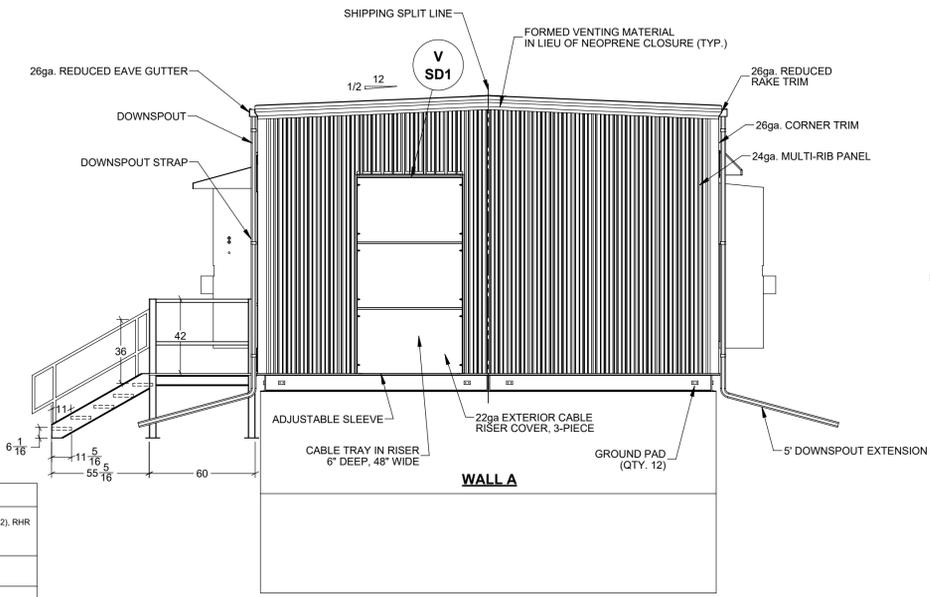
DOOR SCHEDULE:

DOOR #	DESCRIPTION
1	4'-0" x 6'-0", 18ga. DOOR, 14ga. FRAME, STANDARD INSULATED (R-4), LHR PANIC DEVICE, VON DUPRIN - 99L-NL-F3996L-NL 06 4" MD US26D NIGHTLATCH LEVER W/ BEST CONSTRUCTION CORE (4) HINGE HEAVY DUTY - 4 1/2" NRP - SS (32D) - BALL BEARING (BB51) FOR 3/6 OR WIDER (1) DOOR CLOSER W/ NO HOLD OPEN LCN411EDA (UP TO 4' DOOR)
2	3'-0" x 6'-0", 18ga. DOOR, 14ga. FRAME, STANDARD INSULATED (R-4), RHR PANIC DEVICE, VON DUPRIN - 99L-NL-F3996L-NL 06 3" MD US26D NIGHTLATCH LEVER W/ BEST CONSTRUCTION CORE (4) HINGE - 4 1/2" NRP - SS (32D) - BALL BEARING (BB51) (1) DOOR CLOSER W/ NO HOLD OPEN LCN411EDA (UP TO 4' DOOR)
3	3'-0" x 7'-0", 18ga. DOOR, 14ga. FRAME, STANDARD INSULATED (R-4), LHR PANIC DEVICE, VON DUPRIN - 99L-NL-F3996L-NL 06 3" MD US26D NIGHTLATCH LEVER W/ BEST CONSTRUCTION CORE (3) HINGE - 4 1/2" NRP - SS (32D) - BALL BEARING (BB51) (1) DOOR CLOSER W/ NO HOLD OPEN LCN411EDA (UP TO 4' DOOR)

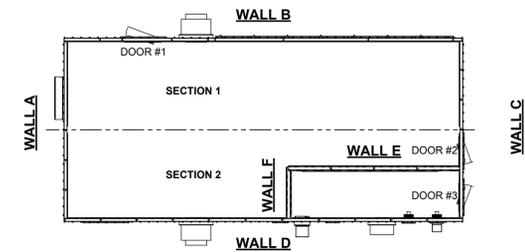
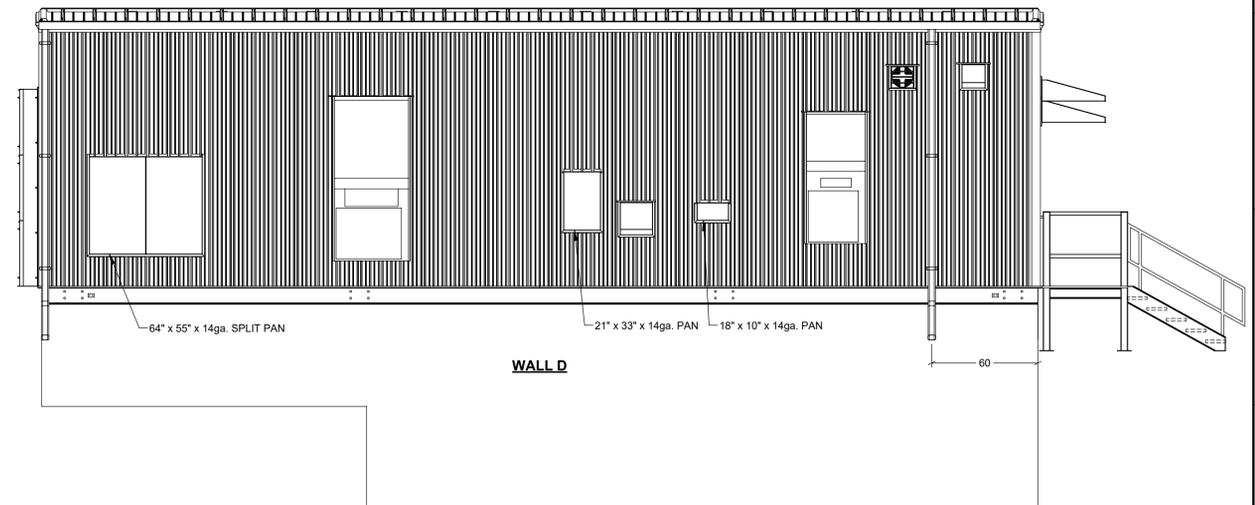
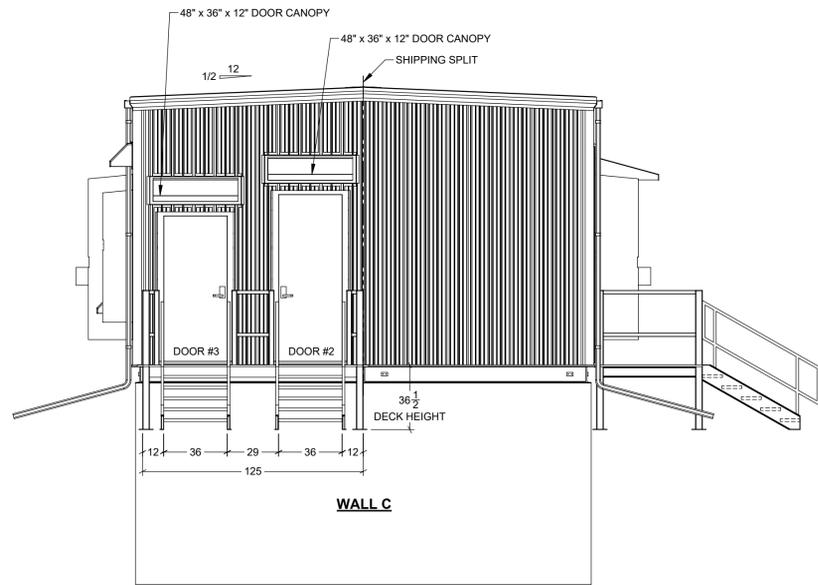
- SHEETING FASTENER SCHEDULE:**
- MULTI-RIB END WALL SHEETING FASTENER PATTERN:**
- BASE CHANNEL & TRUSS WITH A 5'-7"-0" PATTERN
 - GIRTS AT 12" O.C.
 - WALL SHEETING LAPS AT 20" O.C.
- MULTI-RIB SIDE WALL SHEETING FASTENER PATTERN:**
- BASE CHANNEL & EAVE STRUT WITH A 5'-7"-0" PATTERN
 - GIRTS AT 12" O.C.
 - WALL SHEETING LAPS AT 20" O.C.
- MAXIMA STANDING SEAM ROOF SHEETING FASTENER PATTERN:**
- (2) AT EACH STANDING SEAM ROOF CLIP AT EACH PURLIN
 - (4) AT TOP OF EAVE STRUT

QTY	REAR ACCESS SWITCHGEAR DOORS
7	47 1/4" x 95", 12ga. DOOR & FRAME, STANDARD INSULATION (R-5.2), RHR 3 POINT LATCHING W/ DEVICE BLACK DOOR HANDLE W/ PADLOCK HOLE
28	CONCEALED HINGE - ZINC WITH REMOVEABLE PIN
7	DOOR HOLD OPEN

- STAIR SYSTEM NOTES:**
- STAIR SYSTEMS TO BE HOT DIPPED GALVANIZED
 - ALL STAIR SYSTEMS TO BE MOUNTED ON CONCRETE SLAB FOUNDATION
 - ANCHOR BOLTS NOT SUPPLIED BY TRACHTE
 - STAIR SYSTEMS ARE FREE STANDING AND NOT FASTENED BACK TO BUILDING.
 - NEMA 2 HOLE GROUND PADS WELDED TO STAIRS.



NOTE: HOLD ROOF SHEETS OUT WITH A 2 1/2" OVERHANG



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SIEMENS
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GTP FAIRFAX SUBSTATION
FAIRFAX, VA
21'-6" x 47'-8" x 12'-5"

PROJECT NO. 024423-11
SHEET S4
REVISION (REV) (NO) (DATE) DOCUMENT DATE IN PRODUCTION
2024/02/06
30198_CUSTOM_DRAWINGS COMPLETE BUILDING_35193
SCALE 1/48
SHEET NO. S2147