



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR OSHPD SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP – 0538 – 10

OSHPD Special Seismic Certification Preapproval (OSP)

Type: ☒ New ☐ Renewal

Manufacturer Information

Manufacturer: Siemens Industry, Inc.

Manufacturer's Technical Representative: Megan Rahn

Mailing Address: 501 Fountain Parkway, Grand Prairie, TX 75050

Telephone: (817) 652-6578 Email: megan.rahn@siemens.com

Product Information

Product Name: Siemens FCLV Switchgear and Flex Switchboard

Product Type: Metalclad Switchgear and Switchboard

Product Model Number: 800A to 5000A Main Bus Sections – See attachment for identification number
(List all unique product identification numbers and/or part numbers)

General Description: FCLV is a front connected low voltage metalclad switchgear and Flex switchboard that
provides low voltage circuit protection.

Mounting Description: Rigid floor or Combined Floor/Wall mounted

Applicant Information

Applicant Company Name: W.E. Gundy & Associates, Inc.

Contact Person: Travis Soppe, SE

Mailing Address: 250 Bobwhite Ct, Suite 100, Boise, ID 83706

Telephone: (208) 342-5898 Ext. 115 Email: tsoppe@wegai.com

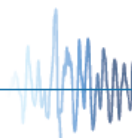
I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2016.

Signature of Applicant:  Date: 09/21/2017

Title: Vice President Company Name: W.E. Gundy & Associates, Inc.

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY
OSH-FD-759 (REV 12/16/15)



OSHPD

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OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

Company Name: W.E. Gundy & Associates, Inc.
Name: Travis Soppe, SE California License Number: S6115
Mailing Address: 250 Bobwhite Ct, Suite 100, Boise, ID 83706
Telephone: (208) 342-5898 Ext. 115 Email: tsoppe@wegai.com

Supports and Attachments Preapproval

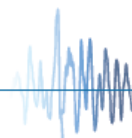
- ☐ Supports and attachments are preapproved under OPM-
(Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required)
- ☒ Supports and attachments are not preapproved

Certification Method

- ☒ Testing in accordance with: ☒ ICC-ES AC156
- ☐ Other (Please Specify): _____

Testing Laboratory

Company Name: Environmental Testing Laboratory
Contact Name: Jeremy Lange
Mailing Address: 11034 Indian Trail, Dallas, TX 75229-3513
Telephone: (972) 247-9657 Email: Jeremy@etldallas.com





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FACILITIES DEVELOPMENT DIVISION

Seismic Parameters

Design in accordance with ASCE 7-10 Chapter 13: ☒ Yes ☐ No

Design Basis of Equipment or Components (F_p/W_p) = 1.50 (z/h = 1) and 1.13 (z/h = 0)

S_{DS} (Design spectral response acceleration at short period, g) = 2.00 (z/h = 1) and 2.50 (z/h = 0)

a_p (In-structure equipment or component amplification factor) = 2.5

R_p (Equipment or component response modification factor) = 6.0

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = 1 (S_{DS} = 2.00) and 0 (S_{DS} = 2.50)

Equipment or Component Natural Frequencies (Hz) = See Attachments

Overall dimensions and weight (or range thereof) = See Attachments

Equipment or Components @ grade designed in accordance with ASCE 7-10 Chapter 15: ☐ Yes ☒ No

Design Basis of Equipment or Components (V/W) = _____

S_{DS} (Design spectral response acceleration at short period, g) = _____

S_{D1} (Design spectral response acceleration at 1 second period, g) = _____

R (Response modification coefficient) = _____

Ω_0 (System overstrength factor) = _____

C_d (Deflection amplification factor) = _____

I_p (Importance factor) = 1.5

Height to Center of Gravity above base = _____

Equipment or Component Natural Frequencies (Hz) = _____

Overall dimensions and weight (or range thereof) = _____

Tank(s) designed in accordance with ASME BPVC, 2015: ☐ Yes ☒ No

List of Attachments Supporting Special Seismic Certification

☒ Test Report(s) ☐ Drawings ☐ Calculations ☐ Manufacturer's Catalog

☒ Other(s) (Please Specify): Certified Product Matrix, UUT Summary Sheets, Subcomponent Certification Letter

OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2022

Signature: _____

Date: January 10, 2018

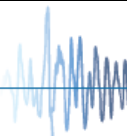
Print Name: Timothy J. Piland

Title: SSE

Special Seismic Certification Valid Up to : S_{DS} (g) = See Above

z/h = See Above

Condition of Approval (if applicable): _____



SIEMENS FRONT-CONNECTED LOW VOLTAGE SWITCHGEAR FLEX SWITCHBOARD CERTIFIED PRODUCT LINE MATRIX



ID Number	Frame Size	^{a)} Vertical / Main Bus Ampere	^{b)} Enclosure Width (in.)	Enclosure Depth (in.)	Enclosure Height (in.)	Enclosure + Component WT (lbs) Min-Max		Representative UUT
FCLV-800-1H	FS2	800A	44"-64"	39"	92"	1258	2603	Extrapolated
FCLV-2000-1H	FS2	2000A	44"-64"	39"	92"	1258	2603	Extrapolated
FCLV-1600-1H	FS2	1600A	44"-64"	39"	92"	1326	2603	Extrapolated
FCLV-2500-1H	FS2	2500A	44"-64"	39"	92"	1368	2618	Extrapolated
FCLV-1600-2H	FS2	1600A	44"-64"	39"	92"	1823	2682	Extrapolated
FCLV-2000-2H	FS2	2000A	44"-64"	39"	92"	1845	2682	Extrapolated
FCLV-2500-2H	FS2	2500A	44"-64"	39"	92"	1867	2682	Extrapolated
FCLV-3000-2H	FS2	3000A	44"-64"	39"	92"	1935	2682	Extrapolated
FCLV-3200-2-2H	FS2	3200A	44"-64"	39"	92"	1935	2682	Extrapolated
FCLV-3200-3-2H	FS3	3200A	44"-64"	39"	92"	2045	2688	Extrapolated
FCLV-4000-2H	FS3	4000A	64"	39"	92"	2045	2688	Extrapolated
FCLV-5000-2H	FS3	5000A	64"	39"	92"	2183	2790	Extrapolated
FCLV-3000-1H	FS2	3000A	44"-64"	39"	92"	1492	2919	Extrapolated
FCLV-3200-2-1H	FS2	3200A	44"-64"	39"	92"	1492	2919	Extrapolated
FCLV-3200-3-1H	FS3	3200A	44"-64"	39"	92"	1873	3080	Extrapolated
FCLV-4000-1H	FS3	4000A	64"	39"	92"	1873	3080	Extrapolated
FCLV-1600-3H	FS2	1600A	44"-64"	39"	92"	2115	3123	Extrapolated
FCLV-2000-3H	FS2	2000A	44"-64"	39"	92"	2137	3123	Extrapolated
FCLV-2500-3H	FS2	2500A	44"-64"	39"	92"	2159	3154	Extrapolated
FCLV-3000-3H	FS2	3000A	44"-64"	39"	92"	2262	3154	Extrapolated
FCLV-3200-4H	FS2	3200A	44"	39"	92"	-	3190	UUT-1

General Notes: Units are not certified for individual installation; a minimum of two connected (one main breaker and one feeder section) units required. Additional main breaker or feeder sections can be added to the lineup as done on UUT-2. All units are constructed with indoor (NEMA 1) enclosures.

^{a)} All bus sections are copper

^{b)} Inclosure widths provide total width of combined breaker and feeder section. Main breakers come in widths of 22" and 32" and the attached feeders come in widths of 22", 30", 32", or 40".

^{c)} UUT-2 is a 64" wide breaker/feeder unit with an additional 40" feeder section making the total width = 104".

SIEMENS FRONT-CONNECTED LOW VOLTAGE SWITCHGEAR FLEX SWITCHBOARD CERTIFIED PRODUCT LINE MATRIX



ID Number	Frame Size	^{a)} Vertical / Main Bus Ampere	^{b)} Enclosure Width (in.)	Enclosure Depth (in.)	Enclosure Height (in.)	Enclosure + Component WT (lbs) Min-Max		Representative UUT
FCLV-3200-2-3H	FS2	3200A	44"-64"	39"	92"	2262	3184	Extrapolated
FCLV-3200-3-3H	FS3	3200A	44"-64"	39"	92"	2378	3190	Extrapolated
FCLV-4000-3H	FS3	4000A	64"	39"	92"	2378	3196	Interpolated
FCLV-5000-3H	FS3	5000A	64"	39"	92"	2602	3384	Interpolated
FCLV-1600-4H	FS2	1600A	44"-64"	39"	92"	2407	3564	Interpolated
FCLV-2000-4H	FS2	2000A	44"-64"	39"	92"	2429	3564	Interpolated
FCLV-2500-4H	FS2	2500A	44"-64"	39"	92"	2451	3625	Interpolated
FCLV-3000-4H	FS2	3000A	44"-64"	39"	92"	2589	3625	Interpolated
FCLV-3200-2-4H	FS2	3200A	44"-64"	39"	92"	2589	3686	Interpolated
FCLV-3200-3-4H	FS3	3200A	44"-64"	39"	92"	2711	3703	Interpolated
FCLV-4000-4H	FS3	4000A	64"	39"	92"	2711	3703	Interpolated
FCLV-5000-1H	FS3	5000A	64"	39"	92"	2120	3821	Interpolated
FCLV-5000-4H	FS3	5000A	64"	39"	92"	3021	3978	Interpolated
FCLV-5000-1H	FS3	5000A	64"	39"	92"	-	4131	UUT-3
FCLV-4000-1H	FS3	4000A	104"	39"	92"	-	4447	UUT-2 ^{c)}

General Notes: Units are not certified for individual installation; a minimum of two connected (one main breaker and one feeder section) units required. Additional main breaker or feeder sections can be added to the lineup as done on UUT-2. All units are constructed with indoor (NEMA 1) enclosures.

^{a)} All bus sections are copper

^{b)} Inclosure widths provide total width of combined breaker and feeder section. Main breakers come in widths of 22" and 32" and the attached feeders come in widths of 22", 30", 32", or 40".

^{c)} UUT-2 is a 64" wide breaker/feeder unit with an additional 40" feeder section making the total width = 104".

SIEMENS FRONT-CONNECTED LOW VOLTAGE SWITCHGEAR AND FLEX SWITCHBOARD CERTIFIED SUBCOMPONENT MATRIX



ID Number	Main Bus Ampere	Frame Size	Breaker Type	Width (in.)	Depth (in.)	Height (in.)	Component WT (lbs) Min-Max	Representative UUT
Table 1: Circuit Breaker UL 489								
S2D308	800A	2	D	22.0"	22.5"	19.5"	192	Extrapolated
L2D308	800A	2	D	22.0"	22.5"	19.5"	192	UUT-1
C2D308	800A	2	D	22.0"	22.5"	19.5"	259	Interpolated
S2D312	1200A	2	D	22.0"	22.5"	19.5"	192	Interpolated
L2D312	1200A	2	D	22.0"	22.5"	19.5"	192	Interpolated
C2D312	1200A	2	D	22.0"	22.5"	19.5"	252	Interpolated
S2D316	1600A	2	D	22.0"	22.5"	19.5"	192	Interpolated
L2D316	1600A	2	D	22.0"	22.5"	19.5"	192	Interpolated
C2D316	1600A	2	D	22.0"	22.5"	19.5"	259	Interpolated
S2D320	2000A	2	D	22.0"	22.5"	19.5"	216	Interpolated
L2D320	2000A	2	D	22.0"	22.5"	19.5"	216	Interpolated
C2D320	2000A	2	D	22.0"	22.5"	19.5"	259	UUT-1
L2D325	2500A	2	D	22.0"	22.5"	19.5"	216	Interpolated
C2D325	2500A	2	D	22.0"	22.5"	19.5"	252	Interpolated
L2D330	3000A	2	D	22.0"	15.0"	19.5"	216	Interpolated
C2D330	3000A	2	D	22.0"	15.0"	19.5"	252	Interpolated
L3D340	4000A	3	D	32.0"	22.5"	19.5"	481	UUT-2
C3D340	4000A	3	D	32.0"	22.5"	19.5"	481	Extrapolated
L3D350	5000A	3	D	32.0"	22.5"	19.5"	481	Extrapolated
C3D350	5000A	3	D	32.0"	22.5"	19.5"	481	Extrapolated

General Notes:

All drawout breaker weights include the weight of the cradle.

SIEMENS FRONT-CONNECTED LOW VOLTAGE SWITCHGEAR AND FLEX SWITCHBOARD CERTIFIED SUBCOMPONENT MATRIX



Table 2: Circuit Breaker UL 1066

N2A308	800A	2	D	22.0"	22.5"	19.5"	192	Extrapolated
S2A308	800A	2	D	22.0"	22.5"	19.5"	192	Extrapolated
H2A308	800A	2	D	22.0"	22.5"	19.5"	192	Extrapolated
L2A308	800A	2	D	22.0"	22.5"	19.5"	192	UUT1
F2A316	1600A	2	D	22.0"	22.5"	19.5"	192	Interpolated
S2A316	1600A	2	D	22.0"	22.5"	19.5"	192	Interpolated
H2A316	1600A	2	D	22.0"	22.5"	19.5"	192	Interpolated
L2A316	1600A	2	D	22.0"	22.5"	19.5"	192	Interpolated
S2A320	2000A	2	D	22.0"	22.5"	19.5"	248	Interpolated
H2A320	2000A	2	D	22.0"	22.5"	19.5"	248	Interpolated
L2A320	2000A	2	D	22.0"	22.5"	19.5"	248	UUT-1
S2A332	3200A	2	D	22.0"	15.0"	19.5"	248	Interpolated
H2A332	3200A	2	D	22.0"	15.0"	19.5"	248	Interpolated
L2A332	3200A	2	D	22.0"	15.0"	19.5"	248	Interpolated
M3A332	3200A	3	D	32.0"	22.5"	19.5"	248	Interpolated
H3A340	4000A	3	D	32.0"	22.5"	19.5"	463	Interpolated
L3A340	4000A	3	D	32.0"	22.5"	19.5"	463	Interpolated
M3A340	4000A	3	D	32.0"	22.5"	19.5"	463	Interpolated
H3A350	5000A	3	D	32.0"	22.5"	19.5"	463	Interpolated
L3A350	5000A	3	D	32.0"	22.5"	19.5"	463	UUT-3
M3A350	5000A	3	D	32.0"	22.5"	19.5"	463	Extrapolated

General Notes:

All drawout breaker weights include the weight of the cradle.

SIEMENS FRONT-CONNECTED LOW VOLTAGE SWITCHGEAR AND FLEX SWITCHBOARD CERTIFIED SUBCOMPONENT MATRIX



Subcomponent ID	Manufacturer	Description	Width (in) min-max	Depth (in)	Height (in)	Weight (lbs)	Representative
Table 3: Surge Protection Device							
TPS3A0610	Siemens	120/240V, 1 Ph 3 W, 100 kA	11.5"	4.5"	10.75"	6.8	Extrapolated
TPS3B0610	Siemens	120/240V, 3 Ph, 4W, 100 kA	11.5"	4.5"	10.75"	6.8	Extrapolated
TPS3C0610	Siemens	120/208V, 3 Ph, 4W, 100 kA	11.5"	4.5"	10.75"	6.8	Extrapolated
TPS3D0610	Siemens	240V, 3Ph, 100 kA	11.5"	4.5"	10.75"	6.8	UUT-2
TPS3E0610	Siemens	277/480V, 3 Ph, 4W, 100 kA	11.5"	4.5"	10.75"	6.8	Interpolated
TPS3F0610	Siemens	480V, 3Ph, 100 kA	11.5"	4.5"	10.75"	6.8	Interpolated
TPS3K0610	Siemens	380/220V, 3 Ph, 4W, 100 kA	11.5"	4.5"	10.75"	6.8	Interpolated
TPS3S0610	Siemens	400/230V, 3 Ph, 4W, 100 kA	11.5"	4.5"	10.75"	6.8	Interpolated
TPS3G0610	Siemens	600V, 3 Ph, 100 kA	11.5"	4.5"	10.75"	6.8	Interpolated
TPS3G0615	Siemens	600V, 3 Ph, 150 kA	11.5"	4.5"	10.75"	6.8	Interpolated
TPS3G0620	Siemens	600V, 3 Ph, 200 kA	11.5"	4.5"	10.75"	6.8	Interpolated
TPS3G0625	Siemens	600V, 3 Ph, 250 kA	11.5"	4.5"	10.75"	6.8	Interpolated
TPS3L0610	Siemens	600Y/347V, 3 Ph, 4W, 100 kA	11.5"	4.5"	10.75"	6.8	Interpolated
TPS3A0650	Siemens	120/240V, 3 Ph, 4W, 500 kA	11.5"	4.5"	10.75"	9.8	Interpolated
TPS3B0650	Siemens	120/240V, 3 Ph, 4W, 500 kA	11.5"	4.5"	10.75"	9.8	Interpolated
TPS3C0650	Siemens	120/208V, 3 Ph, 4W, 500 kA	11.5"	4.5"	10.75"	9.8	Interpolated
TPS3D0650	Siemens	240V, 3Ph, 500 kA	11.5"	4.5"	10.75"	9.8	Interpolated
TPS3E0650	Siemens	277/480V, 3 Ph, 4W, 500 kA	11.5"	4.5"	10.75"	9.8	UUT-3
TPS3F0650	Siemens	480V, 3Ph, 500 kA	11.5"	4.5"	10.75"	9.8	Extrapolated
TPS3K0650	Siemens	380/220V, 3 Ph, 4W, 500 kA	11.5"	4.5"	10.75"	9.8	Extrapolated

General Notes:

SIEMENS FRONT-CONNECTED LOW VOLTAGE SWITCHGEAR AND FLEX SWITCHBOARD CERTIFIED SUBCOMPONENT MATRIX



Table 3 con'd: Surge Protection Device

TPS3S0650	Siemens	400/230V, 3 Ph, 4W, 500 kA	11.5"	4.5"	10.75"	9.8	Extrapolated
TPS3L0650	Siemens	600Y/347V, 3 Ph, 4W, 500 kA	11.5"	4.5"	10.75"	9.8	Extrapolated
TPS3A0615-40	Siemens	120/240V, 1 Ph 3 W, 150 - 400 kA	11.5"	4.5"	10.75"	6.8,9.8	Extrapolated
TPS3B0615-40	Siemens	120/240V, 3 Ph, 4W, 150 - 400 kA	11.5"	4.5"	10.75"	6.8,9.8	Extrapolated
TPS3C0615-40	Siemens	120/208V, 3 Ph, 4W, 150 - 400 kA	11.5"	4.5"	10.75"	6.8,9.8	Extrapolated
TPS3D0615-40	Siemens	240V, 3Ph, 150 - 400 kA	11.5"	4.5"	10.75"	6.8,9.8	Extrapolated
TPS3E0615-40	Siemens	277/480V, 3 Ph, 4W, 150 - 400 kA	11.5"	4.5"	10.75"	6.8,9.8	Extrapolated
TPS3F0615-40	Siemens	480V, 3Ph, 150 - 400 kA	11.5"	4.5"	10.75"	6.8,9.8	Extrapolated
TPS3K0615-40	Siemens	380/220V, 3 Ph, 4W, 150 -400 kA	11.5"	4.5"	10.75"	6.8,9.8	Extrapolated
TPS3S0615-40	Siemens	400/230V, 3 Ph, 4W, 150 - 400 kA	11.5"	4.5"	10.75"	6.8,9.8	Extrapolated
TPS3L0615-40	Siemens	600Y/347V, 3 Ph, 4W, 150-400 kA	11.5"	4.5"	10.75"	6.8,9.8	Extrapolated

Table 4: Current Transformers

WLG8005MCT2	Siemens	3P587-801 800:5	15.9"	2.0"	6.8"	20.0	UUT-1
WLG12005MCT2	Siemens	3P587-122 1200:5	15.9"	2.0"	6.8"	20.0	Interpolated
WLG16005MCT2	Siemens	3P587-162 1600:5	15.9"	2.0"	6.8"	20.0	Interpolated
WLG20005MCT2	Siemens	3P587-202 2000:5	15.9"	2.0"	6.8"	20.0	Interpolated
WLG25005MCT2	Siemens	3P587-252 2500:5	15.9"	2.0"	6.8"	20.0	Interpolated
WLG32005MCT2	Siemens	3P587-322 3200:5	15.9"	2.0"	6.8"	20.0	Interpolated
WLG32005MCT3	Siemens	3200:5	25.5"	2.0"	6.8"	33.0	Interpolated
WLG40005MCT3	Siemens	4000:5	25.5"	2.0"	6.8"	33.0	Interpolated
WLG50005MCT3	Siemens	5000:5	25.5"	2.0"	6.8"	33.0	UUT-3

General Notes:

SIEMENS FRONT-CONNECTED LOW VOLTAGE SWITCHGEAR AND FLEX SWITCHBOARD CERTIFIED SUBCOMPONENT MATRIX



Table 4 con'd: Current Transformers

WLGMDGFCT2	Siemens	4W MDGF 1200:1 FS2	15.9"	2.0"	6.8"	20.0	Interpolated
WLGMDGFCT3	Siemens	4W MDGF 1200:1 FS3	25.5"	2.0"	6.8"	33.0	Interpolated
WLGNDMGCT23	Siemens	4W MDGF 1200:1 FS2/3	10.0"	2.0"	5.5"	7.5	Interpolated
WLG800NMCT23	Siemens	800:5	10.0"	2.0"	5.5"	7.5	Interpolated
WLG1200NMCT23	Siemens	1200:5	10.0"	2.0"	5.5"	7.5	Interpolated
WLG1600NMCT23	Siemens	1600:5	10.0"	2.0"	5.5"	7.5	Interpolated
WLG2000NMCT23	Siemens	2000:5	10.0"	2.0"	5.5"	7.5	Interpolated
WLG2500NMCT23	Siemens	2500:5	10.0"	2.0"	5.5"	7.5	Interpolated
WLG3000NMCT23	Siemens	3000:5	10.0"	2.0"	5.5"	7.5	Interpolated
WLG3200NMCT23	Siemens	3200:5	10.0"	2.0"	5.5"	7.5	Interpolated
WLG4000NMCT23	Siemens	4000:5	10.0"	2.0"	5.5"	7.5	UUT-3
WLG5000NMCT23	Siemens	5000:5	10.0"	2.0"	5.5"	7.5	UUT-2
Model 19	ITI	50-400Hz, 0.6kV, BIL 10kV	6.0"	6.0"	2.9"	3	Interpolated
Model 125	ITI	50-400Hz, 0.6kV, BIL 10kV	8.5"	8.5"	4.1"	3	Interpolated
Model 126	ITI	50-400Hz, 0.6kV, BIL 10kV	10.5"	10.5"	4.4"	5.5	Interpolated
Model 135	ITI	50-400Hz, 0.6kV, BIL 10kV	9.2"	9.2"	5.8"	18	UUT-2
Model 137	ITI	50-400Hz, 0.6kV, BIL 10kV	9.9"	9.9"	7.8"	50	Interpolated
Model 142	ITI	50-400Hz, 0.6kV, BIL 10kV	11.1"	11.5"	5.8"	31	UUT-2

General Notes:

SIEMENS FRONT-CONNECTED LOW VOLTAGE SWITCHGEAR AND FLEX SWITCHBOARD CERTIFIED SUBCOMPONENT MATRIX



Table 5: Voltage Transformers

Model 450	Phasetronics (TTL)	60Hz, 600V, 10kV Bill, 750VA	6"	6.5"	6"	25	UUT-1
Model 456	Phasetronics (TTL)	60Hz, 600V, 10kV Bill, 500VA	6"	6.1"	6.5"	18.5	Interpolated
Model 460	Phasetronics (TTL)	60Hz, 600V, 10kV Bill, 150VA	4.5"	3.5"	4.6"	7.75	Interpolated
Model 467	Phasetronics (TTL)	60Hz, 600V, 10kV Bill, 40VA	3.5"	3.8"	2.9"	2.5	Interpolated
Model 468	Phasetronics (TTL)	60Hz, 600V, 10kV Bill, 75VA	3.6"	4"	2.8"	4	UUT-1

Table 6: Control Power Transformers

MT0500M	Siemens	500VA,240/480-120/24	5.7"	5.3"	5.9"	19	Extrapolated
MT1000M	Siemens	1000VA 240/480-120/240	6.6"	7"	6.4"	30	UUT-2
MT2000M	Siemens	2000VA,240/480-120/240	6.3"	7"	8.2"	38	Interpolated
MT3000M	Siemens	3000VA,240/480-120/240	8.7"	9"	7.1"	89	Interpolated
MT5000M	Siemens	5000VA,240/480-120/240	8.7"	9"	8.6"	89	UUT-2

Table 7: Human Machine Interface (HMI)

6AV66461AD220AX0	Siemens	SIMATIC ITC2200	18"	15"	3"	15	UUT-3, UUT-2
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Table 8: High Resistance Ground

SPL48YK0000-NQ	Post Glover	480V WYE w/o Ethernet	25"	40"	13"	65	UUT-2
SPL48YK0000-NQ	Post Glover	480V Delta w/o Ethernet	25"	32"	13"	65	UUT-2

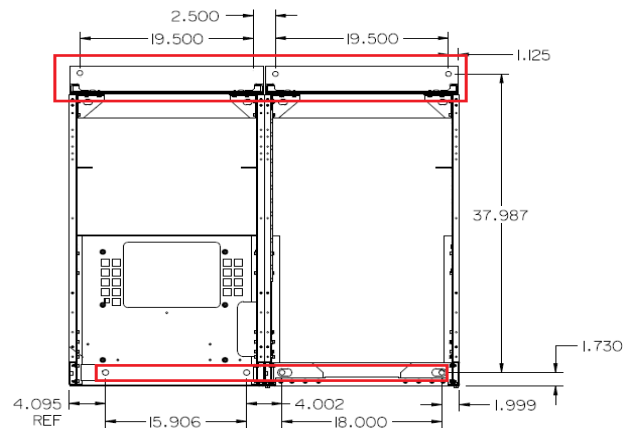
Table 9: UPS

CPE1000RC	Minuteman	1000VA UPS with relay card	5.8"	15.8"	8.78"	34	UUT-1
CPE1000	Minuteman	1000VA UPS	5.8"	15.8"	8.78"	34	Interpolated
CPE3000RC	Minuteman	3000VA UPS with relay card	7.5"	17.8"	14.4"	79	UUT-3
CPE3000	Minuteman	3000VA UPS	7.5"	17.8"	14.4"	79	Extrapolated

General Notes:

UUT-1 Floor	UNIT UNDER TEST (UUT) SUMMARY SHEET	 WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING
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Mounting Details: Floor mounted with 8 - 1/2" diameter grade 5 bolts (4 bolts in both front and rear) with Siemens seismic restraint kits 12-F-9050-01 and 12-F9050-02 (1/2" thick oversized plate washers at all bolt locations).

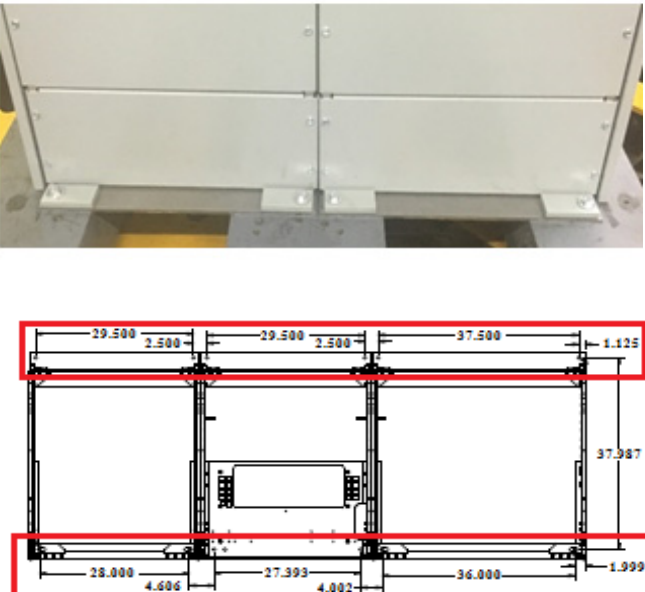


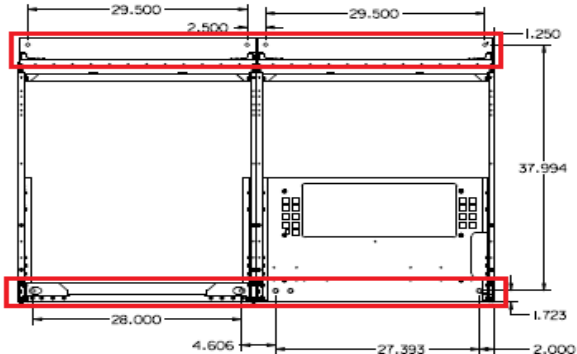
Floor Mount Locations

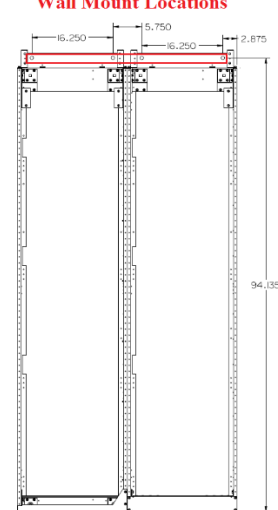
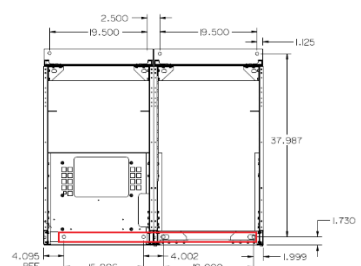
Manufacturer: Siemens Industry, Inc.
Product Line: 800A to 5000A Front-Connected Low Voltage Switchgear
Identification Number: FCLV-3200-4H
UUT Function: FCLV Switchgear and Flex Switchboard provides low voltage circuit protection.
UUT Description: The unit is comprised of two NEMA1 carbon steel enclosures with 3200A bus with circuit breakers.
UUT Component Description: NEMA1 carbon steel enclosure, 3200A copper bus, (2) UL 489 circuit breakers, (2) UL 1066 circuit breakers, (1) current transformer, (2) voltage transformers, and (1) UPS.

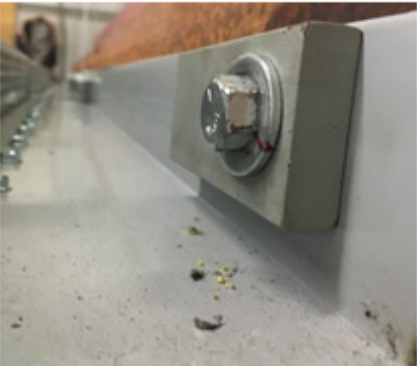
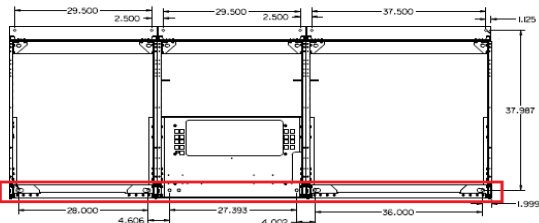
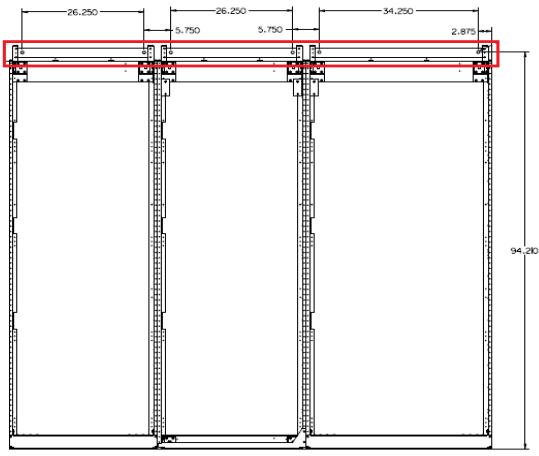
UUT PROPERTIES							
Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)			
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V	
3,190	44"	39"	92"	8.54	4.74	19.96	
SEISMIC TEST PARAMETERS							
Test Criteria	S_{DS} (g)	z / h	I_p	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2016 / ICC-ES-AC156	2.00	1	1.5	3.2g	2.4g	-	-
CBC 2016 / ICC-ES-AC156	2.50	0	1.5	-	-	1.67g	0.67g

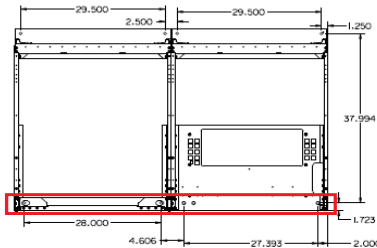
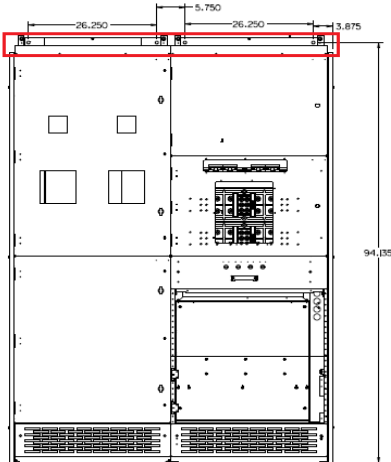
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.

UUT-2 Floor	UNIT UNDER TEST (UUT) SUMMARY SHEET						
Mounting Details: Floor mounted with 12 - 1/2" diameter grade 5 bolts (6 bolts in both front and rear) with Siemens seismic restraint kits 12-F-9050-01 and 12-F9050-02 (1/2" thick oversized plate washers at all bolt locations).							
				 Floor Mount Locations			
Manufacturer: Siemens Industry, Inc.							
Product Line: 800A to 5000A Front-Connected Low Voltage Switchgear							
Identification Number: FCLV-4000-1H							
UUT Function: FCLV Switchgear and Flex Switchboard provides low voltage circuit protection.							
UUT Description: The unit is comprised of three NEMA1 carbon steel enclosures with 4000A bus with circuit breaker.							
UUT Component Description: NEMA1 carbon steel enclosure, 4000A copper bus, (1) UL 489 circuit breaker, (1) surge protection device, (3) current transformers, (1) control power transformer, (1) human machine interface, (2) HRG's, and (1) UPS.							
UUT PROPERTIES							
Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)			
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V	
4,447	104"	39"	92"	6.29	5.7	19.32	
SEISMIC TEST PARAMETERS							
Test Criteria	S _{DS} (g)	z / h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2016 / ICC-ES-AC156	2.00	1	1.5	3.2g	2.4g	-	-
CBC 2016 / ICC-ES-AC156	2.50	0	1.5	-	-	1.67g	0.67g
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.							

UUT-3 Floor	UNIT UNDER TEST (UUT) SUMMARY SHEET						
Mounting Details: Floor mounted with 8 - 1/2" diameter grade 5 bolts (4 bolts in both front and rear) with Siemens seismic restraint kits 12-F-9050-01 and 12-F9050-02 (1/2" thick oversized plate washers at all bolt locations).							
							
				Floor Mount Locations			
							
Manufacturer: Siemens Industry, Inc.							
Product Line: 800A to 5000A Front-Connected Low Voltage Switchgear							
Identification Number: FCLV-5000-1H							
UUT Function: FCLV Switchgear and Flex Switchboard provides low voltage circuit protection.							
UUT Description: The unit is comprised of two NEMA1 carbon steel enclosures with 5000A bus with circuit breaker.							
UUT Component Description: NEMA1 carbon steel enclosure, 5000A copper bus, (1) UL 1066 circuit breaker, (1) surge protection device, (2) current transformers, (1) human machine interface, and (1) UPS.							
UUT PROPERTIES							
Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)			
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V	
4,131	64"	39"	92"	6.41	4.48	19.35	
SEISMIC TEST PARAMETERS							
Test Criteria	S _{DS} (g)	z / h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2016 / ICC-ES-AC156	2.00	1	1.5	3.2g	2.4g	-	-
CBC 2016 / ICC-ES-AC156	2.50	0	1.5	-	-	1.67g	0.67g
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.							

UUT-1 Floor/Wall	UNIT UNDER TEST (UUT) SUMMARY SHEET						
Mounting Details: Combined Floor/Wall mounted with 8 - 1/2" diameter grade 5 bolts (4 wall rear and 4 floor front locations) with Siemens seismic kits 12-F-9050-01 and 12-F9051-03 (1/2" thick oversized plate washers at all bolt locations).							
							
		 Wall Mount Floor Locations					
Manufacturer: Siemens Industry, Inc.							
Product Line: 800A to 5000A Front-Connected Low Voltage Switchgear							
Identification Number: FCLV-3200-4H							
UUT Function: FCLV Switchgear and Flex Switchboard provides low voltage circuit protection.							
UUT Description: The unit is comprised of two NEMA1 carbon steel enclosures with 3200A bus with circuit breakers							
UUT Component Description: NEMA1 carbon steel enclosure, 3200A copper bus, (2) UL 489 circuit breakers, (2) UL 1066 circuit breakers, (1) current transformer, (2) voltage transformers, and (1) UPS.							
UUT PROPERTIES							
Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)			
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V	
3,190	44"	39"	92"	8.19	6.05	6.18	
SEISMIC TEST PARAMETERS							
Test Criteria	S _{DS} (g)	z / h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2016 / ICC-ES-AC156	2.00	1	1.5	3.2g	2.4g	-	-
CBC 2016 / ICC-ES-AC156	2.50	0	1.5	-	-	1.67g	0.67g
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.							

UUT-2 Floor/Wall	UNIT UNDER TEST (UUT) SUMMARY SHEET						
Mounting Details: Combined Floor/Wall mounted with 12 - 1/2" diameter grade 5 bolts (6 wall rear and 6 floor front locations) with Siemens seismic kits 12-F-9050-01 and 12-F9051-03 (1/2" thick oversized plate washers at all bolt locations).							
 		 Wall Mount Floor Locations  Wall Mount Locations					
Manufacturer: Siemens Industry, Inc.							
Product Line: 800A to 5000A Front-Connected Low Voltage Switchgear							
Identification Number: FCLV-4000-1H							
UUT Function: FCLV Switchgear and Flex Switchboard provides low voltage circuit protection.							
UUT Description: The unit is comprised of three NEMA1 carbon steel enclosures with 4000A bus with circuit breaker.							
UUT Component Description: NEMA1 carbon steel enclosure, 4000A copper bus, (1) UL 489 circuit breaker, (1) surge protection device, (3) current transformers, (1) control power transformer, (1) human machine interface, (2) HRG's, and (1) UPS.							
UUT PROPERTIES							
Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)			
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V	
4,447	104"	39"	92"	6.89	6.73	28.63	
SEISMIC TEST PARAMETERS							
Test Criteria	S _{DS} (g)	z / h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2016 / ICC-ES-AC156	2.00	1	1.5	3.2g	2.4g	-	-
CBC 2016 / ICC-ES-AC156	2.50	0	1.5	-	-	1.67g	0.67g
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.							

UUT-3 Floor/Wall	UNIT UNDER TEST (UUT) SUMMARY SHEET						
Mounting Details: Combined Floor/Wall mounted with 8 - 1/2" diameter grade 5 bolts (4 wall rear and 4 floor front locations) with Siemens seismic kits 12-F-9050-01 and 12-F9051-03 (1/2" thick oversized plate washers at all bolt locations).							
				Wall Mount Floor Locations			
							
				Wall Mount Locations			
							
Manufacturer: Siemens Industry, Inc.							
Product Line: 800A to 5000A Front-Connected Low Voltage Switchgear							
Identification Number: FCLV-5000-1H							
UUT Function: FCLV Switchgear and Flex Switchboard provides low voltage circuit protection.							
UUT Description: The unit is comprised of two NEMA1 carbon steel enclosures with 5000A bus with circuit breaker.							
UUT Component Description: NEMA1 carbon steel enclosure, 5000A copper bus, (1) UL 1066 circuit breaker, (1) surge protection device, (2) current transformers, (1) human machine interface, and (1) UPS.							
UUT PROPERTIES							
Weight (lb)	Dimensions (inches)			Natural Frequency (Hz)			
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V	
4,131	64"	39"	92"	6.67	6.39	14.91	
SEISMIC TEST PARAMETERS							
Test Criteria	S _{DS} (g)	z / h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2016 / ICC-ES-AC156	2.00	1	1.5	3.2g	2.4g	-	-
CBC 2016 / ICC-ES-AC156	2.50	0	1.5	-	-	1.67g	0.67g
Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test.							