APPLICATION FOR OSHPD SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY
APPLICATION #: OSP – 0649

OSHPD Special Seismic Certification Preapproval (OSP)

Type: ☒ New ☐ Renewal

Manufacturer Information

Manufacturer: Siemens Industry, Inc.

Manufacturer's Technical Representative: Mike Holland

Mailing Address: 811 North Main Street, Bellefontaine, OH 43311

Telephone: (937) 599-7324 Email: michael.holland@siemens.com

Product Information

Product Name: Switchgear/Switchboards

Product Type: Switchboards

Product Model Number: VBII Safety Switches, VBII OEM Disconnects, and Enclosed Circuit Breakers
(List all unique product identification numbers and/or part numbers)

General Description: Enclosures housing manual (switches) and automatic (breakers) switches that provide circuit circuit protection. Enclosures constructed of carbon steel and stainless steel.

Mounting Description: Rigid, See Certified Product Tables

Applicant Information

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

Contact Person: Travis Soppe, SE

Mailing Address: 1199 Shoreline Drive, Suite 310, Boise, ID 83703

Telephone: (208) 342-5989 Ext. 115 Email: tsoppe@wegai.com

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: 1199 Shoreline Drive, Suite 310, Boise, ID 83703

Telephone: (208) 342-5989 Ext. 115 Email: tsoppe@wegai.com

Certification Method

☐ GR-63-Core ☒ ICC-ES AC156 ☐ IEEE 344 ☐ IEEE 693 ☐ NEBS 3

☐ Other: _____

Testing Laboratory

Company Name: Clark Testing Laboratory, Inc.

Contact Name: Russell Matich

Mailing Address: 1801 Route 51, Jefferson Hills, PA 15025

Telephone: (412) 387-1001 Email: rmatich@clarktesting.com

Seismic Parameters

Design in accordance with ASCE 7-16 Chapter 13: ☒ Yes ☐ No

Design Basis of Equipment or Components (F_p/W_p) = 1.50 (S_{DS} = 2.00 @ z/h = 1); 1.13 (S_{DS} = 2.50 @ z/h = 0)

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

Equipment or Component Natural Frequencies (Hz) = See Attachment

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

OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2025

Date: April 24, 2020

Name: Timothy J. Piland Title: Senior Structural Engineer

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

Condition of Approval (if applicable):

SIEMENS VBII SAFETY SWITCH AND OEM DISCONNECT SWITCH CERTIFIED PRODUCT LINE MATRICES

WEGAI
W.E. GUNDY & ASSOCIATES, INC.
STRUCTURAL & EARTHQUAKE ENGINEERING

ID/Catalog Number [1]	Ampere Rating	NEMA [2] Rating	Equipment Dimensions (in)			Weight (lbs)	Representative [3] UUT
			Width	Depth	Height		
Table 1: VBII Safety Switch Product Line - Max S_{DS} = 2.0 at z/h = 1.0							
GFxxxx, HFxxxx, DTxxxx	30-1200	1 / 3R / 12 / 4x	4-42	3-15	8-72	15-485	Interpolated
HF361J	30	12	9	9	16	15	UUT_y-7
DTF361	30	1	10	6	30	30	UUT_y-15
GF323NR	100	3R	12	9	23	25	UUT_y-3
HF363J	100	12	12	9	23	25	UUT_y-9
DTF363R	100	3R	12	6	36	50	UUT_y-17
GF324NR	200	3R	17	11	31	50	UUT_y-4
HF364J	200	12	17	11	31	50	UUT_y-10
DTF364R	200	3R	20	7	50	98	UUT_y-18
GF325NA	400	3R	22	7	46	95	UUT_x-1
HF366JA	600	12	22	7	46	100	UUT_x-2
DTNF366R	600	3R	29	10	58	261	UUT_y-20
HF368S	1200	4X	39	10	67	352	UUT_z-23
HF367J	800	12	40	15	67	365	UUT_y-13
HF368J	1200	12	40	15	67	385	UUT_y-14
DTNF368R	1200	3R	42	10	72	485	UUT_y-22
Table 2: VBII OEM Disconnect Switch Product Line - Max S_{DS} = 2.0 at z/h = 1.0							
VBxxxx	30-600	NA	7-13	7-8	14-26	15-61	Interpolated
VBFS361F	30	NA	7	8	14	15	UUT_y-23
VBFS363F	100	NA	9	8	16	25	UUT_y-25
VBFS364F	200	NA	13	8	19	49	UUT_y-26
VBFS366	600	NA	13	7	26	61	UUT_y-28

General Notes:

[1.] All components are manufactured by Siemens unless noted. The part numbers listed uniquely identify the type of component, manufacturer, and material of construction for each sub-component with the tested units. The VBII Safety Switch product line consists of general duty switches (G), heavy duty switches (HF), and double throw switches (DT). All three switch types utilize the the same type of construction, structural configuration, and mounting configuration.

[2.] NEMA 1/3R/12 enclosures are constructed of carbon steel and NEMA 4X enclosures are constructed of stainless steel.

[3.] The units were tested at different times and the subsctrips on the UUT's reference the following reports:

$_x$ - PR047910-TR-16 $_y$ - T55890-1 $_z$ - 19-01459

SIEMENS VBII SAFETY SWITCH
CERTIFIED SUBCOMPONENT MATRICES

Identification Number	Manufacturer	Description	Approximate Weights (lbs)	Representative UUT [1]
Table 3: Switch Base Assembly - Max S_{DS} = 2.0 at z/h = 1.0				
HFB61	Siemens	30 Amp	1	UUT_y-7/15
HFB63	Siemens	60 /100 Amp	2	UUT_y-3/9/17
HFB64	Siemens	200 Amp	7.5	UUT_y-4/10/18
HFB66A	Siemens	400 / 600 Amp	16	UUT_y-20 / UUT_x-1/2
HFB67A	Siemens	800 Amp	6.5	UUT_y-13
HFB68	Siemens	1200 Amp	14	UUT_y-14/22 / UUT_z-23
Table 4: Mechanism Assembly - Max S_{DS} = 2.0 at z/h = 1.0				
HM6123	Siemens	30-200 Amp	2	UUT_y-3/4/7/9/15/17
HM64	Siemens	400-600 Amp	4	UUT_y-10/18/20 / UUT_x-1/2
HM68	Siemens	800-1200 Amp	12	UUT_y-13/14/22 / UUT_z-23
Table 5: Load Base Assembly - Max S_{DS} = 2.0 at z/h = 1.0				
HBB61	Siemens	30 Amp	1	UUT_y-7/15
HBB63	Siemens	60 / 100 Amp	1	UUT_y-3/9/17
HBB64	Siemens	200 Amp	3	UUT_y-4/10/18
HBB66A	Siemens	400 / 600 Amp	5	UUT_y-20 / UUT_x-1/2
HBB67A	Siemens	800 Amp	3	UUT_y-13
HBB68	Siemens	1200 Amp	6	UUT_y-14/22 / UUT_z-23

General Notes:

[1.] The units were tested at different times and the subsctrips on the UUT's reference the following reports:
x - PR047910-TR-16 y - T55890-1 z - 19-01459

SIEMENS FLOOR MOUNTED ENCLOSED CIRCUIT BREAKER
CERTIFIED COMPONENT TABLE

ID/Catalog Number [1]	Ampere Rating	Mounting	NEMA Rating	Equipment Dimensions (in)			Weight (lbs)	Representative [3] UUT
				Width	Depth	Height		
Table 1: Floor Mounted Circuit Breaker Enclosure - Max S_{DS} = 2.0 at z/h = 1.0								
E1SPRD6N1[2]	2000A	Floor	1S	32	28	90	484	UUT_z-7

General Notes:

[1.] All components are manufactured by Siemens unless noted. The part numbers listed uniquely identify the type of component, manufacturer, and material of construction for each sub-component with the tested unit. Siemens manufacturing process is ISO 9001 certified.

[2.] Variations to the tested unit are limited to sofware and color/branding. Unit was tested as a single product with no variations.

[3.] The subscript on the UUT references the following test report:

$_z$ - 19-01459

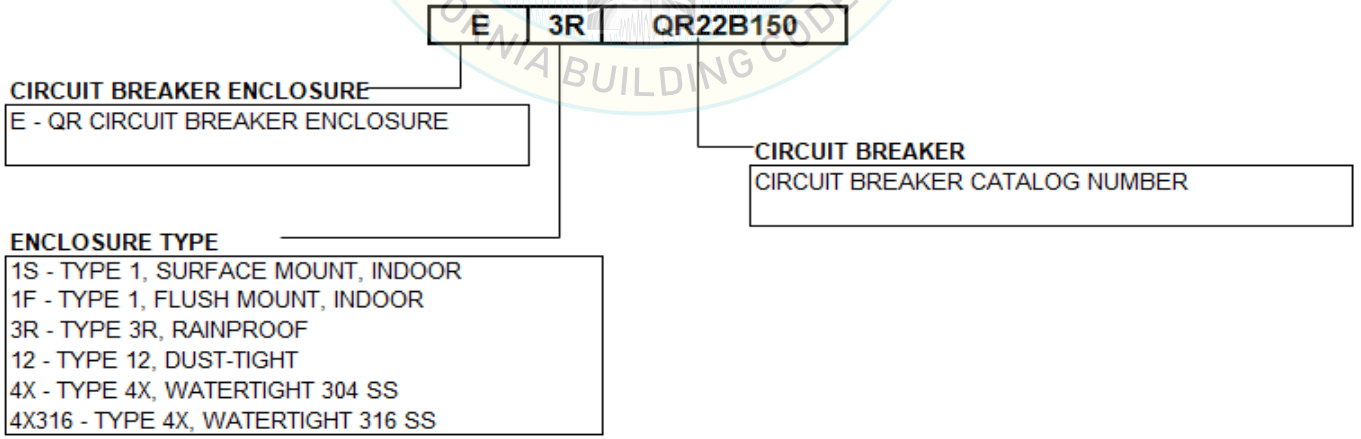
SIEMENS WALL MOUNTED ENCLOSED CIRCUIT BREAKER
CERTIFIED PRODUCT LINE MATRICES

ID/Catalog Number [1]	Ampere Rating	Mounting	NEMA [2] Rating	Equipment Dimensions (in)			Weight (lbs)	Representative [3] UUT
				Width	Depth	Height		
Table 2: Wall Mounted Circuit Breaker Enclosure Product Line - Max S_{DS} = 2.0 at z/h = 1.0								
E xx xxxxxxx	100-1200A	Wall	1F / 3R / 12 / 4X	7.5-38	4-11.8	16.5-62	10-270	interpolated
E 1F 3VA51	100	Wall	1F	6.8	4.5	18.5	13	UUT_z-2
E 4X HQR2H	100	Wall	4x	9.6	5.7	31.5	30	UUT_z-6
E 1F 3VL250	250	Wall	1F	9.6	5.7	31.5	31	UUT_z-4
E 3R 3VA64	600	Wall	3R	22.0	6.5	45.0	74	UUT_z-1
E 4X LD6	600	Wall	4x	30.0	10.0	42.0	144	UUT_z-3
E 12 MND6	1200	Wall	12	38.0	10.0	60.0	270	UUT_z-5

General Notes:

1. All components are manufactured by Siemens unless noted. The part numbers listed uniquely identify the type of component, manufacturer, and material of construction for each sub-component with the tested units. The part number designation for the enclosed circuit breaker product line is detailed below.
2. NEMA 1/3R/12 enclosures are constructed of carbon steel and NEMA 4X enclosures are constructed of stainless steel.
3. The units were tested at the same time and the subscript on the UUT references the following report:

   $_z$ - 19-01459



SIEMENS WALL MOUNTED ENCLOSED CIRCUIT BREAKER CERTIFIED SUBCOMPONENT MATRIX

WEGAI
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STRUCTURAL & EARTHQUAKE ENGINEERING

Subcomponent ID	Manufacturer	Description		Width (in)	Depth (in)	Height (in)	Weight (lbs)	Representative
Table 3: Molded Case Breakers - Sentron								
F6, FD6, FXD6	Siemens	(70-250A)	2/3P	4.5"	4.0"	9.5"	10	Extrapolated
HFD6, HFXD6	Siemens		2/3P, HIC	4.5"	4.0"	9.5"	10	Extrapolated
HHFD6, HHFXD6	Siemens		2/3P, EHIC	4.5"	4.0"	9.5"	10	Extrapolated
E2N	Siemens		2/3P	4.5"	4.0"	9.5"	10	Extrapolated
CED	Siemens		2/3P	4.5"	4.0"	14.25"	16	Extrapolated
CFD6	Siemens		2/3P, Highest IC & CL	4.5"	4.0"	14.25"	16	Extrapolated
SCFD6	Siemens		2/3P, ETU, Highest IC & CL	4.5"	4.0"	14.25	16	Extrapolated
JXD2	Siemens	(250-400A)	2/3P	7.5"	4.0"	11.0"	19.5	Interpolated
J6, JD6, JXD2	Siemens		2/3P	7.5"	4.0"	11.0"	19.5	Interpolated
HJ66, HJXD6, HHJD6	Siemens		2/3P, HIC, HHIC	7.5"	4.0"	11.0"	19.5	Interpolated
HHJXD6	Siemens		2/3P, HHIC	7.5"	4.0"	11.0"	19.5	Interpolated
SJD6, SHJD6	Siemens		2/3P, ETU	7.5"	4.0"	11.0"	19.5	Interpolated
CJD6	Siemens		2/3P, Highest IC & CL	7.5"	4.0"	17.0"	31.5	Interpolated
SCJD6	Siemens		2/3P, ETU, Highest IC & CL	7.5"	4.0"	17.0"	31.5	Interpolated
LD6, LXD6	Siemens		2/3P,	7.5"	4.0"	11.0"	19.5	UUT_z-3
HLD6, HLXD6	Siemens		2/3P, HIC	7.5"	4.0"	11.0"	19.5	Interpolated
HHLD6, HHLXD6	Siemens		2/3P, HHIC	7.5"	4.0"	11.0"	19.5	Interpolated
SLD6, SHLD6	Siemens		2/3P, ETU	7.5"	4.0"	11.0"	19.5	Interpolated
CLD6	Siemens		2/3P, Highest IC & CL	7.5"	4.0"	17.86"	31.5	Interpolated
SCLD6	Siemens		2/3P, ETU, Highest IC & CL	7.5"	4.0"	17.86"	31.5	Interpolated
MD6, MXD6	Siemens	(500-800A)	2/3P	9.0"	6.0"	16.0"	61.5	Interpolated
HMD6, HMXD6	Siemens		2/3P, HIC	9.0"	6.0"	16.0"	61.5	Interpolated
SMD6, SHMD6	Siemens		2/3P, ETU & HIC	9.0"	6.0"	16.0"	61.5	Interpolated
CMD6	Siemens		2/3P, Highest IC & CL	9.0"	6.0"	16.0"	61.5	Interpolated
SCMD6	Siemens		2/3P, ETU, Highest IC & CL	9.0"	6.0"	16.0"	61.5	Interpolated
LMD6, LMXD6	Siemens		2/3P,	7.5"	4.5"	16.0"	61.5	Interpolated
HLMD6, HLMX6D	Siemens		2/3P, HIC	7.5"	4.5"	16.0"	61.5	Interpolated

General Notes:
All Sentron breakers can be installed with either thermal mag (no prefix) or electronic trip unit (S prefix)

SIEMENS WALL MOUNTED ENCLOSED CIRCUIT BREAKER CERTIFIED SUBCOMPONENT MATRIX

Subcomponent ID	Manufacturer	Description		Width (in)	Depth (in)	Height (in)	Weight (lbs)	Representative
Table 3: Molded Case Breakers - Sentron, continued								
MND6	Siemens	(800-1200A)	2/3P,	9.0"	6.0"	16.0"	61.5	UUT_z-5
ND6, NXD6	Siemens		2/3P,	9.0"	6.0"	16.0"	61.5	Interpolated
HND6, HNXD6	Siemens		2/3P, HIC	9.0"	6.0"	16.0"	61.5	Interpolated
SND6, SHND6	Siemens		2/3P, ETU & HIC	9.0"	6.0"	16.0"	61.5	Interpolated
CND6	Siemens		2/3P, Highest IC & CL	9.0"	6.0"	16.0"	61.5	Interpolated
SCND6	Siemens		2/3P, ETU, Highest IC & CL	9.0"	6.0"	16.0"	61.5	Interpolated
PRD6N1	Siemens	2000A	2/3P,	9.0"	6.0"	16.0"	61.5	Interpolated
Table 4: Molded Case Breakers - 3VA								
3VA51	Siemens	125A	3/4P, TM, ETU	3.0"	3.68"	5.51"	4.7	UUT_z-2
3VA61	Siemens		3/4P, TM, ETU	3.0"	3.68"	5.51"	4.7	Interpolated
3VA52	Siemens	250A	3/4P, TM, ETU	4.13"	4.21"	7.28"	5.2	Interpolated
3VA62	Siemens		3/4P, TM, ETU	4.13"	4.21"	7.80"	10.5	Interpolated
3VA63	Siemens	400A	3/4P, TM, ETU	5.43"	5.4"	9.75"	10.5	Interpolated
3VA64	Siemens	600A	3/4P, TM, ETU	5.43"	5.4"	9.75"	10.5	UUT_z-1
Table 5: Molded Case Breakers - 3VL								
3VL250 / 3VL3	Siemens	250A	3P, TM, ETU, LCD ETU	5.5"	5.5"	11.0"	20.5	UUT_z-4
Table 6: General Application Breaker - QR								
QR2Nxxx	Siemens	225A	2P & 3P TM	4.5	2.53	7	4.5	Interpolated
QRH2	Siemens		2P & 3P TM	4.5	2.53	7	4.5	Interpolated
HQR2	Siemens		2P & 3P TM	4.5	2.53	7	4.5	Interpolated
HQR2H	Siemens		2P & 3P TM	4.5	2.53	7	4.5	UUT_z-6

General Notes:

All Sentron breakers can be installed with either thermal mag (no prefix) or electronic trip unit (S prefix)

UUT_x-1	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Wall through bolt mounted with (4) 3/8" diameter grade 5 bolts

Manufacturer: Siemens	**Test Location:** NTS Huntsville
Product Line: VBII Safety Switches	**Report Number:** PR047910-TR-16
Identification Number: GF325NA	**UUT No. in Test Report:** ETU 1
UUT Function: Opens and closes an electrical circuit	
UUT Description: The unit is comprised of a standalone 400A general duty safety switch in a wall mounted NEMA 1 enclosure.	
UUT Components: NEMA 1 12ga carbon steel enclosure with (1) 400/600A switch base assembly (HFB66A), (1) 400/600A mechanism (HM64), (1) 400/600A load base assembly (HBB66A).	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
95	22"	7"	46"	NA	NA	NA

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 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20	2.40	1.34	0.54

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_x-2	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Wall through bolt mounted with (4) 3/8" diameter grade 5 bolts

Manufacturer: Siemens	**Test Location:** NTS Huntsville
Product Line: VBII Safety Switches	**Report Number:** PR047910-TR-16
Identification Number: HF366JA	**UUT No. in Test Report:** ETU 2
UUT Function: Opens and closes an electrical circuit	
UUT Description: The unit is comprised of a standalone 600A heavy duty safety switch in a wall mounted NEMA 12 enclosure.	
UUT Components: NEMA12 12ga carbon steel enclosure with (1) 400/600A switch base assembly (HFB66A), (1) 400/600A mechanism (HM64), (1) 400/600A load base assembly (HBB66A).	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
100	22"	7"	46"	NA	NA	NA

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 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20	2.40	1.34	0.54

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_y-3	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Wall through bolt mounted with (4) 5/16" diameter grade 5 bolts

Manufacturer: Siemens	**Test Location:** Wyle Laboratories
Product Line: VBII Safety Switches	**Report Number:** T55890
Identification Number: GF323NR	**UUT No. in Test Report:** UUT-3

UUT Function: Opens and closes an electrical circuit

UUT Description: The unit is comprised of a standalone 100A general duty safety switch in a wall mounted NEMA 3R enclosure.

UUT Components: NEMA 3R 12ga carbon steel enclosure with (1) 60/100A switch base assembly (HFB63), (1) 60/200A mechanism (HM6123), (1) 60/100A load base assembly (HBB63).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
25	12"	9"	23"	NA	NA	NA

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 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20	2.40	1.34	0.54

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_y-4	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Wall through bolt mounted with (4) 1/4" diameter grade 5 bolts

Manufacturer: Siemens	**Test Location:** Wyle Laboratories
Product Line: VBII Safety Switches	**Report Number:** T55890
Identification Number: GF324NR	**UUT No. in Test Report:** UUT-4
UUT Function: Opens and closes an electrical circuit	

UUT Description: The unit is comprised of a standalone 200A general duty safety switch in a wall mounted NEMA 3R enclosure.

UUT Components: NEMA 3R 12ga carbon steel enclosure with (1) 200A switch base assembly (HFB64), (1) 30/200A mechanism (HM6123), (1) 200A load base assembly (HBB64).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
50	17"	11"	31"	NA	NA	NA

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 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20	2.40	1.34	0.54

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_y-7	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Wall through bolt mounted with (4) 1/4" diameter grade 5 bolts

Manufacturer: Siemens	**Test Location:** Wyle Laboratories
Product Line: VBII Safety Switches	**Report Number:** T55890
Identification Number: HF361J	**UUT No. in Test Report:** UUT-7
UUT Function: Opens and closes an electrical circuit	
UUT Description: The unit is comprised of a standalone 30A heavy duty safety switch in a wall mounted NEMA 12 enclosure.	
UUT Components: NEMA12 12ga carbon steel enclosure with (1) 30A switch base assembly (HFB61), (1) 30/200A mechanism (HM6123), (1) 30A load base assembly (HBB61).	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
15	9"	9"	16"	NA	NA	NA

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 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20	2.40	1.34	0.54

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_y-9	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Wall through bolt mounted with (4) 1/4" diameter grade 5 bolts

Manufacturer: Siemens	**Test Location:** Wyle Laboratories
Product Line: VBII Safety Switches	**Report Number:** T55890
Identification Number: HF363J	**UUT No. in Test Report:** UUT-9

UUT Function: Opens and closes an electrical circuit

UUT Description: The unit is comprised of a standalone 100A heavy duty safety switch in a wall mounted NEMA 12 enclosure..

UUT Components: NEMA12 12ga carbon steel enclosure with (1) 60/100A switch base assembly (HFB63), (1) 30/200A mechanism (HM6123), (1) 60/100A load base assembly (HBB63).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
25	12"	9"	23"	NA	NA	NA

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 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20	2.40	1.34	0.54

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_y-10	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Wall through bolt mounted with (4) 5/16" diameter grade 5 bolts

Manufacturer: Siemens	**Test Location:** Wyle Laboratories
Product Line: VBII Safety Switches	**Report Number:** T55890
Identification Number: HF364J	**UUT No. in Test Report:** UUT-10

UUT Function: Opens and closes an electrical circuit

UUT Description: The unit is comprised of a standalone 200A heavy duty safety switch in a wall mounted NEMA 12 enclosure.

UUT Components: NEMA12 12ga carbon steel enclosure with (1) 200A switch base assembly (HFB64), (1) 400/600A mechanism (HM64), (1) 200A load base assembly (HBB64).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
49	17"	11"	31"	NA	NA	NA

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 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20	2.40	1.34	0.54

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_y-13	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Wall through bolt mounted with (4) 1/2" diameter grade 5 bolts

Manufacturer: Siemens	**Test Location:** Wyle Laboratories
Product Line: VBII Safety Switches	**Report Number:** T55890
Identification Number: HF367J	**UUT No. in Test Report:** UUT-13

UUT Function: Opens and closes an electrical circuit

UUT Description: The unit is comprised of a standalone 800A heavy duty safety switch in a wall mounted NEMA 12 enclosure.

UUT Components: NEMA12 12ga carbon steel enclosure with (1) 800A switch base assembly (HFB67A), (1) 800/1200A mechanism (HM68), (1) 800A load base assembly (HBB67A).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
365	40"	15"	67"	NA	NA	NA

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 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20	2.40	1.34	0.54

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_y-14	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Wall through bolt mounted with (4) 1/2" diameter grade 5 bolts

Manufacturer: Siemens	**Test Location:** Wyle Laboratories
Product Line: VBII Safety Switches	**Report Number:** T55890
Identification Number: HF368J	**UUT No. in Test Report:** UUT-14

UUT Function: Opens and closes an electrical circuit

UUT Description: The unit is comprised of a standalone 1200A heavy duty safety switch in a wall mounted NEMA 12 enclosure.

UUT Components: NEMA12 12ga carbon steel enclosure with (1) 1200A switch base assembly (HFB68), (1) 800/1200A mechanism (HM68), (1) 1200A load base assembly (HBB68).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
385	40"	15"	67"	NA	NA	NA

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 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20	2.40	1.34	0.54

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_y-15	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Wall through bolt mounted with (4) 1/4" diameter grade 5 bolts

Manufacturer: Siemens	**Test Location:** Wyle Laboratories
Product Line: VBII Safety Switches	**Report Number:** T55890
Identification Number: DTF361	**UUT No. in Test Report:** UUT-15

UUT Function: Opens and closes an electrical circuit

UUT Description: The unit is comprised of a standalone 30A double throw safety switch in a wall mounted NEMA 1 enclosure.

UUT Components: NEMA 1 12ga carbon steel enclosure with (1) 30A switch base assembly (HFB61), (1) 30/200A mechanism (HM6123), (1) 30A load base assembly (HBB61).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
30	10"	6"	30"	NA	NA	NA

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 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20	2.40	1.34	0.54

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_y-17	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Wall through bolt mounted with (4) 1/4" diameter grade 5 bolts

Manufacturer: Siemens	**Test Location:** Wyle Laboratories
Product Line: VBII Safety Switches	**Report Number:** T55890
Identification Number: DTF363R	**UUT No. in Test Report:** UUT-17

UUT Function: Opens and closes an electrical circuit

UUT Description: The unit is comprised of a standalone 100A double throw safety switch in a wall mounted NEMA 3R enclosure.

UUT Components: NEMA 3R 12ga carbon steel enclosure with (1) 60/100A switch base assembly (HFB63), (1) 30/200A mechanism (HM6123), (1) 60/100A load base assembly (HBB63).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
50	12"	6"	36"	NA	NA	NA

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 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20	2.40	1.34	0.54

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_y-18	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Wall through bolt mounted with (4) 3/8" diameter grade 5 bolts

Manufacturer: Siemens	**Test Location:** Wyle Laboratories
Product Line: VBII Safety Switches	**Report Number:** T55890
Identification Number: DTF364R	**UUT No. in Test Report:** UUT-18

UUT Function: Opens and closes an electrical circuit

UUT Description: The unit is comprised of a standalone 200A double throw safety switch in a wall mounted NEMA 3R enclosure.

UUT Components: NEMA 3R 12ga carbon steel enclosure with (1) 200A switch base assembly (HFB64), (1) 400/600A mechanism (HM64), (1) 200A load base assembly (HBB64).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
98	20"	7"	50"	NA	NA	NA

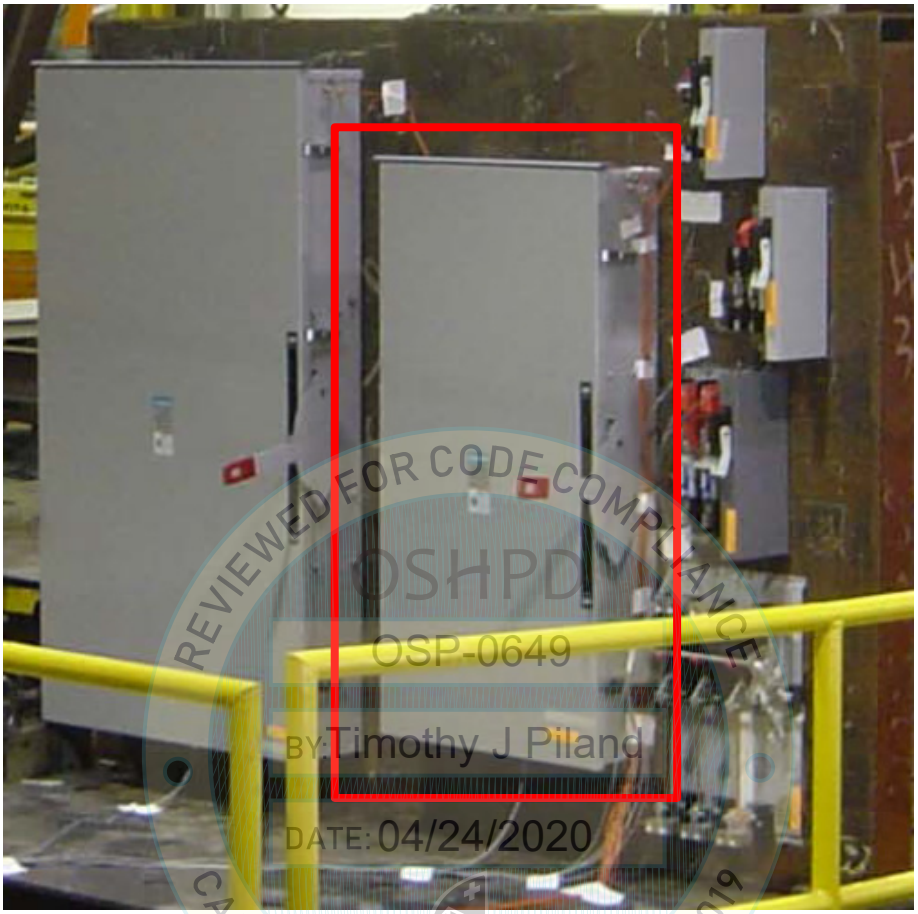
SEISMIC TEST PARAMETERS

Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20	2.40	1.34	0.54

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_y-20	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Wall through bolt mounted with (4) 1/2" diameter grade 5 bolts



Manufacturer: Siemens	**Test Location:** Wyle Laboratories
Product Line: VBII Safety Switches	**Report Number:** T55890
Identification Number: DTNF366R	**UUT No. in Test Report:** UUT-20

UUT Function: Opens and closes an electrical circuit

UUT Description: The unit is comprised of a standalone 600A double throw safety switch in a wall mounted NEMA 3R enclosure.

UUT Components: NEMA 3R 12ga carbon steel enclosure with (1) 400/600A switch base assembly (HFB66A), (1) 400/600A mechanism (HM64), (1) 400/600A load base assembly (HBB66A).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
261	29"	10"	58"	NA	NA	NA

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 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20	2.40	1.34	0.54

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_y-22	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Wall through bolt mounted with (4) 1/2" diameter grade 5 bolts

Manufacturer: Siemens	**Test Location:** Wyle Laboratories
Product Line: VBII Safety Switches	**Report Number:** T55890
Identification Number: DTNF368R	**UUT No. in Test Report:** UUT-22

UUT Function: Opens and closes an electrical circuit

UUT Description: The unit is comprised of a standalone 1200A double throw safety switch in a wall mounted NEMA 3R enclosure.

UUT Components: NEMA 3R 12ga carbon steel enclosure with (1) 1200A switch base assembly (HFB68), (1) 800/1200A mechanism (HM68), (1) 1200A load base assembly (HBB68).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
485	42"	10"	72"	NA	NA	NA

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 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20	2.40	1.34	0.54

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_z-23	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Wall through bolt mounted with (4) 1/2" diameter grade 5 bolts

Manufacturer: Siemens	**Test Location:** Clark Laboratories
Product Line: VBII Safety Switches	**Report Number:** 19-01459
Identification Number: HF368S	**UUT No. in Test Report:** UUT-23

UUT Function: Opens and closes an electrical circuit

UUT Description: The unit is comprised of a standalone 1200A double throw safety switch in a wall mounted NEMA 4x enclosure.

UUT Components: NEMA 4X 12ga carbon stainless steel enclosure with (1) 1200A switch base assembly (HFB68), (1) 800/1200A mechanism (HM68), (1) 1200A load base assembly (HBB68).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
352	39"	10"	67"	NA	NA	NA

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 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20	2.40	1.34	0.54

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_y-23	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Wall through bolt mounted with (4) 1/4" diameter grade 5 bolts

Manufacturer: Siemens	**Test Location:** Wyle Laboratories
Product Line: VBII OEM Disconnect Switch	**Report Number:** T55890
Identification Number: VBFS361F	**UUT No. in Test Report:** UUT-23
UUT Function: Opens and closes an electrical circuit	
UUT Description: The unit is comprised of a standalone wall mounted 30A OEM disconnect switch.	
UUT Components: (1) 30A disconnect switch	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
15	7"	8"	14"	NA	NA	NA

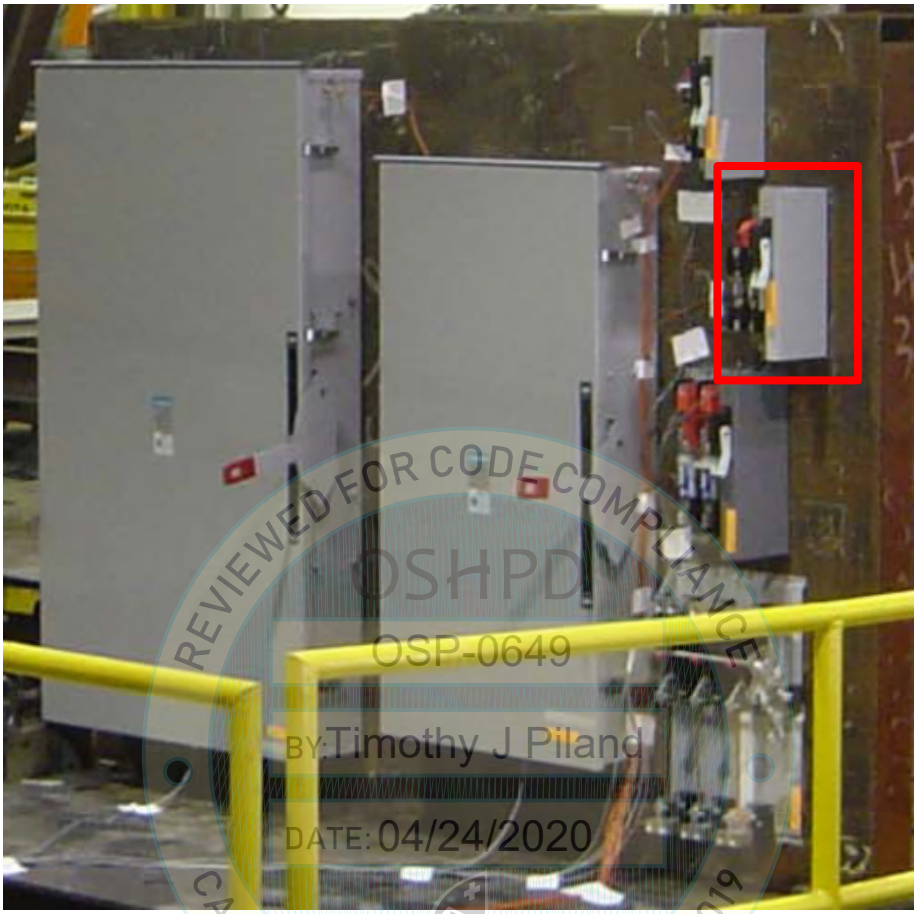
SEISMIC TEST PARAMETERS

Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20	2.40	1.34	0.54

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_y-25	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Wall through bolt mounted with (4) 1/4" diameter grade 5 bolts



Manufacturer: Siemens	**Test Location:** Wyle Laboratories
Product Line: VBII OEM Disconnect Switch	**Report Number:** T55890
Identification Number: VBFS363F	**UUT No. in Test Report:** UUT-25
UUT Function: Opens and closes an electrical circuit	
UUT Description: The unit is comprised of a standalone wall mounted 100A OEM disconnect switch.	
UUT Components: (1) 100A disconnect switch	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
25	9"	8"	16"	NA	NA	NA

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 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20	2.40	1.34	0.54

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_y-26	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Wall through bolt mounted with (4) 1/4" diameter grade 5 bolts

Manufacturer: Siemens	**Test Location:** Wyle Laboratories
Product Line: VBII OEM Disconnect Switch	**Report Number:** T55890
Identification Number: VBFS364F	**UUT No. in Test Report:** UUT-26
UUT Function: Opens and closes an electrical circuit	
UUT Description: The unit is comprised of a standalone wall mounted 200A OEM disconnect switch.	
UUT Components: (1) 200A disconnect switch	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
49	13"	8"	19"	NA	NA	NA

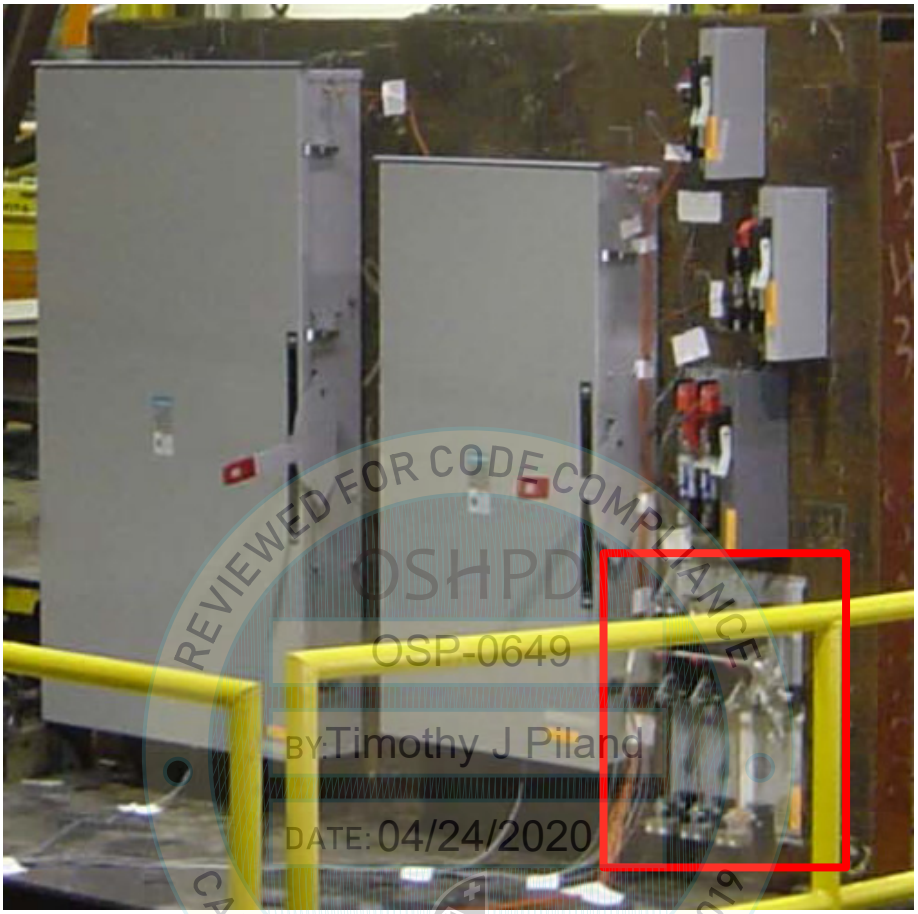
SEISMIC TEST PARAMETERS

Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20	2.40	1.34	0.54

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_y-28	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Wall through bolt mounted with (4) 1/4" diameter grade 5 bolts



Manufacturer: Siemens	**Test Location:** Wyle Laboratories
Product Line: VBII OEM Disconnect Switch	**Report Number:** T55890
Identification Number: VBFS366	**UUT No. in Test Report:** UUT-28
UUT Function: Opens and closes an electrical circuit	
UUT Description: The unit is comprised of a standalone wall mounted 600A OEM disconnect switch.	
UUT Components: (1) 600A disconnect switch	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
61	13"	7"	26"	NA	NA	NA

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 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20	2.40	1.34	0.54

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_z-1	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Wall mounted with (4) 5/16" diameter grade 5 bolts.

Manufacturer: Siemens	**Test Location:** Clark Test Laboratory
Product Line: Wall Mounted Enclosed Circuit Breaker	**Report Number:** 19-01459 Rev.1
Model Number: E 3R 3VA64	**UUT No. in Test Report:** UUT-1

UUT Function: Automatically operated switch that provides circuit protection.

UUT Description: The unit is comprised of a standalone wall mounted NEMA 3R enclosure with circuit breaker.

UUT Components: NEMA 3R 12ga carbon steel enclosure with (1) 3VA64 circuit breaker.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
74	22"	6.5"	45"	NA	NA	NA

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 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20g	2.40g	-	-
CBC 2019 / ICC-ES-AC156	2.50	0.00	1.50	-	-	1.68g	0.68g

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_z-2	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Wall mounted with (3) 1/4" diameter grade 5 bolts.

Manufacturer: Siemens	**Test Location:** Clark Test Laboratory
Product Line: Wall Mounted Enclosed Circuit Breaker	**Report Number:** 19-01459 Rev.1
Model Number: E 1F 3VA51	**UUT No. in Test Report:** UUT-2

UUT Function: Automatically operated switch that provides circuit protection.

UUT Description: The unit is comprised of a standalone wall mounted NEMA 1 enclosure with circuit breaker.

UUT Components: NEMA 1 12ga carbon steel enclosure with (1) 3VA51 circuit breaker.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
13	6.75"	4.5"	18.5"	NA	NA	NA

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 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20g	2.40g	-	-
CBC 2019 / ICC-ES-AC156	2.50	0.00	1.50	-	-	1.68g	0.68g

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_z-3	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Wall mounted with (4) 3/8" diameter grade 5 bolts.

Manufacturer: Siemens	**Test Location:** Clark Test Laboratory
Product Line: Wall Mounted Enclosed Circuit Breaker	**Report Number:** 19-01459 Rev.1
Model Number: E 4X LD6	**UUT No. in Test Report:** UUT-3
UUT Function: Automatically operated switch that provides circuit protection.	
UUT Description: The unit is comprised of a standalone wall mounted NEMA 4X enclosure with circuit breaker.	
UUT Components: NEMA 4x 12ga carbon stainless steel enclosure with (1) LD6 circuit breaker.	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
144	30"	10"	42"	NA	NA	NA

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 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20g	2.40g	-	-
CBC 2019 / ICC-ES-AC156	2.50	0.00	1.50	-	-	1.68g	0.68g

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_z-4	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Wall mounted with (3) 1/4" diameter grade 5 bolts.

Manufacturer: Siemens	**Test Location:** Clark Test Laboratory
Product Line: Wall Mounted Enclosed Circuit Breaker	**Report Number:** 19-01459 Rev.1
Model Number: E 1F 3VL250	**UUT No. in Test Report:** UUT-4

UUT Function: Automatically operated switch that provides circuit protection.

UUT Description: The unit is comprised of a standalone wall mounted NEMA 1 enclosure with circuit breaker.

UUT Components: NEMA 1 12ga carbon steel enclosure with (1) 3VL250 circuit breaker.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
31	9.6"	5.7"	31.5"	NA	NA	NA

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 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20g	2.40g	-	-
CBC 2019 / ICC-ES-AC156	2.50	0.00	1.50	-	-	1.68g	0.68g

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_z-5	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Wall mounted with (4) 3/8" diameter grade 5 bolts.

Manufacturer: Siemens	**Test Location:** Clark Test Laboratory
Product Line: Wall Mounted Enclosed Circuit Breaker	**Report Number:** 19-01459 Rev.1
Model Number: E 12 MND6	**UUT No. in Test Report:** UUT-5

UUT Function: Automatically operated switch that provides circuit protection.

UUT Description: The unit is comprised of a standalone wall mounted NEMA 12 enclosure with circuit breaker.

UUT Components: NEMA 12 12ga carbon steel enclosure with (1) MND6 circuit breaker.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
270	38"	10"	60"	NA	NA	NA

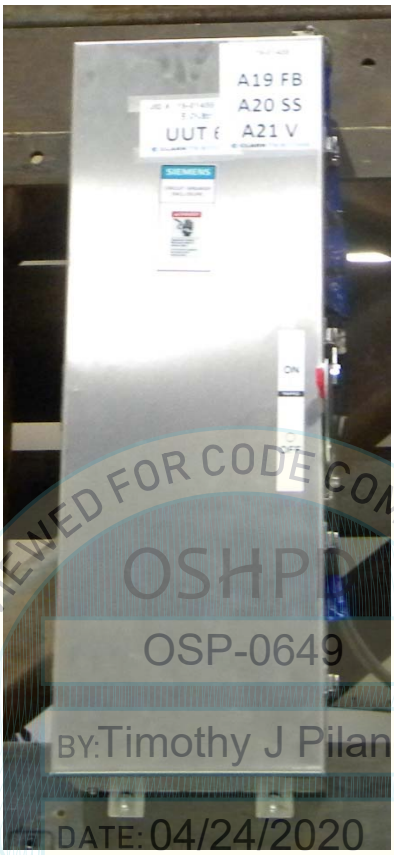
SEISMIC TEST PARAMETERS

Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20g	2.40g	-	-
CBC 2019 / ICC-ES-AC156	2.50	0.00	1.50	-	-	1.68g	0.68g

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_z-6	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Wall mounted with (4) 5/16" diameter grade 5 bolts.



Manufacturer: Siemens	**Test Location:** Clark Test Laboratory
Product Line: Wall Mounted Enclosed Circuit Breaker	**Report Number:** 19-01459 Rev.1
Model Number: E 4X HQR2H	**UUT No. in Test Report:** UUT-6

UUT Function: Automatically operated switch that provides circuit protection.

UUT Description: The unit is comprised of a standalone wall mounted NEMA 4X enclosure with circuit breaker.

UUT Components: NEMA 4X 12ga carbon stainless steel enclosure with (1) HQR2H circuit breaker.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
30	9.6"	5.7"	31.2"	NA	NA	NA

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 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20g	2.40g	-	-
CBC 2019 / ICC-ES-AC156	2.50	0.00	1.50	-	-	1.68g	0.68g

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_z-7	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Floor mounted with (4) 5/16" diameter grade 5 bolts.

Manufacturer: Siemens	**Test Location:** Clark Test Laboratory
Product Line: Single Product	**Report Number:** 19-01459 Rev.1
Model Number: E 1S PRD6N1	**UUT No. in Test Report:** UUT-7

UUT Function: Automatically operated switch that provides circuit protection.

UUT Description: The unit is comprised of a standalone floor mounted NEMA 1 enclosure with circuit breaker.

UUT Components: NEMA 1 12ga carbon steel enclosure with (1) PRD6N1 circuit breaker.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
484	28"	32"	90"	8.9	8.9	>33

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 2019 / ICC-ES-AC156	2.00	1.00	1.50	3.20g	2.40g	-	-
CBC 2019 / ICC-ES-AC156	2.50	0.00	1.50	-	-	1.68g	0.68g

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.