



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT  
FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR OSHPD SPECIAL SEISMIC  
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP – 0458-10

OSHPD Special Seismic Certification Preapproval (OSP)

Type: ☒ New ☐ Renewal

Manufacturer Information

Manufacturer: Crestron Electronics, Inc.

Manufacturer's Technical Representative: Sam Yogasuntharam

Mailing Address: 22 Link Drive, Rockleigh, NJ 07647

Telephone: 201-750-7004 Ext. 11350 Email: syoga@crestron.com

Product Information

Product Name: Spacebuilder

Product Type: Lighting Control Panel

Product Model Number: See Certified Product Table

(List all unique product identification numbers and/or part numbers)

General Description: Galvanized carbon steel enclosures with internal components as listed in the attachments.

Mounting Description: Rigid wall-mounted

Applicant Information


Applicant Company Name: The VMC Group

Contact Person: Mr. John Giuliano

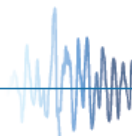
Mailing Address: 113 Main Street, Bloomingdale, NJ 07403

Telephone: 973-838-1780 Email: john.giuliano@thvmcgroup.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: 3/3/16

Title: President Company Name: The VMC Group





**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT  
FACILITIES DEVELOPMENT DIVISION**

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

Company Name: The VMC Group  
Name: Mr. Ken Tarlow California License Number: SE2851  
Mailing Address: 113 Main St, Bloomingdale, NJ 07403  
Telephone: 973-838-1780 Email: ken.tarlow@thevmcgroup.com

**Supports and Attachments Preapproval**

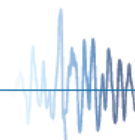
- ☐ Supports and attachments are preapproved under OPM-  
(Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required)  
☒ Supports and attachments are not preapproved

**Certification Method**

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

**Testing Laboratory**

Company Name: Applied Technical Services, Incorporated  
Contact Name: David Common  
Mailing Address: 1049 Triad Court, Marietta, Georgia, 30062  
Telephone: (770) 423-1400 Email: davidc@atslab.com





## OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT 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 ( $S_{DS} = 2.0$ ,  $z/h = 1$ ); 1.3 ( $S_{DS} = 2.5$ ,  $z/h = 0$ )

$S_{DS}$  (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

$\Omega_0$  (System overstrength factor) = 2.0

$I_p$  (Importance factor) = 1.5

$z/h$  (Height factor ratio) = 1.0 ( $S_{DS} = 2.00$ ) & 0.0 ( $S_{DS} = 2.50$ )

Equipment or Component Natural Frequencies (Hz) = See attached

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

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) = \_\_\_\_\_

$\Omega_0$  (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): \_\_\_\_\_

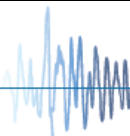
### OSHDP Approval (For Office Use Only) – Approval Expires on December 31, 2022

Signature:  Date: 7/25/16

Print Name: M. R. Karim Title: SHFR

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

Condition of Approval (if applicable): \_\_\_\_\_



**Table 1: Certified Spacebuilder Control Panels**

Model	Manufacturer	Dimensions (in)			Max. Weight (lbs.)	Mounting	Enclosure thickness/ material	z/h= 1 Sds(g)	z/h= 0 Sds(g)	UUT
		Height	Width	Depth						
DIN-EN-3X18-MMOE	Crestron	24.3	16.1	4.4	30	Wall	16ga. Galvanized Carbon Steel	2.0	2.5	UUT-01
GLEX-FT-24	Crestron	24.3	16.1	4.4	30	Wall	16ga. Galvanized Carbon Steel	2.0	2.5	Interpolated
GLEX-FT-24-MMOE	Crestron	24.3	16.1	4.4	30	Wall	16ga. Galvanized Carbon Steel	2.0	2.5	Interpolated
DIN-EN-3X18	Crestron	24.3	16.1	4.4	30	Wall	16ga. Galvanized Carbon Steel	2.0	2.5	Interpolated
GLEX-FT-56	Crestron	39.7	16.1	4.4	40	Wall	16ga. Galvanized Carbon Steel	2.0	2.5	UUT-02
GLEX-FT-56-MMOE	Crestron	39.7	16.1	4.4	40	Wall	16ga. Galvanized Carbon Steel	2.0	2.5	Interpolated
DIN-EN-6X18	Crestron	39.7	16.1	4.4	40	Wall	16ga. Galvanized Carbon Steel	2.0	2.5	Interpolated
DIN-EN-6X18-MMOE	Crestron	39.7	16.1	4.4	45	Wall	16ga. Galvanized Carbon Steel	2.0	2.5	UUT-03
GLEX-RACK-4U	Crestron	45.7	27.3	8.4	100	Wall	16ga. Galvanized Carbon Steel	2.0	2.5	UUT-04

**Table 2: Certified Spacebuilder Control Panel Subcomponents**

Subcomponent	Part #	MFR.	Material	Approx. Weight (lbs.)	S <sub>DS</sub>	z/h	UUT
switch module (16 channels)	GLXX-SW16	Crestron	Galvanized Steel Mounting Plate	3.00	2.0	1.0	UUT-01
Relay Control Module	GLXX-CTRL	Crestron	Galvanized Steel Housing	2.00	2.0	1.0	UUT-01
Power Supply	DIN-PWS30-277	Crestron	plastic housing	0.41	2.0	1.0	UUT-01
Crestron 3 series Control Processor	DIN-AP3	Crestron	plastic housing	0.58	2.0	1.0	UUT-01
Building Management Systems Interface	GLA-BMS	FieldServer Technologies	plastic housing	0.96	2.0	1.0	UUT-01
Power Supply for GLA-BMS	HK-H5-A15	Condor	plastic housing	0.30	2.0	1.0	UUT-01
Switch Module (8 channels)	GLXX-SW8	Crestron	plastic housing	2.50	2.0	1.0	UUT-01
Wireless Router	AIRPORT EXPRESS - MC414LL/A	Apple Computer	plastic housing	0.53	2.0	1.0	UUT-02
Power Supply	DIN-PWS30-277	Crestron	plastic housing	0.41	2.0	1.0	UUT-02
Switching Module	DIN-8SW8	Crestron	plastic housing	0.82	2.0	1.0	UUT-02
PYNG Controll Hub	PYNG-HUB	Crestron	plastic housing	0.70	2.0	1.0	UUT-02
5 Port Switch	CEN-SW-POE-5	Crestron	aluminum housing	0.84	2.0	1.0	UUT-02
Power Supply for CEN-SW-POE-5	GS60A48-EO	Mean Well	plastic housing	1.30	2.0	1.0	UUT-02
Room Media Controller	RMC3	Crestron	plastic housing	0.40	2.0	1.0	UUT-02
Universal Dimming Module	DIN-1DIMU4	Crestron	plastic housing	2.10	2.0	1.0	UUT-03
0-10V Dimming Module	DIN-4DIMFLV4	Crestron	plastic housing	0.58	2.0	1.0	UUT-03
power supply	DIN-PWS60	Crestron	plastic housing	0.38	2.0	1.0	UUT-03
Power Supply	787-1628	WAGO	aluminum housing	1.30	2.0	1.0	UUT-03
Protection Module	PISA11.CLASS2	PULS	plastic housing	0.26	2.0	1.0	UUT-03
DALI Controller	DIN-DALI-2	Crestron	plastic housing	0.60	2.0	1.0	UUT-03
Distribution Block	DIN-BLOCK	Crestron	plastic housing	0.31	2.0	1.0	UUT-03
Crestron 3 series Control Processor	DIN-AP3	Crestron	plastic housing	0.58	2.0	1.0	UUT-03
Distribution Hub	DIN-HUB	Crestron	plastic housing	0.38	2.0	1.0	UUT-03
DMX Lighting Controller	LPC 1	Pharos	aluminum housing	1.06	2.0	1.0	UUT-03
5 Port Switch	CEN-SW-POE-5	Crestron	aluminum housing	0.84	2.0	1.0	UUT-03
Power Supply for CEN-SW-POE-5	GS60A48-EO	Mean Well	plastic housing	1.30	2.0	1.0	UUT-03
Patch Panel	5G596-U24	Leviton	carbon steel chassis	2.00	2.0	1.0	UUT-04
Crestron 3 series Control Processor	CP3N	Crestron	aluminum chassis	3.10	2.0	1.0	UUT-04
Power Supply	PW-2420RU (2)	Crestron	plastic housing	1.30	2.0	1.0	UUT-04
AC Outlet	51015188 (4)	WAGO	plastic housing	0.33	2.0	1.0	UUT-04
24 Port Switch	CNGE2FE24MS	Comnet	carbon steel chassis	2.00	2.0	1.0	UUT-04
Comnet Power brick	CONDOR SA-242A52	Condor	plastic housing	0.53	2.0	1.0	UUT-04
Patch Panel	HP624	Hubbell	carbon steel chassis	1.51	2.0	1.0	UUT-04
Crestron 3 series Control Processor	CP3	Crestron	aluminum chassis	3.12	2.0	1.0	UUT-04
AC Outlet	2963860	Phoenix Contact	plastic housing	0.30	2.0	1.0	UUT-04
16 Port Switch	CEN-SWPOE-16	Crestron	aluminum chassis	6.40	2.0	1.0	UUT-04
GLA-DMX512 Power brick	PW-1205	Crestron	plastic housing	0.29	2.0	1.0	UUT-04
DMX Lighting Controller	GLA-DMX512	Interactive Technologies, Inc.	aluminum housing	0.56	2.0	1.0	UUT-04
5 Port Switch	EIRP305-24V-T	B & B Electronics	aluminum housing	1.39	2.0	1.0	UUT-04
Ethernet to Cresnet Bridge	DIN-CENCN-2	Crestron	plastic housing	0.56	2.0	1.0	UUT-04
Ethernet to Cresnet Bridge w/ POE	DIN-CENCN-2-POE	Crestron	plastic housing	0.76	2.0	1.0	UUT-04
Versiport module	DIN-IO8	Crestron	plastic housing	0.37	2.0	1.0	UUT-04
Analog Output module	DIN-AO8	Crestron	plastic housing	0.40	2.0	1.0	UUT-04
Power Supply	DIN-PWS50	Crestron	plastic housing	0.40	2.0	1.0	UUT-04



## TABLE 2

### UNIT UNDER TEST (UUT) Summary Sheet

**UUT-01**

VMA-50265-01

Model Line	Model Number	Manufacturer
Spacebuilder	DIN-EN-3X18-MMOE	Crestron Electronics, Inc.

#### Product Construction Summary

16ga. Galvanized Carbon Steel

#### Options / Subcomponent Summary

Power Supply: TDK-Lambda; Control Module: Crestron; Automation Processor: Crestron;  
16 channel switch module: Crestron

#### UUT Properties

Weight [ lbs ]	Dimensions [ in ]			Lowest Nat. Freq. [ Hz ]		
	Height	Width	Depth	F-B	S-S	V
30.00	24.30	16.10	4.40	N/A	N/A	N/A

#### UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2016	ICC-ES AC156	2.0	1	1.5	3.20	2.40	1.33	0.53
		2.5	0	1.5	2.50	1.00	1.67	0.67

#### Test Mounting Details

UUT-01 was wall-mounted to the fixture using qty (4) 3/8" Grade 5 bolts in the manufacturer-provided mounting holes.



All units were filled with contents and maintained structural integrity and functionality



# TABLE 3

## UNIT UNDER TEST (UUT) Summary Sheet

**UUT-02**

VMA-50265-01

Model Line	Model Number	Manufacturer
Spacebuilder	GLEX-FT-56	Crestron Electronics, Inc.

### Product Construction Summary

16ga. Galvanized Carbon Steel

### Options / Subcomponent Summary

Power Supply: TDK-Lambda; Ethernet switch: Crestron; Wireless Router: Apple Computer; High voltage switch: Crestron; Control Hum: Crestron; Room Media Controller: Crestron

### UUT Properties

Weight [ lbs ]	Dimensions [ in ]			Lowest Nat. Freq. [ Hz ]		
	Height	Width	Depth	F-B	S-S	V
39.00	39.70	16.10	4.40	N/A	N/A	N/A

### UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2016	ICC-ES AC156	2.0	1	1.5	3.20	2.40	1.33	0.53
		2.5	0	1.5	2.50	1.00	1.67	0.67

### Test Mounting Details

UUT-02 was wall-mounted to the fixture using qty (4) 3/8" Grade 5 bolts in the manufacturer-provided mounting holes.



All units were filled with contents and maintained structural integrity and functionality





# TABLE 4

## UNIT UNDER TEST (UUT) Summary Sheet

**UUT-03**

VMA-50265-01

Model Line	Model Number	Manufacturer
Spacebuilder	DIN-EN-6X18-MMOE	Crestron Electronics, Inc.

### Product Construction Summary

16ga. Galvanized Carbon Steel

### Options / Subcomponent Summary

Power Supply: Crestron; Power Supply: WAGO; DMX Lighting Controller: Pharos; Automation Processor: Crestron; Dimmer: Crestron; Dimmer Module: Crestron; Protection Module: PULS; DALI Controller: Crestron; Distribution Block: Crestron; Distribution Hub: Crestron; 5 Port Switch: Crestron

### UUT Properties

Weight [ lbs ]	Dimensions [ in ]			Lowest Nat. Freq. [ Hz ]		
	Height	Width	Depth	F-B	S-S	V
44.50	39.70	16.10	4.40	N/A	N/A	N/A

### UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2016	ICC-ES AC156	2.0	1	1.5	3.20	2.40	1.33	0.53
		2.5	0	1.5	2.50	1.00	1.67	0.67

### Test Mounting Details

UUT-03 was wall-mounted to the fixture using qty (4) 3/8" Grade 5 bolts in the manufacturer-provided mounting holes.



All units were filled with contents and maintained structural integrity and functionality





# TABLE 5

## UNIT UNDER TEST (UUT) Summary Sheet

**UUT-04**

VMA-50265-01

Model Line	Model Number	Manufacturer
Spacebuilder	GLEX-RACK-4U	Crestron Electronics, Inc.

### Product Construction Summary

16ga. Galvanized Carbon Steel

### Options / Subcomponent Summary

Patch Panel: Leviton; Patch Panel: Hubbell; Power Supply: Crestron; AC Outlet: WAGO; AC Outlet: Phoenix Contact; Ethernet Switch: Crestron; Ethernet Switch: B & B Electronics; Control Module: Crestron; DMX Lighting Controller: Interactive Technologies, Inc.; Control Processor: Crestron; Managed Ethernet Switch: Comnet; Comnet Power brick: Condor; GLA-DMX512 Power brick: Crestron; Building Management Systems Interface: FieldServer Technologies; Bridge, Bridge w/ power over ethernet, Versiport module, Analog Output module: Crestron

### UUT Properties

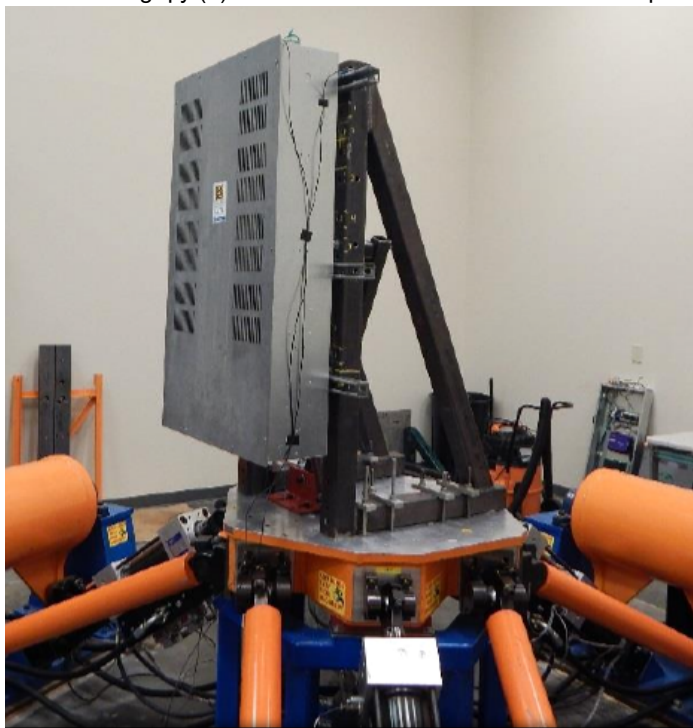
Weight [ lbs ]	Dimensions [ in ]			Lowest Nat. Freq. [ Hz ]		
	Height	Width	Depth	F-B	S-S	V
102.00	45.70	27.30	8.40	N/A	N/A	N/A

### UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2016	ICC-ES AC156	2.0	1	1.5	3.20	2.40	1.33	0.53
		2.5	0	1.5	2.50	1.00	1.67	0.67

### Test Mounting Details

UUT-04 was wall-mounted to the fixture using qty (4) 3/8" Grade 5 bolts in the manufacturer-provided mounting holes.



All units were filled with contents and maintained structural integrity and functionality