



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

**APPLICATION FOR OSHPD SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)**

OFFICE USE ONLY

APPLICATION #: OSP-0438

OSHPD Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Potter Signal (Formerly Harrington Signal)

Manufacturer's Technical Representative: Michael Mclsaac

Mailing Address: 1170 Troy Lane North, Maple Grove, MN 53693

Telephone: (763) 420-0034 Email: michaelm@pottersignal.com

Product Information

Product Name: Electrical Control Panels on Life Safety/Critical Branch

Product Type: Fire Alarm & Security Panels

Product Model Number: EVAX and Mass Notification Panels

General Description: EVAX by Potter Fire alarm control panels, voice evacuation systems and accessories.

Mounting Description: Rigid, Wall Mounted

Tested Seismic Enhancements: None DATE: 08/31/2021

Applicant Information

Applicant Company Name: Structural Integrity Associates, Inc. dba TRU Compliance

Contact Person: Katie Braman

Mailing Address: 5215 Hellyer Ave., San Jose, CA 94608

Telephone: (844) 878-0200 Email: kbraman@structint.com

Title: Program Manager





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

Company Name: STRUCTURAL INTEGRITY ASSOCIATES, INC.
Name: Andrew Coughlin California License Number: S6082
Mailing Address: 5215 Hellyer Ave, Suite 101, San Jose, CA 95138-1025
Telephone: (415) 635-8461 Email: acoughlin@structint.com

Certification Method

GR-63-Core ICC-ES AC156 IEEE 344 IEEE 693 NEBS 3
 Other (Please Specify): _____

Testing Laboratory

Company Name: UL LLC
Contact Person: Chris Rose
Mailing Address: 12 Laboratory Drive, Research Triangle NC 27709-3995
Telephone: (919) 549-1713 Email: christopher.s.rose@us.ul.com





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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 1.88

SDS (Design spectral response acceleration at short period, g) = 2.5

a_p (Amplification factor) = 2.5

R_p (Response modification factor) = 6.0

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 1 and 0

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

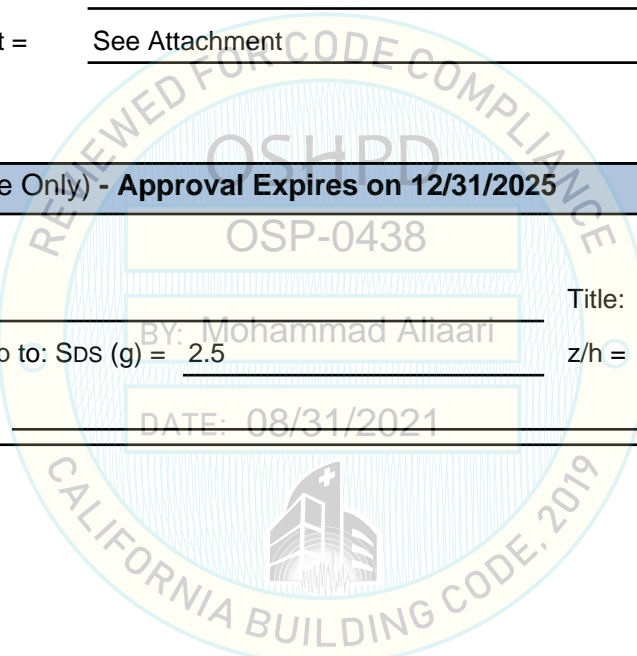
OSHPD Approval (For Office Use Only) - Approval Expires on 12/31/2025

Date: 8/31/2021

Name: Mohammad Aliaari Title: Senior Structural Engineer

Special Seismic Certification Valid Up to: SDS (g) = 2.5 z/h = See Above

Condition of Approval (if applicable): DATE: 08/31/2021



SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX

2001099-CR-001-R1



Manufacturer: EVAX by Potter (Formerly Harrington Signal)	TABLE 1
Model Line: EVAX and Mass Notification Panels	

Certified Product Construction Summary:
 16 gauge cold rolled carbon steel
 0.080" extruded aluminum

Certified Options Summary:

Mounting Configuration:
 Wall mounted - rigid
 Note: Installed mounting configuration must be of similar configuration and identical strength and stiffness to those tested.

Building Code: CBC 2019 **Seismic Certification Limits:** $S_{DS} = 2.5g$ $z/h = 1.0$ $I_p = 1.5$
 $S_{DS} = 2.5g$ $z/h = 0.0$

Model Line	Model	Dimensions (in)			Weight (lb)	Notes	UUT ⁴
		Depth	Width	Height			
EVAX/HMX Voice and Mass Notification Panels	HAVE-25 Voice System				26		10
	EVAX-25 ¹	4	14.5	18	26		Interp.
	EVAX-50 ¹				30		Interp.
	EVAX-100 ^{1,2}				42.9		Interp.
	HAVE-100M Mass Notification				42.9		11
	EVAX-150 ¹	4	14.5	27	42.9	Same components as EVAX-100	Interp.
	EVAX-200 ^{1,2}				42.9	Same components as EVAX-100	Interp.
	HMX-MP				36.2	FNV-MP ³	Interp.
	HAVED-MP16/P Master Panel				36.2	FNV-MP ³	12
	HMX-DP				32.4	FNV-DP ³	Interp.
	HAVED-DPS25/P Distributor Panel	6	26	42	32.4	FNV-DP ³	13
	EVX-RM	3	8	10	6.6		Interp.
	M-RM8 Remote Microphone	3	8	10	6.6		14

¹Identical expander (E) module is also qualified. See Subcomponent Matrix.
²Identical mass notification (M) module is also qualified. See Subcomponent Matrix.
³Alternated product name is Hochiki. Components are identical other than branding.
⁴Tested unit were HAVE Product Line which are indential to EVAX Product Line other than branding.

SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

2001099-CR-001-R1



Manufacturer: EVAX by Potter (Formerly Harrington Signal)	Table Description: EF Series & EVAX/HMX/FNV Series Subcomponents	TABLE 2
Model Line: EVAX and Mass Notification Panels		

Building Code: CBC 2019 **Seismic Certification Limits:** $S_{DS} = 2.5g$ $z/h = 1.0$ $I_p = 1.5$
 $S_{DS} = 2.5g$ $z/h = 0.0$

Component Type	Manufacturer	Model	Description	Notes	UUT
Transformer	Evax Systems	TRF	Power Transformer		11,12,13
Voice Amplifiers	Evax Systems	EVX-25 ¹	25 Watt Module, digital message repeater, paging mic	FNV-25E ²	10
		EVX-50 ¹	50 Watt Module, digital message repeater, paging mic	FNV-50E ² Same as EVX-100M (depopulated)	Interp.
		EVX-100 ¹	100 Watt Module, digital message repeater, paging mic	FNV-100E ² Same as EVX-100M (depopulated)	Interp.
		EVX-25E ¹	25 Watt Expander Module		13
		EVX-50E ¹	50 Watt Expander Module	Same as EVX-100M (depopulated)	Interp.
		EVX-100E ¹	100 Watt Expander Module	Same as EVX-100M (depopulated)	Interp.
		EVX-100M ¹	Mass notification module		11
Enclosures	Evax Systems	EVX-CAB ¹	EVAX-25, EVAX-50, & EVAX-100 cabinet		10
		EVX-CAB2 ¹	EVAX-150, 200, 100M, 200M, HMX-MP and HMX-DP cabinet		11,12,13
		EVX-CABRM ¹	EVX-RM8, RM16, EVX-RM cabinet		14
Optional Components	Evax Systems	MX-FH ¹	Fireman's handset	FNV-FH ²	12
		MX-PWR ¹	Power Supply	FNV-PWR ²	12

Notes:
¹Model prefix EVX is identical to M and MX is identical to HAVE other than branding.
²Alternated product name is Hochiki. Components are identical other than branding/part number.

SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

2001099-CR-001-R1



Manufacturer: EVAX by Potter (Formerly Harrington Signal)	Table Description: EF Series & EVAX/HMX/FNV Series Subcomponents	TABLE 2
Model Line: EVAX and Mass Notification Panels		

Building Code: CBC 2019 **Seismic Certification Limits:** $S_{DS} = 2.5g$ $z/h = 1.0$ $I_p = 1.5$
 $S_{DS} = 2.5g$ $z/h = 0.0$

Component Type	Manufacturer	Model	Description	Notes	UUT
Optional Components	Evax Systems	MX-MFP ¹	Master Fire Phone Interface	FNV-MFP ²	12
		MX-DCC ¹	Data communication control card	FNV-DCC ²	12,13
		MX-SSC ¹	Switch Scan Card	FNV-SSC ²	12
		MX-MMC ¹	Microphone Master Control Card	FNV-MMC ²	12
		MX-II ¹	Input Interface	FNV-II ²	12
		MX-SLC ¹	Switch/LED Card	FNV-SLC ²	12
		MX-MFH ¹	Master Fire Phone Handset Card	FNV-MFH ²	12
		MX-MBR ¹	Motherboard Card	FNV-MBR ²	13
		MX-AMI ¹	Audio/Module Interface	FNV-AMI ²	13
		MX-FPI ¹	Fire Phone Interface	FNV-FPI ²	13
		MX-MBK ¹	Mother Board Relays	FNV-MBK ²	13
		MX-ASC ¹	Audio System Control Card	FNV-ASC ²	12
		MX-ISO ¹	Isolator RS232	FNV-ISO ²	Interp.
		MX-LLC ¹	LED Lamp Card		Interp.
		MX-BRK ¹	Break-out card (Contains no circuitry)		Interp.
		MX-FO ¹	Fiber optic transceiver		Interp.
		MX-BA ¹	Backup amplifier switching relay	FNV-BA ²	Interp.
		MX-OI ¹	Output interface	FNV-OI ²	Interp.
MX-XO ¹	Extended output interface	FNV-XO ²	Interp.		

Notes:
¹Model prefix EVX is identical to M and MX is identical to HAVE other than branding.
²Alternated product name is Hochiki. Components are identical other than branding/part number.

SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

2001099-CR-001-R1



Manufacturer: EVAX by Potter (Formerly Harrington Signal)	Table Description: EF Series & EVAX/HMX/FNV Series Subcomponents	TABLE 2
Model Line: EVAX and Mass Notification Panels		

Building Code: CBC 2019 **Seismic Certification Limits:** $S_{DS} = 2.5g$ $z/h = 1.0$ $I_p = 1.5$
 $S_{DS} = 2.5g$ $z/h = 0.0$

Component Type	Manufacturer	Model	Description	Notes	UUT
Optional Components	Evax Systems	MX-XI ¹	Extended input interface	FNV-XI ²	Interp.
		EVX-SC ¹	Supervisory Card		Interp.
		EVX-MIC ¹	Microphone		10,11,12,14
		EVX-BAB ¹	Backup Module		Interp.
		EVX-ZM ¹	Zone Module		11
		EVX-SL8 ¹	Switch Card		11
		EVX-IL8 ¹	Input Card		11
		EVX-OL8 ¹	Output Card		11
		EVX-RM8 ¹	Remote Microphone Card		14

Notes:
¹Model prefix EVX is identical to M and MX is identical to HAVE other than branding.
²Alternated product name is Hochiki. Components are identical other than branding/part number.

UNIT UNDER TEST (UUT) SUMMARY SHEET

2001099-CR-001-R1



Manufacturer: EVAX by Potter (Formerly Harrington Signal)	UUT 10
Model Line: EVAX and Mass Notification Panels	
Model Number: HAVE-25 Voice System Serial Number: N/A	

Product Construction Summary:
16 gauge cold rolled carbon steel

Options/Subcomponent Summary:
M-CAB enclosure containing M-25 voice amplifier and transformer
Unit identical to EVAX-25.

UUT Properties						
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
26	4	14.5	18	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2019	ICC-ES AC156	2.5	1.0	1.5	4.0	3.0	1.67	0.67	
		2.5	0.0						

Test Mounting Details:



Rigid wall mounted with 5 x 1/4" Lag Screws
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.

UNIT UNDER TEST (UUT) SUMMARY SHEET

2001099-CR-001-R1



Manufacturer: EVAX by Potter (Formerly Harrington Signal)	UUT 11
Model Line: EVAX and Mass Notification Panels	
Model Number: HAVE-100M Mass Notification Serial Number: N/A	

Product Construction Summary:
16 gauge cold rolled carbon steel

Options/Subcomponent Summary:
M-CAB2 enclosure containing M-100M voice amplifier, M-SL8 switch card, M-ZM zone module, M-IL8 input card, and M-OL8 output card
Unit identical to EVAX-100

UUT Properties						
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
42.9	4	14.5	27	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2019	ICC-ES AC156	2.5 2.5	1.0 0.0	1.5	4.0	3.0	1.67	0.67	

Test Mounting Details:



Rigid wall mounted with 5 x 1/4" Lag Screws
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.

UNIT UNDER TEST (UUT) SUMMARY SHEET

2001099-CR-001-R1



Manufacturer: EVAX by Potter (Formerly Harrington Signal)	UUT 12
Model Line: EVAX and Mass Notification Panels	
Model Number: HAVED-MP16/P Master Panel Serial Number: N/A	

Product Construction Summary:
16 gauge cold rolled carbon steel

Options/Subcomponent Summary:
M-CAB2 enclosure containing HAVE-MFP master fire phone interface, HAVE-DCC data communication card, HAVE-ASC audio system card, HAVE-SSC switch scan card, HAVE-PWR power supply, HAVE-II input interface, and TRF transformer. HAVE-MMC microphone master control card, HAVE-SLC switch/LED card, and HAVE-MFH master fire phone handset card mounted to the door.
Unit identical to HMX-MP

UUT Properties						
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
36.2	4	14.5	27	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2019	ICC-ES AC156	2.5	1.0	1.5	4.0	3.0	1.67	0.67	
		2.5	0.0						

Test Mounting Details:



Rigid wall mounted with 5 x 1/4" Lag Screws
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.

UNIT UNDER TEST (UUT) SUMMARY SHEET

2001099-CR-001-R1



Manufacturer: EVAX by Potter (Formerly Harrington Signal)	UUT 13
Model Line: EVAX and Mass Notification Panels	
Model Number: HAVED-DPS25/P Distributor Panel Serial Number: N/A	

Product Construction Summary:
16 gauge cold rolled carbon steel

Options/Subcomponent Summary:
M-CAB2 enclosure containing HAVE-MBR mother board card mounted with HAVE-MBK motherboard/relay card, HAVE-FPI fire phone interface card, HAVE-AMI audio module interface card, HAVE-DCC data communication card, TRF transformer, and M-25E expander module
Unit identical to HMX-DP

UUT Properties						
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
32.4	6	26	42	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2019	ICC-ES AC156	2.5	1.0	1.5	4.0	3.0	1.67	0.67	
		2.5	0.0						

Test Mounting Details:



Rigid wall mounted with 5 x 1/4" Lag Screws
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.

UNIT UNDER TEST (UUT) SUMMARY SHEET

2001099-CR-001-R1



Manufacturer: EVAX by Potter (Formerly Harrington Signal)	UUT 14
Model Line: EVAX and Mass Notification Panels	
Model Number: M-RM8 Remote Microphone Serial Number: N/A	

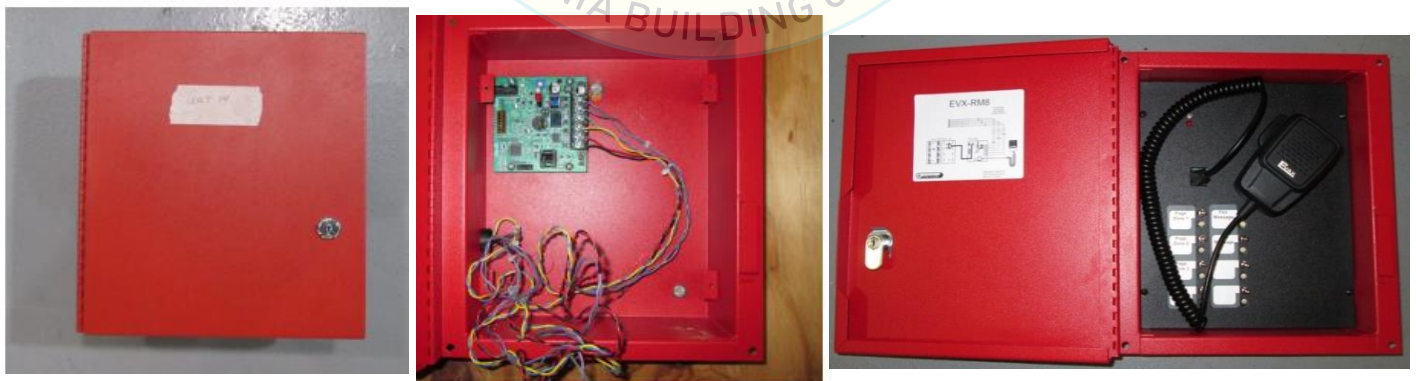
Product Construction Summary:
16 gauge cold rolled carbon steel

Options/Subcomponent Summary:
M-CABRM enclosure containing M-RM8 remote microphone connected to HAVE-100M
Unit identical to EVX-RM

UUT Properties						
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
6.6	3	8	10	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2019	ICC-ES AC156	2.5	1.0	1.5	4.0	3.0	1.67	0.67	
		2.5	0.0						

Test Mounting Details:



Rigid wall mounted with 3 x 1/4" Lag Screws
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.