APPLICATION FOR OSHPD SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY	
APPLICATION #:	OSP – 0233-10

OSHPD Special Seismic Certification Preapproval (OSP)

Type: ☐ New ☒ Renewal

Manufacturer Information

Manufacturer: **Hochiki America Corporation**

Manufacturer's Technical Representative: Bill Denney

Mailing Address: 7051 Village Drive, Suite 100, Buena Park, CA 90621

Telephone: 559.490.7972 Email: bdenney@hochiki.com

Product Information

Product Name: **FireNET Alarm Control Panels**

Product Type: Fire Alarm Control Panel

Product Model Number: See Attachment 1
(List all unique product identification numbers and/or part numbers)

General Description: Analog addressable fire alarm control panels and battery cabinets.

Mounting Description: Rigid wall mounted.

Applicant Information

Applicant Company Name: **Manwill Engineering LLC**

Contact Person: Derek Manwill, SE

Mailing Address: PO Box 1194, Bend, OR 97709

Telephone: 541.241.2102 Email: derek@manwillSE.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: 3/15/2017

Title: President Company Name: **Manwill Engineering LLC**

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

Company Name: **Manwill Engineering LLC**

Name: Derek Manwill, SE California License Number: S6266

Mailing Address: PO Box 1194, Bend, OR 97709

Telephone: 541.241.2102 Email: derek@manwillSE.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: National Technical Systems (NTS)

Contact Name: Ratish Rao

Mailing Address: 1536 East Valencia Drive, Fullerton, CA 92831

Telephone: 714.879.6110 Email: ratish.rao@nts.com

Seismic Parameters

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

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

S_{DS} (Design spectral response acceleration at short period, g) = 2.5

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

Equipment or Component Natural Frequencies (Hz) = N/A (wall mounted)

Overall dimensions and weight (or range thereof) = See Attachments 1 & 2

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): Attachments 1 & 2

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

Signature: Date: 3/15/2017

Print Name: M. R. Karim Title: SHFR

Special Seismic Certification Valid Up to : S_{DS} (g) = 2.5 z/h = 1.0

Condition of Approval (if applicable):

TABLE 1

MANUFACTURER:	HOCHIKI AMERICA CORPORATION
PRODUCT FAMILY:	FireNET ALARM CONTROL PANELS & BATTERY ENCLOSURE

MODEL NUMBER	DIMENSIONS (in)			MAX. WT. (lb)	DESCRIPTION / NOTES	BASIS
	DEPTH	WIDTH	HEIGHT			
FireNET Analog Addressable Fire Alarm Control Panels						
FN-4127N	5.0	14.5	24.0	29		**UUT 1**
FN-4127-DDWN	5.0	14.5	24.0	28		**UUT 2**
Plus-1127	3.5	14.5	19.0	20		**UUT 3**
FN-ACC	5.8	17.8	14.9	62	UUT 4 weighed 27-lb	**UUT 4,5**

MOUNTING:	Rigid wall mounted.	SEISMIC LEVEL	S_{DS} = 2.5g for z/h = 1	I_P = 1.5
NOTES:	**Product Construction:** Carbon steel enclosure. **Options/Subcomponents:** Model number uniquely identifies subcomponents except for FN-ACC. FN-ACC can have a range of battery sizes as shown in Table 2.			

TABLE 2 - SUBCOMPONENTS

MANUFACTURER:	HOCHIKI AMERICA CORPORATION
PRODUCT FAMILY:	FireNET ALARM CONTROL PANELS & BATTERY ENCLOSURE

MODEL NUMBER	DIMENSIONS (in)			MAX. WT. (lb)	DESCRIPTION / NOTES	BASIS
	DEPTH	WIDTH	HEIGHT			
MK Battery - 12V Batteries						
ES7-12	5.9	2.6	3.7	5.3		**UUT 4**
ES9-12	5.9	2.6	3.7	5.9		INTERP
ES10-12	5.9	2.6	4.4	7.3		INTERP
ES12-12	5.9	3.9	3.7	9.0		INTERP
ES14-12	5.9	3.9	3.7	9.4		INTERP
ES17-12	7.1	3.0	6.6	13		INTERP
ES20-12	7.1	3.0	6.6	13		INTERP
ES26-12	6.5	6.9	4.9	21		INTERP
ES33-12	7.8	5.2	6.3	23		**UUT 5**

MOUNTING:	Mounted within unit.	SEISMIC LEVEL(S)	S_{DS} = 2.5g for z/h = 1	I_P = 1.5
NOTES:	**Product Construction/Options:** Model number uniquely identifies manufacturer, materials and configuration of subcomponents.			

UUT 1

MANUFACTURER:	HOCHIKI AMERICA CORPORATION
MODEL NUMBER:	FireNET FN-4127N
UNIT FUNCTION:	Alarm Control Panel
SERIAL NUMBER:	N/A

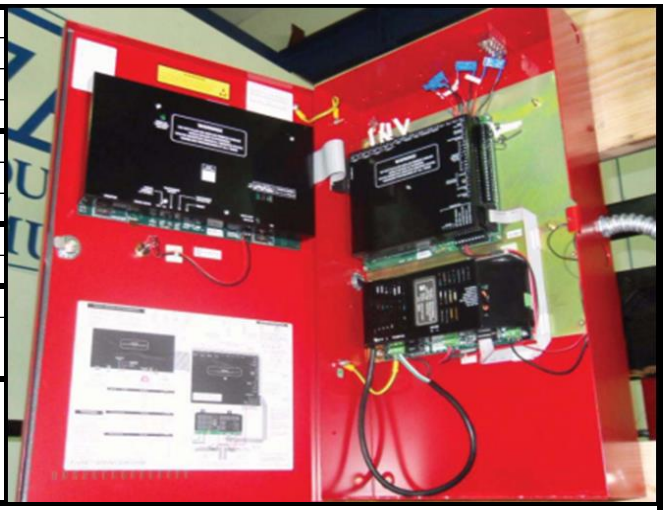
DIMENSIONS (in)			WEIGHT	RES. FREQ. (Hz)		
DEPTH	WIDTH	HEIGHT	(lb)	F-B	S-S	V
5.0	14.5	24.0	29	N/A	N/A	N/A

BUILDING CODE	TEST CRITERIA	LAB REPORT NO.
2016 CBC	ICC-ES AC156	NTS 113-2355

S_{DS} (g)	z/h	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.5	1	4.00	3.00	1.68	0.68

IMPORTANCE FACTOR, I_P = 1.5

Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.



MOUNTING:	Rigid wall mounted using (4) #10 screws.
CONSTRUCTION:	Carbon steel enclosure
SUBCOMPONENTS:	Model number uniquely identifies subcomponents.
TESTING NOTES:	N/A

UUT 2

MANUFACTURER:	HOCHIKI AMERICA CORPORATION
MODEL NUMBER:	FireNET FN-4127-DDWN
UNIT FUNCTION:	Alarm Control Panel
SERIAL NUMBER:	N/A

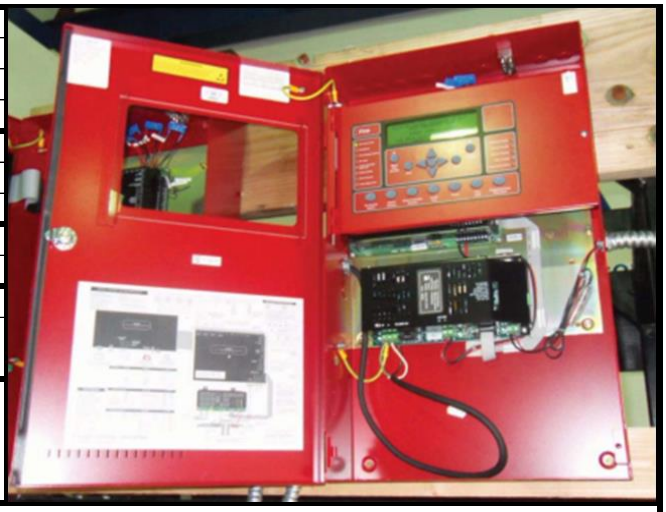
DIMENSIONS (in)			WEIGHT	RES. FREQ. (Hz)		
DEPTH	WIDTH	HEIGHT	(lb)	F-B	S-S	V
5.0	14.5	24.0	28	N/A	N/A	N/A

BUILDING CODE	TEST CRITERIA	LAB REPORT NO.
2016 CBC	ICC-ES AC156	NTS 113-2355

S_{DS} (g)	z/h	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.5	1	4.00	3.00	1.68	0.68

IMPORTANCE FACTOR, I_P = 1.5

Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.



MOUNTING:	Rigid wall mounted using (4) #10 screws.
CONSTRUCTION:	Carbon steel enclosure
SUBCOMPONENTS:	Model number uniquely identifies subcomponents.
TESTING NOTES:	N/A

UUT 3

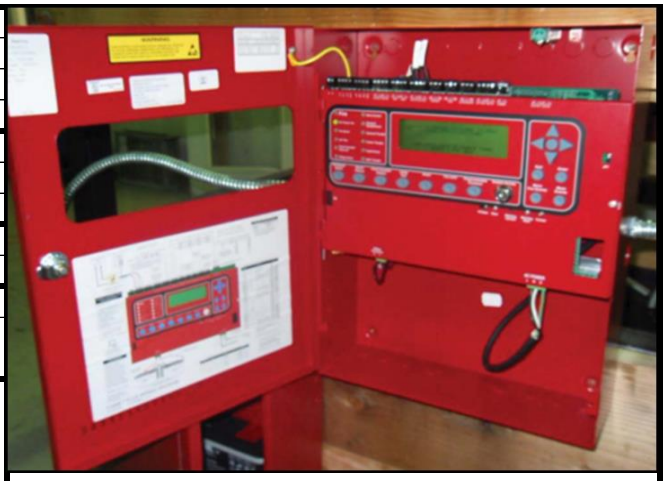
MANUFACTURER:	HOCHIKI AMERICA CORPORATION
MODEL NUMBER:	FireNET Plus-1127
UNIT FUNCTION:	Alarm Control Panel
SERIAL NUMBER:	N/A

DIMENSIONS (in)			WEIGHT	RES. FREQ. (Hz)		
DEPTH	WIDTH	HEIGHT	(lb)	F-B	S-S	V
3.5	14.5	19.0	20	N/A	N/A	N/A

BUILDING CODE	TEST CRITERIA	LAB REPORT NO.
2016 CBC	ICC-ES AC156	NTS 113-2355

S_{DS} (g)	z/h	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.5	1	4.00	3.00	1.68	0.68

IMPORTANCE FACTOR, I_P = 1.5
Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.



MOUNTING:	Rigid wall mounted using (4) #10 screws.
CONSTRUCTION:	Carbon steel enclosure
SUBCOMPONENTS:	Model number uniquely identifies subcomponents.
TESTING NOTES:	N/A

UUT 4

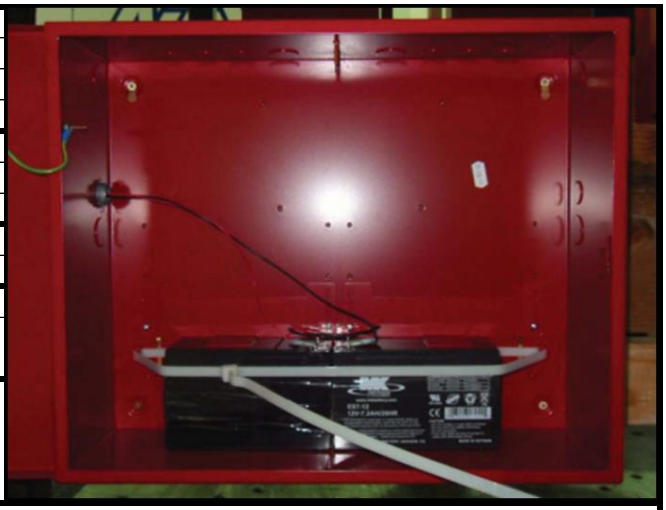
MANUFACTURER:	HOCHIKI AMERICA CORPORATION
MODEL NUMBER:	FN-ACC
UNIT FUNCTION:	Alarm Battery Panel
SERIAL NUMBER:	N/A

DIMENSIONS (in)			WEIGHT	RES. FREQ. (Hz)		
DEPTH	WIDTH	HEIGHT	(lb)	F-B	S-S	V
5.8	17.8	14.9	27	N/A	N/A	N/A

BUILDING CODE	TEST CRITERIA	LAB REPORT NO.
2016 CBC	ICC-ES AC156	NTS 113-2355

S_{DS} (g)	z/h	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.5	1	4.00	3.00	1.68	0.68

IMPORTANCE FACTOR, I_P = 1.5
Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.



MOUNTING:	Rigid wall mounted using (4) #10 screws.
CONSTRUCTION:	Carbon steel enclosure
SUBCOMPONENTS:	MK Battery - battery (two ES7-12)
TESTING NOTES:	N/A

UUT 5

MANUFACTURER:	HOCHIKI AMERICA CORPORATION
MODEL NUMBER:	FN-ACC
UNIT FUNCTION:	Alarm Battery Panel
SERIAL NUMBER:	N/A

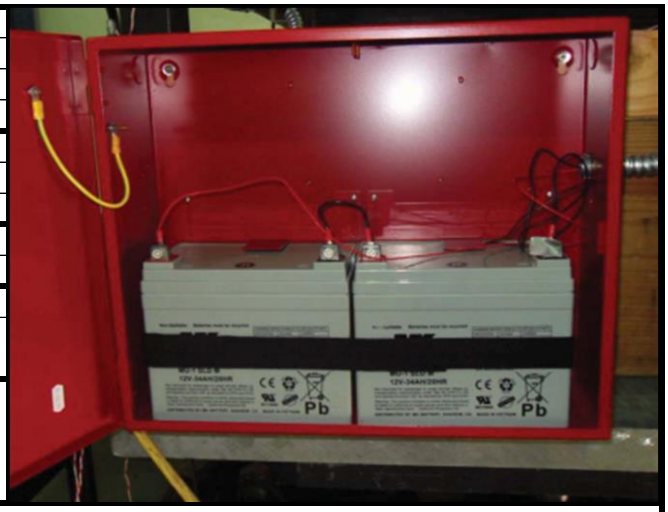
DIMENSIONS (in)			WEIGHT	RES. FREQ. (Hz)		
DEPTH	WIDTH	HEIGHT	(lb)	F-B	S-S	V
5.8	17.8	14.9	62	N/A	N/A	N/A

BUILDING CODE	TEST CRITERIA	LAB REPORT NO.
2016 CBC	ICC-ES AC156	NTS 113-2355

S_{DS} (g)	z/h	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.5	**1**	**4.00**	**3.00**	**1.68**	**0.68**

IMPORTANCE FACTOR, I_P = 1.5

Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.



MOUNTING:	Rigid wall mounted using (4) #10 screws.
CONSTRUCTION:	Carbon steel enclosure
SUBCOMPONENTS:	MK Battery - battery (two ES33-12)
TESTING NOTES:	N/A