



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT

APPLICATION FOR HCAI PREAPPROVAL OF
MANUFACTURER'S CERTIFICATION (OPM)

OFFICE USE ONLY

APPLICATION #: OPM-0547

HCAI Preapproval of Manufacturer's Certification (OPM)

Type: New Renewal/Update

Manufacturer Information

Manufacturer: Smoke Guard Inc.

Manufacturer's Technical Representative: Dylan Emde

Mailing Address: 287 N. Maple Grove, Boise, ID 83704

Telephone: (800) 574-0330

Email: dylan.emde@smokeguard.com

Product Information

Product Name: Smoke Curtain

Product Type: Other mechanical and electrical components

Product Model Number: M200 & M400 & M400B

General Description: Closes off elevator openings to curtail smoke migration between spaces.

Applicant Information

Applicant Company Name: SGW Designworks

Contact Person: Mike Witt

Mailing Address: 200 E 33RD ST, Garden City, ID 837146615

Telephone: (208) 391-4000

Email: mike.witt@sgwdesignworks.com

Title: Co-Founder, COO

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STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY





**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT**

Registered Design Professional Preparing Engineering Recommendations

Company Name: _____
 Name: Riley Mahaffey California License Number: CE51006
 Mailing Address: 201 N Maple Grove Rd, Ste 100, Boise, ID 83704
 Telephone: (208) 342-7168 Email: _____

HCAI Special Seismic Certification Preapproval (OSP)

Special Seismic Certification is preapproved under OSP OSP Number: _____

Certification Method

Testing in accordance with: ICC-ES AC156 FM 1950-16
 Other(s) (Please Specify): _____

*Use of criteria other than those adopted by the California Building Standards Code, 2022 (CBSC 2022) for component supports and attachments are not permitted. For distribution system, interior partition wall, and suspended ceiling seismic bracings, test criteria other than those adopted in the CBSC 2022 may be used when approved by HCAI prior to testing.

Analysis
 Experience Data
 Combination of Testing, Analysis, and/or Experience Data (Please Specify): _____

HCAI Approval

Date: 3/2/2025
 Name: William Staehlin Title: Senior Structural Engineer
 Condition of Approval (if applicable): _____

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STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY



OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT
PREAPPROVAL OF MANUFACTURER'S CERTIFICATION
OPM-0547

THIS PREAPPROVAL CONFORMS TO THE 2022 CALIFORNIA BUILDING CODE
MANUFACTURER: SMOKE GUARD

EQUIPMENT NAME: M200, M400 or M400B SMOKE CURTAIN

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GENERAL NOTES

1. THIS HCAI PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2022. THE DEMANDS (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2022.
2. THIS DOCUMENT MAY ONLY BE USED WITH THE EXPRESS WRITTEN CONSENT OF THE MANUFACTURER LISTED BELOW FOR THE SPECIFIC PROJECT SITE AND INSTALLATION LOCATION. THIS DOCUMENT IS INVALID WITHOUT SUCH CONSENT.
3. THIS PRE-APPROVAL CONFORMS TO THE 2022 CALIFORNIA BUILDING CODE WHERE S_{DS} IS NOT GREATER THAN 2.5.
4. FORCES PER ASCE 7-16 SECTION 13.3.1, EQUATIONS 13.3-1, 13.3-2, & 13.3-3.

WHERE $S_{DS} = 2.5$, $a_p = 1.0$, $I_p = 1.5$, $R_p = 1.5$, $z/h \leq 1$. SEE FOLLOWING SHEETS FOR APPLICABILITY OF $\Omega/0$.
 SITE CLASS D (STIFF SOIL) HAS BEEN ASSUMED IN ACCORDANCE WITH ASCE 7-16 SECTION 20.1, AS NO SITE-SPECIFIC GEOTECHNICAL INVESTIGATION HAS BEEN CONDUCTED. PER CODE PROVISIONS, SITE CLASS D IS THE DEFAULT CLASSIFICATION UNLESS CONDITIONS INDICATIVE OF SITE CLASS E OR F ARE PRESENT. THIS CLASSIFICATION IS SUBJECT TO CHANGE BASED ON LOCAL GOVERNING JURISDICTION REQUIREMENTS OR IF A GEOTECHNICAL REPORT IS PROVIDED.

5. THIS PRE-APPROVAL COVERS ONLY THE SUPPORTS AND ATTACHMENTS OF THE EQUIPMENT TO THE STRUCTURE.
6. ALL DESIGN FORCES SHOWN ON THE DRAWINGS ARE FACTORED LOADS THAT SHALL BE USED FOR STRENGTH DESIGN.
7. SHEET METAL SCREWS SHALL BE TEK SCREWS BY ITW BUILDEX (ICC ESR-1976).
8. CONCRETE WALL DETAIL VALID FOR DEMANDS SHOWN AT ANY ELEVATION. (i.e. $z/h \leq 1$)
9. WOOD SCREWS SHALL BE SIMPSON SDWH19600DB (ER-192)
10. POST-INSTALLED MECHANICAL ANCHORS FOR MASONRY AND CONCRETE SHALL BE HILTI KH-EZ (ICC ESR-3056; USE IN MASONRY) & (ESR-3027; CRACKED CONCRETE).
11. RESPONSIBILITIES OF THE STRUCTURAL ENGINEER OF RECORD (SEOR) OF THE BUILDING:
 - A. PROVIDE SUPPORTING STRUCTURE TO SUPPORT WEIGHTS AND FORCES SHOWN IN ADDITION TO ALL OTHER LOADS.
 - B. VERIFY THAT THE INSTALLATION IS IN CONFORMANCE WITH THE 2022 CBC AND WITH THE DETAILS, MATERIAL AND GAUGE OF THE UNIT WHERE ATTACHMENTS ARE MADE AGREE WITH THE INFORMATION SHOWN ON THE PRE-APPROVAL DOCUMENT.

MANUFACTURER: SMOKE GUARD		NAME	DATE	SMOKE GUARD 287 W. MAPLE GROVE, BOISE, ID 83704 TECHNICAL SUPPORT 800.215.0330			
		DRWN BY	FITZGERALD				11/22/2023
PRODUCT/MODEL: M200/M400/M400B		ENG APPR.					
		CHKD BY	MW				1/1/2024
REV: 00	SIZE: A	SHEET: 3 OF 10	CUST. APPR.				

GENERAL NOTES (CONT.)

RESPONSIBILITIES OF THE STRUCTURAL ENGINEER OF RECORD OF THE BUILDING (CONT.)

- C. VERIFY THAT PROJECT SPECIFIC VALUES OF S_{Ds} & z/h RESULT IN SEISMIC FORCES (E_h , E_v) THAT DO NOT EXCEED THE VALUES ON THE DETAILS.
- D. VERIFY THAT THE CONCRETE WALL TO WHICH THE EQUIPMENT IS ANCHORED MEETS THE REQUIREMENTS OF THE APPLICABLE ICC ESR REPORT AND THIS OPM.
- E. VERIFY THAT THE ANCHORS ARE AN ADEQUATE DISTANCE FROM ANY CONCRETE WALL EDGES OR OPENINGS (SEE DIAGRAM TO RIGHT).
- F. VERIFY THAT ALL NEW OR EXISTING ANCHORS ARE AN ADEQUATE DISTANCE FROM THE UNIT ATTACHMENTS AND CHECK FOR INTERACTION WHERE OTHER ANCHORS ARE WITHIN 18" OR $6h_{ef}$ FROM THIS UNIT'S ANCHORS.
- G. DESIGN BACKING BARS, STUDS, ETC. WHICH THE UNITS ARE ATTACHED TO AS NOTED ON THE DRAWINGS.

TEST CRITERIA AND ACCEPTANCE FOR THE SCREW ANCHORS

A.

ANCHOR DIA	SUBSTRATE TYPE	MIN STRENGTH	ANCHOR TYPE	ICC REPORT	MIN EMBED	MIN SPACING	MIN EDGE DIST	MIN SUBSTRATE THICKNESS	TENSION TEST
1/4"	NW CONC	$f'_c \geq 3000$ psi	HILTI KH-EZ	3027	$h_{ef} = 2.5"$	1.5"	1.5"	6"	215 LBS.
1/4"	CMU	$f'_m \geq 1500$ psi	HILTI KH-EZ	3056	$h_{ef} = 2.5"$	4"	4"	8"	250 LBS.

- B. REFER TO TABLE ABOVE FOR MIN EDGE DISTANCES (TO BE PROVIDED IN TWO DIRECTIONS)
- C. TESTING AND SPECIAL INSPECTIONS OF POST INSTALLED ANCHORS MUST BE PERFORMED BY AN APPROVED INDEPENDENT AGENCY EMPLOYED BY THE FACILITY OWNER PER CBC 1704A & 1910A.5, AND CAC 7-149. ALL REPORTS SHALL BE SENT TO THE INSPECTOR OF RECORD, OWNER AND THE ARCHITECT OR ENGINEER IN RESPONSIBLE CHARGE.
 - i. AFTER AT LEAST 24 HOURS HAVE ELAPSED SINCE THE INSTALLATION, DIRECT PULL TENSION TEST AT LEAST 50% OF THE ANCHORS
 - ii. ACCEPTANCE CRITERIAL:
TENSION TEST: NO OBSERVABLE MOVEMENT AT THE TEST LOAD
 - iii. IF ANY ANCHOR FAILS, TEST ALL ANCHORS
- D. AVOID DAMAGEING EXISTING STEEL REINFORCING IN SUBSTRATE WHEN INSTALLING POST INSTALLED ANCHORS.

POST INSTALLED ANCHORS IN UNCRACKED, GROUT-FILLED CMU

POST INSTALLED ANCHORS DESIGNED TO ICC-ES AC106 ARE LIMITED TO ALLOWABLE STRESS DESIGN ONLY IN ACCORDANCE WITH AC106 PARAGRAPH 1.2

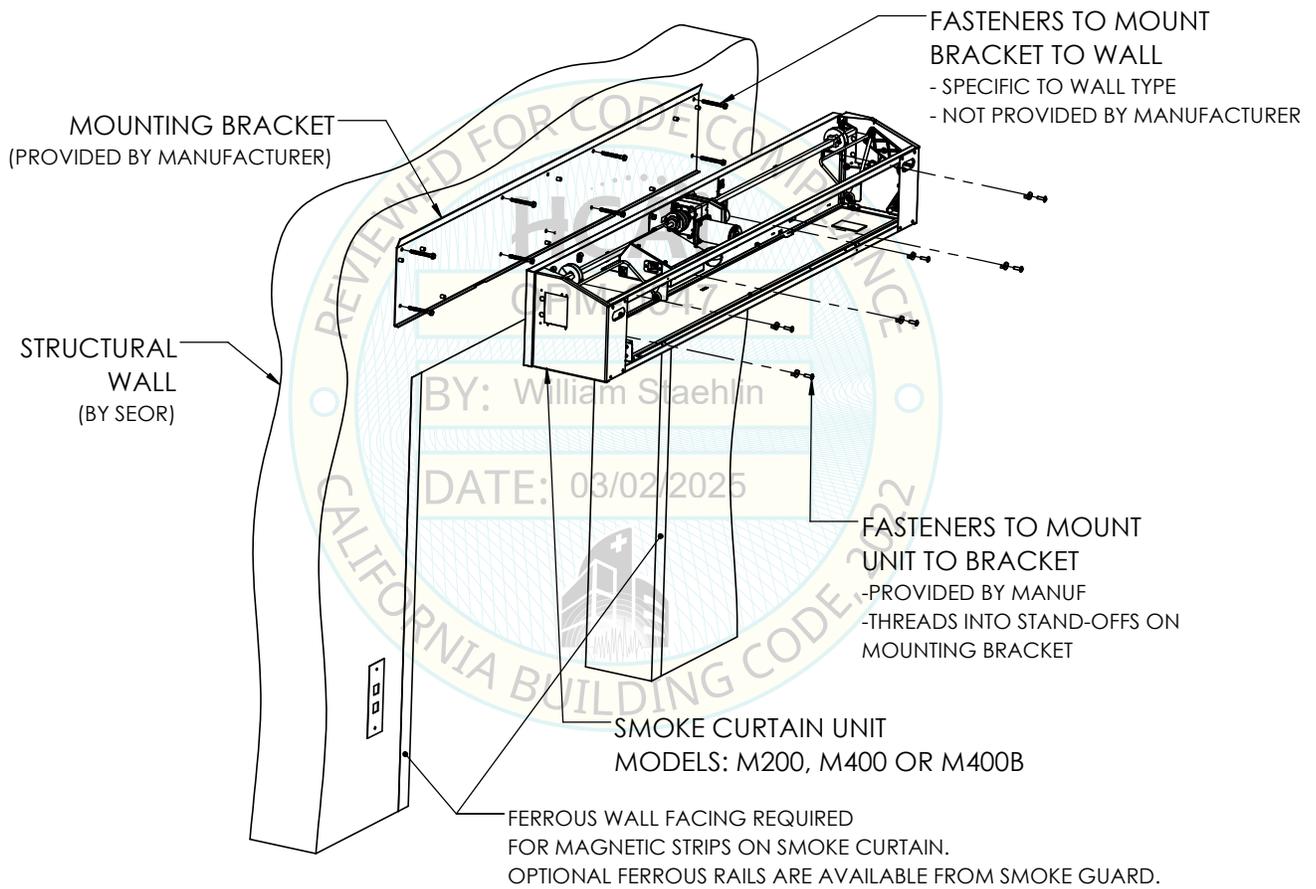
SEOR MUST VERIFY THAT:

1. MASONRY IS NOT CRACKED AS DEFINED IN AC106 PARAGRAPH 1.4.8; CALCULATION TO SHOW MASONRY WALL WOULD NOT CRACK UNDER DESIGN EARTHQUAKE LOADS UNDER ALL SERVICE CONDITIONS; WALL HAS TO REMAIN ELASTIC;
2. MASONRY WALL MUST BE FULLY GROUTED IN ACCORDANCE WITH ESR-3056 SECTION 5.0 IS SATISFIED

MANUFACTURER: SMOKE GUARD			NAME	DATE	SMOKE GUARD 287 W. MAPLE GROVE, BOISE, ID 83704 TECHNICAL SUPPORT 800.215.0330		
PRODUCT/MODEL: M200/M400/M400B			DRWN BY	FITZGERALD			11/22/2023
REV: 00			ENG APPR.				
SIZE: A	SHEET: 4 OF 10	CUST. APPR.	CHKD BY	MW			1/1/2024

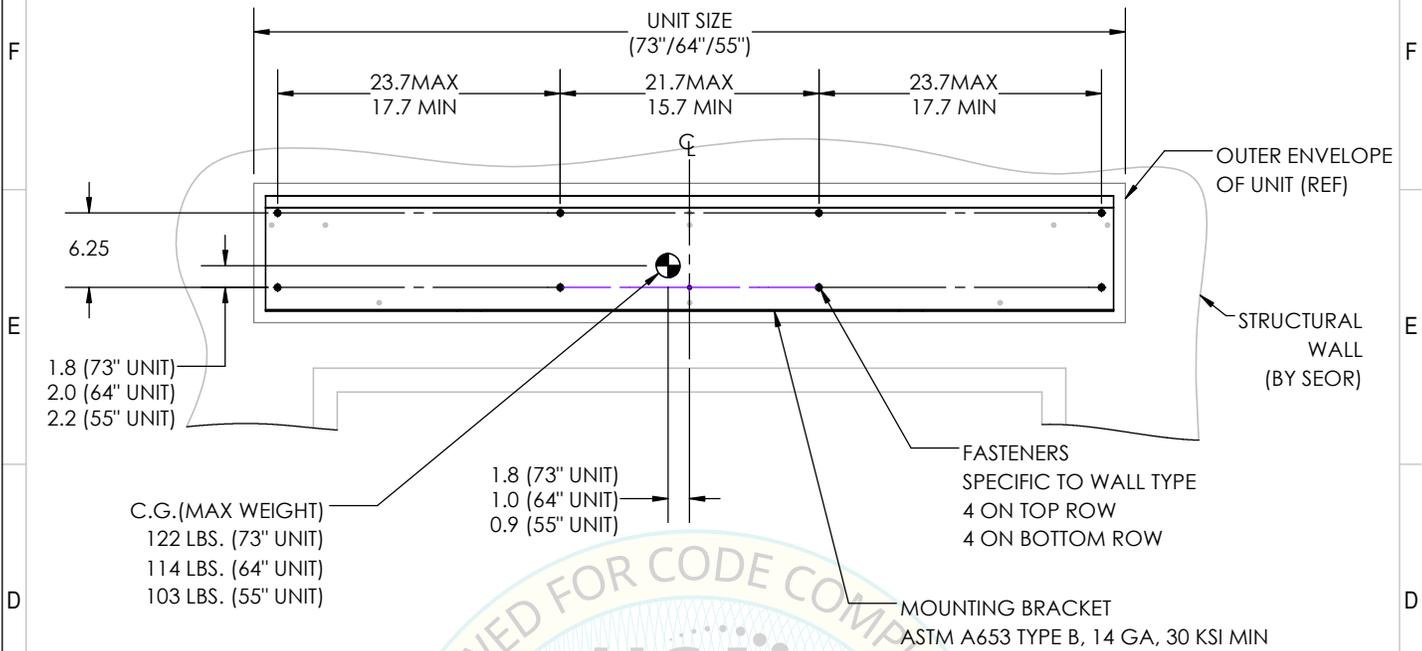
NOTES - APPLICATION SPECIFIC

1. FORCES ARE DETERMINED PER 2022 CALIFORNIA BUILDING CODE SECTION 1603A.3 AND ASCE 7-16
2. STRENGTH DESIGN IS USED WITH THE FOLLOWING SEISMIC FACTORS:
 $S_{Ds} = 2.5g$, $a_p = 1.0$, $I_p = 1.5$, $R_p = 1.5$, $z/h \leq 1$, $\Omega_0 = 1.5$ PER ASCE 7-16 TABLE 13.5-1, OTHER RIGID COMPONENTS
 HORIZONTAL FORCE (E_h) = $3.0 W_p$
 HORIZONTAL FORCE (E_{mh}) = $4.5 W_p$
 VERTICAL FORCE (E_v) = $0.5 W_p$
 ($E_{mh} = E_h \times \Omega_0$; FOR CONCRETE ANCHORAGE)
3. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PRE-APPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
4. STRUCTURAL ENGINEER OF RECORD FOR THE BUILDING SHALL PROVIDE SUPPORT STRUCTURE DESIGNED TO SUPPORT WEIGHTS AND FORCES SHOWN IN COMBINATION WITH ALL OTHER LOADS THAT MAY BE PRESENT.



MANUFACTURER: SMOKE GUARD		NAME	DATE	SMOKE GUARD 287 W. MAPLE GROVE, BOISE, ID 83704 TECHNICAL SUPPORT 800.215.0330		
PRODUCT/MODEL: M200/M400/M400B		DRWN BY	FITZGERALD			11/22/2023
REV: 00		ENG APPR.				
SIZE: A	SHEET: 5 OF 10	CHKD BY	MW			1/1/2024
		CUST. APPR.				

HOLE PATTERN: MOUNTING BRACKET TO WALL



UNITS ARE CERTIFIED TO THE FOLLOWING STANDARDS:

FLAME SPREAD RATING

TEST STANDARD	FLAME SPREAD	SMOKE DEVELOPMENT
ASTM E84	≤ 25	≤ 450
CAN/ULC S102	30	30

AIR LEAKAGE RATINGS

TEST STANDARD	TEST TYPE	RATING ^a
UL 1784	AMBIENT TEMPERATURE	≤ 3.0 CFM/FT ² AT UP TO 0.30 IN OF W.C.
UL1784	ELEVATED TEMPERATURE	≤ 3.0 CFM/FT ² AT UP TO 0.30 IN OF W.C.

^aThis assembly was tested without an artificial bottom seal. The assembly may be installed in areas where pressurization is provided to control smoke movement in accordance with Section 4.3.2 of NFPA 105 (2019) and for hoistway opening protection and lobby doorways as allowed in Chapter 30 of the IBC.

EGRESS RATINGS

TEST STANDARD	TEST TYPE	RATING
ASME A17.1	SECTION 2.11.6.3, UNRESTRICTED EGRESS	COMPLIES

FIRE ALARM RATING (AS AN ACCESSORY TO)

TEST STANDARD	RATING
UL 864	COMPLIES

MANUFACTURER: SMOKE GUARD		NAME	DATE
PRODUCT/MODEL: M200/M400/M400B		DRWN BY FITZGERALD	11/22/2023
REV: 00	SIZE: A	CHKD BY MW	1/1/2024
SHEET: 6 OF 10	CUST. APPR.		

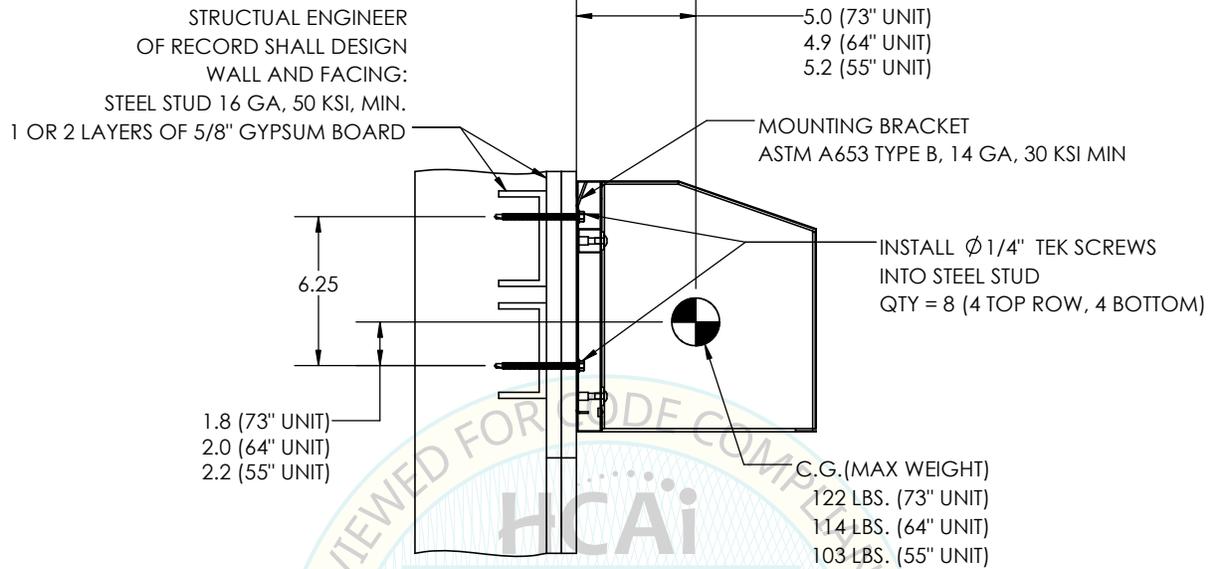
SMOKE GUARD

287 W. MAPLE GROVE,
BOISE, ID 83704

TECHNICAL SUPPORT
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SEISMIC SUPPORTS & ATTACHMENTS - STEEL STUD WALL



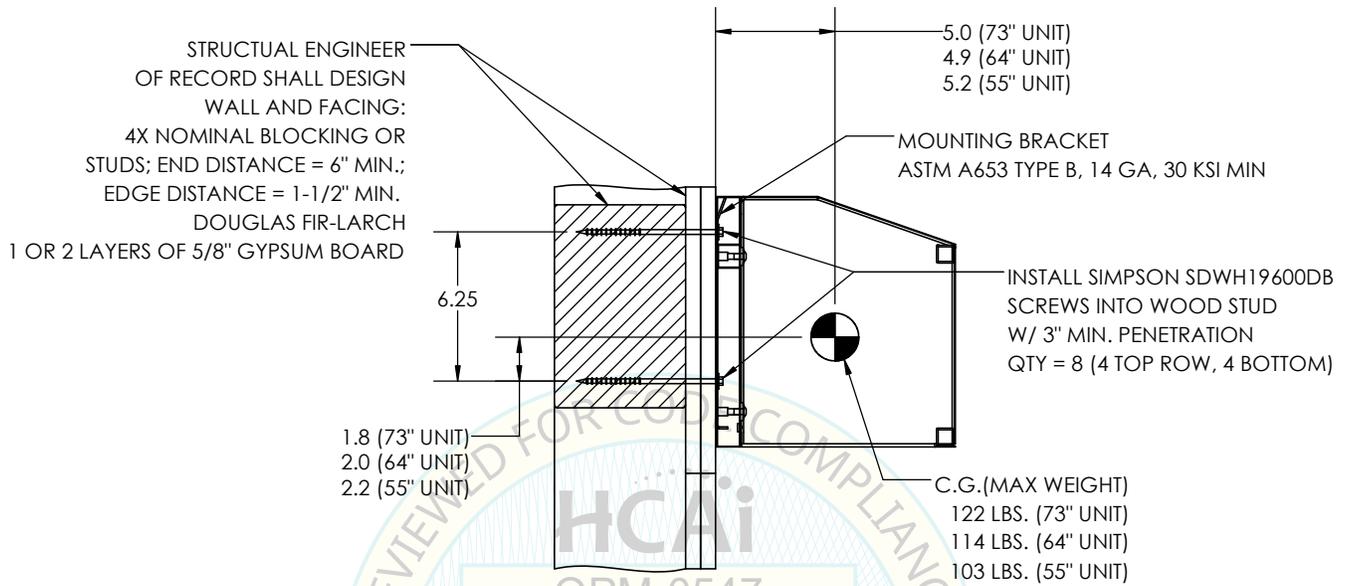
SECTION AT STEEL STUD WALL

(SEE PAGE 6 FOR HOLE PATTERN: MOUNTING BRACKET TO WALL)

LOCATION	TENSION (max.) PER SCREW	SHEAR (max.) PER SCREW
BOTTOM SCREWS	61 LBS.	79 LBS.
TOP SCREWS	33 LBS.	21 LBS.

MANUFACTURER: SMOKE GUARD		NAME	DATE	SMOKE GUARD 287 W. MAPLE GROVE, BOISE, ID 83704 TECHNICAL SUPPORT 800.215.0330	 DESIGNWORKS
PRODUCT/MODEL: M200/M400/M400B		DRWN BY FITZGERALD	DATE 11/22/2023		
REV: 00	SIZE: A	SHEET: 7 OF 10	CUST. APPR.		

SEISMIC SUPPORTS & ATTACHMENTS - WOOD STUD WALL



SECTION AT WOOD STUD WALL

(SEE PAGE 6 FOR HOLE PATTERN: MOUNTING BRACKET TO WALL)

DATE: 03/02/2025

LOCATION	TENSION (max.) PER SCREW	SHEAR (max.) PER SCREW
BOTTOM SCREWS	61 LBS.	79 LBS.
TOP SCREWS	33 LBS.	21 LBS.

MANUFACTURER: SMOKE GUARD		NAME	DATE
PRODUCT/MODEL: M200/M400/M400B		DRWN BY FITZGERALD	11/22/2023
REV: 00	SIZE: A	CHKD BY MW	1/1/2024
SHEET: 8 OF 10		CUST. APPR.	

SMOKE GUARD

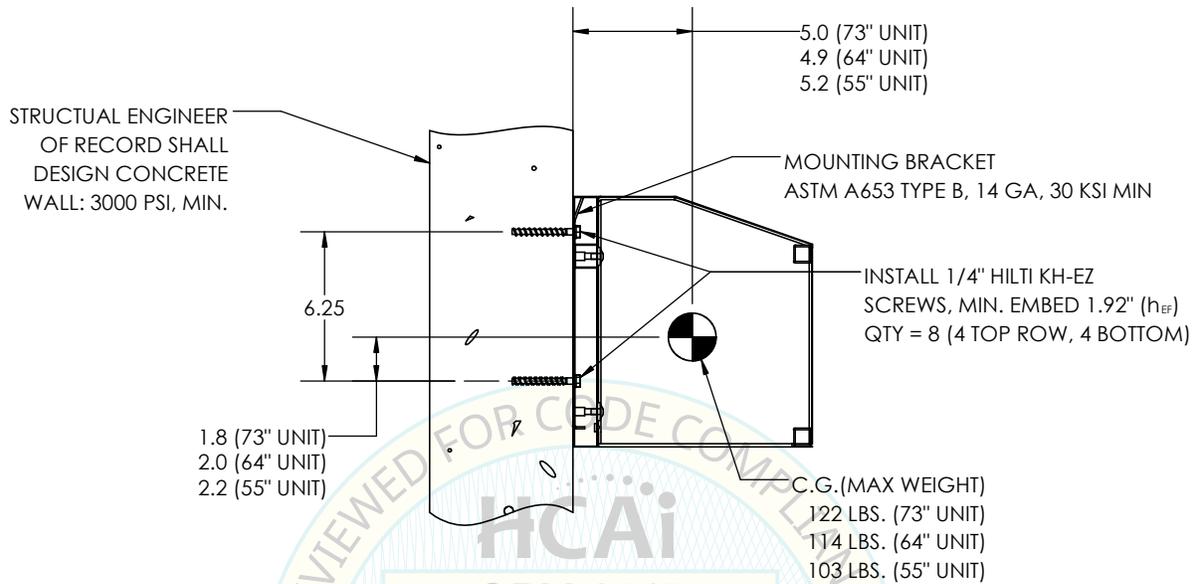
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 BOISE, ID 83704

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DESIGNWORKS

SEISMIC SUPPORTS & ATTACHMENTS - CONCRETE WALL



SECTION AT CONCRETE WALL

(SEE PAGE 6 FOR HOLE PATTERN: MOUNTING BRACKET TO WALL)

DATE: 03/02/2025

LOCATION	TENSION (max.) PER SCREW	SHEAR (max.) PER SCREW
BOTTOM SCREWS	131 LBS.	165 LBS.
TOP SCREWS	41 LBS.	26 LBS.

MANUFACTURER:
SMOKE GUARD

NAME	DATE
DRWN BY FITZGERALD	11/22/2023

SMOKE GUARD

287 W. MAPLE GROVE,
BOISE, ID 83704

PRODUCT/MODEL:
M200/M400/M400B

ENG APPR.	
CHKD BY MW	1/1/2024

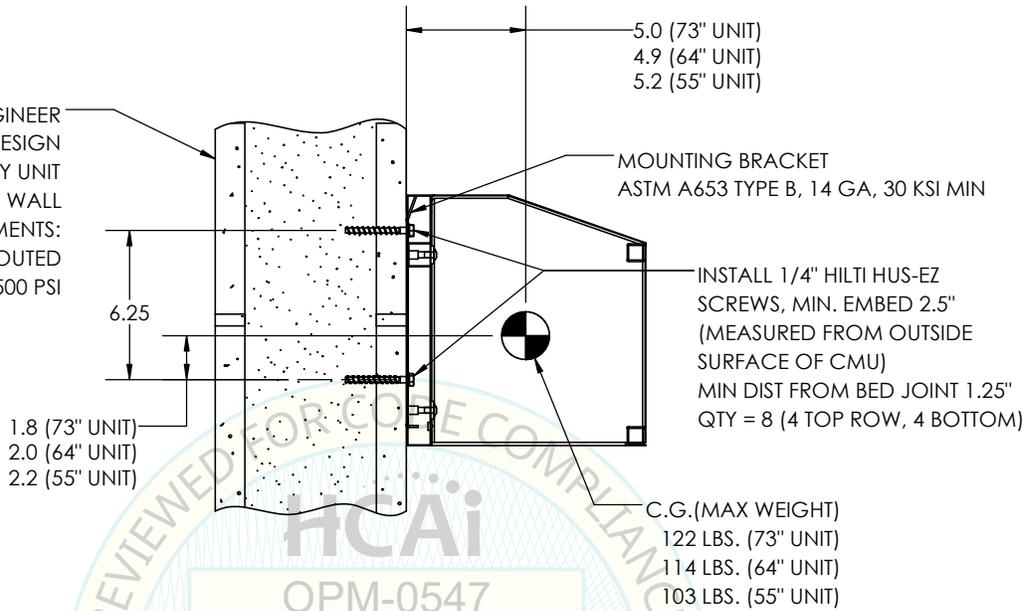
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REV: 00	SIZE: A	SHEET: 9 OF 10	CUST. APPR.
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SEISMIC SUPPORTS & ATTACHMENTS - CMU WALL

STRUCTURAL ENGINEER
OF RECORD SHALL DESIGN
CONCRETE MASONRY UNIT
(CMU) WALL
MIN. REQUIREMENTS:
FULLY GROUTED
 $f'm = 1500$ PSI



SECTION AT CMU WALL

(SEE PAGE 6 FOR HOLE PATTERN: MOUNTING BRACKET TO WALL)

DATE: 03/02/2025

LOCATION	TENSION (max.) PER SCREW	SHEAR (max.) PER SCREW
BOTTOM SCREWS	95 LBS.	116 LBS.
TOP SCREWS	33 LBS.	21 LBS.

*CALCULATIONS TAKE INTO EFFECT THE UNPREDICTABILITY OF ANCHOR LOCATION IN THE FIELD WHERE ANCHORS MIGHT BE INSTALLED WITHIN 1 1/4" FROM BED JOINTS.

MANUFACTURER:
SMOKE GUARD

PRODUCT/MODEL:
M200/M400/M400B

REV: 00 SIZE: A SHEET: 10 OF 10

NAME	DATE
DRWN BY: FITZGERALD	11/22/2023
ENG APPR.	
CHKD BY: MW	1/1/2024
CUST. APPR.	

SMOKE GUARD

287 W. MAPLE GROVE,
BOISE, ID 83704

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