



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-0705

HCAI Preapproval of Manufacturer's Certification (OPM)

Type: New Renewal/Update

Manufacturer Information

Manufacturer: BLE Smoke & Fire Curtains, Ltd.

Manufacturer's Technical Representative: David Bramhall

Mailing Address: Velum House, Woodhouse Link, Innovation Way, Woodhouse Mill, Sheffield SS139AD

Telephone: () - Email: DBramhall@blecurtains.com

Product Information

Product Name: ESC (Smoke and Fire Curtain)

Product Type: other mechanical and electrical components

Product Model Number: Lengths from 53" to 120"

General Description: closes off openings for smoke and fire protection

Applicant Information

Applicant Company Name: EASE LLC.

Contact Person: Tiffany Tonn

Mailing Address: 1515 FAIRVIEW AVE, STE 205, MISSOULA, MT 59801

Telephone: (406) 541-3273 Email: tiffany@easeco.com

Title: Office Assistant

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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: EASE LLC

Name: Jonathan Roberson California License Number: S4197

Mailing Address: 5877 Pine Ave., Suite 210, Chino Hills, CA 91709

Telephone: (951) 295-1892 Email: jon@EASECo.com

Certification Method

Testing in accordance with: ICC-ES AC156 FM 1950 ASHRAE 171 FEMA 461

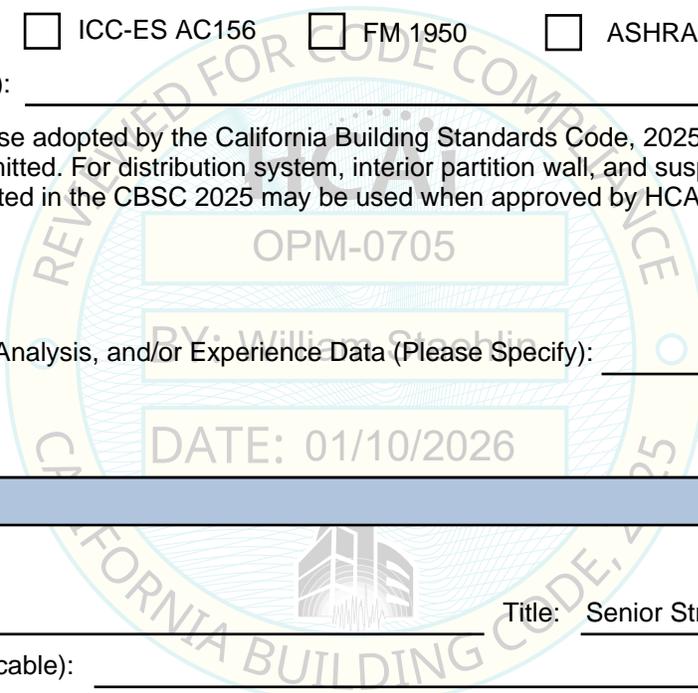
Other(s) (Please Specify): _____

*Use of criteria other than those adopted by the California Building Standards Code, 2025 (CBSC 2025) 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 2025 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: 1/10/2026

Name: William Staehlin Title: Senior Structural Engineer

Condition of Approval (if applicable): _____

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**EQUIPMENT ANCHORAGE
& SEISMIC ENGINEERING**

5877 Pine Ave, Ste. 210
Chino Hills, CA. 91709
Phn: (909) 606-7622

The Department of Health Care Access and Information
PREAPPROVAL OF MANUFACTURER'S CERTIFICATION
OPM-0705

THIS PREAPPROVAL CONFORMS TO THE 2025 CALIFORNIA BUILDING CODE

MANUFACTURER: **BLE SMOKE AND FIRE CURTAINS**
EQUIPMENT NAME: **ESC PROTECTIVE SMOKE CURTAIN**

Sheet: 1 of 5
Date: 1/6/26

GENERAL NOTES

1. THIS HCAI PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE 2025 CBC. THE DEMANDS (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE 2025 CBC
2. THIS DOCUMENT MAY ONLY BE USED WITH THE EXPRESS WRITTEN CONSENT OF THE MANUFACTURER LISTED ABOVE FOR THE SPECIFIC PROJECT SITE AND INSTALLATION LOCATION. THIS DOCUMENT IS INVALID WITHOUT SUCH CONSENT.
3. THIS PREAPPROVAL CONFORMS TO THE 2025 CALIFORNIA BUILDING CODE WHERE S_{DS} IS NOT GREATER THAN 2.50.
4. FORCES PER ASCE 7-22 SECTION 13.3.1, EQUATIONS 13.3-1, 13.3-2 & 13.3-3,
WHERE $S_{DS} = 2.50$, $I_p = 1.5$, $CAR = 1.0$, $R_{po} = 1.5$, $z/h \leq 1.0$, ($R_p = 1.3$, $H_f = 3.50$) CONCRETE WALL. SEE FOLLOWING SHEETS FOR Ω_{op}
5. THIS PREAPPROVAL 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 SATISFY AC118 - ACCEPTANCE CRITERIA FOR TAPPING SCREW FASTENERS AND MUST BE SUPPORTED BY AN INTERNATIONAL CODE COUNCIL (ICC) ICC - ES EVALUATION REPORT.
8. CONCRETE WALL DETAIL VALID FOR DEMANDS SHOWN AT ANY ELEVATION. (i.e. $z/h \leq 1.0$)
9. **RESPONSIBILITIES OF THE STRUCTURAL ENGINEER OF RECORD 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 2025 CBC AND WITH THE DETAILS, MATERIAL AND GAGE OF THE UNIT WHERE ATTACHMENTS ARE MADE AGREE WITH THE INFORMATION SHOWN ON THE PREAPPROVAL DOCUMENTS.
 - C. VERIFY THAT PROJECT SPECIFIC SEISMIC PARAMETERS RESULT IN SEISMIC FORCES (E_h , E_v) THAT DO NOT EXCEED THE VALUES IN THIS OPM.
 - D. VERIFY THAT THE CONCRETE SLAB 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 SLAB EDGES OR OPENINGS (SEE TYPICAL DETAIL ON SHEET 2).
 - 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.



BLE SMOKE AND FIRE CURTAINS

DES. **J. ROBERSON**

SHEET

2

JOB NO. **11-2512**

DATE **1/6/26**

OF **5** SHEETS

ESC PROTECTIVE SMOKE CURTAIN

10. EXPANSION ANCHORS:

A. ATTACHMENT IS TO BE MADE WITH THE ANCHORS LISTED BELOW AND INSTALLED AS DESCRIBED IN THE CORRESPONDING ICC REPORT.

| Anchor Diameter | Concrete Type | Min. f'c (psi) | Anchor Type | ICC Report No. | Min. Embed. | Min. Spacing | Min. Edge Dist. | Min. Conc. Thickness | Torque Test | Direct Tension Test |
|-----------------|---------------|----------------|--|----------------|-------------|--------------|-----------------|----------------------|-------------|---------------------|
| 1/4" | Normal Weight | 3000 | Hilti KH EZ (STAINLESS STEEL) | ESR-3027 | 1.93" | 2" | 3" | 6" | 18 FT-LB | 358 |
| 3/8" | Normal Weight | 3000 | Hilti Kwik Bolt TZ2 (STAINLESS STEEL) | ESR-4266 | 2" | 6" | 4" | 6" | 30 FT-LB | 1982 |

B. THIS PREAPPROVAL ALLOWS FOR UP TO A MAXIMUM OF 2 ADJACENT CONCRETE SLAB EDGES, 3" OR 4" AWAY MINIMUM (i.e. - CORNER). SEE ADJACENT DETAIL FOR ADDITIONAL MINIMUM ALLOWABLE CONCRETE EDGE DISTANCES.

C. TESTING AND SPECIAL INSPECTION OF EXPANSION ANCHORS SHALL 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) DIRECT PULL TENSION TEST OR TORQUE TEST AT LEAST 50% OF THE ANCHORS. FOR KH-EZ ANCHORS AT RAILS, ONLY 10% OF ANCHORS REQUIRED TENSION TESTING PER 1910A. 5.3.2 EXCEPTION 2.

(ii) ACCEPTANCE CRITERIA:

- DIRECT TENSION TEST: THE ANCHOR SHOULD HAVE NO OBSERVABLE MOVEMENT AT THE TEST LOAD. A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER BECOMES LOOSE.
- TORQUE TEST: THE APPLICABLE TORQUE MUST BE ACHIEVED WITHIN THE FOLLOWING LIMITS: WEDGE TYPE : 1/2 TURN OF THE NUT

(iii) IF ANY ANCHOR FAILS, TEST ALL ANCHORS.

D. AVOID DAMAGING EXISTING STEEL REINFORCING IN CONCRETE SLAB WHEN INSTALLING CONCRETE EXPANSION ANCHORS.

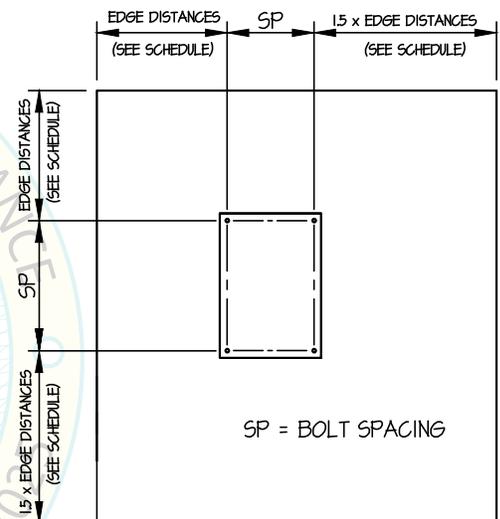
E. PROVIDE FOR FULL THREAD ENGAGEMENT OF NUT & WASHER.

11. BOLTS THROUGH CONCRETE ON METAL DECK

A. BOLTS SHALL BE TORQUED BY 3/4 TURN OF THE NUTS AFTER THE SNUG TIGHT (THE SNUG-TIGHT CONDITION IS DEFINED AS THE TIGHTNESS REQUIRED TO BRING THE CONNECTED PLIES INTO FIRM CONTACT) CONDITION IS ACHIEVED, UNLESS OTHERWISE NOTED.

B. THROUGH BOLT HOLES SHALL BE 1/16" LARGER THAN BOLT SIZE (HOLE SIZE = BOLT SIZE + 1/16) FOR CONCRETE.

C. THROUGH-BOLTS IN CONCRETE SHALL RECEIVE SPECIAL INSPECTION AND TESTING (THROUGH BOLTS WITH STEEL TO STEEL CONNECTION IN TENSION DO NOT REQUIRE TENSION TESTING) IN ACCORDANCE WITH REQUIREMENTS FOR POST-INSTALLED ANCHORS.



TYPICAL CONCRETE EDGE DETAIL



BLE SMOKE AND FIRE CURTAINS

DES. J. ROBERSON

SHEET

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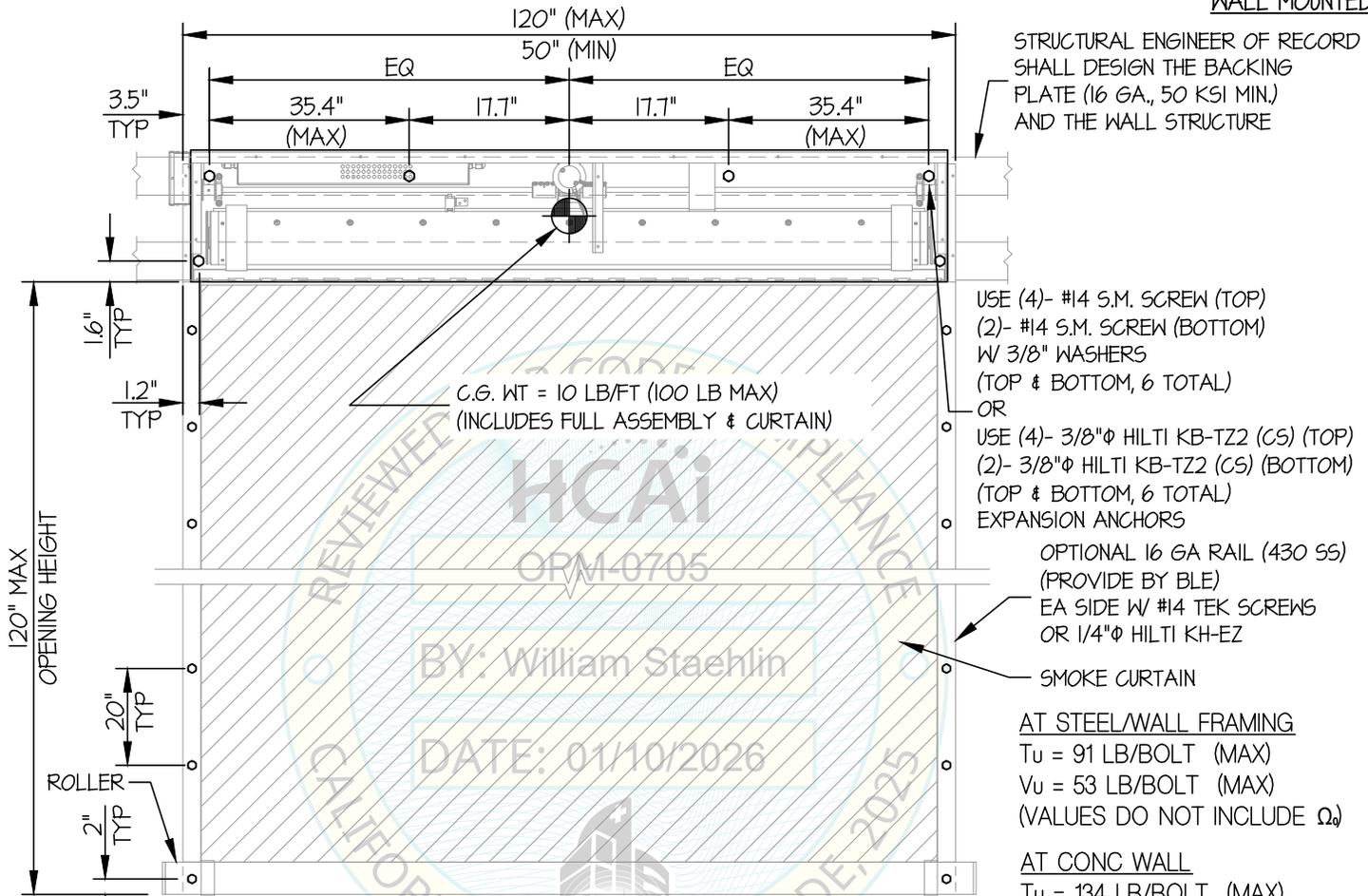
ESC PROTECTIVE SMOKE CURTAIN

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OF 5 SHEETS

WALL MOUNTED



STRUCTURAL ENGINEER OF RECORD SHALL DESIGN THE BACKING PLATE (16 GA., 50 KSI MIN.) AND THE WALL STRUCTURE

USE (4)- #14 S.M. SCREW (TOP)
(2)- #14 S.M. SCREW (BOTTOM)
W 3/8" WASHERS
(TOP & BOTTOM, 6 TOTAL)
OR
USE (4)- 3/8"φ HILTI KB-TZ2 (CS) (TOP)
(2)- 3/8"φ HILTI KB-TZ2 (CS) (BOTTOM)
(TOP & BOTTOM, 6 TOTAL)
EXPANSION ANCHORS

OPTIONAL 16 GA RAIL (430 SS)
(PROVIDE BY BLE)
EA SIDE W #14 TEK SCREWS
OR 1/4"φ HILTI KH-EZ

SMOKE CURTAIN

AT STEEL/WALL FRAMING
 $T_u = 91 \text{ LB/BOLT (MAX)}$
 $V_u = 53 \text{ LB/BOLT (MAX)}$
(VALUES DO NOT INCLUDE Ω)

AT CONC WALL
 $T_u = 134 \text{ LB/BOLT (MAX)}$
 $V_u = 94 \text{ LB/BOLT (MAX)}$
(VALUES INCLUDE Ω)

NOTES:

- FORCES ARE DETERMINED PER 2025 CALIFORNIA BUILDING CODE AND ASCE 7-22. STRENGTH DESIGN IS USED. (EXAMPLE: $S_{DS}=2.50$, $I_p=1.5$, $CAR=1.0$, $R_{po}=1.5$, $\Omega_{op}=2.0$, $R_U=1.3$, $H_f=3.50$, $z/h \leq 1.0$)

| | | | |
|-------------------------------|---|------|--------------------------------|
| HORIZONTAL FORCE (E_h) | = | 2.69 | W_p |
| HORIZONTAL FORCE (E_{mh}) | = | 5.39 | W_p (FOR CONCRETE ANCHORAGE) |
| VERTICAL FORCE (E_v) | = | 0.50 | W_p |
- THIS PREAPPROVAL ENCOMPASSES WEIGHTS AND VERTICAL C.G. POSITIONS NOT EXCEEDING VALUES SHOWN.
- THIS PREAPPROVAL WAS PREPARED WITHOUT KNOWLEDGE OF ANY SITE CONDITION. COMPATIBILITY FOR USE WITH A SITE SHALL BE EVALUATED BY THE STRUCTURAL ENGINEER OF RECORD OF THE INSTALLATION (SEOR). USE REQUIRES APPROVAL BY THE SEOR.
- STRUCTURAL ENGINEER OF RECORD FOR THE INSTALLATION SHALL VERIFY ALL CONDITIONS, EVALUATE INTERACTION WITH ADJACENT EQUIPMENT AND ANCHORS, AND PROVIDE SUPPORT STRUCTURE DESIGNED TO SUPPORT WEIGHTS AND FORCES SHOWN IN COMBINATION WITH ALL OTHER LOADS THAT MAY BE PRESENT.
- SEE GENERAL NOTES: SHEETS 1 AND 2



BLE SMOKE AND FIRE CURTAINS

DES. **J. ROBERSON**

SHEET

4

JOB NO. **11-2512**

ESC PROTECTIVE SMOKE CURTAIN

DATE **1/6/26**

OF **5** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED

USE (4)- #14 S.M. SCREW (TOP)
(2)- #14 S.M. SCREW (BOTTOM)
W/ 3/8" WASHERS
(TOP & BOTTOM, 6 TOTAL)

STRUCTURAL ENGINEER OF RECORD
SHALL DESIGN THE BACKING
PLATE (16 GA., 50 KSI MIN.)
AND THE WALL STRUCTURE

C.G. WT = 10 LB/FT (100 LB MAX)
(INCLUDES FULL ASSEMBLY & CURTAIN)

UNIT BACKING
(ASTM 1008 14 GA, 33 KSI MIN)

5/8" THK.
WALL BOARD
(2 LAYERS MAX)

6"
MAX

2"

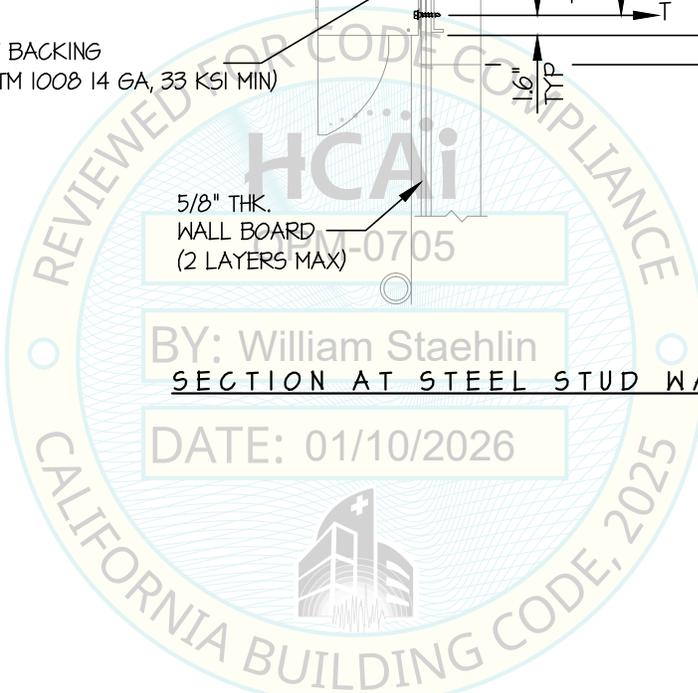
3"

6.4"

10"

1.6"
TYP

TOP OF OPENING



BY: William Staehlin

SECTION AT STEEL STUD WALL

DATE: 01/10/2026

Jonathan Roberson
REGISTERED PROFESSIONAL ENGINEER
JONATHAN ROBERSON
No. 4197
EXP. 6-30-2026
1/6/26
STRUCTURAL
STATE OF CALIFORNIA

BLE SMOKE AND FIRE CURTAINS

DES. **J. ROBERSON**

SHEET

5

JOB NO. **11-2512**

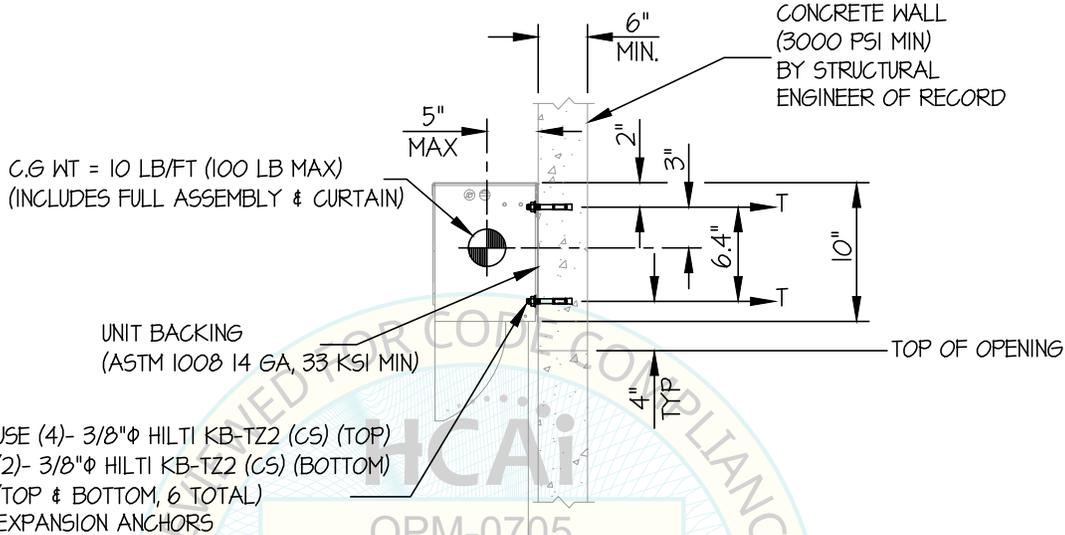
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OF **5** SHEETS

ESC PROTECTIVE SMOKE CURTAIN

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



BY: William Staehlin
SECTION AT CONCRETE WALL

DATE: 01/10/2026

