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

OFFICE USE ONLY

APPLICATION #: OPM-0671

HCAI Preapproval of Manufacturer's Certification (OPM)

Type: [X] New [ ] Renewal/Update

Manufacturer Information

Manufacturer: Getinge USA

Manufacturer's Technical Representative: Paul Fraser

Mailing Address: 45 Barbour Pond Drive, Wayne, NJ 07470

Telephone: (123) 456-7890 Email: paul.fraser@getinge.com

Product Information

Product Name: Moduevo Bridge

Product Type: cantilever

Product Model Number: N/A

General Description: Ceiling supply unit accommodating medical equipment, supplies, monitors, lights, ventilation machines, etc., for ICU, recovery, and emergency patient stations

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 Manager

Registered Design Professonal 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

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: 2/10/2023

Name: William Staehlin Title: Senior Structural Engineer

Condition of Approval (if applicable):

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-0671

THIS PREAPPROVAL CONFORMS TO THE 2022 CALIFORNIA BUILDING CODE

MANUFACTURER: **GETINGE**

EQUIPMENT NAME: **MODUEVO BRIDGE 3500**

Date: 2/9/23

GENERAL NOTES

1. THIS HCAI PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE 2022 CBC. THE DEMANDS (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE 2022 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 2022 CALIFORNIA BUILDING CODE WHERE S_{DS} IS NOT GREATER THAN 2.00.
4. FORCES PER ASCE 7-16 SECTION 13.3.1, EQUATIONS 13.3-1, 13.3-2 & 13.3-3,
   WHERE S_{DS} = 2.00, a_p = 2.5, I_p = 1.5, R_p = 2.5, z/h $\leq$ 1 AT CONCRETE SLAB ON METAL DECK. SEE FOLLOWING SHEETS FOR Ω_0
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. CONCRETE SLAB ON METAL DECK DETAIL VALID FOR DEMANDS SHOWN AT ANY ELEVATION IN THE BUILDING. (i.e. z/h $\leq$ 1)
8. CONCRETE SLAB DETAIL VALID FOR DEMANDS SHOWN AT OR BELOW GRADE. (i.e. z/h = 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.

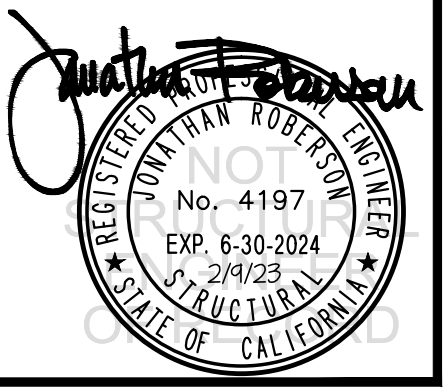
   B. VERIFY THAT THE INSTALLATION IS IN CONFORMANCE WITH THE 2022 CBC AND WITH THE DETAILS, MATERIAL AND GAGE OF THE UNIT WHERE ATTACHMENTS ARE MADE AGREE WITH THE INFORMATION SHOWN ON THE PREAPPROVAL DOCUMENTS.

   C. VERIFY THAT PROJECT SPECIFIC 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 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 6hef FROM THIS UNIT'S ANCHORS.



GETINGE

MODUEVO BRIDGE 3500

DES. J. ROBERSON
JOB NO. 36-2006
DATE 2/9/23

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
1/2"	Sand Light Weight	3000	Hilti Kwik Bolt TZ2 (CARBON STEEL)	ESR-4266	3.25"	9.75"	24"	3.25"	50 FT-LB	N/A

B. THIS PREAPPROVAL ALLOWS FOR UP TO A MAXIMUM OF 2 ADJACENT CONCRETE SLAB EDGES, 24" 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) AFTER AT LEAST 24 HOURS HAVE ELAPSED SINCE INSTALLATION, DIRECT PULL TENSION TEST OR TORQUE TEST AT LEAST 50% OF THE ANCHORS.

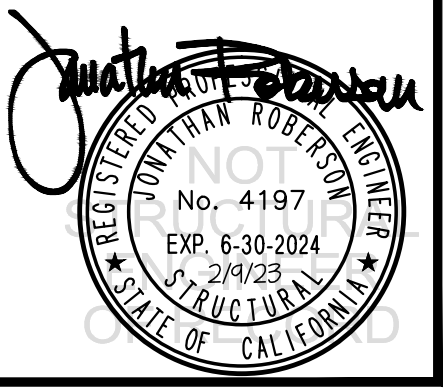
(ii) ACCEPTANCE CRITERIA:

- 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.



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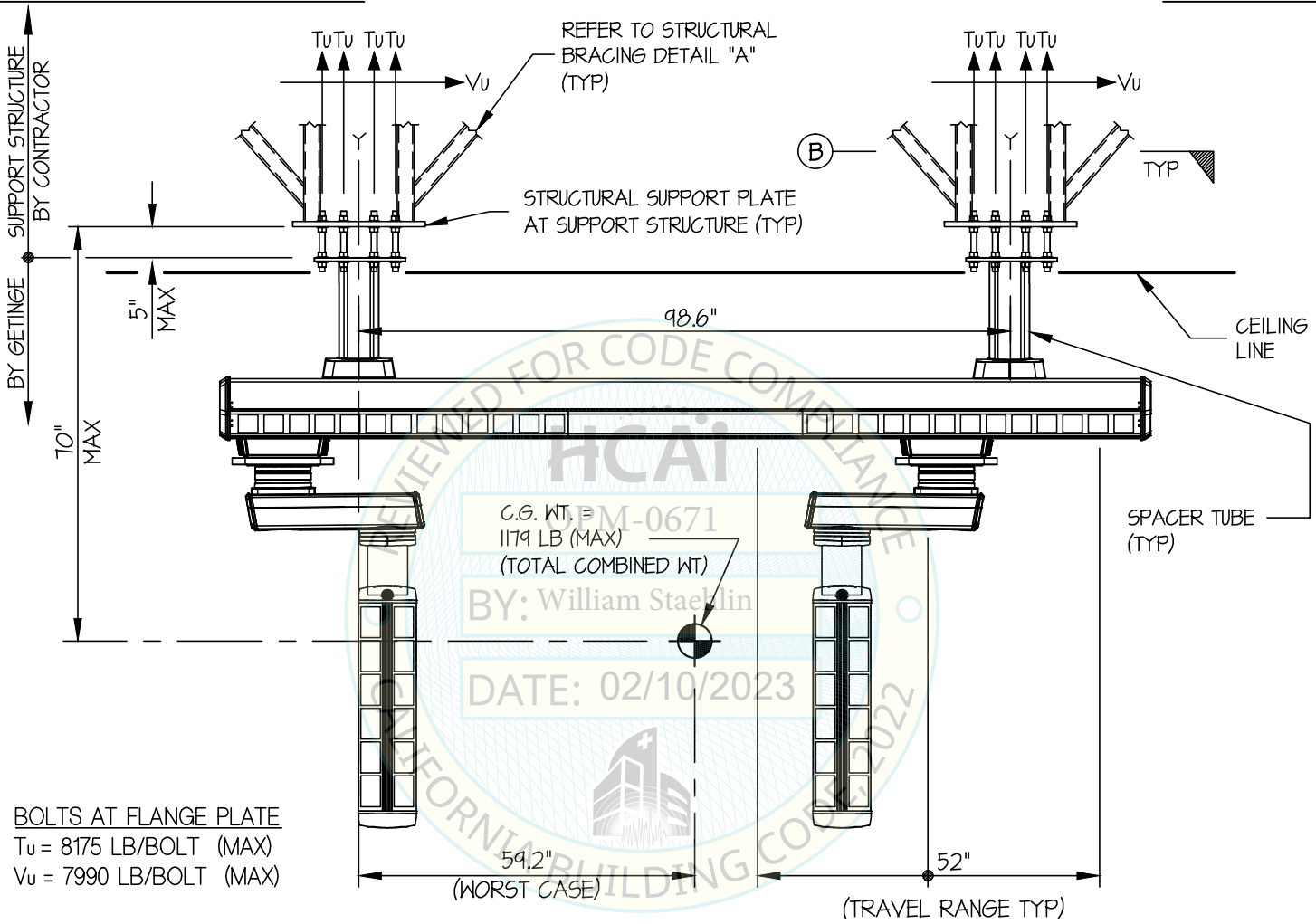
SHEET 3 OF 10 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — CEILING MOUNTED



BOLTS AT FLANGE PLATE
Tu = 8175 LB/BOLT (MAX)
Vu = 7990 LB/BOLT (MAX)

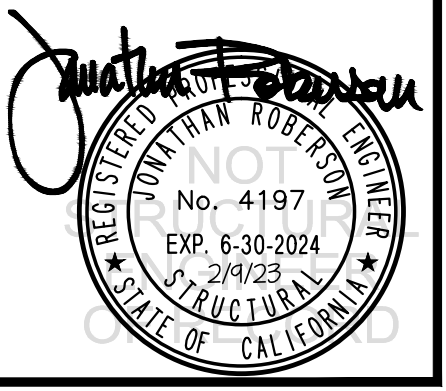
ELEVATION

NOTES:

1. FORCES ARE DETERMINED PER 2022 CALIFORNIA BUILDING CODE AND ASCE 7-16. STRENGTH DESIGN IS USED. [EXAMPLE: S_{DS} = 2.00, a_p = 2.5, I_p = 1.5, R_p = 2.5, Ω_o = 2.0, z/h ≤ 1]

   HORIZONTAL FORCE (E_h) = 3.60 W_p
   HORIZONTAL FORCE (E_{mh}) = 7.20 W_p (FOR CONCRETE ANCHORAGE)
   VERTICAL FORCE (E_v) = 0.40 W_p

2. THIS PREAPPROVAL ENCOMPASSES WEIGHTS AND C.G. POSITIONS NOT EXCEEDING VALUES SHOWN.
3. 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.
4. 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.



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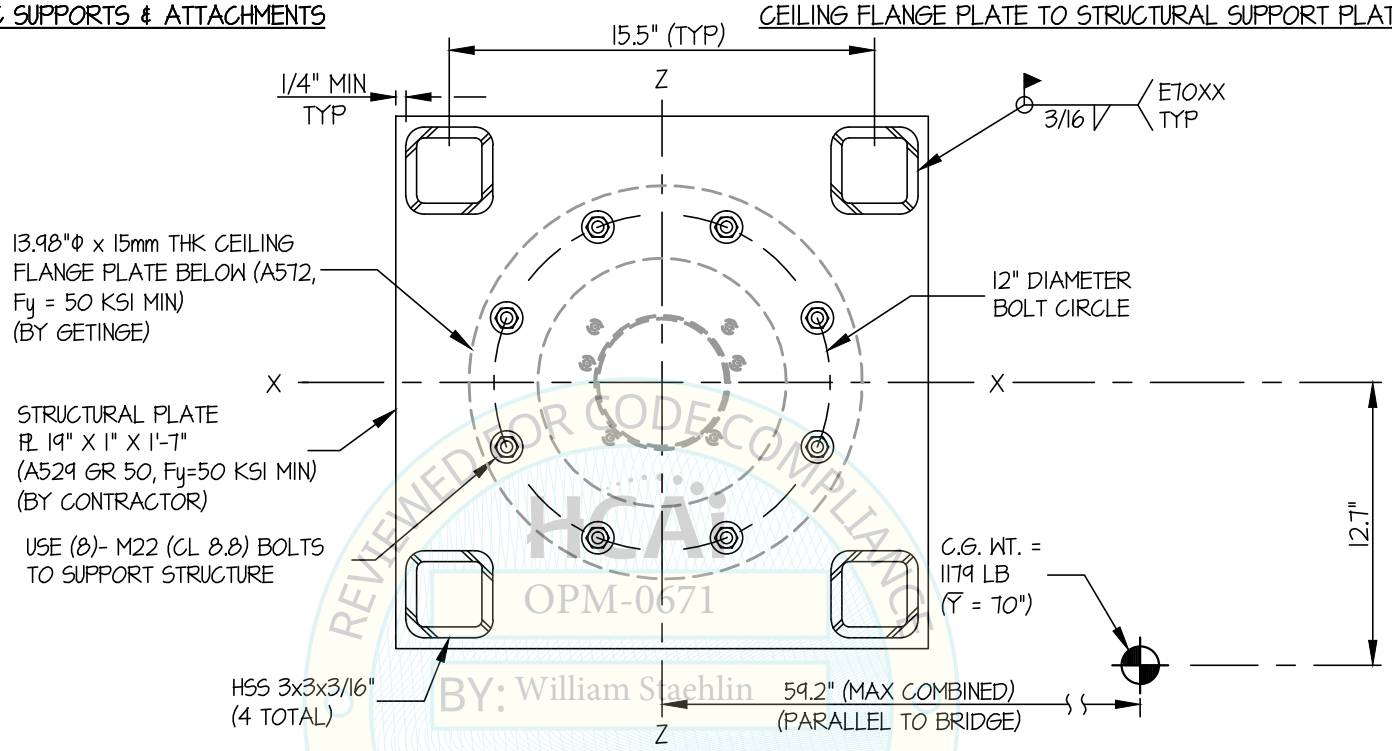
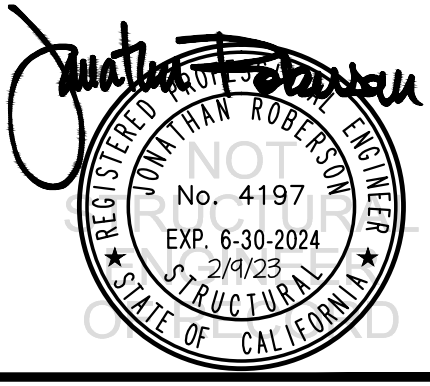
SHEET 4 OF 10 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

CEILING FLANGE PLATE TO STRUCTURAL SUPPORT PLATE



PLAN AT STRUCTURAL PLATE



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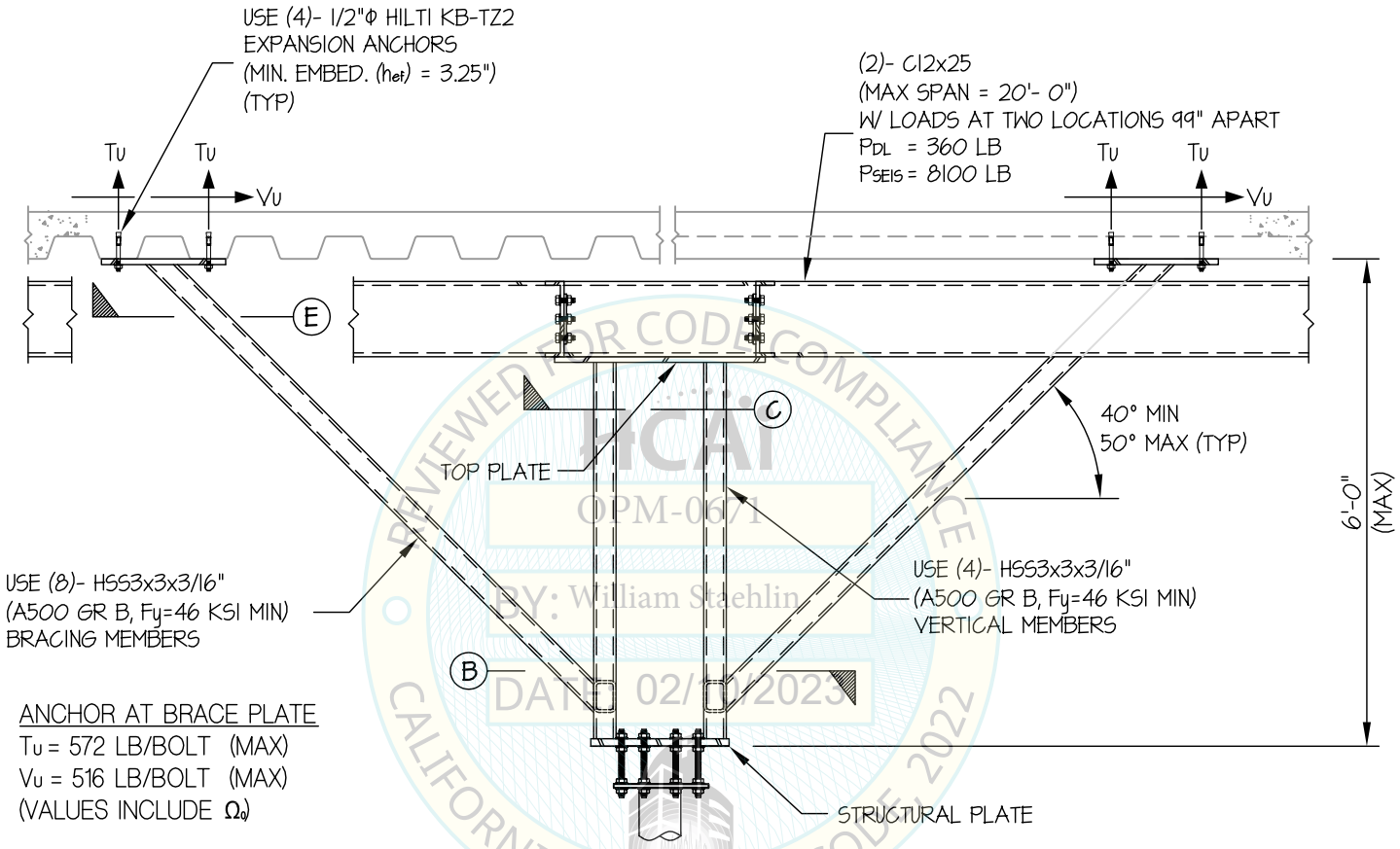
SHEET 5 OF 10 SHEETS

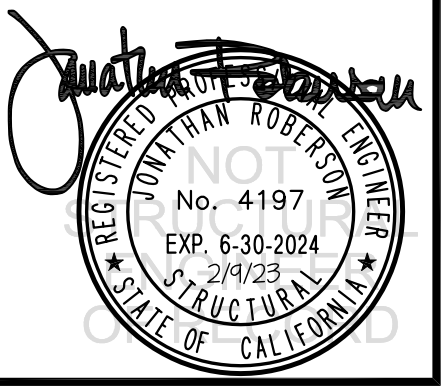
SEISMIC SUPPORTS & ATTACHMENTS

BRACING DETAILS



ANCHOR AT BRACE PLATE
Tu = 572 LB/BOLT (MAX)
Vu = 516 LB/BOLT (MAX)
(VALUES INCLUDE Ωo)

STRUCTURAL SUPPORT ELEVATION (A)
(SUPPORT STRUCTURE BY CONTRACTOR)



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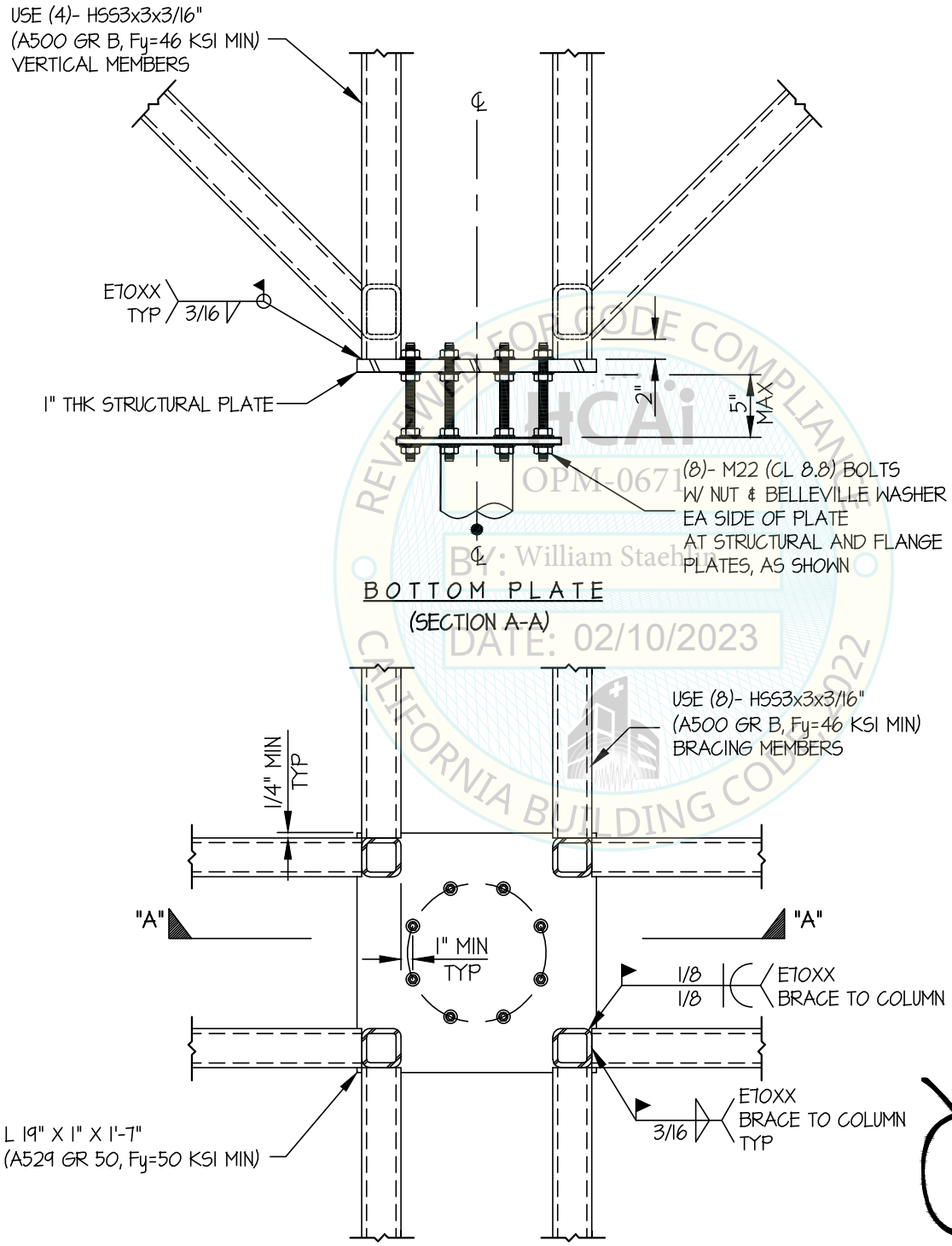
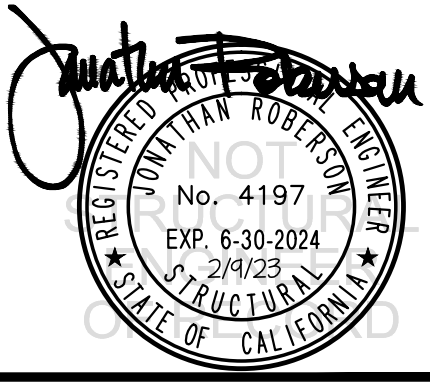
SHEET 6 OF 10 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

BRACING DETAILS



PLAN AT STRUCTURAL PLATE (B)



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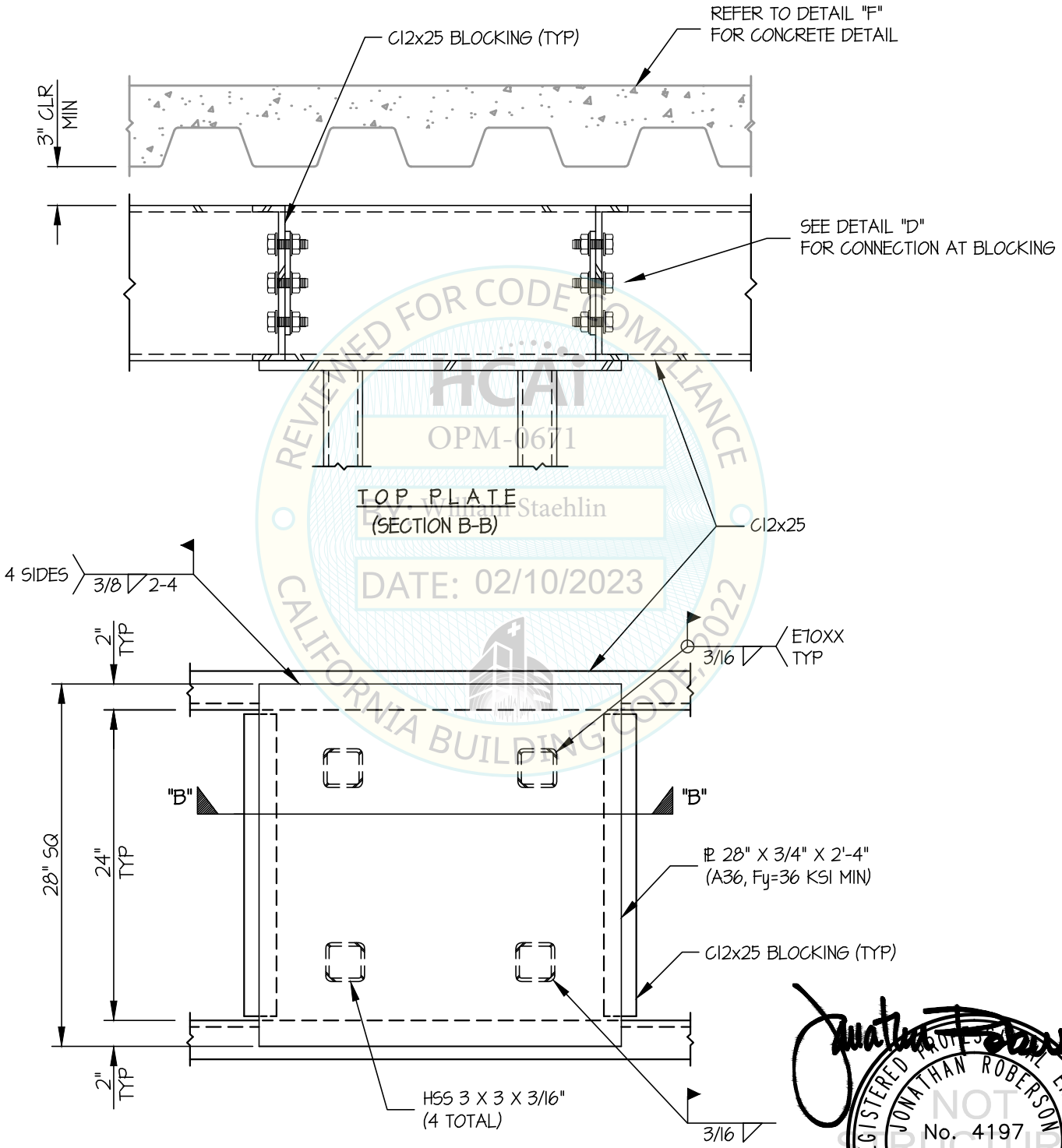
SHEET 7 OF 10 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

BRACING DETAILS



REFLECTED CEILING PLAN (C)

JONATHAN ROBERSON
REGISTERED STRUCTURAL ENGINEER
No. 4197
EXP. 6-30-2024
2/9/23
STATE OF CALIFORNIA

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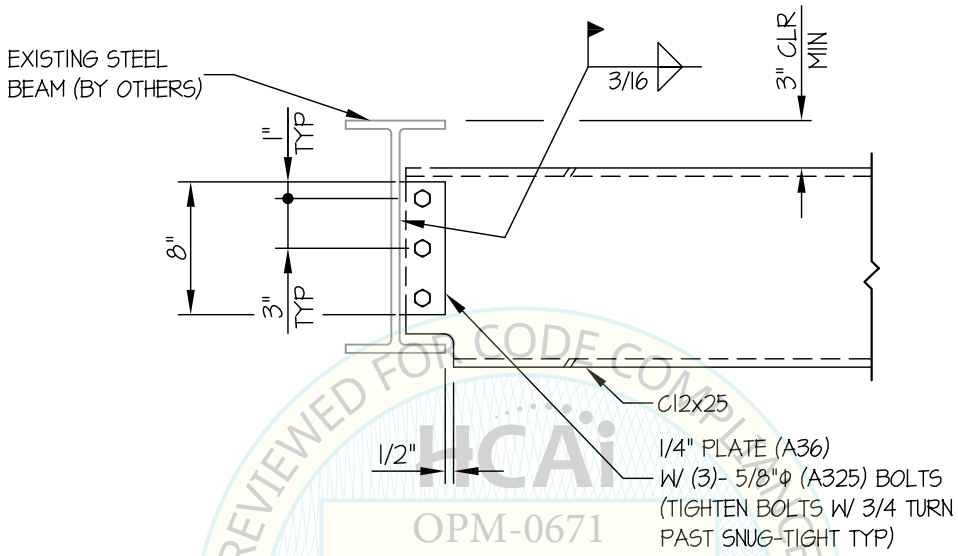
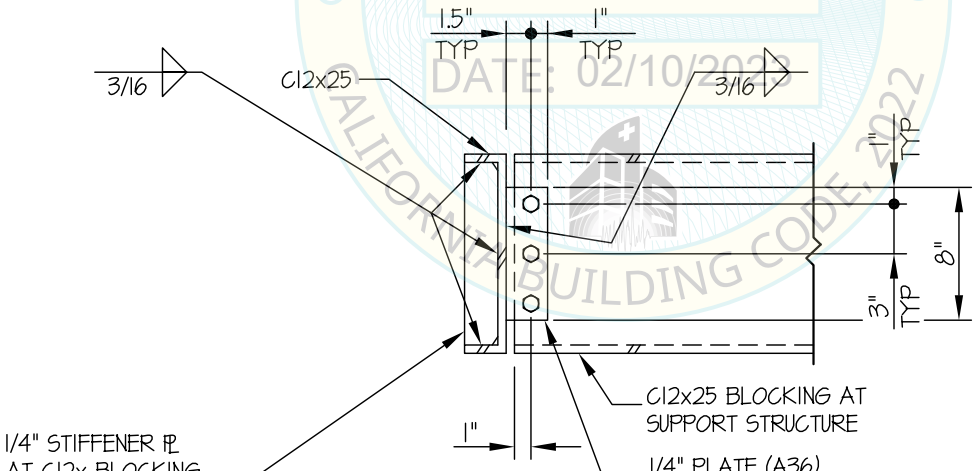
SHEET 8 OF 10 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

BRACING DETAILS

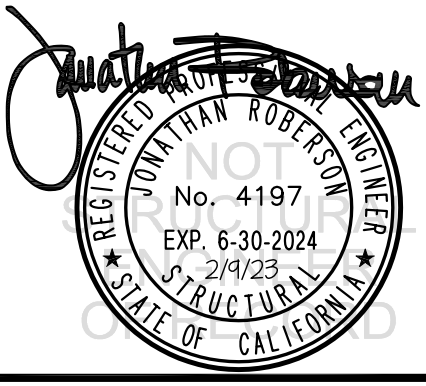


CONNECTION AT (E) STEEL BEAM



CONNECTION AT BLOCKING

C12x CONNECTION DETAILS (D)



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MODUEVO BRIDGE 3500

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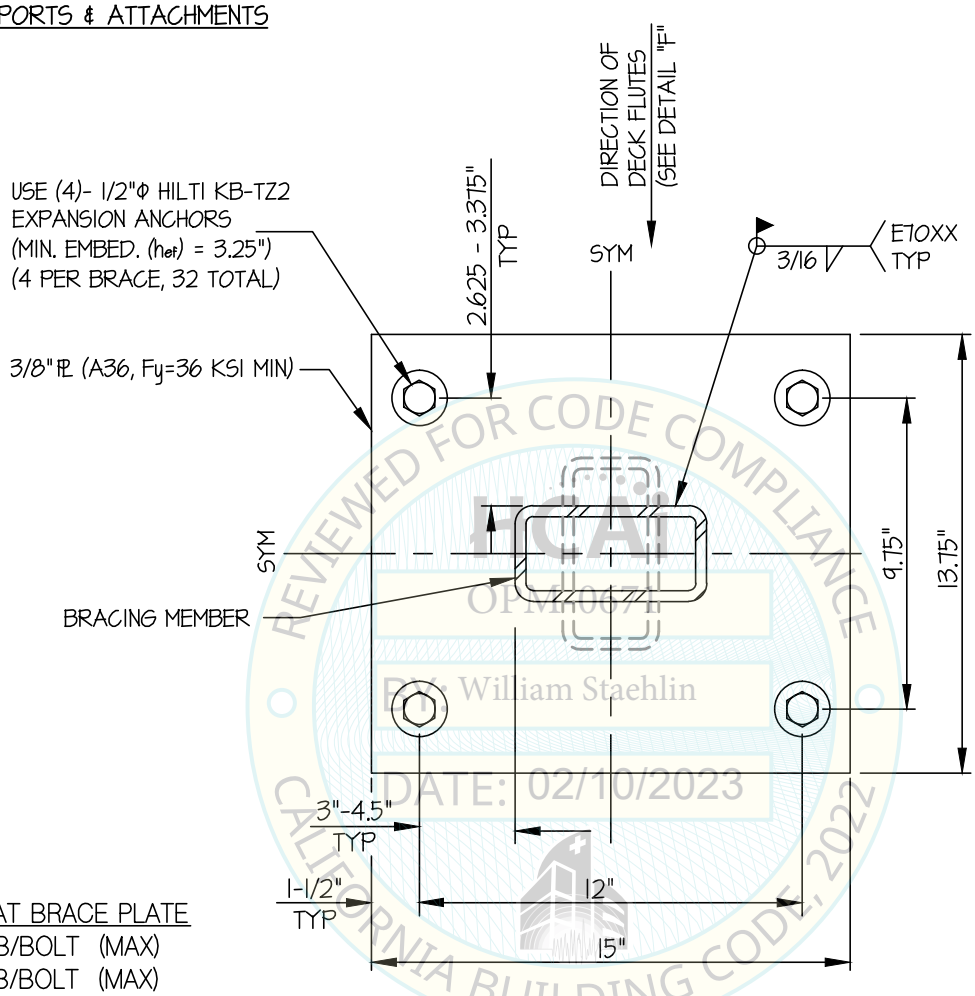
SHEET 9 OF 10 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

BRACING DETAILS



ANCHOR AT BRACE PLATE
Tu = 572 LB/BOLT (MAX)
Vu = 516 LB/BOLT (MAX)
(VALUES INCLUDE Ω0)

BRACE PLATE DETAIL (E)

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MODUEVO BRIDGE 3500

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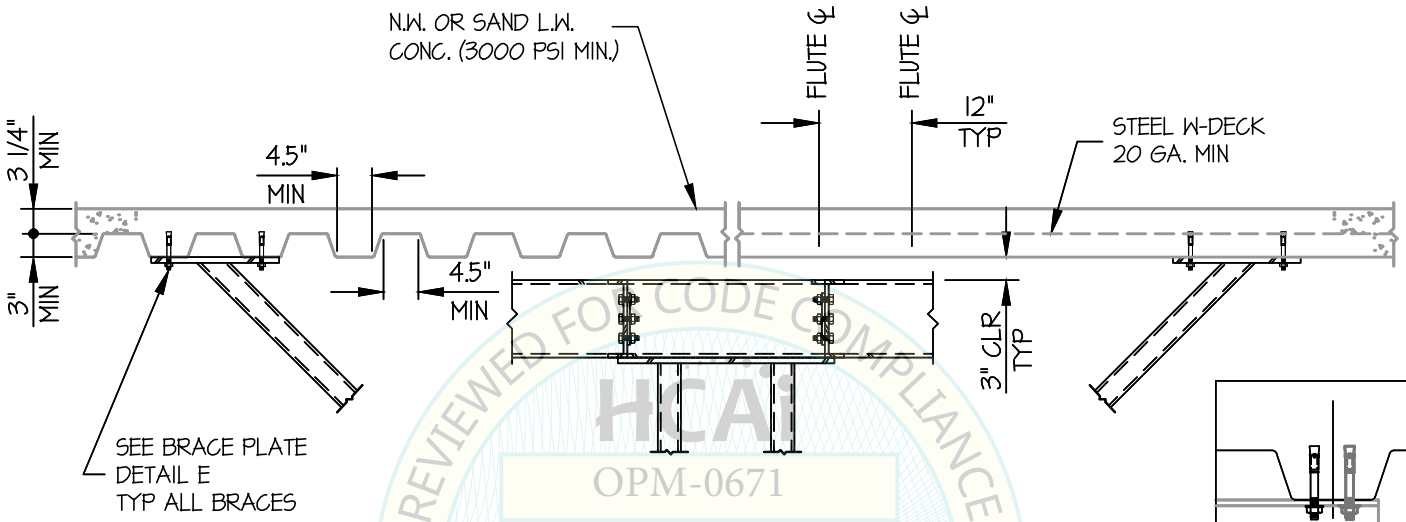
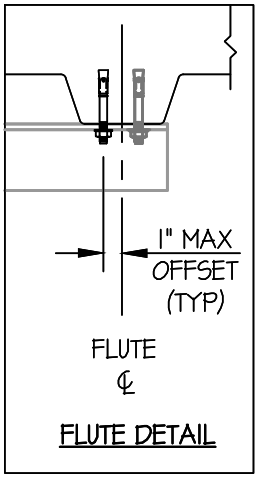
SHEET 10 OF 10 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

BRACING DETAILS





FLUTE DETAIL

MIN STEEL DECK REQUIREMENTS AND STRUT DETAIL (F)