



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

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

OFFICE USE ONLY
APPLICATION #: OPM-0464-19

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: [X] New [] Renewal [] Update to Pre-CBC 2013 OPA Number:

Manufacturer Information

Manufacturer: CRIMSON AV

Manufacturer's Technical Representative: Tony Politz

Mailing Address: 10513 United Parkway, Sciller Park, IL. 60176

Telephone: On File Email: On File

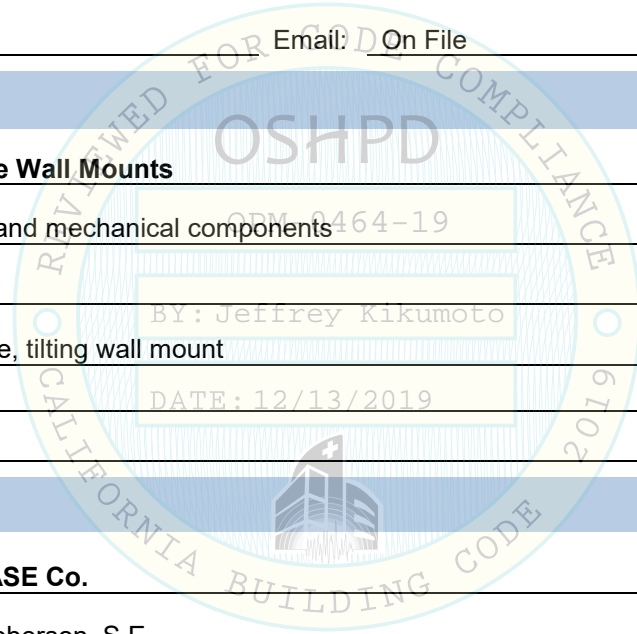
Product Information

Product Name: T55 Low Profile Wall Mounts

Product Type: Other electrical and mechanical components

Product Model Number: T55

General Description: Low profile, tilting wall mount



Applicant Information

Applicant Company Name: EASE Co.

Contact Person: Jonathan Roberson, S.E.

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

Telephone: (909) 606-7622 Email: J.Roberson@EASECo.com

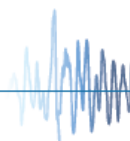
I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2016.

Signature of Applicant: [Signature] Date: 1/24/18

Title: Principal Engineer Company Name: EASE Co.

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"

STATE OF CALIFORNIA - HEALTH AND HUMAN SERVICES AGENCY
OSH-FD-700 (REV 12/16/15)



OSHPD

"Equitable Healthcare Accessibility for California"



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

Registered Design Professional Preparing Engineering Recommendations

Company Name: EASE Co.

Name: Jonathan Roberson, S.E. California License Number: S4197

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

Telephone: 909-606-7622 Email: J.Roberson@EASECo.com

OSHPD Special Seismic Certification Preapproval (OSP)

- Special Seismic Certification is preapproved under OSP-
(Separate application for OSP is required)
- Special Seismic Certification is not preapproved

Certification Method(s)

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

*Use of criteria other than those adopted by the California Building Standards Code, 2016 (CBSC 2016) 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 2016 may be used when approved by OSHPD prior to testing.

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

List of Attachments Supporting the Manufacturer's Certification

- Test Report Drawings Calculations Manufacturer's Catalog
- Other(s) (Please Specify): _____

OFFICE USE ONLY – OSHPD APPROVAL VALID FOR CBC 2016 & ALL PRE-2016 CODE BASED PROJECTS

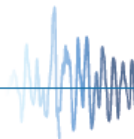
Signature:  Date: 12/13/2019

Print Name: Jeffrey Kikumoto

Title: Structural Engineer

Condition of Approval (if applicable): _____

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"





**EQUIPMENT ANCHORAGE
& SEISMIC ENGINEERING**

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

Office of Statewide Health Planning and Development
PREAPPROVAL OF MANUFACTURER'S CERTIFICATION
OPM-0464-19

THIS PREAPPROVAL CONFORMS TO THE 2019 CALIFORNIA BUILDING CODE

MANUFACTURER: **CRIMSON AV LLC.**
EQUIPMENT NAME: **T55 WALL MOUNT**

Sheet: 1 of 7
Date: 9/12/19

GENERAL NOTES

1. THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE 2019 CBC. THE DEMANDS (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE 2019 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 2019 CALIFORNIA BUILDING CODE WHERE S_{Ds} IS NOT GREATER THAN 2.20.
4. FORCES PER ASCE 7-16 SECTION 13.3.1, EQUATIONS 13.3-1, 13.3-2 & 13.3-3,
WHERE $S_{Ds} = 2.20$, $a_p = 1.0$, $I_p = 1.5$, $R_p = 1.5$, $z/h \leq 1$ CONCRETE WALL. 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 WALL DETAIL VALID FOR DEMANDS SHOWN AT ANY ELEVATION. (i.e. $z/h \leq 1$)
8. **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 2019 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 WALL TO WHICH THE EQUIPMENT IS ANCHORED MEETS THE REQUIREMENTS OF THE APPLICABLE ICC ESR AND THIS OPM.
 - E. VERIFY THAT THE ANCHORS ARE AN ADEQUATE DISTANCE FROM ANY CONCRETE WALL 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.



CRIMSON AV LLC.

T55 WALL MOUNT

DES. **J. ROBERSON**

JOB NO. **11-1802**

DATE **9/12/19**

SHEET

2

OF **7** SHEETS

9. EXPANSION ANCHORS:

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

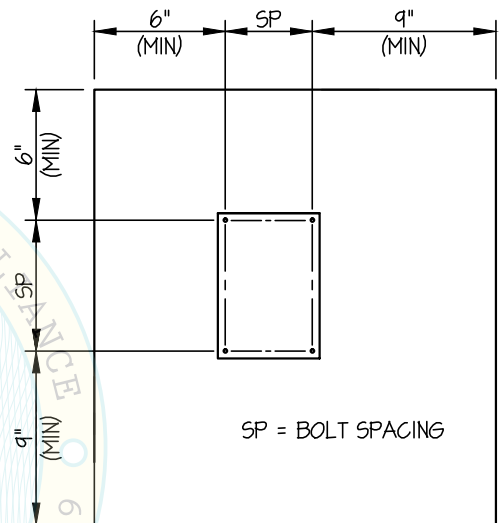
Anchor Diameter	Concrete Type	Min. f'c (psi)	Anchor Type	ICC Report No.	(hef) Min. Embed.	Min. Spacing	Min. Edge Dist.	Min. Conc. Thickness	Torque Test	Direct Tension
1/4"	Normal Weight	3000	Hilti Kwik HUS	ESR-3027	1.92"	6"	6"	6"	N/A	779 lb

B. TESTING OF CONCRETE SCREW ANCHORS PER 2019 CBC, 1910A.5:
TESTING SHALL BE DONE IN THE PRESENCE OF THE SPECIAL INSPECTOR AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO OSHPD

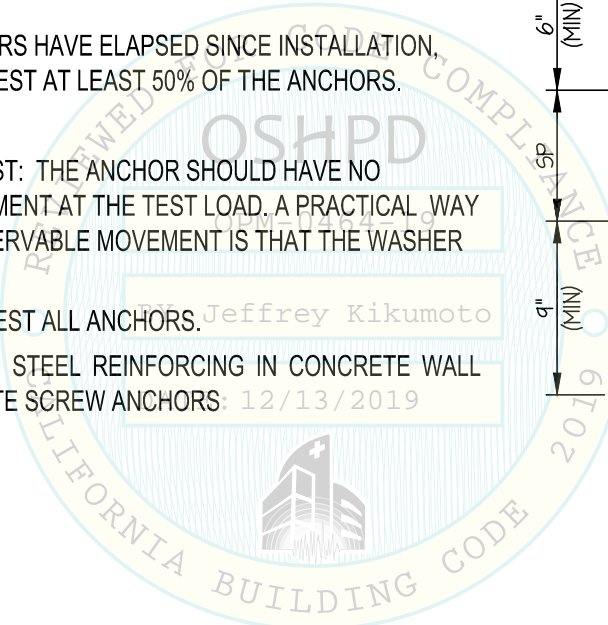
- (i) AFTER AT LEAST 24 HOURS HAVE ELAPSED SINCE INSTALLATION, DIRECT PULL TENSION TEST AT LEAST 50% OF THE ANCHORS.
- (ii) ACCEPTANCE CRITERIA:
 - DIRECT TENSION TEST: THE ANCHOR SHOULD HAVE NO OBSERVABLE MOVEMENT AT THE TEST LOAD. A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER BECOMES LOOSE.

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

D. AVOID DAMAGING EXISTING STEEL REINFORCING IN CONCRETE WALL WHEN INSTALLING CONCRETE SCREW ANCHORS:



TYPICAL CONCRETE EDGE DETAIL



CRIMSON AV LLC.

DES. **J. ROBERSON**

SHEET

3

T55 WALL MOUNT

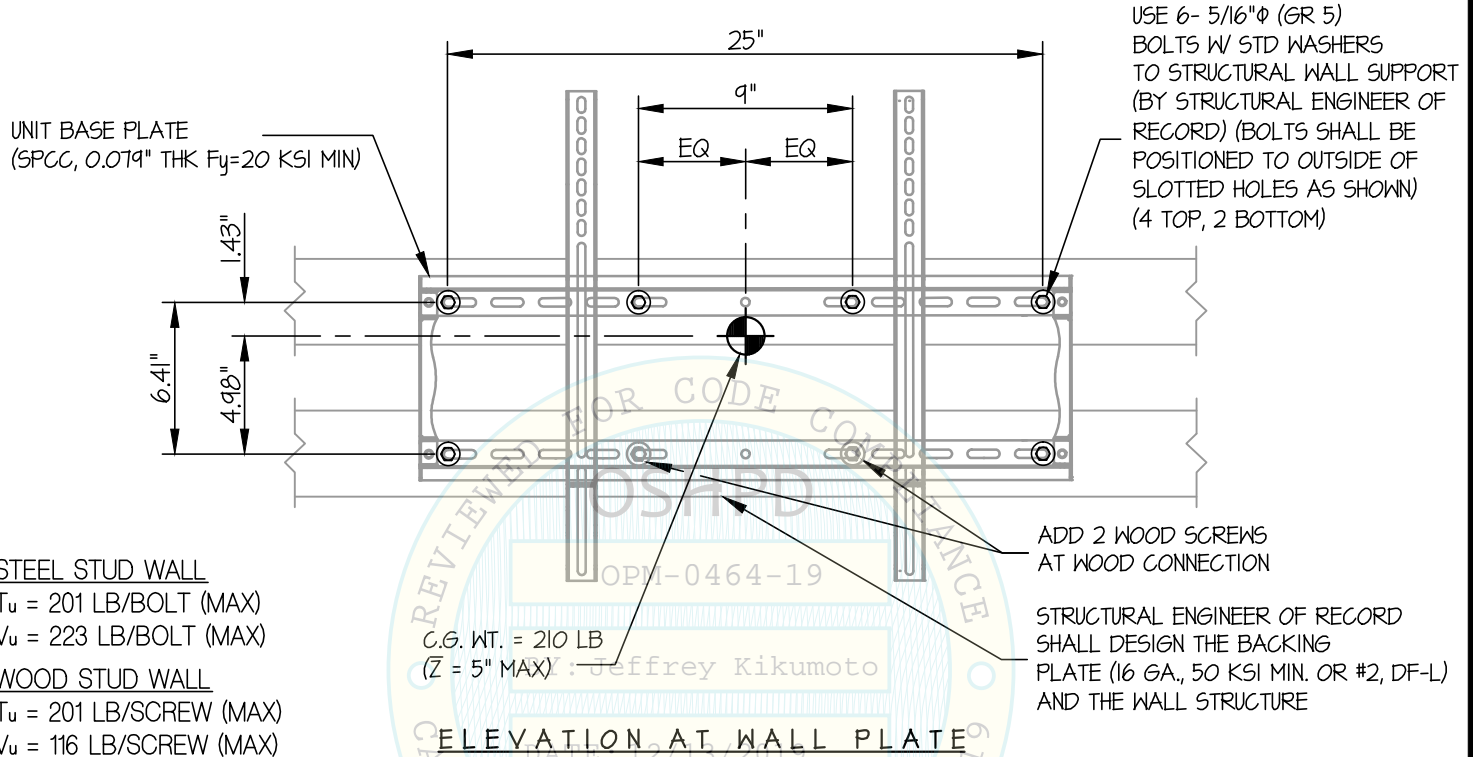
JOB NO. **11-1802**

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OF **7** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



NOTES:

1. FORCES ARE DETERMINED PER 2019 CALIFORNIA BUILDING CODE AND ASCE 7-16 STRENGTH DESIGN IS USED. (S_{ds} = 2.20, α_p = 1.0, I_p = 1.5, R_p = 1.5, z/h ≤ 1)

HORIZONTAL FORCE (E_h) = 2.64 W_p

VERTICAL FORCE (E_v) = 0.44 W_p

- CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PREAPPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
- 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.
- SEE GENERAL NOTES: SHEET 1 AND 2



CRIMSON AV LLC.

DES. **J. ROBERSON**

SHEET

4

T55 WALL MOUNT

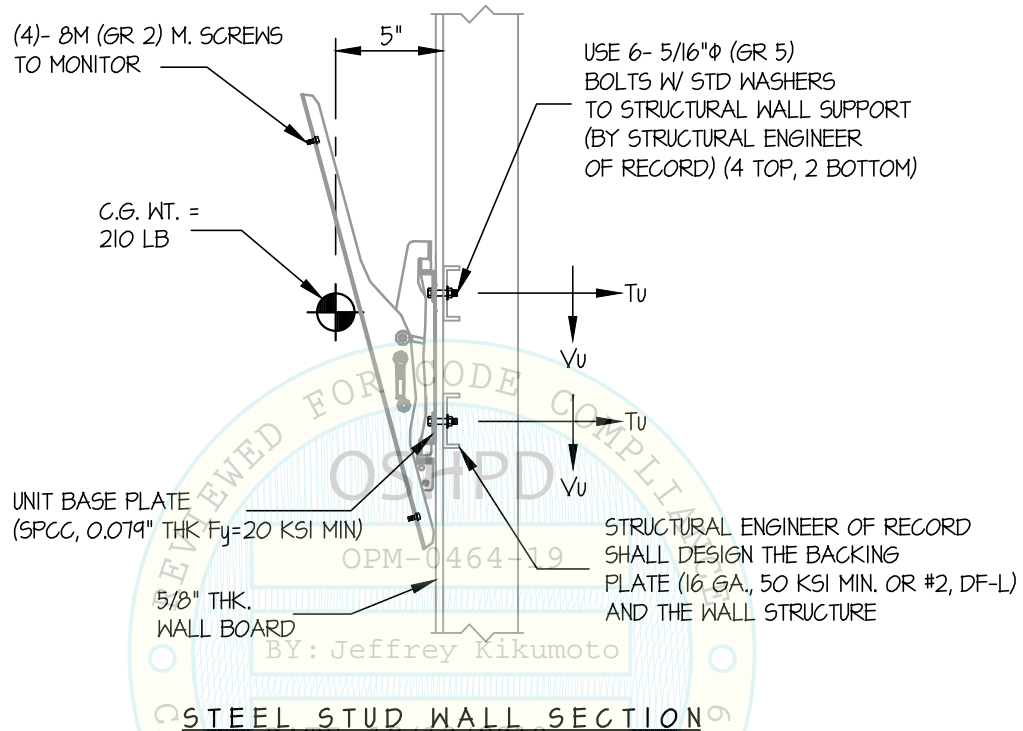
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DATE **9/12/19**

OF **7** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



CRIMSON AV LLC.

DES. **J. ROBERSON**

SHEET

5

JOB NO. **11-1802**

T55 WALL MOUNT

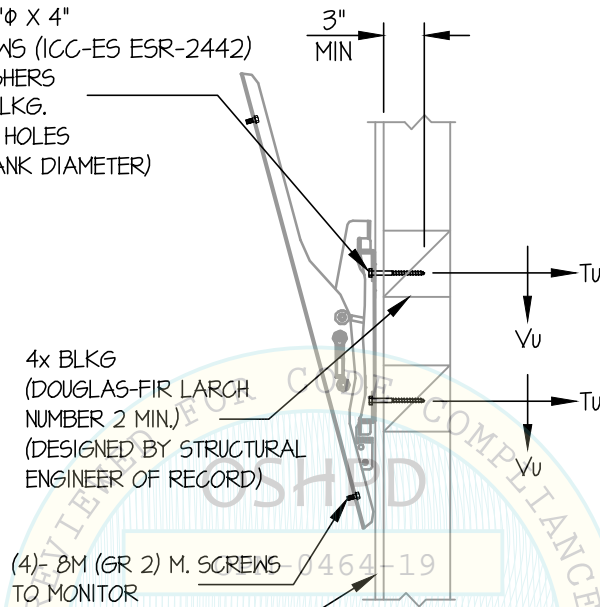
DATE **9/12/19**

OF **7** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

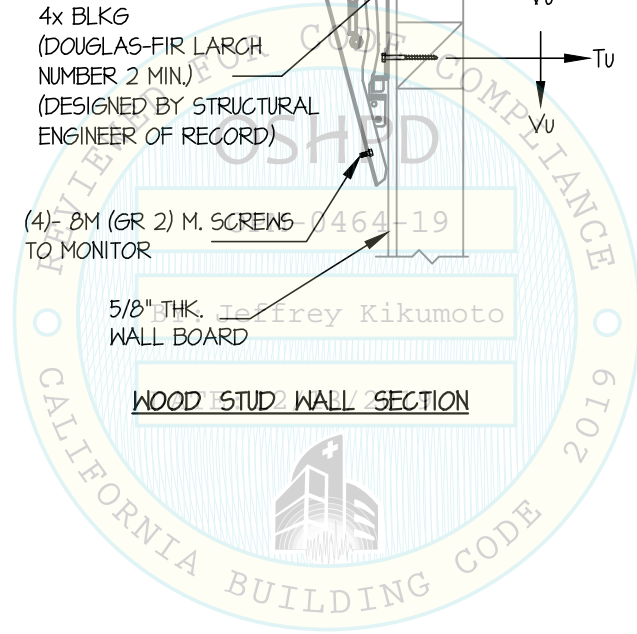
WALL MOUNTED

USE 8- 5/16"Φ X 4"
RSS SCREWS (ICC-ES ESR-2442)
W STD WASHERS
TO WOOD BLKG.
(PRE-DRILL HOLES
TO 70% SHANK DIAMETER)



4x BLKG
(DOUGLAS-FIR LARCH
NUMBER 2 MIN.)
(DESIGNED BY STRUCTURAL
ENGINEER OF RECORD)

WOOD STUD WALL SECTION



CRIMSON AV LLC.

DES. **J. ROBERSON**

SHEET

6

T55 WALL MOUNT

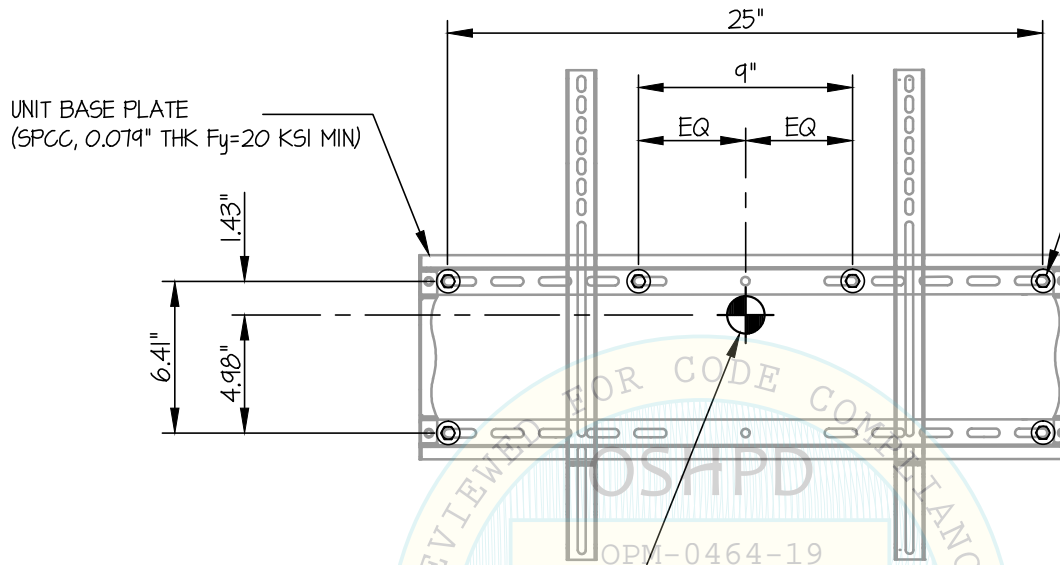
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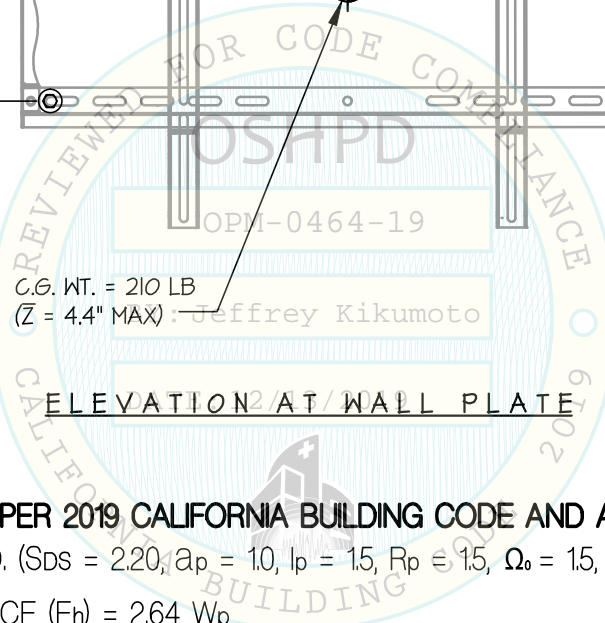
OF **7** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



USE 6- 1/4"Φ HILTI HUS-EZ
SCREW ANCHORS
W STD WASHERS
(MIN. EMBED. (h_{ef}) = 1.92")
TO CONCRETE WALL
(BOLTS SHALL BE
POSITIONED TO OUTSIDE OF
SLOTTED HOLES AS SHOWN)
(4 TOP, 2 BOTTOM)



C.G. WT. = 210 LB
(\bar{Z} = 4.4" MAX) Jeffrey Kikumoto

ELEVATION AT WALL PLATE

T_u = 256 LB/SCREW (MAX)
 V_u = 330 LB/SCREW (MAX)
(VALUES INCLUDE Ω)

NOTES:

1. FORCES ARE DETERMINED PER 2019 CALIFORNIA BUILDING CODE AND ASCE 7-16 STRENGTH DESIGN IS USED. (S_{DS} = 2.20, α_p = 1.0, I_p = 1.5, R_p = 1.5, Ω_o = 1.5, z/h = 0)

HORIZONTAL FORCE (E_h) = 2.64 W_p

HORIZONTAL FORCE (E_{mh}) = 3.96 W_p (FOR CONCRETE ANCHORAGE)

VERTICAL FORCE (E_v) = 0.44 W_p

2. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PREAPPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.

3. 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.

4. SEE GENERAL NOTES: SHEET 1 AND 2



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SHEET

7

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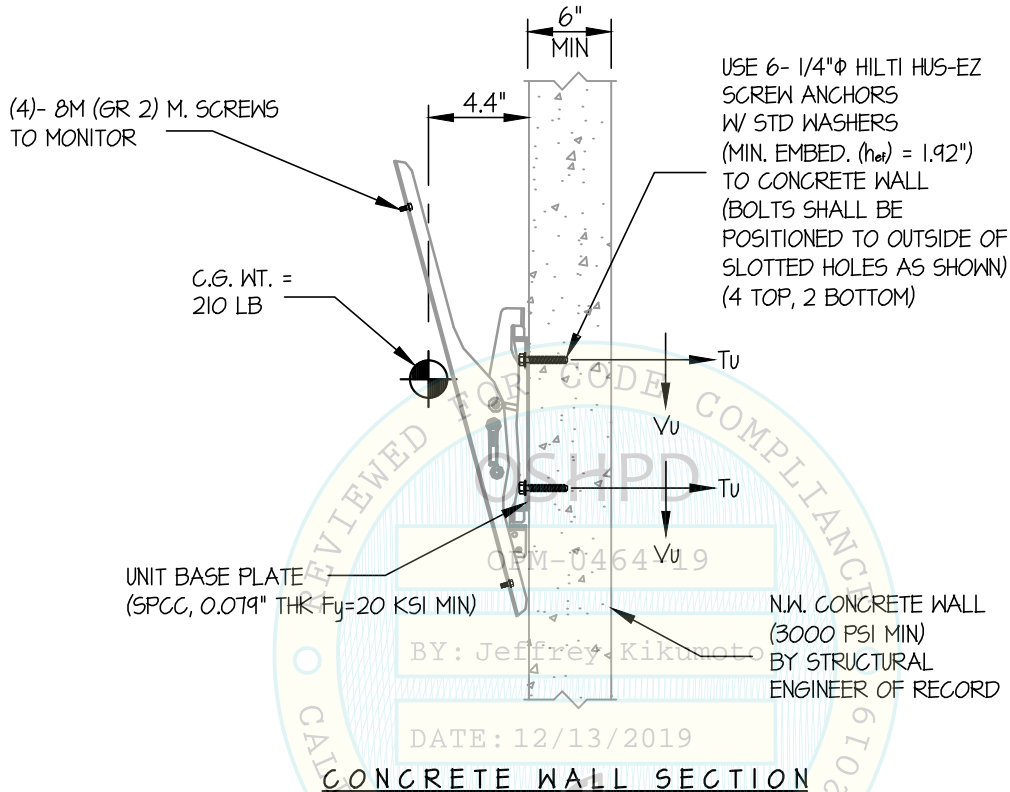
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OF **7** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



Jonathan Roberson

REGISTERED PROFESSIONAL ENGINEER
 JONATHAN ROBERSON
 No. 4197
 EXP. 6-30-2020
 9/12/19
 STRUCTURAL
 STATE OF CALIFORNIA