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

OFFICE USE ONLY

APPLICATION #: OPM-0625

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: [X] New [ ] Renewal/Update

Manufacturer Information

Manufacturer: Peerless-AV

Manufacturer's Technical Representative: John Poremba

Mailing Address: 2300 White Oak Circle, Aurora, IL 60502

Telephone: (630) 375-6471 Email: JPoremba@peerless-av.com

Product Information

Product Name: Universal Flat & Tilt Wall Mounts for Monitor Weight up to 350LB (46"-98" Displays)

Product Type: Other Mechanical & Electrical Components

Product Model Number: SF670, SF680, ST670, ST680

General Description: Wall Mounts for Large Video Monitors

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

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

OSHPD 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, 2019 (CBSC 2019) 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 2019 may be used when approved by OSHPD prior to testing.

☒ Analysis

☐ Experience Data

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

OSHPD Approval

Date: 1/10/2022

Name: Jeffrey Kikumoto Title: Senior Structural Engineer

Condition of Approval (if applicable):

EASE
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-0625

THIS PREAPPROVAL CONFORMS TO THE 2019 CALIFORNIA BUILDING CODE

MANUFACTURER: **PEERLESS INDUSTRIES, INC.**

EQUIPMENT NAME: **UNIVERSAL FLAT AND TILT WALL MOUNT**

Date: 10/4/21

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 1.80. & 2.30
4. FORCES PER ASCE 7-16 SECTION 13.3.1, EQUATIONS 13.3-1, 13.3-2 & 13.3-3,

   WHERE S_{DS} = 1.80 a_p = 1.0, I_p = 1.5, R_p = 1.5, z/h $\leq$ 1 CONCRETE WALL. SEE FOLLOWING SHEETS FOR Ω_0

   WHERE S_{DS} = 2.30 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. SHEET METAL SCREWS SHALL BE TEKS 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. **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 REPORT 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 6hef FROM THIS UNIT'S ANCHORS.

   G. DESIGN BACKING BARS, STUDS, ETC. WHICH THE UNITS ARE ATTACHED TO AS NOTED ON THE DRAWINGS.

REGISTERED PROFESSIONAL ENGINEER
JONATHAN ROBERSON
No. 4197
EXP. 6-30-2022
10/4/21
STRUCTURAL
STATE OF CALIFORNIA

10. **SCREW 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
1/4"	Normal Weight	3000	Hilti Kwik HUS-EZ	ESR-3027	1.92"	3.5"	12"	6"	N/A	779 lb

B. THIS PREAPPROVAL ALLOWS FOR UP TO A MAXIMUM OF 2 ADJACENT CONCRETE SLAB EDGES, 12" AWAY MINIMUM (i.e. - CORNER). SEE ADJACENT DETAIL FOR ADDITIONAL MINIMUM ALLOWABLE CONCRETE EDGE DISTANCES.

C. TESTING AND SPECIAL INSPECTION OF SCREW 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.

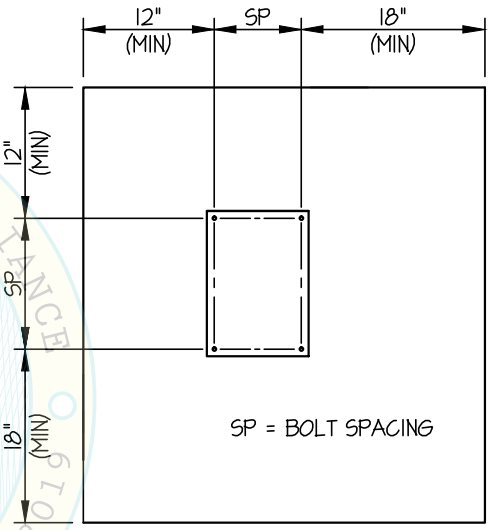
(i) AFTER AT LEAST 24 HOURS HAVE ELAPSED SINCE INSTALLATION, DIRECT PULL TENSION TEST AT LEAST 50% OF THE ANCHORS.

(ii) ACCEPTANCE CRITERIA:

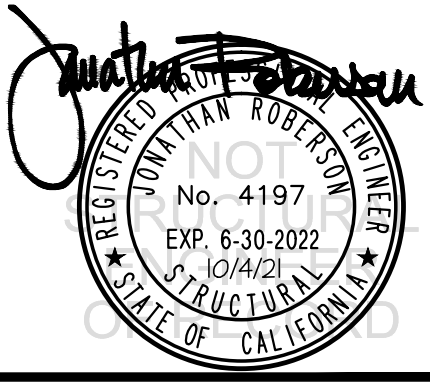
- DIRECT TENSION TEST: THE ANCHOR SHOULD HAVE NO OBSERVABLE MOVEMENT AT THE TEST LOAD. A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER BECOMES LOOSE.

(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

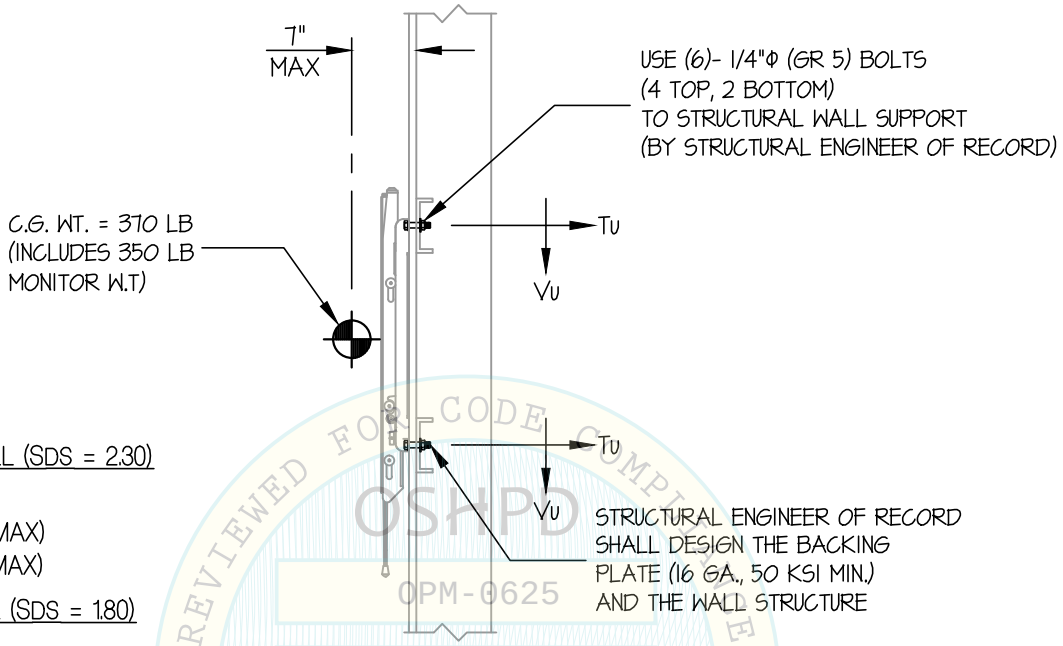


PEERLESS INDUSTRIES, INC.

UNIVERSAL FLAT AND TILT WALL MOUNT

DES. J. ROBERSON
JOB NO. 11-2035
DATE 10/4/21
SHEET 3 OF 8 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — WALL MOUNTED



AT STEEL STUD WALL (SDS = 2.30)

BOLT FORCES
Tu = 353 LB/BOLT (MAX)
Vu = 199 LB/BOLT (MAX)

AT CONCRETE WALL (SDS = 1.80)

BOLT FORCES
Tu = 473 LB/BOLT (MAX)
Vu = 283 LB/BOLT (MAX)

STEEL STUD WALL SECTION
(SF680 FLAT MOUNT SHOWN)

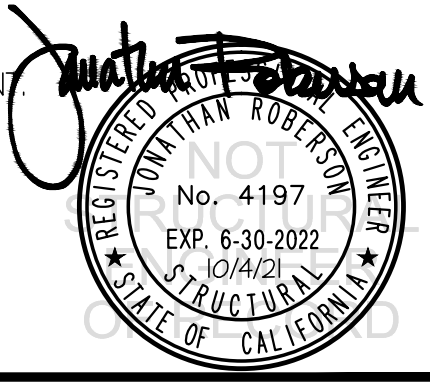
NOTES:

1. **FORCES ARE DETERMINED PER 2019 CALIFORNIA BUILDING CODE AND ASCE 7-16**
   STRENGTH DESIGN IS USED. (a_p = 1.0, I_p = 1.5, R_p = 1.5, Ω_o = 2.0, $z/h \leq 1$)

S_{DS}	2.30	1.80
HORIZONTAL FORCE (Eh)	2.76 Wp	2.16 Wp
HORIZONTAL FORCE (Emh)	N/A	4.32 Wp
VERTICAL FORCE (Ev)	0.46 Wp	0.36 Wp

   (Emh = Eh x Ω_o; FOR CONCRETE ANCHORAGE)

2. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THESE CALCULATIONS ENCOMPASS 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. MODEL NUMBERS: SF670/SF670(P) & SF680/SF680(P), FLAT WALL MOUNTS.
5. SEE GENERAL NOTES: SHEETS 1 AND 2.



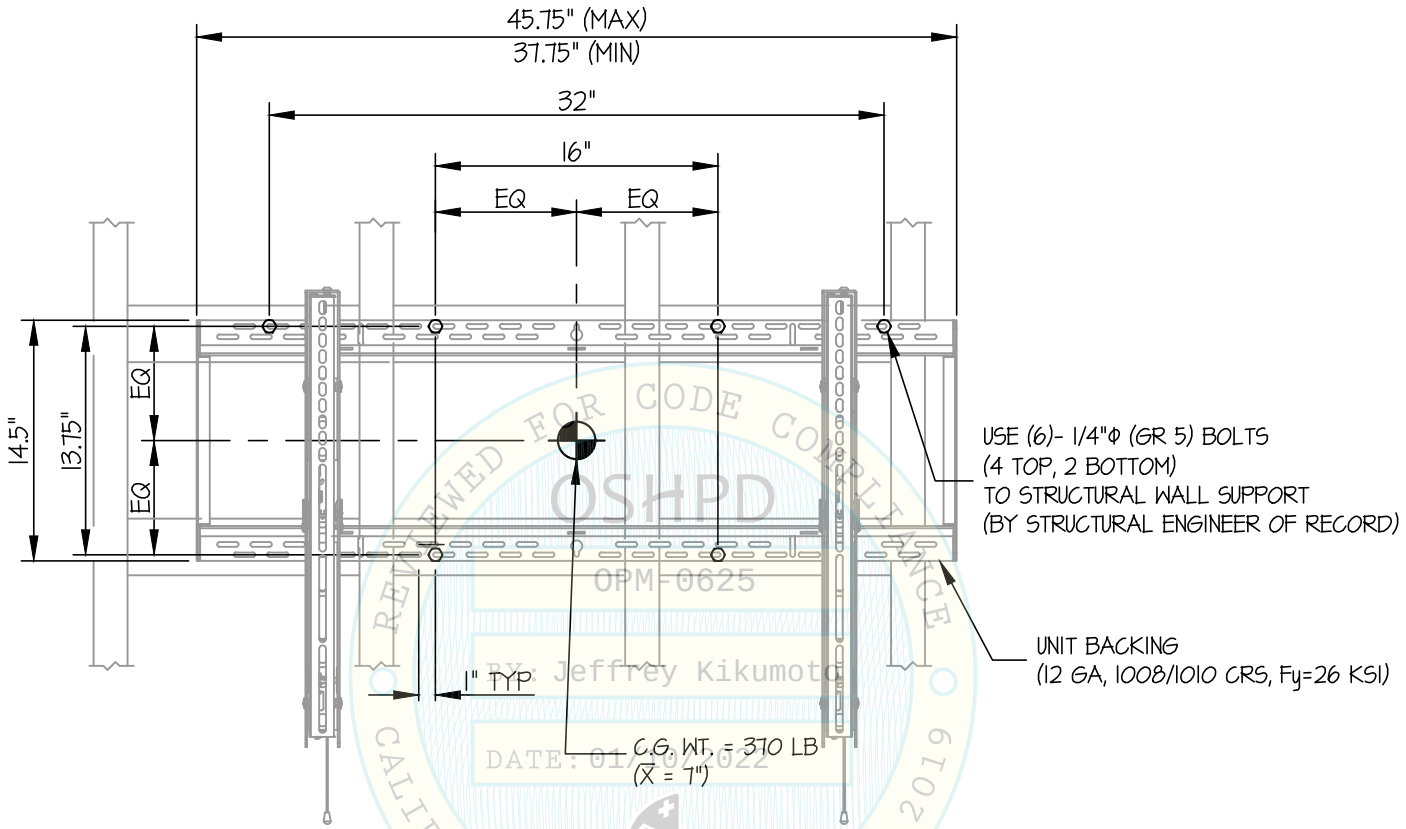
PEERLESS INDUSTRIES, INC.

UNIVERSAL FLAT AND TILT WALL MOUNT

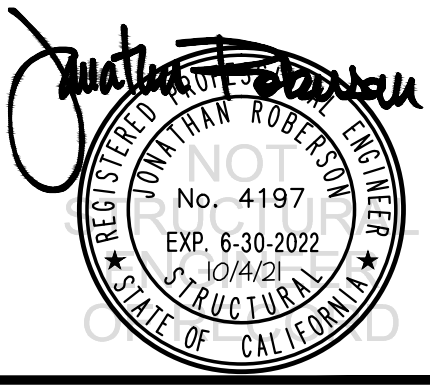
DES. J. ROBERSON
JOB NO. 11-2035
DATE 10/4/21
SHEET 4 OF 8 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



ELEVATION AT WALL PLATE
(SF680 FLAT MOUNT SHOWN)



PEERLESS INDUSTRIES, INC.

UNIVERSAL FLAT AND TILT WALL MOUNT

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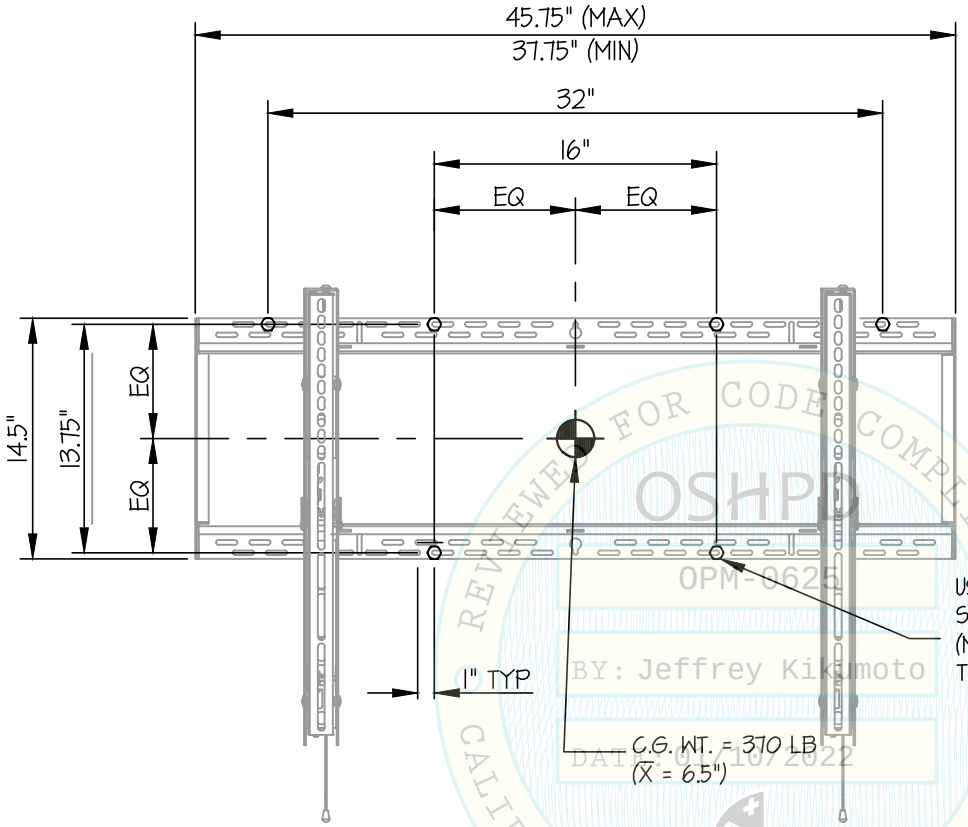
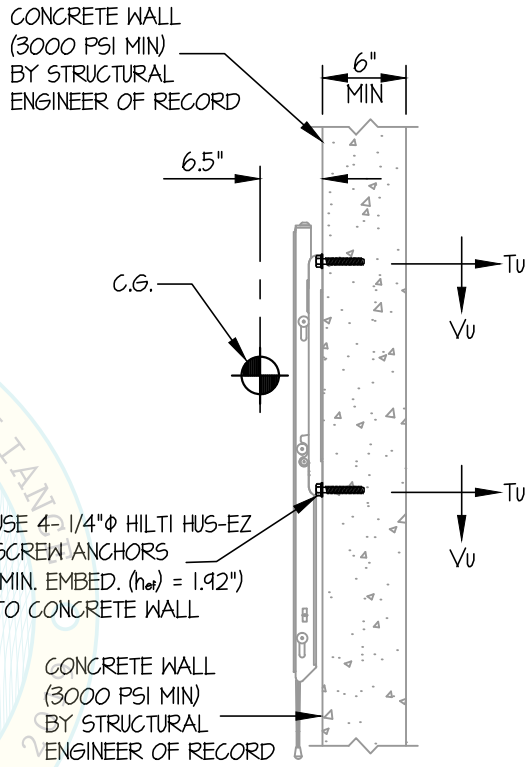
SHEET 5 OF 8 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



ELEVATION AT WALL PLATE
(SF680 FLAT MOUNT SHOWN - CONCRETE OPTION)



CONCRETE WALL SECTION

REGISTERED PROFESSIONAL ENGINEER
JONATHAN ROBERSON
No. 4197
EXP. 6-30-2022
STRUCTURAL
STATE OF CALIFORNIA
10/4/21

NOT FOR STRUCTURAL ENGINEER OF RECORD

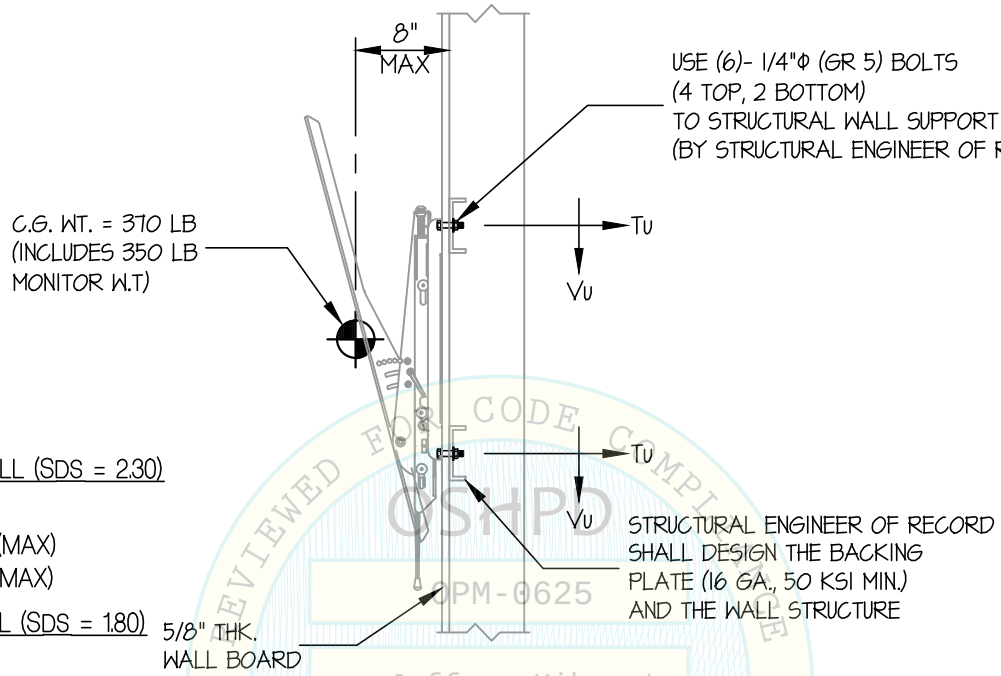
PEERLESS INDUSTRIES, INC.

UNIVERSAL FLAT AND TILT WALL MOUNT

DES. J. ROBERSON
JOB NO. 11-2035
DATE 10/4/21
SHEET 6 OF 8 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



STEEL STUD WALL SECTION
(ST680 TILT MOUNT SHOWN)

AT STEEL STUD WALL (SDS = 2.30)

BOLT FORCES
Tu = 395 LB/BOLT (MAX)
Vu = 199 LB/BOLT (MAX)

AT CONCRETE WALL (SDS = 1.80)

BOLT FORCES
Tu = 534 LB/BOLT (MAX)
Vu = 283 LB/BOLT (MAX)

NOTES:

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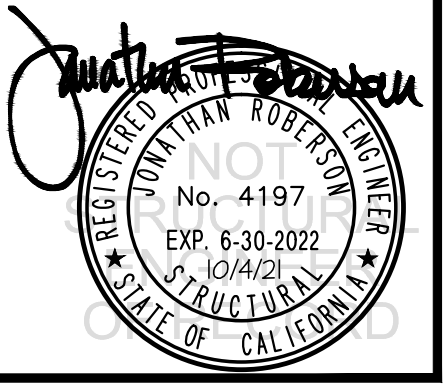


PEERLESS INDUSTRIES, INC.

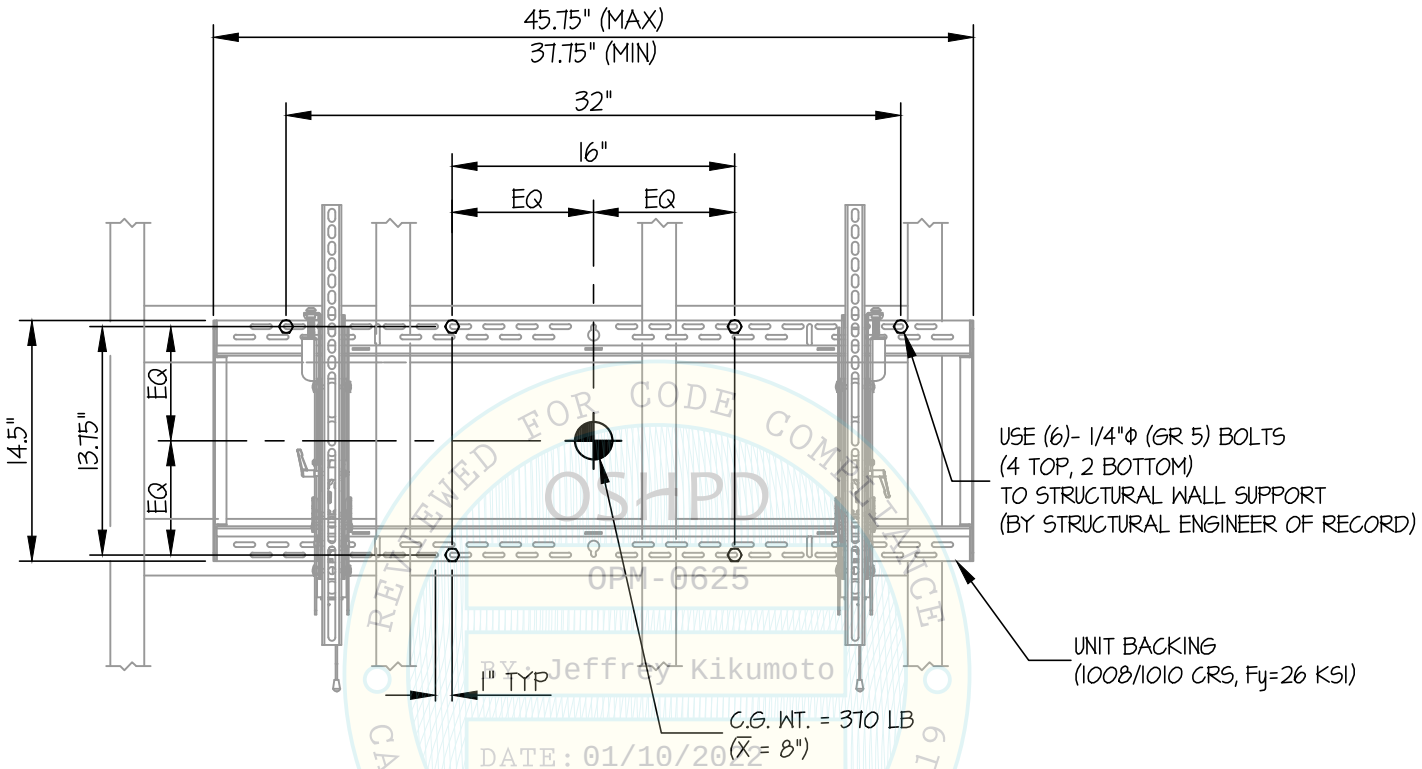
UNIVERSAL FLAT AND TILT WALL MOUNT

DES. J. ROBERSON
JOB NO. 11-2035
DATE 10/4/21

SHEET 7 OF 8 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



ELEVATION AT WALL PLATE
(ST680 TILT MOUNT SHOWN)

JONATHAN ROBERSON
REGISTERED STRUCTURAL ENGINEER
No. 4197
EXP. 6-30-2022
10/4/21
STATE OF CALIFORNIA

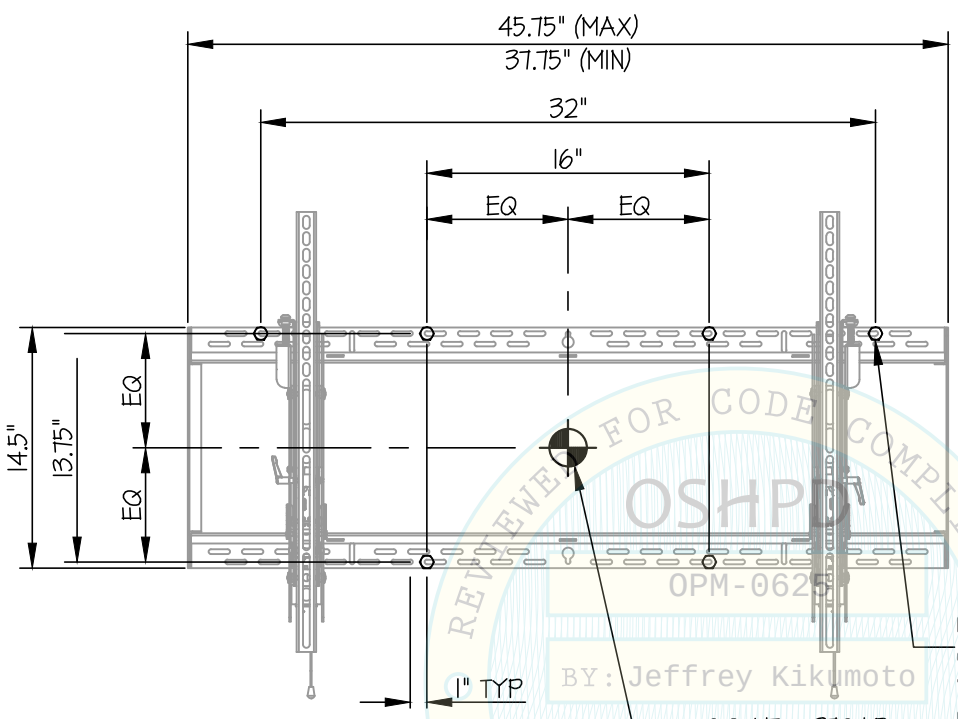
PEERLESS INDUSTRIES, INC.

UNIVERSAL FLAT AND TILT WALL MOUNT

DES.	J. ROBERSON
JOB NO.	11-2035
DATE	10/4/21
SHEET	8
OF	8 SHEETS

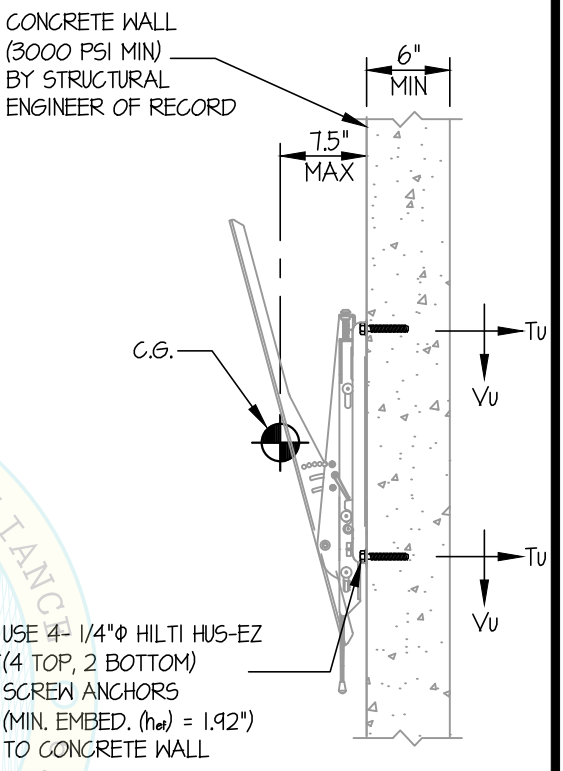
SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



ELEVATION AT WALL PLATE

(ST680 TILT MOUNT SHOWN - CONCRETE OPTION)



CONCRETE WALL SECTION