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

OFFICE USE ONLY
APPLICATION #: OPM-0069-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: ☒ New ☐ Renewal ☐ Update to Pre-CBC 2013 OPA Number: _____

Manufacturer Information

Manufacturer: Peerless Industries, Inc.

Manufacturer's Technical Representative: Peter Dworakowski

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

Telephone: (630) 375-5135 Email: PDworakowski@peerless-av.com

Product Information

Product Name: Projector and Monitor Mounts

Product Type: AV Supports

Product Model Number: EXA, EXB, EXC, PC930, PRGS-UNV, PRSS-UNV & ACC570

General Description: Ceiling Mounted Overhead AV Supports

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, 2013.

Signature of Applicant: _____ Date: 7/8/13

Title: Principal Engineer Company Name: **EASE Co.**

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: 909-606-7667 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 1950-10

☐ Other* (Please Specify):

*Use of test criteria other than those adopted by the California Building Standards Code, 2013 (CBSC 2013) 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 2013 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 2013 ONLY

Signature: Date: 09/29/2014

Print Name: William Staehlin

Title: SSE

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-0069-13

THIS PREAPPROVAL CONFORMS TO THE 2013 CALIFORNIA BUILDING CODE

MANUFACTURER: **PEERLESS INDUSTRIES INC.**

EQUIPMENT NAME: **PRGS & PRSS SERIES CEILING MOUNTS AND KITS**

Date: 9/29/14

GENERAL NOTES

1. THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE 2013 CBC. THE DEMANDS (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE 2013 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 2013 CALIFORNIA BUILDING CODE WHERE S_{DS} IS NOT GREATER THAN 2.5.
4. FORCES PER ASCE 7-10 SECTION 13.3.1, EQUATIONS 13.3-1, 13.3-2 & 13.3-3, WHERE S_{DS} = 2.5, a_p = 2.5, I_p = 1.5, R_p = 2.5, z/h = 0 AT CONCRETE SLAB & 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 ON GRADE DETAIL VALID FOR DEMANDS SHOWN AT ANY ELEVATION BELOW GRADE. (i.e. z/h $\leq$ 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 2013 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.

   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.

REGISTERED PROFESSIONAL ENGINEER
JONATHAN ROBERSON
No. 4197
EXP. 6-30-2016
9/29/14
STRUCTURAL
STATE OF CALIFORNIA

PEERLESS INDUSTRIES INC.

PRGS & PRSS SERIES CEILING MOUNTS AND KITS

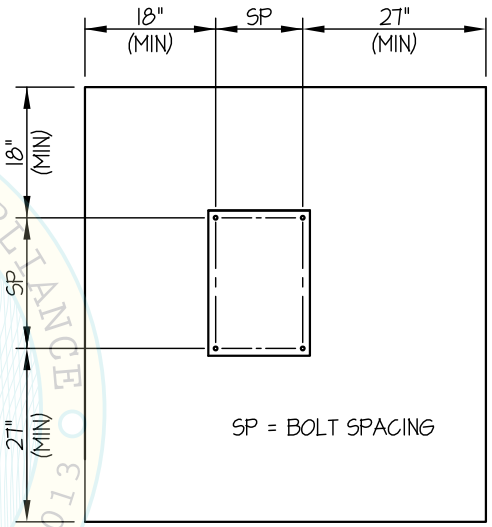
DES. J. ROBERSON
JOB NO. 11-1321
DATE 9/29/14
SHEET 2 OF 10 SHEETS

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
1/2"	Normal Weight	3000	Hilti Kwik Bolt TZ	ESR-1917	3.25"	6"	18"	6"	40 FT-LB	2685 lb

B. THIS PREAPPROVAL ALLOWS FOR UP TO A MAXIMUM OF 2 ADJACENT CONCRETE SLAB EDGES, 18" AWAY MINIMUM (i.e. - CORNER). SEE ADJACENT DETAIL FOR ADDITIONAL MINIMUM ALLOWABLE CONCRETE EDGE DISTANCES.



TYPICAL CONCRETE EDGE DETAIL

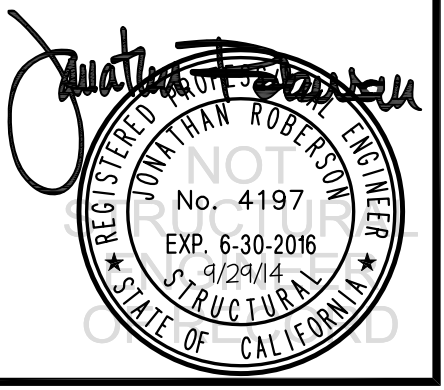
C. TESTING OF EXPANSION ANCHORS PER 2013 CBC, 1913A.7: TENSION & TORQUE TESTING SHALL BE DONE IN THE PRESENCE OF THE SPECIAL INSPECTOR AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO OSHPD

(i) AFTER AT LEAST 24 HOURS HAVE ELAPSED SINCE INSTALLATION, TORQUE TEST OR 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.
- 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.



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PRGS & PRSS SERIES CEILING MOUNTS AND KITS

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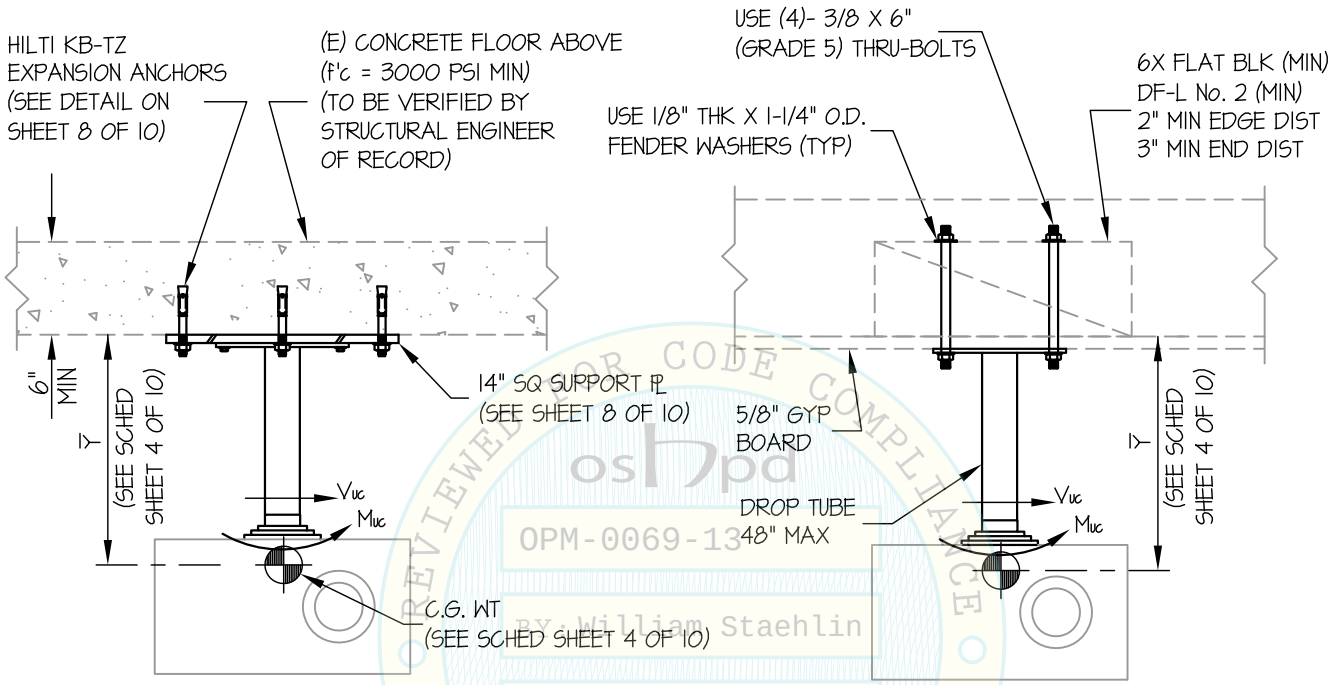
SHEET 3 OF 10 SHEETS

SEISMIC ANCHORAGE — CEILING MOUNTED



CONCRETE FLOOR SLAB — AT WOOD JOISTS

NOTES:

1. FORCES ARE DETERMINED PER 2013 CALIFORNIA BUILDING CODE AND ASCE 7-10 STRENGTH DESIGN IS USED.

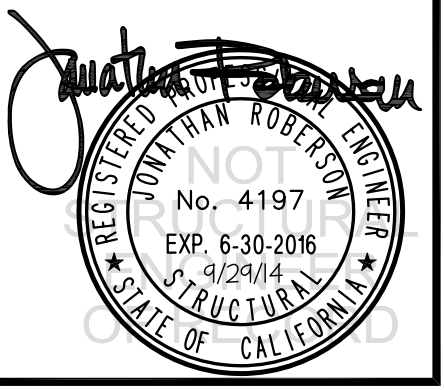
   HORIZONTAL FORCE (Eh) = 4.50 Wp (S_{DS} = 2.5, a_p = 2.5, I_p = 1.5, R_p = 2.5, Ω_o = 2.5, z/h ≤ 1)
   HORIZONTAL FORCE (Ehc) = 11.25 Wp (Ω_o = 2.5 FOR CONCRETE ANCHORAGE)
   VERTICAL FORCE (Ev) = 0.50 Wp

2. CENTER OF GRAVITY (C.G.) WEIGHT IS A MAXIMUM. 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 ADDITION TO ALL OTHER LOADS.

4. THE MAXIMUM LOAD THAT CAN BE ATTACHED TO THE BOTTOM END OF THE SUPPORT DROP TUBE IS, AS FOLLOWS:
   Muc = 4.50(50#)(6.5") = 1462 IN-LB
   Vuc = 4.50(50#) = 225 LB

5. SEE GENERAL NOTES: SHEETS 1 AND 2.

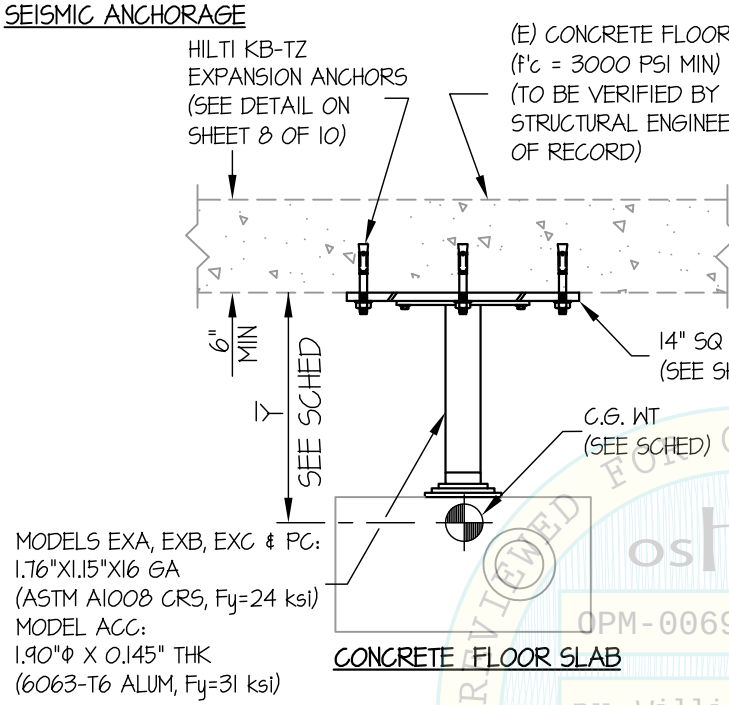


PEERLESS INDUSTRIES INC.

PRGS & PRSS SERIES CEILING MOUNTS AND KITS

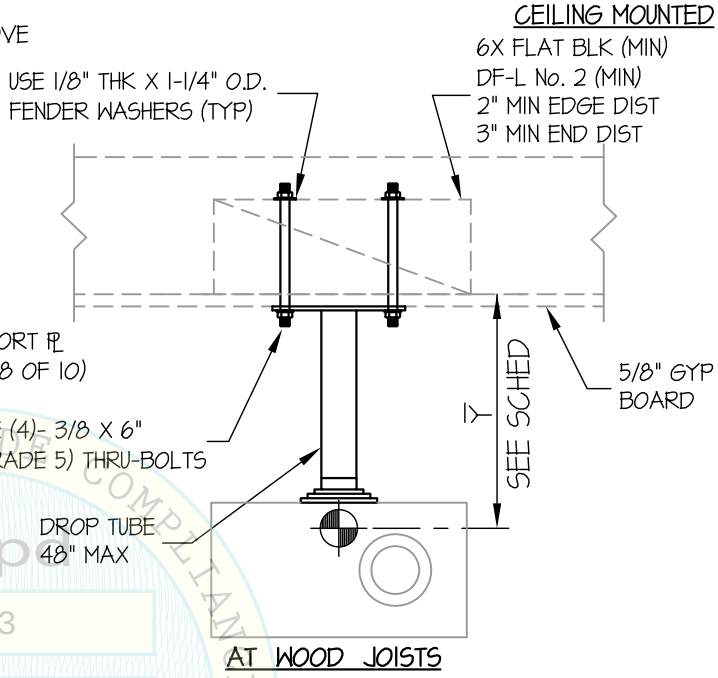
DES. J. ROBERSON
JOB NO. 11-1321
DATE 9/29/14
SHEET 4 OF 10 SHEETS

SEISMIC ANCHORAGE



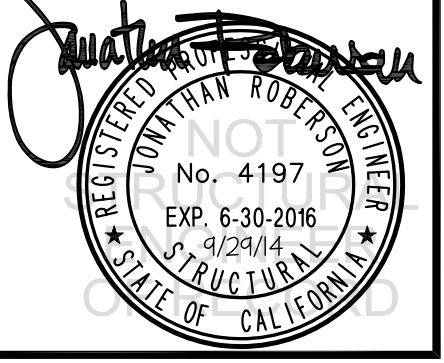
CONCRETE FLOOR SLAB

CEILING MOUNTED



AT WOOD JOISTS

PLATE MODEL	EXTENSION TUBE LENGTH (in.)	TUBE Wt (lb.)	MAXIMUM ACCESSORY Wt (lb.)	TOTAL CG Wt (lb.)	CG LOCATION FROM TOP OF PLATE (in.)
EXA, EXB, EXC, PC930/PC932 SERIES	12.25	6.2	50	56.2	12.9
EXA, EXB, EXC, PC930/PC932 SERIES	16	6.2	50	56.2	16.8
EXA, EXB, EXC, PC930/PC932 SERIES	24.5	6.8	50	56.8	25.7
EXA, EXB, EXC, PC930/PC932 SERIES	36.5	7.6	50	57.6	38.3
PRGS-UNV & PRSS-UNV	N/A	2	50	52	7.5
ACC570	6	6.5	50	56.5	14.2
ACC570	12	7.82	50	57.82	20.2
ACC570	24	10.4	49.6	60	31.6
ACC570	36	13.1	46.9	60	42.7
ACC570	48	15.7	44.3	60	58.8

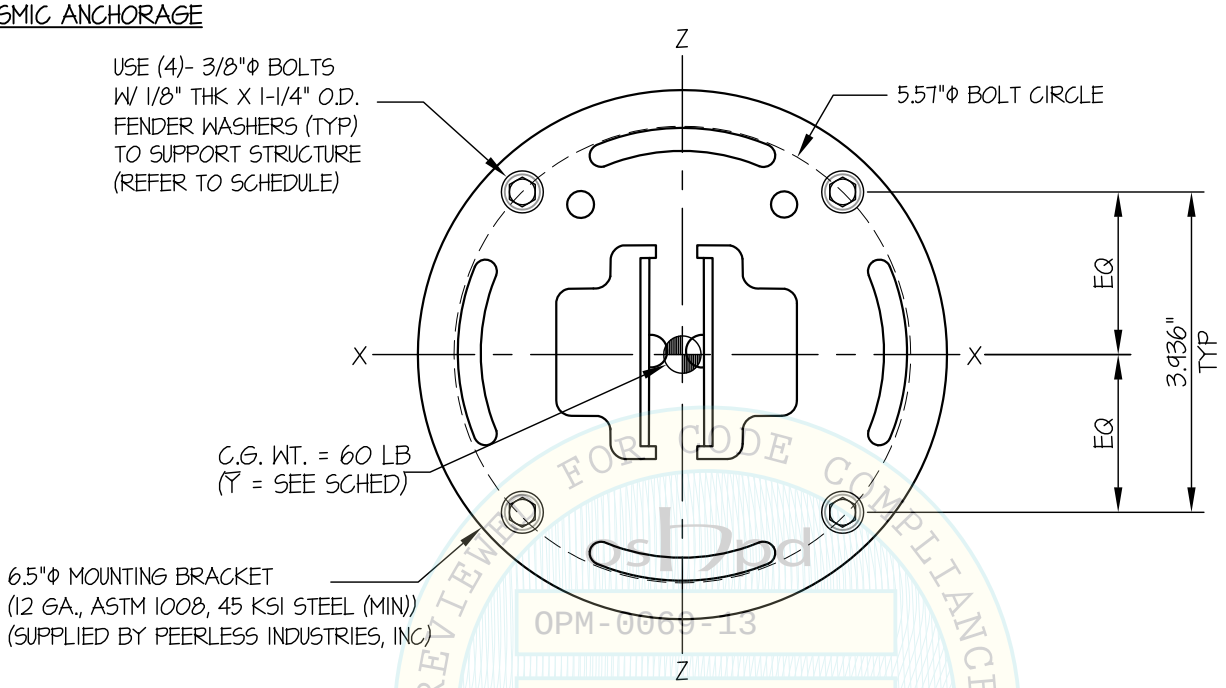


PEERLESS INDUSTRIES INC.

PRGS & PRSS SERIES CEILING MOUNTS AND KITS

DES. J. ROBERSON
JOB NO. 11-1321
DATE 9/29/14
SHEET 5 OF 10 SHEETS

SEISMIC ANCHORAGE — CEILING MOUNTED

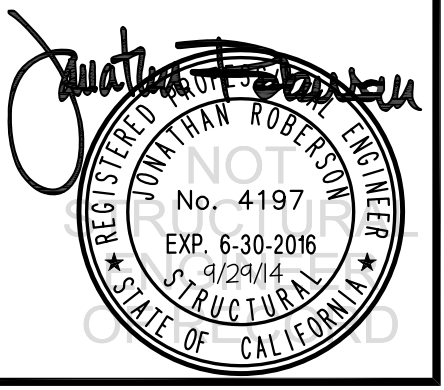


PLAN AT CEILING PLATE

(MODELS EXA, EXB, EXC AND PC930/PC932 SERIES MOUNTING PLATES)

NON - CONCRETE ANCHORS					
EXTENSION TUBE LENGTH	Ŷ	MOMENT inch-lb	TENSION lb/bolt	SHEAR lb/bolt	WOOD FRAMING DETAIL
12.25"	12.9"	3483	838	68	A/9
16"	16.8"	4536	1083	68	A/9
24.5"	25.7"	6939	1644	68	B/10
36.5" (MAX)	38.3"	10,341	2422	68	B/10

NOTES: 1. FOR CONCRETE INSTALLATION REFER DETAILS ON SHEET 8 OF 10
FOR WOOD FRAMING INSTALLATION REFER TO DETAILS ON SHEET 9 & 10 OF 10
2. USE SAE J429 GRADE 5 BOLTS



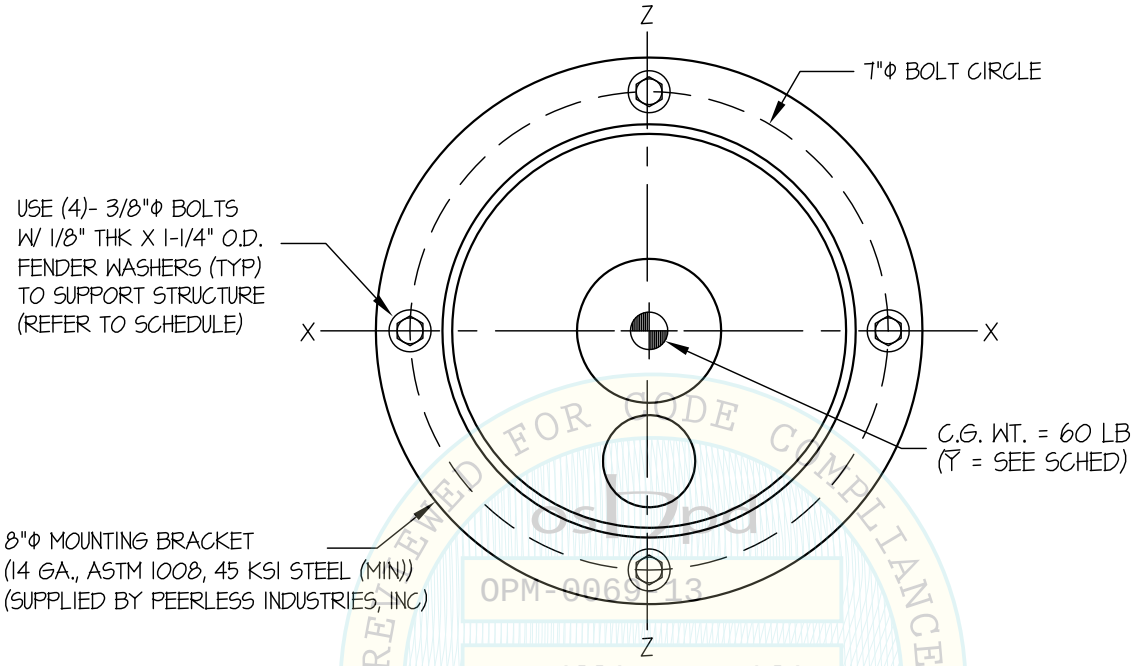
PEERLESS INDUSTRIES INC.

PRGS & PRSS SERIES CEILING MOUNTS AND KITS

DES. J. ROBERSON
JOB NO. 11-1321
DATE 9/29/14

SHEET 6 OF 10 SHEETS

SEISMIC ANCHORAGE — CEILING MOUNTED

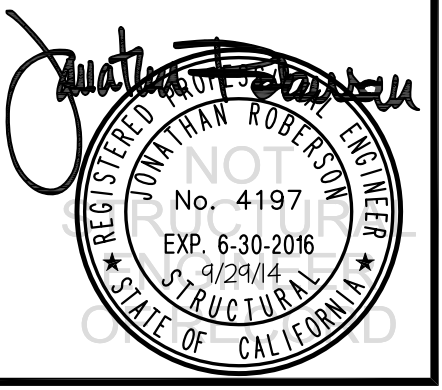


PLAN AT CEILING PLATE

(MODEL ACC570 CEILING PLATE)

NON - CONCRETE ANCHORS					
EXTENSION TUBE LENGTH	Ȳ	MOMENT inch-lb	TENSION lb/bolt	SHEAR lb/bolt	WOOD FRAMING DETAIL
6"	14.2"	3834	738	68	A/9
12"	20.2"	5454	1039	68	A/9
24"	31.6"	8532	1610	68	B/10
36"	42.7"	11,529	2167	68	B/10
48" (MAX)	58.8"	15,876	2974	68	B/10

NOTES: 1. FOR CONCRETE INSTALLATION REFER DETAILS ON SHEET 8 OF 10
FOR WOOD FRAMING INSTALLATION REFER TO DETAILS ON SHEET 9 & 10 OF 10
2. USE SAE J429 GRADE 5 BOLTS



PEERLESS INDUSTRIES INC.

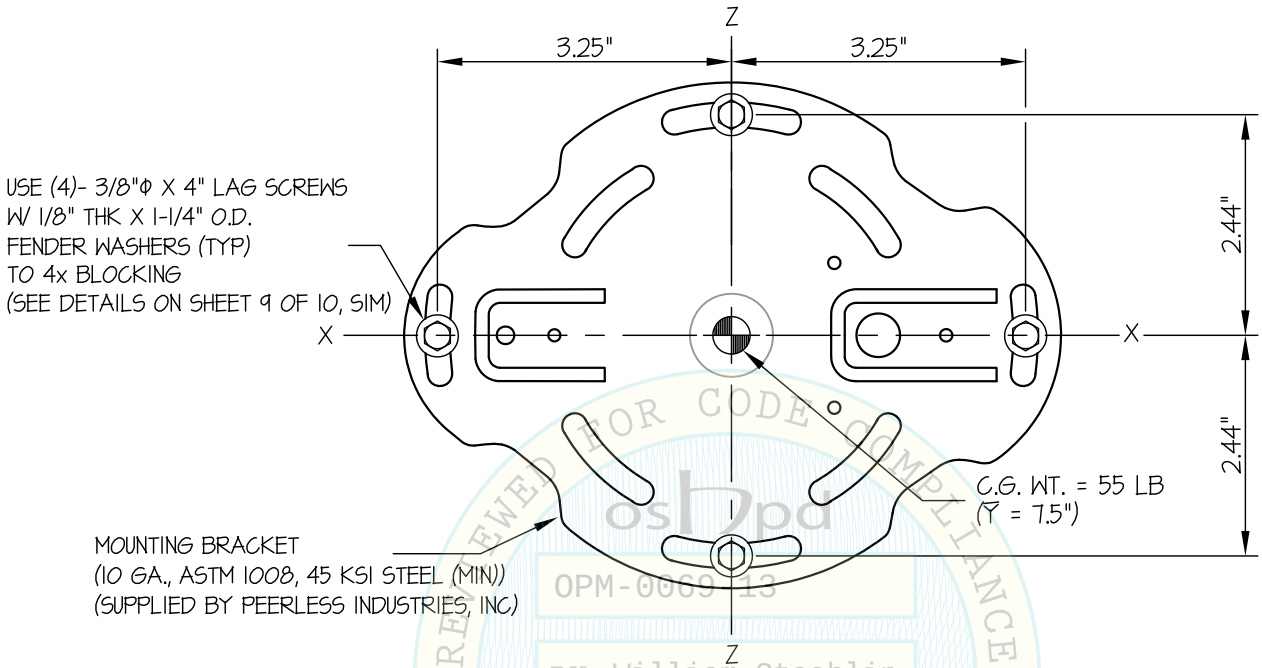
PRGS & PRSS SERIES CEILING MOUNTS AND KITS

DES. J. ROBERSON
JOB NO. 11-1321
DATE 9/29/14

SHEET 7 OF 10 SHEETS

SEISMIC ANCHORAGE

CEILING MOUNTED



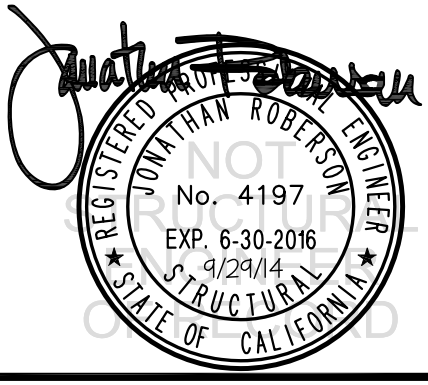
PLAN AT CEILING PLATE

(PRGS/PRSS UNV MOUNTING BASE)

NON - CONCRETE ANCHORS.			
Ȳ	MOMENT inch-lb	TENSION lb/bolt	SHEAR lb/bolt
7.5" (MAX)	1860	618	124

NOTES: 1. REQUIREMENTS FOR INSTALLATIONS MEETING ANSI/ASME STANDARD B18.2.1; STANDARD HEX LAG SCREW DIMENSIONS PER NDS-2012 APPENDIX TABLE L2

2. FOR CONCRETE INSTALLATION REFER DETAILS ON SHEET 8 OF 10
FOR WOOD FRAMING INSTALLATION REFER TO DETAILS ON SHEET 9 & 10 OF 10



PEERLESS INDUSTRIES INC.

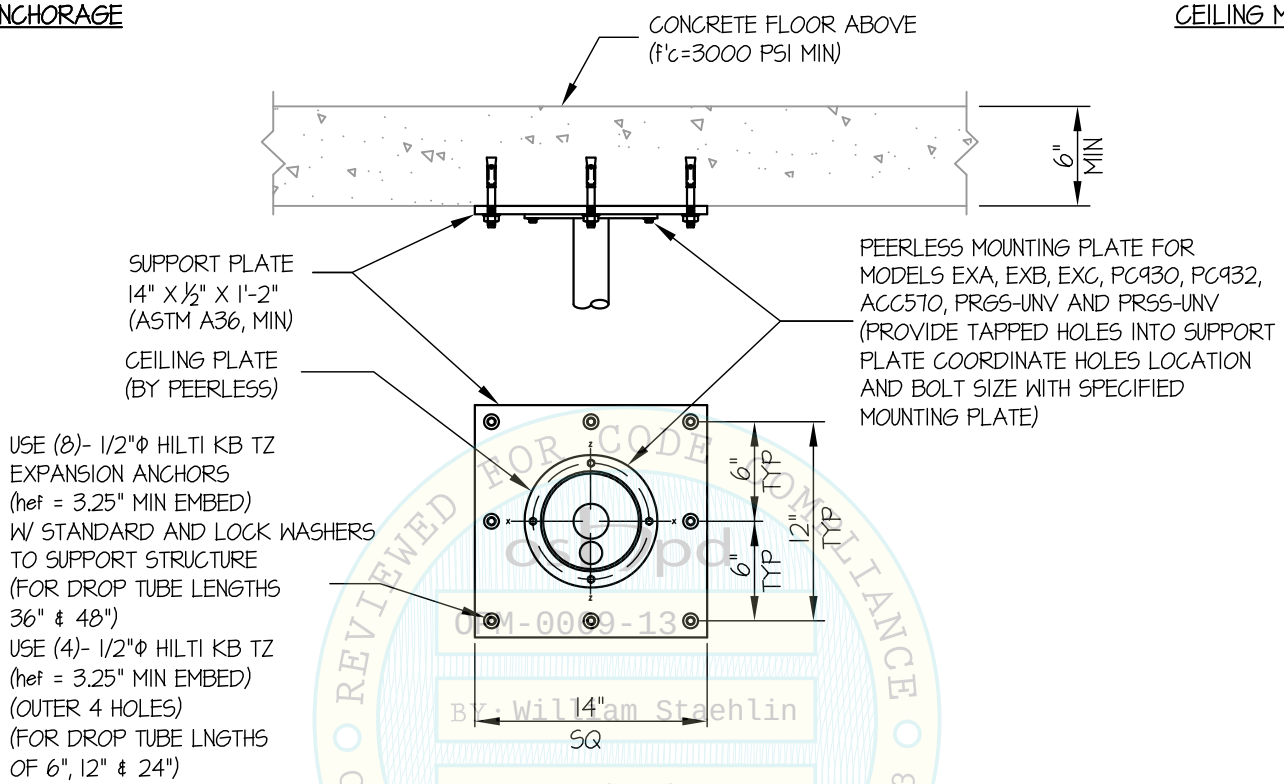
PRGS & PRSS SERIES CEILING MOUNTS AND KITS - CONCRETE ADAPTER PLATE

DES. J. ROBERSON
JOB NO. 11-1321
DATE 9/29/14

SHEET 8 OF 10 SHEETS

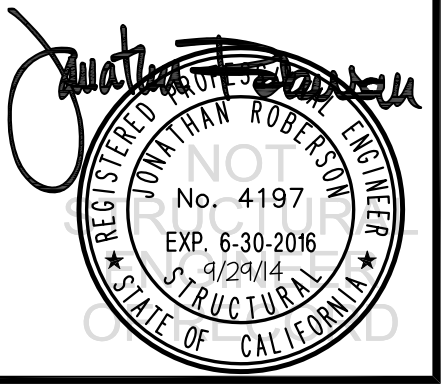
SEISMIC ANCHORAGE

CEILING MOUNTED



DETAIL AT SUPPORT PLATE

CONCRETE ANCHORS				
EXTENSION TUBE LENGTH	Y	MOMENT inch-lb	TENSION lb/bolt	SHEAR lb/bolt
6"	14.2"	9585	760	169
12"	20.2"	13,635	1070	169
24"	31.6"	21,330	1659	169
36"	42.7"	28,823	1484	85
48" (MAX)	58.8"	39,690	2039	85

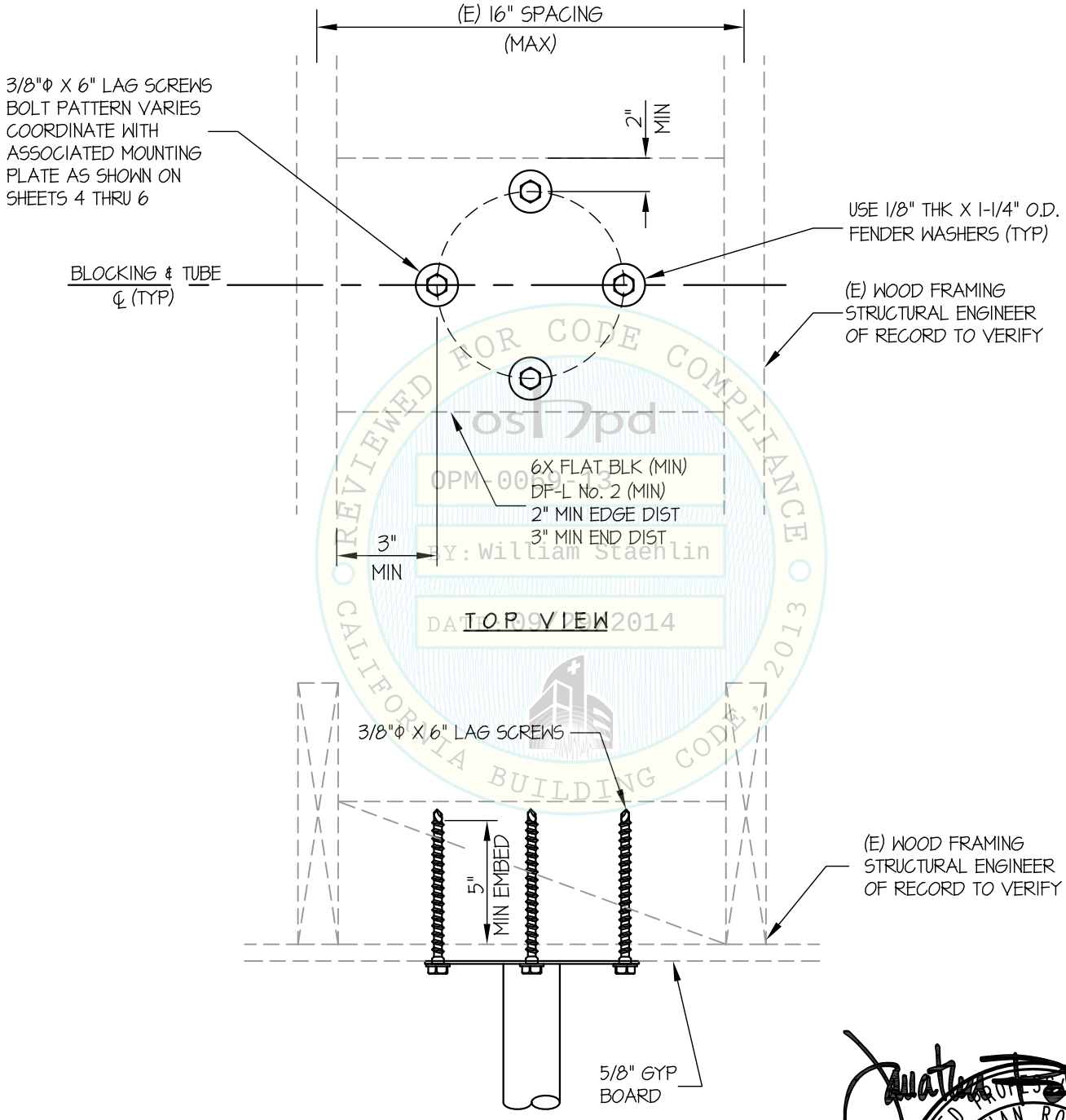


PEERLESS INDUSTRIES INC.

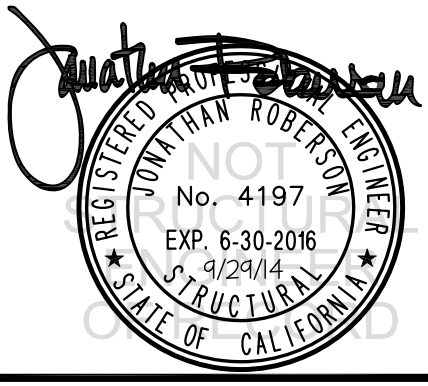
PRGS & PRSS SERIES CEILING MOUNT MOUNTS AND KITS - WOOD DETAILS

DES. J. ROBERSON
JOB NO. 11-1321
DATE 9/29/14
SHEET 9 OF 10 SHEETS

SEISMIC ANCHORAGE — CEILING MOUNTED



A/9 DETAIL
SCALE: NTS

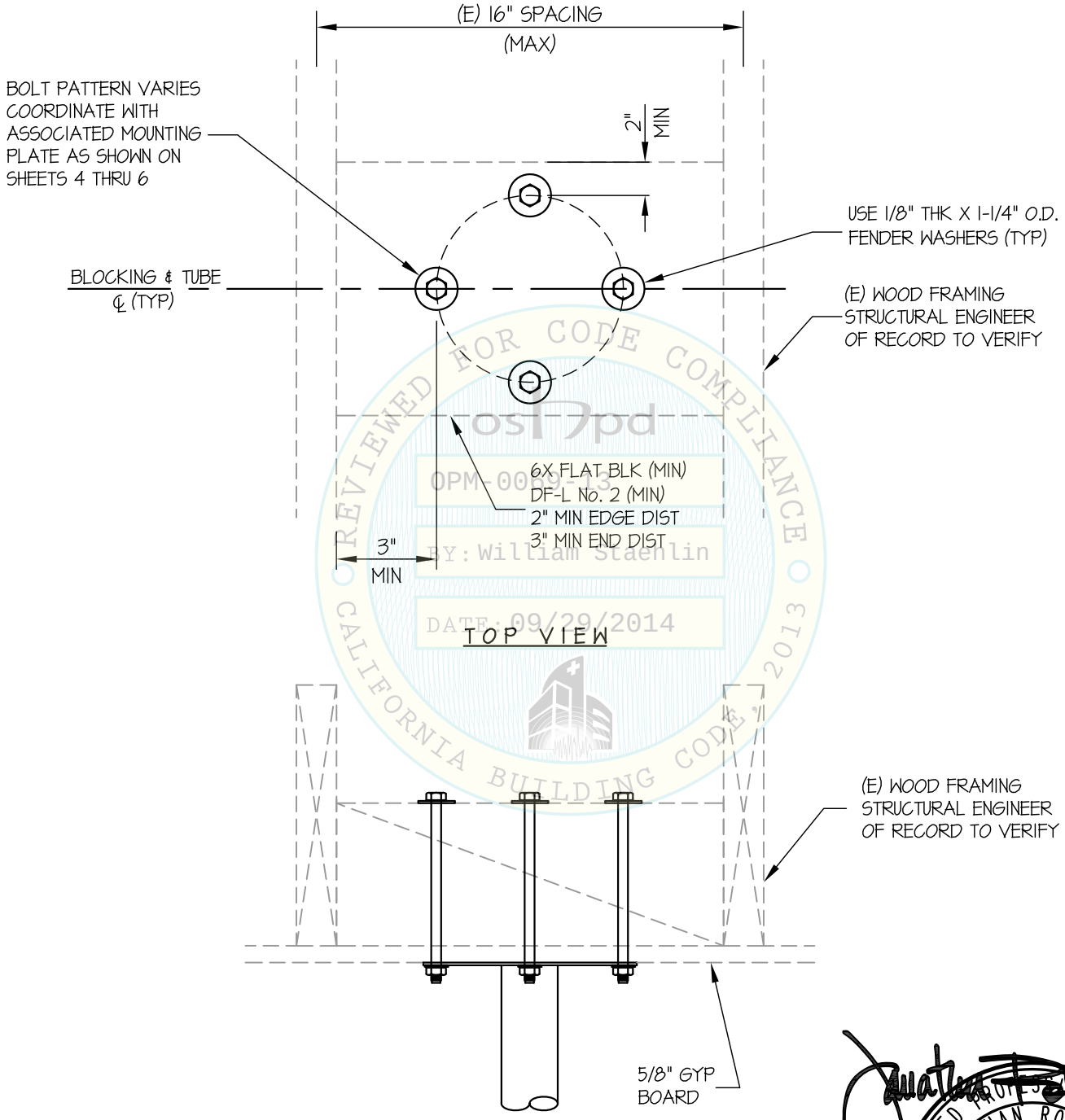


PEERLESS INDUSTRIES INC.

PRGS & PRSS SERIES CEILING MOUNT MOUNTS AND KITS - WOOD DETAILS

DES. J. ROBERSON
JOB NO. 11-1321
DATE 9/29/14
SHEET 10 OF 10 SHEETS

SEISMIC ANCHORAGE — CEILING MOUNTED



B / 10 DETAIL
SCALE: NTS