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

OFFICE USE ONLY
APPLICATION #: OPM-0409-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

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

Manufacturer Information

Manufacturer: Phononic Devices, Inc.

Manufacturer's Technical Representative: Erik Miller

Mailing Address: 800 Capitola Dr, Suite 7, Durham NC 27713

Telephone: 919-908-7088 Email: Erik.miller@phononic.com

Product Information

Product Name: Evolve 5.5

Product Type: Refrigerator

Product Model Number: ELR055SSA-002; ELR055SGA-002; ELR055SSB-002; ELR055SGA-002

General Description: 5.5 cubic foot medical grade refrigerator

Applicant Information

Applicant Company Name: Phononic Devices, Inc.

Contact Person: Jerilin Kenney

Mailing Address: 800 Capitola Dr, Suite 7, Durham NC 27713

Telephone: 919-908-7858 Email: Jerilin.kenney@phononic.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: *Jerilin Kenney* Date: 3/15/17

Title: VP / GM Life Sciences & Healthcare Company Name: Phononic Devices, Inc.

Registered Design Professional Preparing Engineering Recommendations

Company Name: Degenkolb Engineers

Name: Robert Graff California License Number: 5113

Mailing Address: 375 Beal St, Suite 500, San Francisco CA 94105

Telephone: 415 392-6952 Email: rgraff@degenkolb.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): Manufacturer product info provided within the calculation package

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

Signature: Date: 08-03-2017

Print Name: William Staehlin

Title: SSE

Condition of Approval (if applicable):

GENERAL NOTES

I GENERAL

1. THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CALIFORNIA BUILDING CODE (CBC) 2016. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2016.
2. EQUIPMENT: PHONONIC REFRIGERATOR – EVOLVE 5.5

II. RESPONSIBILITIES OF THE STRUCTURAL ENGINEER OF RECORD

1. VERIFY MATERIALS AND WORKMANSHIP TO CONFORM WITH THE 2016 EDITION OF THE CALIFORNIA BUILDING CODE AND THE REQUIREMENTS OF THIS PRE -APPROVAL DOCUMENT.
2. VERIFY THE ADEQUACY OF THE EXISTING FRAMING TO SUPPORT THE LOADS INDICATED IN THE DETAILS ON S2 AND S3, IN ADDITION TO ALL OTHER LOADS.
3. VERIFY ANCHORS ARE ADEQUATE DISTANCES FROM OPENINGS AND EDGES OF SLABS.
4. VERIFY ANCHORS ARE ADEQUATE DISTANCES FROM NEW OR EXISTING ANCHORS.
5. DESIGN ANY SUPPLEMENTARY MEMBER AND THEIR ATTACHMENT OTHER THAN THOSE DETAILED WITHIN THIS PRE-APPROVAL.
6. VERIFY THE EQUIPMENT WEIGHT, C.G. LOCATION. ANCHOR LOCATIONS AND ANCHOR DETAILS AGREE WITH THE INFORMATION SHOWN IN THIS PRE-APPROVAL

III. MECHANICAL ANCHORS

1. WEDGE ANCHORS INTO CONCRETE: USE ZINC PLATE OR STAINLESS STEEL POWERS, POWER STUD + SD2 (ICC ESR-2502).
2. THREADED ANCHORS INTO CONCRETE: USE ZINC PLATE POWERS SNAKE + ANCHORS ICC (ESR 2272).
3. INSTALL ANCHORS IN ACCORDANCE WITH ICC REPORT.
4. IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON AND SHIFT THE HOLE LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM OF 2 ANCHOR DIAMETERS OR 1 INCH, WHICHEVER IS LARGER, OF SOUND CONCRETE BETWEEN THE DOWEL AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT APPROVED BY THE ENGINEER OF RECORD. NOTIFY THE ENGINEER OF RECORD IF ANY REINFORCING IS DAMAGED.
5. ANCHORS WILL BE PROOF-TESTED BY OWNER'S TESTING AND INSPECTION AGENCY REPORT OF THE TEST RESULTS TO BE SUBMITTED TO OSHPD.
6. IF ANY ANCHOR FAILS TESTING, REPLACE ANCHOR AND TEST ADDITIONAL ANCHORS OF THE SAME CATEGORY NOT PREVIOUSLY TESTED UNTIL TWENTY (20) CONSECUTIVE PASS, THEN RESUME INITIAL TESTING FREQUENCY.
7. TEST ANCHORS NO SOONER THAN 24 HOURS AFTER INSTALLATION.
8. TEST 50% WEDGE ANCHORS PER THE FOLLOWING METHOD:
   A. TORQUE WRENCH METHOD: TEST ANCHORS TO THE TORQUE LOAD INDICATED IN THE TABLE BELOW WITHIN THE FOLLOWING LIMITS:

ANCHOR DIA (IN)	TORQUE LOAD (FT-LBS)	MAX TURNS OF NUT
3/8 WEDGE ANCHOR	20	1/2 TURN
1/2 WEDGE ANCHOR	40	1/2 TURN
1/2 THREADED ANCHOR	36	1/4 TURN

9. PROVIDE FOR FULL THREAD ENGAGEMENT OF NUT AND WASHER.
10. THE FOLLOWING APPLY TO THRU-BOLTS:
    A. BOLTS SHALL BE TORQUED BY 3/4 TURN OF THE NUTS AFTER SNUG TIGHT.
    B. THRU-BOLT HOLES SHALL BE 1/16" LARGER THAN BOLT SIZE FOR CONCRETE.
    C. THRU-BOLTS IN CONCRETE SHALL RECEIVE SPECIAL INSPECTION AND TESTING IN ACCODRANCE WITH REQUIREMENTS FOR POST-INSTALLED ANCHORS.

V. STRUCTURAL TESTS, INSPECTIONS, AND OBSERVATIONS

1. AN INDEPENDENT TESTING AGENCY AND SPECIAL INSPECTORS WILL BE RETAINED BYTHE OWNER TO PERFORM THE FOLLOWING TESTS AND INSPECTION. PROVIDE ACCESS AND FURNISH SAMPLES TO THE AGENCY AS REQUIRED.
2. THE FOLLOWING ITEMS REQUIRE TESTS AND INSPECTIONS IN ACCORDANCE WITH THE REQUIREMENTS OF THE CHAPTER "STRUCTURAL TESTS AND INSPECTIONS" OF THE CODE.
3. MECHANICAL ANCHORS:
   A. VERIFY TYPE OF ANCHOR, ANCHOR DIMENSIONS, CONCRETE TYPE AND COMPRESSIVE STRENGTH, PREDRILLED HOLE DIMENSIONS, ANCHOR SPACING, EDGE DISTANCE, SLAB THICKNESS AND ANCHOR EMBEDMENT.
   B. PROOF-TEST AS INDICATED IN THE MECHANICAL ANCHORS SECTION OF THESE GENERAL NOTES.

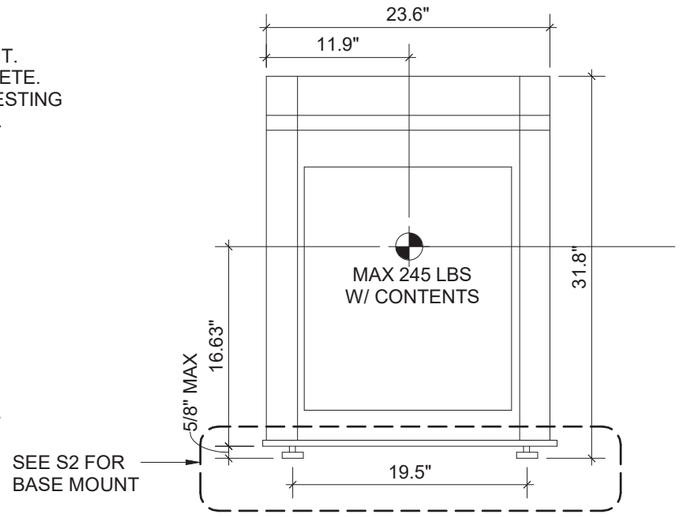
VI. DESIGN CRITERIA

1. APPLICABLE CODE: 2016 CALIFORNIA BUILDING CODE AND ASCE 7-10 INCLUDING SUPPLEMENTS.
2. SEISMIC DESIGN:
   a_p = 1.0
   R_p = 2.5
   Ω_0 = 2.0 WHERE APPLICABLE
   SEISMIC FORCE Fp = 1.80*Wp Ev = 0.500*Wp
   WHERE: z/h $\leq$ 1.0 (SUPPORTS & ATTACHMENTS AT ANY FLR)
   $S_{DS} \leq$ 2.5 WORST CASE ACCEL.
   Ip = 1.5 FOR ESSENTIAL EQUIP.

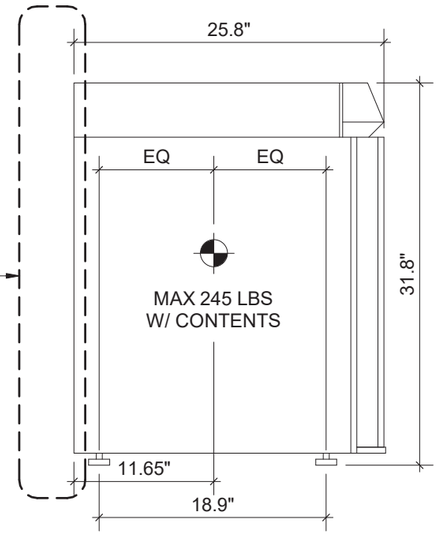
VII. HOW TO USE THIS PRE-APPROVAL

1. REVIEW AND UNDERSTAND ALL GENERAL NOTES AND FIGURES BEFORE PROCEEDING.
2. DETERMINE TYPE OF SUPPORTING STRUCTURE.
3. SELECT CORRECT INSTALLATION OPTION FOR LOCATION AND STRUCTURE TYPE.
4. DETERMINE THE MAXIMUM DEMANDS ON THE EXISTING STRUCTURE AND VERIFY THE ADEQUACY OF THE EXISTING STRUCTURE WITH THE STRUCTURAL ENGINEER OF RECORD FOR THE BUILDING.
5. CENTER OF GRAVITY (C.G.) WEIGHT IS A MAXIMUM. THIS PRE-APPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
6. EQUIPMENT MFR MUST DESIGN UNIT TO MAKE C.G. EQUAL OR LESS THAN THE C.G. HEIGHT DIMENSION SHOWN.
7. ALL HOLES THRU STEEL FOR BOLTS SHALL BE STANDARD HOLE PER AISC, 14TH ED TABLE J3.3 (MAX HOLE DIAMETER = BOLT SIZE + 1/16")

VIII. SHEET LIST



FRONT ELEVATION



SIDE ELEVATION

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REGISTERED PROFESSIONAL ENGINEER
ROBERT M. GRAFF
No. 5113
STRUCTURAL
STATE OF CALIFORNIA

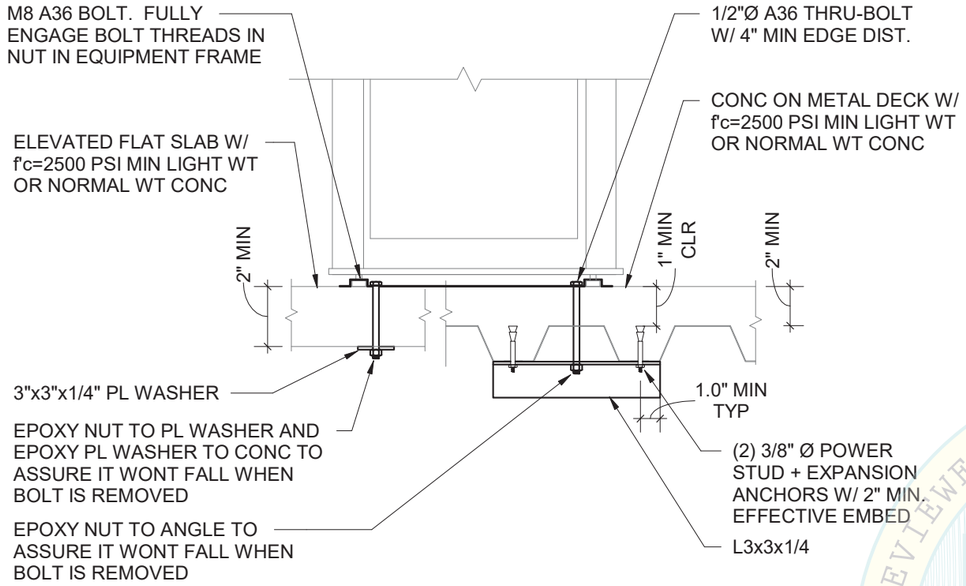
PHONONIC EVOLVE 5.5
OSHPD PREAPPROVAL OF
MANUFACTURERS CERTIFICATION
OPM 0409 - 13

Title: GENERAL NOTES & ELEVATIONS

Sheet Number: S1

Drawn: MM | Job Number: B7535001.00
Design: RG | Check: RG
Date: 05/12/2017

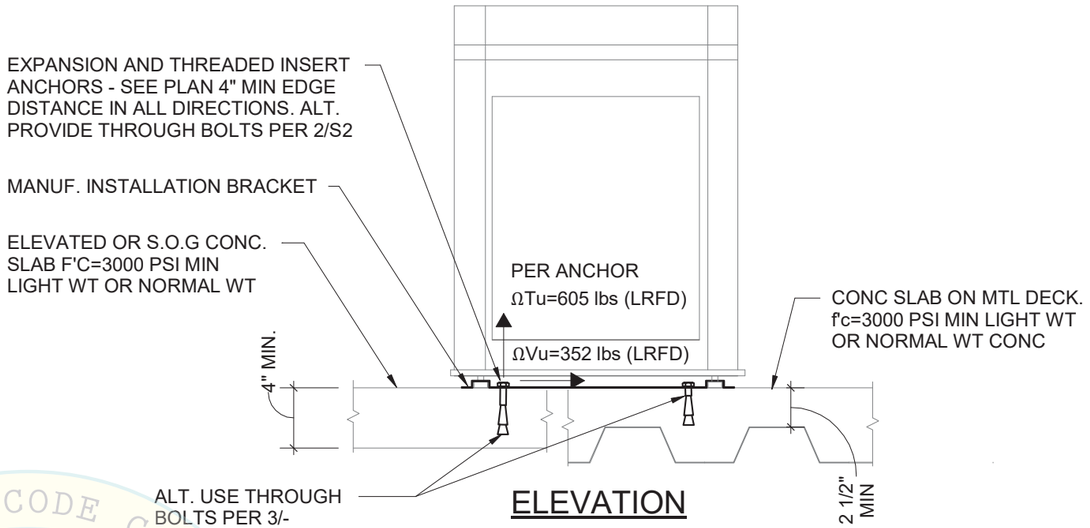
1 OF 33 Sheets



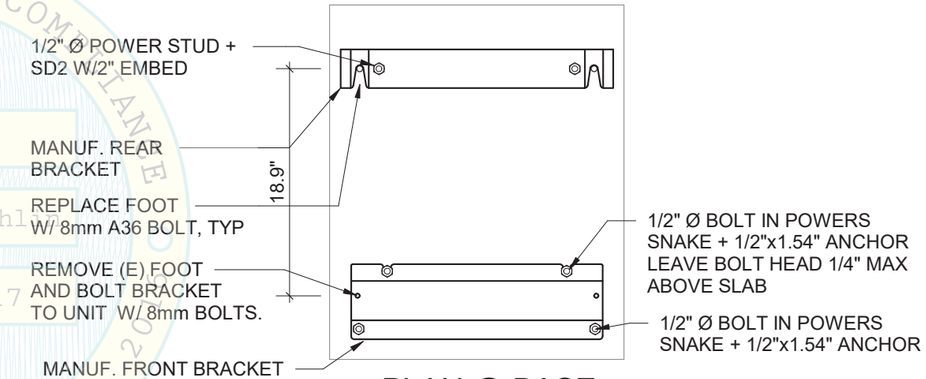
2 THROUGH BOLT OPTION

INSTALLATION PROCESS – CONCRETE SLAB

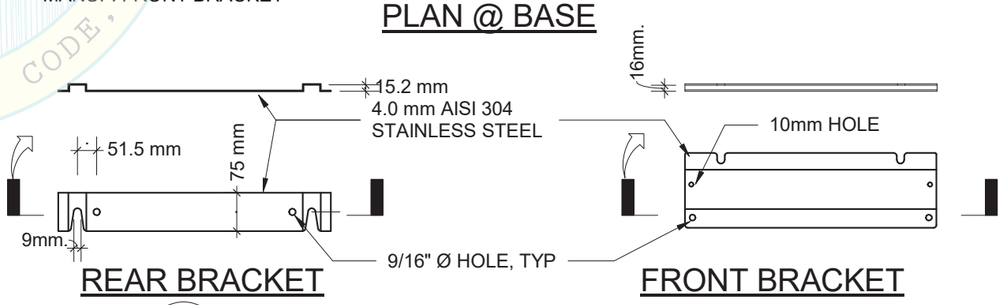
1. INSTALL REAR BRACKET AND TEST THE ANCHORS.
2. REMOVE THE REAR PLASTIC EQUIPMENT FEET AND REPLACE WITH 8MM A36 BOLTS. ADJUST BOLT FEET TO LEVEL THE UNIT.
3. REMOVE THE FRONT PLASTIC EQUIPMENT FEET AND BOLT THE FRONT BRACKET TO THE EQUIPMENT FRAME WITH 8MM A36 BOLTS.
4. PLACE THE UNIT AND ITS 8MM BOLT FEET INTO THE REAR BRACKET.
5. MARK THE ANCHOR LOCATIONS FOR THE FRONT BRACKET.
6. REMOVE UNIT, INSTALL THE FOUR SNAKE ANCHORS, AND TEST THE ANCHORS.
7. INSTALL THE BOLTS IN THE BACK TWO SNAKE ANCHORS LEAVING ¼" MAX CLEAR FROM THE SLAB TO THE BOLT HEAD.
8. INSTALL THE UNIT AND SLIDE THE FRONT BRACKET UNDER THE BOLT HEADS.
9. INSTALL THE FRONT TWO BOLTS INTO THE PREVIOUSLY INSTALLED SNAKE ANCHORS.



ELEVATION



PLAN @ BASE



REAR BRACKET

FRONT BRACKET

1 CONCRETE SLAB INSTALLATION

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REGISTERED PROFESSIONAL ENGINEER ROBERT M. GRAFF No. 5113 STRUCTURAL STATE OF CALIFORNIA

PHONONIC EVOLVE 5.5
OSHPD PREAPPROVAL OF MANUFACTURERS CERTIFICATION
OPM 0409 - 13

Title: BASE MOUNT DETAILS

Sheet Number: S2

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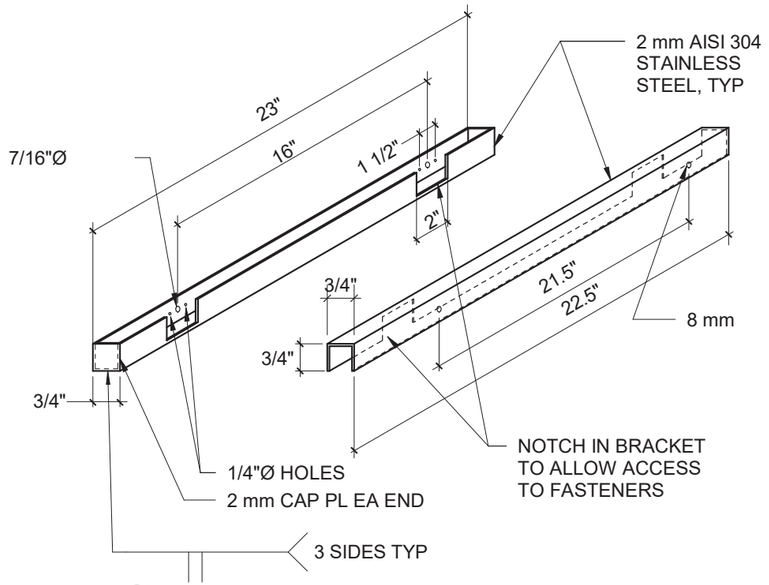
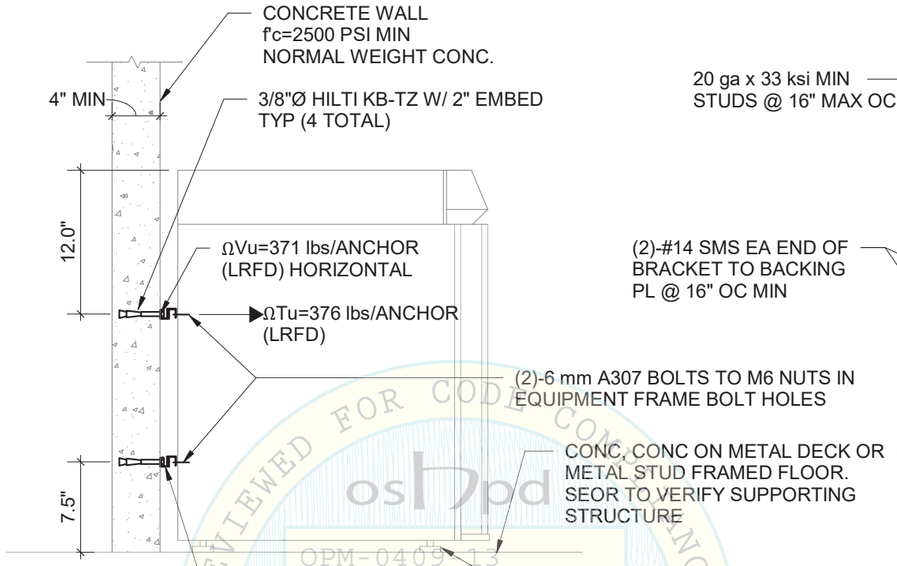
Date:	05/12/2017		2 OF 33 Sheets



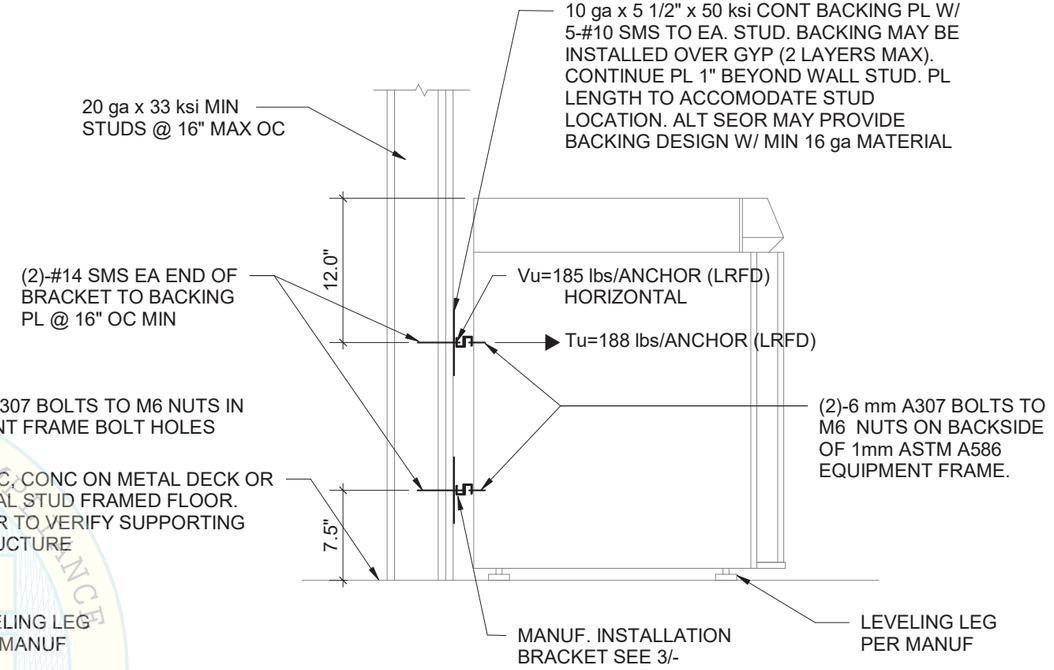
3 MOUNTING BRACKET



2 CONCRETE WALL MOUNT

INSTALLATION PROCESS – CONCRETE WALL

1. INSTALL BRACKETS ON THE BACK OF THE UNIT.
2. LAYOUT THE WALL BRACKETS AND DRILL FOR ANCHORS.
3. INSTALL THE WALL BRACKET AND TORQUE TEST THE ANCHORS.
4. SLIDE THE UNIT INTO POSITION. UNTIL BRACKETS MAKE CONTACT.
5. LEAN THE UNIT FORWARD WHILE PUSHING TOWARD THE WALL.
6. LOWER THE UNIT INTO PLACE ENGAGING THE TWO BRACKETS.



1 METAL STUD WALL MOUNT

INSTALLATION PROCESS – METAL STUD WALL

1. INSTALL BRACKETS ON THE BACK OF THE UNIT.
2. LAYOUT THE WALL BRACKETS AND SECURE IT TO BACKING PLATES WITH SHEET METAL SCREWS.
3. SLIDE THE UNIT INTO POSITION. UNTIL BRACKETS MAKE CONTACT.
4. LEAN THE UNIT FORWARD WHILE PUSHING TOWARD THE WALL.
5. LOWER THE UNIT INTO PLACE ENGAGING THE TWO BRACKETS.

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Title: WALL MOUNT DETAILS

Sheet Number: S3

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Date:	05/12/2017		3 OF 33 Sheets