

R O
O M

Seismic Anchoring

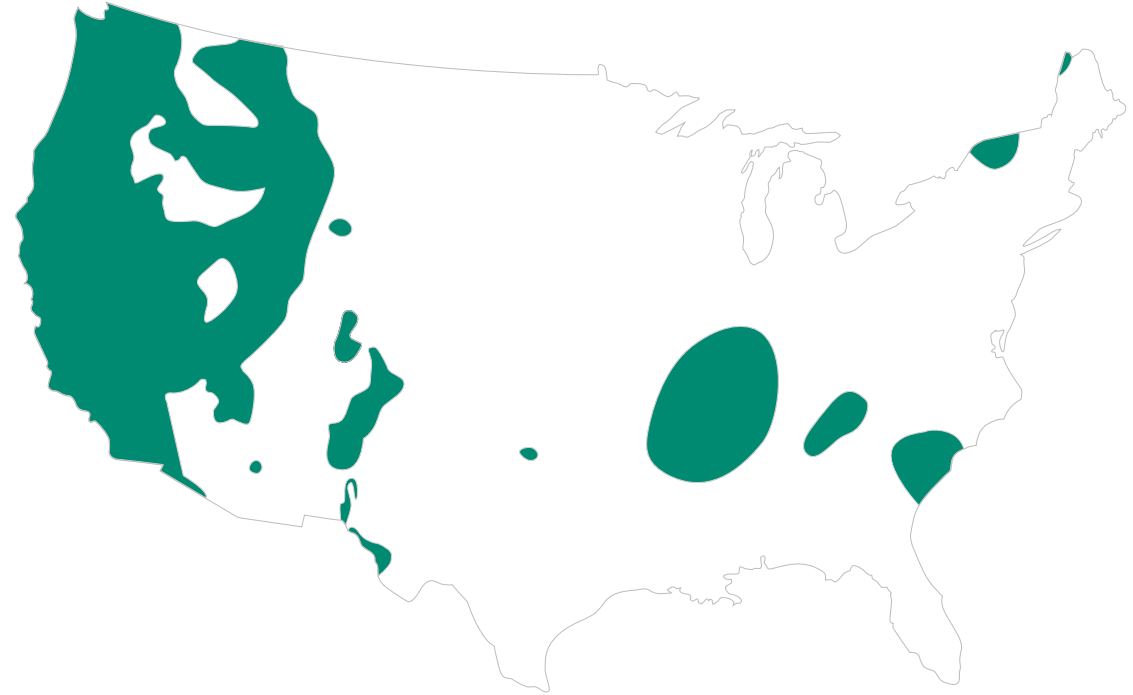
Safety first-

If you're within or near the areas highlighted, we recommend that you speak to your building manager/engineer about any potential anchoring requirements for seismic activity and local jurisdictional approvals for seismic anchoring design and installation.

This guide outlines everything you need to anchor your ROOM units.

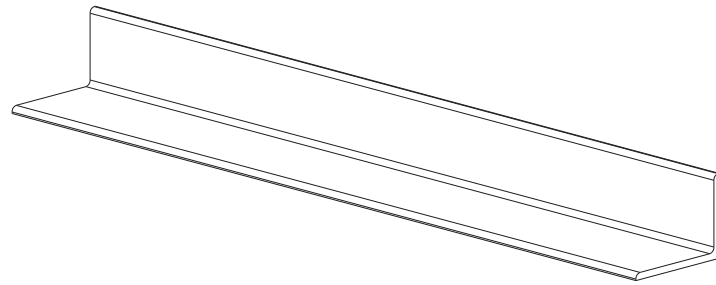
The following steps require either a concrete slab at least 5" thick, or a 1/2" thick wood deck with joists no more than 48" apart.

See the following pages for detailed requirements. Before you begin your anchoring assembly, make sure you are working with a contractor/installer approved by the building for carrying out the scope of work, have all tools and materials outlined, and if installing multiple units ensure that the units are placed at a sufficient distance apart to accommodate installation as necessary.



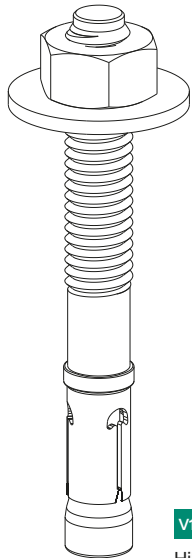
Concrete Installation Instructions

Materials needed



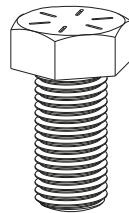
L1

Steel Angle L4X3X1/4", 30"
2x



V1

Hilti KBVTZ 1/2" x 3.75"
8x



V2

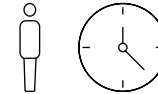
3/8"-24 Thread Size, 3/4" Long Screws
8x



V3

Washer for 3/8" Screw
8x

Duration



1 hour 30 minutes

Ask your assembly team to bring the following:

Tools, Special

- Drill bit for 3/8" thread in aluminum
- Tap for 3/8" thread in aluminum
- Drill bit for 3/8" through-hole on L-channel
- Drill bit for 1/2" through-hole on L-channel
- Drill bit for 1/2" anchor into concrete

Tools, Common

- Tap handle for 3/8" tap
- Hammer Drill
- Hammer

Support



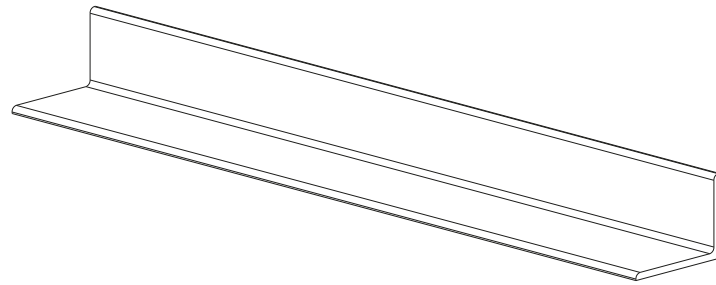
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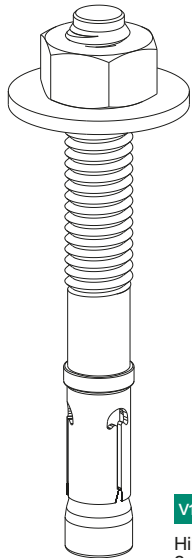
Wood Installation Instructions

Materials needed



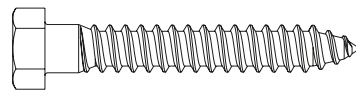
L1

Steel Angle L4X3X1/4", 30"
2x



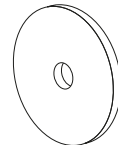
V1

Hilti KBVTZ 1/2" x 3.75"
8x



V4

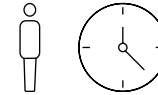
Hex Head Wood Screw
8x



V5

Washer for 1/2" Screw
8x

Duration



1 hour 30 minutes

Ask your assembly team to bring the following:

Tools, Special

- Drill bit for 3/8" thread in aluminum
- Tap for 3/8" thread in aluminum
- Drill bit for 3/8" through-hole on L-channel
- Drill bit for 1/2" through-hole on L-channel
- Drill bit for 1/2" screw into wood

Tools, Common

- Tap handle for 3/8" tap

Support



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GENERAL NOTES:

- THIS DESIGN IS BASED ON THE IBC 2018 AND CBC 2019.
- THIS DESIGN ONLY COVERS THE SUPPORTS AND ATTACHMENTS OF THE EQUIPMENT TO THE STRUCTURE.
- PRODUCT: ROOM S
 - HAS AT LEAST SIX (6) ATTACHMENTS AS DESCRIBED/DEPICTED HEREIN.
 - WEIGHT IS NO GREATER THAN 2000 LBS.
 - CENTER OF GRAVITY THAT IS NO GREATER THAN 46".
- SEISMIC DESIGN CRITERIA:
 - $S_{DS} = 2.57g$
 - $z/h = 1.0$
 - $I_p = 1.0$
 - $a_p = 1.0$
 - $R_o = 2.5$
 - $Q_o = 2.00$
 - $E_h = 5,000 \text{ LB}$
 - $E_v = 0.2"E_h$
- MAXIMUM LOADS PER EACH ANCHOR TENSION
 - INCLUDING OVERSTRENGTH Ω_o : 1570 LBS.
 - EXCLUDING Ω_o : 785 LBS.
- SHEAR
 - INCLUDING Ω_o : 625 LBS.
 - EXCLUDING Ω_o : 313 LBS.
- STEEL MATERIALS:
 - BOLTS AND SCREWS SHOULD BE 316 STAINLESS STEEL OR EQUIVALENT WITH MATCHING WASHERS AND NUTS.
 - MANUFACTURER PROVIDED FRAMING MEMBERS ARE 6063 ALUMINUM.
- CONCRETE SLABS:
 - 6" MINIMAL THICKNESS NORMAL WEIGHT CONCRETE WITH 3000 PSI MINIMUM STRENGTH
- RETROFIT CONCRETE ANCHORS:
 - HILTI KB-VTZ (ESR-3904) CARBON STEEL ANCHORS 0.500" DIAMETER x 3.75" MINIMUM HOLE DEPTH (3.25" EFFECTIVE EMBEDMENT) AND 480 IN-LBS INSTALLATION TORQUE.
 - EDGE DISTANCE IS 8.5" MINIMUM.
 - SPACING IS 8.5" MINIMUM BETWEEN ANY ADJACENT ANCHOR.

POST INSTALLED CONCRETE ANCHORS:

- PERIODIC SPECIAL INSPECTION SHALL BE IN ACCORDANCE WITH CBC 2019 SECTION 1705A AND TABLE 1705A.3 INCLUDING VERIFICATION OF ANCHOR TYPE, ANCHOR DIMENSIONS, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, ANCHOR SPACING, EDGE DISTANCES, CONCRETE MEMBER THICKNESS, TIGHTENING TORQUE, HOLE DIMENSIONS, ANCHOR EMBEDMENT AND ADHERENCE TO THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.
- FOLLOW THE PROVISIONS OF THE CBC 2019 SECTION 1913A.7.2 BY CONFIRMING THE INSTALLATION TORQUE SPECIFIED

BY THE MANUFACTURER.

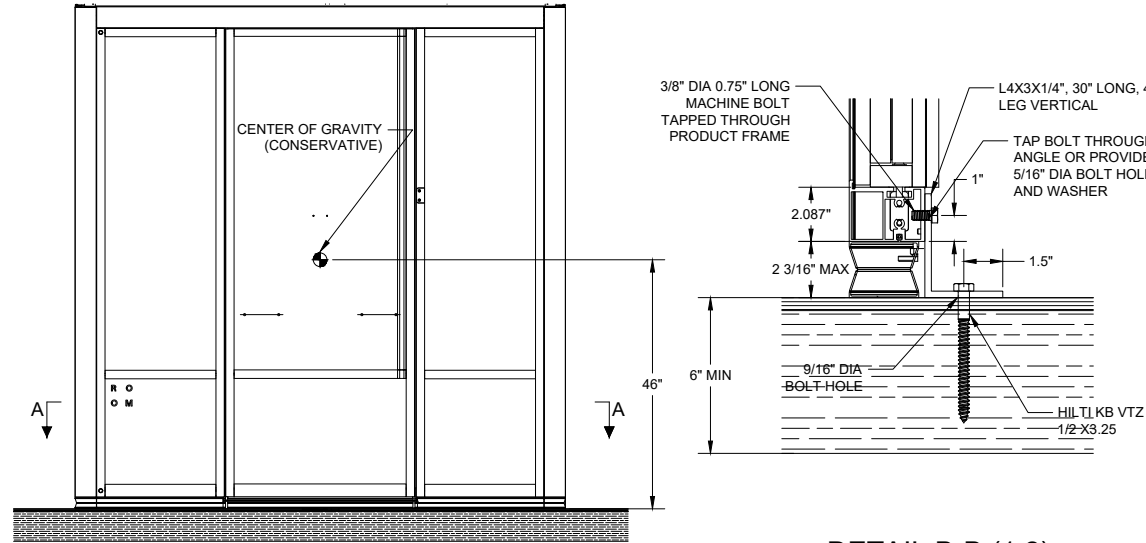
- TESTING IS NOT TO OCCUR UNTIL A MINIMUM OF 24 HOURS HAS ELAPSED AFTER THE INSTALLATION OF THE SUBJECT ANCHORS. TESTING SHALL BE DONE IN THE PRESENCE OF THE SPECIAL INSPECTOR. TEST 50% OF THE ANCHORS FOR EACH PIECE OF EQUIPMENT. USING A CALIBRATED TORQUE WRENCH VERIFY THE INSTALLATION TORQUE IS OBTAINED WITHIN 1/2 TURN OF THE NUT. A REPORT OF TEST RESULTS IS TO BE SUBMITTED TO THE ENFORCEMENT AGENCY. THE SEOR SHALL PROVIDE REMEDIAL ANCHORAGE DETAILS IN THE EVENT THAT AN ANCHOR FAILS TO MEET THE TEST REQUIREMENTS.
- EXERCISE DUE CARE WHEN DRILLING POST-INSTALLED ANCHORS TO AVOID DAMAGING CONCRETE REINFORCEMENT OR TENDONS.
- PROVIDE FULL ENGAGEMENT OF NUT AND WASHER.

RESPONSIBILITIES OF THE APPLICANT / OWNER / OWNER'S AGENT / ARCHITECT OR ENGINEER OF RECORD:

- CONFIRM THE MINIMUM REQUIREMENTS FOR 1 HE CONCRETE SLAB ARE MET. PROVIDE A PLAN FOR INSPECTION OF SUPPORTS AND ATTACHMENTS AND VERIFY ITS IMPLEMENTATION.
- VERIFY THAT THE EXISTING STRUCTURE IS ADEQUATE FOR THE IMPOSED DEAD, LATERAL AND TENSION FORCES SHOWN IN ADDITION TO ALL OTHER LOADS.
- VERIFY THAT THE INSTALLATION IS IN CONFORMANCE WITH CBC 2019.
- VERIFY THAT THE PROJECT SPECIFIC S_{DS} AND Z/H VALUES RESULT IN SEISMIC FORCES THAT DO NOT EXCEED THE VALUES SHOWN IN THESE DETAILS.
- BY USING THIS PERMITTED CONSTRUCTION DRAWINGS FOR THE CONSTRUCTION/INSTALLATION OF THE WORK SPECIFIED HEREIN, YOU AGREE TO COMPLY WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION FOR SPECIAL INSPECTIONS, STRUCTURAL OBSERVATIONS, CONSTRUCTION MATERIAL TESTING, AND OFF-SITE FABRICATION OF BUILDING COMPONENTS, CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS AND AS REQUIRED BY THE CALIFORNIA CONSTRUCTION CODES.

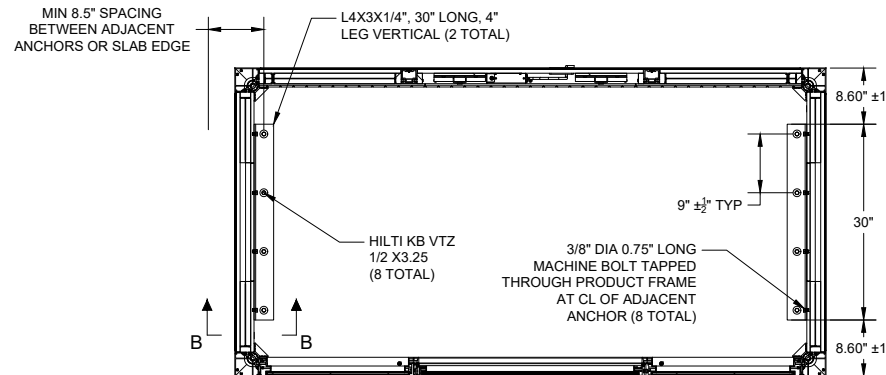
RESPONSIBILITIES OF THE CONTRACTOR / BUILDER / INSTALLER / SUB-CONTRACTOR / OWNER-BUILDER:

- BY USING THIS PERMITTED CONSTRUCTION DRAWINGS FOR THE CONSTRUCTION/INSTALLATION OF THE WORK SPECIFIED HEREIN, YOU ACKNOWLEDGE AND ARE AWARE OF, THE REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS. YOU AGREE TO COMPLY WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION FOR SPECIAL INSPECTIONS, STRUCTURAL OBSERVATIONS, CONSTRUCTION MATERIALS TESTING, AND OFF-SITE FABRICATION OF BUILDING COMPONENTS, CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS AND, AS REQUIRED BY THE CALIFORNIA CONSTRUCTION CODES.



DETAIL B-B (1:2)

FRONT ELEVATION (1:8)



SECTION A-A (1:8)

BILL OF MATERIALS

ITEM	DESCRIPTION	QTY	MATERIAL
1	HILTI KB Vtz 1/2"x3.25"	8	ESR-3904
2	3/8" DIA 0.75" LG MACHINE BOLT (AND WASHER IF NOT TAPPED)	8	316 SS OR EQ.
3	L4X3X1/4", 30" LG	2	ASTM A36



PRODUCTS

THIS DRAWING IS APPLICABLE TO FOLLOWING PRODUCTS:

PRODUCT	NUMBER
ROOM MEETING	ROOM S

REVISIONS	NO	REVISION	DATE
0	ORIGINAL ISSUE	10/14/2020	
1	CHANGED PRODUCT NAME FROM "ROOM 4" TO "ROOM S" ADDED 70 LBS PER SQ. FT. MINIMUM DESIGN LOAD TO EXISTING FLOOR STRUCTURE.	9/12/2022	

KEY PLAN



IT IS A VIOLATION OF STATE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER, TO ALTER THIS DRAWING IN ANY WAY. IF AN ITEM IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE ITEM HIS/HER SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS/HER SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

PROJECT

ROOM S SEISMIC ANCHORAGE

ADDRESS: N/A

PROJECT NO: 1CMH00004.000

DATE: 9/12/2022

DESIGN: MLW
DRAWN BY: MLW
CHECKED BY: HAY

SEE ON VIEWS, DETAILS, AND SECTIONS WHEN APPLICABLE.

ROOM S ANCHORS FOR 6" SLAB

SA01

SHEET 1 OF 2

