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Seismic Anchoring

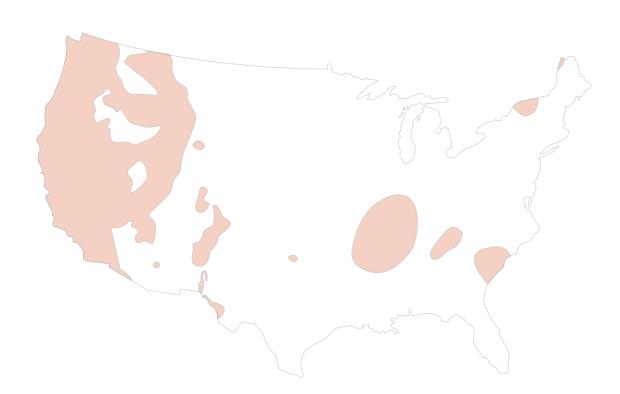
Safety first-

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; or a steel deck with max 3" deep flutes and 16 GA min and at least 2.5" deep concrete fill above steel deck*. 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.



^{*}Steel deck attachment hardware not included in Seismic Kit.

What you'll need



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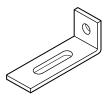
Hammer drill



3/8" diameter masonry drill bit

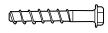
9/16" socket

Included in the kit



Corner angle 4x For Concrete Installation

(Pages 03-06)



Screw-in anchor



Washer 4x For Wood Floor Installation

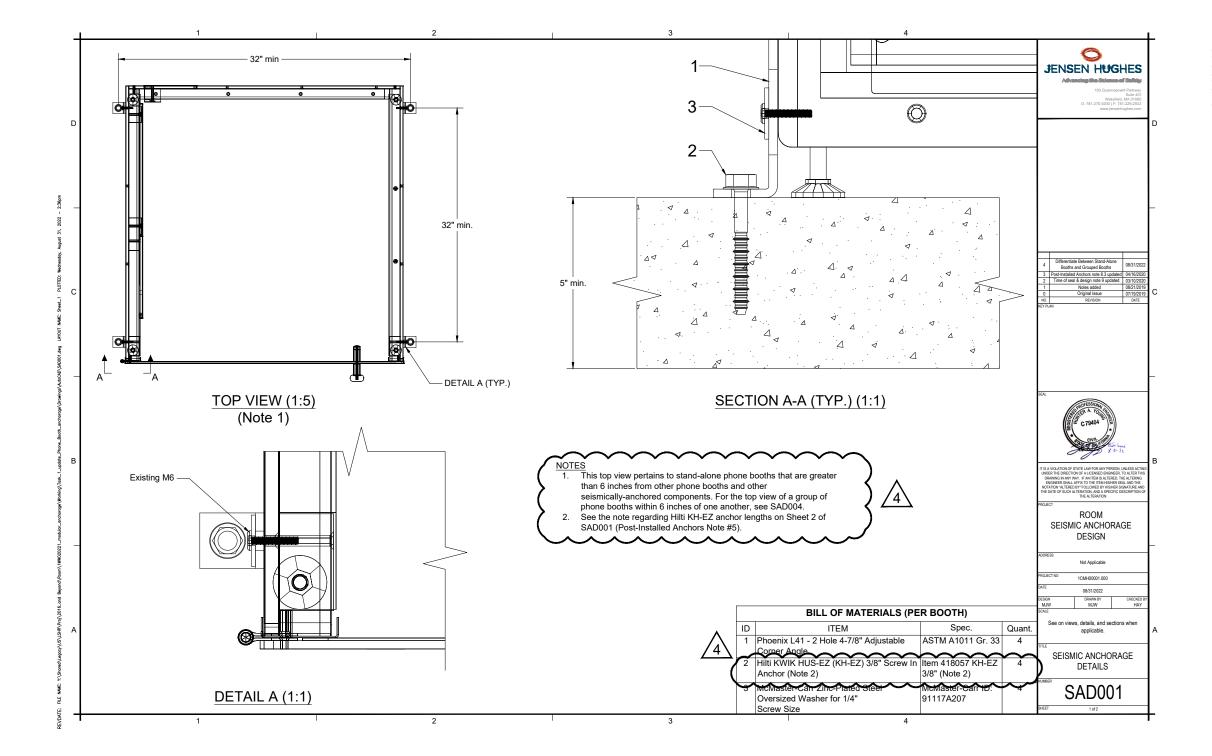
(Pages 09-10)



Hex Head Wood Screw



Washer for 3/8" Screw 4x



DESIGN NOTES:

The values listed below are defined for a conservative analysis of an architectural component per ASCE 7-16, Chapter 13.

Risk category:

Seismic design category: F (see explanation above)

 Seismic importance factor: I_n= 4. Mapped Spectral Accelerations

4.1. S_s= 3.21g 4.2. S₁= Not used

6. Soil Class: D (unknown by ASCE 7-16, Section 11.4.3) 7. Soil Class Coefficients:

7.1. Fa= 1.2 7.2. F_v= Not used

8. 5% Damped Design Spectral Response Acceleration

8.1. S_{DS}= 2.57g 8.2. S_{D1}=

Not used 9. Component Response modification: 1.0 9.1. a_p=

9.2. 9.3. **GENERAL**

Typical details and sections shall apply where specific details are not shown.

The contractor shall verify all site conditions and dimensions. If the actual conditions differ from those shown in the contract drawings, the contractor shall immediately notify the architect/engineer/manufacturer before proceeding with the fabrication. construction or installation of any affected elements.

2.5

2.0

Omissions or conflicts between the contract drawings and/or specifications shall be brought to the attention of the architect/engineer/manufacturer before proceeding with any changes, substitutions or modifications. Any work done by the contractor before receiving written approval will be at contractor risk.

POST-INSTALLED ANCHORS

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 $\Omega_{0}^{p} =$

- Do not install mechanical anchors or screw anchor in concrete less than 7 days old. Contractor must obtain written approval from the engineer to install prior this time period. Do not apply full load to anchors until concrete has reached 28-day
- Anchors specified in details shall be provided; alternative anchors may be used if the contractor provides calculations demonstrating that the alternative can achieve the performance values of the specified product.
- Follow the manufacturer's recommendations and certification testing reports for anchor installation.
- No anchor shall be installed within 1.5 anchor rod diameters of an abandoned hole that has been filled with non-shrink grout; increase distance to 3 anchor rod diameters
- For concrete, the mechanical anchor shall be Kwik Bolt HUS-EZ (KH-EZ) 3/8" Screw-in anchor (ICC-ES ESR-3027) by Hilti Inc

For stand-alone phone booths anchored per SAD001, Sheet 1 that are greater than 6 inches from another booth or another seismically-anchored component, the embedment depth shall be 2 1/2" and the total thread length shall be 3",

For phone booths anchored per SAD004. Sheet 1 that are less than 6 inches from another booth or another seismically-anchored component, the embedment depth shall be 3 1/4" and the total thread length shall be 3 1/2".

- The reinforced concrete slab shall be a minimum of 5 inches thick and constructed of structural reinforced concrete (may be cracked or uncracked) with a compressive concrete strength of at least 2500 psi.
- Spacing requirements:
- Minimum spacing of 32 inches between the outermost base M6 screws.
- Minimum distance of 2.5 inches between the top of reinforced concrete slab and base of M6 screws
- See SAD004, Note #5 for spacing requirements between ROOM phone booths and other anchored components

POST-INSTALLED ANCHORS INSPECTIONS

	ITEM FOR VERIFICATION &	INSPECTION FREQUENCY		COMMENTS	
	INSPECTION	CONTINUOUS	PERIODIC		
	Post Installed Anchors and Reinforcing Bars (2018 IBC Table 1705.3)				
	Mechanical Anchors and Screw Anchors	-	v	Special inspection shall be provided per manufacturer's requirements and approved ICC-ES report noted in POST-INSTALLED ANCHOR section above prior to installation of mechanical or screw anchors.	

Reference Code is ACI 318-14

(cont.)

(Continued)

- Specific requirements for special inspection shall be included in the research report for the anchor issued by an approved source in accordance with 17.8.2 in ACI 318, or other qualification procedures. Where specific requirements are not provided, special inspection requirements shall be specified by the registered design professional and shall be approved by the building official prior to the commencement of the work.
- 1. The special inspector must be registered by the City of San Diego, Development Services, in the category of work required to have special inspection.
- The construction material testing laboratory must be approved by the City of San Diego, Development Services, for testing of materials, systems, components, and equipment.
- 3. The special inspections identified on plans are, in addition to, and not a substitute for, those inspections required to be performed by a City's building inspector.

NOTICE TO THE APPLICANT / OWNER / OWNER'S AGENT / ARCHITECT or ENGINEER OF RECORD

1. By using this permitted construction drawings for the construction/installation of the work specified herein, you agree to comply with the requirements of the City of San Diego 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.

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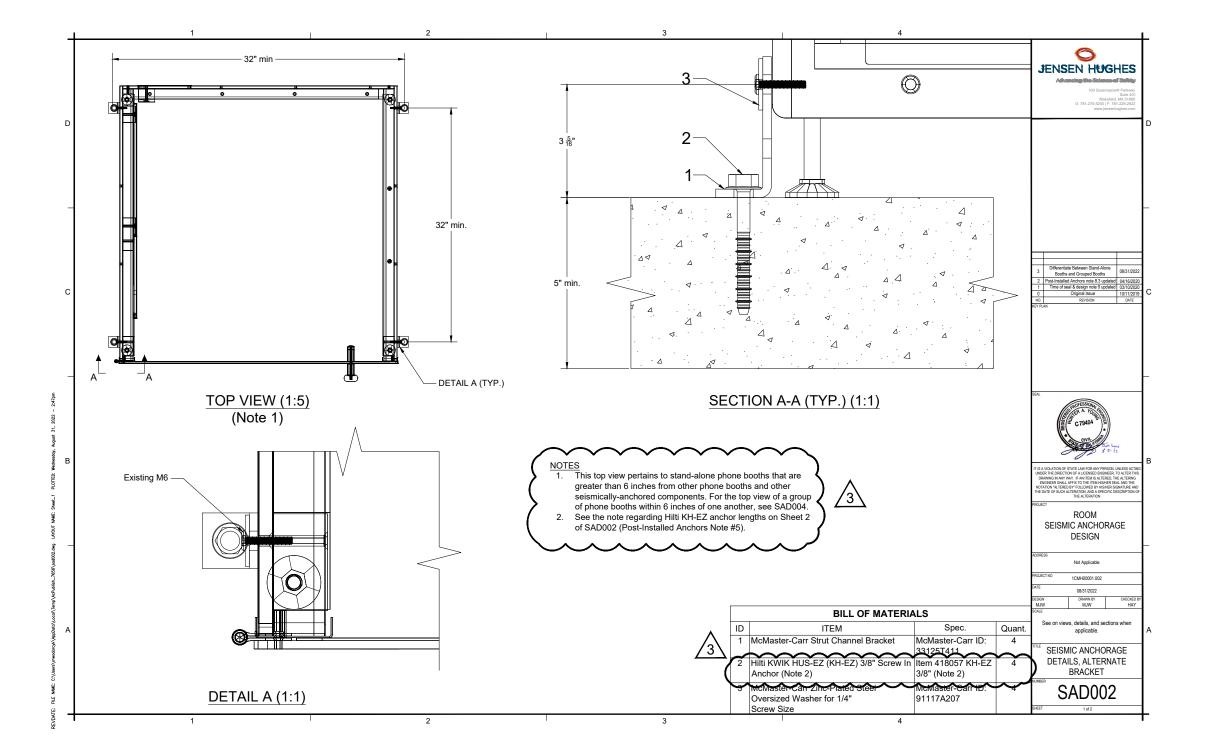


4	Differentiate Between Stand-Alone Booths and Grouped Booths	08/31/2022
3	Post-Installed Anchors note 8.3 updated	04/16/2020
2	Time of seal & design note 9 updated	03/10/2020
1	Notes added	08/21/2019
0	Original Issue	07/19/2019
NO.	REVISION	DATE
KEY PL	AN	



ROOM SEISMIC ANCHORAGE DESIGN

ADDRESS	Not Applicable	
PROJECT NO	1CMH00001.000	
DATE	08/31/2022	
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DESIGN NOTES:

The values listed below are defined for a conservative analysis of an architectural component per ASCE 7-16, Chapter 13.

1.0

Seismic design category: F (see explanation above)

Seismic importance factor: l_e=

4. Mapped Spectral Accelerations 4.1. S_s=

3.21g 4.2. S₁= Not used

Soil Class: D (unknown by ASCE 7-16, Section 11.4.3) 7. Soil Class Coefficients:

7.1 F₂= 1.2 7.2. F_v= Not used

8. 5% Damped Design Spectral Response Acceleration

2.57g

8.2. S_{D1}= Not used

9. Component Response modification: 1.0 a_p= R_p= 9.2. 2.5

9.3. GENERAL

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1. Typical details and sections shall apply where specific details are not shown.

2. The contractor shall verify all site conditions and dimensions. If the actual conditions differ from those shown in the contract drawings, the contractor shall immediately notify the architect/engineer/manufacturer before proceeding with the fabrication, construction or installation of any affected elements.

2.0

3. Omissions or conflicts between the contract drawings and/or specifications shall be brought to the attention of the architect/engineer/manufacturer before proceeding with any changes, substitutions or modifications. Any work done by the contractor before receiving written approval will be at contractor risk.

POST-INSTALLED ANCHORS

- 1. Do not install mechanical anchors or screw anchor in concrete less than 7 days old. Contractor must obtain written approval from the engineer to install prior this time period. Do not apply full load to anchors until concrete has reached 28-day compression strength
- 2. Anchors specified in details shall be provided; alternative anchors may be used if the contractor provides calculations demonstrating that the alternative can achieve the performance values of the specified product.
- Follow the manufacturer's recommendations and certification testing reports for anchor installation.
- 4. No anchor shall be installed within 1.5 anchor rod diameters of an abandoned hole that has been filled with non-shrink grout: increase distance to 3 anchor rod diameters.
- 5. For concrete, the mechanical anchor shall be Kwik Bolt HUS-EZ (KH-EZ) 3/8" Screw-in anchor (ICC-ES ESR-3027) by Hilti Inc

For stand-alone phone booths anchored per SAD002, Sheet 1 that are greater than 6 inches from another booth or another seismically-anchored component, the embedment depth shall be 2 1/2" and the total thread length shall be 3".

For phone booths anchored per SAD004, Sheet 1 that are less than 6 inches from another booth or another seismically-anchored component, the embedment depth shall be a 3 1/4" and the total thread length shall be 3 1/2".

- The anchors shall be installed at a minimum distance of 6 inches from the reinforced concrete slab edges.
- The reinforced concrete slab shall be a minimum of 5 inches thick and constructed of structural reinforced concrete (may be cracked or uncracked) with a compressive concrete strength of at least 2500 psi.
- 8. Spacing requirements:
- Minimum spacing of 32 inches between the outermost base M6 screws.
- Minimum distance of 2.5 inches between the top of reinforced concrete slab and base of M6 screws.

See SAD004, Note #5 for spacing requirements between ROOM phone booths and other anchored components

(structural engineer to confirm)

ITEM FOR VERIFICATION &	INSPECTION FREQUENCY		COMMENTS		
INSPECTION	CONTINUOUS	PERIODIC			
Post Installed Anchors and Reinforcing Bars (2018 IBC Table 1705.3)					
Mechanical Anchors and Screw Anchors	-	x	Special inspection shall be provided per manufacturer's requirements and approved ICC-ES report noted in POST-INSTALLED ANCHOR section above prior to installation of mechanical or screw anchors.		

(cont.)

a Reference Code is ACI 318-14

Specific requirements for special inspection shall be included in the research report for the anchor issued by an approved source in accordance with 17.8.2 in ACI 318, or other qualification procedures. Where specific requirements are not provided, special inspection requirements shall be specified by the registered design professional and shall be approved by the building official prior to the commencement of the work.

The special inspector must be registered by the City of San Diego, Development Services, in the category of work required to have special inspection.

2. The construction material testing laboratory must be approved by the City of San Diego, Development Services, for testing of materials, systems, components, and equipment.

3. The special inspections identified on plans are, in addition to, and not a substitute for, those inspections required to be performed by a City's building inspector.

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JENSEN HUGHES



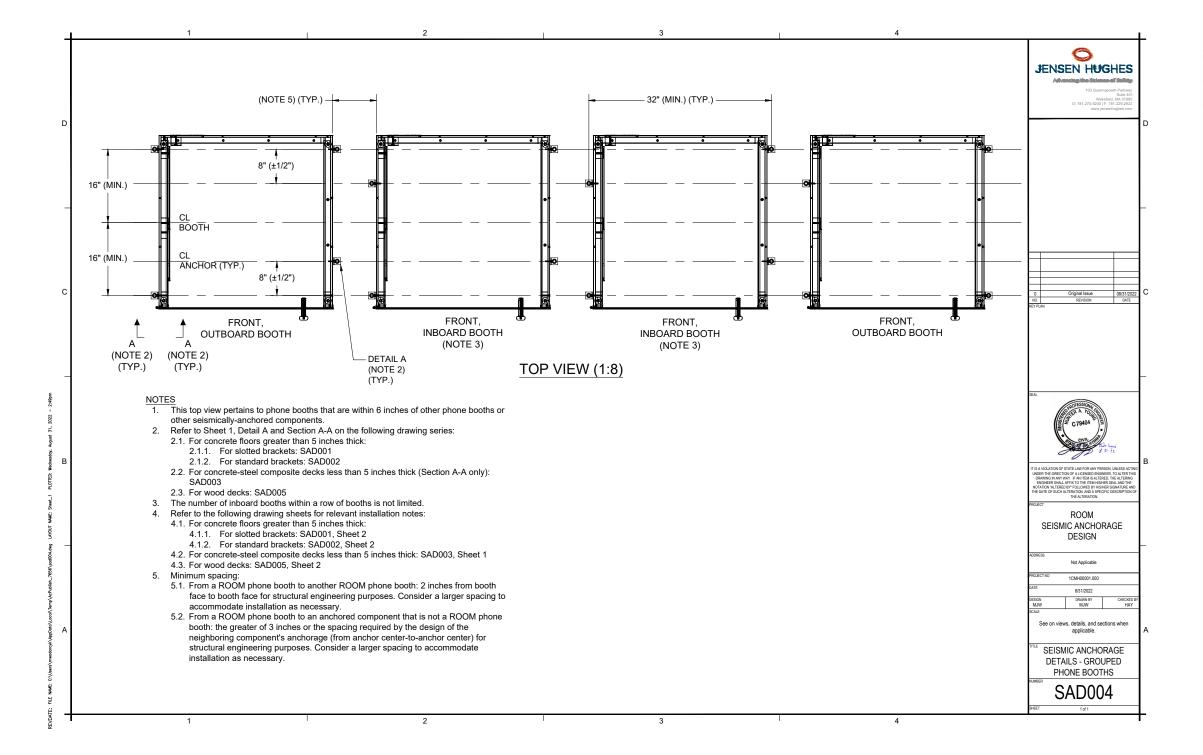
ROOM SEISMIC ANCHORAGE

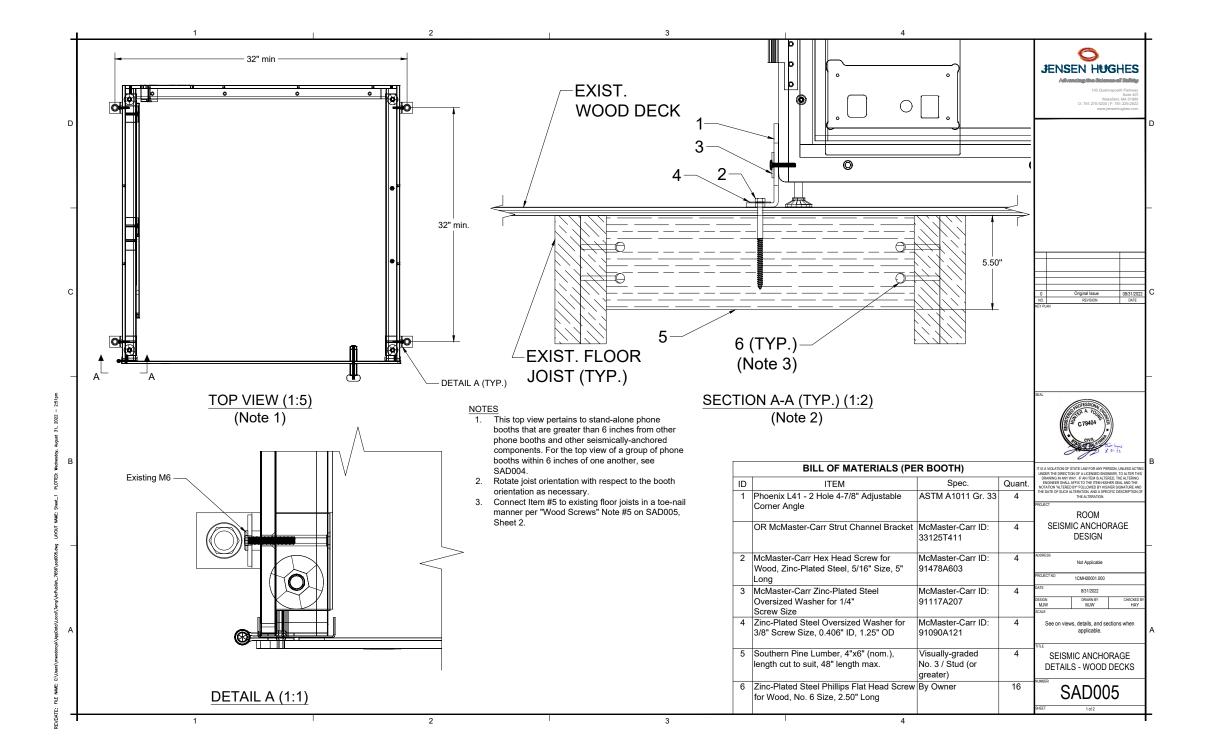
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ADDRESS	Not Applicable	
PROJECT NO	1CMH00001.002	
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GENERAL NOTES





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DESIGN NOTES:

The values listed below are defined for a conservative analysis of an architectural component per ASCE 7-16, Chapter 13.

1. Risk category: I or II
2. Seismic design category: F (see explanation above)
3. Seismic importance factor: I₀= 1.0

4. Mapped Spectral Accelerations
4.1. S_s= 3.21g

4.2. S₁= Not used
6. Soil Class: D (unknown by ASCE 7-16, Section 11.4.3)

7. Soil Class Coefficients:

9.1. a_p= 1.0 9.2. R_p= 2.5 9.3. Ω_r= 2.0

GENERAL

- 1. Typical details and sections shall apply where specific details are not shown.
- The contractor shall verify all site conditions and dimensions. If the actual conditions differ from those shown in the contract drawings, the contractor shall immediately notify the architect/engineer/manufacturer before proceeding with the fabrication, construction or installation of any affected elements.
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LIMITATIONS

The design with these drawings is limited to the following conditions:

- 1. The affected floors have been designed for a live load of at least 50 lbs. per sq. ft., with no live load reduction used at the
- 2. The structures to which the booths are anchored are limited to a maximum operating temperature of 100°F.
- 3. The wood decking is a minimum of 1/2" thick.
- 4. The wood decking and supporting members are limited as follows:
- Moisture content less than 19% at the time of fabrication.
- 4.2. Moisture content less than 19% during in-service life.
- 4.3. Specific gravity of at least 0.35.
 4.4. Floor joists are spaced no more than 48" center-to-center.
- 5. Anchors are at least 6 inches from any floor edge.

LAG SCREWS

- 1. Installation instructions are per AWC NDS 2018, Section 12.1.4 U.N.O.
- 2. Drill a shank clearance hole with a diameter of 3/8" and a total depth (into plywood decking plus lumber block) of 1 3/4".
- 3. Drill a threaded portion clearance hole with a diameter of 5/16".
- 4. Lag screws shall be installed via a wrench, not a hammer.
- 5. The use of soap or other lubricants on the lag screws to aid installation is permitted. Anchors specified in details shall be provided; alternative anchors may be used if the contractor provides calculations demonstrating that the alternative can achieve the performance values of the specified product.

WOOD SCREWS

- . Installation instructions are per AWC NDS 2018, Section 12.1.4 U.N.O.
- Drill a lead hole with a diameter of 1/8".
- 3. Lag screws shall be installed via a screw driver or similar turning tool, not a hammer.
- 4. The use of soap or other lubricants on the lag screws to aid installation is permitted. Anchors specified in details shall be provided, alternative anchors may be used if the contractor provides calculations demonstrating that the alternative can achieve the performance values of the specified product.
- 5. Toe-nail connections are installed per AWC NDS 2018, Figure 12A (reproduced on this drawing).

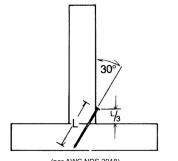
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(per AWC NDS 2018) (L = total fastener length)

ROOM SEISMIC ANCHORAGE DESIGN 1CMH00001.000 8/31/2022 DRAWN BY MJW See on views, details, and sections when applicable. SEISMIC ANCHORAGE DETAILS - WOOD DECKS **SAD005**