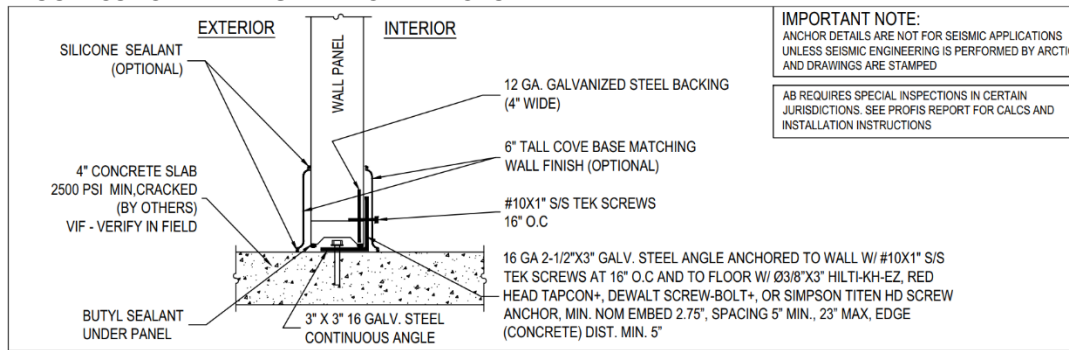


SEISMIC ANCHORING SYSTEMS – OVERVIEW



Standard Seismic Anchoring Systems provided by Arctic Industries, LLC are illustrated and described below. **These anchoring systems are considered seismic anchoring systems ONLY when seismic engineering calculations and stamped drawings are provided by Arctic and installation is performed to the exact specifications provided in the seismic engineering calculations and stamped drawings.** If seismic engineering calculations and stamped drawings are not provided by Arctic, Arctic has no opinion or knowledge as to the suitability of the anchoring system to meet seismic anchoring requirements.

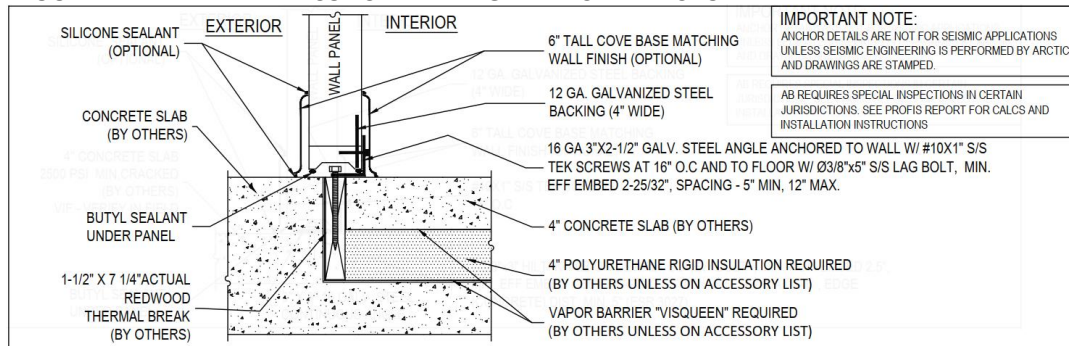
NO FLOOR: CONCEALED ANGLE BRACKET ANCHOR



Provided by Arctic:

- Foamed-in-place 12 ga. galvanized steel backing on the interior wall of wall panel
- 3" x 3" x 16 ga. galvanized steel angles in 8' lengths for field cutting and installation around perimeter
- Ø3/8" x 3" long Hilti-KH-EZ, Red Head Tapcon+, DeWalt Screw-Bolt+, or Simpson TitenHD screw anchors for spacing every 23" around perimeter
- #10 x 1" long stainless steel TEK screws sufficient for spacing every 16" around perimeter
- Butyl sealant caulking tubes for two Ø1/4" beads under walls

NO FLOOR: THERMAL BREAK – CONCEALED ANGLE BRACKET ANCHOR

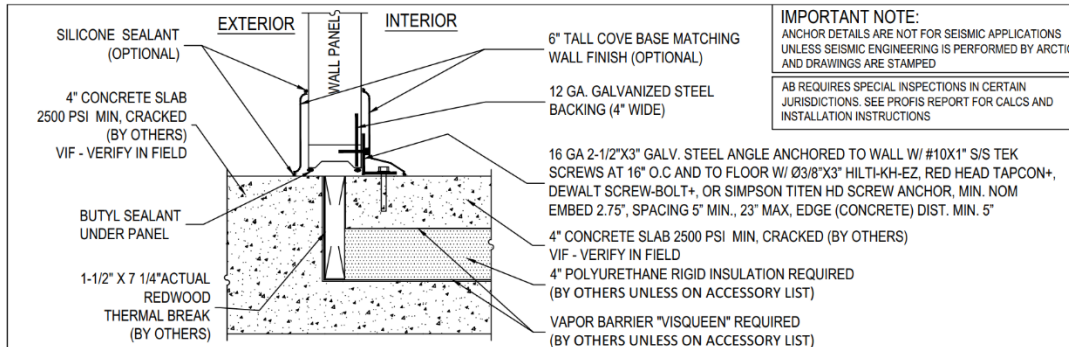


Provided by Arctic:

- Foamed-in-place 12 ga. galvanized steel backing on the interior wall of wall panels
- 2-1/2" x 3" x 16 ga. galvanized steel angles in 8' lengths for field cutting and installation around perimeter
- Ø3/8" x 3-1/2" stainless steel lag bolts for spacing every 12" around perimeter
- #10 x 1" long stainless steel TEK screws sufficient for spacing every 16" around perimeter
- Butyl sealant caulking tubes for two Ø1/4" beads under walls



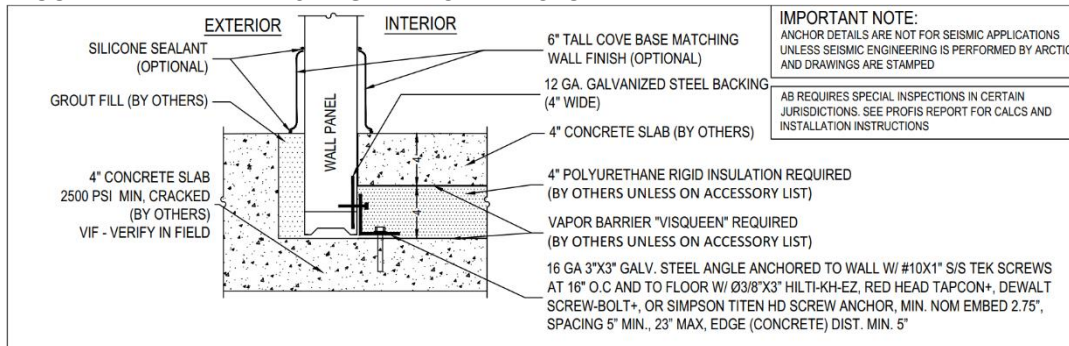
NO FLOOR: THERMAL BREAK – EXPOSED ANGLE BRACKET ANCHOR



Provided by Arctic:

- Foamed-in-place 12 ga. galvanized steel backing on the interior wall of wall panels
- 2-1/2" x 3" x 16 ga. galvanized steel angles in 8' lengths for field cutting and installation around perimeter
- Ø3/8" x 3" long Hilti-KH-EZ, Red Head Tapcon+, DeWalt Screw-Bolt+, or Simpson TitenHD screw anchors for spacing every 23" around perimeter
- #10 x 1" long stainless steel TEK screws sufficient for spacing every 16" around perimeter
- Butyl sealant caulking tubes for two Ø1/4" beads under walls

NO FLOOR: EMBEDDED WALLS ANGLE BRACKET ANCHOR

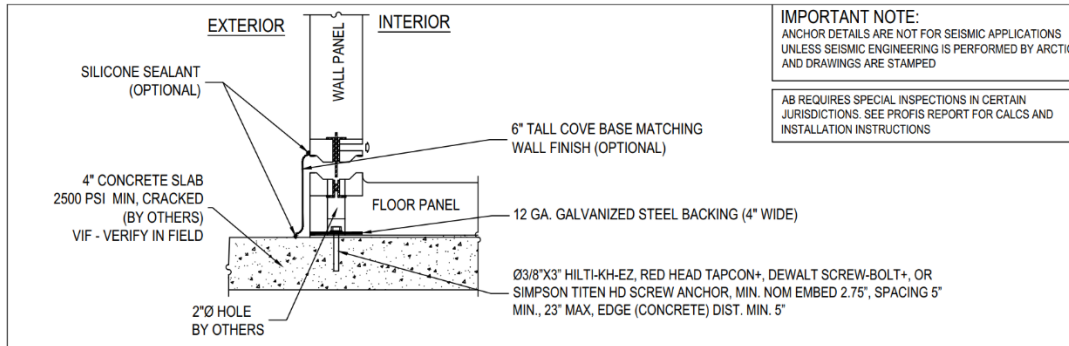


Provided by Arctic:

- Foamed-in-place 12 ga. galvanized steel backing on the interior wall of wall panel
- 3" x 3" x 16 ga. galvanized steel angles in 8' lengths for field cutting and installation around perimeter
- Ø3/8" x 3" long Hilti-KH-EZ, Red Head Tapcon+, DeWalt Screw-Bolt+, or Simpson TitenHD screw anchors for spacing every 23" around perimeter
- #10 x 1" long stainless steel TEK screws sufficient for spacing every 16" around perimeter



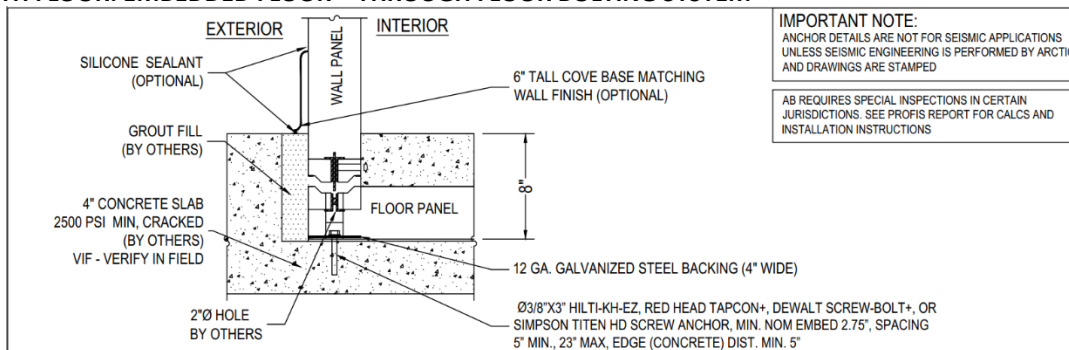
WITH FLOOR: THROUGH FLOOR BOLTING SYSTEM



Provided by Arctic:

- Foamed-in-place 12 ga. galvanized steel backing on the bottom of floor panel
- $\varnothing 3/8"$ x 3" long Hilti-KH-EZ, Red Head Tapcon+, DeWalt Screw-Bolt+, or Simpson TitenHD screw anchors for spacing every 23" around perimeter

WITH FLOOR: EMBEDDED FLOOR – THROUGH FLOOR BOLTING SYSTEM



Provided by Arctic:

- Foamed-in-place 12 ga. galvanized steel backing on the bottom of floor panel
- $\varnothing 3/8"$ x 3" long Hilti-KH-EZ, Red Head Tapcon+, DeWalt Screw-Bolt+, or Simpson TitenHD screw anchors for spacing every 23" around perimeter

Arctic's seismic anchoring systems have been developed from decades of experience and thousands of walk-in coolers and freezers. Arctic provides only the items stated on the details specific to the project. Items noted as "optional" are options that will be provided only when requested and quoted separately. Items noted "by others" are outside of Arctic's scope of offering and should be sourced elsewhere.

On occasion, seismic calculations will indicate that the above standard anchorage systems are not adequate. If seismic calculations indicate that additional anchors, additional backing, additional anchor details, structural steel, exoskeletons, etc. are required, the additional seismic engineering and non-standard seismic details will be quoted at an additional charge.



Seismic Engineering & PE Stamped Drawings:

Standard seismic engineering and PE stamped drawings INCLUDE:

- Single compartment and combo walk-ins
- Evaporator suspended from external Unistrut bridging to the walk-in walls. NOTE: refrigeration evaporator, Unistrut, hangers, and installation are not provided by Arctic unless noted in the refrigeration section of the quotation
- PE (professional engineer) stamped drawings for the state or province where the walk-in will be installed. We offer stamped drawings in all 50 states, 8 Canadian provinces, and several Caribbean islands.

Standard seismic engineering and PE stamped drawings EXCLUDE:

- Additional engineering required to meet seismic requirements beyond that provide by the above standard anchoring packages. Additional engineering is often required in the following circumstances: less than a 4" thick high strength concrete floor, low strength concrete floors, pre-tensioned concrete floors, post-tensioned concrete floors, cracked concrete floors, non-concrete floors, unsupported ceiling spans longer than 10 feet, and walk-in walls taller than 10 feet.
- Additional items mounted to or on top of the walk-in, such as but not limited to refrigeration condenser and shelving. Please contact your Arctic Sales Representative for a quotation for additional items mounted to the walk-in to be included in the seismic calculations.
- Walk-in ceiling suspended from the building ceiling and ceilings supported by a beam bridging across the walk-in (gravity ceilings). Please contact your Arctic Sales Representative for a quotation for these special ceiling seismic calculations.
- Structural steel supports and skeletons. Structural supports and skeletons are often required in order to meet seismic criteria for walk-ins with large openings such as windows and display/reach-in doors and outdoor walk-ins. Please contact your Arctic Sales Representative for a quotation for walk-ins with large openings and outdoor walk-ins.
- SE (Structural Engineering) stamping of drawings. SE stamps are often required for projects in Hawaii, certain projects in Washington state, and other projects based on local jurisdictional requirements. Please contact your Arctic Sales Representative for a quotation for SE stamped drawings.
- **Plan review, jurisdictional review, DSA (California Division of State Architecture), and California OSHPD (Office of Statewide Health Planning and Development) are excluded.** These projects often require many months or even years of submittals and reviews in order to receive seismic approval. Arctic performs these projects on an hourly time and materials basis at our standard engineering rates in effect at the time of the service. The seismic solution is often more complex than our above noted anchoring packages and the anchoring package will be quoted (requoted) once the stamped seismic drawings receive final approval from the regulatory agency(s).



The following information is required for standard seismic calculations to be performed and are to be provided by the customer at time of order placement:

- Walk-in dimensions
- Size, weight, and loading of items that will be attached to the walk-in such as refrigeration evaporators, etc.
- Complete address of where the walk-in will be installed. Seismic calculations utilize the U.S. Geological Survey (USGS) seismic zone of the address of the installation. The seismic calculations are only valid for this address.
- Floor material, thickness, and strength
- Adjacent wall construction, materials, thickness, and strength
- Other information as requested by Arctic

The following items will void the seismic calculations and effectiveness of the anchoring system:

- Attaching items to the walk-in that are not shown on the Arctic stamped drawings
- Mounting/securing/anchoring the walk-in differently than shown on the Arctic stamped drawings
- Modifications to the walk-in
- Damage to the walk-in