

Continuous Rod Wood Shearwall Tiedown Installation JHA

Worked instructional example

Work and worksite

A framing crew will install one engineer-issued continuous rod shearwall tiedown run through released wood framing and prepared penetrations onto accepted foundation anchorage. Identified rods, couplers, bearing plates, nuts and specified shrinkage take-up devices are installed under the actual system instructions. Existing temporary wall support stays in place pending the separate permanent-stability release. This fictional learning example describes planned controls; it records no actual inspection or work authorization.

- The issued US project details identify this run, rod grades/sizes, couplers, plates, take-up assemblies, compression members, anchorage and termination at each required level.
- Prepared penetrations, anchorage and framing are released; protected access and the actual current installer/component instructions are available for each installation stage.
- Partial wood/exterior-wall framing connection only: drilling, anchor installation, field threading/cutting, roof uplift systems, framing erection and temporary-brace removal are excluded.

Questions before work

- How will the installer distinguish the specified rod grade, coupler and take-up assembly at each level of this run?
- Which manufacturer criteria establish rod engagement, plate seating and the selected device's ready state?
- What record must be complete before these connections are concealed or credited for permanent restraint?

Task Hazard Control

1 Release the identified tiedown run

Hazard: An incomplete design or mistaken run can interrupt the intended overturning load path.

Control: Lead matches the run number and issued details to the framed location. Confirm the specified anchorage, rods, coupling transitions, plates, take-up devices, compression members and termination. Obtain current system/component instructions and required inspection stages. Resolve conflicts through the engineer before work; the crew does not size a replacement rod or omitted plate.

Verification: Lead checks current run documents and lists the required concealed-work and completion hold points.

Reasoning: A continuous load path depends on every specified stage, not one visible connector.

2 Inspect components and prepare protected access

Hazard: Wrong grades, damaged threads or exposed edges can cause connection failure or worker injury.

Control: Identify and segregate components by the actual run schedule, checking markings, thread condition, corrosion and device damage under manufacturer criteria. Reject unverified substitutes. Establish protected access, secure small parts against dropping and retain temporary framing restraint. Verify prepared penetrations and anchorage release without drilling, enlarging holes or forcing a rod through an obstruction.

Verification: Installer records component identities and checks access, prepared holes and supporting-framing release.

Reasoning: Similar-looking threaded products can have different capacities and engagement requirements.

3 Assemble the run start and rod couplers

Hazard: Cross-threaded or insufficiently engaged rods can separate under tension; long rods can strike workers.

Control: Handle rod lengths with planned support and crew positioning. Start at the accepted anchorage and fit the specified couplers and rods in the issued sequence, using the actual manufacturer's engagement and verification method. Preserve alignment and inspect threaded interfaces before they become concealed. Stop for binding or an offset outside the design; do not weld, field-cut or thread components to make them fit.

Verification: Named checker verifies run-start identity and each accessible coupling against the selected criteria.

Reasoning: A nut that feels tight may still conceal damaged or incomplete thread engagement.

Complete the work and hand over

4 Install each specified bearing and take-up assembly

Hazard: A mis-seated plate or omitted shrinkage device can prevent the run from transferring load as designed.

Control: At every required level, install the specified bearing plate, washers/nuts and take-up assembly against the detailed supporting members. Follow the actual component instructions for orientation, fastening and activation/ready state; device families are not interchangeable. Keep bearing surfaces and moving device features clear of debris or interference, and preserve any required inspection access.

Verification: Installer and checker verify the actual assembly, seating and device state at each scheduled level.

Reasoning: Wood movement can create gaps unless the designed compensation system remains functional.

5 Complete termination and verify continuity

Hazard: Missing intermediate restraint or an incorrect termination can leave the system apparently complete but ineffective.

Control: Complete the issued run termination and trace the installed assembly from accepted anchorage through every coupling and bearing level. Verify specified components, connections, alignment and device state against the project's actual criteria. Refer deviations to the engineer; never invent torque, rod projection or take-up settings. Retain temporary wall support until its separate release.

Verification: Designated checker records continuity and required inspection findings before any concealment authorization.

Reasoning: The finished top connection cannot prove the concealed lower connections are correct.

6 Protect the installed system and hand over

Hazard: Later enclosure work or unauthorized adjustment can obstruct devices or hide an unresolved defect.

Control: Protect rods and take-up assemblies under their current instructions, maintaining required clearance and inspection access. Record the run, components, inspections, required photographs and unresolved holds. Coordinate enclosure and follow-up checks with the receiving supervisor. Do not treat tiedown completion alone as authorization to remove braces or load an unfinished building system.

Verification: Lead transfers the documented run state and obtains the required concealment/handover release.

Reasoning: Inspection evidence must survive after the run is hidden by finishes.

Pause and reassess

- The run schedule, component identity, anchorage release or current installation instructions are incomplete or conflicting.
- Threads bind, components are damaged, alignment or bearing differs from the detail, or an unapproved substitution/modification is proposed.
- Device state cannot be verified, required inspection would be concealed, or another crew would change temporary restraint or system clearance.

Improve the controls

Needs improvement: All the rods look alike; use the available coupler.

More useful: Match each rod grade, coupling transition and assembly to the issued run schedule and verify engagement using the selected system's actual instructions.

Needs improvement: The top nut is tight, so close the wall.

More useful: Trace and document every required coupling, bearing level and take-up assembly, resolve deviations and obtain the specified concealed-work release.

Decisions that change the analysis

Does sill-plate or ordinary hold-down installation cover this system?

Those operations do not complete a continuous multilevel tension run with graded rods, coupling transitions and specified shrinkage compensation at its bearing levels. This resource covers installation and verification of that issued system. The designer remains responsible for compression members, anchorage, displacement and the complete building load path.

What must the crew record for actual use?

Record the work boundary, design/equipment documents, responsible people, acceptance criteria, control findings and unresolved actions. Communicate restrictions and obtain required project authorization. This learning example supplies no evidence that a control was installed or accepted.

Training needs

- Selected continuous-rod-system installation instruction covering component identification, coupler engagement, bearing assemblies and device-specific activation/checks.
- Project load-path reading, protected access, concealed-work documentation and reporting of misaligned holes or unauthorized substitutions.

Confirm applicable qualifications and actual training evidence for the people assigned. Related toolbox talks support discussion; they do not establish competence.

References and adaptation

Simpson Strong-Tie Anchor Tiedown System overview

<https://www.strongtie.com/products/lateral-systems/strong-rod-systems/ats>

Simpson Strong-Tie shearwall overturning restraint general notes

<https://www.strongtie.com/products/lateral-systems/strong-rod-systems/general-information/shearwall-overturning-restraint>

Simpson Strong-Tie Strong-Rod systems and installation resources

https://www.strongtie.com/strongrodsystems_lateralsystems/landingpage

References reviewed October 9, 2026. Use actual equipment and product instructions, project design and site requirements. This original draft supplies no fabricated inspection, signature or approval.