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Install Steel Walers: Sizing, Splices, Bearings, Torque

Install steel walers with an interactive checklist that is commentable and export as PDF/Excel, verifying sizing, splices, bearings, bolt torques, and alignment for compliant results.

Project:	
Date:	
Filled by:	

Pre-Installation Verification	
1	Confirm latest approved drawings and specifications match the location and phase; record drawing number, revision, and issuance date per approved project specifications and authority requirements. Evidence: photo of title block and digital approval stamp.
2	Verify waler type and section designation (e.g., UB/UC/Channel) against the design schedule; measure flange/web dimensions with calipers to confirm nominal section. Evidence: measurements within manufacturer tolerance; photo of section stamp.
3	Establish exclusion zone and access; confirm lifting plan and slinging gear WLL ≥ component mass. Evidence: lifting plan reference, tag numbers, and pre-use inspection photos.

Waler Sizing and Materials	
4	Check steel grade and heat numbers on the member; match to mill certificates and MTCs on file. Acceptance: grade equals or exceeds specified; Evidence: uploaded MTC, photos of markings.
5	Verify protective coating system (galvanizing/paint) meets dry film thickness requirement using a DFT gauge. Acceptance: DFT ≥ specified microns; Evidence: DFT readings log and gauge serial number.
6	Inspect members for transport damage, distortion, or lamination; check straightedge over 1 m. Acceptance: local out-of-straight ≤ 3 mm in 1 m; Evidence: photos and measurements.

Splices and Connections	
7	Confirm splice type, plate thickness, bolt size/grade, and hole pattern match drawings. Acceptance: hole diameter and spacing per design; edge distance not less than specified; Evidence: measured hole gauge and layout photo.
8	Dry-fit splice; clean faying surfaces; check mating gap with feeler gauges. Acceptance: continuous contact with gaps ≤ 2 mm; Evidence: gap readings and close-up photos.
9	Verify bolts, nuts, and washers by grade and diameter; check certificates and lot IDs. Acceptance: correct grade/finish; washers where specified; ≥ 2 threads protruding past nut; Evidence: component labels and photos.
10	If welded splices are specified, confirm WPS, welder qualifications, weld size, and visual acceptance. Evidence: WPS reference, welder ID, VT photos; NDT reports uploaded when required.

Bearings and Supports	
11	Prepare bearing seats, shims, and packers; remove rust/paint nodules; verify level with a spirit level. Acceptance: level within 2 mm per metre; Evidence: level readings and seat photos.
12	Install bearing pads/shims to achieve firm, uniform contact; tap-test for rocking. Acceptance: ≥ 90% contact area; no rocking under hand load; Evidence: photos and notes.
13	Measure bearing length, setback, and seating against support elements per design. Acceptance: dimensions within ±5 mm of drawing; Evidence: tape readings and as-built sketch.

Alignment and Tolerances	
14	Set out waler line using a total station/laser; mark reference points at 3–5 m intervals. Acceptance: horizontal deviation ≤ 5 mm over 10 m; Evidence: instrument screenshots and marks.
15	Check level at each support and midspan with laser receiver. Acceptance: elevation within ±3 mm of design; Evidence: level readings log and photos of staff.
16	Verify straightness after fixing using stringline/laser; record local and overall deviations. Acceptance: local ≤ 3 mm in 1 m; overall ≤ 10 mm full length; Evidence: records and photos.

Bolting and Torque	
17	Confirm torque wrench calibration is in date (≤ 6 months) and range suits bolt size. Evidence: calibration certificate number and photo of tag.
18	Tighten bolts in a cross-pattern: snug-tight pass, then final torque to specification; lubricate if required. Acceptance: achieved torque within specified range; Evidence: torque log in N·m, tool ID.
19	Re-check torque after 30–60 minutes to account for embedment; mark bolts with paint after acceptance. Acceptance: no additional nut rotation > 10°; Evidence: paint marks and re-torque log.
20	Upload splice/bearing photos, alignment survey, and signed torque logs; export records as PDF/Excel with project QR code. Acceptance: complete and approved by responsible engineer.

Comments:

Filled by:

Signature:

Introduction	How to use this checklist
Install steel walers with confidence using this focused, field-ready checklist. It is purpose-built for waler installation across shoring and excavation support where steel waling beams carry loads between supports. Within scope: verifying sizing, splices, bearings, bolt torques, and alignment. We cover practical controls for waler installation, including material identification, bolted splice assembly, bearing/shim setups, and precision alignment. Related terms—waler installation, steel waling beams, and shoring walers—are addressed to help standardize methods and documentation across sites. Out of scope: struts, rakers, hydraulic jacks, and unrelated support components. By applying these steps, you reduce misfit, slip, overstress, and alignment drift that can compromise load paths, delay works, or trigger rework. Acceptance cues and measurable tolerances help inspectors and foremen make fast go/no-go decisions. Use this interactive checklist to tick tasks, attach comments, capture photos, and export records as PDF/Excel with a project QR code for authenticated sign-off.	1. Preparation: gather approved drawings, calibrated torque wrench, laser/total station, feeler gauges, DFT gauge, spanner set, markers, camera, and required PPE. Confirm access, lifting plan, and exclusion zones. 2. Open the checklist on your device and select the project, location, and waler run. Verify the latest revision is loaded. 3. Switch to interactive mode. Tick each step as you complete it, attach photos, and enter measurements (DFT, gaps, levels, torques) directly into the fields. 4. Use comments to flag deviations, propose corrective actions, and tag responsible parties. Link documents like MTCs and calibration certificates. 5. After inspection, review completeness: all required photos, readings, and signatures recorded. Resolve any open comments or punch items. 6. Export the checklist as PDF/Excel with embedded project QR code for authentication. Share with engineers, contractor representatives, and authorities as needed. 7. Archive the signed record in your project folder naming by date, location, and waler run for easy retrieval.