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Tremie Concrete Diaphragm Wall Panels Inspection Checklist

Tremie concrete diaphragm wall panels checklist for stop-ends, tremie embedment, continuous pour, and joints. Interactive, commentable, PDF/Excel export. Use today.

Project:	
Date:	
Filled by:	

Pre-Pour Controls	
1	Confirm panel ID, chainage, dimensions, and pour sequence against stamped IFC drawings; obtain ITP hold-point release. Evidence: marked drawing photo and inspector initials before cage lowering.
2	Measure slurry properties at top and 0.5–1.0 m above base using mud balance, Marsh funnel, and sand-content kit. Acceptance: density 1.03–1.20 g/cm³, viscosity 32–50 s, sand ≤4%. Record results.
3	Check trench cleanliness and base condition via desander logs and weighted sounding tape. Acceptance: residual sediment at base ≤50 mm. Attach readings and photos of tape marks.
4	Verify reinforcement cage spacers and guides provide uniform cover. Acceptance: concrete cover ≥75 mm on both faces and base; survey at three locations. Photo evidence of spacers installed.
5	Review concrete delivery tickets for approved tremie mix, admixtures, and time limits. Acceptance: slump/workability per approved mix design; initial truck within allowable age. Upload tickets and slump photos.

Stop-Ends and Formers	
6	Inspect stop-end type (steel/HDPE/inflatable) for straightness, clean surface, and release agent. Acceptance: alignment deviation from panel axis ≤10 mm over length. Laser survey record and photos.
7	Confirm stop-end embedment and toe key per drawings and guide wall levels. Acceptance: top level within ±5 mm of design; embedment achieved. Record survey and supervisor sign-off.
8	Brace stop-ends to reinforcement cage and guide wall to resist placement loads. Acceptance: no detectable movement during trial lift/settlement. Capture video/photo during trial and post-fixity check.
9	Install specified joint waterstops or formers (central/external) with continuous laps. Acceptance: laps ≥100 mm, no gaps, secure ties. Close-up photos and installer initials.

Tremie Equipment and Embedment	
10	Inspect tremie pipes, joints, and gaskets; perform water leak test. Acceptance: no leaks at working head; record test pressure and duration. Photo of assembled tremie stack.
11	Mark tremie pipe at 0.5 m intervals for embedment tracking. Acceptance: initial placement to within 100–200 mm of base without disturbing sediment. Photo of marks and crew acknowledgment.
12	Prime the tremie with plug/go-devil to exclude slurry; commence discharge smoothly. Acceptance: continuous flow established within 30 s; no visible slurry mixing in hopper. Time log and photo.
13	Maintain tremie pipe embedment in fresh concrete ≥2.0 m at all times. Verify via marked pipe readings. Log min/max embedment each truckload; attach log sheet.
14	Stage a cleaned standby tremie and hopper with lifting gear ready. Acceptance: backup equipment operational before first discharge. Photo evidence and supervisor confirmation.

Continuous Pour Execution	
15	Coordinate plant dispatch to ensure uninterrupted supply. Acceptance: gap between successive discharges ≤10 minutes. Delivery schedule and time-stamped ticket photos.
16	Monitor concrete head relative to slurry at stop-ends using dip meter. Acceptance: maintain concrete head ≥1.0 m above slurry level. Record readings every 10–15 minutes.
17	Manage tremie movements in small lifts ≤0.3 m; avoid de-priming. Acceptance: no loss-of-prime events; continuous discharge with steady boom control. Log movements with times.
18	If panel width >3.0 m or flow stalls, deploy secondary tremie at high points. Acceptance: no segregation or trapping of slurry; visual checks at hopper and returns.
19	Reconcile placed concrete volume with theoretical (including 10–25% overbreak allowance). Acceptance: variance within planned range; investigate anomalies immediately. Upload reconciliation sheet.

Panel Joint Continuity and Records	
20	During stop-end strike, inspect joint arrises for sound concrete and key profile. Acceptance: no honeycombing or slurry films; joint face clean. Close-up photos before protection.
21	While casting adjacent panel, verify waterstop continuity and paste extrusion at joint. Acceptance: uninterrupted waterstop and visible fresh paste squeeze-out. Photo and inspector sign-off.
22	Perform integrity checks per approved plan (e.g., sonic/echo testing or targeted coring) after curing. Acceptance: results within project criteria. Attach certified test reports.

Comments:

Filled by:

Signature:

Introduction	How to use this checklist
Tremie concrete diaphragm wall panels require disciplined controls to verify stop-ends, tremie embedment, continuous pour, and panel joint continuity. This checklist focuses on slurry-supported diaphragm walls (slurry walls) constructed using tremie placement, not secant piles or top-down capping activities. It targets practices that prevent inclusions, voids, cold joints, and leakage at panel interfaces. You will confirm stop-end alignment and waterstop continuity, maintain tremie pipe submergence, safeguard uninterrupted concrete flow, and document joint integrity. By controlling slurry properties, sediment thickness, concrete head and tremie movements, teams can achieve durable, watertight panels and predictable excavation performance for basements and deep shafts. The scope covers pre-pour checks, active pour execution, and immediate post-pour observations, with records suitable for quality submissions per approved project specifications and authority requirements. Use this interactive tool to tick items live, add field comments and photos, and export your signed report to PDF/Excel with a QR link for secure traceability.	1. Preparation: Gather mud balance, Marsh funnel, sand kit, weighted tape, dip meter, laser level, camera/phone, approved drawings/ITP, PPE (gloves, goggles, boots, helmet), and verify concrete plant and standby tremie readiness. 2. Start Interactive Mode: Open the checklist, select panel ID and location, then tick items as you perform them. Add time-stamped comments, photos, and readings directly to each line for traceable evidence. 3. Export and Share: After completing checks, export the record to PDF/Excel for the site file or submittal. The export includes embedded photos and a QR link for authentication. 4. Sign-Off and Archive: Capture digital signatures from contractor, consultant, and client. Distribute the signed package to stakeholders and archive it in the project’s document control system for later audits.