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Place pile cap concrete (horizontal) – Placement QA Checklist

Place pile cap concrete (horizontal) with an interactive checklist: commentable and export as PDF/Excel. Control sequence, vibration, finish, curing, and protection.

Project:	
Date:	
Filled by:	

Pre-Pour Readiness	
1	Review approved pour sequence drawing and placement plan, including pump location, access, and concrete flow direction; acceptance: plan signed by supervisor; evidence: uploaded, dated plan with signatures.
2	Confirm pile cap base is clean and free from debris and standing water using vacuum/blower; acceptance: surface damp but no free water sheen; evidence: pre-pour photos.
3	Verify sleeves, anchor bolts, dowels, and embedded items are fixed and tagged; method: hand-move check and tie-backs; acceptance: no perceptible movement; evidence: photos with scale and tag IDs.
4	Install grade pins/level markers at 2–3 m grid using laser level; acceptance: elevations within ±5 mm of design; evidence: level log and screenshots.
5	Confirm two working internal vibrators (25–50 mm heads) and backup power; acceptance: test run at 8,000–12,000 vpm; evidence: equipment checklist with serial numbers.
6	Pre-wet blinding/absorptive surfaces to SSD without ponding; acceptance: uniformly damp with no standing water; evidence: pre-pour moisture condition photos.

Concrete Delivery & Fresh Properties	
7	Verify mix design, exposure class, cement type, and maximum aggregate size per approved project specifications and authority requirements; evidence: delivery ticket photo and mix ID.
8	Measure slump at discharge per standard method; acceptance: within specified range (e.g., 75–125 mm); evidence: recorded value with cone photo.
9	Check concrete temperature with a calibrated thermometer; acceptance: 10–32 °C unless otherwise specified; evidence: photo of reading and calibration label.
10	If air-entrained, test air content; acceptance: within design target ±1.5%; evidence: meter reading photo and test sheet.

Placement Sequence & Vibration	
11	Begin placement at the farthest point from the pump and progress steadily towards exit; acceptance: no backtracking; evidence: timestamped placement photos.
12	Limit lift thickness to 300–500 mm per pass; acceptance: measured with marked probe; evidence: photo showing probe depth against surface.
13	Insert internal vibrator vertically at 300–450 mm spacing until mortar sheen appears; acceptance: no visible voids or entrapped air; evidence: consolidation video/photo at start and mid-pour.
14	Penetrate 50–100 mm into previous lift to knit layers; acceptance: no horizontal parting lines; evidence: inspector sign-off in notes.
15	Avoid contact with reinforcement and sleeves; acceptance: no displacement or damage observed; evidence: interim check photos near congested areas.
16	Manage interruptions: if delay exceeds 30 minutes, create a keyed construction joint per approved project specifications and authority requirements; evidence: joint location photo and log entry.

Finishing & Level Control	
17	Strike off using vibro-screed/straightedge guided by grade pins; acceptance: finished elevation within ±10 mm; evidence: laser level readings and screenshots.
18	Bull-float immediately to close surface without bringing excess laitance; acceptance: uniform sheen, no bleed water accumulation; evidence: post-finish photos.
19	Provide specified surface texture or roughening for bonded works (if required); method: brooming or surface retarder; acceptance: profile depth per specification; evidence: photo with ruler scale.
20	Verify embedded items and edges remain to line during finishing; acceptance: tolerances per drawings, no mortar build-up; evidence: close-up photos and measurements.

Curing & Early-Age Protection	
21	Commence curing within 30 minutes of final finish; method: curing compound at 0.3–0.5 L/m² or wet coverings; evidence: application log and photos.
22	Maintain continuous moist curing for at least 7 days unless specified otherwise; acceptance: surface never dries; evidence: daily curing photos and checklist.
23	Install temperature sensors at surface and core; manage differential ≤20 °C with insulation/covers; evidence: data logger export and mitigation notes.
24	Protect against rain, sun, and wind using membranes, covers, and windbreaks; acceptance: no washout or plastic shrinkage cracking; evidence: weather log and site photos.
25	Restrict traffic and loading until concrete reaches ≥70% specified strength; acceptance: signage posted and access controlled; evidence: strength report and barrier photos.

Testing & Records	
26	Sample concrete for compressive strength: prepare minimum three specimens per lot; acceptance: curing and identification per standard; evidence: sample labels and chain-of-custody.
27	Record each truck’s batch, arrival, and discharge times; acceptance: total elapsed time ≤90 minutes unless otherwise approved; evidence: delivery tickets uploaded.
28	Update as-built drawing with pour limits and any construction joints; acceptance: drawing marked and supervisor sign-off; evidence: scanned markup.

Comments:

Filled by:

Signature:

Introduction	How to use this checklist
Place pile cap concrete (horizontal) demands deliberate sequencing, controlled consolidation, precise finishing, and proactive curing. This checklist equips site engineers and inspectors overseeing pile cap placement, horizontal concrete pours, and foundation cap concreting. It focuses on pour sequence, lift thickness, internal vibration, level control, curing, temperature management, and early-age protection—while explicitly excluding formwork inspection, geometry, or falsework assessments handled elsewhere. By following these steps, teams reduce risks of cold joints, honeycombing, segregation, level errors, plastic shrinkage, and thermal cracking. The outcome is a robust, dimensionally correct pile cap ready for subsequent works and compliant with approved project specifications and authority requirements. Use this interactive, commentable tool to plan the pour, capture measurements and photos, and assign actions in real time. Start ticking items, add field notes where required, and export as PDF/Excel with a QR code for authenticated records.	1. Preparation: confirm approvals, pour sequence, crew roles, and equipment readiness. Gather laser level, straightedge, vibrators, pump, thermometer, slump kit, curing materials, data loggers, cameras, and PPE. Set up access control and weather contingencies. Brief the team on evidence capture and sign-off responsibilities. 2. Using the Interactive Checklist: start interactive mode, tick items as completed, enter readings, and attach photos/videos and delivery tickets. Add comments, assign actions, and tag responsible persons. Monitor progress live and resolve blockers without restating tasks. 3. Sign-Off and Records: complete digital signatures from supervisor, contractor, and inspector. Export the commentable record as PDF/Excel, archive with drawings and test reports, and share the QR-authenticated link for stakeholder review and closeout.