

# QC Concrete Shotcrete Checklist

## Section 03.37.13

Receiving substrate is sound, clean, and saturated-surface-dry with no standing water or loose material prior to first shotcrete pass.	<input checked="" type="checkbox"/>	QC	OPN	NA		
Observations						
Reinforcing steel, anchors, and waterstops are securely tied and maintain specified minimum cover from finished shotcrete surface.	FTQ	<input checked="" type="checkbox"/>	OPN	NA		
Observations						
Nozzlemen performing work hold current ACI 506 certification cards and are listed on the approved crew roster posted onsite.	FTQ	QC	<input checked="" type="checkbox"/>	NA		
Observations						
Delivered shotcrete mix matches approved mix design with correct cement content, water-cement ratio, admixture dosage, and fiber quantity as confirmed on batch tickets.	<input checked="" type="checkbox"/>	QC	OPN	NA		
Observations						
Air supply pressure, hose diameter, and nozzle configuration are set to deliver exit velocity sufficient to achieve compaction ( $\geq 350$ ft/s or spec value) and recorded each shift.	<input checked="" type="checkbox"/>	QC	OPN	NA		
Observations						
During shooting, nozzle is held perpendicular within $\pm 15^\circ$ and 3 ft–6 ft from surface to prevent laminations and excessive rebound.	<input checked="" type="checkbox"/>	QC	OPN	NA		
Observations						
Individual shotcrete passes do not exceed 3 in. thickness (or spec limit) and cumulative thickness meets design values verified with depth pins or probes.	<input checked="" type="checkbox"/>	QC	OPN	NA		
Observations						
Rebound and loose accumulations are completely removed between passes and before final finish; no rebound is encapsulated in completed work.	FTQ	<input checked="" type="checkbox"/>	OPN	NA		
Observations						
Ambient and substrate temperatures are within specified limits (40 °F–90 °F) with cold/hot weather protection measures documented when outside range.	<input checked="" type="checkbox"/>	QC	OPN	NA		
Observations						
Curing begins within 1 hour of placement and continuous moisture or membrane curing is maintained for minimum 7 days (or spec duration).	FTQ	QC	<input checked="" type="checkbox"/>	NA		
Observations						
Test panels or cores are produced at required frequency and compressive strength results meet or exceed specified $f'_c$ ; results logged and available on site.	<input checked="" type="checkbox"/>	QC	OPN	NA		
Observations						
Finished shotcrete surface is trimmed to specified tolerance and demonstrates solid sound when tapped; hollow or delaminated areas are absent.	<input checked="" type="checkbox"/>	QC	OPN	NA		
Observations						
Embedments, inserts, and conduits remain correctly located and fully encapsulated without displacement after shooting, confirmed visually or by scanning.	<input checked="" type="checkbox"/>	QC	OPN	NA		
Observations						
Cold joints occur only at approved locations; joint surfaces are roughened, cleaned, and saturated-surface-dry with bond coat applied before resuming shooting.	FTQ	<input checked="" type="checkbox"/>	OPN	NA		
Observations						
Pump lines are flushed and initial material discarded until continuous homogeneous shotcrete emerges prior to directing flow to work surface.	<input checked="" type="checkbox"/>	QC	OPN	NA		
Observations						
For wet-mix method, water flow rate at nozzle is adjusted to achieve cohesive mix with no visible sloughing, segregation, or excessive run-off on applied surface.	FTQ	QC	<input checked="" type="checkbox"/>	NA		
Observations						