METHOD STATEMENT FOR SHOTCRETE WALL REPAIR			
Project Location	SEVEN	**Client :**	**Saudi Entertainment Ventures (SEVEN)**
PMC	**WSP**	**LDC / Consultant**	
Cost Consultant:	Turner & Townsend Arabia	**Contractor:**	

METHOD STATEMENT NO.:1	**REV : 00**
ORIGINATOR :	**DISCIPLINE:**

Title: **Method Statement for Concrete Repair of Shotcrete Walls with Steel Mesh for Verticals**

REV	DATE	STATUS	PURPOSE OF ISSUE
0	29-01-2025	FA	First submission for approval.

Status Code:

FA : For Approval **FI** : For Information **FC** : For Construction

Distribution :

DATE	PREPARED / REVIEWED BY	PREPARED / REVIEWED BY	PREPARED (RA + EI) / REVIEWED BY	REVIEWED BY	REVIEWED BY	APPROVED BY
	CONSTRUCTION MANAGER	TECHNICAL MANAGER	SAFETY MANAGER	MEP MANAGER	QA/QC MANAGER	PROJECT MANAGER
SIGN Subcon						
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Contents

1.0 SCOPE

Repair and rehabilitation of shot crete walls

2.0 REFERENCE

Contract Specifications
All related codes and standards referenced in the Contract specifications Contract drawings
Approved Shop Drawings and Sketches Approved Material Submittals
Program of works
Approved project safety plan and procedures

3.0 HEALTH AND SAFETY HAZARDS

Specific safety measures have to followed as applicable, and all the safety measures are covered separately in the Project Safety Plan.

4.0 DEFINITIONS

xxxxx	-	(Consultant)
xxxxx	-	(Main Contractor)
xxxxx	-	(Subcontractor)
MS	-	Method Statement
ITP	-	Inspection & Test Plan

5.0 RESPONSIBILITIES

Preparation of Procedure	- Construction Manager
Preparation of Procedure	- Technical Manager - MEP Manager
Review of Procedure	- QA/QC Manager
Review of Procedure	
Review of Procedure	- Safety Manager
Approval of Procedure	- Project Manager
Implementation	- As described in the procedure

The Construction Manager will be responsible for over all execution of project activities

The QA/QC Engineer will be reponsible for all inspections and approvals related to project

The Site Engineer will be reponsible for daily work planning and execution

The Safety Engineer will be responsible for job site and employee safety

6.0 PROCEDURE / METHOD TO BE EMPLOYED

Procedure

Pre-Work Inspection and Preparation:

Inspect the damaged area to determine the extent of repair required.

Mark the repair boundaries clearly.

Ensure all necessary permits and approvals are in place.

Surface Preparation:

Remove all loose, damaged, or deteriorated concrete using a chipping hammer or other suitable tools.

Clean the surface thoroughly to remove dust, grease, or any contaminants using compressed air or water jetting.

Ensure the exposed reinforcement is free from rust. Use a wire brush or sandblasting to clean rusted steel.

Apply an approved bonding agent to the prepared surface if required.

Steel Mesh Installation:

Cut and shape the steel mesh to fit the repair area.

Fix the mesh to the wall using anchors or fasteners at appropriate intervals as per design specifications.

Ensure the mesh is securely fastened and positioned at the correct cover depth.

Application of Repair Material:

Mix the repair mortar or shotcrete material as per the manufacturer’s instructions.

Apply the material using shotcrete equipment or manually in layers.

Start from the bottom and move upwards for vertical walls.

Ensure even distribution and compaction of the material.

Smooth and finish the surface with trowels or other tools as required.

Curing:

Apply a curing compound or cover the repaired area with wet hessian or plastic sheets.

Maintain curing for the specified duration to achieve optimal strength and durability.

Final Inspection:

Inspect the repaired area for uniformity, alignment, and adherence to design specifications.

Record the repair details and ensure approval from the quality control team.

Safety Precautions

Ensure all workers use appropriate PPE, including helmets, gloves, goggles, and safety harnesses for working at heights.

Use scaffolding or platforms that meet safety standards.

Follow safe handling procedures for materials and equipment.

Maintain a clean and organized worksite to prevent accidents.

Quality Assurance

Ensure all materials meet project specifications and have been approved by the engineer.

Document and report any deviations or issues during the repair process.

8.0 MATERIAL REQUIREMENTS

Steel mesh (galvanized or as per project specifications)
Repair mortar or shotcrete mix (pre-approved by the engineer)
Anchors and fasteners for mesh installation
Bonding agent (epoxy or cementitious as specified) and Curing compound

9.0 EQUIPMENT

Power tools (grinders, chipping hammers, etc.)

Air compressor

Shotcrete equipment

Trowels and finishing tools

Measuring tools (levels, plumb lines, etc.)

Scaffolding or mobile platforms

Personal Protective Equipment (PPE)

10.0 TEST REPORT

(If applicable, otherwise NIL)

11.0 HEALTH AND SAFETY PROVISIONS

All the safe practices will be adopted during the ongoing works.
All the working platforms will be inspected by Site Safety Engineer
All necessary personal protective equipment shall be used.
Proper access for the labours and equipment will be provided to the place of works.

12.0 QC APPROVALS AND OTHER DOCUMENTS

Project Specific Quality Plan shall be approved
Project HSE Plan
Calibration certificates for equipment and instruments
Confirmation of material sources

13.0 RECORDS TO BE PRODUCED

Inspection & Testing Request
(ITR) Checklist

14.0 DISTRIBUTION

Copies of this method statement shall be issued to the following for implementation.
Construction Manager
Project Engineer
HSE Engineer.
QA/QC Engineer.

15.0 SITE SAFETY INCHARGE APPROVAL

☐ **Approved**

☐ **Approved** Subjected to compliance with the following notes/comments

☐ **Not Approved** - Reasons

(HSE to sign here)

Name & Signature Date

16.0 RISK ASSESSMENT & CONTROL MEASURES

17.0 Risk Assessment

	IMPACT				
LIKELIHOOD	**Neglible**	**Minor**	**Moderate**	**Significant**	**Severe**
Very Likely	Low Med	Medium	Med Hi	High	High
Likely	Low	Low Med	Medium	Med Hi	High
Possible	Low	Low Med	Medium	Med Hi	Med Hi
Unlikely	Low	Low Med	Low Med	Medium	Med Hi
Very Unlikely	Low	Low	Low Med	Medium	Medium

18.0 ENVIRONMENTAL ASPECT , IMPACT & CONTROL MEASURES

Repair Method	Material Use	Energy Consumption	Carbon Emissions	Waste Generation	Water Pollution	Air Pollution	Ecological Impact
Crack Injection	Epoxy or polyurethane resins	Moderate	Moderate	Low	Possible chemical leaching	VOC emissions	Minimal
Patch Repair	Cementitious or polymer-based mortars	Moderate to high	Moderate to high	Moderate	Cement-based runoff	Dust from cement	Habitat disruption
Concrete Overlay	New concrete layer	High	High	High	Cement wash-off	Dust & CO_2	Land use impact
Cathodic Protection	Metal anodes, electrical systems	High (installation)	Moderate	Moderate	Possible metal leaching	Minimal	Long-term durability benefits
Surface Coatings	Polymer, silicate, or acrylic coatings	Moderate	Moderate	Low	Chemical leaching risk	VOC emissions	Minimal
Hydrodemolition	High-pressure water removal	High	High (equipment)	High (debris, slurry)	High (alkaline runoff)	Minimal	Water resource consumption

Carbonation Control	Anti-carbonation coatings	Moderate	Moderate	Low	Minimal	VOC emissions	Extended concrete lifespan
Realkalization	Chemical treatment to restore pH	Moderate	Moderate	Low	Possible chemical leaching	Minimal	Minimal
Electrochemical Chloride Extraction	Chemical & electrical process	High	High	Moderate	Possible runoff	Minimal	Improved structure longevit

Inspection and test plan

Activity	Inspection/Test Method	Acceptance Criteria	Frequency	Responsible Party
1. Pre-Repair Inspection	Visual inspection of damaged areas	Identify cracks, spalling, voids, and delaminations	Before repair	QA/QC Inspector, Engineer
2. Surface Preparation	Visual & tactile inspection	Surface roughened, clean, free of contaminants	Before shotcrete application	Contractor, QA/QC Inspector
3. Moisture Condition Check	Moisture meter / Spray test	Surface damp, no standing water	Before shotcrete application	QA/QC Inspector
4. Shotcrete Material Verification	Review of mix design, batch ticket check	Mix complies with design requirements	Each batch	QA/QC Inspector, Lab Technician
5. Shotcrete Application	Visual observation	Uniform placement, proper nozzle distance maintained	Continuous during application	Contractor, QA/QC Inspector

6. Shotcrete Thickness Check	Depth gauge / Core sampling	Thickness per design drawings ± tolerance	Random locations	QA/QC Inspector
7. Compressive Strength Test	Cylinder or core testing	Meets specified strength (e.g., 28-day strength)	3, 7, 28 days	Testing Lab, QA/QC Inspector
8. Curing Process	Visual inspection / Wet curing check	Proper curing method applied (e.g., moisture retention)	Daily during curing	QA/QC Inspector
9. Final Surface Finish Inspection	Visual check	Surface finish as per project specification	After curing	QA/QC Inspector, Engineer
10. Bonding Test (if required)	Pull-off test	Minimum bond strength as per design	As specified in contract	QA/QC Inspector, Testing Lab
11. Final Acceptance Inspection	Walkthrough inspection with client	No defects, uniform finish, meets project specs	After all tests	Engineer, QA/QC, Client Rep

19.0 LIST OF HAZARDOUS MATERIALS TO BE USED

NIL

20.0 LIST OF HAZARDOUS WASTE TO BE GENERATED

NIL

21.0 ATTACHMENTS

Risk Assesment & Control Measures Environmental Aspect,Impact & Control Measures
Inspection & Test Plan
Checklist
Drawings