

ARSHAD ALI RANA (TUNNEL CONSTRUCTION ENGINEER)

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Location: NEOM, KSA.



PROFILE SUMMARY:

I am a BSc. Geological Engineering graduate from Pakistan with hands on knowledge and experience of managerial process and planning the implementation phases required for the construction projects. I am currently working as a Tunnel Construction Engineer in FCC Construction Company on NEOM High Speed Rail Project in Saudi Arabia. I possess excellent communication skills and I can communicate professionally with clients, consultants and senior managers on detailed technical, contractual and commercial issues related to construction work & fit out works. I adapt quickly in different working environments. Moreover, I have rich experience in overseeing the construction engineering of railway tunneling works.

EDUCATION:

University of Azad Jammu and Kashmir Muzaffarabad

Bachelor of Geological Engineering

Grade: B+ CGPA (3.27/4.0).

Faran Model College Jhang Pakistan

HSSC, Pre-Engineering

Grade: B+

ORGANISATIONAL EXPERIENCE:

Designation: Construction Engineer (Tunnels)

Reporting to: Construction Manager

Company: FCC Construction Company

Location: Sharma, Tabuk KSA.

Consultant: Bechtel Corporation (Executive Project Manager)

Client: NEOM

Project: NEOM High Speed Rail Project

Duration: Feb 2023 to Present



Job Responsibilities Included:

- ◆ Supervision and monitoring of tunnel excavation with Control blasting, Pre-splitting and Post-splitting.
- ◆ Decision for excavation methodology (excavation with drill & blast or jackhammer, full face or heading-benching excavation) and pre-excavation support (spilling bolts, canopy pipes) on the basis of rock condition.
- ◆ Supervision and monitoring of drill holes, V cut and burn cut drilling and Supervision and monitoring of blast holes charging operations.
- ◆ After evaluation of rock mass quality on basis of Q-system supervision and reporting of rock support (shotcrete, fully cement grouted rock bolts, fully cement grouted expansion shell rock bolts, wire mesh, steel ribs, lattice girders, spilling bolts and canopy pipes).
- ◆ Supervising tunnels, portal & slope excavation and construction using drill and blast method (NATM) by keeping in view geological condition.
- ◆ Guidance for tunnel/ rock support installation (sprayed shotcrete, rock dowels/ bolts, wire mesh, umbrella pipe roofing, spilling bolts, lattice girder, steel arch/ rib guidance for rock dowels/rock bolts in case of spot bolting and umbrella pipe and spilling bolts grouting.
- ◆ Monitoring Tunnels, Adit's & Portal mining activities that includes drilling, blasting, mucking, shotcrete work and monitoring the execution of construction works in general with relevant approved drawings, specifications, International Standard, ITP's & Method statements.
- ◆ Monitoring Tunnels, Adit's & Portal mining activities that includes drilling, blasting, mucking, shotcrete work.
- ◆ Leading the execution of construction works in general with relevant approved drawings, specifications, ITP's & Method statements.
- ◆ Leading the Tunnels, Adit's & Portal mining activities that includes drilling, blasting, mucking, shotcrete work.
- ◆ Raising MIR of all materials and follow-up accordingly with procurement department to get

required documents for consultant approval.

- ◆ Monitoring and witness with consultant to check the of quality testing such as Slump/ flow test, shotcrete penetrometer test, shotcrete thickness verification test, Rock bolts/ dowels pull out test
- ◆ Meetings and discussion with consultant on technical issues, Quality and to keep the work smooth.
- ◆ Follow up with HSE Engineer to ensure safety of site team & workers during all construction activities.
- ◆ Reporting site quality issues to QA/QC Manager via inspection & NCR logs and monthly & weekly reports.
- ◆ Coordinate with client and consultant to perform sequence-based inspections and eliminate problem arising at different field work.
- ◆ Preparation of cracks mapping, daily shift report, daily progress report, contractor daily planned versus actual progress.
- ◆ Quality assurance of shotcrete is carried out by bond test, Tube test, for grouted Rock bolts, Pull out test and for strand anchor/bar anchor and cracks support on the basis of geological condition.
- ◆ Responsible for verifications of excavation and rock support works quantities that being completed satisfactorily.
- ◆ Reviewing and approving of Method of Statement, Risk Assessment, ITP and WIR.
- ◆ Review Technical Documents and drawings - Construction Work Packages, Method Statements, ITPs, Checklists, JHA, Field Sketches, Quality Surveillance reports, Quantity Takeoff and Material Approval requests.
- ◆ Preparing Daily Progress Report (DPR) & Delay analysis.

Designation: Construction Engineer (Tunnels)

Reporting to: Construction Manager

Company: China Railway Construction Corporation Ltd

Location: Sharma, Tabuk KSA.

Consultant: Bechtel Corporation (Executive Project Manager)

Client: NEOM

Project: NEOM High Speed Rail Project

Duration: Dec 2021 to Feb 2023



Job Responsibilities Included:

- ◆ Supervision and monitoring of tunnel excavation with Control blasting, Pre-splitting and Post-splitting.
- ◆ Decision for excavation methodology (excavation with drill & blast or jackhammer, full face or heading-benching excavation) and pre-excavation support (spilling bolts, canopy pipes) on the basis of rock condition.
- ◆ Supervision and monitoring of drill holes, V cut and burn cut drilling. Supervision and monitoring of blast holes charging operations.
- ◆ After evaluation of rock mass quality on basis of Q-system supervision and reporting of rock support, (Shotcrete, fully cement grouted rock bolts, fully cement grouted expansion shell rock bolts, wire mesh, steel ribs, lattice girders, spilling bolts and canopy pipes).
- ◆ Supervision and monitoring of power house and transformer hall cavern excavation sequence, rock support, installation/grouting of extensometer, convergence station, bar anchor and strand anchor. construction and erection Portal and portal frame.
- ◆ Installation and pull-out test for Swellex Bolts.
- ◆ Supervision for drilling, Installation and grouting of Canopy Tubes and spiles Bolts. supervision for pressure grouting for cavity area.
- ◆ Monitoring the execution of construction works in general with relevant approved drawings, specifications, International Standard, ITP's & Method statements.
- ◆ Monitoring Tunnels, Adit's & Portal mining activities that includes drilling, blasting, mucking, shotcrete work.
- ◆ Leading the execution of construction works in general with relevant approved drawings, specifications, ITP's & Method statements.
- ◆ Leading the Tunnels, Adit's & Portal mining activities that includes drilling, blasting, mucking, shotcrete work.
- ◆ Raising MIR of all materials and follow-up accordingly with procurement department.

- ◆ Monitoring the installation of primary supports including (lattice girders, steel arches, rock bolts & spiling bolts) as per the design and the rock class determined by the Geologist & Designer.
- ◆ Follow up with Consultant HSE engineer to ensure safety of site team & workers during all construction activities.
- ◆ Monitoring the work progress, Safety & Quality for Tunnels constructed by NATM, which will connect to the Main Running Tunnel (MRT).
- ◆ Inspect and review work in accordance with standards determined in the contractual project drawings and specifications.
- ◆ Review Technical Documents and drawings - Construction Work Packages, Method Statements, ITPs, Checklists, JHA, Field Sketches, Quality Surveillance reports, Quantity Takeoff and Material Approval requests.
- ◆ Preparing Daily Progress Report (DPR) & Delay analysis.

Position: Tunnel Engineer (NATM)
Reporting to: Deputy Project Manager
Company Name: China Railway Construction Corporation Ltd
Location: United Arab Emirates
Project Title: Etihad Rail Project Package
Client: Etihad Rail
Consultant: Jacobs Engineering Group
Duration: August 2020 to January 2022.



Job Responsibilities Included:

- ◆ Leading the execution of construction works in general with relevant approved drawings, specifications, ITP's & Method statements.
- ◆ Leading the Tunnels, Adit's & Portal mining activities that includes drilling, blasting, mucking, shotcrete work.
- ◆ Raising MIR of all materials and follow-up accordingly with procurement department to get required documents for consultant approval.
- ◆ Installation of primary supports including (lattice girders, steel arches, rock bolts & spiling bolts) as per the design and the rock class determined by the Geologist.
- ◆ Follow up with HSE Engineer to ensure safety of site team & workers during all construction activities.
- ◆ Reporting site quality issues to QA/QC Manager via inspection & NCR logs and monthly & weekly reports.
- ◆ Coordinate with client and consultant to perform sequence-based inspections and eliminate problem arising at different field work.
- ◆ Arranging the testing of shotcrete on site (slump test, penetrometer test & fiber content test etc.).
- ◆ Monitoring the Installation of Geo textile, waterproofing membrane & drainage pipe in final lining panels as per drawings.
- ◆ Installation of reinforcement for kicker & vault as per the rock class stated in design.
- ◆ Monitoring and witness with consultant to check the of quality testing such as Slump/ flow test, shotcrete penetrometer test, shotcrete thickness verification test, Rock bolts/ dowels pull out test and Seam/ weld test for waterproofing membrane.
- ◆ Installation of rental duct, kicker & final lining shutter work.
- ◆ False Tunnel construction work of Main Tunnels & Adits including reinforcement, concrete & shutter work.
- ◆ Contact grouting activity of all tunnels & Adits panels.
- ◆ Maintenance work of final lining including crack repairs by installation of packers & using crack injections.
- ◆ First stage & final concrete for rail track including installation of drainage system (precast & In situ manholes, center drain line, symphonic manholes, water collector pipes).
- ◆ Laying of rail track inside tunnel that includes reinforcement work, laying of sleepers and rails.
- ◆ Installation of reinforcement & pouring of cable troughs inside the tunnel.
- ◆ Installation of Gabion Walls and back filling at Tunnel portals.
- ◆ Installation of rock dowels & passive wire mesh in open cut area slopes.
- ◆ To ensure all above mentioned activities are performed as per approved method statement, drawings and above all considering HSE guidelines.
- ◆ Coordinating with Third party laboratory for getting test results of shotcrete, final lining, grouting etc.

Position: Tunnel Construction Engineer
Company: China Gezhouba Group Company.
Location: Pakistan
Duration: September 2017 to July 2020
Project Title: Suki Kinari Hydropower Project.
Client: WAPDA Pakistan



Consultant: National Engineering Services of Pakistan.

Job Responsibilities Included:

- ◆ Supervision and monitoring of tunnel excavation with Control blasting, Pre-splitting and Post-splitting.
- ◆ Decision for excavation methodology (excavation with drill & blast or jackhammer, full face or heading-benching excavation) and pre-excavation support (spilling bolts, canopy pipes) on the basis of rock condition.
- ◆ Supervision and monitoring of drill holes, V cut and burn cut drilling.
- ◆ Supervision and monitoring of blast holes charging operations.
- ◆ After evaluation of rock mass quality on basis of Q–system supervision and reporting of rock support (shotcrete, fully cement grouted rock bolts, fully cement grouted expansion shell rock bolts, wire mesh, steel ribs, lattice girders, spilling bolts and canopy pipes).
- ◆ Supervision and monitoring of power house and transformer hall cavern excavation sequence, rock support, installation/grouting of extensometer, convergence station, bar anchor and strand anchor.
- ◆ Supervision and monitoring of installation of formwork and cast in situ secondary concrete lining.
- ◆ Supervision and monitoring of testing of concrete and shotcrete i:e slump test , temperature test etc.
- ◆ To make it sure that all construction work being executed is according to specifications, designed drawings and according to internationally practiced standards.
- ◆ Places an emphasis on safe constructions in confined spaces, maintaining a high quality construction and monitor it for improvement.
- ◆ Preparation of cracks mapping, daily shift report, daily progress report, contractor daily planned versus actual progress.
- ◆ Quality assurance of shotcrete is carried out by bond test, Tube test, for grouted Rock bolts, Pull out test and for strand anchor/bar anchor and cracks support on the basis of geological condition.
- ◆ Responsible for verifications of excavation and rock support works quantities that being completed satisfactorily.
- ◆ Reviewing and approving of Method of Statement, Risk Assessment, ITP and WIR.

SKILLS

ICT- Competent user of Microsoft Office including Excel, Word, Power Point and Outlook.

Software's: AutoCAD, Plan Swift, Primavera P6 & ERP Software (Oracle).

Languages: ENGLISH (Advanced), ARABIC (Basic), URDU (Native).

PERSONAL INFORMATION

Nationality: Pakistani

Marital Status: Unmarried

Notice Period: 4 weeks

Passport # CG9797181

Visa Status: Transferable IQAMA