



Category

Esmail GHAHREMANI Project Director

Why Selected?

- International experience
- 28 Years of Rail Transportation Engineering
- High Speed Rail experience

Focus and role within the project?

Project Director

Biography

Esmail is a Civil Engineer with over 28 years of design, project management and business development experience gained through working in the Middle East on major railway projects. Through his career with SYSTRA and METRA for the last 28 years, Esmail has gained in-depth experience for the management and coordination of the rail projects. His multiple positions, such as Project Director for Etihad Rail Projects in UAE (UAE HSR, Stage 2: Packages 2A, 2B, MBZ and 2D, overall more than 650 km), Central Asia Director, Director in Middle east, the Project Director for Al Batinah Railway Feasibility study in OMAN, lead Project Coordinator for Dubai Metro Red Line Route 2020, coordinator for GCC Railways feasibility study, preliminary design of KAFD Monorail, Makkah Metro, etc., was a chance for him to improve the leadership skills in rail projects. Over the last few years, he specialized in managing the Railway and Transit projects in the region especially in UAE, Saudi Arabia, Qatar, OMAN. Working previously with METRA in several positions such as Deputy CEO and Engineering Director, Program Director and Civil Engineer and RAI, he has also gained experience in rail track, Structures (Bridges), maintenance renewal, infrastructure dimensioning calculation for new rail lines.

HSR Highlights

- UAE HSR PMC
- HS2
- Al Batinah HSR Railway Line
- Ain EL Sokhna City on the Red Sea coast to new El Alamein city HSR Railway in Egypt
- Moscow-Kazan HSR Railway in Russia
- Tehran – Esfahan High Speed Railway Line
- Tehran – Mashhad High Speed Railway Line
- Deir Al Zor -AlBookamal High Speed Railway Line

Summary

Proposed Position: Project Director

Years' Experience in Proposed Position: 22 years

Years Rail Experience: 28 years

Years in HS rail experience: 12 years

Years Systems/Integration Experience: 16 years

UAE Experience: 18 years

Details

Name: Esmaeil GHAHREMANI

Name of Company: SYSTRA

Years with Company: 18 years

Nationality: Iranian

Languages

Spoken: Azeri (Fluent), Persian (Fluent), English (Fluent), Arabic (Average), French (Basics)

Reading: Azeri (Fluent), Persian (Fluent), English (Fluent), Arabic (Average), French (Basics)

Written: Persian (Fluent), English (Fluent), Arabic (Average), French (Basics)

Education

Higher: MSc in Civil Engineering - Soil Mechanics and Foundation Engineering, 1997 -2000

Professional Qualifications: Member of the Society of Civil Engineers, Member of the International Geotechnical Society, Member of the Tunnelling Association

Date of Birth: 06/09/1975

Relevant Qualifications: High Speed Rail Experience employment Record

SYSTRA (Nov 2019 - Present)

Various Projects, Project Director/ Gulf & Central Asia Director, 2019 - Present

Project Description:

- UAE HSR PMC for PE Design and Tender
- 2 Railway Depots Implementation in Azerbaijan PMC/ Supervision (Bilajari & Ganja Depot)
- Design Review for Moscow-Kazan HSL in Russia
- Georgia Livable city Program, ADB funded Project
- SUMP of 3 cities (Peshawar, Mingora & Abbottabad) in Pakistan, AFD funded Project
- Feasibility Study and Preliminary Design for Mongolia Bypass Railway Line, ADB funded Project
- Two Tbilisi Cable Cars Projects, Preliminary Design, EPC Tender, AFD funded Project
- Transport Plan of 6 Cities in Georgia, EBRD funded Project
- International Consulting Services for Moscow-St. Peterburg HSR in Russia

Roles and Responsibilities: In charge of SYSTRA Operations and Development in Central Asia including Afghanistan, Pakistan, Kazakhstan, Uzbekistan, Azerbaijan, Armenia, Tajikistan, Kirghizstan, Georgia, Russia, Turkey, Turkmenistan and Mongolia. Managing the main activities of SYSTRA in Central Asia

HS2, United Kingdom, 160 billion AED, HS2 Ltd, Project Delivery Management/ Peer Review, Jan 2020 - Present

Project Description: HS2 is an ambitious project to build a high-speed rail line across England to connect some of the country's largest cities. Construction of the new railway is split into three phases:

- Phase 1 from London Euston to Birmingham Curzon Street, with intermediate stations in West London (at old Oak Common) and at Birmingham Airport;
- Phase 2a from the West Midlands to Crewe;
- Phase 2b, which is comprised of an Eastern leg (HS2 East) from the West Midlands to the East Midlands and a Western leg from Crewe to Manchester, with an intermediate station at Manchester Airport.

Roles and Responsibilities: In charge of production coordination and delivery by SYSTRA Dubai for the High-Speed Rail Line in UK.

Etihad Rail Stage 2, Packages A, B, D, MBZ-EXP, UAE, 6.5 billion AED, Project Director, Jan 2019 – Present

Project Description: Preparation of Detailed Design for 140 km Railway Civil works for Package 2A including Alignment, Earthworks, Drainage, Structures (UBR, OBR, UPS, Culverts), Sand Mitigations, Roads, Utilities and Track Preparation of Detailed Design for 145 km Railway Civil works for Package 2D including Alignment, Earthworks, Drainage, Structures (UBR, OBR, UPS, Culverts), Tunnels, MEP, Sand Mitigations, Roads, Utilities and Track.

Preparation of Detailed Design for Package B of the Etihad Rail Network (ERN) and the scope of work includes takeover and finalization of the Detailed Design of part of the alignment/ realignment of two sections: Al Maqatra (12 km), Al Nahda (5 km) including Alignment, Earthworks, Drainage, Structures (UBR, OBR, UPS, Culverts), Sand Mitigations, Roads, Utilities and Track

Roles and Responsibilities: In charge of managing the project including technical and commercial and responsible for the management and leadership of the team overseeing the delivery of the planning and design for the fast track Project of Etihad Rail.

Etihad Rail Packages B, C & D, UAE, 8 billion AED, CSCE/SK JV, CRCC-GTGC JV, CRCC-NPC JV, Project Director for Tender Phase, Aug 2018 - April 2019

Project Description: Preparation of Bid Design for packages B, C and D as the Designer for Contractor

Roles and Responsibilities: In charge of managing the project including technical and commercial and responsible for the management and leadership of the team overseeing the delivery of the planning and design for Bid preparation

Various Project, Middle East: RTA (Road and Transport Authority in Dubai), NAT (National Authority for Tunnels in Egypt), Tehran Municipality, KSU (King Saud University in KSA) and Makkah Region Development Authority (MRDA), SYSTRA Project/ Tender Director, Jan 2017 – Dec 2018

Project Description:

- Consultancy Services for Dubai Metro Green Line and Red Line Extension (Red Line: 3.5km with 1 elevated station and Green Line: 21km with 13 stations and depot with park & ride facility), UAE
- Consultancy Services for the Design and supervision of works of the Alexandria Raml Tram Rehabilitation Project in Alexandria (The preferred corridor consists of: 2 lines with 27 stations and a length of 13.8km including the extension to Mansheya), Egypt.

- Implementation of **first high speed railway line in Egypt** from Ain EL Sokhna City on the Red Sea coast to new El Alamein city on the Mediterranean coast
- Implementation of two Monorail Projects in Egypt Project No (1): 6th October City Rail Transit Monorail with total length about 35 km Project No (2): New Capital Rail Transit Monorail with total length about 52 km
- Project Management / Construction Management (PMCM) Consultancy Services for Makkah Bus Network Phase 1, Makkah Region Development Authority.
- Tehran LRT/ Tram Project including two lines; Bazar Tram and Jomhoury Tram with a total length of 14 km for Municipality.
- Update of Tehran Rail Master Plan considering the new development of the city for Municipality.
- Consultancy Services for the Case Study of KSU (King Saud University) Rail Transit System in Riyadh.

Roles and Responsibilities: In charge of managing/ coordinating the Production and submission including technical and commercial and responsible for the management and leadership of the team overseeing the delivery including Project Plans

Update of Tehran Rail Master Plan, 2.5 million AED (SYSTRA Contract), Municipality, Project Director, Feb 2017 – Sept 2018

Project Description: The existing Long Term Urban Rail Master Plan has been completed in 2007 and should be reconsidered to take into account the actual evolution since then, and new ideas and priorities of the authorities for providing a robust and efficient public transportation network.

Roles and Responsibilities:

In charge of managing the project including technical and commercial and responsible for the management and leadership of the team overseeing the delivery of the planning and design. The main stages of the study are:

- Stage 1: Inception and data identification and collection:
- Stage 2: Review of relevant recent studies and approved plans:
- Stage 3: Definition and Assessment of Network Scenarios:
- Stage 4: Revision of the Rail Masterplan and definition of the main characteristics of the proposed rail lines.

Tehran LRT/Tram Project, Iran, 1.5 billion AED, Municipality, Project Director, Dec 2016 – Oct 2017

Project Description: As part of rail Transit Plan, Municipality plans to design and build two LRT/ Tram Lines in Tehran: Bazar Tram and Jomhuri Tram with a total length of 14 km for Municipality.

Roles and Responsibilities:

As Project Manager, responsible for the management and leadership of the team for the successful delivery of the design and studies. The main stages of the study are:

- Prepare a Feasibility Study analyzing the proposed lines on a technical and financial point of view;
- Provide basic design for alignment, track infrastructure, operating system, rolling stock and future operations at a functional level, based on performance specifications.
- Prepare EPC Tender documentation

The main idea behind this study is to develop a basic design and EPC Tender documentation based on the proposed scenario for LRT construction in the historical center of city, which has been provided by Municipality. Bazar line and Jomhuri line will be the focus of the study.

Various Projects in Middle East for Rail Consultancy Services , Middle East, more than 50 billion AED, RTA (Road and Transport Authority in Dubai), DUBAI AVIATION ENGINEERING PROJECTS, Sharjah Urban Planning Council, Mapna, HSR Company in Russia, Project/Tender Director, Oct 2015 - Jan 2017

Project Description:

- Consultancy Services for Dubai Tram Phase 2 and phase 3 for Road and Transport Authority of Dubai. Tram Phase 2 covers a distance of approximately 6 KM and 9 no (Nine) tram stations. Tram Phase 3 includes approximately 16.6 KM and 19 no (Nineteen) tram stations.
- Consultancy Services for Independent Review Body for the Automated People Mover System, DUBAI AVIATION ENGINEERING PROJECTS
- Technical & Financial Proposal for the Basic Design of Tehran Metro Line 6, Mapna railway Construction Company.
- Design Review for Moscow-Kazan HSL in Russia: The HSR is planned as a double track and with a gauge of 1520 mm, The line is approximately 770 km with the travel time of 3 h 30 min; with Maximum speed of high-speed passenger trains: 350 km/h (up to 400 km/h on certain sections) with the possibility of admitting passenger trains and special freight trains running at speeds of at least 160 km/h.

Feasibility Study, Preliminary Design, PMC, Design Review

Roles and Responsibilities: In charge of managing/ coordinating the production and submission including technical and commercial and responsible for the management and leadership of the team overseeing the delivery of the production Packages including Team Composition, Organization charts, Staffing, Staff Deployment, Technical approach and methodology, Work Plan, schedule and program, Project Plan, QA/QC Plan etc.

Al Batinah HSR Railway Line, Oman, 8.0 billion AED, Supreme Committee for Town Planning (SCTP, Project Manager, Aug 2009 - Dec 2011

Project Description: Feasibility Study/ Concept Design of Al Batinah High Speed Railway Line in OMAN. Al Batinah Railway Project includes a railway mainline extending about 300km from the UAE border to Misfah near the greater Muscat area with an extension of almost 15 km to Muscat area and Muscat Airport. This will be the Oman National railway and will form part of the GCC network.

Roles and Responsibilities: As Project Manager, responsible for the management and leadership of the team for the successful delivery of the feasibility study and basic design. The main stages of the study are:

- Prepare a Feasibility Study analysing the proposed alignments, scoping of railway;
- Passenger and Freight Traffic Demand
- Scoping of Railway
- Operation and maintenance
- Alignment and Civil work
- Track and Systems

Various Projects in Middle East for Rail Consultancy Services, Middle East, RTA (Road and Transport Authority in Dubai), Arriyadh Development Authority, Egypt Ministry of Transport, Qatar rail, Saudi Railway Organization (SRO), Baghdad Mayoralty, Kurdistan Ministry of Transportation and Communication, Development Commission of Makkah Al Mukarramah, Al Madinah Al Munawwarah and Al Mashaer Al Mugadassah (DCOMMM), Rayadah Investment Company, etc, Project/ Tender Manager/ Coordinator, Apr 2007 - Oct 2015

Project Description:

- Dubai Metro Red Line Connection to EXPO 2020, to connect the Dubai Metro's Red Line from Sheikh Zayed Road to the EXPO 2020 site. The Red Line Connection to the EXPO 2020 project is envisioned to be approximately 14 KM in length with 6 stations.
- Consultancy Services PMCM Riyadh Metro Packages 1 and 2, the Client: Arriyadh Development Authority. Riyadh Metro Project consists of 6 Lines of 173.4 km and 85 stations, Blue Line: 38km, 23 stations + 1 iconic Station, Red Line: 25.3km 13 stations, Orange line; 40.7Km, 20 stations + 2 Iconic

stations, Yellow line: 26.6km, 8 stations, Green Line: 12.9km, 10 stations and Purple Line: 29.9km 8 stations.

- Egypt High Speed Rail Network, The Client is Egypt Ministry of Transport and will cover the new electrified high speed rail line between Alexandria – Cairo – Luxor – Aswan (1,087 km).
- Riyadh-Dammam High Speed Rail Network for Saudi Railway Organization (SRO). The overall objective is to assess the feasibility of high speed railway line linking Riyadh to Dammam, based on traffic and market study, defining the optimal alignment, the most suitable systems and rolling stock.
- Baghdad Metro line 1 and 2 Design for Baghdad Mayorality. The first line with a length of 18 km has 20 stations. The second line has a length of 21 km with 21 stations.
- Makkah Metro Design for Development Commission of Makkah Al Mukarramah, Al Madinah Al Munawwarah and Al Mashaer Al Mugadassah (DCOMMM). It includes Preliminary design, including preparation of performance specifications for an elevated metro line (60,000 to 90,000 passengers per hour per direction) for the Southern rail line for a length of 20 km.
- KAFD (King Abdullah Financial District) Monorail Design and Supervision. The project will comprise a one track line in circular configuration, totally elevated with a satisfactorily level of integration into the whole KAFD development: attractors, podium and street network. The length is 4 km and it has 6 stations. The Client is Rayadah Investment Company in Riyadh, KSA. The Monorail system will initially consist of six trains of two cars with a capacity for 3,000 passengers per hour (pph) with average commercial speed of 25 kmh.
- GCC Railway Feasibility Study. The study conducted under the auspices of the Gulf Cooperation Council-Secretariat General (GCC-SG) supports the construction of a railway to connect the GCC Member States - the "GCC railway". The railway would run from Kuwait City in the State of Kuwait along the Gulf to Muscat in the Sultanate of Oman, also serving the Kingdom of Saudi Arabia, the Kingdom of Bahrain, the State of Qatar and the United Arab Emirates. The total length of the GCC Railway main line is about 1,940 km; about 180 km of connecting lines would also be required.

Roles and Responsibilities: In charge of managing/coordinating the production and submission including technical and commercial and responsible for the management and leadership of the team overseeing the

delivery of the production Packages including Team Composition, Organization charts, Staffing, Staff Deployment, Technical approach and methodology, Work Plan, schedule and program, Project Plan, QA/QC Plan etc.

Mashhad Metro Line 1 Rolling Stock and Operational Study, 1.5 billion AED, MUSROC – Mashhad Urban and Suburban Railway Operation Company, Project Manager, June 2010 – Dec 2013

Project Description: Mashhad LRT line 1 has a length of 18.7 km and 22 stations. The Supervision Scope consist of: Follow-up "LRV production contract" progress and "surveillance contract" management, Quality Assurance, audit of CNR (Chinese Manufacturer), Supervision, checking and approval of design drawings, calculations, technical data and documentations provided by CNR. The scope for Operation study includes the preparation of all operational procedures and manuals.

Roles and Responsibilities:

As Project Manager, responsible for the management and leadership of the team overseeing the delivery of the Operation Study, Design Review, Supervision and QA/QC. The Scope includes:

- Task n°1: Follow-up "LRV production contract" progress and "surveillance contract" management.
- Task n°2: Quality Assurance, audit of CNR.
- Task n°3: Assistance for setting up appropriate organization inside MURCO for the "LRV production contract" follow-up.
- Task n°4: Supervision, checking and approval of design drawings, calculations, technical data and documentations provided by CNR.
- Task n°5: Surveillance during production of the first batch of 3 LRV.
- Task n°6: Surveillance during production of LRV serial batch.
- Task n°7: Surveillance LRV guarantee period.

QOM Monorail, Iran, 2.5 billion AED, MAPNA Rail Construction Company, Project Manager, Jan 2010 – Dec 2010

Project Description: The first phase of the Qom Monorail shall consist of six kilometres of track with seven stations. It shall link the north-eastern part of the city with the grand mosque in the centre of the city. In the next phases, the monorail shall continue to Pardisan town, south of Qom. The monorail system shall extend 18 kilometers in total, according to the governor general of the city.

Roles and Responsibilities:

As Project Manager, responsible for the management and leadership of the team overseeing the delivery of the Basic Design and Study. The Scope includes:

- Alignment Design Review
- Civil Engineering Design Review
- System
- Interface Matrix
- RAMS (reliability, availability, maintainability, safety)
- Guide Beam
- Electrical power supply
- Signalling
- Telecommunications
- Tolls / Computer Ticketing / Monetics
- Rolling Stock
- Operation

SYSTRM Design of Tehran – Esfahan High Speed Railway Line, Iran, 7.5 billion AED, METRA Consulting Company, Ministry of Transportation, Project Manager, Apr 2008 – May 2010

Project Description: The Ministry of Transportation decided to build the HSR Line, approximately 420 km, electrified. There are no tunnels in the Section and several Viaducts. The Terrain is mainly flat. The maximum gradient is 15/1000. Design Speed is 250 km/h. There are 3 main stations in the Section, Tehran, Qom and Esfahan. SYSTRM was in charge of the Preliminary Design and EPC Tender Documents for all systems and Rolling Stock including: Telecom, Signalling, Power and Depot.

Roles and Responsibilities:

As Project Manager, responsible for the management and leadership of the team overseeing the delivery of the preliminary Design, Study and Spec. The Scope includes:

- Track
- Stations
- Power Supply Design
- Traction Power
- Signalling
- SCADA
- Telecom
- Operation

Feasibility Study of Tehran – Mashhad High Speed Railway Line, Iran, 16 billion AED, METRA Consulting Company, Ministry of Transportation, Project Manager, June 2007 – Oct 2008

Project Description: The Ministry of Transportation decided to build the HSR Line, approximately 926 km, electrified. There are no tunnels in the Section and the length of longest bridge is 40m. The maximum gradient is 15/1000. There are 5 main stations in the Section, out of which Tehran, Garmsar, Semnan,, Shahrood, and Mashhad are major stations. The following is the list of stations.

Roles and Responsibilities:

As Project Manager, responsible for the management and leadership of the team overseeing the delivery of the preliminary Design, Study and Spec. The Scope includes:

- Alignment
- Earthworks
- Drainage/ Hydrology
- Bridges/ Structures
- Stations
- Power Supply Design
- Traction Power
- Signalling
- SCADA
- Operation

METRA Rail Consulting Engineers (Aug 2000 – Apr 2007)

Shiraz Metro Line 1, 3.5 billion AED, Shiraz Urban Railway Corporation (SURO) Project Director, Aug 2005 – Apr 2007

Project Description: Shiraz Metro Line 1 stretches of Northwest to Southeast of the city with total length of 22.5 km. The alignment, runs through a deep twin single TBM tunnel 6.88m dia for approximately 12km, continues at ground level for roughly 3km and finally passes through a box section subway (8 6m cut & cover) for about 7.5km. 21 stations, one depot and one underground parking have been built for this line.

METRA-BEHANSADD JV was in charge of Project management and Contract administration of the Project.

Roles and Responsibilities:

As Project Director for the Project Management Consultant (PMC), responsible for the management and leadership of the team overseeing the delivery of the design and Construction contracts for the whole Shiraz Line 2 Metro project including Civil, Systems and Rolling Stock. The works, valued at some \$1.0Bn, involved the review of the civil, architectural, MEP, Systems and Operation and maintenance designs and the supervision of the construction and fit out on the operation.

Syrian Railway projects, Syria, 2.9 billion AED, Syrian Railways (CFR), Project Director, Apr 2002 – Jan 2005

Project Description: METRA has signed 2 contracts with Syrian Railways in 2001 for the design and supervision of Syrian National Rail Network. Deir Al Zor -AlBookamal High Speed Railway Line with the length of 150 km, connects Deir Al Zor to Al Bookamal in the border of Iraq. There are two main viaducts to pass Euphrates and Khabour river with many culverts and fly overs. Euphrates Bridge is a steel truss bridge with 400 m length and 75 m spans. Khabour bridge is the pre-stressed concrete with the spans of 27 m. The scope of services include: preliminary design, detailed design, tender documents and construction supervision covering all infrastructure and systems. The scope for the AlKhansa - Akkari Railway Line study, includes feasibility

study and preliminary design for the upgrade of existing railway line.

Roles and Responsibilities: As Project Director, responsible for the management and leadership of the team overseeing the delivery of the design of the two railway lines. At the later stage responsible for the Construction Supervision of all civil works and track works for the 150 km long Deir Al Zor –Al Bookamal High Speed Railway Line and fit out on the operation.

Railway Projects, Ministry of Transport, Vice President – Project Delivery Team, Apr 2002 – Jan 2006

Project Description: METRA has signed several contracts with Ministry of Transport for the design and supervision of expansion of National Rail Network.

- Preliminary Design of Tehran - Mashhad High Speed Railway Line
- Detailed Design of Kermanshah-Khosravi Railway Line
- Preliminary Design of Shiraz-Bushehr Railway Line
- Preliminary Design of Gorgan - Mashad Railway Line
- Detailed Design of Tehran-Esfahan High Speed Railway Line
- Preliminary and Detailed Design of Tehran-Hamedan Railway Line
- Supervision Team of Track and Systems of Bafgh - Mashad Railway Line
- Feasibility Study and Environmental Impact Assessment of Mianeh-Tabriz Railway line

Roles and Responsibilities: As Vice President, responsible for leadership and supervise of the team overseeing the delivery of the design of the railway project.

METRA Rail Consulting Engineers (Nov 1996 – Aug 2000)

Railway Projects, Ministry of Transport, Structural Design Engineer, Nov 1996 – Aug 2000)

Project Description: METRA has signed several contracts with Ministry of Transport for the design and supervision of expansion of National Rail Network.

- Designer of Bridges for Qom –Esfahan High Speed Railway Line (Steel Structure, Precast Concrete)
- Design of Railway Bridges for Tehran –Mashad Railway Line. The existing single track is changed for the double track and the bridges and overpasses are required to be designed.
- Load Testing (Dynamic & Static) and Load Rating of existing Akbar-Abad Railway Bridge.
- Load Testing (Dynamic & Static) and Load Rating of Bridge Km 23 In Tehran-Qom Railway Line.
- Geotechnical Study of Miane-Tabriz Railway Line.

- Design of HEMAT Road Bridge.Superstructure Design and Study of Mianeh-Tabriz, Esfahan-Shiraz and Tehran-Kermanshah Railway Lines.

Roles and Responsibilities: As Structural Design Engineer, responsible for design of the railway and road bridges including all types of concrete and steel girder viaducts. Also in charge of full scale load test of existing railway bridges to estimate the load capacity and need for rehabilitation required for higher axle load.

