

Tendering the Construction Phase of Amir Abad Port (Superstructure and Infrastructure Project)

In detailed design's phase, RAHYAB BEHINEH did the project of tendering the design of railway routes inside the Amir Abad port and its connection with the main railway network. RAHYAB BEHINEH prepared the tender documentation, qualifying the contractor, supervision on purchasing the equipment.

Some of the provided services are as follows:

- Providing the legal documents for the bidding and cooperative supervision with the client for running the bidding
- Supervision on qualifying and choosing the contractor
- Doing the project control (permissible and impermissible delays by contractors)



Date: 2004/2010

Location: Tehran

Client: Amir Abad Port

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Date: 2004/2010

Location: Tehran

Client: Amir Abad Port

Provision of Consulting services for organizing Qom's rail transportation

Since the city of Qom is becoming more developed day by day in terms of urban development and population, a high quality transportation network is necessary. For this, city rail transportation plays an important role.

The existing railway network in the area is the main route for transporting cargo and passengers from north to south, but due to the poor quality of repair and maintenance for more than a decade as well as some technical issues costs are not effective and some unwanted difficulties have been made.

The provided services by RAHYAB BEHINNEH emphasize the following items:

- Checking for railway bottle necks in the project's area and railway network's effects on urban development and architecture
- Suggesting the best route and mechanism for the rail freight and passenger transportation
- Measuring the profitability, efficiency, advantages and disadvantages of railroad options
- Develop strategies for operation phase and consider environmental aspects for preferred options
- Preparing The technical and financial detailed documents for preferred options



Date: 2005/2007
Location: Tehran
Client: I.R.I Railway Co.

Provision of Engineering and consultant services for preparing tender documents, controlling agreement and contract

The main Engineering and consultant services include:

- Provide Annual Financial plans, budgeting, and planning the time schedules
- Ensure effective Time management of the projects
- Ensure Cost management of the projects
- Provide Process management of procurement inquiries



Date: 2014/2016

Location: Tehran

Client: I.R.I Railway Co.

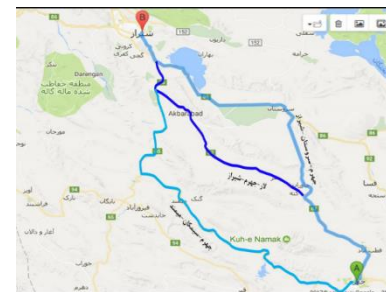


Rahyab Behineh
Consulting Engineering

Railway

Provision of Feasibility studies for Jahrom-Sarvestan cities Railway network connection

- Provision of beneficial statistics
- Revise and pinpoint the influence areas
- Study of the network traffic
- Determination of the route's tunnels and corridors
- Estimation of project's costs
- Foresee of project's profitability
- Analyze of determinant financial elements on making the project profitable



Date: 2017

Location: Tehran

**Client: Ministry of Roads & Urban
Development**



Rahyab Behineh
Consulting Engineering

Railway

Provision of consulting services to restructure the Rail Fleet's Maintenance System

- Project control services
- Rail Engineering Organization Design
 - Identify the existing regulatory organizations and departments in the Rail Transportation field
 - Review existing Engineering Organizations in the country
 - Analyze and design the Organization
- Regulation of Pricing the services for maintenance wagons
 - Create a Service Price List for Rail Fleet's maintenance
- Validation of Restructured System through International Management Consultants



Date: 2016/2017

Location: Tehran

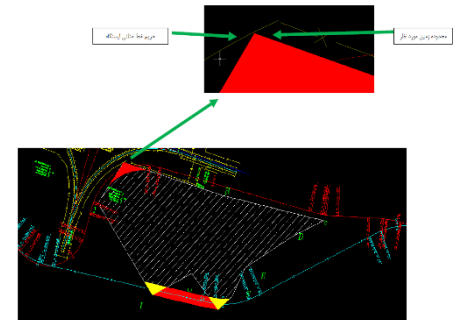
Client: I.R.I. Railway Co.

Provision of Engineering services for superstructures, signaling and communications of the main railroad of Shiraz-Bushehr-Asalooyeh

RAHYAB BEHINEH performed The detailed design phase of the project with an approximate length of 700 kilometers. Considering the potential resources in the area such as oil, gas, and nuclear facilities, Shiraz-Bushehr railway operation can play a significant role in the development of the area.

RAHYAB BEHINEH services were mainly focused on:

- Design criteria and measurements
- Designing the station yard (30 various types of stations)
- Simulating train movement for both freight and passenger vehicles to pass the track
- Preliminary and detailed design studies for signaling along the track
- Studying the required traction forces and suggesting the suitable locomotives
- Preliminary and detailed design studies for power traction along the track and station
- Determining the requirement of station buildings, facilities, and yard construction



Date: 2008/2017

Location: Tehran – Fars – Bushehr
Client: Construction and Development of Transportation Infrastructures Company



Rahyab Behineh
Consulting Engineering

Provision of Conceptual analyzes and feasibility study of constructing the second railway line in in order to acquire the permission for construction

Carefully checking each step, our goal was achieved with doing two main tasks

Section one

Pre-feasibility and feasibility studies

1. Demand and traffic studies
2. Route design studies
3. Super/sub-structure studies
4. Station yard design
5. Fleet and rolling stock studies
6. Track components and station yard facility based on the standards and meeting the requirements of the project, while keeping the costs to the minimum

Section two

Obtaining the construction permission from the government



Date: 2015/2015

Location: Tehran

Client: Nik Gostar Co.

Design and administrative/site provide necessary supervision for railway track maintenance and repair

The project of maintenance and repair is as important as design and construction. In order to present our quality, we advanced to each step with cautious engineering solutions

Design Optimization

- Reviewing the initial design and optimizing it
- Railway track detailed design and building maps preparations
- Site visiting and controlling the earthwork (route profile control)
- Providing the tender documents to be published, in order to choose the qualified contractors
- Supervision on contracting and providing legal documents

Supervision

- Supervision on maintenance and repair of all track components by all responsible companies
- Supervision of rehabilitation including the super/sub-structure carried out by operator, investor and all subsidiary companies



Date: 2016/2017

Location: Tehran

Client: Ports & Maritime

Organization



Rahyab Behineh
Consulting Engineering

Railway

Management Consulting

Provision of Feasibility Study for buying 100 (6 seated) and 8 generator wagons.

- Follow up to approve the design
- Calculation of the design's cash flow
- Providing the design's feasibility study (approved by banks and etc.)



Date: 2011/2012

Location: Tehran

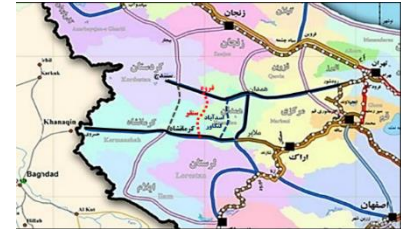
**Client: Tosse, e tarabar Iranian
investment group**

Provision of engineering studies in order to connect Hamedan-Sanandaj Intercity Railway to the national railway network

in this project RAHYAB BEHINEH studied the engineering solutions of appending the Hamedan – Sanandaj, -two main cities in the west of Iran to the railway network

the key aspects of the project INVOLVE:Research and Design

- Project identification
- Study the demands of freight and passenger traffic during the operation phase
- Routes and corridor design
- Carry on Environmental studies
- Carry on Passive Defense studies
- Carry on Financial and economic studies



Date: 2015/2016

**Location: Hamedan - Kermanshah
- Kurdistan**

Client: I.R.I. Co



Rahyab Behineh
Consulting Engineering

Master plan design of Islamshahr train station

Islamshahr train station has the biggest yard and is located on the main southern corridor near Tehran station. The station is currently undergoing major development and modernization to provide TOD regional and commuter services, passing the high speed lines. In this regard RAHYAB BEHINEH Co., prepared the master plan for the optimization of functions and facilities.

The main scope of our services:

- Project identification (scope, methodology, targets)
 - Passive defense studies
- Environmental studies
- The climate and geology conditions
- Geotechnics studies
 - Tunnel, bridges, and culverts
- Economic and social studies
- Railway studies (track, operation condition, rolling stocks, transportation, demands analysis)
- Mechanical and electrical facilities studies
- Master plan design
- The cost and benefit analyzes for introduced packages
- Making a final report (drawings, maps)



Date: 2017/Ongoing

Location: Tehran

Client: I.R.I. Railway Co.

Provision of Consulting Services for tendering the Electrification of Tehran-Mashhad intercity Railway

- Identification phase report (ITC)
- Project description and Term of references (TOR)
- Preparation of proposal (RFP)
- Preparing the documents of RFQ
- Codification of the documents for consultant selection and rating
- Cooperation on collecting and controlling the consultant's documents
- rating and evaluating consultants for the client and selecting the right consultant
- Assisting the chosen consultant to make a contract with the client for the Tehran – Mashhad project



Date: 2006/2007

Location: Tehran - Mashhad

Client: I.R.I. Railway Co.



Rahyab Behineh
Consulting Engineering

Railway

Master plan Design of Rey-Varamin-Garmsar Stations

Three independent Rey-Varamin-Garmsar train stations in proximity to Tehran station are located in the main eastern corridor. The stations are currently undergoing major development and modernization to provide TOD regional and commuter services, electrifying the existing lines. In this regard RAHYAB BEHINEH Co., prepared the master plan for the optimization of functions and facilities.

The main scope of our services:

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- Passive defense studies
- Environmental studies
- The climate and geology conditions
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Date: 2017/Ongoing

Location: Tehran

Client: I.R.I. Railway Co.

Design a Comprehensive system for operation of Siemens/Mapna locomotives

Designing the system on how to operate 150 Siemens locomotives manufactured by Mapna Co. including conductor training packages, running drivers' eligibility tests, hire drivers, design and implement driver's time schedules.

Providing methods to effectively decrease the training time of the drivers

Running financial and economic Studies of the project

Running feasibility studies and Calculation of Profitability of the designed system



Date: 2017

Location: Tehran

Client: Mapna Group

Organizing the Qaemshahr railway transportation network

- Investigating the detected hazards of the train passing through town and feasibility studies for constructing a ring railroad
- Investigation on feasibility of constructing new stations
- Investigation of constructing a second railroad
- predicting the demand for more capacity of passenger and cargo transportation
- presenting a summary report in an article format with the name of Railway and Client's Cooperation



Date: 2009/2011

Location: Qaemshahr/Iran

Client: I.R.I Railway Co

Providing Regulation and instructions for a number of Tehran Municipality rules

- Collecting data from the contract content
- Reviewing the actions and experiences of other organizations
- Reviewing the actions and experiences of other countries
- Field researches and analyzing the feasibility of the current situation
- Setting up professional meetings and asking for suggestions from Experts, consultants, and municipality personnel
- Setting up workshops
- Finalizing the edits based on suggestions
- Guarantying the quality



Date: 2016

Location: Tehran

Client: Tehran Municipality

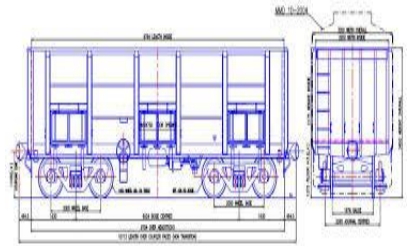
Provision of Regulating services for the instructions and checklists for wagon maintenance and manufactured parts

Rahyab Behineh Consulting Eng. was assigned by Iran National Railway's(IIRR)Department of Freight wagons to provide unified, standard and comprehensive checklists and instructions for supervision of wagon's maintenance done by private contractors. The aim of providing such documents was to ensure the quality of maintenance done by contractors in addition to provide all stakeholders with unified and standard procedures for the maintenance of mentioned rolling stock.

These documents help the owners of wagons to know what to expect from contractors, help the contractors to follow standard maintenance procedures; and help the supervisors to check the quality of the maintenance as well as the spare parts used in them .

The documents including instructions and checklists were provided in 5 distinct categories:

- Car body and chassis (Covered Wagons, Flat Cars, Open top cars, Gandola cars etc.,) in addition to their Overhaul checklists
- coupling devices (SA-3 couplers, ringfeder Unicouplers, Miner Unicouplers, French willison Couplers, Indian Willison Couplers, Screw Couplers, LAF Screw Couplers)
- Bogies(Frame and leverage of Bogies H-665, 18-100, 3-axle parsi, Romanian new and old H, Y25LSD1, Y25R2A ,Y25CS)
- Braking Systems (under chassis braking leverage, different distribution valves, different types of break adjuster)
- Wheels sets & Bearing Boxes (including flange replacement, wheel welding, wheel profile lathing, NDT tests, Overhaul of bearing box and journal box, replacement of wheelset)



Date: 2016/2017

Location: Tehran, Iran

Client: I.R.I. Railway Co.

regulation of the instructions for operation, maintenance and repair of railway tracks in the yard of Imam Khomeini Port

- Reviewing the current maintenance condition and operation
- Conduct Comparative studies using national standards and criteria
- updating and regulating specific instructions for maintenance and repair of the railway tracks in port area
- regulating the operation instructions of railway tracks in port area
- making a technical and financial justification report for particular defects of railway tracks
- Conclusion and Documentation



Date: 2002

Location: Tehran-Imam Khomeini Port

Client: Ports & Maritime Organization of Iran

technical and economic feasibility study for Mianeh – Ardebil cities railway connection

Providing all sorts of technical and engineering services for technical and economic justification for the project's construction and operation phases (Approximate length: 150 km, maximum passenger train speed: 120 km/h)

- Reviewing the records
 - The costs of providing and facilitating the fleet
 - Operation costs
 - Environmental costs
 - Reviewing the optional facilities
- Demand and tariff
 - Collecting, analyzing, and controlling the statistical data
 - Reviewing the development possibilities of optional facilities
 - Measuring the demands for transportation
 - Reviewing effective marketing methods
- Estimating the costs
- Duration of the project
- Asset Liquidity flow
- Effects of monetary inflations and interest rates
- Measuring the incomes
- Demolishing value
- Measuring the financial aspects of the project
- Policies, rules, and regulations
- Economic evaluation



Date: 2003/2006

Location: Tehran

**Client: Ministry of Roads & Urban
Development**

Designing the comprehensive system of interactions among the stakeholders of Wagon Maintenance in I.R.I

We cooperated on this project with the German Company Roland Berger

Identification Phase:

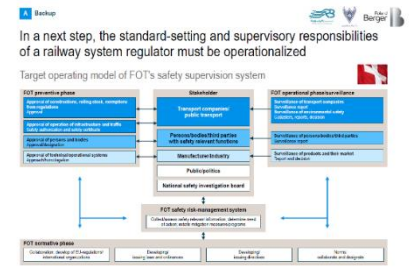
- Identifying stakeholders and the current condition (their role and importance)
- Data gathering, and listing the work history related to the project
- Reviewing standards, provisions and analyzing the current situation
- Establishing the effective measuring index
- Making a report of stakeholders actions and their process
- Making a report of the existing conditions of stakeholders and partners cooperation

Analyzing phase:

- Maintenance and repair activities checklists for F/P trains
- Strengths and weaknesses of the current M&R system
- Reviewing the similar M&R systems in the world
- Establishing the fixed points for designing the new systems for Rolling Stock's M&R
- setting Strategies and methodology of the new M&R systems
- Concluding and reporting results

Design phase:

- The roles of stakeholders and their activities in the new system of interactions
- Stakeholders interactions and their partnership pattern in the new system of interactions
- Presenting the comprehensive system of interactions
- Providing instructions and provisions for stakeholders
- Comparison of the new model with the existing one and highlighting the issues and failures
- Providing the framework and requirements to develop software for the new system
- Developing the privatization model for Rolling Stocks M&R



Date: 2014/2016

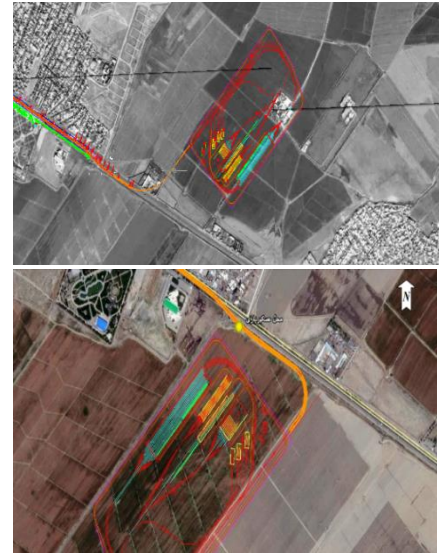
Location: Tehran

Client: I.R.I Railway Co.

Provision of Advanced studies for preliminary phase of the project: Line 3 Mashhad Urban Railway Network (18 Kilometers long)

The general overview of this project includes advanced studies for the preliminary phase of Mashhad's urban railway network: line 3 with the length of 18 kilometers.

- Design of the track and presenting the profiles and plans
- Determination of the design and location of the terminal
- Review of the parking capacity
- Reviewing and studying the parameters
- Evaluation of the project's effect on the nearby facilities
- Review of all required machinery and equipment
- Describe the design of superstructure lines and route's switches
- Study of the maintenance and repair methods
- Estimation of project implementation costs



Date: 2007/2009

Location: Tehran – Mashhad

Client: Mashhad Urban Railway Co.

The standard Dobleh – Dogomeh Cities railway Connection

- Investigation of necessities, targets, limits, and the long/short term results of constructing the Dobleh – Dogomeh railway connection
- Reviewing the determinant parameters for implementation of the Dobleh – Dogomeh railway
- Providing a schematic map
- Carry on Technical analyzes
- General review of the required amount, and methods of providing materials and equipment
- Estimating the approximate annual costs of constructing the project



Date: 1996/2001

Location: Dobleh – Dogomeh

**Client: Qeshm International
Consulting**

Developing the safety index for I.R.I Railway Network

In this project, RAHYAB BEHINEH studied the safety issues in the railway maintenance and operation related to each operational region considering the different conditions.

In this investigation we have studied the fundamental of safety parameters reviewing the current safety condition, performing data collection, data analyzes, and developing new statistical indicators to measure the existing safety level. Also, RAHYAB BEHINEH suggested appropriate tools and equipment to record and calculate newly developed indices to enhance railway safety in each operational region.

- The main tasks involved are as the following:
- Reviewing the current situation
- Studying the effective parameters for safety evaluations
- Statistical studies on available data and setting the right statistical indicators
- Providing the right equipment for collecting, measuring and analyzing the data
- Evaluating Iran's Railway areas and presenting safety records
- Presenting reports and support services
- Reviewing the current system of repair and maintenance for cargo and passenger Railway vehicles
- Analyzing the points of Strengths, weaknesses, opportunities, and threats (SWOT)
- Setting Qualification conditions for manufacturers of spare parts, general contractors and supervisors
- Qualifying the registered companies
- Presenting the new system of interactions to the qualified companies
- Hold Training courses for stakeholders to learn about new system
- Managing the Implementation of the systems, following the ISO 2008-9001 for all stakeholders



Date: 2015/ongoing

Location: Tehran

Client: I.R.I Railway Co.
Co.

Provision of Pre-feasibility and feasibility studies for Oroomieh-Salmas Intercity Railway construction, Tamarchin and Khalkhal antenna

- Gathering statistical information
- Reviewing and précising the influence area
- Check the priority rule of the project in the railway network high priority list
- Studying the demand and traffic
- Designing the corridors
- Providing Time schedule
- Cost predictions
- Predicting the design's profits
- Analyzing the profitability
- Sensitivity analysis of determinant parameters on the project profitability
- Carry on economic evaluations
- Analyzing the effective elements on the economic evaluation
- Conclude Results and offer Recommendations



Date: 2013

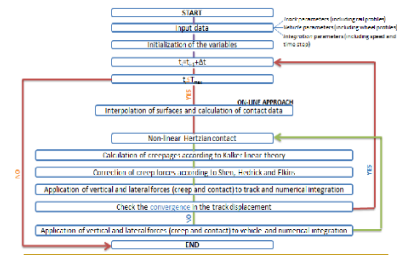
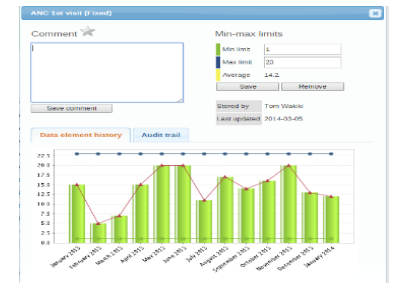
Location: Tehran

Client: Ministry of Roads & Urban

Development

Coding, preparing, inserting, controlling, and correcting the data input and output for the I.R.I railway company spare parts

- Coding three fields of information (Descriptions of parts, location of deployment, the providers name)
- Separating and organizing the data input and output of the railway company properties based on company's 17 data layers
- Preparing, inserting, listing, controlling, and correcting the reports
- Determining the rate and type of depreciation of properties based on Ministry of Economic Affairs and Finance charts
- Determining the depreciation rate and putting it in the related field



Date: 1997/1998

Location: Tehran

Client: I.R.I Railway Co.

Provision of Engineering services for detailed design phase of 620-Kilometere rail track between Chabahr-Fahraj cities

The route that is being studied is more than 600 kilometers long, and starts from Chabahr harbor and through its way it passes cities of Chabahr, Nik Shahr, Iranshahr, and Fahraj. A total length of 262 kilometers of the road is located in plains, 144 kilometers of hills, and the rest is in mountains. The infrastructure project of this road is divided into 7 parts, also three organizational stations of Chabahr, Iranshahr, and Fahraj are being placed in this road. Considering the the mountains of this area some tunnels are designed with a total length of 5 kilometers, and an overeall 1.1 kilometers of bridges will be constructed as well.

- Presenting the superstructure design parameters
- Designing the route's stations including 2 organizational stations, 4 semi-organizational, and 24 passing stations
- Doing simulation studies on how long it takes for both freight and passenger vehicles to complete the route
- First and second level studies on transportation signaling
- Studies on traction forces and suggesting the suitable vehicles
- First and second grades studies on electrical power traction of main line and stations
- Reviewing and determining the requirements for buildings, facilities, and landscaping



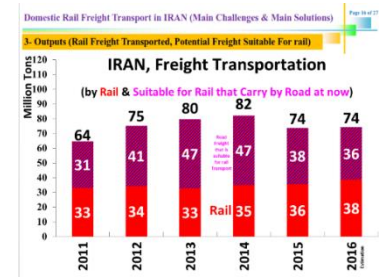
Date: 2006/2007

Location: Tehran – Sistan and Baloochestan

Client: Construction and Development of Transportation Infrastructures Company

Rail Cargo Pricing System Design

- Evaluation of Iran's railway current pricing system as well as the same for foreign countries
- Evaluating Iran's railway network systematical boundaries
- Analyze the pricing mechanisms of cargo for other modes of transportation
- Classify major and minor parameters into separate categories
- Design of the optimum pricing system for Rail Cargo in Iran Freight Transportation



Date: 2013/2015

Location: Tehran

Client: RTC Guild

Provision of Studies for Feasibility phase of project: Imam Khomeini Port-Khoramshahr city Railway Network Connection (120 Km)

Imam Khomeini port, as well as being considered one of the biggest ports of Iran, is Iraq's best access route to high seas.

After design of the the Khoramshahr-Basre project, which led to the connection of Iran-Iraq Railway Network, Company of Construction and Development of Transportation Infrastructures in Iran handed this project to RAHYAB BEHINEH company.

Some advantages of this project are as follows:

- The route is beneficial for Iraq's transportation system so it's a perfect opportunity to increase rail transit income.
- Creates Career opportunities
- This plan improves the financial and political measures

Our actions toward this goal:

- Carry on Geographical studies
- Field research and acquiring suggestions from different organizations
- Estimating the traffic and demands for both: cargo and passengers
- Provide The project's overall studies
- Provide Infrastructure, superstructure, technical construction, and station studies
- Investigation of the rail fleet options and providing the right equipment for maintenance
- Reviewing financial aspects of the project
- Analyzing and setting the project's standards



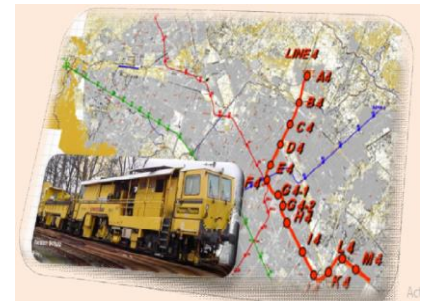
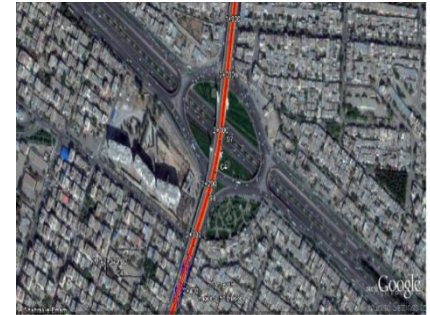
Date: 2004/2009

Location: Tehran - Khoozestan

**Client: Construction and
Development of Transportation
Infrastructures Company**

Provision of Advanced phase 1 studies for Line 4, Mashhad Urban railway infrastructure and superstructure

- Carry on Infrastructure studies
- Describing the location of repair station and the terminal equipment according to rail vehicles specifications of the line
- Designing the terminal and the repair station
- Predict the parking capacity
- Review of the instructions of fixed equipment and the fleet
- Presenting the superstructure system report
- Sound and vibration studies
- Presenting the report of the first part of the superstructure system
- Provision of instruction for the maintenance and repair method of superstructure
- Providing the tender documents



Date: 2014/Ongoing

Location: Tehran

Client: Mashhad Urban Railway Co

Feasibility studies for building a station in Qom's northern terminal and organizing the high speed railway network

Cooperation with the Spanish company SAITEC

- Study the feasibility of moving the Mohammadie Station to the northern multimodal terminal
- Study the feasibility of moving the high speed railway of Tehran-Qom, to the northern terminal
- Study the connection of Qazvin-Qom corridor in the northern terminal



Date: 2015

Location: Tehran – Qom

Client: Qom City Hall

Provision of Studies on how to increase the capacity of Iran's northern railroad

First stage: technical and financial studies

- Investigate the current capacity of the network
- Study the Goals and requirements of the project
- Provide Technical studies
- Provide Financial studies

Second stage: economic and Financing studies

- Provide Economic studies
- Provide Financing studies



Date: 1999

Location: Tehran

**Client: Ministry of Roads & Urban
Development**



Rahyab Behineh
Consulting Engineering

Railway

Revision of feasibility phase of Esfahan-Daran-Azna-Dorood railway network studies in addition to Provision of financial studies of the project

- Predict the passenger and cargo traffic of the railway network for the years of construction
- Carrying out Studies of Infrastructure, technical equipment, superstructure, and stations
- Provision of Rail fleet studies and development phase studies
- Sum up of Feasibility studies
- Presentation of possibilities for financing the project



Date: 2010/2011

Location: Esfahan

**Client: Ministry of Roads & Urban
Development**

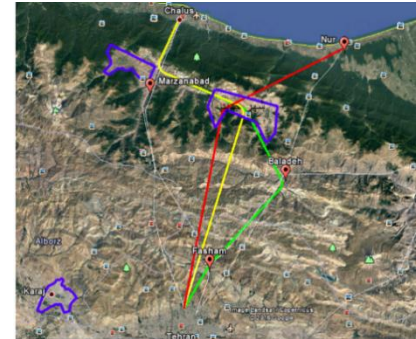


Rahyab Behineh
Consulting Engineering

Railway

Provision of Technical, financial, and environmental feasibility studies for connecting the Tehran's railway network to Imam Khomeini International Airport

- Review of technical and financial records
- Demand studies
- Preliminary and feasibility studies
- Construction and operation financial studies
- Technical and environmental supplementary studies
- Managing the time schedule
- Review of liquidity flow
- Review of impact of inflation and interest of financial resources
- Forecast of incomes
- calculation of residual value
- Technical and economical sensitivity studies



Date: 2002

Location: Tehran

Client: Imam Khomeini Airport



Rahyab Behineh
Consulting Engineering

Railway

Provision of Feasibility studies for of relocation

- Collect and analyze available statistics
- Perform Demand studies
- Perform Corridor studies
- Perform Environmental evaluation studies
- Perform Economic studies
- Presentation of reviews of evaluating the operation phase



Date: 2009/2010

Location: Tehran

Client: Ministry of Roads & Urban

Development

study and provision of the design for connecting the Bushehr port to the national railway network

- Forecasting the rail traffic
- Forecast the Amount and capacity of the predicted cargo
- Determining the feasibility of transporting cargo with the railway network
- studies on Current conditions
- Carry on the feasibility study phase
- Determining the locations of connecting rail track
- Determination of the superstructure of the railroads
- Establishing parameters
- fleet studies including
 - determining the amount and types of rail vehicles
 - determining the required number of locomotives
 - determining the required type of freight trains
- Concluding the results and decision making
- Presenting different options
- Estimating the costs of each option
- Infrastructure and superstructure studies
- Station studies
- Technical reviews
 - Reviewing the profits of cargo transportation
 - Analyzing the financial reviews of different options
 - Describing the method and software used in the project
- Other evaluations
 - Fuel consumption rate
 - Demand Studies
 - The cost of the required fleet
 - The costs of construction and maintenance



Date: 2009/2016

Location: Bushehr

Client: Ports & Maritime

Organization

Provision of Feasibility and planning studies of infrastructure and superstructure for corridors: 2, 3, and 4 of Mashhad urban railway network in addition to Detailed design's phase studies of the Mashhad urban railway network: line 2

This project generally includes providing E.P.C documents for two separate projects:

First, Feasibility and planning studies of infrastructure and superstructure for corridors: 2, 3, and 4 of Mashhad urban railway network

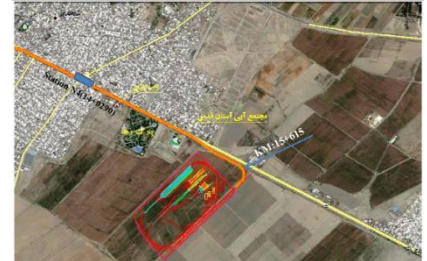
Second, Detailed design's phase studies of the Mashhad urban railway network: line 2

Also, it's good to mention that Rahyab Behineh Company has been responsible for the engineering and consulting services of implementation of the Mashhad's urban railway network cooperating with the national railway network at the F2 station.

These studies are consisted of two parts:

Section one: Feasibility and planning phase

- regulating infrastructure and superstructure parameters considering the types of the fleet
- determining the type of materials used for superstructure of the lines
- reviewing the regulations of the fleet
- Providing information about parking capacity
- Reviewing the method used for moving the facilities under the tunnel
- Presenting plans and profiles



Date: 2006/2008

Location: Tehran – Mashhad

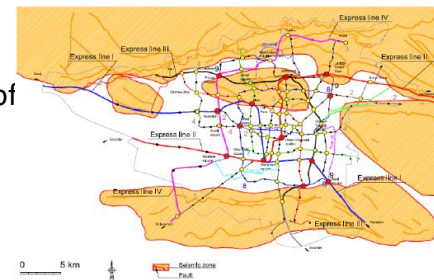
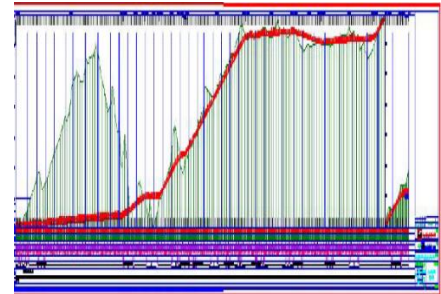
Client: Mashhad Urban Railway Co.



Rahyab Behineh
Consulting Engineering

Provision of Studies for Tehran high speed railway line 2 preliminary phase (Tehran-Pardis & Tehran-Shahriar)

- Gather available information and statistics
- Review and pinpoint of the influence area
- Review of the importance of the project in the initiative
- Study of the traffic and demands
- Determination of corridors and tunnels' location
- Determining time schedules
- Estimation of the initiative's profits
- Estimation of the initiative's costs
- Determine the profitability of the initiative
- Analyzing the effects of determinant elements on profitability of the initiative



Date: 2008/2012
Location: Tehran
Client: I.R.I Railway Co.

Provision of Engineering services for the Initial phase of the project: Transporting iron ore to Khoozestan through Railway Network

Following the growth in industry and economy, an optimum way of transportation is necessary, also because of the average annual growth in steel industries, this project attracts a unique attention.

To reach this Goal, RAHYAB BEHINEH was selected to provide studies and researches for the project

- To Examine the Rail Network related issues in the area of the project and their solutions
- Figuring out the best solution leading to the selection of the best rail route
- Evaluating the profitability, perks, and dangers from economic point of view
- Geographical studies and field researches
- Predicting the traffic and demands
- General studies in order to optimize the design of the route
- Comparison of Electrical vs Diesel rail Network and selection of the best option



Date: 2005/2008

Location: Tehran

**Client: Construction and
Development of Transportation
Infrastructures Company**

National railway network technical – economic railway sleeper studies

- Technical and economic studies in field of sleepers
- Reviewing the types, functions, advantages, and issues of the sleepers as well as provision of the technical, economic, and environmental studies
- Reviewing the effective local features and special properties of the sugarcane development project on the railway sleepers
- Reviewing the effective transportation system features on the sleepers
- Reviewing the parameters for selecting the right type of sleepers
- Reviewing and selecting the right type, quality, and shape for the railway sleepers
- Reviewing the required number of sleepers and their life cycle cost (LCC)
- Providing a road map on the correct management of sleeper supply



Date: 2009/2016

Location: Bushehr

**Client: Ports & Munritime
Organization**

Provision of Initial Studies for Renovation of Ahvaz Khoramshahr cities Rail Connection network

- Gather and careful review of previous study records
- Prediction of the traffic and the demand for the freight and passenger trains
- Investigation of the infrastructure, technical constructions, superstructure, and station options
- Study of the required fleet, and maintenance services requirements
- Study of the financing possibilities



Date: 2004

Location: Tehran – Khoozestan

Client: Construction and
Development of Transportation
Infrastructures Company

Provision of Study and design of rail track and stations for the Amir Abad's port and connecting this railway to closest national railway network



Basic studies for the first stage and second stage of Amir Abad port's infrastructure and superstructure design. Also to make the connection between Amir Abad port and closest Railway network (11.9 km). Also in this project RAHYAB BEHINEH designed the trading stations between this port and the railway track of Rostam Kala city.

First Stage:

1st section:

- Field research
- Presenting the general opinion of our experts about the project
- Predicting the future income of cargo transportation
- Providing the plan

2nd Section:

- Overall analyzes of the project
- Determining the locations and types of stations on the plan
- Reviewing the Design's standards
- Determining the number of bridges and creating contents

Second Stage

1st Section:

- Field research and marking the precise location
- Estimating the costs

2nd section:

- Technical analyzes and creating the final plans
- Time schedules
- Infrastructure and superstructure plans

Date: 2003/2004

Location: Tehran – Amir Abad Port

Client: Amir Abad Port



Rahyab Behineh
Consulting Engineering

Provision of Studies on Connecting the Tehran-Hamedan-Sanandaj cities railway to the Arak- Kermanshah citie

Provision of Studies on Connecting the Tehran-Hamedan-Sanandaj cities railway to the Arak-Malayer-Kermanshah cities railway through Hame Kasi-Tuysarkan-Nahavand route and connecting Asad Abad, Tuysarkan, Knagavar, and Nahavand cities to the national railway network

- Gathering Available statistics and data on the project
- Review and pinpoint the influence area
- Review the importance of this project in national initiatives
- Review the traffic and the demands
- Determination of the location of tunnels and corridors
- Determining initiatives time schedules
- Estimation of the costs
- Estimation of the profit
- Measuring the project's residual value
- Analyzing the profitability
- Analyzing the determinative elements on the project's profitability



Date: 2017

Location: Tehran

**Client: Ministry of Roads & Urban
Development**

Providing the Feasibility Study for buying 2000 freight trains

- follow up in order to approve the plan by the Islamic Republic of Iran Railways (IIRR)
- Providing the design's cash flow
- Providing the Feasibility study for the project (approved by banks)



Date: 2011/2012

Location: Tehran

**Client: Tosse, e tarabar Iranian
investment group**

Development of local and suburban railway transportation

- Studying the demand and gathering field data for routes that currently don't have a railway network (following the mentioned rules below)
 - Being connected to the railway network at least from one side
 - The approximate length shouldn't be more than 100 Km
 - Being classified as busy railroads
- Design the structure of the local and suburban rail transportation pricing system
- Estimation of the capacity of required rail fleet
- Evaluation of the direct and indirect costs of implementation
- Determining the stakeholders' partnership system
- Comparison of the project outputs with other countries' standards



Date: 2002/2005

Location: Tehran

Client: Raja Railway Transport Co.

Provision of Initial feasibility Studies for construction of Shiraz – Ahvaz cities rail connection

1. Collection of information and statistics and analyzing them
2. Carry on Demand studies
 - Analyzing the statistics
 - Reviewing the development feasibility in the area of effect
 - Reviewing the demand and the traffic for both passengers and cargo applications
 - Investigate various marketing methods and their effect on the demand
 - Studying the railroad corridors
 - Determining the connection's schedule
 - Estimating the project's costs and profits
 - Carry Project's financial and economic analyzes



Date: 2013/2014

Location: Shiraz – Ahvaz

Client: Ministry of Roads & Urban Development

Provision of Study Services for the Bafq – Mashhad cities rail transit transportation Network

This project is basically divided into two parts, part One of the project is about studying the transit and investments and the second part is about investment and partnership of the project

Part one:

- Studying the transit transportation opportunities of the country and its neighbors
- Study of Conditions for import and export to middle Asia
- Transit Transportation's Countries of origin and destinations
- Studying the potential railway network and some of their properties like capacity, quality, and function
- The current condition of Iran and middle Asia in field of transit
- Final gathering of information and making a report

Part two:

- Studying the funding options of the project
- Extracting determinant Parameters
- Measuring the economic feasibility
- Items and conditions that can affect the investment
- Identifying the investment stakeholders
- Rating the stakeholders
- Investigation of the technical and financial areas of the project
- Partnership management
- Supervision on technical, financial, and schedules
- Summarizing the gathered information and making a report



Date: 1998/1998

Location: Bafq – Mashhad

Client: Mostazafan Foundation

Concession of Railroads maintenance and repair

The scope of the project:

- Reviewing the current condition and technical justification
- Identifying the best, most functional option
- Qualifying the investors
- Technical, economic, and investing justification report

Feasibility phase

Identifying the current conditions, reviewing the issues and possibilities

Demand and tariff studies

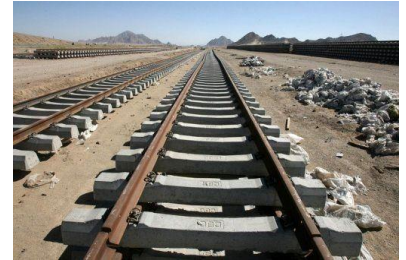
- Studying the current methods of maintenance and repair in other countries
- Management UIC parameters
- Planning and measuring the maintenance and repair of the railroads
- Summary report of the turnover
- Framework and conditions
- Determining the quality grade for each option
- analyze Technical parameters

management studies

- Financial plans and time schedules of maintenance and repair
- Organizing and managing the assignment
- Cost evaluation tables
- Functionality
- Conditions and methods of selecting the contractors
- Design the system of Identifying and rating the contractors

Stage five: Final studies

Regulating the final report, and presenting correctional ways



Date: 2001/2001

Location: Tehran

Client: Ministry of Roads & Urban Development

Provision of Technical and engineering services for technical and economic feasibility study for the construction and operation phase of the project: Freight and passenger Railway of Esfahan – Azna cities



Date: 2002/2003

Location: Esfahan – Azna

Client: Ministry of Roads & Urban Development

- Review the records on
 - Land costs
 - Operation costs
 - The costs of providing and arming the fleet
 - Maintenance costs
 - The costs of the operation phase
 - Environmental costs
 - Identifying and reviewing the project's area of effect
 - Reviewing the probable optional facilities
- Demand and Tariff Prediction
 - Collecting, analyzing, and controlling the statistics
 - Measuring the demand for freight and passenger transportation
 - Measuring the chances of increasing the transportation rates
 - Reviewing the marketing methods
- Estimating the costs
- Calculate Project duration
- Liquidity flow
- Study Effects of monetary inflation and interest rates on costs
- Estimating the incomes
- Project's residual value
- Carry on Financial analyzes
- Analyzing the sensitivity
- Carry on Economic analyzes
- Make and Present conclusions

Studying the superstructure, electrical signalling, and communications of the Esfarayen – Bojnord cities railroad

- Superstructure studies
 - Presenting the KMZ file
 - Presenting a summary of the preliminary phase
 - Designing the superstructure tools
 - Suggesting the tests of ballast rocks
 - doing researches in order to select the suitable mines
 - presenting plans in UTM coordination format
- Fleet studies and maintenance needs
 - Presenting a summary report about technical aspects of the project
 - Determining the numbers and general information of passenger trains
 - Estimating the required machinery
 - Locating the places of facilities
- Operation phase studies
 - Determining the right alignment of freight trains and passenger trains
 - Presenting the stimulation calculations
 - Providing the longitudinal profile maps
- Station studies
 - Mentioning the location of switches
 - Presenting the table of switches details
 - Mentioning the line numbers in the station's railroad
- Superstructure implementation studies
 - Presenting a report about the implementation method
 - Presenting the list of required machinery
- Sign and communication studies



Date: 2018/Ongoing

Location: Esfarayen – Bojnord

Client: Construction and
Development of
Transportation Infrastructures
Company



Rahyab Behineh
Consulting Engineering

Railway

Studying and reviewing the construction of the Rudehen – Amol cities railway and connecting it to the Qaem Shahr railway

- Gathering statistics and information
- Topography maps
- Geology maps and documents
- Environmental maps
- Reviewing the infiltration location and making it more precise
- Studying the demands for passengers and cargo
- Presenting the time schedules
- Estimating the costs
- Estimating the incomes
- Estimating side incomes
- Analyzing the profitability of the design
- Analyzing the effective elements on the project's profitability



Date: 2015/2017

Location: Rudehen – Amol - Qaem Shahr

Client: NKCo.

Provision of studies on technical and operational Regulation of the locomotive maintenance system

Feasibility phase: project overview

- Research method and selecting the right tools
- Describing the scope of the project as well as limits and priorities
- Providing and presenting an overview of the project

Preliminary phase: project identification

- Introductory meeting with stakeholders

Identifying the current technical situation

- Obtaining the opinion of managers, experts, policy makers, and the government
- Identifying, collecting, and analyzing the provided data
- The necessities and needs for the maintenance and repair of locomotives
- Reviewing the current conditions of maintenance and repair
- Reviewing and identifying the conditions of repair workshops
- Providing and presenting an identification report

Identifying the existing contract conditions

The system's condition

Identifying the current regulations for privatization

SWOT analyze of the current situation

Design phase

- Selecting the final design
 - Determining and confirming the strategies of maintenance and repair
 - Scenario making
 - Comparing the scenarios and selecting the best one
 - Making the detailed design of the selected Scenario
- Technical suggestions
- Contract suggestions
- Systematic suggestions
- Privatization suggestions



Date: 2018/Ongoing

Location: Tehran

Client: I.R.I Railway Co.

Providing the cargo rail transit plan from Bandar Abbas – Sarakhs cities

First stage:

General design: project studies

- Presenting the feasibility studies
- Organizations
- Technical aspects
- Equipment
- Operations
- Cost
- Profits
- Tariff
- Technical sensitivity analyzes
- Economic
- Policies
- Presenting the optimized methods for the operation phase
- Determining time schedules

Second stage:

- Organization design and etc.
- Regulating the instructions and standards

Third stage:

Provision of Supervision on construction phase and operation phase



Date: 1997

Location: Tehran

Client: Shetab Co.