

Sandeep Patwardhan

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Objective

In expedition of challenging assignments in Metro/Railway Projects, Project Management, Consulting services that explores my skills to get maximized payback out of my efforts put into operation for a strong time-honoured organization.

Professional Abstract

As an astute professional with **15 years overall & 9 years of key experience in Metro Railway projects**, Assignments handled for Dubai (UAE) Metro, Delhi Metro (DMRC), Gujarat Metro Rail (GEC-GMRCL) & currently working with Louis Berger SAS (a WSP Company) for Bhopal and Indore Metro Rail Project (GC-MPMRCL).

Key activities handled for multiple Elevated and underground metro Projects are, project execution, Interface Management & System integration, Tender preparation, Design Management, Tender Design review & coordination, **Underground station E&M, ECS & TVS , SCADA System packages tender preparation & execution , 750V DC 3rd Rail traction/PST systems, Power supply system** , DDC tender Technical Bid evaluation, Depot E&M services, Lift and Escalators, Project execution, Design engineering, Project management, O&M management. Exposure of working methodology of Rail System packages for interface requirements.

Educational Qualifications

- **Bachelor of Engineering (Electrical-EE)** from RGPV, Bhopal in 2007 (Secured 74.56%)
- Class 12th (MP Board) in 2003 (Secured 68%)
- Class 10th (MP Board) in 2001 (Secured 67.0%)

Work Experience

Organization	: Louis Berger SAS (WSP Group)
Project	: Bhopal and Indore Metro Rail Project
Client	: Madhya Pradesh Metro Rail Corporation Ltd. (MPMRCL)
Project Detail	: The projects operating on 3 rd rail 750V DC traction system. Bhopal metro rail project consist of Line-2 consisting of 14.99 km route length with 14 Elevated stations along with 2 underground stations and Line-5 of 12.88km and consists of total 14 Elevated stations. The project cost is estimated around ₹80 billion (US\$1.2 billion) & the project is funded by European Investment Bank (EIB) Indore Metro Rail project consist of Line-3(ring) of 31.53 km length having 23 Elevated Stations along with 6 Underground stations. The project cost is estimated around \$1.7 billion & the project is funded by Asian Development Bank (ADB) and National Development Bank (NDB).
Period	: Jan-2019 to Till Date
Designation	: Sr. Engineer E&M/ Traction Power Supply

Responsibilities Handled

- Civil/System Tender study & preparation of MEP technical specification for different design and build packages for Bhopal and Indore Metro project
 - Tender drawings preparing and support for Design interface activities
 - Underground Station tender technical parameters preparation for E&M, PST, ECS, TVS, BMS & SCADA Systems and SES/IDA simulation package, tender drawings preparation, finalization of Employers requirements and other tender activities
 - DC 3rd Rail 750V DC traction and Power supply system design review and execution works for Bhopal and Indore metro rail projects
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- Preparation of tender documents for Traction and Power supply works
 - Power supply study arrangement for GSS/TSS 220/132/33kV substations
 - System Interface & Integration management activities with all agencies involved in tender designs/details design and other govt. approving agencies
 - Evaluation/Study of RAMS parameters for Electrical and Mechanical Equipment's
 - Evaluation of IGBC requirements for selection of Energy Efficient Equipment's for attaining Platinum rating for the project
 - Roof top Solar PV report preparation and finalization of scheme complying with the state policies
 - Depot E&M and M&P tender technical specifications/tender drawings preparation
 - Pre-bid meetings, presentations and clarifications to the bidders, technical evaluation of bidders
 - Project Management activities, formulation of Electrical Engineering schemes, Traction/structural earthing services design review/installation verifications
 - Tender drawings review for finalization of various Civil/System contract document
 - Interface with local Electricity authority for design finalization of power distribution scheme
 - Interface management plans and procedure
 - Lift and Escalators Tender preparation and finalization of technical specifications
 - Presentations to client, Interaction with project stakeholders and discipline heads to interpret their needs and requirements and represent them in the relevant documents
 - Cooperate and communicate with project manager and other project heads to provide assistance and technical support
 - Review engineering deliverables and initiate appropriate corrective actions
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Organization : Systra MVA Consulting Engineers India Pvt. Ltd.

Project : Ahmedabad Gandhinagar Metro Rail Project

Client : Gujarat Pradesh Metro Rail Corporation Ltd. (GMRL)

Project Detail : The estimated investment for the construction of the Ahmedabad Metro phase one is \$1.65bn. Ahmedabad Metro is a rapid transit system for the cities of Ahmedabad, Gandhinagar in Gujarat, India. It is being built by Gujarat Metro Rail Corporation Limited, Phase-1 which is under construction. The Rail project operating on 3rd Rail 750 V DC traction system consisting of Two corridors i.e. East-West corridor (21.16 km) comprising of 13 Elevated and 4 underground stations and North-South corridor (18.87km) comprising of 15 Elevated stations.

Period : Sept-2016 to Jan-2019

Designation : Section Engineer (E&M/Traction Power Supply)

Responsibilities Handled

- Design Engineering/coordination thereof with Contractors & DDC's for E&M services for Elevated Metro Stations
 - Project Management activities, Electrical Engineering calculations, E&M services designing
 - System Interface & Coordination for System Integration management activities with all agencies involved in detailed design stage and other internal/client system agencies
 - E&M Coordination with DDC and Contractor relating to design feasibility requirements
 - Verification of Electrical load schedule, cable schedule, Scheduling, load flow studies, Hydrant pipe calculations, Earthing scheme calculations through readily available software's
 - Review of 3rd Rail Traction Scheme drawings, Review of SCADA Scheme, Review of stray current scheme as per employer's requirement
 - DC 3rd Rail 750V DC traction design review execution works
 - Interface Management planning & coordination thereof with the respective system contractors like Traction Power, AFC, PSD, S&T etc. for system integration
 - Tender evaluation activities, recommendation to client for short listing bidders based on technical evaluations reports
 - Project Costing, Comparison of projects, BOQ, selection of contractors/vendors
 - Analyze drawings, specifications and statements of work in the preparation of activity networks for project resource planning and scheduling as per contract document. Hands on Experience on project related software's
 - Latest National and international codes like IS, IEC, NBC-2016, BS etc. standards implementation for effective designing and optimize resources
 - Coordination with Contractors for project deliverables as per contract Technical specification for timely execution of site activities
 - Finalization of contractor's proposal's as per prevailing standards and specification requirements
 - Management of Lift & Escalators contractor for timely deliverables for the project
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- Coordination with Traction System contractor and Interface for timely deliverables of contract requirements
- Review of RAMS studies of system contractors

Organization : Tata Motors Ltd.
Period : March-2012 to Sept. 2016
Designation : Assistant Manager Maintenance
Industry : Automobile Manufacturing Industry

Responsibilities Handled

- Prepare, Study & Monitor the Resources and Material required for the company to perform at the highest level and to avoid unnecessary expenses, to avoid all excess and waste of resources and monitor the project's progress, Project & Maintenance coordination, electrical design
- SAP PM & MM Module hands on experience, Preventive Maintenance, Manpower management
- Preparing Bill of Quantities for project timely delivery
- Underground and overhead services with Earthing installations
- Spares planning management and stock maintaining, Power & Manpower cost calculation
- Project Management, Site installation & Commissioning
- Site execution, Manpower planning, Costing & budgeting
- Energy Management system EnMS ISO 50001 sustenance, well exposed to TQM, TPM, 5S, ISO9001, OEE
- Trained on DuPont Safety practices
- Allen Bradley, Mitsubishi, Siemens PLC, Robotics, Servo Drives, conveyors, Installation and commissioning, Low-cost Automation, Industrial Project

Organization : Time Technoplast Ltd.
Period : Dec-2010 to Feb-2012
Designation : Sr. Engineer Project & Maintenance
Industry : Plastic Manufacturing Industry

Responsibilities Handled

- Operations & Projects planning, execution, design & time line finish
- Material quantity takeoff and quality surveying
- Operation & Maintenance and Shutdown planning for equipment & Assets through optimum available resourceful solutions
- Power & Manpower cost calculation and control through optimization and deployment
- Inventories planning, arrangement, Purchase & control of minimum stock
- HT/LT 11kv/33kv works exposure, Switchgear, CB, Load calculations. Good familiarity of plant machineries and auxiliaries like DG, chillers, compressor and troubleshooting, electrical design
- Managing a group of engineers & Manpower schedule & Maintenance Planning & Control

Organization : ETA Engineering Pvt. Ltd.
Project : Delhi Metro Rail Project-(DMRC-Phase-III Project)
Client : Delhi Metro Rail Corporation (DMRC)
Project Detail : The Delhi Metro is a rapid transit system serving Delhi and in the National Capital Region of India. By far the largest and busiest metro in India, Delhi Metro Phase-II costs around INR 19,131 crores. Phase-II 124.90 kilometres long network consists of 86 stations. Out of those ETA was involved in execution MEP activities of 9 underground stations from Udyog Bhavan to Huda City centre which inaugurated in 2010
Period : Jan-2010 to Nov.2010
Designation : Sr. Project Engineer-Electrical (Underground Metro)

Responsibilities Handled

- Deputed to Delhi Metro Project for Green Park & Malviya Nagar Underground Metro Station for Execution of MEP & ECS/TVS works
- work closely with the Project Manager on all commercial issues & obtaining maximum commercial benefit from the project
- Project Commissioning & Installation with latest standards
- Material take-off (MTO) and design finalization as per IS standards and technical specification
- Preparation and support for design of as built drawings before client handover
- Tunnel, stations broad gauge traction system involvement as per system interface requirement
- Site operations, Project coordination, Execution & manpower control
- Fire Hydrant & Fire Alarm System Commissioning
- Interface activities with power supply and civil contractor for Coordinating the execution of project

activities including planning, scheduling, and monitoring of project

- Tunnel Lighting & Fire system Installation & commissioning
 - ECS/TVS system Installation and Testing
 - Create monthly operating report prescribed dates and to examine the commercial implications of that statement with the Project Manager to ensure there is an understanding of the commercial position of the Project
 - Complying with Safety, Health & Environmental rules and regulations as applicable in the industry
 - Undertake re-measurement and prepare, submit and agree on monthly valuations, variations and final accounts. Interim accounts shall also be discussed with the Project Manager to allow engineering staff input. Awareness of site activities is excellent
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Organization : ETA M&E Division (ETA Ascon Group of Companies)
Project : Dubai Metro Rail Project
Client : RTA, Dubai (Systra and Parsons Corporations as GEC)
Project Detail : The Dubai Metro is a rapid transit rail network in the city of Dubai, United Arab Emirates. The Red Line and Green Line are under operation. Until 2016, the Dubai Metro was the world's longest driverless metro network operating on 3rd Rail 750 V DC traction system with a route length of 75 kilometres with 47 stations (nine of them being underground). The cost of the project was around US\$7.6b
Period : Nov-2007 to Dec.2009
Designation : Project Engineer-Electrical

Responsibilities Handled

- Actively contributed to construction management activities for Metro Line Two Phases-Red & Green Line Viaducts MEP works on behalf of the Project team.
- Involved in Jafiliya and Trade Centre Elevated Metro Station Fire Hydrant Piping, Earthing and lighting & Power socket installations
- Involved in Underground Metro Station study for MEP installations including tunnels
- Handling Interface activities with power supply contractor MHI for installation of 3rd Rail DC traction system
- Corrosion potential and Rebar status measurement
- Fire detection system installation
- Earthing through viaduct, Tunnel, Cut & Cover through various safety methods
- Electrical traction 3rd broad gauge rail system exposure
- Engineering standards applications & accomplish design requirements
- Stray current protection system for protection of viaducts from developed currents
- Earthing of hand rail & lightning protection so as to protect & safe measures of the individual in case of any Metro Line Faults Maintenance sockets & supply system
- Advertisement panel installation & Design throughout the viaduct pier of various sizes for different advertisers

Organization : ETA Engineering Pvt.Ltd. Noida
Project : Delhi Metro Rail Project (DMRC-Phase-I Project)
Client : DMRC
Period : Jul-2007 to Nov-2007
Designation : Jr. Site Engineer-Electrical (Underground Metro)

Responsibilities Handled

- Study & Execution of E&M, ECS/TVS works at Delhi Metro Mandi House & Barakhamba underground metro Stations
 - Study and Execution of Electrical & HVAC works for Australian Embassy
 - Study and execution of Lighting & power installation
 - Study of Electrical Panel commissioning
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Professional Memberships

- MIET-Member of The Institution of Engineering & Technology
- IEEE-Member
- Certified Reliability Engineer (CRE) by TUV-Rhineland
- Certified on RAMS for Railway and metros by Railway Academy

Academic Projects

- PC to PC communication through Power Line (Major Project as part of which 7th semester of B.E.)
- Microprocessor-based Traffic Control System (Minor Project as part of 5th semester of B.E.)

Trainings Attended

- National Fertilisers Limited, Nangal Punjab from 14th Jun'06 to 11th Jul'06 (Duration-One month)
- 220kV Sub-Station MPSEB, Jabalpur, from 16th Jun'05 to 2nd Jul'05 (Duration-15 days)

Additional Courses

- Computer Networking course from R.G.T.U., Bhopal in 2004 (Passed-72%)
- Certified Reliability Engineer (CRE) by TUV-Rhineland, Bangalore in year Dec-2018
- Certification course on RAMS for Railways and Metros organized by Railway Academy in July-21

Soft Skill Set

- AutoCAD, Primavera, BIM (Basics)
- SAP-PM & MM
- Professional in Microsoft office XL, Word, power point
- Elementary skills in HTML, Java and C programming
- Computer hardware Networking

Personal Profile

Fathers Name : Late Mr. Sudhakar Janardan Patwardhan
Marital Status : Married
Nationality : Indian
Passport No. : T3828087 Valid Till: June 2029
Skype ID : sandeep.patwardhan75