



## SHASHANK KALLA

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### Profile

Adept at the analysis of multi-storey and water retaining RCC Structures with a thorough insight of Indian Design standards. Have a fair knowledge of the seismic analysis & design of the structures. Have experience in working on all types of structures like residential, school, pump house, filter house etc. Worked on different water structures and approach bridges including the design and detailing. Well versed with important aspects of project management and planning on-site. An ambitious, enthusiastic, driven engineer aiming to help achieve company goals and take more responsibility.

### Key Skills

- DESIGN SOFTWARE – ETABS, STAAD Pro, STAAD FOUNDATION, CSI SAFE, SAP 2000
- DRAFTING TOOLS – AUTOCAD, AUTODESK CIVIL 3D
- CALCULATION & PRESENTATION TOOLS - MICROSOFT OFFICE, EXCEL-VBA
- STRUCTURAL ANALYSIS, DESIGN, COORDINATION & MANAGEMENT
- PROCESS IMPROVEMENT & SAFETY-IN-DESIGN CONCEPT
- LEADERSHIP & MENTORING
- QUALITY ASSURANCE, ESTIMATING & BOQS PREPARATION

### Education

**Master of Engineering (Structural Engineering)** M.B.M. Engineering College, Jodhpur | 2020

- 75.20% (Honours) Gold Medal. A comprehensive degree course covering complete structure analysis engineering Dynamics of Structure, Finite Element Analysis and Advance Structure Analysis.

**Bachelor of Technology (Civil Engineering)** Jodhpur National University, Jodhpur | 2017

- 82.20% (Honours). Through course covering construction and infrastructure engineering (multi-disciplinary engineering subjects), quantity surveying and project management subjects.

### Professional Experience

#### **1. Senior Engineer – (Substation), Kalpataru Projects International Limited, Mumbai, Maharashtra | May 2023 to till date.**

Kalpataru Projects International Limited is India's one of the best leading EPC Company. I am assigned with different duties including structural analysis, review of design reports and assisting in BOQ for different capacity of Power Sub-Stations across globe.

Duties included:

- Prepare and co-ordinate detailed designs of superstructure as well as substructure for RCC and Steel structures for transmission lines and substations, Industrial buildings etc.
- Understand and Interpret Geotechnical Investigation Report for design of foundation system.
- Design of foundations especially different types of pile foundations, raft foundations, combined footings; as per soil conditions.
- Support transmission lines and substation structural design and drawings by taking engineering input from technical specifications, client and other engineering disciplines.
- Perform independently along with the draftsmen incorporating the GA, Construction drawings, design reports and BOQs.
- Guiding the drafting team time to time and ensure the deliverable targets for the projects.
- Co-ordinate and develop design criteria and construction specifications.
- Prepare and monitor schedules for deliverables.
- Check the designs and drawings and provide technical support and guidance to junior staff.

#### **2. Assistant Design Engineer – (Building – Structures), Theme Engineering Services, Jaipur, Rajasthan | February 2021 to April 2023.**

Theme Engineering is a leading Water supply and Highway engineering consultancy company in Jaipur. I am responsible for the structural analysis and design of water retaining and buildings structure in India with a high level of engineering complexity.

Duties included:

- Analysis and design of RCC structures and Steel structures using Staad Pro-Design, ETABS as per relevant national design standards.

- Preparation of various excel and VBA sheets for manual verification of analysis and design results obtained from the software.
- Reviewing design documentation to ensure a considered approach to “safety in design” through the construction phase to reduce risk, making improvements as required.
- Coordinating with steel and precast contractors for the optimal and accurate production of prefabricated members and to ensure that assumed loads and conditions are adopted during fabrication.
- Preparing budgets and material take-off at the initial stage of the project for bidding purposes.
- Delivered training to new engineers regarding Staad & Etabs-Design and other departmental design and analysis standards.
- Assisting in preparation of Piping & Instrumentation and Single-Line Diagram layouts arrangement.
- Client Presentation of Detailed Project Report and preparation of detailed design reports at project completion.
- Computed and compared output for water retaining structure from Staad, Etabs and IS code.

## **Key Projects & Achievements:**

### ***a. 8 Nos. Muti-Village, Water Supply Scheme, Dist. Raisen & Vidisha (Madhya Pradesh)***

8 Multi Village Rural Water Supply Scheme under Madhya Pradesh Jal Nigam Maryadit. The project spreads over 8 major blocks over district Raisen and Visdisha in Madhya Pradesh.

- Prepared general arrangements drawings for all components of W.T.P (Filter Building, Cascade Aerator, Clarifier, Pump House, etc.), Intake Well, Clear Water Reservoirs and Over Head Service Reservoirs (Intze Type) for DPR submission.
- Prepared audit report formats for statistical quality control checks as per NIT documents.
- Performing structure review work as per relevant Indian Standard Codes for different structure included in scheme.
- Preparation of Piping & Instrumentation and Single-Line Diagram layouts arrangement for different units of structure including Intake-well, Pump House, Scada Building (WTP) etc.

### ***b. Bansagar Dam, Water Supply Scheme, Dist. Rewa, Sidhi, Satna. (Madhya Pradesh)***

Satna - Bansagar Multi Village Rural Water Supply Scheme under Madhya Pradesh Jal Nigam Maryadit. The project spreads over three major district Rewa, Sidhi & Satna in Madhya Pradesh.

- Prepared general arrangements drawings for all components of W.T.P (Filter Building, Cascade Aerator, Clarifier, Pump House, etc.), Intake Well, Clear Water Reservoirs and Over Head Service Reservoirs (Intze Type) for DPR submission.
- Prepared audit report formats for statistical quality control checks as per NIT documents.
- Performing structure review work as per relevant Indian Standard Codes for different structure included in scheme.
- Preparation of Piping & Instrumentation and Single-Line Diagram layouts arrangement for different units of structure including Intake-well, Pump House, Scada Building (WTP) etc.

### ***c. Mahauri & Danti, Water Supply Scheme, Dist. Mirzapur (Uttar Pradesh)***

Mahauri & Danti two water supply scheme under Jal Jeevan Mission for S.W.S.M. The project covering 98+42 group of villages for both tube-well and surface scheme of water supply.

- Design and analysis of Clear Water Reservoirs and Overhead Service Reservoirs (Intze Type) for different capacity in projects and pre- pared reinforcement details.
- Planning, designing and analysis of RCC building structure including major structure including Filter House, Pump house, Laboratory, Staff Quarter and other minor structure.
- Prepared single line diagram with GFC design and drawing details for sub-station yard having substation with DG SET shed, metering room & transformer (11KV/0.433V) arrangements for both schemes.

### ***d. Kuraicha, Water Supply Scheme, Dist. Jhansi (Uttar Pradesh)***

Kuraicha water supply scheme under India’s one of the most prestigious projects Jal Jeevan Mission for S.W.S.M. The project spreads over different group of villages for surface scheme of water supply.

- Prepared analysis models for all components of W.T.P (Filter Building, Cascade Aerator, Clarifier, Pump House, etc.) and Intake-Well with Approach bridge (Steel-Plate).
- Designed Clear Water Reservoirs and Over Head Service Reservoirs (Intze Type) for different capacity in projects and pre-prepared reinforcement details.
- Prepared single line diagram with GFC design and drawing details for sub-station yard having substation with DG SET shed, metering room & transformer (11KV/0.433V) arrangements.

### **3. Assistant Structural Engineer – BLG Construction Services, Jodhpur, Rajasthan |February 2020 to January 2021**

At BLG Construction and Services Pvt. Ltd. I was responsible for coordination and preparation of detailed structural and general arrangement details of water retaining and RCC buildings structure. My major responsibility includes:

- Preparing of design models for different types of water storage and treatment structures including seismic and wind analysis.
- Preparing structural and general arrangement layouts, detailed estimates for detailed project report submission.
- Maintained the quality of deliverables at every stage of the project and kept records of several documents included in the project.
- Prepared excel design sheets for various structural components and Load combination sheets as per Serviceability limit state and Ultimate limit states.
- Coordination for preparation of general arrangement details with hydraulic engineer and structural detailing as per design report.
- Designed Staad model for different capacities of underground sumps and computing reinforcement as per moment output.

#### **Key Projects & Achievements:**

##### ***a. Mandawara Group of Villages Piped Water Supply Scheme, Dist.- Lalitpur (Uttar Pradesh)***

- Design and analysis of Clear Water Reservoirs and Overhead Service Reservoirs (Intze Type) for different capacity in projects and prepared reinforcement details.
- Planning, designing and analysis of RCC building structure including major structure including Filter House, Pump house, Laboratory, Staff Quarter and other minor structure.

##### ***b. Bundelkhand And Vindhyanal Region Gulara Gov. Chirgaon Block Water Supply Scheme, Dist.- Jhansi (Uttar Pradesh)***

- Clear Water Reservoir and Pump House Piped Water Supply Scheme
- Clariflocculator and Water Treatment Plant for Shivhar group of villages.
- Urban Water Supply Project, Dist.- Barmer (Rajasthan Urban Infrastructure Development)
- Design & Analysis of Clear Water Reservoirs and Overhead Service Reservoirs (Intze Type) for different capacity.

### **4. Structural Engineer Trainee: Structure Design Services Pvt. Ltd., Jodhpur, Rajasthan |October 2017 to January 2020.**

Being trainee engineer, I had opportunity to work over analysis and design of various minor as well as major R.C.C. buildings structure in India with a high level of engineering complexity. My duties included: -

- Coordination & Preparation of Column, Foundation Beam and Slab Layout as per provided architectural drawing.
- Analysis and design of RCC Structures & Steel Structures in ETABS and STAAD and comparison of the results.
- Designing different types of foundations as per provided load reactions with economic consideration.
- Detailing of various RCC elements as per relevant Indian Standards of detailing.
- Modelling of structure in Autodesk Cad, preparation of form drawings and preparation of reinforcement drawings.
- Site supervision of an ongoing Residential structure and resolve any error as per design.
- Modal analysis of the structure in ETABS & Preparation Design Basis Report and Detailed Project Reports for different government aided projects.

#### **Key Projects & Achievements:**

##### ***a. Construction of HQ 45 BRTF along with 527 SS & TC AND 1075 FD workshop at village Badli, Dist. Jodhpur (Rajasthan)***

- Preparation of column arrangement layout and modelling of structure for design and analysis.
- Preparation of general arrangement and structure drawing for complete schemes.
- Preparation of complete design basis report for G+2 structure.

##### ***b. Proposed Extension of Gurudawara Saheb Building at Sojti Gate, Dist. Jodhpur (Rajasthan)***

- Site Inspection and client meeting for extension of existing structure as per site condition.
- Preparation of base arrangement drawing of new structure with existing structure.

- Modelling and structure drawing preparation of structure.
- c. ***L.I.G. & E.W.S. Block for Chief Minister Jan Awas Yojna, at Nimbahera & Chhoti Sadri, Dist. Chittorgarh & Dist. Pratapgarh (Rajasthan)***
  - Modelling and designing of L.I.G. & E.W.S. block of both schemes for G+3+M structure.
  - Preparation of General Arrangement of Plan Layout including Structure, Electrical and Plumbing details for both schemes.
  - Assisted in preparation of quantity abstract and detailed estimate for both schemes.
  - Preparation of complete design basis report for G+3+M structure.
- d. ***Construction and Improvement of Storm water drain from Badri Palace, Chopasni road to Pal road, Pkg 11, Dist. Jodhpur (Rajasthan)***
  - Structure Design and Drawing of Box Type Line Drain of different size from 1.2 M to 1.8 M wide and 1.25 M to 2.2 M depth.

## 5. Site Trainee: Nila Infrastructures Ltd. | May 2016 to June 2016

My duties included: -

- Witness various tests done for concrete on-site in the laboratory.
- Read survey drawings of the site and demarcation work at different locations.
- Read the detailed drawings of slab, beam and other structural components.
- Observed the placement of reinforcement of foundation for G+3 multi-story.
- Read geotechnical reports of the site.

### **Extra – Curricular Partake**

- Associate Member - 428, “Indian Association of Structural Engineers (IAStructE) – 13/03/2023 - 31/03/2024
- Successful completion of AUXEN advance online course Design and Detailing of RCC Liquid Retaining Structures (ETABS + Manual), on May 2022.
- Successful completion of AUXEN online project-based course Virtual Design Center-RCC Residential + Commercial Building (ETABS + CSI SAFE + Manual), on February 2021.
- Successful completion of online project-based course Structural & Foundation Analysis using STAAD PRO, SAFE 16 AND SAP2000 20 from Skyfi Labs, on 06th July 2020.
- Participated in R.C.C. Detailing and Bar Bending Schedule webinar from SRM Institute of Science & Technology with ASCE and ACI, on 16th May 2020.
- Participated in R.C.C. Detailing and B.B.S. webinar from SRM Institute. with ASCE and ACI, on 16th May 2020.
- Silver Medal with Elite Completion NPTEL (By M.H.R.D., G.O.I) Online Certified course 'Matrix Method of Structural Analysis' by Indian Institute of Technology Kharagpur from July - September 2019.
- Successful Completion NPTEL (By M.H.R.D., G.O.I) Online Certified course 'Principles of Construction Management' by Indian Institute of Technology Kanpur from July - September 2019.

### **Projects & Publications**

- Dissertation – Effect of Replacement of Conventional Curing with Different Curing Methods in Concrete Mix. To find out whether curing compounds could be alternatives for conventional water-based curing, so as to minimize the dependency over water in terms of natural resources.
- Major Project– Residential Township Planning Report. Detailed report including designs of various structural components like slab, beams, columns, footings, and staircase and detailed estimate for overall cost of project. Preparation of both architectural as well as structural drawings for individual specifications.
- Published two manuscripts entitled ‘A review on seismic analysis and sustainability of multi-story structure with and without floating columns’ in July 2019 and ‘A review on after- effect of concrete by different curing method and Efficacy of curing compounds’ in June 2019.
- Published Research entitled ‘Comparative Study of Effect of Replacement of Conventional Curing with Different Curing Methods at Elevated Temperature’, December 2019.