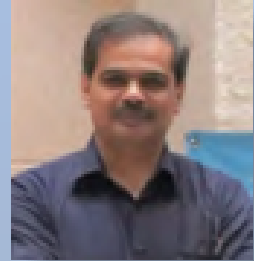


- SKYSCRAPERS
- INFRASTRUCTURE
- RAILWAY STATION
- COMMERCIAL & RESIDENTIAL
- PIERS, RESERVOIRS, CULVERTS

SHAFIQ UR REHMAN

LEAD STRUCTURAL ENGINEER

18 YEARS OF EXPERIENCE



KEY QUALIFICATIONS

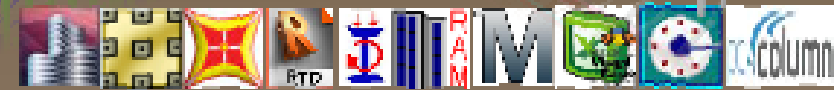
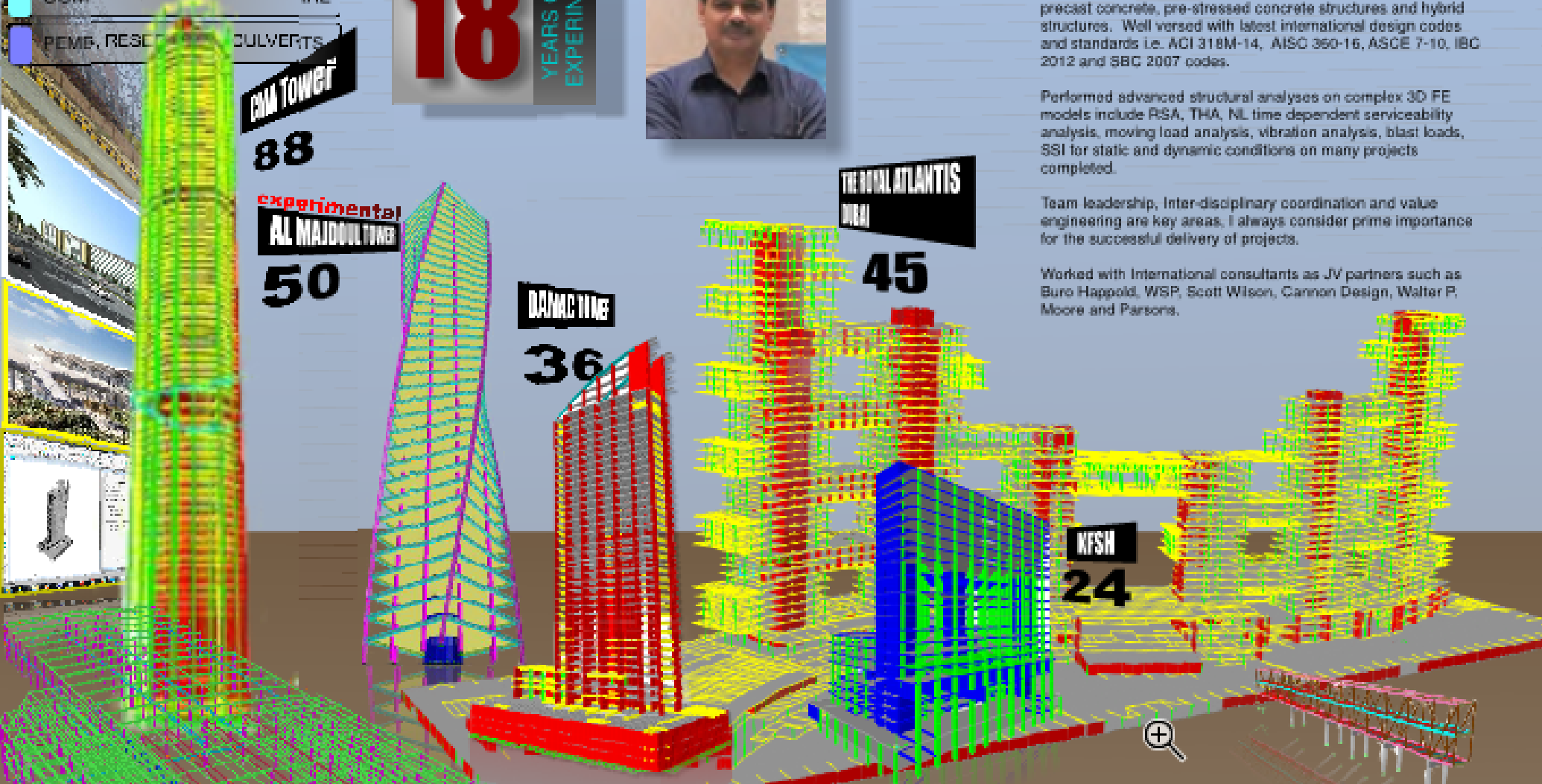
More than eighteen years of versatile experience in structural engineering design. Designed many structures ranging from skyscrapers, commercial / industrial buildings, railway station, treatment plants, communication towers, culverts, substations etc.

Have ability to design steel structures, reinforced concrete, precast concrete, pre-stressed concrete structures and hybrid structures. Well versed with latest international design codes and standards i.e. ACI 318M-14, AISC 360-16, ASCE 7-10, IBC 2012 and SBC 2007 codes.

Performed advanced structural analyses on complex 3D FE models include RSA, THA, NL time dependent serviceability analysis, moving load analysis, vibration analysis, blast loads, SSI for static and dynamic conditions on many projects completed.

Team leadership, Inter-disciplinary coordination and value engineering are key areas. I always consider prime importance for the successful delivery of projects.

Worked with International consultants as JV partners such as Buro Happold, WSP, Scott Wilson, Cannon Design, Walter P. Moore and Parsons.



SOFTWARES



CODES & STANDARDS



COMPANIES

CURRICULUM VITAE

Name : SHAFIQ UR REHMAN
Profession : Lead / Senior Structural Engineer (Design)
Cell No. : 00971 558975212
Date of Birth : August 03, 1971
Membership : M.ASCE (American Society of Civil Engineers),
M.SCE (Saudi Council of engineers),
M. SOE ((Society of Engineers, UAE)



KEY QUALIFICATIONS:

More than eighteen years of versatile experience in structural engineering design. Designed many structures ranging from skyscrapers, commercial / industrial buildings, Infrastructure projects, railway station, treatment plants, communication towers, bridges, culverts, Large Tanks etc.

Team leadership, Inter-disciplinary coordination and value engineering are key areas, I always consider prime importance for the successful delivery of projects.

Have ability to design and review steel structures, reinforced concrete, precast concrete, pre-stressed concrete structures and hybrid structures. Well versed with latest international design codes and standards i.e. ACI 318M-14, AISC 13thed, ASCE 7-10, IBC 2009 and SBC 2007 codes.

Performed advanced structural analyses on complex 3D FE models include RSA, THA, NL time dependent serviceability analysis, moving load analysis, vibration analysis, blast loads, SSI for static and dynamic conditions on many projects completed.

Worked with International consultants as JV partners such as Buro Happold, WSP, Scott Wilson, Cannon Design, Walter P. Moore and Parsons.

EDUCATION

<u>Name of Institution</u>	<u>Year Attended</u>	<u>Degree/Diploma</u>
University of Engineering and Technology, Lahore-Pakistan.	2002	M.Sc. Civil Engineering (Evening Program)
University of Engineering and Technology, Lahore-Pakistan	1994	B.Sc. Civil Engineering

STRUCTURAL ANALYSIS & DESIGN PACKAGES

(Well versed with the following structural engineering packages upto very advanced level of usage.)

- ETABS 2016 (Adv static, dynamic, sequential analysis & Footfall Analysis)
- SAFE 2016 (Adv.NL-Analysis)
- SAP2000 v20 (Adv. static, dynamic, moving load analysis, Time History Analysis)
- MathCAD v15 & Excel (with VBA integration), S-Math
- Autodesk Robot Structural Analysis 2018 with (old CBS Pro (Static, dynamic & moving loads)
- STAADPro v8i (Static, moving loads)
- S-conc,
- IES Visual Analysis v.12
- RamConcept,
- Ram Structural System,
- A.Gear,
- CsiCOL.
- PCACOL,
- Enercalc, Prokon....etc

Types of Structures

Ability to analyze and design: Residential/Commercial Buildings, Skyscraper, Auditoriums, Steel Buildings, Railway & Bus Stations, Bridges, Culvers, Treatment Plants, Communication Towers, Large Tanks (Steel & Concrete) etc.


Familiarity with International Codes & Standards.


Well versed with latest international design codes and standards i.e. **SBC, ACI, AISC, UBC, ASCE, IBC, BS, EC codes.**


Structural System

Have ability to design **Steel Structures, Reinforced Concrete, Prestressed Concrete & Hybrid Structures**

EMPLOYMENT HISTORY

Company	Ssangyong (South Korean Company) 
Duration	April 2017 - To-date
Designation	Sr. Structural Engineer
Project	The Royal Atlantis Project - Palm Jumeira
Job Responsibility	<ul style="list-style-type: none"> ● Design Review of Sub-Contractor (Eversendai) Submittals Calculations and Drawings, ● Design Review of Sub-consultant Calculation Report (Robert Bird Group) ● Design Solutions to site modifications or IFC missing info.

	<ul style="list-style-type: none"> ● Interdecipline coordination i.e MEP, Facade, Architecture, construction etc with structure related to clashes. ● Design meetings to resolve issue with consultant and subcontractors for the successful completion of the tasks ,
Company	: Bechtel International (Center Civil Engineering Excellence)- Dubai UAE 
Duration	: January 2015 – April 2017
Designation	: Senior Structural Engineer,
Job Responsibility	<ul style="list-style-type: none"> ● Preparation of design concept, ● Preparation of Structural Design Criteria, ● Review of Geotechnical Investigation Report (Factual & Interpretive Report), ● Coordination amongst different disciplines, ● Preparation of Structural Framing System, ● Preparation of Structural Model (Computational Model), ● Preparation of Structural Design Calculation Report, ● Preparation of custom built design spread sheets, ● Responses to technical queries from client, construction or in house design dicipline, ● Design meetings with subcontractor Eversendai, Freyssinet. Siemens, Edlonsedra Preparation of Structural Presentation to Client.
	RIYADH METRO PROJECT (SAUDI ARABIA)
	<ul style="list-style-type: none"> ● Design/ Modification of steel buildings, Workshop building, Stabling, Paint shop, Pedestrian Bridge., Concrete Administration Building having 14m x 18m clear control hall. ● Design and analysis of Large concrete water tank 30x10x8m on ground. ● Design of 45m High Mast. ● Responses to RFIs from subcontractor, Eversendai ● Design review of Mechanical Stabilized Earth wall, ● Responses to client design review comments. ● Design review of subcontractor steel connection design calculations and details. ● Design of Pedestrian bridge. 14m span


Company	:	Dar Al Riyadh 
Duration	:	Dec 2009 – Dec 2014
Designation	:	Lead / Senior Structural Engineer,
Job Responsibility		<ul style="list-style-type: none"> • Preparation of deliverables for the project proposals, • Team leadership on special assignments, • Preparation of SOW of Geotechnical Investigation for Project Site (including Borehole Plans), • Review of Geotechnical Investigation Report (Factual & Interpretive Report), • Review of Wind Tunnel Report and its application in ETABS, • Preparation of design concept, • Coordination amongst different disciplines, • Preparation of Structural Design Criteria, • Preparation of Structural Framing System, • Preparation of Structural Model (Computational Model), • Preparation of Structural Design Calculation Report, • Preparation of custom built design spread sheets, • Design info to CAD staff through sketches. • Responses to technical queries from client, bidders or in house design team, • Design meetings with client and vendors. Preparation of Structural Presentation to Client. • Technical queries and correspondence with Structural Software Vendors. • Review of Building Maintenance Unit (BMU) & Façade System Requirements • Technical Assistance and training to Saudi Engineers.
Project Name & Client Name	:	DAMAC Towers. Riyadh, KSA (Skyscraper) DAMAC Properties, Dubai
Scope of Services	:	<p>Tower B, B3+G+36 Storied 169m high Plan dims 54m x 23m</p> <p>Tower A, B3+G+33 Storied 144m high Plan dims 54m x 23m</p> <p>As a Team leader, I performed and involved in all activities including advanced structural analysis of both the towers. The details are as follows...</p> <p>Subsurface cavities detection and mapping using electrical resistivity tomography (ERT) report was</p>

	<p>reviewed and confirmed that rock stratum under the tower is safe enough to setup tower foundations. Responses to all technical queries raised by client's structural department were taken care by myself.</p> <p>Two models were prepared for each tower for ULS and SLS condition. Applied different stiffness reduction factors to different structural elements and adopted different load combinations corresponding to the ULS & SLS conditions. For wind load analysis per ASCE 7-05, Gust factors were determined along two orthogonal directions, Building Drifts and Accelerations induced by wind were determined and compared with the limiting values specified in ASCE 7-05 and ISO 10137 respectively. Application of wind tunnel loads from WindTech into ETABS model was performed. Due to high eccentricity of some governing directional cases, resulted few member overstressing and were resolved.</p> <p>Seismic static and dynamic analysis was performed. Determination of Accidental Torsion as stipulated in ASCE 7-05 was also checked against limiting values. Shear and compressive stresses induced at the junction of mat and blade columns with different concrete strengths were also checked for governing high axial load and moment combinations. Influence of BMU and its location was also determined. Value engineering was performed at every level and every part of the building to minimize material cost. Coordinated with PT slab (Post-Tensioned Slab) contractor Freyssinet. All the technical information required by them was provided to them. Their design and drawing were reviewed and given feedback to the client.</p>
Project Name & Client Name	: King Faisal Specialist Hospital, (Package A), Riyadh, KSA
Scope of Services	<p>: Hospital Tower (B2+G+20) dim 102.3 x 31m Podium 115 x 82m B2+G+10</p> <p>From Concept to complete computational model of the Tower and Podium was developed in ETABS, The tower includes five 7m deep 18m & 22.6 m long transfer girders that support 14 stories above. Design of slabs and mat foundation was performed in SAFE. Developed, custom built spreadsheet to checked floor vibrations against the allowable values provided by Siemens for the proper function of their sensitive medical equipment. Designed and reviewed of steel hanger to support mezzanine floor, developed by 'Cannon'.</p>


Scope of Services	:	Underground Mega Parking Structure
		700m x 600m with two basements
		Concept to IFC, all was my responsibility. It was well-coordinated design. Involved In framing, modeling in ETABS, analysis and design. Full scale model of the parking structure was divided into 13 sub models at expansion joint locations. The critical part of the structural design was heavily loaded with 1.5m earth fill spread entirely on the parking area for plantation & landscape. Retaining walls and foundations (isolated & combined footings) were also part of my scope of design. Parking interface with different hospital buildings was also planned and framed by me. Ramp leading into and out of the parking structure was designed for truck wheel loads. Wheel load impact, punching shear check and flexural requirements for these ramps were also considered in the design process.
Scope of Services	:	70m long steel pedestrian bridge
		The bridge connects different hospital buildings to each other. It was double storied and its design was complex as it includes, steel frame, deck slab designed as composite steel concrete, supports and some place underneath tunnel was complete CIP concrete. Modeled in ETABS Including all load special loads Temperature and wind loads assigned on null areas were also applied on truss joints to check linear and lateral direction stresses.
Scope of Services	:	Service Tunnels between different packages
		Underground service tunnels running between different hospital building (packages) basements. Buried under 1.5m to 6.5m earth. Modeled in Sap2000, Design challenge was very high wide beam punching shear and heavy flexural reinforcement.
Project Name & Client Name	:	Haramain High Speed Railway Terminal
		Madinah al Munawarah
		Platform area 210 x 190m B1+G+4
Scope of Services	:	Huge model of platform was developed in ETABS, Framing setup, application of loads, analysis design and calculation report were my responsibility. All structural design was based on European code.
Project Name & Client Name	:	Dammam Commercial Center
		Khaleej Marketing Company (KMC)

	Three Commercial Buildings
	Building #1: B2+G+8: 55mx45m
	Building #2: B2+G+7: 108mx40m
	Building #3: B2+G+8: 57m x 62m
Scope of Services	: In a leading role this assignment was given to me with a very tight schedule. Three buildings' complete structural design from concept to IFC was my responsibility. Framing, Modeling, Analysis, Design, Calc Report and details to CAD staff were my responsibility. Foundations, Retaining Wall, Beams, column, slabs, steel roof canopy, part of basement slab under the influence of trucking load, all was designed by me. Client meeting and technical query responses were part of my scope.
Project Name & Client Name	: Jeddah Tower 30+ Storied Tower
Scope of Services	: Design reviewed. Includes Model checking and review of calculation design report. My scope was to prepare structural comments.
Project Name & Client Name	: Minhal 5 Star Hotel, Riyadh
	Minhal
	B3+G+10: 90m x 90m basement area
Scope of Services	: Redesign of the project, reframing, Modeling, streamlined the designed work, previously mismanaged. Structural framework readjusted and aligned to proper grid system. Proper load transfer system was established.
Project Name & Client Name	: SFDA
	Saudi Food & Drug Authority (SFDA)
Scope of Services	: Reviewed structural design include model checking, Framing, checking of transfer systems, Loads, seismic and wind parameters. Checking of heavy and critical areas of the building frame system. Reviewed design of foundations.
Project Name & Client Name	: Security Force Hospital
	Ministry of Interior (MOI)
Scope of Services	: Design review of the structural system. Comment preparation of the whole design. Client meeting on the structural issues. Checking of model, loads, seismic and wind load parameters, framing system was thoroughly reviewed.

		Design of pedestrian steel bridge include modeling, framing analysis and design, special checking of vibrations due to walking excitation all was in my scope.
Project Name & Client Name	:	Al Rimal Gated Community Project
		General Organization of Social Insurance (GOSI)
Scope of Services	:	Prepared SOW for Geotechnical Investigation Survey.
		Prepared Bore Hole location plan for three proposed options developed by Architects.
Project Name & Client Name	:	Royal Commission, Jubail, KSA
Scope of Services	:	<p>Steel Frame Vehicle and Equipment Building Bay width 33.1m x Length 39.75m Building Dimension 33.1m x 39.75m Ground Floor Only Steel Portal Frame, bracing including girts, purlins, wind columns, rafters and baseplates. PEMB Modelled in ETABS, Designed foundations against all possible loading especially uplift due to upward wind force acting on sloped roof.</p> <p>RC Industrial Admin Building 45m x 45m B1+G+1 Building Dimension 45m x 45m B1+G+1 CIP building, flat slab with drop panels. Architect's first option: A very complex steel roofing system was developed to be supported on rc frame, Farming, Modelling, Wind Calcs, Modelled in ETABS, Slabs and foundations designed in SAFE. Architect's second option Roof slab made flat in CIP. Part of roof slab due to large span was designed as waffle slab.</p> <p>Misc. Buildings / Structures</p> <ul style="list-style-type: none"> • Supervisor Apartment Building, (46.1x17.7m, G+2) • Apartment Building (17 Nos.) 51.3m x 11.35m, G+2, • Large Kitchen and Dining Hall for Officers • K-9 Building • Technical Unit Building • 33kVa Switch Station Building • Large Diameter Steel tanks (16m Dai x 8.m High)
Project Name & Client Name	:	Ministry of Housing (MOH)
		Saudi Arabian Pasons Ltd (SAPL)
		Nine Sites: Abha, Al-Ahsa, Al-Kharj, Dammam, Jeddah,


		Madinah, Qatif, Riyadh & Tabuk.
Scope of Services	:	Scope of services was very huge. It includes preparation of Structural Design criteria. Geotechnical SOW for all the sites. Review of Geotechnical Investigation Report from all the sites. Issues and their resolution with Parsons and GI consultant. Comparative study of different Structural systems. Design concept for Apartment buildings and Villas. Precast Vendors options and possible adaptibility of their systems to the MOH residential buildings. Coordination between Parsons, Precast Vendors, GI consultant, DAR architects. Dubai Structural consultant was carried out successfully.
Company	:	Omrania & Associates, Bahrain 
Duration	:	May 2008 – Oct 2009
Designation	:	Senior Structural Engineer,
Scope of Services	:	<ul style="list-style-type: none"> • Preparation of deliverables for the project proposals, • Team leadership on special assignments, • Preparation of SOW of Geotechnical Investigation for Project Site (including Borehole Plans), • Review of Design by Foreign Consultant • Preparation of design concept, • Coordination amongst different disciplines, • Preparation of Structural Design Criteria, • Preparation of Structural Framing System, • Preparation of Structural Model (Computational Model), • Preparation of Structural Design Calculation Report, • Preparation of custom built design spread sheets, • Deign info to CAD staff through sketches. • Responses to technical queries from client, bidders or in house design team, • Technical queries and correspondence with Structural Software Vendors.
Project Name & Client Name	:	CMA Tower (B3+G+88) 400m high Tower
		Capital Marketing Authority, KAFD
Scope of Services	:	Design review of Different structural options developed by JV partner Walter P. Moore USA. Review of their structural design criteria.


		<p>Preparation of Technical queries to Hyder Consultant, Dubai for the redesign of structural system as JV partner. Prepared Geotechnical Investigation SOW for the Tower site.</p> <p>Dynamic Analysis of the Lateral Framing System of 400m CMA Tower. Determination of Building periods and adjustment of mass and stiffness in the structural system of the tower. Adjustment of Belt truss and outriggers to control sway and drifts.</p> <p>Assessment of vibrations of large span solid slab with wide shallow RC beam for CMA tower to be constructed in Riyadh, KSA. Optimization of slab thickness to reduce slab self-weight to reduces load on foundations and columns.</p> <p>Design of 4.5m thick Mat Foundation for CMA Tower. Optimization of Mega Columns.</p>
Project Name & Client Name	:	Sky Bridge
		Media Production City, Riyadh
Scope of Services	:	Design of sky bridge between two towers of media production city. The model was developed in Sap2000. 24m Sky Bridge was designed for all vertical loads along with thermal as well as for wind loads. The bridge connection/support was planned to the building, floor elevations considering floor finish, cladding and mechanical services.
Project Name & Client Name	:	King Abdullah International Gardens, Riyadh
		Riyadh Municipality
		160 hectare indoor gardens
Scope of Services	:	Design Review of 160 hectare futuristic botanical garden. The garden is fully covered by arched shape steel roof. The structure is in the shape of two huge crescents. There were about 500 drawings and 20 volumes of structural design calculations prepared by Buro Happold. All were reviewed commented and resolved with the consultant. Also, models prepared in Robot Structural Analysis for different structures within the moons and its main frame was checked and prepared queries / comments.
Project Name & Client Name	:	Traffic Police Buildings, Riyadh. KSA
		Ministry of Interior, KSA
		Admin Building 50m x 50m G+2
		Prison: 60m x 30m G+2

Scope of Services	:	From concept to IFC, I was responsible for all the tasks involved in the design. Both the buildings were designed as proto type for 100 kPa, 150 kPa and 200kPa Allowable bearing Capacities (ABC). So that design can be adopted to any site w.r.t. actual ABC. Building frame was CIP and slabs were Hourdi Slab system. Columns were slender and only 200mm thick to conceal inside Masonry walls. Framing was challenging as there was a circular area allocated for mosque at ground floor. Framing on above floor was difficult to satisfy strength and serviceability requirements. The building was modelled in ETABS and analyzed for wind, earthquake and temperature loads. Design calculation was prepared and details were provided to CAD staff for the completion of structural drawings.
Project Name & Client Name	:	King Abdullah Financial District (KAFD)
		Parcel 2.06 and 2.08
		Tower 1: 50m x 30m B2+G+20
		Tower 2: 42m x 36m B2+
Scope of Services	:	Peer review of the structural design of Tower 1 & Tower 2 in KAFD, developed by Buro Happold, USA. ETABS and SAFE Models were reviewed. Issues with meshing and modulus of subgrade modulus was highlighted with the consultant. All mismatches with architectural drawings were found out.
Misc Design reviews	:	Salam resort, Bahrain
		G+10 hotel building. Structural design review of Salam resort developed by WSP, Dubai. Found design issues in Transfer slab system and Transfer beams. Lots of mismatches between architectural and structural designs.
	:	Kingdom Oasis Project, KSA
		Structural Design review of tent structure(membrane structure) to be constructed on Kingdom Oasis Project submitted by Taiyo Middle East.
Company	:	National Engineering Services Pakistan (NESPAK) 
Duration	:	Jul 2005 – April 2008
Designation	:	Lead / Senior Structural Engineer,
Job Responsibility		<ul style="list-style-type: none"> • Team leadership on some projects. • Review of Geotechnical Investigation Report

		<ul style="list-style-type: none"> • Preparation of design concept, • Coordination amongst different disciplines, • Preparation of Structural Design Criteria, • Preparation of Structural Framing System, • Preparation of Structural Model (Computational Model), • Preparation of Structural Design Calculation Report, • Preparation of custom built design spread sheets, • Deign info to CAD staff through sketches. • Responses to technical queries from client, bidders or in house design team, • Design meetings with client and vendors. Preparation of Structural Presentation to Client. • Technical queries and correspondence with Structural Software Vendors. • Preparation of Tender Documents, Technical and Financial Evaluation of Bidders. • Technical Assistance and training to Junior Staff Engineers.
Project Name & Client Name	:	Expo Lahore (4 huge Exhibition Halls-Steel Structure)
		Export Promotion Bureau, Pakistan
		Four exhibition halls each having 6000m ² covered area
		Four Utility Buildings 40m x 40m B1+G+2
		OHT tank 50,000 Gallons
Scope of Services		<p>My scope of services includes design review and design modification of four exhibition halls. These halls were shaped like tents with maximum clear height of 25m. These huge halls were constructed as Steel Moment Frame. Hall frame was Modelled in STAAD Pro and Steel tapered sections were used to economize material. Special consideration was given to foundations to resist high uplift forces due to high winds. Due to this reason self wt. of footings have been increased to balance the uplift. Slab on grade SOG was designed for heavy trucking load.</p> <p>Utility buildings were simple RC structure with heavy storage and mechanical equipment loads. Modelled in STAAD Pro and Sap2000.</p> <p>Large Overhead Tank was modelled in Sap2000 using shell elements. The circular shaft was designed in PCA Col using custom defined section of C type core section with reinforcement distributed in circular form. Axial load Capacity checking was performed with the maximum</p>

		shell stresses induced in the shaft. Huge circular foundation of 25ft diameter was analyzed and its stability checks were performed.
Project Name & Client Name	:	Lai Express way
		Rawalpindi Development Authority, Pakistan
		Approx. 10km Dual carriage way road way on both side of The Nullah Lai (drainage channel)
Scope of Services	:	As a team leader I was responsible for design of all the possible structures including bridges at different interchanges, channel lining, Deep manholes inside the channel, Piles etc. Bridges were modelled in STAAD Pro and checked for 70 ton Tank + NLC Transport Truck moving loads. Prestressed Girders were designed for the maximum force envelop due to moving loads. Reactions were transferred to Neoprene Bearing Pads. 1.2m to 1.5m Deep Transom were designed as per AASHTO code. Also Pier, Pile cap and piles were modelled in Sap2000. Horizontal and vertical soil springs were modelled along the length of the pile to check settlement and side bending. Detailed design calculation of Transom was prepared in Mathcad.
Project Name & Client Name	:	NespaK Office Building Peshawar
		NESPAK
		B1+G+5, 100ft x 50ft
Scope of Services	:	An RC building, designed as RC beam columns frame system, Modelled in Sap2000. Due to its location in high seismic zone Z=4 per UBC 97. The design was fully conformed to the Special resisting frame (as per ACI 318) and detailing accordingly.
Project Name & Client Name	:	Club & Community Center Building
		Pakistan Council of Scientific & Industrial Research, PCSIR
Scope of Services	:	Large auditorium 100ft x 80ft, Including cantilevered gallery 15ft span
		Modelled in Sap2000, Roof was designed as PEMB and all supporting frame structure as CIP concrete. It also includes large swimming pool about 30ft x 40ft. Code compliance of ACI 350 was considered in the design.
Scope of Services	:	Commercial Center
		150ft x 75ft G+2

		Concept to IFC all stages of design work was handled by me. Framing, ETABS Modelling, Loads, Beam Column design all were performed and involved in Quality Audit.
Project Name & Client Name	:	Nokia Steel Communication Towers
		NOKIA, PTML
Scope of Services	:	Structural Review of 50m High Communication tower designed by Rambol. Calculations submitted in Mathcad, Design based on ACI 318. The scope of design review was to check strength and stability of foundation system of the tower.
Project Name & Client Name	:	Cadet College Choa Saden Shah,
		Cadet College Choa Saden Shah,
		College building G+4 162ft x 60ft
Scope of Services	:	The building was designed coordinated with the inhouse architect. Modelled in Sap2000, Framing and loading arrangement was developed. Complex framing system was prepared to support 30ft Diameter dome at Main reception area. Footing arrangement was also complex the structure was built on a hilly terrain. So to economize cut and fill. Stepping of GF was done.
Project Name & Client Name		Doha Qatar Palace perimeter fence
		Al-Wajba Palace, Qatar
Scope of services		Parametric Fence 5m high was designed reviewed Chinese contractor design for the main entrance gate. The gate was redesigned to resist vehicular impact load. Also, visited Qatar to design the structure as per ground conditions and to review all the design work submitted by the contractor on behalf of client.
Company	:	DESCON Engineering Ltd, Pakistan
		
Duration	:	Aug 2002 – June 2005
Designation	:	Lead / Senior Structural Engineer,
Scope of services	:	<ul style="list-style-type: none"> • Design of structures for Employer Facilities near Mirani Dam site. (Rs 50 Billion) • Design of Intake Tower of Mirani Dam (Rs 50 Billion) • Design & Analysis of Culverts (Rs 50 Billion)

		<ul style="list-style-type: none"> • Design & Analysis of Super Passages (Rs 50 Billion) • Design & Analysis Face Slab & Plinth of the Mirani Dam • Design of Anchors in Plinth slab of the Dam & for Diaphragm Wall. • Design & Analysis of Sheds (Steel structure) • Design & Analysis of an instrument house • Design & Analysis of outlet Irrigation conduit. • Design of Steel Belt Conveyor (Mirani & Mangla Dam Projects)– Truss System • Design of Foundations for Crusher Plant at Mirani. • Preliminary Design of Penstocks for Satpara Dam Project
Company	:	KASHIF ASLAM & ASSOCIATES (Pvt) Ltd. PAKISTAN
Duration	:	Aug 2002 – Nov 2002 (+Part Time 1.5yrs)
Designation	:	Lead / Senior Structural Engineer,
Scope of services	:	<ul style="list-style-type: none"> • Design & Analysis of Bridge cum aqueduct + Dynamic Analysis • Analysis of Marvida Tower 18 Storey Building at Al-Juffair, Bahrain • Designed Madina Hotel 14 Stories at Madina Munawarah, KSA • Designed SWCC Housing Complex at Al-Riyadh & Al-Jizan, KSA • Designed, Shopping Mall, Residential Villas at Al-Khifji, KSA • Designed, Prince Mishal Palace at Al-Riyadh, KSA • Level One Design which includes, Dynamic analysis of Spillway using Time History Record of Tabas Earthquake, Design & Analysis of Gravity Walls using Mononobe-Okabe Theory in consideration of Seismic effects.
Company	:	AMIN TARIQ ASSOCIATES, PAKISTAN 
Duration	:	Jul 2000 – Jul 2002
Designation	:	Senior Structural Engineer,
Scope of services	:	<ul style="list-style-type: none"> • 3D Sap90 Analysis and Design of Pakistan Housing Scheme (PHA) Apartment Building (UET Lahore) • Analysis & Design Calculations for PTML (U-fone) Roof top & on Ground Self supporting Towers (25, 45 & 50 m Towers)

		<ul style="list-style-type: none"> • Prepared a RCC Slab design software using ACI Coefficient Method in Visual Basic 6. • Design & Analysis of Pre-Heater a Composite Structure for Kohat Cement. • Analysis and design of 17 Storeys “Big City” Building Main Boulevard Gulberg Lahore. • Structure Design of Different residential Houses • Structure Design of Lahore Medical College (Phase 2) • Design of Water Distribution & Sewerage network of PHA Apartments at Misri Shah Lahore using Loop Simulation Software. • Design & Analysis of Circular Treatment Plant for DDFC (Pvt) Ltd, Lahore. (Coca Cola, Aero, CDL Industries) • Design & Analysis of 50,000 gals Overhead Tank at Toba Tek Sing • 3D analysis & Design in Sap2000 of Shopping Plaza Vetted by E in C at GHQ • Analysis & Design of Machine Foundation (Ball Mill Foundation) in Sap2000 • Designed Turbine Generator Foundation along with its BOPs Footings for a Power Generation unit extension Project in Saudi Arabia, a project of Habib Rafiq & NESPAK. • Designed & Performed 3D Analysis and 3D Model study for the different arrangements of different components to resist blast forces using FEA for the Bunkers of Pakistan Rangers.
Company	:	KASWA DESIGN SERVICES, PAKISTAN
Duration	:	Jun 1998 – Jun 2000 (Internship to Full employee)
Designation	:	Structural Engineer
Scope of services	:	<ul style="list-style-type: none"> • Design of many small residential houses G+1, • Analysis & Design of Shopping center, Mahmood Sons 2B+G+9, Lahore • Design of Office building, G+2, SPEC, Lahore • Renovation/Reconstruction of restaurant, Gulberg, Lahore