

AIMT ENGINEERING SERVICE INC.

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AIMT Engineering Service Inc. is a New Mexico based structural engineering consulting firm founded in 2009. We cover wide areas of civil and structural engineering services ranging from grading and drainage design, structural design including structural timber, masonry, concrete, steel design, structural inspection of buildings and bridges and structural repair and rehabilitation and preservations using polymer composites. We have been involved in design, drafting, mapping, and inspection of telecommunication towers. We are also specialized in design of special concrete, prestressed concrete, polymer concrete and concrete preservation including testing and test data analysis of concrete materials and structure. Our professional engineering licensure extends to many states in the US and Canada including New Mexico, Arizona, Texas and New York. Our team has over 50 years of collective engineering experience with extensive experience in structural design using the American and European standards. We have also been involved as expert witness in litigations. AIMT has been involved in numerous engineering projects in the US and worldwide.

CORE CAPABILITIES

- ❖ Grading and drainage design for land development
- ❖ Structural engineering and design of residential and commercial structures
- ❖ Structural engineering and design of timber, masonry, concrete and steel structures
- ❖ Design and analysis of prestressed concrete structures
- ❖ Structural inspection of steel, concrete, wood, and masonry buildings and bridges
- ❖ Rehabilitation design of buildings
- ❖ Rehabilitation design of bridges using polymer Composites
- ❖ Special concretes, polymers and composite materials design
- ❖ Design of shallow and deep foundations
- ❖ Design of tie backs and sheet pile walls
- ❖ Design and analysis of slope stability systems such as soil nailing wall systems, excavation support systems, ground anchors, and concrete retaining walls
- ❖ Site grading design using Civil 3D
- ❖ Design, drafting, mapping, and inspection of telecommunication towers (monopole, self-support, guyed), mounts, and rigging plans
- ❖ Design and analysis of water tanks
- ❖ Testing of surface friction and roughness
- ❖ Expert witness for litigations

PROFESSIONAL REGISTRATION

- ❖ AIMT team has Professional Engineer (PE) licenses in the following states
 - New Mexico
 - Arizona
 - Texas

- Utah
- Washington
- ❖ AIMT has licensed Professional Engineers in (PEng), Alberta, Canada

CLIENTS EXAMPLES

- ❖ Alpha Engineering, NY
- ❖ Architect Studio
- ❖ Arizona Department of Transportation (ADOT), AZ
- ❖ Artelia/Sogreah, Dubai, United Arab Emirates
- ❖ Altran, Spain
- ❖ British Petroleum (BP)
- ❖ Chevron
- ❖ ConDeck, NM
- ❖ CSA Engineering, NM
- ❖ Curtis Barrier International, Australia
- ❖ GS Engineering & Construct Corporation, South Korea
- ❖ ISL Engineering & Land Services, Edmonton, Canada
- ❖ Infinity Design Consultants, NY
- ❖ James Hamilton Construction, NM
- ❖ KCPC, Kuwait
- ❖ Korean Railroad Research Institute, South Korea
- ❖ Roca Engineering, OK
- ❖ R2 Architecture, NM
- ❖ Saudi Aramco, Saudi Arabia
- ❖ Sewer Shields Composites, AZ
- ❖ Stearns Engineering, VA
- ❖ Stutzki Engineering, WI
- ❖ Transpo Industries, NY
- ❖ University of New Mexico Hospital (UNMH), NM
- ❖ Zoltek, TX

EXAMPLE COMPLETED PROJECTS:

- ❖ Residential Design, Crestview, Placitas, New Mexico, with Joshua Arnold Architect.
- ❖ Structural renovation, Los Alamos Golf Country Club, Los Alamos, New Mexico, with Architects Studio.
- ❖ Structural repair, UNM Cancer Center, Albuquerque, New Mexico, with Architects Studio
- ❖ Structural design of Mark's Place, 53rd Street, New York City, with Infinity Design Consultant, NY, USA.
- ❖ Construction Litigation, Expert Witness, Doughty Alcaraz Law Firm, New Mexico
- ❖ Grading design of 304 Candelaria Road, Albuquerque, New Mexico, USA.
- ❖ Structural design of polymer composite manholes, Phoenix, Arizona, USA.
- ❖ Structural design of building rehabilitation, 130 Madison Street, Manhattan, with Infinity Design Consultant, New York City, NY, USA.
- ❖ Structural design of 5 story residential building using Quad Deck system, 275 Pleasant Av. with Alpha Engineering, *New York City*, NY, USA.

- ❖ Design of structural strengthening of 16th Av. Bridge over Balrow Trail, Calgary, Canada. Design of strengthening of prestressed concrete bridge girders using FRP. Work with ISL Engineering, *Calgary, Canada*.
- ❖ Design and application of microcrack sealants for CO₂ sequestration in underground tunnel for Chevron & British Petroleum, Monte Terri, Switzerland.
- ❖ Structural design of building rehabilitation of Marcy Av. Community Center, with Infinity Design Consultants, *New York City, NY, USA*.
- ❖ Structural design of support of excavation system, Building 814, 5th Av., with Alpha Engineering, *New York City, NY, USA*.
- ❖ Structural design of building rehabilitation, 207 Brooklyn Av., *New York City, NY, USA*.
- ❖ Design review of contaminated landfill cap project. TSA Amberley, Australia, with Curtis Barrier International, Australia.
- ❖ Design of structural repair for Mountain Scott Park, with Roca Engineering, Wichita, Oklahoma, USA.
- ❖ Structural design of building rehabilitation, 79th Rivington street, New York City, NY, USA. with Alpha Engineering, NY.
- ❖ Goat Hill Hydro Reservoir System Design. Consulting work and recommendation for Tiltex concrete protection system. (with Curtis Barrier International, Australia, 2018).
- ❖ *Structural Design Review of US Navy Lodge, Rota, Spain. Structural System and Foundation. Special checks and recommendation for new foundation system. Consulting work and reporting.* (with Altran, Spain, 2017-2018).
- ❖ *Structural evaluation, repair and strengthening design of Khafaji water desalination reinforced concrete tanks, Saudi Arabia.* Materials and Structural design for repair and strengthening (with Sogreah, Dubai, UAE).
- ❖ *Structural assessment and life cycle cost analysis of Brooks Aqueduct for Heritage Canada (2015-2016).* Proposed repair of aqueduct piers using carbon fibers. (with ISL Engineering, Canmore, Alberta, Canada, 2016).
- ❖ Structural analysis and optimization of polymer concrete manholes, Arizona.
- ❖ Structural design review, Enabling Earthwork, Petrofac – *Upper Zakum 750 North Island Seawater Intake Structure, Abu Dhabi, UAE.* Work with SOGREAH (Dubai).
- ❖ *Strengthening of 53th Av. Bridge over Whitemud Drive, Edmonton, Alberta, Canada.* Preliminary design of shear strengthening of prestressed concrete bridge girders using FRP (with ISL Engineering, Edmonton, Canada, 2015).
- ❖ *3D laser scanning inspection, structural modeling and design of repair strategy of reinforced concrete service tunnel in, Dhahran, Saudi Arabia,* (work with KFUPM, Darling Geomatics, Saudi Arabia, Phase I - 2015).
- ❖ *Structural analysis, design and construction review, Hamriyah Pump Station, Sharjah, UAE. Work done in partnership with SOGREAH (UAE) (January 2013- May 2014). Design work included pumping station, outfall channels, overflow pits and pipe supporting bridge. The common Intake and Outfall System for the Hamriyah Station for Power Generation and Water Desalination in the Emirate of Sharjah, UAE was planned for a planned power generation capacity of 2600 MW and desalination capacity of 150 MIGD. The total project cost was US\$ 35M. The works consisted of an open seawater intake and pumping station for a design flow of 420,000m³/h and an outfall channel for a design flow of 360,000m³/h. The pumping station consisted of 13.4 m deep wet pit that required 7600 tonnes of steel and 41,000m³ of concrete and took 10 months of construction.*

- ❖ Design of special cellular lightweight concrete (CLC) and autoclave aerated concrete (AAC) for *Al-Nami block industrial plant*, Kuwait (2014).
- ❖ Special consultant for KIIT Holding Companies for acquisition of FRP Technology (2014).
- ❖ *Structural analysis, design and construction review, Hamriyah Pump Station, Sharjah, UAE. Work done in partnership with SOGREAH (UAE) (January 2013- May 2014). Design work included pumping station, outfall channels, overflow pits and pipe supporting bridge. The common Intake and Outfall System for the Hamriyah Station for Power Generation and Water Desalination in the Emirate of Sharjah, UAE was planned for a planned power generation capacity of 2600 MW and desalination capacity of 150 MIGD. The total project cost was US\$ 35M. The works consisted of an open seawater intake and pumping station for a design flow of 420,000m³/h and an outfall channel for a design flow of 360,000m³/h. The pumping station consisted of 13.4 m deep wet pit that required 7600 tonnes of steel and 41,000m³ of concrete and took 10 months of construction.*
- ❖ *Structural design and construction drawings review of reinforced concrete bridge for water transport to Hamriyah Pump station, Sharjah, UAE, (with Sogreah Dubai, 2013-2014).*
- ❖ *Structural analysis, design and construction review, Hamriyah Pump Station, Sharjah, UAE. Work done in partnership with SOGREAH (UAE) (January 2013- May 2014). Design work included pumping station, outfall channels, overflow pits and pipe supporting bridge. The common Intake and Outfall System for the Hamriyah Station for Power Generation and Water Desalination in the Emirate of Sharjah, UAE was planned for a planned power generation capacity of 2600 MW and desalination capacity of 150 MIGD. The total project cost was US\$ 35M. The works consisted of an open seawater intake and pumping station for a design flow of 420,000m³/h and an outfall channel for a design flow of 360,000m³/h. The pumping station consisted of 13.4 m deep wet pit that required 7600 tonnes of steel and 41,000m³ of concrete and took 10 months of construction.*
- ❖ *Feed Design of ELNG Trestle Road Prestressed Concrete Bridge (work with Sogreah, Dubai, United Arab Emirates, November 2012).*
- ❖ *Design and simulation of steel couplers for improved fatigue resistance. Work for Transpo industries, NY. Research resulted improvement of fatigue strength of couplers (2011-2014).*
- ❖ *Structural design check of glass façade and roof for Zuhair Fayez Partnership (ZHP) building, Jeddah, Saudi Arabia. Work done in partnership with KFUPM (Saudi Arabia).*
- ❖ *Structural and construction design, Saint Patrick's pedestrian bridge, Calgary, Canada, with ISL Engineering and Graham Construction, Calgary, Canada.*
- ❖ *Design check of FRP strengthening of Dammam prestressed concrete bridge, Dammam, Saudi Arabia (Saudi Arabia, May 2012).*
- ❖ *Repair and strengthening of 60th Street–Gaetz Interchange, reinforced concrete bridge girders using CFRP (with ISL Engineering, Red Deer, Canada, September 2010- May 2011).*
- ❖ *Design of pedestrian pultruded FRP and composite piles for Maintenance Bridge for Al Qurayyah power plant, Saudi Arabia, Saudi Electricity Company (2010-2011). Work performed in partnership with KFUPM, Saudi Arabia and SPECO Engineering.*
- ❖ *Structural inspection and rehabilitation of water intake structure, Saudi Aramco, Saudi Arabia (2010). Work included structural inspection to identify structural condition and destructive and non-destructive testing of structure above and underwater. Work also included providing strengthening/repair strategy for the intake structure. Work done in partnership with KFUPM (Saudi Arabia) and Stearns Engineering (VA, USA), (2010).*

- ❖ *Design and simulation of special GFRP connections for bridge design. Work for Saudi Electrical Company results in special bridge connections (2010).*
- ❖ *Structural strengthening of reinforced concrete bridge on Interstate I-40, using CFRP strips to strengthen K-frame moment capacity. Tucumcari, New Mexico (New Mexico, 2008).*

PROFESSIONAL AFFILIATIONS

- ❖ American Concrete Institute (ACI)
- ❖ American Society of Civil Engineers (ASCE)
- ❖ Arizona Society of Professional Engineers (ASPE)
- ❖ New Mexico Society of Professional Engineers (NMSPE)
- ❖ Nevada Society of Professional Engineers (NSPE)
- ❖ Washington Society of Professional Engineers (WSPE)

CONTACT INFORMATION

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