



# STATEMENT OF QUALIFICATIONS

## RFO 2021-003

### ENGINEERING SERVICES FOR MANGANA-HEIN ROAD EXTENSION PROJECT



SUBMITTED BY:

MARCH 12, 2021

**CRANE  
ENGINEERING**

CIVIL • PUBLIC WORKS • HYDROLOGY



IN ASSOCIATION WITH:

**Terracon**

March 12, 2021

Mr. Juan Guerrero  
Contract Administrator  
Webb County Purchasing Department  
1110 Washington Street, Suite 101  
Laredo, Texas 78040

**Re: Request for Qualifications RFQ 2021-003  
Engineering Services for Mangana-Hein Road Extension Project**

Dear Mr. Guerrero,

We appreciate this opportunity to submit our Statement of Qualifications for professional engineering services for the extension of Mangana-Hein Road. Crane Engineering is a Laredo based civil engineering firm celebrating 25 years of assisting public governments improve the quality of life for our community. Crane is current on City wide planning efforts to improve our transportation network and we network with national engineering firms when specialized services are needed. For this project, we have teamed up with Terracon to provide Webb County with a team that can provide a one stop shop approach to complete this project.

Our team has completed multiple public improvements projects together and has recent experience in major arterial planning, design of industrial collectors, major collectors, local collectors, and local streets all in accordance to AASHTO standards. Additionally, our firm has GPS GLNSS survey capabilities allowing us to tie ROW, topographic, and as built surveying to state plane coordinate system.

Crane Engineering is the lead consultant on this submittal and is led by Edward D. Garza, P.E., CFM, Principal Engineer. Mr. Garza brings 33 years experience along with TxDOT pre certifications in multiple transportation categories to lead the project team. Terracon will utilize its Laredo office to serve as Geotechnical Engineer and material testing lab. We seek an opportunity to put our experience to work for Webb County.

Respectfully Submitted,

**CRANE ENGINEERING CORP.**  
Firm # F-3353

  
Edward D. Garza, P.E., CFM  
Principal Engineer

*Enclosure*



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# SECTION 1

## TEAM INTRODUCTION



# CRANE ENGINEERING

CIVIL . PUBLIC WORKS . PLANNING . HYDROLOGY

## PRIME FIRM INTRODUCTION

### *CELEBRATING 25 YEARS (1996 – 2021)*

1310 Junction Dr. Suite B  
Laredo, TX 78041  
Phone: (956) 712-1996  
Fax: (956) 712-2378  
Contact: Edward D Garza, P.E., CFM  
Principal Engineer  
Email: eddie-crane@sbcglobal.net



Crane Engineering is a second-generation, minority owned, TxDOT Pre-Certified, HUB & SBE certified Civil Engineering firm established in 1996 that provides comprehensive services in planning, hydrology, storm water management, street analysis and design, water and wastewater, public works, construction inspection, and project management. Our mission is to develop a balance between the environment and technology by providing innovative design, cost effective solutions, and personal commitment to your project.

Crane Engineering (CE) has been in business for 25 years and has served as a trusted advisor to multiple public clients to help plan, design, and create efficient, cost effective, and sustainable infrastructure projects throughout our community.

Edward D. Garza, P.E., CFM, Principal Engineer, is a licensed Professional Engineer and Certified Floodplain Manager in Texas who has over thirty three (33) years experience in planning, designing, and managing infrastructure projects in south Texas. He will serve as Project Manager for this project and will lead the project team in coordinating all planning and engineering services and will serve as the County's point of contact. Mr. Garza has been providing these types of services to multiple public entities for over 33 years.

Alfredo Martinez, P.E., CFM is a licensed Professional Engineer and Certified Floodplain Manager in Texas with over ten (10) years experience in developing engineering solutions including floodplain analysis, land development planning, infrastructure design, hydrologic and hydraulic analysis, and PS&E for municipalities and various private entities. He specializes in modeling of land development, including roadway route studies and design, open and closed storm systems, and water transmission and distribution systems. Mr. Martinez will serve as Lead Design Professional and coordinating with utility providers and regulatory agencies.



# FIRM REGISTRATIONS & CERTIFICATIONS

- ✚ TBPE Registration Certificates
- ✚ DBE Certified
- ✚ HUB Certified
- ✚ Small Business Enterprise (SBE) Certified
- ✚ TxDOT Pre-Certified

Firm Registration Number F-3353  
Vendor Number 20094764  
Certificate/VID Number 1742782031500  
Vendor Number (VN) 23686  
Firm Sequence No. 00003268

Edward D. Garza, P.E., CFM  
Employee Sequence No. 000016949

Categories:

- 1.4.1 Land Planning/Engineering
- 3.1.1 Route Studies & Schematic Design - Minor Roadways
- 3.2.1 Route Studies & Schematic Design - Major Roadways
- 3.5.1 Major Bridge Layouts
- 4.1.1 Minor Roadway Design
- 4.2.1 Major Roadway Design
- 7.1.1 Traffic Engineering Studies
- 8.1.1 Signing, Pavement Marking and Channelization
- 9.1.1 Bicycle and Pedestrian Facility Development
- 10.1.1 Hydrologic Studies
- 10.2.1 Basic Hydraulic Design
- 11.1.1 Roadway Construction Management and Inspection



Alfredo Martinez, P.E., CFM  
Employee Sequence No. 000024888

Categories:

- 17.5.1 Civil Engineering

## TEXAS BOARD OF PROFESSIONAL ENGINEERS (TBPE) & TEXAS FLOODPLAIN MANAGEMENT ASSOCIATION (TFMA)

Crane Engineering is registered with the State of Texas Firm No. F-3353. All Engineers are registered with the State of Texas.

Edward D. Garza, P.E., CFM

Licensed Professional Engineer, Texas #75853  
Cert. Floodplain Manager #2006-10N

Alfredo Martinez, P.E., CFM

Licensed Professional Engineer, Texas #123303  
Cert. Floodplain Manager #2576-14N

Crane Engineering utilizes GIS Formatted Mapping and RTK GPS GLNSS survey equipment tied to state plane coordinate system to provide clients with accurate base mapping tied to state plane. Crane engineers are involved at every phase of project development to ensure the highest level of service. We strive to develop long term solutions that incorporate growth, protection of the environment, and ease of maintenance all within the financial constraints that each project requires.



## SERVICES WE PROVIDE

Crane Engineering provides comprehensive civil engineering, planning, design, and project management services to the public and private sector, Including:

- ◆ Street Paving Analysis and Design (Arterials, Collectors, Local Streets)
- ◆ Traffic Engineering Studies
- ◆ TxDOT Driveway and Utility Permits
- ◆ Project Management
- ◆ Construction Inspection
- ◆ Platting, Zoning, and Annexation of Properties
- ◆ Hike & Bike Trail Planning & Design
- ◆ FEMA CLOMR/LOMR Studies & Map Revisions
- ◆ Onsite Parking and Retaining Wall Design
- ◆ Greenspace Preservation
- ◆ Land Use Plans including Residential, Commercial, Multi-Family, Schools, Parks, Detention, etc.
- ◆ Storm Water Pollution Prevention Plan-TCEQ Permits
- ◆ Subsurface Utility Coordination
- ◆ Utility Easement Delineation
- ◆ Topographic Surveys
- ◆ Wastewater Collection / Lift stations
- ◆ Water Distribution, Storage, and Modeling
- ◆ Hydrology Studies including 100-year Flood Insurance Studies and Detention Pond Design (H&H Studies)
- ◆ Storm Drainage Analysis and Design
- ◆ GIS Mapping
- ◆ Subdivision Design
- ◆ Site Planning Analysis and Design
- ◆ Computerized Deed Research
- ◆ Construction Staking / As-Built Surveys
- ◆ Property Feasibility Investigations



Our company has ongoing working relationships with City of Laredo Departments, TxDOT – Laredo District and Area offices and all private utility companies including AEP, AT&T, Charter (Spectrum), and Centerpoint Energy. This relationship will allow our team to work effectively through the permitting process.



# Terracon

## Firm Introduction

### MAIN CONTACT:

**Arturo R. Barrera, P.E., PMP**

Office Manager

Email: [art.barrera@terracon.com](mailto:art.barrera@terracon.com)

Cell: (956) 740-3736

### Terracon – Laredo

615 Gale Street, Bldg. B.

Laredo, Texas 78041

Phone: (956) 729-1100

Fax: (956) 791-1071

### SECONDARY CONTACTS:

**Mike Ghazawi, P.E.**

Geotechnical Department Manager

Email: [mike.ghazawi@terracon.com](mailto:mike.ghazawi@terracon.com)

Phone: (210) 714-2104

**Chuck Gregory, P.E.**

Vice President/Regional Manager

Email: [chuck.gregory@terracon.com](mailto:chuck.gregory@terracon.com)

Phone: (210) 714-2091



### Accreditations

- AASHTO Accreditation
- U.S. Army Corps of Engineers Validation
- TxDOT Laboratory Accreditation / Precertification for Personnel

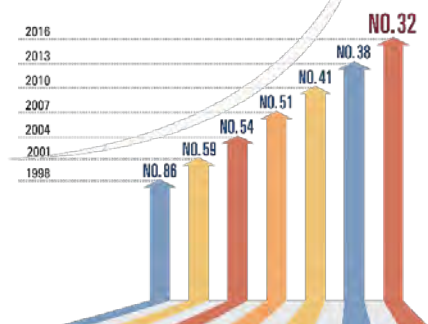
Terracon has served the Laredo community for approximately 16 years. Staff members in our Laredo and San Antonio offices includes licensed Texas engineers and scientists who have Masters and Bachelor's degrees in Civil Engineering, Geology, Environmental Science, Biology and Natural Science with specialization and experience in environmental, geotechnical, materials testing, and facilities services. With over forty-eight years of proven success, we deliver quality, responsive and cost-effective services, regardless of project size or complexity. With these resources, Webb County is assured that projects will receive the prompt and professional attention they deserve.

Terracon is a 100 percent employee-owned consulting engineering firm providing quality services to clients. Since 1965, Terracon has evolved into a successful multi-discipline firm specializing in Environmental, Facilities, Geotechnical Engineering, and Materials. We help our clients succeed in their business ventures by effectively executing projects, controlling costs and managing risk. Our clients appreciate this approach, and they know that we intend to be with them for the long term. Additional services Terracon provides are as follows:

**ENR**

**Terracon # 32**

Top 500 Design Firms • 2016





- Geotechnical Engineering
- Geologic Assessments
- Construction Materials Engineering
- Special Inspections
- Construction Observation and Testing
- Facilities Engineering
- Forensic Investigations and Studies
- Property Condition Assessments
- Roofing / Building Envelope Testing & Design
- Environmental Consulting
- Natural Resources / Wetlands Delineation
- Threatened and Endangered Species Surveys
- Industrial Hygiene
- Asbestos/ Lead Base Paint/ Mold/ Indoor Air Quality
- Expert Witness Testimony
- Peer and Third-Party Review
- Foundation Design for T&D Structures

Terracon provides these services to a diverse clientele including developers, engineers, architects, government agencies, manufacturing industries, the military, learning institutions, and health care companies. Our management team, both seasoned and experienced, provides the continuity, coordination, communication, responsiveness, and quality control during the project to remain focused on our number one objective...**your satisfaction**. To maintain our commitment to sound engineering, quality of services, and responsive attitude to our clients, we maintain an excellent work environment, regularly maintained and calibrated field and laboratory equipment, an in-house quality assurance program, an extensive library, and a state-of-the-art computer network system and electronic data collection / reporting.

*Our Goal:  
To help you deliver a  
project that you can be  
proud of tomorrow and  
30 years from now*

Terracon offers a unique mix of professional staff and experienced technicians that are familiar and comfortable working with both private and public sector clients. In other words, we can bring our services with **no learning curve**, a proven record of accomplishment and history of excellent performance to Webb County. Terracon services will meet all requirements and requests as defined by Webb County.

## Transportation Services

From major highway projects to bridge inspections, Terracon proves itself to be a leader in the transportation sector, providing geotechnical engineering, environmental consulting, construction materials, and pavement related services. We bring a broad range of technical and management experience to both public and private sector clients.



### **Highways and Bridges**

In addition to traditional geotechnical, environmental and construction materials engineering services, specialized highway and bridge services have included oversight and evaluation of dynamic pile load testing evaluation, load testing of piles and drilled shafts (including Statnamic testing) and lateral load testing of deep foundations. Terracon has also provided extensive instrumentation for settlement observation and slope stability.

Terracon has been instrumental in developing solutions to control roadbed and bridge settlement using extensive wick drain installation and monitoring settlement using pneumatic pore pressure transducers and magnet read switches. When it comes to pavement engineering and construction quality control consulting, Terracon is one of the best in the industry.

### **Pavement Design**

Design of pavements requires knowledge of traffic conditions, environmental conditions, subgrade properties, and pavement types, as well as design life criteria. Our design experience includes drives and parking areas, streets and highways, aviation taxiways, aprons and runways, and commercial and industrial slabs-on-grade.

### **Subgrade Evaluation**

Subgrade properties are fundamental to the design of pavement and slab sections. Evaluation of subgrade can include soil explorations, mechanical properties testing, presence of chemicals destructive to pavement elements, groundwater conditions, and the potential benefit of chemical stabilization or geotextile reinforcement.

### **Material Evaluation**

Paving surfaces may consist of concrete or asphalt. Mixes are developed to incorporate local aggregate materials. Aggregates are evaluated for soundness and durability. Soils and base materials are evaluated for potential benefit of stabilization. The potential for recycling in-situ pavements can also be evaluated.

### **Evaluation of Existing Surfaces**

Pavement maintenance and rehabilitation programs are important elements in maximizing the life and serviceability of pavements. Terracon's evaluation services include tests on samples of the existing pavement elements and nondestructive methods. Evaluation and recommendations can be provided for pavement rehabilitation, overlays, and recycling.

## **Environmental Services**

- Our environmental services include:
- Phase I and II ESAs
- Remedial design and implementation
- Brownfield site redevelopment
- Cultural Resources
- Natural resources/wetlands delineation/mitigation
- Industrial hygiene/health and safety
- Asbestos/lead/mold/indoor air quality
- Regulatory compliance
- Environmental management systems
- Threatened and Endangered Species



*Wetlands location*



## Geotechnical Services

With more than 250 geotechnical engineers, Terracon is well positioned to deliver quality, responsive, and cost-effective geotechnical engineering services, regardless of project size.

Design and construction reliable foundations and infrastructure require a thorough understanding of soil, rock, and groundwater conditions. Through Terracon's nationwide network of geotechnical professionals, access to historical subsurface exploration data from thousands of locations across the country, and GIS-enabled geology mapping, we can accurately anticipate ground conditions and develop the right work plan to explore a site. Our innovative technologies and collaborative approach allow us to provide practical design recommendations. Terracon's Geotechnical services include:

- Earth structures, slopes, and retention systems
- Pavement design and subgrade evaluation
- Mechanically Stabilized Earth (MSE) wall and Global stability analysis
- Dynamic analysis and evaluation
- Subsurface exploration and testing
- Resuse of existing materials
- Foundation analysis and design
- In-situ testing and performance monitoring
- Groundwater evaluation and control



*Geotechnical lab, preparing for Liquid Limit test*

## Construction Materials Engineering Services

Proper selection, quality, workmanship, and performance of construction materials play a vital role in ensuring that today's buildings and infrastructure perform adequately over long time periods. We work with clients to minimize material replacements, reduce the likelihood of deterioration, avoid potential failures, and investigate and evaluate construction materials related problems and failures when they do occur. These services include:

- On-site observation and monitoring of earthwork activities and foundation construction
- Construction quality control and quality assurance programs
- Field and laboratory testing and analysis of soil, concrete, aggregates, grout, asphalt and fireproofing
- Design and review of concrete, grout, and asphaltic concrete mixes
- Consulting for construction material selection, compatibility, and acceptability
- Forensic investigation and evaluation of in place construction materials
- Pavement materials engineering
- Special Inspections
- Structural steel inspections / nondestructive testing



*Construction Materials soil lab, preparation of proctor soil samples for compaction testing*





# SECTION 2

## EXPERIENCE

# CRANE ENGINEERING EXPERIENCE

Crane Engineering has dedicated its efforts in providing professional engineering services to public entities within Webb County and City of Laredo for 25 years including WC-CL Regional Mobility Authority, City of Laredo, Webb County Drainage District, and United Independent School District.

We are current in City of Laredo and TxDOT design requirements for road design and maintain an updated cost database of road material cost to provide value engineering on all of our road projects. The following represents a partial list of recent road improvement projects completed within Webb County and City of Laredo.

## WEBB COUNTY – CITY OF LAREDO REGIONAL MOBILITY AUTHORITY

### LOS PRESIDENTES ARTERIAL ROAD FROM CUATRO VIENTOS TO CONCORD HILLS BLVD.

Planning and design of 3,150 LF (0.60 miles) of 4 lane suburban arterial in partnership with TxDOT, City of Laredo, Webb County Drainage District (WCDD), Webb County-City of Laredo Regional Mobility Authority (RMA), and private landowners to improve the transportation network south of SH359 and east of Cuatro Vientos (TxDOT ROW) and improve EMS response time and fire protection for communities and schools in the area. Preparation of PS&E following TxDOT guidelines for design, permitting, and bid let. TxDOT improvements will include deceleration and acceleration lane, drainage improvements, and 24" waterline stubout.

#### Scope of Services Includes:

- ◆ Platting of adjoining tracts following City of Laredo Land Development Code for Right of Way Dedication
- ◆ Utility coordination through City of Laredo Utility Coordination Committee
- ◆ Water, wastewater, drainage, street, traffic safety, SW3P, and sidewalk design
- ◆ H&H analysis / 100 year BFE study
- ◆ Floodplain drainage crossing design
- ◆ CLOMR submittal and coordination with FEMA
- ◆ Environmental and geotechnical coordination

<b>Client Representative</b>	Webb County-City of Laredo Regional Mobility Authority (WCCL RMA) Antonio Rodriguez, P.E. GEC Deputy Program Manager	(512) 800-0382 anrodriguez@hntb.com
<b>Crane Assignments</b>	Project Manager Project Design Engineer	Edward D. Garza, P.E., CFM Alfredo Martinez, P.E., CFM

**Project Status** Construction start March 2021  
**Construction Value** \$5,100,000



## WEBB COUNTY – CITY OF LAREDO REGIONAL MOBILITY AUTHORITY FM 1472 (MINES ROAD) AND KILLAM INDUSTRIAL BLVD. TURN LANES PROJECT

Project involved the widening of westbound Killam Industrial Boulevard collector right turn lane, northbound FM1472 acceleration / merge lane, and modification to existing traffic signal and signage improvements to relieve congestion and improve truck traffic circulation at this intersection.

*Challenges included constant coordination with AEP, Centerpoint, AT&T, Charter-Spectrum, and city of Laredo to get each utility relocated on time. Crane developed a utility matrix to keep RMA informed of latest utility coordination activities.*

### Scope of Services Included:

- ◆ Topographic surveys including 811 coordination
- ◆ Utility coordination through City of Laredo Utility Coordination Committee
- ◆ Preparation of existing utility maps, survey control maps, and utility relocation maps on NAD83, NAVD88 coordinate system
- ◆ Coordination with AEP, AT&T, Spectrum, Centerpoint, and City of Laredo on relocation of utilities
- ◆ Replatting of adjoining tracts following City of Laredo Land Development Code for Right of Way dedication.
- ◆ Design of 12" watermain relocation plans including bore under City ROW
- ◆ Coordination with TxDOT and multiple City of Laredo Departments on permitting for construction
- ◆ Meetings with TxDOT and City Engineer
- ◆ Utility surveys to SUE Level C & B



<b>Client</b>	Webb County-City of Laredo Regional Mobility Authority (WCCL RMA)
<b>Representative</b>	Antonio Rodriguez, P.E. GEC Deputy Program Manager
<b>Crane Assignments</b>	Project Manager Project Design Engineer
<b>Year Completed</b>	2020
<b>Construction Value</b>	\$234,300



## INTERNATIONAL BOULEVARD AT SAN ISIDRO PARKWAY ROUNDABOUT INTERSECTION



Project engineers responsible for design / project management of converting an existing major collector T intersection into a single lane roundabout with bypass lane to eliminate traffic signal option and improve traffic circulation through two major collectors. Project was designed to maintain continuous traffic operation during construction. Project involved public outreach to educate citizens on roundabout benefits and is the first single lane major roundabout in Laredo.

*The biggest challenge was keeping the intersection operational while constructing the roundabout. Crane developed multiple traffic circulation plans and worked closely with City Traffic Department to implement a plan that resulted in continuous flow of traffic and provided the City with multiple traffic control options. Crane engineers develop detailed traffic control plans for all public work to protect the safety, health, and welfare of the public.*

<b>Client</b>	City of Laredo	
<b>Representative</b>	Robert Peña, EIT Engineering Superintendent	(956) 795-2550 rpena@ci.laredo.tx.us
<b>Crane Assignments</b>	Project Manager Project Design Engineer	Edward D. Garza, P.E., CFM Alfredo Martinez, P.E., CFM

<b>Construction Estimate</b>	\$258,032
<b>Construction Value</b>	\$275,000
<b>Original Design Contract Schedule</b>	October 2016 – March 2017
<b>Final Design Completion</b>	February 2017



## NORTH MERIDA DRIVE EXTENSION AND STORM WATER PROJECT

Project involved the construction of an 1,800 foot concrete section of roadway over a 100 year flood plain consisting of a 41' wide local collector. Developed PS&E for roadway, 12" water main, utility coordination, sidewalks, erosion control measures, keystone block retaining walls, storm improvements consisting of conventional storm systems and creek crossing, Alignment required crossing 100 Year Floodplain. Designed roadway improvements to satisfy City of Laredo and FEMA requirements. Modeled the conventional storm systems by utilizing TxDOT hydrologic and hydraulic analysis software and utilized HEC-RAS for modeling the creek crossing consisting of a 100 foot steel truss bridge and two (2) 24' x 6.5' pre-cast arch culverts.



*The most challenging issue was the existence of an underground landfill and seasonal high water table. The extents of the landfill was unknown so Crane developed an overexcavation plan that included removal of debris and disposal at City Landfill and replacement with flowable fill to allow quick turnaround and improve stability of the subgrade. To address the water table, a dewatering plan for trenches and French drains under major drainage crossings was developed to allow construction to continue during high water table conditions. Project designed with contingency allowances due to poor soil conditions. Although 3 change orders were part of project, the original project budget was not exceeded.*

### Engineering Services Provided:

- ◆ Hydrologic & Hydraulic Analysis (H&H)
- ◆ HEC-RAS modeling of 100 year flood for existing condition and proposed road crossing
- ◆ Design of street extension including all drainage improvements
- ◆ Design of waterline extension
- ◆ Project management
- ◆ Bid letting
- ◆ USACE permitting
- ◆ Construction inspection
- ◆ Surveying



**Client** City of Laredo  
**Representative** Victor J. Linares, P. E.  
Civil Engineer II  
**Crane Assignments** Project Manager  
Project Design Engineer

(956) 791-7341  
vlinares@ci.laredo.tx.us  
Edward D. Garza, P.E., CFM  
Alfredo Martinez, P.E., CFM

**Construction Estimate** \$2,500,000  
**Construction Value** \$2,450,000  
**Original Design Contract Schedule** May 2009 – January 2010  
**Final Design Completion** January 2010





## HIGHWAY 359 TRANSPORTATION & MAINTENANCE FACILITY

This project developed a bus transportation facility in order to improve the transportation efficiency within the United Independent School District. The project required development of a master plan that addressed the districts overall needs for the entire 56 acres that is owned by the district in the vicinity including potable water, wastewater collection, storm water management, and roadway access. Additionally, this project required the platting of 26 acres of property and the design and construction of public and private improvements. Public improvements included construction of 1,800 feet of major collector roadway with related underground drainage systems, retaining walls, sidewalks, 12" water main, wastewater lift station, 8" gravity sewer main, earthen channel, and detention pond. Private improvements include construction of a pre-engineered building, parking lots, drainage improvements, fueling station with tanks, and site lighting. A Traffic Engineering Study was also conducted to secure approval from the Texas Department of Transportation in order to justify the installation of a traffic signal on a state highway.

*The biggest challenge was constructing this project in 12 months. Crane led a team of consultants and coordinated this project with multiple City departments, private utility companies, and school officials. Crane developed an action item agenda that allowed for daily communication and allow decision makers and inspectors to stay informed on construction activity. Project was open for operation in time for the first day of school.*



<b>Client</b>	United Independent School District	
<b>Representative</b>	Enrique Rangel, P.E. Assistant Superintendent for Facilities and Construction	(956) 473-7959 erangel@uisd.net
<b>Crane Assignments</b>	Project Manager Project Design Engineer	Edward D. Garza, P.E., CFM Alfredo Martinez, P.E., CFM
<b>Construction Estimate</b>	\$10,000,000	
<b>Construction Value</b>	\$9,500,000	
<b>Original Design Contract Schedule</b>	January 2011 – April 2013	
<b>Final Design Completion</b>	April 2013	



## PORT GRANDE INDUSTRIAL PARK

Master plan of 2,000 acre industrial park and design of Phases 1 & 2 totaling 150 acres of industrial park. Design / project management of 3,800 LF of 70' & 90' ROW - 4 lane industrial collectors according to AASHTO design standards for heavy truck loads (3M ESALs). Worked with multiple private utility companies to coordinate underground installations and plan for future growth. Project included drainage, utility infrastructure, striping, and signage. Streets were designed for both concrete and asphalt to provide owner with options for construction.



*The most challenging issue was developing master plans for the 2,000 acre site for streets, water, sewer, and drainage. Since this tract was a former tire test track, the City did not include this tract in their overall infrastructure master plans. Crane worked closely with the City to properly integrate these 2,000 acres into their overall infrastructure network and develop a partnership between the City and the Developer to prepare this area for proper growth. Crane utilizes the approach of connecting landowners together to address infrastructure needs regionally to allow the City to provide a superior level of service to the customers that are created from our projects.*

### Engineering Services Provided:

- ◆ Hydrologic & Hydraulic Analysis (H&H)
- ◆ Lidar Aerial survey
- ◆ Master planning of 2,000 acre tract including water, wastewater, storm water
- ◆ Platting of 150 acres into 2 phases
- ◆ Design of water distribution and wastewater collection
- ◆ Design of 3,800 LF of 4 lane industrial collectors
- ◆ Design of conventional drainage and open channels for storm water management
- ◆ Surveying including topo, construction staking, and utility as built



**Client** Majestic Realty  
**Representative** Thomas Simmons  
Vice President  
**Crane Assignments** Project Manager  
Project Design Engineer

(562) 948-4347  
tsimmons@majesticrealty.com  
Edward D. Garza, P.E., CFM  
Alfredo Martinez, P.E., CFM

**Investment to Date** \$4,000,000  
**Original Design Contract Schedule** February 2016 – August 2017  
**Final Design Completion** August 2017



# CRANE ENGINEERING REFERENCES

## **CITY OF LAREDO ENGINEERING DEPARTMENT**

Mr. Ramon Chavez, P.E.  
City Engineer  
1110 Houston Street  
Laredo, Texas 78040  
(956) 791-7346  
Email: [rchavez@ci.laredo.tx.us](mailto:rchavez@ci.laredo.tx.us)

## **CITY OF LAREDO ENVIRONMENTAL DEPARTMENT**

Mr. John Porter, REM, CFM, CPM  
Environmental Director  
619 Reynolds Street  
Laredo, Texas 78040  
(956) 794-1650  
Email: [jporter@ci.laredo.tx.us](mailto:jporter@ci.laredo.tx.us)

## **MS. MARGIE ARCE**

President  
Webb County Drainage District  
c/o Stewart Title  
1016 Monaco Boulevard  
Laredo, Texas 78045  
(956) 791-5810  
Email: [maarce@stewart.com](mailto:maarce@stewart.com)

## **MR. JOE MALDONADO**

Vice President  
Sanchez Management Corp.  
10410 Medical Loop, Ste. 5B  
Laredo, Texas 78045  
(956) 722-8092  
Email: [jmaldonado@sanchezog.com](mailto:jmaldonado@sanchezog.com)

## **MS. BETTY FLORES**

City of Laredo Former Mayor  
322 Farrell Road  
Laredo, Texas 78045  
(956) 763-3802 - cell  
Email: [borderflowers@sbcglobal.net](mailto:borderflowers@sbcglobal.net)

## **CITY OF LAREDO CITY MANAGER'S OFFICE**

Mr. Riazul Mia, P.E., CFM  
Assistant City Manager  
1110 Houston Street  
Laredo, Texas 78040  
(956) 791-7302  
Email: [rmia@ci.laredo.tx.us](mailto:rmia@ci.laredo.tx.us)

## **CITY OF LAREDO UTILITIES DEPARTMENT**

Mr. Arturo Garcia, Jr., P.E.  
Utilities Director  
5816 Daugherty Avenue  
Laredo, Texas 78041  
(956) 721-2000  
Email: [agarcia10@ci.laredo.tx.us](mailto:agarcia10@ci.laredo.tx.us)

## **WC-CL REGIONAL MOBILITY AUTHORITY**

Mr. Antonio Rodriguez, P.E.  
GEC Deputy Program Manager  
9601 McAllister Freeway, Suite 1001  
San Antonio, Texas 78216  
(512) 800-0382  
Email: [anrodriguez@hntb.com](mailto:anrodriguez@hntb.com)

## **MR. THOMAS B. SIMMONS**

Vice President  
Majestic Realty Co.  
13191 Crossroads Parkway N  
City of Industry, California 91746  
(562) 948-4347  
Email: [tsimmmons@majesticrealtyco.com](mailto:tsimmmons@majesticrealtyco.com)

## **MR. JOHN VILLEGAS**

Santa Fe Webb, LLC  
P.O. Box 505  
Benavides, Texas 78341  
(361) 207-2244  
Email: [johnv@arrowdrillingcompany.com](mailto:johnv@arrowdrillingcompany.com)



## Relevant Experience & References

### Geotechnical Services

#### Project

WC-CL RMA Los Presidentes Arterial Road

Webb County Wormser Road Realignment

I-35 Commercial Development

Laredo International Airport Air Cargo Area

Laredo Town Center, Phase 2

Laredo International Airport Cargo Apron Phase 13

#### Client

WC-CL Regional Mobility Authority  
Antonio Rodriguez, P.E.  
(512) 800-0382

Webb County Engineering  
Luis Perez Garcia, P.E.  
(956) 523-4055

Levcor Inc  
Aldo Antu  
(281) 840-4875

RS&H Inc  
John Hippchen, P.E.  
(210) 301-4813

Kim Wise  
(214) 649-4472

RS&H Inc  
John Hippchen, P.E.  
(210) 301-4813

### Testing Services

#### Project

FMCSA - Laredo Colombia Bridge

Laredo International Airport Taxiway "G" Extension & General Aviation Apron Phase 9

Camino Nuevo Road

Laredo International Airport Taxiway E Widening & General Aviation Apron Phase 10 Reconstruction

San Lorenzo Creek Bridge Road

Laredo International Airport Cargo Apron Phase 11 & 12

#### Client

Brasfield & Gorrie LLC  
Robert Hammack  
(205) 714-1445

Reim Construction Inc.  
Miguel Ramos  
(956) 580-2675

QRO-MEX Construction  
Arturo Rubio  
(830) 598-2268

Reim Construction Inc.  
Miguel Ramos  
(956) 580-2675

Chesapeake Operating Inc  
Roger Edmison, P.E., PLS  
(405) 935-6167

RS&H Inc  
John Hippchen, P.E.  
(210) 301-4813



# SECTION 3

## ORGANIZATION RESUMES

# PROJECT TEAM ORGANIZATIONAL CHART



**WEBB COUNTY**

**PROJECT MANAGER  
PRINCIPAL ENGINEER**  
Edward D. Garza, P.E., CFM

**ADMINISTRATION**  
Annie R. Garza  
Kellianne Skelton

**GEOTECHNICAL &  
MATERIALS TESTING**  
Arturo Barrera, Jr., P.E., PMP  
Chuck A. Gregory, P.E.  
Mike Ghazawi, P.E.

**CIVIL ENGINEERING  
& DESIGN**  
Alfredo Martinez, P.E., CFM  
Abdullah Albrinji, EIT

**SURVEYING / CADD**  
James Vela  
I. Abel Martinez  
J. Mark Rubio  
Marco A. Rubio

**Team Member Key**  
Crane Engineering  
Terracon



**EDWARD D. GARZA, P.E., CFM**  
**PRINCIPAL ENGINEER / PROJECT MANAGER**



*Edward D. Garza, P.E., CFM, President, is a licensed Professional Engineer and Certified Floodplain Manager in Texas who has over 33 years experience in planning, designing, and managing infrastructure projects in South Texas. He has served as Project Engineer on multiple City, School, and County projects utilizing over \$200 million in public funds and improving the quality of life for our region. Mr. Garza also has 10 years experience in building design, construction, and property management. Mr. Garza has worked for Crane Engineering for 25 years.*

**EDUCATION:**

B.S. in Civil Engineering  
Texas A&M University, 1987  
Specialization:  
Public Works – Urban Planning

**REGISTRATION:**

Professional Engineer Texas  
No. 75853

**CERTIFICATION:**

Certified Floodplain Manager  
Texas No. 2006-10N

Texas Department of Transportation  
Employee Sequence 00016949  
Pre-Certified 12 Categories

**ASSOCIATIONS:**

Texas Floodplain Management  
Association  
  
American Society of Civil Engineers  
  
National Society of Professional  
Engineers  
  
Texas Society of Professional Engineers

**AWARDS / AFFILIATIONS:**

Texas Mathcounts Coordinator of the  
Year 2015  
  
Texas Engineering Foundation  
Distinguished Engineer of the  
Foundation, 2014  
  
Texas A&M International University  
Engineering Advisory Board  
  
Rotary International – Paul Harris  
Fellow

**TXDOT PRE-CERTIFIED**

- 1.4.1 Land Planning/Engineering
- 3.1.1 Route Studies & Schematic Design – Minor Roadways
- 3.2.1 Route Studies & Schematic Design – Major Roadways
- 3.5.1 Major Bridge Layouts
- 4.1.1 Minor Roadway Design
- 4.2.1 Major Roadway Design
- 7.1.1 Traffic Engineering Studies
- 8.1.1 Signing, Pavement Marking and Channelization
- 9.1.1 Bicycle and Pedestrian Facility Development
- 10.1.1 Hydrologic Studies
- 10.2.1 Basic Hydraulic Design
- 11.1.1 Roadway Construction Management and Inspection

**WEBB COUNTY DRAINAGE DISTRICT**

District Engineer 2009 – Present

**UNITED INDEPENDENT SCHOOL DISTRICT**

District Civil Engineer 2009 – 2013

**CITY OF LAREDO TECHNICAL COMMITTEES**

One Stop Shop Platting Committee  
Specification Manual Standardization  
Construction Details Standardization  
GreenSpace Committee  
Access Management Committee  
Hydrology Committee  
Impact Fee Committee

**CITY OF ENCINAL**

City Engineer Consultant 2003 – 2007

**TEXAS SOCIETY OF PROFESSIONAL ENGINEERS**

State Education Committee Chairman 2012 – 2014  
Region 3 Vice-President 2010 – 2012  
P.E. Leadership Institute Graduate  
State Board Director – 20 years  
Mathcounts Coordinator Gateway Chapter – 24 years  
Gateway Chapter President 2016 – Present



**ALFREDO MARTINEZ, P.E., CFM**  
**PROJECT ENGINEER**



**SELECTED PROJECT EXPERIENCE**

**CITY OF LAREDO**

Eastern Chacon Creek Interceptor & Drainage Improvements  
Airport Cargo Apron Reconstruction Phase 11, 12, 13, & 14  
International Blvd. @ San Isidro Pkwy Roundabout  
Intersection  
Bustamante Street Waterline Replacement  
Galveston Street Waterline Replacement  
Cielito Lindo, Lomas Del Sur, Backwoods Trail, & SH359  
Waterline Extensions  
CSJ-0922-33-135-City Street Connections (Culvert Crossing  
Upgrade)

**WCCL REGIONAL MOBILITY AUTHORITY**

Los Presidentes Arterial Road from Loop 20 (Cuatro Vientos)  
to Concord Hills and 100 Year Crossing

**WEBB COUNTY DRAINAGE DISTRICT**

Lago Dam (TX #05979) Conversion to Regional Detention  
Pond  
Lago Del Valle to Independence Hills Chacon Creek Tributary  
2 100 Year Floodplain Update LOMR  
Lago Del Valle & EG Ranch Existing Condition Floodplain &  
Dam Break Analysis  
Cuatro Vientos East, Los Presidentes, & Gault H&H Study  
Lomas Del Sur and Cuatro Vientos Sur H&H Study  
WCDD Mapping Update

**UNITED INDEPENDENT SCHOOL DISTRICT**

Hwy 359 Transportation & Maintenance Facility

**PRIVATE**

Southern Development Unit II, III, & IV  
Southern Development Unit IV Proposed 100 Year Channel &  
Detention Pond CLOMR  
Werner Enterprises Cold Storage Facility Site Civil  
Improvements  
Port Grande Subdivision Phase 1 & Phase 2  
Port Grande Subdivision H&H Study & LOMR (1,992 acres)  
Port Grande Subdivision CLOMR  
Killam Industrial Park CLOMR  
Killam Industrial Park Existing Condition Floodplain Analysis  
Lago Del Valle Subdivision Phase 4, 5, 6, & 7  
EG Business Park Phase 2  
EG Ranch Road Extension (Major Collector)

**PLANNING**

Gruy Land Use Plan, 440 Acres – Hebronville, Tx  
Whispering Hills Subdivision, 32 Acre Multi-Use Development

**EDUCATION:**

B.S. in Civil Engineering  
Texas A&M University-Kingsville  
May 2011 *Cum Laude Graduate*

**REGISTRATION:**

Professional Engineer Texas  
No. 123303

**CERTIFICATION:**

Certified Floodplain Manager  
Texas No. 2576-14N  
TxDOT Pre-Certification Employee  
Sequence No. 000024888

**ASSOCIATIONS:**

Texas Floodplain Management  
Association  
American Society of Civil Engineers  
National Society of Professional  
Engineers  
Texas Society of Professional  
Engineers

*Mr. Martinez has 10 years experience in providing engineering services including preparation of feasibility analysis, hydrologic and hydraulic analysis, and PS&E for municipalities, school districts, and various private entities. He specializes in computer modeling of open and closed storm systems and water transmission and distribution systems. Alfredo is involved in all aspects of project development from preliminary analysis, planning, design, and construction management. His attention to detail results in a quality project that satisfies plans and specifications while meeting project budget and scheduling constraints.*



# CHUCK A. GREGORY, P.E.

## SENIOR PRINCIPAL / VICE PRESIDENT / REGIONAL MANAGER

### PROFESSIONAL EXPERIENCE

Mr. Gregory is Terracon's regional manager of San Antonio, Laredo and Pharr offices. His technical background includes over 32 years of construction materials engineering and testing, geotechnical engineering and forensics.

Mr. Gregory's expertise in construction materials engineering and testing includes concrete technology, testing and mix design; precast concrete technology and testing; non-destructive testing of concrete; post-tensioning; fireproofing; masonry; bolted/welded steel connections; floor flatness; and roofing technology.

Mr. Gregory's geotechnical engineering experience includes deep and shallow foundations, heave and settlement analysis, subsurface drain design, pavement condition surveys, pavement design/rehabilitation, and pavement structural analysis.

Mr. Gregory performs forensic investigations and provides expert witness testimony regarding paving failures, concrete problems/variability, evaluation of floor slab distress, monitoring deflection of elevated concrete slabs, assessment of fire damage to concrete and infrared surveys.

### PROJECT EXPERIENCE

- Northeast Campus Renovations (Formerly Albertson's) - Alamo Community College
- North Central Campus- Alamo Community College
- Northwest Vista College - Juniper Hall / Redbud Learning Center/ Cypress Campus Center / Mexican Persimmon Physical Plant- Alamo Community College
- San Antonio College Observatory Improvements- Alamo Community College
- Palo Alto College - Playing Fields Improvements/ Chiller Replacement /Veterinary –Technical Building/ - Alamo Community College



### Education

*Master of Science, Civil Engineering, 1983, Texas A & M University*

*Bachelor of Science, Civil Engineering, 1981, Texas A & M University*

### Registrations

*Professional Engineer: Texas, No. 63148*

### Affiliations

*American Council of Engineering Companies, Past President, San Antonio Chapter*

*American Society of Civil Engineers, San Antonio Branch, Past President*

*American Concrete Institute, San Antonio Chapter; Lifetime Service Award, 2013*

*Texas Society of Professional Engineers; (Bexar Chapter), Engineer of the Year, 2015*

*Geoprofessional Business Association; COMET Committee Chair, 2006-2012; Board Member since 2015*

### Work History

*Terracon Consultants, Inc., Senior Principal/Office Manager, 2004 - Present*

*Drash Consulting Engineers, Inc., a Terracon company, Vice President/Office Manager, 1995-2004*

*ATSER LLC, Manager, 1994–1995*

*Southwestern Laboratories, Manager, 1987-1994*

*McBride Ratcliff and Associates, Materials Engineer, 1985-1987*

*Texas Transportation Institute, Research Associate, 1983-1985*

# ARTURO R. BARRERA, JR., P.E., PMP

## OFFICE MANAGER

### PROFESSIONAL EXPERIENCE

Mr. Barrera is a bilingual Office Manager (Spanish, English) and has over 30 years of Engineering, Procurement and Construction (EPC) experience which include planning, estimating, scheduling, Safety and Quality Assurance.

"Hands-on" private and government EPC projects both domestic and international. Three-year assignment with the San Antonio USACE Area office on various US DOD projects. Track record of customer satisfaction demonstrated by 100% award fees and client's recognition for Outstanding Performance. Experience includes nuclear facility renovations; high explosive pressing facilities; high pressure fire systems; rocket launch facilities; US Embassy renovations and security upgrades; wireless and fiber optic telecommunication; telecommunication switch centers; 100 meter towers; aircraft technical support facilities; administrative; runways; emergency power generation plants; and military records / archive storage. Managed direct hire and subcontract work force. Direct experience with multi-project execution; Earned Value Management, Project Controls (planning, scheduling, project costs and reporting); permitting and leasing; and Risk Management.

Mr. Barrera had oversight of a Concrete Masonry Unit testing laboratory in Saudi Arabia; foundation soils studies required for 100 meter towers in Venezuela; asbestos abatement on four (4) old DOE facilities in Amarillo, TX; and air quality power generator operating permits in Sacramento, California.

Mr. Barrera's responsibility at Terracon Laredo Office will be to plan, organize, direct and coordinate all office activities (administrative and technical). This includes general profit/loss management practices, employee supervision, project management, client relations and development, new business development and contract administration.

### PROJECT EXPERIENCE

#### On-Call-Construction-Contract – US

Program Manager with direct responsibility for the execution and contract administration of the "On Call Construction Program" for the Air Force Space Systems division which provided for a full-service construction capability for unique, rapid response, turnkey projects of a high priority classified nature in various part of the US. Client awarded 99% award fees in two years for outstanding performance. **[\$48M]**

#### Director of Operation & Maintenance – Laughlin AFB, TX

Managed a 300-person work force responsible for the maintenance, repairs and construction necessary to operate a U.S. Air Force Base. Infrastructure included 603 housing units, 250 support facilities, a small hospital, water treatment plant, a sewage plant to include oxidation ponds, electrical power stations, streets, HVAC systems and all related equipment necessary to support said infrastructure. **[\$100M]**



### Education

*Master of Arts, Management,  
1987, Webster University at  
San Antonio, Texas*

*Bachelor of Science, Civil  
Engineering, 1968, Texas  
A&M University, College  
Station, TX*

### Registrations

*Licensed Professional Engineer:  
Texas, No. 63702*

*Project Management  
Professional (PMP):*

### Affiliations

*Texas Society of Professional  
Engineers, Gateway Chapter  
National Society of Professional  
Engineers*

### Work History

*Terracon Consultants, Inc.,  
Office Manager 2014 –  
Present*

*KBR, Inc., Sr Project  
Controls & Risk Manager  
2007 - 2012*

*Bechtel, Inc., Project  
Manager 1997 – 2007*

*Brown & Root, Inc., Project  
Manager 1988 – 1997*

*USAF Civil Engineering Officer  
1968 - 1988*

**GTE Wireless Construction - Venezuela**

Project Manager responsible for execution and contract administration of fast track, EPC turn-key services for GTE telecommunications which included cellular site acquisition, government of Venezuela permits, engineering (soils studies), construction and start-up. Infrastructure Design-Built 40 cellular sites and 3 major switch stations throughout Venezuela. **[\$2M]**

**High Explosive Pressing Facility – Amarillo, TX**

Engineering Manager for Pantex's 45,000 sf High Explosive Pressing Facility which included 5 to 10 foot thick concrete laced reinforced steel walls. Developed Project Design Agreements with the Department of Energy user, the National Laboratory, and the Defense Nuclear Facility Safety Board representatives to define project requirements; worked with engineering design team; and acted on behalf of the Contracting Officer on technical matters. **[\$65M]**

**DOD Construction Liaison Officer - Turkey:**

Civil Engineering officer with direct responsibility for the coordination of all DOD construction permits for numerous projects in Turkey. Established contacts with the U.S. Ambassador and his staff, as well as, the Turkish Military government and NATO representatives. Managed projects to support military operations in Turkey. Also had direct responsibility for identification and coordination of the DOD construction and major maintenance and repair requirements at the respective military headquarters in Germany and Italy. **[\$100M]**

**Sr. Manager, Project Controls – Houston, TX**

Provided oversight of about 140 projects within the Infrastructure & Minerals Americas Group to ensure project control processes and systems were being applied. Ensured Project Controls was meeting KBR project management policies and procedures, and specific contract requirements. **[\$10M]**

**Western Integrated Network (WIN) – Sacramento, California**

Engineering & Construction Coordinator responsible for the WIN Project Execution Plan and Market operating procedures to ensure Standard Work Processes at all locations. Market ISP Engineering and Construction coordinator for the Primary Processing Center. Also, worked with city and county to obtain building permits and the Air Quality Management District for the generator permits. Significant achievement includes client recognition for outstanding performance. **[\$2M]**

**AWARDS/HONORS**

- Numerous military awards for Meritorious and Outstanding Service
- Executed multiple projects in a two-year period valued at \$48 million and received 3-100% and 1-98% award fees from the client

# MIKE GHAZAWI, P.E.

## GEOTECHNICAL ENGINEERING TASK LEADER

### PROFESSIONAL EXPERIENCE

Mr. Ghazawi has 26 years of experience in geotechnical engineering, project and construction management, geotechnical design, inspection of deep and shallow foundations, exploration for commercial, industrial, residential, and governmental projects.

Mr. Ghazawi professional experience includes the evaluation of pile or pier foundations for lateral, compressive and tension loads; conducting roadway soil surveys for the design and improvement of new and existing roadways; performing geotechnical evaluations for residential and commercial structures to evaluate structural damage to the properties; performing geotechnical investigations to provide site preparation, pavement and foundation recommendations. Mike also has experience in construction materials testing and Phase I and II environmental assessments.

### PROJECT EXPERIENCE

#### **United Independent School District, Laredo, Texas**

Served as Project Manager for the Geotechnical Engineering services for numerous projects.

#### **Laredo Independent School District, Laredo, Texas**

Served as Project Manager for the Geotechnical Engineering services for numerous projects.

#### **North East Independent School District – San Antonio, Texas**

Served at Project Manager for the Geotechnical Engineering Services for the following Elementary School Additions; Jackson Keller, Gardner, Regency Place, Harmony Hills, Dellview, Oak Grove, Ridgeview, West Avenue , Encino Park; Churchill High School Additions – Gym, Tennis Courts and Athletic Fields.

#### **Northside Independent School District – San Antonio, Texas**

Served as Project Manager for the Geotechnical Engineering services for numerous projects.

#### **Harlandale & McCollum High School – Field House and Band Hall – San Antonio, Texas**

Served as Project Manager for geotechnical engineering services for the additions to the field house and band hall to the existing Harlandale High School Campus.



### Education

*Texas A & M University at Prairie View, B.S. in Civil Engineering, 1990*

*University of Texas at San Antonio, M.S. in Civil Engineering, 2001*

### Registrations

*Professional Engineer: Texas, No. 90139*

### Affiliations

*American Society of Civil Engineers*

*Association of Soil and Foundation Engineers*

### Work History

*Terracon Consultants, Inc., 2004-Present*

*Drash Consulting Engineers, Inc. a Terracon Company, San Antonio/Laredo, Texas 2001 – 2004*

*PSI – San Antonio, Texas, Department Manager, 1999 – 2001*

*Drash Consulting Engineers, Inc., San Antonio, Texas, Project Manager, 1994 – 1999*

*HTS, Inc., Houston, Texas, Project Engineer, 1990 - 1994*



# SECTION 4

## PROJECT APPROACH & DESIGN CONSIDERATIONS

# PROJECT APPROACH – MANAGEMENT PLAN

## Project Understanding

Webb County is pursuing professional engineering services for Mangana-Hein Road improvements project in District 1. This transportation project will generally require the following services for successful completion:

- ◆ Kickoff meeting between project team and Webb County to confirm project goals, deliverables, and budget
- ◆ Conduct engineering site analysis, topographic surveys, and coordinate with utility companies
- ◆ Confirm Right of Way dedication instruments
- ◆ Review City's and TxDOT's transportation master plans to identify the transportation vision for growth to implement into project and confirm budget
- ◆ Perform geotechnical studies
- ◆ Coordinate with County on possible alternatives to design
  - Examples include lime stabilization, use of geogrids, over excavation of subgrade, design of concrete versus asphalt road
- ◆ Preparation of construction plans, specifications and cost estimate
- ◆ Preparation of bid package which may include additive alternates to address value engineering ideas
- ◆ Conduct pre-bid meeting and issue addenda as required, address bidder's questions
- ◆ Review bids and provide letter of recommendation and bid tabulation
- ◆ Conduct pre-construction conference
- ◆ Review product submittals
- ◆ Provide construction staking as per contract
- ◆ Periodic inspection of construction and reports, evaluation of laboratory reports, shop drawings and field change requests
- ◆ Review Contractor requests for payment
- ◆ Conduct monthly construction status meetings
- ◆ Conduct pre-final and final inspection
- ◆ Preparation of project closeout documents including as builts, test reports, warranty, release of liens, etc.



## Design considerations that will need to be considered include:

- ◆ Design of road for oil field truck loads
- ◆ Subgrade PI and options to stabilize high PI soils
- ◆ Utilizing street slopes to maximize drainage runoff and ensure minimum 2 ft/sec velocity along drainage channels
- ◆ Lane width minimums (11' - 12') to accommodate large truck maneuvering
- ◆ Preparation of intersections for future traffic signals if signal not warranted
- ◆ Compare asphalt to concrete streets
- ◆ Coordinate with utility providers for utility upgrades and conduit needs
- ◆ Complete surveying utilizing GPS GLNNS system tied to state plane coordinate system and compatible to Webb County GIS system
- ◆ All CAD work in Civil 3D for plan development
- ◆ Coordinate with TxDOT for Outer Loop interconnections
- ◆ Proper striping and reflectorized pavement markers for proper illumination at night
- ◆ Development of proper ADA compliant crosswalks at intersections, including possible school zones
- ◆ Coordinate with geotechnical consultant for proper street design based on existing soil conditions
- ◆ Design storm water utilizing computer based design software for optimum results
- ◆ Maintain access to existing development for landowners, first responders, and trash collection



Crane Engineering (CE) is uniquely qualified to serve as your consultant for the Mangana-Hein Road project. Our firm is TxDOT pre certified and has recent experience in arterial and collector planning, design, and project management. In addition:

- ◆ We are a fully automated firm utilizing GPS GLNNS tied to national grid network including Webb County and multiple software platforms for design and analysis
- ◆ We have worked with Terracon for over 20 years on similar projects
- ◆ We are current on road costs for base, asphalt, and concrete

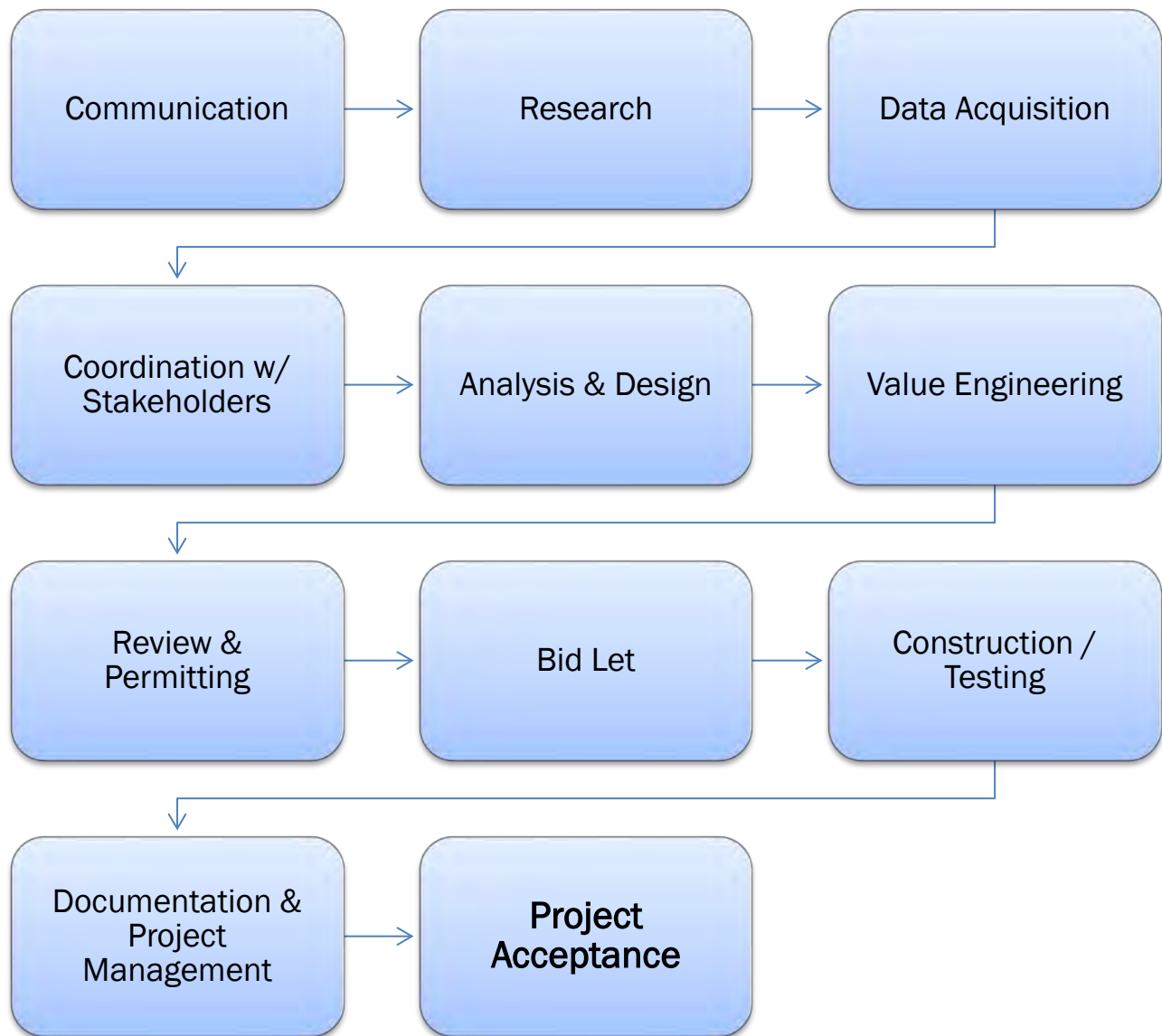
This commitment establishes a culture of excellence, quality, and innovative design. As Project Manager, Edward Garza, PE will develop effective work plans by:

- ◆ Developing overall project schedule with milestones and critical paths that incorporates the County's vision and project goals
- ◆ Utilize Webb County standard contract front end documents and City of Laredo standard specifications and detail drawings
- ◆ Assigning a Civil Engineer full time to project
- ◆ Conducting weekly status meetings with design team
- ◆ Maintaining communication with Webb County and integrating County's feedback into design plans

# CRANE ENGINEERING PROJECT MANAGEMENT PHILOSOPHY

Crane Engineering is a civil engineering, planning, and design firm that are devoted to functional, affordable, and sustainable civil engineering design solutions that integrate the desired land use into our living world. It is our sincere belief that this unique approach to civil engineering is essential to building beautiful, sustainable communities with minimum loss to environmental assets.

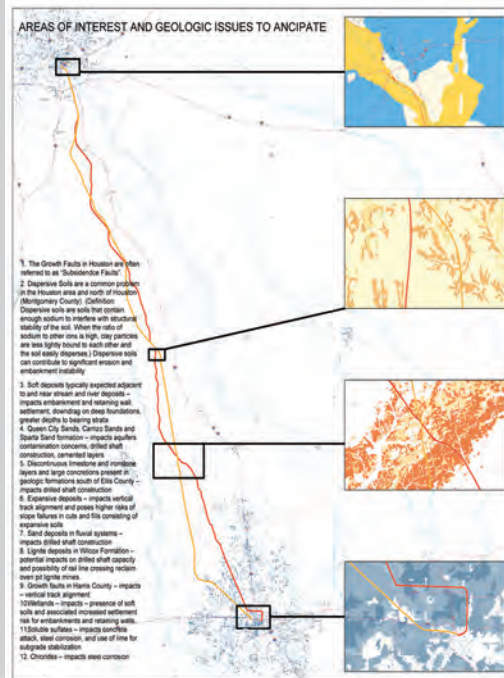
Crane utilizes proven experience and technology to deliver successful public funded infrastructure projects. Our ability to get the job done is based on multiple project process components including:





# GEOTECHNICAL ENGINEERING | 21st Century Reporting

## Terracon GeoReport®



As millennials' approach to communication becomes increasingly the norm in the modern workplace, the traditional means of reporting geotechnical data is becoming obsolete. As a society we have become accustomed to utilizing technology with access to large amounts of information at the click of a mouse.

Terracon has embraced this cultural shift and developed a faster, better way to render geotechnical information, opinions, and designs: *GeoReport*.

*GeoReport* replaces the old-fashioned paper-based, static, bound report used for more than a century. This new web-based approach facilitates real-time collaboration and encourages innovation.

*GeoReport* brings information and opinions to the design team, owner, and all stakeholders in real time. All parties can join in the communication. Decision-making occurs collaboratively and is faster, more informed, and more efficient.

*GeoReport*...bringing geotechnical communication into the 21st century.

Challenges and unexpected conditions will always exist on construction sites, and often relate to geotechnical conditions.

Therefore, it is essential you work with a geotechnical engineer to find effective solutions. The geotechnical engineer should be engaged in a project's preliminary planning, development, final design, and construction stages. Terracon works with clients to minimize issues and achieve a much more desirable end result during construction by collaboratively addressing geotechnical conditions during the project design.

The key to success is collaboration. *GeoReport* uses a dedicated collaboration portal to facilitate communication around the facts of the geotechnical investigation and bring all stakeholders into a documented conversation online.

Our *GeoReport* system provides:

- A collaboration portal for you and the entire design team to understand project options and to agree on a design and construction approach.
- A listing of your project team members - the individuals who will make your project successful.
- Our completion schedule of various tasks associated with your project.

Our geotechnical information is delivered in three stages, with opportunities for collaboration at each stage.

- **Project Planning:** Project information and planned approach delivered immediately after the proposal is accepted.
- **Site Characterization:** The results of our field exploration and laboratory testing along with interpretation of subsurface conditions in the form of a geotechnical model for the site.
- **Geotechnical Engineering:** Geotechnical recommendations prepared based upon collaboration with the project team.

*GeoReport* offers:

- Seamless delivery of data, opinions, and designs
- True, documented collaboration
- Fierce commitment to schedule

Terracon uses our Client Development Website to deliver *GeoReport* to all stakeholders. This allows a seamless transition into our construction materials engineering/testing services, as this data is also rendered via the same portal.

# MATERIALS CONSULTING | Laboratory Testing Services



## HYDRAULIC CONDUCTIVITY TESTING ASTM D5084

Laboratory testing of construction materials is the point where science intersects with quality, safety, and performance. At Terracon, our laboratory professionals combine materials expertise, sophisticated testing equipment, and a rigorous quality management system to deliver accurate, precise, timely results – and the confidence that comes with them.

### Experience and Expertise

Terracon owns, operates, and maintains more than 140 construction materials and geotechnical laboratories across the U.S. Our laboratories are equipped to perform a wide variety of tests while following strict internal guidelines to deliver the most thorough and reliable data possible.

In addition to routine material property testing, we also provide advanced shear strength, swell/consolidation, petrographic, steel, wood, geosynthetics, and rock mechanics test data to meet testing needs for even the most complex structures.



## TRIAXIAL SHEAR STRENGTH TESTING ASTM D4767

We continually apply new technologies to improve and expedite our services to solve your project challenges in a timely, reliable, and cost-effective manner.

Quality is the top priority of all our laboratory services. In addition to our internal Quality Management System (QMS), we maintain laboratory certification through third-party, industry-recognized accrediting agencies. Our quality commitment is rooted in our core value of safety. Our laboratory technicians are internally trained and externally certified as part of “doing things safe and right” for the benefit of our employees, clients, and communities.

Our national laboratory resources allow us to quickly process large volumes of test specimens, reducing the risk of delays to your critical project timelines. And, with a local presence, we have deep familiarity with specifications of numerous state and federal agencies.

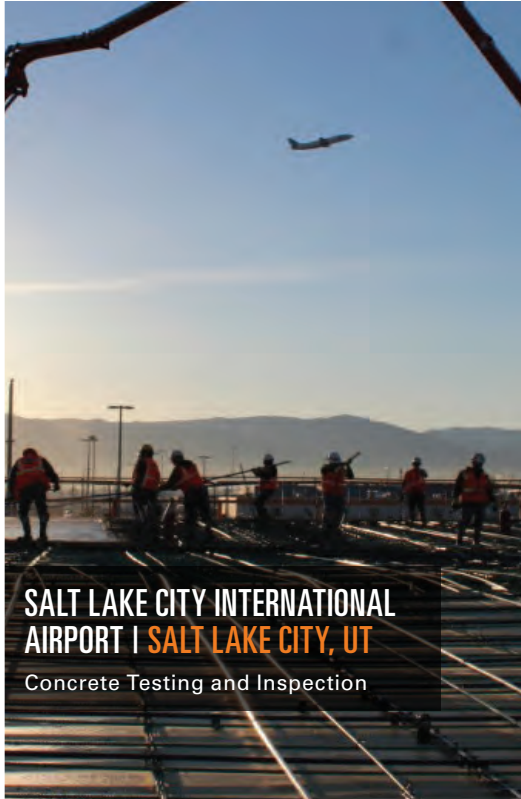
Terracon’s multidiscipline services include geotechnical engineering and testing, allowing us to characterize your site and use that knowledge to develop our approach for the materials testing that follows, ensuring that all materials used on your project are as solid as the ground they are built on.

We perform field and laboratory testing services including:

- Soils
- Concrete
- Masonry
- Bituminous Asphalt/Materials
- Aggregates
- Structural Steel
- Other Specialties

Our independent laboratory accreditations include: AASHTO, AMRL, CCRL, COE, CMEC, A2LA, and NVLAP. Our QMS has been reviewed, as appropriate, on projects requiring NQA-1 compliance.

# CONSTRUCTION SERVICES | Transportation

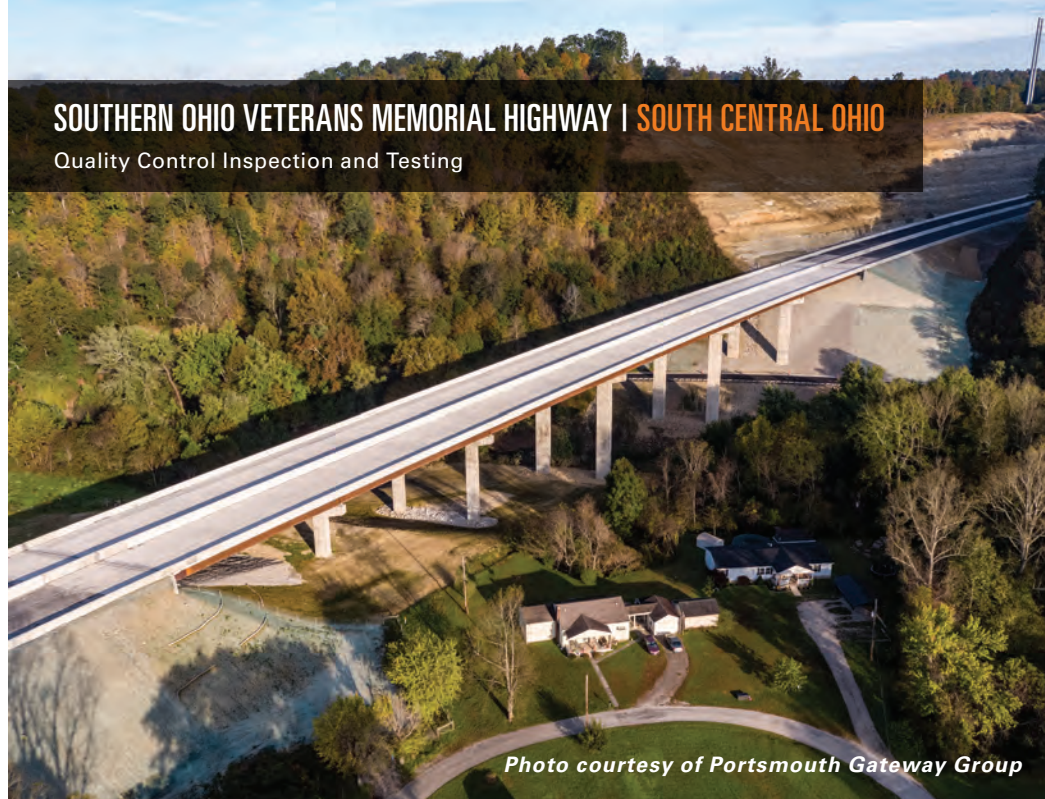


**SALT LAKE CITY INTERNATIONAL AIRPORT | SALT LAKE CITY, UT**  
Concrete Testing and Inspection

Delivering safe, sustainable infrastructure is essential to our country's economic growth and stability. Terracon has served transportation clients on thousands of projects nationwide for more than five decades. The essential role of materials quality and craftsmanship is critical to a project's success.

## Experience and Expertise

With a unique understanding of transportation infrastructure project needs, Terracon is your go-to consultant for quality construction engineering and inspection, construction administration, construction quality control and assurance, and materials testing services. We work closely with departments of transportation, municipalities, contractors, port authorities, major railway companies, and airport owners nationwide, providing these critical services on complex transportation projects. Our experience and flexible, practical, and responsive approach ensures a high level of quality to meet our clients' expectations.



**SOUTHERN OHIO VETERANS MEMORIAL HIGHWAY | SOUTH CENTRAL OHIO**  
Quality Control Inspection and Testing

*Photo courtesy of Portsmouth Gateway Group*

## Construction Engineering and Inspection (CEI)

Terracon CEI professionals have an in-depth knowledge of local, state, and federal agency requirements, procedures, and testing essential to success. We serve as our clients' eyes and ears on site, providing inspection services and proactively developing solutions in collaboration with contractors to deliver strong, efficient transportation systems.

## Quality Control (QC)

Effective QC is not limited to specification compliance using construction materials engineering and testing (CMET) procedures. It also includes partnering with the construction team to provide innovative, cost- and time-saving solutions when challenges arise. Terracon's experienced and certified staff will accurately monitor, test, and report results to not only meet the quality requirements, but exceed them.

Through proactive communications and aggressive results reporting, we will reduce your risk and expenses by minimizing the time between sampling and reporting.

## Quality Assurance

Terracon's proactive daily project site communication and dedicated scheduling and dispatch team ensure Terracon staff are in the right place at the right time. Equally important is the distribution of testing information. Terracon's proprietary software, iTraMS, reduces paper consumption, expedites workflow, and distributes and displays test results so discrepancies and non-conformances can be resolved quickly and easily, avoiding costly mistakes down the road.

## Owner's Representation

When assembling a team to represent the owner during an alternative delivery project, Terracon is the right choice. In addition to our ability to assemble a diverse team of materials testing, inspections, and specifications subject matter experts, we also provide expertise in construction means and methods, and utilize our proprietary innovative tools for construction inspection and data management.

# TRANSPORTATION SERVICES | Highways, Roads, and Bridges

## I-11 BOULDER CITY BYPASS DESIGN-BUILD PROJECT BOULDER CITY, NV



## INTERSTATE 75 BROWARD AND MIAMI-DADE COUNTIES, FL

Transportation and infrastructure clients are constantly challenged to upgrade deteriorating structures, improve performance, and ensure safety for travelers utilizing highway, road, and bridge systems nationwide.

### National Experience

With more than 50 years serving our clients, Terracon's environmental, geotechnical, and materials capabilities enable us to provide you with efficient, innovative solutions to your most challenging infrastructure projects. Our staff brings national expertise and depth of knowledge critical to the success of large-scale transportation projects. With more than 150 offices, we can mobilize quickly along major transportation corridors.

### Alternative Delivery

Terracon's extensive alternative delivery experience lets us know how to provide technical value to accelerate schedules and reduce costs.

**Three-Dimensional (3D) Subsurface Condition Modeling.** Combining our \$1 billion of subsurface characterization data with publicly available data, we can develop subsurface 3D modeling to provide a high degree of confidence in pre-award design and seamlessly integrate models into MicroStation and other standard design systems.

This unique approach provides:

- Low-cost preliminary evaluations
- Confident predictions
- Constructability evaluations
- Smart work plan development
- Efficient decision making
- More economical foundations

**Risk Identification and Probable Impact Analysis.** The subsurface presents a high liability and can critically impact the outcome of any highway, road, or bridge project. Terracon's ability to mitigate and identify probable impacts of potential risks is crucial. Providing this service early in the process, we help the contractor and designer prioritize risk and successfully manage projects, avoiding schedule delays and increased costs.

**Construction Quality Assurance/ Construction Quality Control (QA/QC).** Terracon has provided QA/QC for multiple project types nationwide, from design-build to public-private-partnership (P3) to design-bid-build. Terracon is flexible, practical, and responsive, bringing a high level of quality to your construction project. Our proactive daily site communication and dedicated scheduling and dispatch team ensures Terracon staff are in the right place at the right time.

Equally important is the distribution of testing information. Terracon's proprietary software, iTRAMS, reduces paper consumption, expedites workflow,

and distributes and displays test results so discrepancies and non-conformances can be resolved quickly and easily, avoiding costly mistakes down the road.

**Instrumentation.** Terracon can design, install, and manage state-of-the-art instrumentation programs. We use a variety of sensors and real-time web hosting of collected data for infrastructure projects; track implementation of remote, automated, web-based, real-time monitoring solutions to help clients manage risk; and deliver timely warning notifications and reports.

**Innovative, Cost-Effective Solutions Life-Cycle Costs.** Terracon's pavement specialists have expertise in all phases of design, construction, and maintenance. We utilize advanced pavement modeling to develop life-cycle costs for optimized pavement design. We build sections from the ground up and analyze diverse material types, rehabilitation strategies, and technologies to reduce cost and construction time.

**Predictive Performance Modeling.** For longer-term projects, predictive modeling information helps you analyze conditions, understand pavement distress, determine maintenance and rehabilitation requirements, and ultimately enjoy a better project outcome.



# SECTION 5

## REQUIRED FORMS

**THIS FORM MUST BE INCLUDED WITH RFQ PACKAGE; PLEASE CHECK OFF EACH ITEM INCLUDED WITH RFQ PACKAGE AND SIGN BELOW TO COMPLETE SUBMITTAL OF EACH REQUIRED ITEM.**

*RFQ # 2021-003*

*“Engineering Services for Mangana-Hein Road Extension Project”*

- Statement of Qualifications
  
- Proposers Information form
  
- Conflict of Interest form (Form CIQ)
  
- Certification regarding Debarment (Form H2048)
  
- Certification regarding Federal lobbying (Form 2049)
  
- Purchasing Code of Ethics Affidavit
  
- Proof of No Delinquent Tax Owed to Webb County



\_\_\_\_\_  
Signature of Authorized Official completing RFQ

March 12, 2021  
Date



**Proposer Information**

Name of Company: Crane Engineering

Address: 1310 Junction Drive, Suite B

City and State Laredo, Texas 78041

Phone: (956) 712-1996

Email Address: eddie-crane@sbcglobal.net

Signature of Person Authorized to Sign:

A handwritten signature in blue ink is written over a horizontal line. The signature is cursive and appears to read "Edward D. Garza".

Signature

Edward D. Garza, P.E.

Print Name

President

Title

Indicate status as to "Partnership", "Corporation", "Land Owner", etc.

Corporation

March 12, 2021

(Date)

***Note:***

*All submissions relative to these RFQ shall become the property of Webb County and are nonreturnable. If any further information is required, please call the Webb County Contract Administrator, Juan Guerrero, at (956)523-4125.*

# CONFLICT OF INTEREST QUESTIONNAIRE

For vendor doing business with local governmental entity

FORM CIQ

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. See Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

### OFFICE USE ONLY

Date Received

1 Name of vendor who has a business relationship with local governmental entity.

Crane Engineering Corp.

2  Check this box if you are filing an update to a previously filed questionnaire. (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 Name of local government officer about whom the information is being disclosed.

N/A

Name of Officer

4 Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

Yes

No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

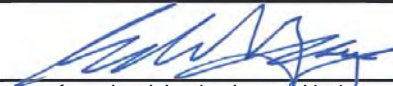
Yes

No

5 Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.

N/A

6  Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).

7   
Signature of vendor doing business with the governmental entity

March 12, 2021  
Date



**CERTIFICATION**  
REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY  
EXCLUSION FOR COVERED CONTRACTS

**PART A.**

Federal Executive Orders 12549 and 12689 require the Texas Department of Agriculture (TDA) to screen each covered potential contractor to determine whether each has a right to obtain a contract in accordance with federal regulations on debarment, suspension, ineligibility, and voluntary exclusion. Each covered contractor must also screen each of its covered subcontractors.

In this certification "contractor" refers to both contractor and subcontractor; "contract" refers to both contract and subcontract.

By signing and submitting this certification the potential contractor accepts the following terms:

1. The certification herein below is a material representation of fact upon which reliance was placed when this contract was entered into. If it is later determined that the potential contractor knowingly rendered an erroneous certification, in addition to other remedies available to the federal government, the Department of Health and Human Services, United States Department of Agriculture or other federal department or agency, or the TDA may pursue available remedies, including suspension and/or debarment.
2. The potential contractor will provide immediate written notice to the person to which this certification is submitted if at any time the potential contractor learns that the certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
3. The words "covered contract", "debarred", "suspended", "ineligible", "participant", "person", "principal", "proposal", and "voluntarily excluded", as used in this certification have meanings based upon materials in the Definitions and Coverage sections of federal rules implementing Executive Order 12549. Usage is as defined in the attachment.
4. The potential contractor agrees by submitting this certification that, should the proposed covered contract be entered into, it will not knowingly enter into any subcontract with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the Department of Health and Human Services, United States Department of Agriculture or other federal department or agency, and/or the TDA, as applicable.

Do you have or do you anticipate having subcontractors under this proposed contract?

Yes

No

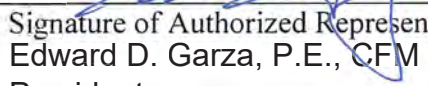
5. The potential contractor further agrees by submitting this certification that it will include this certification titled "Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion for Covered Contracts" without modification, in all covered subcontracts and in solicitations for all covered subcontracts.
6. A contractor may rely upon a certification of a potential subcontractor that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered contract, unless it knows that the certification is erroneous. A contractor must, at a minimum, obtain certifications from its covered subcontractors upon each subcontract's initiation and upon each renewal.
7. Nothing contained in all the foregoing will be construed to require establishment of a system of records in order to render in good faith the certification required by this certification document. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
8. Except for contracts authorized under paragraph 4 of these terms, if a contractor in a covered contract knowingly enters into a covered subcontract with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the federal government, Department of Health and Human Services, United States Department of Agriculture, or other federal department or agency, as applicable, and/or the TDA may pursue available remedies, including suspension and/or debarment.

**PART B. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION FOR COVERED CONTRACTS**

Indicate in the appropriate box which statement applies to the covered potential contractor:

- The potential contractor certifies, by submission of this certification, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this contract by any federal department or agency or by the State of Texas.
- The potential contractor is unable to certify to one or more of the terms in this certification. In this instance, the potential contractor must attach an explanation for each of the above terms to which he is unable to make certification. Attach the explanation(s) to this certification.

Name of Contractor	Vendor ID No. or Social Security No.	Program No.
Crane Engineering	74-2782031	

  
Signature of Authorized Representative  
Edward D. Garza, P.E., CFM  
President

March 12, 2021  
Date

Printed/Typed Name and Title of  
Authorized Representative

**CERTIFICATION REGARDING FEDERAL LOBBYING**  
**(Certification for Contracts, Grants, Loans, and Cooperative Agreements)**

**PART A. PREAMBLE**

Federal legislation, Section 319 of Public Law 101-121 generally prohibits entities from using federally appropriated funds to lobby the executive or legislative branches of the federal government. Section 319 specifically requires disclosure of certain lobbying activities. A federal government-wide rule, "New Restrictions on Lobbying", published in the Federal Register, February 26, 1990, requires certification and disclosure in specific instances.

**PART B. CERTIFICATION**

This certification applies only to the instant federal action for which the certification is being obtained and is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$100,000 for each such failure.

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No federally appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, or the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.
2. If any funds other than federally appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with these federally funded contract, subcontract, subgrant, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying", in accordance with its instructions. (If needed, contact the Texas Department of Agriculture to obtain a copy of Standard Form-LLL.)

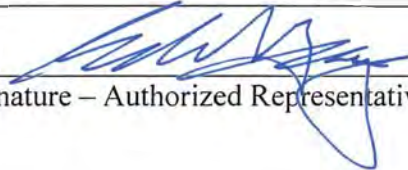
3. The undersigned shall require that the language of this certification be included in the award documents for all covered subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all covered subrecipients will certify and disclose accordingly.

Do you have or do you anticipate having covered subawards under this transaction?

- Yes
- No

Name of Contractor/Potential Contractor	Vendor ID No. or Social Security No.	Program No.
Terracon Consultants, Inc.	42-1249917	

Name of Authorized Representative	Title
Edward D. Garza, P.E.	President

  
\_\_\_\_\_  
Signature – Authorized Representative

March 12, 2021  
\_\_\_\_\_  
Date

PROOF OF NO DELINQUENT TAXES OWED TO WEBB COUNTY

Name Crane Engineering owes no delinquent property taxes to Webb County.

Crane Engineering owes no property taxes as a business in Webb County.  
(Business Name)

Edward D. Garza owes no property taxes as a resident of Webb County.  
(Business Owner)

Annie R. Garza  
Person who can attest to the above information

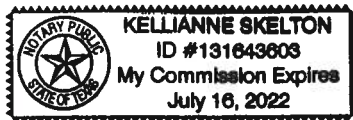
**\* SIGNED NOTORIZED DOCUMENT AND PROOF OF NO DELINQUENT TAXES TO WEBB COUNTY.**

The State of Texas  
County of Webb

Before me, a Notary Public, on this day personally appeared Edward D. Garza, know to me (or proved to me on the oath of Edward D. Garza to be the person whose name is subscribed to the forgoing instrument and acknowledged to me that he executed the same for the purpose and consideration therein expressed.

Given under my hand and seal of office this 12<sup>th</sup> day of March 2021.

Notary Public, State of Texas



*Kellianne Skelton*

(Print name of Notary Public here)

My commission expires the 16<sup>th</sup> day of July 2022

**WEBB COUNTY PURCHASING DEPT.  
QUALIFIED PARTICIPATING VENDOR CODE OF ETHICS  
AFFIDAVIT FORM**

STATE OF TEXAS \*

KNOW ALL MEN BY THESE PRESENTS:

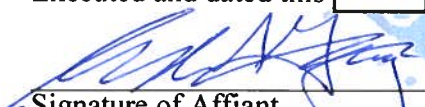
COUNTY OF WEBB \*

BEFORE ME the undersigned Notary Public, appeared Edward D. Garza, the herein-named "Affiant", who is a resident of Webb County, State of Texas and upon his/her respective oath, either individually and/or behalf of their respective company/entity, do hereby state that I have personal knowledge of the following facts, statements, matters, and/or other matters set forth herein are true and correct to the best of my knowledge.

*I personally, and/or in my respective authority/capacity on behalf of my company/entity do hereby confirm that I have reviewed and agree to fully comply with all the terms, duties, ethical policy obligations and/or conditions as required to be a qualified participating vendor with Webb County, Texas as set forth in the Webb County Purchasing Code of Ethics Policy posted at the following address: <http://www.webbcountytexas.gov/PurchasingAgent/PurchasingEthicsPolicy.pdf>*

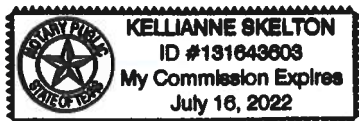
*I personally, and/or in my respective authority/capacity on behalf of my company/entity do hereby further acknowledge, agree and understand that as a participating vendor with Webb County, Texas on any active solicitation/proposal/qualification that I and/or my company/entity failure to comply with the Code of Ethics policy may result in my and/or my company/entity disqualification, debarment or make void my contract awarded to me, my company/entity by Webb County. I agree to communicate with the Purchasing Agent or his designees should I have questions or concerns regarding this policy to ensure full compliance by contacting the Webb County Purchasing Dept. via telephone at (956) 523-4125 or e-mail to the Webb County Purchasing Agent to [joel@webbcountytexas.gov](mailto:joel@webbcountytexas.gov).*

Executed and dated this 12th day of March, 2021.

  
Signature of Affiant

Edward D. Garza, P.E., CFM  
Crane Engineering Corporation  
Printed Name of Affiant/Company/Entity

SWORN to and subscribed before me, this 12th day March, 20 21



  
NOTARY PUBLIC, STATE OF TEXAS

**CONFLICT OF INTEREST QUESTIONNAIRE**  
For vendor doing business with local governmental entity

**FORM CIQ**

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A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

**OFFICE USE ONLY**

Date Received

**1** Name of vendor who has a business relationship with local governmental entity.

Terracon Consultants, Inc.

**2**  Check this box if you are filing an update to a previously filed questionnaire. (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

**3** Name of local government officer about whom the information is being disclosed.

N/A

Name of Officer

**4** Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

Yes  No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

Yes  No

**5** Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.

N/A

**6**  Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).

**7**   
Signature of vendor doing business with the governmental entity

March 12, 2021  
Date

**WEBB COUNTY PURCHASING DEPT.  
QUALIFIED PARTICIPATING VENDOR CODE OF ETHICS  
AFFIDAVIT FORM**

STATE OF TEXAS \*

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF WEBB \*

BEFORE ME the undersigned Notary Public, appeared Arturo R. Barrera, Jr., the herein-named "Affiant", who is a resident of Webb County, State of Texas and upon his/her respective oath, either individually and/or behalf of their respective company/entity, do hereby state that I have personal knowledge of the following facts, statements, matters, and/or other matters set forth herein are true and correct to the best of my knowledge.

*I personally, and/or in my respective authority/capacity on behalf of my company/entity do hereby confirm that I have reviewed and agree to fully comply with all the terms, duties, ethical policy obligations and/or conditions as required to be a qualified participating vendor with Webb County, Texas as set forth in the Webb County Purchasing Code of Ethics Policy posted at the following address: <http://www.webbcountytexas.gov/PurchasingAgent/PurchasingEthicsPolicy.pdf>*

*I personally, and/or in my respective authority/capacity on behalf of my company/entity do hereby further acknowledge, agree and understand that as a participating vendor with Webb County, Texas on any active solicitation/proposal/qualification that I and/or my company/entity failure to comply with the Code of Ethics policy may result in my and/or my company/entity disqualification, debarment or make void my contract awarded to me, my company/entity by Webb County. I agree to communicate with the Purchasing Agent or his designees should I have questions or concerns regarding this policy to ensure full compliance by contacting the Webb County Purchasing Dept. via telephone at (956) 523-4125 or e-mail to the Webb County Purchasing Agent to [joel@webbcountytexas.gov](mailto:joel@webbcountytexas.gov).*

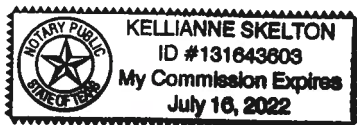
Executed and dated this 12th day of March, 2021.

Arturo R. Barrera, Jr.  
Signature of Affiant

Arturo R. Barrera, Jr., P.E., PMP  
Terracon Consultants, Inc.

Printed Name of Affiant/Company/Entity

SWORN to and subscribed before me, this 12th day March, 2021



Kellianne Skelton  
NOTARY PUBLIC, STATE OF TEXAS





**CRANE  
ENGINEERING**  
CIVIL • PUBLIC WORKS • HYDROLOGY

**Terracon**