



September 23, 2021

City of Schertz
10 Commercial Place, Building 2
Schertz, TX 78154

Attn: Ms. Jennifer R. Shortess, P.E.
Telephone # 210.619.1826
Email: jshortess@schertz.com

RE: Proposal
Construction Materials Testing and Inspection Services
Aviation Heights Water Line Improvements Phase 5,6 and 7 Project
Schertz, Texas, 78154
Proposal N° P90211400

Dear Ms. Shortess:

Terracon Consultants Inc. appreciates the opportunity to submit this proposal to provide construction materials observation and testing services for the proposed Aviation Heights Waterline Improvements Phase 5,6 and 7 projects. This proposal outlines our understanding of the scope of services to be provided by Terracon and includes unit fees for services we anticipate will be required for this project.

We understand that we have been chosen to provide these services for this publicly funded project. Therefore, by providing cost information we are not in violation of the Texas Professional Services Procurement Act.

We have reviewed the plans prepared by Ford Engineering Inc. dated January 04, 2021.

1. PROJECT INFORMATION

We understand the project is to include construction materials testing and services for water line improvements on Phase 5 – Aero Avenue, Brooks Avenue and Winburn Avenue, Phase 6 – Mitchell Avenue and Phase 7 – Aviation Avenue in Schertz, Texas.

2. SCOPE OF SERVICES

We anticipate providing the requested construction materials observation and testing services for this project on an “as requested” basis during construction. We will rely on the general contractor or his representative to notify us at least 24 hours in advance when the requested services are needed. The technicians assigned to the project will be qualified and equipped to perform the following field services:

Terracon Consultants, Inc. 6911 Blanco Road, San Antonio, Texas 78216
P [210] 641-2112 F [210] 641-2124 terracon.com Texas Professional Engineers No. 3272

- Concrete (*includes Reinforcing Steel Observation*)
- Asphalt Observation/Testing

These services are described in greater detail in Exhibit A “Proposed Scope of Services for Construction Materials Observation and Testing”. Our cost estimate and schedule of fees are included in Exhibit B.

Our proposed scope of services should be reviewed by the design professionals prior to the start of construction. If the design professionals determine that the proposed testing and observation scope is inappropriate, we would be happy to work with you in developing a scope and cost estimate to address the requested change in scope.

2.1 Scheduling

Terracon’s services will be performed on an as-requested basis with scheduling by the Client or the client’s designated representative. Terracon will not be responsible for scheduling our services and will not be responsible for tests or observations that are not performed due to failure to schedule our services on the project. Since our personnel will not be at the site on a resident basis, it will be imperative that we be advised when work is in progress. Services should be scheduled a minimum of 24 hours in advance. Scheduling personnel will be on an as-available basis which may require changes in personnel assigned to the project. For instances of short-notice requests, personnel may have to be utilized which have a higher rate than those normally assigned and this higher cost may be passed on to the client.

All requests for services should be submitted to the San Antonio, Texas office at the following phone number: (210) 714-2121. Services should not be scheduled through our field personnel.

We recommend the scope of services described in this proposal be provided to the person(s) responsible for scheduling our services so they are aware of the services that are proposed.

2.2 Data Collection and Reporting

All field technicians are responsible to provide a daily report identifying what work was found to be in compliance with the project specifications and drawings and report any non-conformances. The field technicians are required to immediately communicate any non-conformances to the site superintendent and our Project Manager. Effective and timely communication is essential for non-conforming items. Our Project Manager will be responsible for reviewing each technician’s reports, keeping non-conformance lists up to date, and communicating test results in a timely manner.

To ensure our Project Manager and Field Personnel meet the goals we have set for report turnaround, we have developed report tracking software to evaluate the status of any test result or report within our system. This allows us to achieve better communication, more consistency, and faster turnaround of reporting on the project. Data, observations, and other testing and

inspection information are easily entered into the system allowing for immediate availability for quality review and electronic distribution of reports.

Terracon will maintain non-conformance logs and lists for all testing types performed by us. The list will be maintained electronically in our database and can be updated and e-mailed or printed at any time.

2.2.1 CMELMS™ Management System

In order to provide our clients with real-time field and laboratory data management and reporting, Terracon developed and maintains an automated application that we call CMELMS. The acronym stands for ***Construction Materials Engineering Laboratory Management System*** and is utilized by construction materials engineering and testing operations in our offices.

CMELMS is a complete and comprehensive field and laboratory testing data and results management system. It automates the delivery of our testing and inspection information and can be used anywhere with an internet connection or through a wireless device. Data (test results and inspections) can be entered into the application right from the project site so that project managers and engineering staff have real-time access to the field data. Final Client Reports are produced in the same application, which allows us to achieve better communication, more consistency, and faster turnaround of reports on the project.

2.2.2 Report Turnaround Time

Our Project Managers and/or field technicians will report failing tests or non-conformance items immediately to the designated parties and will typically have digitally-signed reports distributed by the end of the next business day. As stated, using our CMELMS software and our field reporting and communication services and capabilities, the test results and inspection information is quickly entered into the system and a report produced. Non-deviation reports will typically be digitally signed and distributed within 3 to 5 business days of service. Laboratory test reports will typically be digitally signed and distributed within 2 business days of the completion of each test. Our reports can be sent digitally via email, posted to our Client Document Website (CDW), or posted to a designated ftp website.

2.3 Terracon's Incident and Injury-Free Culture

Employee safety is a core value of Terracon and we are committed to an Incident and Injury-Free (IIF) workplace. It is our personal and organizational commitment at all levels of the company to everyone going home safe to their family every day. All employees are expected to perform their job assignments with safety as a primary objective. Terracon dedicates the time, resources, and equipment necessary for an IIF environment and no employee will be required to work in unsafe conditions.

3. COMPENSATION

Our scope of services will be determined by your authorization for specific services as requested by your project superintendent or other representative. Charges for our services will be based on the quantities of services provided and the unit rates shown on the attached "Exhibit B." The cost of our services will be determined by the construction schedule and the quantity of services provided. Based on our review of the construction plans and specifications and our experience with similar construction projects, our fee estimate to provide the proposed scope of services for the Comal Avenue and Union Avenue maintenance projects is **\$62,975.00**. **Contractor's schedule was not provided at the time of this proposal. Our fee estimate is based on an assumed schedule.**

Many factors, including those out of our control, such as weather and the contractor's schedule, responses to requests for information, and how often we are called to the site, will dictate the final fee for our services. Furthermore, all costs associated with deviations, re-testing and re-inspections of failing items, on-site standby time, overtime, and short-notice premiums are not included in our estimated cost. If additional services are required, this fee may be exceeded. We recommend that a budget of \$63,000.00 be established for these services. **Please recognize that this is an estimate. Terracon will only invoice for the actual services and required laboratory services which are required/requested to fulfill the project's needs.**

The applicable field rate will be invoiced for all hours worked, including travel time, report and sample preparation. Technician time will be invoiced on a portal-to-portal basis from our office. Overtime rates of 1.5 times the regular hourly rates will be charged for time worked outside normal workday hours of 8:00 am to 5:00 pm and over eight (8) hours per day, Monday through Friday and all day Saturday. Hours worked on Sunday, or holidays will be invoiced at the rate of 2.0 times the regular hourly rates. A minimum three (3)-hour charge will be invoiced per visit to the project site, Project Management/Clerical services will be invoiced on hours worked, unless otherwise noted on the attached Table 1. Hours will be rounded up to the next whole number.

The construction schedule and sequencing will have a major impact on the testing/observation cost. We would be glad to visit with you at the appropriate time and revise the estimated cost presented in this proposal as necessary to meet the project needs.

4. AUTHORIZATION

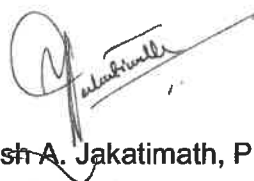
This proposal may be accepted by returning a Task Order in accordance with the “Master Service Agreement” between City of New Braunfels and Terracon Consultants, Inc dated July 5th, 2019. This proposal for services and accompanying Exhibits, Schedule of Services and Fees and Agreement for services shall constitute the terms and conditions for our services to be performed for this project. This proposal is valid if authorized within sixty days from our listed proposal date.

We appreciate the opportunity to provide this proposal and look forward to working with you and the rest of the project team.

Sincerely,

Terracon Consultants Inc.
(Firm Registration: TX F3272)

Yash Menaria, EIT
Senior Staff Engineer
Construction Materials Services



Yatish A. Jakatimath, P.E.
Department Manager

YM/YAJ
Attachments
Exhibits A and B
Distribution Sheet

EXHIBIT A
PROPOSED SCOPE OF SERVICES FOR CONSTRUCTION MATERIALS
OBSERVATION AND TESTING
AVIATION HEIGHTS WATER LINE IMPROVEMENTS PROJECT
TERRACON PROPOSAL NO. P90211400

The proposed scope of services provided by Terracon is described below. The purpose of these services is to observe various components of the construction and conduct specific tests to determine whether or not the materials and construction comply with the project requirements.

These services are designed to provide a level of quality assurance (QA) services for the client. Terracon requires a complete set of construction plans and specifications approved for construction and any addenda or revisions approved during the construction process that would affect the construction related to the requested QA services.

If additional services are needed to comply with the construction documents, Terracon should be contacted and requested to modify our proposed scope and estimated cost. The contractor has the responsibility to be familiar with the project requirements and to contact Terracon a minimum of 24 hrs. (one business day) prior to the time our services will be required. Terracon is not responsible for providing specified services if the client does not authorize Terracon to provide the services or if the contractor does not provide adequate notification for our scheduling purposes.

Terracon will provide construction observations and testing services requested by the client as described in our "Scope of Services" in general accordance with the normal standard of care. Our scope of services does not include any design, design review, construction safety, trench safety, construction supervision, or construction management services. Terracon personnel do not have the responsibility or authority to stop the contractor's work, or to accept or reject any construction materials or workmanship, even if they do not comply with the project requirements.

EXHIBIT A (continued)

1. **Concrete** – The Terracon scope of services includes sampling concrete and conducting slump and concrete compressive strength tests. Terracon personnel do not have the authority to accept or reject concrete even if it does not comply with the project specifications. The contractor has the responsibility to reject concrete that does not comply with the specifications or is unsuitable for use. Terracon will typically make 4-inch diameter, 8-inch high cylinders for compressive strength testing whenever the aggregate size allows. When larger aggregate is used in the concrete or when the client requires 6-inch diameter, 12-inch high cylinders, a surcharge will be applied for each cylinder made and tested. We will rely on the contractor or his concrete supplier to provide adequate facilities for initial (and field) curing of test cylinders as required by ASTM C 31 test procedures.

The Terracon scope of services also includes spot observations of the formwork dimensions and the reinforcing steel size, spacing, and configuration on a periodic basis prior to concrete placement.

The Terracon scope of services does not include the following: continuous observation of concrete placement for proper application techniques or periodic observation of the maintenance of specified curing temperatures.

2. **Asphalt** – This is not an IBC special inspection item. The Terracon scope of services includes observation of the asphalt paving operations, sampling asphalt and conducting laboratory tests. These services may be provided on a part-time or full-time basis as authorized by the client.
3. **Soils** – The Terracon scope of services includes sampling and testing of soils, periodic observation of earthwork operations, and moisture-density testing of subgrade and compacted fills. The Terracon scope of services does not include verification of the use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill on a continuous basis. The Terracon scope of services also excludes sampling, testing and evaluation of materials below shallow foundations to determine whether or not they are adequate to achieve the design bearing capacity. The adequacy of shallow footing subgrade soils will be based on recommendations in the geotechnical engineering report (or structural engineer's notes if a geotechnical engineering report is not provided) and visual observations of the foundation excavation bottom.

EXHIBIT B
COST ESTIMATE FOR
CONSTRUCTION MATERIALS TESTING SERVICES
AVIATION HEIGHTS PHASE 5,6 AND 7 Project
Terracon Proposal No. P90211400

Earthwork Observation/Testing				
Service	Quantity	Unit	Unit Rate	Estimate
Moisture/Density Curve (ASTM D698)	3	Each	\$ 300.00	\$ 900.00
Atterberg Limits (ASTM D4318)	3	Each	\$ 85.00	\$ 255.00
Sieve Analyses (ASTM C136 & C117)	3	Each	\$ 95.00	\$ 285.00
Nuclear Gauge Fee	12	Each	\$ 45.00	\$ 540.00
Soil Technician, Regular Rate	48	Hour	\$ 70.00	\$ 3,360.00
Vehicle Trip Charge	12	Per Trip	\$ 50.00	\$ 600.00
Subtotal, Earthwork				\$ 5,940.00

This estimate is based on the estimated construction schedule of 12 days to test fill material.

Concrete and Reinforcement Steel Observation/Testing				
Service	Quantity	Unit	Unit Rate	Estimate
Engineering Technician, Regular Hours	45	Hour	\$ 70.00	\$ 3,150.00
Concrete Cylinders, (ASTM C31 & C39)	75	Each	\$ 22.00	\$ 1,650.00
Vehicle Trip Charge	30	Per Trip	\$ 50.00	\$ 1,500.00
Cylinder Pick-Up	45	Hour	\$ 55.00	\$ 2,475.00
Subtotal, Concrete				\$ 8,775.00

This estimate is based on 45 trips for concrete observation and testing. This estimate also includes trips to the project site to pick up concrete test cylinders cast the previous day.



Asphalt Concrete Observation/Testing				
Service	Quantity	Unit	Unit Rate	Estimate
Asphalt Lab Series	1	Each	\$ 500.00	\$ 500.00
Asphalt Technician, Regular Rate	450	Hour	\$ 85.00	\$ 38,250.00
Asphalt Cores, each	45	Each	\$ 50.00	\$ 2,250.00
Nuclear Density Gauge	45	Per Day	\$ 50.00	\$ 2,250.00
Vehicle Trip Charge	45	Per Trip	\$ 50.00	\$ 2,250.00
Subtotal, Asphalt Concrete				\$ 45,500.00

This estimate is based on providing full-time laboratory testing and observation during paving with an assumed paving schedule of 45 days mentioned in project schedule. The costs for these services will be quoted upon request.

Project Management	18	Hour	\$ 135.00	\$ 2,430.00
Clerical	6	Hour	\$ 55.00	\$ 330.00
ESTIMATE TOTAL				\$ 62,975.00

MASTER SERVICES AGREEMENT

TASK ORDER

This **TASK ORDER** is issued under the **MASTER SERVICES AGREEMENT** dated 07/01/2020 between City of Schertz TX ("Client") and Terracon Consultants, Inc. ("Consultant") for Services to be provided by Consultant for Client on the Aviation Heights Waterline Improvements Phase 5,6 and 7 project ("Project"), as described in the Project Information section of the Consultant's Task Order Proposal dated 09/20/2021 ("Task Order Proposal") unless the Project is otherwise described below or in Exhibit A to this Task Order (which section or Exhibit are incorporated into this Task Order). This Task Order is incorporated into and part of the Master Services Agreement.

1. Project Information

Please see attached proposal P90211400

2. Scope of Services

The scope of Services to be provided under this Task Order are described in the Scope of Services section of the Consultant's Task Order Proposal, unless Services are otherwise described below or in Exhibit B to this Task Order.


Please see attached proposal P90211400

3. Compensation

Client shall pay compensation for the Services performed at the fees stated in the Task Order Proposal unless fees are otherwise stated below or in Exhibit C to this Task Order.

Please see attached proposal P90211400

All terms and conditions of the **Master Services Agreement** shall continue in full force and effect. This Task Order is accepted and Consultant is authorized to proceed.

Consultant: **Terracon Consultants, Inc.**
By:  Date: **9/20/2021**
Name/Title: **Yatish A. Jakatimath, P.E. / Department Manager**
Address: **6911 Blanco Rd
San Antonio, TX 78216-6164**
Phone: **(210) 641-2112** Fax: **(210) 558-7894**
Email: **Yatish.Jakatimath@terracon.com**

Client: **City of Schertz TX**
By: _____ Date: _____
Name/Title: **Jennifer Shortess P.E. / Engineer**
Address: **10 Commercial PI Bldg 2
Schertz, TX 78154-1634**
Phone: **(210) 382-9071** Fax: _____
Email: **jshortess@schertz.com**

DISTRIBUTION SHEET

Thank you for choosing Terracon Consultants, Inc. to provide these services. Please fill out below the pertinent information below so that we may expedite report distribution, project correspondence and invoice(s) to appropriate person (s). If you have any questions please do not hesitate to contact our office.

Project Name: _____

Client
Copies _____ Firm _____
Address _____
Attn: _____ P () _____ F () _____
Email: _____

Invoice (do not complete if same as client)
Copies _____ Firm _____
Address _____
Attn: _____ P () _____ F () _____
Email: _____

Report Distribution (Clients, Architects, Engineers, Contractors, etc...)
Copies _____ Firm _____
Address _____
Attn: _____ P () _____ F () _____
Email: _____

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If you need more room or would like to send other pertinent information please provide on the back of this sheet. Thank you for your time and concern to this matter.

