

STATE OF TEXAS §
 §
COUNTY OF FORT BEND §

AGREEMENT FOR PROFESSIONAL ENGINEERING SERVICES

THIS AGREEMENT is made and entered into by and between Fort Bend County, (hereinafter "County"), a body corporate and politic under the laws of the State of Texas, and Othon, Inc., (hereinafter "Contractor"), a company authorized to conduct business in the State of Texas.

WITNESSETH

WHEREAS, County desires that Contractor provide professional engineering services for extension of SH 99 Northbound Frontage Road from Westheimer Parkway to Cinco Ranch Boulevard under 2020 Mobility Bond Project No. 20303b (hereinafter "Services") pursuant to SOQ 14-025; and

WHEREAS, County has determined Contractor is the most highly qualified provider of the desired Services on the basis of demonstrated competence and qualifications, and County and Contractor have negotiated to reach a fair and reasonable amount of compensation for the provision of such Services, as required under Chapter 2254 of the Texas Government Code; and

WHEREAS, Contractor represents that it is qualified and desires to perform such services.

NOW, THEREFORE, in consideration of the mutual covenants and conditions set forth below, the parties agree as follows:

AGREEMENT

Section 1. Scope of Services

Contractor shall render the professional engineering services as described in Contractor's proposal dated May 14, 2021, attached hereto as Exhibit A, and incorporated herein for all purposes.

Section 2. Personnel

2.1 Contractor represents that it presently has, or is able to obtain, adequate qualified personnel in its employment for the timely performance of the Scope of Services required under this Agreement and that Contractor shall furnish and maintain, at its own expense, adequate and sufficient personnel, in the opinion of County, to perform the Scope of Services when and as required and without delays.

2.2 All employees of Contractor shall have such knowledge and experience as will enable them to perform the duties assigned to them. Any employee of Contractor who, in the

opinion of County, is incompetent or by his conduct becomes detrimental to the project shall, upon request of County, immediately be removed from association with the project.

Section 3. Compensation and Payment

3.1 Contractor's fees shall be calculated at the rates set forth in the attached Exhibit A. The Maximum Compensation for the performance of Services within the Scope of Services described in Exhibit A is one million seventy-eight thousand ninety-two dollars and 66/100 (\$1,078,092.66) as set forth in Exhibit A. In no case shall the amount paid by County under this Agreement exceed the Maximum Compensation without a written agreement executed by the parties.

3.2 All performance of the Scope of Services by Contractor including any changes in the Scope of Services and revision of work satisfactorily performed will be performed only when approved in advance and authorized by County.

3.3 County will pay Contractor based on the following procedures: Upon completion of the tasks identified in the Scope of Services, Contractor shall submit to County staff person designated by the County Engineer, one (1) electronic (pdf) copy of the invoice showing the amounts due for services performed in a form acceptable to County. County shall review such invoices and approve them within 30 calendar days with such modifications as are consistent with this Agreement and forward same to the Auditor for processing. County shall pay each such approved invoice within thirty (30) calendar days. County reserves the right to withhold payment pending verification of satisfactory work performed.

Section 4. Limit of Appropriation

4.1 Contractor clearly understands and agrees, such understanding and agreement being of the absolute essence of this Agreement, that County shall have available the total maximum sum of is one million seventy-eight thousand ninety-two dollars and 66/100 (\$1,078,092.66) specifically allocated to fully discharge any and all liabilities County may incur.

4.2 Contractor does further understand and agree, said understanding and agreement also being of the absolute essence of this Agreement, that the total maximum compensation that Contractor may become entitled to and the total maximum sum that County may become liable to pay to Contractor shall not under any conditions, circumstances, or interpretations thereof exceed is one million seventy-eight thousand ninety-two dollars and 66/100 (\$1,078,092.66).

Section 5. Time of Performance

Time for performance of the Scope of Services under this Agreement shall begin with receipt of the Notice to Proceed and end no later than December 31, 2025. Contractor shall complete the tasks described in the Scope of Services, within this time or within such additional time as may be extended by the County.

Section 6. Modifications and Waivers

6.1 The parties may not amend or waive this Agreement, except by a written agreement executed by both parties.

6.2 No failure or delay in exercising any right or remedy or requiring the satisfaction of any condition under this Agreement, and no course of dealing between the parties, operates as a waiver or estoppel of any right, remedy, or condition.

6.3 The rights and remedies of the parties set forth in this Agreement are not exclusive of, but are cumulative to, any rights or remedies now or subsequently existing at law, in equity, or by statute.

Section 7. Termination

7.1 Termination for Convenience – County may terminate this Agreement at any time upon forty-eight (48) hours written notice.

7.2 Termination for Default

7.2.1 County may terminate the whole or any part of this Agreement for cause in the following circumstances:

7.2.1.1 If Contractor fails to perform services within the time specified in the Scope of Services or any extension thereof granted by the County in writing;

7.2.1.2 If Contractor materially breaches any of the covenants or terms and conditions set forth in this Agreement or fails to perform any of the other provisions of this Agreement or so fails to make progress as to endanger performance of this Agreement in accordance with its terms, and in any of these circumstances does not cure such breach or failure to County's reasonable satisfaction within a period of ten (10) calendar days after receipt of notice from County specifying such breach or failure.

7.2.2 If, after termination, it is determined for any reason whatsoever that Contractor was not in default, or that the default was excusable, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the County in accordance with Section 7.1 above.

7.3 Upon termination of this Agreement, County shall compensate Contractor in accordance with Section 3, above, for those services which were provided under this Agreement prior to its termination and which have not been previously invoiced to County. Contractor's final invoice for said services will be presented to and paid by County in the same manner set forth in Section 3 above.

7.4 If County terminates this Agreement as provided in this Section, no fees of any type, other than fees due and payable at the Termination Date, shall thereafter be paid to Contractor.

Section 8. Ownership and Reuse of Documents

All documents, data, reports, research, graphic presentation materials, etc., developed by Contractor as a part of its work under this Agreement, shall become the property of County upon completion of this Agreement, or in the event of termination or cancellation thereof, at the time of payment under Section 3 for work performed. Contractor shall promptly furnish all such data and material to County on request.

Section 9. Inspection of Books and Records

Contractor will permit County, or any duly authorized agent of County, to inspect and examine the books and records of Contractor for the purpose of verifying the amount of work performed under the Scope of Services. County's right to inspect survives the termination of this Agreement for a period of four years.

Section 10. Insurance

10.1 Prior to commencement of the Services, Contractor shall furnish County with properly executed certificates of insurance which shall evidence all insurance required and provide that such insurance shall not be canceled, except on 30 days' prior written notice to County. Contractor shall provide certified copies of insurance endorsements and/or policies if requested by County. Contractor shall maintain such insurance coverage from the time Services commence until Services are completed and provide replacement certificates, policies and/or endorsements for any such insurance expiring prior to completion of Services. Contractor shall obtain such insurance written on an Occurrence form (or a Claims Made form for Professional Liability Insurance) from such companies having Best's rating of A/VII or better, licensed or approved to transact business in the State of Texas, and shall obtain such insurance of the following types and minimum limits:

10.1.1 Workers' Compensation insurance. Substitutes to genuine Workers' Compensation Insurance will not be allowed.

10.1.2 Employers' Liability insurance with limits of not less than \$1,000,000 per injury by accident, \$1,000,000 per injury by disease, and \$1,000,000 per bodily injury by disease.

10.1.3 Commercial general liability insurance with a limit of not less than \$1,000,000 each occurrence and \$2,000,000 in the annual aggregate. Policy shall cover liability for bodily injury, personal injury, and property damage and products/completed operations arising out of the business operations of the policyholder.

10.1.4 Business Automobile Liability insurance with a combined Bodily Injury/Property Damage limit of not less than \$1,000,000 each accident. The policy shall cover liability arising from the operation of licensed vehicles by policyholder.

10.1.5 Professional Liability insurance may be made on a Claims Made form with limits not less than \$1,000,000.

10.2 County and the members of Commissioners Court shall be named as additional insured to all required coverage except for Workers' Compensation and Professional Liability. All Liability policies including Workers' Compensation written on behalf of Contractor shall contain a waiver of subrogation in favor of County and members of Commissioners Court.

10.3 If required coverage is written on a claims-made basis, Contractor warrants that any retroactive date applicable to coverage under the policy precedes the effective date of the contract; and that continuous coverage will be maintained or an extended discovery period will be exercised for a period of 2 years beginning from the time that work under the Agreement is completed.

Section 11. Indemnity

CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS COUNTY AGAINST LOSSES, LIABILITIES, CLAIMS, AND CAUSES OF ACTION, INCLUDING THE REIMBURSEMENT OF COUNTY'S REASONABLE ATTORNEYS FEES IN PROPORTION TO CONTRACTOR'S LIABILITY, ARISING FROM ACTIVITIES OF CONTRACTOR, ITS AGENTS, SERVANTS OR EMPLOYEES, PERFORMED UNDER THIS AGREEMENT THAT RESULT FROM THE NEGLIGENT ACT, INTENTIONAL TORT, ERROR, OR OMISSION OF CONTRACTOR OR ANY OF CONTRACTOR'S AGENTS, SERVANTS OR EMPLOYEES.

Section 12. Confidential and Proprietary Information

12.1 Contractor acknowledges that it and its employees or agents may, in the course of performing their responsibilities under this Agreement, be exposed to or acquire information that is confidential to County. Any and all information of any form obtained by Contractor or its employees or agents from County in the performance of this Agreement shall be deemed to be confidential information of County ("Confidential Information"). Any reports or other documents or items (including software) that result from the use of the Confidential Information by Contractor shall be treated with respect to confidentiality in the same manner as the Confidential Information. Confidential Information shall be deemed not to include information that (a) is or becomes (other than by disclosure by Contractor) publicly known or is contained in a publicly available document; (b) is rightfully in Contractor's possession without the obligation of nondisclosure prior to the time of its disclosure under this Agreement; or (c) is independently developed by employees or agents of Contractor who can be shown to have had no access to the Confidential Information.

12.2 Contractor agrees to hold Confidential Information in strict confidence, using at least the same degree of care that Contractor uses in maintaining the confidentiality of its own confidential information, and not to copy, reproduce, sell, assign, license, market, transfer or otherwise dispose of, give, or disclose Confidential Information to third parties or use Confidential Information for any purposes whatsoever other than the provision of Services to County hereunder, and to advise each of its employees and agents of their obligations to keep Confidential Information confidential. Contractor shall use its best efforts to assist County in identifying and preventing any unauthorized use or disclosure of any Confidential Information. Without limitation of the foregoing, Contractor shall advise County

immediately in the event Contractor learns or has reason to believe that any person who has had access to Confidential Information has violated or intends to violate the terms of this Agreement and Contractor will at its expense cooperate with County in seeking injunctive or other equitable relief in the name of County or Contractor against any such person. Contractor agrees that, except as directed by County, Contractor will not at any time during or after the term of this Agreement disclose, directly or indirectly, any Confidential Information to any person, and that upon termination of this Agreement or at County's request, Contractor will promptly turn over to County all documents, papers, and other matter in Contractor's possession which embody Confidential Information.

12.3 Contractor acknowledges that a breach of this Section, including disclosure of any Confidential Information, or disclosure of other information that, at law or in equity, ought to remain confidential, will give rise to irreparable injury to County that is inadequately compensable in damages. Accordingly, County may seek and obtain injunctive relief against the breach or threatened breach of the foregoing undertakings, in addition to any other legal remedies that may be available. Contractor acknowledges and agrees that the covenants contained herein are necessary for the protection of the legitimate business interest of County and are reasonable in scope and content.

12.4 Contractor in providing all services hereunder agrees to abide by the provisions of any applicable Federal or State Data Privacy Act.

12.5 Contractor expressly acknowledges that County is subject to the Texas Public Information Act, TEX. GOV'T CODE ANN. §§ 552.001 *et seq.*, as amended, and notwithstanding any provision in the Agreement to the contrary, County will make any information related to the Agreement, or otherwise, available to third parties in accordance with the Texas Public Information Act. Any proprietary or confidential information marked as such provided to County by Consultant shall not be disclosed to any third party, except as directed by the Texas Attorney General in response to a request for such under the Texas Public Information Act, which provides for notice to the owner of such marked information and the opportunity for the owner of such information to notify the Attorney General of the reasons why such information should not be disclosed.

Section 13. Independent Contractor

13.1 In the performance of work or services hereunder, Contractor shall be deemed an independent contractor, and any of its agents, employees, officers, or volunteers performing work required hereunder shall be deemed solely as employees of contractor or, where permitted, of its subcontractors.

13.2 Contractor and its agents, employees, officers, or volunteers shall not, by performing work pursuant to this Agreement, be deemed to be employees, agents, or servants of County and shall not be entitled to any of the privileges or benefits of County employment.

Section 14. Notices

14.1 Each party giving any notice or making any request, demand, or other communication (each, a "Notice") pursuant to this Agreement shall do so in writing and shall use one of the following methods of delivery, each of which, for purposes of this Agreement, is a writing: personal delivery, registered or certified mail (in each case, return receipt requested and postage prepaid), or nationally recognized overnight courier (with all fees prepaid).

14.2 Each party giving a Notice shall address the Notice to the receiving party at the address listed below or to another address designated by a party in a Notice pursuant to this Section:

County:	Fort Bend County Engineering Department Attn: County Engineer 301 Jackson Street Richmond, Texas 77469
With a copy to:	Fort Bend County Attn: County Judge 401 Jackson Street, 1 st Floor Richmond, Texas 77469
Contractor:	Othon, Inc. 575 North Dairy Ashford, Suite 650 Houston, Texas 77079

14.3 A Notice is effective only if the party giving or making the Notice has complied with subsections 14.1 and 14.2 and if the addressee has received the Notice. A Notice is deemed received as follows:

14.3.1 If the Notice is delivered in person, or sent by registered or certified mail or a nationally recognized overnight courier, upon receipt as indicated by the date on the signed receipt.

14.3.2 If the addressee rejects or otherwise refuses to accept the Notice, or if the Notice cannot be delivered because of a change in address for which no Notice was given, then upon the rejection, refusal, or inability to deliver.

Section 15. Compliance with Laws

Contractor shall comply with all federal, state, and local laws, statutes, ordinances, rules and regulations, and the orders and decrees of any courts or administrative bodies or tribunals in any matter affecting the performance of this Agreement, including, without limitation, Worker's Compensation laws, minimum and maximum salary and wage statutes and regulations, licensing laws and regulations. When required by County, Contractor shall furnish County with certification of compliance with said laws, statutes, ordinances, rules, regulations, orders, and decrees above specified.

Section 16. Standard of Care

Contractor represents shall perform the Services to be provided under this Agreement with the professional skill and care ordinarily provided by competent engineers practicing under the same or similar circumstances and professional license. Further, Contractor shall perform the Services as expeditiously as is prudent considering the ordinary professional skill and care of a competent engineer.

Section 17. Assignment

17.1 Neither party may assign any of its rights under this Agreement, except with the prior written consent of the other party. That party shall not unreasonably withhold its consent. All assignments of rights are prohibited under this subsection, whether they are voluntarily or involuntarily, by merger, consolidation, dissolution, operation of law, or any other manner.

17.2 Neither party may delegate any performance under this Agreement.

17.3 Any purported assignment of rights or delegation of performance in violation of this Section is void.

Section 18. Applicable Law

The laws of the State of Texas govern all disputes arising out of or relating to this Agreement. The parties hereto acknowledge that venue is proper in Fort Bend County, Texas, for all legal actions or proceedings arising out of or relating to this Agreement and waive the right to sue or be sued elsewhere. Nothing in the Agreement shall be construed to waive the County's sovereign immunity.

Section 19. Successors and Assigns

County and Contractor bind themselves and their successors, executors, administrators and assigns to the other party of this Agreement and to the successors, executors, administrators and assigns of the other party, in respect to all covenants of this Agreement.

Section 20. Third Party Beneficiaries

This Agreement does not confer any enforceable rights or remedies upon any person other than the parties.

Section 21. Severability

If any provision of this Agreement is determined to be invalid, illegal, or unenforceable, the remaining provisions remain in full force, if the essential terms and conditions of this Agreement for each party remain valid, binding, and enforceable.

Section 22. Publicity

Contact with citizens of Fort Bend County, media outlets, or governmental agencies shall be the sole responsibility of County. Under no circumstances whatsoever, shall Contractor release any material or information developed or received in the performance of the Services hereunder without the express written permission of County, except where required to do so by law.

Section 23. Captions

The section captions used in this Agreement are for convenience of reference only and do not affect the interpretation or construction of this Agreement.

Section 24. Conflict

In the event there is a conflict between this Agreement and the attached exhibits, this Agreement controls.

Section 25. Certain State Law Requirements for Contracts

25.1 Agreement to Not Boycott Israel Chapter 2271 Texas Government Code: By signature below, Contractor verifies that if Contractor employs ten (10) or more full-time employees and this Agreement has a value of \$100,000 or more, Contractor does not boycott Israel and will not boycott Israel during the term of this Agreement.

25.2 Texas Government Code Section 2251.152 Acknowledgment: By signature below, Contractor represents pursuant to Section 2252.152 of the Texas Government Code, that Contractor is not listed on the website of the Comptroller of the State of Texas concerning the listing of companies that are identified under Section 806.051, Section 807.051 or Section 2253.153.

Section 26. Human Trafficking

BY ACCEPTANCE OF AGREEMENT, CONTRACTOR ACKNOWLEDGES THAT THE COUNTY IS OPPOSED TO HUMAN TRAFFICKING AND THAT NO COUNTY FUNDS WILL BE USED IN SUPPORT OF SERVICES OR ACTIVITIES THAT VIOLATE HUMAN TRAFFICKING LAWS.

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IN WITNESS WHEREOF, the parties hereto have signed or have caused their respective names to be signed to multiple counterparts to be effective on the date signed by the last party hereto.

FORT BEND COUNTY

OTHON, INC

KP George, County Judge



Authorized Agent – Signature

Date

Charles A. Othon

Authorized Agent – Printed Name

ATTEST:

President & CEO
Title

Laura Richard, County Clerk

June 7, 2021

Date

APPROVED:

J. Stacy Slawinski, P.E., County Engineer

APPROVED AS TO LEGAL FORM:

Marcus D. Spencer, First Assistant County Attorney

AUDITOR'S CERTIFICATE

I hereby certify that funds are available in the amount of \$_____ to accomplish and pay the obligation of Fort Bend County under this contract.

Robert Ed Sturdivant, County Auditor

I:\Marcus\Agreements\Engineering\Road Construction\Grand Parkway (SH 99)\Northbound SH 99 Frontage Road\Agreement - Pro Eng Svcs.OI.docx.6/1/2021. 21-Eng-100843

EXHIBIT A

May 14, 2021

Mark C. Dessens, P.E.
Vice President
Schaumburg & Polk Inc.
11767 Katy Freeway Suite 900
Houston, TX 77079

Re: Project No. 20303b:
NB SH 99 Frontage Rd:
Westheimer Pkwy to Cinco Ranch Blvd.

Mark,

We are proposing to perform preliminary and final engineering services on the referenced project for \$1,078,092.66 based on the attached Services descriptions and Fee Schedule. In addition to the preclusions outlined in the attachments, these Services specifically do not include any Construction Phase Services or Support. I will call you to ensure your receipt and understanding of this proposal.

Sincerely,



Joel Schramm, PE
Director of Engineering

Attachments:

- Services to be provided by the Engineer
- Fee Schedule/Budget
- Location Map
- Subconsultant Proposals (CEHRA, SWCA & Geotest)

SERVICES TO BE PROVIDED BY THE ENGINEER

PRELIMINARY PHASE

The work to be performed by the Engineer shall consist of providing preliminary engineering services for development of a design schematic, environmental documents/studies in support of the schematic work, public involvement, drainage, surveying and mapping, subsurface utility engineering (SUE), PS&E and utility coordination. *Traffic studies/analyses shall not be included in the scope.*

A. Develop Base Maps

The base maps to be used for the analysis and proposed schematic layout shall be developed by the Engineer from existing construction and right of way (ROW) plans as available. The Engineer shall re-establish the existing centerline horizontal alignments for all roadways, identify existing ROW, property owners and the approximate location of major utilities based on a SUE in the preparation of base maps.

B. Schematic Alternatives

The Engineer shall identify and analyze schematic alternatives to minimize potential adverse impacts, major utility conflicts, structural impediments, or exceptions to the design criteria.

Schematic Design

A. ROW/Property Base Map

The Engineer shall obtain information on existing ROW, easements, and property information from as-built plans, ROW maps, and tax records. The Engineer shall prepare a base map depicting the information.

B. Typical Sections

The Engineer shall develop both existing and proposed typical sections that depict the number and type of lanes, shoulders, median width, curb offsets, cross slope, border width, clear zone widths, and ROW limits.

C. Environmental Constraints

The Engineer shall consider impacts to environmentally sensitive sites during the schematic design process. Environmentally sensitive sites include neighborhood communities and residential areas, wetlands, preserves, undeveloped areas, and significant trees.

D. Drainage

The Engineer shall use data from as-built plans and FEMA maps to locate drainage

out fall(s) and to determine existing storm sewer and culvert sizes, design flows, and water surface elevations for use in the design of roadway geometry. The Engineer shall conduct a Preliminary Drainage Study to determine and evaluate the adequacy of the ROW needed to accommodate the proposed roadway and drainage system. The drainage study shall identify the impacts to abutting properties and the 100-year floodplain due to proposed highway improvements, identify the water surface elevations for the 2, 5, 10, 25, 50 and 100 year storm events, identify and locate outfalls, drainage outfall descriptions, provide overall drainage area map, sub-drainage area map, storm water detention facilities, and provide a drainage study report identifying the results of the study. The drainage report, signed and sealed by a professional engineer, shall include applicable hydrologic and hydraulic models such as HEC-1 and HEC-2, HEC-RAS, HEC-HMS, XP-SWMM, and other applicable models.

Geometric Design Schematics

The Engineer shall develop geometric design schematics based on the conceptual schematics after the basic layout, lane arrangement, and ROW and easements requirements depicted on the conceptual schematics are approved.

Cross-Sections

The Engineer shall generate preliminary cross- sections every 50 or 100 feet and at culvert locations in conjunction with the Geometric Schematic. The Engineer shall determine earthwork volumes for use in the cost estimate and shall prepare 11"x17" or roll plots of the cross-sections.

Preliminary Construction Sequence

The Engineer shall prepare a Preliminary Construction Sequence Layout in conjunction with the Geometric Schematic depicting the phasing and traffic detours anticipated to construct the proposed design for 30%, 60% and 100% milestones.

Preliminary Cost Estimate

The Engineer shall prepare a preliminary cost estimate for the project, including the costs of construction, required ROW and associated improvements, and eligible utility adjustments. Current unit bid prices will be used in preparation of the estimate.

Public Involvement

- A. The Engineer shall assist in conducting a public meeting during the project development process. The Engineer shall prepare schematic exhibits, constraints maps, other necessary exhibits, and assist in the presentation.
- B. The Engineer shall schedule, participate in mail out, and pay for meeting notices, and facilitate a Meeting with Affected Property Owners (MAPO).
- C. The Engineer shall prepare the adjacent property owner list, mail out and pay

for notices for public meetings and hearing, draft letter to public officials, prepare, publish, and pay for notices to major newspaper, reserve public meeting, hire law enforcement for public meeting, provide audio and visual rental equipment, and assist with conducting public meeting. The Engineer shall attend pre-meetings in preparation for meeting.

- D. Compile public comments received and responses to comments during the MAPO and a public meeting. Prepare a documentation of MAPO and public meeting.

Environmental Documentation

Each environmental service provided by the Engineer shall have a deliverable. Deliverables shall summarize the methods used for the environmental services and shall summarize the results achieved. All deliverables shall meet regulatory requirements for legal sufficiency and shall adhere to the requirements for reports. Deliverables shall consist of technical reports of environmental services performed in addition to documentation for a Categorical Exclusion (CE) determination, including the preparation of a Request for Classification form to classify the project as an Open Ended (d) list CE. On the cover page of each technical report and for any memorandum corresponding to any CE determination it makes; the Engineer shall include a CE project record.

Technical Reports and Documentation

All technical reports and documentation prepared shall be included in a CE project record.

Public Involvement

The Engineer shall:

- A. Develop a plan for public involvement activities. The Public Involvement Plan (PIP) shall specify all activities to be performed and alternatives to be discussed during public involvement activities and address the cultural and human environmental potential impacts.
- B. Compile, maintain and update a mailing list of people, agencies and organizations interested in the Transportation Activity.
- C. Make all arrangements and pay for meetings with affected property owners (MAPOs), public meeting, including the site of the meetings, mailing and publishing notices, preparation of exhibits, provision for taping or transcription of proceedings, and any other arrangements.
- D. Submit all legal notices for review prior to publication.
- E. Arrange a meeting to review all exhibits and other materials to be used prior to public meetings or hearings.
- F. Obtain approval for all legal notices, exhibits, and other materials.

- G. Provide personnel to staff one public meeting including a translator and people to perform registration, make presentations, and answer questions.
- H. Develop and submit a public meeting documentation packet.
- I. Develop and send acknowledgement letters and response letters to commenters at the public meeting.
- J. Develop and maintain materials in support of interactive on-line public engagement.

Geotechnical

The Engineer shall perform soil borings design recommendations along storm drain alignment.

PS&E PHASE

ROADWAY DESIGN

Geometric Design

The Engineer shall Refine Schematic. The Engineer shall review the schematic confirm their understanding of the project and to verify completeness and accuracy of the information. The Engineer shall refine the horizontal and vertical alignment of the design schematic in English units for frontage roads. Minor modifications in the alignment must be considered to provide optimal design.

Roadway P&P Design

The Engineer shall provide roadway plan and profile drawings using CADD standards. The drawings must consist of a planimetric file of existing features and files of the proposed improvements. The roadway base map must contain line work that depicts existing surface features obtained from the schematic drawing. Existing major subsurface and surface utilities must be shown. Existing and proposed right-of-way lines must be shown. Plan and Profile must be shown on the same sheet for frontage roads.

Typical Sections

The Engineer shall prepare typical sections for all proposed and existing roadways and structures. Typical sections must include width of travel lanes, shoulders, outer separations, border widths, curb offsets, and ROW. The typical section must also include Proposed Profile Gradeline (PGL), centerline, pavement design, longitudinal joints, side slopes, sodding or seeding limits, station limits, common proposed and existing structures, existing pavement removal, riprap, and limits of embankment and excavation.

Frontage Road Design

The Engineer shall provide the design of frontage roads. The design must be consistent with the approved and refined schematic.

Cut and Fill Quantities

The Engineer shall develop an earthwork analysis to determine cut and fill quantities and provide final design cross sections at 100 feet intervals. Cross sections must be created and must be delivered in the standard format on 11"x17" sheets or roll plots and electronic files. The Engineer shall provide all templates and corridors used to generate the design cross sections. Cross sections and quantities must include existing pavement removals. Annotation shall include at a minimum existing and proposed ROW, side slopes (front & back), and profiles.

Pedestrian and Bicycle Facilities

The Engineer shall incorporate pedestrian and bicycle facilities shown on the project's schematic. All pedestrian and bicycle facilities must be designed in accordance with the latest Americans with Disabilities Act Accessibility Guidelines (ADAAG), the Texas Accessibility Standards (TAS), and the AASHTO Guide for the Development of Bicycle Facilities.

DRAINAGE

Cross-Drainage Structures

The Engineer shall provide the following services:

- A. Determine drainage areas and flows for cross culvert drainage systems.
- B. Determine the sizing of the drainage crossings. The scope may include extending, adjusting, or replacing non-bridge-class culvert crossing. Develop designs that minimize the interference with the passage of traffic or cause damage to the highway and local property. Cross drainage design shall be performed using HY-8 or HEC RAS.

Temporary Drainage Facilities

The Engineer shall develop plans for all temporary drainage facilities necessary to allow staged construction of the project and to conform with the phasing of adjacent construction projects without significant impact to the hydraulic capacity of the area. Drainage area maps are not required for temporary drainage.

Storm Drains

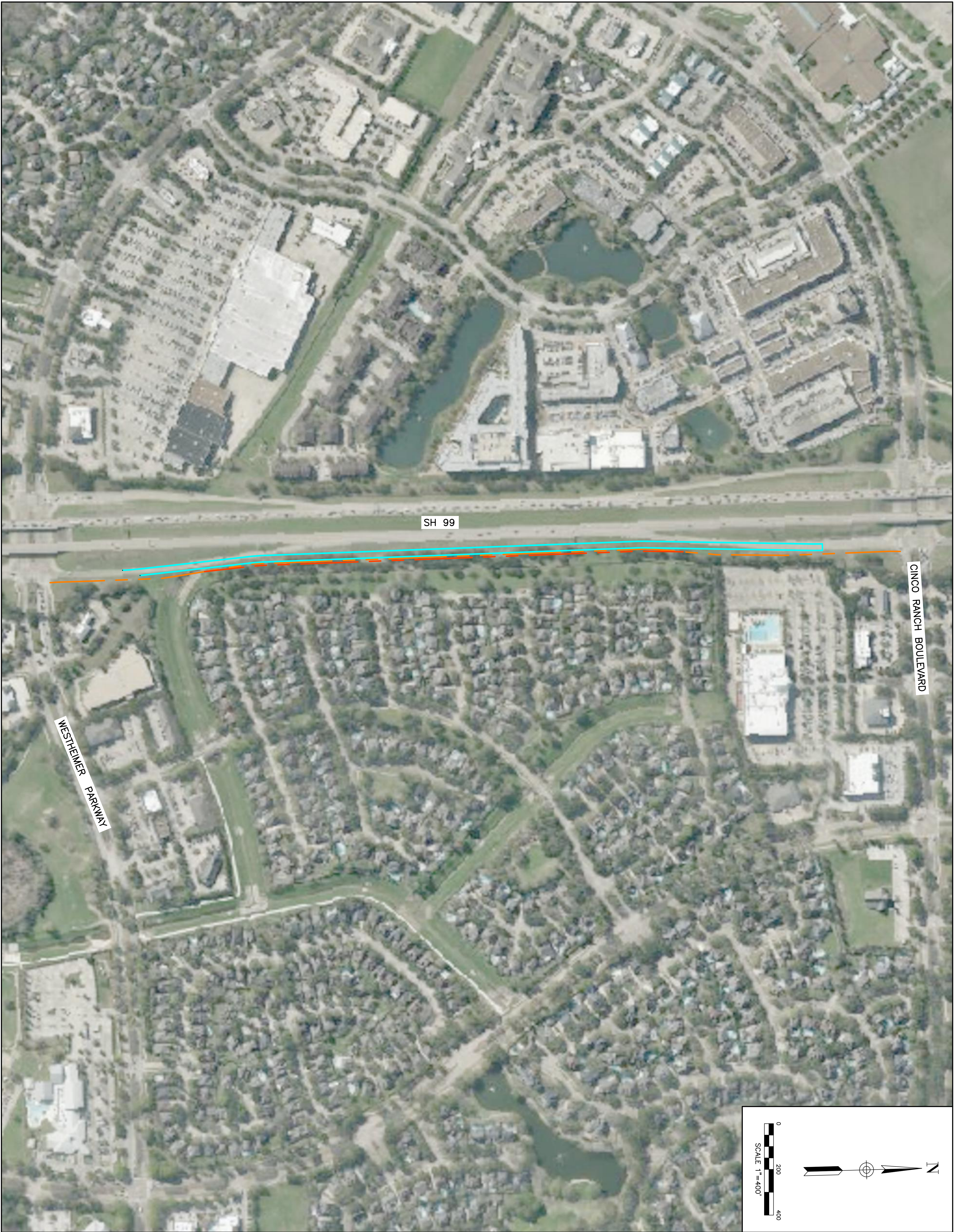
The Engineer shall provide the following services:

1. Design and analyze storm drains.
2. Size inlets, laterals, trunk line and outfall. Develop designs that minimize the interference with the passage of traffic or incur damage to the highway and local property.
3. Determine hydraulic grade line starting at the outfall channel for each storm drain design. Use the design water surface elevation of the outfall as the starting basis (tailwater) for the design of the proposed storm sewer system.
4. Calculate manhole headlosses. Compute manhole head losses as per FHWA's

HEC-22.

5. Limit discharge into existing storm drains and existing outfalls to the capacity of the existing system, which will be determined by the Engineer. Evaluate alternate flow routes or detention, if necessary, to relieve system overload. Determine the amount of the total detention storage to control storm drain runoff for the design frequency based on hydrograph routing for the full range of frequencies (50%, 20%, 10%, 4%, 2%, 1%, and 0.2% AEP), as well as a rough estimate of the available on-site volume. When oversized storm drains are used for detention, the Engineer shall evaluate the hydraulic gradeline throughout the whole system, within project limits, for the design frequency or frequencies.
6. Identify areas requiring trench protection, excavation, shoring, and de- watering.

BID & CONSTRUCTION PHASE : NOT PART OF THIS SCOPE



PROJECT:

NB SH 99
FRONTAGE RD

PROJECT No. 20303b

FROM: Westheimer Pkwy

TO: Cinco Ranch Blvd

3,000 LF (NB)

DESCRIPTION:

Design 2-lane frontage road including ramp reversals and box culvert extension at channel crossing. Design only.

LEGEND:

- PROP EOP
- EXIST ROW
- PROP ROW

FORT BEND COUNTY



FEE SCHEDULE/BUDGET
Method of Payment: Lump Sum

	DESCRIPTION OF WORK TASK		PRIME OTHON	SUB SWCA	SUB EHRA	SUB Geotest	TOTAL COST
	Schematic		\$ 242,365.18				\$ 242,365.18
	Environmental		\$ -	\$ 145,720.20			\$ 145,720.20
	PI		\$ 98,873.27				\$ 98,873.27
	Managing Contract		\$ 32,802.31				\$ 32,802.31
	PS&E		\$ 358,231.11				\$ 358,231.11
	Survey				\$ 88,480.00		\$ 88,480.00
	Geotech					\$ 20,942.74	\$ 20,942.74
	UC		\$ 26,148.08				\$ 26,148.08
	Direct Expenses		\$ 52,394.37	\$4,531.00	\$ 7,500.00	\$ 104.40	\$ 64,529.77
Work Task Total			\$ 810,814.32	\$ 150,251.20	\$ 95,980.00	\$ 21,047.14	\$ 1,078,092.66
Percent of Contract			75.21%	13.94%	8.90%	1.95%	100.00%

SH 99 NBFR: Cinco Ranch Blvd to Westheimer Parkway

Provider: OTH

Task Description	Project Manager	Senior Structural Engineer	Senior Engineer	Project Engineer	EIT	Senior CADD Operator	CADD Operator	Admin/ Clerical	Sr Public Involvement Officer	Traffic Engineer	Public Involvement Officer	Total Labor Hours	Total Labor
Labor Rates	\$210.10	\$184.16	\$178.97	\$139.68	\$97.27	\$94.67	\$81.70	\$63.94	\$151.73	\$153.03	\$126.60		
Preliminary & Schematic													
Data Collection	12		10			9		10				0	\$ -
Analyze Existing Conditions	4		12									41	\$ 5,802.33
Roadway Design Criteria	3		4					2				18	\$ 2,988.04
Typical Sections	2		4	6	12	6	12					42	\$ 4,689.82
Preliminary Design Conference	8		8					12				28	\$ 3,879.84
Develop Base Maps	5		10	15	30	15	30					105	\$ 11,724.55
Constraints Map	5		10	15	30	15	30					105	\$ 11,724.55
ID Design Exceptions/Waivers	20		40					18				78	\$ 12,511.72
Three Conceptual Design Schematics	15		30	45	90	45	90					315	\$ 35,173.65
Hybrid of Concepts	6		12	18	36	18	36					126	\$ 14,069.46
Final Geometric Schematic	7		14	21	42	21	42					147	\$ 16,414.37
Cross-Sections	8		16	24	48	24	48					168	\$ 18,759.28
Preliminary TCP Layouts	15		30	45	90	45	90					315	\$ 35,173.65
Preliminary TCP Typical Section	3		6	9	18	9	18					63	\$ 7,034.73
Preliminary TCP Narrative	3		6	9	18	9	18					63	\$ 7,034.73
Engineering Summary Report	30		40					18				88	\$ 14,612.72
H&R Report	38		98	25	50	25	50					276	\$ 32,788.91
Preliminary Cost Estimate	1		4	13	12	9	12					63	\$ 6,508.77
TOTAL	185	0	294	245	476	250	476	122	0	0	0	2048	\$ 242,365.18
Project Management													
	60		54			49	33	50				246	\$ 32,802.31
TOTAL	60	0	54	0	0	49	33	50	0	0	0	246	\$ 32,802.31

PUBLIC INVOLVEMENT

Task Description	Project Manager	Senior Structural Engineer	Senior Engineer	Project Engineer	EIT	Senior CADD Operator	CADD Operator	Admin/ Clerical	Sr Public Involvement Officer	Traffic Engineer	Public Involvement Officer	Total Labor Hours	Total Labor
Labor Rates	\$210.10	\$184.16	\$192.92	\$159.01	\$102.49	\$94.67	\$81.70	\$67.82	\$144.69	\$153.03	\$126.60		
Agency Coordination and Public Involvement													
Stakeholder Work Group meetings (2)	12					12		24	32		32	112	\$ 13,966.20
Public Involvement													
Develop PI plan	12							16	28		28	84	\$ 11,202.44
Compile, maintain and update mailing lists for all meetings and groups								38	8		48	94	\$ 9,811.48
Arrange pre-meetings									36		36	72	\$ 9,766.44
Prepare for PI meeting								16	24		24	64	\$ 7,586.08
one (1) public meeting			8						16		16	40	\$ 5,884.00
three (3) MAPDs				16				16	36		36	104	\$ 13,395.72
Submit legal notices for review								16	8		8	32	\$ 3,255.44
Develop and submit public meeting documentation packet								8	18		26	36	\$ 3,146.98
Develop and send acknowledgement letters to commenters								26	13		39	39	\$ 3,644.29
Compile comments and respond for PI meetings (effort below):								23	42		36	101	\$ 12,194.44
Develop project information for website (SPI coord only)								12	8		24	44	\$ 5,009.76
												0	\$ -
												0	\$ -
												0	\$ -
TOTAL	24	0	8	16	0	12	0	295	268	0	288	812	\$ 98,773.27

Provider: PS&E

Task Description	Project Manager	Senior Structural Engineer	Senior Engineer	Project Engineer	EIT	Senior CADD Operator	CADD Operator	Admin/ Clerical	Sr Public Involvement Officer	Traffic Engineer	Public Involvement Officer	Total Labor Hours	Total Labor
Labor Rates	\$210.10	\$184.16	\$178.97	\$139.68	\$97.27	\$94.67	\$81.70	\$63.94	\$151.73	\$153.03	\$126.60		
Roadway Design													
Title Sheet	1		2	3	6	3	6					21	\$ 2,344.91
General Notes & Specifications	1		2	3	6	3	6					21	\$ 2,344.91
Index of Sheets	1		2	3	6	3	6					21	\$ 2,344.91
Existing Typical Section	1		2	3	6	3	6					21	\$ 2,344.91
Proposed Typical Section	1		2	4	7	4	7					25	\$ 2,759.23
Summary of TCP Quantities	1		2	4	7	4	7					25	\$ 2,759.23
Summary of Removal Quantities	1		2	4	7	4	7					25	\$ 2,759.23
Summary of Roadway Quantities	1		2	4	7	4	7					25	\$ 2,759.23
Pavement Marking Summary	1			4	7	4	7			2		25	\$ 2,706.35
Summary of Small Signs	1			4	7	4	7			2		25	\$ 2,706.35
TCP Phase 1 Typical Sections	1			4	7	4	7			2		25	\$ 2,706.35
TCP Phase 1 Layouts	10			22	45	22	45			15		159	\$ 17,605.80
TCP Phase 2 Typical Sections	1			4	7	4	7			2		25	\$ 2,706.35
TCP Phase 2 Layouts	7			22	45	22	45			15		156	\$ 16,975.50
TCP Standards	1			5	10	5	10			3		36	\$ 3,630.64
Project Layout & Geometric Data	1		2	4	7	4	7					25	\$ 2,759.23
Removal Layouts	5		10	15	30	15	30					105	\$ 11,724.55
Roadway P&P	8		17	26	52	26	52					181	\$ 20,122.83
Earthwork Cross Sections	8		16	25	50	25	50					174	\$ 19,351.57
Roadway Details	1		2	4	7	4	7					25	\$ 2,759.23
Roadway Standards	1		2	4	9	4	9					29	\$ 3,116.17
Soil Storming Details	4		8	12	24	12	24					84	\$ 9,379.64
Signing & Pavement Marking Layouts	10		0	22	45	22	45			15		159	\$ 17,605.80
Signing & Pavement Marking Standards	2		0	4	10	4	10			2		32	\$ 3,453.36
SUBTOTAL												0	\$ 188,720.28
Drainage Design													
Summary of Storm Sewer Quantities	1		3	4	9	4	9					30	\$ 3,295.14
Summary of Detention Pond Quantities	1		3	4	9	4	9					30	\$ 3,295.14
Summary of SWQP Quantities	1		3	4	9	4	9					30	\$ 3,295.14
Summary of Culvert Quantities	1		3	4	9	4	9					30	\$ 3,295.14
Overall Drainage Area Map	2		3	5	10	5	10					35	\$ 3,918.56
Drainage Area Map	10		15	25	50	25	50					175	\$ 19,592.80
Runoff Computations	8		12	20	40	20	40					140	\$ 15,674.24
FR Storm Sewer P&P	11	22	0	33	67	33	67					233	\$ 26,087.16
ML Storm Sewer P&P	11	22	0	33	67	33	67					233	\$ 26,087.16
Temp Drainage	10	15	0	25	50	25	50					175	\$ 19,670.65
Lateral Profiles	5	10	0	15	30	15	30					105	\$ 11,776.45
Culvert P&P	1	5	0	7	15	7	15					50	\$ 5,455.90
Detention Pond Layouts	5	10	0	15	30	15	30					105	\$ 11,776.45
SWQP Layouts	5	0	10	15	30	15	30					105	\$ 11,724.55
Ditch Details	3	6	9	9	18	9	18					63	\$ 7,065.97
Drainage Details	3	6	9	9	18	9	18					63	\$ 7,065.97
Drainage Standards	8	16		25	50	25	50					174	\$ 19,434.61
SUBTOTAL												0	\$ 188,510.83
UC	28		48			48		64			24	212	\$ 26,148.08
SUBTOTAL												0	\$ 26,148.08
												0	\$ -
TOTAL	184	112	173	461	825	509	925	64	0	58	24	3435	\$ 384,379.19

[illegible]

EHRA LABOR								
	TASK	PROJECT MANAGER	SURVEY TECH	CADD TECH	3-MAN CREW	2-MAN CREW	ADMIN	TOTAL
1	DIGTESS Utility Locate Request	1	2					\$ 465.00
2	Utility Research	2	12				1	\$ 2,090.00
3	Pipeline Coordination	1	1	5	5			\$ 1,755.00
4	TxDOT ROW	2	4	4	10			\$ 3,210.00
5	Subdivisions	2	6	6	15			\$ 4,620.00
6	TxDOT Control	1	3		10			\$ 2,500.00
7	Field Topographic Survey Control	1	5		15			\$ 3,720.00
8	TxDOT ROW/Subdivision Project Limits	3	5	20				\$ 3,160.00
9	Field Topographic Survey	3	8		70		1	\$ 15,045.00
10	Subsurface Utility Engineering	10		44	18	99	2	\$ 25,055.00
11	Wetlands	2	5	10	20			\$ 5,815.00
12	Soil Borings	2	3		15			\$ 3,645.00
13	Topographic Survey-Office	6	20	80			1	\$ 11,550.00
14	Survey Control Map	5	15	30				\$ 5,850.00
TOTAL HOURS		41	89	199	178	99	5	
HOURLY RATE		\$ 195.00	\$ 135.00	\$ 95.00	\$ 190.00	\$ 155.00	\$ 80.00	
TOTAL		\$ 7,995.00	\$ 12,015.00	\$ 18,905.00	\$ 33,820.00	\$ 15,345.00	\$ 400.00	\$ 88,480.00
	OTHER - Reimbursable (Abstract, SUE equip., Records)							\$ 7,500.00
GRAND TOTAL								\$ 95,980.00

Highway: SH 99

Subprovider Name: **SWCA**

OTHER DIRECT EXPENSES	UNIT	UNIT COST	FC120	
			QUANTITY	COST
Lodging/Hotel - Taxes and Fees	day/person	\$40.00		\$0.00
Lodging/Hotel (Taxes/fees not included)	day/person	\$94.00		\$0.00
Meals (Excluding alcohol & tips) (Overnight stay required)	Day/person	\$55.00		\$0.00
Mileage	mile	\$0.58	400	\$230.00
SUV or ATV Rental (Includes taxes and fees; Insurance costs will not be reimbursed)	day	\$150.00		\$0.00
Rental Car Fuel	lump sum	\$50.00	3	\$150.00
Rental Car (Includes taxes and fees; Insurance costs will not be reimbursed)	day	\$75.00	3	\$225.00
Air Travel - In State - Short Notice (Coach)	Rd Trip/person	\$650.00		\$0.00
Air Travel - In State - 2+ Wks Notice (Coach)	Rd Trip/person	\$530.00		\$0.00
Air Travel - Out of State - 2+ Wks Notice (Coach)	Rd Trip/person	\$700.00		\$0.00
Air Travel - Out of State - Short Notice (Coach)	Rd Trip/person	\$900.00		\$0.00
Oversize, special handling or extra baggage airline fees	each	\$100.00		\$0.00
Taxi/Cab fare	each/person	\$35.00		\$0.00
Parking	day	\$20.00		\$0.00
Toll Charges	each	\$10.00		\$0.00
Standard Postage	letter	\$0.55		\$0.00
Certified Letter Return Receipt	each	\$1.50		\$0.00
Overnight Mail - letter size	each	\$25.50		\$0.00
Overnight Mail - oversized box	each	\$45.00	2	\$90.00
Courier Services	each	\$45.00		\$0.00
Photocopies B/W (11" X 17")	each	\$0.20	50	\$10.00
Photocopies B/W (8 1/2" X 11")	Each	\$0.10	1110	\$111.00
Photocopies Color (11" X 17")	each	\$1.50	50	\$75.00
Photocopies Color (8 1/2" X 11")	each	\$1.00	480	\$480.00
Digital Ortho Plotting	sheet	\$4.50		\$0.00
Plots (B/W on Bond)	per sq. ft.	\$0.93		\$0.00
Plots (Color on Bond)	per sq. ft.	\$1.75		\$0.00
Plots (Color on Photographic Paper)	per sq. ft.	\$4.50		\$0.00
Color Graphics on Foam Board	square foot	\$10.00		\$0.00
Presentation Boards 30" X 40" Color Mounted	each	\$150.00		\$0.00
Report Printing	each	\$64.00		\$0.00
Report Binding and tabbing	each	\$5.00		\$0.00
Notebooks	each	\$8.00		\$0.00
Reproduction of CD/DVD	each	\$5.00		\$0.00
CDs	each	\$2.75		\$0.00
Misc supplies	lump sum	\$50.00	6	\$300.00
Tx Parks & Wildlife Data Request Fees	each	\$100.00		\$0.00
Hazardous Materials Database Search	per search	\$750.00	1	\$750.00
Noise Meter Rental	per project	\$475.00	4	\$1,900.00
Environmental Database Search	per project	\$1,000.00		\$0.00
Environmental Field Supplies (lathes, stakes, flagging, spray paint, etc.)	day	\$50.00		\$0.00
Curator (Drawer & TX Archaeological Research Lab for artifacts & report)	per project	\$3,270.00		\$0.00
Newspaper Advertisement	per publication	\$4,000.00		\$0.00
Court Reporter	page	\$10.00		\$0.00
Court Reporter (Public Meetings, Hearings & Transcription)	day	\$725.00		\$0.00
Translator (English to Spanish, other language as appropriate, or Sign Language) for Public Involvement	event	\$600.00		\$0.00
Translator (English to Spanish, other language as appropriate, or Sign Language)	hour	\$100.00		\$0.00
Custodian for Public Involvement	hour/custodian	\$50.00		\$0.00
Sound Technician for Public Involvement	event	\$350.00		\$0.00
Public Involvement Facility Rental (estimate)	4 hours	\$750.00		\$0.00
Public involvement Facility Rental (estimate)	8 hours	\$3,000.00		\$0.00
Public Involvement Facility Rental (estimate)	hour	\$150.00		\$0.00
Public Involvement Facility Rental	event	\$2,400.00		\$0.00
Audio - Equipment Rental	each	\$400.00		\$0.00
Audio - Visual Equipment Rental	event	\$800.00		\$0.00
Public Notices - Mass Mailing (500 pieces)	per mailing	\$500.00		\$0.00
Public Notices - Mass Mailing/with Self Addressed Return Envelope (500 pieces)	per mailing	\$550.00		\$0.00
Electronic Message Signs	day	\$225.00		\$0.00
Website URL Rental	year	\$100.00		\$0.00
FEMA FIS (Manual)	each	\$5.00		\$0.00
FEMA FIS Backup Data Request	each	\$400.00		\$0.00
FEMA Map Revision Submittal (CLOMR/LOMR) (Submittal Fee Only)	each	\$8,500.00		\$0.00
FEMA Model/Floodplain Hardcopy	each	\$250.00		\$0.00
Railroad - Flagger (Service provided by RR)	hour	\$64.00		\$0.00
Railroad - Insurance in addition to STD Minimum Required (Minimum coverage of \$1 Million required by RR.)	each	\$3,500.00		\$0.00
Railroad - Permit	each	\$200.00		\$0.00
Railroad - Safety Training (If required - Heavy Rail Safety Training Certificate, includes classroom training and employee certification card.)	Per Person	\$400.00		\$0.00
Traffic Control Services, Arrow Boards and Attenuator trucks - Large Project (Includes labor, equipment and fuel)	day	\$4,000.00		\$0.00

Traffic Control Services, Arrow Boards and Attenuator trucks - Medium Project (Includes labor, equipment and fuel)	day	\$2,650.00		\$0.00
Traffic Control Services, Arrow Boards and Attenuator trucks - Small Project (Includes labor, equipment and fuel)	Day	\$1,750.00		\$0.00
Attenuator trucks - (Lane/Shoulder Closure) (Includes labor, equipment and fuel)	day	\$400.00		\$0.00
Attenuator trucks - (No Lane Closure) (Includes labor, equipment and fuel)	day	\$250.00		\$0.00
Flashing Arrow Board	day	\$500.00		\$0.00
Portable Message Board	day	\$250.00		\$0.00
Law Enforcement/Uniform Officer (including vehicle)	Hour	\$77.50		\$0.00
Required Permit Fees (non- railroad)	each	\$700.00		\$0.00
Boat with Motor	day	\$375.00		\$0.00
Fathometer	day	\$90.00		\$0.00
Backhoe Rental	day	\$1,200.00		\$0.00
Rental Equipment - Gasoline Powered Auger	day	\$200.00		\$0.00
ManLift Equipment Rental or Bridge Inspection Equipment Rental	day	\$1,100.00		\$0.00
GPS Receiver (GIS grade)	day	\$70.00	3	\$210.00
GPS RTK (rates applied to actual time GPS units are in use)	hour	\$25.00		\$0.00
GPS Static (rates applied to actual time GPS units are in use)	hour	\$25.00		\$0.00
Map Records	sheet	\$8.00		\$0.00
Deed Copies	sheet	\$2.00		\$0.00
Certified Deed Copies	sheet	\$2.60		\$0.00
Historical Aerial Images	unit	\$150.00		\$0.00
Aerial Photographs (1" = 500' scale)	each	\$100.00		\$0.00
Reprographics	per sq. ft.	\$5.00		\$0.00
Terrestrial Laser Scanner (rates applied to actual time scanner unit is in use)	Hour	\$105.00		\$0.00
Ground Target (includes paint, panel material, etc.)	Each	\$25.00		\$0.00
Mobilization for Aerial Photography/LiDAR Fixed Wing Aircraft (Includes aircraft, Pilot, Camera/LiDAR Operator, fuel and transportation cost)	Per Project	\$21,650.00		\$0.00
Mobilization for Helicopter Airborne LiDAR (Includes helicopter, Pilot, LiDAR Operator, fuel and transportation cost)	Per Project	\$21,600.00		\$0.00
Helicopter Equipment LiDAR - Project Flight Miles (On project flight miles)	per mile	\$60.00		\$0.00
Helicopter Equipment LiDAR - Transit Miles (including turn, maneuver miles and local airport to project)	per mile	\$15.00		\$0.00
Fixed Wing Airborne LiDAR - Project Flight Miles (On project flight miles)	per mile	\$21.64		\$0.00
Fixed Wing Airborne LiDAR - Transit Miles (including turn, maneuver miles and local airport to project)	per mile	\$8.00		\$0.00
Aerial Photography - Airborne GPS/IMU Data collection/Processing	Per Project	\$2,275.00		\$0.00
Aerial Photography - Project Flight Miles (On project flight miles)	Per Mile	\$30.00		\$0.00
Aerial Photography - Transit miles (including turn, maneuver miles and local airport to project)	Per mile	\$8.00		\$0.00
Photo Lab Service - Black and White Processing (film, development, scanning)	Per Frame	\$20.00		\$0.00
Photo Lab Service - Color Infrared Processing (film, development, scanning)	Per Frame	\$27.00		\$0.00
Photo Lab Service - Color Processing (film, development, scanning)	Per Frame	\$30.00		\$0.00
Photo Lab Service - Digital image processing	Per Frame	\$27.00		\$0.00
Photo Lab Service - Enlargements, Lamination, Mounting	per sq. ft.	\$6.00		\$0.00
Flash Drive 128 GB	Each	\$10.00		\$0.00
Subtotal Other Direct Expenses:				\$4,531.00

\$4,531.00

Task Descriptions	Senior Engineer	Support Manager	Project Engineer	Engineer-In-Training	Senior Engineer Tech	Admin/Clerical	Total Cost	NOTES
	\$ 221.98	\$ 208.83	\$ 160.63	\$ 81.15	\$ 81.83	\$ 69.44		
Engineering and Report Preparation	4	8	12	40	6	6	\$ 8,639.74	
Subtotal Hours:	4	8	12	40	6	6	\$ 8,639.74	
Subtotal Labor Cost:	\$ 887.92	\$ 1,670.64	\$ 1,927.56	\$ 3,246.00	\$ 490.98	\$ 416.64	\$ 8,639.74	

DESCRIPTION	Senior Engineer	Support Manager	Project Engineer	Engineer-In-Training	Senior Engineer Tech	Admin/Clerical	TOTAL COSTS BY FC
Personnel	4	8	12	40	6	6	\$ 8,639.74
Unit Costs							\$ 12,303.00
ODEs							\$ 104.40
						Total	\$ 21,047.14

Subprovider: Geotest Engineering, Inc.
Project: SH99
CSI:NA

Attachment E - Fee Schedule
Method of Payment: Lump Sum and Unit Cost

Geotest Proposal No. 1140527199

OTHER DIRECT EXPENSES

Sub Provider: Geotest Engineering, Inc.				Function Code:	
Services To Be Provided		Unit	Unit Cost	QUANTITY	AMOUNT
Mileage		mile	\$ 0.580	180	\$ 104.40
Total:				\$	104.40

UNIT COST PAYMENT BASIS

Function Code:

SUB- PROVIDER NAME: Geotest Engineering, Inc.					
SERVICES TO BE PROVIDED	TEST	UNIT	COST	QUANTITY	AMOUNT
Mobilization/Demobilization of Truck Mounted Drill Rig and Crew		lumpsum	\$ 600.00	1	\$ 600.00
Drilling and Sampling, Truck Mounted Rig, from 0 to 50 ft		ft	\$ 25.00	135	\$ 3,375.00
Grouting of Completed Bore Holes		ft	\$ 12.00	135	\$ 1,620.00
TxDOT Cone Penetration Test (every 5 feet)		each	\$ 31.00	27	\$ 837.00
Liquid and Plastic Limits	ASTM D4318	each	\$ 71.00	18	\$ 1,278.00
Moisture Content	ASTM D2216	each	\$ 11.00	38	\$ 418.00
Percent Passing No. 200 Sieve	ASTM D1140	each	\$ 55.00	5	\$ 275.00
Sieve Analysis through No. 200 Sieve	ASTM D6913	each	\$ 65.00	4	\$ 260.00
Sieve Analysis with Hydrometer	ASTM D7928	each	\$ 145.00	1	\$ 145.00
Unconfined Compressive Strength of Soil	ASTM D3080	each	\$ 51.00	11	\$ 561.00
Unconsolidated-Undrained Triaxial Compression	ASTM D2166	each	\$ 72.00	8	\$ 576.00
Consolidated Undrained Triaxial tests	ASTM D4767	each	\$ 1,900.00	1	\$ 1,900.00
Crumb Tests	ASTM D6572	each	\$ 37.00	2	\$ 74.00
Double Hydrometer	ASTM D4221	each	\$ 177.00	2	\$ 354.00
Specific Gravity	ASTM D854	each	\$ 30.00	1	\$ 30.00
Total:				12,303.00	\$ 12,303.00



March 12, 2021

VIA E-MAIL: jschramm@OTHON.com

Mr. Joel Schramm, P.E.
Director of Engineering
Othon, Inc.
575 N. Dairy Ashford, Suite 650
Houston, Texas 77079

Re: Proposal for Topographic Surveying Services for SH-99 North Bound Frontage Road
from Westheimer Parkway to Cinco Ranch Boulevard
Fort Bend County Precinct 3 Project No. 20303b
EHRA Project No. 211-508-00 (50)

Dear Mr. Schramm,

At your request, Edminster, Hinshaw, Russ & Associates, Inc. d/b/a EHRA (Surveyor) has prepared this proposal to provide professional surveying services for Othon, Inc. (Client) as referenced above, in accordance with the following description of professional services, terms, and conditions:

SCOPE OF SERVICES

Topographic Survey

Surveyor will perform a Topographic Survey in substantial compliance with a Category 6, Condition II survey for the land adjacent to the east edge of existing SH-99 north bound lane to the east right-of-way line of SH-99 required for the final frontage roadway design. This will involve mapping the existing north bound frontage road entry ramp from the north curb line of Westheimer Parkway to the south curb line of Cinco Ranch Boulevard (approximately 4,000 linear-feet) from the east edge of the existing north bound toll lane to the east right-of-way line of SH-99, and extend mapping across the subdivision reserve adjacent to SH-99 to the brick wall along the west line of the Cinco Ranch subdivision. We will map approximately 600 linear-feet of the Willow Fork Drainage Ditch east of and adjacent to the east right-of-way line of SH-99. We will map the existing features along SH-99 from the east edge of the existing main lane roadway for the limits of current existing right-of-way and approximately 60-feet beyond the existing east right-of-way up to the brick wall, providing access is permitted. The scope of services is more specifically described as follows:

1. Notify DIGTESS and request underground utility companies mark the locations of private utility lines within the project limits;

Mr. Joel Schramm, P.E.

March 12, 2021

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2. Research public and private utilities to obtain record documents or plans for existing facilities (including Texas Department of Transportation, CenterPoint Energy, AT&T, Willow Fork Drainage and MUD);
3. Coordinate with private pipeline companies to meet and obtain information regarding the locations and depths for petroleum pipelines that might cross the project limits. This information will be incorporated into the existing topographic survey;
4. Research the Texas Department of Transportation existing right-of-way for SH-99 and perform field surveying to recover and tie sufficient monumentation necessary to establish the east right-of-way for SH-99 from Westheimer Parkway to Cinco Ranch Boulevard;
5. Research public records for copies of subdivision plats and easement deeds crossing or adjacent to the east right-of-way of SH-99 and perform field surveying to recover and tie sufficient monumentation necessary to establish the location of the subdivisions and easements;
6. Research the Texas Department of Transportation existing survey control for SH-99 and perform field surveying to recover and verify the survey control;
7. Perform field surveying to set additional “permanent” iron rod control monuments throughout the project limits at the beginning, the end, and at approximate 500-foot intervals sufficient for conventional total station data collection surveying. The new control shall be oriented to the datum of the Texas Department of Transportation existing survey control for SH-99. Elevations will be established on all control monuments based on the current Texas Department of Transportation existing survey control. Additional temporary benchmarks shall be set at the beginning, end, and at approximate 1,000-foot intervals throughout the project limits;
8. Perform office data processing and analysis of the monumentation researched and tie in Items 4 and 5 to calculate the existing centerline for SH-99 and the location of the current east right-of-way for SH-99 from Westheimer Parkway to Cinco Ranch Boulevard and the subdivisions and easements adjacent to the east right-of-way line to establish the project limits;
9. Perform field surveying along the east side of SH-99 to locate existing features (natural and man-made). The field surveying shall include locating existing roadway features, culverts, ditches, visible utilities and marked utilities, fences, structures, signs, trees and other major visible improvements; Outline heavily wooded areas; Obtain elevations across the project limits at 100-foot intervals based on the stationing for the centerline of SH-99; Obtain elevations of banks and flow lines of existing drainage ditches; Obtain elevations of manhole covers, inlets, valve covers, valve operating nuts (where accessible); Elevations of underground utility pipes where accessible (manholes, inlets and culvert pipes); Obtain locations, dimensions and elevations of the junction box along the west side of SH-99 and the west end of the box culvert under SH-99; Obtain location and elevations for swale in the center of the median and the storm sewer crossing under SH-99 at approximate station 1444+00; and Obtain locations, dimensions and elevations of box culverts, rip-rap, banks, toes and flow lines for approximately 600-feet of the Willow Fork Drainage Ditch downstream of SH-99 on 50-foot cross-section intervals;



Mr. Joel Schramm, P.E.

March 12, 2021

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10. Coordinate with a Subsurface Utility Engineer to obtain locations and depths for a Level "A" survey for two (2) underground pipeline crossing locations to a maximum depth of 10-feet (deeper than 10-feet will be performed under a separate contract) and ten (10) hydro vac sites along the high voltage underground electrical line street lighting line and a Level "B" tone marking of the underground television and phone service lines along the Cinco Ranch subdivision;
11. Coordinate with environmental engineer consultants to determine the locations and ground surface elevations for wetland locations throughout the limits of the project;
12. Coordinate with geotechnical consultants to determine the locations and ground surface elevations for approximately 35 soil boring locations throughout the limits of the project;
13. Process all field survey data and record utility data and prepare an existing condition topographic survey base map for the project limits; Research the Federal Emergency Management Agency for current elevations and locations of the flood plain lines affecting the project limits and incorporate these into the final drawing; and Attach a separate reference file of the existing right-of-way lines and boundary lines for the property adjacent to the limits of the project. The map shall be prepared in AutoCAD and converted to MicroStation V8i and will include a DTM TIN file sufficient for engineering review and design; and
14. Prepare a Survey Control Map for the overall project control to be signed and sealed by a Registered Professional Land Surveyor licensed to practice in the State of Texas.

COMPENSATION

We propose to provide these professional services to the Client on an **hourly basis, plus reimbursable expenses, for a total estimated fee of \$95,980.00, as shown on the attached man-hour projection sheet. Should we discover any unforeseen problems not routinely or customarily associated with the above-described Scope of Services, we will notify you of the circumstances and provide a separate proposal for Additional Services.** Surveyor will not proceed with any Additional Services without prior written authorization by Client. The cost of labor, materials and equipment for performing the above Scope of Services includes deed research for the boundary, printing and delivery of copies of the drawing and metes and bounds description.

PAYMENT

Surveyor shall submit invoice(s) for services rendered in accordance with the attached Hourly Rate and Reimbursement Schedule. Client shall make prompt payment(s) in response to Surveyor's invoice(s).

Additional work beyond the Scope of Services described above will be considered an Additional Service and will subsequently be provided in accordance to the attached Hourly Rate and Reimbursement Schedule or negotiated to a fixed fee. Surveyor will not proceed with any Additional Services without prior written authorization by Client. Any Additional Services not contemplated under this Agreement can only be provided by a separate contract or change order.



Mr. Joel Schramm, P.E.

March 12, 2021

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The General Conditions (Exhibit "A") of this proposal are attached hereto and made a part hereof for all purposes.

If all terms and provisions are acceptable to you, please signify so by executing this document in the appropriate space provided. Please retain one (1) executed copy for your records and return one (1) executed copy to the undersigned. We will consider receipt of this executed document as our authorization to proceed.

We thank you for the opportunity to provide professional surveying services and we look forward to working with you on this project.

CLIENT AND SURVEYOR AGREE AS SET FORTH ABOVE.

CLIENT

SURVEYOR

OTHON, INC.

**EDMINSTER, HINSHAW, RUSS
& ASSOCIATES, INC. d/b/a EHRA**

By: _____
Joel Schramm, P.E.

DocuSigned by:
Robert Boelsche
By: _____
761AA4BA06B64ED...
Robert L. Boelsche, R.P.L.S.
Sr. Survey Project Manager
Surveying and Mapping Services

Effective Date: _____

3/12/2021 | 10:47:26 AM CST
Date: _____

DocuSigned by:
Charles Kennedy
By: _____
F89C5BCDA18B4A4
Charles Kennedy, Jr., R.P.L.S.
Sr. Vice President | Practice Area Leader
Surveying and Mapping Services

3/12/2021 | 10:52:58 AM CST
Date: _____

RLB/ol

Attachments: Exhibit "A" – General Conditions
Hourly Rates 2019STD2SV
Man-Hour Projections for SH-99 Basic Survey Services Topographic Survey

EXHIBIT "A"

GENERAL CONDITIONS

CLIENT'S RESPONSIBILITY (SURVEYING): Easements and other restrictions of record, unless depicted on a recorded plat, will be noted based on a current title insurance commitment or title report together with copies of the relevant documents all of which will be provided by the Client.

SURVEYOR'S/ENGINEER'S RESPONSIBILITY: The Surveyor/Engineer hereby represents and warrants to the Owner/Client that the Surveyor/Engineer is licensed by the State of Texas to perform the work, is experienced in the performance of the work similar to the work to be performed, and is competent to perform the work. The Owner/Client is relying upon the expertise of the Engineer/Surveyor in its performance of the work.

ADDITIONAL SERVICES: If authorized by the Owner/Client, Edminster Hinshaw, Russ & Associates, Inc. ("EHRA") will furnish or obtain from others, Additional Services not included in the Basic Services. Any Additional Services not contemplated under this Agreement can only be provided by written authorization from the Owner/Client and will be in accordance with the attached Hourly Rate and Reimbursement Schedule or negotiated to a lump-sum fee. Any work not specified above that may arise will be covered under the Additional Services section and as such, EHRA will not proceed with any Additional Services without written authorization by Owner/Client.

Additional Services required by Owner/Client, which may arise and are not outlined in the Basic Services include revisions to drawings due to design changes associated with alteration to Owner/Client-approved general plan after the design work has commenced, design of non-standard structures, preparation of easements by separate instrument, and survey staking other than listed above, etc. All Additional Services for assignments related to design and preparation of construction plans will include topographic surveying, construction plan preparation, governmental agency approvals, bidding cycle services, construction control staking, construction phase services, and post-construction topographic survey, as may be required.

FAILURE TO MAKE PAYMENT: If Owner/Client fails to make any payment due EHRA for services and expenses within thirty (30) days after receipt of EHRA's statement thereof, the amounts due EHRA will be increased at the rate of 1% per month from said thirtieth (30th) day, and in addition, EHRA may, after giving fourteen (14) days written notice to Owner/Client, suspend services under this Agreement until EHRA has been paid in full all amounts due for services, expenses and charges.

TERMINATION OF AGREEMENT: This Agreement may be terminated by EHRA or Owner/Client by providing fourteen (14) days written notice to the other party. In the event of such termination, EHRA will prepare an invoice for all work performed, on the task underway, up to the date of termination. The total of this work will be deducted from the advance payment (if any) and any balance remaining will be reimbursed back to Owner/Client.

OWNERSHIP OF DOCUMENTS: Drawings, images, fonts and specifications as instruments of service are, and will remain, the property of EHRA, whether the project for which they are made is executed, or not. EHRA is not to reuse these drawings, or any part thereof, for any other client EHRA may have, without the written approval of Owner/Client contingent upon EHRA having been paid in full. These drawings, images and fonts are not to be used by Owner/Client on other projects, or extensions to this project, except by agreement in writing and with appropriate compensation to EHRA.

Owner/Client certifies they have proper license or ownership of data, fonts or images given to EHRA for incorporation into work product.

EHRA will provide Owner/Client with a copy of its engineering/surveying calculations upon which its designs are based. All correspondence, documents and drawings initiated from EHRA's office will be copied to Owner/Client's office as an original document.

EHRA will provide to the Owner/Client the results of the work product in a paper ("hard copy") form. An AutoCAD drawing file ("soft copy") of the work product may be provided to the Owner/Client, if requested. Use of soft copy information is governed by the attached "Electronic File Transfer Agreement." All original documents, drawings, notes, or procedures, in whatever form, produced as a result of this professional service will remain the property of EHRA and may be used by EHRA without the consent of the Owner/Client.

SUCCESSORS AND ASSIGNS: Owner/Client and EHRA each binds itself, its successors, assigns and legal representatives to the other party of this Agreement and to the successors, assigns and legal representatives of such other party with respect to all provisions of this Agreement. Neither Owner/Client nor EHRA will assign, set over or transfer its interest, in whole or in part, in this Agreement without the prior written consent of the other, and any act in derogation hereof, will, at the option of the non-assigning party, render the within Agreement terminated. Minor changes in EHRA's corporation will not operate to cancel this Agreement.

INSURANCE PROVISION: EHRA will carry professional liability insurance in the minimum amount of One Million (\$1,000,000) dollars per claim and Two Million (\$2,000,000) dollars aggregate limits to indemnify itself from damage resulting from errors and omissions from surveying, drawings, or specifications, which insurance will inure to the benefit of Owner/Client.

DISPUTE RESOLUTION: If a dispute arises out of or related to this Agreement or the breach thereof, the parties will attempt to settle the matter between themselves. If no agreement can be reached, the laws of Texas (other than the choice of law provisions thereof) should govern the validity of this Agreement, the construction of its terms, and the interpretation of the rights and duties of the parties. The parties hereto each hereby agree that all obligations performable under this Agreement and/or the Ancillary Documents shall be performed in Harris County, Texas, and each party hereto irrevocably attorns to the venue of the courts in Harris County, Texas.

CONDITIONS (SURVEYING): EHRA will begin the Survey upon receipt of this signed Agreement and proceed diligently to complete the Survey as soon as possible. Weather and other site conditions may affect our schedule and we will attempt to notify you promptly of delays which may affect our anticipated schedule. If the Client has a particular closing schedule or contract deadline, the Surveyor must be informed of this prior to the start of work.

LANDSCAPE ARCHITECT STATEMENT OF JURISDICTION: The Texas Board of Architectural Examiners has jurisdiction over complaints regarding the professional practices of persons registered as Landscape Architects in Texas. Mailing Address: P.O. Box 12337, Austin, TX 78711; Phone: (512) 305-9000; or e-mail: customerservice@tbae.state.tx.us.

EXTENT OF AGREEMENT: This Agreement represents the entire and integrated agreement between Owner/Client and EHRA and supersedes all prior negotiations, representatives or agreements, either written or oral. This Agreement may be amended only by written instrument signed by both Owner/Client and EHRA. Any modifications to this original Agreement must be agreed to by Owner/Client and EHRA and initialed and dated by both the Owner/Client and EHRA in order for the modification to be in full force and effect.

GOVERNING LAW: This Agreement will be governed by the laws of the State of Texas.

EHRA
HOURLY RATE AND REIMBURSEMENT SCHEDULE
Standard Rates
2019

<u>PROFESSIONAL SURVEYING PERSONNEL</u>	<u>Per Hour</u>
Principal / RPLS	\$240.00
Expert Witness	225.00
Senior Survey Project Manager/RPLS	195.00
Survey Project Manager/RPLS	165.00
Senior Survey CAD Technician	135.00
CAD Technician	95.00
Senior Platting Coordinator	115.00
Platting Coordinator	105.00
Administrative Assistant	85.00
Clerical	80.00
Survey Field Supervisor	130.00
Survey 1 Person GPS/Robotic Crew	140.00
Survey Party Chief	90.00
Survey Instrument Person	65.00
Survey Rod Person	35.00

UAV LiDAR (Drone)

available upon request

REIMBURSABLES:

Delivery	Cost
Sub-Consultant Fees	Cost
Outside Abstracting, Documentation, Deed Research	Cost
Advertising	Cost
Plan Review Fees, Governmental Fees	Cost

Above fees include all materials, mileage, tolls, equipment, reproduction and incidentals.

MARCH 2021

**MAN-HOUR PROJECTIONS FOR SURVEY SERVICES- TOPOGRAPHIC SURVEY
NORTH BOUND FRONTAGE ROAD-SH 99-WESTHEIMER PARKWAY TO CINCO RANCH BLVD.**

[illegible]



ENVIRONMENTAL CONSULTANTS

Sound Science. Creative Solutions.

Houston Office
10245 West Little York Road, Suite 600
Houston, Texas 77040
Tel 281.617.3217 Fax 281.617.3227
www.swca.com

May 13, 2021

Joel Schramm, PE
Director of Engineering
OTHON ENGINEERING
575 N. Dairy Ashford Rd, Suite 650
Houston, TX 77079

Re: Revised Proposal/Cost Estimate for Environmental Services Related to SH99 Grand Parkway Northbound Frontage Road Project – Westheimer Parkway to Cinco Ranch Boulevard, Proposal No. P65873, Fort Bend County, Texas

Dear Mr. Schramm:

Thank you for allowing SWCA Environmental Consultants (SWCA) the opportunity to submit this revised proposal and cost estimate to OTHON, INC., Consulting Engineers (OTHON) for environmental services for the proposed Grand Parkway (SH 99) North Bound Frontage Road (NBFR) Project (project) located in Fort Bend County, Texas. Fort Bend County is the project sponsor and will follow Texas Department of Transportation (TxDOT) Local Government Project Procedures. The project extends from Westheimer Parkway to Cinco Ranch Boulevard (approximately 0.7 miles). SWCA proposes to team with IDCUS to provide air and noise support services. SWCA and IDCUS will represent the same team as currently engaged on the Segments 1 and 2 SH 99 SBFR projects.

It is our understanding the project includes the addition of two new frontage lanes and either a third auxiliary lane or a shared use path adjacent to the existing Grand Parkway. The travel lanes would be up to 14-foot wide, partly within existing TxDOT right of way (ROW) and may require acquisition of land from adjacent landowners. The project also includes relocation of sound barriers to allow for drainage improvements. Drainage will be determined during design and is expected to be within existing ROW. The environmental process is to follow TxDOT standards and it is anticipated that the project would be environmentally cleared as a Categorical Exclusion (CE) open ended (d).

SWCA has prepared the following scope of work to follow the provider services document obtained from OTHON to address the CE with potential for an Environmental Assessment (EA) and to fit into the TxDOT Environmental Compliance and Oversight System (ECOS) for environmental clearance. SWCA understands that engineering will be provided by OTHON, environmental studies and documentation will be provided by SWCA or IDCUS as indicated below, and public involvement will be conducted by others. These participants may be referred to as the project team below.

SERVICES TO BE PROVIDED BY THE PROJECT TEAM

The work to be performed by OTHON (the Engineer), SWCA, and others shall consist of providing environmental documents/studies public involvement, permit procurement, data collection analysis, mitigation and remediation, and monitoring for the project.

The Engineer is required to meet with the TxDOT-designated environmental coordinator on a monthly basis for progress tracking purposes. The Engineer shall submit minutes of the meeting summarizing the events of the meeting within seven calendar days after each meeting.

The Engineer shall prepare a project work schedule. The work schedule must incorporate an allocation of time for stage reviews of the environmental documents.

Each member of the Engineer's project team must complete the following Environmental Management System (EMS) e-Learning courses prior to working on the project:

1. Storm Water Compliance Requirements in Construction (ENV433)
2. EMS Awareness Training (ENV414)
3. AP&D Stage Gate Checklist (DES435)
4. Design Erosion & Sediment Control (EL4030)
5. EPIC Sheet (DES908)
6. PS&E Stage Gate Checklist (DES907)
7. How to Comply With Section 404 Permits (ENV457)
8. CGP Compliance and Enforcement (ENV432)

Information about these online courses may be accessed at: <https://www.txdot.gov/inside-txdot/division/environmental/ems-courses.html>.

The Engineer shall ensure that each member of the Engineer's project team has completed the required training listed above prior to working on the project. In addition, the Engineer shall ensure that the required training is repeated by each member of the project team based on the repeat requirements stated in the EMS training matrix that may be accessed at: <https://www.txdot.gov/inside-txdot/division/environmental/ems-courses.html>. SWCA will complete the required environmental (ENV) trainings.

The Engineer, together with SWCA, shall identify any potential impacts within the project corridor, including impacts to the nature, cultural, and human environment. Identification should include, but not be limited to all structures, burial grounds, neighborhood communities, historical landmarks, and undeveloped areas is required.

Analyze Existing Conditions

Using collected data and base maps, the Engineer shall develop an overall analysis of the existing conditions. The analysis shall include, but not be limited to the following:

- Locations of critical constraints

Alternatives

The Engineer shall identify and analyze potential adverse impacts.

Environmental mitigation (For example: Noise Walls, Storm Water Best Management Practices (BMP's), etc.)

Data Collection

The Engineer and SWCA shall conduct field reconnaissance and collect data as necessary and obtained from other agencies as required.

- Environmental Data

Environmental Constraints

The Engineer and SWCA shall consider impacts to environmentally sensitive sites during the process. Environmentally sensitive sites include natural, cultural, and the human environment. Examples are historic and archeological resources, burial grounds, neighborhood communities and residential areas, farmland, floodplains, wetlands, endangered species, rare habitats, wildlife corridors, wildlife crossings, parks and nature preserves, geologic features, undeveloped areas, and significant trees.

SOCIAL, ECONOMIC AND ENVIRONMENTAL STUDIES

Environmental Documentation

Each environmental service provided by the Engineer and project team shall have a deliverable. Deliverables shall summarize the methods used for the environmental services, and shall summarize the results achieved. The summary of results shall be sufficiently detailed to provide satisfactory basis for thorough review. All deliverables shall meet regulatory requirements for legal sufficiency, and shall adhere to the requirements for reports enumerated in the State's NEPA MOU.

A. Quality Assurance/Quality Control Review

For each deliverable, the Engineer and project team shall perform quality assurance quality control (QA/QC) reviews of environmental documents and on other supporting environmental documentation to determine whether documents conform with:

1. Current Environmental Compliance Toolkit guidance published by the State's Environmental Affairs Division and in effect as of the date of receipt of the documents or documentation to be reviewed;
2. Current state and federal laws, regulations, policies, guidance, agreements, and memoranda of understanding between the State and other state or federal agencies; and
3. FHWA and American Association of State Highway and Transportation Officials (AASHTO) guidelines contained in "Improving the Quality of Environmental Documents, A Report of the Joint AASHTO and American Council of Engineering Companies (ACEC) Committee in Cooperation with the Federal Highway Administration" (May 2006) for:
 - a. Readability, and
 - b. Use of evidence and data in documents to support conclusions.

Upon request, the Engineer and project team shall provide documentation that the QA/QC reviews were performed by qualified staff.

- B. Deliverables shall contain all data acquired during the environmental service. All deliverables shall be written to be understood by the public and must be in accordance with the State's Environmental Toolkit guidance, documentation standards, current guidelines, policies and procedures.
- C. Electronic versions of each deliverable will be written in software which is compatible and provided in a changeable format for future use. The Engineer and project team shall supplement all hard copy deliverables with electronic copies in searchable Adobe Acrobat™ (.pdf) format, unless another format is specified. Each deliverable shall be a single, searchable.pdf file that mirrors the layout and appearance of the physical deliverable. The Engineer and project team shall deliver the electronic files on CD-R, CD-RW media in Microsoft Windows format, or through the ftp site.
- D. When the environmental service is to apply for a permit (e.g., United States Coast Guard (USCG) or United States Army Corps of Engineers (USACE), the permit and all supporting documentation shall be the deliverable.
- E. Submission of Deliverables
 - 1. Deliverables shall consist of technical reports of environmental services performed in addition to documentation for a Categorical Exclusion (CE) determination, including the preparation of a Request for Classification form to classify the project as an Open Ended (d) list CE, if needed. SWCA anticipates approval as an Open Ended (d) list CE and provides the scope listed below based on that assumption.
 - 2. All deliverables will comply with all applicable state and federal environmental laws, regulations and procedures and include all items listed in the Environmental Document Review Checklist.
 - 3. On the cover page of each technical report, and for any memorandum corresponding to any CE determination it makes, the preparer shall insert the following language in a way that is conspicuous to the reader or include it in a CE project record: **“The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 16, 2014, and executed by FHWA and TxDOT.”**
- F. The preparer shall revise the deliverable:
 - 1. to include any commitments, findings, agreements, or determinations (e.g., wetlands, endangered species consultation, Section 106, or Section 4(f)), required for the Transportation Activity;
 - 2. to incorporate the results of public involvement and agency coordination; and
 - 3. to reflect mitigation measures resulting from comments received or changes in the Transportation Activity
- G. All photographs shall be 3.5” x 5” color presentation printed on matte finish photographic paper or 3.5” x 5” color presentation printed on matte white, premium or photo quality laser or inkjet paper.

All photographs shall be well focused and clearly depict details relevant to an evaluation of the project area. Provision of photographs shall be one original print of each image or electronic presentations of comparable quality. Comparable quality electronic photograph presentations shall be at least 1200 x 1600 pixel resolution. Photographs shall be attached to separately labeled pages that clearly identify project name; project identification (ID) number; address or Universal Transverse Mercator (UTM) of resource; description of the picture and direction of the photographic view. In addition to the hard-copy prints, an electronic version of each will be submitted with the same identification information as the hard-copy.

Technical Reports and Documentation

Definition of technical report and documentation for environmental services: a report, checklist, form, or analysis detailing resource-specific studies identified during the process of gathering data to make an environmental decision.

Technical reports and documentation will be produced before an environmental document (e.g., CE, EA) is prepared in order to identify issues early in the process. The project team will determine what technical reports and documentation are necessary for the project. Technical reports and documentation will be prepared with sufficient detail and clarity to support environmental determination(s). All technical reports shall be compliant with TxDOT Environmental Compliance Toolkits. The environmental document will reference the technical reports.

Environmental technical reports and documentation will include appropriate National Environmental Policy Act of 1969 (NEPA) or federal regulatory language in addition to the purpose and methodology used in delivering the service. Technical reports and forms will include sufficient information to determine the significance of impacts. The anticipated environmental technical reports and documentation are listed below:

- A. Biological Evaluation with Species Analysis Form and Tier 1 Assessment
- B. Air Quality Analysis
- C. Archeological Background Study
- D. Community Impacts Assessment
- E. Hazardous Materials Initial Site Assessment (ISA)
- F. Historic Resources Project Coordination Request (PCR)
- G. Indirect and Cumulative Impacts
- H. Natural Resources Surface Water Analysis Form and Waters of the U.S. Delineation Report
- I. Traffic Noise Analysis

Minimum Deliverables for all documents and technical reports: (Additional deliverables to be identified in a work authorization based on work assigned.)

- A. Draft Document
- B. Final Document

Community Impacts

Community Impacts includes environmental justice, limited English proficiency, and other issues as addressed in TxDOT Environmental guidance and toolkits.

SWCA will perform Community Impact Assessments screening including displacements, changes to access and travel pattern, changes to cohesion, and Environmental Justice analysis (in accordance with Executive Order 12898) and Limited English Proficiency analysis (in accordance with Executive Order 13166).

- A. Compile analysis to meet requirements of TA 6640.8A. Analysis will conform to applicable current State and FHWA guidance.
- B. Process for Community Impact Assessment will follow guidance provided in TxDOT's Community Impacts Assessment Toolkit.

Historic Resource Identification, Evaluation and Documentation Services

SWCA will perform limited non-archeological historic-age resource studies related to compliance with Section 106 and Section 110 of the NHPA (36 CFR 800). Prior to conducting formal historic resource investigations, a Project Coordination Requests (PCR) will be prepared and approved to determine if further studies are warranted. SWCA anticipates no additional studies will be warranted.

The PCR shall comply with the TxDOT Environmental Compliance Toolkits provided by the State's Environmental Affairs Division in effect as of the date of the receipt of the documents.

- A. SWCA shall revise the PCR to address comments by TxDOT ENV at no additional cost and may be required to integrate the findings into another environmental document. SWCA assumes responsibility for transmitting the findings to the Texas Historical Commission (THC) and any appropriate consulting parties, and for transmitting THC and consulting parties' comments to the Engineer's Technical Expert (SWCA). Engineer's Technical Expert is an institution, firm, individual, or team that provides professional scientific services, including but not limited to archeologists, biologists, geologists, historians, or other environmental professions that conduct environmental or cultural assessments required by state or federal law for transportation projects. SWCA assumes responsibility for any further historic, non-archeological surveys that arise from the findings of the PCR.
- B. SWCA shall conduct tasks associated with public involvement as requested during the historic resources reporting phase and conforming to the methodology outlined in the TxDOT Environmental Compliance Toolkits.

SWCA shall contact interested parties in order to determine local knowledge of historic resources in the project area. Interested parties include but are not limited to: Certified Local Governments, Historic Preservation Offices, County Historical Commissions, Main Street Managers, the Historic Bridge Foundation, and other consulting parties.

Archeological Background Studies

Due to the highly disturbed nature of the proposed undertaking, SWCA will conduct an Archeological Background Study of the project area. The goal will be to gather all available information regarding previously conducted cultural resources surveys; previously documented cultural resources including archaeological sites and cemeteries; identify the potential for these resources to

- affect the current development, and determine management recommendations to satisfy all applicable Federal or State cultural resources laws. A. The Background Study shall be produced by a professional archeologist as defined in 13 TAC §26.4(2).
- B. The Archeological Background Study shall conform to the current Review Standard for Archeological Background Studies, available from the Environmental Compliance Toolkit.
- C. Unless the Engineer has previously completed an Archeological Background Study for the project, the Archeological Background Study must define and consider all alternatives selected for detailed study, including all existing right of way, all proposed new right of way, easements (temporary and permanent), and any other project-specific location. The Archeological Background Study shall consider the likely depth of impacts resulting from the proposed project. The location of all alternatives selected for detailed study shall be presented on a map or maps as part of the Archeological Background Study.
- D. For projects in which an Archeological Background Study has already been completed by the Engineer and the project has materially changed –affecting the project limits, proposed new right of way (if any), easements (if any), any other project-specific location, and/or the depth of impacts – the Archeological Background. Study shall incorporate the previous study by reference and focus on the project changes.
- E. To conduct the Archeological Background Study, the professional archeologist shall undertake a review of existing data, including, but not limited to, the Texas Archeological Sites Atlas, geologic maps, soil maps, Potential Archeological Liability Map (PALM), historical aerial photographs, and historical maps of the project area and a 0.6-mile (1 km) radius of the project area. Based on this review, the Archeological Background Study shall identify and plot on a map the areas that require field investigation to evaluate the project's effects on archeological resources and cemeteries and shall identify the areas in which the proposed project would have no effect on archeological resources and cemeteries. The Archeological Background Study shall identify any areas proposed for field investigation where impacts are deep, extending beyond three feet in depth.

Air Quality Studies

IDCUS shall prepare the air quality section in accord with the current version of the State's Air Quality Handbook, and Air Quality toolkit. If the Air Quality Handbook requires it, the administrative record must contain and IDCUS shall prepare the following air quality elements in the format prescribed in the specific SOP documents or other Air Quality toolkit documents:

- A. Conformity report form and applicable coordination,
- B. A traffic air quality analysis (TAQA) statement that Average Annual Daily Traffic (AADT) projections for the project do not exceed 140,000 vehicles per day (VPD),
- C. Qualitative Mobile Source Air Toxics (MSAT) analysis,
- D. CMP analysis (other operational improvement projects near the project will be provided by the county),
- E. Standard construction emissions disclosure,
- F. Applicable disclosure statements in the environmental document as prescribed in the SOP for Preparing Air Quality Statements, and

- G. Response to public comments received on air quality issues.

Traffic Noise Studies

IDCUS shall:

- A. Perform a traffic noise analysis in accordance with the current version of the State's (FHWA approved) "Guidelines for Analysis and Abatement of Roadway Traffic Noise" The current version of the guidance is located on the State's Traffic Noise Toolkit website. Noise analyses shall be performed for all alternatives.
- B. Comply with all noise policy, guidelines and standards found on the State's Traffic Noise Toolkit website. The county will provide the existing and predicted (future) traffic data.
- C. Project location site visit to identify adjacent, land use development and photo document representative receivers that might be impacted by highway traffic noise and may benefit from feasible and reasonable noise abatement.
- D. Determine existing and predicted noise levels for representative receivers, as follows:
 - 1. For transportation activities on new location, take field measurements of existing noise levels. Field measurements shall be accomplished with sound meters that meet or exceed American National Standards Institute (ANSI) S1.4-1983, Type 2.
 - 2. For transportation activities not on new location, take field measurements of existing noise levels, perform computer modeling of existing noise levels and predicted (future) noise levels.
 - 3. Computer modeling shall be accomplished with the latest FHWA approved Traffic Noise Model (TNM) software program which must be purchased at the expense of the Engineer's Technical Expert from the software distributor.
- E. Identify impacted receivers in accordance with the absolute and relative impact criteria.
- F. Consider and evaluate all required noise abatement measures for impacted receivers in accordance with the feasible and reasonable criteria.
- G. Propose noise abatement measures that are both feasible and reasonable.
- H. Determine predicted (future) noise impact contours for transportation activities where there is adjacent undeveloped property where residential or commercial development is likely to occur in the near future.
- I. Validate the TNM noise model with field noise measurements performed at representative noise receivers located adjacent to the proposed project. Field measurements will be conducted in accordance with State noise policy guidance. As part of the TNM model validation process, the noise analysis must include one noise measurement with simultaneous traffic counts for up to two receptor locations for model validation purposes. Documentation consisting of noise monitoring results, traffic counts, and comparisons to the existing TNM noise model must be included in the traffic noise technical report and project files.
- J. One person will attend one public meeting, one public hearing, one public meeting dress rehearsal, and one public hearing dress rehearsal.

- K. One IDCUS and one SWCA staff person will attend one noise workshop and one pre-meeting.

Clean Water Act Section 303(d) and Other Impaired Waters

For a CE project, no project-specific analysis is required as part of the environmental review process under Section 303(d) of the Clean Water Act for the reasons provided below:

To date, TCEQ has not identified (through either a total maximum daily load (TMDL) or the review of projects under the TCEQ MOU) a need to implement control measures beyond those required by the construction general permit (CGP) on road construction projects. Therefore, compliance with the project's CGP, along with coordination under the TCEQ MOU for certain transportation projects, collectively meets the need to address impaired waters during the environmental review process. As required by the CGP, the project and associated activities will be implemented, operated, and maintained using best management practices to control the discharge of pollutants from the project site.

Clean Water Act Section 404

- A. SWCA shall identify all waters within the boundaries of the project area.
- B. SWCA shall make a preliminary determination of USACE jurisdiction. Restrict the level of effort to identification without formal delineation.
- C. SWCA shall delineate waters of the United States (WOTUS), including wetlands.
 - 1. Provide documentation which shall include all records from field work and a compilation of field documentation for all WOTUS, including wetland delineations. Wetland delineations shall be performed in accordance with the current USACE Wetlands Delineation Manual (Technical Report Y-87-1) and, the appropriate regional supplement, including the Great Plains, Arid West, or Atlantic and Gulf Coastal Plain Supplement to Technical Report Y-87-1.
 - 2. SWCA will use a real-time differentially corrected global positioning system (GPS), or equivalent capable of achieving sub-meter accuracy, to geographically reference features, such as data points and wetland and ordinary high-water mark (OHWM) boundaries.
- D. Map the boundaries of all WOTUS using field-collected and post-processed global positioning system. SWCA will provide a kmz file of the WOTUS boundaries within 48 hours of the completion of the delineation.
- E. When applying for a permit, the permit and supporting documentation shall be the report and deliverable.
- F. Draft and Final Deliverable.
 - 1. SWCA shall produce a draft and final delineation report for WOTUS including wetlands. The draft report will be submitted for review and approval by the USACE, if applicable. In the final report, USACE comments from the draft report. The revised final report shall be delivered within ten days of receipt of comments from the USACE.
 - 2. The location of all sites, cities, villages, highways, rivers and other features or place names discussed in the text and situated in the project locale shall be shown on the appropriate figure. All tables, figures and maps shall have a number, title, appropriate explanatory note and a

source reference. In addition, where applicable, figures and all maps shall display a title, north arrow, scale, legend, and source reference.

3. The report shall follow the most recent template provided in the Environmental Compliance Toolkit.

Floodplain Impacts

SWCA shall determine whether the Transportation Activity has the potential to affect floodplains by completing the Surface Water Analysis Form. No project-specific analysis is required as part of the environmental review process under Executive Order 11988, Floodplain Management for the reasons provided below:

The department implements this Executive Order on a programmatic basis through its Hydraulic Design Manual. Design of this project will be conducted in accordance with the department's Hydraulic Design Manual. Adherence to the TxDOT Hydraulic Design Manual ensures that this project will not result in a "significant encroachment" as defined by FHWA's rules implementing Executive Order 11988 at 23 CFR 650.105(q).

Stormwater Permits (Section 402 of the Clean Water Act)

No project-specific analysis is required as part of the environmental review process under Section 402 of the Clean Water Act for the reasons provided below:

Since Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit (CGP) authorization and compliance (and the associated documentation) occur outside of the environmental clearance process, compliance is ensured by the policies and procedures that govern the design and construction phases of the project. The Project Development Process Manual and the Plans, Specifications, and Estimates (PS&E) Preparation Manual require a storm water pollution prevention plan (SWPPP) be included in the plans of all projects that disturb one or more acres. The Construction Contract Administration Manual requires that the appropriate CGP authorization documents (notice of intent or site notice) be completed, posted, and submitted, when required by the CGP, to TCEQ and the municipal separate storm sewer system (MS4) operator. It also requires that projects be inspected to ensure compliance with the CGP.

The PS&E Preparation Manual requires that all projects include Standard Specification Item 506 (Temporary Erosion, Sedimentation, and Environmental Controls), and the "Required Specification Checklists" require the current version of Special Provision 506 on all projects that need authorization under the CGP. These documents require the project contractor to comply with the CGP and SWP3, and to complete the appropriate authorization documents.

SWCA shall:

- A. Describe the need to use the TPDES General Permit, TX 150000. The text will describe how the project will comply with the terms of the TPDES, including the Stormwater Pollution Prevention Plan. SWCA will prepare as necessary the SWPPP to address construction, including best management practices (BMPs). SWCA will use information provided by the Engineer on the location of all proposed soil disturbance activities to determine installation locations for pre-construction BMPs (e.g., vegetation preservation, siting construction entrances, silt fencing, filter berms, temporary seeding, and rock berms). The SWPPP will also address post-construction BMPs such as grading to control erosion, permanent seeding, mulching, and soil retention.

- B. Describe the need for Municipal Separate Storm Sewer System (MS4) notification. List MS4 participating municipalities. SWCA will prepare a Notice of Intent (NOI) and provide it for final review and submittal to TCEQ and the municipalities associated with the MS4.

USACE Permits

- A. Section 10 of the Rivers and Harbors Act (33 USC 403). SWCA has determined that a Section 10 permit is not required and is not included in this proposal.
- B. Section 404 of the Clean Water Act (33 USC 1344). SWCA shall determine whether the Transportation Activity requires a Section 404 permit (Regional General or Nationwide (NWP) or Individual Permit (IP)) and prepare and submit a permit application (i.e., Regional General Permit (RGP) application, Pre-Construction Notification (PCN), or IP application) to USACE and obtain the permit. RGP applications, PCNs, and IP applications will be prepared in accordance with current USACE policies and regulations. SWCA assumes that the project will require a NWP with PCN and shall prepare the documentation in accordance with the TxDOT Documentation Standard for USACE Pre-Construction Notification provided in the Environmental Compliance Toolkit.
- C. An IP is not anticipated for this project.
- D. SWCA shall provide documentation (including all original correspondence) of consultation with USACE and TCEQ.

Fish and Wildlife Coordination Act (FWCA)

SWCA shall identify water body modifications and impacts to wildlife. The Fish and Wildlife Coordination Act (FWCA) applies to projects that would result in the control or modification of a natural stream or body of water and would require a Section 404 Individual Permit. Complying with the terms of a nationwide permit and following required processes and implementation terms when acquiring a permit typically satisfy FWCA coordination requirements. SWCA will document compliance.

Biological Evaluation for Threatened or Endangered Species

SWCA will prepare a Species Analysis Form and update the Biological Evaluation Form and Tier I Site Assessment and required attachments for the project.

- A. Surveys for Protected Species or Habitat of Protected Species based on the most current State and TPWD Memorandum of Understanding (MOU Effective 2013) and USFWS survey protocols are not anticipated. SWCA will review the USFWS Information for Planning and Consultation (IPaC) tool, county-specific lists of threatened and endangered (T&E) species and their habitat requirements. SWCA shall:
 - 1. Perform surveys of habitat of protected species. This shall include:
 - a. All species listed by the United States Fish and Wildlife Service (USFWS) as threatened or endangered or proposed for listing as threatened or endangered (50 CFR 17.11-12),
 - b. All species that are candidates for review for listing by USFWS as threatened or endangered (per most recently updated list in Federal Register),

- c. Species listed as threatened or endangered species or species of greatest conservation need (SGCN) by the State of Texas Threatened and Endangered Species Listings, Texas Park and Wildlife Department (TPWD),
 - d. Species protected by the Migratory Bird Treaty Act (50 CFR 10.13) and the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c).
2. Examine existing data to determine the likelihood that rare species, protected species, their habitat, or designated critical habitat (per 50 CFR §17.94-95) could be impacted by the Transportation Activity. Existing data shall include the Element Occurrence Identification (EOID) records of the TPWD Natural Diversity Database, following the Guidelines set forth in the most current version of TPWD's Guidelines for TXNDD Data Analysis in TxDOT Environmental Documents.
 3. Perform an effect determination pursuant to the Endangered Species Act (ESA) for all federally listed species. A determination of impact must be included for all state-listed species. The determination of effect and impact must be supported by evidence, and may require a detailed assessment. Any technical reports used to support the determination(s) must be referenced.
 4. Determine whether critical habitat is present in the study area and whether the Transportation Activity will affect that critical habitat.
 5. Perform species-specific habitat surveys, presence or absence surveys for protected species, or critical habitat (per 50 CFR 17.94-95) and rare species. For karst invertebrate species, a USFWS permitted biologist must perform the habitat assessment for listed karst assessment per USFWS protocols.
 6. Conduct surveys for the presence or absence of protected species according to protocols adopted by USFWS and TPWD for all protected species for which such protocols have been established.
 7. Personnel conducting presence or absence surveys for protected species shall hold appropriate USFWS and TPWD permits at the time surveys are performed.
 8. Conduct presence or absence surveys during the time of the year appropriate for each species.
 9. Furnish completed Biological Evaluation Form and Engineer's Technical Expert's field notes.
 10. Coordinate between USFWS or TPWD as directed by the State to ensure proper rules, regulations and policies are followed for biological services.
- B. Habitat Analysis and Characterization of Project Study Area. SWCA shall perform an analysis and characterization of habitat and habitat impacts for the study area and documented on the Biological Evaluation Form. The habitat analysis shall be based on the most current State and TPWD MOU and associated Programmatic Agreements.
1. For transportation activities involving no new right-of-way or easements, including temporary easements, this includes:
 - a. The habitat descriptions of habitat types (e.g., forested, prairie, riparian, floodplain, rangeland, agricultural) in the study area are based upon the 2013 MOU.
 - b. The habitat description shall indicate the vegetative type(s) listed for the study area in the 2013 MOU.

- c. The habitat description shall include a description of the existing vegetation within and adjacent to the right-of-way, as per the 2013 MOU.
 - d. The habitat description shall describe habitat for protected species if such habitat occurs within or adjacent to the right-of-way.
 - e. The description shall be supplemented with topographic maps (based on USGS 7.5' maps, aerial photos, on-site photographs and per the 2013 MOU.
 - (1) Maps and aerial photos shall be annotated to indicate the locations and areas of distinct vegetative types if any have been identified during field inspections.
 - (2) Photographs shall illustrate representative vegetation for each vegetation type. Aerial photographs (with dates) shall be provided when available.
2. If the vegetation within the right-of-way does not match the description as per the 2013 MOU or if there is an unusual difference between the vegetation in the right-of-way and outside the right-of-way, details shall be included in the description to clearly explain the differences in vegetative content between the existing vegetation and the 2013 MOU 4) For transportation activities involving new right-of-way or easements, including temporary easements, the habitat description shall address the entire study area. For projects with multiple alternatives, all alternatives shall be described to the same level of detail. If lack of access to the new location right-of-way limits field observation for the habitat description, existing published sources shall be used to provide an estimate. All elements of description required for projects with no new right-of-way (above) shall be included. Land use within and outside the proposed right-of-way shall be described. In addition, the description of vegetation in the new right-of-way or easements shall include the following:
- a. Dominant Species for each vegetation stratum (i.e., tree, shrub, vine, herbaceous [grass and forbs]) present,
 - b. Height of trees (range), if present,
 - c. Diameter at Breast Height (DBH) of trees (range and average), if present,
 - d. Percent canopy cover of trees, if present,
 - e. Acreage for each vegetation type present.
3. The habitat analysis shall contain a description of anticipated impacts to the following:
- a. Any vegetation, broken down by plant community (as above),
 - b. Unusual vegetation features (as above),
 - c. Special habitat features (as above),
 - d. Habitat for any protected species (as above),

Note: The description of anticipated impacts shall be based on impacts that can be predicted as a result of construction activities and the kind(s) of facility proposed for the Transportation Activity.

- C. Survey Reports and Habitat Analyses included in the appendices of the Biological Evaluation Form must follow all guidelines and requirements as specified by the TxDOT Environmental Compliance Toolkits.

Invasive Species

Compliance with EO 13112 on Invasive Species is required for projects that are federally funded and result in ground disturbance. SWCA will document that this section does not apply.

Essential Fish Habitat

The project is not federally funded, not located within tidally influenced waters, and will not impact Essential Fish Habitat (EFH). SWCA assumes that no further action is necessary and will document findings.

Beneficial Landscaping

The project is not federally funded and is not subject to the Executive Memorandum on Beneficial Landscaping of April 26, 1994 as per the Ecological Resources Handbook (TxDOT Environmental Online Toolkit).

Initial Assessment of Hazardous Materials Impacts

SWCA shall:

- A. perform an Initial Site Assessment (ISA) for potential hazardous materials impacts for the limits of the study area. SWCA is responsible acquiring the latest version of TxDOT's Hazardous Materials Initial Site Assessment (ISA) located in the Hazardous Materials Toolkit (<http://www.txdot.gov/inside-txdot/division/environmental/compliance-toolkits/haz-mat.html>).
 - 1. Note: The ISA shall determine the potential for encountering hazardous materials in the study area, including possible environmental liability, increased handling requirements (e.g. soil or groundwater), and potential construction worker health and safety issues.
 - 2. Note: SWCA is responsible for reviewing and being familiar with the State's guidance related to the development of the ISA and the Hazardous Material process. All guidance and information related to this can be found on the Hazardous Materials Toolkit.
 - 3. Note: No lead paint or asbestos surveys are anticipated; no such surveys are included.
- B. Produce and submit a completed ISA using the State's ISA Environmental Compliance Toolkit guidance format.
- C. SWCA's completed ISA shall include, when applicable, full copies of list search reports, including maps depicting locations, copies of agency file information, photographs, recommendations, and any other supporting information gathered by SWCA to complete the ISA. The ISA will include:
 - 1. Current and historic aerial and topographic maps.
 - 2. Sanborn Fire Insurance Maps, if available.
 - 3. Current and historic land use information.

4. Regulatory database search.
 5. Oil/gas well database search.
- D. Based on the ISA information, SWCA shall provide a report discussing the known or potential hazardous materials impacts suitable for inclusion in the environmental document. The report of hazardous materials impacts shall include, when applicable:
1. A concise summary of relevant information gathered during the ISA, including sufficient information to show that the study area for the Transportation Activity was adequately investigated for known or potential hazardous material contamination.
 2. A concise description of the scope of the hazardous materials ISA, disclosure of any limitations of the assessment, and a statement indicating who performed the assessment.
 3. A concise summary of the findings of the assessment for each alternative considered, along with an opinion of the potential of an identified site to impact the project during construction.
 4. A discussion of any commitments recommended for performing further investigation of suspect areas, and justification for postponement of further investigation.
 5. A summary of efforts to be employed to avoid or minimize involvement with known or suspected hazardous material contamination sites during construction, and justification for not avoiding contaminated sites within the preferred alternative or corridor alignment.
 6. Disclosure of known or suspected hazardous material contamination that is anticipated to be encountered during construction.
 7. A discussion of any required or recommended special considerations, contingencies or provisions to handle known or suspected hazardous material contamination during right-of-way negotiation and acquisition, property management, design and construction.
 8. A summary of any early coordination or consultation conducted with the regulatory agencies, local entities or property owners.
 9. A discussion of any further hazardous materials related coordination with, and approvals or permits required from, the regulatory agencies or other entities.
- E. Should the findings of the ISA conclude that additional investigation, special considerations, or other commitments are required during future stages of project development, SWCA shall review those findings and commitments prior to completing the hazardous materials discussion for the environmental document.

Indirect and Cumulative Impacts (ICI) Analysis

(This scope is for the corresponding section(s) of the CE documentation, EA, or EIS.)

SWCA shall provide all indirect and cumulative impacts (ICI) that meet the requirements set forth in the State's Environmental Compliance Toolkit guidance.

SWCA will complete a Risk Assessment for Indirect Impacts for the project. The assessment includes seven questions with "yes", "no" or "unknown" checkboxes. The answer to each checkbox determines if

you proceed to the next question. The purpose of the assessment is to determine if an indirect impacts analysis is required for the proposed project. SWCA will provide supporting text to this analysis.

SWCA will complete a Risk Assessment for Cumulative Impacts for the project. The assessment includes three questions with “yes” or “no” checkboxes. The answer to each checkbox determines if you proceed to the next question. The purpose of the assessment is to determine if a cumulative impacts analysis is required for the proposed project. SWCA will provide supporting text to this analysis.

Reference Documents

SWCA shall adhere to the content of TxDOT’s On-Line Environmental Compliance Toolkit guidance.

- A. Perform all work in accordance with the latest practices, criteria, specifications, policies, procedures, and Environmental Compliance Toolkits. All documents shall be sufficient to satisfy the current Environmental Compliance Toolkits available from the State.
- B. Produce a complete and acceptable deliverable for each environmental service performed for environmental documentation.
- C. Incorporate environmental data into identification of alternatives.

NEPA Documentation

SWCA will prepare the CE Classification document. SWCA will also coordinate with TxDOT to upload project information and technical reports to TxDOT’s Environmental Compliance Oversight System (ECOS). SWCA will assist with implementation of Environmental Permits Issues and Commitments (EPIC) for project compliance.

Project Management and Meetings

SWCA will provide a monthly progress report for 18 months for the Project. SWCA will attend up to 50 project calls during the project life cycle.

One SWCA staff member will attend one public meeting and one public meeting dress rehearsal as well as one public hearing and one public hearing dress rehearsal. One SWCA staff member will attend up to 10 in-person project coordination meetings in the Houston area, 5 with the Design Team and 5 with TxDOT.

ASSUMPTIONS

- SWCA assumes that the Project will ultimately be classified as a CE and will not require preparation or publication of a Finding of No Significant Impact (FONSI).
- SWCA assume up to 5 calls with TxDOT to work the Project through ECOS.
- OTHON will provide coordination with TxDOT and/or assist with coordination where delegated to SWCA for development of the CE and analyses.
- OTHON will provide all project documents such as digital design files, GIS shapefiles, traffic data for existing and the design year.
- OTHON will obtain right-of-entry for field surveys.
- OTHON will provide plan, profile and cross-sections scaled to 8-1/2 by 11 inches for USACE permitting.

- OTHON will provide erosion and sedimentation plans, project description and purpose and need discussion for USACE permitting.
- OTHON will provide the location of all proposed soil disturbance activities to determine installation locations for pre-construction BMPs (e.g., vegetation preservation, siting construction entrances, silt fencing, filter berms, temporary seeding, and rock berms). OTHON will prepare the necessary plans and provide the necessary signatures.
- SWCA assumes that each technical report prepared will be provided to OTHON for one round of review prior to submittal to TxDOT.
- This scope does not include lead-based paint or asbestos surveys.
- It is assumed that 24-hour traffic volumes are less than 140,000 vehicles and the project is exempt from Hot Spot Analysis and CO TAQA. Based on traffic volumes, it is anticipated that only a qualitative MSAT analysis would be required for the proposed project.
- The determination of predicted (future) noise impact contours for transportation activities in adjacent undeveloped property where development is likely to occur in the near future is not included. Separate scope and cost estimate can be provided if needed.
- Scope includes two revisions to the noise model and barrier analysis.
- A detailed barrier design will require additional analysis and is not included in the current scope and fee.
- Costs and scope do not include the development of a wetland mitigation plan. Separate scope and cost estimate can be provided if mitigation is required.
- SWCA assumes that the proposed action will have no effect on listed species, or no listed species are present.
- No agency meetings will be required.
- Costs for additional surveys due to changes in the project area outside the initial field survey efforts are not included in this estimate.
- No archaeological field investigation is included in this proposal. If the agencies require field investigation, a change order would be required.
- No viewshed or other indirect effect study is included for aboveground resources.
- Assumes one Archeological Background Study of the project area. Changes to the design of the project may require a change order to update the study.
- No protected EFH, 4(f), or 6(f) properties would be impacted by the project.

COST ESTIMATE SUMMARY

SWCA will conduct authorized tasks described in this proposal on a time and materials basis, not to exceed \$150,251.20. Invoicing will be once per month. SWCA can begin the project immediately upon execution of a contract and notice to proceed.

Table 1. Cost estimate by task.

TASK / DESCRIPTION	COST
Biological Evaluation with Threatened and Endangered Species Analysis Form, Tier 1 Assessment, Habitat Analysis, Invasive Species, Beneficial Landscaping	\$13,256.00
Air Quality Analysis	\$10,300.60
Archeological Background Study	\$3,741.00
Community Impacts Assessment	\$5,652.00
Hazardous Materials Initial Site Assessment (ISA)	\$5,092.00
Historic Resources Project Coordination Request (PCR)	\$2,130.00
Indirect and Cumulative Impacts	\$2,452.00
Natural Resources: Surface Water Analysis Form, CWA Section 404 Waters of the U.S. Delineation Report, Floodplain Impacts, Essential Fish Habitat	\$6,493.00
Traffic Noise Analysis, Modeling & Workshops	\$45,660.60
USACE Permits: CWA Section 404 NWP with PCN, CWA Section 303(d) Impaired Waters, CWA Section 402 Stormwater, FCWA Coordination	\$16,598.00
NEPA Documentation	\$6,428.00
Project Management and Meetings	\$27,917.00
Other Direct Expenses	\$4,531.00
TOTAL	\$150,251.20

If you have any questions or require any additional information, please call 281.617.3217 or e-mail (patricia.riley@swca.com). Thank you for the opportunity to assist with this project.

Sincerely,
SWCA Environmental Consultants



Patricia Riley
Senior Project Manager



GEOTEST ENGINEERING, INC.

Geotechnical Engineers & Materials Testing

5600 Bintliff Drive

Houston, Texas 77036

Telephone: (713) 266-0588

Fax: (713) 266-2977

Proposal No. 1140527199

March 12, 2021

Mr. Joel L. Schramm, P. E.
Director of Engineering
OTHON Engineering
575 N. Dairy Ashford Road; Ste. 650
Houston, TX 77079

**Reference: Proposal for Geotechnical Investigation
 SH 99 Northbound Frontage Road
 From Westheimer Parkway to Cinco Ranch Boulevard
 Fort Bend County, Texas**

Dear Mr. Schramm:

In accordance with your request, Geotest Engineering, Inc. (Geotest) is pleased to present this proposal for the geotechnical investigation for the proposed SH 99 Northbound Frontage Road from Westheimer Parkway to Cinco Ranch Boulevard in Fort Bend County, Texas. The proposed improvements include approximately 3,750 linear feet of new pavement for the proposed north bound frontage road and associated storm sewer trunk line along the alignment. The project also includes a linear in-line detention pond, approximately 10 to 15-foot deep, along the project alignment.

Further, the project also includes extension of existing 3'-8"x8' box culvert and headwalls/wingwalls under the new frontage road at the ditch crossing. It is our understanding that the existing ditch depth is about 15 feet. The riprap along the ditch will be extended east approximately 100 feet.

Based on the information provided by Othon, all the borings will be performed in the grass area per TxDOT criteria.

Purpose and Scope

The purposes of this study are to perform a geotechnical investigation and develop geotechnical recommendations for the proposed improvements.

The scope of services is based on the information provided to us by your e-mail on March 4, 2021 and our conversations on March 10, 2021, and consists of the following:

- Drill and sample five (5) soil borings to depths ranging from 25 to 30 feet in accordance with TxDOT criteria. The details of boring program are given below and also shown on attached plan of borings, presented on Figure 1:
 - Three (3) soil borings each to a depth of 25 feet for storm sewer trunk line, detention pond and paving;

- Two (2) soil borings, each to a depth of 30 feet, for existing box culvert extension and ditch improvements

Texas Cone Penetration (TCP) tests will be performed on every 5-foot interval for all borings. It is assumed that the proposed borings will be located and tied in by you or your surveyor.

- Perform laboratory tests on representative soil samples to evaluate the engineering properties of the soils.
- Perform engineering analyses to develop geotechnical recommendations for the proposed storm sewer, pavement, and culverts.
- Submit a geotechnical report containing a plan showing the locations of the borings, Wincore logs and recommendations as outlined above.

Schedule and Fees

We should be able to start field work within one (1) week after receiving your written authorization or one (1) week after receiving the Right of Way permission whichever is latest. The field work will be complete in about one (1) week, barring bad weather. The laboratory tests will be completed in about four (4) weeks. The geotechnical report, which will include field and laboratory data and design recommendations, will be submitted in about eight (8) weeks after completion of field work.

Based on the scope of work outlined above, the cost of the field investigation, laboratory testing, engineering analyses, and a geotechnical report will be a not to exceed a cost of \$21,047.14. The cost breakdown is provided in Attachment No. E.

We appreciate the opportunity to submit this proposal. Formal authorization is required for our services. This may be provided by signing in the space provided below and returning one copy for our files.

Very truly yours,
GEOTEST ENGINEERING, INC.

B.C. 
Mohan Ballagere, P.E.
Vice President

MB\ego

Copies Submitted: (1)

Enclosures:

Proposed Plan of Borings – Figure 1
Attachment No. 1 – Cost Breakdown

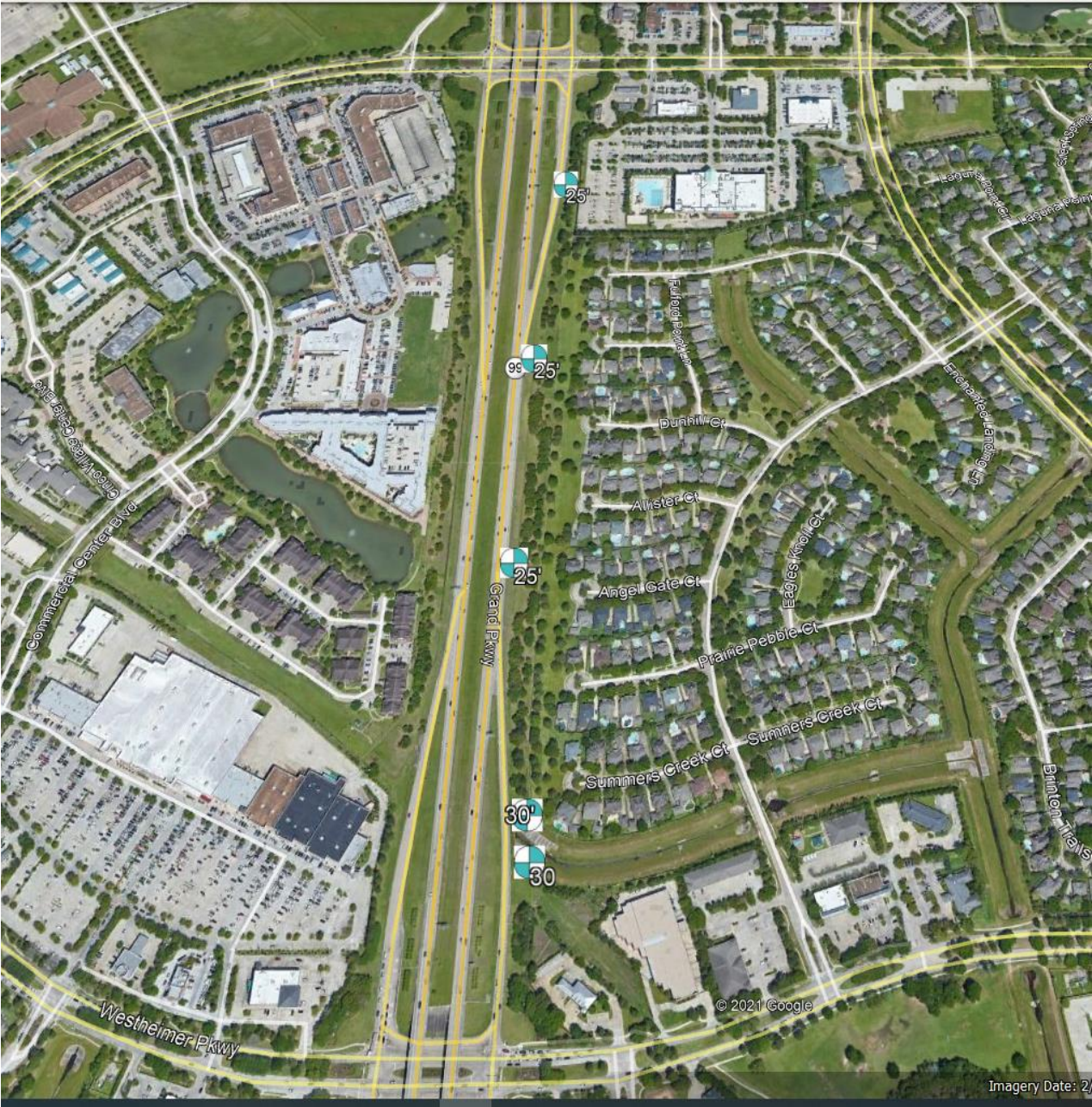
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ACCEPTED BY: _____

PRINTED NAME: _____

TITLE: _____

DATE: _____



Legend	Geotest Engineering, Inc.
 Boring	SH 99 Northbound Frontage Road From Westheimer Parkway to Cinco Ranch Blvd PROPOSED PLAN OF BORINGS