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 DE Corp., (hereinafter "Consultant"), a company authorized to conduct business in the State of Texas.

W I T N E S S E T H

WHEREAS, County desires that Consultant provide professional engineering services for improvements to the SH 99 Frontage Road (Northbound) under Project No. 20320x of the Fort Bend County Mobility Program (hereinafter "Services") pursuant to SOQ 14-025; and

WHEREAS, County has determined Consultant is the most highly qualified provider of the desired Services on the basis of demonstrated competence and qualifications, and County and Consultant 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, Consultant 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

Consultant shall render the professional engineering services as described in Consultant's Proposal dated August 29, 2022, attached hereto as Exhibit A, and incorporated herein for all purposes.

Section 2. Personnel

2.1 Consultant 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 Consultant 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 Consultant shall have such knowledge and experience as will enable them to perform the duties assigned to them. Any employee of Consultant 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 The Maximum Compensation for the performance of Services within the Scope of Services described in Exhibit A is one million five hundred twenty-nine thousand nine hundred twenty dollars and no/100 ($1,529,920.00) 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 Consultant 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 Consultant based on the following procedures: Upon completion of the tasks identified in the Scope of Services, Consultant 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 Consultant 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 one million five hundred twenty-nine thousand nine hundred twenty dollars and no/100 ($1,529,920.00) specifically allocated to fully discharge any and all liabilities County may incur.

4.2 Consultant does further understand and agree, said understanding and agreement also being of the absolute essence of this Agreement, that the total maximum compensation that Consultant may become entitled to and the total maximum sum that County may become liable to pay to Consultant shall not under any conditions, circumstances, or interpretations thereof exceed one million five hundred twenty-nine thousand nine hundred twenty dollars and no/100 ($1,529,920.00).

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, 2026. Consultant 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 Consultant 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 Consultant 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 Consultant 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 Consultant 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. Consultant'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 Consultant.

Section 8. Ownership and Reuse of Documents

All documents, data, reports, research, graphic presentation materials, etc., developed by Consultant 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. Consultant shall promptly furnish all such data and material to County on request.

Section 9. Inspection of Books and Records

Consultant will permit County, or any duly authorized agent of County, to inspect and examine the books and records of Consultant 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, Consultant 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. Consultant shall provide certified copies of insurance endorsements and/or policies if requested by County. Consultant 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. Consultant 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 Consultant shall contain a waiver of subrogation in favor of County and members of Commissioners Court. For Commercial General Liability, the County shall be named as an Additional Insured on a Primary & Non-Contributory basis.

10.3 If required coverage is written on a claims-made basis, Consultant 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 Consultant 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 Consultant 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 Consultant 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 Consultant) publicly known or is contained in a publicly available document; (b) is rightfully in Consultant'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 Consultant who can be shown to have had no access to the Confidential Information.

12.2 Consultant agrees to hold Confidential Information in strict confidence, using at least the same degree of care that Consultant 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. Consultant 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, Consultant shall advise County immediately in the event Consultant 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 Consultant will at its expense cooperate with County in seeking injunctive or other equitable relief in the name of County or Consultant against any such person. Consultant agrees that, except as directed by County, Consultant 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, Consultant will promptly turn over to County all documents, papers, and other matter in Consultant's possession which embody Confidential Information.

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

12.5 Consultant 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 Consultant

13.1 In the performance of work or services hereunder, Consultant 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 Consultant 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, 1st Floor Richmond, Texas 77469
Consultant:	DE Corp. 3100 West Alabama Houston, Texas 77098

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

Consultant 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, Consultant shall furnish County with certification of compliance with said laws, statutes, ordinances, rules, regulations, orders, and decrees above specified.

Section 16. Standard of Care

Consultant 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, Consultant 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 Consultant 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 Consultant 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

For purposes of sections 2252.152, 2271.002, and 2274.002, Texas Government Code, as amended, Consultant hereby verifies that Consultant and any parent company, wholly owned subsidiary, majority-owned subsidiary, and affiliate:

25.1 Unless affirmatively declared by the United States government to be excluded from its federal sanctions regime relating to Sudan or Iran or any federal sanctions regime relating to a foreign terrorist organization, is not identified on a list prepared and maintained by the Texas Comptroller of Public Accounts under Section 806.051, 807.051, or 2252.153 of the Texas Government Code.

25.2 If employing ten (10) or more full-time employees and this Agreement has a value of $100,000.00 or more, Consultant does not boycott Israel and is authorized to agree in such contracts not to boycott Israel during the term of such contracts. "Boycott Israel" has the meaning provided in section 808.001 of the Texas Government Code.

25.3 If employing ten (10) or more full-time employees and this Agreement has a value of $100,000.00 or more, Consultant does not boycott energy companies and is authorized to agree in such contracts not to boycott energy companies during the term of such contracts. "Boycott energy company" has the meaning provided in section 809.001 of the Texas Government Code.

25.4 If employing ten (10) or more full-time employees and this Agreement has a value of $100,000.00 or more, Consultant does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association and is authorized to agree in such contracts not to discriminate against a firearm entity or firearm trade association during the term of such contracts. "Discriminate against a firearm entity or firearm trade association" has the meaning provided in section 2274.001(3) of the Texas Government Code. "Firearm entity" and "firearm trade association" have the meanings provided in section 2274.001(6) and (7) of the Texas Government Code.

Section 26. Human Trafficking

BY ACCEPTANCE OF AGREEMENT, CONSULTANT 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.

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	DE CORP.
_____	_____
KP George, County Judge	Authorized Agent – Signature
_____	Nick Bokaie, P.E.
Date	Authorized Agent – Printed Name
ATTEST:	
	Chief Operating Officer
	Title
_____	October 18, 2022
Laura Richard, County Clerk	Date

APPROVED:

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

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\20320x\Agreement - Pro Eng Svcs.DEC.docx.10/17/2022. 23-Eng-100191

EXHIBIT A

DE Corp.
3100 West Alabama, Houston, TX 77098
P.O. BOX 22292 Houston, TX 77227
(713) 520-9570

August 29, 2022

Mr. Stacy Slawinski, P.E.
Fort Bend County Engineer
301 Jackson Street, 4th Floor
Richmond, Texas 77469

SUBJECT: **SH 99 Grand Parkway Northbound Frontage Road from Fry Road to Westheimer Parkway**
Scope and Fee Proposal for Design Services

Dear Mr. Slawinski:

DE Corp. (DEC) is pleased to submit for your approval the scope and fee proposal for the SH 99 Grand Parkway Northbound Frontage Road Project. This proposal addresses Fort Bend County's plan to design and construct a new location northbound frontage road from north of Fry Road to south of Westheimer Parkway.

The design effort will include Field Surveys, Geotechnical Investigations, Environmental documentation, Right-of-Way (ROW) Mapping, Schematics, Drainage Studies, and Final Plans, Specifications, and Estimates (PS&E). DEC will serve as the County's lead General Engineering Consultant and Design Lead.

Attached you will find our Fee Proposal (Attachment A) and Scope of Services (Attachment B) for the Project. We ask for your approval and execution of this contract as supported by the attached documents.

DEC appreciates the opportunity to provide you with our services. If I can be of any assistance or answer any additional questions, please feel free to contact me at (713) 527-6420 or at Nick.Bokaie@decorp.com. We look forward to working with you on this important Fort Bend County project.

Very truly yours,

Nick Bokaie, P.E.
Principal, Houston Transportation Division
DEC

Attachments

PROJECT NAME: SH99 Grand Parkway Northbound Frontage Road
PROJECT LIMITS: North of Fry Road to South of Westheimer Parkway

WORK ELEMENT	Engineering Fees October 2022
Advanced Planning/Preliminary Engineering (Part 1)	
Schematic Design (DEC)	$ 130,634.12
Environmental/NEPA (SWCA)	$ 152,700.00
Drainage Impact Report (Gauge)	$ 130,316.40
Management (DEC)	$ 57,867.26
Final PS&E Engineering (Part 2)	
Roadway & Misc Design (DEC)	$ 225,425.76
Drainage & SW3P Design (DEC)	$ 145,440.96
Bridge Design (DEC)	$ 162,488.93
Traffic - Signing and Pavement Marking (iGET)	$ 22,943.50
TCP (HJ Consulting)	$ 89,145.00
Management (DEC)	$ 126,430.08
Extras	
Survey (Weisser)	$ 75,985.00
ROW Parcel Mapping[1] (Weisser)	$ 24,000.00
Geotechnical (Earth Engineering)	$ 115,620.00
Utility Coordination (DEC)	$ 60,772.99
Direct Expenses	$ 10,150.00
Bid/Construction Phase Services	
Post Design Services (DEC)	$ -
Total Management & Engineering Fees	$ 1,529,920.00

Notes

1. ROW Mapping assumes parcel surveying of SIXTEEN (16) parcels.

GENERAL DESCRIPTION OF PROJECT

SH 99 NBFR from Fry Road to Westheimer Parkway

Fort Bend County proposes to design and construct a new northbound frontage road on the east side of SH 99/Grand Parkway from Fry Road to Westheimer Parkway. The proposed project is approximately 1.1-miles in length. Efforts will be taken to develop design solutions within the existing right-of-way (ROW); however, additional ROW is anticipated.

The “Engineer” shall perform the work in accordance with current and applicable Fort Bend County and TxDOT regulations, policies, standards and guidelines. This proposal describes sources of data needed from other federal, state, and local governmental and quasi-governmental agencies and field investigations in order for the Engineer to complete their work.

A sub consultant to the Engineer on the Project is hereinafter referred to as the “Consultant”.

ATTACHMENT A - PART 1 Schematic
FEE SCHEDULE (DEC)
METHOD OF PAYMENT: LUMP SUM

PRIME PROVIDER NAME: DEC
CONTRACT NUMBER:
PROJECT NAME: SH99 Grand Parkway Northbound Frontage Road
PROJECT LIMITS: North of Fry Road to South of Westheimer Parkway

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	SENIOR ENGINEER TECH	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
ROUTE & DESIGN STUDIES (FC 110)										
DATA COLLECTION	1	4	8					13	N/A	N/A
DEVELOP BASE MAPS	1	4	8			24		37	N/A	N/A
ANALYZE EXISTING CONDITIONS	2	4	8	8		4		26	N/A	N/A
DESIGN CONCEPT CONFERENCE (FORM & MTG)	2	4	8	4		4		22	N/A	N/A
GEOMETRIC DESIGN SCHEMATICS	4	8	40	60		120		232	N/A	N/A
TYPICAL SECTIONS	2		8	16		24		50	N/A	N/A
ENVIRONMENTAL CONSTRAINTS	4	8	16	8		16		52	N/A	N/A
ROW REQUIREMENTS	1	4	8			20		33	N/A	N/A
TRAFFIC DATA COLLECTION (REVIEW DATA PROVIDED BY OTHERS)	1		8					9	N/A	N/A
BICYCLE AND PEDESTRIAN ACCOMODATIONS	1	4	8	8		16		37	N/A	N/A
CROSS SECTIONS	2	4	16	40		100		162	N/A	N/A
PRELIMINARY CONSTRUCTION SEQUENCE	2	4	8	4		4		22	N/A	N/A
PRELIMINARY CONSTRUCTION COST ESTIMATE	2	4	8	8		8		30	N/A	N/A
									N/A	N/A
									N/A	N/A
									N/A	N/A
HOURS SUB-TOTALS	25	52	152	156	0	340	0	725		
CONTRACT RATE PER HOUR	$247.30	$200.93	$170.02	$154.56	$123.65	$108.19	$92.74			
TOTAL LABOR COSTS	$6,182.40	$10,448.26	$25,842.43	$24,111.36	$0.00	$36,785.28	$0.00	$103,369.73		
SUBTOTAL (FC 110)								**$103,369.73**		

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	SENIOR ENGINEER TECH	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
ENVIRONMENTAL STUDIES & PUBLIC INVOLVEMENT (FC 120)										
									N/A	N/A
PROVIDE EXHIBITS AND DATA FOR ENVIRONMENTAL STUDY	20	20	20	8		80	8	156	N/A	N/A
									N/A	N/A
									N/A	N/A
									N/A	N/A
HOURS SUB-TOTALS	20	20	20	8	0	80	8	156		
CONTRACT RATE PER HOUR	$247.30	$200.93	$170.02	$154.56	$123.65	$108.19	$92.74			
TOTAL LABOR COSTS	$4,945.92	$4,018.56	$3,400.32	$1,236.48	$0.00	$8,655.36	$741.89	$22,998.53		
SUBTOTAL (FC120)								**$22,998.53**		

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	SENIOR ENGINEER TECH	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
RIGHT OF WAY DATA (FC 130)										
ROW DELINEATION (REVIEW SURVEY PROVIDED BY OTHERS)	2	4	8			16		30	N/A	N/A
									N/A	N/A
UTILITY ADJUSTMENT COORDINATION (5 ENTITIES & 15 MTGS	4	20	40			20		84	N/A	N/A
REVIEW OF UTILITY AGREEMENTS (5 UTILITIES	4	20	20			0		44	N/A	N/A
REVIEW OF PROPOSED UTILITY ADJUSTMENTS (5 UTILITIES)		20	60			16		96	N/A	N/A
PROPOSED UTILITY LAYOUT	4	8	40			80		132	5	26.4
HOURS SUB-TOTALS	14	72	168	0	0	132	0	386		
CONTRACT RATE PER HOUR	$247.30	$200.93	$170.02	$154.56	$123.65	$108.19	$92.74			
TOTAL LABOR COSTS	$3,462.14	$14,466.82	$28,562.69	$0.00	$0.00	$14,281.34	$0.00	$60,772.99		
SUBTOTAL (FC130)								**$60,772.99**		

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	SENIOR ENGINEER TECH	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
PROJECT MANAGEMENT (FC 145)										
COORDINATION W/ SUBCONSULTANTS	20		40			0	8	68	N/A	N/A
COORDINATION WITH COUNTY AND TXDOT	20		64			0	8	92	N/A	N/A
PROGRESS MEETINGS (6 ESTIMATED)	20		40			0	16	76	N/A	N/A
PROJECT SCHEDULE AND COST ESTIMATE UPDATES	20		40			0	8	68	N/A	N/A
PREPARE INVOICES W/ PROGRESS REPORTS	4		8			0	8	20	N/A	N/A
									N/A	N/A
HOURS SUB-TOTALS	84	0	192	0	0	0	48	324		
CONTRACT RATE PER HOUR	$247.30	$200.93	$170.02	$154.56	$123.65	$108.19	$92.74			
TOTAL LABOR COSTS	$20,772.86	$0.00	$32,643.07	$0.00	$0.00	$0.00	$4,451.33	$57,867.26		
SUBTOTAL (FC150)								**$57,867.26**		

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	SENIOR ENGINEER TECH	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
SURVEYING (FC 150)										
SURVEYING (REVIEW SURVEY PROVIDED BY OTHERS)	2		12			16		30	N/A	N/A
									N/A	N/A
HOURS SUB-TOTALS	2	0	12	0	0	16	0	30		
CONTRACT RATE PER HOUR	$247.30	$200.93	$170.02	$154.56	$123.65	$108.19	$92.74			
TOTAL LABOR COSTS	$494.59	$0.00	$2,040.19	$0.00	$0.00	$1,731.07	$0.00	$4,265.86		
SUBTOTAL (FC150)								**$4,265.86**		

DESCRIPTION							TOTAL MH BY FC	TOTAL COSTS BY FC
ROUTE & DESIGN STUDIES (FC 110)							725	$103,369.73
ENVIRONMENTAL STUDIES & PUBLIC INVOLVEMENT (FC 120)							156	$22,998.53
RIGHT OF WAY DATA (FC 130)							386	$60,772.99
PROJECT MANAGEMENT (FC 145)							324	$57,867.26
SURVEYING (FC 150)							30	$4,265.86
SUBTOTAL LABOR EXPENSES							1621	**$249,274.37**
OTHER DIRECT EXPENSES	**QUANTITY**	**RATE**	**UNIT**					
Mileage (# of miles) (0.550)	1,000	$0.550	MI					$550.00
Courier Services	20	$30.00	EACH					$600.00
Photocopies 8.5x11	1,000	$0.10	EACH					$100.00
Photocopies 11x17	1,000	$0.25	EACH					$250.00
Plot (Color on Bond)	1,000	$3.50	SF					$3,500.00
Mylars 11x17	0	$4.00	SHEET					$0.00
ZIP DRIVE Archive	5	$5.00	EACH					$25.00
SUBTOTAL DIRECT EXPENSES								**$5,025.00**

SUMMARY	
TOTAL COSTS FOR PRIME ONLY(includes multiplier)	$249,274.37
NON-SALARY (OTHER DIRECT EXPENSES)	$5,025.00
SUBCONTRACTS (includes labor costs and direct expenses)	$0.00
GRAND TOTAL	**$254,299.37**

Subprovider: Gauge Engineering, LLC
Highway: SH 99 NBFR
Limits: Fry Road to Westheimer Parkway
CSJ: xxxx-xxx-xx

Attachment A
Drainage Impact Report Fee Schedule
Method of Payment: Lump Sum

TASK DESCRIPTION	SUPPORT MANAGER	ENGINEER - SENIOR	ENGINEER (HYDRAULIC)	ENGINEER-IN-TRAINING	CADD OPERATOR	ADMINISTRATIVE/ CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
MANAGING CONTRACTED/DONATED PE - FC 145 (145,164)									
PROJECT MANAGEMENT AND ADMINISTRATION									
PREPARE MONTHLY PROGRESS REPORTS (6 MONTHS)	6					3	9	N/A	N/A
COORDINATION MEETING WITH DEC AND COUNTY (2 INPERSON AND 4 TEAMS)	14	8		6		6	34	N/A	N/A
QUALITY CONTROL/DOCUMENTATION	8	8					16	N/A	N/A
HOURS SUB-TOTALS	28	16	0	6	0	9	59	0	
CONTRACT RATE PER HOUR	$232.00	$211.00	$168.00	$138.00	$121.00	$90.00			
TOTAL LABOR COSTS	$6,496.00	$3,376.00	$0.00	$828.00	$0.00	$810.00	$11,510.00		
% DISTRIBUTION OF STAFFING	47.46%	27.12%	0.00%	10.17%	0.00%	15.25%			
SUBTOTAL - FC 145 (145, 164)							**$11,510.00**		

TASK DESCRIPTION	SUPPORT MANAGER	ENGINEER - SENIOR	ENGINEER (HYDRAULIC)	ENGINEER-IN-TRAINING	CADD OPERATOR	ADMINISTRATIVE/ CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
ROADWAY DESIGN - FC 160 (160)									
ROADWAY DESIGN									
PREPARE WSEL PROFILE EXHIBITS									
SH 99 EXISTING AND PROPOSED FRONTAGE ROAD (1.4 MILES)	1	6	2	8	24		41	2	21
HOURS SUB-TOTALS	1	6	2	8	24	0	41	2	
CONTRACT RATE PER HOUR	$232.00	$211.00	$168.00	$138.00	$121.00	$90.00			
TOTAL LABOR COSTS	$232.00	$1,266.00	$336.00	$1,104.00	$2,904.00	$0.00	$5,842.00		
% DISTRIBUTION OF STAFFING	0.14%	0.82%	0.27%	1.09%	3.28%	0.00%			
SUBTOTAL - FC 160 (161)							**$5,842.00**		

TASK DESCRIPTION	SUPPORT MANAGER	ENGINEER - SENIOR	ENGINEER (HYDRAULIC)	ENGINEER-IN-TRAINING	CADD OPERATOR	ADMINISTRATIVE/ CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
ROADWAY DESIGN - FC 160 (161)									
DRAINAGE DESIGN									
1. DATA COLLECTION	2	4	8			2	16	N/A	N/A
2. HYDROLOGIC STUDIES (1.4 MILES - CONTRIBUTING TO 2 OUTFALLS)									
DELINEATE EXISTING DRAINAGE AREAS		4	8	16			28	N/A	N/A
DETERMINE EXISTING HYDROLOGIC PARAMETERS		4	8	16			28	N/A	N/A
CALCULATE EXISTING CONDITIONS FLOWRATES	1	4	16	24			45	N/A	N/A
DELINEATE PROPOSED DRAINAGE AREAS		4	8	16			28	N/A	N/A
DETERMINE PROPOSED HYDROLOGIC PARAMETERS		4	8	16			28	N/A	N/A
CALCULATE PROPOSED CONDITIONS FLOWRATES	1	4	16	24			45	N/A	N/A
VERIFY FEMA HEC-HMS FLOW RATES		1	2	2			5	N/A	N/A
3. STORM DRAINS									
UPDATE EXISTING CIVILTECH SWMM MODEL (10-YR AND 100-YR)	1	2	8	16			27	N/A	N/A
PROPOSED TRUNK MODEL USING CIVILTECH SWMM MODEL AND VERIFY NO IMPACT (10-YR AND 100-YR)	2	4	16	36			58	N/A	N/A
INCORPORATE FILL IN FLOODPLAIN MITIGATION VOLUME IN SWMM MODEL AND VERIFY NO IMPACT	1	2	12	24			39	N/A	N/A
4. COMPLEX HYDRAULIC DESIGN AND DOCUMENTATION									
DEVELOP REVISED EXISTING CONDITIONS HYDRAULICS MODELS FOR 2 BRIDGE CROSSINGS		4	6	18			28	N/A	N/A
DEVELOP PROPOSED CONDITIONS HYDRAULICS MODELS FOR 2 BRIDGE CROSSINGS	2	6	12	28			48	N/A	N/A
FLOODPLAIN CUT AND FILL CALCULATIONS		2	6	16			24	N/A	N/A
5. SCOUR ANALYSIS									
SCOUR EVALUATION OF BRIDGE CROSSINGS (2-BRIDGES)	1	6	16	24			47	N/A	N/A
PREPARE SCOUR FORM 2605		1	2	6			9	N/A	N/A
BRIDGE SCOUR REPORT	1	6	12	30			49	N/A	N/A
6. PS&E									
BRIDGE HYDRAULIC DATA SHEETS (2-BRIDGES)	1	4	12	16	32		65	2	33
7. DRAINAGE REPORT									

DRAFT REPORT	6	6		36	16	4	68	N/A	N/A
FINAL REPORT	4	8		24	8	2	46	N/A	N/A
HOURS SUB-TOTALS	23	80	176	388	56	8	731	2	
CONTRACT RATE PER HOUR	$232.00	$211.00	$168.00	$138.00	$121.00	$90.00			
TOTAL LABOR COSTS	$5,336.00	$16,880.00	$29,568.00	$53,544.00	$6,776.00	$720.00	$112,824.00		
% DISTRIBUTION OF STAFFING	3.15%	10.94%	24.08%	53.08%	7.66%	1.09%			
SUBTOTAL - FC 160 (161)							**$112,824.00**		

DESCRIPTION							**TOTAL COSTS BY FC**
MANAGING CONTRACTED/DONATED PE - FC 145 (145,164)							$11,510.00
ROADWAY DESIGN - FC 160 (160)							$5,842.00
ROADWAY DESIGN - FC 160 (161)							$112,824.00
SUBTOTAL LABOR EXPENSES							**$130,176.00**

OTHER DIRECT EXPENSES	**UNIT**	**COST/UNIT**		**FC102(110) QUANTITY**			**TOTAL COSTS**
Mileage	mile	$0.585		240			$140.40
SUBTOTAL DIRECT EXPENSES				**$0.00**			**$140.40**

SUMMARY	
TOTAL COSTS FOR SUB PROVIDER ONLY	$130,176.00
NON-SALARY (OTHER DIRECT EXPENSES) FOR SUB PROVIDER ONLY	$140.40
GRAND TOTAL	**$130,316.40**

ATTACHMENT A - PART 2 PS&E
FEE SCHEDULE (DEC)
METHOD OF PAYMENT: LUMP SUM

PRIME PROVIDER NAME: DEC
CONTRACT NUMBER:
PROJECT NAME: SH99 Grand Parkway Northbound Frontage Road
PROJECT LIMITS: North of Fry Road to South of Westheimer Parkway

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	SENIOR ENGINEER TECH	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
PROJECT MANAGEMENT (FC 145)										
COORDINATION W/ SUBCONSULTANTS	60		80			0	20	160	N/A	N/A
COORDINATION WITH COUNTY AND TXDOT	80		120			0	20	220	N/A	N/A
PROGRESS MEETINGS (10 ESTIMATED)	40		80			0	20	140	N/A	N/A
PROJECT SCHEDULE AND COST ESTIMATE UPDATES	40		40			0	20	100	N/A	N/A
PREPARE INVOICES W/ PROGRESS REPORTS	20		20			0	20	60	N/A	N/A
									N/A	N/A
HOURS SUB-TOTALS	240	0	340	0	0	0	100	680		
CONTRACT RATE PER HOUR	$247.30	$200.93	$170.02	$154.56	$123.65	$108.19	$92.74			
TOTAL LABOR COSTS	$59,351.04	$0.00	$57,805.44	$0.00	$0.00	$0.00	$9,273.60	$126,430.08		
SUBTOTAL (FC150)								**$126,430.08**		

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	SENIOR ENGINEER TECH	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
ROADWAY DESIGN CONTROLS (FC160)										
								0		
HORIZONTAL ALIGNMENT DATA SHEETS		2	4	12		16		34	2	17.0
EXISTING TYPICAL SECTIONS								0		
PROPOSED TYPICAL SECTIONS		2	4	20		80		106	5	21.2
ROADWAY PLAN AND PROFILE (SCALE: H 1"=100' V 1"=10')		4	20	40		100		164	6	27.3
CROSS STREET ROADWAY PLAN AND PROFILE (SCALE: H 1"=100' V 1"=10)								0		
INTERSECTION LAYOUTS								0		
DRIVEWAY DETAIL AND SUMMARY								0		
MISCELLANEOUS ROADWAY DETAILS		4	8	8		16		36	2	18.0
REMOVAL PLANS (SCALE 1"=100') (Double Banked)		4	16	20		50		90	4	22.5
EARTHWORK CROSS SECTIONS		8	24	80		120		232	20	11.6
ROADWAY STANDARDS		2	8			60		70	30	2.3
SUMMARY OF ROADWAY QUANTITY SHEETS		4	4	8		8		24	1	24.0
SUMMARY OF REMOVAL QUANTITY SHEETS		4	4	6		8		22	1	22.0
SUMMARY OF EARTHWORK QUANTITY SHEETS		4	4	8		8		24	1	24.0
DETERMINATION OF DESIGN EXCEPTIONS/WAIVERS		8	4					12		
HOURS SUB-TOTALS	0	46	100	202	0	466	0	814	72	
CONTRACT RATE PER HOUR	$247.30	$200.93	$170.02	$154.56	$123.65	$108.19	$92.74			
TOTAL LABOR COSTS	$0.00	$9,242.69	$17,001.60	$31,221.12	$0.00	$50,417.47	$0.00	$107,882.88		
SUBTOTAL (FC 160)								**$107,882.88**		

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	SENIOR ENGINEER TECH	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
DRAINAGE (FC161)										
REVIEW DRAINAGE IMPACT STUDY		12	8	16				36		
OVERALL DRAINAGE AREA MAP		4	4	8		12		28	1	28.0
DRAINAGE AREA MAPS		8	16	20		60		104	6	17.3
DRAINAGE PLAN & PROFILE (SCALE: H 1"=100' V 1"=10')		16	20	40		80		156	6	26.0
DRAINAGE HYDRAULIC COMPUTATIONS (GEOPAK DRAINAGE)		16	20	80		40		156	6	26.0
DRAINAGE CROSS CULVERT LAYOUT								0		
DRAINAGE LATERAL PROFILES		8	12	20		40		80	3	26.7
MISCELLANEOUS DRAINAGE DETAILS		8	16	8		20		52	2	26.0
JUNCTION BOX DETAILS		8	16	60		40		124	5	24.8
DRAINAGE STANDARDS		8	4	16		40		68	30	2.3
SUMMARY OF DRAINAGE QUANTITY SHEETS		8	4	20		20		52	2	26.0
SW3P PLAN		2	12			12		26	1	26.0
SW3P LAYOUTS (SCALE 1"=100') (Double Banked)		4	8	40		50		102	4	25.5
SW3P STANDARDS		2	2			16		20	5	4.0
SUMMARY OF SW3P QUANTITY SHEETS		2	4	8		8		22	1	22.0
HOURS SUB-TOTALS	0	106	146	336	0	438	0	1,026	72	
CONTRACT RATE PER HOUR	$247.30	$200.93	$170.02	$154.56	$123.65	$108.19	$92.74			
TOTAL LABOR COSTS	$0.00	$21,298.37	$24,822.34	$51,932.16	$0.00	$47,388.10	$0.00	$145,440.96		
SUBTOTAL (FC 161)								**$145,440.96**		

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	SENIOR ENGINEER TECH	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
SIGNING, PVMT. MARKING, & SIGNAL (FC162)										
PAVEMENT MARKING LAYOUTS (SCALE 1"=100') (Double Banked)								0		
PAVEMENT MARKING STANDARDS								0		
SUMMARY OF PAVEMENT MARKING QUANTITY SHEETS								0		
SMALL SIGNING LAYOUTS (SCALE 1"=100') (Double Banked)								0		
SUMMARY OF PROPOSED SMALL SIGNS								0		
SMALL SIGN DETAILS								0		
SIGNING STANDARDS								0		
HOURS SUB-TOTALS	0	0	0	0	0	0	0	0	0	
CONTRACT RATE PER HOUR	$247.30	$200.93	$170.02	$154.56	$123.65	$108.19	$92.74			
TOTAL LABOR COSTS	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		
SUBTOTAL (FC 162)								**$0.00**		

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	SENIOR ENGINEER TECH	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
MISCELLANEOUS (ROADWAY) (FC 163)										
								0		
TITLE SHEET		1	2	2		16		21	1	21.0
INDEX OF SHEETS		1	4	4		24		33	2	16.5
PROJECT LAYOUTS		1	2	8		40		51	3	17.0
SOIL BORING LAYOUTS			2	12		40		54	3	18.0
SOIL BORING LOGS			2	8		40		50	15	3.3
HORIZONTAL AND VERTICAL CONTROL INDEX		1	2	4		8		15	1	15.0
HORIZONTAL AND VERTICAL CONTROL SHEETS		1	2	4		8		15	1	15.0
TRAFFIC CONTROL PLAN NARRATIVE								0		
CONSTRUCTION SEQUENCE LAYOUT								0		
PROJECT LIMIT SIGNING LAYOUT								0		
TRAFFIC CONTROL PLANS								0		
TRAFFIC CONTROL STANDARDS								0		
SUMMARY OF TRAFFIC CONTROL QUANTITY SHEETS								0		
TRAFFIC CONTROL WORKSHOP	2		4					6		
SAFETY REVIEW TEAM MEETING	2		4					6		
EPIC SHEETS		4	4	12		20		40	2	20.0
COMPUTE & TABULATE QUANTITIES (30, 60, 90 & FINAL)	2	8	20	60		80		170		
CONSTRUCTION COST ESTIMATE & DCIS INPUT (30, 60, 90 & FINAL)	4	8	20	40				72		
GENERAL NOTES, SPECIFICATIONS AND PROVISIONS	4	8	20	8				40		
CONSTRUCTION TIME DETERMINATION (PRIMAVERA)	4	8	40					52		
QC & CONSTRUCTABILITY REVIEWS (30, 60, 90 & FINAL)	4	40	20	60		60		184		
HOURS SUB-TOTALS	22	81	148	222	0	336	0	809	28	
CONTRACT RATE PER HOUR	$247.30	$200.93	$170.02	$154.56	$123.65	$108.19	$92.74			
TOTAL LABOR COSTS	$5,440.51	$16,275.17	$25,162.37	$34,312.32	$0.00	$36,352.51	$0.00	$117,542.88		
SUBTOTAL (FC 163)								**$117,542.88**		

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	SENIOR ENGINEER TECH	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
BRIDGE DESIGN (FC 170)										
BUFFALO BAYOU										
Bridge Layout	2	40	24		40			106	2	53.0
Boring Log Review of CLG Files		2		2	2	8		14	0	
Bridge Estimated Quantities & Bearing Seat Elevations	1	10	4	12		16		43	1	43.0
Foundation Layout	1	5	4		20	8		38	1	38.0
Foundation Details		20	8	30	20	16		94	2	47.0
Abutment Plans (2 Total)	1	20	12	40	24	24		121	4	30.3
Bent Plans (5 Total)	1	40	16	80	60	60		257	10	25.7
Concrete Slab Plan & Deflection- 2 Units	1	16	6	24	20	16		83	2	41.5
Concrete Framing Plan & Bent Report- 2 Units	1	12	6	40	16	16		91	2	45.5
Concrete Typical Sections - 2 Units		20	12	20	12	16		80	2	40.0
Prestressed Concrete Beams - IGND		16	8	40	8	24		96	2	48.0
BRIDGE STANDARDS		8	4	16		40		68	30	2.3
HOURS SUB-TOTALS	8	209	104	304	222	244	0	1091		
CONTRACT RATE PER HOUR	$247.30	$200.93	$170.02	$154.56	$123.65	$108.19	$92.74			
TOTAL LABOR COSTS	$1,978.37	$41,993.95	$17,681.66	$46,986.24	$27,449.86	$26,398.85	$0.00	$162,488.93		
SUBTOTAL (FC 163)								**$162,488.93**		

TASK DESCRIPTION	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	SENIOR ENGINEER TECH	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
CONSTRUCTION PHASE SERVICES (FC 309) - T&M										
								0		
ASSISTANCE AND SUPPORT DURING BIDDING								0		
PRECONSTRUCTION MEETINGS								0		
FIELD MEETINGS								0		
WEEKLY PROGRESS MEETINGS								0		
SHOP DRAWING REVIEW								0		
RESPOND TO RFIS								0		
RESPOND TO GENERAL QUESTIONS								0		
PROVIDE CLARIFICATIONS								0		
HOURS SUB-TOTALS	0	0	0	0	0	0	0	0		
CONTRACT RATE PER HOUR	$247.30	$200.93	$170.02	$154.56	$123.65	$108.19	$92.74			
TOTAL LABOR COSTS	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		
SUBTOTAL (FC 163)								**$0.00**		

DESCRIPTION							FC	BY FC
SUMMARY								
PROJECT MANAGEMENT (FC 145)							680	$126,430.08
ROADWAY DESIGN CONTROLS (FC160)							814	$107,882.88
DRAINAGE (FC161)							1,026	$145,440.96
SIGNING, PVMT. MARKING, & SIGNAL (FC162)							0	$0.00
MISCELLANEOUS (ROADWAY) (FC 163)							809	$117,542.88
BRIDGE DESIGN (FC 170)							1,091	$162,488.93
CONSTRUCTION PHASE SERVICES (FC 309) - T&M							0	$0.00
SUBTOTAL LABOR EXPENSES							2649	**$659,785.73**
OTHER DIRECT EXPENSES	**QUANTITY**	**RATE**	**UNIT**					
Mileage (# of miles) (0.550)	2,000	$0.550	MI					$1,100.00
Courier Services	25	$30.00	EACH					$750.00
Photocopies 8.5x11	2,500	$0.10	EACH					$250.00
Photocopies 11x17	5,000	$0.25	EACH					$1,250.00
Plot (Color on Bond)	500	$3.50	SF					$1,750.00
Mylars 11x17	0	$4.00	SHEET					$0.00
ZIP DRIVE Archive	5	$5.00	EACH					$25.00
SUBTOTAL DIRECT EXPENSES								**$5,125.00**

SUMMARY	
TOTAL COSTS FOR PRIME ONLY(includes multiplier)	$659,785.73
NON-SALARY (OTHER DIRECT EXPENSES)	$5,125.00
SUBCONTRACTS (includes labor costs and direct expenses)	$0.00
GRAND TOTAL	**$664,910.73**

ATTACHMENT A
FEE SCHEDULE (IGET)
METHOD OF PAYMENT: LUMP SUM

PRIME PROVIDER NAME: DEC
CONTRACT NUMBER:
PROJECT NAME: SH99 Northbound Frontage Road
PROJECT LIMITS: Fry Road to Westheimer Parkway

TASK DESCRIPTION	SENIOR PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	SENIOR ENIGNEER TECH	ENGINEER TECH	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
SIGNING, PVMT. MARKING, & SIGNAL (FC162)											
SIGNING LAYOUTS	4		10				40	2	56	6	9
PAVEMENT MARKING LAYOUTS (SCALE 1"=100')	4		10				40	2	56	7	8
PAVEMENT MARKING DETAILS	4		10				10	2	26	10	3
PAVEMENT MARKING SUMMARY	4		6				10	2	22	2	11
TRAFFIC WARRANT STUDIES									0		
TRAFFIC STUDIES											
HOURS SUB-TOTALS	16	0	36	0	0	0	100	8	160	25	
CONTRACT RATE PER HOUR	$180.00		$125.00				$69.75	$74.25			
TOTAL LABOR COSTS	$2,880.00	$0.00	$4,500.00	$0.00	$0.00	$0.00	$6,975.00	$594.00	$14,949.00		
SUBTOTAL (FC 162)									**$14,949.00**		

TASK DESCRIPTION	SENIOR PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	SENIOR ENIGNEER TECH	ENGINEER TECH	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
MISCELLANEOUS (ROADWAY) (FC 163)											
TITLE SHEET									0		
INDEX SHEET									0		
SOIL BORING LOGS (STORM SEWER AREA)									0		
									0		
TRAFFIC CONTROL PLAN:									0		
TCP, DETOURS AND SEQUENCE OF CONSTRUCTION									0		
OVERALL PHASING LAYOUT									0		
ADVANCE SIGNING LAYOUTS									0		
TCP PHASE 1									0		
TCP PHASE 2									0		
TCP DETAILS									0		
TCP STANDARDS									0		
SUMMARY SHEETS FOR TCP QUANTITIES									0		
									0		
PRELIM TRAFFIC CONTROL WORKSHOP									0		
									0		
COMPUTE & TABULATE QUANTITIES									0		
									0		
CONSTRUCTION COST ESTIMATE (30, 60, 90 & FINAL)	3		15				8	1	27		
GENERAL NOTES, SPECIFICATIONS AND PROVISIONS	3		8				8	1	20		
CONSTRUCTION TIME DETERMINATION (PRIMAVERA)									0		
PERMIT REVIEW FOR NEW DEVELOPMENT (MAX OF 5)									0		
HOURS SUB-TOTALS	6	0	23	0	0	0	16	2	47	0	
CONTRACT RATE PER HOUR	$180.00		$125.00				$69.75	$74.25			
TOTAL LABOR COSTS	$1,080.00	$0.00	$2,875.00	$0.00	$0.00	$0.00	$1,116.00	$148.50	$5,219.50		
SUBTOTAL (FC 163)									**$5,219.50**		

TASK DESCRIPTION	SENIOR PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	SENIOR ENIGNEER TECH	ENGINEER TECH	CADD OPERATOR	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
MANAGING CONTRACTED PER SERVICES & SURVEY CONTRACTS (FC 164)											
MONTHLY PROGRESS MEETINGS (12 ESTIMATED)	4		4				3		11	N/A	N/A
COORDINATION WITH CORRIDOR PM, ENGINEERS, ETC.	4		4				3		11	N/A	N/A
HOURS SUB-TOTALS	8	0	8	0	0	0	6	0	22		
CONTRACT RATE PER HOUR	$150.00		$120.00				$50.00	$30.00			
TOTAL LABOR COSTS	$1,200.00	$0.00	$960.00	$0.00	$0.00	$0.00	$300.00	$0.00	$2,460.00		
SUBTOTAL (FC 164)									**$2,460.00**		

DESCRIPTION								**TOTAL MH BY FC**	**TOTAL COSTS BY FC**
ROUTE & DESIGN STUDIES (FC 110)								0	$0.00
ROADWAY DESIGN CONTROLS (FC160)								0	$0.00
DRAINAGE (FC161)								0	$0.00
SIGNING, PVMT. MARKING, & SIGNAL (FC162)								160	$14,949.00
MISCELLANEOUS (ROADWAY) (FC 163)								47	$5,219.50
MANAGING CONTRACTED PER SERVICES & SURVEY CONTRACTS (FC 164)								22	$2,460.00
SUBTOTAL LABOR EXPENSES								229	**$22,628.50**
OTHER DIRECT EXPENSES	**QUANTITY**	**RATE**	**UNIT**						
Mileage (# of miles) (0.550)	200	$0.550	MI						$110.00
Courier Services	4	$30.00	EACH						$120.00
Photocopies 8.5x11	100	$0.10	EACH						$10.00
Photocopies 11x17	200	$0.25	EACH						$50.00
Plot (Color on Bond)	0	$3.50	SF						$0.00
Mylars 11x17	0	$4.00	SHEET						$0.00
CD Archive	5	$5.00	EACH						$25.00
SUBTOTAL DIRECT EXPENSES									**$315.00**

SUBCONTRACTS:									
SUBCONTRACT SUB-TOTAL									**$0.00**

SUMMARY	
TOTAL COSTS FOR PRIME ONLY(includes multiplier)	$22,628.50
NON-SALARY (OTHER DIRECT EXPENSES)	$315.00
SUBCONTRACTS (includes labor costs and direct expenses)	$0.00
GRAND TOTAL	**$22,943.50**

ATTACHMENT A
FEE SCHEDULE

HJ CONSULTING, INC.
LEVEL OF EFFORT FOR TRAFFIC CONTROL PLAN SERVICES

Employee Classification		Principal	Project Manager	QA/QC Engineer	Project Engineer	Graduate Engineer	CAD Technician	Admin	Subtotal Hours	**Total**
Labor Rate Per Hour		$325.00	$275.00	$225.00	$175.00	$135.00	$105.00	$95.00		
TASK	TASK DESCRIPTION	**ESTIMATED HOURS**								
TRAFFIC CONTROL PLAN SERVICES										
1	**Preliminary Engineering**									
1.1	*Traffic Control & Construction Phasing Layout*		8	4	8	16	24		60	$ 9,180.00
1.2	*Preliminary Traffic Control Workshop*		8		8				16	$ 3,600.00
2	**Final PS&E**									
2.1	*TCP Notes*									$ -
2.2	*Overall Phasing Layout*		4	4	8	20	8		44	$ 6,940.00
2.3	*Advance Signing Layout*		4	4	8	16	24		56	$ 8,080.00
2.4	*TCP Phase 1 (South Ramp)*		8	4	16	36	40		104	$ 14,960.00
2.5	*TCP Phase 2 (North Ramp)*		8	4	16	36	40		104	$ 14,960.00
2.6	*TCP Typical Sections*		4	1	8	24	24		61	$ 8,485.00
2.7	*TCP Details*									$ -
2.8	*TCP Standards*		2	2	8	24	24		60	$ 8,160.00
2.9	*Summary Sheets for TCP Quantities*		2	2	4	8	8		24	$ 3,620.00
2.10	*Compute & Tabulate Quantities*		4	4	40	16			64	$ 11,160.00
	SUBTOTAL		52	29	124	196	192		593	**$ 89,145.00**
	TOTAL HOURS		52	29	124	196	192		593	
	TOTAL ESTIMATE		$14,300	$6,525	$21,700	$26,460	$20,160			**$ 89,145.00**

SWCA®
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

April 12, 2022

Michael Kaspar
DE Corp.
3100 W. Alabama St.
Houston, TX 77098-2094

Re: Proposal/Cost Estimate for Environmental Services Related to SH99 Grand Parkway Northbound Frontage Road Project – Fry Road to Westheimer Parkway, Fort Bend County, Texas

Dear Mr. Kaspar:

Thank you for allowing SWCA Environmental Consultants (SWCA) the opportunity to submit this proposal and cost estimate to DE Corp. (DEC) 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 S. Fry Road (approximately 5,600 linear feet) and crosses Buffalo Bayou and Little Prong Creek. 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 SH 99 SBFR Segments 1 and 2 projects.

It is our understanding the project would include the addition of two new frontage lanes adjacent to the existing Grand Parkway. The travel lanes would be 12- to 14-feet wide, partly within existing TxDOT right of way (ROW) and could impact up to five different, adjacent landowners. The project also includes sound barriers and coordination with the SH 99 main lanes project. 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). SWCA has prepared the following scope of work to address the CE and incorporate findings in the TxDOT Environmental Compliance and Oversight System (ECOS) for environmental clearance.

SCOPE OF WORK

TASK 1: TXDOT ENVIRONMENTAL COMPLIANCE

Technical reports and documentation will be produced before the environmental document (e.g., CE) is prepared in order to identify issues early in the process. Technical reports and documentation will be prepared with sufficient detail and clarity to support the environmental determination. All technical reports shall be compliant with TxDOT Environmental Compliance Toolkits. SWCA will coordinate with TxDOT for incorporation of this segment into technical reports prepared for the outstanding 2020 Program projects (4 total segments) and combined ECOS entry. SWCA anticipates up to 12 monthly calls

with TxDOT to work the project through the system. Forms and reports to be updated to be specific to the project are addressed in separate tasks and include the following.

- Air Quality Analysis (see Task 2 below)
- Hazardous Materials Initial Site Assessment (ISA) (see Task 3 below)
- Traffic Noise Analysis Technical Report (see Task 4 below)
- Public Involvement (see Task 5 below)
- Impact Assessment (see Task 6 below)
- Water Resources (see Task 7 below)
- State and Federal Protected Species (see Task 8 below)
- Cultural Resources (see Task 9 below)
- Recreational Resources (see Task 10 below)

SWCA proposes to provide an electronic copy of the draft CE and supporting documentation to DEC for review. Once comments are received, SWCA will incorporate comments and upload into ECOS. TxDOT Environmental Division would have ultimate approval of the CE determination.

TASK 2: AIR QUALITY ANALYSIS

IDCUS will prepare a qualitative air quality analysis in accordance with the current version of the TxDOT Air Quality Handbook (July 2021) and the Air Quality Toolkit. The qualitative analysis will include the following:

- A statement indicating that the county where the project is located is not in attainment of all National Ambient Air Quality Standards (NAAQS).
- A statement indicating whether or not the project has been included in, and is consistent with, the current Regional Transportation Plan (RTP). If it is not consistent with the RTP, Fort Bend County will provide information about the status of the project's inclusion in the RTP.
- A statement that Annual Average Daily Traffic (AADT) projections for the project do not exceed the 140,000 Vehicles Per Day (VPD) threshold standard.
- Standard construction emissions disclosure language.
- Qualitative Mobile Source Air Toxics (MSAT) analysis.
- Congestion Management Process (CMP) analysis (provided by Fort Bend County).
- Applicable disclosure statements in the environmental document as prescribed in the TxDOT Guidance for Preparing Air Quality Statements (SOP) (Aug. 2020).
- If required, IDCUS will complete the TxDOT Transportation Conformity Report Form (210.01.FRM, Nov. 2015).
- The Air Quality Analysis will be documented and presented in an Air Quality Technical Report/Memo.

One electronic copy of the Air Quality Technical Report/Memo will be provided for submission. IDCUS will respond to two rounds of review comments.

TASK 3: HAZARDOUS MATERIALS INITIAL SITE ASSESSMENT

SWCA will prepare a TxDOT Hazardous Materials Initial Site Assessment (ISA) Report including review and summary of the following information:

- Current and historic aerial and topographic maps.
- Sanborn Fire Insurance Maps, if available.
- Current and historic land use information.

- Regulatory database search.
- Oil/gas well database search.
- Site reconnaissance results.

SWCA will compile the hazardous materials ISA form with the CE.

TASK 4: TRAFFIC NOISE ANALYSIS, MODELING, & WORKSHOP

IDCUS will prepare a traffic noise analysis and a traffic noise technical report in accordance with the TxDOT Traffic Noise Toolkit and the TxDOT Traffic Noise Policy: Roadway Traffic and Construction Noise (Feb. 2019). The traffic noise analysis will include:

- A project site investigation to identify adjacent land use and document representative receivers potentially impacted by traffic noise from the proposed project and may benefit from feasible and reasonable noise abatement measures.
- Validation of the Traffic Noise Model (TNM) existing noise model with field noise measurements performed at representative noise receivers located adjacent to the proposed project. Field noise measurements will be conducted in accordance with TxDOT noise policy and guidance. As part of the TNM model validation process, the noise analysis will include one noise measurement with simultaneous traffic counts at up to two receptor locations for model verification purposes. Documentation consisting of noise monitoring results, traffic counts, and comparisons to the existing TNM noise model will be included in the traffic noise analysis technical report and project files.
- Determination of existing and predicted (future) noise levels for representative receivers with TNM v2.5.
- Identify impacted receivers in accordance with the absolute and relative impact criteria.
- Consider and evaluate all required noise abatement measures for impacted receivers in accordance with the feasible and reasonable criteria.
- If required, propose noise abatement measures that are both feasible and reasonable.
- If required, 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.
- The Traffic Noise Analysis will be documented in a Traffic Noise Technical Report/Memo.

TNM files and one electronic copy of the Traffic Noise Technical Report/Memo will be provided for submission. IDCUS will respond to two rounds of review comments.

IDCUS will participate in project noise workshops for any proposed noise abatement location(s). One IDCUS staff will attend or participate virtually in up to three noise workshops for proposed noise abatement options. Attendance may be required at one pre-meeting per mitigation location.

TASK 5: PUBLIC INVOLVEMENT

SWCA and IDCUS will work with DEC and TxDOT to combine public meeting information collectively with the 2020 Program segments. SWCA understands that the public meeting would be led by others (OTHON) and has included scope for public meeting attendance and response to comments.

One SWCA and one IDCUS staff member will attend one public involvement event (in-person or virtual) and one dress rehearsal at the district office for this project. Identified personnel will attend up to 15 project coordination meetings and conference calls to review the public meeting materials. SWCA and IDCUS will address up to 20 public involvement comments in conjunction with the project design team.

TASK 6: IMPACT ASSESSMENT

Community Impacts Assessment (CIA)

Community Impacts include environmental justice, limited English proficiency, and other issues as addressed in TxDOT Environmental guidance and toolkits. SWCA will prepare the CIA Technical Report Form for the project consistent with the Environmental Handbook provided in the TxDOT Community Impacts Assessment Toolkit. The evaluation will include an assessment of the effects of the proposed project on the surrounding community and its quality of life. The assessment will also include items of importance to people, such as mobility, safety, employment effects, relocation, isolation, and other community issues.

Indirect and Cumulative Impacts

SWCA will prepare a Risk Assessment for Indirect Impacts for the project as provided in the TxDOT Environmental Compliance Toolkit. 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. Supporting text will be added to the bottom of each question in order to bolster the findings of each question.

SWCA will also prepare a Risk Assessment for Cumulative Impacts for the project as provided in the TxDOT Environmental Compliance Toolkit. This 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. Supporting text will be added to the bottom of each question in order to bolster the findings of each question.

TASK 7: WATER RESOURCES

Water Resources Technical Report

SWCA will perform a surface water analysis in ECOS to determine appropriate water resources technical reports. The project crosses Buffalo Bayou and a tributary; therefore, SWCA will conduct a wetland and waterbody delineation in accordance with the U.S. Army Corps of Engineers' 1987 Wetlands Delineation Manual (Manual) and subsequent 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region. The delineation will identify potential waters of the United States (WOTUS), including wetlands and waterbodies, within the proposed project corridor. SWCA will prepare a Waters of the U.S. Delineation Report for the project.

USACE Impacts Determination and Permitting

SWCA will review the project design to determine the need for a Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers (USACE). It is anticipated that the project will qualify for Nationwide Permit (NWP) 14 for linear transportation projects and that the bridge carrying the frontage roads will span Buffalo Bayou and Little Prong Creek with abutments placed above the high-water mark and no discharges into special aquatic sites, including wetlands. Such placement will qualify for self-verification of NWP 14 without pre-construction notification (PCN). SWCA will prepare a memo to document how the project meets the appropriate conditions. Should project activities result in any wetland impacts, or stream impacts greater than 0.1 acre, a PCN will be required. Impacts greater than 0.5 acre

will not qualify for NWP 14. SWCA can provide separate scope and cost estimate should the impact thresholds be exceeded and a PCN or other permit is required.

SWCA has determined that a Section 10 permit pursuant to the Rivers and Harbors Act (33 USC 403) is not required for this project and is not included in this proposal

TASK 8: STATE AND FEDERAL PROTECTED SPECIES

SWCA will perform a Species Analysis in ECOS and prepare a Biological Evaluation for Informal Consultation with the U.S. Fish & Wildlife Service (USFWS) for the project. SWCA anticipates review of the following:

- Aerial map (with delineated project boundaries).
- USFWS Information for Planning and Consultation (IPaC) report.
- Texas Parks and Wildlife Department (TPWD) County Threatened or Endangered Species list.
- Texas Natural Diversity Database (TXNDD) rare resources report.
- Marine Mammal Protection Act (MMPA) Analysis.
- Essential Fish Habitat (EFH) Analysis.
- Natural Resources Conservation Service (NRCS) Web Soil Survey Map.
- Farmland Protection Policy Act (FPPA) documentation, if applicable.
- Ecological Mapping System of Texas (EMST)-MOU Project Area Map and Summary Table.

SWCA will utilize the USFWS IPaC, TXNDD, and TPWD threatened and endangered species information obtained for Fort Bend County, Texas as described above to develop the species consultation for the project.

TASK 9: CULTURAL RESOURCES

SWCA will conduct a review of the project limits for non-archeological historic properties and archeological sites and cemeteries in compliance with Section 106 of the National Historic Preservation Act (NHPA) and the Antiquities Code of Texas (ACT).

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 conducted a preliminary review for non-archeological historic properties in compliance with the NHPA and the ACT. No buildings were identified in the project corridor during the historic period. However, historic aerials show that Buffalo Bayou had been lined with concrete by 1958, which could require investigation into the significance of the infrastructure. SWCA will complete a Project Coordination Request (PCR) for Historic Studies in ECOS to determine the significance of the Bayou. SWCA assumes that the concrete work associated with the channelization of Buffalo Bayou is not eligible for the National Register of Historic Places (NRHP). Therefore, it is believed that the PCR form will be sufficient, and no further work will be required. However, if it is determined that additional archival research or fieldwork and associated reporting are going to be required by TxDOT or any other permitting agencies to document the significance of this resource, additional funding will be required.

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 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, an SWCA archaeologist will perform an on-line search of the project area and a 0.6-mile (1 kilometer) radius on the Texas Archeological Sites Atlas (TASA), a restricted database maintained by the Texas Historical Commission (THC) and

Texas Archeological Research Laboratory (TARL). This source provides information for previously recorded surveys and historic or prehistoric archaeological sites in or near the project area. In addition to identifying previously recorded archaeological sites, the TASA review includes the following types of information: NRHP properties, State Antiquities Landmarks (SALs), Official Texas Historical Markers, Registered Texas Historic Landmarks, cemeteries, and local neighborhood surveys. Additional sources of information utilized will include historical aerial photographs and topographic maps and the Texas Historic Overlay. Bureau of Economic Geology Maps, and the Natural Resources Conservation Service (NRCS) Web Soil Survey will also be examined for historical and environmental information related to the project area.

SWCA will utilize the background literature and records review to prepare the Archeological Background Study of the project area. This report will document the methodology used in the investigation and the presence and condition of any previously recorded sites and/or surveys revealed in the literature review. The report will also identify the potential for these resources to affect the current development and determine management recommendations to satisfy applicable Federal or State cultural resource laws. Given the high extent of commercial and residential development in the project area, it is expected that the project would have no effect on archeological resources and cemeteries. No field investigations are anticipated.

SWCA will provide a draft report to DEC for review and approval, followed by a final report incorporating comments and suggestions. The report can be used for planning purposes and, if necessary, submitted on behalf of TxDOT to the THC for review and concurrence with SWCA recommendations. A 30-day, or roughly 5-week, timeframe is assumed for THC review.

TASK 10: RECREATIONAL RESOURCES

SWCA will identify and evaluate potential impacts resulting from the direct use of the proposed project on any publicly owned parks, recreation areas, or wildlife and waterfowl refuge lands in the project area to ensure compliance with Section 4(f) of the Department of Transportation Act of 1966. SWCA has identified a trail that follows along Buffalo Bayou. Listed as Buffalo Bayou Nature Trail, the trail is located on the north bank of the bayou and provides connections into surrounding neighborhoods. SWCA preliminarily consulted with the Texas Parks and Wildlife Department and determined that no properties protected under Section 6(f) Land and Water Conservation Fund (LWCF) Act or Chapter 26 of the Texas Parks and Wildlife Code are located within the project area. SWCA will verify this determination once project plans are available.

SWCA will assist the County to consult with the officials with jurisdiction (OWJ) to determine the significance of properties considered for Section 4(f) protection, the magnitude of project impacts to protected properties, and the appropriate level of mitigation if needed. Since the nature trail is a potential Section 4(f) property, SWCA will prepare a textual and graphic description of the Section 4(f) property boundaries, significant features, and position in relationship to the project area for OWJ consultation. SWCA will also complete the required checklist to determine where an exception applies and/or whether the proposed project will use a Section 4(f) property. If the project will constitute a use of Section 4(f) property, SWCA will assist the County to avoid impacts or seek a *de minimis* impact determination through consultation with the OWJ. If impacts are *de minimis*, then SWCA will complete a *de minimis* checklist with appropriate documentation. Consultation efforts with the OWJ will be documented in the NEPA document. SWCA assumes the project would not result in the use or take of significant Section 4(f) properties that would require an Individual 4(f) Evaluation. If an Individual Section 4(f) Evaluation is required, a separate scope and cost estimated would be provided.

TASK 11: PROJECT MANAGEMENT, MEETINGS

SWCA will attend weekly project calls for up to 50 weeks and provide a monthly progress report for 18 months for the Project. SWCA will also attend up to 5, in-person coordination meetings for the project.

ASSUMPTIONS

- SWCA assumes that the project will be classified as a CE and will not require preparation or publication of a Finding of No Significant Impact (FONSI).
- SWCA assumes attending up to 12 monthly calls with TxDOT to work the project through ECOS.
- DEC will provide coordination with TxDOT and/or assist with coordination where delegated to SWCA for development of the CE and analyses.
- DEC will provide all project documents such as schematic plan and profile, digital design files, GIS shapefiles, CAD files necessary for TNM, traffic data for the existing and the design years.
- SWCA assumes that each report prepared in tasks 2 through 10 above will be provided to DEC for one round of review prior to submittal to TxDOT.
- A title search is not included in the Hazardous Materials ISA. A separate cost estimate at $350/parcel can be included if requested.
- This scope does not include lead-based paint or asbestos surveys.
- Traffic data necessary to complete the air quality analysis will be provided by Fort Bend County or DEC.
- The project has a 24-hour future traffic volume of less than 140,000 vehicles, it is anticipated that only a qualitative analysis would be required for the proposed project. The qualitative analysis would provide information on national Mobile Source Air Toxics (MSAT) emission trends.
- Since the project is not located within a carbon monoxide (CO) or particulate matter (PM) nonattainment or maintenance area, the project is anticipated to be exempt from Hot Spot Analysis and CO Traffic Air Quality Analysis.
- If required, a Congestion Management Process (CMP) analysis will be provided by Fort Bend County.
- Coordination with TxDOT to determine noise measurement location will be required.
- Two IDCUS staff will perform site investigation and site field measurements for noise.
- Traffic data necessary to complete the traffic noise analysis for existing and predicted (future) years, including Average Daily Traffic (ADT), k-factor or Design Hourly Volumes (DHV), fleet mix, and directional split or line diagrams, will be provided by Fort Bend County or DEC.
- Previous modeling of project or adjacent projects, such as the TxDOT SH 99 mainlane project will be provided by DEC or TxDOT.
- Changes to the traffic noise model and technical report/memo for revised traffic numbers or other factors is not included.
- Detailed barrier design will require additional analysis and is not included in the current scope and fee.

- Noise workshop preparation including workshop site location selection, security, signs and boards, stakeholder notices, stakeholder ballots, and stakeholder ballot counting will be done by others.
- One SWCA and one IDCUS staff will attend one public involvement event or participate in one virtual public involvement event. Public involvement preparation including site location selection, security, signs and boards, notices/advertisements, handouts, and public meeting presentation or virtual public meeting presentation will be done by others.
- Cost estimate assumes addressing up to 20 public involvement comments.
- One SWCA and one IDCUS team member will attend up to 15 project coordination meetings in the Houston area, 10 with the Design Team and 5 with TxDOT.
- Structures carrying SH 99 NBFR will span Buffalo Bayou, Little Prong Creek, and the Buffalo Bayou Trail without wetland, stream or trail impact.
- Costs and scope do not include the development of a wetland permit or mitigation plan. Separate scope and cost estimate can be provided if project activities result in any wetland impacts, or stream impacts greater than 0.1 acre and permitting and mitigation is required.
- For a CE project, TxDOT has determined that no project-specific analysis is required as part of the environmental review process under Sections 303(d) and 402 of the Clean Water Act. Compliance is anticipated through the use of best management practices to control the discharge of pollutants from the project site.
- The project engineer will adhere to the TxDOT Hydraulic Design Manual to ensure that this project will not result in a "significant floodplain encroachment" as defined by FHWA's rules implementing Executive Order 11988 at 23 CFR 650.105(q).
- Cost includes up to 2 hours of agency (USFWS and TPWD) coordination as the proposed action is anticipated to have no effect on listed species, or no listed species are present.
- No agency meetings will be required.
- Cultural resource investigations are limited to online analysis, thus no costs are provided for archaeological field investigations or non-archeological historic properties viewshed or other indirect effect field studies. A change order would be required, if the agencies require field investigation.
- SWCA assumes that the concrete work associated with the channelization of Buffalo Bayou is not eligible for the NRHP. Therefore, it is believed that the PCR form will be sufficient, and no further work will be required. However, if it is determined that additional archival research or fieldwork and associated reporting are going to be required by TxDOT or any other permitting agencies to document the significance of this resource, additional funding 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.
- SWCA assumes the project would not result in the use or take of significant Section 4(f) properties that would require an Individual 4(f) Evaluation. If an Individual Section 4(f) Evaluation is required, a separate scope and cost estimated would be provided.
- No protected 6(f), or Chapter 26 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 $152,700. Invoicing will be once per month. We can begin the project immediately upon execution of a contract and notice to proceed.

Table 1. Cost estimate by task.

TASK	DESCRIPTION	COST
1.	TxDOT Environmental Compliance	$9,200
2.	Air Quality Analysis	$10,600
3.	Hazardous Materials Initial Site Assessment	$5,000
4.	Traffic Noise Analysis, Modeling & Workshops (includes site and publication fees costing $27,600)	$53,400
5.	Public Involvement	$19,800
6.	Impact Assessment	$4,200
7.	Water Resources	$6,800
8.	Biological Resources	$5,100
9.	Cultural Resources	$5,500
10.	Recreational Resources	$8,100
11.	Project Management, Meetings	$25,000
	TOTAL (includes $37,500 in newspaper ads and fees)	**$152,700**

If you have any questions or require any additional information, please contact me at 281.617.3217 or patricia.riley@swca.com. Thank you for the opportunity to assist with this project.

Sincerely,
SWCA Environmental Consultants

Patricia Riley
Senior Project Manager, Natural Resources

WEISSER Engineering & Surveying

TBPLS Reg. No. 10194324
TBPE Reg. No. F-68

PROPOSAL AGREEMENT FOR PROFESSIONAL SERVICES

Effective Date: April 14, 2022

Michael J. Kaspar, P.E.
DEC Engineering
3100 West Alabama St.
Houston, TX 77098
713-527-6374
Michael.Kaspar@decorp.com

Proposal for Professional Services in Connection With: Grand Parkway (SH 99) Northbound Frontage Road Project – S. Fry Road to Westheimer Parkway, Fort Bend County, Texas

Weisser Engineering & Surveying is pleased to submit this proposal and terms of service (together, the "Agreement") to DEC Engineering (the "Client").

I. SCOPE OF SERVICES

Surveying and Mapping
The Surveyor shall evaluate the existing ROW envelope and make recommendations for the acquisition of ROW necessary for the Project including but not limited to roadway, corner cuts, sight distance triangles, detention, and outfalls, if necessary. The Surveyor shall establish a project baseline based on the centerline of the right-of-way. The Surveyor shall create an available existing utility list (Excel Format) including the type, owner, location, and contact information for available existing utilities within the project limits to be supplied to the Engineering Consultant to complete the identification of potential utility conflicts. The Surveyor shall sign and seal all survey documents.

The specific survey limits are as follows:
The linear topographic and right-of-way survey along Grand Parkway (SH 99) Northbound Frontage Road beginning approximately 350 feet north of S. Fry Road and 950 feet south of Westheimer Parkway for an approximate total of 5**,600 linear feet**. (As Shown on the Attached Aerial Image)

1. **Existing Right of Way Mapping (Cat. 1B; Cond. II)**
    a. Perform abstract survey; obtain deeds of records, and plats for Grand Parkway (SH 99) right-of-way, streets intersecting Grand Parkway (SH 99) and tracts of land adjoining Grand Parkway (SH 99).
    b. Establish the existing right-of-way of Grand Parkway (SH 99).
    c. Prepare existing Right-of-Way Map of the Project certifying to a Cat. 1B, Cond. II Right-of-Way Survey to be delivered in PDF format.
    d. Prepare Survey Control Sheet(s) for the project to be delivered in PDF format.

    COST: $32,100.00 (non-taxable)

2. **Topographic Surveying for Grand Parkway (SH 99) Southbound Frontage Road and Intersecting Roadways (Cat 6; Cond. II)**

    The Surveyor will provide the following within the surveying limits described in Task 2:

a. Utilize horizontal and vertical project control established and provided by Texas Department of Transportation.
b. For the roadway and ditches, obtain cross-sections at 100-foot intervals with grade breaks. Cross-sections shall extend 20 feet beyond the proposed right-of-way lines where accessible. Identify locations and elevations of physical features to include buildings, fences, walls, trees (trunk diameter, drip line, and type), sidewalks, driveways and driveway curbs, power poles, light poles, water meters, water wells, ponds, sprinklers, off-site drain pipe, etc. Horizontally and vertically locate available existing utilities within, crossing, and adjoining project limits. Utilities will be located and tied based on visual evidence and utilities based on maps, plans, and marked by "One Call" within the project limits, flow line elevations, sizes, material types and directions of pipes will be obtained on storm sewer lines, sanitary sewer lines and culverts. The rim (top) and flow line elevations will be obtained on inlets, manholes, and drainage structures.
c. The Surveyor will coordinate with pipeline companies, municipal utility districts (MUDs), homeowner's associations (HOA's), Fort Bend County, and private utility agencies to obtain locations of available existing utilities and depths of existing pipelines and provide Level B Subsurface Utility Surveying.
d. Survey geotechnical bore hole locations as indicated by Client and provide information to Client in an approved digital format.
e. Prepare existing Topographic Survey Map of the Project certifying to a Cat. 6, Cond. II Topographic Survey to be delivered in PDF format.
f. The 3D topographical survey base map and digital terrain model (DTM), surface triangular irregular network (TIN) will be created and delivered for the existing roadway using Geopak and Microstation.

COST: $36,085.00 (non-taxable)

3. **Subsurface Utility Engineering (Level B) Utility/Pipeline Investigations**
The Survey shall perform such investigations, research, and other activities necessary to identify any potential utility/pipeline conflicts with the Project, including but not limited to:
    a. Locating and identifying available existing utilities/pipelines including casings and vent pipes within the existing and proposed rights-of-way, including obtaining information from utility owners record drawings and site reconnaissance, as well as shooting elevations marked or uncovered by others, and providing Subsurface Utility Engineering Level B effort to locate all available subsurface utilities within the existing and proposed right-of-way.
        - Level B – Two dimensional (x,y) information obtained through the application and interpretation of non-destructive surface geophysical methods. Also known as "designating", this quality level provides the horizontal position of subsurface utilities within approximately one foot.

COST: $7,800.00 (non-taxable)

4. **Additional Services**
    a. **Parcel Surveys (Cat. 1A; Cond. II)** - Prepare metes and bounds descriptions in accordance with Fort Bend County guidelines for property acquisition and add parcels to the existing right-of-way maps.

COST: $1,500.00 per parcel (**non-taxable**)
(Approximately 16 Tracts = $24,000.00)

b. Subsurface Utility Engineering (Level A) Pothole Investigation
COST: 0 to 5 feet - $1,200.00 per excavation (non-taxable)
5 to 10 feet – $1,500.00 per excavation (non-taxable)

10 to 15 feet – $1,800.00 per excavation (non-taxable)
15 to 20 feet - $2,300.00 per excavation (non-taxable)

(Note: $5,000 threshold must be met to cover cost of excavation equipment)

Survey field crew charge per day to collect the data from potholing.
COST: $2,100.00 (non-taxable)

II. TERMS AND CONDITIONS

1. This Agreement may only be modified by a writing acknowledging agreement of modification by both parties.
2. The Responsible Party signing this Agreement agrees to be fully responsible for the timely and complete payment for Services within thirty (30) days of invoicing. Any requests for modification of this provision must be signed by an officer or department director of Weisser Engineering & Surveying.
3. Weisser Engineering & Surveying is an independent contractor. Nothing in this Agreement forms a partnership, joint venture, employment, franchise, master-servant, or agency relationship between Client and Weisser Engineering & Surveying.
4. WEISSER ENGINEERING & SURVEYING SHALL ONLY BE LIABLE FOR DAMAGE OR LOSS TO ANY PERSON OR PROPERTY TO THE EXTENT SUCH DAMAGE OR LOSS IS CAUSED BY WEISSER ENGINEERING & SURVEYING'S NEGLIGENT ACT OR OMISSION IN CONNECTION WITH THE SERVICES. WEISSER ENGINEERING & SURVEYING'S LIABILITY TO CLIENT OR ANY OTHER PARTY FOR CLAIMS OF ANY KIND, WHETHER BASED ON CONTRACT OR TORT OR OTHERWISE RELATING TO THIS AGREEMENT, SHALL NOT EXCEED THE COMPENSATION PAID OR OWED TO WEISSER ENGINEERING & SURVEYING FOR SERVICES UNDER THIS AGREEMENT.
5. Client shall not solicit Weisser Engineering & Surveying employees for purposes of employment during the course of the Agreement or for a period of twelve (12) months thereafter. Client acknowledges and agrees that breach of this provision may result in irreparable and continuing damage to Weisser Engineering & Surveying, for which there would be no adequate remedy at law, and that, in the event of such breach, Weisser Engineering & Surveying may be entitled to equitable or injunctive relief and/or a decree for specific performance, in addition to all such other and further relief as may be available at law, in equity, or otherwise.
6. Upon request, Weisser Engineering & Surveying may make electronic files of its CAD drawings available to Client on an "as is" basis for informational purposes only that may not be relied upon for any other purpose. ALL WARRANTIES AND REPRESENTATIONS OF ANY KIND WITH REGARD TO ELECTRONIC FILES ARE DISCLAIMED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE. Since revisions or additions to design file drawings may occur at any time, Client agrees to indemnify, defend and hold harmless Weisser Engineering & Surveying, its officers, directors, agents, shareholders, and employees from and against any and all claims, suits, losses, damages or costs, including reasonable attorney's fees, arising from the use of outdated or amended design file drawings by Client or any third party, and such indemnification shall survive acceptance of said file(s) by Client or the termination of this Agreement. Client promises to notify any third party that the third party may not reasonably rely on electronic files, drawings, or documents not directly provided to such third party by Weisser Engineering & Surveying.
7. This Agreement shall be deemed entered into in Texas and shall be governed by and construed and interpreted in accordance with the laws of the State of Texas, without reference to any rules of conflict of laws. Venue shall be in Houston, Harris County, Texas.
8. In the event that any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability

shall not affect any other provisions, and the Agreement shall be construed as if such invalid, illegal, or unenforceable provision had never been contained in it.

9. This Agreement may be executed by facsimile or scanned and electronically transferred signatures. A copy of this Agreement bearing such a signature or signatures shall have the same force and effect as an original agreement with inked original signatures. Once signed, any reproduction of this Agreement made by reliable means (e.g., photocopy, scan, facsimile) is considered an original.
10. Client's failure to sign and return this Agreement to Weisser Engineering & Surveying within fifteen (15) days of Effective Date renders the Agreement voidable by Weisser Engineering & Surveying.
11. Notwithstanding anything to the contrary in this Agreement or any other ancillary documents, Weisser Engineering & Surveying shall not be responsible for delays caused by factors beyond Weisser Engineering & Surveying's reasonable control, including but not limited to delays because of strikes, lockouts, work slowdowns or stoppages, government ordered industry shutdowns, power or server outages, acts of nature, widespread infectious disease outbreaks (including, but not limited to epidemics and pandemics), failure of any governmental or other regulatory authority to act in a timely manner, failure of the Client to furnish timely information or approve or disapprove of Weisser Engineering & Surveying's services or work product, or delays caused by faulty performance by the Client or by contractors of any level. When such delays beyond Weisser Engineering & Surveying's reasonable control occur, Client agrees that Weisser Engineering & Surveying shall not be responsible for damages, nor shall Weisser Engineering & Surveying be deemed in default of this Agreement or any other agreement.

We appreciate the opportunity to provide this proposal. If you have any questions or comments, please do not hesitate to contact Laurie Young (Lyoung@weissereng.com).

The Client, by signing below, represents that he or she has the authority to enter into this Agreement, agrees to the terms and conditions in this Agreement, is willing to be the Responsible Party, promises to pay the invoiced amount within thirty (30) days of invoicing, and authorizes Weisser Engineering & Surveying to proceed with the Services as described above.

CLIENT
DEC Engineering
By: _____

Printed Name: _____

Title: _____

Date of Acceptance: _____

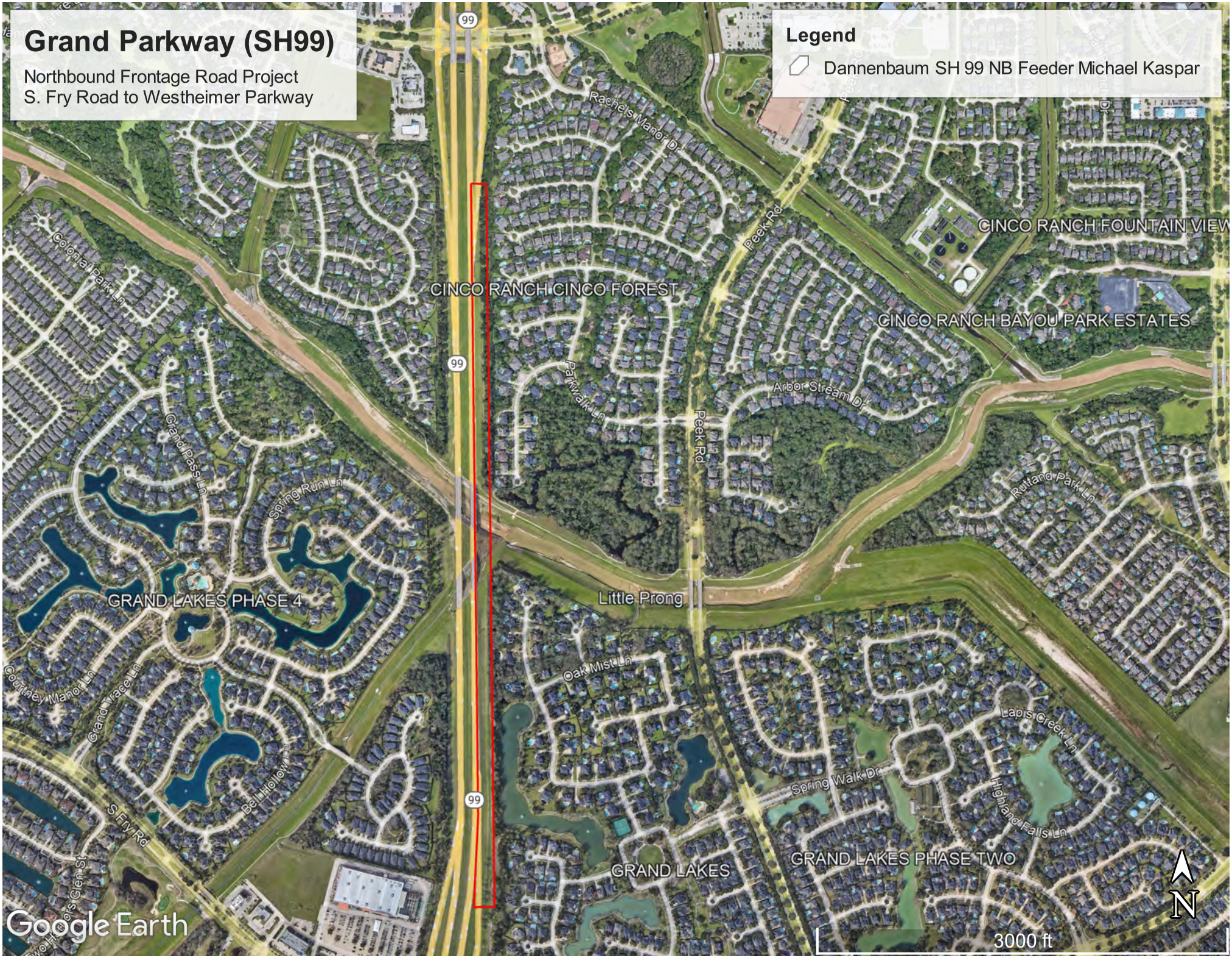
WEISSER ENGINEERING & SURVEYING

By: _____

Printed Name: Walter P. Sass

Title: Principal

Date of Acceptance: 4/14/2022


Grand Parkway (SH99)
Northbound Frontage Road Project
S. Fry Road to Westheimer Parkway
Legend
Dannenbaum SH 99 NB Feeder Michael Kaspar
99
Rachels Manor Dr
Peek Rd
CINCO RANCH FOUNTAIN VIEW
Colonial Park Ln
CINCO RANCH CINCO FOREST
CINCO RANCH BAYOU PARK ESTATES
Parkwalk Ln
Arbor Stream Dr
Grand Pass Ln
Spring Run Ln
Rutland Park Ln
GRAND LAKES PHASE 4
Little Prong
Oak Mist Ln
Courtney Manor Ln
Grand Trace Ln
Bell Hollow Dr
Lapis Creek Ln
Spring Walk Dr
Highland Falls Ln
S Fry Rd
GRAND LAKES
GRAND LAKES PHASE TWO
Google Earth
N
3000 ft

EARTH ENGINEERING, INC.

Geotechnical, Materials Testing & Environmental Consultants

4877 Langfield Road • Houston, TX 77040 • T: (713) 681-5311 • F: (713) 681-5411 • www.eartheng.com

June 01, 2022

Mr. Michael J. Kaspar,
DEC Engineering
3100 West Alabama St.
Houston, Texas 77098
O 713.527.6374
C 979.270.1115

P.E. Proposal No.: P-EE2217606-G
Sent Via E-Mail: michael.kaspar@decorp.com

GEOTECHNICAL EXPLORATION FOR A BRIDGE AT
SH99 NBFR - FRY ROAD TO WESTHEIMER PARKWAY IN KATY, TX.

Dear Mr. Kaspar,

Earth Engineering, Inc. is pleased to present this proposal to perform geotechnical Investigation for above project in Katy, Texas.

Furnished information indicated that the total length of the proposed Highway 5,600 ft. with a bridge crossing over Buffalo Bayou.

TXDOT Standards and specification will be adopted for this project including Texas department of Transportation Geotechnical Manuel, March 2018 and Pavement manual July, 2018.

SCOPE OF WORK

The scope of our services was specified based on Texas Department of Transportation TXDOT:

The scope of our services was specified by the client as follows:

- Total number of borings is 13 as follows:
  - Drilling and sampling (8) borings to a depth of 25-feet at proposed Highway ROW.
  - Drilling and sampling three (2) borings to a depth of 100-feet at the proposed bayou bridge.
  - Drilling and sampling three (3) borings to a depth of 120-feet at the proposed bayou bridge.
  - Installing two (2) piezometers to a depth of 35' each
- Obtaining continuous soil samples to a depth of 10 feet.
- Earth Engineering will perform granular soil sampling utilizing the Standard Penetration Test (split spoon sampler) by driving. Blow counts will be recorded as produced by a 140-pound weight falling 30 inches (ASTM D-1558). Cohesive soils will be sampled using a thin walled sampler (Shelby Tube) hydraulically pushed into the soil (ASTM D-1587).
- Performing laboratory tests on selected representative soil samples to develop the engineering properties of the soil. These tests may include: pocket penetrometers, unconfined compression, present moisture content, percent passing 200 sieves, dry densities, Atterberg Limits, Unconsolidated-Undrained Triaxial test, California Bearing Ratio (CBR), and OMD Standard Compaction as deemed appropriate.
- Perform Texas Cone Penetration (TCP) in accordance to Tes-132-E
- Utilizing the results of observations both in the field and in limited laboratory tests, Earth Engineering will author a report that will include the following subjects:
  - soil stratigraphy: soil encountered up to 120 feet
  - groundwater conditions and groundwater control during construction
  - boring log information will include all laboratory test results and field observations utilizing Wincore.
  - develop design recommendations for the proposed Creek bridge foundations including bearing piles capacity curves.

- passive earth pressure, friction factor, settlement analysis (consolidation report) and lateral earth pressure for the retaining walls will be included.

- develop design recommendations for the underground utilities. The recommendations will include buried structures such as manhole etc.

- classify the soils types in accordance to TXDOT requirements based on the characteristics of the soils along the alignment

- recommend the utilities bedding in accordance with TXDOT standards and specifications

- present subgrade stabilization option such as lime/fly-ash for cohesion-less soils and lime for cohesive soils

- recommend construction considerations, as deemed necessary

- recommend back-fill material specifications

- provide the sign and sealed Soil Boring Log sheets for insertion to the plans

- Incorporating all of the above into a geotechnical engineering report which is performed under the direction of, and signed by, a professional engineer registered in the State of Texas.

SCHEDULING

We anticipate that the total project duration will be 90 working days.

ESTIMATED FEES

- Eight (8) borings @25' (ROW)
- Two (2) borings @100' each (Bridge)
- Three (3) borings @ 120' each (Bridge)
- Total Number of borings 13
- Total Borings Depth 760'

The total cost for the geotechnical study is estimated to be **$ 115,620.00.**
The following table presents a detailed level-of-effort

SERVICE DESCRIPTION	*UNIT FEE*	*AMOUNT*	*UNIT*	*ESTIMATED COST*
Field Exploration				
Mobilization/Demobilization	$350	4	Mob	$1,400.00
Drilling and sampling (0-50) feet	$22	450	feet	$9,900.00
Drilling and sampling below 50 feet	$26	310	LS	$8,060.00
Two (2) Piezometers io a depth of 35 feet	N/A	2,500	LS	$2,500.00
Texas Cone Pentration (TCP)	$28	120	Each	$3,360.00
Boring grout	$10	100		$1,000.00
Field Engineer supervision and layout	$90.00	21	hours	$1,890.00
Vehicle Charge	$10.00	171	hours	$1,710.00
Technician, NICET II, Looger TXDOT	$90.00	150	hours	$13,500.00
		Subtotal:		**$43,320.00**
.				
Laboratory Testing				
Atterberg Limits (LL, Pi's)	$71.00	45	tests	$3,195.00
Moisture Contents	$11.00	55	tests	$605.00
Percent Finer than No. 200 Sieve	$55.00	10	tests	$550.00
Unconsolidated undrained	$72.00	15	tests	$1,080.00
Consolidated undrained	$1,500.00	6	tests	$9,000.00
Consolidation with two cycles	$600.00	2	tests	$1,200.00
Double Hydrometer test	$250.00	2	tests	$500.00
Sieve analysis (D50)	$145.00	6	tests	$870.00
		Subtotal:		**$17,000.00**
Engineering and Report Writing				
Principal Engineer, P.E.	$250.00	50	hours	$12,500.00
Senior Geotechnical Engineer	$205.00	200	hours	$41,000.00
Support Personnel	$60.00	30	hours	$1,800.00
		Subtotal		**$55,300.00**
			TOTAL	**$115,620.00**

INSURANCE

Earth Engineering inc. maintains the following insurance:

- Professional Liability (errors and omissions): one **million.**
- General Liability: **two million.**
- Workman's Compensation: **one million.**
- Commercial Auto Insurance: **one million.**
- Umbrella Insurance: **five million**

CLIENT RESPONSIBILITIES

Earth Engineering, Inc. requests that you provide the following information prior to the site visit and our site activities:

- Formal written authorization.
- Name and telephone number of a responsible client contact, if other than yourself.
- Any geotechnical, environmental, geologic, and hydrological report previously prepared for the study area, to which you have access, as well as information regarding any similar report currently being undertaken.
- Any restrictions or limitations to, or requirements for site access to be adhered to by Earth Engineering personnel.

Should you have any questions concerning this proposal or other services we may provide, please feel free to contact us at (713) 681-5311 or by e-mail at moes@eartheng.com. We will be pleased to discuss them with you.

Yours very truly,
EARTH ENGINEERING, INC.

Moe A. Shihadeh

Moe A. Shihadeh, P.E., D.GE
Principal - Diplomate Geotechnical Engineering

SERVICES TO BE PROVIDED BY THE ENGINEER

The Engineer shall provide engineering services required for the preparation of plans, specifications, and estimates (PS&E) and related documents, for the SH 99 Northbound Frontage Road from Fry Road to Westheimer Parkway in Fort Bend County. These services may include, but are not limited to, preparing roadway and bridge design, hydrologic and hydraulic design, traffic signal design, utility adjustment coordination, survey, and geotechnical data collection.

GENERAL REQUIREMENTS

1.1. Design Criteria. The Engineer shall prepare all work in accordance with the latest version of applicable Texas Department of Transportation (TxDOT) procedures, specifications, manuals, guidelines, standard drawings, and standard specifications or previously approved special provisions and special specifications, which include: the *PS&E Preparation Manual*, *Roadway Design Manual*, *Hydraulic Design Manual*, the *Texas Manual on Uniform Traffic Control Devices* (TMUTCD), *Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges (latest Edition)*, and other approved manuals. When design criteria are not identified in TxDOT manuals, the Engineer shall notify TxDOT and refer to the American Association of State Highway and Transportation Officials (AASHTO), *A Policy on Geometric Design of Highways and Street,* (latest Edition). In addition, the Engineer shall follow TxDOT's Houston District guidelines in developing the PS&E package. The Engineer shall prepare each PS&E package in a form suitable for letting through TxDOT's construction contract bidding and awarding process.

The Engineer shall identify any Design Exceptions required within the project limits prior to the 30% project completion submittal. The Engineer shall submit each exception to TxDOT for coordination and processing of approvals. If subsequent changes require additional exceptions, the Engineer shall notify TxDOT in writing as soon as possible after identification of each condition that may warrant a design exception.

1.2. Right-of-Entry and Coordination. The Engineer shall secure permission to enter private property to perform any surveying, engineering or geotechnical activities needed off TxDOT right-of-way. The Engineer shall not commit acts which would result in damages to private property, and the Engineer shall make every effort to comply with the wishes and address the concerns of affected private property owners. The Engineer shall contact each property owner prior to any entry onto the owner's property.

1.3. Progress Reporting and Invoicing. The Engineer shall conduct monthly project reviews, prepare monthly Progress Reports and Invoices for review and approval. Progress Reports shall include a brief discussion of the activities conducted during the reporting period and activities planned for the upcoming month and describe any problems/delays encountered and remedial actions needed and/or exercised to alleviate the same.

The Engineer shall prepare a design time schedule and an estimated construction contract time schedule, using the latest version of Primavera software or any approved programs. The schedules shall indicate tasks, subtasks, critical dates, milestones, deliverables and review requirements in a format that depicts the interdependence of the various items. The Engineer shall provide assistance in interpreting the schedules. The Engineer shall schedule milestone submittals at 30%, 60%, 90% and final project completion phases. The Engineer shall advise TxDOT in writing if the Engineer is not able to meet the scheduled milestone review date.

The Engineer shall prepare a letter of transmittal to accompany each document submittal. At a minimum, the letter of transmittal must include the TxDOT Project number, project limits, and contract number.

1.4. Traffic Control. The Engineer shall provide all planning, labor, and equipment to develop and to execute each Traffic Control Plan (TCP) needed by the Engineer to perform services under this contract. The Engineer shall comply with the requirements of the most recent edition of the TMUTCD. The Engineer shall submit a copy of each TCP for approval prior commencing any work on any roadway. The Engineer shall provide all signs, flags, and safety equipment needed to execute the approved TCP. The Engineer shall provide written notification twenty-four (24) hours in advance of executing each TCP requiring a lane closure, and shall have received written concurrence prior to beginning the lane closure. The Engineer's field crew shall possess a copy of the approved TCP on the job site at all times and shall make the TCP available for inspection upon request. The Engineer shall assign charges for any required traffic control to the applicable function code.

1.5. Coordination. The Engineer shall coordinate issues and communications through TxDOT's Project Manager. TxDOT will communicate the resolution of issues and provide the Engineer direction through TxDOT's Project Manager.

1.6. Quality Assurance (QA) and Quality Control (QC). The Engineer shall provide peer review at all levels. For each deliverable, the Engineer shall have some evidence of their internal review and mark-up of that deliverable as preparation for submittal. A milestone submittal is not considered complete unless the required milestone documents and associated internal red-line mark-ups are submitted. TxDOT's Project Manager may require the Engineer to submit the Engineer's internal mark-up (redlines) or comments developed as part the Engineer's quality control step. When internal mark-ups are requested by the TxDOT in advance, TxDOT, at its sole discretion, may reject the actual deliverable should the Engineer fail to provide the evidence of quality control. The Engineer shall clearly label each document submitted for quality assurance as an internal mark-up document.

The Engineer shall perform QA and QC on all survey procedures, field surveys, data, and products prior to delivery to TxDOT. If, at any time, during the course of reviewing

a survey submittal it becomes apparent to TxDOT that the submittal contains errors, omissions, or inconsistencies, TxDOT may cease its review and immediately return the submittal to the Engineer for appropriate action by the Engineer. A submittal returned to the Engineer for this reason is not a submittal for purposes of the submission schedule.

1.7. Use of TxDOT's Standards. The Engineer shall identify and insert as frequently as is feasible the applicable, current TxDOT Standard Details, Houston District Standard Details, or miscellaneous details that have been approved for use in the plan. The Engineer shall sign, seal, and date each Standard and miscellaneous detail if the Standard selected has not been adopted for use in Houston District. The Engineer shall obtain approval for use of these details during the early stages of design from the TxDOT Project Manager. In addition, these details shall be accompanied by the appropriate general notes, special specifications, special provisions, and method of payment. The Engineer shall retain the responsibility for the appropriate selection of each Standard identified for use within their design.

1.8. Organization of Plan Sheets. The PS&E shall be complete and organized in accordance with the latest edition of TxDOT's PS&E Preparation Manual. The PS&E package shall be suitable for the bidding and awarding of a construction contract, and in accordance with the latest TxDOT policies and procedures, and the District's PS&E Checklist.

1.9. Organization of Design Project Folder and Files (Electronic Project Files). The Engineer shall organize the electronic project files in accordance with TxDOT's File Management System (FMS) format.

TASK DESCRIPTIONS AND FUNCTION CODES

The Engineer shall categorize each task performed to correspond with the Function Codes (FC) and Task Descriptions.

PART 1 - PRELIMINARY ENGINEERING SERVICES

Function Code 110: Schematic Design and Development

1. Data Collection and Corridor Assessment

1.1. Data Collection

The Engineer shall conduct field reconnaissance and collect data as necessary to complete the schematic design. Data shall include the following:

- Existing and future design year traffic data. Design year traffic data to be provided by others.
- Applicable roadway inventory information, including the number of lanes, speed limits, pavement widths and rating, bridge widths and ratings, and ROW widths
- Aerial photos, planimetric mapping, and DTM (provided by others)
- Environmental Data
- Record plans as available
- Federal Emergency Management Agency (FEMA) Flood Boundary Maps
- Public and private utility information

1.2. Develop Base Maps

The base maps to be used for 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 identify existing ROW, property owners and the approximate location of major utilities in the preparation of base maps.

1.3. Analyze Existing Conditions

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

- ROW determination
- Horizontal alignment
- Profile grades
- Pavement cross slopes and pavement type
- Intersection design and analysis
- Sight distance
- Roadside signing
- Level-of-service
- Locations of critical constraints
- Drainage
- Traffic control and construction phasing sequence

1.4 Geotechnical Borings and Investigations (by Earth Engineering, Inc.)

The Consultant shall determine the location of proposed soil borings for potential sound walls, ditch slope stability, and along storm drain, and perform all geotechnical work in accordance with the latest version of TxDOT's Geotechnical Manual. All testing shall be performed in accordance with the latest version of the State's Manual of Test Procedures. American Society for Testing Materials (ASTM) test procedures can be used only in the absence of the State's procedures. All soil classification shall be done in accordance with the Unified Soil Classification System.

The Consultant shall provide a signed, sealed and dated geotechnical report which contains, but is not limited to, soil boring locations, boring logs, laboratory test results, generalized subsurface conditions, ground water conditions, piezometer data, analyses and recommendations for settlement and slope stability of the earthen embankments, skin friction tables and design capacity curves including skin friction and point bearing. The skin friction tables and design capacity curves must be present for piling and drilled shaft foundation.

The Consultant shall incorporate soil boring data sheets prepared, signed, sealed, and dated by the Geotechnical Engineer. The soil boring sheets shall be in accordance with the State's WINCORE software as can be found on the TxDOT website.

2. Design Concept Conference

In accordance with the State's Project Development Process Manual, the Engineer, in cooperation with the State, shall plan, attend and document a Design Concept Conference (DCC). In preparation for the DCC, the Engineer shall complete a State's Design Summary Report to serve as a checklist for the minimum required design considerations. The conference will provide for a brainstorming session in which decision makers, stakeholders and technical personnel may discuss and agree on:

- Roadway and drainage design parameters
- Engineering and environmental constraints
- Project development schedule
- Other issues as identified by the State
- Identify any Design Exceptions and waivers
- Preliminary Construction Cost Estimate

3. Conceptual Design Schematics

The Engineer shall develop conceptual design schematics in MicroStation format to evaluate various alignments. Profile work will be done only to the extent necessary to lay out the proper horizontal geometry. The conceptual schematic layouts shall contain the following design elements:

- Roadway alignment
- Pavement edges, face of curbs and shoulder lines
- Typical sections of existing and proposed roadways
- Proposed structure locations
- Preliminary ROW requirements and control-of-access locations
- Direction of traffic flow and the number of lanes
- Existing and projected traffic volumes

4. Geometric Design Schematics

The Engineer shall furnish Microsoft Office and MicroStation V8 or V8i-Geopak compatible computer generated media containing the roadway schematic layout. All supporting attachments and exhibits shall accompany the schematic layout.

Design shall be prepared in accordance with the latest version of TxDOT Advance Project Development Design Schematic Checklist, TxDOT Roadway Design Manual, TxDOT Project Development Process Manual, American Association of State Highway and Transportation Officials (AASHTO), including:

- Roadway alignments for ramps, frontage roads and cross streets
- Pavement edges, curb lines, sidewalks
- Typical sections of existing and proposed roadways
- Structure locations
- Existing and proposed major utilities
- Existing property lines and respective property ownership information
- ROW requirements adequate for preparation of ROW ramps
- Control-of-access limits
- Existing and projected traffic volumes
- Location and text of the proposed guide signs
- Lane lines, shoulder lines, and direction of traffic flow arrows
- Calculated profile grade and vertical curve data including “K” values
- Potential noise barrier locations

4.1. 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, bicycle and pedestrian facilities, and ROW limits.

4.2. Environmental Constraints

The Engineer shall consider impacts to environmentally sensitive sites.

4.3. ROW Requirements

The Engineer shall provide early identification of the ROW and drainage easement requirements and temporary construction easements, based on the proposed alignment, typical sections, access control, terrain, construction requirements, drainage, clear zone, maintenance, and any environmental mitigation requirements.

5. Cross Sections

The Engineer shall use Geopak to generate preliminary cross-sections every 100 feet in conjunction with the Geometric Schematic. The Engineer shall determine earthwork volumes for use in the cost estimate, and shall prepare roll plots or 11X17 sheets of the cross-sections as required.

6. Preliminary Construction Sequence

The Engineer shall prepare a Preliminary Construction Sequence Layout in conjunction with the Geometric Schematic.

7. Preliminary Cost Estimate

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

8. Engineering Summary Report

The Engineer shall prepare a report to summarize the design criteria, traffic analysis, preliminary cost estimate and basis of estimate, construction sequence description, and utility conflict issues.

9. Deliverables

In conjunction with the performance of the foregoing services, the Engineer shall provide the following draft and final documents and associated electronic files:

- Design Summary Report and Geometric Criteria Table (2 hard copies & PDF)
- Conceptual Design Alternative roll plots and matrix (2 hard copies & PDF)
- Preliminary Construction Sequence (2 hard copies & PDF)
- Preliminary opinion of probable costs for each Conceptual Alternative (PDF)
- Preliminary Drainage Study (2 hard copies & PDF)
- Final Drainage Study (2 hard copies & PDF)
- Geometric Design & Signing Schematic roll plots (2 hard copies & PDF)

Function Code 120: Environmental Documentation (by SWCA)

1. Project Scope for CE Form

The Consultant shall prepare the TxDOT required *Project Scope for Categorical Exclusions (CEs).* This task includes one set of revisions per the Client and TxDOT Houston District, and one meeting with the Client and TxDOT Houston District to discuss the scoping form. TxDOT Environmental Affairs Division (ENV) must approve the classification of the proposed project as an Open-Ended (d)-list project.

2. Data Collection

The Consultant will collect, review, and evaluate any necessary available and appropriate data pertaining to this proposed project and/or the project area.

3. Right-of-Entry

The Consultant will obtain the names and addresses of adjacent property owners for purposes of right-of-entry letters, public involvement notices, and noise workshops. The Consultant will request and obtain permission to enter their property to conduct environmental investigations.

4. Technical Reports

The Consultant will conduct analyses and prepare technical reports for the following items.

1. Biological
2. Hazardous Materials
3. Community Impacts
4. Indirect and Cumulative Impacts
5. Air Quality
6. Noise
7. Water Resources, including Wetlands
8. Cultural Resources

5. Notice Affording and Opportunity for Public Hearing (NAOPH)

The Consultant will prepare and publish a NAOPH after TxDOT Houston District has determined the CE to be satisfactory for further processing. The NAOPH will be submitted to the Client and TxDOT Houston District for approval prior to publication. The NAOPH will be published in a major newspaper, a local newspaper and a Spanish newspaper.

If requests for a public hearing are received and if the concerns of the requestors cannot be satisfied, the Consultant will coordinate a public hearing, which will be addressed in a supplemental agreement.

6. CE Determination Form

The Consultant shall prepare a draft CE Determination Form, address comments, revise the Form, and produce a final CE form.

7. Conduct Noise Workshops:

A. Conduct Noise Workshops - The Consultant will conduct two noise workshops to present the results of the noise analysis and the details of the proposed noise barriers from the noise mitigation analysis.

B. Prepare Noise Workshop Summary Report - After the two noise workshops have been completed, the Consultant will prepare one draft noise workshop summary report. The completed draft summary report will be submitted for review and approval in electronic format to the Client and TxDOT Houston District.

8. Deliverables

- Project Scope for CE Determination Form (PDF to Client & TxDOT)
- Technical Reports (See Task 5 above) (PDF to Client & TxDOT)
- Noise Analysis (PDF & TNM files to Client & TxDOT)
- Hazardous Materials Assessment (PDF to Client & TxDOT)
- CE Determination Form (PDF to Client & TxDOT)
- Noise Workshop Summary Report (PDF to Client & TxDOT)

Function Code 130: RIGHT-OF-WAY (ROW) DATA

1. ROW Mapping (by Weisser)

All surveys shall meet the standards set in the Professional Land Surveying Practices Act, the General Rules of Procedures and Practices promulgated by the Texas Board of Professional Land Surveying (TBPLS), and the Texas Department of Transportation (TxDOT) TxDOT Survey Manual, latest edition.

The Surveyor shall evaluate the existing ROW envelope and make recommendations for the acquisition of ROW necessary for the Project including but not limited to roadway, corner cuts, sight distance triangles, detention, and outfalls, if necessary.

The Surveyor shall establish a project baseline based on centerline of Project.

The Surveyor shall create an available existing utility list (Excel Format) including the type, owner, location, and contact information for available existing utilities within the project limits to be supplied to the Engineering Consultant to complete the identification of potential utility conflicts.

The Surveyor shall sign and seal all survey documents.

Existing ROW Mapping will include:

- Perform abstract survey; obtain deeds of records, and plats for Grand Parkway (SH 99) ROW, streets intersecting Grand Parkway (SH 99) and tracts of land adjoining Grand Parkway (SH 99).
- Establish the existing ROW of Grand Parkway (SH 99).
- Prepare existing ROW Map of the Project certifying to a Cat. 1B, Cond. II ROW Survey to be delivered in PDF format.
- Prepare Survey Control Sheet(s) for the project to be delivered in PDF format.
- Parcel Surveys (Cat. 1A; Cond. II) - Prepare metes and bounds descriptions in accordance with TxDOT guidelines for property acquisition and add parcels to the existing ROW maps.

2. Utility Adjustment Coordination

Utility Adjustment Coordination shall include utility coordination meetings with individual utility companies, communication and coordination with utilities, preparation of utility agreement assemblies including utility agreements, joint use agreements, and advanced funding agreements.

2.1 Utility Coordination

The Utility Coordinator shall perform utility coordination and liaison activities with involved utility owners, their consultants, and the County to achieve timely project notifications, formal coordination meetings, conflict analysis and resolution.

- The Utility Coordinator shall coordinate all activities to facilitate the orderly progress and timely completion of the design phase.
- The Utility Coordinator shall provide initial project notification letters to all affected utility companies, owners, and other concerned parties.
- The Utility Coordinator shall provide a Utility Contact List for each.
- The Utility Coordinator shall advise utility companies and owners of the general characteristics of the Project and provide an illustration of the project footprint for mark-up of utility facility locations that occupy the project area.

2.2 Utility Agreements for Utility Adjustments

The Utility Coordinator shall coordinate with utilities that conflict with highway construction or the “Utility Accommodation Rules” (UAR), and make the utility company aware of these conflicts. The Utility Coordinator shall assist the utility companies in the preparation of required agreements associated with the funding of adjustments and the occupation of State right of way.

2.3 Review of Utility’s Proposed Adjustments

The Utility Engineer shall evaluate alternatives in the adjustment of utilities balancing the needs of both the State and the Utility.

The Utility Engineer shall review the utility adjustment estimates for reasonableness of cost and the timely scheduling of the adjustment.

The Utility Engineer shall review plans for compliance with Utility Accommodation Rules and proposed location data. The responsibility for quality and accuracy of Utility adjustment plans will remain with the Utility Company.

Function Code 145: Project Management

The Engineer, in association with the Project Manager shall be responsible for directing and coordinating all activities associated with the project to comply with policies and procedures, and to deliver that work on time.

1. Progress Reports and Invoices

The Engineer shall conduct monthly project reviews, prepare monthly Progress Reports and Invoices for review and approval. Progress Reports shall include a brief discussion of the activities conducted during the reporting period and activities planned for the upcoming month, and describe any problems/delays encountered and remedial actions needed and/or exercised to alleviate the same.

2. Coordination/Administration

The Engineer shall manage project activities (including scheduled/ unscheduled meetings), maintain the project files, and direct Project Teams and staff.

3. Quality Plan

The Engineer shall establish a project specific Quality Management Plan to provide Quality Control and Quality Assurance processes for Team members.

4. Sub-consultant Management

The Engineer shall manage subcontracts/supplemental agreements for sub-consultant(s), monitor sub-consultant activities (staff and schedule), and review and recommend approval of sub-consultant invoices and progress reports.

Function Code 150: Surveys (by Weisser)

1. Topographic Surveying

The Surveyor will provide the following within the surveying limits:

- Utilize horizontal and vertical project control established and provided by TxDOT.
- For the roadway and ditches, obtain cross-sections at 100-foot intervals with grade breaks. Cross-sections shall extend 20 feet beyond the proposed right-of-way lines where accessible. Identify locations and elevations of physical features to include buildings, fences, walls, trees, sidewalks, driveways and driveway curbs, power poles, light poles, water meters, water wells, ponds, sprinklers, off-site drain pipe, etc. Horizontally and vertically locate available existing utilities within, crossing, and adjoining project limits. Utilities will be located and tied based on visual evidence and utilities based on maps, plans, and marked by “One Call” within the project limits, flow line elevations, sizes, material types and directions of pipes will be obtained on storm sewer lines, sanitary sewer lines and culverts. The rim (top) and flow line elevations will be obtained on inlets, manholes, and drainage structures.
- The Surveyor will coordinate with pipeline companies, municipal utility districts (MUDs), homeowner’s associations (HOA’s), Fort Bend County, and private utility agencies to obtain locations of available existing utilities and depths of existing pipelines and provide Level B Subsurface Utility Surveying.
- Survey geotechnical bore hole locations as indicated by Client and provide information to Client in an approved digital format.
- Prepare existing Topographic Survey Map of the Project certifying to a Cat. 6, Cond. II Topographic Survey to be delivered in PDF format.
- Topographic survey will supplement TxDOT’s aerial flight data.
- The 3D topographical survey base map and digital terrain model (DTM), surface triangular irregular network (TIN) will be created and delivered for the existing roadway using Geopak and Microstation.

2. Subsurface Utility Engineering (Level B) Utility/Pipeline Investigations

The Surveyor shall perform such investigations, research, and other activities necessary to identify any potential utility/pipeline conflicts with the Project, including but not limited to:

- Locating and identifying available existing utilities/pipelines including casings and vent pipes within the existing and proposed rights-of-way, including obtaining information from utility owners record drawings and site reconnaissance, as well as shooting elevations marked or uncovered by others, and providing Subsurface Utility Engineering Level B effort to locate all available subsurface utilities within the existing and proposed ROW.
- Level B – Two dimensional (x,y) information obtained through the application and interpretation of no-destructive surface geophysical methods. Also known as "designating", this quality level provides the horizontal position of subsurface utilities within approximately one foot.

Function Code 161: Drainage Design (by Gauge)

The work to be performed consists of providing engineering services for the preparation of drainage analysis and drainage studies or reports.

This report builds on the TxDOT Drainage Study for State Highway 99 Roadway Improvement Project dated June 2022 and produced by CivilTech Inc. The June 2022 report includes the necessary mitigation analysis for the ultimate SH 99 configuration, including the addition of the northbound frontage road between Fry Road and Westheimer Parkway. The goal of the work identified in the following scope of work is to not duplicate effort by utilizing any and all available work from the June 2022 report.

A drainage study is required to determine the impacts to abutting properties, identify negative impacts to private property and Federal Emergency Management Agency (FEMA) compliance for the 100-year floodplain due to proposed highway improvements, and provide recommendations for mitigation. The drainage report, signed and sealed by a professional engineer (P.E.), must include applicable hydrologic and hydraulic models such as HY-8, GEOPAK Drainage, HEC-RAS, HEC-HMS, XP-SWMM, PC-SWMM and EPA SWMM. Modeling must include the evaluation of existing versus proposed conditions. The drainage report includes drainage area maps, drainage outfall descriptions, tailwater selection and descriptions, storm water detention facilities, recommendations for mitigation of impacts.

1. DATA COLLECTION

The Consultant shall provide the following data collection services:

a. Collect available applicable data including GIS data and maps, site survey data, construction plans, previous reports and studies, and readily available rainfall history for the area. Particular sources of data collected must include the State, County, City, FEMA, and other stakeholders.

b. Collect available Flood Insurance Rate Maps (FIRMs), Flood Insurance Study (FIS) study data, and any effective HEC-HMS and HEC-RAS models.

c. Review survey data and coordinate any additional surveying needs with the prime DEC.

2. HYDROLOGIC STUDIES

The Consultant shall provide the following services:

a. Incorporate in the hydrologic study a thorough evaluation of the methodology available, comparison of the results of two or more methods, and calibration of results against measured data.

b. Calculate discharges using appropriate hydrologic methods, as included in this document or as approved by the State.

c. Consider the pre-construction and post-construction conditions in the hydrologic study. The additional lanes must be accounted for by increasing percent development or by a higher curve number, as deemed appropriate for the site.

d. Obtain the drainage area boundaries and hydrologic parameters such as impervious covered areas, and overland flow paths and slopes from appropriate sources such as, topographic maps, GIS modeling, construction plans, and existing hydrologic studies. The Consultant shall not use existing hydrologic studies without assessing of their validity. Obtain additional local rainfall from official sites such as airports.

e. Compare calculated discharges to the effective FEMA flows. If calculated discharges are to be used in the model instead of the effective FEMA flows, full justification must be documented.

3. STORM DRAINS

The Consultant shall provide the following services:

a. Design and analyze storm trunklines using SWMM. The Consultant shall design and analyze two drainage systems within the project limits.

b. Size trunk line and outfall. Develop designs that minimize the interference with the passage of traffic or incur damage to the highway and local property in accordance with the State’s Hydraulic Design Manual, Houston District’s criteria and any specific guidance provided by the State. Storm trunk line design software must be SWMM.

c. 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.

d. Confirm that the post project discharge is fully mitigated. Utilize the models developed from the CivilTech June 2022 Drainage Study for SH 99 to verify that the proposed discharges result in no adverse impact. This is a validation of the original report. The Consultant shall verify the SWMM from the June 2022 report and perform the analysis for the 10-year and 100-year frequency storms for both existing and proposed conditions to ensure no adverse impact to adjacent properties upstream and downstream of the project limits. The work to be performed under this work authorization is limited to analysis and sizing only and does not include design of any proposed infrastructure.

e. Determine the trunkline size for the 10-year design event using the State's Hydraulic Design Manual. Determine the trunkline upsizing necessary to mitigate for the fill in the floodplain. The June 2022 CivilTech report noted that their analysis did not quantify mitigation for fill in the floodplain, and placed that responsibility on the individual project teams. Using SWMM demonstrate that the oversized boxes do not result in an adverse impact when combined with the ultimate fully mitigated models from the CivilTech June 2022 report models.

4. COMPLEX HYDRAULIC DESIGN AND DOCUMENTATION

The Consultant shall provide the following services:

a. Gather information regarding existing drainage facilities and features from existing plans and other available studies or sources.

b. Perform hydraulic design and analysis using appropriate hydraulic methods, which may include computer models such as HEC-RAS, unsteady HEC-RAS or 2D models such as SWMM.

c. Analyze two bridges crossing Upper Buffalo Bayou and Little Prong Creek. Both channels are FEMA studied with a defined floodplain and floodway.

   i. Use the current effective FEMA models, where appropriate, as a base model for the analysis. If a "best available data" model is provided by the local floodplain administrator or previous drainage studies, it must be utilized accordingly for this analysis. Review the provided base model for correctness and update as needed.

   ii. Utilize the "best available data" model to develop the existing conditions HEC-RAS model. Verify "best available data" model hydrology with multiple methods and verify hydraulics inputs and results.

d. Consider pre-construction, present and post-construction conditions, as well as future widening.

e. Quantify impacts, beneficial or adverse, in terms of increases in peak flow rates and water surface elevations for the above listed hydraulic conditions and hydrologic events. Impacts must be determined for both upstream and downstream of the bridge crossings.

f. Compute water surface profiles for existing and proposed roadway conditions. The Consultant shall provide mitigation to offset any increases in the 1% AEP water surface profile. For a FEMA Flood Zone AE (as defined in the TxDOT Hydraulic Design Manual), the Consultant shall obtain a zero rise in the water surface profile, beyond the right of way line, unless otherwise approved by the State.

g. Present mitigation measures along with the advantages and disadvantages of each. Each method must consider the effects on the entire area. Include approximate construction costs in the report.

h. Coordinate with roadway lead and prime DEC to support the calculation of fill in the floodplain within Openroads or Power GeoPAK. Gauge will provide the WSEL and coordinate with Prime. Prime will perform Open Roads or GeoPAK quantification exercise of fill in the floodplain. To confirm prime calculated fill numbers, Gauge will provide spreadsheet average end area calculations which quantify the cut and fill within the 1% AEP flood plain using cross sections provided by the Prime.

5. SCOUR ANALYSIS

The Consultant shall provide the following services for two bridges over Upper Buffalo Bayou and Little Prong Creek:

a. Complete a scour analysis using the HEC-RAS hydraulics model. Document the scour envelop on bridge layouts that are provided by the roadway lead and prime DEC. Determine the need for scour counter measures and provide recommendations. Document the scour findings and recommendations in a scour report. This report must be signed and sealed by a Licensed Texas PE.

6. PLANS, SPECIFICATIONS AND ESTIMATES (PS&E) DEVELOPMENT FOR HYDRAULICS

The Consultant shall provide the following services:

a. Prepare the PS&E package in accordance with the applicable requirements of the State’s specifications, standards, and manuals, including the PS&E Preparation Manual. Include the following sheets and documents:

    i. Prepare Hydraulic Data Sheets for two bridges over Upper Buffalo Bayou and Little Prong Creek.

7. DELIVERABLES

The Consultant shall submit the following to the State:

1. **Reports:**

   a. Draft Drainage Report
      - Three copies of a draft Hydraulic Report for review and comment.
      - The report must document and justify all data, boundary conditions, assumptions, methodologies, and results. The text, tables, exhibits, and appendices must document clearly and concisely the work performed and results found. The report must provide recommendations for critical review by the State. Such recommendations must include corrective actions by the State, corrective actions by others, or need for further detailed analysis such as an unsteady model analysis or the development of mitigation measures. The Consultant shall save text, tables, exhibits, and appendices (including computer models) on a compact disc and included the disk with each report. The report must be signed and sealed by a Texas P.E.
      - Assume one round of comments from the State. The Consultant shall address all State comments.

   b. Final Drainage Report
      - Four originals of a finalized Hydraulic Report.
      - The reports must be signed and sealed by a P.E.
      - Provide a complete version of the report and calculations to the State Project Manager via Box.com.

PART 2 - PS&E SERVICES

SERVICES TO BE PROVIDED BY THE ENGINEER

The work to be performed by the Engineer shall consist of providing engineering services required for the schematic refinement and environmental re-evaluation of the existing schematic and the preparation of plans, specifications and estimates (PS&E) and related documents.

Function Code 145: Project Management

The Engineer, in association with the Project Manager shall be responsible for directing and coordinating all activities associated with the project to comply with policies and procedures, and to deliver that work on time.

1. Progress Reports and Invoices

The Engineer shall conduct monthly project reviews, prepare monthly Progress Reports and Invoices for review and approval. Progress Reports shall include a brief discussion of the activities conducted during the reporting period and activities planned for the upcoming month, and describe any problems/delays encountered and remedial actions needed and/or exercised to alleviate the same.

2. Coordination/Administration

The Engineer shall manage project activities (including scheduled/ unscheduled meetings), maintain the project files, and direct Project Teams and staff.

3. Quality Plan

The Engineer shall establish a project specific Quality Management Plan to provide Quality Control and Quality Assurance processes for Team members.

4. Sub-consultant Management

The Engineer shall manage subcontracts/supplemental agreements for sub-consultant(s), monitor sub-consultant activities (staff and schedule), and review and recommend approval of sub-consultant invoices and progress reports.

Function Code 160: Roadway Design Controls

1. Roadway Design

The Engineer shall provide roadway plan and profile drawings using Computer-Aided Design and Drafting (CADD) standards as required by the State.

The plan view shall contain the following design elements:

- Calculated roadway centerlines for mainlanes, ramps, cross streets and frontage roads, as applicable. Horizontal control points shall be shown. The alignments shall be calculated using GEOPAK.
- Pavement edges for all improvements (mainlanes, ramps, cross streets, driveways and frontage roads, if applicable).
- Lane and pavement width dimensions.
- The geometrics of ramps, auxiliary lanes.
- Proposed structure locations, lengths and widths.
- Direction of traffic flow on all roadways.
- Control of access line, & ROW lines and easements.
- Begin/end super elevation transitions and cross slope changes.
- Limits of rip rap, block sod, and seeding.
- Existing utilities and structures.
- Benchmark information.
- Radial call outs, curb location, Concrete Traffic Barrier (CTB), guard fence, crash safety items and American with Disabilities Act Accessibility Guidelines (ADAAG) compliance items.
- Removal items.

The profile view shall contain the following design elements:

- Calculated profile grade for proposed mainlanes, ramps, cross streets and frontage roads, if applicable. Vertical curve data, including "K" values shall be shown.
- Existing and proposed profiles along the proposed centerline of the mainlanes, the outside shoulder line of ramps, and the outside gutter line of the designated frontage roads.
- Water surface elevations at major stream crossing for 2, 5, 10, 25, 50, and 100-year storms.
- Calculated clearances, taking into account the appropriate super elevation rate.
- The location of interchanges, mainlanes, grade separations and ramps (shall include cross sections of any proposed or existing roadway, structure, or utility crossing).

2. Typical Sections

Typical sections shall be required for all proposed and existing roadways and structures.

The Engineer shall provide the design of mainlanes with full shoulders, frontage roads, entrance and exit ramps, managed lanes and auxiliary lanes. The design shall be consistent with the approved refined schematic and the current Roadway Design Manual.

3. Cross Streets

The Engineer shall provide an intersection layout detailing the pavement design and drainage design at the intersection of each cross street. The layout shall include the curb returns, geometrics, transition length, stationing, and pavement and drainage details. The Engineer shall design for full pavement width to the ROW and provide a transition to the existing roadway.

4. 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 shall be delivered in standard GEOPAK format on 11"x17" sheets or roll plots and electronic files. The Engineer shall provide all criteria and input files used to generate the design cross sections.

5. Plan Preparation

The Engineer shall prepare roadway plans, profiles and typical sections for the proposed improvements.

Function Code 161: Drainage

1. Drainage Design

The Engineer shall provide drainage layouts, drainage area maps, calculations, and design of all drainage components. The Engineer shall design all detention/retention ponds, conventional storm drainage and cross drainage in conformance with the State Hydraulic Design Manual (September 2019) and Houston District’s criteria.

The drainage design will be prepared to provide for the two-lane frontage section. At a minimum the drainage items to be provided shall include the detailed drainage area maps showing the final drainage areas and inlet and storm sewer calculations for revised storm sewer flow elements. All drainage designs shall be

prepared in accordance with the findings presented in the Drainage Study. The proposed tasks are listed below:

- Conduct field trips to the Project site to investigate and confirm data and assumptions and assess general drainage conditions as needed;
- Review previous plans and drainage reports prepared by others which relate to drainage in the Project area (to be provided by the PMC);
- Prepare proposed drainage area maps for proposed improvements within the portion of the Project limits stated above;
- Design drainage structures located within the Project ROW, including open ditch drainage, storm sewer, inlets, manholes, subsurface drainage at retaining walls, and inlets/internal drainage piping where required on structures;
- Design and analyze the storm sewer system utilizing the Geopak Drainage Program and incorporate output to plan set;
- Design and analyze the roadside ditches for the proposed drainage criteria and incorporate results into the plans set on the roadway plan and profile sheets;
- Prepare storm sewer plan/profile drawings and special plan details, where required, for storm sewer system, laterals, junction boxes, etc. Identify potential utility conflicts during project design. Drawings will be prepared on 11” X 17” sheet at horizontal scale of 1”=100’ and vertical scale of 1”=10’; and
- Design cross-culvert extensions, if required, within the Project limits. This task is the extent to which designs and calculations regarding cross-culverts is required. Required drainage work outside the ROW will be performed by others.

Function Code 162: Signing, Pavement Markings and Signalization (by iGET)

1. Signing

The Consultant shall prepare drawings, specifications and details for all project-related signs. The Consultant shall coordinate with the State (and other Engineers as required) for overall temporary, interim and final signing strategies and placement of signs within contract limits.

2. Pavement Marking

The Consultant shall detail both permanent and temporary pavement markings and channelization devices on plan sheets. The Consultant shall coordinate with the State (and other Engineers as required) for overall temporary, interim, and final pavement marking strategies. The Consultant shall select Pavement markings from the latest State standards.

The Consultant shall provide the following information on sign and pavement marking layouts:

- Roadway layout.
- Center line with station numbering.
- Designation of arrow used on exit direction signs
- Culverts and other structures that present a hazard to traffic.
- Location of utilities.
- Existing signs to remain, to be removed, to be relocated or replaced.
- Proposed signs (illustrated, numbered and size).
- Proposed overhead sign bridges to remain, to be revised, removed, relocated, or replaced.
- Proposed overhead sign bridges, indicating location by plan.
- Proposed markings (illustrated and quantified) which include pavement markings, object markings and delineation.
- Quantities of existing pavement markings to be removed.
- Proposed delineators, object markers, and mailboxes.
- The location of interchanges, mainlanes, grade separations, frontage roads and ramps.
- The number of lanes in each section of proposed highway and the location of changes in numbers of lanes.
- Right-of-way limits.
- Direction of traffic flow on all roadways.

Function Code 163: Miscellaneous (Roadway)

1. Traffic Control Plan, Detours, Sequence of Construction (by HJ Consulting)

The Consultant shall prepare Traffic Control Plans (TCP) including TCP typical sections, for the project. A detailed TCP must be developed in accordance with the latest edition of the TMUTCD. The Consultant shall implement the current Barricade and Construction (BC) standards and TCP standards as applicable. The Consultant shall interface and coordinate phases of work, including the TCP, with adjacent Engineers. The Consultant shall:

1. The Consultant shall show proposed traffic control devices at grade intersections during each construction phase (stop signs, flagperson, signals, etc.). The Engineer shall show temporary roadways, ramps, structures (including railroad shoo-fly) and detours required to maintain lane continuity throughout the construction phasing. If temporary shoring is required, prepare layouts and show the limits on the applicable TCP.
2. The Consultant shall assist TxDOT in coordinating mitigation of impacts to adjacent schools, emergency vehicles, pedestrians, bicyclists and neighborhoods.
3. Develop each TCP to provide continuous, safe access to each adjacent property during all phases of construction and to preserve existing

access. The Consultant shall notify TxDOT in the event existing access must be eliminated and must receive approval from TxDOT prior to any elimination of existing access.

4. Design temporary drainage to replace existing drainage disturbed by construction activities or to drain detour pavement. The Consultant shall show horizontal and vertical location of culverts and required cross sectional area of culverts.
5. Prepare each TCP in coordination with TxDOT. The TCP must include interim signing for every phase of construction. Interim signing must include regulatory, warning, construction, route, and guide signs. The Engineer shall interface and coordinate phases of work, including the TCP, with adjacent Engineers, which are responsible for the preparation of the PS&E for adjacent projects.
6. Maintain continuous access to abutting properties during all phases of the TCP.
7. Make every effort to prevent detours and utility relocations from extending beyond the proposed Right-of-way lines. If it is necessary to obtain additional permanent or temporary easements and Right-of- Entry, the Engineer shall notify TxDOT in writing of the need and justification for such action. The Engineer shall identify and coordinate with all utility companies for relocations required.
8. Describe the type of work to be performed for each phase of sequence of construction and any special instructions (e.g. storm drain, culverts, bridges, railing, illumination, signals, retaining walls, signing, paving surface sequencing or concrete placement, ROW restrictions, utilities, etc.) that the contractor should be made aware to include limits of construction, obliteration, and shifting or detouring of traffic prior to the proceeding phase.
9. Include the work limits, the location of channelizing devices, positive barrier, location and direction of traffic, work area, stations, pavement markings, and other information deemed necessary for each phase of construction.
10. Identify and delineate any outstanding ROW parcels.
11. Delineate areas of wetlands on traffic control plans.

2. Storm Water Pollution Prevention Plans (SW3P)

The Engineer shall develop SW3P, on separate sheets from (but in conformance with) the TCP, to minimize potential impact to receiving waterways. The SW3P shall include text describing the plan, quantities, type, phase and locations of erosion control devices and any required permanent erosion control.

3. Compute and Tabulate Quantities

The Engineer shall provide the summaries and quantities with formal submittals.

4. Estimate

The Engineer shall independently develop and report quantities necessary to construct contract in standard State bid format at the specified milestones and Final PS&E submittals. The Engineer shall prepare construction estimates using Microsoft Excel or in a format directed by the State.

5. Specifications and General Notes

The Engineer shall identify necessary standard specifications, special specifications, special provisions and the appropriate reference items. The Engineer shall prepare general notes, special specifications and special provisions for inclusion in the plans and bidding documents.

Function Code 170: Bridge Design

1. Bridge Layout

The Engineer shall prepare a bridge layout plan sheet for each bridge. The Engineer shall determine the location of each soil boring needed for foundation design in accordance with TxDOT's *Geotechnical Manual*.

The Engineer shall comply with all relevant sections of the latest edition of TxDOT*'s LRFD Bridge Design Manual, Bridge Project Development Manual, Bridge Detailing Guide, and AASHTO LRFD Bridge Design Specifications and respective checklists*. Each bridge layout sheet must include bridge typical sections, structural dimensions, abutment and bent locations, superstructure and substructure types. The Engineer shall locate and plot all soil borings and utilities, show proposed retaining walls, and, for staged construction, indicate limits of existing bridge for removal and reconstruction.

2. Bridge Detail Summary. The Engineer shall prepare total bridge quantities, estimates, and summary sheets for each bridge.

3. Bridge Structural Details. The Engineer shall prepare each structural design and develop detailed structural drawings of all required details in compliance with above-listed manuals and guidelines. The Engineer shall assemble and complete all applicable TxDOT Standard Details sheets.

Additionally, the Engineer shall:

i. Perform calculations for design of bridge abutments.

ii. Perform calculations for bridge slab design.
iii. Perform calculations to determine elevations of bridge substructure and super structure elements.
iv. Perform calculations for bridge box beam design.
v. Prepare necessary foundation details and plan sheets.
vi. Prepare plan sheets for abutment design.
vii. Prepare plan sheets for additional abutment details.
viii. Prepare framing plan and slab plan sheets.
ix. Compute and prepare tables for slab and bearing seat elevations, dead load deflections, etc.
x. Design beams and prepare beam design tables.
xi. Prepare special provisions and special specifications in accordance to the above-listed manuals and guidelines.

Deliverables

Plans

The Engineer shall provide the following information at each submittal:

1. 30% Plans Submittal
   1.1. 8 sets of 11” x 17” plan sheets for Review.
   1.2. Estimate of construction cost.
   1.3. Engineer’s internal QA and QC markup set.
   1.4. Form 1002 and Design Exceptions with existing and proposed typical sections, location map and design exception exhibits.

2. 60% Plans Submittal:
   2.1. 8 sets of 11” x 17” plan sets for Review.
   2.2. Estimate of construction cost.
   2.3. Engineer’s internal QA and QC marked up set.
   2.4. One set of a roll format TCP phasing layouts, one .pdf of plan sheets for TCP concept, and significant project procedures form (State Form 2229) to present at the TCAT for TxDOT review.

3. 90% Plans Submittal
   3.1. 8 sets of 11” x 17” plan sheets for the Review.
   3.2. Estimate of construction cost.
   3.3. Marked up general notes
   3.4. Construction schedule.
   3.5. New Special Specifications and Special Provisions with Form 1814, if applicable.
   3.6. Engineer’s internal QA and QC marked up set.
   3.7. Other supporting documents.

4. District Review Submittal (95%):
    4.1. 8 sets of 11” x 17” plan sheets for the State district review
    4.2. List of governing Specifications and Special Provisions in addition to those required.
    4.3. Marked up general notes.
    4.4. Plans estimate.
    4.5. New Special Specifications and Special Provisions with Form 1814, if applicable.
    4.6. Triple Zero Special Provisions.
    4.7. Engineer sign, seal and date supplemental sheets (8 ½” x 11”).
    4.8. Contract time determination summary.
    4.9. Significant project procedures form.
    4.10. Right-of-Way and utilities certification.
    4.11. Temporary road closure letters.
    4.12. Construction speed zone request.
    4.13. Engineer’s internal QA and QC marked-up set.
    4.14. Other supporting documents.

5. Final submittal (100%).
    5.1. 8 paper sets of 11” x 17”
    5.2. Revised supporting documents from 95% review comments.

Electronic Copies

The Engineer shall furnish a DVD of the final plans in the format of current CADD system used by TxDOT, and in .pdf format.

SERVICES NOT INCLUDED IN SCOPE OR FEE PROPOSAL

1. Negotiations with adjacent property owners;
2. Improvement Survey once project is complete;
3. Filing and permit fees;
4. Floodplain Studies and Reclamation plans;
5. CLOMR & LOMR preparation and coordination;
6. Public Hearing;
7. Nationwide and Individual 404 Permits;
8. Traffic engineering report or studies;
9. Traffic or Signal Warrant Studies;
10. VISSIM Modeling;
11. Signal Plans;
12. Illumination Plans;
13. Design of ramp reversals;
14. Design of any utilities within project limits;
15. Value engineering studies;
16. Design of any Detention Pond facilities;
17. Design of pump stations that may be required for detention;
18. CTMS (ITS) Design and Plans;
19. Landscaping, irrigation or hardscape design.
20. Bid and Construction Phase Services.