

ENGINEERING SERVICES AGREEMENT

THIS AGREEMENT is made and entered into by and between the Fort Bend Grand Parkway Toll Road Authority, a transportation corporation organized and operating under the laws of the State of Texas, hereinafter called the "FBGPTRA" and HVJ Associates, Inc., hereinafter called "Engineer."

WITNESSETH

WHEREAS, the FBGPTRA desires to enter into an agreement for the performance by Engineer of services during the Project, and which are within the "Scope of Services" as defined in paragraph 2 below;

WHEREAS, the FBGPTRA proposes to construct Toll Road grade separation structures from US 59 to north of the Fort Bend Westpark Tollway (FM 1093) in Fort Bend County, Texas, called the Fort Bend Grand Parkway Toll Road, Segment D (the "Project");

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

AGREEMENT

1. General

The Engineer shall render professional services to FBGPTRA related to the Project as defined in the Scope of Services in Attachment A and Attachment A-1.

The standard of care for all professional engineering and related services performed or furnished by Engineer under this Agreement will be the care and skill ordinarily used by members of Engineer's profession practicing under similar conditions at the same time and in the same locality.

2. Compensation and Payment

- a. The Maximum Compensation under this contract is \$127,060.35. The amount paid under this Agreement may not exceed the Maximum Compensation without an approved change order.

Compensation for the performance of services within the Scope of Services described in Attachment A will be paid as a lump sum amount not to exceed \$127,060.35, as shown in Attachment B. Progress payments for work detailed in Attachment A will be made when the Engineer has attained a level of completion equal to or greater than agreed upon milestones of completion in the reasonable opinion of FBGPTRA.

Compensation for services described in Attachment A-1 will be paid per the rates described in Attachment B-1 only for work authorized in writing prior to being performed and only for such work as was actually performed. The Engineer shall

furnish satisfactory documentation of such work (e.g. timesheets, billing rates, classifications, invoices, etc.) as may be required by FBGPTRA.

- b. All performance of the Scope of Services and any Additional Services including changes in the contractual scope of work and revision of work satisfactorily performed, will be performed only when approved in advance and authorized by the FBGPTRA, and Additional Services will be reimbursed based on the billing rates in effect at that time, to the extent that such labor costs, and subcontracts are reasonable and necessary for the performance of such services. Out-of-pocket expense costs may be reimbursed only when approved in advance and authorized by the FBGPTRA. Payment will be made on the basis of project completion certificate and, for Additional Services, time and expense records and in accordance with those payment procedures set forth in subparagraph d. below. Billing rates will be inclusive of all direct labor, fringe benefits, general overhead, and profit.
- c. Where subcontractors are employed by the Engineer to perform additional services not within the original Scope of Services, the Engineer will be reimbursed for subcontractors' actual salaries and hourly rates, including overtime rates. Reimbursement to the Subcontractor for non-salary costs incurred by subcontractor will be on the same basis as if the cost was incurred by the Engineer. For subcontractors employed for the convenience of the FBGPTRA, the Engineer will be paid a subcontract administrative fee equal to ten percent (10%) of all subcontractor invoiced amounts.
- d. It is understood and agreed that monthly payments will be made to the Engineer by the FBGPTRA based on the following procedures: On or about the fifteenth day of each month during the performance of services hereunder and on or about the fifteenth day of the month following completion of all services hereunder, the Engineer shall submit to the FBGPTRA two (2) copies of invoices showing the amounts due for services performed during the previous month, set forth separately for work under this Agreement and for additional services (accompanied by supporting certified time and expense records of such charges in a form acceptable to the FBGPTRA.) It is specifically understood that any requests for travel reimbursements shall comply with those procedures for travel reimbursement to Fort Bend County employees established by the Fort Bend County Auditor. The FBGPTRA 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. The County shall pay each such invoice as approved by the FBGPTRA within thirty (30) calendar days after the FBGPTRA's approval of same.

3. Time of Performance

It is understood and agreed that the time for performance of the Engineer's services under this Agreement shall begin with receipt of the Notice to Proceed and end 200 calendar days from that date.

4. The FBGPTRA's Option to Terminate

- a. The FBGPTRA has the right to terminate this Agreement at its sole option at any time, with or without cause, by providing 30 days written notice of such intentions to terminate and by stating in said notice the "Termination Date" which shall be less than 30 days later than the actual receipt of such written notice by the Engineer. Upon such termination, the FBGPTRA shall compensate the Engineer in accordance with paragraph 3, above, for those services which were provided under this Agreement prior to its termination and which have not been previously invoiced to the FBGPTRA. The Engineer's final invoice for said services will be presented to and paid by the FBGPTRA in the same manner set forth in paragraph 3(b), above.
- b. Termination of this Agreement and payment as described in subparagraph (a) of this Paragraph shall extinguish all rights, duties, obligations, and liabilities of the FBGPTRA and the Engineer under this Agreement and this Agreement shall be of no further force and effect, provided, however, such termination shall not act to release the Engineer from liability for any previous default either under this Agreement or under any standard of conduct set by common law or statute. The obligations in Paragraph 6 shall survive the termination of this Agreement.
- c. If the FBGPTRA terminates this Agreement as provided in this paragraph, no fees of any type, other than fees due and payable at the Termination Date, shall thereafter be paid to the Engineer.
- d. The FBGPTRA's rights and options to terminate this Agreement, as provided in any provision of this Agreement shall be in addition to, and not in lieu of, any and all rights, actions and privileges otherwise available under law or equity to the FBGPTRA by virtue of this Agreement or otherwise. Failure of the FBGPTRA to exercise any of its said rights, actions, options or privileges to terminate this Agreement as provided in any provision of this Agreement shall not be deemed a waiver of any rights, actions or privileges otherwise available under the law or equity with respect to any continuing or subsequent breaches of this Agreement or of any other standard of conduct set by common law or statute.
- e. Copies of all completed and partially completed documents prepared under this Agreement shall be delivered to the FBGPTRA within 30 days or upon Engineer's receipt of termination payment, whichever is sooner, when and if this Agreement is terminated.

5. Inspection of the Engineer's Books and Records

The Engineer will permit the FBGPTRA, or any duly authorized agent of the FBGPTRA, to inspect and examine the books and records of the Engineer for the purpose of verifying the amount of work performed on the Project. FBGPTRA's right to inspect survives the termination of this Agreement for a period of four years.

6. Ownership and Reuse of Documents

All documents, including original drawings, estimates, specifications, field notes, and data created, produced, developed or prepared by Engineer or its approved outside advisory or support consultants (collectively, the "Documents") shall be the property of the FBGPTRA subject to all of the following terms and conditions; provided, however, FBGPTRA shall not own and shall have no right to receive any documents not deemed "final" by the Engineer until termination of this Agreement. Engineer will deliver the Documents to FBGPTRA within 30 days of the termination of this agreement and may retain a set of reproducible record copies of the Documents, provided that the Engineer has received full compensation due pursuant to the terms of this Agreement. It is mutually agreed that FBGPTRA will use the Documents solely in connection with the Project and for no other purposes, except with the express written consent of the Engineer, which consent will not be unreasonably withheld. Any use of the Documents without the express written consent of the Engineer will be at District's sole risk and without liability or legal exposure to Engineer.

FBGPTRA shall also be the owner of all intellectual property rights of the services rendered hereunder, including all rights of copyright therein. It is the intention of Engineer and FBGPTRA that the services provided are a "work for hire" as the term is used in the federal Copyright Act. Moreover, Engineer hereby agrees to assign, and by these presents, does assign to FBGPTRA all of Engineer worldwide right, title and interest in and to such work product and all rights of copyright therein.

Engineer agrees that all trademarks, trade names, service marks, logos, or copyrighted materials of FBGPTRA that Engineer is permitted to use in connection with the services will not be used without FBGPTRA's consent and shall remain in the sole and exclusive properties of FBGPTRA and this Agreement does not confer upon Engineer any right or interest therein or in the use thereof.

7. Personnel, Equipment, and Material

- a. The Engineer 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 the Engineer shall furnish and maintain, at its own expense, adequate and sufficient personnel and equipment, in the opinion of the FBGPTRA, to perform the Scope of Services when and as required and without delays. It is understood that the FBGPTRA will approve assignment and release of all key Engineer personnel and that the Engineer shall submit written notification of all key Engineer personnel changes for the FBGPTRA's approval prior to the implementation of such changes. For the purpose of this agreement, key Engineer personnel are defined as: Project Manager. Services described in this Agreement shall be performed under the direction of an engineer licensed to practice professional engineering in the State of Texas.
- b. All employees of the Engineer shall have such knowledge and experience as will enable them to perform the duties assigned to them. Any employee of the Engineer who, in the opinion of the FBGPTRA, is incompetent or by his conduct

becomes detrimental to the Project shall, upon request of the FBGPTRA, immediately be removed from association with the Project.

- c. Except as otherwise specified, the Engineer shall furnish all equipment, transportation, supplies, and materials required for its operation under this Agreement.

8. Items to be furnished to Engineer by the FBGPTRA

The following items will be supplied to the Engineer:

- a. Copies of preliminary studies by others.
- b. Assistance in coordination with all utility companies.
- c. Assistance in coordination with all public and governmental entities.

9. Subletting

The Engineer shall not sublet, assign, or transfer any part of its rights or obligations in this Agreement without the prior written approval of the FBGPTRA. Responsibility to the FBGPTRA for sublet work shall remain with the Engineer.

10. Conference

At the request of the FBGPTRA, the Engineer shall provide appropriate personnel for conferences at its offices, or attend conferences at the various offices of the FBGPTRA, or at the site of the Project, and shall permit inspections of its offices by the FBGPTRA, or others when requested by the FBGPTRA.

11. Appearance as Witness

If requested by the FBGPTRA, or on its behalf, the Engineer shall prepare such engineering exhibits and plans as may be requested for all hearings and trials related to the Project and, further, it shall prepare for and appear at conferences at the office of the FBGPTRA's Executive Director and shall furnish competent expert engineering witnesses to provide such oral testimony and to introduce such demonstrative evidence as may be needed throughout all trials and hearings with reference to any litigation relating to the Project. Trial preparation and appearance by the Engineer in courts regarding litigation matters are Additional Services and compensation will be made in accordance with the schedule contained in Exhibit B-1.

12. Compliance with Laws

The Engineer 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, the Engineer shall furnish the FBGPTRA with certification of compliance with said laws, statutes, ordinances, rules, regulations, orders, and decrees above specified.

13. Insurance

The Engineer shall obtain and maintain, throughout the term of the Agreement, insurance of the types and in the minimum amounts set forth in Attachment C.

14. Indemnification

With respect to claims brought by third parties against either Engineer of the FBGPTRA relating to the property or facilities with respect to which this Agreement pertains, Engineer and the FBGPTRA agree as follows:

- a. **ENGINEER WILL INDEMNIFY AND HOLD HARMLESS THE FBGPTRA, ITS DIRECTORS, OFFICERS, AND EMPLOYEES AGAINST ANY CLAIMS, DEMANDS OR CAUSES OF ACTION; AND COSTS, LOSSES, LIABILITIES, EXPENSES AND JUDGMENTS INCURRED IN CONNECTION THEREWITH, INCLUDING REASONABLE ATTORNEY'S FEES AND COURT COSTS, BROUGHT BY ANY OF ENGINEER'S EMPLOYEES OR REPRESENTATIVES, OR BY ANY OTHER THIRD PARTY, BASED UPON, IN CONNECTION WITH, RESULTING FROM OR ARISING OUT OF THE NEGLIGENT ACTS, ERRORS OR OMISSIONS OF ENGINEER; HOWEVER, ENGINEER'S CONTRACTUAL OBLIGATION OF INDEMNIFICATION SHALL NOT EXTEND TO THE NEGLIGENCE OR OTHER FAULT OF THE FBGPTRA OR STRICT LIABILITY IMPOSED UPON THE FBGPTRA AS A MATTER OF LAW (INCLUDING STRICT LIABILITY IMPOSED UPON THE FBGPTRA AS A RESULT OF THE CONDITION OF THE PROPERTY OR FACILITIES WITH RESPECT TO WHICH THIS AGREEMENT PERTAINS).**
- b. In the event that both the FBGPTRA and Engineer are adjudicated negligent or otherwise at fault or strictly liable without fault with respect to damage or injuries sustained by the claimant, each shall be responsible for its own costs of litigation and pro rata share of damages as determined by the proceedings.

It is a condition precedent to the indemnitor's contractual obligation of indemnification under this Agreement that the party seeking indemnity shall provide written notice of a third party claim, demand or cause of action within 30 days after such third party claim, demand or cause of action is received by the party seeking indemnity. It is a further condition precedent to the indemnitor's contractual obligation of indemnification under this Agreement that the indemnitor shall thereafter have the right to participate in the investigation, defense and resolution of such third party claim.

15. Dispute Resolution

Except as expressly provided in Section 4. Termination, if a dispute arises out of, or relates to, the breach thereof, and if the dispute cannot be settled through negotiation, then the FBGPTRA and the Engineer agree to submit the dispute to mediation. In the event the FBGPTRA or the Engineer desires to mediate any dispute, that party shall notify the other party in writing of the dispute desired to be mediated. If the parties are unable to resolve their differences within 10 days of the receipt of such notice, such dispute shall be submitted for mediation in accordance with the procedures and rules of the American Arbitration Association (or any successor organization) then in effect. The deadline for submitting the dispute to mediation can be changed if the parties mutually agree in writing to extend the time between receipt of notice and submission to mediation. The expenses of the mediator shall be shared 50 percent by the FBGPTRA and 50 percent by the Engineer. This requirement to seek mediation shall be a condition required before filing an action at law or in equity.

16. Delivery of Notices, Etc.

- a. All written notices, demands, and other papers or documents to be delivered to the FBGPTRA under this Agreement shall be delivered to the Fort Bend Grand Parkway Toll Road Authority, P.O. Box 2789, Sugar Land, Texas 77487-9740, Attention: Bill Jameson, or at such other place or places as it may from time to time designate by written notice delivered to the Engineer. For purposes of notice under this Agreement, a copy of any notice or communication hereunder shall also be forwarded to the following address: Fort Bend County Clerk, 301 Jackson Street, Richmond, Texas 77469, Attention: County Judge.
- b. All written notices, demands, and other papers or documents to be delivered to the Engineer under this Agreement shall be delivered to HVJ Associates, Inc., 6120 South Dairy Ashford Street, Houston, TX 77072, Attention: Hossam Esmail, or such other place or places as the Engineer may designate by written notice delivered to the FBGPTRA.

17. Reports of Accidents, Etc.

Within 24 hours after the occurrence of any accident or other event which results in, or might result in, injury to the person or property of any third person (other than an employee of the Engineer), whether or not it results from or involves any action or failure to act by the Engineer or any employee or agent of the Engineer and which arises in any manner from the performance of this Agreement, the Engineer shall send a written report of such accident or other event to the FBGPTRA, setting forth a full and concise statement of the facts pertaining thereto. The Engineer shall also immediately send the FBGPTRA a copy of any summons, subpoena, notice, other documents served upon the Engineer, its agents, employees, or representatives, or received by it or them, in connection with any matter before any court arising in any manner from the Engineer's performance of work under this Agreement.

18. The FBGPTRA's Acts

Anything to be done under this Agreement by the FBGPTRA may be done by such persons, corporations, or firms as the FBGPTRA may designate.

19. Limitations

Notwithstanding anything herein to the contrary, all covenants and obligations of the FBGPTRA under this Agreement shall be deemed to be valid covenants and obligations only to extent authorized by the Act creating the FBGPTRA and permitted by the laws and the Constitution of the State of Texas. This Agreement shall be governed by the laws of the State of Texas, and no officer, director, or employee of the FBGPTRA shall have any personal obligation hereunder.

20. Captions Not a Part Hereof

The captions of subtitle of the several sections and divisions of this Agreement constitute no part of the content hereof, but are only labels to assist in locating and reading the provisions hereof.

21. Controlling Law, Venue

This Agreement shall be governed and construed in accordance with the laws of the State of Texas. The parties hereto acknowledge that venue is proper in Fort Bend County, Texas, for all disputes arising hereunder and waive the right to sue or be sued elsewhere.

22. Successors and Assigns

The FBGPTRA and the Engineer 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.

23. Appendices

The Appendices attached to this Agreement, which consists of:

Attachment A	Scope of Services
Attachment A-1	Additional Services
Attachment B	Compensation for Scope of Services
Attachment B-1	Compensation for Additional Services
Attachment C	Insurance Requirements

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 16th day of February, 2011.

FORT BEND GRAND PARKWAY TOLL ROAD
AUTHORITY, a local government Texas
corporation


By: _____


James D. Condrey

Chairman, Board of Directors

ATTEST: _____

By: _____


Secretary, Board of Directors

HVJ Associates, Inc.

ENGINEER

By: _____


Name: Hossam Esmail, PE

Title: Vice President

**ATTACHMENT A
SCOPE OF SERVICES**

FORT BEND GRAND PARKWAY TOLL ROAD (SH 99) – SEGMENT D

DESIGN SERVICES

SECTIONS 1, 4, AND BIG CREEK SEGMENT 4 DESIGN SERVICES

Section 1 Limits: West Riverpark Drive
Section 1 Station Limits: 678+85 to 737+00 (approximate)

Section 4 Limits: West Airport Boulevard
Section 4 Station Limits: 962+00 to 1023+00 (approximate)

Big Creek Limits: FM 2977 to Gless Big Creek Road (Segment 4)
Big Creek Length: 22,500 ft (approximate)

GENERAL DESCRIPTION

The work to be performed by the Engineer under this scope of work consists of providing geotechnical engineering services for Section 1 (West Riverpark Drive), Section 4 (West Airport Boulevard), and at Big Creek Segment 4. A single geotechnical report will be prepared to summarize all analyses included in this scope of services.

1) PLANNING OF FIELD INVESTIGATIONS

Obtain schematic drawings of the proposed structure drawings from the PMC in AutoCAD or MicroStation format. Submit a Proposed Plan of Borings to the PMC for review and approval.

2) FIELD INVESTIGATION COORDINATION

Complete the following tasks prior to mobilizing drilling equipment:

- a) Stake borings
- b) Clear utilities
- c) Prepare traffic control plan if needed
- d) Coordinate with drilling subcontractor
- e) Coordinate with the PMC

3) FIELD INVESTIGATION

- a) Drill the following borings:

Sections 1 and 4 – Drill four (4) borings for the bridges to a depth of 100 feet, seventeen (17) borings for the retaining walls to a depth of 35 feet, four (4) borings for

the overhead signs to a depth of 50 feet and two (2) borings for the storm sewers to a depth of 15 feet below the existing ground surface.

Up to 2 borings will be converted to piezometers to a depth of 35 feet. The borings will be drilled in accordance with TxDOT procedures. The following Table summarizes the proposed soil borings:

Structure	No. of Borings	Depth of borings (ft)	Drilling Footage (ft)
Retaining Walls	17	35	595
Bridges	4	100	400
Overhead Signs	4	50	200
Storm Sewers	2	15	30
Total	27		1,225

Big Creek Segment 4 - Drill 22 borings on either side of the creek to a depth of 15 feet below the existing ground surface.

b) Soil Sampling and In-Situ Testing

The subsurface investigation will be conducted using appropriate sampling and testing equipment. A minimum of 2.8-inch-diameter core samples will be taken to the full depth of hole. Cohesive soil samples are generally recovered continuously except within TxDOT Cone Penetration Test locations. Samples of cohesive soils are typically obtained with a thin-walled tube continuously pushed into the soil in accordance with TxDOT Geotechnical Manual. Sand samples will be obtained in accordance with TxDOT Geotechnical Manual.

In addition, TxDOT Cone Penetration Tests will be conducted every 5 feet in the borings in accordance with TxDOT Test Method Tex-132-E. This test is performed by installing a conical tip (3-inch diameter cone) on the drill rods and driving the tip into the soil using a 170-lb. hammer which is dropped a regulated 2 feet. The penetrometer is driven 12 blows in order to seat it in the soil. Reference marks are then made on drill stem for two, six inch increments. In relatively soft soils the penetrometer is driven one foot and the number of blows required for each 6-inch increment noted. In hard material, penetration for first and second 50 blows for a total of 100 blows is recorded. In either case, the penetrometer cone is driven into the soil 6 inches or 50 blows for each increment.

Once soils samples are retrieved they are removed from the samplers, classified, and basic field tests are performed. Soil classification is performed using the Visual-Manual Procedure for Description and Identification of Soils in accordance with TxDOT Geotechnical Manual to determine the type of soil and other descriptive information about the material. Soil samples are packaged and transported to the laboratory to preserve their condition as closely as possible in accordance with TxDOT Geotechnical Manual.

c) Documentation

The field work is documented through preparation of a field log and a borehole summary. The field log includes, the date and time the boring was drilled, personnel performing the work, type of equipment used, weather conditions, groundwater depth

measurements, sample and test types and depths, soil strata encountered with descriptions, TxDOT Cone Penetrometer data, and other pertinent information.

d) **Groundwater Level Measurement**

The presence of groundwater often drastically impacts the appropriate construction procedures, and can influence the geotechnical design. During drilling, the depth at which groundwater is first encountered will be noted. Drilling will be suspended for 10 minutes, and the groundwater level after five and ten minutes will be measured. In addition, groundwater levels will be measured after 24 hours, or immediately prior to borehole backfilling.

Two of the Sections 1 and 4 borings will be completed as 35-foot piezometers to obtain long-term ground water readings. Two ground water level readings will be obtained at 15 and 30 days after the completion of piezometers.

e) **Bore Hole Backfilling**

Boreholes will be backfilled using bentonite granules and / or soil cuttings. The following items will be submitted at end of this phase:

- 1) Preliminary WINCORE Logs - Field Data Only
- 2) Sketches showing the actual boring locations
- 3) Preliminary ground water reading on piezometer.

4) Laboratory Tests

Laboratory testing will be performed based on the TxDOT Manual of Testing Procedures and to ASTM standards, where applicable. The laboratory testing program is intended to provide confirmation of the field visual soil classifications and to establish properties of the subsurface materials required for design.

5) Engineering Analysis and Recommendations

Perform the following analyses:

- a) Final WINCORE Logs
- b) Bridge foundation design recommendations
- c) Retaining wall design and construction recommendations
- d) Overhead signs foundation design recommendations
- e) Storm sewer design and construction recommendations
- f) Structural fill requirements and general earthwork recommendations

The pile and drilled shaft capacity analysis will be calculated using the procedures described in the Texas Department of Transportation (TxDOT) Geotechnical Manual dated August, 2006.

The method described was adapted to Houston District practice as documented in the Sep. 12, 1988 memo to District 12 Designers and Laboratory Geotechnical Engineers titled Guidelines for Foundation Design. The Wincore computer program that incorporates

TxDOT standard procedures will be used to compute the allowable unit and accumulative skin friction for straight-sided drilled shafts and driven piles for the project bridge structures. Unless requested by the PMC, no deliverables will be delivered during this task. However, if requested, preliminary design information can be provided through memorandums. This information will be presented in the report.

6) Geotechnical Investigation Report

A report of the study will be prepared by an engineer specializing in soil mechanics and foundation engineering after reviewing available structural, geological, boring and laboratory data. In general, the following items will be included in the report:

- a) Plan of borings,
- b) Final boring logs and test data,
- c) Groundwater conditions,
- d) Generalized subsurface conditions,
- e) Bridge foundation design recommendations
- f) Retaining wall design recommendations
- g) Overhead signs foundation design recommendations
- h) Storm sewer design and construction recommendations
- i) General earthwork recommendations

Schedule

April 30, 2011 Completion of drilling, testing, and preparing Foundation Capacity Curves for the bridge borings.

May 15, 2011 Completion of draft geotechnical report.

This schedule assumes that no delays to permits or right of entries will be needed to complete the field work.

**ATTACHMENT A-1
ADDITIONAL SERVICES**

Fort Bend Grand Parkway Toll Road – Segment D

There are no additional services included in the initial scope of work, and no additional services are to be performed without approval of FBGPTRA. Additional services, if and when required, will be at additional expense, authorized in writing, and performed at the rates described in Attachment B-1 Compensation for Additional Services.

**ATTACHMENT B
COMPENSATION FOR SCOPE OF SERVICES
FORT BEND GRAND PARKWAY TOLL ROAD (SH 99) - SEGMENT D**

**HVJ ASSOCIATES, INC.
GEOTECHNICAL INVESTIGATIONS**

WORK AREA	SUBTOTAL LABOR EXPENSES	SUBTOTAL DIRECT EXPENSES	TOTAL
SECTIONS 1 AND 4	\$41,431.89	\$58,524.00	\$99,955.89
BIG CREEK SEGMENT 4	\$10,512.36	\$16,592.00	\$27,104.36
TOTAL	\$51,944.25	\$75,116.00	\$127,060.35

**ATTACHMENT B
COMPENSATION FOR SCOPE OF SERVICES
FORT BEND GRAND PARKWAY TOLL ROAD (SH 99) - SEGMENT D**

**HVJ ASSOCIATES, INC.
SECTIONS 1 & 4 GEOTECHNICAL INVESTIGATIONS**

TASK DESCRIPTION	PRINCIPAL	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	BIT	CAD DRAFTER	CLERICAL	FIELD TECHNICIAN	TOTAL LABOR HRS. & COSTS
Stake Boreholes and Utility Clearance									
Drilling Coordination									
Logging									
Review Field Logs & Assign Laboratory Testing									
Laboratory Data Review									
Boring Logs Preparation									
Foundation Design Recommendations									
Retaining Wall Stability Analysis									
Settlement Analysis									
Drawings									
Report Preparation									
Final Report Preparation									
Project Meetings									
SHEET TOTALS									
HOURS SUB-TOTALS									
LABOR RATE PER HOUR									
DIRECT LABOR COSTS									
MULTIPLIER (1+1.72) 1.1=2.992									
TOTAL LABOR COSTS									
SUBTOTAL LABOR EXPENSES									

ATTACHMENT B
COMPENSATION FOR SCOPE OF SERVICES
FORT BEND GRAND PARKWAY TOLL ROAD (SH 99) - SEGMENT D

HVJ ASSOCIATES, INC.
SECTIONS 1 & 4 GEOTECHNICAL INVESTIGATIONS

DIRECT EXPENSES	QUANTITY	RATE	UNIT	TOTAL COSTS
Field Exploration				
Mobilization / Demobilization		\$500.00	Lumpsum	
Soil Borings, Continuous 2-in (0-50')	1	\$18.00	per ft	
Soil Borings, Continuous 2-in (50'-100')	1	\$20.00	per ft	
THD Cone Penetration Test	1	\$22.00	each	
Grouting of Completed Boring	1	\$5.00	per ft	
3-Man Crew (Driver, Logger & Helper) Travel to/from job site, per day	1	\$120.00	per hour	
Concrete Coring 6" diameter (up to 12" thick)	1	\$18.00	per inch	
Piezometer Installation (2-in diameter maximum)	1	\$28.00	per foot	
Piezometer Manhole Cover (Steel)	1	\$120.00	each	
Piezometer Abandonment	1	\$450.00	each	
Permits, Traffic Control Plans & Other Coordination	1	\$10,000.00	Lumpsum	
Traffic Control Officer	1	\$35.00	per hour	
Traffic Control Signage	1	\$450.00	per day	
Vehicle Use	1	\$7.50	per hour	
Laboratory Testing				
Moisture Content	1	\$8.00	each	
Liquid and Plastic Limits	1	\$53.00	each	
Sieve Analysis	1	\$49.00	each	
Percent Passing No. 200 Sieve	1	\$41.00	each	
Maximum Gradation	1	\$110.00	each	
Unconfined Compression Strength	1	\$39.00	each	
Unconsolidated Undrained Strength	1	\$44.00	each	
One Dimensional Consolidation	1	\$310.00	each	
Consolidated Undrained Triaxial (w/ Pore Pressure)	1	\$550.00	each	
California Bearing Ratio (0 sets, 3-points each)	1	\$185.00	each	
SUBTOTAL DIRECT EXPENSES				

TOTAL LABOR COSTS	\$41,431.99
NON-SALARY (DIRECT EXPENSES)	\$58,824.00
SUBCONTRACTS	N/A
GRAND TOTAL	

**ATTACHMENT B
COMPENSATION FOR SCOPE OF SERVICES
FORT BEND GRAND PARKWAY TOLL ROAD (SH 99) - SEGMENT D**

**HVJ ASSOCIATES, INC.
BIG CREEK SEGMENT 4 GEOTECHNICAL INVESTIGATIONS**

TASK DESCRIPTION	PRINCIPAL	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	EIT	CAD DRAFTER	CLERICAL	FIELD TECHNICIAN	TOTAL LABOR HRS. & COSTS
Stake Boreholes and Utility Clearance									
Drilling Coordination									
Logging									
Review Field Logs & Assign Laboratory Testing									
Laboratory Data Review									
Boiling Logs Preparation									
Soil Evaluation									
Retaining Walls Stability Analysis									
Settlement Analysis									
Drawings									
Report Preparation									
Final Report Preparation									
Project Meetings									
SHEET TOTALS									
HOURS SUB-TOTALS									
LABOR RATE PER HOUR									
DIRECT LABOR COSTS									
MULTIPLIER (1+1.72) 1.1=2.82									
TOTAL LABOR COSTS									
SUBTOTAL LABOR EXPENSES									

**ATTACHMENT B
COMPENSATION FOR SCOPE OF SERVICES
FORT BEND GRAND PARKWAY TOLL ROAD (SH 99) - SEGMENT D**

**HVJ ASSOCIATES, INC.
BIG CREEK SEGMENT 4 GEOTECHNICAL INVESTIGATIONS**

DIRECT EXPENSES	QUANTITY	RATE	UNIT	TOTAL COSTS
Field Exploration				
Mobilization / Demobilization				
Soil Borings, Continuous 3-in (0'-50')	1	\$500.00	Lumpsum	
Soil Borings, Continuous 3-in (60'-100')	1	\$15.00	per ft	
THD Cone Penetration Test	1	\$20.00	per ft	
Grouting of Completed Boring	1	\$25.00	each	
3-Men Crew (driver, logger & helper) travel to/from job site, per day	1	\$5.00	per ft	
Concrete Coring 8" diameter (up to 12" thick)	1	\$120.00	per hour	
Piezometer Installation (2-in diameter minimum)	1	\$15.00	per inch	
Piezometer Maribole Cover (Steel)	1	\$25.00	per foot	
Piezometer Abandonment	1	\$120.00	each	
Permits, Traffic Control Plans & Other Coordination	1	\$450.00	Lumpsum	
Traffic Control Officer	1	\$10,000.00	per hour	
Traffic Control Signage	1	\$35.00	per day	
Vehicle Use	1	\$450.00	per day	
Laboratory Testing	1	\$7.50	per hour	
Moisture Content	1	\$8.00	each	
Liquid and Plastic Limits	1	\$53.00	each	
Sieve Analysis	1	\$40.00	each	
Percent Passing No. 200 Sieve	1	\$41.00	each	
Hydrometer Gradation	1	\$110.00	each	
Unconfined Compression Strength	1	\$35.00	each	
Unconsolidated Undrained Strength	1	\$54.00	each	
One Dimensional Consolidation	1	\$510.00	each	
Consolidated Undrained Triaxial (w/ Pore Press)	1	\$550.00	each	
Standard Proctor	1	\$130.00	each	
SUBTOTAL DIRECT EXPENSES				

TOTAL LABOR COSTS	\$10,612.50
NON-SALARY (DIRECT EXPENSES)	\$18,592.00
SUBCONTRACTS	N/A
GRAND TOTAL	