



**EUSTIS ENGINEERING COMPANY, INC.**

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30 November 2007

Shread-Kuyrkendall & Associates, Inc.  
Suite 16  
13000 Justice Avenue  
Baton Rouge, Louisiana 70816

Attention Mr. Frank Stagg  
Email [fstagg@shreadkuyrkendall.com](mailto:fstagg@shreadkuyrkendall.com)

Gentlemen:

Lump Sum Fee Proposal  
Professional Geotechnical Engineering Services  
St. Charles Parish  
West Bank Hurricane Protection Levee  
Phases I-A and I-B: Magnolia Ridge and  
Phase II: Willow Ridge  
St. Charles Parish, Louisiana  
Amendment No. 4 to Original Ordinance (No. 95-1-5)  
St. Charles Parish Project No. 941201  
Eustis Project No. 13194

Eustis Engineering Company, Inc., is providing this letter to transmit our proposal to perform additional geotechnical engineering services for the subject project. This proposal is intended to supplement our contract that was established based on our proposal dated 8 January 2003 (i.e., Amendment No. 3 to the original ordinance). This proposal has been prepared to address the outstanding scope items from our original scope of work, an increase in engineering fees since the 2003 fee schedule, and revised design practices established in light of Hurricane Katrina. We understand at this time the U.S. Army Corps of Engineers is funding only primary hurricane protection alignments and the West Bank Hurricane Protection Levee in St. Charles Parish is not considered primary protection.

Outstanding Scope Items. Please refer to Enclosure 1 of this letter that provides the scope items originally required for Phases I-A and I-B of the West Bank Hurricane Protection Levee. Tasks that are currently outstanding include geotechnical analyses of the two gated structures in the Paradis Canal (south and north), denoted as Items 3c and 3d on

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Enclosure 1, respectively. Additional analyses not listed on Enclosure 1 will include a preliminary evaluation of temporary retaining structures (TRS) for the construction of the gated structures. Based on the previous subsurface investigations, we have assumed primarily clay deposits will be encountered and therefore a detailed dewatering design will not be necessary for construction of these structures. Global slope stability analyses will also be required. We intend to issue a report for each gated structure based on previously obtained soil borings and laboratory test data. This data was obtained from Soil Boring 11 under Eustis' Project No. 14304 (northern structure) and Soil Boring 45 under this project (southern structure).

In general, our reports will include:

- boring location plans,
- individual boring logs,
- summaries of the laboratory test data,
- discussions of the subsoil and ground water conditions,
- the results of the engineering analyses outlined above and on Enclosure 1,
- preliminary TRS design requirements, and
- discussions of site preparation and construction recommendations.

In addition, Eustis anticipates reevaluation of several items associated with the Equalization Structures (Item 3b) and the Willow Ridge levee alignment (Item 3f). With regard to the Equalization Structures, we understand that alternative pile types to the steel H-Piles analyzed in our letter report dated 5 May 2006 are being considered. As such, additional pile capacity curves will need to be generated. For the Willow Ridge levee alignment, we understand various water loading conditions (different from what were previously analyzed) will need to be evaluated for levee stability. Stability analyses will be based on existing geotechnical data.

#### Cost and Assumptions

We propose to perform the above scope of services for a lump sum fee of \$34,625.00. An itemized breakdown by task is included as Enclosure 2. A new ordinance will be required to update the scope of services and unit rates for billing purposes. The current cost estimate is based on a 5% increase to our 2006-2007 Schedule of Fees (Enclosure 3) and assumes the services outlined will be completed by the end of 2008. We will increase our rates yearly by 5% for tasks performed after 31 December 2008.

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Our lump sum fee assumes up to three copies of each geotechnical report (via standard mail, facsimile transmission, email transmission, etc.) will be furnished to the owner/client. Additional copies will be furnished to the owner/client at the rates described in Item 4 of our general conditions.

Closing

Thank you for asking us to prepare this proposal for professional geotechnical services. We look forward to working with you on this phase of the project.

If you are in agreement with this proposal, please indicate your acceptance by completing the areas provided below and on Enclosure 3, and returning one copy for our files.

Yours very truly,

EUSTIS ENGINEERING COMPANY, INC.



GWENDOLYN P. SANDERS, P.E.

J. J. Hance:aln/jkd

Enclosures 1 through 3

Accepted By: <i>Albert D. Laguerre</i>	
Title: <i>Parish President</i>	Date: <i>12-18-2007</i>
Email Address: <i>alague@stcharlesgov.net</i>	
Organization: <i>St. Charles Parish</i>	
Mailing Address: <i>P.O. Box 302, Hahnville, LA 70057</i>	

West Bank Hurricane Protection Levee  
Summary of Geotechnical Requirements  
December 18, 2002

**Phase I-A & I-B. Magnolia Ridge Levee System**

1. Additional Soil Borings
  - a. Phase I-B: Realignment (7800 ft. north of Chevron Pipeline Corridor) {REQ'D}
    - a. Eight Borings (1000' spacing)
      - 3- 5 in. borings
      - 5- 3 in. borings
    - b. Phase I-A: Gated Structure South (Paradis Canal) {REQ'D}
      - a. One Boring (In or about canal)
2. Testing {REQ'D}
3. Geotechnical Analysis
  - a. Levee Construction (7800 ft. North of Chevron Pipeline) {REQ'D}
    1. Slope Stability
    2. Settlement
    3. Seepage
    4. Consolidation Time
    5. Construction Technique & Site Preparation
  - b. Equalizer Structures ( 5 sites) {REQ'D}
    1. Sheetpile I-Wall
      - a. Depth of Penetration
      - b. Max. Bending Moments
    2. Box Culverts & Pipe Culverts
      - a. Pile Load Capacities
      - b. Settlement
      - c. Compaction Criteria
      - d. Construction Technique & Site Preparation
  - b. Sheetpile I-Wall Crossing Underground Pipelines (1 site) {REQ'D}
    1. Chevron Pipeline (2 crossings)
    2. Columbia Gulf Pipeline (1 crossing)
  - c. Gated Structure South (Paradis Canal) {96-8-8}
    1. Sheetpile
      - a. Depth of Penetration
      - b. Max. Bending Moments
    2. Swing Gates and Lift Gates
      - a. Pile Load Capacities
      - b. Settlement
      - c. Compaction Criteria
      - d. Construction Technique & Site Preparation
  - d. Gated Structure North (Paradis Canal @ Cajun Paradise) {96-8-8}
    1. Pile Load Capacities
    2. Settlement
    3. Compaction Criteria
    4. Construction Technique & Site Preparation
  - e. Magnolia Ridge Pump Station {REQ'D}
    1. Pile Load Capacities
    2. Settlement
    3. Compaction Criteria
    4. Construction Technique & Site Preparation
    5. Depth of Penetration
    6. Max. Bending Moments

**ST. CHARLES PARISH  
 WEST BANK HURRICANE PROTECTION LEVEE  
 PHASES I-A AND I-B: MAGNOLIA RIDGE  
 AND PHASE II: WILLOW RIDGE  
 ST. CHARLES PARISH, LOUISIANA  
 ST. CHARLES PARISH PROJECT NO. 941201  
 AMENDMENT NO. 4 TO ORIGINAL ORDINANCE (NO. 95-1-5)  
 EUSTIS PROJECT NO. 13194**

**ITEMIZED SUMMARY OF FEES  
 BASED ON TASKS OUTLINED ON ENCLOSURE 1**

ITEM	DESCRIPTION/TASK	LUMP SUM FEE
	<b>Geotechnical Analyses and Reports</b>	
	a. Levee Construction (completed)	\$ 0.00
	b. Equalization Structures (reevaluate pile capacities, settlement and pile installation recommendations)	\$ 2,000.00
3	c. Gated Structure South (Boring 45, Eustis Project No. 13194)	\$ 13,500.00
	d. Gated Structure North (Boring 11, Eustis Project No. 14304)	\$ 13,500.00
	e. Magnolia Ridge Pump Station (completed)	\$ 0.00
	f. Willow Ridge Levee System (not shown on Enclosure 1) (Evaluation of various water loading conditions on levee stability using existing geotechnical data)	\$ 5,625.00
	<b>TOTAL</b>	<b>\$34,625.00</b>

**EUSTIS ENGINEERING COMPANY, INC.  
2006-07 SCHEDULE OF FEES**

**ADDITIONAL SERVICES**

Eustis offers a wide range of services not included in the above unit rates. Environmentally related services include the environmental soil probe as well as environmental drilling and laboratory testing. Additional CQC services include roof inspection, pipeline pressure testing, sewer infiltration-exfiltration, shotcrete inspection, etc. We will be happy to provide you with additional information on these services at your request.

**GENERAL CONDITIONS**

**1. Successors and Assigns.** The Client/Owner and Eustis each bind himself, his successors, executors, administrators, and assigns to the other party and their agreement, and to the successors, executors, administrators, and assigns of such other party with respect to all covenants of this agreement.

**2. Insurance.** Eustis shall secure and maintain at his expense such insurance that will protect him and the Client/Owner from claims under Workers' Compensation Acts and from claims for bodily injury, death, or property damage which may arise from performance of services under this agreement.

Insurance for bodily injury or death shall be not less than five hundred thousand and no/100 (500,000.00) dollars for one person, and not less than five hundred thousand and no/100 (500,000.00) dollars for all injuries and/or death resulting from any one occurrence. The insurance for the property damage shall not be less than fifty thousand and no/100 (50,000.00) dollars for each accident and not less than one hundred thousand and no/100 (100,000.00) dollars aggregate. The Engineer shall also secure and maintain at his expense professional liability insurance in the amount of not less than one hundred thousand and no/100 (100,000.00) dollars. All certificates shall be furnished to the Client and shall provide that insurance shall not be canceled without ten (10) days prior to written notice to the Client. The Client may examine the policies.

**3. Payment.** Invoices will be submitted once a month for services performed during the prior month. Payment will be due on receipt of invoice. Interest will accrue at the rate of 1% per month for accounts which are over 60 days old.

*Please indicate below who is responsible for payment of our invoice(s) if not the party signing the proposal.*

**Party/Organization:**

**Address:**

**Contact:**

**Phone:**

**Email:**

**Fax:**

4. **Report Distribution.** Fees are based on furnishing the Client/Owner up to three copies of a report/letter/test results in any of the standard formats offered by Eustis (hard paper copy by U.S. Mail, facsimile transmission, or email transmission in Adobe (.PDF) format, or copy of a CD. These copies include distribution to designated parties (the architect, engineer, contractor, etc.). Additional copies will be furnished at the cost of \$25.00 per copy. Overnight packages sent at the Client/Owner's request will be billed at Eustis' cost plus 15%.

5. **Records.** All pertinent records related to services performed hereunder shall be retained for five years after completion of work. The Client/Owner shall have access to the records at all reasonable times during our normal work hours. Copies of reports will not be issued to anyone with prior *written approval* from the Client/Owner or his representatives. Additional copies of reports issued after completion of Eustis' phase of the project will be billed as stated in Item 4 above. Reports including photographs and drawings larger than 11" x 17" will be billed at Eustis' cost plus 15%.

6. **Rights of Entry.** Unless otherwise agreed, the Client/Owner will furnish right-of-entry on the land for any planned borings and surveys. Reasonable precautions will be taken to minimize damage by equipment to the land and crops. The cost of restoration and crop damage resulting from normal operations has not been included in Eustis' fee. If the Client/Owner desires Eustis to restore land to its former condition and/or pay for crop damages, this will be accomplished and added to the fee.

7. **Samples.** All samples will be discarded 30 days after submission of the report unless the Client/Owner advises otherwise. Upon request, samples will be shipped in accordance with the Client/Owner's instructions and at the Client/Owner's expense, or stored for agreed upon charges. Samples which require chain-of-custody documentation will be returned to the job site or another location at the Client/Owner's expense.

8. **Warranty.** The only warranty or guarantee made in connection with services performed hereunder is that Eustis will use the degree of care and skill ordinarily exercised under similar conditions by reputable members of the profession practicing in the same or similar locality. No other warranty, expressed or implied, is made or intended by the proposal for consulting services or the furnishing of oral or written reports.

9. **Utilities.** If buried utilities exist in the area of the proposed operations, the Client/Owner will provide a location plan showing the existing utilities at the site where the exploration is to be performed. Reasonable care and diligence will be made to avoid the utilities as shown. However, the Client/Owner must agree to hold Eustis and its agents, owners, and/or employees harmless for any damage which may result due to inaccuracies in the plans or lack of plans relating to the location of underground utilities.

10. **Delivery.** Eustis will furnish its findings within a reasonable period of time. Neither Eustis or the Client/Owner shall hold the other responsible for any delays caused by events beyond the control of the other, the other's employees, and/or agents. These considerations may be, but are not limited to, natural disasters, strikes, lockouts, accidents, and/or events of this nature.

11. **Disavowal.** Eustis specifically disavows responsibility for design or construction review services relating to safety precautions of any contractors or subcontractors working on the project. It is specifically understood that Eustis will not be the supervising engineer for the project unless hired for that purpose.

12. **Definitions.** Straight time is defined as eight hours between the hours of 7:00 a.m. and 5:00 p.m. in any given day, exclusive of weekends and company holidays. Straight time hours may be varied to coincide with straight time hours of individual projects upon prior verbal agreement. Overtime is defined as those hours in excess of the normal eight hours described above.

**SPECIFIC SERVICES**

13. **Environmental Drilling and Testing.** All specialized field services, supplies, and/or equipment, marine equipment, surveying, insurance, etc., will be negotiated for each project. It is assumed the site conditions allow working at Level "D". Any fees associated with special site safety conditions will be negotiated on a project basis.

All well materials, such as screens, risers, bottom plugs, sumps, caps, centralizers, sand/gravel packs, bentonite seal, grout, well covers, guard posts, and pads, will be billed to include a 15% handling charge. If the material or equipment rental costs exceed \$10,000.00 for a particular project, the Client/Owner agrees to prepay for those items prior to start of the project.

The Client/Owner requesting laboratory tests performed on overtime will be billed an additional 35%.

For samples which require additional special handling, disposal, processing, or other unusual procedures, an additional fee of 25% above the stated prices will be added. Fees for field tests, chemical tests, sample preparation, specialized testing, etc., will be furnished upon request. All contaminated samples will be returned to Client/Owner's site at the Client/Owner's expense unless other arrangements have been previously made and agreed upon by all parties.

14. **CQC and Materials Testing Services.** Notification and/or requests for inspection or testing must be made not later than the close of business day prior to the date on which testing services are to be performed. *Notice of cancellation must be given at least four (4) hours prior to the time of the assignment.*

All CQC services quoted by hourly rate in this Schedule of Fees, unless otherwise noted, will be charged at a four-hour minimum or actual time thereafter per assignment. Travel time will be included in the total hours charged. The unit rate for mileage will also be added to those projects outside of the New Orleans Metropolitan area.

Special technician services or tests not included in this Schedule of Fees will be quoted upon request.

Mileage will be charged on projects which are located more than 20 miles round trip from our office.

*The above general conditions are acceptable.*

Party/Organization:

Accepted By:	Email Address:
Title:	Date: