

STATE OF LOUISIANA INVITATION TO BID

GRAND LAKE SHORELINE PROTECTION PROJECT FOR OFFICE OF COASTAL PROTECTION AND RESTORATION IN CAMERON PARISH, LOUISIANA



File Number: P27386DL

Solicitation Number: 2232414

Bid Opening Date: MAY 28, 2009, 10:00 A.M. (CT)

**State of Louisiana
Office of State Purchasing
1201 N. Third Street, Suite 2-160
Baton Rouge, LA 70802**

NOTICE TO BIDDERS

Sealed bids will be received for the State of Louisiana by the Division of Administration, Office of State Purchasing, Claiborne Office Building, 1201 North Third Street, Second Floor, Suite 2-160, Post Office Box 94095, Baton Rouge, Louisiana 70804-9095 until 10:00 A.M. (CT), on May 28, 2009, for the following:

**Solicitation 2232414, File Number P27386DL
GRAND LAKE SHORELINE PROTECTION PROJECT
for Office of Coastal Protection and Restoration, Engineering and Operations
Cameron Parish, Louisiana**

PROJECT:

The Work to be performed is issued in Cameron Parish, Louisiana, on the southern shoreline of Grand Lake near Catfish Lake. The Project Site is accessible by boat from the Gulf of Mexico via the Mermentau River and/or the Gulf Intercoastal Waterway (GIWW) via the Mermentau River

The Work to be performed under these plans and specifications consists of furnishing all labor and materials, including mobilization and demobilization to dredge access and flotation channels, temporary and permanent spoil placement, installation of woven geotextile fabric, construction of rock breakwaters, installation of settlement plates, and installation of temporary and permanent warning signs. The scope of this project is discussed in detail within the complete specifications.

Complete Bidding Documents may be obtained from:

OFFICE OF STATE PURCHASING
Claiborne Office Building, Second Floor, Suite 2-160
1201 North Third Street, Baton Rouge, Louisiana 70804
Attn: Samantha LeBlanc
Email: Samatha.LeBlanc@la.gov Fax: (225) 342-8688 Phone: (225) 342-8034
11 X 17 Drawings available upon request

All Requests should include: Federal Tax ID, Phone Number, Fax Number, Solicitation and File Number and Bid Opening Date

Website Link: <http://www.prd.doa.louisiana.gov/osp/lapac/pubmain.asp>

For additional information contact Brenda Myers, Office of State Purchasing, telephone (225) 342-8022, facsimile (225) 342-8688, or by email at Brenda.Myers@la.gov

A MANDATORY PRE-BID CONFERENCE AND SITE VISIT WILL BE HELD AT:

TIME & DATE: May 14, 2009 at 10:00 A.M. (CT)
LOCATION: Abdalla Hall, Room 102
635 Cajundome Blvd.
Lafayette, LA 70506

AGENCY CONTACT: Whitney Thompson, E.I. at (225) 342-9419, if directions are needed to the meeting.

Bids shall be accepted only from those bidders who attend the Mandatory Pre-Bid Conference and Site Visit.

All bids must be accompanied by bid security equal to five percent (5%) of the sum of the base bid and all alternates, and must be in the form of a bank money order, certified check, cashier's check or bid bond. If a bid bond is used, it shall be written by a surety or insurance company currently on the U.S. Department of the Treasury Financial Management Service list of approved bonding companies which is published annually in the *Federal Register*, or by a Louisiana domiciled insurance company with at least an A- rating in the latest printing of the A.M. Best's Key Rating Guide to write individual bonds up to ten percent (10%) of policyholders' surplus as shown in the A.M. Best's Key Rating Guide. The Bid Security shall be in favor of the State of Louisiana, Division of Administration. No Bid Security indicating an obligation of less than five percent (5%) by any method is acceptable.

Bids shall be accepted from Contractors who are licensed under LA. R.S. 37:2150-2163 for classification of Heavy Construction and/or specialty of Coastal Restoration & Habitat Enhancement; Seeding, Sodding, Soil Stabilization, Sheet Piling; Dredging; Dams, Reservoirs and Flood Control Work Other Than Levees; Earthwork, Drainage & Levee; Wharfs, Docks & Harbor Improvements, Landscaping, Grading & Beautification. In accordance with LA R.S. 37:2163 "anyone objecting to these classifications must send a certified letter to both the Louisiana State Licensing Board for Contractors and the Office of State Purchasing. The letter must be received no later than ten working days prior to the day on which bids are to be opened.

In accordance la R.S. 37:2163 "anyone objecting to the classification must send a certified letter to both the Louisiana state licensing board for contractors and the office of state purchasing. the letter must be received no later than ten working days prior to the day on which bids are to be opened.

No bid may be withdrawn for a period of thirty (30) days after receipt of bids. The State reserves the right to reject any and all bids for just cause.

When this project is financed either partially or entirely with State Bonds, the award of this Contract is contingent upon the granting of lines of credit, or the sale of bonds by the State Bond Commission. The State shall incur no obligation to the Contractor until the Contract between Owner and Contractor is fully executed.

STATE OF LOUISIANA
DIVISION OF ADMINISTRATION
OFFICE OF STATE PURCHASING
DENISE LEA, DIRECTOR

INSTRUCTIONS TO BIDDERS, POLICIES AND PROCEDURES

COMPLETION TIME

The Bidder shall agree to fully complete the contract within two-hundred seventy (270) consecutive calendar days for the bid, subject to such extensions as may be granted under Sections SP3 of the General Provisions, and acknowledges that this construction time will start on or before the date specified in the written "Notice to Proceed" from the Owner.

LIQUIDATED DAMAGES

The Bidder shall be assessed Liquidated Damages in the amount of one thousand four hundred fifty and NO/100 (\$1,450) Dollars for each consecutive calendar day for which the work is not complete, beginning with the first day beyond the completion date stated on the "Notice to Proceed".

BIDDING DOCUMENTS

The Bidding Documents include the following:

- Notice to Bidders
- Instructions to Bidders, Policies and Procedures
- Bid Form
- Bid Bond and Performance and Payment Bond
- General Provisions
- Special Provisions
- Contract Between Owner and Contractor including Insurance Certificates
- Affidavit
- Other Documents (if applicable)
- Technical Specifications
- Construction Plans
- Addenda Issued During the Bid Period and Acknowledged in the Bid Form

BIDDING DOCUMENTS

One (1) set of Plans and Specifications shall be furnished to each Bidder. Bidding Documents may be obtained only from the Office of State Purchasing as described in the Notice to Bidders.

Complete sets of Bidding Documents shall be used in preparing bids; neither the Owner nor the Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

Bidders shall promptly notify the Office of State Purchasing of any ambiguity, inconsistency or error which they may discover upon examination of the Bidding Documents or of the site and local conditions.

Bidders requiring clarification or interpretation of the Bidding Documents shall make a written request to the Office of State Purchasing at least seven (7) days prior to the date for receipt of bids. Any interpretation, correction or change of the Bidding Documents will be made by addendum. Interpretations, corrections or changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon such interpretations, corrections and changes.

DEFINITIONS

All definitions set forth in the General Provisions are applicable to the all portions of the Bidding Documents, unless otherwise specifically stated or written.

MANDATORY PRE-BID CONFERENCE/SITE VISIT

A MANDATORY Pre-Bid Conference and Site Visit shall be held as the time and location described in the Notice to Bidders. Bids shall be accepted only from those bidders who attend the Pre-Bid Conference. Contractors who are not in attendance for the entire Pre-Bid Conference and Site Visit will not be considered to have attended. Any revision of the Bidding Documents made as a result of the Pre-Bid Conference and/or the Site Visit shall not be valid unless included in an addendum.

BIDDER'S REPRESENTATION

Each Bidder by making his/her bid represents that:

1. He has read and understands the Bidding Documents and his bid is made in accordance therewith without exception.
2. He has visited the site and is familiar with the local conditions under which the work is to be performed.
3. His bid is based solely upon the materials, systems and equipment described in the Bidding Documents as advertised and as modified by addenda.
4. His bid is not based on any verbal instructions contrary to the Contract Documents and addenda.
5. The Bidder must be fully qualified under any State or local licensing law for Contractors in effect at the time and at the location of the work before submitting his bid. In the State of Louisiana, Revised Statutes 37:2150, et seq. will be considered, if applicable.
6. The Contractor shall be responsible for determining that all of his Sub-bidders or prospective Subcontractors are duly licensed in accordance with law.

COMPLIANCE REGARDING SUSPENSION/DEBARMENT:

Certification of no suspension or debarment: by signing and submitting any bid for \$100,000 or more, the bidder certifies that their company, any subcontractors, or principals are not suspended or debarred by the General Services Administration (GSA) in accordance with the requirements in OMB Circular A-133. A list of parties who have been suspended or debarred can be viewed via the internet at www.epls.gov.

EQUAL EMPLOYMENT OPPORTUNITY

The Division of Administration of the State of Louisiana is an equal opportunity employer, and looks to its contractor, subcontractors, vendors and suppliers to take affirmative action to effect this commitment in its operations.

By submitting and signing this solicitation, the Bidder agrees to abide by the requirements of the following as applicable: Title VI and VII of the Civil Rights Act of 1964, as amended by the Equal Opportunity Act of 1972, Federal Executive Order 11246, the Federal Rehabilitation Act of 1973, as amended, the Vietnam Era Veterans Readjustment Assistance Act of 1974, Title IX of the Education Amendments of 1972, and the Age Act of 1975, and bidder agrees to abide by the requirements of the Americans with Disabilities Act of 1990.

The Bidder agrees not to discriminate in its employment practices, and will render services under any contract entered into as a result of the solicitation, without regard to their race, age, color, religion, sex, national origin, veteran status, political affiliation or disabilities. Any act of discrimination committed by the Bidder, or failure to comply with these statutory obligations when applicable, shall be grounds for termination of any contract entered into as a result of the solicitation.

MINORITY OR WOMAN-OWNED ENTERPRISE

If your organization is a minority or woman-owned enterprise, please send supporting documentation. This information is required for the purpose of reporting to federal funding agencies. Send info to:

Natural Resources - Purchasing
Attn: Judy Lebourgeois
P O Box 44362
Baton Rouge La 70804-4362, or
Email Judy.Lebourgeois @ La.Gov

INSURANCE REQUIREMENTS

Proof of Contractor's Liability Insurance shall be required prior to contract being released to the successful bidder, and before work can commence. Insurance coverage specified below shall be furnished with the following minimum limits:

Workers' Compensation Insurance: The contractor and subcontractor shall take and maintain during the life of the contract workers' compensation insurance for all of their employees employed at the site of the project. Coverage provided must meet requirements of the labor code of the State of Louisiana. In case any class of employees is engaged in hazardous work under the workers' compensation statute, the contractor and subcontractor shall provide employer's liability insurance for the protection of their employees not otherwise protected. Employers' liability limit shall be \$1,000,000 when work is to be over water and involves maritime exposure.

Public Liability and Property Damage Insurance: Commercial general liability insurance, including but not limited to bodily injury, property damage, contractual liability, products liability, completed operations and owner's protective liability with combined single limits of \$1,000,000 per occurrence.

Licensed Motor Vehicles: The contractor shall take out and maintain during the life of the contract, automobile public liability insurance in an amount not less than combined single limits of \$1,000,000 per occurrence for bodily injury/property damage. If any non-licensed motor vehicles are engaged in operations within the terms of the contract on the site of the work to perform thereunder, such insurance shall

cover the use of all such vehicles.

(NOTE: If the Contractor does not own an automobile and an automobile is utilized in the execution of the contract, then only hired and non-owned coverage is acceptable. If an automobile is not utilized in the execution of the contract, then automobile coverage is not required.)

Aircraft or Watercraft Liability (When Applicable): \$2,000,000 for watercraft and \$5,000,000 for aircraft.

Builder's Risk Insurance: (If Applicable)

The General Contractor shall purchase and maintain property insurance upon the entire work included in the contract for an amount equal to the greater of the full-completed value or the amount of the construction contract including any amendments thereto. The general contractor's policy shall provide "All Risk" Builder's Risk insurance (extended to include the perils of wind, collapse, vandalism/malicious mischief, and theft, including theft of materials whether or not attached to any structure.) The "All Risks" Builder's Risk insurance must also cover architects' and engineers' fees that may be necessary to provide plans and specifications and supervision of work for the repair and/or replacement of property damage caused by a covered peril not to exceed ten percent (10%) of the cost of those repairs and/or replacements.

Flood coverage shall be provided by the Contractor on the first floor and below for projects North of the interstate corridor beginning at the Texas-Louisiana border at Interstate 10 East to the Baton Rouge junction of Interstate 12, East to Slidell junction with Interstate 10 to the Louisiana-Mississippi border. Flood sub-limit shall equal an amount no lower than ten percent (10%) of the total contract cost per occurrence. Coverage for roofing projects shall not require flood coverage on projects South of this corridor, flood coverage shall be provided by the State of Louisiana, as the owner, through the National Flood Insurance Program (NFIP). The Contractor will be liable for the \$5,000 deductible on the NFIP policy from the Notice to Proceed date through the Notice of Final Acceptance date of the project.

A specialty contractor shall purchase and maintain property insurance upon the system to be installed for an amount equal to the greater of the full-completed value or the amount of the contract including any amendments thereto. The specialty contractor may provide an installation floater with the same coverage as the "All Risk" Builder's Risk insurance policy.

The policy must include the interest of the Owner, Contractor and Subcontractors as their interest may appear. The Contractor has the right to purchase coverage or self-insure any exposures not required by the bid specifications, but shall be held liable for all losses, deductibles, self-insurance for coverages not required.

Policies insuring projects involving additions, alterations, or repairs to existing buildings or structures must include an endorsement providing the following:

In the event of a disagreement regarding a loss covered by this policy which may also be covered by the State of Louisiana policy of self-insurance or any commercial property insurance policy purchased by the State of Louisiana, Office of Risk Management ("ORM") covering in excess of the State of Louisiana, Policy of Self-Insurance, this company agrees to follow the following procedures to establish coverage and/or the amount of loss:

Any party to a loss may make written demand for an appraisal of the matter in disagreement. Within 20 days of receipt of written demand, this company and either ORM or its commercial insurance company shall each select a competent and impartial appraiser and notify the other of the appraiser selected. The two (2) appraisers will select a competent and impartial umpire. The appraisers will then identify the policy or policies under which the loss is insured and, if necessary, state separately the value of the property and the amount of the loss than must be borne by each policy. If the two (2) appraisers fail to agree, they shall submit their differences to the umpire. A written decision by any two (2) shall determine the policy or policies and the amount of the loss. Each insurance company or ORM agree that the decision of the appraisers and the umpire, if involved, will be binding and final and that neither party will resort to litigation. Each of the two (2) parties shall pay its chosen appraiser and bear the cost of the umpire equally.

Additional Insureds: The State of Louisiana, all state departments, agencies, boards and commissions, its officers, directors, agents and employees are to be included as additional insureds with respect to any work done by the insured under contract. The contracting party shall include all subcontractors as insureds under its policies or shall furnish separate certificates for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

Indemnification Agreement: The other party agrees to protect, defend, indemnify, save and hold harmless the State of Louisiana, all state departments, agencies, boards and commissions, its officers, agents, servants and employees, including volunteers, from and against any and all claims, demands, expense and liability arising out of injury or death to any person or the damage, loss or destruction of any property which may occur or in any way grow out of any act or omission of the other party, its agents, servants and employees, or any and all costs, expense and/or attorney fees incurred by the other party as a result of any claim, demands, and/or causes of action except of those claims, demands, and/or causes of action arising out of the negligence of the State of Louisiana, all state departments, agencies, boards, commissions, its agents, representatives, and/or employees. The other party agrees to investigate, handle, respond to, provide

defense for and defend any such claims, demands, or suit at its sole expense and agrees to bear all other costs and expenses related thereto, even if it (claims, etc.) is groundless, false or fraudulent.

BIDDING PROCEDURE

All bids must be submitted on the forms provided for this purpose and as included in the Bid Documents. All blanks on the Bid Form must be filled out with ink or type written and signed in ink. Any interlineations, alteration or erasure must be initialed by the signer of the bid.

Bid sums shall be expressed in both words and figures, and in case of discrepancy between the two, the written words shall govern.

Bidders are cautioned to complete all alternates as required in the Bid Form. Failure to submit alternate prices will render the proposal informal and shall cause its rejection.

The bid shall include the legal name of Bidder and shall be signed by a person legally authorized to bind the Bidder to a Contract. The name and license number on the envelope shall be the same as on the Bid Form. On any bid in excess of fifty thousand dollars (\$50,000.00), and \$1.00 or more if hazardous materials are involved, the Contractor shall certify that he is licensed under R.S. 37:2150-2173 and show his license number on the bid above his signature or his duly authorized representative.

BID SECURITY

No bid shall be considered or accepted unless the bid is accompanied by bid security in an amount of not less than five percent (5%) of the base bid and all alternates. The Bid Security shall be in favor of the State of Louisiana, Division of Administration. Bid security furnished by the Bidder shall guarantee that the Bidder will, if awarded the work according to the terms of his proposal, enter into the Contract and furnish Performance and Payment Bonds as required by these Contract Documents, within ten (10) days after written notice that the instrument is ready for his signature. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as penalty.

The State of Louisiana, Division of Administration will have the right to retain the bid security of Bidders until either (a) the Contract has been executed and bonds have been furnished, or (b) the specified time has elapsed so that bids may be withdrawn, or (c) all bids have been rejected.

SUBMISSION OF BIDS

BIDDERS ARE HEREBY ADVISED THAT THE U.S. POSTAL SERVICE DOES NOT MAKE DELIVERIES TO THE PHYSICAL LOCATION OF THE OFFICE OF STATE PURCHASING.

Bids may be mailed to: OFFICE OF STATE PURCHASING
P.O. BOX 94095
BATON ROUGE, LA 70804-9095

or delivered by hand or by courier to: OFFICE OF STATE PURCHASING
CLAIBORNE OFFICE BUILDING, 2ND FLOOR, SUITE 2-160
1201 NORTH THIRD STREET
BATON ROUGE, LA 70804

Bidder is solely responsible for ensuring that its courier service provider makes inside deliveries to our physical location. The Office of State Purchasing is not responsible for any delays caused by the bidder's chosen means of bid delivery.

Bidders should be aware of security requirements for the Claiborne Building and allow time to be photographed and presented with a temporary identification badge.

Bidder is solely responsible for the timely delivery of its bid. Failure to meet the bid opening date and time shall result in rejection of the bid.

The bid envelope shall be identified on the outside with the project name, solicitation number and file number, bid opening date and time, and the name, address, and license number of the Bidder. The envelope shall contain **only one bid form** and will be received until the time specified and at the place specified in the Notice to Bidders.

SIGNATURE AUTHORITY:

In accordance with L.R.S. 39:1594 (Act 121), the person signing the bid must be:

1. A current corporate officer, partnership member or other individual specifically authorized to submit a bid as reflected in the appropriate records on file with the Secretary of State; or,

2. An individual authorized to bind the vendor as reflected by an accompanying corporate resolution, certificate or affidavit; or
3. An individual listed on the State of Louisiana Bidder's application as authorized to execute bids. By signing the bid, the bidder certifies compliance with the above.

ADDENDA

Addenda shall not be issued within a period of seventy-two (72) hours prior to the advertised time for the opening of bids, excluding Saturdays, Sundays, and any other legal holidays, except an Addendum, if necessary, postponing the date of receipt of bids or canceling the request for bids.

Receipt of all Addenda issued should be acknowledged on the Bid Form and copies of the addenda should be returned with the Bid.

It is the Bidder's responsibility to check website link: <http://wwwprd.doa.louisiana.gov/osp/lapac/pubmain.asp> frequently for any possible addenda that may be issued. The Office of State Purchasing is not responsible for a Bidder's failure to download any addenda documents required to complete an Invitation to Bid.

CONSIDERATION OF BIDS

The properly identified Bids received on time will be opened publicly and will be read aloud.

The Division of Administration reserves the right to reject any or all bids and in particular to reject a bid not accompanied by any required bid security or data required by the Bidding Documents or a bid in any way incomplete or irregular.

The Division of Administration reserves the right to waive any informality or irregularity in any bid received, deemed to be in the best interest of the State of Louisiana.

WITHDRAWAL OF BID

The Bidder agrees that his/her bid shall be good and may not be withdrawn by the Bidder for a period of thirty (30) calendar days after the bid opening.

REJECTION OF BIDS: The Bidder understands that the State reserves the right to reject any or all bids for just cause.

PUBLICIZING OF AWARD

Unsuccessful bidders will be notified of the award in accordance with LAC 34:i.535 provided that they submit a self addressed, stamped envelope requesting this information.

ACCEPTANCE OF BID

It is the intent of the Division of Administration, if any alternates are accepted, to accept them in the order in which they are listed in the Bid Form. Determination of the Low Bidder shall be on the basis of the sum of the base bid and the alternates accepted. However, the Division of Administration shall reserve the right to accept or reject alternates in any order which does not affect determination of the Low Bidder. The low bid, including alternates, will be accepted if that bid is within the construction budget, otherwise the bid will be awarded on the basis of the base bid.

AFFIDAVIT

The successful Bidder shall be required to execute an affidavit attesting "THAT THIS PUBLIC CONTRACT WAS NOT SECURED THROUGH EMPLOYMENT OR PAYMENT OF A SOLICITOR".

NOTICE OF AWARD AND FORM OF CONTRACT

If the Bidder is notified of the acceptance of the above bid or bids, within thirty (30) days of the time set forth for the opening of bids, the Bidder agrees to execute a contract for the work accepted, in the standard contract form currently used by the Division of Administration within ten (10) days after notice from the Division of Administration.

PERFORMANCE BOND, LABOR AND MATERIAL PAYMENT BOND

The Bidder agrees, if awarded the contract, to execute and deliver to the Division of Administration at the time the contract documents are executed, a Performance Bond with Power of Attorney, on the forms provided, in an amount equal to the contract sum.

Any performance bond furnished shall be written by a surety or insurance company currently on the U.S. Department of the Treasury Financial Management Service list of approved bonding companies which is published annually in the *Federal Register*, or by a Louisiana domiciled insurance company with at least an A-rating in the latest printing of the A.M. Best's Key Rating Guide to write individual bonds up to ten percent (10%) of policyholders' surplus as shown in the A.M. Best's Key Rating Guide or by an insurance company that is either domiciled in Louisiana or owned by Louisiana residents and is licensed to write surety bonds.

No surety or insurance company shall write a performance bond which is in excess of the amount indicated as approved by the U.S. Department of Treasury Financial Management Service list or by a Louisiana domiciled insurance company with an A-rating by A.M. Best up to a limit of ten percent (10%) of policyholders' surplus as shown by A.M. Best; companies authorized by this Paragraph who are not on the treasury list shall not write a performance bond when the penalty exceeds fifteen percent (15%) of its capital and surplus, such capital and surplus being the amount by which the company's assets exceed its liabilities as reflected by the most recent financial statements filed by the company with the Department of Insurance.

In addition, any performance bond furnished shall be written by a surety or insurance company that is currently licensed to do business in the State of Louisiana. If a performance bond has been required, the requirement cannot be waived, unless otherwise allowed by Louisiana statutes.

A Labor and Materials Payment Bond in an amount equal to 100% of the contract amount must also be provided by the successful Bidder.

RECORDATION CERTIFICATE

Contractor upon receipt of executed contract, bond, purchase order and Notice to Proceed shall record the contract and bond with the Clerk of Court in the parish in which the work is to be performed, obtain a Certificate of Recordation from the Clerk of Court and forward this Certificate immediately to the Division of Administration. The contracting agency will process no invoices until receipt of the Certificate of Recordation.

PROGRESS PAYMENTS

The Schedule of Items submitted by the Bidder shall be incorporated in the Contract showing the estimated quantities and accepted unit prices therefore, the total of which comprises the Total Contract Amount. Progress payments will be made in accordance with the Measurement and Payment Provisions included in the Technical Specifications and the General Provisions of the Contract Documents. Contract retainage will be withheld from each Progress Payment as follows:

Ten (10%) percent of the payment amount for projects up to \$500,000.00
Five (5%) percent of the payment amount for contracts of \$500,000.00 or more.

The final Total Contract Amount will be determined by the actual quantities in place at the unit prices set forth under the Schedule of Items.

ACCEPTANCE

Acceptance of the work shall be made in accordance with Section GP-29 of the General Provisions. Upon written notice by the Owner to the Division of Administration, a Notice by Owner of Acceptance of Work will be executed and forwarded to the Contractor for recording with the Clerk of Court in the parish in which the work has been performed and shall furnish a clear Lien Certificate from the Clerk of Court (to the owner along with final invoice) forty-five (45) days after recordation of acceptance. Payment of retainage will be made at this time.

AWARD AND EXECUTION OF CONTRACT: When this project is financed either partially or entirely with State Bonds, the award of this Contract is contingent upon the granting of lines of credit, or the sale of bonds by the State Bond Commission. The State shall incur no obligation to the Contractor until the Contract Between Owner and Contractor is duly executed.

If the Bidder is notified of the acceptance of the bid within thirty (30) days after the opening of bids, the Bidder agrees to execute and deliver the executed contract between the owner and contractor and applicable bonds and insurance certificates within ten (10) days after notice from the Owner that the instrument is ready for signature.

If the Bidder fails to complete all requirements for executing the contract or bonds within ten (10) days after notification, the State may reject the Bid, retain the Bid Bond, call in the surety for payment, and award the contract to the next lowest bidder.

REJECTION OF BIDS: The Bidder understands that the State reserves the right to reject any or all bids for just cause.

WITHDRAWAL OF BIDS: No bid may be withdrawn for a period of thirty (30) days after receipt of bids.

BID SECURITY: Attached is the bid security equal to five percent (5%) of the sum of total base bid and all alternates. The Bid Security shall be in favor of the State of Louisiana, Division of Administration. The bid security is to become the property of the State in the event the Contract and bond are not executed within the time set forth, as Liquidated Damages for the delay and additional work caused thereby.

COMPLETION TIME: The Bidder hereby agrees to fully complete the project within the number of consecutive calendar days stipulated in the Contract Documents, as may be amended by addenda, and acknowledges that this construction time will begin on the date specified in the written "Notice to Proceed" from the State.

LIQUIDATED DAMAGES: The Bidder hereby also agrees to be assessed the amount stipulated in the Contract Documents as Liquidated Damages for each consecutive calendar day for which the work is not complete beginning with the first day beyond the completion date stated on the "Notice to Proceed".

SCHEDULE OF BID ITEMS: The proposal shall be completed by the bidder on the attached Schedule of Bid Items, with the prices shown in words and numerals and the total amount shown by the bidder. Refer to the Technical Specifications for complete information concerning these items. In case of a discrepancy, the prices shown in words shall govern.

The undersigned bidder understands that the quantities of work as shown in the Schedule of Bid Items and work to be performed are approximate only and are subject to increase or decrease, and offers to do the work at the unit price stated in the Schedule of Bid Items.

The Bidder also agrees to do any extra work, not covered by the Schedule of Bid Items, which may be ordered by the Engineer, and to accept as full compensation therefore such prices as may be agreed upon in writing by the Engineer and the Contractor in accordance with the General Provisions, Change Orders, etc. This extra work will be connected to the scope of work required on this project.

THE UNDERSIGNED BIDDER, in compliance with the Invitation to Bid for the project listed above, having: a) examined the construction plans, specifications and related documents, b) not received, relied on, or based his bid on any verbal instructions contrary to the Contract Documents or any addenda, c) inspected the site and being familiar with all of the conditions surrounding the fulfillment of the contract, hereby proposes to furnish all labor, materials, tools and equipment necessary to complete the project within the time set forth and for the total amount of the accepted bid based on the sum of the extension of unit prices and estimated quantities contained in the Schedule of Bid Items.

Also, the Bidder acknowledges receipt of the following **ADDENDA (ATTACH COPIES):**

No. _____ Dated: _____

No. _____ Dated: _____

No. _____ Dated: _____

No. _____ Dated: _____

NAME OF BIDDER: _____

LOUISIANA CONTRACTORS LICENSE NUMBER: _____

SIGNATURE: _____

TYPED or PRINTED NAME: _____

TITLE: _____

ADDRESS: _____

PHONE: (_____) _____

FAX: (_____) _____

VENDOR NUMBER: _____

DATED: _____

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BID PRICE SHEET
Solicitation 2230661, File Number P 27272 UL

BID OPEN DATE: _____, 2009, 10:00 AM (CT)

TO:	
Office of State Purchasing	
Division of Administration	
State of Louisiana	
Post Office Box 94095	
Baton Rouge, Louisiana 70804-9095	

SCHEDULE OF BID ITEMS FOR BASE BID
GRAND LAKE SHORELINE PROTECTION (ME-21)

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY ¹	UNIT PRICE ²		EXTENDED PRICE ²	
				USING WORDS	USING NUMBERS	USING NUMBERS	USING NUMBERS
1.	Mobilization and Demobilization ³	Lump Sum	1	_____ Dollars _____ Cents	\$ _____	\$ _____	_____
2.	Surveys	Lump Sum	1	_____ Dollars _____ Cents	\$ _____	\$ _____	_____
3.	Access and Flotation Channels	Lump Sum	1	_____ Dollars _____ Cents	\$ _____	\$ _____	_____
4.	Woven Geotextile Fabric	Square Yard	84,900	_____ Dollars _____ Cents	\$ _____	\$ _____	_____
5.	250 Lb. Class Rock	Ton	82,650	_____ Dollars _____ Cents	\$ _____	\$ _____	_____

6.	Settlement Plates	Each	5	Dollars Cents	\$		\$	
7.	Permanent Warning Signs	Each	26	Dollars Cents	\$		\$	
8.	Temporary Warning Signs	Each	30	Dollars Cents	\$		\$	
TOTAL AMOUNT OF BASE BID:				Dollars			Cents	

Where the quantity of Work with respect to any item is covered by a unit price, such quantities are estimated quantities to be used when comparing bids and the right is reserved by the Owner to increase/decrease such quantities as may be necessary to complete the Work and/or remain within the funding limits. In the event of material underruns/overruns, the unit costs will be used to determine payment to the Contractor.

Items must be completed by the bidder. The completed sheet must be attached to the bid submitted to the Office of State Purchasing in order for the bid to be considered. Mobilization and Demobilization shall include all appropriate costs associated with constructing all features listed in the Specifications and/or shown in the Plans. Determination of the low bidder shall be on the basis of the sum of the base bid and any alternates accepted.

SCHEDULE OF BID ITEMS FOR ADDITIVE ALTERNATE 1

GRAND LAKE SHORELINE PROTECTION (ME-21)

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY ¹	UNIT PRICE ²		EXTENDED PRICE ²	
				USING WORDS	USING NUMBERS	USING NUMBERS	USING NUMBERS
9.	Surveys	Lump Sum	1	Dollars Cents	\$ _____	\$ _____	_____
10.	Flotation Channels	Lump Sum	1	Dollars Cents	\$ _____	\$ _____	_____
11.	Woven Geotextile Fabric	Square Yard	25,810	Dollars Cents	\$ _____	\$ _____	_____
12.	250 Lb. Class Rock	Ton	27,300	Dollars Cents	\$ _____	\$ _____	_____
13.	Settlement Plates	Each	1	Dollars Cents	\$ _____	\$ _____	_____
14.	Permanent Warning Signs	Each	7	Dollars Cents	\$ _____	\$ _____	_____
15.	Temporary Warning Signs	Each	7	Dollars Cents	\$ _____	\$ _____	_____
TOTAL AMOUNT OF ADDITIVE ALTERNATE 1 BID:				Dollars _____		Cents _____	

Where the quantity of Work with respect to any item is covered by a unit price, such quantities are estimated quantities to be used when comparing bids and the right is reserved by the Owner to increase/decrease such quantities as may be necessary to complete the Work or remain within any funding limits. In the event of material underruns/overruns, unit costs will be used to determine payment to the Contractor.

Items must be completed by the bidder. The completed sheet must be attached to the bid submitted to the Office of State Purchasing in order for the bid to be considered. Determination of the low bidder shall be on the basis of the sum of the base bid and any alternates accepted.

Mobilization and Demobilization shall include all appropriate costs associated with constructing all features listed in the Specifications and/or shown in the Plans.

SCHEDULE OF BID ITEMS FOR ADDITIVE ALTERNATE 2

GRAND LAKE SHORELINE PROTECTION (ME-21)

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY ¹	UNIT PRICE ²		EXTENDED PRICE ²	
				USING WORDS	USING NUMBERS	USING NUMBERS	USING NUMBERS
16.	Surveys	Lump Sum	1	Dollars Cents	\$	\$	\$
17.	Flotation Channels	Lump Sum	1	Dollars Cents	\$	\$	\$
18.	Woven Geotextile Fabric	Square Yard	27,725	Dollars Cents	\$	\$	\$
19.	250 Lb. Class Rock	Ton	27,700	Dollars Cents	\$	\$	\$
20.	Settlement Plates	Each	2	Dollars Cents	\$	\$	\$
21.	Permanent Warning Signs	Each	9	Dollars Cents	\$	\$	\$
22.	Temporary Warning Signs	Each	9	Dollars Cents	\$	\$	\$
TOTAL AMOUNT OF ADDITIVE ALTERNATE 2 BID:				Dollars		Cents	

Where the quantity of Work with respect to any item is covered by a unit price, such quantities are estimated quantities to be used when comparing bids and the right is reserved by the Owner to increase/decrease such quantities as may be necessary to complete the Work or remain within any funding limits. In the event of material underruns/overruns, unit costs will be used to determine payment to the Contractor.

Items must be completed by the bidder. The completed sheet must be attached to the bid submitted to the Office of State Purchasing in order for the bid to be considered. Determination of the low bidder shall be on the basis of the sum of the base bid and any alternates accepted.

Mobilization and Demobilization shall include all appropriate costs associated with constructing all features listed in the Specifications and/or shown in the Plans.

Also, the Bidder acknowledges receipt of the following ADDENDA (ATTACH COPIES):

No. _____ Dated: _____ No. _____ Dated: _____

No. _____ Dated: _____ No. _____ Dated: _____

NAME OF BIDDER: _____

LOUISIANA CONTRACTORS LICENSE NUMBER: _____

SIGNATURE: _____

TYPED or PRINTED NAME: _____

TITLE: _____

ADDRESS: _____

PHONE: () FAX: ()

VENDOR NUMBER: _____

DATED: _____

PART I GENERAL PROVISIONS

GP-1 DEFINITION OF TERMS

Whenever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to the singular or plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs and the titles of other documents or forms.

Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

- 1.1 Acceptance: A written approval from the Engineer which certifies that specific items of work in the Contract have been completed and/or obligations have been fulfilled by the Contractor.
- 1.2 Addenda: Those written or graphic documents which are issued prior to opening of Bids in accordance with the Bidding Requirements and clarify or change the bidding requirements or the proposed Contract Documents.
- 1.3 Agreement: The written and signed agreement between the Owner and Contractor specifying the Work to be performed and includes the Contract Documents, all addenda pertaining to the Bid, Notice of Award, Bonds, Plans, General Provisions, Special Provisions, and Technical Specifications.
- 1.4 Application of Payment: That form which is used by the Contractor to request partial and final payment and is deemed acceptable to the Owner. It shall be accompanied by any supporting documentation required by the Contract Documents.
- 1.5 A.S.T.M.: American Society for Testing and Materials.
- 1.6 Bid: An offer or proposal submitted on the prescribed form setting forth the prices for the Work.
- 1.7 Bidder: The person, association of persons, firm, or corporation submitting a proposal for the Work.
- 1.8 Bidding Requirements: The Advertisement or Invitation to Bid, Instruction to Bidders, Form of Bid Security, if any, and Bid Form with any supplements.
- 1.9 Change Order: A written order which is submitted to the Contractor, signed by the Owner, and authorizes an addition, deletion, or revision in the Work, or an adjustment in the contract price or the contract time issued after the effective date of the Agreement.
- 1.10 Claim: A written demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both or other relief with respect to the terms of the Contract.
- 1.11 Contract: The written Agreement between the Owner and the Contractor which defines the work to be completed and shall be understood to include the Plans, Specifications, Information for Bidders, Agreement, Advertisement For Bidders, Affidavit, Bid Form, Bid Bond, Contract Bond, Notice of Award, Notice to Proceed, and Change Orders, and Claims.

- 1.12 Contract Bond: The approved form of security furnished by the Contractor and Surety for the faithful performance of the Work, and the payment for all labor, materials, and/ or obligations incurred by the Contractor in the prosecution thereof.
- 1.13 Contract Documents: The Agreement, all addenda which pertains to the Contract Documents, Bid Documents and specified Attachments accompanying the Bid and any post-bid documentation submitted prior to the Notice of Award, Contractor's Bid when attached as an exhibit to the Agreement, the Bonds (Bid and Performance/Payment), General Provisions, Special Provisions, Technical Specifications, Plans, and all Field or Change Orders issued after the execution of the Agreement. Shop Drawings and other submittals by the Contractor are not Contract Documents.
- 1.14 Contract Price: The moneys payable by the Owner to the Contractor for the Work in accordance with the Contract Documents as stated in the Agreement.
- 1.15 Contract Time: The number of calendar days specified in the Agreement for completion of the Work, together with any extensions authorized through change orders.
- 1.16 Contractor: The person, association of persons, firm, or corporation entering into the duly awarded Contract.
- 1.17 Contracting Agency: The Office of Coastal Protection and Restoration (OCPR) acting through the Division of Administration.
- 1.18 Day: When any period of time is referred to in the Contract Documents using days, it will be computed to exclude the first day and include the last day of such period. If the last day of any such period falls on a Saturday, Sunday, or a legal holiday, that day will be omitted from the computation. A calendar day is measured as twenty-four (24) hour period starting at midnight and ending the following midnight.
- 1.19 Design Report: A written report by the Engineer which provides the design methodology for the Work.
- 1.20 Effective Date of the Agreement: The date indicated in the Agreement on which it becomes effective.
- 1.21 Engineer: The Office of Coastal Protection and Restoration, Engineering and Operations Branch, or its designee.
- 1.22 Equipment: All machinery, implements, and power-tools, in conjunction with the necessary supplies for the operation, upkeep, maintenance, and all other tools and apparatuses necessary for the proper construction and acceptable completion of the Work.
- 1.23 Extension of Contract: Any extension of time for completion of the Work beyond the Contract Time which is granted by the Owner and recommended by the Engineer.
- 1.24 Federal Sponsor: The federal agency which has been tasked to manage the implementation of the project.
- 1.25 Field Order: A written order issued by the Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or Contract Time.
- 1.26 Inspector: An authorized representative of the Engineer who is responsible to inspect the Work and materials furnished by the Contractor.

- 1.27 Laboratory: The firm, company, or corporation which is used to test materials and is approved for use by the Engineer.
- 1.28 Laws and Regulations; Laws or Regulations: Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
- 1.29 Materials: Any substance used in the Work to build structures, but does not include material used in false work or other temporary structures not incorporated in the Work.
- 1.30 Milestone: A principal event specified in the Contract Documents relating to an intermediated completion date or time prior to the Contract Times.
- 1.31 Notice of Award: A written notice to the successful Bidder stating that the Bid has been accepted by the Owner and that the successful Bidder is required to execute the Contract and furnish the Contract Bond.
- 1.32 Notice to Proceed: The written notice to the Contractor by the Owner which provides the starting date for the Contract Time.
- 1.33 Owner: The Owner is the State of Louisiana (State) which acts through the Contracting Agency.
- 1.34 Plans: That part of the Contract Documents prepared or approved by the Engineer which graphically shows the scope, intent, and character of the Work to be completed by the Contractor.
- 1.35 Project Site: The location where the Work is to be performed as stated in the Agreement.
- 1.36 Right-of-way: That entire area reserved for constructing, maintaining, and protecting the proposed improvement, structures, and appurtenances of the Work.
- 1.37 Samples: Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portions of the Work will be judged.
- 1.38 Shop Drawings: All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for the Contractor and submitted by the Contractor to illustrate some portion of the Work to be performed.
- 1.39 Specifications: That part of the Contract Documents consisting of written technical descriptions of materials, equipment, systems, standards, and workmanship as applied to the work to be performed and certain administrative details applicable thereto.
- 1.40 State: The State of Louisiana.
- 1.41 Structures: Bridges, plugs, weirs, bulkheads, berms, dams, levees, and other miscellaneous construction encountered during the Work and not otherwise classified herein.
- 1.42 Subcontractor: Any person, association of persons, firm, or corporation who contracts with the Contractor to perform any part of the project covered by the Contract.
- 1.43 Submittals: Certificates, samples, shop drawings, and all other project data which are submitted to the Engineer in order to verify that the correct products will be installed on the project.

- 1.44 Successful Bidder: The lowest responsible Bidder whom the Owner makes an award.
- 1.45 Special Provisions: That part of the Contract Documents which amends or supplements these General Provisions.
- 1.46 Surety: The corporate body, licensed to do business in Louisiana, bound with and for the Contractor's primary liability, and engages to be responsible for payment of all obligations pertaining to acceptable performance of the Work contracted.
- 1.47 Temporary Structures: Any non-permanent structure required while engaged in the prosecution of the Contract.
- 1.48 Written Amendment: A written statement modifying the Contract Documents which is signed by the Owner and the Contractor on or after the Effective Date of the Agreement.
- 1.49 Work: All work specified herein or indicated on the Plans.
- 1.50 Work Plan: A written plan by the Contractor that details how the Work will be provided including layout drawings, projected schedule (Initial Progress Schedule), and a list of labor hours, materials, and Equipment.

GP-2 BID REQUIREMENTS

The Contract and Bonds which govern the Work shall be performed in accordance with the Plans and Specifications. The Bidder understands that all quantities for performing the Work have been estimated by the Engineer, and that the Bid shall be the sum of the quantities multiplied by their respective unit rates. The Contract shall be awarded by the Owner through a comparison of all bids. It is the responsibility of each Bidder before submitting a Bid to:

- 2.1 Examine the Bidding Documents including the Plans and Specifications and any Addenda or related data identified in the Bidding Documents;
- 2.2 Visit the Project Site to become familiar with the local conditions if they are believed to affect cost, progress or the completion of the Work;
- 2.3 Become familiar and satisfied with all federal, state, and local Laws and Regulations that may affect cost, progress, or the completion of the Work;
- 2.4 Study and correlate all information known to the Bidder including observations obtained from Bidder's visits, if any, to the Project Site, with the Bidding Documents;
- 2.5 Submit a written notice to the Office of State Purchasing within three (3) days regarding any conflicts, errors, ambiguities, or discrepancies discovered in the Bidding Documents and confirm that the written resolution thereof by the Office of State purchasing is acceptable to the Bidder; and
- 2.6 Determine that the Bidding Documents are generally sufficient to convey an understanding of all terms and conditions for completing the required Work.

The submission of a Bid will constitute an incontrovertible representation that the Bidder has complied with every requirement of Bid Documents. The Bidder shall comply with all other requirements specified in the Notice to Bidders.

GP-3 AVAILABILITY OF PLANS AND SPECIFICATIONS

One (1) set of Plans and Specifications shall be furnished to each Bidder. Three (3) sets of the Plans and Specifications shall be furnished to the Contractor upon award of the Contract. Additional sets may be furnished to the Contractor upon request from the Office of Coastal Protection and Restoration, 450 Laurel Street, 12th Floor, Baton Rouge, Louisiana 70801.

GP-4 LAWS, REGULATIONS, STANDARDS, SPECIFICATIONS, AND CODES

Bidders are required to become familiar and remain in compliance with all Federal, State, and local laws, ordinances, permits, and regulations which may affect all employees and execution of the Work. The filing of a bid will be presumptive evidence that the Bidder has complied with this requirement. The Owner will not be responsible for any inaccurate interpretations or conclusions drawn by the Contractor from information and documentation provided by the Owner.

References to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws and Regulations, whether such reference be specific or by implication, in effect at the time of opening the Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents. No provision of any such standard, specification, manual or code, or any instruction of a supplier shall be effective to change the duties or responsibilities of the Owner or Engineer, or any of their Subcontractors, consultants, agents, or employees from those set forth in the Bid Documents. No such provision shall be effective to assign to the Owner or Engineer, or any of their consultants, agents, or employees any duty or authority to supervise or direct the performance of the Contractor's obligations or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

The Contractor shall indemnify the Owner and its representatives against any claim or liability arising from all violations of any laws, bylaws, ordinances, codes, regulations, orders, or decrees. The obligations imposed by these specifications are in addition to and are not to be construed in any way as a limitation of any rights available to the Engineer or Owner which are otherwise imposed by any laws or regulations or other provisions within the Contract Documents.

GP-5 MANDATORY PRE-BID CONFERENCE AND SITE VISIT

A mandatory Pre-Bid conference will be held at the location and on the date provided in the Bid Solicitation. A site visit may also be held at the Project Site as specified in the Bid Solicitation or at the mandatory Pre-Bid conference. Bidders will be required to furnish their own transportation to the Project Site. Representatives of the Owner and Engineer will attend the mandatory Pre-Bid conference and site visit to discuss the Work. **Bidders are required to attend the mandatory Pre-Bid conference and site visit.** Failure to attend will result in a null or void Bid.

All questions are to be submitted to Brenda Myers at (225) 342-8022, within three (3) business days after the mandatory pre-bid conference and site visit. For additional information regarding this requirement, you may contact **Brenda Myers at (225) 342-8022.** No additional questions shall be received after this date. Oral statements will not be binding or legally effective. The Project Engineer will submit addenda in response to all questions arising at the mandatory Pre-Bid Conference and site visit to all prospective Bidders on record. All prospective Bidders on record may contact the Project Engineer for any additional information.

GP-6 NOTICE OF AWARD

The Owner shall provide written notice to the Successful Bidder stating that the Owner will sign and deliver the Agreement upon compliance with the conditions enumerated therein and within the time specified.

GP-7 NOTICE TO PROCEED AND CONTRACT TIME

The Contractor shall start the Work and begin the Contract Time on the dates provided in the Notice to Proceed. The Work shall be conducted using sufficient labor, materials, and equipment as necessary to ensure completion within the Contract Time. The Contract Time for completion of the Base Bid for the Work is provided in SP-3, unless an extension is granted to the Contract Time as specified in GP-44.

GP-8 WORK PLAN

The Contractor shall develop a written Work Plan which accounts for all of the construction activities required by the Contract Documents. The Work Plan shall include a list of the individual construction tasks to be completed and the estimated dates for beginning and completing the tasks. It shall also include all other items which are applicable to completing the Work such as, but not limited to, the following:

- 8.1 Typical report form for the Progress Meetings;
- 8.2 Typical form for Daily Progress Report;
- 8.3 Hurricane and Severe Storm Plan;
- 8.4 Site-specific Health and Safety Plan;
- 8.5 The delivery method and source (s) of all construction materials (company or producer name, mailing and physical address, phone number, and name of contact person).
- 8.6 The personnel, material, subcontractors, fabricators, suppliers, and types of equipment the Contractor proposes to use for construction;
- 8.7 Shop drawings, test results, and sample submittals;
- 8.8 Survey layout and stakeout;
- 8.9 All supplemental items specified in SP-6.

The Work Plan shall be submitted to the Engineer at the Pre-Construction Conference by the date provided in SP-3. The Engineer shall review the Work Plan and have the Contractor make any necessary revisions prior to acceptance of the plan.

GP-9 PROGRESS SCHEDULE

The Contractor shall develop a written Progress Schedule which provides for an orderly progression of the Work, submittals, tests, and deliveries in order to complete the Work within the specified Milestones and Contract Time. All of the items listed in the Work Plan shall be integrated into the Progress Schedule. The format of the schedule shall be composed using Microsoft Project®, or any other software or methods deemed acceptable by the Engineer. It shall be updated weekly by the Contractor, at a minimum. The Progress Schedule shall also include, but not be limited to the following:

- 9.1 All of the elements in the Work Plan, including updates;
- 9.2 A work order issued from Louisiana One Call ordering all their subscribers in the project area to mark their utilities;
- 9.3 A telephone log verifying that all property owners and utilities have been contacted. This log should list the time, date, and names of the personnel representing the property owners, utilities, and Contractor;

The following table defines the monthly anticipated adverse weather days that are expected to occur during the Contract Time and will constitute the baseline monthly weather time for evaluations. The schedule is based upon National Oceanic and Atmospheric Administration (NOAA) or similar data for the regional geographic area.

Monthly Anticipated Adverse Weather Calendar Days											
Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
5	5	4	4	4	5	7	7	5	3	3	4

The Progress schedule must reflect these anticipated adverse weather delays on all weather dependent activities. Adverse weather days must prevent Work for fifty percent (50%) or more of the work day and delay work critical to the timely completion of the project. The number of actual adverse weather days shall be calculated chronologically from the first to the last day of each month.

The Progress Schedule shall be submitted to the Engineer at the Pre-Construction Conference by the date provided in SP-3. The Engineer shall perform a review and have the Contractor make any necessary revisions prior to acceptance of the schedule. Acceptance will not impose responsibility on the Owner or Engineer for the sequencing, scheduling, or progression of the Work. The Contractor is fully responsible for progression of the Work in order to maintain compliance with the Progress Schedule.

GP-10 DAILY PROGRESS REPORTS

The Contractor shall record the following daily information on Daily Progress Reports:

- 10.1 Date and signature of the author of the report;
- 10.2 Dollar amount of all bid items that are fabricated, installed, backfilled, pumped, constructed, damaged, replaced, etc. The amount of material shall be expressed in the units stated in the bid;
- 10.3 Field notes of all surveys;
- 10.4 Notes on all inspections;
- 10.5 Details of Health and Safety meetings;

- 10.6 A brief description of any Change Orders, Field Orders, Claims, Clarifications, or Amendments;
- 10.7 Condition of all navigation aides (I.E., warning signs, lighted marker buoys) and any repairs performed on them;
- 10.8 Weather conditions (adverse weather day, wind speed and direction, temperature, wave height, precipitation, etc.);
- 10.9 The amount of time lost to severe weather or personnel injury, etc;
- 10.10 Notes regarding compliance with the Progress Schedule;
- 10.11 Visitor log (Instructions for format will be furnished by the Field Engineer).

The daily progress reports shall be submitted to the Engineer at the Weekly Progress Meetings specified in GP-13 in both hard copy and digital format (Adobe Acrobat® Format, or approved equal). The typical form for Daily Progress Reports shall be developed by the Contractor and incorporated into the Work Plan.

GP-11 HURRICANE AND SEVERE STORM PLAN

The Contractor shall develop and maintain a written Hurricane and Severe Storm Plan. The Plan shall include, but not be limited to, the following:

- 11.1 What type of actions will be taken before storm strikes at the Project Site. The plan should specify what weather conditions or wave heights will require shutdown of the Work and removal of equipment, personnel, etc.
- 11.2 Notes from continuous monitoring of NOAA marine weather broadcasts and other local commercial weather forecasts.
- 11.3 Equipment list with details on their ability to handle adverse weather and wave conditions.
- 11.4 List of safe harbors or ports and the distance and travel time required to transfer equipment from the Project Site.
- 11.5 Hard copies of any written approvals or operations schedules associated with the use of the safe harbors or ports.
- 11.6 Method of securing equipment at the safe harbors or ports.
- 11.7 List of tug boats and work boats and their respective length, horsepower, etc. which will adequately transfer the equipment to safe harbor or port under adverse weather conditions.
- 11.8 Methods which will be used to secure equipment left onsite during adverse weather conditions.
- 11.9 Evacuation or immediate reaction plans to be taken by personnel for sudden storm occurrences.
- 11.10 Operations procedures which will be used to secure critical dredging equipment such as spuds, swing wires, anchor wires, or tugs during adverse weather conditions.
- 11.11 Communications protocol with local law enforcement and fire and rescue agencies.

The Contractor shall incorporate the Hurricane and Severe Storm Plan into the Work Plan. The Owner and Engineer are not responsible for the adequacy of this plan.

GP-12 HEALTH AND SAFETY PLAN AND INSPECTIONS

The Contractor shall develop and maintain a written Health and Safety Plan which is specific to the Project Site and allows the Work to be performed in compliance with all applicable laws, ordinances, rules, and regulations of any government agency having jurisdiction over the safety of personnel or property. This includes maintaining compliance with the Code of Federal Regulations, Title 29, Occupational Safety and Health Administration (OSHA) and all applicable Health and Safety Provisions of the State of Louisiana.

The Contractor shall institute a daily inspection program to assure that the requirements of the Health and Safety Plan are being fulfilled. Inspections shall include the nature of deficiencies observed, corrective action taken or to be taken, location of inspection, date, and signature of the person responsible for its contents. The results of the inspections shall be recorded on Daily Progress Reports and kept at the Project Site during the Work.

The Contractor shall incorporate the Health and Safety Plan into the Work Plan. The Owner and Engineer are not responsible for the adequacy of this plan.

GP-13 PROGRESS MEETINGS AND REPORTS

The Engineer shall schedule meetings to review the progress of the Work, coordinate future efforts, discuss compliance with the Progress Schedule and resolve miscellaneous problems. The Engineer or Inspector, Contractor, and all Subcontractors actively working at the Project Site shall attend each meeting. Representatives of suppliers, manufacturers, and other Subcontractors may also attend at the discretion of the Contractor. The Contractor shall record the details of each meeting in a Progress Report. The format of this report shall be developed by the Contractor, approved by the Engineer, and included in the Work Plan. The progress meetings and reports shall be scheduled according to SP-3.

GP-14 PRE-CONSTRUCTION CONFERENCE

A Pre-Construction Conference shall be held by the Contractor, Subcontractors, Owner, Engineer, local stakeholders, and other appropriate personnel prior to starting construction on the date specified in SP-3. This conference shall serve to establish a mutual understanding of the Work to be performed, the elements of the Progress Schedule and Work Plan, expectations for weekly progress meetings, the Plans and Specifications, processing Applications for Payment, and any other items of concern. If any subcontractors are not present, another pre-construction conference will be required.

GP-15 CONTRACT INTENT

The Bid Documents are complementary; what is called for by one is as binding as if called for by all. Clarifications and interpretations or notifications of minor variations and deviations of the Contract Documents will be issued by Engineer as provided in GP-168. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Bid Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided at no additional cost to the Owner.

GP-16 ENGINEER AND AUTHORITY OF ENGINEER

The Engineer will be the designated representative of the Owner, the initial interpreter of the Contract Documents and the judge over acceptability of all the Work. Claims, disputes, and other matters relating to the acceptability of the Work, performance by the Contractor or the interpretation of the requirements of the Contract Documents must be submitted to the Engineer in writing. Upon written request from the Contractor, the Engineer shall issue written clarifications or interpretations which are consistent with the overall intent of the Contract Documents. Such written clarifications and interpretations will be binding on the Owner and the Contractor. Either the Owner or the Contractor may make a Claim if a written clarification or interpretation justifies an adjustment in the Contract Price or Contract Times.

The Engineer has the authority to suspend the Work in whole or in part due to failure of the Contractor to correct conditions unsafe for workmen or the general public, carry out provisions of the Contract, perform conformance work, or to carry out orders. The Engineer shall submit a written order to the Contractor for work which must be suspended or resumed. Nothing in this provision shall be construed as establishing responsibility on the part of the Engineer for safety which is the responsibility of the Contractor.

The Engineer or Inspector shall keep a daily record of weather and flood conditions and may suspend the Work as deemed necessary due to periods of unsuitable weather, conditions considered unsuitable for execution of the Work, or for any other condition or reason deemed to be in the public interest.

GP-17 CONFORMITY WITH PLANS AND SPECIFICATIONS

All work and materials involved with the Work shall conform with the lines, grades, cross sections, dimensions, and other requirements shown on the Plans or indicated in the Specifications unless otherwise approved by the Engineer.

GP-18 CLARIFICATIONS AND AMENDMENTS TO CONTRACT DOCUMENTS

The Contract Documents may be clarified or amended by the Engineer to account for additions, deletions, and revisions to the Work after the Effective Date of the Agreement. The clarifications and amendments shall be addressed by either a Change Order or a written clarification by the Engineer. The Contractor shall not proceed with the Work until the Change Order or clarification has been issued by the Engineer. The Contractor shall not be liable to the Owner or Engineer for failure to report any such discrepancy unless the Contractor had reasonable knowledge.

The Contractor may request a clarification or amendment for the following:

- 18.1 Any conflict, error, ambiguity, or discrepancy within the Contract Documents; or
- 18.2 Any conflict, error, ambiguity, or discrepancy between the Bid Documents and the provision of any Law or Regulation applicable to the performance of the Bid; or
- 18.3 Any standard, specification, manual, or code (whether or not specifically incorporated by reference in the Bid Documents); or
- 18.4 Instructions by a supplier.

The official form for a written clarification is provided in Appendix A. This form shall be filled out appropriately by the Contractor and submitted to the Engineer. The Engineer shall clarify the issue in writing on either the clarification form or a Change Order and submit it to the Contractor.

GP-19 SUBCONTRACTS

The Contractor shall provide the names of all Subcontractors to the Engineer in writing before awarding any Subcontracts. The Contractor shall be responsible for the coordination of the trades and Subcontractors engaged in the Work. The Contractor is fully responsible to the Owner for the acts and omissions of all of the Subcontractors. The Owner and Engineer will not settle any differences between the Contractor and Subcontractors or between Subcontractors. The Contractor shall have appropriate provisions in all Subcontracts to bind Subcontractors to the Contractor by the terms of the General Conditions and other Contract Documents, as applicable to the Work of Subcontractors. The provisions should provide the Contractor the same power regarding termination of Subcontracts that the Owner may exercise over the Contractor under any provisions of the Contract Documents.

GP-20 WORKERS, METHODS, AND EQUIPMENT

The Contractor shall provide competent, qualified, and trained personnel to perform the Work. The Contractor shall not employ any person found objectionable by the Engineer. Any person employed by the Contractor or any Subcontractor who, in the opinion of the Engineer, does not perform the Work in a proper, skillful, and orderly manner shall be immediately removed upon receiving a written order by the Engineer. The Engineer may also suspend the Work until the Contractor removes the employee or provides a suitable replacement. Such an employee shall not be re-employed in any portion of the Work without written approval from the Engineer.

The on-site superintendent for the Contractor shall be competent, English-speaking, and qualified to receive orders, supervise, and coordinate all Work for the Contractor and any Subcontractors. The qualifications of the superintendent must be established and approved by the Engineer prior to commencement of the Work. The superintendent shall be furnished by the Contractor regardless of how much Work may be sublet. In the performance of the Work under this Contract, the Contractor shall conduct operations to avoid interference with any other Contractors.

All equipment, products, and material incorporated into the Work shall be as specified, or if not specified, shall be new, of good quality, and protected, assembled, used, connected, applied, cleaned, and conditioned in accordance with the manufacturer's instructions, except as otherwise may be provided in the Bid Documents. All equipment shall be of sufficient size and mechanical condition to meet the requirements of the Work and produce a satisfactory quality of work. Equipment shall not damage adjacent property throughout the performance of the Work. The Plant and Equipment Schedule should be completed by the Contractor.

The Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures used to complete the Work in conformance with the Contract Documents.

The Contractor shall obtain permission from the Engineer if a method or type of equipment other than specified in the Contract is desired. The request shall be in writing and shall include a full description of the methods, equipment proposed, and reasons for the modification. A proposed item of material or equipment may be considered by the Engineer to be functionally equal to an item specified in the Contract if:

- 20.1 It is at least equal in quality, durability, appearance, strength, and design characteristics;
- 20.2 There is no increase in any cost including capital, installation, or operating to the Owner;
- 20.3 The proposed item will conform substantially, even with deviations, to the detailed requirements of the item named in the Bid Documents.

If, after trial use of the substituted methods or equipment, the Engineer determines that the Work produced does not meet Contract requirements, the Contractor shall discontinue use of the substituted methods or equipment and shall complete the Work with the specified methods and equipment. The Contractor shall remove the deficient Work and replace it with Work of specified quality or take other corrective action as directed. No change will be made in basis of payment for construction items involved or in Contract Time as a result of authorizing a change in methods or equipment.

GP-21 ACCIDENT PREVENTION, INVESTIGATIONS, AND REPORTING

The Contractor shall be responsible to develop and maintain all safeguards and safety precautions necessary to prevent damage, injury, or loss throughout the performance of the Work. All accidents at the Project Site shall be investigated by the immediate supervisor of employee(s) involved and reported to the Engineer or Inspector within one (1) working day. A complete and accurate written report of the accident including estimated lost time days shall be submitted to the Engineer within four (4) calendar days. A follow-up report shall be submitted to the Engineer if the estimated lost time days differ from the actual lost time days.

GP-22 PRESERVATION AND RESTORATION OF PROPERTY, MONUMENTS, ETC.

The Contractor shall comply with all applicable laws, ordinances, rules, and regulations of any government agency having jurisdiction over the preservation and protection of public and private property. The Contractor shall install and maintain suitable safeguards and safety precautions during the Work as necessary to prevent damage, injury, or loss to property. This responsibility shall remain with the Contractor until the Work has been completed and accepted. Any damage, injury, or loss to property which is caused by the Contractor or Subcontractors shall be repaired or replaced at the expense of the Contractor.

The Contractor shall protect all land monuments, State and United States bench marks, geodetic and geological survey monuments, and property markers from disturbance or damage until an authorized agent has witnessed or otherwise referenced their location. The Contractor shall also provide protection for all public and private property including trees, utilities, pipes, conduits, structures, etc. These items shall not be removed unless directed by the Engineer.

The Contractor shall be responsible to completely repair all damages to public or private property due to any act, omission, neglect, or misconduct in the execution of the Work unless it is due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God, public enemies, or governmental authorities. The damage must be repaired at the expense of the Contractor before final acceptance of the Work can be granted by the Engineer. If the Contractor fails to repair the damage within forty-eight (48) hours, the Owner may independently proceed with the repairs at the expense of the Contractor by deducting the cost from the Contract. If the Contractor cannot provide for the cost of repairs, the Surety of the Contractor shall be held until all damages, suits, or claims have been settled.

GP-23 PROTECTION OF THE WORK, MATERIALS, AND EQUIPMENT

It shall be the responsibility of the Contractor to protect the Work, materials, and equipment from damages or delays due to inflows, tidal rise, and storm water runoff which may occur at the Project Site. The Owner shall not be held liable or responsible for these types of delays or damages.

GP-24 LAND RIGHTS

The land shall only be accessed to facilitate surveying requirements specified in TS-2. The contractor shall gain permission from the landowner specified below prior to accessing the land. Contact landowner regarding use of private boat launch at Superior Canal. See Appendix D for the boat launch details.

Miami Corporation
309 La Rue France
Suite 201
Lafayette, LA 70508

GP-25 UTILITIES

The Owner has been granted all of the temporary easements, servitudes, and right-of-way agreements from public and private utilities in order to perform the Work. The utilities include, but are not limited to telephone, telegraph, power poles or lines, water or fire hydrants, water or gas mains and pipelines, sewers, conduits, and other accessories or appurtenances of a similar nature which are fixed or controlled by a city, public utility company, or corporation.

The Contractor shall conduct the Work in such a manner as to cooperate and minimize inconveniences with utilities. Prior to commencement of the Work, the Contractor is responsible to notify all of the utilities and abide by stipulations required by the utility company(s). The Contractor shall also call "Louisiana One Call" at 1-800-272-3020 a minimum of 5 working days prior to construction to locate existing utilities at the Project Site.

Any damage to utilities that is caused by the Contractor within the Project Site shall be repaired at the expense of the Contractor. The Owner will not be responsible for any delay or damage incurred by the Contractor due to working around or joining the Work to utilities left in place or for making adjustments.

Any unidentified pipes or structures which may be discovered within the limits of the Project Site shall not be disturbed and shall be reported to the Engineer as soon as possible. Construction or excavation shall not be performed around unidentified utilities without prior approval from the Engineer. The known pipeline companies are listed below.

Plains All American LP
Contact: Mike Guidry
Phone: 337-774-4613
Cell Phone: 337-526-8539

Targa Midstream Services
Contact: Tim Touchet or Kevin Jaubert
Phone: 337-774-5984 ext.18

GP-26 PERMITS

Federal and State permits that are required to perform the Work, such as the COE 404 Permit, Coastal Use Permit, and LDEQ Clean Water Permit, have been secured by the Owner. Copies of these permits are provided in Appendix C. These permits will not relieve the responsibility of the Contractor from obtaining any additional permits which may be needed to complete the work. Copies of any special permits that are obtained by the Contractor must be submitted to the Owner. The Contractor shall conform to the requirements therein and display copies of the permits in a public setting at the Project Site at all times.

GP-27 PROJECT SITE CLEAN-UP

The Contractor shall keep the Project Site free from accumulations of waste material or trash at all times. All trash and waste materials shall be removed by the Contractor and disposed off-site in an approved waste disposal facility. In addition, all equipment, tools, and non-conforming work shall also be removed prior to the Work being accepted. No materials shall be placed outside of the Project Site.

GP-28 OWNER INSPECTION

The Owner, Inspector, and Federal Sponsor shall have the right to perform reasonable inspections and testing of the Work at the Project Site. Access shall be granted to the entire Project Site including all materials intended for use in the Work. The Contractor shall allow reasonable time for these inspections and tests to be performed. The inspections shall not relieve the Contractor from any obligation in accordance with the requirements of the Contract.

The Owner shall notify the Contractor prior to all tests, inspections, and approvals of the Work which are to be conducted at the Project Site. The Owner shall also provide the Contractor with the written results of all inspections and tests. Inspections, tests, or Payments made by the Owner shall not constitute acceptance of non-conforming Work or prejudice the Owner's rights under the Contract.

GP-29 DUTIES OF INSPECTOR

An Inspector also referred to as the Engineer's Representative, shall be assigned by the Engineer to the Project Site to observe the Contractor and monitor the progress and manner in which the Work is being performed. The Inspector will also report to the Engineer and Contractor whenever materials or work fail to comply with the Contract. The Inspector is authorized to reject any materials or suspend work which does not comply with the Contract until the issue is resolved by the Engineer.

However, the Inspector is not authorized to revoke, alter, enlarge, relax, or release any requirements of the Contract, or to approve or accept any portion of the Work, or to issue instructions contrary to the Plans and Specifications. The Inspector shall not manage or perform duties for the Contractor.

GP-30 CONSTRUCTION STAKES, LINES, AND GRADES

The Engineer shall direct the Contractor to all control points necessary for setting stakes and establishing lines and grades as shown on the Plan Drawings. The Contractor shall be responsible for laying out all of the Work. All layouts shall be witnessed and verified by the Engineer or Inspector prior to beginning the Work. The Contractor shall be responsible for proper execution of the Work according to the layouts after receiving verification from the Engineer.

The Contractor shall be responsible for furnishing and maintaining the stakes such that the Work can be verified for acceptance. The Engineer may suspend the Work at any time if it can not be adequately verified due to the number, quality, or condition of the stakes.

GP-31 CONTRACTOR'S RESPONSIBILITY FOR WORK

The Contractor shall execute all items covered by the Contract, and shall furnish, unless otherwise definitely provided in the Contract, all materials, implements, machinery, equipment, tools, supplies, transportation, and labor necessary to complete the Work. The Contractor shall pay constant attention to the progress of the Work and shall cooperate with the Engineer in every way possible. The Contractor shall maintain a complete copy of the Contract at all times, including the Plans, Specifications, and any authorized modifications.

GP-32 CONTROL OF SILTATION AND WATER POLLUTION

The Contractor shall comply with all applicable Federal and State regulations and statutes relating to the prevention and abatement of pollution in the performance of the Contract. The Contractor shall conduct the Work in a manner that will not cause damaging concentrations of silt or pollution to water. The Contractor shall prevent fuels, oils, bituminous materials, chemicals, sewage, or other harmful contaminants from entering the land or water.

GP-33 SANITARY PROVISION

The Contractor shall provide and maintain sanitary accommodations for use by all employees and Subcontractors. Facilities shall comply with the requirements of the Louisiana State Board of Health and Hospitals and other authorities having jurisdiction. Committing public nuisance on the Project Site is prohibited.

GP-34 PAYMENT OF TAXES

The Contractor shall be responsible for all taxes and duties that may be levied under existing State, Federal, and local laws during the completion of the Work. The Owner will presume that the amount of such taxes is included in the unit prices bid by the Contractor and will not provide additional reimbursement.

GP-35 RADIO TELEPHONES

The Contractor shall furnish and maintain radio and telephone equipment throughout the Contract Time which will allow communication between the Contractor and the Engineer or Inspector.

GP-36 NAVIGATION

All marine vessels shall comply with the following Federal Laws and Regulations:

- 36.1 The International Navigational Rules Act of 1977 (Public Law 95-75, 91 Stat. 308, or 33 U.S.C. 1601-1608); and
- 36.2 The Inland Navigation Rules Act of 1980 (Public Law 96-591, 94 Stat. 3415, 33 U.S.C. 2001-2038).

These rules can be found on the Internet at <http://www.navcen.uscg.gov/mwv/navrules/navrules.htm>. All marine vessels shall display the lights and day shapes required by Part C- Lights and Shapes of the Inland Navigation Rules. The location, type, color, and size of the lights and day shape shall be in accordance with Annex I - Positioning and Technical Details of Lights and Shapes. Any vessel engaged in dredging is considered a "Vessel restricted in her ability to maneuver" and shall display all the lights and shapes required in Rule 27, "Vessel Not Under Control".

GP-37 OBSTRUCTION TO NAVIGATION

The Contractor shall minimize all obstructions to navigation in compliance with pertinent U. S. Coast Guard regulations while conducting the Work. The Contractor shall promptly move any floating equipment or marine vessels which obstruct safe passage of other marine vessels. Upon completion of the Work, the Contractor shall remove all marine vessels and other floating equipment such as temporary ranges, buoys, piles, and other marks or objects that are not permanent features of the Work.

GP-38 MARINE VESSELS AND MARINE ACTIVITIES

All marine vessels operated by the Contractor shall possess a valid United State Coast Guard (USCG) inspection certificate and current American Bureau of Shipping (ABS) Classification. All officers and crew shall possess valid USCG licenses as required by USCG regulations. These certificates, classifications, and licenses shall be posted in a public area on board each vessel.

All marine vessels not subject to USCG certification or American Bureau of Shipping (ABS) Classification shall be inspected annually by a marine surveyor accredited by the National Association of Marine Surveyors (NAMS) or the Society of Accredited Marine Surveyors (SAMS). All inspections shall be documented using an appropriate report format. At a minimum, the inspections shall evaluate the structural integrity of the vessel and comply with the National Fire Protection Association Code No. 302 - Pleasure and Commercial Motor Craft. The most recent inspection report shall be posted in a public area on board each vessel.

GP-39 RECORD KEEPING

The Contractor shall maintain orderly records of the Progress Schedule, Daily Progress Report, Weekly Progress Meetings, correspondence, submittals, reproductions of original Contract Documents, Change Orders, Field Orders, certificates, additional drawings issued subsequent to the executed Contract, clarifications and interpretations of the Contract Documents by the Engineer, and other related documents at the Project Site until all of the Work is accepted by the Engineer.

GP-40 CERTIFICATES OF COMPLIANCE

Any certificates required for demonstrating proof of compliance of materials with specification requirements shall be executed in three (3) copies. Each certificate shall be certified by an authorized agent of the supplying company and shall contain the name and address of the Contractor, the project name and location, and the quantity and date of shipment. Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the testing date. The Contractor shall also certify that all materials and test reports conform to the requirements of the Contract. Certification shall not be construed as relieving the Contractor from furnishing satisfactory material if the material is tested and determined to be in nonconformance.

GP-41 SUBMITTALS

The Contractor shall review all Submittals for compliance with the requirements of the Contract prior to delivery to the Engineer. Each Submittal shall contain a signed statement by the Contractor that it complies with the Contract requirements with any exceptions explicitly listed. The Contractor shall comply with these requirements for Submittals from Subcontractors, manufacturers, and suppliers.

All Submittals shall include sufficient data to demonstrate that the requirements of the Contract are met or exceeded. All submittals shall be legible and marked with the project title and clearly identify the item submitted. Each submittal package shall include an itemized list of the items submitted.

All Submittals shall be reviewed within fourteen (14) days after being received by the Engineer. The Contractor shall allow the Engineer sufficient time for review, corrections, and resubmission of all Submittals prior to beginning the associated Work. The Contract Time shall not be extended based on incorrect or incomplete Submittals.

GP-42 MODIFICATIONS TO THE WORK

The Engineer may authorize modifications, additions, or deductions to the Work using Change Orders, Field Orders, or Written Amendments. The requirements and stipulations of these documents shall be binding on the Owner and Contractor throughout the remainder of the Contract.

GP-43 INCREASES TO CONTRACT PRICE

The Contractor shall complete the Work according to the Contract Price specified in the Bidding Documents. Under certain circumstances, the Contractor may request for a legitimate increase to the Contract Price using a Claim. The Claim shall justify the request for an increase in Contract Price by providing supporting data and calculations. The Claim must be submitted to the Engineer in writing within fourteen (14) days after the event occurs which necessitates the increase in contract price. If an increase in Contract Price involves an extension of Contract Time, both claims shall be submitted together. The Engineer reserves the right to accept, deny, or negotiate the Claim. If the Claim is accepted, the Engineer shall issue a Change Order. Where a change order is negotiated, the Contractor shall fully document and itemize costs, including material quantities, material costs, taxes, insurance, employee benefits, other related costs, profit, and overhead. The requirements and stipulations of Change Order shall be binding on the Owner and Contractor throughout the remainder of the Contract.

The increase in Contract Price shall be determined by the following:

- 43.1 By application of the unit prices in the Contract to the quantities of the items involved; or
- 43.2 By mutual acceptance between the Owner and Contractor of a lump sum.

If the Contractor is prevented from completing the Work according to the Contract Price due to the Owner, the Contractor may be entitled to any reasonable and necessary addition of cost as determined by the Engineer. Neither the Owner nor the Contractor shall be entitled to any damages arising from events or occurrences which are beyond their control, including but not limited to fires, floods, epidemics, abnormal weather conditions, acts of God, acts of war, and other like matters. The provisions of this section exclude recovery for damages caused by the Contractor and compensation for additional professional services by either party.

GP-44 EXTENSION OF CONTRACT TIME

The Contractor is expected to complete the Work within the Contract Time specified in the Bidding Documents. A legitimate increase of the Contract time may be requested by the Contractor throughout the course of the Work. This Claim must be submitted to the Engineer in writing within fourteen (14) days of the event which caused the time delay to the Contractor. If an extension of Contract Time involves an increase in Contract Price, both claims shall be submitted together. The Contractor shall justify the increase of the Contract Time in the Claim using supporting data and calculations. The Engineer may deny the claim if there is insufficient information to make a determination. If the Claim is approved, the Engineer shall issue a Change Order within thirty (30) days of the Claim. The Contract Time shall be increased on a basis that is commensurate with the amount of additional or remaining Work. For example, the Contract Time can be increased where the number of actual adverse weather days exceeds the number of days estimated in the Contract.

GP-45 DEFAULT AND TERMINATION OF CONTRACT

The Owner shall submit a written notice to the Contractor and Surety which justifies placement of the Contractor in default if:

- 45.1 The Work is not begun within the time specified in the Notice to Proceed; or
- 45.2 The Work is performed with insufficient workmen, equipment, or materials to assure prompt completion; or
- 45.3 The Contractor performs unsuitable, neglected or rejected work, refuses to remove materials; or
- 45.4 The Work is discontinued; or
- 45.5 The Work is not completed within the Contract Time or time extension; or
- 45.6 Work is not resumed within a reasonable time after receiving a notice to continue; or
- 45.7 The Contractor becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency; or
- 45.8 The Contractor allows any final judgment to stand unsatisfied for a period of ten (10) days; or
- 45.9 The Contractor makes an assignment for the benefit of creditors; or
- 45.10 The Work is not performed in an acceptable manner.

If the Contractor or Surety does not remedy all conditions cited in the written notice within ten (10) days after receiving such a notice, the Contractor will be in default and the Owner shall remove the Contractor from the Work. If the Contractor is placed into default, the Owner may obtain the necessary labor, materials, and equipment or enter into a new Agreement and Contract in order to complete the Work. All costs incurred by the Owner for completing the Work under the new Contract will be deducted from the payment due the Contractor. If the expense exceeds the sum payable under the Contract, the Contractor and Surety shall be liable to pay the Owner the difference.

GP-46 TEMPORARY SUSPENSION OF WORK

The Engineer shall have the authority to temporarily suspend the Work in whole or in part. A Field Order shall be issued to the Contractor for any of the Work that is suspended for periods exceeding one (1) calendar day. The Field Order shall include the specific reasons and details for the suspension. The Contract Time shall not be extended if the Work is suspended due to failure by the Contractor to comply with a Field Order or with the Plans and Specifications. If the Work is suspended in the interest of the Owner, the Contractor shall make due allowances for the lost time.

GP-47 NON-CONFORMING AND UNAUTHORIZED WORK

Work not conforming to the Plans, Specifications, Field Orders, or Change Orders shall not be accepted for payment. Unacceptable or unauthorized work shall be removed and replaced in an acceptable manner at the expense of the Contractor in order to obtain final acceptance of the Work.

GP-48 CONTRACTOR'S RIGHT TO TERMINATE CONTRACT

The Contractor may terminate the Contract or Work and recover payment from the Owner for labor and materials if the Work is stopped through no act or fault of the Contractor for more than three (3) months. For example, such an occurrence could be caused by a court order or other public authority. In any case, the Contractor shall submit a written notice to the Engineer at the beginning of the occurrence, and a written Claim to the Owner at the end of the occurrence.

GP-49 BREACH OF CONTRACT

The Owner shall submit a written Claim to the Contractor regarding any breach of the Contract. The Contractor must provide a written response to the Owner regarding the breach of Contract within ten (10) days after the Claim. This response must provide either an admission to the Claim or a detailed denial based on relevant data and calculations. The failure of the Contractor to provide a proper response within ten (10) days shall result in justification of the Claim by default.

GP-50 NO WAIVER OF LEGAL RIGHTS

The Owner shall not be prevented from recovering costs from the Contractor, Surety, or both due to failure of the Contractor to fulfill all of the obligations under the Contract. If a waiver is provided to the Contractor for a breach of Contract by the Owner, it shall not apply to any other breach of Contract. Final acceptance of the Work shall not prevent the Owner from correcting any measurement, estimate, or certificate. The Contractor shall be liable to the Owner without prejudice to the terms of the Contract or any warranty for latent defects, fraud, or gross negligence.

GP-51 LIABILITY FOR DAMAGES AND INJURIES

To the fullest extent permitted by Laws and Regulations, the Contractor shall indemnify and hold harmless the Owner, Engineer, and their affiliates from claims, costs, losses, demands, and judgments (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) caused by negligence of the Contractor or the Contractor's affiliates under this Contract, provided that it:

- 51.1 Is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property including the loss of use resulting there from; or

- 51.2 Is caused by negligence or omission of the Contractor or Subcontractors to furnish any of the Work in accordance with all Laws and Regulations.

The indemnification obligations of the Contractor shall not extend to the liability of the Owner, Engineer, and their affiliates arising out of the preparation or approval of the Plans, Specifications, maps, opinions, reports, surveys, or Change Orders, or for providing directions or instructions which are the primary cause of the injury or damage.

Should the Owner or Contractor suffer from any injury or damage due to an error, omission, or act of the other party or their legally liable affiliates, a written Claim shall be submitted to the other party within ten (10) days. The Claim shall provide all details regarding the injury or damage, the results of any investigations, and the action to be taken to prevent any reoccurrence.

GP-52 LIABILITY FOR LOSSES BY ACTS OF THE GOVERNMENT

The Owner shall not be liable for any loss or damage suffered by the Contractor arising out of a cessation of Work under this Contract due to any act or order of any local, state, or federal government agency. If this cessation occurs, the Contractor may request an extension of the Contract Time according to the provisions in GP-44.

GP-53 FINAL INSPECTION AND ACCEPTANCE

The Engineer, Owner, and Contractor shall perform a final inspection after receiving written notice from the Contractor that all of the Work is complete. If the Work is determined to be unsatisfactory, the Engineer shall notify the Contractor in writing of the deficiencies and recommended corrective actions.

Unfulfilled work or damages caused by the negligence of the Contractor or Subcontractors shall be repaired or corrected at the expense of the Contractor. All other damages to the Work which received previous acceptance by the Engineer shall be repaired at the expense of the Owner. Upon completion of the repairs or corrections, the Engineer, Owner, and Contractor shall perform another inspection. The Engineer shall submit a written notice of acceptance to the Owner after the Work has been determined to be satisfactorily completed according to the Contract.

GP-54 AS-BUILT DRAWINGS

The As-Built Drawings will be completed by the Owner. The Contractor shall submit the preconstruction and process survey data to the Engineer in accordance with SP-3 and SP-4.

GP-55 COMPLETION OF CONTRACT

Completion of the Contract requires all of the Work to be complete, inspected by the Engineer, accepted by the Owner as recommended by the Engineer, and after, final payment is made. After the Contract is complete, the Contractor will then be released from further obligation except as set forth in the Contract Bond and Contractor's Guarantee.

GP-56 CONTRACTOR'S GUARANTEE

The Contractor is obligated to provide a written guarantee to the Owner that all of the Work conforms to the Contract Documents. The Work shall be guaranteed to survive for a minimum period of 1 year after final acceptance, unless otherwise specified in the Technical Specifications.

56.1 The guarantee shall include:

- 56.1.1 A written warranty by the manufacturer for each piece of installed project equipment or apparatus furnished under the Contract.
- 56.1.2 Any necessary repair or replacement of the warranted equipment during the guarantee period at no cost to the Owner.
- 56.1.3 Satisfactory operation of installed equipment including, but not limited to, any mechanical and electrical systems furnished and constructed under the Contract during the guarantee period. The Contractor shall repair all equipment which fails due to defective materials or faulty workmanship during the guarantee period. The Contractor shall also be liable for all other ancillary expenses incurred by the Owner due to the failure.

56.2 The guarantee shall exclude defects or damage caused by:

- 56.2.1 Abuse or improper modification, maintenance, or operation by anyone other than the Contractor;
or
- 56.2.2 Wear and tear under normal usage.

56.3 This obligation by the Contractor shall be absolute. The following actions will not constitute acceptance of non-conformance work or release the Contractor from obligation to furnish the Work in accordance with the Contract Documents:

- 56.3.1 Observations by the Owner or Engineer; or
- 56.3.2 Recommendations by the Engineer or payment by the Owner; or
- 56.3.3 Use of the Work by the Owner; or
- 56.3.4 Issuance of a notice of acceptance by the Owner pursuant to the provisions of GP-53, or failure to do so; or
- 56.3.5 Any inspection, test, or approval by others; or
- 56.3.6 Any correction to non-conforming work by the Owner.

PART II SPECIAL PROVISIONS

SP-1 LOCATION OF WORK

The Project Site is located in Cameron Parish, Louisiana, on the southern shoreline of Grand Lake near Catfish Lake. The Project Site is accessible by boat from the Gulf of Mexico via the Mermentau River and/or the Gulf Intracoastal Waterway (GIWW) via the Mermentau River. See Appendix D for directions to the available launches.

SP-2 WORK TO BE DONE

- 2.1 **Scope:** The Contractor shall provide all labor, materials, and equipment necessary to perform the Work. The Work shall include, but not be limited to, mobilization and demobilization at the Project Site, dredge access and flotation channels, temporary and permanent spoil placement, installation of woven geotextile fabric, construction of rock breakwaters, installation of settlement plates, and installation of temporary and permanent warning signs. The Work shall be performed in accordance with these Specifications and in conformity to lines, grades, and elevations shown on the Plans or as directed by Engineer. Quantity calculations, layouts, shop drawings, and construction sequencing of these items shall be provided in the Work Plan. The major tasks associated with the Work are described as follows:
- 2.1.1 **Surveying** – Prior to construction, the survey transects established in the previous survey shall be resurveyed for bathymetry and topography. Settlement plates shall be surveyed during installation and throughout construction along the alignment of the rock breakwaters. Prior to construction, all of the access routes to the Project Site, and access and flotation channels shall be surveyed by magnetometer. During construction, surveys for partial payment and quality control shall be performed as deemed necessary by the Contractor and as requested by the Engineer. After construction is complete, the Owner shall perform an As-Built Survey, which shall be reviewed by the Contractor and Engineer for acceptance of the Work.
 - 2.1.2 **Access and Flotation Channels** – Access channels shall be dredged to the Project Site to allow for delivery of construction materials by marine vessels. Additionally, the flotation channel(s) shall be dredged along the southern shoreline of Grand Lake to allow marine vessels to construct the rock breakwaters. All dredging shall be performed using a mechanical dredge. The access channel and flotation channel shall be backfilled with the spoil material after construction of the rock breakwaters is complete. All access and flotation channels shall be maintained until the Work is accepted by the Engineer.
 - 2.1.3 **Woven Geotextile Fabric** – A woven geotextile fabric shall be installed underneath the rock breakwaters prior to the placement of the rock breakwaters.

- 2.1.4 **Rock Breakwaters** – A semi-continuous rock breakwater shall be constructed from Catfish Lake to Superior Canal. The rock breakwaters shall be constructed parallel to the shoreline along the approximate -1.0 ft NAVD 88 contour according to the cross sections specified in the Plans, or as directed by the Engineer.
- 2.1.5 **Temporary Warning Signs** – Temporary warning signs shall be installed lake ward of the flotation channel temporary spoil, on both sides of the access channel temporary spoil, and shall remain in place during construction as shown on the Plans.
- 2.1.6 **Permanent Warning Signs** – Permanent warning signs shall be installed along the lakeward side of the rock breakwaters at each fish dip, approximately every 1,000 ft., and at each navigation gap as shown on the Plans.
- 2.1.7 **Settlement Plates** – Settlement plates shall be installed along the centerline of the rock breakwaters at the locations shown on the Plans.
- 2.1.8 **Disposal of Dredged Material** – Dredged material shall be deposited within the temporary and permanent spoil areas shown on the Plans. Placement in any other location is prohibited without prior written approval from the Engineer. Logs, stumps, snags, debris, and other obstructions which are encountered will not receive separate payment for removal and disposal.
- 2.1.9 **Use of Equipment** – The equipment used for the Work shall be operated within the boundaries of the Project Site and away from existing vegetated wetlands, the lake shoreline, or any other sensitive areas. All equipment shall remain in open water only. The Contractor shall be responsible for returning all disturbed wetlands to pre-existing conditions at no expense to the Owner.
- 2.1.10 **Navigation Depths** – Access and flotation channels shall be dredged and maintained to provide clear and safe navigation of all marine vessels to be used for the Work. Areas containing navigable depths shall not be impaired except as allowed by applicable laws or regulations. It is the responsibility of the Contractor to select equipment that can navigate from a maintained navigation channel to the Project Site without dredging, except for the flotation and access channels depicted in the Plans. All equipment shall remain floating at all times during the transit to the Project Site. The Contractor shall obtain NOAA Nautical Charts and/or other charts to become familiar with the depths in the vicinity of the Project Site.

SP-3 BID AND CONTRACT DATES

Milestone	Location or Recipient	Due Date
Bid Advertisement	Publications	As advertised
Mandatory Pre-bid Conference	Provided in Notice to Bidders	Provided in Notice to Bidders
Questions on Bid Documents	As stated in GP-5	3 business days after Mandatory Pre-bid Conference
Site Visit	Provided in Notice to Bidders	Provided in Notice to Bidders
Effective Date of Agreement	Contractor and Owner	Stated in Notice of Award
Start of Contract Time	Contractor and Owner	As stated in Notice to Proceed
Work Plan	Submit to Engineer	At least 14 days prior to Pre-Construction Conference
Progress Schedule	Submit to Engineer	At least 14 days prior to starting construction, monthly thereafter
Pre-Construction Conference	Contractor and Engineer	As determined by the Engineer after the Notice to Proceed is issued
Progress Meetings and Reports	At Project Site	As determined at Pre-Construction Conference
As-Built Drawings	To be done by Owner	Prior to Final Inspection as scheduled by the Engineer
End of Contract Time	At Project Site	270 days after Notice to Proceed

SP-4 DELIVERABLES

4.1 Prior to Construction:

4.1.1 The Contractor shall submit the following documents to the Engineer prior to the Pre-Construction Conference specified in GP-14:

4.1.1.1 Work Plan as specified in GP-8;

4.1.1.2 Progress Schedule as specified in GP-9;

4.1.1.3 Copy of typical Daily Progress Report as specified in GP-10;

4.1.1.4 Hurricane and Severe Storm Plan as specified in GP-11;

4.1.1.5 Health and Safety Plan as specified in GP-12.

4.1.2 The Contractor shall provide the following information to the Engineer at the Pre-Construction Conference specified in GP-14:

4.1.2.1 Updates to all plans and schedules based on comments from the Engineer;

4.1.2.2 Potential access corridors which may be approved on an as needed basis.

- 4.2 During Construction: The Contractor shall deliver copies of the following documents upon request by the Engineer, or as specified in these provisions:
- 4.2.1 The results of all surveys and calculations as specified in the TS-2;
 - 4.2.2 Progress Schedule as specified in GP-9;
 - 4.2.3 Daily Progress Reports as specified in GP-10;
 - 4.2.4 Copies of all inspection reports;
 - 4.2.5 All Change Orders, Field Orders, Claims, Clarifications, and Amendments;
 - 4.2.6 Results of any materials testing.
- 4.3 Post Construction: The Contractor shall contact the Engineer by phone, a minimum of five (5) working days prior to the anticipated completion of the Work in order to schedule the final inspection and gain Acceptance by the Engineer. The following documents shall also be submitted to the Engineer:
- 4.3.1 Copies of all delivery slips, which shall include the source of construction materials, date of delivery, exact quantity, and size of materials delivered with each shipment to the Project Site;
 - 4.3.2 The Contractor shall furnish the Engineer with the preconstruction and process survey data as specified in TS-2.

SP-5 ADDRESSES FOR DOCUMENT DELIVERY

Prior to Bid opening date, the Contractor shall send all Bid Documentation to the attention of Brenda Myers of the Office of State Purchasing. The address and contact information is as follows:

State Purchasing Officer
Office of State Purchasing
Post Office Box 94095
Phone: 225-342-8022

After award, the successful Contractor shall contact the Engineers concerning bid documentation or questions. The addresses and contact information for the Engineers are listed as follows:

Project Engineer:
Whitney C. Thompson, E.I.
617 North 3rd Street
Suite 1036
Baton Rouge, Louisiana 70802

Phone: 225-342-9419
Fax: 225-342-6801

Field Engineer:
Melvin Guidry
635 Cajundome Blvd.
Suite 203A
Lafayette, Louisiana 70506

Phone: 337-482-0682
Fax: 337-482-0685

The Owner and Engineer shall deliver all written Claims, notices, submittals, Plans, and other documents to the Contractor at the address indicated on the Bid, or as directed by the Engineer.

SP-6 WORK PLAN SUPPLEMENTAL

The following items shall be included in the Work Plan in addition to those required by GP-8:

- 6.1 Layout and schedule for temporary access and flotation channels;
- 6.2 Layout and construction schedule for rock breakwaters;
- 6.3 Barge displacement table;
- 6.4 Rock staging area;
- 6.5 Woven geotextile fabric layout and proposed seams;
- 6.6 Dredge Data Sheet as specified in SP-9.

SP-7 FAILURE TO COMPLETE ON TIME

For each day the Work remains incomplete beyond the Contract Time, as specified in SP-3, or Extension of Contract Time, as specified in GP-44, the sum of **one-thousand four hundred fifty dollars (\$1,450)** per calendar day will be deducted from any money due to the Contractor as liquidated damages. The Contractor and Surety shall be liable for any liquidated damages that are in excess of the amount due the Contractor.

SP-8 TRANSPORTATION

The Contractor shall provide a safe and reasonable means of transportation to and from the dock, staging area, and Project Site for personnel from OCPD throughout the Work. The schedule and pickup location shall be arranged by OCPD and the Contractor prior to mobilization. Upon request, overnight room and board shall be provided to these personnel by the Contractor if adequate facilities are available. The Contractor shall provide a boat for the exclusive use of the Engineer and/or Inspector to tour the Project Site during the Work. The boat shall have the following features:

- 8.1 An enclosed cabin space;
- 8.2 Capable of maintaining 25 knots (29 mph);
- 8.3 Six (6) passenger capacity;
- 8.4 Coast Guard certified;
- 8.5 Operable marine radio;
- 8.6 All safety equipment required by the Coast Guard for the size and type of that boat;
- 8.7 Draft of two feet (2') or less.

The Contractor shall supply the fuel and maintain the boat. All mechanical malfunctions of the boat shall be repaired within twelve (12) hours. In the event that the Contractor refuses, neglects, or delays compliance with the requirements of this provision, the Owner may obtain and use other necessary boats at the expense of the Contractor. The costs associated with providing the boats shall be included in the lump sum price for Bid Item No. 1, "Mobilization and Demobilization".

SP-9 DREDGE DATA SHEET

The Contractor shall complete the dredge data sheet in Appendix B for each dredge that is proposed to be used to perform the Work and include it in the Bid. Bids which do not have the dredge data sheet attached will not be considered for the Work by the Owner. Submittal of a dredge data sheet shall constitute a certification that the described equipment is available to, and under control of, the Contractor. The Dredge Data Sheet is for informational purposes only and will not be used as a basis for Award. The data is pertinent to the evaluation of the proposed dredges and their capability to perform the Work. The bidder may only omit data or information that is considered to be proprietary.

SP-10 BARGE DISPLACEMENT TABLE

The Contractor shall develop a barge displacement table for measurement and payment of rock and include it in the Work Plan. The table shall be approved by the Engineer. It shall show the name and/or number, dimensions, name of owner, and name of fabricator for each barge. The Contractor shall furnish a dimensioned drawing or sketch of each barge that is sufficient to verify the barge displacement table. The drawings shall show, at a minimum, the length, width, and depth of the barge, and dimensions of rake(s). All new or modified barges shall be field checked for current dimensions by the Contractor in the presence of the Engineer or the Inspector. Each table shall contain the freeboard of the barge in feet and tenths from zero (0) to the full depth of the barge and the corresponding gross displacement to the nearest ton.

Each barge shall be suitably marked with two displacement gaging lines along each side of the barge. Each gaging line shall be painted perpendicular to the edge of the barge and be no less than four (4) inches wide and one (1) foot long on both the deck and side of the barge. Barges with rakes shall have the displacement gaging lines placed at each corner of the box section between the rakes. If a barge has a box end or ends, the gaging lines shall be placed approximately four (4) feet from the box end. The freeboard will be measured at the four (4) gaging locations and the displacement determined by the use of the "CELMV Standard Barge Tables" from the average of these measurements. The displacement shall be determined before and after the barge is unloaded and the difference between these values shall be the quantity delivered.

If the barge tables were originally furnished for fresh water and the barge displacement measurements are being taken in salt water, the Contractor has the option to obtain water samples and determine the densities or unit weights of the water. Water sampling shall be performed concurrently with the measurements of the barges, both when fully loaded and empty. Water samples shall be taken by the Contractor and witnessed by the Engineer. The water samples shall be taken in accordance with ASTM D 3370 (practice A-Grade Sample) at depths of four (4) and eight (8) feet in the area where measurements are made using a "Polypro" 2000 ml. water sampler, or approved equal.

Densities shall be tested by a certified testing laboratory according to ASTM D 1429 (Method D-Hydrometer Method). After review and approval of the test results by the Engineer, the average of the densities will be used to adjust the measurements. A unit weight of 62.45 pounds/cubic foot is standard for fresh water. If the Contractor does not obtain water samples and densities, then no adjustments will be applied to the displacement table and rock quantities.

SP-11 OYSTER LEASE RESTRICTIONS

There are no known existing Oyster leases near or within the boundaries of the Project Site. Therefore, no oyster lease restrictions are provided for performing the Work within the boundaries of the Project Site.

SP-12 THREATENED AND ENDANGERED SPECIES

The Contractor shall take all steps required to prevent any disturbance to fish and wildlife in the project area. Water flows shall not be altered, and native habitat adjacent to the project shall not be disturbed.

- 12.1 Nesting Birds: Colonial nesting wading birds (including, but not limited to herons, egrets, and ibis) and seabirds/water birds (including, but not limited to, terns, gulls, black skimmers, and brown pelicans) occur in the project area and shall be avoided. The nesting period generally begins February 15 and ends September 15. In the event nesting wading birds and/or seabirds or water birds are sighted, please immediately report to Dona Ours at 225-342-1477. If nests are present in the project area, a 2000 foot buffer distance from brown pelican nests or 1500 foot buffer distance from all other colonial bird nests must be implemented. Depending on the species of bird found, a reduction of the no-work distance restriction may be implemented.
- 12.2 Manatees: The West Indian Manatee may occur in the project area. All personnel associated with the project should be advised of the manatees, and collisions with the manatees must be avoided. Under the Marine Mammal Protection Act of 1972, the Endangered Species Act of 1973, and the Florida Manatee Sanctuary Act, there are civil and criminal penalties associated with harassing, harming, or killing manatees. All personnel associated with the project shall be advised of these provisions, and the Contractor will be held responsible for any manatee harassed, harmed, or killed due to construction activities.
 - 12.2.1 Special Operating Conditions if Manatees Are Present in the Project Area: When dredging is performed between April 1 and November 15, the following provisions shall be followed:
 - 12.2.1.1 When spotted within 100 yards of the project area, all precautions shall be taken by the contractor to ensure protection of the manatee. Moving equipment shall not be operated within 50 feet of a manatee. To ensure the protection of the manatee, equipment shall be shut down and all construction shall cease if a manatee is within 50 feet of moving equipment or the project area. Construction activities may resume when the 50 foot buffer distance has been reestablished.
 - 12.2.1.2 If a manatee is sighted in the project area, all vessels shall maintain no wake/idle speed where there is less than four feet of clearance between the vessel draft and the water bottom. Vessels shall follow deep water routes when possible. Where navigational safety permits, passenger vessels shall be shallow draft, preferably of the light-displacement category.
 - 12.2.1.3 Manatee Signs: Each vessel shall display a temporary sign at the vessel control station or in a prominent place, visible to all employees, at least 8 ½" x 11" reading, "CAUTION: MANATEE HABITAT/IDLE SPEED IS REQUIRED IN CONSTRUCTION AREA." A second temporary sign measuring 8-1/2" x 11" reading "CAUTION: MANATEE HABITAT. EQUIPMENT MUST BE SHUTDOWN IMMEDIATELY IF A MANATEE COMES WITHIN 50 FEET OF OPERATION" will be posted at the dredge operator control station and at a location prominently adjacent to the issued construction permit. The Contractor shall remove the signs upon completion of construction. At no time should manatees be physically

harmful by any measures undertaken to induce manatees to leave the immediate work area.

- 12.2.2 Manatee Sighting Reports: Any sightings of manatees, or collisions with a manatee, shall be reported immediately to the OCPR. The point of contact within the OCPR will be Dona Ours, at 225-342-1477.

SP-13 OFFICE FOR OWNER

The Contractor shall provide an office for the Engineer and Inspector at the Project Site if requested by the Engineer. This office shall be for the sole use of the Engineer or Inspector, suitably sized, provided with lighting, heat, and air conditioning. The office furnishings shall include a work table, drafting table, stool, and two chairs.

In the event that the Contractor refuses, neglects, or delays compliance with the requirements of this provision, the Owner may obtain and use another necessary office at the expense of the Contractor. The cost for providing and furnishing this office shall be included in the contract lump sum price for Bid Item No. 1, "Mobilization and Demobilization".

PART III TECHNICAL SPECIFICATIONS

TS-1 MOBILIZATION AND DEMOBILIZATION

- 1.1. Description: The Contractor shall provide all labor and equipment costs necessary to move personnel, equipment, supplies, and incidentals to and from the Project Site, establish offices, buildings, and other facilities necessary for the Work, obtain bonds, required insurance, and any other pre-construction expenses necessary to perform the Work. This section shall exclude the cost of construction materials.
- 1.2. Arbitrary Mobilization by Contractor: The Owner shall pay for only one mobilization and demobilization effort. Should the Contractor demobilize prior to completing the Work, subsequent remobilization shall be performed at no cost to the Owner.
- 1.3. Ratio of Mobilization (60%) and Demobilization (40%) Effort: Sixty percent (60%) of the mobilization/demobilization lump sum price will be paid to the Contractor upon complete mobilization to the Project Site. The remaining forty percent (40%) will be paid to the Contractor upon final acceptance of the Work and removal of all equipment and unused materials.
- 1.4. Justification of Costs: In the event the unit cost does not bear a reasonable relation to the amount of work for mobilization and demobilization in the Contract, the Engineer may require the Contractor to produce cost data to justify the unit cost in the Bid. Failure to justify such cost to the satisfaction of the Engineer will result in payment of actual mobilization costs, as determined by the Engineer at the completion of mobilization, actual demobilization cost at the completion of the demobilization, and payment of the remainder of this item in the final payment under this contract. The determination of the Engineer is not subject to appeal.
- 1.5. Measurement and Payment: Payment for mobilization and demobilization shall be paid for at the contract lump sum price for Bid Item No. 1, "Mobilization and Demobilization". Payment shall constitute full compensation for moving personnel, equipment, supplies, and incidentals to and from the job site and establishing offices, buildings, and other facilities for the work, obtaining bonds, insurance, and any other associated expenses. No invoice for demobilization will be paid until the access and flotation channel(s) have been completed and accepted as defined in TS-2.4 and TS-3.7.

TS-2 SURVEYS

- 2.1. Scope: The Contractor shall furnish all of the materials, labor, and equipment necessary to perform pre-construction and process surveys of the baseline, transects, rock breakwaters, settlement plates, and access and flotation channels as shown in the Plans. All surveys shall be performed by personnel who are approved by the Engineer under the direct supervision of a professional land surveyor licensed in the state of Louisiana. Survey data shall reference the North American Datum of 1983 (NAD 83), Louisiana South Zone, U. S. Survey Feet for horizontal control, and the North American Vertical Datum of 1988 (NAVD 88), U. S. Survey Feet for vertical control. Horizontal and vertical control shall be established by using the four OCPR secondary monuments specified in Appendix E.
- 2.2. Pre-Construction Survey: The baseline and transects shall be re-surveyed and staked by the Contractor after the Pre-Construction Conference and prior to construction. This survey shall be used to verify the alignment of the various project features and to make modifications or adjustments as deemed necessary by the Engineer. Drawings of the plan views, cross sections, and calculations of the projected quantities of materials, shall be developed from this survey by the Contractor and submitted to the Engineer for review.
 - 2.2.1. Temporary Bench Marks (TBM): TBMs shall be installed at locations necessary to complete all surveys. Horizontal and vertical coordinates shall be determined for all TBMs installed. The Contractor shall maintain the TBMs for the duration of the Work. In the event that a single TBM is disturbed and/or destroyed, the TBM shall be reinstalled at no cost to the Owner by qualified personnel that are approved by the Engineer. If multiple TBMs are destroyed, the Engineer may require the TBMs to be reinstalled by a professional surveyor licensed in State of Louisiana. The TBMs shall be shown on the plan view drawings.
 - 2.2.2. Baseline: The baseline shall be surveyed and staked at all points of inflection and intersections with transects. The baseline shall be shown on the plan view drawings.
 - 2.2.3. Transects: The flotation and access channels shall be surveyed at intervals and locations deemed necessary to perform the Work as directed by the Engineer.

Transects shall also be surveyed and staked along the alignment of the rock breakwaters at 400 ft. minimum intervals, or at intervals deemed necessary to perform the work. Transects shall extend beyond the rock breakwater toe a minimum of 10 feet. All inflection points of the alignment of the rock breakwaters shall also be surveyed and staked. Transect intervals for the rock breakwater shall be submitted to the Engineer for approval prior to layout.

The Contractor shall develop Drawings which show the cross sections and plan views of the shoreline and rock breakwaters. Elevations, coordinates, lines, and grades shall be shown on the drawings. Elevation contours shall also be shown on all plan view drawings.

The Contractor shall also determine the projected quantities for the rock and woven geotextile fabric. The quantities of rock shall be calculated using a method that is approved by the Engineer, such as the average end area or AutoCAD. The projected quantities of rock shall be calculated in tons and account for an in-place unit weight of rock equal to 1.5 tons per cubic yard and the assumed settled section (below existing ground) shown in the Plans.

- 2.2.4. Stakes: The stakes shall be untreated wood or natural bamboo of sufficient diameter and length such that they are embedded at least three feet into the soil and protrude 5 feet above existing grade if on shore, or 5 feet above mean water elevation if off shore. The grade stakes shall be installed at intervals not to exceed 100 feet in length.
- 2.2.5. Magnetometer Survey: A magnetometer survey shall be performed along the centerline of the access route to the Project Site, access channel, flotation channel, and submerged portions of the rock breakwaters, where possible. Perpendicular track lines shall be run at 400 foot intervals and extend 25 feet beyond the outside edge of each of these proposed features, where possible. All pipelines shall also be probed and appropriately marked throughout construction according to United States Coast Guard Standards. The magnetometer survey shall show all track lines, coordinates, amplitudes, signature types, and signature widths of all hits. The survey shall also show the coordinates, top elevation, and ground cover for all pipelines.
- 2.3. Process Surveys: The settlement plates and rock breakwaters shall be surveyed during construction as follows:
- 2.3.1. Rock Breakwater Settlement Plates: The Contractor shall survey the settlement plates within one day after installation, twice weekly for the first month, and weekly thereafter until the rock breakwater is accepted by the Engineer.
- 2.3.2. Rock Breakwaters: The breakwaters shall be surveyed bi-weekly, as per section TS-5, or as directed by the Engineer. The crown and both toes of the rock breakwaters shall be surveyed at 200 foot intervals and at all survey transects and points of inflection along the alignment. Survey intervals shall be submitted to the Engineer for approval. The Engineer shall evaluate the process surveys to determine if the rock lift is to be accepted or modified. Those portions of breakwaters which are modified must also be resurveyed.
- 2.3.3. Permanent Dredge Fill: The permanent dredge fill shall be surveyed at intervals and locations deemed necessary to perform the Work as directed by the Engineer. The crown of the permanent dredge fill shall be surveyed along the alignment.
- 2.4. As-Built Surveys: As-built Surveys will be conducted by the Owner. The contractor shall provide the Owner all Pre-Construction Survey and Process Survey data for the development of the As-Built Survey.
- 2.5. Deliverables: The magnetometer, pre-construction, and process Surveys shall be stamped by a professional surveyor licensed in the State of Louisiana. The Contractor shall provide the details for the survey layout and stakeout in the Work Plan.

The pre-construction survey drawings and projected material quantities shall be submitted to the Engineer for review. Three copies shall be provided on 11" X 17" paper and one digital copy provided in AutoCAD or an approved equal.

The process survey drawings, in-place material quantities, and supporting calculations shall be submitted to the Engineer for review immediately after they are completed in order to receive acceptance and payment. Three copies shall be provided on 11" X 17" paper and one digital copy provided in AutoCAD or an approved equal.

Point files of the pre-construction and process Surveys shall be included in the digital copies, organized by transect, and shall contain the following information:

- 2.5.1. Point number;
 - 2.5.2. Northing (NAD 83 US. FT.);
 - 2.5.3. Easting (NAD 83 US. FT.);
 - 2.5.4. Elevation (NAVD 88 FT.);
 - 2.5.5. Description.
- 2.6. **Measurement and Payment:** Payment for Surveys shall be made at the contract lump sum price for Bid Item No. 2, "Surveys" (and Bid Items No. 9 and/or 16 if Additive Alternates 1 and/or 2 are awarded). Price and payment shall constitute full compensation for furnishing all labor, materials, and equipment to perform the Magnetometer, Pre-construction, and Process Surveys specified herein.

TS-3 ACCESS AND FLOTATION CHANNELS

- 3.1. **Scope:** The Contractor shall furnish all of the materials, labor, and equipment necessary to construct the access and flotation channels through removal and satisfactory disposal of spoil materials. The channels shall be maintained in a useable configuration throughout the duration of the Work at the expense of the Contractor. Soil boring logs for the Project Site are provided in Appendix F.
- 3.2. **Excavation Method:** A mechanical dredge shall be used for the excavation of the access and flotation channels. The Contractor shall use any environmentally acceptable method that will complete the Work in accordance with the drawings. The proposed dredging method must be provided in the Work Plan.
- 3.3. **Excavation Limits:** Access and flotation channels shall not be excavated beyond the limits shown on the Plans without written approval from the Engineer. The minimum bottom elevation of the channels shall be -5.5' NAVD 88 (i.e. the invert of the channel shall not be lower than -5.5' NAVD 88). The locations of the permitted channels are shown in the Plans. The Contractor shall also obtain and submit to the Engineer a letter of no objection from any pipeline company for the proposed excavation inside their right-of-way.
- 3.4. **Temporary and Permanent Spoil Disposal Areas:** All dredged material shall be deposited in the areas as shown on the Plans or as directed by the Engineer. The permanent dredge fill shall be placed behind the rock breakwater and must conform to the elevations, grades, and lines specified in the Plans. Permanent dredge fill shall be placed to the greatest extent possible based on the Contractor's equipment, or as directed by the Engineer. Remaining spoil from the flotation channel shall be placed in the temporary spoil areas as shown on the Plans. The flotation channel temporary spoil shall be reworked to $\pm 6"$ of the original bottom depth and utilized to backfill the flotation channel after the rock breakwater has been accepted by the Owner. The access channel temporary spoil shall be placed on each side of the access channel as shown on the Plans. The access channel temporary spoil shall be reworked to $\pm 6"$ of the original bottom depth and utilized to backfill the access channel after the rock breakwater has been accepted by the Owner. Any spoil material that is deposited elsewhere than as indicated on the Plans or as authorized by the Engineer, shall be required to be removed and deposited in approved areas at the Contractor's expense. Additionally, the Contractor will be responsible for restoring unauthorized spoil disposal areas to pre-project conditions at his own expense.

- 3.5. Maintenance: The access and flotation channels shall be maintained according to the dimensions shown on the Plans in order to transport equipment and materials to the Project Site throughout construction. Maintenance excavation shall be performed at the expense of the Contractor.
- 3.6. Navigation: The Contractor shall mark the channels with buoys and lights in accordance with the rules and regulations of the U.S. Coast Guard and the U.S. Army Corps of Engineers.
- 3.7. Measurement and Payment: Following completion of access and flotation channel dredging and marking the channel(s) in accordance with the Plans and Specifications, the Contractor shall be paid sixty percent (60%) of the contract lump sum price for Bid Item No. 3, "Access and Flotation Channels" (and Bid Items No. 10 and/or 17 if Additive Alternates 1 and/or 2 are awarded). The remaining forty percent (40%) will be paid upon successful completion of access and flotation channel backfilling operations. This work will be considered complete when the temporary spoil is placed back into the access and flotation channels. Price and payment for this item shall constitute full compensation for all labor, materials, supplies, and equipment required for dredging and maintaining the access and flotation channels to the specified elevations for the duration of the project.

TS-4 WOVEN GEOTEXTILE FABRIC

- 4.1. Scope: The Work provided herein consists of furnishing all labor, material, equipment, and performance of all operations required for furnishing, hauling, placing, completing, and maintaining the woven geotextile fabric until placement of the stone cover is completed and accepted, as specified herein and on the plans.
- 4.2. Materials: The material shall be a woven geotextile consisting only of long chain polymetric filaments or yarns formed into a stable network such that the filaments or yarns retain their position relative to each other during handling, placement, and throughout the design service life. At least eighty-five percent (85%), by weight, of the material shall be polypropylenes, polyesters, polyamides, polyethylene, or polyolefins. The geotextile shall be free of any treatment or coating which might adversely alter the geotextile's hydraulic or physical properties after installation. When required, the geotextile shall contain stabilizers and/or inhibitors added to the base material to make filaments resistant to deterioration due to ultraviolet light and/or heat exposure. The edges of the geotextile shall be selvaged. The geotextile shall be free from defects and tears and shall meet or exceed the physical property requirements listed in the table on the next page. Thread used for factory or field sewing shall be of contrasting color to the geotextile and made of kevlar, polypropylene, polyester, or polyamide thread. The thread shall be as resistant to deterioration due to ultraviolet light and/or heat exposure.

MINIMUM PHYSICAL PROPERTY REQUIREMENTS FOR WOVEN GEOTEXTILE FABRIC

Physical Property	Test Method	Geotextile Requirements
* Wide Width Tensile Strength (lb./ft.)	ASTM D4595	4800 (lb/ft) minimum, in direction perpendicular to centerline
** Seam Strength, (lb./ft.)	ASTM D 4884	2400 (lb/ft) minimum, in direction perpendicular to centerline

Physical Property	Test Method	Geotextile Requirements
Elongation at Break, (%)	ASTM D 4595	9% in any principal direction
Puncture Resistance, (lb.)	ASTM D 4833	90 minimum
Ultraviolet Radiation Stability, (% residual strength)	ASTM D 4355	70% at 500 hrs. minimum
Apparent Open Size- AOS	ASTM 4751	No finer than U. S. standard sieve size number 50 and no courser than U. S. standard sieve size number 30
Water Permittivity, (sec -1)	ASTM D 4491	.15 minimum
Flow Rate, (gal/min/ft ²)	ASTM 4491	minimum of 10 and a maximum of 50
Trapezoid Tear Strength, (lb.)	ASTM D 4533	220 minimum

(*) Value represents minimum average roll value (MARV) in the direction perpendicular to the centerline of the new geotextile received from the manufacturer or distributor (i.e., any roll in a lot shall meet or exceed the minimum strength value in the table).

(**) All of the samples shall yield test values greater than the minimum strength value specified.

- 4.3. **Shipment and Storage:** The geotextile shall be shipped/transported and maintained in a protective cover prior to placement. During all periods of shipment and storage, the geotextile shall be protected from moisture, dust, debris, ultraviolet light, and other contaminants. Each geotextile roll shall be labeled or tagged with the manufacturer's name, date of manufacture, batch number, and name of product.
- 4.4. **Seams and End Laps:** A geotextile panel shall consist of multiple geotextile strips sewn together at the factory for as large a panel area as manageable. All geotextile panel seams shall be sewn at the factory using a double row, "butterfly" two-thread ("401") chain stitch. Each row of stitching shall be located a minimum of two (2) inches from the geotextile edge. The sewing shall consist of two parallel stitched rows at a minimum spacing of one (1) inch. The panel width must cover the minimum structure width shown on the plans and shall overlap the structure edge a minimum of one (1) foot and a maximum of three (3) feet on each side. No payment will be made for material placed outside of the maximum edge overlap stated above. Each geotextile panel end lap shall be overlapped a minimum of five (5) feet to provide the area coverage shown on the plans. In areas deemed necessary by the engineer, the geotextile shall be overlapped a minimum of ten (10) feet or as directed by engineer.
- 4.5. **Installation:** The woven geotextile fabric shall be placed with the machine direction perpendicular to the centerline under the stone at the locations, and to the lines and grades shown on the Plans. The Contractor shall prepare the surface to receive the geotextile, ensuring the surface is relatively smooth and free of obstructions, depressions, debris, soft or low density pockets of material, and stone, which could damage the geotextile during placement. At the time of installation, the geotextile shall be rejected if defects, rips, holes, flaws, deterioration, or damage incur during manufacture, transportation, or storage. The geotextile shall be protected at all times during construction to ensure the geotextile's original chemical and physical properties are unchanged. Work shall be scheduled so that the geotextile placed, is completely covered with a layer of the specified material by the end of each workday. Failure

to comply shall require replacement of geotextile. All wrinkles and sags shall be stretched out immediately before stone is placed on the geotextile. The geotextile shall be protected from damage during placement of stone. This shall be accomplished by limiting the height of drop to less than one (1) foot. In the event the stone placement damages the geotextile, the stone shall be placed directly on the geotextile with zero (0) height of drop. Before placement of stone, the Contractor shall demonstrate the stone placement will not damage the geotextile. Any geotextile rejected or damaged shall be replaced by the Contractor at no additional cost to the Owner. The Contractor shall also submit a geotextile panel placement plan for each site and the corresponding factory sewn geotextile panel dimensions. The Contractor shall allow the Engineer a minimum of seven (7) days for review and approval of the placement plan, prior to geotextile fabrication.

- 4.6. Acceptance: All brands of geotextile and all seams used in construction will be accepted on the following basis. At least thirty (30) days prior to installation, the Contractor shall furnish to the Engineer, in duplicates, a mill certificate or affidavit signed by a legally authorized official from the company manufacturing the geotextile. The certificate shall contain the signer's title, the name and address of the Contractor, the contract number, and the project name and location. The mill certificate or affidavit shall attest the geotextile meets the chemical, physical, and manufacturing requirements stated above in this Specification, and the seams used to meet the seam requirements. Accompanying the certificate/affidavit, the Contractor shall submit a three (3) foot by three (3) foot sample of each geotextile to be used. If seams are used, an additional three (3) foot by three (3) foot sample containing a seam in the center of the geotextile sample shall be submitted.
- 4.7. Measurement and Payment: Payment for this item will be made at the contract unit price per square yard for Bid Item No. 4, "Woven Geotextile Fabric" (and Bid Items No. 11 and/or 18 if Additive Alternates 1 and/or 2 are awarded). The geotextile will be measured in place to the nearest square yard, as delineated on the Plans. Overlaps will be measured as a single layer. Price and payment shall constitute full compensation for providing all plant, labor, material, and equipment and performing all operations necessary for the complete and satisfactory installation of the geotextile. No payment shall be made for geotextile that is rejected or damaged due to Contractor fault or negligence.

TS-5 250 LB CLASS ROCK

- 5.1. Scope: The Contractor shall furnish all of the materials, labor, and equipment necessary to construct and install the rock breakwater in conformity to the lines, grades, and thicknesses provided on the Plans and in these Specifications.
- 5.2. Materials: The rock shall not disintegrate upon exposure to the elements or be easily broken from handling, and shall be reasonably free from cracks, seams, earth, and other foreign materials. The least dimension of an individual rock shall be at least one third (1/3) its maximum dimension. The rock faces shall be roughly angular, not rounded in shape. Field stone, rectangular block stone, slabs and rounded boulders will not be accepted. When tested in accordance with AASHTO Designation: T 85, the solid weight of rock shall be at least one hundred fifty (150) pounds per cubic foot (based on bulk specific gravity) and the absorption shall not exceed two percent (2%).
- 5.3. Quarries: On the basis of information and data available to the Engineer, rock which meets the quality requirements of this specification is produced by the sources listed in the following table.

Producer	Nearest Town to Pit	Pit Designation
B.E. Construction Co.	Murfreesboro, AR	Murfreesboro Quarry
Boorhem Fields, Inc.	Black Rock, AR	Valley Stone Quarry
Bussen Quarries, Inc.	Mehlville, MO	Bussen Quarry
Central Stone Co.	Withers Mill, MO	Pitt No. 1
Central Stone Co.	Perry, MO	Pitt No. 9
Central Stone Co.	Danby, MO	Plattin Quarry
Dravo Basic Material Co., Inc.	Smithland, KY	Three Rivers Quarry
Farmer's Limestone Co.	Uniontown, MO	Farmer's Limestone Quarry
Graysonia Quarries, Inc.	Delight, AR	Delight Quarry
H.M.B. Construction	Dequeen, AR	H.M.B. Quarry
Industrial Mineral Products	Little Rock, AR	3M Arch Street Quarry
Little Rock Quarry Co., Inc.	Caddo Valley, AR	DeRock Creek Quarry
Little Rock Quarry Co., Inc.	Little Rock, AR	Little Rock Quarry
McGeorge Corp.	Sweet Home, AR	Granite Mountain Quarry
Pine Bluff Sand and Gravel	Delaware, Ark.	River Mountain Quarry
Reed Crushed Stone Co.	Lake City, KY	Givertsville Quarry
Rigsby-Barnard Quarry, Inc.	Cave-In-Rock, IL	Rigsby-Barnard Quarry
Tower Rock Stone Co.	St. Genevieve, MO	Tower Rock Stone Quarry
Vulcan Materials Co.	Tuscumbia, AL	Quarry No. 114
Vulcan Materials Co.	Iuka, MS	Iuka Plant
West Lake Quarry Materials	Scott City, MO	Gray's Point Quarry
West Lake Quarry Materials	Neely's Landing, MO	Neely's Landing Quarry
West Lake Quarry Materials	Barnhart, MO	Barnhart Quarry
West Lake Quarry No. 2	Musicks Ferry, MO	West Lake Quarry

Other rock suppliers may be accepted prior to construction by the Engineer. In order to gain acceptance, the Contractor shall obtain and test samples of the rock under supervision of the Engineer. The Engineer shall accept the rock if the test results comply with this specification.

- 5.4. Gradation: All stone supplied for the rock breakwater shall be LADOTD Class 250 lb. graded rip-rap as specified by Section 711.02 (a) of the LADOTD, Louisiana Standard Specifications for Roads and Bridges, latest Edition or Owner approved equivalent. The stone shall meet the following gradation and tested at the quarry.

250 lb. Class Rock

Stone Size (lbs.)	Spherical Diameter (ft)	% of Stone Smaller
1250	2.50	100
500	1.83	45-100
250	1.46	15-50
80	1.00	0-15

A minimum of one (1) gradation test shall be performed for each 20,000 tons of stone supplied to the project site. Each test sample shall be representative of the stone shipped from the quarry and must be received by the Engineer's Representative prior to rock placement, but no later than seven (7) days after the stone leaves the quarry. The certificate of compliance shall contain the type of stone, the stone loading date, and the barge number for each stone shipment. The stone shall be visually inspected by the Engineer's representative prior to use at the job site. Control of gradation will be by visual inspection either at the source or Project Site or both. The Engineer reserves the right to verify the gradation of any shipment of stone by testing two uniform size random samples. The equipment, labor, and cost for testing the stone gradation samples shall be provided by the Contractor and in a timely manner.

- 5.5. Free Fall: The rock shall be placed carefully onto the woven geotextile fabric by limiting the height of drop to less than one (1) foot. If this height of drop causes damage to the woven geotextile fabric, the stone shall be placed directly onto the woven geotextile fabric with a zero (0) height of drop. Before placement of stone, the Contractor shall demonstrate to the Engineer that the stone will not damage the woven geotextile fabric.
- 5.6. Losses: The Contractor is responsible to reclaim and utilize all rock that is lost during shipment or construction.
- 5.7. Placement: The rock shall be placed five feet from each edge of the woven geotextile fabric and worked toward the center. Care shall be taken not to damage the woven geotextile fabric when placing the rock. All rock shall be placed with a "Drag" bucket or approved equal. "Orange Peel" and "Clamshell" buckets are prohibited. Damaged woven geotextile fabric shall be replaced as directed by the Engineer.
- 5.8. Staging Area: The Contractor is responsible for locating a staging area outside the access or flotation channels with adequate depth to light load the rock barges. The Contractor shall include the proposed location of the staging area in the Work Plan. If the Staging area is within 150 feet of a well head or pipeline, the infrastructure shall be probed and appropriately marked by the Contractor. The Contractor shall also submit any letters of no objection or agreements for temporary easements from the landowner, well owner, or pipeline owner to the Engineer.
- 5.9. Tolerances: All rock shall be placed according to the cross sections (elevations, slopes, dimensions, etc.) shown on the Plans with a maximum tolerance of plus or minus one half foot ($\pm 0.5'$). Rock shall not be placed along the alignment at the minimum tolerance elevation (+2.5' NAVD 88) over a distance greater than fifty (50) linear feet. The average tolerance measured for each lift across the entire alignment shall be within fifty percent (50%) of the specified tolerance. Any stone placed outside of the specified tolerances will not be paid for by the Owner and must be added or removed by the Contractor.
- 5.10. Acceptance: Completed sections of the rock structure will be inspected on a bi-weekly basis (every 14 days to allow for initial settling) for completeness, elevation, width, etc. Measurements will be taken by the Contractor under the supervision of the Engineer or Inspector. If the inspected section has undergone considerable settlement, the Engineer shall determine if an additional lift of rock is needed.

- 5.11. Measurement and Payment: The unit of measurement for rock shall be the ton (2,000 pounds). Quantities will be computed to the nearest whole ton using the Barge Displacement Table as specified in SP-10. The Contractor shall provide the Engineer with certified weight tickets issued by the stone quarry for each barge. Measurement and payment for 250 lb. Class Rock shall be made at the contract unit price per ton under Bid Item No. 5, "250 lb. Class Rock" (and Bid Items No. 12 and/or 19 if Additive Alternates 1 and/or 2 are awarded). Price and payment shall constitute full compensation for furnishing all materials, measuring, installing, and performing all work associated with the construction of the rock breakwaters.

TS-6 SETTLEMENT PLATES

- 6.1. Scope: The Contractor shall furnish all of the materials, labor, and equipment necessary to construct, install, survey, and maintain the settlement plates in accordance with the Plans and these Specifications.
- 6.2. Materials: Plates shall be fabricated with a four foot (4') by four foot (4') by one fourth inch (1/4") steel plate and a three inch (3") diameter galvanized riser pipe welded to the center of the plate using a 3/16" continuous fillet. The pipe riser shall be a minimum of three feet (3') above the rock breakwater crest to facilitate elevation readings. The top will be closed with a threaded galvanized cap. After fabrication, the plates shall be hot-dipped galvanized.
- 6.3. Zinc Coating: Zinc coating shall be applied in a manner and thickness quality conforming to ASTM A 123. In any case where the zinc coating becomes damaged, the damaged area shall be re-galvanized with a suitable low-melting zinc base alloy as recommended by the American Hot-Dip Galvanizers Association. One coat of a vinyl wash primer followed by red top coat shall be applied over the zinc coat. All painting shall conform to Section 811 and 1008 of the LADOTD, Louisiana Standard Specifications for Roads and Bridges, latest Edition or Owner approved equivalent.
- 6.4. Installation: The plates shall be installed along the centerline of the rock breakwaters at the locations shown on the Plans. The Contractor shall exercise care when placing rock and woven geotextile fabric in the vicinity of the settlement plates. Leveling of the plate bed shall be accomplished by removing the minimum amount of earth or rock necessary to produce a level foundation and in a manner such that the densities of the plate bed and undisturbed adjacent ground remain the same. Leveling of the plate bed by the addition of any material will not be permitted.
- 6.5. Maintenance: The Contractor shall maintain all rock settlement plates until the Work is completed. Any damaged settlement plates shall be repaired or replaced by the Contractor at no expense to the Owner. Settlement plates must be maintained in order to accurately locate the centerline elevation under the rock breakwaters.
- 6.6. Measurement and Payment: Payment for this item will be made at the contract unit price per each for Bid Item No. 6, "Settlement Plates" (and Bid Items No. 13 and/or 20 if Additive Alternates 1 and/or 2 are awarded). Price and payment shall constitute full compensation for furnishing all labor, materials, and equipment for construction and maintenance of all required settlement plates and performing all work specified herein. No payment shall be made for settlement plates that are rejected or damaged due to fault or negligence by the Contractor.

TS-7 PERMANENT WARNING SIGNS

- 7.1. Scope: The Contractor shall furnish all of the materials, labor, and equipment necessary to construct and install the permanent warning signs in accordance with the Plans and these Specifications. The signs shall also conform to the regulations in the United States Coast Guard (USCG) Commandant Directives Manuals No. 16500.3 (Series), "Aids to Navigation Manual – Technical" and No. 10360-3 (Series), "Coatings and Color Manual".
- 7.2. Fabrication: The warning signs shall be fabricated from 1/8 inch thick commercial grade aluminum plate that is three (3) feet high and three (3) feet wide. Each sign shall be overlaid with white vinyl film. All letters and borders shall be retro-reflective and match the locations, dimensions, colors, and sizes shown on the Plans. The film, letters, and borders shall be obtained from a USCG qualified supplier. The signs shall be bolted to one (1) 12" diameter (large end) x 40 ft long timber piling after it is driven to the proper depth, as shown in the Plans
- 7.3. Installation: The permanent warning signs shall be installed at the locations shown on the Plans, and 10 feet from the lakeward edge of the rock breakwater. The top of pile shall be at an elevation of +11.0 ($\pm 0.5'$) feet NAVD 88. Each sign shall be mounted 5 degrees from vertical and leaning down towards Grand Lake. The face of each sign shall be parallel to the existing shoreline.
- 7.4. Measurement and Payment: The Contractor shall submit an Application for Payment for the costs incurred to provide all labor, material, and equipment necessary to construct, install, survey, and maintain the permanent warning signs as denoted in the Contract Documents. Upon acceptance by the Engineer, an invoice shall be paid at the contract unit price for Bid Item No. 7, "Permanent Warning Signs" (and Bid Items No. 14 and/or 21 if Additive Alternates 1 and/or 2 are awarded). No payment shall be made for signs that are rejected or damaged due to fault or negligence by the Contractor.

TS-8 TEMPORARY WARNING SIGNS

- 8.1 Scope: This Work consists of furnishing and assembling the materials needed to construct and install warning signs in accordance with these Specifications and the project Plans or as directed by the Engineer.
- 8.2 Materials: Each of the warning signs shall be fabricated from 3/4 inch thick sign grade plywood or approved equal, and bolted to one (1) 12" diameter (nominal end) x 40 ft long timber piling after it is driven to the proper depth, as shown on the Construction Drawing Typical Details. All timber piling shall conform to Section 812 and 1014 of the LADOTD, Louisiana Standard Specifications for Roads and Bridges, latest Edition or Owner approved equivalent. All piling shall be treated with Creosote or Chromated Copper Arsenate (CCA). All Creosote treatment shall meet American Wood Preservers Association (AWPA) P2 with a minimum retention of 20 LB./CU. FT. All creosote treated pilings shall be steam flushed for a minimum of one (1) hour at 240° F (116° C) after treatment. All CCA treated piles shall conform to AWPA C2 with a minimum retention of 2.5 LB./CU. FT. of CCA oxides in the outer 0.60 inches. Retention shall be determined by assay performed and certified by the treating company. The Contractor has the option of using a 40' x 4" diameter schedule 80 galvanized steel pipe or other approved material. Each sign shall have a reflective face. The sign and face lettering shall be fabricated as shown on the project Plans.

- 8.3 Installation: The warning signs shall be installed near the toe of the temporary spoil as shown on the Plans or as directed by the Engineer. The top of the pile shall be at an elevation of +11.0 ($\pm 0.5'$) feet NAVD 88.
- 8.4 Removal: All pilings or pipes shall be removed to depth at least ten (10) feet below existing ground. All material not incorporated into the permanent signs shall become property of the Contractor and shall be removed from the site prior to demobilization.
- 8.5 Measurement and Payment: Payment for this item will be made at the contract unit price per each for Bid Item No. 8, "Temporary Warning Signs" (and Bid Items No. 15 and/or 22 if Additive Alternates 1 and/or 2 are awarded). No payment shall be made for signs that are rejected or damaged due to fault or negligence by the Contractor.

APPENDIX A: INTERPRETATION OR CLARIFICATION BY ENGINEER FORM

GRAND LAKE SHORELINE PROTECTION Project (ME-21)
Interpretation or Clarification by Engineer
Number (____)

DATE:

SUBJECT:

SUMMARY OF MATTER BY CONTRACTOR

INTERPRETATION OR CLARIFICATION OF MATTER BY ENGINEER

APPENDIX B: DREDGE DATA SHEET AND PLANT AND EQUIPMENT SCHEDULE

DREDGE DATA SHEET

DREDGE INFORMATION:

Owned: _____ Leased: _____ Leased From: _____

Dredge name: _____

Minimum width of channel in which dredge can successfully operate and make a 180 degree turn: _____

Maximum draft of dredge: _____

Loaded freeboard: _____

Minimum depth in which the dredge can successfully operate: _____

Depth range to which dredge will dig: _____

Maximum _____ Minimum: _____

Maximum effective dredge swing, in degrees, and reach in feet: _____

Length of dredge spuds: _____

Length and beam of dredge hull: _____

Length of dredge ladder: _____

Length of suction and boat lines: _____

Inside diameter of pump discharge: _____

Inside diameter of pump suction inlet: _____

Suction lift (Elevation of main dredge pump relative to the water surface level): _____

Diameter of pump impeller eye: _____

Outside diameter of pump impeller: _____

Brake horsepower and corresponding engine RPMs (during dredging operations) applied to pump impeller at rated drive of the prime mover, during dredging operations: _____

Cutter head type and diameter: _____

Brake horsepower applied to cutter head during dredging operations: _____

Pump engine(s) horsepower and corresponding RPM: _____

Completion date of each dredge pump engine re-build: _____

DREDGE DATA SHEET

Type(s) of production rate monitoring equipment on-board the dredge (measuring cy/hr of material dredged): _____

THE DREDGE MAY BE INSPECTED AT (List location of equipment):

DREDGE OWNER INFORMATION:

Firm name _____

Point of contact _____

Title _____

Business address: _____

Street _____

City _____

Parish/County _____

State _____ Zip+4 _____

Telephone no. () _____ Facsimile no. () _____

GRAND LAKE SHORELINE PROTECTION (ME-21)

PLANT AND EQUIPMENT SCHEDULE

EQUIPMENT CATEGORY: _____

Type	Capacity	Manufacturer	Age & Condition	Location

EQUIPMENT CATEGORY: _____

Type	Capacity	Manufacturer	Age & Condition	Location

EQUIPMENT CATEGORY: _____

Type	Capacity	Manufacturer	Age & Condition	Location

NOTE: The Plant and Equipment Schedule is for information purposes only and will not be used as a basis for award. The information submitted is pertinent to the evaluation of the proposed dredges and their capability to perform the Work as required and as agreed to by the Bidder through the submittal of a Proposal. The Bidder may only omit information that he/she considers proprietary. Provide separate table for each category of equipment including dredging, excavating, material handling, pile driving, barges, loading, grading, earthworks, trucking, etc. Specify production rate of equipment. Use separate line for each major item. Use additional pages if necessary.

(THIS PAGE SHOULD BE COMPLETED AND RETURNED WITH CONTRACTOR BID)

APPENDIX C: GOVERNMENT PERMITS

DEPARTMENT OF THE ARMY PERMIT

Permittee: Cameron Parish Police Jury

Permit No. MVN-2007-04266-WDD

Issuing Office: New Orleans District

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: Conduct dredge and fill operations and install rock dike as required to implement the *Grand Lake Shoreline Protection Project (ME-21)*, in accordance with the drawings attached in 14 sheets, five date August 2007 and nine dated March, 2008.

Project Location: Along the south shoreline of Grand Lake near Grand Chenier, Louisiana, in Cameron Parish.

General Conditions:

1. The time limit for completing the work authorized ends on June 30, 2013. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least 1 month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions: Page 4.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

- (x) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
- (x) Section 404 of the Clean Water Act (33 U.S.C. 1344).
- () Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

- a. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.
- b. This permit does not grant any property rights or exclusive privileges.
- c. This permit does not authorize any injury to the property or rights of others.
- d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
- b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
- c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
- d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. **Reliance on Applicant's Data:** The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. **Reevaluation of Permit Decision:** This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. **Extensions:** General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

x Ernestine J. Horn, Parish Administrator 6-25-2008
(PERMITTEE) Cameron Parish Police Jury (DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

Ronnie W. Duke July 1, 2008
Ronnie W. Duke, Chief Western Evaluation Section (DATE)

for Alvin B. Lee, District Commander

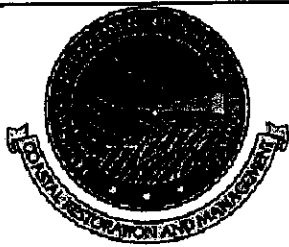
When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFeree)

(DATE)

SPECIAL CONDITIONS: MVN 2007-04266 WDD

7. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
8. Your use of the permitted activity must not interfere with the public's right to free navigation on all navigable waters of the United States.
9. You must install and maintain, at your expense, any safety lights, signs, and signals prescribed by the US Coast Guard, through regulations or otherwise, on your authorized facilities.
10. If the proposed project, or future maintenance work, involves the use of floating construction equipment (barge mounted cranes, barge mounted pile driving equipment, floating dredge equipment, dredge discharge pipelines, etc.,) in the waterway, you are advised to notify the US Coast Guard so that a Notice to Mariners, if required, may be prepared. Notification, with a copy of your permit approval and drawings, should be mailed to the US Coast Guard, Sector New Orleans Command Center, 201 Hammond Highway, Metairie, Louisiana 70005, about 1 month before you plan to start work. Telephone inquiries can be directed to (504) 846-5923.
11. Structures will not be placed across state-owned water bottoms without the approval of the Louisiana Division of Administration, State Lands Office. The permittee will be responsible for contacting the State Land Office to ascertain which, if any, of the structures will be placed over state-owned water bottoms.
12. If the proposed project requires any additional work not expressly permitted herein, the permittee must obtain an amendment to this authorization prior to commencement of work.



**DEPARTMENT OF NATURAL RESOURCES
COASTAL MANAGEMENT DIVISION**

P.O. BOX 44487
BATON ROUGE, LOUISIANA 70804-4487
(225)342-7591
1-800-267-4019

COASTAL USE PERMIT/CONSISTENCY DETERMINATION

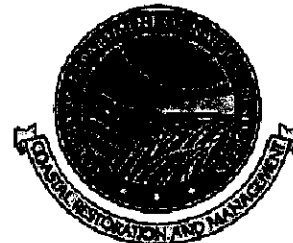
C.U.P. No.: P20071471
C.O.E. No.: MVN 2007- 04266 WDD
NAME: CAMERON PARISH POLICE JURY
c/o LOUISIANA DEPARTMENT OF NATURAL RESOURCES
P.O. BOX 44027
BATON ROUGE, LA 70804
Attn: Kristi Cantu

LOCATION: Cameron Parish, LA
Lat 29° 50' 23.6"N / Long -92° 45' 19.8"W; Section 5; T14S-R4W; Section 17; T14S-R3W.

DESCRIPTION: Proposed construction of a rock dike approximately 40,000 linear feet as shoreline protection in Grand Lake and excavation of an access channel and flotation channel. Approximately 590,065 cu. yds. of water bottom material will be excavated for access channel and flotation channel and approximately 56,237 cu. yds. of rock will be used for shoreline protection.

In accordance with the rules and regulations of the Louisiana Coastal Resources Program and Louisiana R.S. 49, Sections 214.21 to 214.41, the State and Local Coastal Resources Management Act of 1978, as amended, the permittee agrees to:

1. Carry out, perform, and/or operate the use in accordance with the permit conditions, plans and specifications approved by the Department of Natural Resources.
2. Comply with any permit conditions imposed by the Department of Natural Resources.
3. Adjust, alter, or remove any structure or other physical evidence of the permitted use if, in the opinion of the Department of Natural Resources, it proves to be beyond the scope of the use as approved or is abandoned.
4. Provide, if required by the Department of Natural Resources, an acceptable surety bond in an appropriate amount to ensure adjustment, alteration, or removal should the Department of Natural Resources determine it necessary.
5. Hold and save the State of Louisiana, the local government, the department, and their officers and employees harmless from any damage to persons or property which might result from the use, including the work, activity, or structure permitted.
6. Certify that the use has been completed in an acceptable and satisfactory manner and in accordance with the plans and specifications approved by the Department of Natural Resources. The Department of Natural Resources may, when appropriate, require such certification to be given by a registered professional engineer.
7. All terms of the permit shall be subject to all applicable federal and state laws and regulations.
8. This permit, or a copy thereof, shall be available for inspection at the site of work at all times during operations.
9. The applicant will notify the Coastal Management Division of the date on which initiation of the permitted activity described under the "Coastal Use Description" began. The applicant shall notify the Coastal Management Division by mailing the enclosed green initiation card on the date of initiation of the coastal use.
10. Unless specified elsewhere in this permit, this permit authorizes the initiation of the coastal use described under "Coastal Use Description" for two years from the date of the signature of the Secretary or his designee. If the coastal use is not initiated within this two year period, then this permit will expire and the applicant will be required to submit a new application. Initiation of the coastal use, for purposes of this permit, means the actual physical beginning of the use of activity for which the permit is required. Initiation does not include preparatory activities, such as movement of equipment onto the coastal use site, expenditure of funds, contracting out of work, or performing activities which by themselves do not require a permit. In addition, the permittee must, in good faith and with due diligence, reasonably progress toward completion of the project once the coastal use has been initiated.
11. The following special conditions must also be met in order for the use to meet the guidelines of the Coastal Resources Program:
 - a. All logs, stumps and other debris unearthed during dredging shall be buried a minimum of one (1) foot beneath the bottom of the waterway or removed to an approved disposal site on land.
 - b. That permittee shall insure that all sanitary sewage and/or related domestic wastes generated during the subject project activity and at the site, thereafter, as may become necessary shall receive the equivalent of secondary treatment (30 mg/l BOD5) with disinfection prior to discharge into any of the streams or adjacent waters of the area or, in the case of total containment, shall be disposed of in approved sewerage and sewage treatment facilities, as is required by the State Sanitary Code. Such opinion as may be served by those comments offered herein shall not be construed to suffice as any more formal approval(s) which may be required of possible sanitary details (i.e. provisions)



scheduled to be associated with the subject activity. Such shall generally require that appropriate plans and specifications be submitted to the Department of Health and Hospitals for purpose of review and approval prior to any utilization of such provisions.

- c. All structures built under the authorization and conditions of this permit shall be removed from the site upon abandonment of the facilities for the herein permitted use, or when these structures fall into a state of disrepair such that they can no longer function as intended. This condition does not preclude the necessity for revising the current permit or obtaining a separate Coastal Use Permit, should one be required, for such removal activities.
- d. As-built drawings shall be submitted within 30 days of completion of this project to the Louisiana Department of Natural Resources, Coastal Management Division, PO Box 44487, Baton Rouge, LA 70804-4487.
- e. Structures must be marked/lighted in accordance with U. S. Coast Guard regulations.
- f. In the event that adverse impacts to vegetative plantings required as mitigation for P19971865, P19971866, and P19980486 occur, permittee shall restore the area(s) damaged through construction of this Coastal Use Permit (P20071471). In the event that restoration activities are required, a new coastal use permit application must be submitted to this office.
- g. This permit does not convey any property rights, mineral rights, or exclusive privileges; nor does it authorize injury to property.
- h. Permittee is subject to all applicable state laws related to damages which are demonstrated to have been caused by this action.
- i. Permittee shall allow representatives of the Coastal Management Division or authorized agents to make periodic, unannounced inspections to assure the activity being performed is in accordance with the conditions of this permit.
- j. Permittee shall comply with all applicable state laws regarding the need to contact the Louisiana One Call (LOC) system (1-800-272-3020) to locate any buried cables and pipelines.
- k. This permit authorizes the initiation of the Coastal Use described under "Coastal Use Description" for two (2) years from the date of the signature of the Secretary or his designee. Initiation of the Coastal Use, for purposes of this permit, means the actual physical beginning of the use or activity for which the permit is required. Initiation does not include preparatory activities, such as movement of equipment onto the Coastal Use site, expenditure of funds, contracting out of work, or performing activities which by themselves do not require a permit. In addition, Permittee must, in good faith and with due diligence, reasonably progress toward completion of the project once the Coastal Use has been initiated. If the Coastal Use is not initiated within this two (2) year period, an extension may be granted pursuant to the requirements contained in the Rules and Procedures for Coastal Use Permits (Title 43:1.723.D.). Please note that a request for permit extension MUST be made no sooner than one hundred eighty (180) days and no later than sixty (60) days prior to the expiration of the permit.

The expiration date of this permit is five (5) years from the date of the signature of the Secretary or his designee.

Upon expiration of this permit, a new Coastal Use Permit will be required for completion of any unfinished or uncommenced work items and for any maintenance activities involving dredging or fill that may become necessary. Other types of maintenance activities may also require a new Coastal Use Permit.

***** End of Conditions *****

Page: 3 of 4
C.U.P. No.: P20071471
C.O.E. No.: MVN 2007-04266 WDD



By accepting this permit the applicant agrees to its terms and conditions.

I affix my signature and issue this permit this 24th day of May, 2008

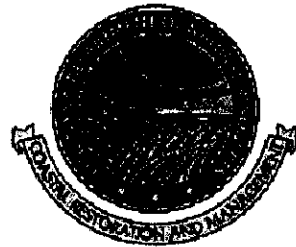
THE DEPARTMENT OF NATURAL RESOURCES

Jim Rives, Administrator
Coastal Management Division

This agreement becomes binding when signed by Administrator of
the Coastal Management Division, Department of Natural Resources.

Attachments

Page: 4 of 4
C.U.P. No.: P20071471
C.O.E. No.: MVN 2007-04266 WDD



Final Plats:

1) P20071471 Final Plats 03/13/2008

cc: Pete Serio, COE w/attachments
Venise Ortego, LDWF w/attachments
Karl Morgan, CMD/SS w/attachments
Kaili Mills, CMD/FI w/plats
Cameron Parish w/attachments

CAMERON PARISH POLICE JURY w/attachments

BOBBY JINDAL
GOVERNOR



HAROLD LEGGETT, PH.D.
SECRETARY

State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

January 31, 2008

La. Dept. of Natural Resources/Coastal Engineering Div.
P.O. Box 44027
Baton Rouge, LA 70804

Attention: **Kristi Cantu**, Agent for **Cameron Parish Police Jury**

RE: Water Quality Certification (WB 071130-03/AI 154761/CER 20070001)
Corps of Engineers Permit (MVN-2007-4266-WDD)
Coastal Management Permit (P20071471)
Cameron Parish

Dear Ms. Cantu:

The Department has reviewed your application to construction rip rap/erosion control for the Grand Lake Shoreline Protection project approximately 13.8 miles ENE of Grand Chanier, Louisiana in Cameron Parish.

The requirements for Water Quality Certification have been met in accordance with LAC 33:IX.1507.A-E. Based on the information provided in your application, we have determined that the placement of the fill material will not violate the water quality standards of Louisiana provided for under LAC 33:IX.Chapter 11. Therefore, the Department has issued a Water Quality Certification.

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas R. Griggs".

Thomas R. Griggs
Engineer Manager

TRG/wgb

c: Corps of Engineers- New Orleans District
Coastal Management Division

APPENDIX D: DIRECTIONS TO BOAT LAUNCH

Directions to Private Launch at Superior Canal:

From Abbeville, take Highway 82 south, then west. Travel past Pecan Island and the Superior Canal launch is located on the right. Travel north via Superior Canal, approximately 10 miles to reach Grand Lake.

Latitude: 29.7072°

Longitude: 92.6745°

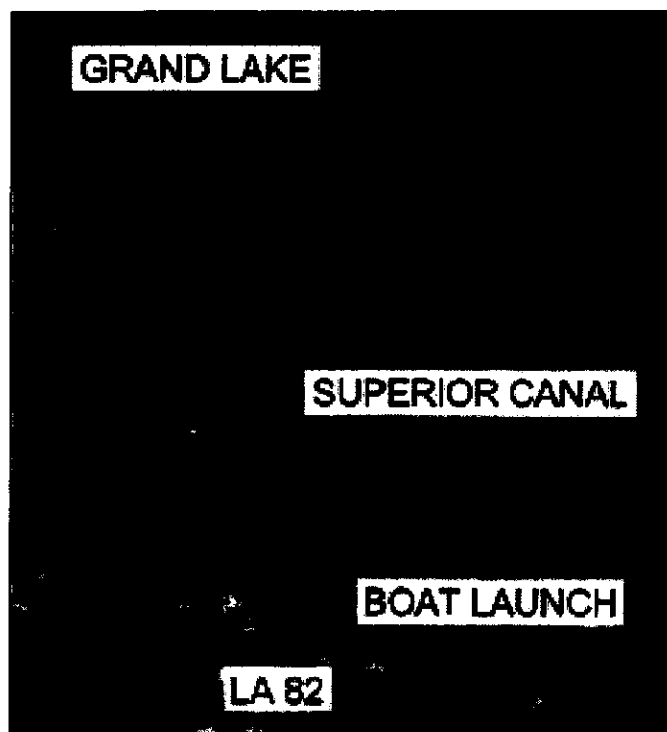
Boat Launch Owner:

Miami Corporation

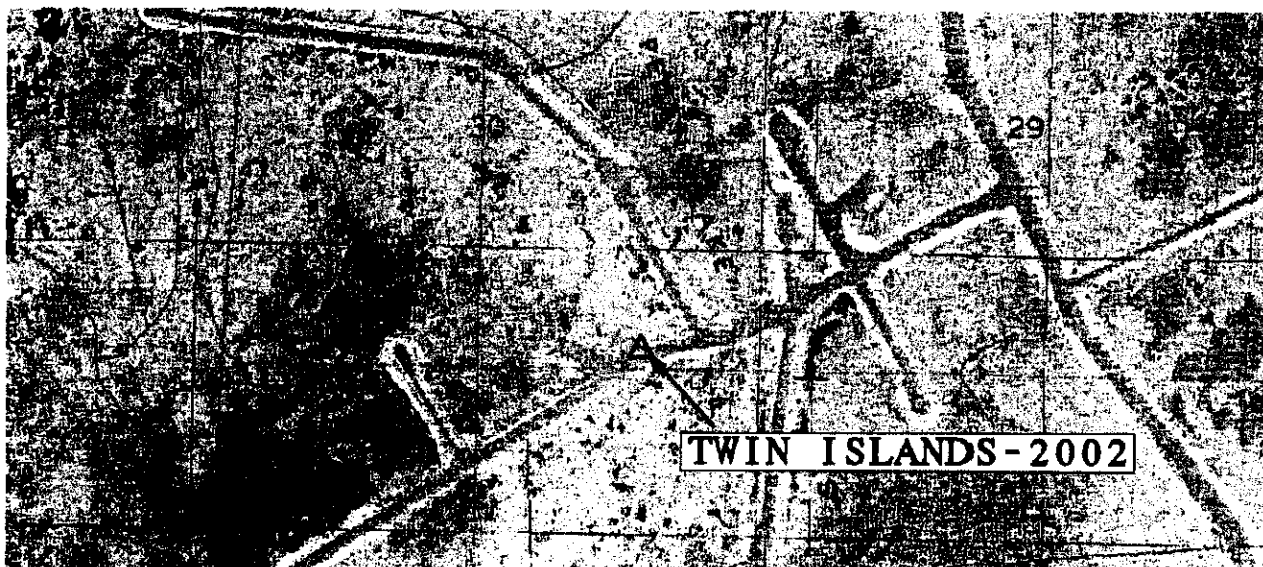
309 La Rue France

Suite 201

Lafayette, LA 70508



APPENDIX E: SURVEY CONTROL



VICINITY MAP

Scale: 1" = 2000'

Reproduced from USC&GS "COLLICON LAKE" Quadrangle

Station Name: "ME20-SM-01"

Monument Location: To reach this station, **by boat only**, Launch at boat ramp in Grand Chenier, travel up Mermentau River to Grand Lake, travel east across Grand Lake to canal entrance to Pecan Lake Gas Field, after entering the main canal turn left at third canal on left, travel southwesterly down canal 0.9 miles. Station is on right on spoil bank.

Monument Description: 44 foot length of 9/16" stainless steel rod driven to refusal within a top security sleeve with an aluminum NGS style access cover.

Stamping: "TWIN ISLAND-2002"

Date: January 2003

Monument Established By: C.H. Fenstermaker and Associates, Inc.

For: The LA Dept of Natural Resources, CRD

Adjusted NAD 83 Geodetic Position

Lat. 29° 47' 34.16494" N
Long. 92° 42' 52.96199" W

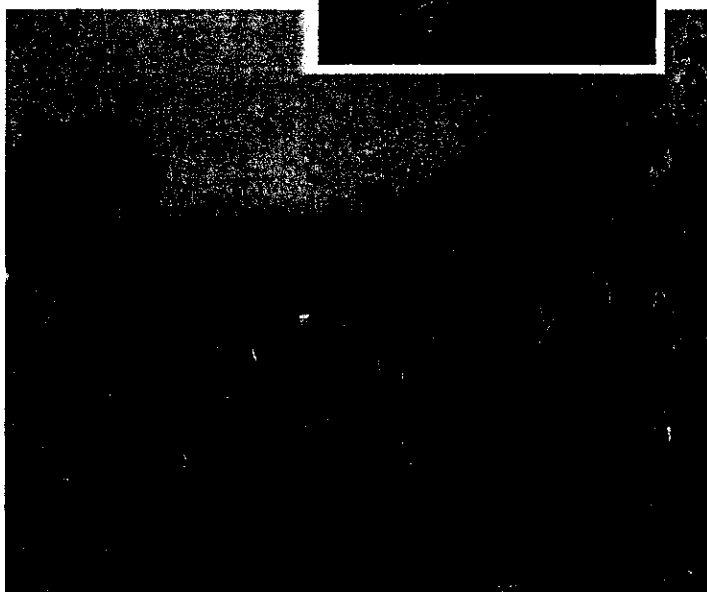
Adjusted NAD 83 Position
LA South Zone 1702 (feet)

N = 472,792.34
E = 2,842,685.40

Adjusted NAVD 88 (Geoid 99)

Elevation = 4.37 feet (1.332 mtrs)

Ellipsoid Hgt: -25.072 mtrs
Geoid99 Hgt: -26.404 mtrs



Adjusted Position Established by C.H. Fenstermaker & Associates, Inc. for Louisiana Department of Natural Resources, CRD



Fig 11: LONG LAKE MONUMENT VICINITY MAP

Reproduced from USC&GS

"COLLICON LAKE" Quadrangle

VICINITY MAP

Station Name: "LONG LAKE"

Monument Location: From the intersection of State Highway 82 and the Superior Canal in Grand Chenier proceed North along the Superior Canal for approximately 7.75 miles to the most northern oil field canal on the west side of Superior Canal, thence turn west and travel approximately 350' to the monument on the left (South bank) of the oilfield canal.

Monument Description: Standard datum point with security lid set on top of eleven (11) - 4" stainless steel rods set to refusal and stamped "Long Lake"

Date: August 2002

Monument Established By: Lonnie G. Harper & Associates, Inc. **For:** Louisiana Department of Natural Resources, CRD

LONG LAKE

Adjusted NAD 83 Geodetic Position

Lat. 29° 48' 48.70150" N
Long. 92° 42' 24.43175" W

Adjusted NAD 1983 Datum (1992)

LSZ (1702) Feet
N = 480,290.869
E = 2,845,289.205

Adjusted NAVD88 (Feet) / Geoid99

Elevation = 9.922

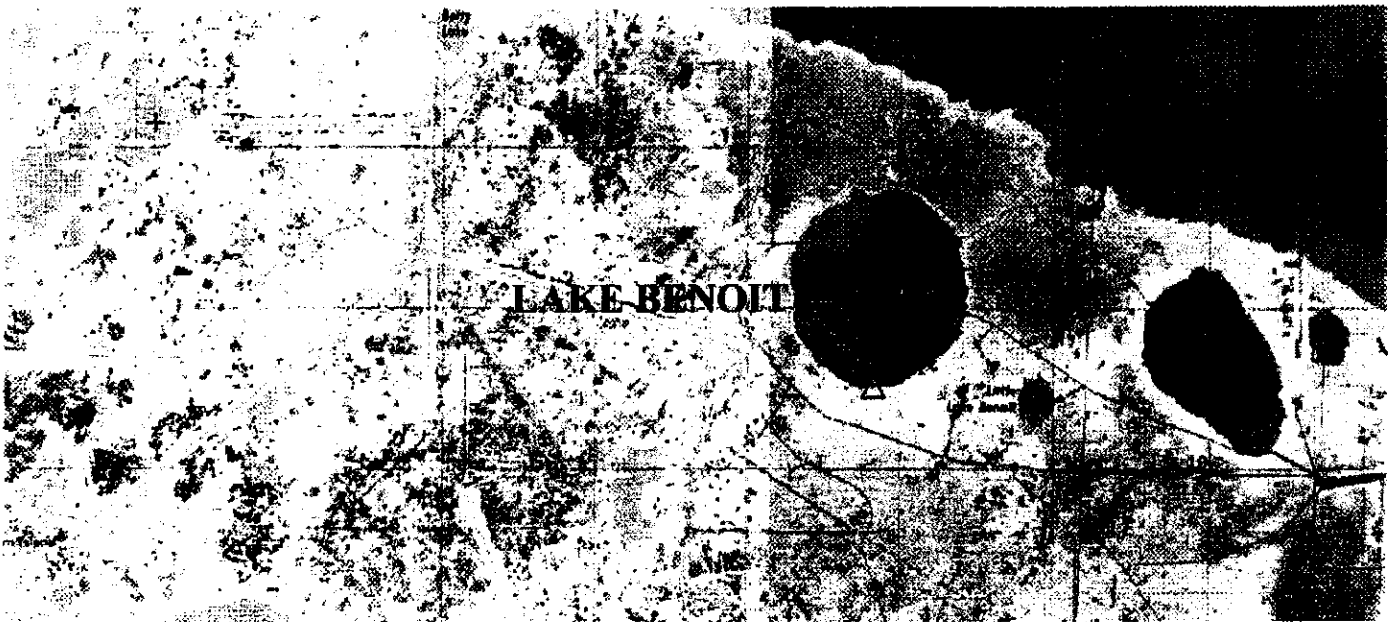


Fig 10: LAKE BENOIT MONUMENT VICINITY MAP

VICINITY MAP

"CATFISH LAKE" Quadrangle

Reproduced from USC&GS

Station Name: "LAKE BENOIT"

Monument Location: From the intersection of State Highway 82 and the Superior Canal in Grand Chenier proceed North along the Superior Canal for approximately 7.75 miles to the most northern oil field canal on the west side of Superior Canal, thence turn West and continue for approximately 0.6 miles to the west end of the oilfield canal thence continue west along trenass for approximately 2.3 miles to the east end of an oilfield canal and the monument is on the right (north bank).

Monument Description: Standard datum point with security lid set on top of nine (9) - 4" stainless steel rods set to refusal and stamped "Lake Benoit"

Date: August 2002

Monument Established By: Lonnie G. Harper & Associates, Inc. **For:** Louisiana Department of Natural Resources, CRD

LAKE BENOIT

Adjusted NAD 83 Geodetic Position

Lat. 29° 49' 15.88432" N

Long. 92° 45' 07.67342" W

Adjusted NAD 1983 Datum (1992)

LSZ (1702) Feet

N = 483,211.723

E = 2,830,944.325

Adjusted NAVD88 (Feet) / Geoid99

Elevation = 3.062



Fig 12: SOUTH GRAND LAKE MONUMENT VICINITY MAP

VICINITY MAP
 "CATFISH LAKE" Quadrangle

Reproduced from USC&GS

Station Name: "SOUTH GRAND LAKE"

Monument Location From the intersection of State Highway 82 and the Superior Canal in Grand Chenier proceed North along the Superior Canal for approximately 7.75 miles to the most northern oil field canal on the west side of Superior Canal, thence turn West and continue for approximately 0.6 miles to the west end of the oilfield canal thence continue west along a trenass for approximately 2.3 miles to east end of oilfield canal. Continue west along oilfield canal 1.38 miles to intersection, turn right and continue north 0.47 miles to intersection and turn left and travel west for approximately 0.82 miles to a turn in the canal (existing boat gate) and the monument is on the right (north bank).

Monument Description: Standard datum point with security lid set on top of nine (9) - 4" stainless steel rods set to refusal and stamped "South Grand Lake"

Date: August 2002

Monument Established By: Lonnie G. Harper & Associates, Inc.
 Natural Resources, CRD

For: Louisiana Department of

SOUTH GRAND LAKE

Adjusted NAD 83 Geodetic Position

Lat. 29 50'01.39729" N

Long. 92 47'14.82969" W

Adjusted NAD 1983 Datum (1992)

LSZ (1702) Feet

N = 487,949.240

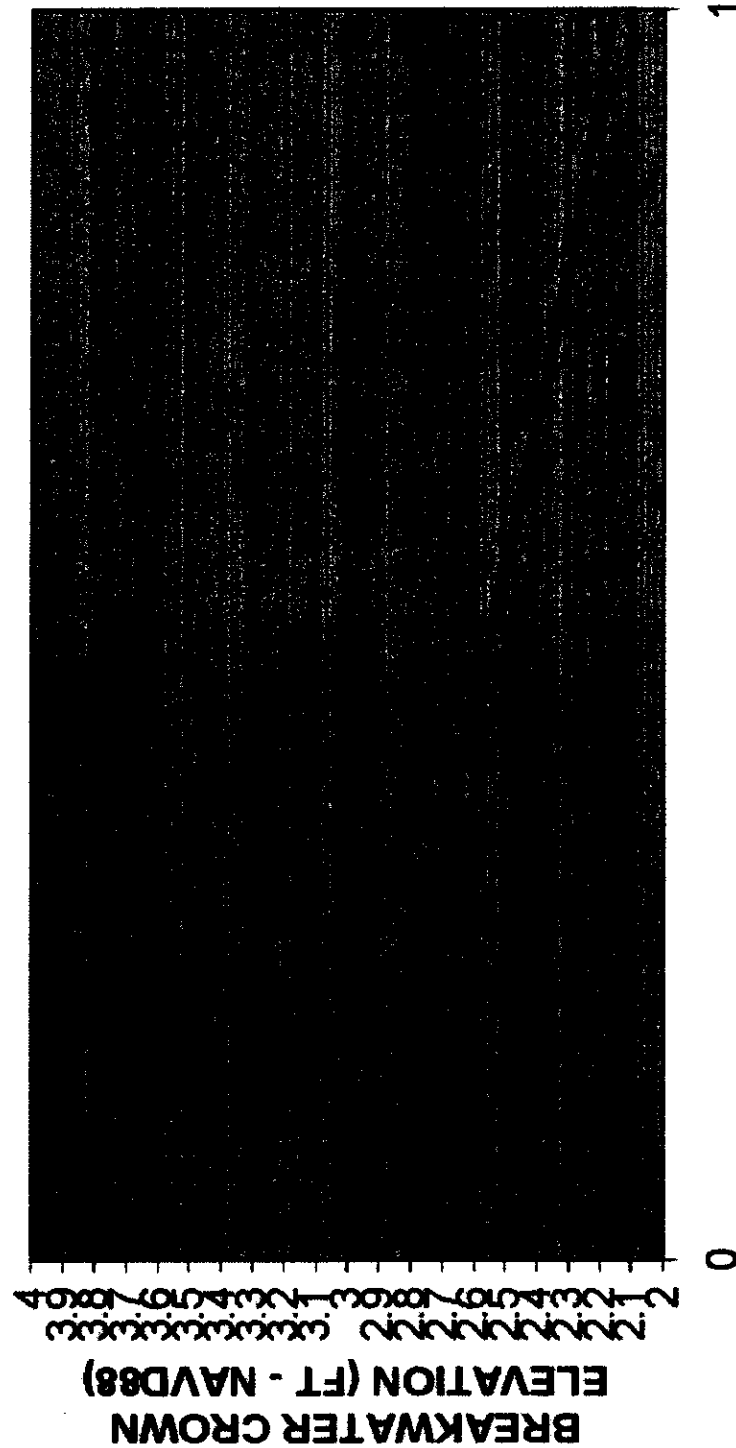
E = 2,819,803.207

Adjusted NAVD88 (Feet) / Geoid99

Elevation = 5.988

APPENDIX F: SOIL BORING LOGS

GRAND LAKE SHORELINE PROTECTION (ME-21) **Estimated Time vs. Settlement Curve** **Rock Breakwater Centerline**



Note: This data may be used for informational purposes only for estimating the breakwater vertical settlement of the underlying soils.

SOIL BORING LEGEND

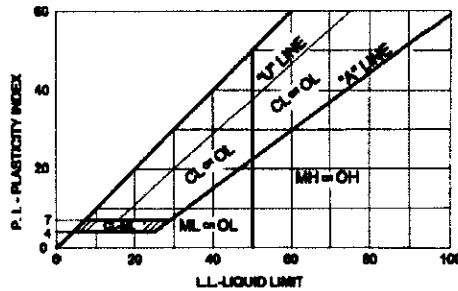
UNIFIED SOIL CLASSIFICATION

MAJOR DIVISION	TYPE	LETTER SYM SYMBOL	TYPICAL NAMES
COARSE-GRAINED SOILS More than half of material is larger than No. 200 sieve size.	GRAVELS More than half of material is larger than No. 4 sieve size.	GW	GRAVEL, Well Graded, gravel-sand mixtures, little or no fines
		GP	GRAVEL, Poorly Graded, gravel-sand mixtures, little or no fines
		GM	SILTY GRAVEL, gravel-sand-silt mixtures
		GC	CLAYEY GRAVEL, gravel-sand-clay mixtures
		SW	SAND, Well-Graded, gravelly sands
	SANDS More than half of material is larger than No. 4 sieve size.	SP	SAND, Poorly-Graded, gravelly sands
		SM	SILTY SAND, sand-silt mixtures
		SC	CLAYEY SAND, sand-clay mixtures
FINE-GRAINED SOILS More than half of material is smaller than No. 200 sieve size.	SILTS AND CLAYS (Liquid Limit < 60)	ML	SILT & very fine sand, silty or clayey fine sand or clayey silt with slight plasticity
		CL	LEAN CLAY, Sandy Clay, Silty Clay, of low to medium plasticity
		OL	ORGANIC SILTS, and organic silty clays of low plasticity
		MH	SILT, fine sandy or silty soil with high plasticity
	SILTS AND CLAYS (Liquid Limit > 60)	CH	FAT CLAY, inorganic clay of high plasticity
		OH	ORGANIC CLAYS of medium to high plasticity, organic silts
		Pt	PEAT, and other highly organic soil
WOOD		Wd	WOOD
SHELLS		Sl	SHELLS
NO SAMPLE		NS	No Sample Retrieved

NOTE: Soils possessing characteristics of two groups are designated by combinations of group symbols.

DESCRIPTIVE SYMBOLS

COLOR		CONSISTENCY FOR COHESIVE SOILS			MODIFICATIONS	
COLOR	SYMBOL	CONSISTENCY	COHESION IN LBS./SQ. FT. FROM UNCONFINED COMPRESSION TEST	SYMBOL	MODIFICATION	SYMBOL
TAN	T	VERY SOFT	< 250	vSo	Trace	Tr
YELLOW	Y	SOFT	250-600	So	Fine	F
RED	R	MEDIUM	600-1000	M	Medium	M
BLACK	BK	STIFF	1000-2000	St	Coarse	C
GRAY	Gr	VERY STIFF	2000-4000	vSt	Concretions	co
LIGHT GRAY	lGr	HARD	> 4000	H	Roots	r
DARK GRAY	dGr				Lignite fragments	lg
BROWN	Br				Shale fragments	sh
LIGHT BROWN	lBr				Sandstone fragments	sd
DARK BROWN	dBr				Shell fragments	sf
BROWNISH-GRAY	brGr				Organic matter	O
GRAYISH-BROWN	gyBr				Clay streaks or lenses	CS
GREENISH-GRAY	gnGr				Silt streaks or lenses	SS
GRAYISH-GREEN	gyGn				Sand streaks or lenses	SS
GREEN	Gn				Sandy	S
BLUE	Bl				Gravelly	G
BLUE-GREEN	bgGn				Boulders	B
WHITE	Wh				Stalactites	SL
MOTTLED	Mot				Wood	Wd
					Oxidized	Ox



SOIL BORING LEGEND

TYPICAL NOTES:

1. While the borings are representative of subsurface conditions at their respective locations and for their respective vertical reaches, local variations characteristic of the subsurface materials of the region are anticipated and, if encountered, such variations will not be considered as differing materially within the purview of the contract clause entitled "Differing Site Conditions".
2. Ground-water elevations shown on the boring logs represent ground-water surfaces encountered in such borings on the dates shown. Absence of water surface data on certain borings indicates that no ground-water data are available from the boring but does not necessarily mean that ground-water will not be encountered at the locations or within the vertical reaches of such borings.
3. Consistency of cohesive soils shown on the boring logs is based on driller's log and visual examination and is approximate, except within those vertical reaches of the borings where shear strengths from unconfined compression tests are shown.
4. Unless otherwise noted:
 - a. Undisturbed borings, indicated by the letter "U", are taken with a 5" I.D. Piston Type Sampler.
 - b. General type borings are taken with a 1 7/8" I.D. Tube Sampler and/or a 1 3/4" I.D. Split Spoon Sampler.

NOTES:

FIGURES TO LEFT OF BORING UNDER COLUMN " W OR D "

Are natural water contents in percent dry weight

When underlined denotes D_{50} size in mm

FIGURES TO LEFT OF BORING UNDER COLUMNS " LL" AND " PL"

Are liquid and plastic limits, respectively

SYMBOLS TO LEFT OF BORING

▽ Ground-water surface and date observed

Ⓒ Denotes location of consolidation test

Ⓔ Denotes location of consolidated-drained direct shear test

Ⓗ Denotes location of consolidated-undrained triaxial compression test

Ⓖ Denotes location of unconsolidated-undrained triaxial compression test

Ⓘ Denotes location of sample subjected to consolidation test and each of the above three types of shear test

FW Denotes free water encountered in boring or sample

FIGURES TO RIGHT OF BORING

Are values of cohesion in lbs./sq.ft. from unconfined compression tests

In parenthesis are driving resistances in blows per foot determined with a standard split spoon sampler (1 7/8" I.D., 2" O.D.) and a 140 lb. driving hammer with a 30" drop

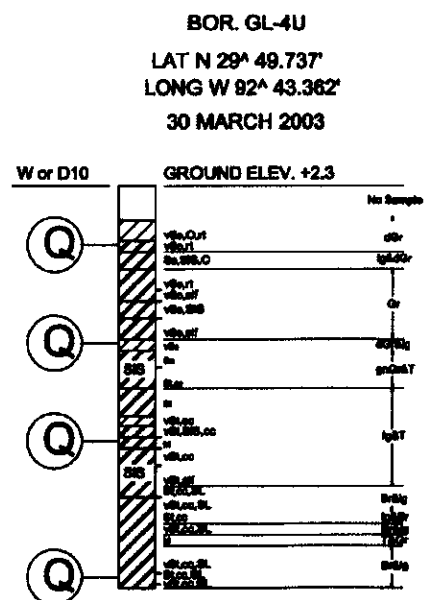
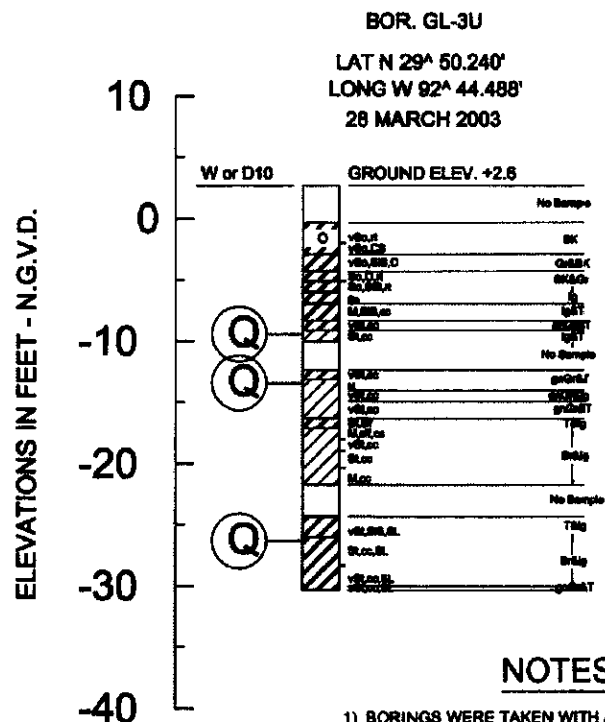
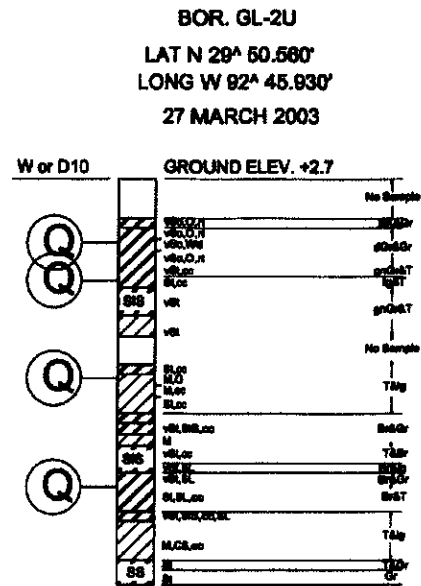
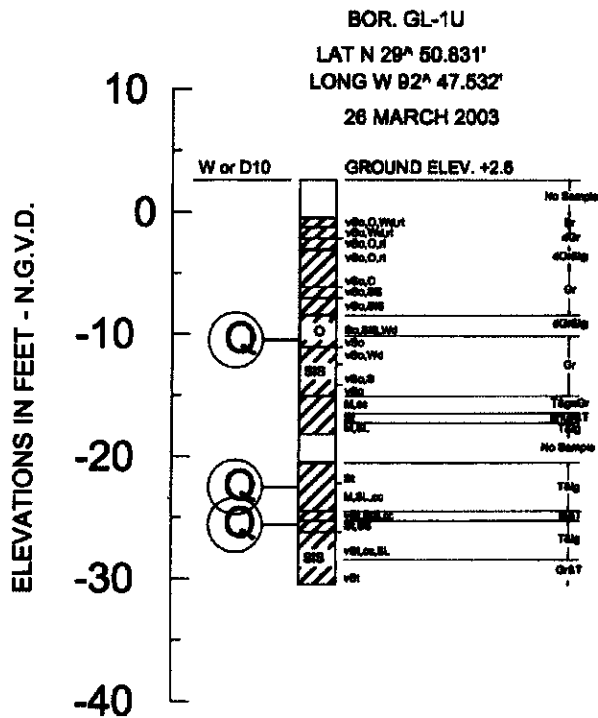
Where underlined with a solid line denotes laboratory permeability in centimeters per second of undisturbed sample

Where underlined with a dashed line denotes laboratory permeability in centimeters per second of sample remoulded to the estimated natural void ratio

The D_{50} size of a soil is the grain diameter in millimeters of which 10% of the soil is finer, and 90% coarser than D_{50}

Results of these tests are available for inspection in the U.S. Army Engineer District Office, if these symbols appear beside the boring logs on the drawings.

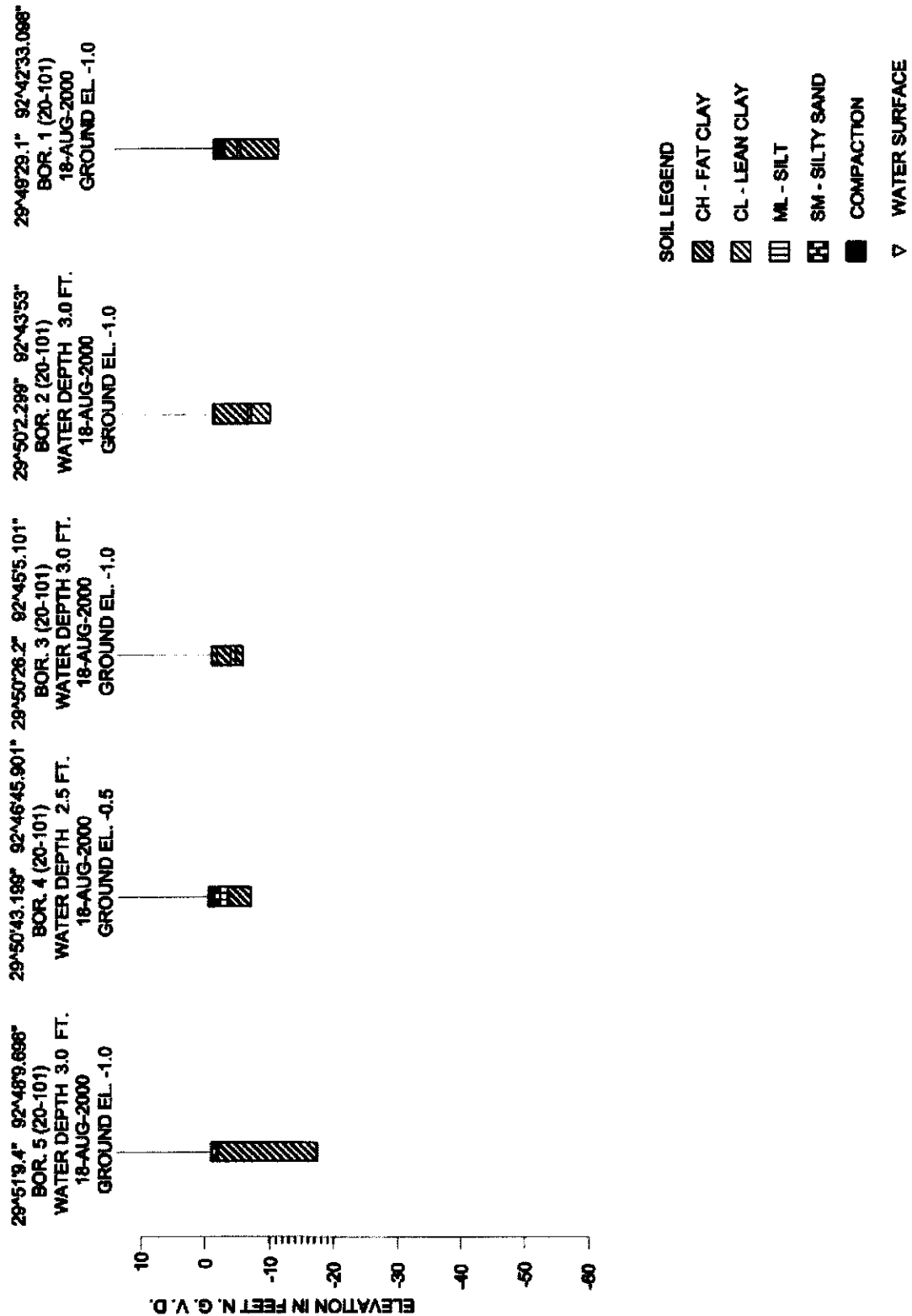
SOIL BORING LOGS



NOTES

- 1) BORINGS WERE TAKEN WITH A 5 INCH DIAMETER STEEL TUBE PYSTON TYPE SAMPLER
- 2) (Q) = UNCONSOLIDATED - UNDRAINED TRIAXIAL SHEAR TEST
- 3) FOR SOIL BORING LEGEND SEE DWG. 11
- 4) FOR LOCATION OF BORINGS SEE DWG. 2 - DWG. 7
- 5) DETAILED BORING LOGS AND TEST DATA AVAILABLE AT CEMVN UPON REQUEST

VIBRACORE LOGS



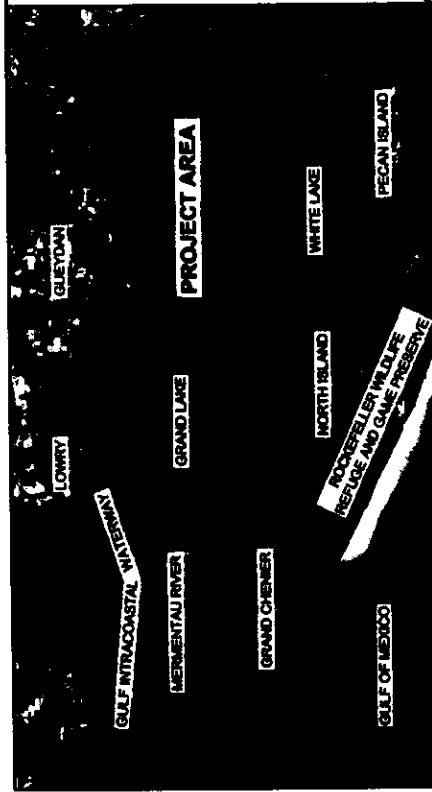
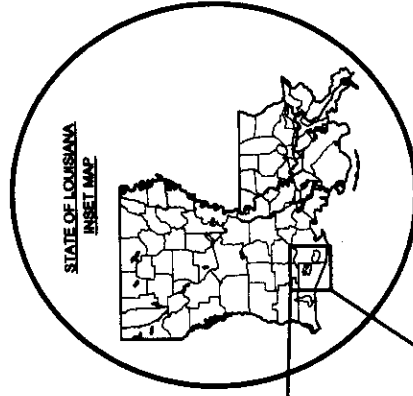
STATE OF LOUISIANA OFFICE OF COASTAL PROTECTION AND RESTORATION ENGINEERING BRANCH

GRAND LAKE SHORELINE PROTECTION ME-21 CAMERON PARISH, LOUISIANA

INDEX TO SHEETS

SHEET NO. DESCRIPTION

- 1 TITLE SHEET
- 2 GENERAL NOTES
- 3 PLAN VIEW
- 4-9 PROJECT LAYOUT
- 10 TYPICAL SECTIONS
- 11 TYPICAL ROCK BREAKWATER DETAILS
- 12 TYPICAL NAVIGATION GAP AND FISH DIP DETAILS
- 13 SETTLEMENT PLATE, WOVEN GEOTEXTILE,
AND WARNING SIGN DETAILS
- 14 SURVEY LAYOUT
- 15-19 BASE BID SECTIONS
- 20-21 ADDITIVE ALTERNATE 1 SECTIONS
- 22-24 ADDITIVE ALTERNATE 2 SECTIONS



2.17.09

CHIEF - ENGINEERING & OPERATIONS DIVISION

ENGINEER ADMINISTRATION

ENGINEER MANAGER

PROJECT ENGINEER



TYPE OF CONSTRUCTION

CLASSIFICATION III (HEAVY CONSTRUCTION)

SHORELINE PROTECTION

OFFICE OF COASTAL PROTECTION & RESTORATION
ENGINEERING BRANCH
420 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

GRAND LAKE
SHORELINE PROTECTION

STATE PROJECT NUMBER: ME-21

FEDERAL PROJECT NUMBER:

DESIGNED BY: WHITNEY THOMPSON

DRAWN BY: KRISTI CANTU

BY

DESCRIPTION

REV DATE

BY

DESCRIPTION

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GENERAL NOTES

1. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1983 (NAVD 83) U.S. SURVEY FEET. ALL HORIZONTAL COORDINATES ARE GIVEN IN THE NORTH AMERICAN DATUM OF 1983 (NAVD 83) LOUISIANA STATE PLANE SOUTH ZONE (U.S. FEET). ELEVATIONS ARE BASED ON THE FOLLOWING BENCHMARKS: SEE APPENDIX E, SURVEY CONTROL OF THE SPECIFICATIONS FOR SECONDARY MONUMENT DATA SHEETS.

BENCHMARK	ELEVATION	NORTHING	EASTING
ME20-584-01	4.37	472,702.34	2,642,665.40
LONG LAKE	5.02	489,200.87	2,645,289.21
LAKE BENNET	3.06	483,211.72	2,630,944.33
SOUTH GRAND LAKE	5.96	487,949.24	2,619,803.21

2. THE ELEVATIONS SHOWN ON THE PLANS ARE BASED ON SURVEYS PERFORMED IN SEPTEMBER 2003 BY ACADIAN ENGINEERS & CONSULTANTS. THE AERIAL PHOTOGRAPHY WAS TAKEN IN THE FALL OF 2003.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NAVIGATING FROM A NAVIGABLE WATER BODY TO THE SITE. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR NAVIGATING WITHIN THE LIMITS OF THE PROJECT AREA AND DREDGING ONLY WITHIN THE LIMITS OF THE FLOTATION AND ACCESS CHANNELS. THE OCPRI ENGINEER OR INSPECTOR SHALL MONITOR EQUIPMENT OPERATIONS DURING CONSTRUCTION.

4. ALL EQUIPMENT SHALL BE FLOATING AT ALL TIMES DURING TRANSIT TO AND FROM THE PROJECT AREA, AS WELL AS DURING CONSTRUCTION. NO EQUIPMENT, ROCK, OR EXCAVATED MATERIAL MAY BE PLACED ON ADJACENT MARSH AT ANY TIME.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL THE LANDOWNERS, UTILITIES, AND PIPELINE COMPANIES IDENTIFIED IN THE SPECIFICATIONS AT LEAST 5 WORKING DAYS PRIOR TO MOBILIZATION. THE CONTRACTOR SHALL COORDINATE EFFORTS WITH THE PIPELINE AND UTILITY OWNERS TO LOCATE AND MARK ALL UNDERGROUND PIPELINES AND UTILITIES WITHIN THE PROJECT AREA. THE CONTRACTOR SHALL MAINTAIN MARKED LOCATIONS DURING CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN THE CLEARANCES FROM THE PIPELINES SET FORTH IN THE PLANS OR IN THE BID DOCUMENTS. NO EXCAVATION IS ALLOWED WITHIN ANY AREA RESTRICTED BY THE PIPELINE COMPANIES AND SET FORTH ON THE PLANS. PIPELINE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THE OWNER IS NOT LIABLE FOR EXACT LOCATIONS. THE CONTRACTOR SHALL VERIFY EXACT PIPELINE LOCATIONS PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR MUST CALL LOUISIANA ONE CALL AT 1-800-272-3029 AT LEAST 5 WORKING DAYS PRIOR TO MOBILIZATION. SEE SECTION GP-34, LAND RIGHTS, OF THE SPECIFICATIONS.

PIPELINES
PLAINS ALL AMERICAN LP
 CONTACT: MIKE GURDY
 PHONE: (337) 774-4613
 CELL: (337) 526-8539

LANDOWNERS
MAIMI CORPORATION
 309 LA RUE FRANCE
 SUITE 201
 LAFAYETTE, LA 70506

6. THE CONTRACTOR SHALL PERFORM A MAGNETOMETER SURVEY OF THE ACCESS CHANNEL AND FLOTATION CHANNELS PRIOR TO EXCAVATION. MAGNETOMETER LINES SHALL BE RUN ALONG THE ALIGNMENT OF THE ACCESS CHANNEL AND FLOTATION CHANNELS. ADDITIONAL MAGNETOMETER LINES SHALL BE RUN PERPENDICULAR TO THE ALIGNMENT OF THE ACCESS CHANNELS AND FLOTATION CHANNEL. THESE LINES SHALL EXTEND OUT 25.0' FROM THE EDGE OF THE TEMPORARY SPILL PLACEMENT AND BE SPACED A MAXIMUM OF 400.0' APART. DRAWINGS SHOWING THE TRACK LINES, MAGNETOMETER HTS, COORDINATES, AMPLITUDE, SIGNATURE TYPE, AND SIGNATURE WIDTH OF ALL MAGNETOMETER HTS SHALL BE SUBMITTED TO THE OCPRI ENGINEER PRIOR TO MOBILIZATION. THE DRAWINGS SHALL BE STAMPED BY A REGISTERED PROFESSIONAL SURVEYOR LICENSED IN LOUISIANA. SEE SECTION TS-2, SURVEYS, FOR ADDITIONAL REQUIREMENTS.

7. THE 90% WATER LEVEL (2.28' NAVD 88) AND 90% WATER LEVEL (1.45' NAVD 88) WERE CALCULATED FROM GAGE USACE 70875 LOCATED AT NORTH 488.973.84, EAST 2,800.116.17 USING JANUARY 1980 TO DECEMBER 1989 DATA.

8. MATERIAL EXCAVATED FROM THE ACCESS CHANNEL SHALL BE DEPOSITED IN THE AREAS SHOWN ON THE PLANS AND PLACED SUCH THAT IT IS READILY AVAILABLE TO BE BACKFILLED. ONLY MATERIAL DREDGED FROM THE ACCESS CHANNEL SHALL BE BACKFILLED INTO THE ACCESS CHANNEL. MATERIAL EXCAVATED FROM THE FLOTATION CHANNEL SHALL BE DEPOSITED IN THE PERMANENT DREDGE FILL AREAS SHOWN ON THE PLANS.

9. DREDGED MATERIAL SHALL NOT BE DISCHARGED OR ALLOWED TO FLOW INTO EXISTING WATERWAYS EXCEPT AS NOTED IN THE PLANS AND SPECIFICATIONS.

10. THE ESTIMATED ROCK QUANTITIES SHOWN IN THE SUMMARY OF ESTIMATED QUANTITIES ARE FOR BIDDING PURPOSES ONLY AND CALCULATED ACCORDING TO THE CONDITIONS SURVEYED IN SEPTEMBER 2003. THE ROCK QUANTITIES WERE CALCULATED USING THE AVERAGE END AREA METHOD OF SECTIONS AT THE BEGINNING, END, AND EVERY SURVEY TRANSECT ALONG THE ROCK BREAKWATER ALIGNMENT. THE ROCK QUANTITIES ASSUMED VARYING RATES OF SETTLEMENT FOR THE ROCK BREAKWATER. AN IN-PLACE UNIT WEIGHT OF 1.5 TONS/CU YD. WAS ASSUMED FOR THE ROCK. ACTUAL QUANTITIES WILL BE BASED ON BARGE DISPLACEMENT MEASUREMENTS. SEE SECTION TS-5 OF THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. THE OWNER RESERVES THE RIGHT TO ADJUST QUANTITIES HIGHER OR LOWER WITHOUT ADJUSTMENT OF THE UNIT PRICE.

11. THE ALIGNMENT FOR THE ROCK BREAKWATER MAY BE REVISED BY THE OCPRI ENGINEER BEFORE OR DURING CONSTRUCTION TO REFLECT CHANGES IN FIELD CONDITIONS.

12. ANY DAMAGE TO EXISTING U.S. COAST GUARD NAVIGATION AIDS OR PRIVATE NAVIGATION AIDS SHALL BE REPAIRED BY THE CONTRACTOR TO U.S. COAST GUARD STANDARDS AT THE EXPENSE OF THE CONTRACTOR.

13. THE PLANS AND BID DOCUMENTS ARE COMPLEMENTARY; WHAT IS REQUIRED IN ONE IS AS BINDING AS IF REQUIRED BY ALL. CLARIFICATIONS, INTERPRETATIONS, OR NOTIFICATIONS OF MINOR VARIATIONS AND DEVIATIONS IN THE CONTRACT DOCUMENTS WILL BE ISSUED BY THE ENGINEER, IF NECESSARY.

SUMMARY OF ESTIMATED QUANTITIES

BASE BID

ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY
1	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	1
2	SURVEYS	LUMP SUM	1
3	ACCESS AND FLOTATION CHANNELS	LUMP SUM	1
4	WOVEN GEOTEXTILE FABRIC	SQUARE YARD	64,900
5	250 LB CLASS ROCK	TON	82,650
6	SETTLEMENT PLATES	EACH	5
7	PERMANENT WARNING SIGNS	EACH	26
8	TEMPORARY WARNING SIGNS	EACH	30

ADDITIVE ALTERNATE 1 BID

ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY
9	SURVEYS	LUMP SUM	1
10	FLOTATION CHANNELS	LUMP SUM	1
11	WOVEN GEOTEXTILE FABRIC	SQUARE YARD	25,810
12	250 LB CLASS ROCK	TON	27,300
13	SETTLEMENT PLATES	EACH	1
14	PERMANENT WARNING SIGNS	EACH	7
15	TEMPORARY WARNING SIGNS	EACH	7

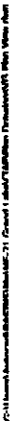
ADDITIVE ALTERNATE 2 BID

ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY
16	SURVEYS	LUMP SUM	1
17	FLOTATION CHANNELS	LUMP SUM	1
18	WOVEN GEOTEXTILE FABRIC	SQUARE YARD	27,725
19	250 LB CLASS ROCK	TON	27,700
20	SETTLEMENT PLATES	EACH	2
21	PERMANENT WARNING SIGNS	EACH	9
22	TEMPORARY WARNING SIGNS	EACH	9

NOTES:

- QUANTITIES SHOWN ARE FOR BID PURPOSES ONLY AND WERE CALCULATED ACCORDING TO CONDITIONS SURVEYED IN SEPTEMBER 2003. THE OWNER RESERVES THE RIGHT TO ADJUST QUANTITIES HIGHER OR LOWER WITHOUT ADJUSTMENT OF THE UNIT PRICE.
- THE ADDITIVE ALTERNATE BIDS CONSIST OF THE INCREMENTAL COST ASSOCIATED WITH INCREASED EXCAVATION OF FLOTATION CHANNEL AND THE PLACEMENT OF ADDITIONAL WOVEN GEOTEXTILE FABRIC, CLASS 250 LB ROCK, SETTLEMENT PLATES, PERMANENT WARNING SIGNS, AND TEMPORARY WARNING SIGNS.
- DETERMINATION OF THE LOW BIDDER SHALL BE ON THE BASIS OF THE SUM OF THE BASE BID AND ANY ALTERNATE ACCEPTED.

OFFICE OF COASTAL PROTECTION & RESTORATION ENGINEERING BRANCH 409 LAUREL STREET BATON ROUGE, LOUISIANA 70801		GRAND LAKE SHORELINE PROTECTION STATE PROJECT NUMBER: ME-21 FEDERAL PROJECT NUMBER: APPROVED BY: RUSSE JOHNSON, P.E.	GENERAL NOTES DATE: JANUARY 2009 SHEET 2 OF 24
BY	DATE	DESCRIPTION	



ROCK BREAKWATER ALIGNMENT CENTERLINE		
NO.	NORTHING	EASTING
1	495,316.33	2,812,217.81
2	495,453.17	2,812,875.87
3	494,950.25	2,813,463.19
4	493,957.38	2,814,055.19
5	494,002.12	2,814,853.39
6	493,245.00	2,815,811.81
7	492,585.81	2,817,043.35

ACCESS CHANNEL 14' X 7' TEMPORARY DREDGE FILL

TEMPORARY SPOIL PLACEMENT

TEMPORARY WARNING SIGN

STAFF GAGE 2
N 495,590.70
E 2,812,324.20

PERMANENT
WARNING SIGN

CATFISH LAKE

LEGEND	
	ROCK BREAKWATER
	ACCESS/FLOTATION CHANNEL
	BASELINE
	PERMANENT DREDGE FILL
	TEMPORARY SPOIL PLACEMENT
	STAFF GAGE
	PERMANENT WARNING SIGN
	TEMPORARY WARNING SIGN
	SETTLEMENT PLATE

- NOTES:
1. THE TEMPORARY SPOIL SHALL BE BACKFILLED INTO THE ACCESS CHANNEL AS PER TS-3 OF THE SPECIFICATIONS.
 2. THE FISH DIPS ARE SPACED IN APPROXIMATE INTERVALS OF 1000'. SEE SHEETS 11 AND 12 FOR FISH DIP DETAILS.
 3. THE SETTLEMENT PLATES ARE SPACED IN APPROXIMATE INTERVALS OF 5000'.
 4. THE CONTRACTOR SHALL VERIFY STAFF GAGE ELEVATIONS PRIOR TO CONSTRUCTION.



GRAND LAKE

BASELINE

TEMPORARY SPOIL PLACEMENT

FLOTATION CHANNEL

PERMANENT DREDGE FILL

GRAND LAKE
SHORELINE PROTECTION
STATE PROJECT NUMBER: MS-21
FEDERAL PROJECT NUMBER:

OFFICE OF COASTAL PROTECTION & RESTORATION
ENGINEERING BRANCH
498 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

PROJECT LAYOUT
DATE: JANUARY 2009
SHEET 4 OF 24

DRAWN BY: KIRSTY CANTU
DESIGNED BY: WENDY THOMPSON
APPROVED BY: BILLY JOHNSON, P.E.

REV. DATE DESCRIPTION BY

MATCHLINE: SHEET 3

ROCK BREAKWATER ALIGNMENT CENTERLINE		
NO.	NORTHING	EASTING
8	402,808.93	2,817,797.40
9	402,340.54	2,819,475.55
10	401,877.97	2,820,406.21
11	401,443.20	2,821,623.10
12	401,228.30	2,821,883.06
13	401,310.64	2,822,002.79
14	401,453.00	2,822,803.61

MATCHLINE: SHEET 4

MATCHLINE: SHEET 5

TEMPORARY SPOIL PLACEMENT

ROTATION CHANNEL

PERMANENT DREDGE FILL

FISH DIP (TYP.)

LEGEND	
	ROCK BREAKWATER
	FLUTATION CHANNEL
	BASELINE
	PERMANENT DREDGE FILL
	TEMPORARY SPOIL PLACEMENT
	PERMANENT WARNING SIGN
	SETTLEMENT PLATE

NOTES:
1. THE FISH DIPS ARE SPACED IN APPROXIMATE INTERVALS OF 1000'. SEE SHEETS 11 AND 12 FOR FISH DIP DETAILS.
2. THE SETTLEMENT PLATES ARE SPACED IN APPROXIMATE INTERVALS OF 500'.



OFFICE OF COASTAL PROTECTION & RESTORATION ENGINEERING BRANCH BAYON BOULEVARD, LOUISIANA 70001		GRAND LAKE SHORELINE PROTECTION	PROJECT LAYOUT
DESIGNED BY: WHITNEY THOMPSON	STATE PROJECT NUMBER: MS-21	FEDERAL PROJECT NUMBER:	DATE: JANUARY 2009
DRAWN BY: MUSTI CANTU	APPROVED BY: BLISS OFFERMAN, P.E.	SHEET 5 OF 24	

ROCK BREAKWATER ALIGNMENT CENTERLINE		
NO.	NORTHING	EASTING
15	461,487.08	2,823,631.67
16	461,627.53	2,823,675.45
17	461,670.06	2,824,174.23
18	461,580.01	2,824,353.34
19	461,434.73	2,824,514.74
20	460,842.30	2,825,073.40
21	460,348.93	2,825,860.26
22	460,118.11	2,826,088.74

WRECK

NAVIGATION GAP:
SEE NOTE 3

NOTES:
1. THE FISH DIPS ARE SPACED IN APPROXIMATE INTERVALS OF 1000'.
2. THE SETTLEMENT PLATES ARE SPACED IN APPROXIMATE INTERVALS OF 5000'.
3. NAVIGATION GAPS SHALL BE A MINIMUM WIDTH OF 100'.
4. SEE SHEETS 11 - 12 FOR NAVIGATION GAP AND FISH DIP DETAILS.



MATCHLINE, SHEET 6

TEMPORARY SPOIL PLACEMENT

FLOTATION CHANNEL

FISH DIP (TYP.)

BASELINE

PERMANENT DREDGE FILL

MATCHLINE, SHEET 7

LEGEND	
	ROCK BREAKWATER
	FLOTATION CHANNEL
	BASELINE
	PERMANENT DREDGE FILL
	TEMPORARY SPOIL PLACEMENT
	PERMANENT WARNING SIGN
	TEMPORARY WARNING SIGN
	SETTLEMENT PLATE

REV.	DATE	DESCRIPTION	BY	DRAWN BY:	DESIGNED BY:
				KIMETI CANU	WETNEY THOMPSON

OFFICE OF COASTAL PROTECTION & RESTORATION
ENGINEERING BRANCH
458 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

GRAND LAKE SHORELINE PROTECTION	PROJECT LAYOUT
STATE PROJECT NUMBER: ME-21	DATE: JANUARY 2009
FEDERAL PROJECT NUMBER:	SHEET 6 OF 24

ROCK BREAKWATER ALIGNMENT CENTERLINE		
NO.	NORTHING	EASTING
23	460,134.97	2,829,823.96
24	460,548.48	2,831,077.85
25	460,634.68	2,831,930.58
26	460,418.45	2,832,864.74

ADDITIVE ALTERNATE 1 ROCK BREAKWATER ALIGNMENT CENTERLINE		
26	460,418.45	2,832,864.74
27	460,985.40	2,833,779.07

NOTES:
1. THE FISH DIPs ARE SPACED IN APPROXIMATE INTERVALS OF 100'.
SEE SHEETS 11 AND 12 FOR FISH DIP DETAILS.
2. THE SETTLEMENT PLATES ARE SPACED IN APPROXIMATE
INTERVALS OF 500'.



MATCHLINE: SHEET 8

MATCHLINE: SHEET 8

GRAND LAKE

TEMPORARY SPOIL PLACEMENT

FLOTATION CHANNEL

ADDITIVE ALTERNATE 1
TEMPORARY SPOIL PLACEMENT

ADDITIVE ALTERNATE 1 FLOTATION CHANNEL

ADDITIVE ALTERNATE 1
PERMANENT DREDGE FILL

PERMANENT DREDGE FILL

END OF BASE AND ROCK BREAKWATERS. BEGINNING
OF ADDITIVE ALTERNATE 1 ROCK BREAKWATERS

FISH DIP (172)

BASELINE

LEGEND

	ROCK BREAKWATER
	ADDITIVE ALTERNATE 1 ROCK BREAKWATER
	FLOTATION CHANNEL
	ADDITIVE ALTERNATE 1 FLOTATION CHANNEL
	PERMANENT DREDGE FILL
	ADDITIVE ALTERNATE 1 PERMANENT DREDGE FILL
	TEMPORARY SPOIL PLACEMENT
	ADDITIVE ALTERNATE 1 TEMPORARY SPOIL PLACEMENT
	BASELINE
	PERMANENT WARNING SIGN
	TEMPORARY WARNING SIGN
	SETTLEMENT PLATE

REV	DATE	DESCRIPTION	BY	DESIGNED BY: WHITNEY THOMPSON	DRAWN BY: KERSTI CARTY	APPROVED BY: ELISE AFFRON, P.E.	FEDERAL PROJECT NUMBER:	STATE PROJECT NUMBER: 14E-21	SHORELINE PROTECTION	GRAND LAKE	PROJECT LAYOUT

OFFICE OF COASTAL PROTECTION & RESTORATION
ENGINEERING BRANCH
BATON ROUGE, LOUISIANA 70801

DATE: JANUARY 2009

SHEET 1 OF 24

ADDITIVE ALTERNATE 1 ROCK BREAKWATER ALIGNMENT CENTERLINE		
NO.	NORTHING	EASTING
26	488,363.59	2,836,172.14
27	487,983.44	2,835,670.59
28	487,825.18	2,835,781.05
29	487,314.87	2,837,676.61
30	486,799.09	2,837,799.68
31	486,501.33	2,838,197.86
32	486,513.03	2,838,728.83

ADDITIVE ALTERNATE 2 ROCK BREAKWATER ALIGNMENT CENTERLINE		
NO.	NORTHING	EASTING
35	488,472.43	2,838,088.08
36	488,033.70	2,838,240.04
37	488,003.98	2,838,800.84
38	488,466.25	2,840,340.87

LEGEND	
	ADDITIVE ALTERNATE 1 ROCK BREAKWATER
	ADDITIVE ALTERNATE 2 ROCK BREAKWATER
	ADDITIVE ALTERNATE 1 FLOTATION CHANNEL
	ADDITIVE ALTERNATE 2 FLOTATION CHANNEL
	ADDITIVE ALTERNATE 1 PERMANENT DREDGE FILL
	ADDITIVE ALTERNATE 2 PERMANENT DREDGE FILL
	ADDITIVE ALTERNATE 1 TEMPORARY SPOIL PLACEMENT
	ADDITIVE ALTERNATE 2 TEMPORARY SPOIL PLACEMENT
	BASELINE
	PERMANENT WARNING SIGN
	TEMPORARY WARNING SIGN
	SETTLEMENT PLATE

NOTES:

1. THE FISH DIPS ARE SPACED AT APPROXIMATE INTERVALS OF 1000'.
2. THE SETTLEMENT PLATES ARE SPACED IN APPROXIMATE INTERVALS OF 5000'.
3. NAVIGATION GAP'S SHALL BE A MINIMUM WIDTH OF 100'.
4. SEE SHEETS 11 - 12 FOR NAVIGATION GAP AND FISH DIP DETAILS.



ADDITIVE ALTERNATE 1 FLOTATION CHANNEL

FISH DIP (TYP)

ADDITIVE ALTERNATE 1
PERMANENT DREDGE FILL

BASELINE

END OF ADDITIVE ALTERNATE 1
ROCK BREAKWATERS

NAVIGATION GAP
SEE NOTE 3

BEGINNING OF ADDITIVE
ALTERNATE 2 ROCK BREAKWATERS

ADDITIVE ALTERNATE 1
TEMPORARY SPOIL PLACEMENT

ADDITIVE ALTERNATE 2
TEMPORARY SPOIL PLACEMENT

ADDITIVE ALTERNATE 2 FLOTATION CHANNEL

ADDITIVE ALTERNATE 2
PERMANENT DREDGE FILL

GRAND LAKE

REV.	DATE	DESCRIPTION	BY	DESIGNED BY	DRAWN BY

OFFICE OF COASTAL PROTECTION & RESTORATION
ENGINEERING BRANCH
BAYOU BOULEVARD, LOUISIANA 70081

GRAND LAKE
SHORELINE PROTECTION
STATE PROJECT NUMBER: ME-21
FEDERAL PROJECT NUMBER:
APPROVED BY: BLISS JOFFORD, P.E.

PROJECT LAYOUT
DATE: JANUARY 2009
SHEET 8 OF 14

MATCHLINE: SHEET 7

MATCHLINE: SHEET 9

ADDITIVE ALTERNATE 2 ROCK BREAKWATER ALIGNMENT CENTERLINE		
NO.	NORTHING	EASTING
35	485,485.25	2,840,340.87
36	485,485.10	2,840,887.32
37	485,485.10	2,841,318.06
38	485,485.10	2,841,670.88
39	485,485.10	2,842,212.30
40	485,485.10	2,842,765.77
41	485,485.10	2,843,017.61
42	485,485.10	2,843,292.24
43	485,485.10	2,843,593.00
44	485,485.10	2,843,902.92
45	485,485.10	2,844,202.43
46	485,485.10	2,844,502.43
47	485,485.10	2,844,802.43
48	485,485.10	2,845,102.43

MATCHLINE: SHEET 8

ADDITIVE ALTERNATE 2
TEMPORARY SPOIL PLACEMENT

ADDITIVE ALTERNATE 2
PERMANENT DREDGE FILL

NAVIGATION GAP
SEE NOTE 5

FISH DIP (TYP.)

LEGEND

- ADDITIVE ALTERNATE 2 ROCK BREAKWATER
- ADDITIVE ALTERNATE 2 ROTATION CHANNEL
- ADDITIVE ALTERNATE 2 PERMANENT DREDGE FILL
- ADDITIVE ALTERNATE 2 TEMPORARY SPOIL PLACEMENT
- EXISTING ROCK DIKE
- PIPELINE
- BASELINE
- STAFF GAGE
- PERMANENT WARNING SIGN
- TEMPORARY WARNING SIGN
- SETTLEMENT PLATE



- NOTES:
1. THE CONTRACTOR SHALL NOT EXCAVATE OR PLACE ROCK OR DREDGE FILL WITHIN 100' OF ANY PIPELINE.
 2. THE FISH DIPs ARE SPACED IN APPROXIMATE INTERVALS OF 1000'.
 3. THE SETTLEMENT PLATES ARE SPACED IN APPROXIMATE INTERVALS OF 5000'.
 4. THE CONTRACTOR SHALL VERIFY STAFF GAGE ELEVATIONS PRIOR TO CONSTRUCTION.
 5. NAVIGATION GAPS SHALL BE A MINIMUM WIDTH OF 100'.
 6. SEE SHEETS 11 - 12 FOR NAVIGATION GAP AND FISH DIP DETAILS.

OFFICE OF COASTAL PROTECTION & RESTORATION
ENGINEERING BRANCH
499 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

GRAND LAKE
SHORELINE PROTECTION
STATE PROJECT NUMBER: MB-21
FEDERAL PROJECT NUMBER:
APPROVED BY: ELISSA JOHNSON, P.E.

PROJECT LAYOUT
DATE: JANUARY 2009
SHEET 9 OF 24

12" PLAINS

GRAND LAKE

24" TARGA
MIDSTREAM
SERVICES

5' PLAINS

ADDITIVE ALTERNATE 2 ROTATION CHANNEL

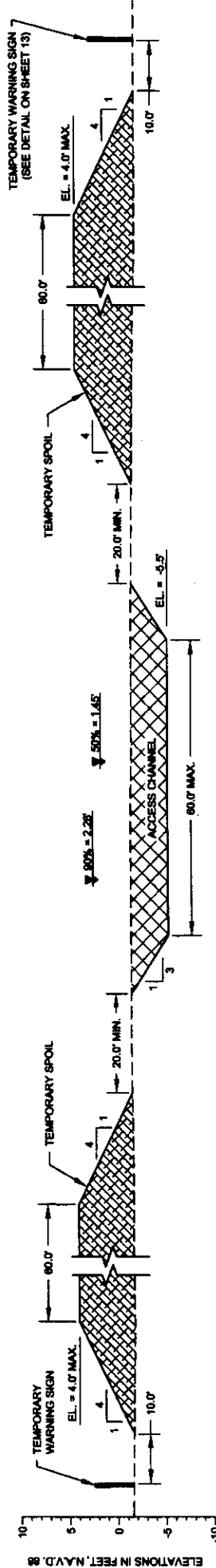
100.7' MIN.

STAFF GAGE
N 483,637.08
E 2,845,347.08

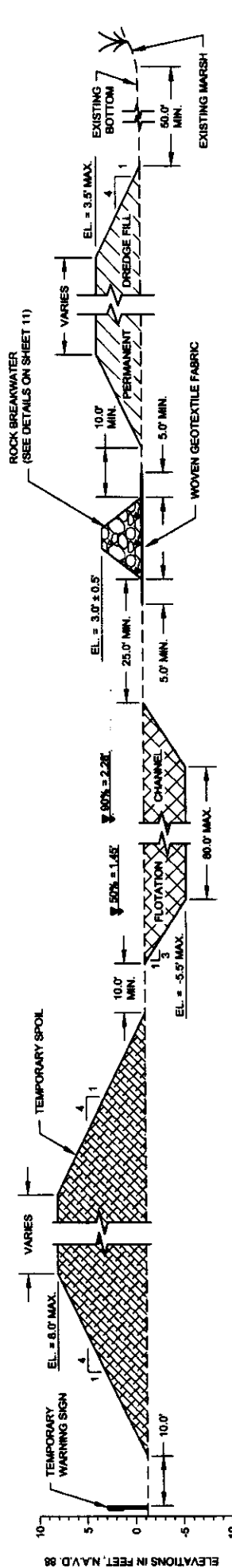
EXISTING ROCK DIKE

END OF ADDITIVE ALTERNATE 2
ROCK BREAKWATER

SUPERIOR CANAL

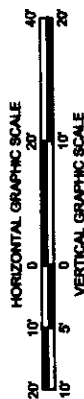


SECTION A-A'
ACCESS CHANNEL



SECTION B-B'
ROCK BREAKWATER AND FLOTATION CHANNEL
TRANSECT 26+00

- NOTES:**
1. THE SIDE SLOPES SHOWN FOR THE TEMPORARY SPOIL, ACCESS CHANNEL, AND FLOTATION CHANNEL ARE FOR INFORMATIONAL PURPOSES ONLY. THE ACCESS AND FLOTATION CHANNELS SHALL BE MAINTAINED DURING CONSTRUCTION.
 2. THE TEMPORARY SPOIL SHALL BE BACKFILLED INTO THE ACCESS CHANNEL AS PER TS-3 OF THE SPECIFICATIONS.
 3. THE WOVEN GEOTEXTILE FABRIC SHALL CONFORM TO TS-4. SEE SHEET 13 FOR WOVEN GEOTEXTILE LAYOUT DETAIL.
 4. THE ROCK BREAKWATER MATERIAL SHALL CONFORM TO LA DOTD SPECIFICATION 711.02 (b) AND TS-5. SEE SHEET 11 FOR TYPICAL ROCK BREAKWATER DETAIL.
 5. THE ESTIMATED TIME-SETTLEMENT CURVE FOR THE ROCK BREAKWATER IS SHOWN IN APPENDIX F FOR INFORMATIONAL PURPOSES ONLY.

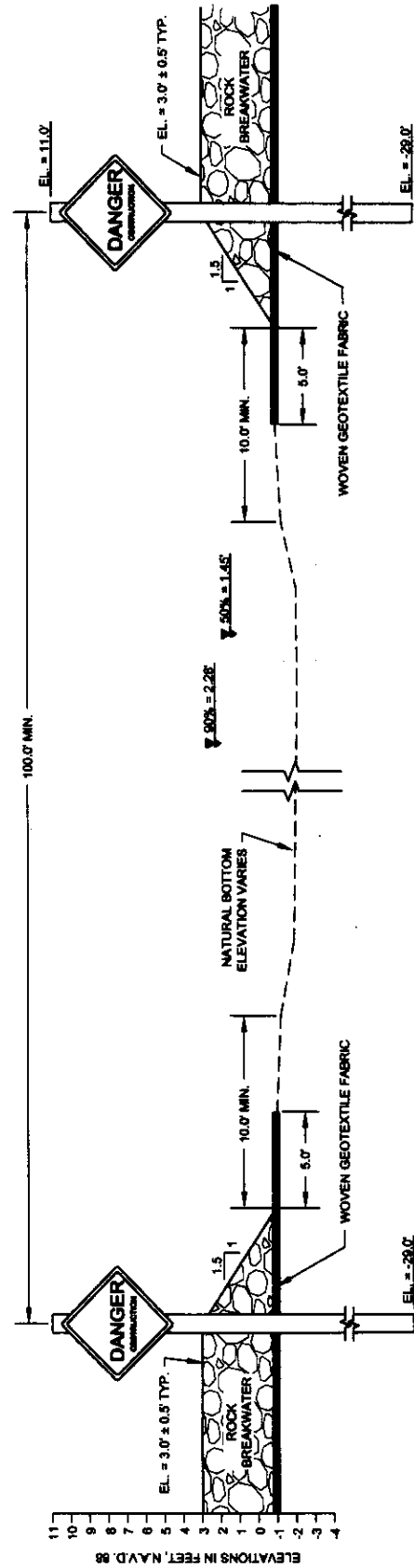
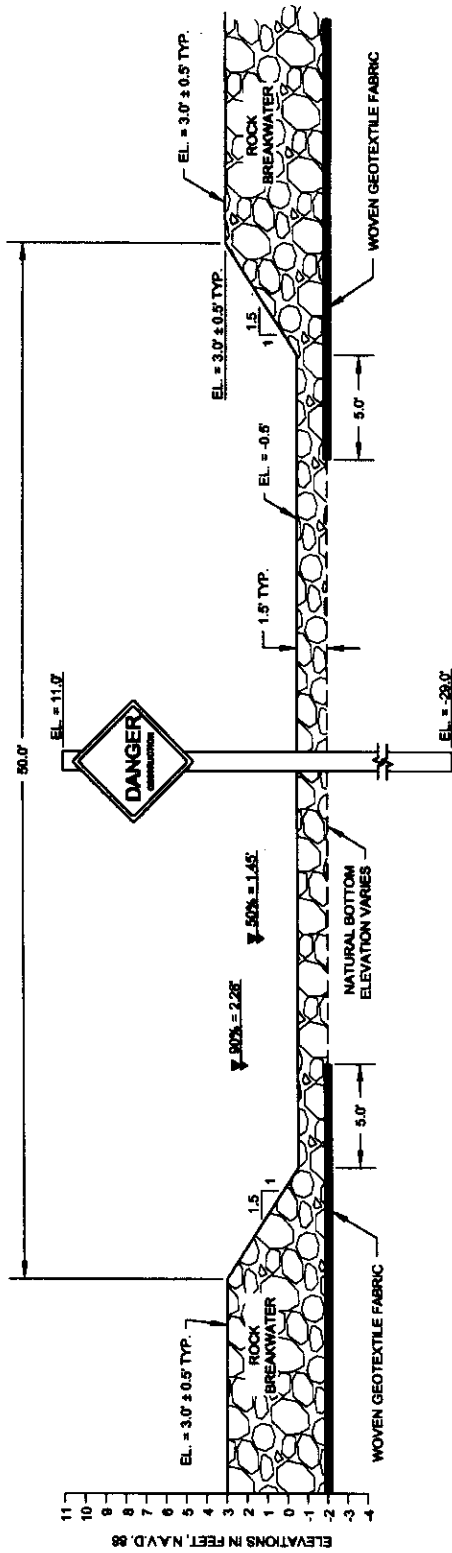


LEGEND

	ROCK BREAKWATER
	PERMANENT DREDGE FILL
	ACCESS/FLotation CHANNEL
	TEMPORARY SPOIL

OFFICE OF COASTAL PROTECTION & RESTORATION ENGINEERING BRANCH		TYPICAL SECTIONS	
STATE PROJECT NUMBER: MS-31	GRAND LAKE SHORELINE PROTECTION	DATE: JANUARY 2009	SHEET 10 OF 24
FEDERAL PROJECT NUMBER:	DESIGNED BY: WHITNEY THOMPSON	APPROVED BY: RUSS JOFFRION, P.E.	
BATON ROUGE, LOUISIANA 70801	DRAWN BY: KIRSTI CAMTU	BY	
REV.	DATE	DESCRIPTION	





NOTES:

1. SEE TS-4 FOR GEOTEXTILE FABRIC PLACEMENT.
2. SEE SHEET 13 FOR WARNING SIGN DETAILS.

[illegible]

SOIL BORINGS			
NO.	NORTHING	EASTING	
1	484,364.68	2,844,574.65	
2	487,815.10	2,837,578.51	
3	490,311.31	2,831,268.80	
4	492,138.28	2,822,404.10	
5	494,578.81	2,815,058.52	
GL-1U	492,883.44	2,818,260.47	
GL-2U	491,114.38	2,828,803.82	
GL-3U	490,080.52	2,834,388.82	
GL-4U	488,598.48	2,840,311.05	

STAFF GAGE 2
N 486,580.70
E 2,812,334.20

CATFISH LAKE

SOUTH GRAND LAKE
N 487,948.24
E 2,819,803.21

LAKE BENOT
N 483,211.72
E 2,830,944.33

LONG LAKE
N 483,280.87
E 2,845,289.21

STAFF GAGE 1
N 483,837.88
E 2,845,347.09

- NOTES:
1. SURVEY SECTIONS POINT FILES ARE AVAILABLE UPON REQUEST.
 2. THE SURVEYS WERE PERFORMED IN SEPTEMBER 2003 BY ACADIAN ENGINEERS & CONSULTANTS.
 3. SEE APPENDIX E FOR SECONDARY MONUMENT DATA SHEETS.
 4. SEE APPENDIX F FOR SOIL BORING LOG INFORMATION.
 5. SEE SHEETS 15 - 23 FOR SECTIONS.
 6. SURVEYS FOR CONSTRUCTION AND PAYMENT SHALL BE DONE AS PER TS-2.

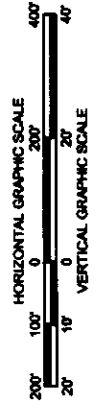
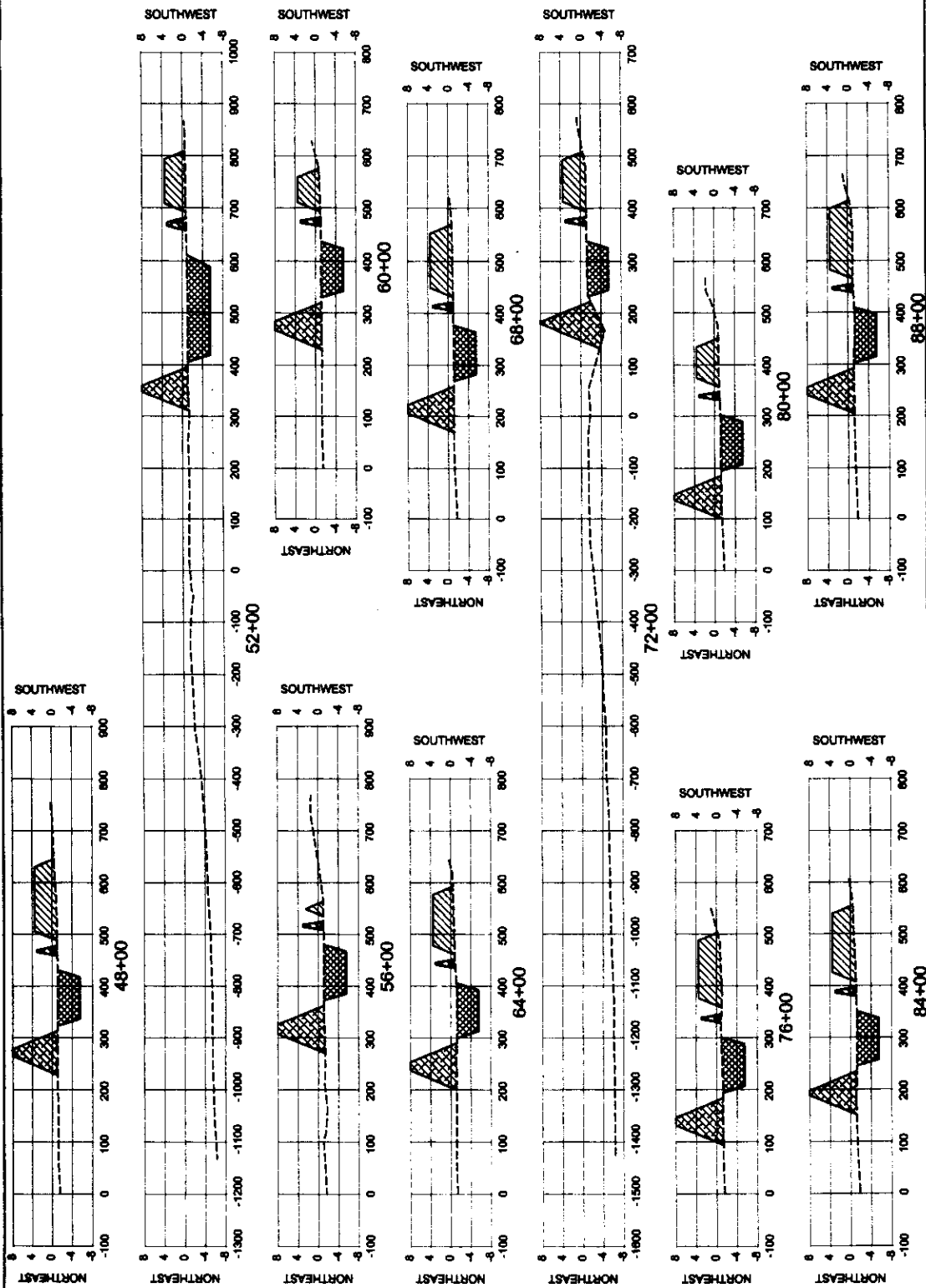


LEGEND	
---	BASELINE
---	SURVEY TRANSECT
---	ROCK BREAKWATER CENTER LINE
●	SECONDARY MONUMENT
●	STAFF GAGE
●	SOIL BORING

OFFICE OF COASTAL PROTECTION & RESTORATION ENGINEERING BRANCH 400 LAUREL STREET BATON ROUGE, LOUISIANA 70801		DESIGNED BY: WHEATNEY THOMPSON	BY:	DATE:	DESCRIPTION:
GRAND LAKE SHORELINE PROTECTION STATE PROJECT NUMBER: ME-21 FEDERAL PROJECT NUMBER:		APPROVED BY: MISS JEFFREY, P.E.			
SURVEY LAYOUT				DATE: JANUARY 2009	SHEET 14 OF 24

NOTE:
ALL ELEVATIONS ARE GIVEN IN THE
NORTH AMERICAN VERTICAL DATUM
OF 1988 (NAVD 88).

LEGEND	
---	EXISTING BOTTOM
▨	ROCK BREAKWATER
▩	FLOTATION CHANNEL
▧	PERMANENT DREDGE FILL
▦	TEMPORARY SPOIL

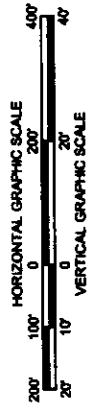
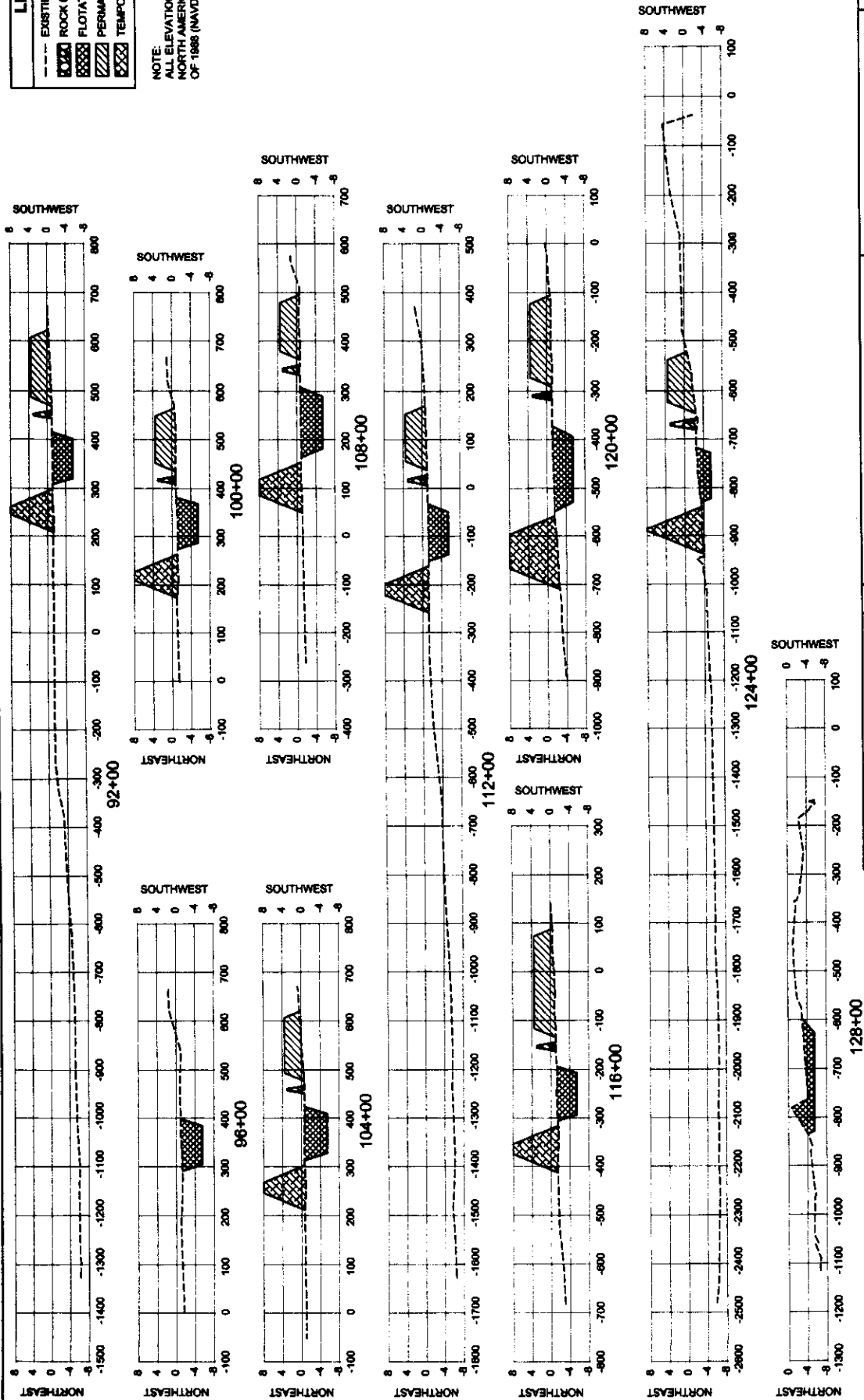


GRAND LAKE SHORELINE PROTECTION		OFFICE OF COASTAL PROTECTION & RESTORATION ENGINEERING BRANCH 490 LAUREL STREET BATON ROUGE, LOUISIANA 70801	
STATE PROJECT NUMBER: ME-21		DRAWN BY: KURT CANTU	DESIGNED BY: WHITNEY THOMPSON
FEDERAL PROJECT NUMBER:		BY:	DATE:
APPROVED BY: ELIS ODFORON, P.E.		REV:	DATE:
BASE BID SECTIONS			
DATE: JANUARY 2009			
SHEET 16 OF 24			

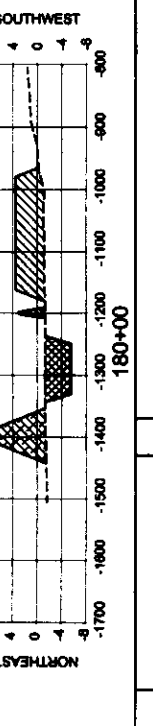
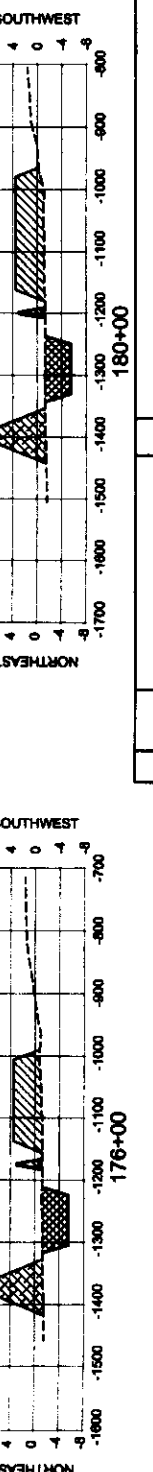
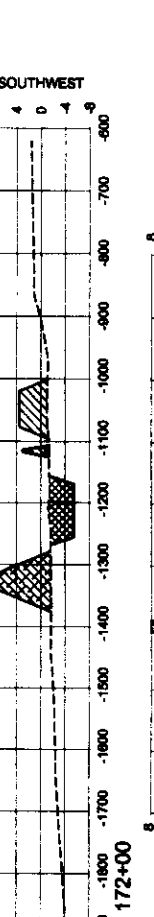
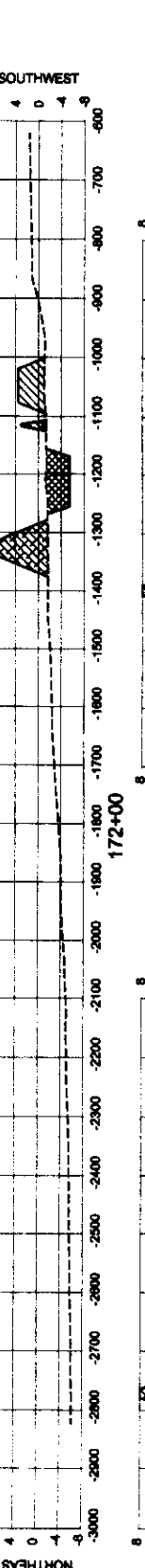
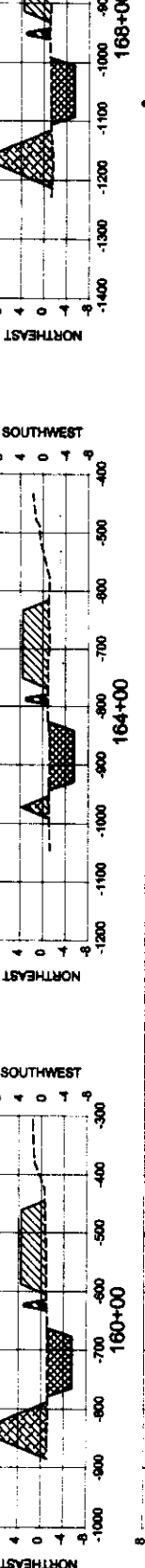
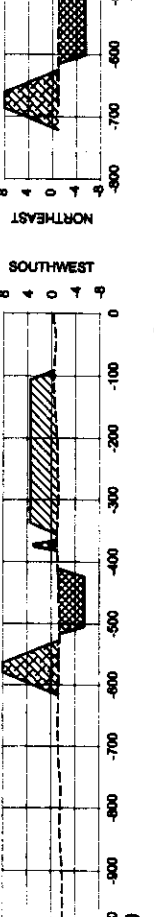
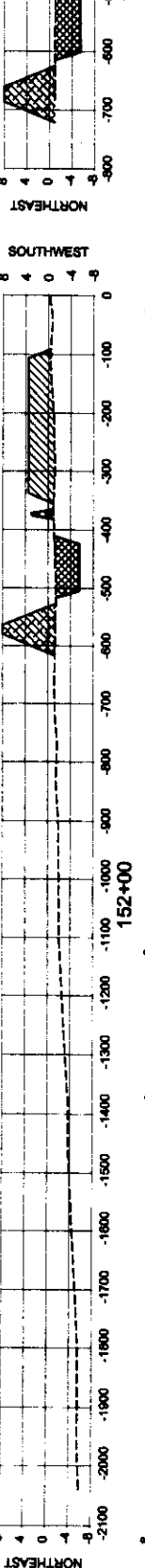
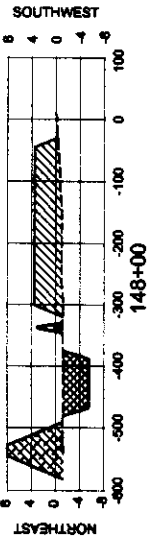
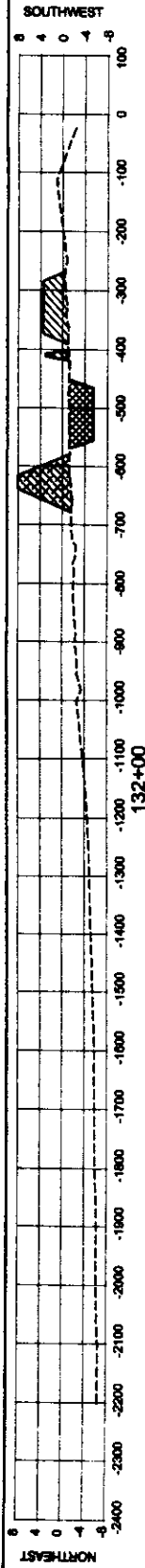
LEGEND

- EXISTING BOTTOM
- ███ ROCK BREAKWATER
- ▨▨▨ FLOTATION CHANNEL
- ▨▨▨ PERMANENT DREDGE FILL
- ▨▨▨ TEMPORARY SPON.

NOTE:
ALL ELEVATIONS ARE GIVEN IN THE
NORTH AMERICAN VERTICAL DATUM
OF 1988 (NAVD 88).



OFFICE OF COASTAL PROTECTION & RESTORATION ENGINEERING BRANCH 601 LAUREL STREET BATON ROUGE, LOUISIANA 70801		GRAND LAKE SHORELINE PROTECTION STATE PROJECT NUMBER: ME-21 FEDERAL PROJECT NUMBER:		BASE BID SECTIONS
REV.	DATE	DESCRIPTION	BY	DESIGNED BY: WHITNEY THOMPSON
				APPROVED BY: RUSSE JOHNSON, P.E.
				DATE: JANUARY 2009
				SHEET 17 OF 24

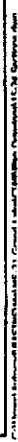


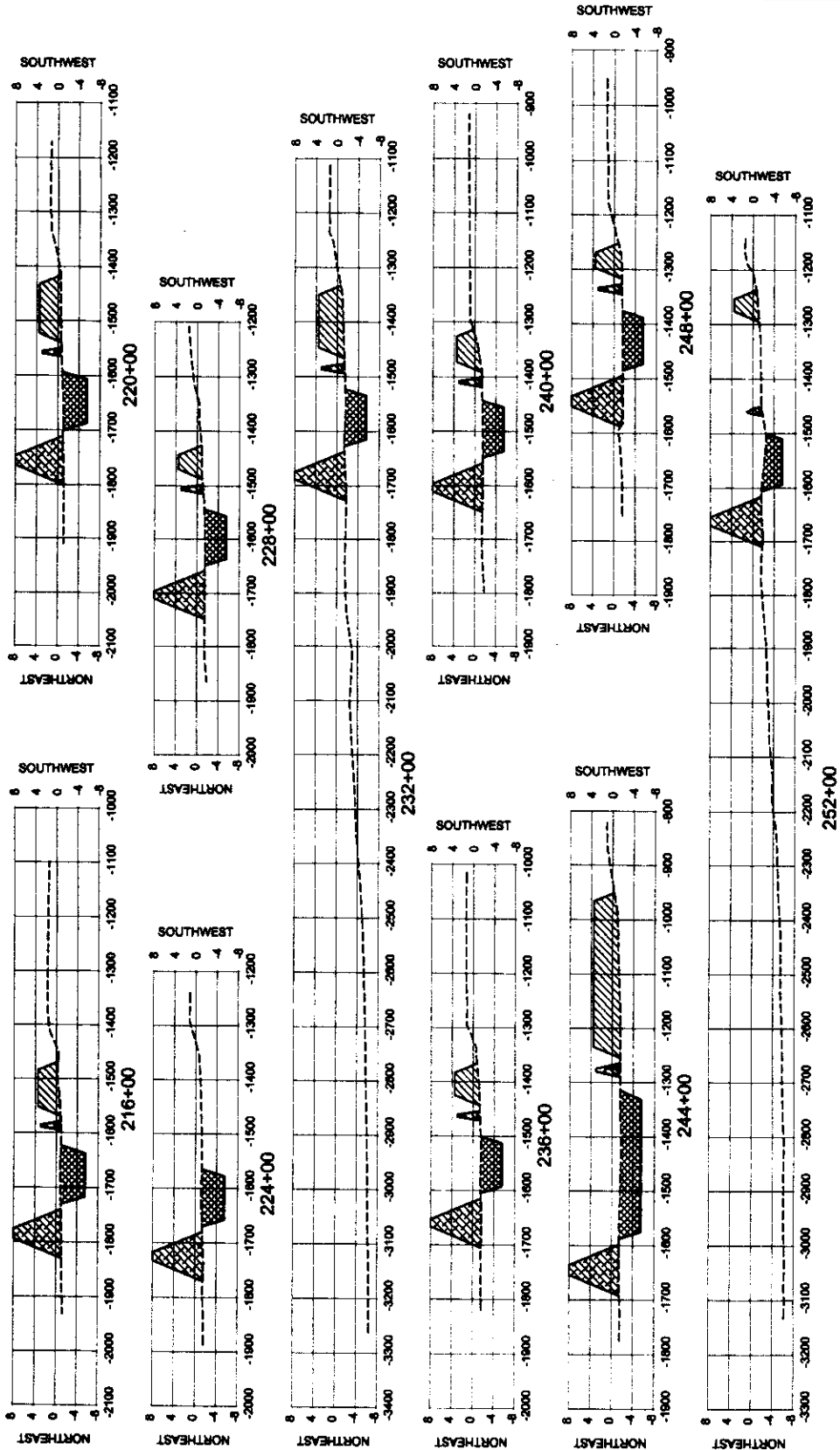
NOTE:
ALL ELEVATIONS ARE GIVEN IN THE
NORTH AMERICAN VERTICAL DATUM
OF 1988 (NAVD 88).

LEGEND	
---	EXISTING BOTTOM
	ROCK BREAKWATER
	FLOTATION CHANNEL
	PERMANENT DREDGE FILL
	TEMPORARY SPOIL



OFFICE OF COASTAL PROTECTION & RESTORATION ENGINEERING BRANCH 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		GRAND LAKES SHORELINE PROTECTION	BASE BID SECTIONS
BY		STATE PROJECT NUMBER: MB-21	DATE: JANUARY 2009
REV. DATE DESCRIPTION		FEDERAL PROJECT NUMBER:	SHEET 18 OF 24
DRAWN BY: AMETICANTU		DESIGNED BY: WETNEY THOMPSON	APPROVED BY: RUSSE JEFFERSON, P.E.



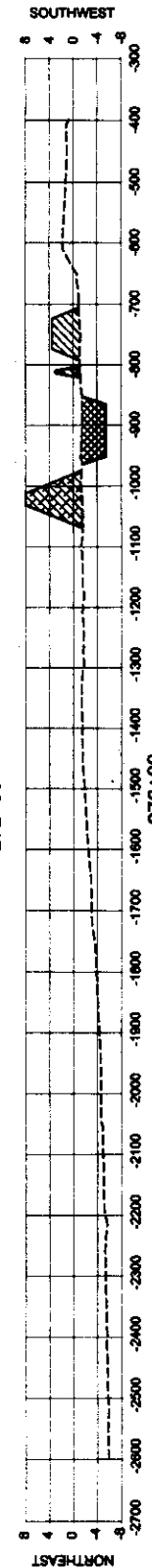
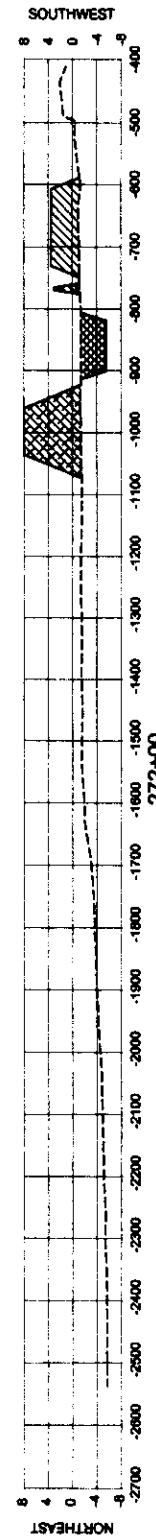
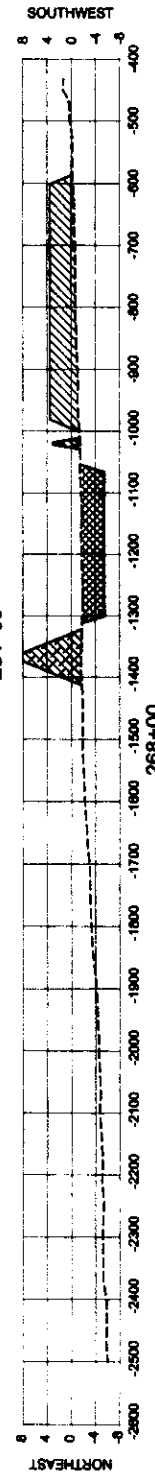
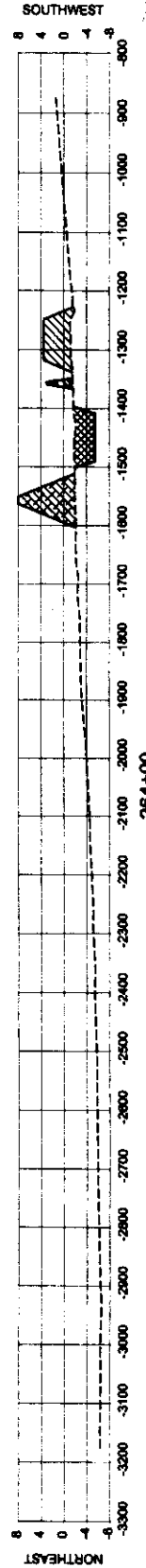
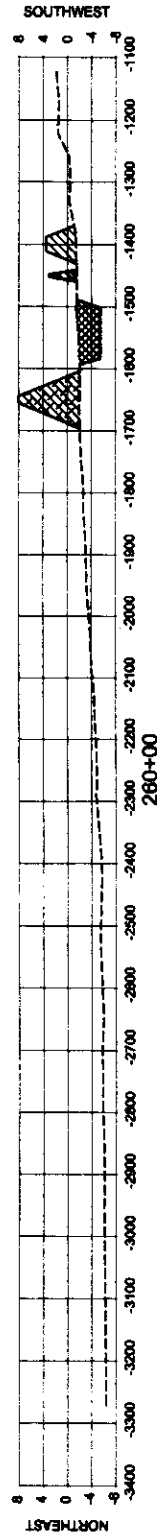
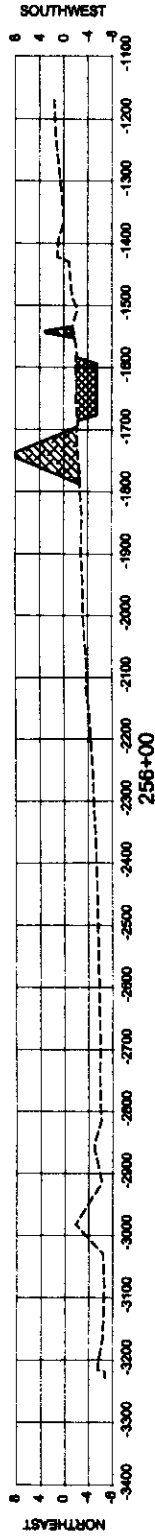


NOTE:
ALL ELEVATIONS ARE GIVEN IN THE
NORTH AMERICAN VERTICAL DATUM
OF 1988 (NAVD 88).

LEGEND	
---	EXISTING BOTTOM
XXXX	ROCK BREAKWATER
XXXX	FLOTATION CHANNEL
XXXX	PERMANENT DREDGE FILL
XXXX	TEMPORARY SPOIL

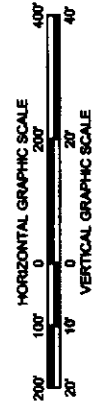


OFFICE OF COASTAL PROTECTION & RESTORATION ENGINEERING BRANCH 480 LAUREL STREET BATON ROUGE, LOUISIANA 70801		DESIGNED BY: WHEAT THOMPSON	APPROVED BY: BLISS JOHNSON, P.E.
GRAND LAKE SHORELINE PROTECTION		STATE PROJECT NUMBER: ME-21	DATE: JANUARY 2009
ADDITIVE ALTERNATE 1 SECTIONS		FEDERAL PROJECT NUMBER:	SHEET 30 OF 24

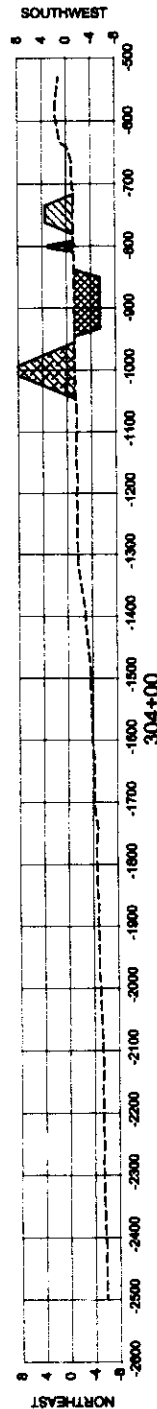
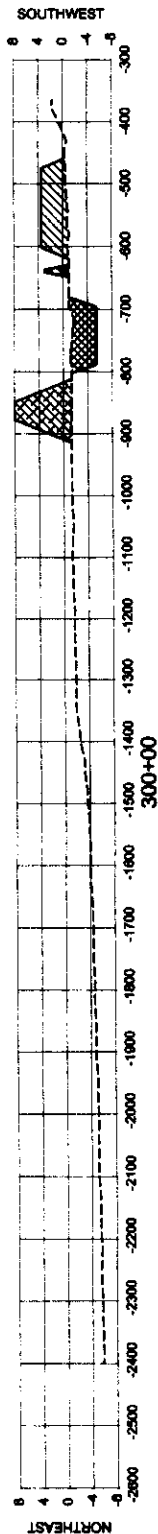
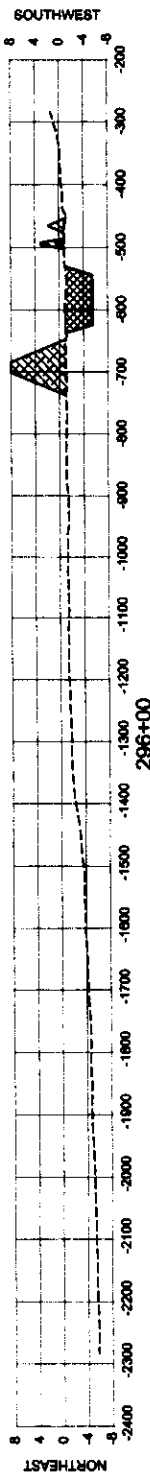
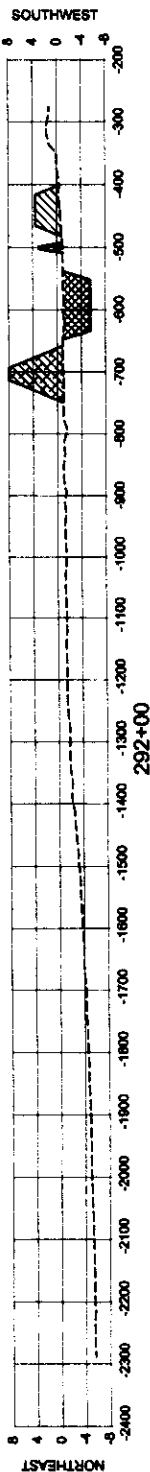
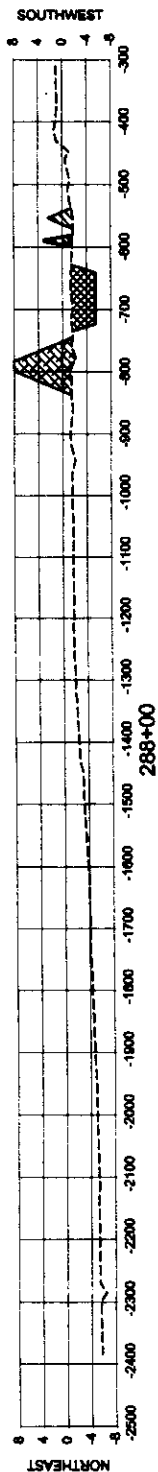
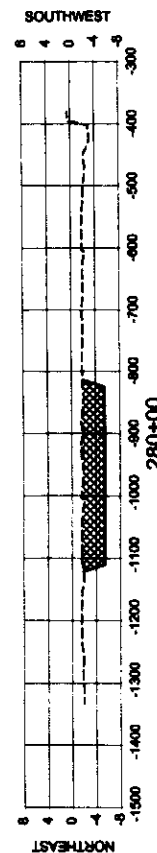


NOTE:
ALL ELEVATIONS ARE GIVEN IN THE
NORTH AMERICAN VERTICAL DATUM
OF 1988 (NAVD 88).

LEGEND	
---	EXISTING BOTTOM
	ROCK BREAKWATER
	FLotation CHANNEL
	PERMANENT DREDGE FILL
	TEMPORARY SPOIL



GRAND LAKE SHORELINE PROTECTION		ADDITIVE ALTERNATE 1 SECTIONS	
STATE PROJECT NUMBER: MS-21		DATE: JANUARY 2009	
FEDERAL PROJECT NUMBER:		SHEET 21 OF 24	
DESIGNED BY: WHEATLEY THOMPSON		APPROVED BY: MURS JOHNSON, P.E.	
DRAWN BY: KERSTI CANTU		BY	
DESCRIPTION		DATE	
REV		DESCRIPTION	
BY		DATE	
DESCRIPTION		DATE	
BY		DATE	
DESCRIPTION		DATE	



NOTE:
ALL ELEVATIONS ARE GIVEN IN THE
NORTH AMERICAN VERTICAL DATUM
OF 1988 (NAVD 88).

LEGEND

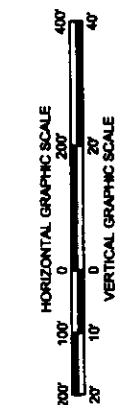
--- EXISTING BOTTOM

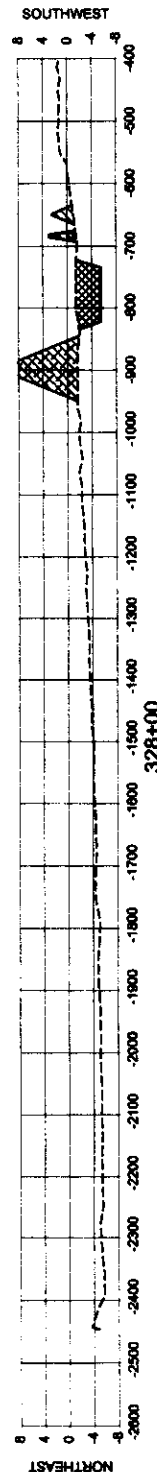
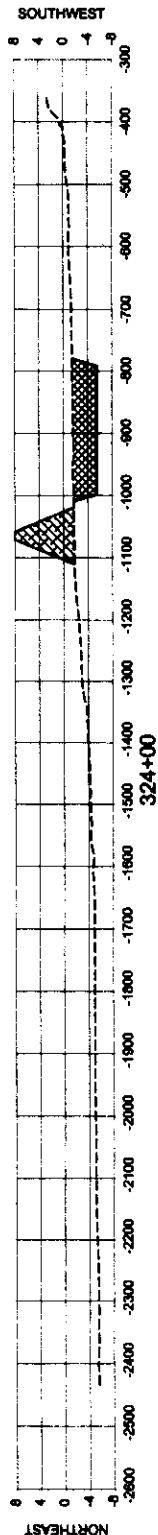
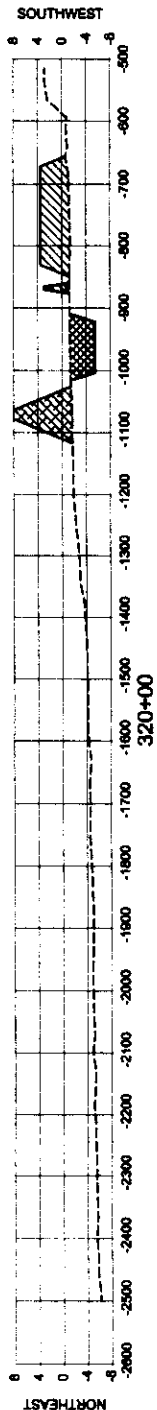
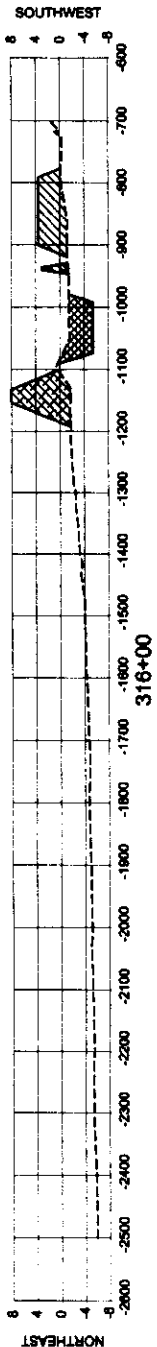
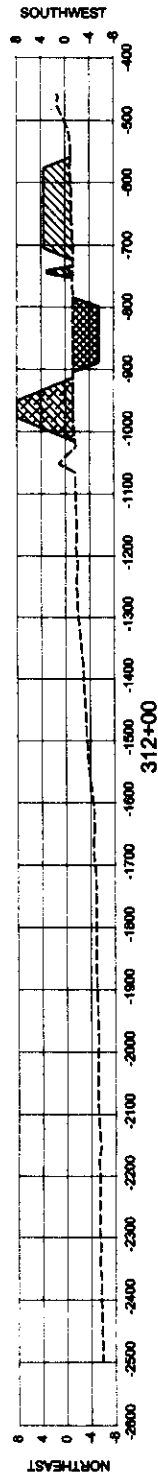
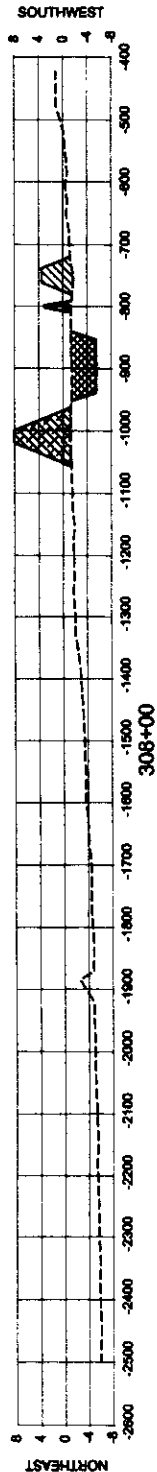
 ROCK BREAKWATER

 FLOTATION CHANNEL

 PERMANENT DREDGE FILL

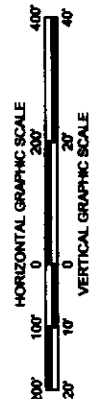
 TEMPORARY SPOIL

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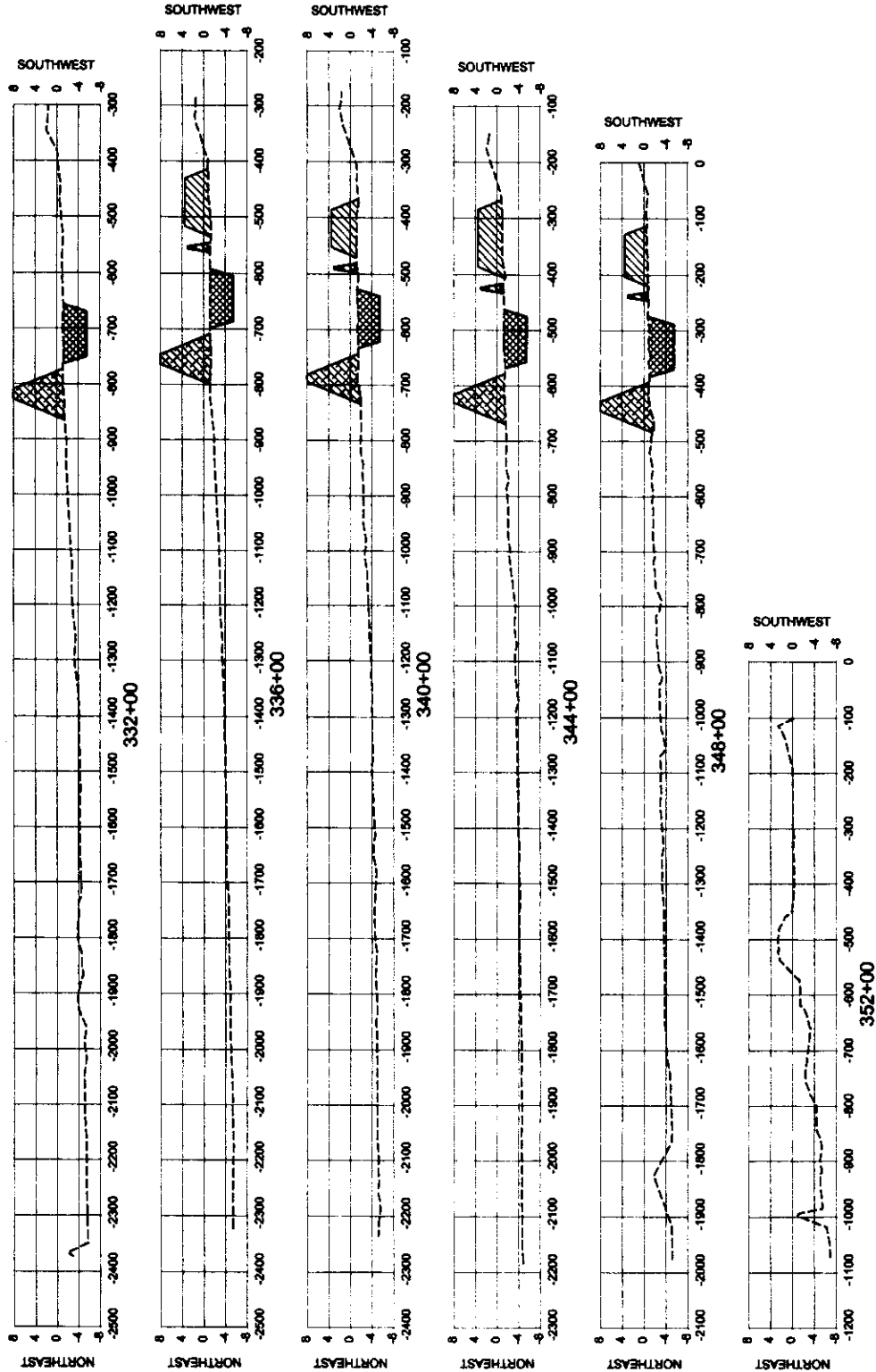


NOTE:
ALL ELEVATIONS ARE GIVEN IN THE
NORTH AMERICAN VERTICAL DATUM
OF 1988 (NAVD 88).

LEGEND	
---	EXISTING BOTTOM
▨	ROCK BREAKWATER
▤	FLOTATION CHANNEL
▥	PERMANENT DREDGE FILL
▦	TEMPORARY SPOIL



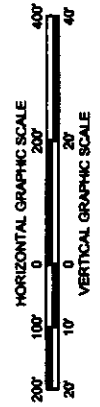
OFFICE OF COASTAL PROTECTION & RESTORATION ENGINEERING BRANCH BATON ROUGE, LOUISIANA 70801		GRAND LAKE SHORELINE PROTECTION	ADDITIVE ALTERNATE 2 SECTIONS
DRAWN BY: KENSTY CARTY		STATE PROJECT NUMBER: ME-21	DATE: JANUARY 2009
DESIGNED BY: WHITNEY THOMPSON		FEDERAL PROJECT NUMBER:	SHEET 21 OF 24
REV	DATE	DESCRIPTION	



NOTE:
ALL ELEVATIONS ARE GIVEN IN THE
NORTH AMERICAN VERTICAL DATUM
OF 1988 (NAVD 88).

LEGEND

- EXISTING BOTTOM
- ███ ROCK BREAKWATER
- ███ FLOTATION CHANNEL
- ███ PERMANENT DREDGE FILL
- ███ TEMPORARY SPOIL



REV.	DATE	DESCRIPTION	BY	DESIGNED BY: WHITNEY THOMPSON

OFFICE OF COASTAL PROTECTION & RESTORATION
ENGINEERING BRANCH
401 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

GRAND LAKE
SHORELINE PROTECTION
STATE PROJECT NUMBER: ME-21
FEDERAL PROJECT NUMBER:
APPROVED BY: RUSSE JORDON, P.E.

ADDITIVE ALTERNATE 2
SECTIONS
DATE: JANUARY 2009
SHEET 24 OF 24