PROJECT COMPLETION REPORT[1]

PROJECT NAME — **BARATARIA LANDBRIDGE SHORELINE PROTECTION C. U. #2**

CWPPRA/STATE PROJECT NO. — **BA-27**

Report Date: January 8, 2003 **BY:** USDA - NRCS

1. **Project Managers/Contracting Officer:**

DNR Project Manager	**Hilary Thibodeaux**	**Telephone**	**(985) 449-5105**
DNR Construction Project Manager	**Brian Babin**	**Telephone**	**(985) 447-0956**
DNR Monitoring Manager	**Melissa Hymel**	**Telephone**	**(504) 288-4684**
Federal Agency Project Manager	**Quin Kinler**	**Telephone**	**(225) 382-2047**
Federal Agency Contracting Officer	**Charles Phillips**	**Telephone**	**(318) 473-7796**
Federal Agency Construction Engineer	**Dale Garber**	**Telephone**	**(985) 447-6050**
Federal Agency Design Engineer	**Cherie LaFleur**	**Telephone**	**(318) 473-7674**
Federal Agency Construction Inspector	**Robert Payton**	**Telephone**	**(985) 447-6050**

2. **Location and description of projects as approved for construction by Task Force.**
The Barataria Basin Land Bridge Shoreline Protection Project Phase 1 is located in both Jefferson and Lafourche Parishes, Louisiana, central to a point approximately 14 miles south of Lafitte, along the south-east bank of Bayou Rigolettes and the west bank of Bayou Perot. The entire project area encompasses intermediate marsh, brackish marsh, upland shrub, and open water habitat. This project area was identified by the CWPPRA Environmental Work Group (EnvWG) and represents the acreage that, without the project over 20 years, would be lost directly to shoreline erosion, as well as additional acreage that would be affected by increased tidal exchange, coalescence of interior ponds, and deepening of interior ponds throughout the project life. This project will be completed in multiple construction contracts. **This project completion report is representative of only that portion of the work completed in Construction Unit #2.**

The objective of the Barataria Basin Land Bridge Shoreline Protection Project is to reduce or eliminate shoreline/ bank-line erosion for portions of Bayous Perot and Rigolettes in Jefferson and Lafourche Parishes. Secondary benefits would include maintenance and, in some areas, an increased extent of submerged aquatic vegetation.

Construction Unit #2 includes 6403 linear feet of rock dike placed parallel to the southeast shoreline of Bayou Rigolettes within Jefferson Parish in Section 28 of Township 17 South, Range 23 East.

3. **Final, as-built features, boundaries and resulting acreage (use attachments if necessary).**
This project consisted of the installation of 6403 linear feet of rock dike that parallels the existing shoreline in the area previously described. The rock dike was constructed using the COE R-400 gradation of rock riprap. The rock riprap was placed on a high strength woven geotextile for the entire length of dike. The dike was constructed with 2 horizontal to 1 vertical side slopes with a 2 foot top width at an elevation of +3.5' NAVD 88.

The dike was constructed in lifts that did not exceed 2.5' in thickness. The contractor was required to place a 2.5' thick lift for the entire length of the dike before adding additional rock. An additional requirement for the east reach was that the contractor had to construct the dike to an elevation of +1.0 and then wait a minimum of 21 days before placing another lift.

See the "As Built" plans for detailed information regarding dimensions, materials, locations, and other completed features of the project.

Actual Benefited Acres (the total project benefited acres is 1304, of which the construction unit is only a portion)

4. Key project cost elements

	CWPPRA Project Cost Estimates*	Cost Incurred as of Construction Unit #2 Completion**
Construction	**$16,974,094**	**$3,143,308.76**
E & D	**$2,349,120**	**$348,494.70**
Landrights	**$95,318**	**$0.00**
Monitoring	**$168,650**	**$0.00**
O & M	**$1,525,609**	**$1,213.24**
Total	**$21,112,791**	**$3,493,016.70**

*** Most recent estimate from CWPPRA Project estimates Report produced by USACOE.**
**** Includes funds expended for Construction Units #1 and #2**

5. Items of Work

Item No.	Work	Est. Quant.	Unit	Est. Unit Price	Est. Amount	Bid Unit Price	Bid Amount	Final Quant.	Final Amount	%Over /Under
1	Mobilization & Demobilization	1	Job	$80,000.00	$80,000.00	$65,000.00	$65,000.00	1	$65,000.00	0.0%
2	Pollution Control	1	Job	$5,000.00	$5,000.00	$10,000.00	$10,000.00	1	$10,000.00	0.0%
3	Timber Piles	8	Each	$1,200.00	$9,600.00	$1,200.00	$9,600.00	8	$9,600.00	0.0%
4	Rock Riprap	34700	Tons	$38.00	$1,318,600.00	$44.50	$1,544,150.00	32049	$1,426,180.50	-7.6%
5	Permanent Signs	8	Each	$500.00	$4,000.00	$800.00	$6,400.00	8	$6,400.00	0.0%
6	Settlement Plates	9	Each	$1,000.00	$9,000.00	$900.00	$8,100.00	9	$8,100.00	0.0%
7	Geotextile	22,000	S.Y.	$5.00	$110,000.00	$5.50	$121,000.00	24502	$134,761.00	11.4%
8	Construction Surveys	1	Job	$12,000.00	$12,000.00	$45,000.00	$45,000.00	1	$45,000.00	0.0%
9	Quality Control	1	Job	$10,000.00	$10,000.00	$24,000.00	$24,000.00	1	$24,000.00	0.0%
10	Temporary Signs	22	Each	$500.00	$11,000.00	$615.00	$13,530.00	12	$7,380.00	-45.5%

Original Est. Amount $1,569,200.00

Original Bid Amount $1,846,780.00

Final Contract Amount $1,736,421.50

6. Construction and construction oversight

Prime construction contractor	**ERCON Corporation**
Subcontractor	**Bertucci Contracting Corporation**
Original construction contract	**$1,846,780.00**
Change orders	**$ 0.00**
Over runs	**$ 13,761.00**
Under runs	**$ 124,119.50**
Final construction contract	**$1,736,421.50**

Const. oversight contractor	**NA**	**Const. amt.**	**$ 0.00**
Cons. O.S./Admin. agency	**NRCS**	**Est. amt.**	**$ 0.00**

7. **Major equipment used.**
   AB-4 Spud Barge w/ Bucyrus Erie 88B
   AB-3 Spud Barge w/ Bucyrus Erie 88B
   BB-105 Spud Barge w/ Linkbelt 3400 Excavator
   RG-623 Spud Barge w/ Linkbelt 2800 Excavator
   Tug Boats – Captain Mack, Julie Marie, Delta Dorado
   Various Rock Barges

8. **Discuss construction sequences and activities, problems encountered, solutions to problems, etc.**
   The contractor began by excavating access floatation for the east reach at Sta. 29+00 with the AB-4, then proceeding west to Sta. 13+00. Next the contractor excavated access flotation for the west reach from Sta. 24+00 to Sta. 18+00 and then from Sta. 13+00 to 5+00. All excavation for access flotation was completed for the job before proceeding with rock riprap placement. Temporary warning signs were placed along exposed spoil as the excavation proceeded.

   The contractor then placed geotextile and rock riprap from Sta. 3+20 to Sta. 34+20 for the east reach in two lifts to achieve the 1.5' elevation specified prior to the 21-day waiting period before dike section could be completed. The contractor then placed geotextile from Sta. –0+08 to Sta. 3+20 of the east reach then placed the rock riprap in two lifts. Next, the contractor moved to Sta. 34+20 and placed geotextile to Sta. 36+83 of the east reach then placed the rock riprap in two lifts to final grade. There was no waiting period between lifts of rock riprap specified in the contract for the segments from Sta. –0+08 to Sta. 3+20 and Sta. 34+20 to Sta. 36+83 of the east reach.

   The contractor then moved to the west reach and placed geotextile and the first 2.5' lift of rock riprap from Sta. –0+42 to Sta. 17+10. He then moved to Sta. 26+70 and placed geotextile and first lift of rock riprap back to Sta. 17+60, also at this time a second lift of rock riprap was placed from Sta. –0+42 to Sta. 17+10. There was no waiting period between lifts of rock riprap specified in the contract for the entire west reach.

   After the 21 day waiting period had expired, the AB-4 began placing the final lift of rock riprap on the east reach from Sta. 3+20 proceeding to Sta. 34+20 while the AB-3 and RG-623 continued placing rock riprap on the west reach. Upon reaching Sta. 17+60 of the west reach, the RG-623 and BB-105 placed geotextile and rockfill over the Chevron Pipeline crossing. Once the rockfill over the pipeline was to the specified grade, it was overlain by a second piece of geotextile and then rock riprap was placed to the final grade. The AB-4 continued to build on the east reach and the RG-623 and AB-3 continued to build on the west reach. Concurrent with the rock riprap placement, the BB-105 placed the piles for the warning signs on the east reach by pushing them into place. Once all the piles were in place the permanent warning signs were attached to the piles. The AB-3 was used to light load barges in Bayou Perot from time to time during rock riprap placement.

   On the east reach from Sta. 29+50 to Sta. 31+50, an excessive amount of settlement occurred and the contractor attempted to build the segment to final grade but could only achieve a finished elevation of approximately 2.0'. A warning sign was placed in this low area for boater safety and additional rock riprap may be placed in this area in a future contract. Upon completion of the east reach the contractor moved the AB-3 and RG-623 off site while the AB-4 and BB-105 backfilled the excavated access floatation channels.

9. **Construction change orders and field changes.**
   There was only one modification to the contract that changed the physical mailing address of the Contracting Officer. This was a no cost or time change modification.

   There were two field changes during the construction of the project.
   1. The section of the East structure from Sta. 29+50 to Sta. 31+50 was left at about a + 2.0 elevation because of excessive settlement. It is planned to either bring the area up to planned grade or reshape area as a fish dip in a later construction unit.
   2. The ends of the dike was extended by 42' at the south end and 23' at the north end of the west reach and 83' at the east end of the east reach in order to adequately tie the dike into existing shoreline.

10. **Pipeline and other utility crossings.**

Structure	Owner	Rep. To Contact
Pipeline	Chevron Pipeline	Kevin Gaudet – (504) 538-1079

11. **Safety and Accidents.**
Mr. Louis Bernardez, an employee of Bertucci Corporation, tripped over a rock on the BB-105 barge while placing geotextile. The employee was taken to West Jefferson Medical Center for examination and was placed on light duty for two days.

12. **Additional comments pertaining to construction, completed project, etc.**
See the attached NRCS Supplements.

13. **Significant Construction Dates: To be filled out by DNR Construction Project Manager or Contracting Officer for construction for Agency responsible for construction.**

Construction Unit #2 Contract No.	50-7217-6-2
	Date
Bid Opening	N/A (8-a Proposal Submitted)
Construction Contract Award	7/16/02
Preconstruction Conference	7/21/02
Notice to Proceed	7/22/02
Mobilization	7/27/02
Construction Start	7/29/02
Construction Completion	10/11/02
Final Acceptance	10/15/02

NRCS SUPPLEMENT TO COMPLETION REPORT

CONTRACT ADMINISTRATION

List any significant problems encountered in the administration of the construction contract and recommended solution for future contract of like nature.

DESCRIPTION OF PROBLEM ENCOUNTERED	RECOMMENDATIONS FOR FUTURE CONTRACTS
The question was raised about competing 8A contracts rather than having negotiated 8A contracts.	From discussions with Contracting Personnel, competition is not allowed for 8A contracts less than $3,000,000 in value. Therefore it is recommended that all 8A contracts in excess of $3,000,000 be competitive.

CONSTRUCTION SPECIFICATIONS

List any significant items in the construction specifications which caused problems, need clarification or changes for future contracts of this nature.

DESCRIPTION OF ITEM IN SPECIFICATIONS	RECOMMENDATIONS FOR FUTURE CONTRACTS
Spillage of rock during placement operation.	In future contracts require in the specifications that the contractor sweep any channel bottom for any spilled rock in areas where boat traffic is anticipated, and could possibly hit the rock (shallow channels).
Special Provisions – Notification of Pipeline Companies.	In future contracts add an additional requirement that the contractor provides the Government a written statement if a pipeline company chooses **not** to be on site during construction around their lines. This should be provided to the Government at least 48 hours prior to any work being performed near the pipeline.

GENERAL COMMENTS

List any significant items which worked well and should be repeated or which caused problems, need clarification or changes for future contracts of this nature.

DESCRIPTION OF ITEM	RECOMMENDATIONS FOR FUTURE CONTRACTS
Spilled rock in areas where boats could hit the rocks.	In areas where boat traffic is anticipated, and could possibly hit the spilled rock, NRCS inspection personnel need to be very observant. If rock spillage is observed, the contractor shall be required to remove the spilled rocks. If no spillage is directly observed, inspection personnel should probe the areas in question prior to contract completion to determine if in fact there has been any spilled rock. If spilled rocks are found, the contractor shall remove them.
Staged Placement of Rock Rip-Rap	Whenever possible, staged placement is recommended. The results from this construction unit that employed staged construction were good. Therefore it is recommended placing the first lift of rock over the entire structure to an elevation 0.5' above the average water elevation, then wait the specified number of days and place the final lift at planned grade. This would be recommended for rock dike total heights of approximately 4.5' or less. From review of the settlement plates, very little consolidation occurred between the placement of the first lift and second lifts. The intent of this recommendation is to allow a slightly greater initial load, thus potentially reducing the amount of settlement that occurs during the placement of the final lift.

LANDBRIDGE C.U. # 2
SETTLEMENT PIPES
EAST STRUCTURE

LOCATION	Initial Placement	1st check AFTER First Lift	2nd check AFTER 21day wait	3rd check AFTER Final Lift	G.P.S. Final AS BUILT	Total Settelment (ft)
Sta.4+00	8.57	8.09	8.10	7.91	7.82	
DATE TAKEN	8/24/02	8/28/02	9/17/02	9/20/02	10/22/02	
SETTELMENT	0	0.45	0	0.19	0.09	0.75
Sta.11+00	9.24	8.89	8.82	8.61	8.43	
DATE TAKEN	8/24/02	8/28/02	9/17/02	9/20/02	10/22/02	
SETTELMENT	0	0.35	0.07	0.22	0.18	0.81
Sta.19+00	8.25	7.98	7.95	7.68	7.59	
DATE TAKEN	8/24/02	8/29/02	9/17/02	10/7/02	10/22/02	
SETTELMENT	0	0.27	0.03	0.27	0.09	0.66
Sta.27+00	8.34	8.17	8.02	7.98	7.83	
DATE TAKEN	8/27/02	9/11/02	9/17/02	10/9/02	10/22/02	
SETTELMENT	0	0.17	0.15	0.04	0.15	0.51
Sta.34+00	8.32		7.99	7.94	7.61	
DATE TAKEN	9/2/02		9/17/02	10/10/02	10/22/02	
SETTELMENT	0		0.33	0.05	0.33	0.71

LANDBRIDGE C.U. # 2
SETTLEMENT PIPES
WEST STRUCTURE

LOCATION	Initial Placement	1st check Final Lift	G.P.S. survey AS Built	Total Settelment (ft)
Sta.4+00	8.13	7.87	7.75	
DATE TAKEN	9/5/02	9/12/02	10/21/02	
SETTELMENT	0	0.26	0.12	0.38
Sta.10+00	8.09	8.09	7.86	
DATE TAKEN	9/5/02	9/12/02	11/7/02	
SETTELMENT	0	0	0.23	0.23
Sta.16+00	8.39	8.39	8.12	
DATE TAKEN	9/9/02	9/17/02	10/21/02	
SETTELMENT	0	0	0.27	0.27
Sta.23+00	8.46	8.39	8.04	
DATE TAKEN	9/9/02	9/17/02	10/21/02	
SETTELMENT	0	0.07	0.35	0.42

Amendment No.1

ATTACHMENT IV

CONSTRUCTION UNIT NO.2

BA-27 BARATARIA LAND BRIDGE SHORELINE PROTECTION PROJECT

AS-BUILT DRAWINGS