

CEMVN-CD-NO-Q

10 Dec 97

✓ MEMORANDUM THRU Area Engineer, NOAO  
C/Const. Div, ATTN: Contr Admin Br

FOR C/Engr Div

SUBJECT: Contract No. DACW29-95-C-0093, Lake Pontchartrain, Louisiana and Vicinity, Floodproofing Veterans Boulevard Bridges at 17<sup>th</sup> Street Canal, Orleans and Jefferson Parishes, Louisiana, Narrative Completion Report

1. The subject contract dated 24 Aug 95 was awarded to Johnson Bros. Corp. of LA, 2002 20<sup>th</sup> Street, Suite A202, Kenner, LA 70062. The Notice to Proceed was issued on 21 Sep 95, with construction to start no later than 01 Oct 95. The original completion date was set for 12 Jun 97, with the original contract amount at \$4,021,422.00.
2. Required work under this contract included constructing two precast concrete girder bridges on Veterans Blvd. over 17<sup>th</sup> Street Canal, constructing approach slabs and asphalt overlays on bridge approaches, constructing floodwall tie-ins and floodgates adjacent to the bridges, constructing a floodgate at I-10, constructing surface drain inlets and drainlines, constructing landscaping, demolition of the existing bridges, riprap removal and dredging 17<sup>th</sup> Street Canal, fertilizing and seeding, and all other incidental work.
3. The Preconstruction Conference was held at the New Orleans Area Office on 21 Sep 95. Detailed minutes of this meeting are located in the contract file. The Notice to Proceed was signed by the contractor on 21 Sep 95, and the contractor began mobilizing field offices to the site on 01 Nov 95. The contractor started setting up the safety fences and staging area fences on 01 Nov 95.
4. This contract provided for nineteen (19) major construction phases; (1) Demolition of existing bridges, (2) Maintenance of traffic, (3) Driving 24" concrete piles, (4) Driving steel sheet piles, (5) Driving steel "H" piles, (6) Casting and installation of precast concrete girders, (7) Constructing two new floodproof bridges, (8) Constructing nine floodwall panels, (9) Installation of five floodgates, (10) Asphaltic concrete overlay, (11) Installation of four drain inlets and drain lines, (12) Detour construction, (13) Painting, (14) Permanent Pavement Markings, (15) Dredging, (16) Riprap removal, (17) Erosion control, (18) Construction of Approach slabs and curb/gutter, (19) Landscaping, and (20) Pile Tests.
5. The project was performed in six separate phases of work. These phases were changed from the original sequence of work by a Value Engineering proposal made by the contractor, and accepted by the government. The project phases are summarized as follows; Phase I - Remove median and construct asphalt crossovers. Phase II - Demolish outside westbound bridge lane and use girders to construct temporary lane on the existing eastbound bridge. Phase III - Demolish

remaining westbound bridge and construct new westbound bridge in its entirety. Phase IV - Shift traffic to new westbound bridge and demolish existing eastbound bridge. Construct new eastbound bridge in its entirety. Phase V - Remove median crossovers and restore median with landscaping. Phase VI - Completion.

The flow of traffic was maintained through the use of temporary concrete jersey barriers, signs, barrels, and stripping. Two lanes of traffic in both directions remained opened during the entire duration of the project. The contractor periodically closed one lane of traffic for delivery of materials during non peak hours (9 a.m. to 4 p.m.). However, during pile driving operations the contractor stopped all lanes of traffic for approximately five minutes at a time in order to off load the 24" concrete piles. The traffic phases were as follows; Phase I - Shift traffic to two outside lanes for median crossover work. Phase II - Shift traffic to two inside lanes for widening of the eastbound bridge. Phase III - Shift all traffic to temporarily widened eastbound bridge. Phase IV - Shift all traffic to new westbound bridge. Phase V - Shift traffic to two outside lanes for median restoration. Phase VI - Completion. The concrete jersey barriers used on subject contract were furnished by the Orleans Levee District thru the LDOTD. A total of 145 barriers were provided to the contractor, and 20 were supplied by the contractor for use on subject contract.

6. The contractor started the major phases of work on 11 Nov 95 by beginning the removal of the existing medians between C/L Stations 16+90 & 19+70, and 22+60 & 25+75, in preparation for the required Asphaltic Concrete Pavement Crossovers for traffic detours. Contractor placed the required 6" layer of crushed concrete base course material for the temporary asphalt crossover on 16 Dec 95, and Subcontractor (Barriere) placed 6" Asphaltic Binder/Wear Course Material for temporary asphalt crossover on 19 Dec 95.

7. The contractor began demolition of the existing bridges over 17<sup>th</sup> Street Canal on 27 Jan 96 by removing the outside lane of the westbound bridge, between C/L Stations 21+49 and 22+24, 39.17' to 54.17' left of C/L, using Cat. 235 Backhoe w/2000# hydraulic breaker. Barges were placed under bridges to catch debris from bridge demolition, and to prevent debris from falling into the canal. Demolition of the existing bridges was completed on 10 Mar 97, with the removal of the existing 20" x 20" x 37.5' concrete piles from the location of the existing Abutment "C". The piles were pulled with an ICE 612 Vibratory Extractor and the American 9260 Crane on the flexifloat barges. All holes left by extraction of the existing 20" concrete piles at existing Abutments "A" thru "D" were filled with bentonite slurry mix as required.

8. The Dredging and Riprap Removal phase of work under this contract, began on 19 Jun 96 and was completed on 06 May 97. The contractor used a Cat 225 Long reach Backhoe set on 10 - 40' X 10' X 5' Flexi-Float barges to perform all dredging excavation. All material dredged from the 17<sup>th</sup> Street Canal (including riprap), was placed onto the barges where it was permitted to drain overnight as required, prior to being loaded into trucks and hauled to the designated disposal site, north of Airline Highway (U.S. Hwy. 61) adjacent to Ormond Boulevard in St. Charles Parish, LA. The contractor use a subcontractor, Hamps Inc. to haul the dredge material with watertight trucks approved by the LDEQ. All trucks were washed on wash racks at the Veterans site and at the disposal site prior to leaving the sites. The truck wash rack at the disposal site was purchased by the government for use on the ongoing Corps levee project Phase IIB in the area. During

dredging operations, the government stayed in contact with the S&WB Pumping Station No. 6. All dredging operations were halted during times when the pumping station was in operation. A total of 10 hours of standby time was accumulated during the work. Some areas along the slopes of the excavated area were filled with graded stone to assure stability of the cut. A total of 782 tons of graded stone was placed on the southeast side slopes. Contractor dredged an estimated 12,894 cubic yards of material from the 17<sup>th</sup> Street Canal.

9. The contractor performed a pile load test program which started on 16 Jan 96 by driving one 24" precast prestressed concrete pile to tip elevation -89.0 after reaching refusal of 96 blows per foot, and one steel HP14X73 H-pile to tip elevation -95.0. A modification was issued to allow the concrete piles to be jetted down to El-60 and change the location of the test pile to 25' south of Veterans Boulevard. The original location was adjacent to the Stewart Building, and moved due to concern of damaging the building during pile driving operations. The piles were driven with a Vulcan 512 Air Hammer with a D-2000 air compressor, and the American 9260 Crane. The concrete pile reached refusal and was driven with the aid of water jetting at pressures of 50 psi to 300 psi. The H pile was spliced in 60' and 50' sections. The contractor used "Chance" spiral anchor systems for support piles and loaded the H-pile and concrete pile in accordance with the specified schedule. After allowing 21 days to elapse from driving the piles, the pile test program began on 21 Feb 96 with testing of the H-pile which was concluded on 24 Feb 96. The concrete pile test began on 28 Feb 96 and was concluded on 2 March 96. Delta Testing laboratory performed the load test for both piles. Both piles were tested to the full 300% of the service loads (Service Load H-pile= 65 tons Concrete pile=119 tons). The test piles were cut off 4' below natural ground and all voids filled with a cement- bentonite slurry to 2' below ground. The remaining hole was backfilled with earthen material.

10. Steel sheetpiling was driven on both sides of the canal, continuous from one existing I-wall, thru the abutments, to the other existing I-wall. The contractor used Skyline Steel type CZ113 cold rolled sheetpile for the I-walls on the Orleans Parish side, Bethlehem type PSA23 sheetpile in the abutments, and Frodingham type IB sheetpile for the I-walls on the Jefferson Parish side. The Frod type IB sheetpile were furnished by the East Jefferson Levee District for use by the contractor. All sheetpile were driven with a hairpin drop hammer, An ICE 612 vibratory hammer, the American 9260 Crane, and a steel H-beam template for maintaining alignment.

11. The driving of the 24" x 24" x 97.5' prestressed precast concrete piles for the new floodproof bridges began on 26 Aug 97 at location of Bent Cap WB-4, left of C/L Sta. 21+80 for the new westbound bridge. Contractor completed the driving of the 24" concrete piles on 31 May 97 at Bent Cap EB-4, right of C/L Sta. 21+80. Concrete piles were driven with an American 9260 Crane/Piledriver, with a Vulcan 512 Air Hammer with a D-2000 air compressor. All piles were driven with the aid of water jetting above elevation -60.0' NGVD. Concrete piles were driven to approx. tip elevations of -88.0' to -92.5', depending on refusal elevation. Piles were driven until piles received 96 blows per foot of penetration. All refusal lengths of piles, above point-of-cut elevations, were removed by contractor as required. All concrete piles were cast by Gulf Coast Prestress, Inc. in Pass Christian, MS. The jet pipes used were 3" steel weld pipe that was set alongside the concrete piles to aid the driving thru the dense upper sand layer.

In addition, the requirement to halt all driving operations if the vibrations caused by the pile driving exceeded .5 in/sec was added by modification. The driving operations was monitored by two separate testing laboratories (Alpha and Eustis Testing). At no times did the vibrations exceed the max .5 in/sec range. The piles on the westbound bridge were driven with the Air Hammer while the jetting process was performed to obtain 15 to 25 blows per foot. Some piles were driven out of tolerance in West Bent Caps 4 & 3 (most west) which required the widening of these two bent caps. A proposal by the contractor was accepted to allow the piles to be jetted down to El -50.0 without striking the pile with the hammer. This method was used on the eastbound bridge for all the concrete piles, and no piles were driven out of tolerance on this side. The contractor was instructed to drive the piles down to grade one at a time in the westbound bridge due to unsafe conditions from the amount of pile sticking out above ground (70-75').

12. The H-piles were driven at the abutments with the American 9260 Crane, the Vulcan 512 Air Hammer, and a fabricated pile template. The piles were driven without jetting down to the required tip Elevation of -95. All piles were spliced together in 60' and 50' sections and driven as one continuous pile. Pile heads were cut off at the required elevations. A total of 12 pieces of the 60' long piles were used for the temporarily widened eastbound bridge. After the existing eastbound bridge was demolished, the piles were used in the abutments for the new eastbound bridge.

13. The installation of the precast concrete girders began on 15 Nov 96, with the contractor setting 14 pieces of concrete girders between Bent Cap WB-4 and Abutment "B". The girders were set with the American 9260 Crane on the barges in the canal. Contractor completed the installation of the precast concrete girders on 25 Jun 97, with 5 concrete girders being installed between Abutment "C" and Bent Cap EB-1, and 5 concrete girders being installed between Bent Cap EB-1 and Bent Cap EB-2. Contractor installed 1" x 10" x 50" elastomeric bearing pads under each concrete girder, and also installed 1/2" x 10" compressible fill material between concrete girders, below shear keys, as required. Contractor installed 1" dywidag tension rods through all concrete girders, and tensioned all dywidag rods to 5 kips as required. All concrete girders were secured to Abutments and Bent Caps by 7" x 7" x 1/2" steel plate washers and 1-1/2" 0 galvanized nuts installed on 1-1/2" Anchor Bolts that were embedded into each Abutment and Bent Cap. After all concrete girders were secured in-place, contractor then began filling all shear-keys with a cementitious non-shrink grout, installing a 6" dumbbell waterstop in each shear-key approx. 3-1/2" from top of girders, then filled shear keys to tops of girders with non-shrink grout as required. The tie rod holes were also filled with non-shrink grout. The non-shrink cementitious grout was used in lieu of the original specified epoxy grout. The contractor proposed this substitution which was a Value engineering change accepted by the government. The change substituted the grout and modified the method of waterstop installation. The original waterstop installation was to splice the stops longitudinally along the shear keys that were to be cast into the concrete girders.

*This was not part of approved change!*

14. Contractor began placement of Class "A" Concrete (3800# mix) on 18 Jul 96, by placing concrete for the first (bottom) section of Abutment "B" at C/L Sta. 22+23, left of C/L. All bridge bent caps, abutments, approach slabs, transition barrier rails on approach slabs, curb and gutters, bolster blocks, and all ten I-walls (including the I-10 Gate Monolith) were placed with Class "A"

concrete. All rebar was Grade 60 and placed to contract drawings. An approved 9" three bulb waterstop (Vinylex Corporation) was placed between the I-wall joints, and a 6" three bulb (Vinylex Corporation) was placed between the bridge barrier (Class AA) joints. The 6" dumbbell waterstop (Vinylex) was placed at the abutments to provide waterproofing at construction joints. "L" type waterstop (Buckhorn Rubber Products) was placed at locations specified in the drawings for sealing the I-walls to the bridge barriers and floodgate monoliths. The contractor used wooden forms for placement of the I-walls and bridge barriers. Steel EFCO forms were used for abutment and bent cap placements. All I-wall placements were made in one placement and the abutments were made in two placements. The final placement of Class "A" concrete was the curb and gutter for the inside lane of the eastbound lane of traffic on Veterans Boulevard. After placement of the abutments, riprap was placed with fabric on the slopes under the bridges for erosion control.

15. Contractor began placement of Class "AA" Concrete (4200# mix) on 11 Dec 96, by placing concrete for Interior and Exterior Barrier Wall Panels #2, between C/L Stations 21+80 and 22+02.50 for the new westbound bridge. All bridge decks, interior and exterior barrier panels, and traffic barrier panels were all placed with Class "AA" concrete. The final placement of Class "AA" concrete was for eastbound traffic barrier panels #1 and #3, C/L Stations 22+02.50 to 22+25 and 21+57.50 to 21+80, respectively. The 5" concrete deck was placed with an automatic paving machine called the "Bidwell Paving unit". Concrete was delivered to the job site by concrete mixer trucks. The concrete bridge decks were placed with pump trucks starting on one end and continuously placing to the other end. The I-walls, bent caps, abutments, and bridge barriers were placed with the American 9260 Crane and/ or Cat 225 Backhoe with a concrete bucket and rubber trunks of various lengths. Quality Control was maintained daily through the use of the 1246 checkout list, with air content tests, slump tests, temperature checks, and test cylinders done by the contractor.

16. The five steel swing gates were fabricated and set in place by Manufab Inc. The gates on the Jefferson Parish side were double swing gates and the gates on the Orleans Parish side were single swing gates. The concrete monoliths were placed with steel sheetpile embedded into them. Manufab installed the gates with a Cat rubber tired Backhoe. Modifications issued concerning the gates were as follows; Relocate the gate near I-10 to the south side of I-10, Increase the width of the two Jefferson Parish side gates from 5' to 8', and move the locking device to the protected side for the Jeff Parish gates.

17. The Asphaltic Concrete Pavement phase of this project, was performed by Barriere Const., Inc. of New Orleans, LA. which included the paving of the temporary traffic cross-overs and the paving of the required asphalt taper overlays on all approaches to the new east and west bound bridges. This phase of work began on 19 Dec 95, and was completed on 20 Aug 97 with the installation (placement) of the 1-1/2" Asphaltic Wear Course for the eastbound taper approaches for the new eastbound bridge. This subcontractor also placed/installed the required 2" thick by 5' wide ACP sidewalks on all four (4) corners of new bridges for pedestrian walkways.

18. Subcontractor, Scott Derr, performed the painting of all concrete floodwall panels, interior and exterior barrier panels, and traffic barrier panels. All floodwalls were painted with the

required two coats system, and all bridge barrier panels (interior, exterior and traffic) were painted with a one coat system. All concrete bridge and I-wall panels were painted pearl gray, with the exception of the inset frame panels of floodwall panels #5 thru #9, on Orleans Parish side of 17<sup>th</sup> Street Canal, which were painted buckskin color.

19. The Landscaping phase of work for this project, was performed by Charvet's Nursery of Metairie, LA. This work began on 30 Sept 97 and was completed on 22 Oct 97. This work consisted of the installation of 20-Crepe Myrtles, 8-Shumark Oak Trees, 72-Spruce Pine Trees, 8-Bald Cypress Trees, 19-Indica Azaleas, 10-Saop Palm Tres, 155-Indian Hawthorns, 76-Shore Junipers, 580-Green Liriope, and 273-Annual Colors. The seeding and fertilizing of disturbed areas was performed by subcontractor, Economy Grassing of Ethel, LA. on 21 Oct 97 & 6 Nov 97. All landscaping will be maintained by the contractor for one full year.

20. There were thirty-four (34) modifications on this contract. A summary of each is as follows:

a. P0001 (FM-001) dated 30 Nov 95, provides for additional funds available for payment for work performed under this contract, in the amount of \$110,000.00

b. P0002 (FM-002) dated 21 Dec 95, provides for additional funds available for payment for work performed under this contract, in the amount of \$555,000.00.

c. P0003 (CAN-02) dated 08 Jan 96, changes the amount in the 5<sup>th</sup> sentence of Mod. P0002, Block 14, to read \$555,000.00.

d. A00001 (CAN-01) dated 31 Oct 95, changes the contractor's mailing address to P.O. Box 54778, New Orleans, LA 70154.

e. A00002 (CIN-04) dated 08 Dec 95, revised the "Order of Work" for this contract. The contract price remains unchanged.

f. A00003 (CIN-02) dated 20 Dec 95, is a Value Engineering Change Proposal (VECP) changing the "Construction Sequence" of this project. This mod adds Pay Items #026 and #027 to the contract. The contract price was decreased by \$24,300.00, and the contract time was decreased by 18 calendar days.

g. A00004 (CIN-01) dated 28 Dec 95, is a Value Engineering Change Proposal (VECP) changing the installation of the 6" Dumbbell Waterstop by permitting the use of a non-shrink grout in lieu of epoxy grout. This mod adds Pay Items #028 and #029 to the contract. The contract price was decreased by \$25,527.70, and the contract time was increased by 07 calendar days.

h. A00005 (CIN-03 & CIN-06) dated 05 Jan 96, changes the location of the pile load test (CIN-03), and allows the jetting of concrete piles (CIN-06). This mod adds Pay Item #030, to the contract. The contract price was increased by \$3,300.00, and the contract time remained unchanged.

i. A00006 (CIN-07) dated 22 Feb 96, provides for the use of A572 steel in lieu of A588 steel for the steel H-piles. This mod decreased Pay Item #006 by \$3,351.20, therefore, the contract price also decreased by \$3,351.20. The contract time remained unchanged.

j. A00007 (CIN-08) dated 01 Mar 96, changes the pile type for the temporary widening of the eastbound bridge from 14" diameter steel pipe piles to steel HP14X73 piles at 60 feet long, and adds the requirement to halt driving operations when ground velocities reach or exceed 0.5 inches per second. The contract price and time remained unchanged.

k. P00004 (FM-003) dated 20 Mar 96, provides for additional funds available for payment for work performed under this contract by \$1,300,000.00.

l. A00008 (CIN-05) dated 15 Mar 96, revises the widths of two gate openings, relocates one gate opening, and revises miscellaneous elevations and details. This mod increases Pay Item #011 by \$28,000.00. The total contract price was increased by \$28,000.00, and the contract time remained unchanged.

m. A00009 (TE-001) dated 07 Jun 96, increases the contract time by four (4) calendar days due to unusually severe weather during the period from 21 Sep 95 through 31 May 96.

n. P00005 (FM-004) dated 17 Sep 96, provides for additional funds available for payment for work performed under this contract by \$143,700.00.

o. P00006 (FM-005) dated 15 Oct 96, provides for additional funds available, for payment for work performed under this contract by a total amount of \$547,740.00, which includes an increase of \$47,740.00 for Pay Item #023AB of this contract.

p. A00010 (CIN-10) dated 18 Oct 96, provides for the purchase by the Government from the contractor of the truck wash rack at the north end of the Airline Highway concrete bridge entrance to the dredged material disposal site. This mod adds Pay Item #031 to the contract. The contract price was increased by \$6,744.17, and the contract time remained unchanged.

q. A00011 (TE-002) dated 04 Nov 96, increases the contract time by five (5) calendar days due to unusually severe weather during the period from 01 Jun 96 through 31 Oct 96.

r. A00012 (CIN-11) dated 22 Nov 96, provides for the change of the grout around the Dywidag tie-rods from an epoxy to a cementitious base grout. The total contract price was decreased by \$2,700.00, and the contract time remained unchanged.

s. P00007 (FM-006) dated 21 Feb 97, provides for additional funds available for payment for work performed under this contract by \$96,818.83.

t. A00013 (TE-003) dated 13 Feb 97, increases the contract time by seven (7) calendar days due to unusually severe weather and two (2) calendar days due to high tidal stages during the period from 01 Nov 96 through 31 Jan 97.

u. A00014 (CIN-12) dated 04 Feb 96, provides for additional asphaltic concrete base course material. This mod adds Pay Item #032 to the contract. The contract price was increased by \$21,700.00 and the contract time was increased by one (1) calendar day.

v. P00008 (FM-007) dated 11 Apr 97, provides for additional funds available for payment for work performed under this contract by \$1,160,024.27.

w. A00015 (CIN-13) dated 25 Mar 97, provides for an extension of time due to an overrun on Bid (Pay) Item #023AB, "Dredging". The contract time was increased by twenty (20) calendar days.

x. A00016 (CIN-14) dated 21 Apr 97, provides for the cutting of the concrete and steel test piles 4 feet below existing ground in lieu of pulling the piles from the ground. Pay Item #016 was decreased by \$1,600.00. The total contract price was decreased by \$1,600.00, and the contract time remained unchanged.

y. A00017 (CIN-15) dated 23 Apr 97, is provided to reduce the width of floodgate panel number 4 and to demolish a section of the adjacent floodwall. This mod increases Pay Item #008 by \$1,351.00. The total contract price was increased by \$1,351.00, and the contract time remained unchanged.

z. A00018 (TE-004) dated 02 May 97, increases the contract time by fifteen (15) calendar days due to unusually severe weather during the period from 01 Feb 97 through 30 Apr 97.

aa. A00019 (CIN-18) dated 30 Jun 97, provides for the placement of additional riprap in the areas of excess dredging caused by stump removal. This mod increases Pay Item #001 and adds Pay Item #033 to the contract. The total contract price was increased by \$35,375.00, and the contract time was increased by eight (8) calendar days.

bb. P00009 (FM-008) dated 29 Apr 97, provides for additional funds available for payment for work under this contract by \$13,860.00.

cc. A00020 (CIN-17) dated 17 Jul 97, the installation of the latching devices of two (2) gates from the floodside to the protected side. This mod increases Pay Item #011 by \$2,420.00. The total contract price was increased by \$2,420.00, and the contract time remained unchanged.

dd. A00021 (CIN-19) dated 12 Aug 97, provides for the delays due to changes in pile driving procedures, obstructions encountered and sawcutting, chipping and removal of concrete pile refusal lengths.

ee. A00022 (CIN-20) dated 11 Sep 97, provides for demolition and removal of additional curb from the inside eastbound and westbound lanes between stations 22+25 and 25+90. This mod increases Pay Item #002 by \$2,386.57. The total contract price was increased by \$2,386.57, and the contract time remained unchanged.



ff. A00023 (TE-005) dated 12 Sep 97, increases the contract time by thirty (30) calendar days for unusually severe weather and two (2) calendar days for high tidal stages during the period from 01 May 97 through 31 Jul 97.

gg. P00010 (FM-009) dated 10 Oct 97, provides for additional funds available for payment for work under this contract by \$38,581.57.

hh. A00024 (TE-006) dated 25 Nov 97, increased the contract time by ten (10) days for unusually severe weather during the period of 1 Aug 97 thru 31 Oct 97.

21. Subcontractors performing work on this project, along with their contract responsibilities were as follows:

a. Barriere Const. Co., Inc., P.O. Box 13565, New Orleans, LA, 70185. Cold milling of existing asphalt roadway. Installation of asphaltic base, binder & wearing courses. Installation of all asphaltic concrete pavement sidewalks.

b. Ax Reinforcement Co., 2148 Grape Place, Terrytown, LA, 70056. Installation of all reinforcement steel for Class "A" Concrete, and Class "AA" Concrete.

c. Jack B. Harper, Inc., Contractor, P.O.Box 309, Mandeville, LA 70470. Installation and maintenance of the Impact Attenuators, Temporary Lane Stripping, and Permanent Pavement Markings.

d. Work Zone, Inc., P.O. Box 1630, Harvey, LA 70059. Installation, maintenance, and removal of all arrow boards, signs, barrels, lights for barrels, reflectors on temporary concrete barriers, for the 6 Phases of Traffic Controls.

e. Charvet's Garden Center, 4511 Clearview Parkway, Metairie, LA 70006. Installation and maintenance of all required plants, bushes, and trees for landscaping of project.

f. Hamps Enterprises, Inc. 1319 Newton Street, New Orleans, LA 70114. Construct and maintain the containment dike, wash rack, and limestone road at disposal site. Spread hauled dredged material into containment dike. Wash trucks at disposal site and haul dredged material from jobsite to disposal site.

g. Scott Derr Painting, 1904 San Joaquin Parkway, Friendswood, TX, 77546. Application of Special Surface Finishes to all floodwall panels, bridge barriers, and transition barriers associated with this project.

h. Economy Grassing, Route 2, Box 2351, Ethel, LA. Seeding and fertilizing of all disturbed areas.

22. The following is a list of major suppliers on the subject contract:

- a. Concrete - Carlo Ditta, Inc., New Orleans, LA.
- b. Precast Concrete Girder & 24" Piles - Gulf Coast Prestress, Inc., Pass Christian, MS.
- c. Paint/Filter Fabric/Waterstops/Grout/Etc. - Building Specialties, Inc, New Orleans, LA.
- d. Gates and Misc. Metalwork - Manufab, Inc., Kenner, LA.
- e. Steel Sheet Pile - Skyline Steel, Metairie, LA.
- f. Reinforcing Steel - Capitol Steel, Inc., Slidell, LA.
- g. Rip-Rap and Crushed Concrete - Pontchartrain Materials Corp., New Orleans, LA.
- h. Density Test/Asphalt Cores/Asphalt Plant QC/Concrete Sampling - Alpha Testing, Inc.,
- i. Concrete Pipe - La. Industries, Inc.
- j. Precast Catchbasins and Manholes - Brooks Products, LaPlace, LA.
- k. Compression Seals/Bearing Pads - D.S. Brown, Roswell, GA
- l. Steel H-Piles - L.B. Foster Co., Slidell, LA.
- m. Concrete Barriers - Standard Materials, Slidell, LA.
- n. Strip Seal Joints - Capitol City Steel, Austin, TX.
- o. Tension Rods - Dywidag Systems, Inc., Arlington, TX.

23. The contractor submitted and enforced an adequate Accident Prevention Program. The contractor performed daily safety inspections, in addition to holding weekly safety meeting with employees, and holding monthly safety meetings with supervisors. There were no lost time accidents throughout the duration of this project.

24. The following is a comparison of contract quantities versus actual quantities:

<u>Item No.</u>	<u>Description</u>	<u>Quantity &amp; Unit</u>	<u>Unit Price</u>	<u>Est. Amt.</u>	<u>Act. Qty.</u>	<u>Earnings To-Date</u>
0001	Mob & Demob (A00019)	L.S.	L.S.	\$103,375.00	100%	\$103,375.00
0002	Demolition (A00022)	L.S.	L.S.	\$402,386.57	100%	\$402,386.57
0003	Maint. Of Traffic	L.S.	L.S.	\$400,000	100%	\$400,000.00
0004	Furnish & Deliver 24" Prestress Concrete Piles	5,635 LF	\$32.00	\$180,320	5,460 LF	\$174,720.00
0005	Driving 24" Prestress Conc. Piles	5,635 LF	\$10.00	\$56,350	5,212.10 LF	\$ 52,121.00
0006	Furnish & Deliver Steel H-Piles(A0006)	2,840 LF	\$18.82	\$53,448.80	2,828.20 LF	\$ 53,226.72

0007	Driving Steel H-Piles	2,840 LF	\$ 8.00	\$22,720	2,828.20 LF	\$ 22,625.60
0008	Class "A" Concrete (A00017)	L.S.	L.S.	\$401,351	100%	\$401,351.00
0009	Class "AA" Conc.	L.S.	L.S.	\$300,000	100%	\$300,000.00
0010	Precast, Prestressed Concrete Girders (A00012)	L.S.	L.S.	\$997,300	100%	\$997,300.00
0011	Misc. Metalwork (A0008 &20)	L.S.	L.S.	\$270,420	100%	\$270,420.00
0012	Asphaltic Conc. Pavement	L.S.	L.S.	\$ 75,000	100%	\$ 75,000.00
0013	Floodwall Gate Near I-10	L.S.	L.S.	\$ 25,000	100%	\$ 25,000.00
0014	Steel Sheet Piles	3,220 SF	\$20.00	\$ 64,400	3,21.46 SF	\$64,289.20
0015	Driving Gov't Furnished Sheet Piles	L.S.	L.S.	\$ 6,000	100%	\$ 6,000.00
0016	Furnish & Drive Test Piles (A00016)	2 EA.	\$19,200	\$38,400	2 EA	\$ 38,400.00
0017	Pile Load Test	2 EA.	\$20,000	\$40,000	2 EA	\$ 40,000.00
0018	Permanent Pave. Markings	L.S.	L.S.	\$50,000	100%	\$ 50,000.00
0019	Drainage Structures	L.S.	L.S.	\$95,000	100%	\$ 95,000.00
0020	Landscaping	L.S.	L.S.	\$60,000	100%	\$ 60,000.00
0021	Maintenance of Landscaping	L.S.	L.S.	\$ 5,000	0%	\$ 0.00
0022	Detour Construction	L.S.	L.S.	\$100,000	100%	\$100,000.00

0023	Dredging					
	AA. First 8,000 CY	8,000 CY	\$30.00	\$240,000	8,000 CY	\$240,000.00
	BB. All Over 8,000 CY	2,200 CY	\$22.00	\$ 48,400	4,894 CY	\$107,668.00
0024	Erosion Control					
	AA. First 800 LF	800 LF	\$ 5.00	\$ 4,000	800 LF	\$ 4,000.00
	BB. All Over 800 LF	180 LF	\$ 4.00	\$ 720	45 LF	\$ 180.00
0025	Standby Cost (Dredging)					
	AA. First 64 Hours	64 HR	\$125.00	\$8,000	10 HR	\$ 1,250.00
	BB. All Over 64 Hours	32 HR	\$116.00	\$3,712	0 HR	\$ 0.00
0026	VECP (A0003)	L.S.	L.S.	(-\$54,000)	100%	(-\$54,000.00)
	Construction Sequence					
0027	VECP, Payment	L.S.	L.S.	\$29,700	100%	\$ 29,700.00
	Const. Sequence					
	(A0003)					
0028	VECP	L.S.	L.S.	(-\$56,728.22)	100%	(-\$56,728.22)
	Waterstop Change					
	(A0004)					
0029	VECP, Payment	L.S.	L.S.	\$31,200.52	100%	\$ 31,200.52
	Waterstop Change					
	(A0004)					
0030	Jetting Setup	L.S.	L.S.	\$ 3,300	100%	\$ 3,300.00
	(A0005)					
0031	Purchase of Truck	L.S.	L.S.	\$6,744.17	100%	\$ 6,744.17
	Wash Rack					
	(A00010)					
0032	Additional Asphaltic	350 Tons	\$62.00	\$21,700	226 Tons	\$ 14,012.00
	Base Course					
	(A00014)					
0033	Repair Excess	800 Tons	\$40.00	\$32,000	782 Tons	\$ 31,280.00
	Dredging					
	(A00019)					
0034	Delays Driving	L.S.	L.S.	\$16,045.19	100%	\$ 16,045.19
	24" Piles(A00021)					
	Totals			\$ 4,081,265.03		\$ 4,105,866.75

25. A copy of the "As-Built" drawings are attached.

26. The contract was completed in accordance with contract plans and specifications, with the Substantial Completion on 3 Dec 97.



JULES BOUDREAUX  
Project Engineer  
New Orleans Area Office

CF:  
Proj Engr (Boudreaux)  
Proj Insp (Bryant)  
Ofc Engr (w/as-built)  
CEMVN-CD-Q  
CEMVN-PA  
CEMVN-CT  
CEMVN-ED-C  
CEMVN-CD-CS  
CEMVN-CD-B  
CEMVN-PP  
CEMVN-OD-ON