

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P. I. No. 142291-, Hall County **OFFICE** Preconstruction
BRST-2424(3)
SR 284 over Lake Lanier/Chattahoochee River **DATE** September 5, 2007
FROM *Genetha Rice-Singleton*
Genetha Rice-Singleton, Assistant Director of Preconstruction
TO *rs* SEE DISTRIBUTION

SUBJECT APPROVED REVISED PROJECT CONCEPT REPORT

Attached for your files is the approval for subject project.

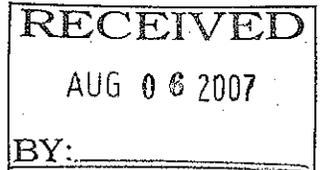
GRS/cj

Attachment

DISTRIBUTION:

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- Glenn Bowman
- Ken Thompson
- Jamie Simpson
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- Babs Abubakari
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- BOARD MEMBER**

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**



INTERDEPARTMENT CORRESPONDENCE

FILE **BRST-2424(3) HALL COUNTY** **OFFICE** Atlanta
SR 284 over Lake Lanier/Chattahoochee River
P.I. No. 142291

M. Babs Abubakari

FROM Mohammed (Babs) Abubakari, State Consultant Design Engineer **DATE** August 1, 2007

TO Genetha Rice-Singleton, Assistant Director of Preconstruction

SUBJECT **REVISED PROJECT CONCEPT REPORT**

Attached is the original copy of the Revised Concept Report for your further handling for approval in accordance with the Plan Development Process (PDP).

The original concept and first concept revision are revised by the changing of the size and location of a pedestrian culvert. In addition, an off-site detour has also been added to decrease pedestrian culvert construction time and cost.

The Revised Concept Report as presented herein and submitted for approval, is consistent with the State Transportation Improvement Program (STIP).

DATE 8/02/2007

Angela J. Alexander

State Transportation Planning Administrator

Distribution:

Project Review Engineer
State Environmental/Location Engineer
State Traffic Safety and Design Engineer
State Transportation Planning Administrator
State Transportation Financial Management Administrator
District 1 Engineer
State Bridge Design Engineer
Consultant Design Office

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

SECOND REVISED PROJECT CONCEPT REPORT

Need & Purpose: Bridge project BRST-2424(3) will replace the structurally deficient bridge located on State Route (SR) 284 over Chattahoochee River. The bridge sufficiency rating is 48.20. The Office of Bridge Maintenance has determined that any structure with a sufficiency rating less than 50 should be replaced rather than improved. This project will replace the existing bridge with a structurally adequate bridge.

This section of SR 284 is functionally classified as a rural major collector roadway. The posted speed limit along this section of SR 284 is 45 mph. The bridge is located 4 miles north of the city of Gainesville and was constructed in 1958. The Average Daily Traffic (ADT) along this section of roadway was 8,050 VPD in 2000 with one percent trucks. The projected 2011 and 2031 ADT for this section of roadway is 11,000 VPD and 15,000 VPD respectively.

Replacing this bridge will bring it up to current design standards and in doing so will improve the operation and safety of this roadway.

Project Location: This project consists of SR 284 over Chattahoochee River, located 4 miles north of the city of Gainesville in Hall County, in the 411th & 570th G.M.D.

Description of the approved concept: The approved concept is to build the proposed bridge 50 ft east of the existing bridge. Traffic will be maintained on the existing bridge during construction. The roadway typical section consists of two 12 foot travel lanes, 4 ft bike lanes, curb and gutter, and urban shoulders with 5 ft sidewalks.

Description of the first approved revised concept: The approved revised concept added a 10 ft x 10 ft pedestrian culvert near the north end of the proposed bridge to connect Hall County parks located on each side of SR 284. Hall County and the US Army Corp of Engineers requested a means to safely move pedestrian traffic across SR 284. The pedestrian culvert was chosen as the most economical solution compared to extending the roadway bridge or a pedestrian bridge alternate.

PDP Classification:

Full Oversight (), Exempt (X), SF (), Other ()

Functional Classification: Rural Major Collector

U. S. Route Number(s): N/A

State Route Number(s): 284

Traffic (AADT) as shown in the approved concept:

Current Year: (2011) - 11,000

Design Year: (2031) - 15,000

Proposed features to be revised: Proposed revision of the 10 ft x 10 ft pedestrian culvert near the north end of the proposed bridge to a 10 ft x 8 ft pedestrian culvert located at the entrance of Clarks Bridge Park. The profile grade will be raised to accommodate the revised pedestrian culvert, which will be constructed on an existing alignment section of the project. To maintain traffic during construction an off-site detour (approved July 19, 2007) will be used.

Updated Traffic Data (AADT): No change from approved concept

Programmed/Schedule:

P.E. 2000

R/W 2008

Construction LR ✓

Revised cost estimates:

- | | | |
|----|--|----------------|
| 1. | Construction cost including inflation and E&C, | \$9,326,000.00 |
| 2. | Right-of-way, and | \$ 633,000.00 |
| 3. | Utilities | \$ 15,000.00 |

Is the project located in a non-attainment area? Yes X No

Recommendation: The Consultant Design Office recommends that the proposed revision to the concept be approved for implementation.

Attachments:

1. Cost Estimate

Concur: _____


Director of Preconstruction

Approve: _____


Chief Engineer

Estimate Report for file "142291_2006-07-262006107215_2006-12-18"

| Section Roadway | | | | | |
|---------------------------|----------|-------|------------|---|-----------------------|
| Item Number | Quantity | Units | Unit Price | Item Description | Cost |
| 150-1000 | 1 | LS | 25000.00 | TRAFFIC CONTROL - BRST-2424(3) | 25000.00 |
| 150-5010 | 1 | EA | 11124.74 | TRAFFIC CONTROL, PORTABLE IMPACT ATTENUATOR | 11124.74 |
| 153-1300 | 1 | EA | 75272.56 | FIELD ENGINEERS OFFICE TP 3 | 75272.56 |
| 208-0200 | 19640 | CY | 42.23 | ROCK EMBANKMENT | 829397.20 |
| 210-0100 | 1 | LS | 166668.00 | GRADING COMPLETE - BRST-2424(3) | 166668.00 |
| 318-3000 | 200 | TN | 17.21 | AGGR SURF CRS | 3442.00 |
| 433-1000 | 337 | SY | 135.15 | REINF CONC APPROACH SLAB | 45545.55 |
| 441-0104 | 2650 | SY | 37.12 | CONC SIDEWALK, 4 IN | 98368.00 |
| 441-0301 | 4 | EA | 1876.27 | CONC SPILLWAY, TP 1 | 7505.08 |
| 441-6022 | 2760 | LF | 19.34 | CONC CURB & GUTTER, 6 IN X 30 IN, TP 2 | 53378.40 |
| 500-9999 | 80 | CY | 196.43 | CLASS B CONC, BASE OR PVMT WIDENING | 15714.40 |
| 550-2180 | 85 | LF | 28.99 | SIDE DRAIN PIPE, 18 IN, H 1-10 | 2464.15 |
| 550-4118 | 4 | EA | 636.02 | FLARED END SECTION 18 IN, SIDE DRAIN | 2544.08 |
| 576-1018 | 164 | LF | 26.13 | SLOPE DRAIN PIPE, 18 IN | 4285.32 |
| 620-0200 | 4170 | LF | 68.96 | TEMPORARY BARRIER, METHOD NO. 2 | 287563.20 |
| 634-1200 | 20 | EA | 104.82 | RIGHT OF WAY MARKERS | 2096.40 |
| 641-1100 | 133 | LF | 51.47 | GUARDRAIL, TP T | 6845.51 |
| 641-1200 | 1263 | LF | 18.54 | GUARDRAIL, TP W | 23416.02 |
| 641-5001 | 3 | EA | 617.35 | GUARDRAIL ANCHORAGE, TP 1 | 1852.05 |
| 641-5012 | 3 | EA | 1871.80 | GUARDRAIL ANCHORAGE, TP 12 | 5615.40 |
| 668-1100 | 1 | EA | 2277.92 | CATCH BASIN, GP 1 | 2277.92 |
| Section Sub Total: | | | | | \$1,670,375.98 |

| Section Required Pavement | | | | | |
|---------------------------|----------|-------|------------|---|---------------------|
| Item Number | Quantity | Units | Unit Price | Item Description | Cost |
| 310-5100 | 2934 | SY | 16.00 | GR AGGR BASE CRS, 10 INCH, INCL MATL | 46944.00 |
| 402-1812 | 208 | TN | 75.00 | RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & LIME | 15600.00 |
| 402-3121 | 1074 | JN | 75.00 | RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME | 80550.00 |
| 402-3130 | 588 | TN | 75.00 | RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME | 44100.00 |
| 402-3190 | 613 | TN | 75.00 | RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME | 45975.00 |
| 413-1000 | 621 | GL | 1.84 | BITUM TACK COAT | 1142.64 |
| Section Sub Total: | | | | | \$234,311.64 |

| Section Erosion Control | | | | | |
|-------------------------|----------|-------|------------|--|----------|
| Item Number | Quantity | Units | Unit Price | Item Description | Cost |
| 163-0232 | 3 | AC | 571.97 | TEMPORARY GRASSING | 1715.91 |
| 163-0240 | 100 | TN | 183.84 | MULCH | 18384.00 |
| 163-0300 | 5 | EA | 2872.37 | CONSTRUCTION EXIT | 14361.85 |
| 163-0503 | 1 | EA | 549.25 | CONSTRUCT AND REMOVE SILT CONTROL GATE, TP 3 | 549.25 |
| 163-0530 | 600 | LF | 3.67 | CONSTRUCT AND REMOVE BALED STRAW EROSION CHECK | 2202.00 |
| 165-0030 | 2250 | LF | 1.83 | MAINTENANCE OF TEMPORARY SILT FENCE, TP C | 4117.50 |
| 165-0050 | 600 | LF | 4.83 | MAINTENANCE OF SILT RETENTION BARRIER | 2898.00 |
| 165-0070 | 300 | LF | 2.29 | MAINTENANCE OF BALED STRAW EROSION CHECK | 687.00 |
| 165-0087 | 1 | EA | 178.48 | MAINTENANCE OF SILT CONTROL GATE, TP 3 | 178.48 |
| 165-0101 | 5 | EA | 660.01 | MAINTENANCE OF CONSTRUCTION EXIT | 3300.05 |
| 167-1000 | 2 | EA | 1349.35 | WATER QUALITY MONITORING AND SAMPLING | 2698.70 |
| 167-1500 | 18 | MO | 1035.76 | WATER QUALITY INSPECTIONS | 18643.68 |
| 170-1000 | 600 | LF | 19.00 | FLOATING SILT RETENTION BARRIER | 11400.00 |
| 171-0030 | 4500 | LF | 3.84 | TEMPORARY SILT FENCE, TYPE C | 17280.00 |
| 603-2180 | 14 | SY | 43.48 | STN DUMPED RIP RAP, TP 3, 12 IN | 608.72 |
| 603-7000 | 14 | SY | 4.83 | PLASTIC FILTER FABRIC | 67.62 |
| 700-6910 | 6 | AC | 906.91 | PERMANENT GRASSING | 5441.46 |
| 700-7000 | 5 | TN | 58.05 | AGRICULTURAL LIME | 290.25 |
| 700-7010 | 5 | GL | 19.30 | LIQUID LIME | 96.50 |
| 700-8000 | 2 | TN | 348.14 | FERTILIZER MIXED GRADE | 696.28 |
| 700-8100 | 84 | LB | 2.04 | FERTILIZER NITROGEN CONTENT | 171.36 |

| | | | | | |
|---------------------------|------|----|------|------------------------------|---------------------|
| 716-2000 | 3700 | SY | 1.15 | EROSION CONTROL MATS, SLOPES | 4255.00 |
| Section Sub Total: | | | | | \$110,043.61 |

| Section Traffic Signs & Marking | | | | | |
|--|----------|-------|------------|---|--------------------|
| Item Number | Quantity | Units | Unit Price | Item Description | Cost |
| 636-1020 | 16 | SF | 15.31 | HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 3 | 244.96 |
| 636-1031 | 43 | SF | 26.99 | HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING TP 6 | 1160.57 |
| 636-2070 | 99 | LF | 8.75 | GALV STEEL POSTS, TP 7 | 866.25 |
| 652-5301 | 4200 | LF | 0.52 | SOLID TRAF STRIPE, 6 IN, WHITE | 2184.00 |
| 652-5701 | 12 | LF | 2.71 | SOLID TRAF STRIPE, 24 IN, WHITE | 32.52 |
| 653-1502 | 3056 | LF | 0.69 | THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW | 2108.64 |
| 653-1804 | 825 | LF | 1.99 | THERMOPLASTIC SOLID TRAF STRIPE, 8 IN, WHITE | 1641.75 |
| 654-1001 | 62 | EA | 3.64 | RAISED PVMT MARKERS TP 1 | 225.68 |
| 657-1054 | 2080 | LF | 4.82 | PREFORMED PLASTIC SOLID PVMT MKG, 5 IN, WHITE, TP PB | 10025.60 |
| 657-6054 | 2080 | LF | 4.69 | PREFORMED PLASTIC SOLID PVMT MKG, 5 IN, YELLOW, TP PB | 9755.20 |
| Section Sub Total: | | | | | \$28,245.17 |

| Section Bridge | | | | | |
|---------------------------|----------|-------|------------|-----------------------------------|-----------------------|
| Item Number | Quantity | Units | Unit Price | Item Description | Cost |
| 000-0000 | 48000 | SF | 120.00 | PROPOSED BRIDGE, BR NO -1 | 5760000.00 |
| 540-1102 | 1 | LS | 218208.91 | REMOVAL OF EXISTING BR, BR NO - 1 | 218208.91 |
| Section Sub Total: | | | | | \$5,978,208.91 |

| Section Pedestrian Culvert | | | | | |
|-----------------------------------|----------|-------|------------|--------------------------------------|---------------------|
| Item Number | Quantity | Units | Unit Price | Item Description | Cost |
| 207-0203 | 200 | CY | 50.55 | FOUND BKFILL MATL, TP II | 10110.00 |
| 441-0105 | 300 | SY | 42.00 | CONC SIDEWALK, 5 IN | 12600.00 |
| 500-3101 | 211 | CY | 578.66 | CLASS A CONCRETE | 122097.26 |
| 511-1000 | 30825 | LB | 0.95 | BAR REINF STEEL | 29283.75 |
| 550-1180 | 355 | LF | 41.02 | STORM DRAIN PIPE, 18 IN, H 1-10 | 14562.10 |
| 550-4118 | 1 | EA | 636.02 | FLARED END SECTION 18 IN, SIDE DRAIN | 636.02 |
| 603-2181 | 10 | SY | 45.10 | STN DUMPED RIP RAP, TP 3, 18 IN | 451.00 |
| 603-7000 | 10 | SY | 4.83 | PLASTIC FILTER FABRIC | 48.30 |
| 668-2105 | 2 | EA | 4663.90 | DROP INLET, GP 1, SPCL DES | 9327.80 |
| Section Sub Total: | | | | | \$199,116.23 |

| Section Additional Roadway Items & Required Pavement | | | | | |
|---|----------|-------|------------|---|---------------------|
| Item Number | Quantity | Units | Unit Price | Item Description | Cost |
| 150-1000 | 1 | LS | 25000.00 | TRAFFIC CONTROL - Additional Due to Pedestrian Culvert | 25000.00 |
| 210-0100 | 1 | LS | 20000.00 | GRADING COMPLETE - Additional Due to Pedestrian Culvert | 20000.00 |
| 310-5100 | 2650 | SY | 16.00 | GR AGGR BASE CRS, 10 INCH, INCL MATL | 42400.00 |
| 318-3000 | 100 | TN | 17.21 | AGGR SURF CRS | 1721.00 |
| 402-1812 | 50 | TN | 75.00 | RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME | 3750.00 |
| 402-3121 | 220 | TN | 75.00 | RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME | 16500.00 |
| 402-3130 | 286 | TN | 75.00 | RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME | 21450.00 |
| 402-3190 | 468 | TN | 75.00 | RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME | 35100.00 |
| 413-1000 | 250 | GL | 1.84 | BITUM TACK COAT | 460.00 |
| 441-0104 | 445 | SY | 37.12 | CONC SIDEWALK, 4 IN | 16518.40 |
| 441-6022 | 800 | LF | 19.34 | CONC CURB & GUTTER, 6 IN X 30 IN, TP 2 | 15472.00 |
| 500-9999 | 20 | CY | 196.43 | CLASS B CONC, BASE OR PVMT WIDENING | 3928.60 |
| 550-2180 | 120 | LF | 28.99 | SIDE DRAIN PIPE, 18 IN, H 1-10 | 3478.80 |
| 550-3518 | 6 | EA | 598.44 | SAFETY END SECTION 18 IN, STORM DRAIN, 6:1 SLOPE | 3590.64 |
| 620-0200 | 700 | LF | 68.96 | TEMPORARY BARRIER, METHOD NO. 2 | 48272.00 |
| Section Sub Total: | | | | | \$257,641.44 |

Total Estimated Cost: \$8,477,942.98

Subtotal Construction Cost \$8,477,942.98

E&C Rate 10.0 % \$847,794.30

Inflation Rate 5.0 % @ 0.0 Years \$0.00

Total Construction Cost \$9,325,737.28

Right Of Way \$633,000.00

ReImb. Utilities \$15,000.00

Grand Total Project Cost \$9,973,737.28