ORIGINAL TO GENERAL FILES

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P. I. No. 245400-, Morgan County
BRST-2938(4)
SR 83 over Little Sandy Creek

OFFICE Preconstruction

DATE July 6, 2006

FROM Margaret B. Pirkle, P.E., Assistant Director of Preconstruction

TO SEE DISTRIBUTION

SUBJECT APPROVED REVISED PROJECT CONCEPT REPORT

Attached for your files is the approval for subject project.

MBP/cj

Attachment

DISTRIBUTION:

Brian Summers
Harvey Keepler
Ken Thompson
Jamie Simpson
Michael Henry
Keith Golden
Joe Palladi (file copy)
Babs Abubakari
Mike Thomas
BOARD MEMBER

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

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JUN 19 2006
BY:

FILE **BRST-2938(4) MORGAN COUNTY**
SR 83 OVER Little Sandy Creek
P.I. No. 245400

OFFICE Atlanta

M. Babs Abubakari

FROM Mohammed (Babs) Abubakari, State Consultant Design Engineer

DATE June 13, 2006

TO Meg Pirkle, 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 is changed from a 10' X 10' box culvert to a 145' bridge due to that the United States Fish & Wildlife Service (USFWS) would not approve the culvert. A Bridge was requested by The Office of Environment Location to minimize stream channel loss.

The revised concept report as presented herein and submitted for approval is consistent with that which is included in the State Transportation Improvement Program (STIP).

DATE 6/19/06

State Transportation Planning Administrator

Distribution:

Project Review Engineer
State Environmental/Location Engineer
State Traffic Operations Engineer
State Transportation Planning Administrator
State Transportation Programming Engineer
District 2 Engineer
State Bridge Design Engineer
Consultant Design Office

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

SECOND REVISED PROJECT CONCEPT REPORT

Need & Purpose: Bridge project BRST-2938(4) will replace the structurally deficient bridge located on State Route 83 over Little Sandy Creek, 4 miles south of Bostwick, Georgia. The bridge's sufficiency rating is 45.00. 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.

State Route 83 is functionally classified as a rural major collector. The posted speed limit along SR 83 is 55 mph. The section where the proposed bridge project improvement would take place is a school bus route. SR 83 is not part of the Statewide Bicycle Plan. The bridge is located 4 miles south of Bostwick, Georgia and was constructed in 1949. Trucks represent 8% of the traffic of SR 83. The Average Daily Traffic (ADT) along this section of highway for 2002 is 2,900. The projected ADT for the year 2010 is 3,400 and the projected (2030) ADT for this section of highway is 5,000.

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 83 over Little Sandy Creek, located in Morgan County four miles south of Bostwick, in G.M.D 284.

Description of the approved concept: The approved concept is to build the proposed culvert in the same location as the existing bridge by closing the road and detouring traffic off-site during construction. The roadway typical section consists of two 12 feet travel lanes with 10 feet rural shoulders. The approved construction cost is $981,376.31, which is based on minimal improvements to the off-site detour roadway.

Description of the first approved revised concept: The approved revised concept was to construct the triple 10'X10' concrete box culvert on the existing alignment, using a temporary on-site detour and to maintain traffic during construction rather than detour traffic off-site as in the original approved concept.

PDP Classification:

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

Functional Classification: Rural Major Collector Road

U. S. Route Number(s): N/A **State Route Number(s):** 83

Traffic (AADT) as shown in the approved concept:

Current Year: (2010) - 3400 Design Year: (2030) - 5000

Proposed features to be revised: The proposed revision is to delete the triple 10'X10' concrete box culvert and adding a 145' bridge on the existing alignment. The reason for the revision is that United States Fish & Wildlife Service (USFWS) would not approve the proposed triple 10' X 10' box culvert. This revision will increase the construction cost for this project by $297,573.00.

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

Programmed/Schedule:

P.E. 2002 R/W 2006 Construction After 2010

Revised cost estimates:

1.	Construction cost including inflation and E&C,	$1,239,474.99
2.	Right-of-way, and	$200,000
3.	Utilities	$15,000

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 "245400BRIDGE"

Section ROADWAY

Item Number	Quantity	Units	Unit Price	Item Description	Cost
150-1000	1	LS	75000.00	TRAFFIC CONTROL -	75000.00
150-5000	60	EA	441.05	TRAFFIC CONTROL, TEMPORARY SAND LOADED ATTENUATOR MODULE	26463.00
210-0100	1	LS	410915.00	GRADING COMPLETE -	410915.00
318-3000	300	TN	16.75	AGGR SURF CRS	5025.00
429-1000	2	EA	477.90	RUMBLE STRIPS	955.80
433-1000	310	SY	132.69	REINF CONC APPROACH SLAB	41133.90
436-1000	2215	LF	8.08	ASPHALTIC CONCRETE CURB -	17897.20
441-0301	2	EA	1676.10	CONC SPILLWAY, TP 1	3352.20
441-0303	3	EA	1678.86	CONC SPILLWAY, TP 3	5036.58
441-0304	1	EA	1673.10	CONC SPILLWAY, TP 4	1673.10
550-1180	300	LF	27.63	STORM DRAIN PIPE, 18 IN, H 1-10	8289.00
550-1602	160	LF	225.05	STORM DRAIN PIPE, 60 IN, H 15-20	36008.00
550-3418	18	EA	534.25	SAFETY END SECTION 18 IN, SIDE DRAIN, 4:1 SLOPE	9616.50
550-4118	2	EA	294.04	FLARED END SECTION 18 IN, SIDE DRAIN	588.08
577-1100	4	EA	1283.15	METAL DRAIN INLET - COMPLETE ASSEMBLY	5132.60
620-0200	2800	LF	61.13	TEMPORARY BARRIER, METHOD NO. 2	171164.00
634-1200	45	EA	90.37	RIGHT OF WAY MARKERS	4066.65
641-1100	83	LF	31.11	GUARDRAIL, TP T	2582.13
641-1200	1900	LF	11.48	GUARDRAIL, TP W	21812.00
641-5001	4	EA	433.02	GUARDRAIL ANCHORAGE, TP 1	1732.08
641-5012	4	EA	1426.54	GUARDRAIL ANCHORAGE, TP 12	5706.16
650-1200	9	EA	12336.19	IMPACT ATTENUATOR UNIT, (COMPRESSION CRASH CUSHION) TYPE T -	111025.71
				Section Sub Total:	**$965,174.69**

Section REQUIRED PAVEMENT

Item Number	Quantity	Units	Unit Price	Item Description	Cost
310-1101	916	TN	15.45	GR AGGR BASE CRS, INCL MATL	14152.20
402-1812	789	TN	38.67	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	30510.63
402-3121	2238	TN	36.40	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	81463.20
402-3131	1242	TN	41.24	RECYCLED ASPH CONC 9.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	51220.08
402-3190	1204	TN	45.06	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2,INCL BITUM MATL & H LIME	54252.24
413-1000	1306	GL	0.95	BITUM TACK COAT	1240.70
				Section Sub Total:	**$232,839.05**

Section EROSION CONTROL

Item Number	Quantity	Units	Unit Price	Item Description	Cost
163-0232	4	AC	481.40	TEMPORARY GRASSING	1925.60
163-0240	125	TN	196.00	MULCH	24500.00
163-0300	4	EA	1259.14	CONSTRUCTION EXIT	5036.56
163-0503	1	EA	490.79	CONSTRUCT AND REMOVE SILT CONTROL GATE, TP 3	490.79
163-0520	325	LF	12.67	CONSTRUCT AND REMOVE TEMPORARY PIPE SLOPE DRAIN	4117.75
165-0030	2100	LF	1.18	MAINTENANCE OF TEMPORARY SILT FENCE, TP C	2478.00
165-0087	1	EA	176.18	MAINTENANCE OF SILT CONTROL GATE, TP 3	176.18
165-0101	4	EA	422.50	MAINTENANCE OF CONSTRUCTION EXIT	1690.00
167-1000	2	EA	1734.57	WATER QUALITY MONITORING AND SAMPLING	3469.14
167-1500	18	MO	853.64	WATER QUALITY INSPECTIONS	15365.52
171-0030	4200	LF	3.22	TEMPORARY SILT FENCE, TYPE C	13524.00
603-2180	32	SY	33.47	STN DUMPED RIP RAP, TP 3, 12 IN	1071.04
603-7000	32	SY	4.03	PLASTIC FILTER FABRIC	128.96
700-6910	8	AC	806.16	PERMANENT GRASSING	6449.28
700-7000	18	TN	58.72	AGRICULTURAL LIME	1056.96
700-7010	20	GL	18.97	LIQUID LIME	379.40
700-8000	8	TN	268.54	FERTILIZER MIXED GRADE	2148.32
700-8100	400	LB	1.57	FERTILIZER NITROGEN CONTENT	628.00
716-2000	13280	SY	1.07	EROSION CONTROL MATS, SLOPES	14209.60
				Section Sub Total:	**$98,845.10**

Section TRAFFIC SIGNS AND MARKING

Item Number	Quantity	Units	Unit Price	Item Description	Cost
636-1020	28	SF	13.82	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 3	386.96
636-1031	57	SF	16.95	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING TP 6	966.15
636-2070	143	LF	7.04	GALV STEEL POSTS, TP 7	1006.72
652-5451	5608	LF	0.14	SOLID TRAFFIC STRIPE, 5 IN, WHITE	785.12
652-5452	5401	LF	0.14	SOLID TRAFFIC STRIPE, 5 IN, YELLOW	756.14
652-5701	54	LF	2.52	SOLID TRAF STRIPE, 24 IN, WHITE	136.08
654-1002	64	EA	3.02	RAISED PVMT MARKERS TP 2	193.28
657-1054	290	LF	3.50	PREFORMED PLASTIC SOLID PVMT MKG, 5 IN, WHITE, TP PB	1015.00
657-6054	290	LF	3.74	PREFORMED PLASTIC SOLID PVMT MKG, 5 IN, YELLOW, TP PB	1084.60
				Section Sub Total:	**$6,330.05**

Section BRIDGES

Item Number	Quantity	Units	Unit Price	Item Description	Cost
000-000	6851	SF	75.00	REINF CONC BRIDGE - STA 34+60 (145 ft x 47.25 ft)	513843.75
540-1101	1	LS	113191.87	REMOVAL OF EXISTING BR, STA NO - 34+90	113191.87
541-5428	1	LS	108618.75	DETOUR BRIDGE, 24 FT X 140 FT, STA - 34+60	108618.75
				Section Sub Total:	**$735,654.37**

Total Estimated Cost: $2,038,843.26

Subtotal Construction Cost	**$2,038,843.26**
E&C Rate 10.0 %	$203,884.33
Inflation Rate 5.0 % @ 2.0 Years	$229,879.58
Total Construction Cost	**$2,472,607.16**
Right Of Way	$200,000.00
ReImb. Utilities	$15,000.00
Grand Total Project Cost	**$2,687,607.16**

right-of-way acquisition north of Prospect Road, all other environmental impacts are believed to be comparable between the two alternatives.

4. Based on the additional environmental impacts associated with the culvert alternative being weighed against additional cost of the bridge alternative, the United States Fish and Wildlife Service (USFWS) does not concur with the proposed loss of stream channel along Little Sandy Creek. Without USFWS concurrence, it is unlikely that the U.S. Army Corps of Engineers will issue a permit for impacts to waters of the U.S. FHWA also will not support the culvert alternative without USFWS concurrence nor will they approve the environmental document which allows the project to advance in the Plan Development Process.

Based on these concerns, the Office of Environment and Location requests that the alternative to construct a replacement bridge on existing alignment with an on-site temporary detour be considered the preferred project alternative. Environmental studies will be updated to reflect the reduction in stream impacts and the additional right-of-way requirements. The project alternatives analysis will be updated based on new cost estimates, a new preferred alternative, and a discussion of environmental concerns that have supported selection of a new preferred alternative.

HDK/

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE	245400	**OFFICE**	Environment/Location
		DATE	March 29, 2006

FROM Harvey D. Keepler, State Environmental/Location Engineer

TO Babs Abubakari, P.E., State Consultant Design Engineer

ATTENTION Yun Tang

SUBJECT BRST-2938(4), Morgan County; Selection of Bridge Alternative as Preferred Alternative for the Proposed Project

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The Office of Environment and Location requests that the preferred alternative for the proposed project be revised to include replacing the existing bridge by building a proposed bridge on existing alignment with a temporary detour bridge to the east (downstream). This request is made for the following reasons:

1. The original alternatives analysis supported staged construction of a box culvert to replace the existing bridge based on staging issues and safety concerns. Upon further review of this project, the staging and safety issues are believed to be comparable for the replacement bridge versus replacement box culvert alternatives. This leaves the issue of cost as the only reason for replacing the existing bridge with a box culvert instead of a bridge.

2. According to the designer, the alternative to replace the existing bridge with a new bridge is estimated to cost approximately $2,687,607. The alternative to replace the existing bridge with a box culvert is estimated to cost approximately $2,390,034. The bridge alternative is $297,573 more expensive than the culvert alternative, or approximately 12.5% of the total project cost. The bridge alternative would also include additional right-of-way costs. However, the additional cost of the bridge alternative would be offset by as much as $79,000 (1,438 stream mitigation credits at $55/credit, as quoted by a local mitigation bank), as stream mitigation requirements would decrease and may not be required at all with a bridge alternative.

3. The additional cost of the bridge alternative ($297,573 or 12.5% of the total project cost) must be weighed against the additional environmental costs associated with the box culvert alternative. A box culvert would result in approximately 148 feet of channel loss to Little Sandy Creek, considered a high quality stream. The culvert alternative would also result in approximately 55 feet of additional impact to Stream 2 versus a bridge alternative. While the bridge alternative would result in up to an additional 55 feet of