

ORIGINAL TO GENERAL FILES

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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**OFFICE OF DESIGN POLICY & SUPPORT  
INTERDEPARTMENTAL CORRESPONDENCE**

**FILE** P.I. #0007040 **OFFICE** Design Policy & Support  
CSBRG-0007-00(040)  
GDOT District 2 - Tennille  
Lincoln and McDuffie Counties **DATE** 9/12/2011  
SR 43 Bridge Replacement over Little River

**FROM**  Brent Story, State Design Policy Engineer

**TO** SEE DISTRIBUTION

**SUBJECT** APPROVED CONCEPT REPORT

Attached is the approved Concept Report for the above subject project.

Attachment

**DISTRIBUTION:**

Genetha Rice-Singleton, Program Control Administrator  
Bobby Hilliard, State Program Delivery Engineer  
Cindy VanDyke, State Transportation Planning Administrator  
Angela Robinson, Financial Management Administrator  
Glenn Bowman, State Environmental Administrator  
Ben Rabun, State Bridge Engineer  
Kathy Zahul, State Traffic Engineer  
Georgene Geary, State Materials & Research Engineer  
Ron Wishon, State Project Review Engineer  
Jeff Baker, State Utilities Engineer  
Ken Thompson, Statewide Location Bureau Chief  
Michael Henry, Systems & Classification Branch Chief  
James Smith, District Engineer  
Jamie Lindsey, *for* District Utilities Engineer  
Jim Kitchings, District Environmentalist  
Clinton Ford, Project Manager  
BOARD MEMBER - 10th Congressional District

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
PROJECT CONCEPT REPORT

Project Number: CSBRG-0007-00(040)  
County: Lincoln - McDuffie  
P. I. Number: 0007040  
Federal Route Number(s): None  
State Route Number(s): 43

SR 43 @ Little River

Submitted for approval:

DATE 5/4/2011 Foster C. Grimes  
Design Phase Leader  
DATE 5/9/2011 Bryson M. Brewer  
Design Phase Office Head  
DATE \_\_\_\_\_  
DATE 8/2/2011 \_\_\_\_\_  
Office Head - State Program Delivery Administrator  
CLINTON FORD \*  
Project Manager

Recommendation for approval:

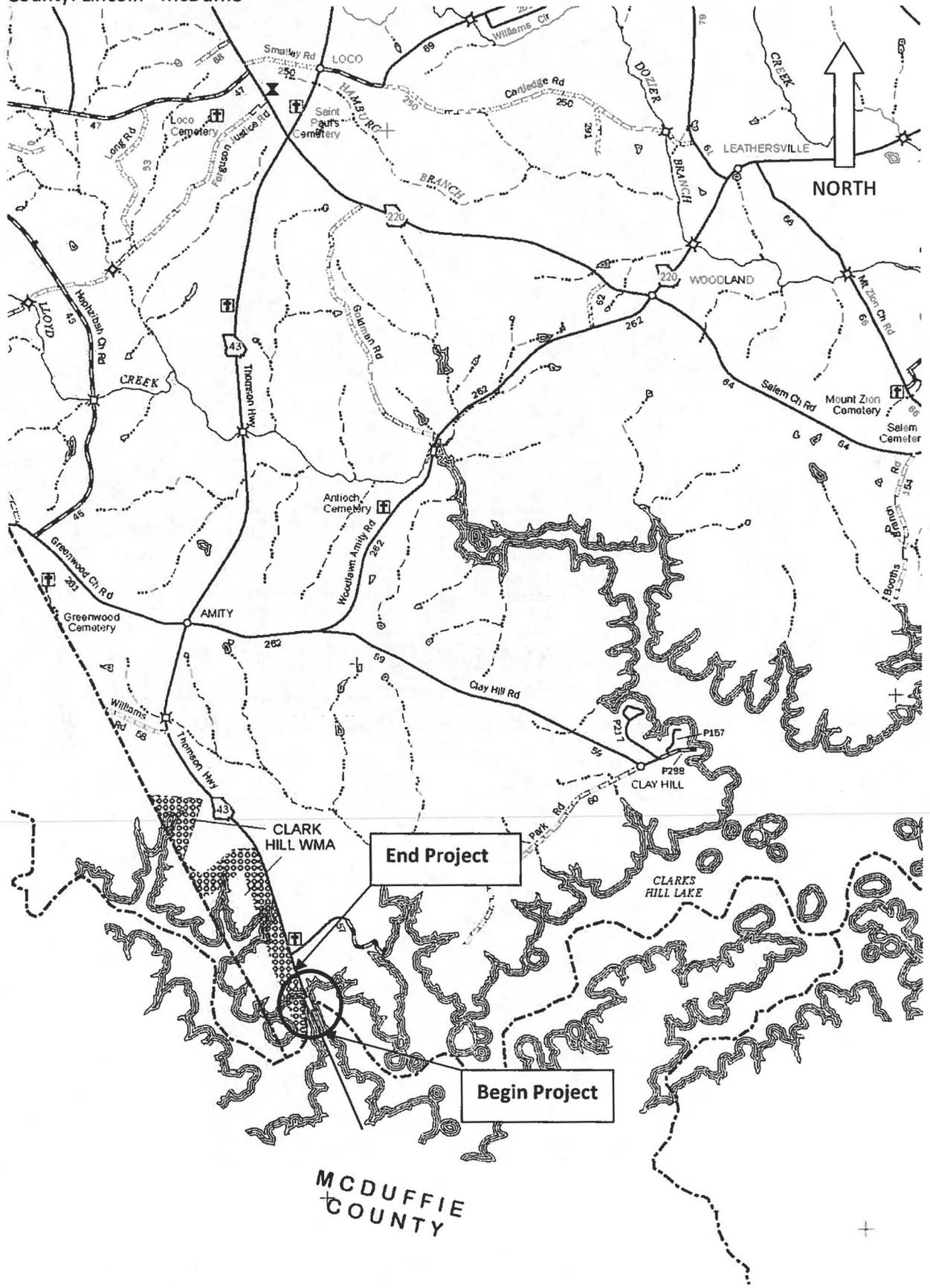
DATE 7/19/2011 JEFF BAKER \*  
State Utilities Engineer  
DATE \_\_\_\_\_  
Program Control Administrator  
DATE 7/22/2011 GLENN BOWMAN \*  
State Environmental Administrator  
DATE \_\_\_\_\_  
State Traffic Operations Engineer  
DATE 7/26/2011 RON WISTON \*  
Project Review Engineer  
DATE 5-10-11 \_\_\_\_\_  
District Engineer  
DATE 8/18/2011 BEN RABUN \*  
State Bridge Design Engineer (if applicable)  
DATE \_\_\_\_\_  
State Transportation Financial Management Administrator

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

DATE 7/26/2011 CYNTHIA VANDYKE \*  
State Transportation Planning Administrator

\* SUBMITTANCE & RECOMMENDATION ON FILE - [Signature]

Project Concept Report page 2  
Project Number: CSBRG-0007-00(040)  
P.I. Number: 0007040  
County: Lincoln - McDuffie



**Need and Purpose:** *This Bridge (Structure ID 189-0009-0) was built in 1952 and consists of a 3 span continuous unit (span lengths of 117'-0", 145'-0", and 117'-0") on a concrete substructure with spread footings. The bridge is currently posted from 19 to 30 tons and has a Sufficiency Rating of 19.34. This bridge is fracture critical. The substructure is showing heavy abrasion from the cap down. The girders are showing section loss in both girders on both ends at both abutments. The need exists to replace this structurally deficient bridge. The purpose of this project is to replace the existing bridge with a structurally sound bridge.*

**Description of Project:** *Alternate "A" consists of the replacement of the structurally deficient bridge on SR 43 located at the Lincoln/McDuffie County line over Little River. The bridge is located approximately 9 miles northeast of the City of Thomson in McDuffie County. The length of project will be 0.65 miles and will begin at McDuffie County MP 7.00 and end at Lincoln County MP 0.28. SR 43 will be realigned approximately 50-ft. to the west of the existing alignment of SR 43 and the new bridge constructed. Traffic will be maintained on the existing alignment during construction. Once the new bridge and roadway are constructed, traffic will be diverted and the old roadbed and bridge removed.*

Is the project located in a PM 2.5 Non-attainment area?  Yes  No

Is this project located in an Ozone Non-attainment area?  Yes  No

PDP Classification: Major  Minor

Federal Oversight:  Full  Exempt  State Funded  or Other

Functional Classification: Rural Major Collector

U.S. Route Number(s): None State Route Number(s): 43

**Traffic (AADT):**

Base Year: (2016) 1800

Design Year: (2036) 2600

**Existing Design Features:**

- Typical section: One 12-ft travel lane in each direction with 6-ft. rural grassed shoulders.
- Posted Speed: 55 mph Minimum radius for curve: 1910-ft.
- Maximum super-elevation rate for curve: 6%
- Maximum Grade: Mainline 2%, Sideroads 2%, Drives 8%
- Width of right-of-way: Varies fm 100-ft. to 300-ft.
- Major Structures: 379-ft x 24-ft continuous pile girder bridge
- Major Interchanges or intersections along the project: None
- Existing length of roadway segment and the beginning mile logs for each county segment: The length of roadway segment will begin approximately at McDuffie County MP 7.0 and approximately end at Lincoln County MP 0.28. for a total of 0.58 miles of roadway with 0.07 miles of bridge for a total of 0.65 miles

**Proposed Design Features:**

- Proposed Typical Section(s): One 12-ft. travel lane in each direction with 8-ft. rural shoulders (2-ft. paved)
- Proposed Design Speed: 55 mph
- Proposed Maximum grade Mainline: 3%
- Proposed grade allowable: 7%
- Proposed Maximum grade Side Street: 7%
- Maximum grade allowable: 7%
- Proposed Maximum grade driveway: 11%
- Proposed minimum radius of curve: 1890-ft.
- Minimum Radius allowable: 1060 ft.
- Maximum allowable super-elevation rate: 6%
- Proposed maximum super-elevation rate: 5%
- Right-Of-Way:
  - Width: *Varies from 5-ft to 165-ft strip tracts*
  - Easements: Temporary  Permanent  Utility  Other
  - Type of Access control: Full  Partial  By Permit  Other
  - Number of Parcels: 1                      Number of displacements: 0
    - Business: 0
    - Residences: 0
    - Mobile homes: 0
    - Other: 0
- Structures:
  - Bridges: *Estimated 379-ft long x 40-ft wide reinforced concrete bridge*
  - Retaining walls: *None*
- Major Intersections, interchanges, median openings and signal locations: *None*
- Transportation Management Plan Anticipated:  Yes  No
- Design Exceptions to controlling criteria anticipated:

	YES	NO	UNDETERMINED
HORIZONTAL ALIGNMENT:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
LANE WIDTH:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
SHOULDER WIDTH:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VERTICAL GRADES:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
CROSS SLOPES:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
STOPPING SIGHT DISTANCE:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
SUPERELEVATION RATES:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VERTICAL CLEARANCE:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
BRIDGE WIDTH:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
BRIDGE STRUCTURAL CAPACITY:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
LATERAL OFFSET TO OBSTRUCTION:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VERTICAL ALIGNMENT:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DESIGN SPEED:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- Design Variances: *None*
- Environmental Concerns: *This project is located on Lake Thurmond which is regulated by the United States Corps of Engineers. All of the surrounding property belongs to the federal government and impacts are subject to 4(f) protection. A Memorandum of Understanding will be required between GDOT and the USCOE. However, no recreational areas or facilities will be impacted so a diminimis is anticipated.*
- *This project will require an individual 404 Permit.*
- *Threatened and Endangered Species include the Bald Eagle but no adverse effects are anticipated.*
- *A Public Information Open House will be required for this project.*
- *The bridge is not historic.*
- *The project is not located within an air quality concern area. No noise impacts are anticipated*
- Anticipated Level of Environmental Analysis:
  - Are time savings procedures appropriate:  Yes  No
  - Categorical Exclusion anticipated
  - Environmental Assessment/Finding of No Significant Impacts (FONSI) anticipated
  - Environmental Impacts Statement (EIS) anticipated
- Utility Involvements:
  - Telephone: *AT&T and Wilkes Telephone*
- VE Study Anticipated:  Yes  No

**Project Cost Estimate and Funding Responsibilities:**

	PE	ROW	UTILITY	CST*	MITIGATION**
By Whom	GDOT	GDOT	GDOT	GDOT	GDOT
\$ Amount	\$382,271.64	\$506,000.00	\$0,000.00	\$7,506,041.44	\$140,000.00

\*CST Cost Includes: Construction, Engineering and Inspection, Fuel and Asphalt Cement Cost Adjustment.

\*\* Mitigation is for approximately 3.5 ac. of open water impacts using the formula supplied by the Office of Environmental Services (Acres x 8 x \$5000.00)

**Project Activities Responsibilities:**

- Design: GDOT - District Two
- Right-of-Way Acquisition: GDOT
- Right-of-Way funding (real property): GDOT
- Relocation of Utilities: GDOT
- Letting to Contract: GDOT
- Supervision of construction: GDOT
- Providing material pits: Contractor
- Providing Detours: Contractor
- Environmental Studies/Documents/Permits: GDOT
- Environmental Mitigation: GDOT

Coordination:

- Initial Concept Meeting Date and brief summary: *See attached minutes*
- Concept meeting date and brief summary: 3-31-2011 *See attached minutes*
- P.A.R. meetings, dates, and results: *To be decided once environmental studies are completed.*
- Public Involvement: *A Public Information Open House may be required for this project to ascertain public opinion of the project scope.*
- Local Government comments: *Mr. H. Wade Johnson, Chairman of the Lincoln County Commissioners stated that Lincoln County needed a 4-lane project on SR 43 in order to promote industrial growth in that area. And even though he realizes that this project was to reconstruct the bridge, no work had been done to establish a 4-lane project along this corridor. Lincoln County has has a 20-yr. plan with the DCA (Department of Community Affairs) which has a 4-lane project for SR 43 listed.*
- Other Projects in area: *None*
- Railroads: *No Involvement*
- Other coordination to date: *Coordination with the United States Corps of Engineers will continue to be required throughout the preliminary engineering for this project.*

**Scheduling – Responsible Parties’ Estimate:**

- |  |                              |
|--|------------------------------|
| • Time to complete the environmental process:        | Begin: 10-27-11 End:3-15-12  |
| • Time to complete preliminary construction plans:   | Begin: 8-15-11 End: 5-23-12  |
| • Time to complete right-of-way plans:               | Begin: 6-22-13 End: 12-7-12  |
| • Time to complete the Section 404 Permit:           | Begin: 10-14-13 End: 2-28-14 |
| • Time to complete the final construction plans:     | Begin: 7-17-12 End: 9-13-13  |
| • Time to complete the purchase of the right-of-way: | Begin: 2-6-12 End: 2-11-13   |
| • Coordination with the USCOE                        | Begin: 11-27-11 End: 5-19-14 |

**Other Alternatives Considered:**

*Alternate "B" - Realign SR 43 to the East: SR 43 would be realigned to the east approximately 50-ft. and the new bridge constructed. Once this bridge is completed, traffic would be diverted to it and the old roadway and bridge would be removed. This alternative is more cost effective than an on-site detour because the bridge would be constructed permanently instead of temporarily and would not have to be removed. Also, the rock embankment required to build a bridge over the lake area would remain in place and not be removed. This generates a significant cost savings for the project and simplifies the constructability. However, this side of SR 43 was not selected due to potential impacts to the USACE recreational facilities located on the east side of SR 43. These facilities include a boat ramp and a marina located on the north side of the lake. Any impacts to these facilities would be considered adverse and would eliminate the possibility of obtaining a diminished finding. This would delay the project schedule by requiring 4(f) coordination as well as require extensive mitigation efforts.*

*Alternate "C" - Off Site Detour: This alternative was considered first. However, the only suitable routes that can accommodate truck traffic are SR 17 and SR 47. This route would cause motorists to travel 18.0 miles along SR 17 to the City of Washington, then take SR 47 for an additional 18.9 miles back to the City of Lincoln for a total mileage of 36.9 miles. This is 19.2 miles more than they normally commute now to McDuffie County and the City of Thomson and also I-20.*

*S.R. 43 is a vital link for both the USACE as well as citizens of Lincoln County. It provides the quickest route from Lincoln to I-20 and provides a main route through Lake Thurmond. It is used by the USACE to access the southern coves located near Mistletoe State Park. Also, there are two marinas located near the project site where ingress and egress would be impacted due to the long detour route. People would tend to try and access other marinas that have easier access causing those areas to become crowded. This alternative would be a temporary negligible impact to the USACE properties during construction.*

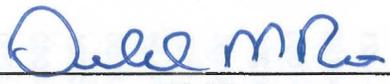
*There are limited job sources in Lincoln County so most people work in McDuffie, Columbia or Richmond County. SR 43 is used by motorists in Lincoln County traveling to and from I-20 / SR 402 because it is the shortest route to I-20. Closing SR 43 will cause motorists to travel SR 47 to Washington and SR 17 to Thomson in order to access I-20. This will cause commuter time delays of approximately 38 minutes each day commuting to work. This will also add additional costs to the commuters by increasing their fuel costs with the additional mileage being traveled. This office feels that this would be an undue hardship on motorists considering the length of time of construction required for this project.*

**Comments:** *This office recommends that Alternate "A" of this concept be approved for implementation.*

**Attachments:**

1. Detailed Cost Estimates including:
  - a. Construction including Engineering and Inspection
  - b. Completed Fuel & Asphalt Price Adjustment forms
  - c. Right of Way Costs
  - d. Utility Costs
2. Typical Sections
3. Corridor Traffic Data
4. Historic Bridge Inventory Report
5. Minutes of Concept Kick-Off meeting
6. Bridge Inventory Data Listing
7. Minutes from Concept Team Meeting

Concur:   
Director of Engineering

Approve:   
Chief Engineer

Date: 9-6-11

JOB NUM 0007040\_AS\_ALTA

FED/STATE PROJ CSBRG-0007-00(167)

SPEC YE. 01

DESCRIP BRIDGE REPLACEMENT ON SR 43 OVER LITTLE RIVER

**ITEMS FOR JOB 0007040 AS ALTA**

**10 - ROADWAY**

LINE	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0005	150-1000	1.000	LS	\$50,000.00	TRAFFIC CONTROL - CSBRG-0007-00(040)	\$50,000.00
0295	153-1300	1.000	EA	\$75,676.23	FIELD ENGINEERS OFFICE TP 3	\$75,676.23
0010	201-1000	1.000	LS	\$60,000.00	CLEAR & GRUB - LUMP SUM	\$60,000.00
0015	205-0001	15200.000	CY	\$3.62	UNCLASS EXCAV	\$55,024.00
0020	206-0002	95000.000	CY	\$3.85	BORROW EXCAV, INCL MATL	\$365,750.00
0265	208-0500	179529.000	TN	\$15.65	ROCK EMBANKMENT	\$2,809,628.85
0045	310-1101	6612.000	TN	\$21.50	GR AGGR BASE CRS, INCL MATL	\$142,130.49
0025	318-3000	500.000	TN	\$20.22	AGGR SURF CRS	\$10,110.22
0055	402-1812	500.000	TN	\$76.14	RECYL AC LEVELING, INC BM&HL	\$38,067.70
0030	402-3103	1100.000	TN	\$84.00	REC AC 9.5 MM SP, TPII, GP2, INCL BM & H L	\$92,400.00
0040	402-3121	3300.000	TN	\$67.78	RECYL AC 25MM SP, GP1/2, BM&HL	\$223,660.83
0035	402-3190	1750.000	TN	\$71.31	RECYL AC 19 MM SP, GP 1 OR 2 , INC BM&HL	\$124,788.88
0050	413-1000	1268.000	GL	\$2.84	BITUM TACK COAT	\$3,597.73
0065	433-1200	267.000	SY	\$137.54	REF CONC APPR SL/I SLOPED EDGE	\$36,722.69
0070	441-0301	2.000	EA	\$1,731.33	CONC SPILLWAY, TP 1	\$3,462.66
0060	446-1100	500.000	LF	\$5.00	PVMT REF FAB STRIPS, TP2, 18 INCH WIDTH	\$2,500.00
0095	540-1102	1.000	LS	\$250,000.00	REM OF EX BR, BR NO - BRIDGE NO. 1	\$250,000.00
0100	543-9000	1.000	LS	\$1,819,200.00	CONSTR OF BRIDGE COMPLETE - CSBRG-0007-00(040)	\$1,819,200.00
0270	603-2024	6840.000	SY	\$46.78	STN DUMPED RIP RAP, TP 1, 24"	\$319,948.73
0275	603-7000	6840.000	SY	\$3.78	PLASTIC FILTER FABRIC	\$25,823.60
0260	634-1200	22.000	EA	\$95.66	RIGHT OF WAY MARKERS	\$2,104.49

0080	641-1100	84.000	LF	\$58.77	GUARDRAIL, TP T	\$4,936.40
0075	641-1200	1000.000	LF	\$17.63	GUARDRAIL, TP W	\$17,629.30
0085	641-5001	2.000	EA	\$522.99	GUARDRAIL ANCHORAGE, TP 1	\$1,045.98
0090	641-5012	2.000	EA	\$1,884.63	GUARDRAIL ANCHORAGE, TP 12	\$3,769.26
<b>SUBTOTAL FOR ROADWAY:</b>						<b>\$6,537,978.04</b>

### **30 - SIGNING / MARKING**

LINE	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0175	636-1020	63.000	SF	\$16.13	HWY SGN,TP1MAT,REFL SH TP3	\$1,016.32
0180	636-2070	98.000	LF	\$9.96	GALV STEEL POSTS, TP 7	\$975.90
0155	652-5451	5642.000	LF	\$0.12	SOLID TRAF STRIPE, 5 IN, WHITE	\$695.83
0160	652-5452	5642.000	LF	\$0.11	SOLID TRAF STRIPE, 5 IN, YELLO	\$644.71
0185	654-1001	55.000	EA	\$4.97	RAISED PVMT MARKERS TP 1	\$273.60
0165	657-1054	878.000	LF	\$4.05	PRF PL SD PVMT MKG,5",WH,TP PB	\$3,557.86
0170	657-6054	878.000	LF	\$3.97	PRF PL SD PVMT MKG,5",YW,TP PB	\$3,485.63
<b>SUBTOTAL FOR SIGNING / MARKING:</b>						<b>\$10,649.85</b>

### **40 - PERMANENT EROSION CONTROL**

LINE	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0190	700-6910	12.000	AC	\$759.98	PERMANENT GRASSING	\$9,119.72
0195	700-7000	36.000	TN	\$49.53	AGRICULTURAL LIME	\$1,783.15
0200	700-7010	30.000	GL	\$19.89	LIQUID LIME	\$596.82
0205	700-8000	15.000	TN	\$478.31	FERTILIZER MIXED GRADE	\$7,174.66
0210	700-8100	1000.000	LB	\$2.56	FERTILIZER NITROGEN CONTENT	\$2,561.11
0280	716-2000	10000.000	SY	\$1.10	EROSION CONTROL MATS, SLOPES	\$10,970.20
<b>SUBTOTAL FOR PERMANENT EROSION CONTROL:</b>						<b>\$32,205.66</b>

**50 - TEMPORARY EROSION CONTROL**

LINE	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0220	163-0232	36.000	AC	\$387.14	TEMPORARY GRASSING	\$13,936.91
0215	163-0240	216.000	TN	\$194.05	MULCH	\$41,914.78
0225	163-0300	4.000	EA	\$1,798.31	CONSTRUCTION EXIT	\$7,193.24
0230	163-0520	3000.000	LF	\$15.37	CONSTR AND REMOVE TEMP PIPE SLOPE DRAIN	\$46,101.72
0235	163-0527	80.000	EA	\$210.21	CNST/REM RIP RAP CKDM,STN P RIPRAP/SN BG	\$16,816.95
0240	165-0030	3750.000	LF	\$0.80	MAINT OF TEMP SILT FENCE, TP C	\$2,996.10
0245	165-0041	80.000	LF	\$1.74	MAINT OF CHECK DAMS - ALL TYPES	\$139.39
0250	165-0101	4.000	EA	\$428.20	MAINT OF CONST EXIT	\$1,712.81
0285	167-1000	2.000	EA	\$636.61	WATER QUALITY MONITORING AND SAMPLING	\$1,273.21
0290	167-1500	24.000	MO	\$832.76	WATER QUALITY INSPECTIONS	\$19,986.28
0255	171-0030	7500.000	LF	\$3.28	TEMPORARY SILT FENCE, TYPE C	\$24,615.53
<b>SUBTOTAL FOR TEMPORARY EROSION CONTROL:</b>						<b>\$176,686.92</b>

**TOTALS FOR JOB 0007040\_AS\_ALTA**

ESTIMATED COST:	<b>\$6,757,520.47</b>
ENGINEERING AND INSPECTION:	<b>\$337,876.02</b>
ESTIMATED COST WITH E&I:	<b>\$7,095,396.49</b>

P.I. Number 7040

County Lincoln/McDuffie

Project Number CSBRG-0007-00(040)

**Special Provision, Section 109-Measurement and Payment  
FUEL PRICE ADJUSTMENT (ENGLISH 125% MAX)**

ENTER FPL DIESEL	3.403
ENTER FPM DIESEL	7.657

ENTER FPL UNLEADED	3.008
ENTER FPM UNLEADED	6.768

<http://www.dot.ga.gov/doingbusiness/Materials/Pages/asphaltcementindex.aspx>

<b>INCREASE ADJUSTMENT</b>
125.00%

<b>INCREASE ADJUSTMENT</b>
125.00%

ROADWAY ITEMS	QUANTITY	DIESEL FACTOR	GALLONS DIESEL	UNLEADED FACTOR	GALLONS UNLEADED	REMARKS
Excavations paid as specified by Sections 205 (CUBIC YARD)	15200.000	0.29	4408.00	0.15	2280.00	
Excavations paid as specified by Sections 206 (CUBIC YARD)	95000.000	0.29	27550.00	0.15	14250.00	
GAB paid as specified by the ton under Section 310 (TON)	4880.000	0.29	1415.20	0.24	1171.20	
Hot Mix Asphalt paid as specified by the ton under Sections 400 (TON)		2.90		0.71		
Hot Mix Asphalt paid as specified by the ton under Sections 402 (TON)	5080.000	2.90	14732.00	0.71	3608.80	
PCC Pavement paid as specified by the square yard under Section 430 (SY)		0.25		0.20		

BRIDGE ITEMS	Quantity	Unit Price	QF/1000	Diesel Factor	Gallons Diesel	Unleaded Factor	Gallons Unleaded	REMARKS
Bridge Excavation (CY) Section 211				8.00		1.50		
Class __ Concrete (CY) Section 500				8.00		1.50		
Class __ Concrete (CY) Section 500				8.00		1.50		
Class __ Concrete (CY) Section 500				8.00		1.50		
Superstru Con Class __ (CY) Section 500				8.00		1.50		
Superstru Con Class __ (CY) Section 500				8.00		1.50		
Superstru Con Class __ (CY) Section 500				8.00		1.50		
Concrete Handrail (LF) Section 500				8.00		1.50		
Concrete Barrier (LF) Section 500				8.00		1.50		

BRIDGE ITEMS	Quantity	Unit Price	QF/1000	Diesel Factor	Gallons Diesel	Unleaded Factor	Gallons Unleaded	REMARKS
Stru Steel Plan Quantity (LB) Section 501				8.00		1.50		
Stru Steel Plan Quantity (LB) Section 501				8.00		1.50		
PSC Beams____ (LF) Section 507				8.00		1.50		
PSC Beams____ (LF) Section 507				8.00		1.50		
PSC Beams____ (LF) Section 507				8.00		1.50		
Stru Reinf Plan Quantity(LB) Section 511				8.00		1.50		
Stru Reinf Plan Quantity(LB) Section 511				8.00		1.50		
Bar Reinf Steel (LB) Section 511				8.00		1.50		
Piling__ inch (LF) Section 520				8.00		1.50		
Piling__ inch (LF) Section 520				8.00		1.50		
Piling__ inch (LF) Section 520				8.00		1.50		
Piling__ inch (LF) Section 520				8.00		1.50		
Piling__ inch (LF) Section 520				8.00		1.50		
Piling__ inch (LF) Section 520				8.00		1.50		
Drilled Caisson,____ (LF) Section 524				8.00		1.50		
Drilled Caisson,____ (LF) Section 524				8.00		1.50		
Drilled Caisson,____ (LF) Section 524				8.00		1.50		
Pile Encasement,____(LF) Section 547				8.00		1.50		
Pile Encasement,____(LF) Section 547				8.00		1.50		

SUM QF DIESEL=	48105.20	SUM QF UNLEADED=	21308.00
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DIESEL PRICE ADJUSTMENT(\$)	\$188,257.29
UNLEADED PRICE ADJUSTMENT(\$)	\$73,708.63



# ASPHALT CEMENT PRICE ADJUSTMENT FOR BITUMINOUS TACK COAT(Surface Treatment 125% MAX)

APPLICABLE TO CONTRACTS CONTAINING THE 413 SPEC. SECTION 413.5.01 ADJUSTMENTS ASPHALT PRICE ADJUSTMENT FOR BITUMINOUS TACK COAT

<http://www.dot.ga.gov/doingbusiness/Materials/Pages/asphaltcementindex.aspx>

ENTER APL

ENTER APM

Use this side for Asphalt Emulsion Only		
L.I.N.	TYPE	ASPHALT EMULSION (GALLONS)
TMT = <input style="width: 100px;" type="text"/>		
REMARKS:		

Use this side for Asphalt Cement Only		
L.I.N.	TYPE	TACK (GALLONS)
TMT = <input style="width: 100px;" type="text"/>		
REMARKS:		

## ADJUSTMENT SUMMARY

FUEL PRICE ADJUSTMENT ( <i>ENGLISH 125% MAX</i> )	
DIESEL PRICE ADJUSTMENT(\$)	<u>\$188,257.29</u>
UNLEADED PRICE ADJUSTMENT(\$)	<u>\$73,708.63</u>
ASPHALT CEMENT PRICE ADJUSTMENT (BITUMINOUS TACK COAT 125% MAX)	<u>\$2,375.02</u>
400 / 402 ASPHALT CEMENT PRICE ADJUSTMENT 125% MAX	<u>\$146,304.00</u>
ASPHALT CEMENT PRICE ADJUSTMENT FOR BITUMINOUS TACK COAT(Surface Treatment 125% MAX)	

REMARKS:

# Department of Transportation State of Georgia

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Interdepartmental Correspondence

**FILE** Preliminary R/W Cost Estimate **OFFICE** Atlanta  
**DATE** February 7, 2011

**FROM** Phil Copeland, Right of Way Administrator  
LaShone Alexander, Right of Way Cost Estimator

**TO** Alan Smith, District Design Engineer

**SUBJECT** Preliminary Right of Way Cost Estimate  
Project: CSBRG-0007-00(040) Lincoln/McDuffie County  
P.I. No.: 0007040  
Description: SR 43 @ Little River

As per your request, attached is a copy of the approved Preliminary Right of Way Cost Estimates on the above referenced projects.

If you have any questions, please contact LaShone Alexander at One Georgia Center 600 West Parkway Street, NW Atlanta, GA 30308, Right of Way Office at (478) 553-1569 or (478) 232-4045.

PC: LA  
Attachments  
c: File

# Preliminary Right of Way Cost Estimate



**Phil Copeland**  
 Right of Way Administrator  
 Re: LaShone Alexander

Date: February 7, 2011  
 Project: CSBRG-0007-00(040) Lincoln/McDuffie  
 Existing/Required R/W: Varies/Varies  
 Project Termini : SR 43 @ Little River  
 Project Description: SR 43 @ Little River

P.L. Number: 000740  
 No. Parcels: )

Land: R/W Res/Agri/Com: 9.20 acres @\$ 20,000	\$	184,000
Improvements : misc. site improvements		20,000
Relocation: Commercial (0) Residential (0)		0
Damage: Proximity 000 Consequential 000 Cost to Cure 000		000
<b>Net Cost</b>	<b>\$</b>	<b>204,000</b>
Net Cost	\$	204,000
Scheduling Contingency 55 %		112,200
Adm/Court Cost 60 %		189,720
	\$	505,920

**Total Cost \$ 506,000**

Note: The Market Appreciation (40%) is not included in the updated Preliminary Cost Estimate.

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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**INTERDEPARTMENT CORRESPONDENCE**

**FILE** CSBRG-0007-00 (040) Lincoln/McDuffie      **OFFICE** Tennille  
P.I. No. 0007040

**FROM** <sup>JDC/JLL</sup>  
Jack D. Cooper, Jr.  
District Utilities Engineer      **DATE** February 22, 2011

**TO** Bobby Hilliard, Program Delivery  
**ATTN** Clinton Ford

**SUBJECT** CONCEPT UTILITY COST (ESTIMATE)

As requested by your office, we are furnishing you with a Concept Utility Cost estimate for each utility with facilities potentially located within the project limits.

FACILITY OWNER	NON- REIMBURSABLE	REIMBURSABLE
GA Power Co.	\$0.00	
AT&T Georgia	\$0.00	
Wilkes Telephone	\$0.00	
<hr/>		
Totals	\$0.00	
Total Reimbursement Cost:	\$0.00	

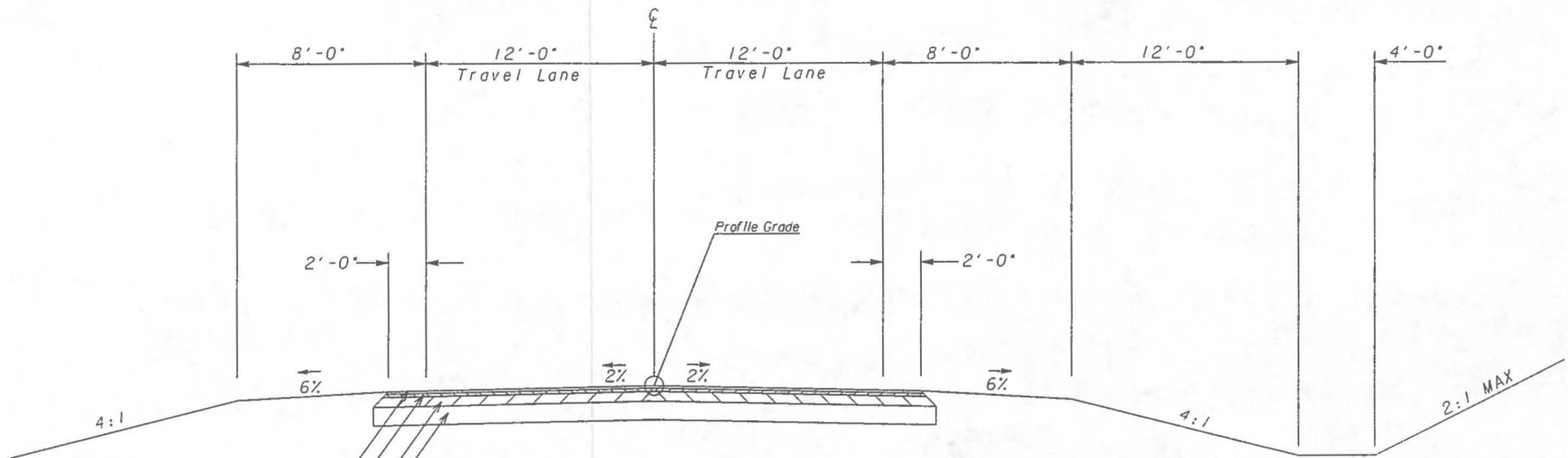
At this time, the total reimbursable cost for the above project is \$ 0.00.

\*The utility companies listed above have facilities in the area, but not located in the project limits.

If you have any questions, please contact Jamie Lindsey at 478-552-4637.

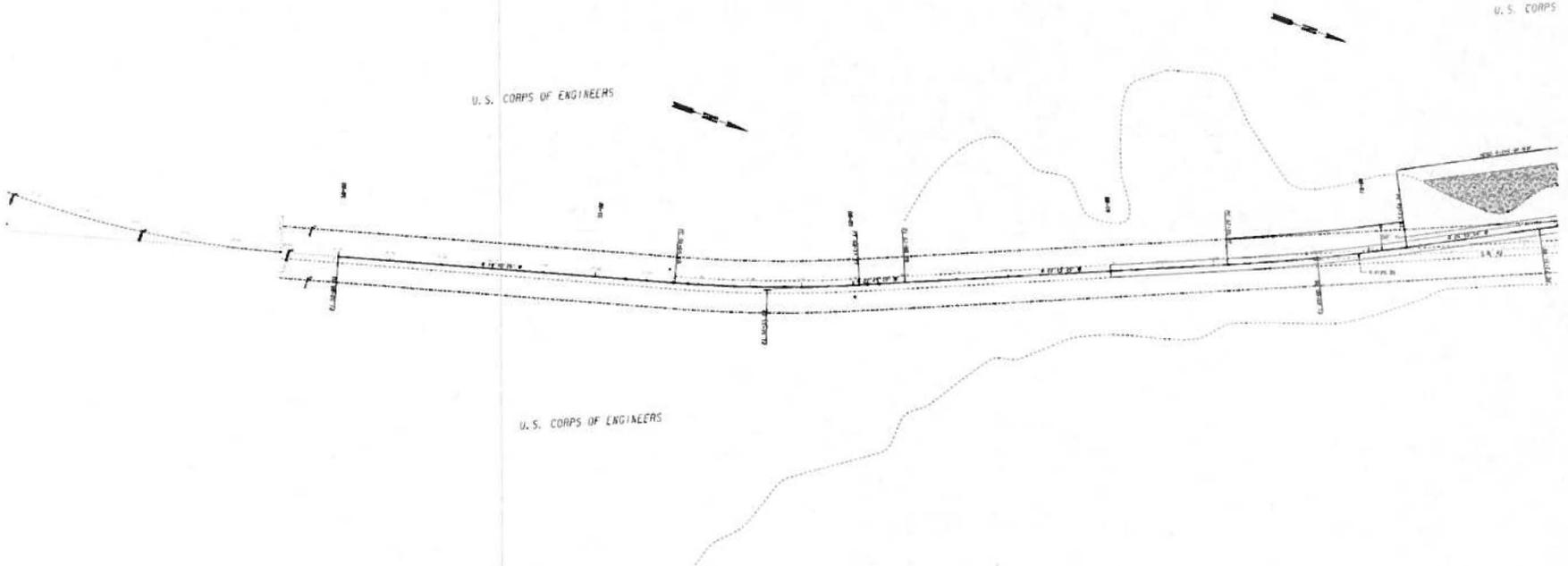
JDC/JLL

C: Jeff Baker, State Utilities Engineer  
Mike Keene, Area Engineer  
Alan Smith, District Design Engineer



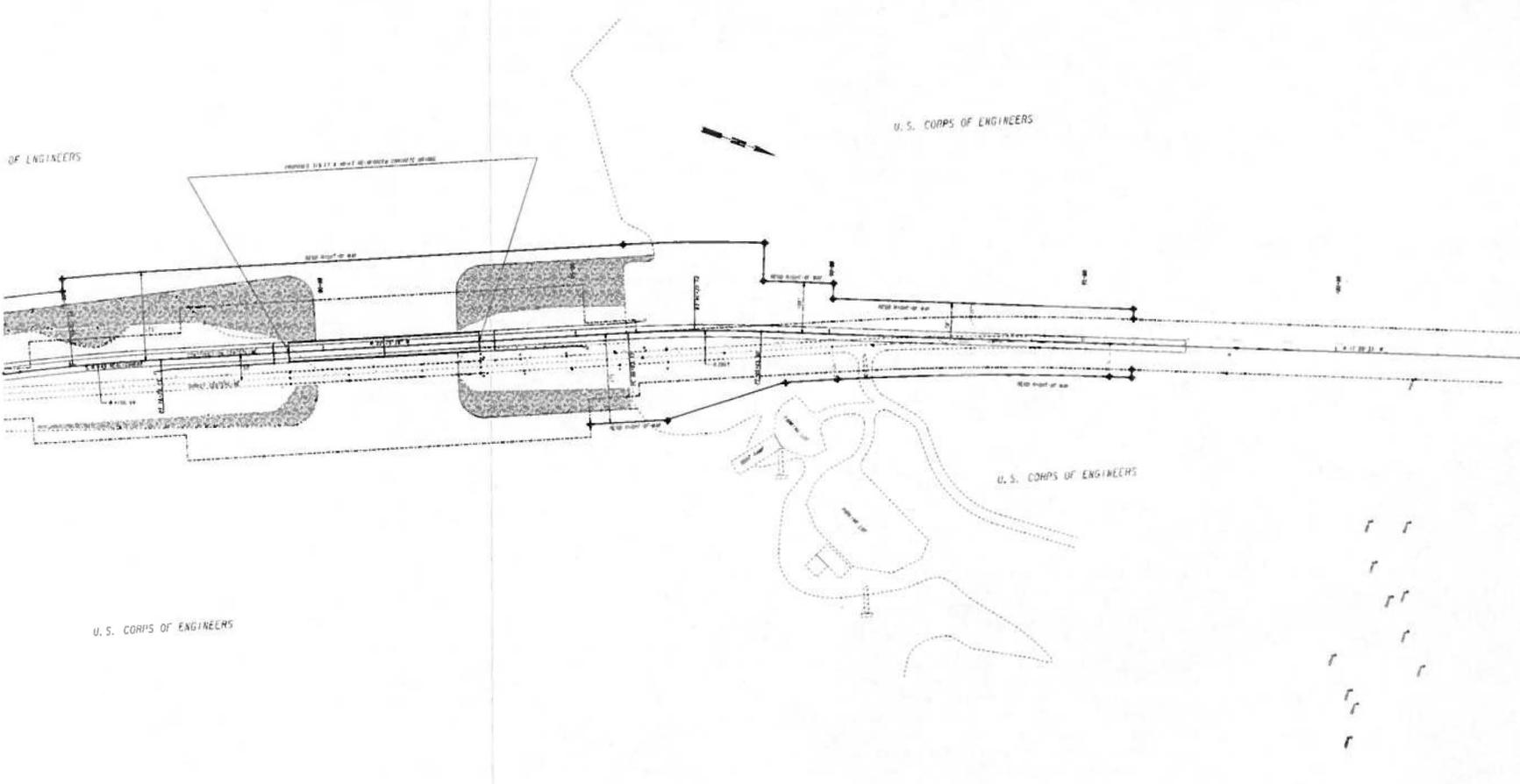
TANGENT SECTION

- 8" GRADED AGGREGATE BASE CRS.
- 4" 25mm SUPERPAVE
- 2" 19mm SUPERPAVE
- 1 1/4" 9.5mm SUPERPAVE



REVISION	DATE	DESCRIPTION

STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE:  
**MAINLINE PLAN**



STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION	
OFFICE: MAINLINE PLAN	
REVISION DATES	

# Department of Transportation State of Georgia

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## INTERDEPARTMENT CORRESPONDENCE

**FILE** CSBRG-0007-00(040), Pulaski County                      **OFFICE** Planning  
Lincoln & McDuffie Counties  
P.I. # 0007040  
**DATE** August 16, 2010

**FROM** Angela T. Alexander, State Transportation Planning Administrator

**TO** Bobby Hilliard, P.E., State Program Delivery Engineer  
**Attention:** Clinton Ford

**SUBJECT** Traffic Volumes for S.R. 43 @ Little River.

Traffic Volumes for the above project is attached below:

**TC # 181-0103**  
2009 ADT = 1600  
2016 ADT = 1800  
2036 ADT = 2600  
D = 60%  
K = 8%  
T = 10.5%  
24 HR. T. = 12%  
S.U. = 8%  
COMB. = 4%

If you have any questions concerning this information please contact  
Abby Ebodaghe at (404) 631-1923.

ATA/AFE

**GEORGIA DEPARTMENT OF TRANSPORTATION**

**HISTORIC BRIDGE INVENTORY REPORT**

**Serial #:** 189-0009-0

**NO  
ATTACHMENT**

**NO  
ATTACHMENT**

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**County:** MCDUFFIE      **Municipality:**      **GDOT District 2**      **Owner:** STATE

**Location:** 12.3 MI NE OF THOMSON

**Bridge Name:**

**UTM:** 17 380510 3694661

**Facility Carried:** SR 43

**Feature Intersected:** LITTLE RIVER

**Type:** GIRDER-FLOORBEAM

**Design:** CONTINUOUS

**Material:** STEEL

**# Spans:** 3

**Length:** 379

**Width:** 25.7

**# Lanes:** 2

**Railing Type:** CONCRETE RAILINGS

**Date of Construction:** 1952

**Alteration:**

**Source:** SAP 1915(2)

**Designer/Builder:** PATCHEN & ZIMMERMAN

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**Current National Register Status of Bridge:** Not Eligible

**Local, Determined Eligible, or NR Historic District/Status:**

**Inventory NR Recommendation:** Not Eligible

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**Setting/Context:**

The bridge carries a 2-lane state highway over the Little River, a branch of J. Strom Thurmond Lake (formerly Clark Hill Lake), the 39-mile long reservoir created by the US Army Corps of Engineer's dam on the Savannah River. The dam was built from 1946 to 1954 as part of a multi-use hydroelectric and flood control project. The dam and 70,000 acre reservoir required the state highway department to raise or relocate at least 8 bridges. The work was covered by funds provided by the federal government. Because of the large scope of work, the highway department contracted with the Augusta civil engineering firm of Patchen & Zimmerman to design and supervise several of the bridges affected by the reservoir, including this one. The lake is bordered by recreational facilities, including the Clark Hill Wildlife Management Area on the western side of SR 43 and marinas, campgrounds, and a trailer park north and south of the bridge.

**Physical Description:**

**Summary of Significance:**

The 117'-145'-117' continuous span deck girder bridge has built-up girders with floor beams, concrete deck, and concrete column piers with web walls. The concrete railings are a custom design, probably reflecting the taste of the consulting engineers, but are not of themselves significant. In 1952 the bridge was constructed to replace a 443'-long timber and steel bridge flooded by the reservoir. It is one of at least 15 identified bridges from 1940 to 1955 that were built as a result of various federal flood control and hydroelectric projects. The replacement of bridges flooded by reservoirs was a relatively routine matter and the bridge is not historically significant for its association with the J.

**GEORGIA DEPARTMENT OF TRANSPORTATION**

**HISTORIC BRIDGE INVENTORY REPORT**

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**Serial #:** 189-0009-0      **County:** MCDUFFIE      **District** 2      **City:**

Strom Thurmond Lake. The 1952 bridge is not a technologically significant example of a continuous deck girder bridge. Earlier and longer span examples have been identified.

**Bibliography:**

GADOT. Bridge Inspection File & Plans.

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**Reviewed By/ Date:** JPH

**Notes/Comments**

NO  
ATTACHMENT

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**Other Alternatives Considered:**

*Alternate "A" – Realign SR 43 to the West: This is the preferred alternative. SR 43 would be realigned to the west approximately 50-ft. and the new bridge constructed. Once this bridge is completed, traffic would be diverted to it and the old roadway and bridge would be removed. This alternative is more cost effective than an on-site detour because the bridge would be constructed permanently instead of temporarily and would not have to be removed. Also, the rock embankment required to build a bridge over the lake area would remain in place and not be removed. This generates a significant cost savings for the project and simplifies the constructability. This side of SR 43 was selected based on the environmental impacts in the area. It will prevent impacts to the USACE recreational facilities located on the east side of SR 43. The USACE representatives present at the meeting agreed that this is the best alternative.*

*Alternate "B" - Realign SR 43 to the East: This alternative. SR 43 would be realigned to the east approximately 50-ft. and the new bridge constructed. Once this bridge is completed, traffic would be diverted to it and the old roadway and bridge would be removed. This alternative is more cost effective than an on-site detour because the bridge would be constructed permanently instead of temporarily and would not have to be removed. Also, the rock embankment required to build a bridge over the lake area would remain in place and not be removed. This generates a significant cost savings for the project and simplifies the constructability. However, this side of SR 43 was not selected due to potential impacts to the USACE recreational facilities located on the east side of SR 43. These facilities include a boat ramp and a marina located on the north side of the lake. Any impacts to these facilities would be considered adverse and would eliminate the possibility of obtaining a diminished finding. This would delay the project schedule by requiring 4(f) coordination as well as require extensive mitigation efforts.*

*Alternate "C" – Off Site Detour: This alternative was considered first. However, the only suitable routes that can accommodate truck traffic are SR 17 and SR 47. This route would cause motorists to travel 18.0 miles along SR 17 to the City of Washington, then take SR 47 for an additional 18.9 miles back to the City of Lincolnton for a total mileage of 36.9 miles. This is 19.2 miles more than they normally commute now to McDuffie County and the City of Thomson and also I-20.*

*S.R. 43 is a vital link for both the USACE. It provides the quickest route from Lincolnton to I-20 and provides a main route through Lake Thurmond. It is used by the USACE to access the southern coves located near Mistletoe State Park. Also, there are two marinas located near the project site where ingress and egress would be impacted due to the long detour route. People would tend to try and access other marinas that have easier access causing those areas to become crowded. This alternative would be a temporary negligible impact to the USACE properties during construction.*

*There are limited job sources in Lincoln County so most people work in McDuffie, Columbia or Richmond County. SR 43 is used by motorists in Lincoln County traveling to and from I-20 / SR 402 because it is the shortest route to I-20. Closing SR 43 will cause motorists to travel SR 47 to Washington and SR 17 to Thomson in order to access I-20. This will cause commuter time delays of approximately 38 minutes a day commuting to work. This will also add additional costs to the commuters by increasing their fuel costs with the additional mileage being traveled.*

**Comments:**

**Design:**

*No Comments*

**Utilities:**

*It was originally thought that there was a inter-state telephone line buried in the lake bed that would be located on the realignment side (west side) of SR 43. This is not there.*

**Traffic Operations:**

*No Comments*

**Construction:**

*No Comments*

**Right of Way:**

*No Comments*

**Environmental:**

*The nearest bald eagle nest (active or inactive) is located approximately 4.25 miles from the bridge site. There are four nests located approx. equal distance from the bridge, two noted in active status and two inactive. These are the known nests. The USCOE is not aware of any additional nests in the area, but that doesn't mean that they couldn't build one in the area prior to beginning future construction.*

*There are three archaeological sites in the area, but only one that may be within the project area. It is identified as site 9LC26/63 and is located along the highway, approximately 200 feet north of the entrance to Amity Day Use Area in Lincoln County. Our records indicate that it is an historic homesite and possible cemetery. While it is recommended not eligible for listing on the NRHP, it is still listed as protected in our records due to the potential for a cemetery on the site. The USCOE typically adds a 100-ft buffer to the site boundary, as indicated on the attached map. The USCOE ask that if GDOT includes this site on any maps or drawings that may be released to the public that the site is listed as environmentally sensitive, but does not identify that it is a cultural resource site.*

Processed Date:11/1/2010

# Bridge Inventory Data Listing



Parameters: Bridge Serial Num

Structure ID:189-0009-0

McDuffie

SUFF. RATING: 19.34

### Location & Geography

Structure ID: 189-0009-0  
 200 Bridge Information: 06  
 \*6A Feature Int: LITTLE RIVER  
 \*6B Critical Bridge: 0  
 \*7A Route No Carried: SR00043  
 \*7B Facility Carried: SR 43  
 9 Location: 12.3 MI NE OF THOMSON  
 2 Dot District: 2  
 207 Year Photo: 2010  
 \*91 Inspection Frequency: 24 Date: 01/21/2009  
 92A Fract Cr1 Insp Freq: 2 Date: 01/21/2010  
 92B Underwater Insp Freq: 2 Date: 10/16/2006  
 92C Other Spc Insp Freq: 0 Date: 02/01/1901  
 \*4 Place Code: 00000  
 \*5 Inventory Route(O/U): 1  
 Type: 3  
 Designation: 1  
 Number: 00043  
 Direction: 0  
 \*16 Latitude: 33 38.6407 HMMS Prefix:SR  
 \*17 Longitude: 82 -28.6365 HMMS Suffix:00 MP:7.61  
 \*98 Border Bridge: 000%Shared:00  
 \*99 ID Number: 0000000000000000  
 \*100 STRAIGHT: 0  
 12 Base Highway Network: 1  
 13A LRS Inventory Route: 1891004300  
 13B Sub Inventory Route: 0  
 101 parallel Structure: N  
 \*102 Direction of Traffic: 2  
 \*204 Road Inventory Mile Post: 007.59  
 \*208 Inspection Area: 2 Initials: EFP  
 Engineer's Initials:  
 \* Location ID No: 189-00043D-007.61N

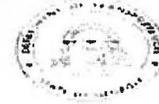
\*104 Highway System: 0  
 \*26 Functional Classification: 07  
 \*204 Federal Route Type: S No: 00906  
 105 Federal Lands Highway: 0  
 \*110 Truck Route: 0  
 206 School Bus Route: 1  
 217 Benchmark Elevation: 0346.00  
 218 Datum: 2  
 \*19 Bypass Length: 21  
 \*20 Toll: 3  
 \*21 Maintenance: 01  
 \*22 Owner: 01  
 \*31 Design Load: 2  
 37 Historical Significance: 5  
 205 Congressional District: 10  
 27 Year Constructed: 1952  
 106 Year Reconstructed: 0000  
 33 Bridge Medium: 0  
 34 Skew: 00  
 35 Structure Flared: 0  
 38 Navigation Control: 0  
 213 Special Steel Design: 4  
 267 Type of Paint: 5  
 \*42 Type of Service On: 1  
 Type of Service Under: 5  
 214 Movable Bridge: 0  
 203 Type Bridge: A  
 259 Pile Encasement: 3  
 \*43 Structure Type Main: 4 03  
 45 No.Spans Main: 003  
 44 Structure Type Appr: 0 00  
 46 No Spans Appr: 0000  
 226 Bridge Curve Horz: 0 Vert 1  
 111 pier Protection: 0  
 107 Deck Structure Type: 1  
 108 Wearing Structure Type: 1  
 Membrane Type: 8  
 Deck Protection: 8

### Signs & Attachments

225 Expansion Joint Type: 01  
 242 Deck Drains: 1  
 243 Parapet Location: 0  
 Height: 0  
 Width: 0  
 238 Curb Height: 1  
 Curb Material: 1  
 239 Handrail: 11  
 \*240 Medium Barrier Rail: 0  
 241 Bridge Median Height: 0  
 \* Bridge Median Width: 0  
 230 Guardrail Loc. Dir. Rear: 3  
 Fwd: 3  
 Oppo. Dir. Rear: 0  
 Oppo. Fwd: 0  
 244 Approach Slab: 3  
 224 Retaining Wall: 0  
 233 Posted Speed Limit: 55  
 236 Warning Sign: 1.00  
 234 Deineator: 1.00  
 235 Hazzard Boards: 1  
 237 Utilities Gas: 00  
 Water: 00  
 Electric: 00  
 Telephones: 00  
 Sewer: 00  
 247 Lighting Street: 0  
 Navigation: 0  
 Aerial: 0  
 \*246 County Continuity No: 00

Processed Date:11/1/2010

# Bridge Inventory Data Listing



Parameters: Bridge Serial Num

## Structure ID:189-0009-0

Programming Data  
 201 Project No. SAP 1915 (2)  
 202 Plans Available: 4  
 249 Prop Proj No. BRG-0007-00(040)  
 250 Approval Status: 0000  
 251 PI Number: 0007040  
 252 Contract Date: 02/01/1901  
 269 Scheme No: 00000  
 75 Type Work: 34 1  
 94 Bridge Imp. Cost: \$ 544  
 95 Roadway Imp. Cost: 244  
 96 Total Imp Cost: 992  
 76 Imp Length: 001699  
 97 Imp Year: 1990  
 114 Future ADY: 004035 Year:2027

### Hydraulic Data

215 Waterway Data:  
 High Water Elev: 0335.0 Year:1900  
 Flood Elev: 0000.0 Freq:00  
 Avg Streambed Elev: 0287.0  
 Drainage Area: 00000  
 Area of Opening: 000000  
 113 Scour Critical: U  
 216 Water Depth: 45.3 Br.Height:17.3  
 222 Slope Protection: 1  
 221 Slope Protection: 0 Fwd:0  
 219 Fender System: 0  
 239 Dolphin: 0  
 223 Current Cover: 000  
 Type: 0  
 No. Barrels: 0  
 \* Width: 0 00 Height:0 00  
 \* Length: 0 Apron:0  
 265 U/W Insp. Area: 1 Diver:RMO  
 Location ID No: 189 00043D-007 61N

### Measurements:

\*29 ADT 002690 Year:2007  
 109% Trucks: 0  
 \* 28 Lanes On: 02 Under:00  
 210 No. Tracks On: 00 Under:00  
 \* 48 Max. Span Length: 0145  
 \* 49 Structure Length: 379  
 51 Br. Rwdy. Width: 23.90  
 52 Deck Width: 25.70  
 \* 47 Tot. Horiz. Cl: 24  
 50 Curb / Sidewalk Width: 2.00 / 2.00  
 32 Approach Rdwy Width: 024  
 \*229 Shoulder Width:  
 Rear Lt: 3.50 Type:2 Rt:3.20  
 Fwd. Lt: 5.00 Type:8 Rt:5.00  
 Permanent Width:  
 Rear: 22.00 Type:2  
 24.00 Type:2  
 Intersection Rear: 0 Fwd: 0  
 36 Safety Features Br. Rail: 2  
 Transition: 2  
 App. G. Rail: 2  
 App. Rail End: 2  
 53 Minimum Cl. Over: 99' 99"  
 Under:  
 \*228 Minimum Vertical Cl  
 Act. Odm Dir.: 99' 99"  
 Oppo. Dir: 99' 99"  
 Posted Odm. Dir: 00' 00"  
 Oppo. Dir: 00' 00"  
 55 Lateral Undercl. Rt: N 0 0  
 56 Lateral Undercl. Lt: 0.00  
 \*10 Max Min Vert Cl: 99' 99" Dir:0  
 39 Nav Vert Cl: 000 Horiz:0000  
 116 Nav Vert Cl Closed: 000  
 245 Deck Thickness Main: 6.00  
 Deck Thick Approach: 0.00  
 246 Overlay Thickness: 0.00  
 212 Year Last Painted: Sup:1998 Sub:0000

65 Inventory Rating Method: 1  
 63 Operating Rating Method: 1  
 66 Inventory Type: 2 Rating: 12  
 64 Operating Type: 2 Rating: 12  
 231 Calculated Loads:  
 H-Modified: 19 1  
 HS-Modified: 22 1  
 Type 3: 19 1  
 Type 3s2: 30 1  
 Timber: 27 1  
 Piggyback: 40 0  
 261 H Inventory Rating: 8  
 262 H Operating Rating: 13  
 67 Structural Evaluation: 2  
 58 Deck Condition: 6  
 59 Superstructure Condition: 6  
 \* 227 Collision Damage: 0  
 60A Substructure Condition: 5  
 60B Scour Condition: 7  
 60C Underwater Condition: 6  
 71 Waterway Adequacy: 9  
 61 Channel Protection Cond.: 7  
 68 Deck Geometry: 2  
 69 UnderCl. Horz/Vert: N  
 72 Appr. Alignment: 8  
 62 Culvert: N  
 Posting Data  
 70 Bridge Posting Required: 1  
 41 Struct Open, Posted. CL: P  
 \* 103 Temporary Structure: 0  
 232 Posted Loads  
 H Modified: 19  
 HS-Modified: 22  
 Type 3: 19  
 Type 3s2: 30  
 Timber: 27  
 Piggyback: 00  
 253 Notification Date: 02/01/1901  
 258 Fed Notify Date: 2/1/1901 12:00 00AM

# Memorandum

Date 4/13/2011

File CSBRG-0007-00(040) Lincoln/ McDuffie Counties

Bridge Replacement SR 43 @ Little River

PI 0007040

Concept Team Meeting

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A Concept Team Meeting was held on March 31, 2011 at 9:30 am in the GDOT Augusta Are Office. The purpose of this Memorandum is to document the meeting. The sign in sheet is attached.

## General Notes

- Alan Smith, District 2 Design Engineer welcomed everyone to the meeting.
- Everyone introduced themselves.
- Alan Smith gave a project description, and mentioned that at the Initial Concept Team Meeting coordination was made with the United States Corp of Engineers.
- Alan Smith presented the concept report in detail and invited comments and questions from the group.

## Comments and Questions

- It was discussed that a Memorandum of Understanding is needed with the USCOE.
- PAR will be performed after the Concept report is finished.
- VE Study will not be needed.
- The district commented on the quantity of rock embankment.

The Concept Team Meeting was ended.

