

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

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

FILE P.I. # 0011681

OFFICE Design Policy & Support

Crawford County
GDOT District 3 - Thomaston
SR 22 Culvert Replacement @ Bailey
Branch

DATE 8/5/2015

FROM  Brent Story, State Design Policy Engineer

TO SEE DISTRIBUTION

SUBJECT APPROVED REVISED CONCEPT REPORT

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

Attachment

DISTRIBUTION:

Glenn Bowman, Director of Engineering
Joe Carpenter, Director of P3/Program Delivery
Genetha Rice-Singleton, Assistant Director of P3/Program Delivery
Albert Shelby, State Program Delivery Engineer
Darryl VanMeter, State Innovative Delivery Engineer
Bobby Hilliard, Program Control Administrator
Cindy VanDyke, State Transportation Planning Administrator
Hiral Patel, State Environmental Administrator
Ben Rabun, State Bridge Engineer
Andrew Heath, State Traffic Engineer
Angela Robinson, Financial Management Administrator
Lisa Myers, State Project Review Engineer
Charles "Chuck" Hasty, State Materials Engineer
Lee Upkins, State Utilities Engineer
Richard Cobb, Statewide Location Bureau Chief
Andy Casey, State Roadway Design Engineer
Attn: Jason Mobley, District Design Engineer
Michael Presley, District Engineer
Kerry Gore, District Utilities Engineer
Iheanachor Njoku, Project Manager
BOARD MEMBER - 2nd Congressional District

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
REVISED PROJECT CONCEPT REPORT

Project Type: Culvert Replacement P.I. Number: 0011681
GDOT District: 3 County: Crawford
Federal Route Number: 80 State Route Number: 22

Replacing a culvert along 0.40 miles of SR/US 80 at Bailey Branch about 8 miles of Roberta

Submitted for approval:

[Signature] 5/26/15
District Engineer, District 3 Date
Albert Shelby BNS 5/28/15
State Program Delivery Engineer Date
[Signature] KESD. 5/26/15
GDOT Project Manager Date

Recommendation for approval:

HIRSH PRTEL*/EKP 6/1/2015
State Environmental Administrator Date
ANDREW HEATH*/EKP 6/8/2015
State Traffic Engineer Date
BEN RABUN*/EKP 6/8/2015
State Bridge Engineer Date

- MPO Area: This project is consistent with the MPO adopted Regional Transportation Plan (RTP)/Long Range Transportation Plan (LRTP).
- Rural Area: This project is consistent with the goals outlined in the Statewide Transportation Plan (SWTP) and/or is included in the State Transportation Improvement Program (STIP).

CINOS VANDUYKE*/EKP 6/3/2015
State Transportation Planning Administrator Date

*-RECOMMENDATION ON FILE

PLANNING, APPROVED CONCEPT, AND BACKGROUND

Project Justification Statement

This culvert (Structure ID 079-0007-0; SR 22/US 80 over Bailey Branch) was built in 1936 and was extended in 1959. This is a four barrel reinforced concrete box culvert with a barrel length of 67 feet. Each barrel is seven feet high and ten feet wide. This culvert is in poor condition with concrete spalling, heavy concrete scaling and wide cracking. A portion of the culvert barrels 1, 2 and 3 have experienced settlement. The settlement issue has currently been stabilized, however the barrels of the culvert are still misaligned. Due to the structural integrity of this culvert and based on the inspection and settlement that has occurred, replacement of this culvert is recommended.

Project Justification statement provided by:

GDOT Bridge Maintenance Unit

Existing conditions: This project is located on SR 22/US 80 about 8 miles west of Roberta and about 2 miles east from the Upson/Crawford County line. The culvert is in poor condition and barrel number three is failing and supports have been inserted to stop complete failure of the barrel.

Description of the approved concept: This project will replace the existing culvert (Structure ID 079-0007-0; SR 22/US 80 over Bailey Branch) with a reinforced concrete bridge. The bridge is 120 feet long and 40 feet wide. The new bridge will be constructed in the same location as the existing culvert and will tie in with the existing road alignment. The project length spans approximately 0.21 mile. The required ROW is 120' in width and approximately 0.51 acre. A temporary traffic signal will control traffic during staged construction of the bridge.

Federal Oversight: Exempt

Projected Traffic as shown in the approved Concept Report: ADT

Open Year (2017): 2200

Design Year (2037): 3000

Updated Traffic: ADT

Open Year (2017): 2200

24 HR T: 18 %

Design Year (2037): 3000

Functional Classification (Mainline): Rural Minor Arterial

VE Study anticipated:

No

Yes

Completed – Date:

PROPOSED REVISIONS

<p>Approved Features:</p> <ul style="list-style-type: none">• A temporary traffic signal will control traffic during staged construction of the bridge.• The project begins at milepost 2.05 and ends at milepost 2.35. The project length is 0.30 miles	<p>Proposed Features:</p> <ul style="list-style-type: none">• An off-site detour will be used during construction of the new bridge.• The project begins at milepost 2.10 and ends at milepost 2.27. The project length is 0.17 miles
<p>Reason(s) for change: The bridge will be constructed on the existing alignment while utilizing an offsite detour. Staged construction is unfavorable because the culvert has a loss of backfill at the construction joints, large spalls, heavy scaling and wide cracks.</p>	

Design Variances and/or Exceptions needed:

No design variances or exceptions are needed.

ENVIRONMENTAL AND PERMITS

Potential environmental impacts of proposed revision: Changing the on-site detour to an offsite detour will decrease the impacts to the environmental resources with less mitigation costs.

Have proposed revisions been reviewed by environmental staff? No Yes

Environmental Permits/Variations/Commitments/Coordination anticipated:

Permit/Variance/Commitment/Coordination Anticipated	YES	NO	Remarks
1. US Coast Guard Permit		X	
2. Forest Service/Corps Land		X	
3. CWA Section 404 Permit	X		
4. Tennessee Valley Authority Permit		X	
5. Buffer Variance		X	
6. Coastal Zone Management Coordination		X	
7. NPDES	X		
8. FEMA		X	
9. Cemetery Permit		X	
10. Other Permits		X	
11. Other Commitments	X		SP 107.23G for protected species.
12. Other Coordination		X	

Air Quality:

Is the project located in a PM 2.5 Non-attainment area? No Yes
 Is the project located in an Ozone Non-attainment area? No Yes
 Is a Carbon Monoxide hotspot analysis required? No Yes
 The project located in an MS4 area No Yes

Environmental Comments and Information:

NEPA/GEPA: A Categorical Exclusion will be prepared. This hasn't been completed yet. The Concept change, and addition of a detour, would not require any reevaluation.

Ecology: The ecology resource survey has been completed. The draft assessment of effects report has been prepared. There are two perennial streams, four wetlands, and three ephemeral non-buffered state waters. There is potential habitat for 21 protected species. The aquatic species survey was performed. No suitable habitat for protected aquatic species was present. The draft AOE will have to be updated to reduce impacts because the on-site bridge detour will no longer be required. There is no need for additional survey.

Archeology: The archaeology field survey has been completed. There is no need for additional survey.

Air & Noise: This project is not located in a non-attainment area. No ozone or hotspot analysis will be required. A Type III noise analysis will be prepared for this project. This revision will not require modeling.

Public Involvement: A Public Detour Open House will be required.

Major Stakeholders: Travelling public.
City of Roberta
Crawford County

PROJECT COST AND ADDITIONAL INFORMATION

Item	Estimated Cost	Date of Estimate	Funded By
Base Construction Cost:	\$831,349.06	7/10/2015	
Engineering and Inspection:5%	\$41,567.45	7/10/2015	
Contingencies: 5%	\$41,567.45	7/10/2015	
Liquid AC Adjustment:	\$14,577.97	7/10/2015	
<u>Total Construction Cost:</u>	\$929,061.93		GDOT
Right-of-Way:	N/A	N/A	N/A
Utilities (reimbursable costs):	N/A	NA	N/A
Environmental Mitigation:	N/A	N/A	N/A
TOTAL PROJECT COST:	\$929,067.93		

Recommendation: Recommend that the proposed revision to the concept be approved for implementation.

Comments:

Attachments:

1. Sketch map
2. Cost Estimate(s)
3. Detour map

APPROVALS

Concur:

Sh. Brown
Director of Engineering

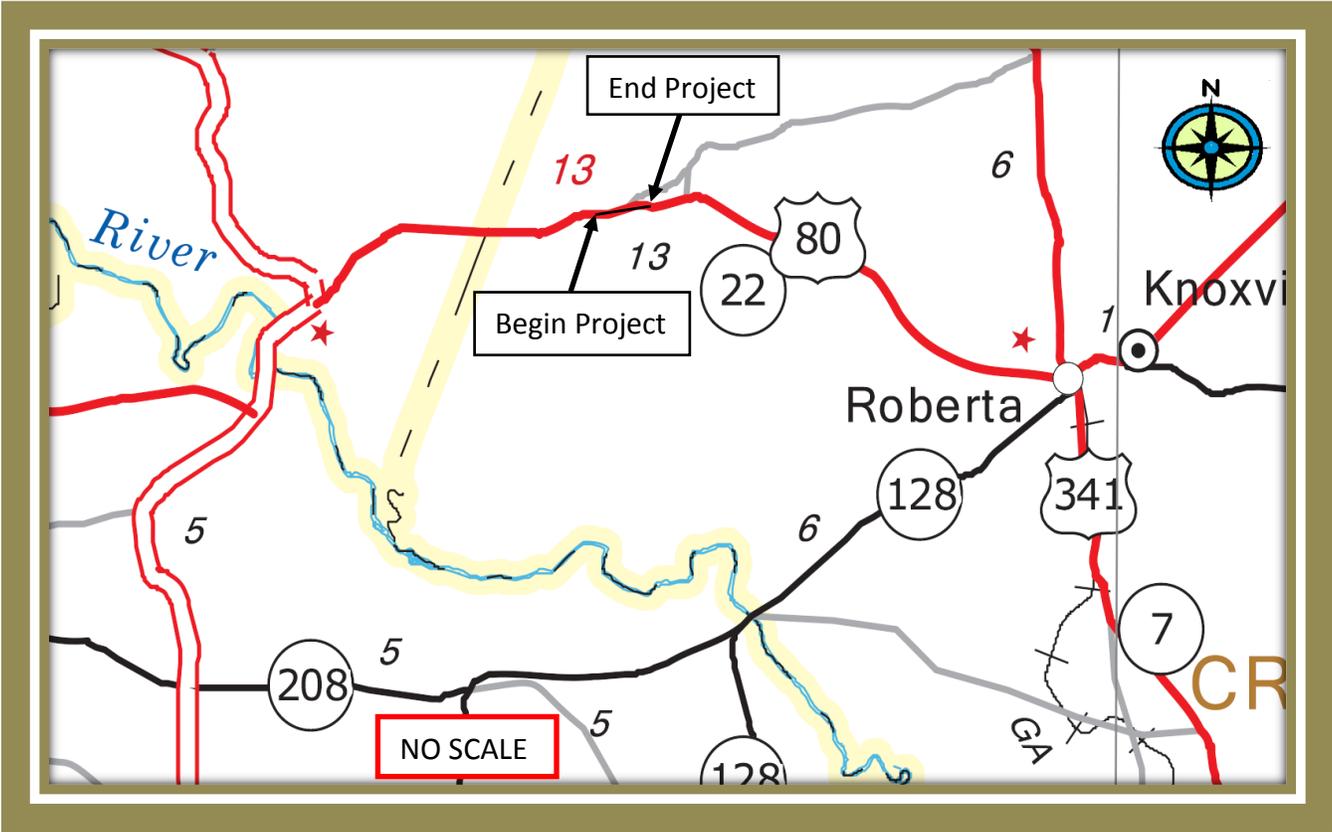
7/23/2015
Date

Approve:

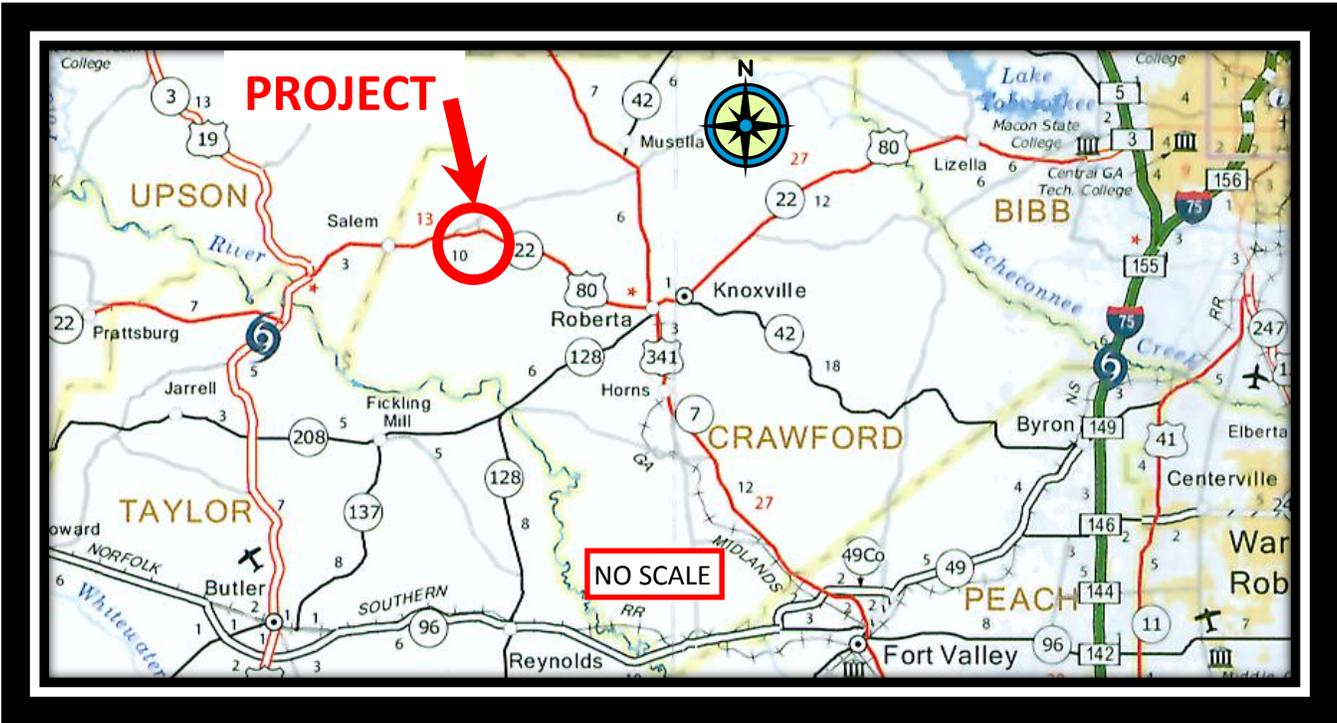
Margaret B. Pickett
Chief Engineer

7.30.15
Date

PROJECT LOCATION



SR 22 Culvert Replacement at Bailey Branch 8 miles west of Roberta



DETAILED COST ESTIMATE



Job: 0011681

JOB NUMBER 0011681

FED/STATE PROJECT NUMBER

SPEC YEAR: 01

DESCRIPTION: BRIDGE REPLACEMENT
CRAWFORD COUNTY

ITEMS FOR JOB 0011681

0010 - ROADWAY

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0355	150-1000	1.000	LS	\$30,000.00000	TRAFFIC CONTROL - 01	\$30,000.00
0100	210-0100	1.000	LS	\$85,000.00000	GRADING COMPLETE - 0011681	\$85,000.00
0110	310-1101	1011.000	TN	\$22.00000	GR AGGR BASE CRS, INCL MATL	\$22,242.00
0115	318-3000	100.000	TN	\$20.00000	AGGR SURF CRS	\$2,000.00
0360	402-1812	200.000	TN	\$82.96520	RECYL AC LEVELING, INC BM&HL	\$16,593.04
0125	402-3100	133.000	TN	\$85.00000	REC AC 9.5 MM SP, TPI, GP1ORBL1, INCL BM&HL	\$11,305.00
0130	402-3121	396.000	TN	\$80.00000	RECYL AC 25MM SP, GP1/2, BM&HL	\$31,680.00
0135	402-3190	214.000	TN	\$83.00000	RECYL AC 19 MM SP, GP 1 OR 2, INC BM&HL	\$17,762.00
0140	413-1000	224.000	GL	\$3.50000	BITUM TACK COAT	\$784.00
0365	432-5010	320.000	SY	\$7.06024	MILL ASPH CONC PVMT, VARB DEPTH	\$2,259.28
0150	433-1000	267.000	SY	\$165.00000	REINF CONC APPROACH SLAB	\$44,055.00
0155	436-1000	700.000	LF	\$9.00000	ASPH CONC CURB - 0011681	\$6,300.00
0165	441-0050	40.000	SY	\$55.00000	CONC SLOPE DRAIN	\$2,200.00
0170	441-0303	4.000	EA	\$1,300.00000	CONC SPILLWAY, TP 3	\$5,200.00
0370	456-2015	1.000	GLM	\$4,040.32848	INDENT. RUMB. STRIPS - GRND-IN-PL (SKIP)	\$4,040.33
0175	500-0100	267.000	SY	\$5.00000	GROOVED CONCRETE	\$1,335.00
0180	500-3200	20.000	CY	\$450.00000	CL B CONC	\$9,000.00
0195	550-2180	50.000	LF	\$30.00000	SIDE DR PIPE 18", H 1-10	\$1,500.00
0199	550-3418	1.000	EA	\$500.00000	SAFETY END SECTION 18", SD, 4:1	\$500.00
0200	550-3618	1.000	EA	\$500.00000	SAFETY END SECTION 18", SD, 6:1	\$500.00
0250	641-1100	84.000	LF	\$60.00000	GUARDRAIL, TP T	\$5,040.00
0255	641-1200	346.000	LF	\$18.00000	GUARDRAIL, TP W	\$6,228.00
0375	641-5001	2.000	EA	\$688.16856	GUARDRAIL ANCHORAGE, TP 1	\$1,376.34
0265	641-5012	3.000	EA	\$1,900.00000	GUARDRAIL ANCHORAGE, TP 12	\$5,700.00
0270	643-8200	400.000	LF	\$2.00000	BARRIER FENCE (ORANGE), 4 FT	\$800.00
SUBTOTAL FOR ROADWAY:						\$313,399.99

0020 - STRUCTURES

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0325	211-0300	250.000	CY	\$30.00000	BR EXCAV, STREAM CROSSING	\$7,500.00
0330	543-9000	1.000	LS	\$408,000.00000	CONSTR OF BRIDGE COMPLETE - 0011681	\$408,000.00
SUBTOTAL FOR STRUCTURES:						\$415,500.00

DETAILED COST ESTIMATE



Job: 0011681

0040 - SIGNING & MARKING

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0240	636-1033	50.000	SF	\$22.00000	HWY SIGNS, TP1MAT,REFL SH TP 9	\$1,100.00
0245	636-2070	80.000	LF	\$8.00000	GALV STEEL POSTS, TP 7	\$640.00
0275	653-1501	1040.000	LF	\$0.65000	THERMO SOLID TRAF ST 5 IN, WHI	\$676.00
0280	653-1502	1040.000	LF	\$0.70000	THERMO SOLID TRAF ST, 5 IN YEL	\$728.00
0285	654-1001	20.000	EA	\$3.00000	RAISED PVMT MARKERS TP 1	\$60.00
0290	657-1085	360.000	LF	\$6.00000	PRF PL SD PVT MKG,8",B/W,TP PB	\$2,160.00
0295	657-6085	360.000	LF	\$6.00000	PRF PL SD PVMT MKG,8",B/Y,TPPB	\$2,160.00
SUBTOTAL FOR SIGNING & MARKING:						\$7,524.00

0080 - EROSION CONTROL

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0010	163-0232	1.000	AC	\$300.00000	TEMPORARY GRASSING	\$300.00
0015	163-0240	40.000	TN	\$200.00000	MULCH	\$8,000.00
0020	163-0300	2.000	EA	\$1,200.00000	CONSTRUCTION EXIT	\$2,400.00
0025	163-0520	200.000	LF	\$15.00000	CONSTR AND REMOVE TEMP PIPE SLOPE DRAIN	\$3,000.00
0350	165-0030	1400.000	LF	\$0.78362	MAINT OF TEMP SILT FENCE, TP C	\$1,097.07
0070	165-0101	2.000	EA	\$700.00000	MAINT OF CONST EXIT	\$1,400.00
0080	167-1000	2.000	EA	\$500.00000	WATER QUALITY MONITORING AND SAMPLING	\$1,000.00
0085	167-1500	12.000	MO	\$500.00000	WATER QUALITY INSPECTIONS	\$6,000.00
0095	171-0030	2800.000	LF	\$3.00000	TEMPORARY SILT FENCE, TYPE C	\$8,400.00
0210	603-2024	600.000	SY	\$43.00000	STN DUMPED RIP RAP, TP 1, 24"	\$25,800.00
0215	603-2182	600.000	SY	\$46.00000	STN DUMPED RIP RAP, TP 3, 24"	\$27,600.00
0220	603-7000	1200.000	SY	\$4.00000	PLASTIC FILTER FABRIC	\$4,800.00
0300	700-6910	2.000	AC	\$1,000.00000	PERMANENT GRASSING	\$2,000.00
0305	700-7000	6.000	TN	\$85.00000	AGRICULTURAL LIME	\$510.00
0310	700-8000	2.000	TN	\$450.00000	FERTILIZER MIXED GRADE	\$900.00
0315	700-8100	100.000	LB	\$2.30000	FERTILIZER NITROGEN CONTENT	\$230.00
0320	716-2000	1200.000	SY	\$1.24000	EROSION CONTROL MATS, SLOPES	\$1,488.00
SUBTOTAL FOR EROSION CONTROL:						\$94,925.07

TOTALS FOR JOB 0011681

ITEMS COST:	\$831,349.06
COST GROUP COST:	\$0.00
ESTIMATED COST:	\$831,349.06
CONTINGENCY PERCENT:	0.05
ENGINEERING AND INSPECTION:	0.05
ESTIMATED COST WITH CONTINGENCY AND E&I:	\$914,483.97

PROJ. NO.	
P.I. NO.	0011681
DATE	7/10/2015

CALL NO.

INDEX (TYPE)	DATE	INDEX
REG. UNLEADED	Jul-15	\$ 2.291
DIESEL		\$ 2.848
LIQUID AC		\$ 505.00

Link to Fuel and AC Index:

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

LIQUID AC ADJUSTMENTS

$PA = \left(\frac{APM - APL}{APL} \right) \times TMT \times APL$

Asphalt

Price Adjustment (PA)				14286.45	\$	14,286.45
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	808.00		
Monthly Asphalt Cement Price month project let (APL)			\$	505.00		
Total Monthly Tonnage of asphalt cement (TMT)				47.15		

ASPHALT	Tons	%AC	AC ton
Leveling	200	5.0%	10
12.5 OGFC		5.0%	0
12.5 mm		5.0%	0
9.5 mm SP	133	5.0%	6.65
25 mm SP	396	5.0%	19.8
19 mm SP	214	5.0%	10.7
943			47.15

BITUMINOUS TACK COAT

Price Adjustment (PA)			\$	291.52	\$	291.52
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	808.00		
Monthly Asphalt Cement Price month project let (APL)			\$	505.00		
Total Monthly Tonnage of asphalt cement (TMT)				0.962102607		

Bitum Tack

Gals	gals/ton	tons
224	232.8234	0.96210261

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)				0	\$	-
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	808.00		
Monthly Asphalt Cement Price month project let (APL)			\$	505.00		
Total Monthly Tonnage of asphalt cement (TMT)				0		

Bitum Tack	SY	Gals/SY	Gals	gals/ton	tons
Single Surf. Trmt.		0.20	0	232.8234	0
Double Surf. Trmt.		0.44	0	232.8234	0
Triple Surf. Trmt		0.71	0	232.8234	0
					0

TOTAL LIQUID AC ADJUSTMENT \$ **14,577.97**

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No. 0011681 **OFFICE** Environmental Services

DATE July 13, 2015

FROM *Hiral Patel loc*
Hiral Patel, P.E., State Environmental Administrator

TO Achor Njoku, Project Manager

SUBJECT Amended Preliminary Section 404 Mitigation Credit Cost Estimate

Our office provided you with a revised preliminary Section 404 mitigation cost estimate on July 1, 2015 for the subject project. The estimate was based on information provided in the preliminary Ecology Resource Survey and Assessment of Effect Report. Based on new information provided by your office, it was noted that the project would have no impacts on waters of the U.S. Therefore, no mitigation credits will need to be purchased and you can disregard the memo provided to you earlier.

If you have any questions or need additional information, please contact Lisa Westberry (404) 631-1772 of our office.

HP/HDC/lmw

cc: General File

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE **N/A, Crawford County, P.I. # 0011681**
SR 22 / US 80 @ Bailey Branch

OFFICE Thomaston

DATE 07/16/2015

FROM Kerry Gore, District Utilities Engineer

TO Iheanachor Njoku, Project Manager

SUBJECT **PRELIMINARY UTILITY COST (ESTIMATE)**

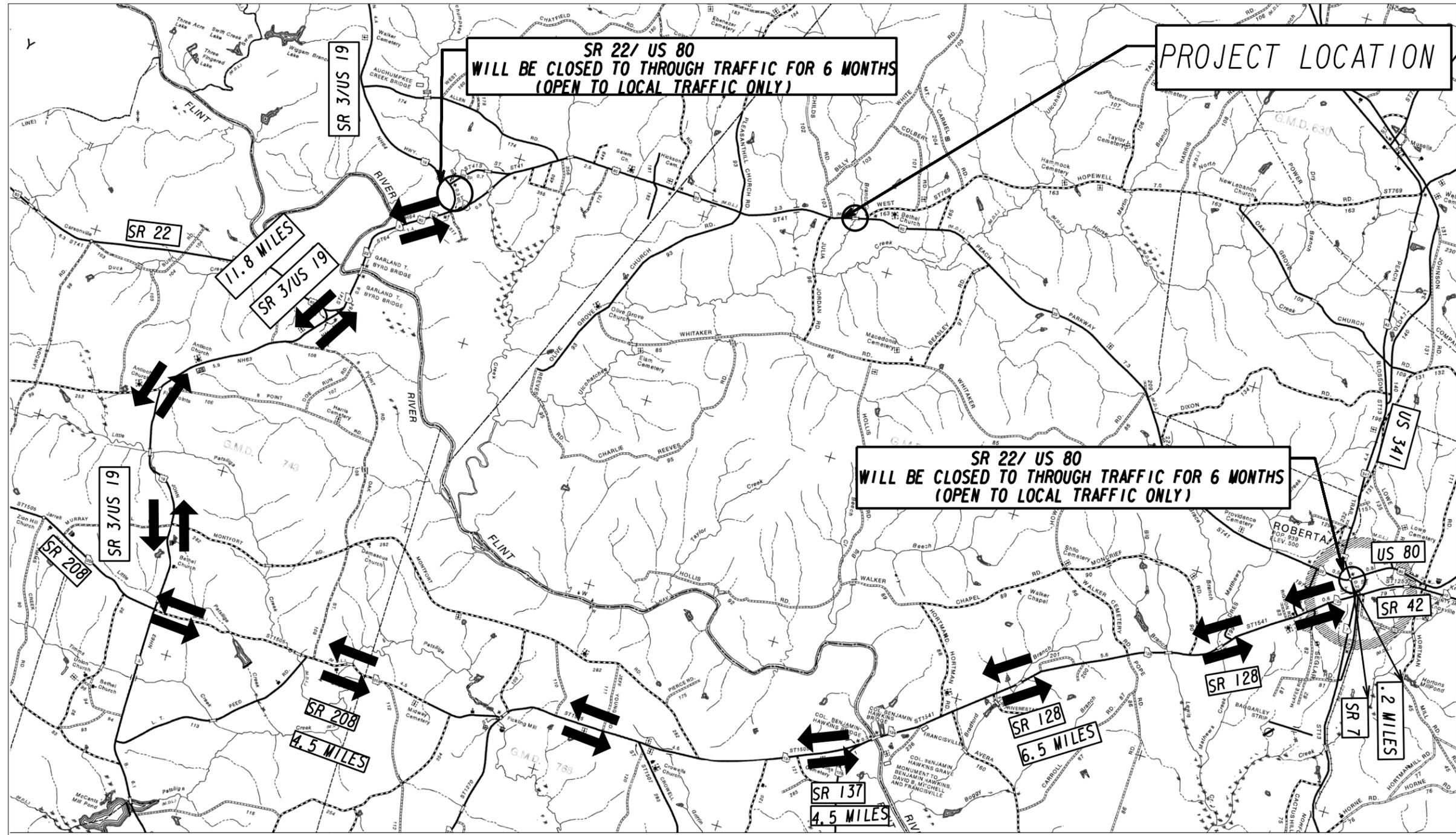
As requested by your office, we are furnishing you with a Preliminary Utility Cost estimate for each utility with facilities potentially located within the project limits.

<u>FACILITY OWNER</u>	<u>NON- REIMBURSABLE</u>	<u>REIMBURSABLE</u>
Public Service Telephone	\$26,760.00	\$0
Upson EMC	\$28,000.00	\$0
<hr/>		
TOTALS	\$54,760.00	\$0.00

Total Preliminary Utility Cost Estimate **\$54,760.00**.

If you have any questions, please contact Harland Smith at 706-646-7606.

KG/pls



**DETOUR MAP - CRAWFORD 0011681 STATE ROUTE DETOUR
SR 22 CULVERT REPLACEMENT AT BAILEY BRANCH 8 MILES WEST OF ROBERTA**

**GEORGIA
DEPARTMENT
OF
TRANSPORTATION**

DETOUR ROUTE
TRAVEL LENGTH WITH DETOUR (MILE) = 23.13
ADDED TRAVEL LENGTH (MILE) = 9.78

1 INCH = 0.5 MILE

