

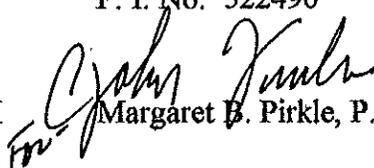
ORIGINAL TO GENERAL FILES

D.O.T. 66

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

**FILE** HPP-STP-064-1(41) Chatham County **OFFICE** Preconstruction  
P. I. No. 522490 **DATE** November 10, 2003

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

**TO** SEE DISTRIBUTION

**SUBJECT** REVISED PROJECT CONCEPT REPORT APPROVAL

Attached for your files is the approval for subject project.

MBP/cj

Attachment

DISTRIBUTION:

David Mulling  
Harvey Keeper  
Jerry Hobbs  
Percy Middlebrooks  
Michael Henry  
Phillip Allen  
Joe Palladi (file copy)  
Brent Story  
Ben Buchan  
Gary Priester  
BOARD MEMBER

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

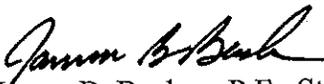
RECEIVED  
SEP 30 2003  
OFFICE OF PLANNING

FILE HPP-STP-064-1(41), Chatham County  
P.I. No. 522490  
SR 26/US 80 fm W of Bull River to E of  
Lazaretto Creek

OFFICE

DATE

Urban Design  
RECEIVED  
SEP 15 2003

FROM   
James B. Buchan, P.E., State Urban Design Engineer

TO Margaret B. Pirkle, P.E., 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).

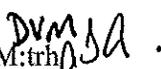
The concept is being revised to modify the typical section to add 4 -11 foot (3.3 m) lanes separated by a 24 -foot (7.2 m) raised grassed median, 10-foot (3.0 m) bicycles shoulders, and 4:1 slopes. The typical section between Bull River and Lazaretto Creek will have the same features as described above except for 6:1 front and back slopes with a 2-foot (0.6 m) flat bottom ditch; and a gravity wall to prevent Diamondback Terrapins from entering the roadway. In addition, Sabal Palm trees will be planted behind the gravity wall. The changes to the typical sections are needed based on updated design guidelines and to reduce Environmental impacts based on coordination efforts with Resource Agencies.

The approved concept designated this project as Exempt, whereas, currently, the project is designated as Full Oversight, due to being on Federal land. Therefore, this Revised Concept Report includes an approval signature line for the FHWA.

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

DATE 10/3/03

  
State Transportation Planning Administrator

JBB:DVM:trh 

cc: David Mulling, PE, State Project Review Engineer  
Harvey Keepler, State Environmental/Location Engineer  
Phillip Allen, State Traffic Safety and Design Engineer  
Joseph P. Palladi, PE, State Transportation Planning Administrator  
Percy Middlebrooks, PE, State Financial Management Administrator  
Gary D. Priester, District 5 Engineer  
Paul Liles, P.E., State Bridge and Structural Design Engineer

# REVISED PROJECT CONCEPT REPORT

**Need and Purpose:** (See Attachment No. 3)

**Project location:** This project is located within the eastern portion of the City of Savannah and within Chatham County. The length of the project is approximately 5.77 miles beginning at milepost 27.5 and ending at milepost 32.87.

**Description of the approved concept:** This project consists of widening existing US 80/SR26 and two bridges from two to four lanes with a 20 foot median and bicycle shoulders from just west of Bull River to just east of Lazaretto Creek.

**PDP Classification:** Major  Minor

**Federal Oversight:** Full Oversight (  ), Exempt (  ), State Funded (  ), or Other (  )

**Functional Classification:** Rural Principal Arterial

**U. S. Route Number(s):** 80 **State Route Number(s):** 26

**Traffic (AADT) as shown in the approved concept:**

Current Year: (1997) 11100 Design Year: (2017) 18000

**Proposed features to be revised:**

The approved concept typical section consisted of 4 -12 foot (3.6 m) lanes with a 20-foot (6.0 m) median and a type 22 or type 22A barrier separating the lanes, 12 -foot (3.6 m) bicycle shoulders, and 2:1 slopes.

**Describe the revised feature(s) to be approved:**

The typical section will be revised to add 4- 11 foot (3.3 m) lanes separated by a 24-foot (7.2 m) raised grassed median, 10- foot (3.0 m) bicycle shoulders, and 4:1 slopes. The typical section between Bull River and Lazaretto Creek will have the same features as described above except for 6:1 front and back slopes separated by a 2-foot (0.6 m) flat bottom ditch, and a gravity wall to prevent Diamondback Terrapins from entering the roadway. In addition, Sabal Palm trees will be planted two meters behind the gravity wall. The Office of Materials and Research has approved the use of the gravity wall.

**Updated traffic data (AADT):**

Current Year: (2010) 14000 Design Year: (2030) 24500

**Programmed/Schedule:**

P.E. 07/94 R/W: 2000 Construction: 2008

**Revised cost estimates:**

- |   |               |
|---|---------------|
| 1. Construction cost including inflation and E&C, | \$ 72,560,073 |
| 2. Right-of-way                                   | \$ 8,000,000  |
| 3. Utilities                                      | \$ 0          |

Is the project located in a Non-attainment area? \_\_\_\_\_ Yes  No.

**Recommendation:** This Office recommends that the proposed revision to the concept be approved for implementation.

**Comments:** A Value Engineering Study will need to be conducted for this project.  
Wetland Mitigation will be required.

**Attachments:**

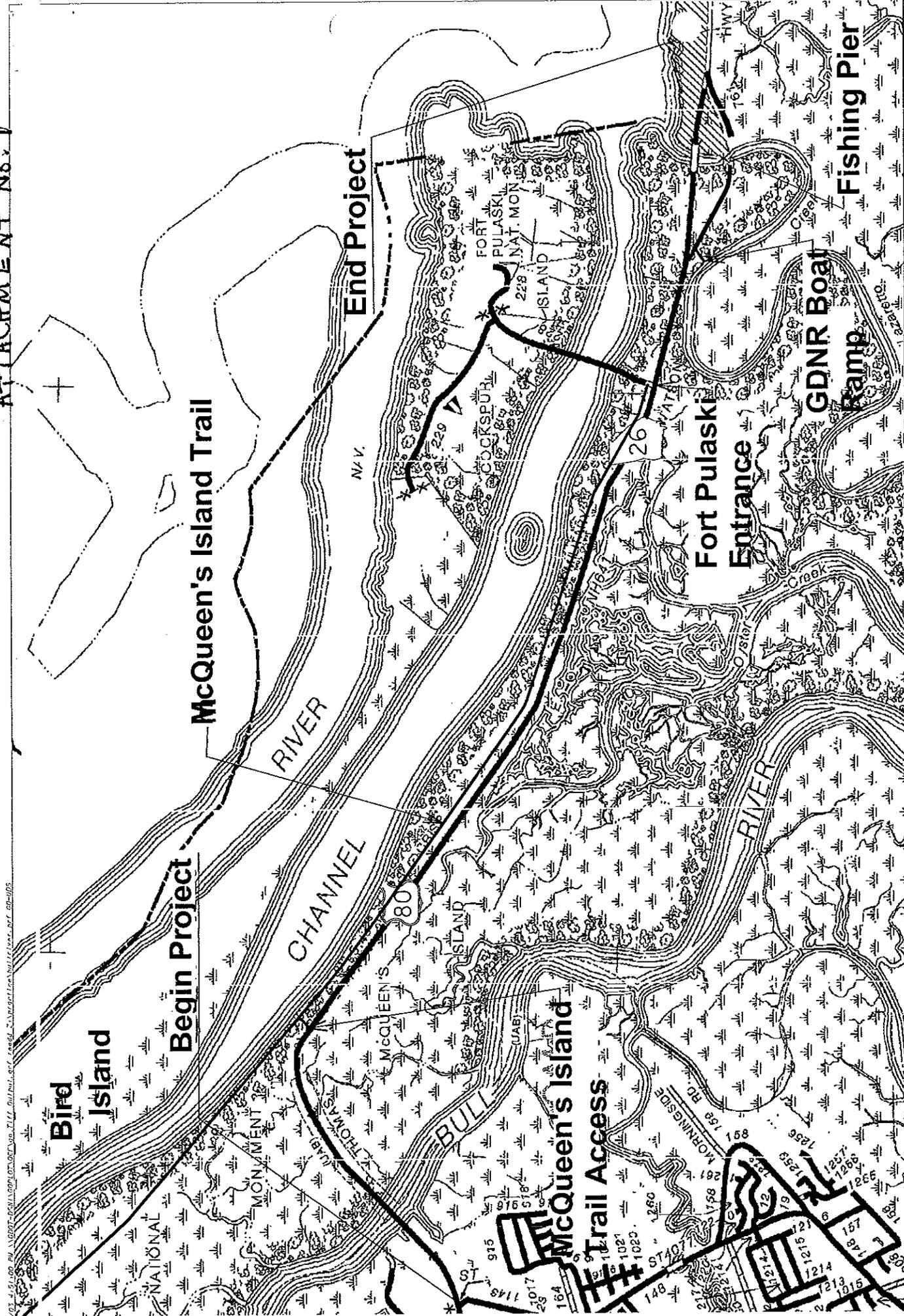
1. Sketch Map
2. Cost Estimate
3. Need and Purpose Statement
4. Updated Traffic Accident Data
5. Typical Sections

**Full Oversight projects**

Concur: Thomas R. [Signature]  
Director of Preconstruction

Approve: Floyd Moore  
Division Administrator, FHWA

Approve: Paul W. [Signature]  
Chief Engineer



2014-11-08 PM 1:00:00 BY: A:\G027-001\AVP\010102\Map\_1111.dwg (11/08/14) 11:00:00 AM 11/08/14

2014-11-08 PM 1:00:00 BY: A:\G027-001\AVP\010102\Map\_1111.dwg (11/08/14) 11:00:00 AM 11/08/14

**PRELIMINARY COST ESTIMATE**  
**URBAN DESIGN OFFICE**

DATE: 09/17/03 PREPARED BY: VCP  
 PROJECT NO: STP-064-1(41) FILE NAME: CostEst-8-22-03  
 P.I. NO: 522490 LENGTH: 9.286 KILOMETERS  
 PROJECT DESCRIPTION/CONCEPT: US80/SR26 WIDENING FROM BULL RIVER TO LAZERATTO CREEK.

EXISTING ROADWAY US 80

TRAFFIC: CURRENT AADT PROJECTED AADT  
 14,000 (2010) 24,500 (2030)

- ( ) PROGRAMMING PROCESS  
 ( ) CONCEPT DEVELOPMENT  
 (X) DURING PROJECT DEVELOPMENT

**PROJECT COSTS**

A. RIGHT OF WAY	lump sum		\$8,000,000.00
		<b>SUBTOTAL</b>	<b>\$8,000,000.00</b>
B. UTILITIES	lump sum		\$0.00
		<b>SUBTOTAL</b>	<b>\$0.00</b>
C. CLEARING AND GRUBBING	27 ha @	\$23,000.00	\$621,000.00
		<b>SUBTOTAL</b>	<b>\$621,000.00</b>
D. EARTHWORK			
<u>In Place Embankment</u>			
Borrow Incl Haul	191650 m <sup>3</sup> @	\$20.00	\$3,833,000.00
<u>Geotechnical</u>			
Filter Fabric	750000 m <sup>2</sup> @	\$6.00	\$4,500,000.00
Wick Drains	5500000 linear meter@	\$1.00	\$5,500,000.00
Drainage Material for Wick Drains	70000 m <sup>3</sup> @	\$19.00	\$1,330,000.00
Surcharge Material (Borrow Material)	300000 m <sup>3</sup> @	\$10.00	\$3,000,000.00
Geogrid	200000 m <sup>2</sup> @	\$6.00	\$1,200,000.00
		<b>SUBTOTAL</b>	<b>\$19,363,000.00</b>

### E. BASE AND PAVING

#### Aggregate Base

Soil Cement	20866 MG @	\$15.00	\$312,990.00
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#### Asphalt Paving

Asph Conc 12.5 mm Superpave	9254 MG @	\$44.66	\$413,283.64
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Asph Conc 19 mm Superpave	12021 MG @	\$49.57	\$595,880.97
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Asph Conc 25 mm Superpave	35834 MG @	\$56.40	\$2,021,037.60
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Leveling	908 MG @	\$34.00	\$30,872.00
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Tack Coat	45142 L @	\$1.00	\$45,142.00
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<b>SUBTOTAL</b>			<b>\$3,419,206.21</b>
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### F. DRAINAGE

#### Drainage

Drop Inlet /w Double Weir opening	60 each @	\$1,677.07	\$100,624.20
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Storm Drainage Pipe 450mm H 0.3-3.0m	180 linear meter @	\$86.25	\$15,525.00
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Flared End Section 450mm (FES)	60 each @	\$252.20	\$15,132.00
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<b>SUBTOTAL</b>			<b>\$131,281.20</b>
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### G. CONCRETE WORK

Approach Slabs	983 m <sup>2</sup> @	\$125.00	\$122,875.00
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Raised Median	49987 m <sup>2</sup> @	\$41.02	\$2,050,466.74
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Curb and Gutter	15576 linear meter @	\$53.00	\$825,528.00
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Temporary Concrete Barrier	8047 linear meter @	\$66.00	\$531,102.00
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<b>SUBTOTAL</b>			<b>\$3,529,971.74</b>
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### H. TRAFFIC CONTROL

lump sum		\$66.00	\$750,000.00
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<b>SUBTOTAL</b>			<b>\$750,000.00</b>
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### I. EROSION CONTROL

Type A Silt Fence	31095 linear meter @	\$11.50	\$357,592.50
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<b>SUBTOTAL</b>			<b>\$357,592.50</b>
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### J. GUARDRAIL

T-Beam Rail	193 linear meter @	\$175.00	\$33,775.00
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Type 1 Anchors	8 each @	\$435.83	\$3,486.64
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Type 12 Anch	8 each @	\$1,321.56	\$10,572.48
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<b>SUBTOTAL</b>			<b>\$47,834.12</b>
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### K. SIGNS, STRIPING, SIGNALS, LIGHTING

Striping	lump sum		\$600,000.00
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Roadside Signs	lump sum		\$100,000.00
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Traffic Signals	2 each @	\$50,000.00	\$100,000.00
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<b>SUBTOTAL</b>			<b>\$800,000.00</b>
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L. GRASSING/LANDSCAPING		lump sum		\$150,000.00
			<b>SUBTOTAL</b>	<b>\$150,000.00</b>

M. MISCELLANEOUS

Field Engineer Office		1 each @	\$48,000.00	\$48,000.00
Right-of-Way Markers		28 each @	\$69.00	\$1,932.00
Wildlife Barrier	(2' Gravity Wall on both side of the road)	13463.90 linear meter @	\$182.30	\$2,454,461.40
9'-10' Palm trees		379 each @	\$400.00	\$151,600.00
			<b>SUBTOTAL</b>	<b>\$2,655,993.40</b>

N. MAJOR STRUCTURES

Bridges	Bull Rvr New	15006 m <sup>2</sup> @	\$645.85	\$9,691,625.10
Bridges	Bull Rvr Widen	5139 m <sup>2</sup> @	\$1,250.00	\$6,423,750.00
Bridges	Lazeratto New	6104 m <sup>2</sup> @	\$645.85	\$3,942,268.40
Bridges	Lazeratto Widen	2358 m <sup>2</sup> @	\$1,250.00	\$2,947,500.00
			<b>SUBTOTAL</b>	<b>\$23,005,143.50</b>

O. MITIGATION

		lump sum		\$5,000,000.00
			<b>SUBTOTAL</b>	<b>\$5,000,000.00</b>

**ESTIMATE SUMMARY**

A. Right of Way	\$8,000,000.00
B. Reimbursable Utilities	\$0.00

**CONSTRUCTION COST SUMMARY**

C. Clearing and Grubbing	\$621,000.00
D. Earthwork	\$19,363,000.00
E. Base and Paving	\$3,419,206.21
F. Drainage	\$131,281.20
G. Concrete Work	\$3,529,971.74
H. Traffic Control	\$750,000.00
I. Erosion Control	\$357,592.50
J. Guardrail	\$47,834.12
K. Signs, Striping, Signals, Lighting	\$800,000.00
L. Grassing/Landscaping	\$150,000.00
M. Miscellaneous	\$2,655,993.40

**SUBTOTAL CONSTRUCTION \$31,825,879.17**

N. Major Structures	\$23,005,143.50
O. Mitigation	\$5,000,000.00

**SUBTOTAL \$59,831,022.67**

2 Years of			
Inflation at	5 %		\$6,132,679.82
10 % E & C			\$6,596,370.25

**TOTAL CONSTRUCTION ESTIMATE \$72,560,072.74**

**TOTAL PROJECT COST ESTIMATE \$80,560,072.74**

**Need and Purpose Statement**  
**US80 from Bull River to Lazaretto Creek**  
**In Chatham County; HPP-STP-064-1(41); P.I. 522490**

***Background***

US80 from Bull River to Lazaretto Creek is a rural principal arterial in Chatham County. The corridor serves as the only roadway access to Tybee Island. Tybee Island serves as the Savannah metropolitan area's primary beach access. Tybee Island has an ever-fluctuating year-round population, with additional tourist and seasonal populations during peak months. The existing roadway is a two-lane undivided rural section. The section proposed for improvement has passing lanes that cover approximately 25% of the section. The corridor includes a low-level bridge crossing the Bull River (length=3534') and a high-level bridge crossing Lazaretto Creek (length=1440'). The US80 corridor is also the only hurricane evacuation route for Tybee Island. Improvements to this portion of US80 are included in the 2025 Regional Transportation Plan (RTP) adopted by the CUTS Policy Committee in 1999 and in the CUTS Transportation Improvement Program. At its present elevation, the spring tide approaches the edge of the travel way on this section of US 80.

***Logical Termini***

The termini for this project are logical because the project can stand on its own. The proposed project will provide lane continuity by linking two four-lane segments (US80 is four-lanes east and west of the project corridor).

***Travel Demand & Operational Conditions***

Design Traffic provided by the Office of Environment/Location indicates this section of US80 will carry 14,000 AADT in 2010. In 2030 the corridor will carry 24,500 AADT.

Level-of-Service (LOS) is defined as a qualitative measure describing operational conditions within a traffic stream. There are six identified LOS at which a roadway can operate. Each of the six are identified by a letter, A through F. LOS "A" represents the best operating conditions and LOS "F" represents the worst. Based upon the Base Year traffic, this segment of US80 will be operating at a Level of Service (LOS) D in the year 2010. If the highway is not widened the LOS for the year 2030 will fall to E. Widening US80 from Bull River to Lazaretto Creek would improve the LOS to A for the year 2010 and to LOS B for the year 2030.

***Economic & Land Use Considerations***

Tybee Island is heavily developed and denser development is now occurring and will continue into the future. The project corridor is mostly undeveloped, consisting almost entirely of salt marshes. The only developed property in the project corridor is the entrance to Fort Pulaski National Monument, the adjacent McQueens Island Trail, and an entrance to a boat ramp on the Lazaretto Creek.

**Safety**

The table below summarizes the accident rate per 100 million miles traveled and the corresponding statewide average for a similar facility (Rural Principal Arterial, on NHS):

	1995		1996		1997	
	US80	State	US80	State	US80	State
Total accidents	13		8		14	
Accident rate	71	140	47	148	74	134
Injuries	10		3		11	
Injury rate	55	53	18	55	58	94
Fatalities	0		0		0	
Fatality rate	0	2.67	0	2.94	0	2.36

In the twelve year period between 1988 and 2000, this section of US 80 experienced twelve fatalities.

Hurricane evacuation is the primary safety concern that the project addresses. The existing US80 roadbed is only five feet above sea level. Major portions of the roadway shoulders are flooded during spring tide conditions. This low elevation makes hurricane evacuation for Tybee Island a major concern. The proposed project will provide an improved hurricane evacuation route by increasing the number of lanes on which to evacuate and by increasing the elevation of the roadway to nine feet, only one foot below the highest ground elevation on Tybee Island.

**Need & Purpose**

This project is needed to provide an adequate hurricane evacuation route and to satisfactorily accommodate existing and future traffic demands, while decreasing the roadways susceptibility to flooding. The addition of bicycle lanes in the corridor will provide an additional benefit.

**Chatham County, 1988-2001**  
**SR 26, ML 27.50 - 32.49**

Year	Accidents	Injuries	Fatalities	Acc. Rate	Inj. Rate	Fat. Rate
1988	---	---	3	---	---	---
1989	---	---	1	---	---	---
1990	12	17	1	61	86	5.06
1991	16	9	0	81	46	0.00
1992	14	13	0	71	66	0.00
1993	9	6	3	46	30	15.17
1994	12	8	1	61	40	5.06
1995	14	11	0	71	56	0.00
1996	7	3	0	35	15	0.00
1997	12	10	0	61	51	0.00
1998	12	3	0	61	15	0.00
1999	---	---	1	---	---	---
2000	15	19	2	---	---	---
2001	13	7	0	---	---	---

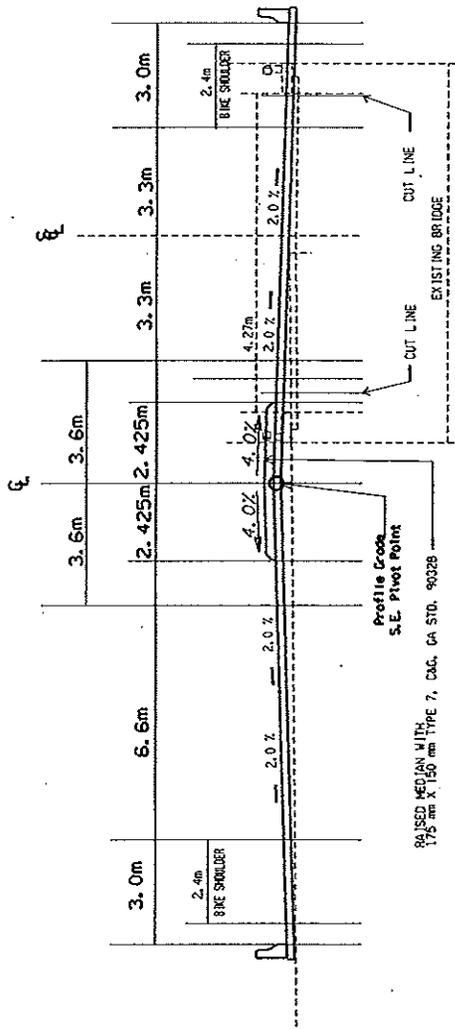
\* --- Not available

\*\* Data for 1998 is 60% complete, 2000 is incomplete, and 2001 is 99% complete.

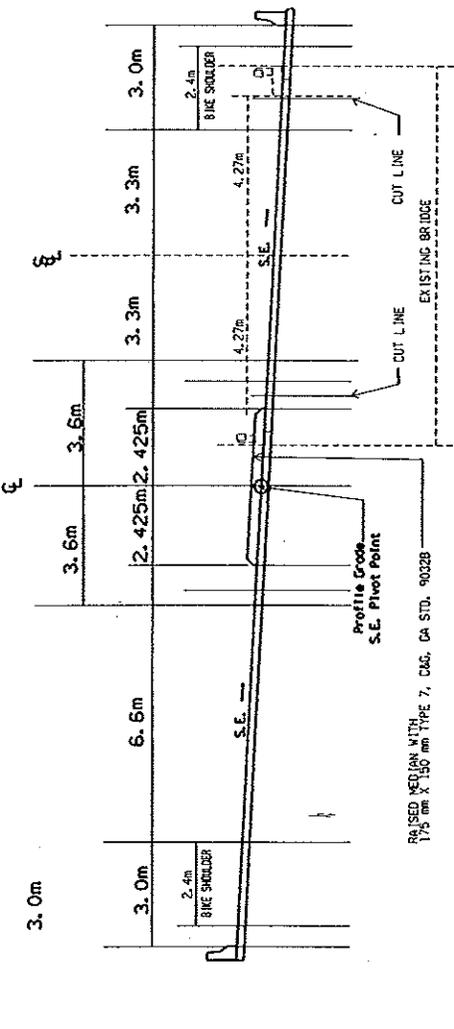


(2 of 6)

STATE	PROJECT NUMBER	DRAWING NUMBER	DATE
GA			



Typical Section No. 2  
Tangent Section  
Bull River



Superelevation Section

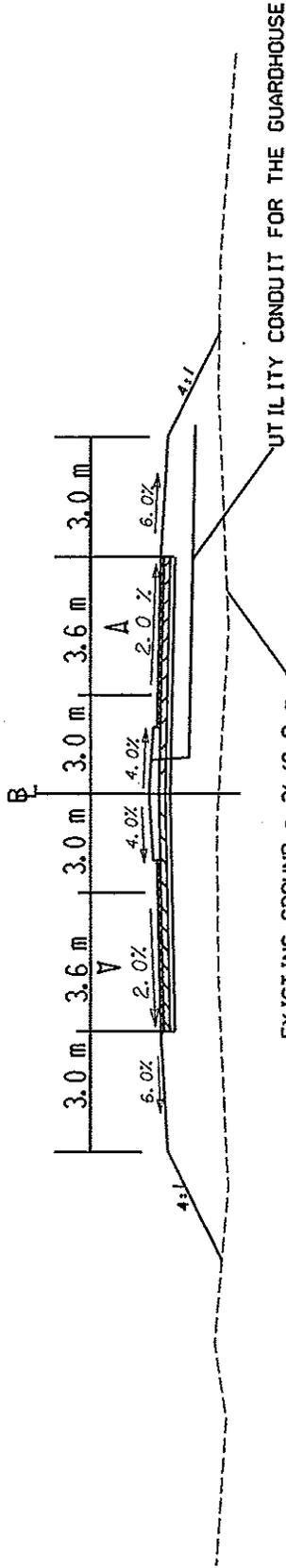
STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
OFFICE OF URBAN DESIGN

TYPICAL SECTIONS



(4 of 6)

STATE	PROJECT NUMBER	SHEET TOTAL
GA.	SP-37-00-000	10
	SECTION	



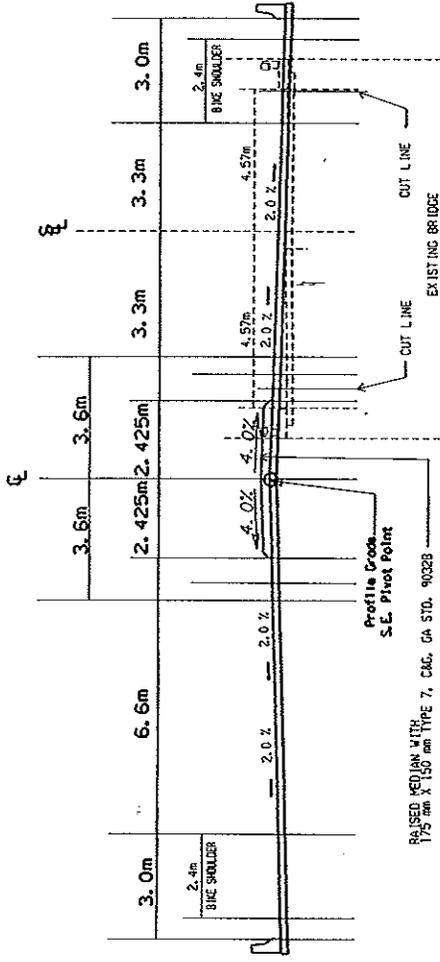
TYPICAL SECTION NO 4  
FORT PULASKI

TYPICAL SECTIONS

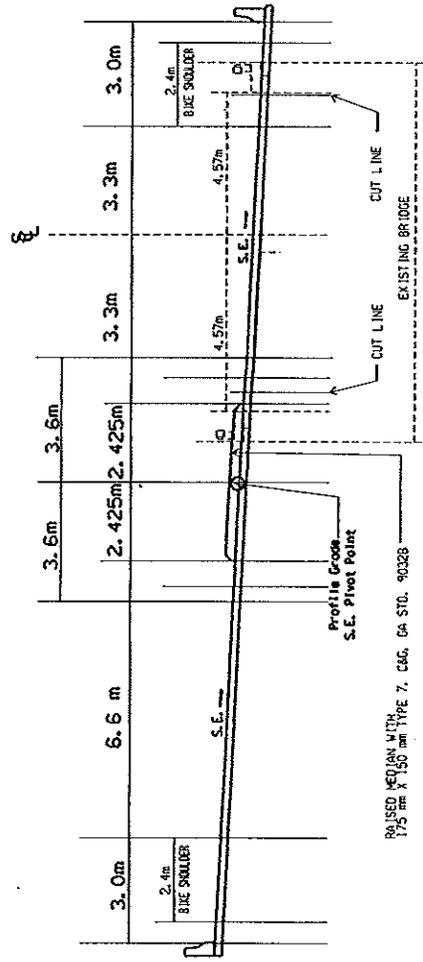
STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
OFFICE OF URBAN DESIGN

(5 of 6)

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			
	REVISION DATES		



Typical Section No. 5  
Tangent Section  
Lazaretto Creek



Superelevation Section  
Lazaretto Creek

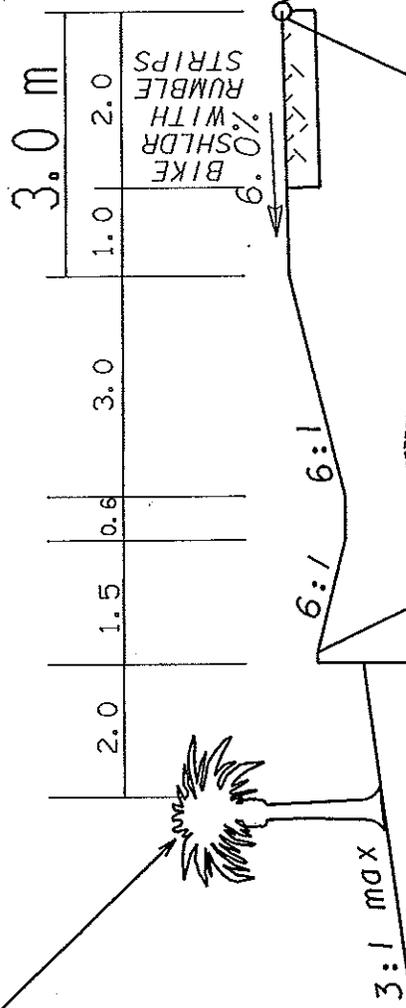
STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
OFFICE OF URBAN DESIGN

TYPICAL SECTIONS

(4 of 6)

STATE	PROJECT NUMBER	SHEET	TOTAL SHEETS
GA.	SP-517-84-100		
	SECTION NOTES		

SABAL PALM



EDGE OF PAVEMENT

PROPOSED

WILDLIFE BARRIER (TYP.) = 9' / 2.7 m

SABAL PALM DETAIL

STATE OF GEORGIA	DEPARTMENT OF TRANSPORTATION	OFFICE OF URBAN DESIGN	TYPICAL SECTIONS
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