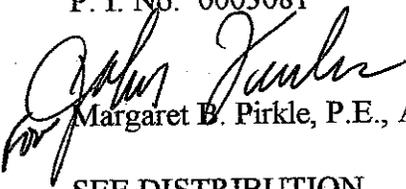


D.O.T. 66

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

**FILE** BR-F003-00(081) Chattooga County **OFFICE** Preconstruction  
P. I. No. 0003081 **DATE** October 4, 2002

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

**TO** SEE DISTRIBUTION

**SUBJECT** PROJECT CONCEPT REPORT APPROVAL

Attached for your files is the approval for subject project.

MBP/cj

Attachment

**DISTRIBUTION:**

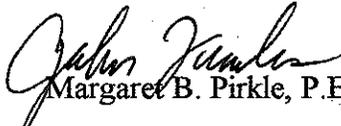
David Mulling  
Harvey Keeper  
Jerry Hobbs  
Herman Griffin  
Michael Henry  
Phillip Allen  
Marta Rosen  
Paul Liles  
Ben Buchan  
Kent Sager  
BOARD MEMBER

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

**FILE:** BR-F003-00(081) Chattooga County **OFFICE** Preconstruction  
P.I. No. 0003081

**DATE** September 23, 2002

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

**TO** Frank L. Danchetz, P.E., Chief Engineer

**SUBJECT PROJECT CONCEPT REPORT**

This project is the replacement of a structurally deficient bridge on CR 321/Taliafero Springs Road over Chattooga River, 1.0 mile south of Lyerly, Georgia. The existing bridge, constructed in 1955, is load limited with a sufficiency rating of 43. County Road 321 at this location is a rural two lane roadway with 9' travel lanes with rural shoulders. This section of CR 321 is functionally classified as a rural local road. This route is part of "Route 5" of the GDOT Statewide Bicycle and Pedestrian Plan. Traffic is projected to be 250 VPD and 400 VPD in the years 2007 and 2027 respectively. The posted speed and the design speed are 35 MPH.

The construction proposes to construct a new 196' x 37' concrete bridge over Chattooga River at the existing bridge site. The approaches will consist of two, 12' lanes with rural shoulders (6.5' paved bikeable shoulder). The existing roadway will be closed during construction and traffic will be diverted to an off-site detour.

Environmental concerns include requiring a COE 404 Permit; a Categorical Exclusion will be prepared; a public hearing is not required; time saving procedures are appropriate.

The estimated costs for this project are:

	<u>PROPOSED</u>	<u>APPROVED</u>	<u>PROG DATE</u>	<u>LET DATE</u>
Construction (includes E&C and inflation)	\$846,000	\$866,000	2005	FY-05
Right-of-Way & Utilities*	Local	Local		

\*Chattooga County signed LGPA on 9-11-01 for right-of-way, utilities, and detours.

Frank L. Danchetz  
Page 2

BR-F003-00(081) Chattooga  
September 23, 2002

This project is in the STIP. I recommend this project concept be approved.

MBP:JDQ/cj

Attachment

CONCUR   
Thomas L. Turner, P.E., Director of Preconstruction

APPROVE   
Frank L. Danchetz, P.E., Chief Engineer

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

-----  
**INTERDEPARTMENTAL CORRESPONDENCE**

**FILE:** BR-F003-00(081) Chattooga  
P.I. Number 0003081

**OFFICE:** Engineering Services

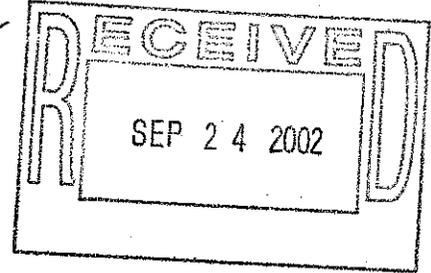
**DATE:** September 23, 2002

**FROM:** David Mulling, Project Review Engineer

*REW*

**TO:** Meg Pirkle, Assistant Director of Preconstruction

**SUBJECT:** CONCEPT REPORT



We have reviewed the concept report submitted September 12, 2002 by the letter from Ben Buchan dated September 11, 2002, and have no comments.

The costs for the project are:

Construction	\$663,880
Inflation	\$104,644
E&C	\$76,852
Reimbursable Utilities	\$LGPA anticipated
Right of Way	\$LGPA anticipated

REW/DTM

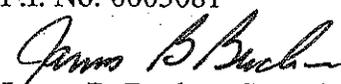
c: James B. Buchan, Attn.: Ted Cashin

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

**FILE**      **BR-F003-00(081) Chattooga County**  
CR 321/Taliafero Springs at Chattooga River 1 mi. south of Lyerly  
P.I. No. 0003081

**OFFICE**      Atlanta

**FROM**        
James B. Buchan, State Consultant Design Engineer

**DATE**      September 11, 2002

**TO**      Meg Pirkle, Assistant Director of Preconstruction

**SUBJECT**      **PROJECT CONCEPT REPORT**

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

Those on the distribution list below should review the Concept Report and send comments and/or the signature page to the Preconstruction Office within 10 days as per the PDP.

If you have any questions or require further information please call Ted Cashin at (404)463-6135 or Carol Bowler of Wilbur Smith Associates at (770) 936-8650.

*Distribution:*

David Mulling, Project Review Engineer  
Harvey Keepler, State Environmental/Location Engineer  
Phillip Allen, State Traffic Safety and Design Engineer  
Marta Rosen, State Transportation Planning Administrator  
Herman Griffin, Office of Financial Management Administrator  
Kent Sager, District Engineer – Cartersville  
Paul Liles, State Bridge & Structural Engineer

JBB:MBA:EJC

cc: Wilbur Smith Associates

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
Office of Consultant Design

Project Concept Report

Project Number: BR-F003-00(081)

County: Chattooga

P. I. Number: 0003081

Federal Route Number: N/A

County Road Number: 321

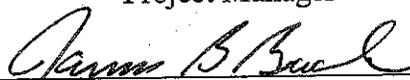
Recommendation for approval:

DATE 9-11-02

DATE 9-11-02



Project Manager



State Consultant Design Engineer

The 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 \_\_\_\_\_

State Transportation Planning Administrator

DATE \_\_\_\_\_

Office of Financial Management Administrator

DATE \_\_\_\_\_

State Environmental/Location Engineer

DATE \_\_\_\_\_

State Traffic Safety and Design Engineer

DATE \_\_\_\_\_

District Engineer

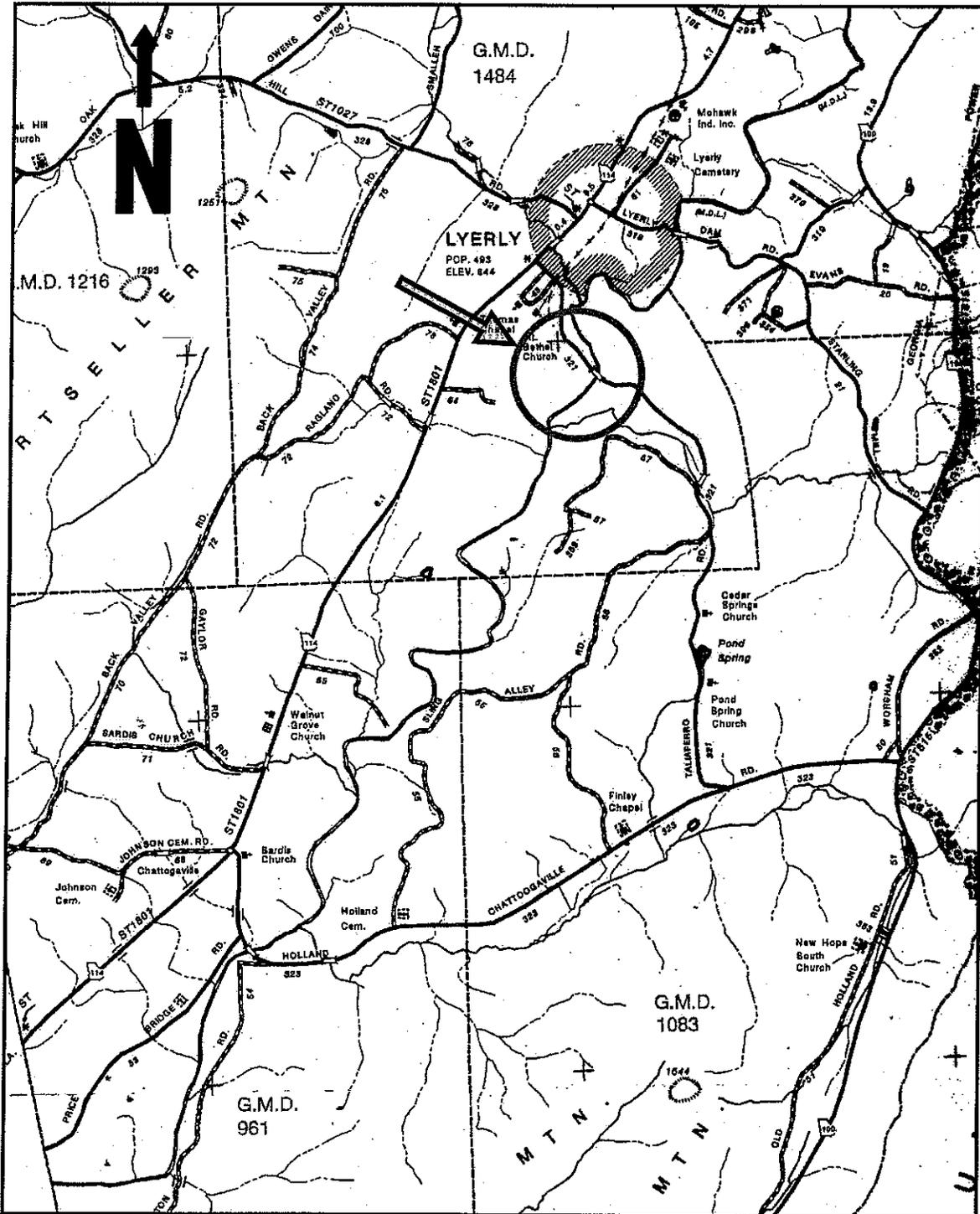
DATE \_\_\_\_\_

Project Review Engineer

DATE \_\_\_\_\_

State Bridge and Structural Design Engineer

Project Concept Report page 2  
Project Number: BR-F003-00(081)  
P. I. Number: 0003081  
County: Chattooga



Scale: 1 inch = 1 mile

## Location Map

Project: BR-F003-00(081) Chattooga County PI No.: 0003081

Description: CR 321/Taliaferro Springs at Chattooga River 1 mi. south of Lyerly

Project Concept Report page 3  
Project Number: BR-F003-00(081)  
P. I. Number: 0003081  
County: Chattooga

**Need and Purpose:** The proposed project BR-F003-00(081), will replace the structurally deficient CR 321 bridge over the Chattooga River with a structurally adequate bridge to improve the operation and safety of this section of CR 321. See the attached Need and Purpose Statement.

**Description of the proposed project:** Project BR-F003-00(081) is a bridge replacement project proposing the replacement of the existing, substandard bridge where CR 321 crosses the Chattooga River in Chattooga County. The proposed roadway will consist of two 12' travel lanes and two 10' shoulders which include 6.5' paved bikeable shoulders. The project length is approximately 985 feet (0.19 miles). The GDOT road inventory mile post nearest the project is 003.27. Project BR-F003-00(081) is approximately 1 mile south of Lyerly.

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

PDP Classification: Major \_\_\_\_\_ Minor

PDP Designation: Full Oversight ( ),      Exempt(  ),      State Funded( ),      or Other ( )

Functional Classification: Rural Local Road

U. S. Route Number(s):      NA      State Route Number(s): NA

Traffic (AADT):

Current Year: (2007) 250      Design Year: (2027) 400

Existing design features:

- Typical Section: Two lane rural section consisting of two 9' travel lanes and 5' shoulders.
- Posted speed: N/A      Maximum degree of curvature: 2° 54'
- Maximum grade: 1.003 %
- Width of right of way: 50'
- Major structures: An existing 20.2' wide bridge. (The existing bridge consists of five spans for a total of 197' with a sufficiency rating of 43.0).
- Major interchanges or intersections along the project: None.
- Existing length of roadway segment: 788' (0.15mi).

**Proposed Design Features:**

- Proposed typical section(s): One 12' travel lane with a 10' shoulder in each direction. The 10' shoulder consists of a 6.5' paved bikeable shoulder (including 2' for clearance and 4.5' for bike travel) and a 3.5' grassed shoulder.
- Proposed Design Speed Mainline: 35 mph
- Proposed Maximum grade Mainline: 0.3 %      Maximum grade allowable 10.0 %.
- Proposed Maximum grade Side Street NA      Maximum grade allowable NA.
- Proposed Maximum grade driveway NA
- Proposed Maximum degree of curve 4° 05'      Maximum degree allowable 16° 00'.
- Right of way
  - Width 130' total.
  - Easements: Temporary (  ), Permanent (  ), Utility (  ), Other (  ).
  - Type of access control: Full (  ), Partial (  ), By Permit (  ), Other (  ).
  - Number of parcels: 4      Number of displacements:
    - Business: 0
    - Residences: 0
    - Mobile homes: 0
    - Other: 0
- Structures:
  - Bridges: The proposed bridge will have a 37' gutter to gutter width, consisting of two 12'-0" travel lanes, two 7'-0" outside shoulders. The bridge is expected to be approximately 196' long. The bridge is wider than usual due to the bike lanes.
  - Retaining walls: (None)
- Major intersections and interchanges: (None)
- Traffic control during construction: Road will be closed, and traffic will be diverted to an off-site detour while the bridge is demolished and reconstructed.

• Design Exceptions to controlling criteria anticipated:

	<u>UNDETERMINED</u>	<u>YES</u>	<u>NO</u>
HORIZONTAL ALIGNMENT:	( )	( )	(X)
ROADWAY WIDTH:	( )	( )	(X)
SHOULDER WIDTH:	( )	( )	(X)
VERTICAL GRADES:	( )	( )	(X)
CROSS SLOPES:	( )	( )	(X)
STOPPING SIGHT DISTANCE:	( )	( )	(X)
SUPERELEVATION RATES:	( )	( )	(X)
HORIZONTAL CLEARANCE:	( )	( )	(X)
SPEED DESIGN:	( )	( )	(X)
VERTICAL CLEARANCE:	( )	( )	(X)
BRIDGE WIDTH:	( )	( )	(X)
BRIDGE STRUCTURAL CAPACITY:	( )	( )	(X)

Project Concept Report page 5.  
Project Number: BR-F003-00(081)  
P. I. Number: 0003081  
County: Chattooga

- Design Variances: (None anticipated)
- Environmental concerns: (Nationwide 404 with PCN anticipated. Possible section 4f or programmatic 4f for impacts to adjacent historical properties.)
- Level of environmental analysis:
  - Are Time Savings Procedures appropriate? Yes ( X ), No ( )
  - Categorical exclusion: ( Anticipated )
  - Environmental Assessment/Finding of No Significant Impact(FONSI) Yes ( ) .No ( X )
  - Environmental Impact Statement (EIS) Yes ( ) , No ( X )
- Utility Involvements:
  - Telephone: Alltell
  - Power: Georgia Power
  - Gas:
  - Cable TV:
  - Water:

**Project responsibilities:**

- Design, Wilbur Smith Associates
- Right of Way Acquisition, Chattooga County is expected to sign LGPA for right of way.
- Relocation of Utilities, Chattooga County is expected to sign LGPA for utilities.
- Letting to contract, GDOT Office of Contract Administration
- Supervision of construction, GDOT District 6
- Providing material pits, Contractor
- Providing detours, Chattooga County is expected to sign LGPA for detours.

**Coordination**

- Concept meeting date and brief summary. Attach minutes.
- P. A. R. meetings, dates and results: (None anticipated).
- FEMA: (No FEMA involvement anticipated).
- Public involvement: (None anticipated).
- Local government comments: (None).
- Other projects in the area: (None).
- Other coordination to date: (None).

**Scheduling – Responsible Parties' Estimate**

- Time to complete the environmental process: 9 Months.
- Time to complete preliminary construction plans: 3 Months.
- Time to complete right of way plans: 3 Months.
- Time to complete the Section 404 Permit: 2 Months.
- Time to complete final construction plans: 6 Months.

Project Concept Report page 6  
Project Number: BR-F003-00(081)  
P. I. Number: 0003081  
County: Chattooga

- Time to complete to purchase right of way: 6 Months.
- List other major items that will affect the project schedule: None - 0 Months.

**Alternates considered:** (1) Build proposed bridge parallel and offset from existing, abandon or demolish existing bridge; (2) No Build; (3) Build temporary detour bridge adjacent to existing bridge. Remove existing bridge and build proposed bridge while traffic is diverted to temporary detour bridge; (4) Build proposed bridge on same location of the existing bridge with temporary off site detour while matching existing horizontal alignment as closely as possible.

**Comments:** Alternate (1) was eliminated due to the fact that the project is adjacent to a historical property on both sides of the road, the increase in project impacts, and that an acceptable offsite detour is available. Alternate (2) was eliminated due to long term maintenance cost of structurally deficient bridge. Alternate (3) was eliminated due to low traffic volume, the additional cost of building two bridges as opposed to building one as well as the historical property that straddles the road and that an acceptable offsite detour is available. Alternate (4) is selected for this concept in an effort to minimize utility and R/W impacts, enhance public safety, and for a more cost effective project. Existing speed limit verified at 35 mph with GDOT and local government.

**Attachments:**

1. Cost Estimates:
  - a. Construction including E&C,
  - b. Right of Way, and
  - c. Utilities.
  - d. Detour Bridge
2. Need and Purpose Statement
3. Traffic Counts Letter
4. Typical Sections
5. Bridge Inventory
6. Flexible Pavement Design Analysis
7. Notice of Location and Design Approval
8. Concept Team Meeting Minutes and Attendance Sheet

**PROJECT COSTS**

DATE: August 29, 2002

PREPARED BY: KET of Wilbur Smith Associates

PROJECT NO.: BR-F003-00(081)

P.I. NO.: 003081

LENGTH: 985 feet (0.19 miles)

PROJECT DESCRIPTION: CR 321 over Chattooga River bridge replacement

PROPOSED CONCEPT: Close road to remove existing substandard bridge. Build proposed 196' x 37' bridge at same location of existing bridge. Roadway approaches will consist of two 12 ft. travel lanes with 10 ft. shoulders consisting of a 6'-6" paved bikeable shoulder and a 3'-6" grassed shoulder.

EXISTING ROADWAY: CR 321 / Taliafero Springs

TRAFFIC: Existing: 250 ADT (2007)

Design: 400 ADT (2027)

( ) PROGRAMMING PROCESS (x) CONCEPT LEVEL ( ) DURING PROJ LEVEL.

**PROJECT COSTS**

A. Right Of Way		Lump Sum By Locals				\$0.00
		<b>Subtotal</b>				<b>\$0.00</b>
B. Utilities		Lump Sum By Locals				\$0.00
		<b>Subtotal</b>				<b>\$0.00</b>
C. Clearing and Grubbing	1.96	ACRES	@	\$5,000.00	ACRES	\$9,800.00
		<b>Subtotal</b>				<b>\$9,800.00</b>
D. Earthwork						
Grading Complete				LS		\$6,000.00
Excavation	1,000	CU YD				
Embankment	1,000	CU YD				
		<b>Subtotal</b>				<b>\$6,000.00</b>
E. Base and Paving						
1 1/4" 9.5mm Superpave	284	TONS	@	\$41.87	TON	\$11,898.62
2" 19mm Superpave	463	TONS	@	\$53.63	TON	\$24,836.05
G.A.B. 6"	711	TONS	@	\$26.80	TON	\$19,051.85
Leveling	50	TONS	@	\$42.00	TON	\$2,100.00
Tack Coat	147	GAL	@	\$0.95	GAL	\$139.98
		<b>Subtotal</b>				<b>\$58,026.50</b>

## F. Drainage

Longitudinal System

24" Storm Drain Pipe	50 LF		@	\$36.00 FT		\$1,800.00
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Drainage Structures

Catch Basins GP I	0	EA	@	\$1,762.00	EA	\$0.00
Catch Basins GP II	2	EA	@	\$1,449.00	EA	\$2,898.00

<b>Subtotal</b>						<b>\$4,698.00</b>
-----------------	--	--	--	--	--	-------------------

## G. Concrete Work

Curb & Gutter TP 2	0	LF	@	\$11.00	LF	\$0.00
Valley Gutter, 8 in	0	SQ YD	@	\$33.00	SQ YD	\$0.00
Class B Pvmnt Widen	0	CU YD	@	\$135.00	CU YD	\$0.00
Conc Sidewalk, 4 in	0	SQ YD	@	\$21.00	SQ YD	\$0.00

<b>Subtotal</b>						<b>\$0.00</b>
-----------------	--	--	--	--	--	---------------

H. Traffic Control	1	LS	@	\$10,000	LS	\$10,000.00
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<b>Subtotal</b>						<b>\$10,000.00</b>
-----------------	--	--	--	--	--	--------------------

I. Erosion Control	0.19	MI	@	\$320,000	MI	\$60,800.00
--------------------	------	----	---	-----------	----	-------------

<b>Subtotal</b>						<b>\$60,800.00</b>
-----------------	--	--	--	--	--	--------------------

## J. Signs, Striping, Signals &amp; Lighting

Signing & Marking	0.19	MI	@	\$32,000	MI	\$6,080.00
	0					
Traffic Signals	0	EA	@	\$50,000	EA	\$0.00

<b>Subtotal</b>						<b>\$6,080.00</b>
-----------------	--	--	--	--	--	-------------------

## K. Grassing/Landscaping

Grassing	0.89	ACRES	@	\$600	ACRES	\$534.00
----------	------	-------	---	-------	-------	----------

<b>Subtotal</b>						<b>\$534.00</b>
-----------------	--	--	--	--	--	-----------------

## L. Miscellaneous

Field Engineers Office	0	EA	@	\$40,070.00	EA	\$0.00
Fencing	1500	LF	@	\$17.90	LF	\$26,850.00
Right of Way Markers	14	EA	@	\$64.00	EA	\$896.00

<b>Subtotal</b>						<b>\$27,746.00</b>
-----------------	--	--	--	--	--	--------------------

## M. Major Structures

Bridge Removal 20.2' x 197'		EA	@			\$39,038.00
Bridge New 40.92' x 196'	8021	SF	@	\$55	SF	\$441,155.00

<b>Subtotal</b>						<b>\$480,193.00</b>
-----------------	--	--	--	--	--	---------------------

**ESTIMATE SUMMARY**

1. Right of Way	\$0.00
2. Reimbursable Utilities	\$0.00

**Construction Cost Summary**

3. Clearing and Grubbing	9,800.00
4. Earthwork	6,000.00
5. Base & Paving	58,026.50
6. Drainage	4,698.00
7. Concrete Work	0.00
8. Traffic Control	10,000.00
9. Erosion Control	60,800.00
10. Sign, Striping, Signals & Lighting	6,080.00
11. Grassing/Landscaping	534.00
12. Miscellaneous	27,746.00
13. Bridges	480,193.00
<b>C. Total Construction Estimate</b>	<b>663,877.50</b>
<b>D. 3 year of Inflation @ 5.00%</b>	<b>104,643.69</b>
<b>E. 10% E &amp; C</b>	<b>76,852.12</b>
<b>F. Total Construction Estimate</b>	<b>845,373.32</b>
<b>Grand Total Project Cost</b>	<b>845,373.32</b>

**NEED AND PURPOSE**  
**PROJECT BR-F003-03(081) CHATTOOGA COUNTY**  
**PI No. 0003081**  
**BRIDGE REPLACEMENT**

This project will replace the bridge on CR 321 over the Chattooga River, built in 1955. The bridge has a posted load limit and a sufficiency rating of 43. The Office of Bridge Maintenance has determined that any structure with a sufficiency rating less than 50 should be replaced rather than improved. Therefore, this project will replace the existing bridge with a structurally adequate bridge.

The Average Daily Traffic (ADT) along this two-lane road was 200 in 1998, which represents a Level of Service "A". The ADT is expected to reach 250 by 2007 and 400 by 2027, which also represent a Level of Service "A". Current truck traffic accounts for 1% of the ADT.

This local road is a designated school bus route. This route is also a part of the Route 5 of the GDOT Statewide Bicycle and Pedestrian Plan. Land use along this road is mainly agricultural, with some dispersed residences. According to 1990 Census data, less than 20% of the population in the Census Block lives below the poverty level. This Census Block also has a population that is more than 50% minority.

This project will enhance the safety and operation of the roadway by installing a new bridge conforming to current design standards. GDOT has no other projects programmed in the area.

# Department of Transportation State of Georgia

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## INTERDEPARTMENT CORRESPONDENCE

**FILE** BR-F003-00(081) Chattooga  
P.I. 0003081

**OFFICE** Environment/ Location

**DATE** October 23, 2001

**FROM** Harvey D. Keepler, State Environmental/ Location Engineer

**TO** Jim Chambers, P.E., State Consultant Design Engineer  
**Attn: Ted Cashin**

**SUBJECT** CR 321/Taliafero Springs @ Chattooga River

We are furnishing estimated traffic assignments for the above project as follows:

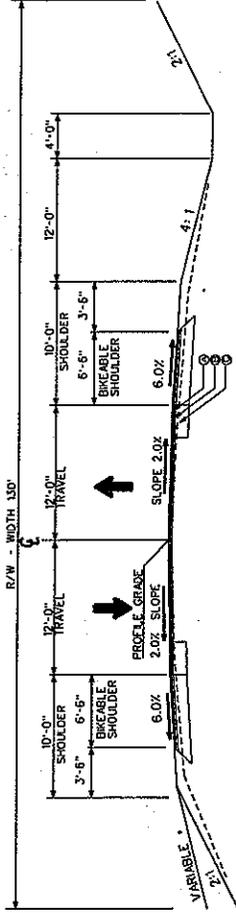
Existing 1998 ADT = 200  
2007 ADT = 250  
2027 ADT = 400  
K = 12%  
D = 60%  
T = 1%  
24 HR T = 3%  
SU = 2%  
COMB = 1%

If you have any questions concerning this information please contact  
Teresa Williamson at (404)699-4458.

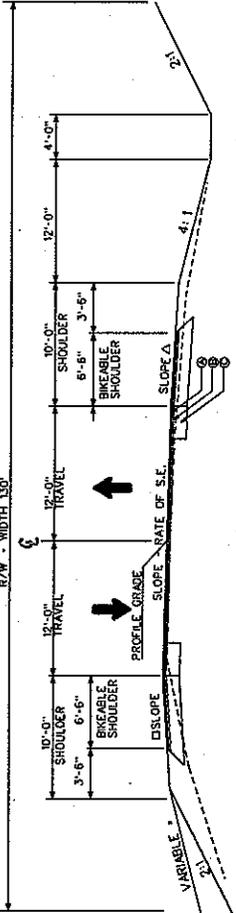
HDK:TJW

STATE	PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
GA	BP-F003-001(0811)		

SLOPE CONTROLS	
SLOPE	CUT
4:1	0-10'
2:1	OVER 10'
	ALL



TYPICAL SECTION #1  
TANGENT



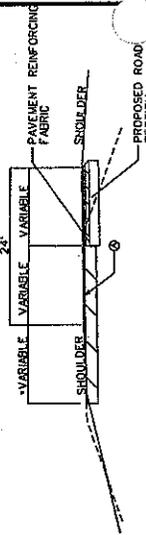
TYPICAL SECTION #2  
SUPERELEVATION

ALLOWABLE RANGES TABLE	
FOR THIS PROJECT, CROSS SLOPES THAT ARE ADJUSTED TO "BEST FIT" EXISTING PAVEMENT SLOPES ARE SUBJECT TO THE FOLLOWING LIMITS:	
A. MINOR CROWN	SECTION WITH GRADES 0.5% OR GREATER
	SECTION WITH GRADES LESS THAN 0.5%
	0.0150 FT/FT - MINIMUM
	0.008 FT/FT - DESIRABLE
	0.0250 FT/FT - MAXIMUM
B. SUPERELEVATION RATE	0.0148 FT/FT - MINIMUM
	0.008 FT/FT - DESIRABLE
	0.0200 FT/FT - MAXIMUM
C. S.E. RATE SHOWN ON PLANS OR SE RATE EXISTING IN FIELD, WHICHEVER IS GREATER.	LENGTH FROM FLAT POINT TO FULL SE
	MINIMUM
	1:150
	MAXIMUM
	1:500
D. POSITONING OF SUPERELEVATION TRANSITION LENGTH ON SINGLE CURVES	CORRESPONDING DIFFERENCE IN GRADE BETWEEN PIVOT POINT AND EDGE OF PAVEMENT
	MINIMUM
	0.67%
	MAXIMUM
	0.53%
E. SMOOTHING OF BREAKS IN EDGE PROFILE AT BEGIN AND END OF TRANSITION SHALL BE ACCOMPLISHED BY VERTICAL CURVE WITH A MINIMUM LENGTH (10 FEET) EQUAL TO THE SPEED DESIGN (IN MPH).	LENGTH FROM FLAT POINT TO FULL SE
	MINIMUM
	1:150
	MAXIMUM
	1:500

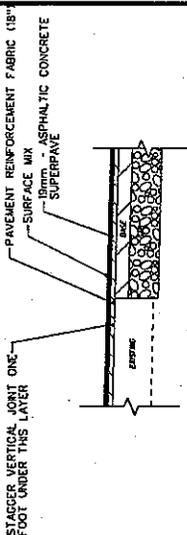
REQUIRED PAVEMENT:

- ⊙ RECYCLED ASPH CONC. (1 1/4") 9.5mm SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME ( 135 LBS/SY ) - SUPERPAVE LEVEL A
- ⊙ RECYCLED ASPH CONC. (2") 19 mm SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME ( 220 LBS/SY ) - SUPERPAVE LEVEL A
- ⊙ GR AGGREGATE BASE CRS. 6 INCH, INCL MATL

WIDENING AND OVERLAY DETAIL



PAVEMENT REINFORCEMENT FABRIC DETAIL



STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
TYPICAL SECTION  
PROJECT - BP-F003-001(0811)  
COUNTY - CHATTAHOOGA  
DATE 8/29/02 SH 1 OF 2

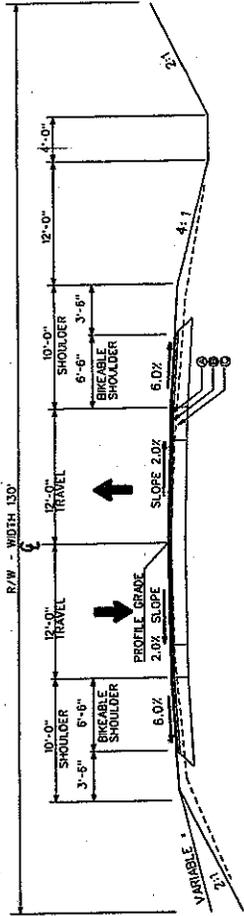
Wilbur Smith Associates  
2930 BRANDYWINE ROAD, SUITE 220  
ATLANTA, GEORGIA 30341 (770) 938-8650

DATE	REVISIONS	DATE	REVISIONS

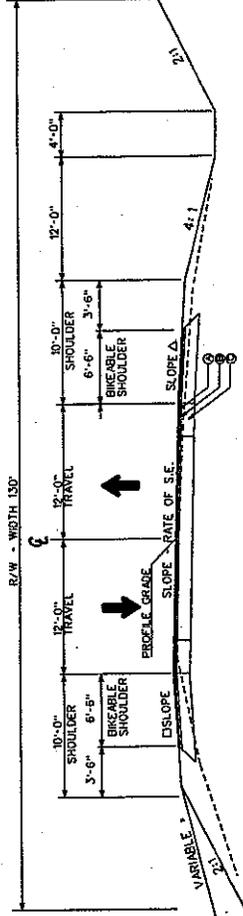
NOT TO SCALE

STATE	PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
GA.	BR-F003-0010811		

SLOPE CONTROLS		
SLOPE	FALL	CUT
4:1	0'-10"	ALL
2:1	OVER 10'	ALL

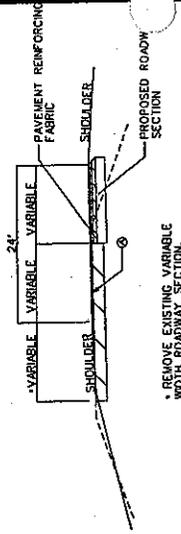


TYPICAL SECTION #1  
TANGENT



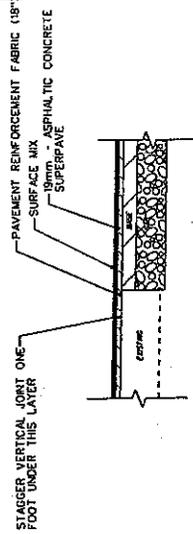
TYPICAL SECTION #2  
SUPERELEVATION

WIDENING AND OVERLAY DETAIL



\* REMOVE EXISTING VARIABLE WIDTH ROADWAY SECTION

PAVEMENT REINFORCEMENT FABRIC DETAIL



STAGGER VERTICAL JOINT ONE FOOT UNDER THIS LAYER

REQUIRED PAVEMENT:

- ① RECYCLED ASPH CONC. (1 1/4") 9.5mm SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME ( 135 LBS/SY ) - SUPERPAVE LEVEL A
- ② RECYCLED ASPH CONC. (2") 19 mm SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME ( 220 LBS/SY ) - SUPERPAVE LEVEL A
- ③ GR AGGREGATE BASE CRS. 6 INCH. INCL MATL

- △ RATE OF S.E. OR NORMAL SHOULDER SLOPE WHICHEVER IS GREATER ( BUT NOT LESS THAN EX. FOR UNPAVED SHOULDERS )
- ALGEBRAIC DIFFERENCE IN PAVING SLOPE AND SHOULDER SLOPE NOT TO EXCEED 8%.


  
 WILBUR SMITH ASSOCIATES
   
 2320 BRANDYwine ROAD, SUITE 220
   
 ATLANTA, GEORGIA 30341 (770) 936-8850

DATE	REVISIONS	DATE	REVISIONS

NOT TO SCALE

STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTION  
 PROJECT - BR-F003-0010811  
 COUNTY - CHATTAHOOCHEE  
 DATE 8/29/02 SH 2 OF 2

Structure ID: 055-5054-0

Location & Geography

Structure I.D. No.: 055-5054-0
200 Bridge Information: 06
6A Feature Int.: CHATTOOGA RIVER
6B Critical Bridge: 0
7A Route Number Carried: CR00321
7B Facility Carried: TALLAFERO SPRINGS
9 Location: 1 MILE S OF LYERLY
2 DOT District: 6
207 Year Photo: 1998
91 Inspection Frequency: 24 Date: 03/01/2000
92A Fract Crit Insp Freq: 0 00 Date: 0000
92B Underwater Insp Freq: 1 60 Date: 08/22/2000
92C Other Spc. Insp Freq: 0 00 Date: 0000
4 Place Code: 00000
5 Inventory Route (O/U): 1
Type: 4
Designator: 1
Number: 00321
Direction: 0
16 Latitude: 34-23.3
17 Longitude: 85 -24.3
98 Border Bridge: 000 %Shared: 00
99 ID Number: 00000000000000000000
100 Defense Highway: 0
101 Parallel Structure: N
102 Direction of Traffic: 2
264 Road Inventory Mile Post: 003.27
208 Inspection Area: 06 Initials: BDH

Chattooga County

Signs & Attachments

104 Highway System: 0
26 Functional Classification: 09
204 Federal Route Type: 0 No: 00000
110 Truck Route: 0
206 School Bus Route: 1
217 Benchmark Elevation: 0.00
218 Datum: 0
19 Bypass Length: 11
20 Toll: 3
21 Maintenance: 02
22 Owner: 02
31 Design Load: 0
37 Historical Significance: 5
205 Congressional District: 07
27 Year Constructed: 1955
106 Year Reconstructed: 0000
33 Bridge Median: 0
34 Skew: 20
35 Structure Flared: 0
38 Navigation Control: 0
213 Special Steel Design: 0
267 Type of Paint: 1
42 Type Service On: 1 Under: 5
214 Movable Bridge: 00
203 Type Bridge: A-O-M-O
259 Pile Encasement: 3
43 Structure Type Main: 3 02
45 No. Spans Main: 005
44 Structure Type Appr: 0 0
46 No. Spans Appr: 0000
226 Bridge Curve Horz: 0 Vert: 0
111 Pier Protection: 0
107 Deck Structure Type: 1
108 Wearing Surface Type: 6 Membrane: 0 Protection: 0

DEPARTMENT OF TRANSPORTATION

SUFF. RATING: 430

223 Expansion Joint Type: 02
242 Deck Drains: 1
243 Parapet Location: 0 Height: 0 Width: 0
238 Curb: 0.5 1
239 Handrail: 2 2
240 Median Barrier Rail: 0
241 Bridge Median Height: 0 Width: 0
230 Guardrail Loc Dir Rear: 0 Fwrd: 0 Oppo Dir Rear: 0 Fwrd: 0
244 Approach Slab: 0
224 Retaining Wall: 4
233 Posted Speed Limit: 00
236 Warning Sign: 0
234 Delineator: 0
235 Hazard Boards: 0
237 Utilities Gas: 00 Water: 00 Electric: 00 Telephone: 00 Sewer: 00
247 Lighting Street: 0 Navigation: 0 Aerial: 0
248 County Continuity No: 00

# BRIDGE INVENTORY DATA LISTING GEORGIA DEPARTMENT OF TRANSPORTATION

Structure ID: 055-5054-0

Chattanooga County

Year: 1999

SUFF. RATING: 43.0

201 Project No: COUNTY DESIGN  
 202 Plans Available: 0  
 249 Prop. Proj No: 00000000000000000000000000000000  
 250 Approval Status: 0000  
 251 P.I. No: 0000000  
 252 Contract Date: 0000  
 260 Seismic No: 000000  
 75 Type Work: 31 1  
 94 Bridge Imp. Cost: \$ 300  
 95 Roadway Imp. Cost: \$ 200  
 96 Total Imp. Cost: \$ 577  
 76 Imp. Length: 001516  
 97 Imp. Year: 1990  
 114 Future ADT: 000720 Year: 2019

Measurements  
 \* 29 ADT: 000480 Year: 1999  
 109 % Trucks: 1  
 \* 28 Lanes On: 02 Under: 00  
 210 No. Tracks On: 00 Under: 00  
 \* 48 Max. Span Length: 0046  
 \* 49 Structure Length: 197  
 51 Br. Rdwy. Width: 20.2  
 52 Deck Width: 21.3  
 \* 47 Tot. Horz. Cl: 20.2  
 50 Curb/Sdewlk Width: 0.4/0.4  
 32 Approach Rdwy Width: 018  
 \* 229 Shlder Width:

Ratings  
 66 Inventory Type: 2 Rating: 16  
 64 Operating Type: 2 Rating: 27  
 231 Calculated Loads  
 II-Modified: 12 1  
 IIS-Modified: 18 0  
 Type 3: 14 1  
 Type 3S2: 21 1  
 Timber: 20 1  
 Piggyback: 00 0  
 261 II Inventory Rating: 11  
 262 II Operating Rating: 18  
 67 Structural Evaluation: 4  
 58 Deck Condition: 6  
 59 Superstructure Condition: 6  
 \* 227 Collision Damage: 0  
 60A Substructure Condition: 5  
 60B Scour Condition: 6  
 60C Underwater Condition: 6  
 71 Waterway Adequacy: 7  
 61 Channel Protection Cond: 5  
 68 Deck Geometry: 3  
 69 UnderClr. Horz/Vert: N  
 72 Appr. Alignment: 6  
 62 Culvert: N

36 Safety Features Br. Rail: 3  
 Transition: 0  
 App. G. Rail: 0  
 App. Rail End: 0  
 53 Minimum Cl. Over: 99' 99"  
 Under: N 00' 00"

228 Min. Vert. Cl  
 Act. Od. Dir: 99' 99"  
 Oppo. Dir: 99' 99"  
 Posted Od. Dir: 00' 00"  
 Oppo. Dir: 00' 00"  
 55 Lateral Undercl. Rt: N 99.9  
 56 Lateral Undercl. Lt: 0.0  
 \* 10 Max Min Vert Cl: 99' 99" Dir: 0  
 39 Nav Vert Cl: 000 Horz: 0000  
 116 Nav Vert Cl Closed: 000  
 245 Deck Thickness Main: 5.3  
 Deck Thick Approach: 0.0  
 246 Overlay Thickness: 2.0  
 211 Tons Structural Steel: 0.0  
 212 Year Last Painted: Sup: 1955 Sub: 0000

215 Waterway Data  
 Highwater Elev: 0000.0 Year: 0000  
 Flood Elev: 0000.0 Freq: 00  
 Avg. Streambed Elev: 0000.0  
 Drainage Area: 00000  
 Area of Opening: 000000  
 113 Scour Critical: 6  
 216 Water Depth: 5 Br Height: 17.8  
 222 Slope Protection: 0  
 221 Spur Dikes Rear: 0 Fwd: 0  
 219 Fender System: 0  
 220 Dolphin: 0  
 223 Culvert Cover: 000  
 Type: 0  
 No Barrels: 0  
 Width: 0.0  
 Height: 0.0  
 Length: 0  
 Apron: 0  
 \* 265 U/W Insp. Area: 1 Diver: WSR

Posting Data  
 70 Bridge Posting Required: 3  
 41 Struct Open, Posted, Cl: P  
 \* 103 Temporary Structure: 0  
 232 Posted Loads II-Modified: 03  
 IIS-Modified: 00  
 Type 3: 00  
 Type 3S2: 00  
 Timber: 00  
 Piggyback: 00  
 253 Notification Date: 02/15/1996  
 253 Fed Notify Date: 0000 0

\* Location I.D. No: 055-00321X-003.27N  
 \* XReferen I.D. No: 000-000000-000.000

# FLEXIBLE PAVEMENT DESIGN ANALYSIS

Project: BR-F003-00(081)

County: Chattooga

P.I. no.: 0003081

Description: Bridge replacement for 2 lane rural CR 321 over Chattooga River

**Traffic Data** (NOTE: AADTs are one-way)

24-hour Truck Percentage: 3.00%

AADT initial year of design period: 125 vpd (2007)

AADT final year of design period: 200 vpd (2027)

Mean AADT (one-way): 162 vpd

**Design Loading**

Mean AADT	LDL	Trucks	18-K ESAL	Total Daily Loads
162 *	1.00 *	0.030 *	0.50 =	3

Total predicted design period loading = 3 \* 20 \* 365 = 21,900

**Design Data**

Terminal Serviceability Index: 2.50

Soil Support: 2.50

Regional Factor: 2.00

### PROPOSED FLEXIBLE PAVEMENT STRUCTURE

Material	Thickness Inches	(mm)	Structural Coefficient	Structural Value
9.5 mm Superpave	1.25	(32)	0.44	0.55
19 mm Superpave	2.00	(51)	0.44	0.88
Graded Aggregate Base	6.00	(152)	0.16	0.96

Required SN = 2.54

Proposed SN = 2.39

>>> Proposed pavement is 5.8% Underdesign <<<

Remarks:

Prepared by Kim Tyson, E.I.T. Designer

July 26, 2002

Date

Recommended

State Materials & Research Engineer

Date

Approved

State Consultant Design Engineer

Date

**NOTICE OF LOCATION AND DESIGN APPROVAL**

**Project No. BR-F003-00 (081)**

**P.I. No. 003081**

Notice is hereby given in compliance with Georgia code 22-2-109 that the Georgia Department of Transportation has approved the Location and Design of the above project.

The date of location approval is *OCTOBER 4, 2002*

This project consists of improvements to C.R. 321 over the Chattooga River in Land District number 1484, Land Lot 136 of Chattooga County, Georgia.

This project consists of the replacement of the structurally deficient bridge on C.R. 321 over the Chattooga River. The proposed bridge will be constructed in place of the existing bridge.

Drawings or maps or plats of the proposed project, as approved, are on file and are available for public inspection at the Georgia Department of Transportation:

Mr. Glenn Brown –District Six Area Four Engineer  
Glenn.Brown@dot.state.ga.us  
533 East 20<sup>th</sup> Street  
Rome, Georgia 30161  
706-295-6025

Any interested party may obtain a copy of the drawings or maps or plats or portions thereof by paying a nominal fee and requesting in writing to:

Ted Cashin  
Office of Consultant Design  
Ted.Cashin@dot.state.ga.us  
No. 2 Capitol Square  
Atlanta, Georgia 30334  
404-463-6135

Any written request or communication in reference to this project or notice SHOULD include the Project and P. I. Numbers as noted at the top of this notice.

**Concept Team Meeting Minutes**  
**Project No. BR-F003-00(081) Chattooga County**  
**CR321/Taliaferro Springs Bridge over Chattooga River Replacement**  
**P.I. No. 003081**

Meeting Date: 29 August 2002

Persons in Attendance:

DeWayne Comer	GDOT - District 6	(770) 387-3619
David Moore	GDOT - District 6 Design	(770) 387-3623
Stanley Horton	GDOT - District 6 Utilities	(770) 387-3616
Steve Sanders	GDOT - District 6 T.O.	(770) 387-3637
Newell L. Reed	GDOT - District 6 Area 4	(706) 295-6025
Ted Cashin	GDOT - OCD	(404) 463-6135
Jim Parker	Chattooga County	(706) 857-0700
Ed Kennedy	Charter Communications	(706) 278-5888 ext. 2125
Carol Bowler	Wilbur Smith Associates	(770) 936-8650
Kimberley Tyson	Wilbur Smith Associates	(770) 936-8650
Simeon Robinson	Wilbur Smith Associates	(770) 936-8650
Daniel Dean	Wilbur Smith Associates	(770) 936-8650

Purpose:

The purpose of BR-F003-00(081) is to replace the structurally deficient bridge over Chattooga River with a structurally adequate bridge to improve the operation and safety of this section of CR 321.

The following comments were made:

**GDOT Utilities:** Stanley Horton stated utilities in the area would most likely be Alltel (telephone), Georgia Power, and possibly Charter Communications (cable TV).

**Charter Communications:** Ed Kennedy is unsure if Charter Communications has lines in the area. He will check and let Carol Bowler know.

**GDOT District 6:** DeWayne Comer stated that the LGPA has not been signed yet.

**GDOT Design:** David Moore commented that the Ga Std. 9031T taper cannot fit at the beginning of the bridge and that the project should be extended at the beginning to allow for it. Also, he stated that Ga Std 9017J type 3 spillways are needed on the bridge and that the full depth section is missing on the typical sections.

**GDOT Area Four:** Lee Reed stated that the cost estimate for erosion control is extremely low. He stated that the amount of erosion control should be four times what was estimated.

**Chattooga County:** Commissioner Jim Parker had no comment at this time other than he is happy to see the bridge replaced.

**GDOT Traffic Operations:** No Comment.

**GDOT OCD:**

Ted Cashin stated that the following improvements should be made in the concept report:

The posted speed limit should be verified.

The existing bridge width should match that stated in the bridge inventory.

A statement should be added that the proposed bridge is wider than usual due to the bike lanes.

The possible section 4F or programmatic 4f may be needed because of impacts to the adjacent historical properties.

Chattooga County will be responsible for right of way acquisition, relocation of utilities, and providing detours once the LGPA is signed.

The environmental process should take 9 months, and the final construction plans should take 6 months.

Alternate 5 can be removed from the report because the drainage area exceeds 20 square miles.

Alternate 1 was eliminated because of the adjacent historical properties and because an acceptable offsite detour is available.

Alternate 3 was eliminated because an acceptable offsite detour is available and because of the additional cost of building two bridges, but the cost of the detour bridge is not needed and can be removed.

Ted Cashin stated that the following improvements should be made in the cost estimate:

The proposed bridge width should be 37'+3.25'(barrier)+8"(railing) for a total of 40.92'. The proposed bridge's cost should be \$55 per square foot.

Three years of inflation should be used for final calculations.

The cost estimate for the detour bridge is not needed and can be removed.

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
Office of Consultant Design

Project Concept Report

Project Number: BR-F003-00(081)

County: Chattooga

P. I. Number: 0003081

Federal Route Number: N/A

County Road Number: 321

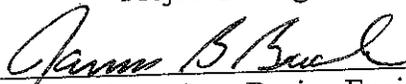
Recommendation for approval:

DATE 9-11-02

DATE 9-11-02



Project Manager



State Consultant Design Engineer

The 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 \_\_\_\_\_

State Transportation Planning Administrator

DATE \_\_\_\_\_

Office of Financial Management Administrator

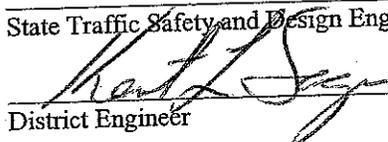
DATE \_\_\_\_\_

State Environmental/Location Engineer

DATE \_\_\_\_\_

State Traffic Safety and Design Engineer

DATE 9/17/02



District Engineer

DATE \_\_\_\_\_

Project Review Engineer

DATE \_\_\_\_\_

State Bridge and Structural Design Engineer

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
Office of Consultant Design  
Project Concept Report**

Project Number: BR-F003-00(081)

County: Chattooga

P. I. Number: 0003081

Federal Route Number: N/A

County Road Number: 321

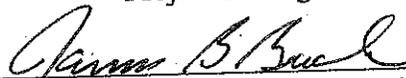
Recommendation for approval:

DATE 8-11-02

DATE 9-11-02



Project Manager



State Consultant Design Engineer

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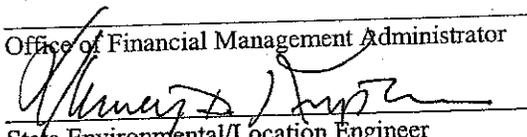
DATE \_\_\_\_\_

State Transportation Planning Administrator

DATE \_\_\_\_\_

Office of Financial Management Administrator

DATE 9/10/02



State Environmental/Location Engineer

DATE \_\_\_\_\_

State Traffic Safety and Design Engineer

DATE \_\_\_\_\_

District Engineer

DATE \_\_\_\_\_

Project Review Engineer

DATE \_\_\_\_\_

State Bridge and Structural Design Engineer

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
Office of Consultant Design

Project Concept Report

Project Number: BR-F003-00(081)

County: Chattooga

P. I. Number: 0003081

Federal Route Number: N/A

County Road Number: 321

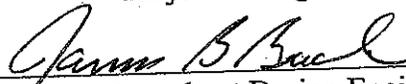
Recommendation for approval:

DATE 8-11-02

DATE 9-11-02



Project Manager



State Consultant Design Engineer

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DATE \_\_\_\_\_

State Transportation Planning Administrator

DATE \_\_\_\_\_

Office of Financial Management Administrator

DATE \_\_\_\_\_

State Environmental/Location Engineer

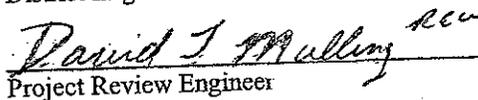
DATE \_\_\_\_\_

State Traffic Safety and Design Engineer

DATE \_\_\_\_\_

District Engineer

DATE 9-23-02



Project Review Engineer

DATE \_\_\_\_\_

State Bridge and Structural Design Engineer

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
Office of Consultant Design

Project Concept Report

Project Number: BR-F003-00(081)

County: Chattooga

P. I. Number: 0003081

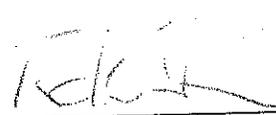
Federal Route Number: N/A

County Road Number: 321

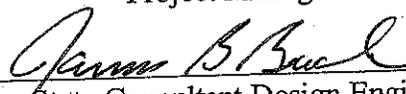
Recommendation for approval:

DATE 9-11-02

DATE 9-11-02



Project Manager



State Consultant Design Engineer

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DATE \_\_\_\_\_

State Transportation Planning Administrator

DATE \_\_\_\_\_

Office of Financial Management Administrator

DATE \_\_\_\_\_

State Environmental/Location Engineer

DATE \_\_\_\_\_

State Traffic Safety and Design Engineer

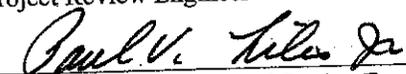
DATE \_\_\_\_\_

District Engineer

DATE \_\_\_\_\_

Project Review Engineer

DATE 9/24/02



State Bridge and Structural Design Engineer

