ORIGINAL TO GENERAL FILES

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE BRST-0869(16) Henry County
P. I. No. 343396

OFFICE Preconstruction

DATE December 18, 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 Keepler
Jerry Hobbs
Herman Griffin
Michael Henry
Phillip Allen
Marta Rosen
Paul Liles
Ben Buchan
Thomas Howell
BOARD MEMBER

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE BRST-0869(16) Henry County
P.I. No. 343396

OFFICE Preconstruction

DATE December 11, 2002

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

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

SUBJECT PROJECT CONCEPT REPORT

This project is the replacement of a structurally deficient bridge on SR 20 over Big Cotton Indian Creek, 9.0 miles northeast of McDonough, Georgia. The existing bridge, constructed in 1957, is load limited with a sufficiency rating of 45. State Route 20 at this location is a rural two lane roadway with 12' travel lanes with rural shoulders. This section of SR 20 is functionally classified as an urban major collector and is a designated school bus route. Traffic is projected to be 6,800 VPD and 11,800 VPD in the years 2007 and 2027 respectively. The posted speed and the design speed are 55 MPH.

The construction proposes to relocate SR 20 south of its present location, extending a total of 0.568 mile. The proposed new bridge will be 245' x 44' and will be located just south of the existing bridge structure. The relocated SR 20 will consist of two, 12' lanes with 10' rural shoulders (6.5' paved). Traffic will be maintained on the existing bridge while the proposed bridge is constructed.

Environmental concerns include requiring a COE 404 Permit; a Categorical Exclusion will be prepared; time saving procedures are appropriate.

The estimated costs for this project are:

	PROPOSED	APPROVED	PROG DATE	LET DATE
Construction (includes E&C and inflation)	$1,541,000	$1,941,000	2005	FY-05
Right-of-Way	$ 80,000	$ 10,000		
Utilities*	$ 40,000	-----		

*LGPA sent 7-20-99 requesting Henry County do utilities.

BRST-0869(16) Henry
December 11, 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: BRST-0869(16) Henry
P.I. Number 343396

OFFICE: Engineering Services

DATE: November 21, 2002

RECEIVED
NOV 22 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 November 15, 2002 by the letter from James B. Buchan dated November 14, 2002, and have no additional comments.

The costs for this project are:

Construction	$1,270,010
Inflation	$130,177
E&C	$140,019
Reimbursable Utilities	$40,000 (LGPA anticipated)
Right of Way	$80,000

REW

c: Ben Buchan, Attn: Ted Cashin

SCORING RESULTS AS PER MOG 2440-2

Project Number:	County:	PI No.:
BRST-0869(16)	Henry	343396

Report Date:	Concept By:
November 14, 2002	DOT Office: Consultant Design
☒ Concept Stage	Consultant: Parsons Brincherhoff Quade & Douglas

Project Type: Choose One From Each Column			
	☐ Major	☒ Urban	☐ ATMS
	☒ Minor	☐ Rural	☒ Bridge Replacement
			☐ Building
			☐ Interchange Reconstruction
			☐ Intersection Improvement
			☐ Interstate
			☐ New Location
			☐ Widening & Reconstruction
			☐ Miscellaneous

FOCUS AREAS	SCORE	RESULTS
Presentation	100	
Judgement	100	
Environmental	100	
Right of Way	100	
Utility	100	
Constructability	100	
Schedule	100	

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE **BRST-0869(16) Henry County**
SR 20 over Big Cotton Indian Creek 9 mi NE of McDonough
P.I. No. 343396-

OFFICE Atlanta

FROM James B. Buchan, State Consultant Design Engineer

DATE November 14, 2002

TO Margaret B. Pirkle, Assistant Director of Preconstruction

NOV 18 2002

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.

NOTE: This concept report replaces the earlier one of October 23 which was recalled by the project manager before approval by management. During preliminary hydraulic design it was found that the grade of the new bridge would be substantially higher and therefore the adjacent alignment alternate became preferable to the onsite detour alternate that had originally been proposed.

If you have any questions or require further information please call Ted Cashin at (404)463-6135 or John Durand of Parsons Brinckerhoff Quade & Douglas at (404) 364-5236.

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
Thomas Howell, District Engineer – Thomaston
Paul Liles, State Bridge & Structural Engineer

JBB:MBA:EJC

cc: Parsons Brinckerhoff Quade & Douglas

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

Office of Consultant Design

PROJECT CONCEPT REPORT

Project Number: BRST-0869(16)
County: HENRY
P. I. Number: 343396-

Federal Route Number: N/A
State Route Number: 20

Recommendation for approval:

DATE 11-14-02 _____ Project Manager

DATE 11-15-02 _____ State Consultant Design Engineer

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

DATE_____ _____ State Transportation Planning Administrator

DATE_____ _____ Office of Financial Management Administrator

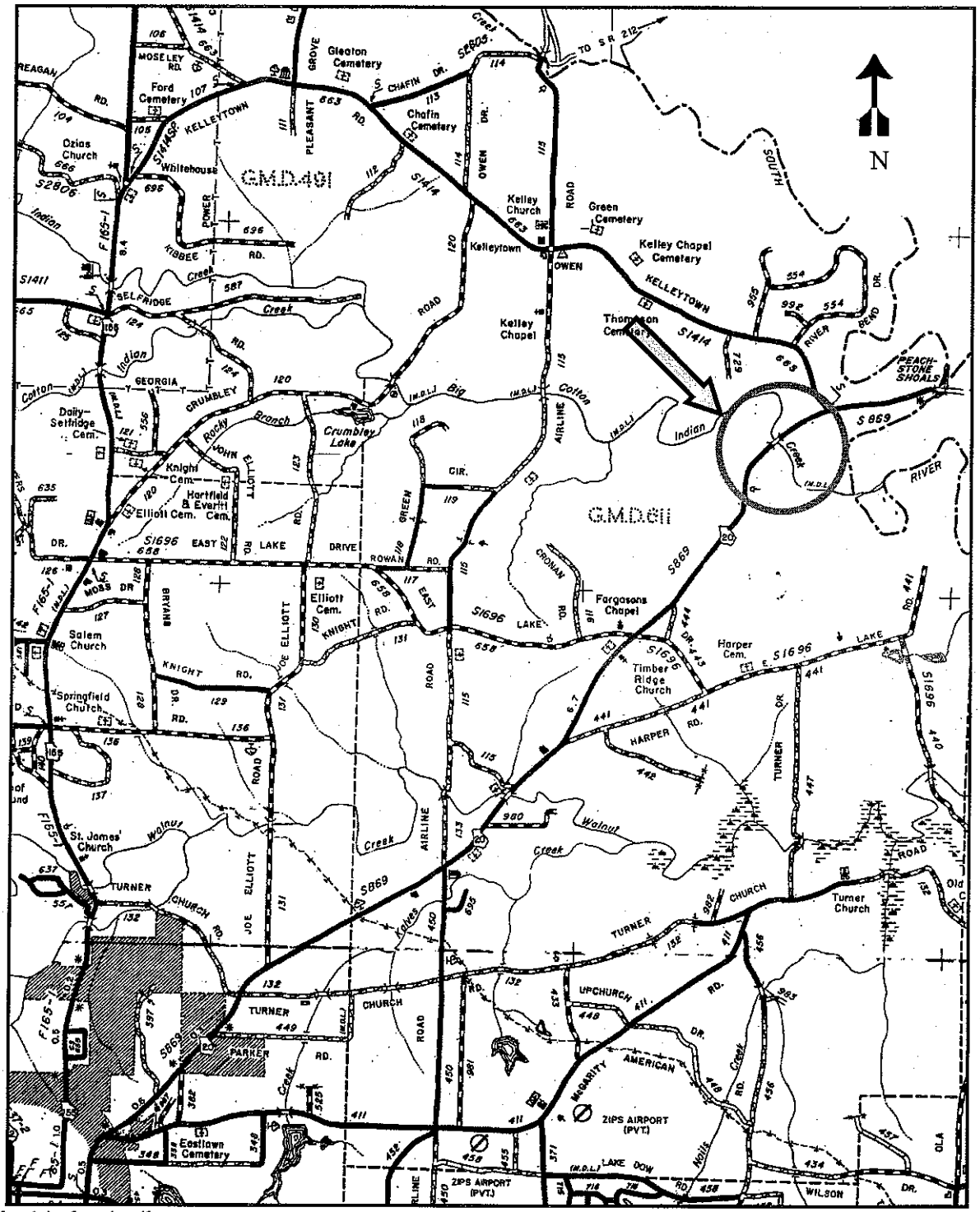
DATE_____ _____ State Environmental/Location Engineer

DATE_____ _____ State Traffic Safety and Design Engineer

DATE_____ _____ District 3 Engineer, Thomaston

DATE_____ _____ Project Review Engineer

DATE_____ _____ State Bridge and Structural Design Engineer



Scale: 1 inch = 1 mile

Location Map

Project: BRST-0869(16) Henry County **PI No.:** 343396-

Description: SR 20 over Big Cotton Indian Creek 9 mi NE of McDonough

Need and Purpose: The purpose of project BRST-0869(16) is to replace a structurally deficient and functionally obsolete bridge on S.R.20 over the Big Cotton Indian Creek. The existing bridge sufficiency rating is currently 45.60. See attached Need & Purpose Statements.

Description of the proposed project: Project BRST-0869(16) is a bridge replacement project in Henry County 9 miles northeast of McDonough on State Route 20 over the Big Cotton Indian Creek. The total project length is approximately 3000 feet (0.568 miles), beginning at M.P. 0.866 and extending to M.P. 1.434.

Is the project located in a Non-attainment area? X **Yes** _____ **No**
The proposed design, of this project, does not add any additional capacity to State Route 20. The existing roadway has two lanes. The proposed roadway will be designed for two lanes. The project is consistent with what is identified in the District 3 STIP.

PDP Classification: **Major**_____ **Minor**___X____
Federal Oversight: Full Oversight ( ), Exempt(X), State Funded( ), or Other ( )

Functional Classification: Urban Major Collector

U. S. Route Number(s): None **State Route Number(s):** 20
Local Road Number(s): None

Traffic (AADT):
Current Year: (2007) 6,800 Design Year: (2027) 11,800

Existing design features:

- Typical Section: 2-12 ft. travel lanes, with a 2 ft. paved and variable width grassed shoulder on both sides.
- Posted speed 55mph Maximum degree of curvature: No Curves.
- Maximum grade: 7.0 % Mainline; 12.0% Cross Roads, and 10% Driveways
- Width of right of way: 150ft. total

- Major structures: Concrete bridge, 7 spans for a total length of 245 ft., width 32 ft., (bridge roadway width 25.8 ft.) sufficiency rating is 45.60.
- Existing length of the S.R. 20 roadway is approximately 3000 feet long.

Proposed Design Features:

Proposed typical section(s): Two 12'-0" travel lanes with 10' graded shoulders (6.5 Ft. paved due to the high volume of traffic). Typical section attached.

- Proposed Design Speed Mainline 55 mph based on Green Book for ADT
- Proposed Maximum grade Mainline 6% Maximum grade allowable 8%.
- Proposed Maximum grade Side Street N/A Maximum grade allowable 12%.
- Proposed Maximum grade driveway 12%
- Proposed Maximum degree of curve No curves. Maximum degree allowable 6 deg.
- Right of way
  - Additional R/W width 80 ft. south side
  - Easements: Temporary (X), Permanent ( ), Utility ( ), Other ( ).
  - Type of access control: Full ( ), Partial ( ), By Permit (X), Other ( ).
  - Number of parcels: 3 Number of displacements: None
    - Business: 0
    - Residences: 0
    - Mobile homes: 0
    - Other: 0
- Structures:
  - Bridges: The proposed concrete bridge will be 44 ft wide and approximately 245 ft long, consisting of two 12'-0" travel lanes and 10'-0'' shoulders.
  - Retaining walls: None Required
- Major intersections and interchanges. None

Traffic control during construction: The traffic will be maintained along existing S.R.20 during construction of a parallel roadway and bridge shifted to the south side.

- Design Exceptions to controlling criteria anticipated:

	UNDETERMINED	YES	NO
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)

- Design Variances; None

- Environmental concerns: None
- Level of environmental analysis:
    - Are Time Savings Procedures appropriate? Yes (**X**), No ( ),
    - Categorical exclusion: **Anticipated**
    - Environmental Assessment/Finding of No Significant Impact (FONSI) ( ), or
    - Environmental Impact Statement (EIS) ( ).
- Utility involvement: Overhead power lines north side of S.R.20. Gas line on the north side and a 8" PVC water line on the north crossing to the south side.

Project responsibilities:

- Design: Office of Consultant Design/Parsons Brinckerhoff
- Right of Way Acquisition: Dist. 3 Preconstruction R/W Office
- Relocation of Utilities: District 3 Utility Office.
- Letting to contract: General Office (Office of Contract Administration)
- Supervision of construction: District 3 Construction Office
- Providing material pits: Construction Contractor
- Providing detours: None Required

Coordination

- Initial Concept Meeting date and brief summary. N/A
- Concept meeting date and brief summary. 9-26-02 See Attach minutes.
- P. A. R. meetings, dates and results: None required.
- FEMA, USCG, and/or TVA: Nationwide 404
- Public involvement: None Required
- Local government comments: Henry County has not signed utility LGPA
- Other projects in the area: Bridge replacement Project on S.R.20 at the South River in Newton County
- Other coordination to date.
- Railroads: None-N/A

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: 1 Month.
- Time to complete the Section 404 Permit: 2 Months.
- Time to complete final construction plans: 3 Months.
- Time to complete to purchase right of way: 8 Months.
- List other major items that will affect the project schedule:

Alternates considered: (1) Construct proposed bridge at same location as the existing bridge with temporary on-site detour and detour bridge; (2) Construct proposed bridge at same location as the existing bridge with off-site detour; close road; (3) Construct proposed bridge parallel and offset from existing, and remove existing bridge; (4) No Build

Comments:

Comparison Summary of Concepts 1 - 4

Alternate (1) is not recommended for this concept. The preliminary hydraulic analysis indicates raising the proposed roadway and bridge significantly to clear the abnormal flood conditions due to the backwater effect from the South River for the Design Year (50 Year) and the 100Year flood storm events. The location of an on-site run-around detour will impact homes and property located on the southeast side of S.R. 20 and requires shifting the traffic twice. Also raising the profile of the existing road will impact homes and property on the northwest side

Alternate (2) is not recommended for this concept, due to the high volumes of traffic on S.R. 20(Approximately 5,200 ADT). Also, there are no acceptable State Routes or County Roads in the area to detour traffic or to provide access for emergency vehicles.

Alternate (3) is recommended for this concept since the existing roadway alignment is favorable to a permanent shift to the southeast side. This parallel shifted alignment to the southeast side will utilize existing curves on both sides of the bridge. The profile can be raised on the shifted alignment, such that a new bridge can be completed, eliminating the need for a detour and provides for shifting the existing traffic only one time, which creates a safer project.

Alternate (4) was eliminated due to the condition of the existing bridge (Sufficiency Rating of 45.60) and also because of the long-term maintenance cost on a structurally and functionally deficient bridge.

Attachments:

1. Cost Estimates: (For Alternates 1 and 3)
    a. Construction including E&C,
    b. Right of Way, and
    c. Utilities.
2. Need and Purpose Statements.
3. Minutes of Concept Meeting.
4. Typical Section.
5. Bridge Inventory and existing Bridge plan and elevation drawing
6. Traffic Assignments
7. Flexible Pavement Design.
8. Location and Design Notice.
9. Project Concept Conformity/Certification letter.
10. Concept Layout
11. Project Status Report

PRELIMINARY COST ESTIMATE (Alternate 3)

DATE: November 14, 2002 PREPARED BY: Parsons Brinckerhoff

PROJECT NO.: BRST-0869(16) Henry County

P.I. NO.: 343396- LENGTH: 0.568mi./3000 ft.

PROJECT DESCRIPTION: SR 20 over the Big Cotton Indian Creek bridge replacement - Proposed bridge length of 245 ft and 44'-0" wide.

PROPOSED CONCEPT: Two 12'-0" travel lanes with 10'-0" shoulders (6.5' Paved). The traffic will be maintained along existing S.R.20 during construction of a parallel roadway and bridge shifted to the southeast side.

EXISTING ROADWAY: STATE ROUTE 20

TRAFFIC: Existing: 6,800 ADT (2007) Design: 11,800 ADT (2027)

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

PROJECT COST	
A. RIGHT-OF-WAY:	
1. PROPERTY (R/W & EASEMENT) 2.5acre R/W@$20,000/Ac.	$ 50,000
2. DISPLACEMENTS:	
3. OTHER COST (ADM./COST, INFLATION)	$ 30,000
SUBTOTAL:A	$ 80,000
B. REIMBURSABLE UTILITIES:	
1. RAILROAD	
2. TRANSMISSION LINES	
3. SERVICES (Henry County has not signed LGPA)	$ 40,000
SUBTOTAL:B	$ 40,000
C. CONSTRUCTION:	
1. MAJOR STRUCTURES	
a. OVERPASSES – Bridge over Big Cotton Indian Creek (47'-3"x 245')@$55/Sq.Ft.	$636,694
b. APPROACH SLAB – 294 SY @$90/SY 2 each spillways @$1200 ea	$ 28,860

PROJECT COST		
SUBTOTAL:C-1		$665,554
2. GRADING AND DRAINAGE:		
a. EARTHWORK – 12,000 CY Borrow @ $5.00/CY (Mainline)		$ 60,000
b. DRAINAGE:		
1) CROSS DRAIN PIPE		$ 5,000
2) LONGITUDINAL PIPE		$
3) CATCH BASINS		$
SUBTOTAL:C-2		$ 65,000
3. BASE AND PAVING:		
a. AGGREGATE BASE – Mainline6637Tn - @ $18/TN		$ 119,466
b. ASPHALT PAVING: SURFACE – Mainline 1018TN@$45/TN	$	$ 45,810
BINDER – Mainline 1365 TN@$40	$	$ 54,600
BASE –Mainline 2757TN @$40	$	$ 110,280
SUBTOTAL:C-3.b		$ 330,156
c. CONCRETE PAVING		
d. OTHER		$
SUBTOTAL:C-3		$
4. LUMP ITEMS:		
a. GRASSING – 3 acres @ $2000/ac		$ 6,000
b. CLEARING AND GRUBBING - 5 acres @ $2000/ac		$ 10,000
c. LANDSCAPING		$
d. EROSION CONTROL- Silt fence type A 4000 LF @$3.10/LF, Silt fence type C 1000 LF @ $4.80/LF, Floating silt fence 600 ft. @ $12/LF		$24,400
e. TRAFFIC CONTROL		$ 35,000
SUBTOTAL:C-4		$ 75,400
5. MISCELLANEOUS:		
a. LIGHTING - NONE		$
b. SIGNING - MARKING		$ 20,000
c. GUARDRAIL – 1500 LF @ $15/LF, 4 ea Type 12 or 1 anch @ $1700/ea		$ 29,300
d. CURB & GUTTER		$

PROJECT COST	
SUBTOTAL:C-5	$ 49,300
6. SPECIAL FEATURES- Rem. Exist. Bridge @$7/sq.ft-$44,600; Field Eng. Office Ty 3 $40,000 SUBTOTAL:C-6	$ 84,600

ESTIMATE SUMMARY			
A. RIGHT-OF-WAY		$ 80,000	
B. REIMBURSABLE UTILITIES (Henry Co. has not signed LGPA.)		$ 40,000	
C. CONSTRUCTION			
1. MAJOR STRUCTURES		$ 665,554	
2. GRADING AND DRAINAGE		$ 65,000	
3. BASE AND PAVING		$ 330,156	
4. LUMP ITEMS		$ 75,400	
5. MISCELLANEOUS		$ 49,300	
6. SPECIAL FEATURES		$ 84,600	
SUBTOTAL CONSTRUCTION COST			$ 1,270,010
E. & C. (10%)			$ 140,019
INFLATION (5% PER YEAR)			
NUMBER OF YEARS	2		$ 130,177
TOTAL CONSTRUCTION COST			$ 1,540,206
GRAND TOTAL PROJECT COST			**$ 1,660,206**

PRELIMINARY COST ESTIMATE (Alternate 1)

DATE: November 14, 2002 PREPARED BY: Parsons Brinckerhoff

PROJECT NO.: BRST-0869(16) Henry County

P.I. NO.: 343396- LENGTH: 0.379mi./2000 ft.

PROJECT DESCRIPTION: SR 20 over the Big Cotton Indian Creek bridge replacement - Proposed bridge length of 245 ft and 44'-0" wide.

PROPOSED CONCEPT: Two 12'-0" travel lanes with 10'-0" shoulders (6.5' Paved). The traffic will be maintained along an "on-site" detour constructed on the south side of existing S.R.20 and a new bridge will be constructed in the same location as the existing bridge.

EXISTING ROADWAY: STATE ROUTE 20

TRAFFIC: Existing: 6,800 ADT (2007) Design: 11,800 ADT (2027)

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

PROJECT COST	
A. RIGHT-OF-WAY:	
1. PROPERTY (R/W & EASEMENT) 2.2acre R/W@$20,000/Ac.	$ 44,000
2. DISPLACEMENTS:	
3. OTHER COST (ADM./COST, INFLATION)	$ 26,400
SUBTOTAL:A	$ 70,400
B. REIMBURSABLE UTILITIES:	
1. RAILROAD	$ 0
2. TRANSMISSION LINES	$ 0
3. SERVICES (Henry County has not signed LGPA)	$ 40,000
SUBTOTAL:B	0
C. CONSTRUCTION:	
1. MAJOR STRUCTURES	
b. OVERPASSES – Bridge over Big Cotton Indian Creek (47'-3"x 245')@$55/Sq.Ft. c. Detour Bridge-200' x 27'-3"@ $30/SqFt	$800,194
b. APPROACH SLAB – 294 SY @$90/SY 2 each spillways @$1200 ea	$ 28,860
SUBTOTAL:C-1	$829,054
2. GRADING AND DRAINAGE:	

PROJECT COST		
a. EARTHWORK – 15,000 CY Borrow @ $5.00/CY (Mainline & Detour)		$ 75,000
b. DRAINAGE:		
1) CROSS DRAIN PIPE		$ 5,000
2) LONGITUDINAL PIPE		$
3) CATCH BASINS		$
SUBTOTAL:C-2		$ 80,000
3. BASE AND PAVING:		
a. AGGREGATE BASE – Mainline6590-Detour 1600 TN @ $18/TN		$ 147,420
b. ASPHALT PAVING: SURFACE – MnLi 825-Det.385 TN@$45/TN	$	$ 54,450
BINDER – Mainline 1106-Detour 515 TN@$40	$	$ 64,840
BASE –Mainline 2235-Detour 1000 TN @$40	$	$ 129,400
SUBTOTAL:C-3.b		$ 396,110
c. CONCRETE PAVING		
d. OTHER		$
SUBTOTAL:C-3		$
4. LUMP ITEMS:		
a. GRASSING – 4 acres @ $2000/ac		$ 8,000
b. CLEARING AND GRUBBING - 7 acres @ $2000/ac		$ 14,000
c. LANDSCAPING		$
d. EROSION CONTROL- Silt fence type A 4000 LF @$3.10/LF, Silt fence type C 1000 LF @ $4.80/LF, Floating silt fence 600 ft. @ $12/LF		$24,400
e. TRAFFIC CONTROL		$ 50,000
SUBTOTAL:C-4		$ 96,400
5. MISCELLANEOUS:		
a. LIGHTING - NONE		$
b. SIGNING - MARKING		$ 10,000
c. GUARDRAIL – 1500 LF @ $15/LF, 4 ea Type 12 or 1 anch @ $1700/ea		$ 29,300
d. CURB & GUTTER		$
SUBTOTAL:C-5		$ 39,300
6. SPECIAL FEATURES- Rem. Exist. Bridge @$7/sq.ft-$44,600; Field Eng. Office Ty 3		$ 184,600

PROJECT COST	
$40,000, Remove Detour Br. & Detour Rdwy. Grade to Drain & Grass $100,000 SUBTOTAL:C-6	

ESTIMATE SUMMARY			
A. RIGHT-OF-WAY		$ 70,400	
B. REIMBURSABLE UTILITIES (Henry Co. has not signed LGPA.)		$ 40,000	
C. CONSTRUCTION			
1. MAJOR STRUCTURES		$ 829,054	
2. GRADING AND DRAINAGE		$ 80,000	
3. BASE AND PAVING		$ 396,110	
4. LUMP ITEMS		$ 96,400	
5. MISCELLANEOUS		$ 39,300	
6. SPECIAL FEATURES		$ 184,600	
SUBTOTAL CONSTRUCTION COST			$ 1,625,464
E. & C. (10%)			$ 179,208
INFLATION (5% PER YEAR)			
NUMBER OF YEARS	2		$ 166,611
TOTAL CONSTRUCTION COST			$ 1,971,283
GRAND TOTAL PROJECT COST			**$ 2,081,683**

NEED AND PURPOSE
PROJECT BRST-0869 (16), HENRY COUNTY
PI No. 343396
BRIDGE REPLACEMENT

Project BRST-0869 (16) consists of the replacement of the bridge on State Route 20 over the Big Cotton Indian Creek in Henry County, nine miles northeast of the City of McDonough. This route serves commuter traffic traveling north to Newton and Rockdale Counties and south to Henry County. State Route 20 is classified as an Urban Major Collector and is not a designated bike route.

This bridge was constructed in 1957 and consists of concrete bents, steel beam superstructure, and a concrete deck. The original load capacity is H-15. The sufficiency rating on this structure is 45.60, and the bridge is classified as Functionally Obsolete. The sufficiency rating is a number from 0 to 100 and is a method of evaluating structural adequacy and safety, serviceability, and functional obsolescence. The Office of Bridge Maintenance has determined that any structure with a sufficiency rating less than 50 should be replaced rather than improved.

Present conditions on this structure are 12-foot, one-lane travel lanes in each direction, no sidewalks or shoulders to allow for pedestrian movements. Existing 2000 Average Annual Daily Traffic (AADT) along this section of roadway were 5,150. Future volumes are expected to be approximately 6,800 AADT in the year 2007; and 11,800 AADT in 2027 with eight-percent trucks.

Replacing this bridge will bring it up to current AASHTO geometric design standards and in doing so will improve the operation and safety of this roadway. This project is committed to a safe, efficient and sustainable transportation system for all users.

MINUTES OF INITIAL CONCEPT TEAM MEETING

Project: GDOT Project Work Order No. 6 in Henry County
BRST-0869(16) - PI No. 343396,
SR 20 @ Big Cotton Indian Creek

Date: September 26, 2002

Place: Henry County Government Offices, Rm. 203 (Training Room)

Present:
Ted Cashin – GDOT OCD
Wade Harris – GDOT Eng. Services
Tom Queen – GDOT District 3
Kerry Gore – GDOT District 3 Utilities
David Coleman – GDOT
Marc Mastronardi – GDOT
Shawanna Qawiy – Henry County
Jim O'Neal – Henry County DOT
Barry Carter – Henry County Board of Education
Beverly Skipper – Henry County Board of Education
Jerry Wylie – Georgia Power
Shane Hallford – HCWSA
Tony Carwell – HCWSA
Steve Manley – Manley Acquisition Services, LLC
Jim Graybeal – Parsons Brinckerhoff
John Durand – Parsons Brinckerhoff
George Krausser – Parsons Brinckerhoff

Distribution: Attendees

Purpose: Initial Concept Team Meeting

DISCUSSION:

1. The proposed runaround detour to the south side of S.R. 20 along with photos looking north and south along the project, and a photo of the bridge, looking upstream was presented.
2. Jim Graybeal explained to the group the major aspects of the concept report and why we decided to go with the option of using a detour.
3. Wade stated the contractor is required to furnish a material pit, instead of District 3 as originally stated in the concept report.
4. Steve recommended that the time to purchase right of way be extended to 8 months, as opposed to 6 months as written in the report.
5. Ted said that Post, Buckley, Schuh, and Jernigan are designing a bridge replacement project along S.R. 20 at South River, located less than 1 mile from this project.

6. Tom stated the TIP for this project to be HE158A
7. Tony described the waterlines in the vicinity of this project, including an 8" PVC waterline along the north side of the project (it goes across the creek). As shown in the photo, the casing surrounding the water line has corroded away. The water line crosses over to the south side west of the bridge. There is also a gas line attached to the north side of the bridge.
8. Kerry gave an estimated figure of $40,000 reimbursable cost for utilities.

The preceding is my understanding of the topics discussed. If you have any corrections or comments, please fax them to me at 404-237-3015.

Sincerely,

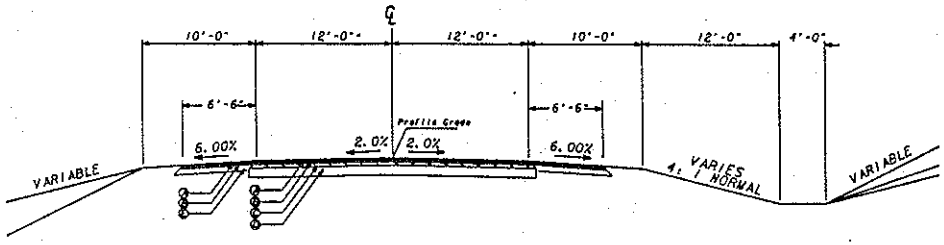
PARSONS BRINCKERHOFF QUADE & DOUGLAS, INC.

John Durand, P.E.
Project Manager

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	BRST-08691161		

TYPICAL SECTIONS

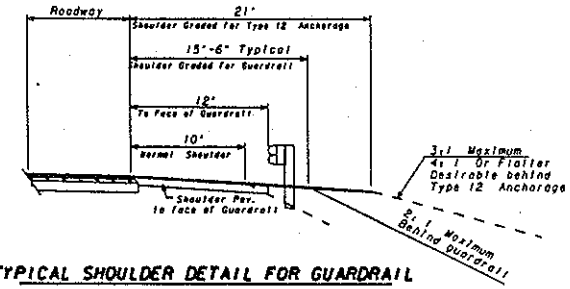
S. R. 20 MAINLINE



FULL DEPTH SECTION

REQUIRED PAVEMENT

- 12.5 mm ASPHALTIC CONCRETE SUPERPAVE - 165*/SY
- 19mm ASPHALTIC CONCRETE SUPERPAVE - 220*/SY
- 25mm ASPHALTIC CONCRETE SUPERPAVE - 440*/SY
- GRADED AGGREGATE BASE, 12"
- GRADED AGGREGATE BASE, 6"



TYPICAL SHOULDER DETAIL FOR GUARDRAIL
SEE PLAN FOR LOCATION

NOT TO SCALE

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Programming Data

201 Project No.: S-0869 (5)
202 Plans Available: 0
249 Prop. Proj. No. BRST-0869 (16)
250 Approval Status: 0000
251 P.I. No.: 343396-
252 Contract Date: 02/01/2005
260 Seismic No.: 00000
75 Type Work: 34 1
94 Bridge Imp. Cost $ 236
95 Roadway Imp. Cos $ 242
96 Total Imp Cost: $ 607
76 Imp. Length: 001565
97 Imp. Year: 1990
114 Future ADT: 007800 Year: 2019

Hydraulic Data

215 Waterway Data
Highwater Elev.: 0000.0 Year: 1900
Avg. Streambed Elev.: 0000.0 Freq.: 00
Drainage Area: 00000
Area Of Opening: 000000
113 Scour Critical: 6
216 Water Depth: 04.0 Br. Height: 26.3
222 Slope Protection: 1
221 Spur Dikes Rear: 0 Fwrd: 0
219 Fender System: 0
220 Dolphin: 0
223 Culvert Cover: 000
Type: 0
No. Barrels: 0
Width: 0.00 Height: 0.00
Length: 0 Apron: 0
* 265 U/W Insp. Area: 0 Diver: ZZZ

* Location I.D. No.: 151-00020D-001.15E

Measurements

* 29 ADT: 005200 Year: 1999
109 % Trucks: 9
* 28 Lanes On: 02 Under: 00
210 No. Tracks On: 00 Under: 00
* 48 Max. Span Length: 0035
* 49 Structure Length: 245
51 Br. Rwdy. Width: 25.80
52 Deck Width: 32.20
* 47 Tot. Horz. Cl: 25.80
50 Curb/Sdewlk Width: 2.00/2.00
32 Approach Rdwy Width: 024
* 229 Shoulder Width:
Rear Lt: 2.00 Type: 2 Rt: 2.00
Fwrd Lt: 2.00 Type: 2 Rt: 2.00
Pavement Width:
Rear: 24.00 Type: 2
Fwrd: 24.00 Type: 2
Intersection Rear: 0 Fwrd: 1
36 Safety Features Br. Rail: 2
Transition: 2
App. G. Rail: 2
App. Rail End: 1
53 Minimum Cl.Over: 99 ' 99 "
Under: N 00 ' 00 "
* 228 Min. 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 99.90
56 Lateral Undercl. Lt: 0.00
* 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: 7.00
Deck Thick Approach: 0.00
246 Overlay Thickness: 0.00
212 Year Last Painted: Sup: 0000 Sub: 1957

Ratings

65 Inventory Rating Method: 2
63 Inventory Rating Method: 2
66 Inventory Type: 2 Rating: 22
64 Operating Type: 2 Rating: 39
231 Calculated Loads
H-Modified: 20 0
HS-Modified: 25 0
Type 3: 28 0
Type 3s2: 40 0
Timber: 36 0
Piggyback: 40 0
261 H Inventory Rating: 15
262 H Operating Rating: 27
67 Structural Evaluation: 5
58 Deck Condition: 7
59 Superstructure Condition: 7
* 227 Collision Damage: 0
60A Substructure Condition: 5
60B Scour Condition: 5
60C Underwater Condition: N
71 Waterway Adequacy: 8
61 Channel Protection Cond: 6
68 Deck Geometry: 2
69 UnderClr. Horz/Vert: N
72 Appr. Alignment: 6
62 Culvert: N

Posting Data

70 Bridge Posting Required: 5
41 Struct Open, Posted, Cl: A
* 103 Temporary Structure: 0
232 Posted Loads H-Modified: 00
HS-Modified: 00
Type 3: 00
Type3s2: 00
Timber: 00
Piggyback: 00
253 Notification Date 02/01/1901
253 Fed Notify Date: 02/01/1901 0

Structure ID: 151-0007-0

GEORGIA DEPARTMENT OF TRANSPORTATION

Henry

SUFF. RATING 45.60

Location & Geography

*	Structure I.D.No:	151-0007-0
	200 Bridge Information	07
*	6A Feature Int:	BIG COTTON INDIAN CREEK
*	6B Critical Bridge:	0
*	7A Route Number Carried:	SR00020
*	7B Facility Carried:	SR 20
*	9 Location:	9 MI NE OF MCDONOUGH
	2 DOT District:	3
	207 Year Photo:	2000
*	91 Inspection Frequency:	24 Date: 01/30/2001
	92A Fract Crit Insp Freq:	00 Date: 02/01/1901
	92B Underwater Insp Freq:	00 Date: 02/01/1901
	92C Other Spc. Insp Freq:	00 Date: 02/01/1901
*	4 Place Code:	00000
*	5 Inventory Route (O/U):	1
	Type:	3
	Designation:	1
	Number:	00020
	Direction:	0
*	16 Latitude: 33-31.2	MMS Prefix: SR
*	17 Longitud 84-03.8	MMS Suffix: 00 MP: 1.15
	98 Border Bridge: 000	%Shared: 00
	99 ID Number: 000000000000000	
*	100 STRAHNET: 0	
	12 Base Highway Network:	0
	13A LRS Inventory Route:	
	13B Sub Inventory Route:	
*	101 Parallel Structure:	N
*	102 Direction of Traffic:	2
*	264 Road Inventory Mile Post:	001.15
*	208 Inspection Area: 03	Initials: JAA
	Engineer's Initial:	

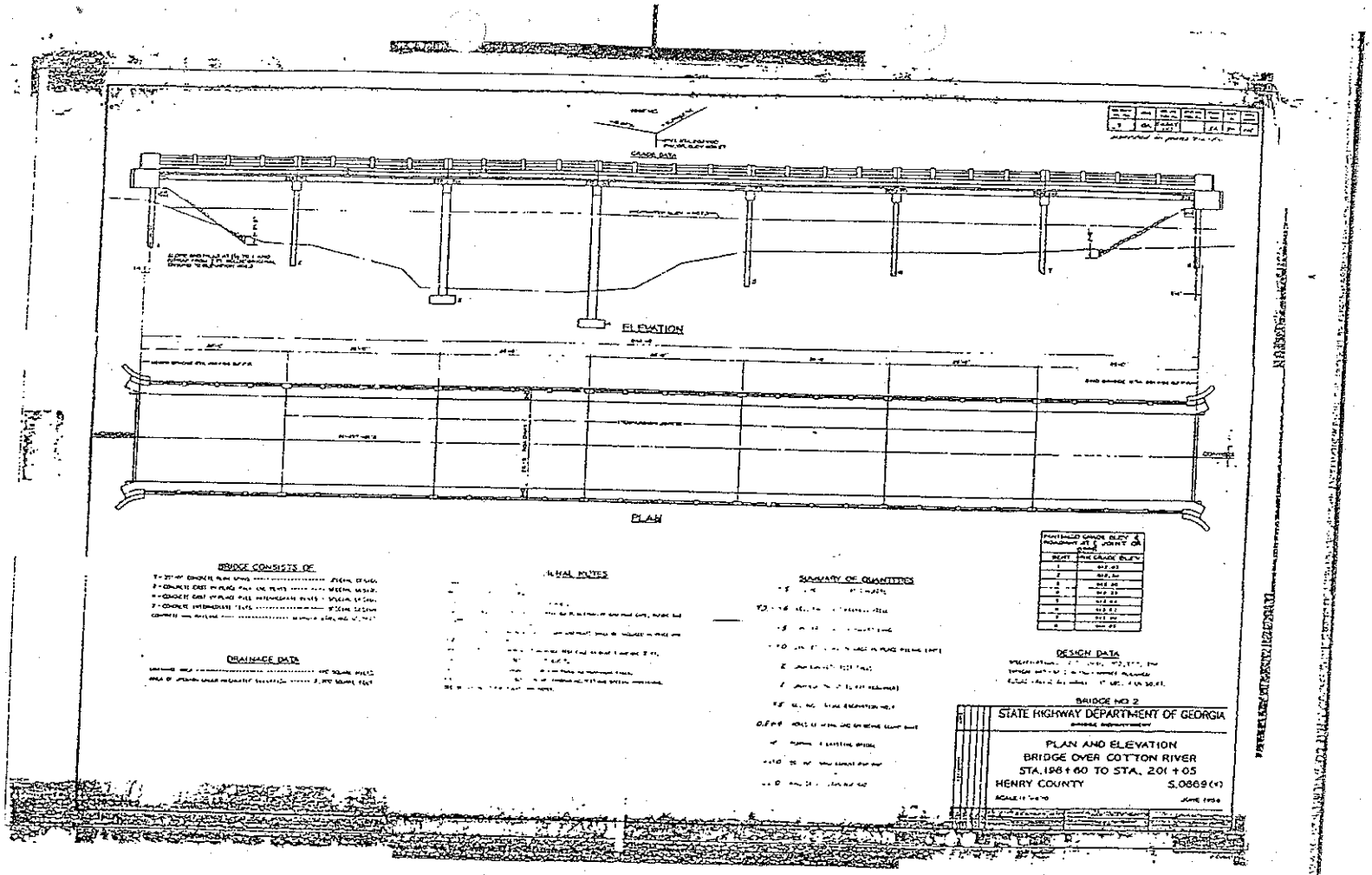
* Location I.D. No.: 151-00020D-001.15E

*	104 Highway System:	1	
*	26 Functional Classification:	07	
*	204 Federal Route Type:	S	No.: 00869
	105 Federal Lands Highway:		
*	110 Truck Route:	0	
	206 School Bus Route:	1	
	217 Benchmark Elevation:	0000.00	
	218 Datum:	0	
*	19 Bypass Length:	12	
*	20 Toll:	3	
*	21 Maintenance:	01	
*	22 Owner:	01	
*	31 Design Load:	2	
	37 Historical Significance:	5	
	205 Congressional District:	03	
	27 Year Constructed:	1957	
	106 Year Reconstructed:	0000	
	33 Bridge Median:	0	
	34 Skew:	00	
	35 Structred Flared:	0	
	38 Navigation Control:	0	
	213 Special Steel Design:	0	
	267 Type of Paint:	3	
*	42 Type of Service on:	1	
		5	
	214 Movable Bridge:	0	
	203 Type Bridge:	O-N-O-O	
	259 Pile Encasement:	3	
*	43 Structure Type Main:	1 04	
	45 No. Spans Main:	007	
	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 Surface Type:	1	
	Mi	8	
	F	8	

Signs & Attachments

	225 Expansion Joint Type:	02	
	242 Deck Drains:	1	
	243 Parapet Location:	0	
	Height:		0.00
	Width:		0.00
	238 Curb:		1.20 1
	239 Handrail:	1 1	
*	240 Median Barrier Rail:	0	
	241 Bridge Median Height:		0.00
	Width:		0.00
*	230 Guardrail Loc Dir Rear:	3	
	Fwrd:	3	
	Oppo Dir Rear:	0	
	Fwrd:	0	
	244 Approach Slab:	3	
	224 Retaining Wall:	0	
	233 Posted Speed Limit:	55	
	236 Warning Sign:	0	
	234 Delineator:	1	
	235 Hazard Boards:	1	
	237 Utilities Gas:	00	
	W	00	
	Ele	00	
	Telephone:	00	
	Sc	00	
	247 Lighting Street:	0	
	Naviagtion:	0	
	Aerial:	0	
*	248 County Continuity No.:	00	

Report Date: 1/8/02


GRADE DATA
ELEVATION
PLAN
BRIDGE CONSISTS OF
GENERAL NOTES
SUMMARY OF QUANTITIES
DESIGN DATA
DRAINAGE DATA
BRIDGE NO 2
STATE HIGHWAY DEPARTMENT OF GEORGIA
PLAN AND ELEVATION
BRIDGE OVER COTTON RIVER
STA. 198+60 TO STA. 201+05
HENRY COUNTY
S.0869(1)

Department of Transportation
State of Georgia

INTERDEPARTMENT CORRESPONDENCE

FILE BRST-0869(16), Henry County
P.I. # 343396

OFFICE Environment/Location

DATE January 24, 2002

FROM Harvey D. Keepler, State Environment/Location Engineer

TO James B. Buchan, P.E., State Consultant Design Engineer.
Attn. Ted Cashin

SUBJECT Traffic Assignments for S.R. 20 @ Big Cotton Indian Creek 9 Mi NE of McDonough in Henry County.

We are furnishing estimated traffic assignments for the above project is attached:

2000 AADT = 5150
2007 AADT = 6800
2027 AADT = 11800
K = 9%
D = 60%
T. = 8%
24 HOUR T = 10%
S.U. = 5%
COMB. = 5%

If you have any questions concerning this information please contact Abby Ebodaghe at (404) 699-4460.

HDK/AFE

FLEXIBLE PAVEMENT DESIGN ANALYSIS

Project: BRST-0869(16)
P.I. no.: 343396
County: Henry
Description: Bridge Replacement on S.R. 20 over Big Cotton Indian Creek

Traffic Data (NOTE: AADTs are one-way)

24-hour Truck Percentage: 10.00%
AADT initial year of design period: 3,400 vpd (2007)
AADT final year of design period: 5,900 vpd (2027)
Mean AADT (one-way): 4,650 vpd

Design Loading

Mean AADT		LDF		Trucks		18-K ESAL		Total Daily Loads
4,650	*	1.00	*	0.100	*	0.95	=	443

Total predicted design period loading = 443 * 20 * 365 = 3,233,900

Design Data

Terminal Serviceability Index: 2.50
Soil Support: 2.50
Regional Factor: 1.60

PROPOSED FLEXIBLE PAVEMENT STRUCTURE

Material	Thickness mm	(in.)	Structural Coefficient	Structural Value
12.5 mm Superpave	38	(1.50)	0.0173	0.66
19 mm Superpave	50	(1.97)	0.0173	0.86
25 mm Superpave	26	(1.02)	0.0173	0.45
	74	(2.91)	0.0118	0.87
Graded Aggregate Base	300	(11.81)	0.0063	1.89

Required SN = 5.36 Proposed SN = 4.73

>>> Proposed pavement is 11.7% Underdesign <<<

Remarks: Br. replac. along the existing align. with "on-site detour

Prepared by Ted Cashin-GDOT/Jim Graybeal-PB September 4, 2002
Date

Recommended _____
State Materials & Research Engineer Date

Approved _____
State Consultant Design Engineer Date

NOTICE OF LOCATION AND DESIGN APPROVAL

Project No. BRST-0869(16) HENRY COUNTY
P.I. No. 343396-

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:_____

Project BRST-0869(16) is a bridge replacement project in Henry County. This project is in the 611th GMD, 9 miles northeast of McDonough on State Route 20 over the Big Cotton Indian Creek. The total project length is approximately 3000 feet (0.568 miles), beginning at M.P. 0.866 and extending to M.P. 1.434. The purpose of this project is to replace a structurally deficient and functionally obsolete bridge on S.R. 20 over the Big Cotton Indian Creek. The traffic will be maintained along existing S.R.20 during construction of a parallel roadway and bridge shifted to the southeast side.

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

Marc Mastronardi
Marc.Mastronardi@DOT.STATE.GA.US
1001 Highway 19 South
Griffin, Ga. 30223
Tel. No. 770-228-7205

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
Georgia Department of Transportation
Ted.Cashin@DOT.STATE.GA.US
No. 2 Capitol Square
Atlanta, Georgia 30334
Tel. No. 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.

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE **BRST-0869(17), PI 343395, Henry County** **OFFICE** Planning

DATE October 15, 2002

FROM Marta V. Rosen, State Transportation Planning Administrator

TO Ted Cashin

ATTN: Jim Graybeal

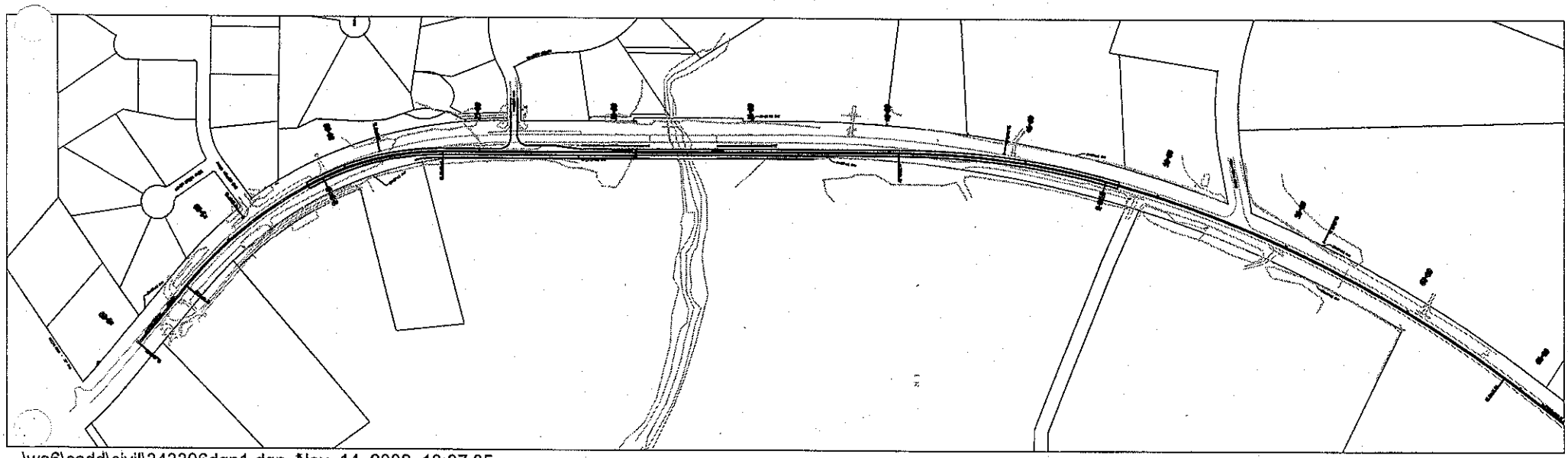
SUBJECT Project Concept Conformity – Certification for Preliminary Field Plan Review – **BRST-0869(17), PI 343395, Henry County**

The Office of Planning is providing this letter of certification as defined in Plan Development Process Manual of Guidance. The concept plans for the Preliminary Field Plan Review are in conformance with the adopted Air Quality Model of the Atlanta Regional Transportation Plan and the State Transportation Plan and the State Transportation Improvement Program.

By copy of this letter, the project concept **BRST-0869(17), PI 343395, Henry County** is found to conform to the Atlanta Regional Transportation Plan based on the October 17, 2002 review. This project cannot be open to traffic before July 1, 2005 to comply with ARC's network 2010. If any changes occur to the proposed concept, please notify this office immediately. If you have any questions, please contact John Gregory at (404) 463-4375.

MVR: jkg

cc: Tom Turner



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PROJECT STATUS REPORT

PI NUMBER / PROJECT	COUNTY	DESCRIPTION	READY TO LET
343396-BRST-0869(16)	HENRY	SR 20 @ BIG COTTON INDIAN CREEK 9 MI NE OF MCDONOUGH	FY05

US:

PROJ MGR: T. CASHIN
PROG TYPE: BRIDGES
CONCEPT:
P.E. PROJECT:
LENGTH: 0.25 C DIST: 3 FIELD DIST: 3 STATUS: PRECST TIP #: HE 158B UAC: 1 FUND 1: Q10

APPROVED DATES	PE DATE: 2002	RW DATE: 2004	CST DATE: 2005
PROPOSED DATES	TII PE DATE: 2002	TII RW DATE: 2004	TII CST DATE: 2005
APPROVED COSTS	PES: $24,000	RW COST: $10,000	CST EST: $1,026,000
PROPOSED COSTS	TII PES: $24,000	TII RWS: $10,000	TII CSTS $1,026,000
NN: 48.5W	REF PROJ:	TWIN PROJ:	EST DATE: 4/15/99

SCHED START	SCHED FINISH	ACTIVITY	ACTUAL START	ACT/EST FINISH	PCT	DISTRICT COMMENTS
		DEFINE CONCEPT RPT:			00	
		CONCEPT MEETING:				
		SUB RTP TO ENG SERVICES:				
		REC ENG SERV APPROVAL:				
		MGT APPROV CPT REPORT:			00	
		ENVIRONMENTAL:	7/1/02	12/31/02	00	
		PUBLIC HEARING:				
		PHOTO MAPPING:			01	TO SCHEDULE AFTER RECEIPT OF WORK ORDER
		FIELD SURVEY:			00	
		FINAL ALT APPRV:				SCHEDULE PER SSE.
		PRELIM FPR HELD:				
		PREL RDWY RW PLANS:			00	
		SECURE 404 PROCESS:			00	
		LOC DZN APPRV:			00	
		FINAL CST PLANS:			00	
		APPRV RW PLANS:			00	
		STAKE RW:			00	
		FINAL FPR HELD:				
		LAB RECV SOIL REQUEST:			00	
		PREL HYDR PLANS:			00	
		LAB BFI REQUEST:			00	
		BRIDGE PLANS:			00	
		U.S.T.s:			00	

BIKE PROVISIONS INCLUDED?: MEASUREMENT SYSTEM: CONSULTANT: C UT EST: $0.00
PDD :
PLANNING:
DZN CMT:
UTIL CMT:
LGPA: REQ HENRY DO UTILITIES 7-20-99.
LOC CMT: BRIDGE
EIS: MM|DA|TW|AIELLO - CONSULT TASK FORCE
404: NEED IMPACTS TO DETERMINE
TS: CAH|BR REPL PRJCT|S&M PLNS N/R|030601

ROW:
RR
PITS:
UST CMT:
BR CMT: BRIDGE REQUIRED

R/W INFORMATION:

RW STATUS: PRECST NUMBER OF PARCELS TO BE ACQUIRED: 0 ACQUIRED BY: DOT ACQMGR
UNDER-REVIEW: 0 RELEASED 0 OPT-PEND: 0 DEEDS 0 COND-PEND 0 COND-FILED 0
RWCERT:

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

Office of Consultant Design

PROJECT CONCEPT REPORT

Project Number: BRST-0869(16)
County: HENRY
P. I. Number: 343396-

Federal Route Number: N/A
State Route Number: 20

Recommendation for approval:

DATE 11-14-02 _____ Project Manager

DATE 11-15-02 _____ State Consultant Design Engineer

The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Plan (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 3 Engineer, Thomaston

DATE 11-21-02 _____ Project Review Engineer

DATE_____ _____ State Bridge and Structural Design Engineer