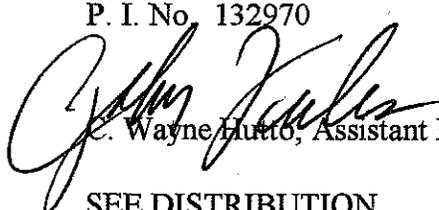


D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE BRST-052-1(13) Barrow County **OFFICE** Preconstruction
P. I. No. 132970
DATE March 18, 2002
FROM  C. Wayne Hutto, Assistant Director of Preconstruction
TO SEE DISTRIBUTION

SUBJECT PROJECT CONCEPT REPORT APPROVAL

Attached for your files is the approval for subject project.

CWH/cj

Attachment

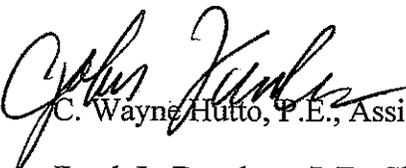
DISTRIBUTION:

David Mulling
Harvey Keepler
Jerry Hobbs
Herman Griffin
Michael Henry
Phillip Allen
Marta Rosen
Paul Liles
Ben Buchan
Larry Dent
BOARD MEMBER

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE BRST-052-1 (13) Barrow County OFFICE Preconstruction
P.I. No. 132970
DATE March 4, 2002

FROM  C. Wayne Hutto, 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 SR 11/Winder-Monroe Hwy over Marbruy Creek, 2.3 miles south of Winder, Georgia. The existing bridge, constructed in 1938, is load limited with a sufficiency rating of 44. State Route 11 at this location is a rural two lane roadway with 12' travel lanes with rural shoulders. This section of SR 11 is functionally classified as a urban minor arterial. Traffic is projected to be 8000 VPD and 14000 VPD in the years 2007 and 2027 respectively. The posted speed and the design speed are 55 MPH.

The construction proposes to construct a new 180' x 44' concrete bridge over Marbruy Creek at the existing bridge site. The approaches will consist of two, 12' lanes with 10' rural shoulders (2' paved). Traffic will be maintained during construction utilizing an off-site detour. Replacing the bridge on existing location creates the least impacts to adjacent properties and provide the most cost efficient alternative.

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) | \$1,726,000 | \$1,100,000 | 2005 | FY-05 |
| Right-of-Way | \$ 7,000 | \$ 10,000 | | |
| Utilities* | LGPA | LGPA | | |

*Barrow County signed LGPA for utilities 8-12-99.

Frank L. Danchetz
Page 2

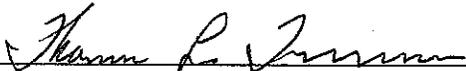
BRST-052-1 (13) Barrow County
March 4, 2002

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

CWH:JDQ/cj/klp

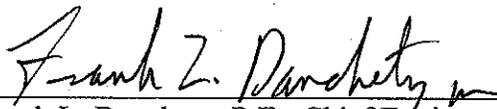
Attachment

CONCUR



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

APPROVE



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

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

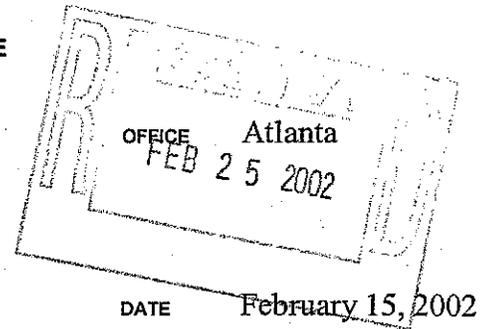
FILE **BRST-052-1(13) Barrow County**
SR 11/Winder-Monroe Hwy. Over Marbury Creek
P.I. No. 132970-

James B. Buchan

FROM James B. Buchan, State Consultant Design Engineer

TO Wayne Hutto, 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
Larry Dent, District Engineer – Gainesville
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: BRST-052-1(13)
County: Barrow
P.I. Number: 132970

Federal Route Number: NA
State Route Number: 11

Recommendation for approval:

DATE 2-15-02



Project Manager

DATE 2-18-02



State Consultant Design Engineer

The concept as presented herein and submitted for approval is consistent with that which is included in 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 _____

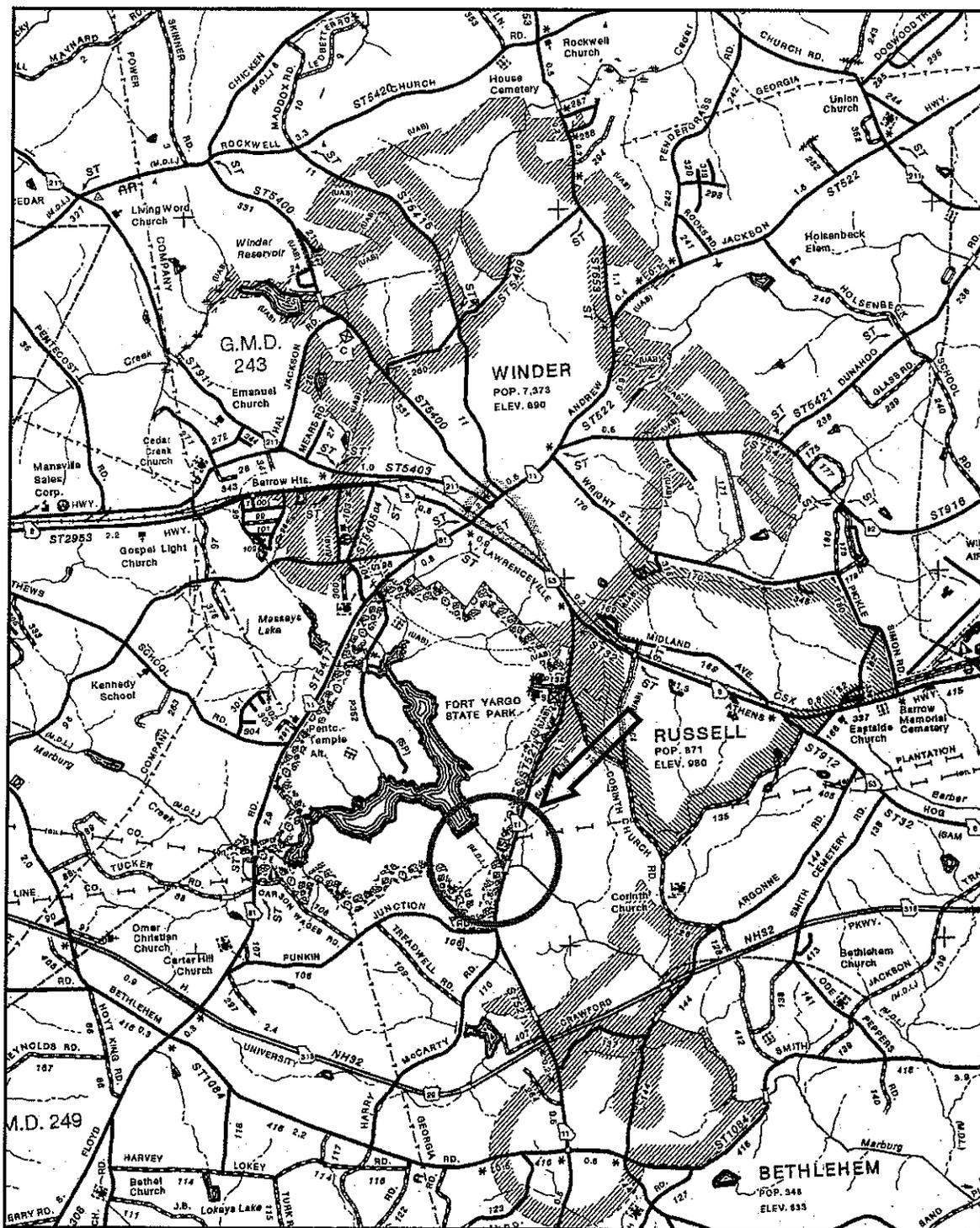
District Engineer

DATE _____

Project Review Engineer

DATE _____

State Bridge & Structural Design Engineer



Scale: 1 inch = 1 mile



Location Map

Project: BRST-052-1(13) Barrow County PI No.: 132970-
Description: SR 11/Winder-Monroe Hwy. Over Marbury Creek

Project Concept Report Page 3
Project Number: BRST-052-1(13)
P.I. Number: 132970
County: Barrow

PROJECT BRST-052-1(13), BARROW COUNTY
P.I. NO 132970
Bridge Replacement
SR 11 Bridge over Marbury Creek

The proposed project, Bridge project BRST-052-1(13), will replace the functionally obsolete SR 11 bridge over Marbury Creek. The two-lane bridge is functionally classified as an urban minor arterial, was constructed in 1938 and is not a designated bike route. The project would replace the current 27 foot wide bridge with a 44-foot bridge. The desired width is based on Georgia MOG 4265-10. This project is not associated with any other projects and has independent utility. The 1999 AADT is 7,800 vehicles, which includes school bus traffic. Traffic in 2027 is projected at 14,000 AADT. The 2027 AADT is based on the assumption that the Winder Bypass will be in place.

This project does not disproportionately burden or benefit any particular community. The Census population for Barrow County consists of between 41% and 60 % minority and 21%-40% of residents are below the poverty level. The project is considered to be a benefit to all of the communities that use the bridge because of the improved bridge condition.

The Structural Evaluation Rating for the bridge is a 4 and the Sufficiency Rating is a 44.0. Rather than improve a structure with a Sufficiency Rating below 50, the Department currently schedules the bridge for replacement. The Structural Evaluation Rating is on a scale of 0-9 with 2 being the lowest rating for an operable bridge. A zero requires closing the bridge and a 2 requires replacement. In accordance with MOG 2450-1, the Structural Evaluation Rating and the Sufficiency Rating of the bridge requires the bridge be replaced.

PROJECT CONCEPT REPORT

Description of the proposed project: *The proposed project is located in Barrow County on SR 11/Winder-Monroe Highway over Marbury Creek, 2.3 miles south of Winder. The project consists of replacing a structurally deficient bridge over Marbury Creek on existing location while providing an offsite detour during construction. The City of Winder sewage treatment plant and Fort Yargo State Park are located adjacent to the bridge on the ~~northwest~~ ^{side} ~~east~~ of State Route 11. The proposed project length is 0.180 miles.*

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

PDP Classification: Major ___ Minor X

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

Functional Classification: *Urban Minor Arterial*

U.S. Route Number(s): N/A

State Route Number(s): 11

Traffic (AADT):

Current Year: (2007) 8000

Design Year: (2027) 14000

Existing design features:

- Typical Section: *Two, 12' Lanes with 2' paved shoulders and 6' grassed shoulders.*
- Posted Speed: 55 mph Maximum degree of curvature: Tangent
- Maximum grade: 5.03% Mainline 2.3% Driveways
- Width of right of way: 100 ft.
- Major structures:
 - *135' x 27' bridge over Marbury Creek on State Route 11. Three spans @ 45'-00"*
Struct. ID: 013-0003-0 Sufficiency rating: 44.0
- Major interchanges or intersections along the project: *None*
- Existing length of roadway segment: 0.142
Beginning mile log for county segment: 4.13

Proposed Design Features:

- Proposed typical section(s): *The proposed roadway will consist of two 12' lanes with 2' paved shoulder and 8' grassed shoulders with side slopes.*
- Proposed Design Speed Mainline: 55 mph
- Proposed Maximum grade Mainline: 5.03% Maximum grade allowable: 6%
- Proposed Maximum grade Side Street: N/A Maximum grade allowable: N/A
- Proposed Maximum grade driveway: 10%
- Proposed Maximum degree of curve: Tangent Maximum degree allowable: 6°00'00"
- Right of Way
 - Width: Varies 100'-140'
 - 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 be approximately 180' long and 44' wide.*
 - Retaining Walls: *None*
- Major intersections and interchanges: *None*
- Traffic control during construction: *An offsite State Route detour will be provided during construction of the proposed bridge. The total detour mileage from begin bridge to end bridge is 9.8 miles. There are several acceptable local roads that can serve as alternates to the local traffic.*

• Design Exceptions to controlling criteria anticipated:

| | <u>UNDETERMINED</u> | <u>YES</u> | <u>NO</u> |
|--------------------------|---------------------|------------|-----------|
| HORIZ 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: *Possible involvement with waters of the US.*
- Level of Environmental Analysis:
 - Are Time Saving Procedures Appropriate? Yes (X), No ()
 - Categorical Exclusion Anticipated? Yes (X), No ()
 - Environmental Assessment/Finding of No Significant Impact: Yes (), No (X)
 - Environmental Impact Statement (EIS): Yes (), No (X)
- Utility Involvements:
 - Telephone: *Bell South*
 - Power: *GA Power, Jackson EMC, Walton EMC*
 - Gas: *City of Winder*
 - Cable TV: *Adelphia*
 - Water: *City of Winder*

Project Responsibilities:

- Design: *Earth Tech*
- Right of way acquisition: *GDOT*
- Relocation of utilities: *Barrow County is responsible for reimbursable utilities. LGPA signed 8-12-99.*
- Letting to contract: *GDOT*
- Supervision of construction: *GDOT*
- Providing material pits: *Contractor*
- Providing detours: *GDOT*

Coordination:

- Concept Meeting date(Minutes Attached): *February 5, 2002*
- P.A.R. meetings, dates, and results: *None*
- FEMA, USCG and/or TVA: *None*
- Public involvement: *Public Hearing for off-site Detour to be scheduled at a later date.*
- Local government comments: *None*
- Other projects in the area: *Future Plans for a Winder Bypass*
- Other coordination to date: *None*

Scheduling – Responsible Parties' Estimate

| | |
|--|-----------------|
| Time to complete the environmental process: | <u>6</u> Months |
| Time to complete preliminary construction plans: | <u>4</u> Months |
| Time to complete right of way plans: | <u>3</u> Months |
| Time to complete the section 404 permit: | <u>4</u> Months |
| Time to complete final construction plans: | <u>3</u> Months |
| Time to complete the purchase right-of-way: | <u>9</u> Months |
| Other major items that will affect project schedule: | None |

Other alternates considered:

Alternate 1 – Replace bridge on existing location, providing an onsite detour with a detour bridge. This alternate was eliminated because a detour to the west would impact the City of Winder sewage treatment plant. A detour to the east would impact existing water reclamation spray fields. An onsite detour to either side of SR 11 would increase the project length from 0.180 miles to 0.43 miles, increase right of way impacts to adjacent properties, and increase the project cost by approximately \$758,000.

Alternate 2 – Rehabilitation of existing bridge. This alternate was eliminated because FHWA has determined that any structure with a sufficiency rating less than 50 should be replaced. The sufficiency rating for this bridge is 44.0.

Comments: It is recommended to replace the structurally deficient bridge on existing location and provide an offsite detour on nearby State Route 81. Replacing the bridge on existing location creates the least impacts to adjacent properties and provides the most cost and time efficient alternative.

Attachments:

1. Cost Estimates:
 - a. Construction including E&C
 - b. Right of Way, and
 - c. Utilities.
2. On-Site Detour Cost Estimate,
3. Sketch location map,
4. Typical sections,
5. Bridge Inventory
6. Concept Meeting Minutes
7. Location and Design Notice
8. Preliminary Pavement Design
9. Traffic Counts

PRELIMINARY COST ESTIMATE

PROJECT NUMBER: BRST-052-1(13)

COUNTY: BARROW

DATE: December 27, 2001

ESTIMATED LETTING DATE:

PREPARED BY: BWH

PROJECT LENGTH: 0.18 miles

() PROGRAMMING PROCESS (X) CONCEPT DEVELOPMENT () DURING PROJECT DEV.

| PROJECT COST | | | |
|---|----|-----------------|------------|
| A. RIGHT-OF-WAY: | | | |
| 1. PROPERTY (LAND & EASEMENT) 0.646 AC | \$ | | 6,459 |
| 2. DISPLACEMENTS; RES: 0, BUS: 0, M.H.: 0 | \$ | | |
| 3. OTHER COST (ADM./COST, INFLATION) | \$ | | |
| SUBTOTAL: A | | | \$ 6,459 |
| B. REIMBURSABLE UTILITIES: | | | |
| 1. RAILROAD | \$ | | |
| 2. TRANSMISSION LINES | \$ | | |
| 3. SERVICES | \$ | | 8,000 |
| SUBTOTAL: B | | | \$ 8,000 |
| C. CONSTRUCTION: | | | |
| 1. MAJOR STRUCTURES | | | |
| a. BRIDGES (180'X44') | | | |
| | \$ | | 554,400 |
| | \$ | | |
| SUBTOTAL: C-1.a | | | \$ 554,400 |
| b. OTHER | | | |
| | \$ | | - |
| | \$ | | |
| SUBTOTAL: C-1 | | | \$ 554,400 |
| 2. GRADING AND DRAINAGE | | | |
| a. EARTHWORK | | | |
| Borrow/Excavation | | 4640 CY @ \$7.5 | \$ 34,800 |
| SUBTOTAL: C-2a | | | \$ 34,800 |

| | | | | |
|---|-----|-------------|----|--------|
| b. DRAINAGE | | | | |
| 1) Side Drain Pipe | 25 | LF @ \$21 | \$ | 525 |
| 2) Storm drain pipe | 70 | LF @ \$44 | \$ | 3,080 |
| 3) Longitudinal System (incl. catch basins) | | LF @ \$0 | \$ | - |
| 4) Safety End Sections | 4 | EA @ \$280 | \$ | 1,120 |
| 5) Perforated Underdrain | | LF @ \$6 | \$ | - |
| 6) Temporary Pipe Slope Drain | | LF @ \$24 | \$ | - |
| SUBTOTAL: C-2.b | | | \$ | 4,725 |
| SUBTOTAL: C-2 | | | \$ | 39,525 |
| 3. BASE AND PAVING: | | | | |
| a. AGGREGATE BASE | 880 | TN @ \$24 | \$ | 21,120 |
| b. ASPHALT PAVING (Mainline & Cross-Roads): | | | | |
| 19 mm Superpave | 166 | Tons @ \$43 | \$ | 7,138 |
| 25 mm Superpave | 333 | Tons @ \$37 | \$ | 12,321 |
| 12.5 mm Superpave | 143 | Tons @ \$46 | \$ | 6,578 |
| SUBTOTAL: C-3.b | | | \$ | 47,157 |
| c. CLASS "B" CONCRETE | | CY @ \$146 | \$ | - |
| d. OTHER (Leveling, Tack Coat, Milling) | | | \$ | 300 |
| e. AGGREGATE SURFACE COURSE | 5 | Tons @ \$19 | \$ | 95 |
| SUBTOTAL: C-3 | | | \$ | 68,672 |

| | | | | |
|--------------------------|-----|------------------|----|---------|
| 4. EROSION CONTROL | | | | |
| a. SILT FENCE | | | | |
| 1. TYPE A | 650 | LF @ \$3.5 | \$ | 2,275 |
| 2. TYPE B | | LF @ \$2.6 | \$ | - |
| 3. TYPE C | 500 | LF @ \$5.3 | \$ | 2,650 |
| | | | \$ | 4,925 |
| b. RIP RAP | 220 | SF @ \$30 | \$ | 6,600 |
| c. PLASTIC FILTER FABRIC | 220 | SF @ \$5.8 | \$ | 1,276 |
| d. EROSION CONTROL MATS | 800 | SY @ \$5 | \$ | 4,000 |
| | | | | |
| SUBTOTAL: C-4 | | | \$ | 16,801 |
| 5. LUMP ITEMS | | | | |
| a. GRASSING | | | \$ | 7,510 |
| b. CLEARING AND GRUBBING | | | \$ | 10,000 |
| c. EROSION CONTROL | | | \$ | 10,000 |
| d. TRAFFIC CONTROL | | | \$ | 50,000 |
| SUBTOTAL: C-5 | | | \$ | 77,510 |
| 6. MISCELLANEOUS: | | | | |
| a. LIGHTING | | | \$ | |
| b. SIGNING - MARKING | | | \$ | 1,500 |
| c. GUARDRAIL | | | | |
| W Beam | 175 | LF @ \$12 | \$ | 2,100 |
| T Beam | 83 | LF @ \$40 | \$ | 3,320 |
| Anchors | | TYPE 12 @ \$1600 | \$ | 3,200 |
| | | TYPE 1 @ \$450 | \$ | 900 |
| SUBTOTAL: C-6.c | | | \$ | 9,520 |
| d. SIDEWALK | | | \$ | |
| e. MEDIAN / SIDE BARRIER | | | \$ | |
| f. APPROACH SLABS | 310 | SY @ \$110 | \$ | 34,100 |
| g. REMOVAL | | | | |
| Bridges | | | \$ | 60,000 |
| SUBTOTAL: C-6.g | | | \$ | 60,000 |
| h. OTHER | | | \$ | |
| SUBTOTAL: C-6 | | | \$ | 105,120 |
| 7. SPECIAL FEATURES | | | | |
| SUBTOTAL: C-7 | | | \$ | - |

| SUMMARY | |
|---------------------------------|---------------------|
| A. RIGHT-OF-WAY | \$ 6,459 |
| B. REIMBURSABLE UTILITIES | \$ 8,000 |
| C. CONSTRUCTION | |
| 1. MAJOR STRUCTURES | \$ 554,400 |
| 2. GRADING AND DRAINAGE | \$ 39,525 |
| 3. BASE AND PAVING | \$ 68,672 |
| 4. EROSION CONTROL | \$ 16,801 |
| 5. LUMP ITEMS | \$ 77,510 |
| 6. MISCELLANEOUS | \$ 105,120 |
| 7. SPECIAL FEATURES | \$ - |
| SUBTOTAL CONSTRUCTION COST | \$ 862,028 |
| INFLATION (5% PER YEAR) | \$ 43,101 |
| NUMBER OF YEARS | 1 |
| E. & C. (10%) | \$ 90,513 |
| TOTAL CONSTRUCTION COST | \$ 995,642 |
| GRAND TOTAL PROJECT COST | \$ 1,010,101 |

ON-SITE DETOUR PRELIMINARY COST ESTIMATE

PROJECT NUMBER: BRST-052-1(13)

COUNTY: BARROW

DATE: February 19, 2002

ESTIMATED LETTING DATE:

PREPARED BY: BWH

DETOUR LENGTH: 0.43 Miles

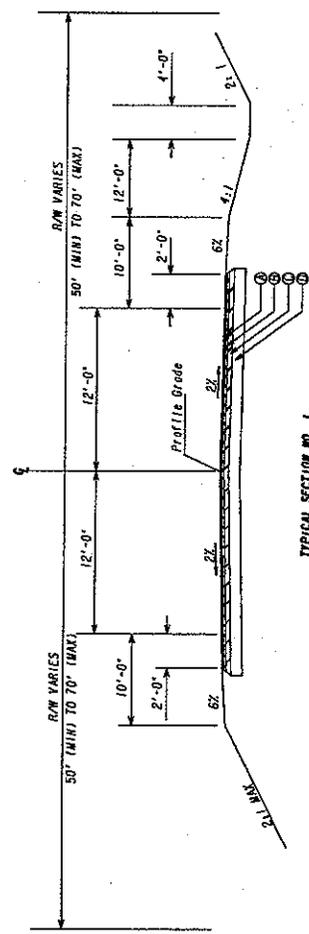
() PROGRAMMING PROCESS (X) CONCEPT DEVELOPMENT () DURING PROJECT DEV.

| PROJECT COST (Alternate 1) | | | |
|---|------|------------|------------|
| A. RIGHT-OF-WAY: | | | |
| 1. PROPERTY (LAND & EASEMENT) 3.15 AC | | \$ | 32000 |
| 2. DISPLACEMENTS; RES: 0, BUS: 0, M.H.: 0 | | \$ | |
| 3. OTHER COST (ADM./COST, INFLATION) | | \$ | |
| SUBTOTAL: A | | | \$ 32,000 |
| B. REIMBURSABLE UTILITIES: | | | |
| 1. RAILROAD | | \$ | |
| 2. TRANSMISSION LINES | | \$ | |
| 3. SERVICES | | \$ | 10000 |
| SUBTOTAL: B | | | \$ 10,000 |
| C. CONSTRUCTION: | | | |
| 1. MAJOR STRUCTURES | | | |
| a. Detour Bridge | | \$ | 60000 |
| b. Proposed Mainline Bridge(180'X44') | | \$ | 554400 |
| SUBTOTAL: C-1 | | | \$ 614,400 |
| 2. GRADING AND DRAINAGE | | | |
| a. EARTHWORK | | | |
| Detour Borrow/Excavation | 1500 | CY @ \$7.5 | \$ 11,250 |
| Mainline Borrow/Excavation | 4600 | CY @ \$7.5 | \$ 34,500 |
| SUBTOTAL: C-2.a | | | \$ 45,750 |

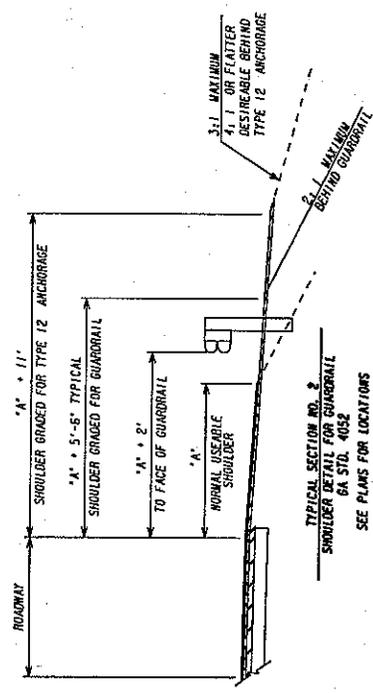
| | | | |
|---|------|-------------|------------|
| b. DRAINAGE | | | |
| 1) Side Drain Pipe(Detour) | 100 | LF @ \$21 | \$ 2,100 |
| a. Mainline | 25 | LF @ \$21 | \$ 525 |
| 2) Storm drain pipe (for Mainline) | 70 | LF @ \$44 | \$ 3,080 |
| 3) Longitudinal System (incl. catch basins) | | LF @ \$0 | \$ - |
| 4) Safety End Sections (Detour) | 2 | EA @ \$280 | \$ 560 |
| a. Mainline | 4 | EA @ \$280 | \$ 1,120 |
| 5) Perforated Underdrain | 300 | LF @ \$6 | \$ 1,800 |
| 6) Temporary Pipe Slope Drain | | LF @ \$24 | \$ - |
| SUBTOTAL: C-2.b | | | \$ 9,185 |
| SUBTOTAL: C-2 | | | \$ 54,935 |
| 3. BASE AND PAVING: | | | |
| a. AGGREGATE BASE (Detour) | 4200 | TN @ \$24 | \$ 100,800 |
| b. ASPHALT PAVING (Detour): | | | |
| 19 mm Superpave | 680 | Tons @ \$43 | \$ 29,240 |
| 25 mm Superpave | 1365 | Tons @ \$37 | \$ 50,505 |
| 9.5 mm Superpave | 563 | Tons @ \$44 | \$ 24,772 |
| SUBTOTAL: C-3.b | | | \$ 205,317 |
| c. AGGREGATE BASE (Mainline) | 880 | TN @ \$24 | \$ 21,120 |
| d. ASPHALT PAVING (Mainline): | | | |
| 19 mm Superpave | 166 | Tons @ \$43 | \$ 7,138 |
| 25 mm Superpave | 333 | Tons @ \$37 | \$ 12,321 |
| 9.5 mm Superpave | 143 | Tons @ \$44 | \$ 6,292 |
| SUBTOTAL: C-3.d | | | \$ 252,188 |
| e. OTHER (Leveling, Tack Coat, Milling) | | | \$ 400 |
| f. AGGREGATE SURFACE COURSE | 5 | Tons @ \$19 | \$ 95 |
| SUBTOTAL: C-3 | | | \$ 710,188 |

| | | | | |
|-------------------------------------|---------|------------|----|---------------|
| 4. EROSION CONTROL | | | | |
| a. SILT FENCE (Detour) | | | | |
| 1. TYPE A | 585 | LF @ \$3.5 | \$ | 2,048 |
| 2. Baled Straw | 300 | LF @ \$2.6 | \$ | 780 |
| 3. TYPE C | 400 | LF @ \$5.3 | \$ | 2,120 |
| b. SILT FENCE (Mainline) | | | | |
| 1. TYPE A | 650 | LF @ \$3.5 | \$ | 2,275 |
| TYPE B | | LF @ \$2.6 | \$ | - |
| 3. TYPE C | 500 | LF @ \$5.3 | \$ | 2,650 |
| c. RIP RAP (Detour) | 250 | SF @ \$30 | \$ | 7,500 |
| d. RIP RAP (Mainline) | 220 | SF @ \$30 | \$ | 6,600 |
| e. PLASTIC FILTER FABRIC (Detour) | 250 | SF @ \$5.8 | \$ | 1,450 |
| f. PLASTIC FILTER FABRIC (Mainline) | 220 | SF @ \$5.8 | \$ | 1,276 |
| g. EROSION CONTROL MATS (Detour) | 720 | SY @ \$5 | \$ | 3,600 |
| e. EROSION CONTROL MATS (Mainline) | 800 | SY @ \$5 | \$ | 4,000 |
| SUBTOTAL: C-4 | | | \$ | 30,299 |
| 5. LUMP ITEMS | | | | |
| a. GRASSING | | | \$ | 8000 |
| b. CLEARING AND GRUBBING | | | \$ | 10000 |
| c. EROSION CONTROL | | | \$ | 10000 |
| d. TRAFFIC CONTROL | | | \$ | 30000 |
| SUBTOTAL: C-5 | | | \$ | 58,000 |
| 6. MISCELLANEOUS: | | | | |
| a. LIGHTING | | | | \$ |
| b. SIGNING - MARKING | | | | \$ |
| c. GUARDRAIL (Detour) | | | | |
| W Beam | 600 | LF @ \$12 | \$ | 7,200 |
| T Beam | 88 | LF @ \$40 | \$ | 3,520 |
| Anchors | TYPE 12 | 2 @ \$1600 | \$ | 3,200 |
| | TYPE 1 | 2 @ \$450 | \$ | 900 |
| d. GUARDRAIL (Mainline) | | | | |
| W Beam | 175 | LF @ \$12 | \$ | 2,100 |
| T Beam | 83 | LF @ \$40 | \$ | 3,320 |
| Anchors | TYPE 12 | 2 @ \$1600 | \$ | 3,200 |
| | TYPE 1 | 2 @ \$450 | \$ | 900 |
| SUBTOTAL: C-6 | | | \$ | 25,840 |

| SUMMARY | |
|--|---------------------|
| A. RIGHT-OF-WAY | \$ 32,000 |
| B. REIMBURSABLE UTILITIES | \$ 10,000 |
| C. CONSTRUCTION | |
| 1. MAJOR STRUCTURES | \$ 614,400 |
| 2. GRADING AND DRAINAGE | \$ 54,935 |
| 3. BASE AND PAVING | \$ 710,188 |
| 4. EROSION CONTROL | \$ 30,299 |
| 5. LUMP ITEMS | \$ 58,000 |
| 6. MISCELLANEOUS | \$ 25,840 |
| SUBTOTAL CONSTRUCTION COST | \$ 1,493,662 |
| INFLATION (5% PER YEAR) | \$ 74,683 |
| NUMBER OF YEARS | |
| E. & C. (10%) | \$ 156,834 |
| TOTAL CONSTRUCTION COST | \$ 1,725,179 |
| GRAND TOTAL PROJECT COST(Alternate 1) | \$ 1,767,179 |



TYPICAL SECTION NO. 1
NORMAL CROWN



TYPICAL SECTION NO. 2
SHOULDER DETAIL FOR GUARDRAIL
GA STD. 4052
SEE PLANS FOR LOCATIONS

- REQUIRED PAVEMENT
- ① 165 LBS/SY RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP2 ONLY, INCL BITUM & H LINE (SUPERPAVE LEVEL "B")
 - ② 220 LBS/SY RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM & H LINE (SUPERPAVE LEVEL "B")
 - ③ 140 LBS/SY RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM & H LINE (SUPERPAVE LEVEL "A")
 - ④ 12" GRADED AGGREGATE BASE

| SLOPE CONTROLS | | FILL |
|----------------|-------------|-------------|
| SLOPE | CUT | 0-10 ft. |
| 2:1 | OVER 10 ft. | OVER 10 ft. |

* REQUIRES GUARDRAIL

| DATE | REVISIONS | DATE | REVISIONS |
|------|-----------|------|-----------|
| | | | |
| | | | |
| | | | |

EARTH TECH
1455 OLD ALABAMA ROAD, SUITE 170
ROSELAND, GA 30076
PHONE: (770) 390-1400

BRIDGE INVENTORY DATA LISTING GEORGIA DEPARTMENT OF TRANSPORTATION

Structure ID: 013-0003-0

Barrow County

SUFF. RATING: 44.0

Location & Geography

* Structure I.D. No.: 013-0003-0
 * 200 Bridge Information: 06
 * 6A Feature Int.: MARBURY CREEK
 * 6B Critical Bridge: 0
 * 7A Route Number Carried: SR00011
 * 7B Facility Carried: WINDER-MONROE HWY.
 * 9 Location: 2.3 MI SOUTH OF WINDER
 2 DOT District: 1
 207 Year Photo: 2000
 * 91 Inspection Frequency: 24 Date: 01/19/2000
 92A Fract Crit Insp Freq: 0 00 Date: 0000
 92B Underwater Insp Freq: 0 00 Date: 0000
 92C Other Spc. Insp Freq: 0 00 Date: 0000
 * 4 Place Code: 00000
 * 5 Inventory Route (O/U): 1
 Type: 2
 Designator: 1
 Number: 00029
 Direction: 0
 * 16 Latitude: 33-57.5
 * 17 Longitude: 83-43.2
 98 Border Bridge: 000 %Shared: 00
 99 ID Number: 0000000000000000
 * 100 Defense Highway: 0
 * 101 Parallel Structure: N
 * 102 Direction of Traffic: 2
 264 Road Inventory Mile Post: 004.13
 * 208 Inspection Area: 01 Initials: GMC
 * Location I.D. No: 013-00011D-004.25N
 * XReferen I.D. No: 000-0000000-000.000

Signs & Attachments

* 104 Highway System: 0
 * 26 Functional Classification: 16
 * 204 Federal Route Type: F No: 052-1
 * 110 Truck Route: 0
 206 School Bus Route: 1
 217 Benchmark Elevation: 0.00
 218 Datum: 0
 * 19 Bypass Length: 4
 * 20 Toll: 3
 * 21 Maintenance: 01
 * 22 Owner: 01
 * 31 Design Load: 2
 37 Historical Significance: 5
 205 Congressional District: 11
 * 27 Year Constructed: 1938
 106 Year Reconstructed: 0000
 33 Bridge Median: 0
 34 Skew: 00
 35 Structure Flared: 0
 38 Navigation Control: 0
 213 Special Steel Design: 0
 267 Type of Paint: 2
 * 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: 003
 44 Structure Type Appr: 0 0
 46 No. Spans Appr: 0000
 226 Bridge Curve Horiz: 0 Vert: 0
 111 Pier Protection: 0
 107 Deck Structure Type: 1
 108 Wearing Surface Type: 1 Membrane: 0 Protection: 8
 223 Expansion Joint Type: 02
 242 Deck Drains: 1
 243 Parapet Location: 0
 Height: 0
 Width: 0
 238 Curb: 1.1 1
 239 Handrail: 1 1
 * 240 Median Barrier Rail: 0
 241 Bridge Median Height: 0
 Width: 0
 * 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: 1
 234 Delineator: 1
 235 Hazard Boards: 1
 237 Utilities Gas: 00
 Water: 00
 Electric: 00
 Telephone: 00
 Sewer: 00
 247 Lighting Street: 0
 Navigation: 0
 Aerial: 0
 * 248 County Continuity No: 14

BRIDGE INVENTORY DATA LISTING GEORGIA DEPARTMENT OF TRANSPORTATION

Structure ID: 013-0003-0

Barrow County

SUFF. RATING: 44.0

Programming Data

201 Project No: WPA-148
 202 Plans Available: 1
 249 Prop. Proj No: BRST-052-1 (13)
 250 Approval Status: 0000
 251 P.I. No: 132970
 252 Contract Date: 02/01/2004
 260 Seismic No: 00000
 75 Type Work: 341
 94 Bridge Imp. Cost: \$ 167
 95 Roadway Imp. Cost: \$ 46
 96 Total Imp. Cost: \$ 279
 76 Imp. Length: 000346
 97 Imp. Year: 1990
 114 Future ADT: 012945 Year: 2018

Measurements

* 29 ADT: 008630 Year: 1998
 109 % Trucks: 12
 * 28 Lanes On: 02 Under: 00
 210 No. Tracks On: 00 Under: 00
 * 48 Max. Span Length: 0045
 * 49 Structure Length: 135
 51 Br. Rdwy. Width: 23.7
 52 Deck Width: 26.5
 * 47 Tot. Horz. Cl: 23.7
 50 Curb/Sdewlk Width: 0.5/0.5
 32 Approach Rdwy Width: 029
 * 229 Sllder Width:

Rear Lt: 2.8 Type: 2 Rt: 2.7
 Fwrd Lt: 2.6 Type: 2 Rt: 3.1

Pymnt Width:

Rear: 23.1 Type: 2
 Fwrd: 23.7 Type: 2
 Intersection Rear: 0 Fwrd: 0

Hydraulic Data

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: 3.8 Br Height: 27.5
 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: 0.0
 Height: 0.0
 Length: 0
 Apron: 0
 265 U/W Insp. Area: 0 Diver: ZZZ

* 228 Min. Vert. Cl
 Act. Odsm. Dir: 99'99"
 Opp. Dir: 99'99"
 Posted Odsm. Dir: 00'00"
 Opp. 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: 7.0
 Deck Thick Approach: 0.0
 246 Overlay Thickness: 0.0
 211 Tons Structural Steel: 28.0
 212 Year Last Painted: Sup: 1990 Sub: 0000

265 Location I.D. No: 013-00011D-004.25N
 * XReferen I.D. No: 000-000000-000.000

Ratings

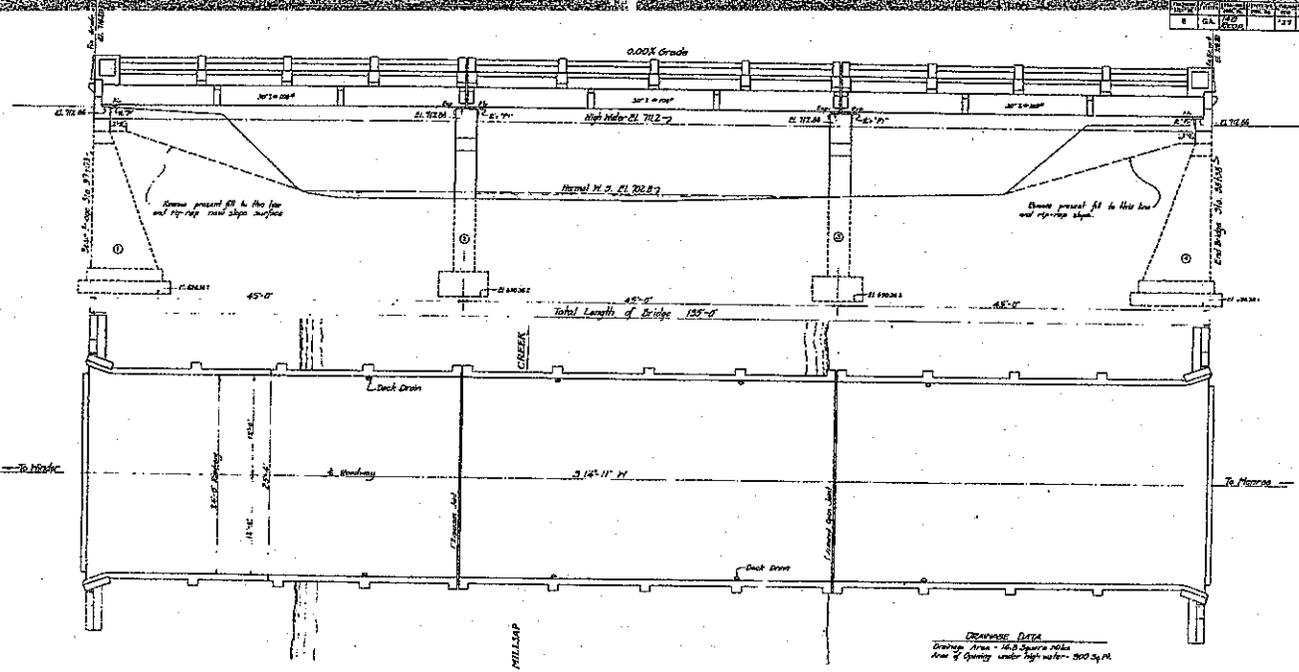
66 Inventory Type: 2 Rating: 20
 64 Operating Type: 2 Rating: 32
 231 Calculated Loads
 H-Modified: 20 0
 HS-Modified: 25 0
 Type 3: 24 0
 Type 3s2: 37 0
 Timber: 35 0
 Piggyback: 00 0

261 H Inventory Rating: 15
 262 H Operating Rating: 24
 67 Structural Evaluation: 4
 58 Deck Condition: 5
 59 Superstructure Condition: 6
 * 227 Collision Damage: 0
 60A Substructure Condition: 5
 60B Scour Condition: 7
 60C Underwater Condition: N
 71 Waterway Adequacy: 9
 61 Channel Protection Cond: 7
 68 Deck Geometry: 2
 69 UnderCl. Horz/Vert: N
 72 Appr. Alignment: 8
 62 Culvert: N

Posting Data

70 Bridge Posting Required: 5
 41 Struct Open, Posted, Cl: A
 * 103 Temporary Structure: 0

232 Posted Loads H-Modified: 00
 HS-Modified: 00
 Type 3: 00
 Type 3S2: 00
 Timber: 00
 Piggyback: 00
 253 Notification Date: 0000
 253 Fed Notify Date: 0000



GENERAL NOTES
 1. Construction details shown on drawings shall be in accordance with Georgia Standard Specifications for Highway Construction, 1937 Edition, unless otherwise specified.
 2. All materials shall be of the best quality obtainable and conform to the specifications of the Georgia Standard Specifications for Highway Construction, 1937 Edition.
 3. The contractor shall be responsible for the proper placement and compaction of all materials.
 4. The contractor shall be responsible for the proper placement and compaction of all materials.
 5. The contractor shall be responsible for the proper placement and compaction of all materials.

BRIDGE COMPOSED OF
 1 - 45' x 14' 11" Box Girders
 2 - Concrete Abutments
 2 - Concrete Piers
 Georgia Standard No. 3303
 Georgia Standard No. 3502
 Special Design

SUMMARY OF QUANTITIES
 228 Cu Yds. Class A Concrete
 27,000 Lbs. Bar Steel
 1 Lump Structural Steel
 473 Cu Yds. Excavation No. 1
 60 Cu Yds. Excavation No. 2
 300 Cu Yds. Gravel Excavation
 300 Sq Yds. Plain Riprap
 0.310 Acres Clearing and Grubbing (Lump Sum)
 Lump Removal of Existing Bridge

DRAINAGE DATA
 Draining Area - 14.5 Square Miles
 Area of Quarry under High Water - 200 Sq. Ft.

Section Data
 Vertical Curve Length
 Proposed Alignment

STATE HIGHWAY BOARD OF GEORGIA
 BRIDGE DEPARTMENT
 PLAN AND ELEVATION
 BRIDGE OVER MILLSAPS CREEK
 STA. 97+03 TO STA. 98+38
 BARROW COUNTY - W. R. H. 148 REOP.
 SCALE - 1" = 5'-0"
 APRIL 1937

Earth Tech
1455 Old Alabama Road
Roswell, Georgia 30076
(770) 990-1400 Fax (770) 990-1503

MEETING MINUTES

DATE: February 5, 2001

PROJECT: BRST-052-1(13)
P.I. No. 132970
SR 11/Winder Monroe Highway Over Marbury Creek

SUBJECT: Concept Team Meeting Minutes

| | | |
|----------------------------------|-------------------------------|----------------|
| ATTENDEES: Billy Cantrell | GDOT-Traffic Ops | (770) 532-5532 |
| Ted Cashin | GDOT-OCD | (404) 532-5532 |
| Neil Counts | City of Winder | (770) 867-3106 |
| Randall L. Davis | GDOT Area Engineer | (770) 339-2308 |
| Eddie Elder | Barrow County | (770) 307-3010 |
| Neil Kantner | GDOT-District Location | (770) 532-5580 |
| Todd Long | GDOT-District Preconstruction | (770) 532-5520 |
| Russell Murry | GDOT-District Construction | (770) 532-5532 |
| Henry O'Kelly | GDOT | (770) 532-5510 |
| Larry Price | Barrow County | (770) 307-3113 |
| Robbie Robinson | Plantation Pipe Line | (770) 751-4258 |
| Britt Hennessey | Earth Tech | (770) 990-1400 |
| Scott Gero | Earth Tech | (770) 990-1400 |

Notes prepared by: Britt Hennessey, Earth Tech

A Concept Team Meeting was held on the above project on February 5, 2002 at the District 1 office in Gainesville, Georgia. Todd Long called the meeting to order at 11:00 AM. Britt Hennessey then presented the project. The following comments/discussions were noted:

Ms. Hennessey presented the conceptual layout and showed that the existing, structurally deficient bridge will be replaced on its existing alignment. Traffic will be detoured during construction on nearby State Route 81. The proposed roadway profile will be raised 1.3'.

Ms. Hennessey noted some discrepancies with the given Need and Purpose Statement. The document states that the proposed bridge width is 40'. It also indicates that the functional classification of State Route 11 is a rural minor arterial street.

Neil Kantner and Todd Long noted that their records show the functional classification as an urban minor arterial. Earth Tech will update the concept report to reflect this.

Ted Cashin clarified that the proposed bridge width shall remain as stated in the concept report as 44'. This width comes from the Georgia Manual of Guidance 4265-10.

Todd Long asked that responsibility of providing detours be changed from Barrow County to GDOT in the concept report.

Ms. Hennessey presented the on-site detour alternates. These alternates would increase the right of way and utility impacts. They would also possibly affect the City of Winder Sewage Treatment Plant spray fields.

Earth Tech
1455 Old Alabama Road
Roswell, Georgia 30076
(770) 990-1400 Fax (770) 990-1503

MEETING MINUTES

Neil Counts indicated that there are water reclamation facility spray fields on the eastern side of State Route 11. Mr. Counts will identify and send the existing location of these spray fields to Earth Tech. Mr. Counts also said that cross drains run from the south end of the treatment plant to the spray fields (across State Route 11).

Everyone was in agreement that the off-site detour is the best alternative. The meeting attendees discussed the benefits of an offsite detour. They are as follows:

- Avoids possible permitting process associated with impacting the spray fields.
- Least expensive alternative
- 9-12 month construction time versus a 15-20 month construction time
- Provides least amount of right of way and utility impacts
- Forces trucks to utilize State Route 81 instead of State Route 11, which is what the county intends them to use anyway.

Ted Cashin said that a public detour meeting must be scheduled.

The group decided it is desired to have the construction time encompass the summer months to minimize the duration of time of impacts to school traffic. There was some concern that the additional traffic detoured from State Route 11 and placed on State Route 81 will create an undesirable Level Of Service on State Route 81 when school is in session. There are two schools located on State Route 81.

Earth Tech will change the format of the concept report to reflect all of the addenda to the PDP.

Earth Tech will provide a complete cost estimate for the on-site detour and add the length of the offsite detour to the concept report.

Earth Tech will verify Traffic Control cost for the off-site detour.

Earth Tech will add Erosion Control Mats to the cost estimate for the project.

Earth Tech will call Ned O'Kelly to verify the utilities on this project.

**PRECONSTRUCTION STATUS REPORT
FROM TII**

| | | | | |
|------------------------|----------------|----------------|--|-------------------------|
| PI NUMBER | PROJECT | COUNTY | DESCRIPTION | READY TO LET |
| 132970- | BARROW | | SR 11/WINDER-MONROE HWY. @ MARBURY CREEK SO OF WINDER | FY05 |
| BRST-052-1(13) | US: | | <u>APPROVED DATES</u> PE DATE: 9910 RW DATE: 2003 CST DATE: 2005 | |
| PROJ MGR: T. CASHIN | | | <u>PROPOSED DATES</u> TII PE DATE: 9910 TII RW DATE: 2003 TII CST DATE: 2005 | |
| PROG TYPE: REPLACEMENT | | | <u>APPROVED COSTS</u> PES: \$20,000 RW COST: \$10,000 CST EST: \$1,100,000 | |
| CONCEPT: | | | <u>PROPOSED COSTS</u> TII PES: \$20,000 TII RWS: \$10,000 TII CSTS \$1,100,000 | |
| P.E. PROJECT: | | | REF PROJ: TWIN PROJ: EST DATE: 10/23/00 | |
| LENGTH: 0.22 NN; 42.0W | FIELD DIST: 1 | STATUS: PRECST | TIP #: UAC: 0 | FUND 1: Q10 |

| SCHED START | SCHED FINISH | ACTIVITY | ACTUAL START | ACT/EST FINISH | PCT | DISTRICT COMMENTS |
|-------------|--------------|--------------------------|--------------|----------------|-----|--------------------------|
| | | DEFINE CONCEPT RPT: | | | 00 | NEED CONSULTANT SCHEDULE |
| | | CONCEPT MEETING: | | | | |
| | | SUB RTP TO ENG SERVICES: | | | | |
| | | REC ENG SERV APPROVAL: | | | | |
| | | MGT APPROV CPT REPORT: | | | 00 | |
| | | ENVIRONMENTAL: | 7/1/01 | 12/31/01 | 00 | |
| | | PUBLIC HEARING: | | | | |
| | | PHOTO MAPPING: | | | 01 | |
| | | FIELD SURVEY: | | | 00 | |
| | | FINAL ALT APPRV: | | | | |
| | | 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 REC V SOIL REQUEST: | | | | |
| | | 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: APRIL BOARD ADDITION: ASSIGNED CONSULTANT TASK FORCE 4/30/99

PLANNING:

DZN CMT:

UTIL CMT:

LGPA: BARROW SGN UTILITIES 8-12-99.

LOC CMT: BRIDGE

EIS: PP-CONSULT TASK FORCE | AIELLO

404: CONSULTANT TASK FORCE-NW 23 EXPECTED

TS: CAH|BR REPL PRJCT|S&M PLNS N/R|031601|

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 | ACQ MGR |
| UNDER-REVIEW: | 0 | RELEASED | 0 | OPT-PEND: | 0 | DEEDS |
| RWCERT: | | | | COND-PEND | 0 | COND-FILED |
| | | | | | 0 | |

NOTICE OF LOCATION AND DESIGN APPROVAL

Project No. BRST-052-1(13), Barrow County
P.I. No. 132970

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 MARCH 18, 2002

This project is located entirely in Barrow County on SR 11/Winder-Monroe Highway at Marbury Creek, south of Winder. The project is located within G.M.D. 243 and 249.

This project consists of the replacement of the structurally deficient bridge on SR 11 over Marbury Creek. The proposed bridge structure will be constructed on the existing alignment.

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

Mr. Randall L. Davis – Area Engineer
Randall.Davis@dot.state.ga.us
892 Hi-Hope Road
Lawrenceville, Georgia 30043
(770) 339-2308

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 must include Project and P.I. Numbers as noted at the top of this notice.

FLEXIBLE PAVEMENT DESIGN ANALYSIS

Project: BRST-052-1(13)

County: Barrow

P.I. no.: 132970

Description: SR 11/Winder Monroe Highway Over Marbury Creek

Traffic Data (NOTE: AADTs are one-way)

24-hour Truck Percentage: 8.00%

AADT initial year of design period: 4,000 vpd (2007)

AADT final year of design period: 7,000 vpd (2027)

Mean AADT (one-way): 5,500 vpd

Design Loading

| | | | | |
|-----------|--------|---------|-----------|-------------------|
| Mean AADT | LDF | Trucks | 18-K ESAL | Total Daily Loads |
| 5,500 * | 1.00 * | 0.080 * | 1.06 | = 467 |

Total predicted design period loading = 467 * 20 * 365 = 3,409,100

Design Data

Terminal Serviceability Index: 2.50

Soil Support: 2.50

Regional Factor: 1.80

PROPOSED FLEXIBLE PAVEMENT STRUCTURE

| Material | Thickness | | Structural Coefficient | Structural Value |
|-----------------------|-----------|---------|------------------------|------------------|
| | mm | (in.) | | |
| 12.5 mm Superpave | 38 | (1.50) | 0.0173 | 0.66 |
| 19 mm Superpave | 51 | (2.00) | 0.0173 | 0.88 |
| 25 mm Superpave | 25 | (0.99) | 0.0173 | 0.43 |
| | 77 | (3.01) | 0.0118 | 0.90 |
| Graded Aggregate Base | 305 | (12.00) | 0.0063 | 1.92 |

Required SN = 5.48

Proposed SN = 4.79

>>> Proposed pavement is 12.7% Underdesign <<<

Remarks:

Prepared by Brittain W. Hennessey, P.E.

February 6, 2002

Date

Recommended

State Materials & Research Engineer

Date

Approved

State Consultant Design Engineer

Date

Department of Transportation State of Georgia

INTERDEPARTMENT CORRESPONDENCE

FILE BRST-052-1(13) Barrow
P.I. 132970

OFFICE Environment/ Location

DATE August 7, 2001

FROM Harvey D. Keeper, State Environmental/ Location Engineer

TO Jim Chambers, P.E., State Consultant Design Engineer

Attn: Ted Cashin

SUBJECT SR 11/Winder-Monroe Highway @ Marbury Creek

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

Existing 1999 ADT = 7800
2007 ADT = 8000
2027 ADT = 14000
K = 9%
D = 60%
T = 5%
24 HR T = 8%
SU = 3%
COMB = 5%

Note: Assumes Winder Bypass to be in place.

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

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF CONSULTANT DESIGN

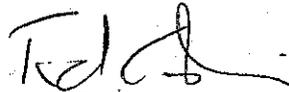
PROJECT CONCEPT REPORT

Project Number: BRST-052-1(13)
County: Barrow
P.I. Number: 132970

Federal Route Number: NA
State Route Number: 11

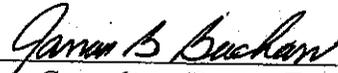
Recommendation for approval:

DATE 2-15-02



Project Manager

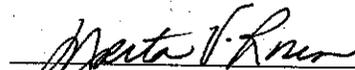
DATE 2-18-02



State Consultant Design Engineer

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

DATE 3/6/02



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 & Structural Design Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF CONSULTANT DESIGN

PROJECT CONCEPT REPORT

Project Number: BRST-052-1(13)

County: Barrow

P.I. Number: 132970

Federal Route Number: NA

State Route Number: 11

Recommendation for approval:

DATE 2-15-02


Project Manager

DATE 2-18-02


State Consultant Design Engineer

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

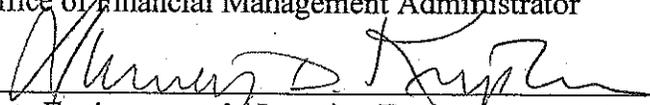
DATE _____

State Transportation Planning Administrator

DATE _____

Office of Financial Management Administrator

DATE 2/18/02


State Environmental / Location Engineer

DATE _____

State Traffic Safety and Design Engineer

DATE _____

District Engineer

DATE _____

Project Review Engineer

DATE _____

State Bridge & Structural Design Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF CONSULTANT DESIGN

PROJECT CONCEPT REPORT

Project Number: BRST-052-1(13)

County: Barrow

P.I. Number: 132970

Federal Route Number: NA

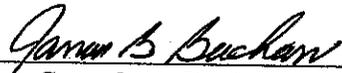
State Route Number: 11

Recommendation for approval:

DATE 2-15-02


Project Manager

DATE 2-18-02


State Consultant Design Engineer

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

DATE _____

State Transportation Planning Administrator

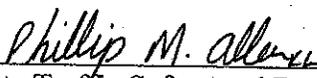
DATE _____

Office of Financial Management Administrator

DATE _____

State Environmental / Location Engineer

DATE 2/28/02


State Traffic Safety and Design Engineer

DATE _____

District Engineer

DATE _____

Project Review Engineer

DATE _____

State Bridge & Structural Design Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF CONSULTANT DESIGN

PROJECT CONCEPT REPORT

Project Number: BRST-052-1(13)

County: Barrow

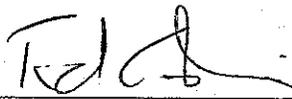
P.I. Number: 132970

Federal Route Number: NA

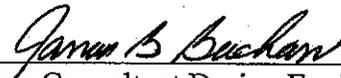
State Route Number: 11

Recommendation for approval:

DATE 2-15-02


Project Manager

DATE 2-18-02


State Consultant Design Engineer

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

DATE _____

State Transportation Planning Administrator

DATE _____

Office of Financial Management Administrator

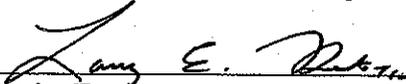
DATE _____

State Environmental / Location Engineer

DATE _____

State Traffic Safety and Design Engineer

DATE 2-27-02


District Engineer

DATE _____

Project Review Engineer

DATE _____

State Bridge & Structural Design Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF CONSULTANT DESIGN

PROJECT CONCEPT REPORT

Project Number: BRST-052-1(13)

County: Barrow

P.I. Number: 132970

Federal Route Number: NA

State Route Number: 11

Recommendation for approval:

DATE 2-15-02



Project Manager

DATE 2-18-02



State Consultant Design Engineer

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

DATE _____

State Transportation Planning Administrator

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Office of Financial Management Administrator

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State Environmental / Location Engineer

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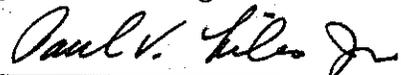
State Traffic Safety and Design Engineer

DATE _____

District Engineer

DATE _____

Project Review Engineer



DATE 3/8/02

State Bridge & Structural Design Engineer