

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

**FILE** P. I. No. 0000305, Towns County **OFFICE** Preconstruction  
BR-0000-00(305)  
SR 66 over Crooked Creek-  
Bridge Replacement **DATE** August 17, 2007

**FROM** *Cynthia Rice-Singleton*  
Genetha Rice-Singleton, Assistant Director of Preconstruction

**TO** *for* SEE DISTRIBUTION

**SUBJECT APPROVED REVISED PROJECT CONCEPT REPORT**

Attached for your files is the approval for subject project.

Attachment

**DISTRIBUTION:**

Brian Summers  
Glenn Bowman  
Ken Thompson  
Michael Henry  
Keith Golden  
Russell McMurry  
Angela Alexander  
Paul Liles  
Babs Abubakari  
BOARD MEMBER

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DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE BR-0000-00(305) Towns County OFFICE Consultant Design  
S.R. 66 @ Crooked Creek  
3.2 miles northwest of Young Harris  
P.I. 0000305



DATE July 17, 2007

FROM: Mohammed (Babs) Abubakari, P.E.  
State Consultant Design & Program Delivery Engineer

TO: Genetha Rice-Singleton, Assistant Director of Preconstruction

SUBJECT: Revised Project Concept Report

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

The original Concept was revised to allow for a longer and taller bridge than originally anticipated, while avoiding historic properties along both SR 66 and SR 339.

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

DATE 8/9/2007

  
State Transportation Planning Administrator

Distribution:

Brian Summers, State Project Review Engineer  
Glen Bowman, State Environmental/Location Engineer  
Keith Golden, State Traffic Safety and Design Engineer  
Angela T. Alexander, State Transportation Planning Administrator  
Jamie Simpson, Office of Financial Management Administrator  
Russell McMurry, District 1 Engineer  
Paul Liles, State Bridge Design Engineer

## REVISED PROJECT CONCEPT REPORT

### Need and Purpose:

S. R. 66 is a major connector route from the western area of Towns County to the City of Young Harris consisting of heavy recreation and work destinations. S.R. 66 is the only connector route between Towns County and Warne, North Carolina.

The existing bridge crossing over Crooked Creek in Towns County has a sufficiency rating of 60.24, as classified by the Bridge Inventory Data Listing. This bridge is listed in the Highway Bridge Replacement and Rehabilitation Program (HBRRP) and has been recommended for replacement in accordance with the criteria set forth in Policy 2405-1, which states that an existing bridge on the state route system which has a current Load Rating of less than HS-20 shall be replaced. The S.R. 66 bridge over Crooked Creek has a load rating of H-15.

The Structure ID is 281-0017-0 and the Location ID is 281-00066D-003.25N.

**Project location:** Project BR-0000-00(305) is located in Towns County on S.R. 66 crossing over Crooked Creek and is located 3.2 miles north of Young Harris. The project length is 0.22 miles.

**Description of the approved concept:** The approved concept proposes a new 120' x 40' concrete bridge crossing over Crooked Creek at its existing bridge site. The roadway approaches will consist of two 12-ft lanes with 8' rural shoulders (2-ft paved). The road will be closed during construction with traffic detoured utilizing SR2, SR 17, and SR 339.

**PDP Classification:** Minor

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

**Functional Classification:** Major Collector

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

**State Route Number(s):** 66, 339

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

Current Year: 2,500 (2007) Design Year: 3,700 (2027)

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P.I. # 0000305  
July 17, 2007

**Proposed features to be revised:**

Based on a conceptual hydraulic analysis which identified a High Water flood mark on the existing bridge cap, the profile for the proposed structure must be approximately 6 ft higher than existing. This grade change requires revising the approved concept as follows:

1. The Proposed bridge length has been increased from 120 ft. to 170 ft. to coincide with the higher profile.
2. Provisions will be made to relocate the intersection of SR 339 with SR 66 further north along SR 66 to accommodate the longer bridge length and higher elevation at the intersection.
3. The maximum proposed grade has been increased from 8% to 10% to accommodate the tie-in with SR 339 at the end of the proposed bridge and is more appropriate for mountainous terrain.
4. The proposed bridge will be built on offset parallel alignment to the west of the existing bridge to allow traffic to be maintained on both SR 66 and SR 339 throughout construction.
5. The proposed Right of Way will be increased to 150 ft to accommodate the shifted alignment.
6. Provisions will be made for a retaining wall along SR 339 to reduce impacts to historic property in NE corner of intersection of SR 339 and SR 66.
7. A design variance will be prepared for the proposed intersection skew angle of 60 degrees for SR 339 with SR 66.
8. A design exception will be prepared for the proposed 25 mph curves on SR 339 leading to the intersection with SR 66.
9. The project length has been increased to 0.66 miles due to the required hydraulic requirements that mandate a higher profile for its proposed bridge structure and the increased roadway lengths to tie-in to the existing roadway. The project begins at milepost 3.32 and ends at milepost 3.98.

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

- The horizontal alignment will be shifted.
- The maximum grade will be increased.
- The right of way widths will be increased.
- The project length will be increased.
- The increased bridge length.

**Updated traffic data (AADT):**

Current Year: 2650 (2010)      Design Year: 4000 (2030)

**Programmed/Schedule:**

P.E.: 2001      R/W: 2008      Construction: <sup>LR</sup> 2012 <sub>will</sub>

VE Study Required    Yes ( )    No (X)

**Revised cost estimates:**

Construction (Infl., E & C)	\$ 2,446,000	
Right-of-Way	\$ 63,000	Acquired by LGPA and GDOT
Utilities	\$ N/A	Adjusted LPGA and GDOT

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

**Recommendation:**

It is recommended that the proposed revisions to the concept be approved for implementation in order to meet environmental requirements and the project estimate be adjusted to reflect these changes.

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P.I. # 0000305

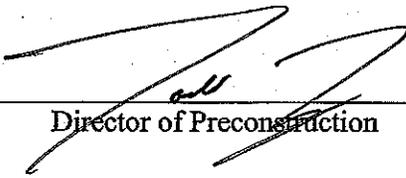
July 17, 2007

**Attachments:**

1. Revised Cost Estimates:
2. Location Map
3. Typical Sections

- Exempt projects

Concur: \_\_\_\_\_



Director of Preconstruction

Approve: \_\_\_\_\_



Chief Engineer

# CONCEPT COST ESTIMATE

Office of Road Design - District 1

July 3, 2007 3:40 PM

County(s)

PI Number  Project Number

Project Name  Project Length  Miles

### Project Description

Project BR-0000-00(305), Towns County proposes to replace the existing bridge on SR 66 over Brasstown (Crooked) Creek located 3.2 miles Northwest of Young Harris.

### Existing Roadway

Two lane roadway with rural shoulders

### Comments

Also included in the project will be the associated upgrades to SR 339.

### TRAFFIC:

Current Design Year  Daily Volume (AADT)

Future Design Year  Daily Volume (AADT)

Concept Estimate

Feasibility Estimate

### Typical Section(s) Used in Estimate

### Typical Section Length

Rural New Location: 2-Lanes with 24 ft Pavement	<input type="text" value="0.70"/> Miles
Rural New Location: 2-Lanes with 24 ft Pavement	<input type="text" value="0.10"/> Miles
<input type="text"/>	<input type="text"/> Miles
<input type="text"/>	<input type="text"/> Miles
<input type="text"/>	<input type="text"/> Miles
<input type="text"/>	<input type="text"/> Miles

Prepared By

**MAJOR STRUCTURES**

*Note! All distances are in feet*

**Bridges: Stream Crossings & Grade Separations**

NO	LOCATION	QTY	CROSSING TYPE	WIDTH	LENGTH	UNIT COST	TOTAL
1	SR 66 over Brasstown (Crooked) Creek	1	Stream-New	43.30	170.0	80.00	589,000
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

**Bridge Culverts**

NO	LOCATION	TYPE / W x H / FILL	LENGTH	UNIT COST	TOTAL
1					
2					
3					
4					
5					
6					
7					
8					

**Walls**

NO	LOCATION	TYPE	HEIGHT	LENGTH	UNIT COST	TOTAL
1	SR 339 Side road	MSE	10.0	200.0	65.00	130,000
2	SR 66 Mainline	MSE	10.0	500.0	65.00	325,000
3						
4						
5						
6						

**MAJOR STRUCTURES SUBTOTAL \$ 1,044,000**

**Typical Section**

Rural New Location: 2-Lanes with 24 ft Pavement

Typical Section Length  Miles Right-of-Way Width  Feet

**GRADING AND DRAINAGE**

- 1. EARTHWORK
  - a. Unclassified Excavation Soil
  - b. Unclassified Excavation Rock
  - c. Borrow Excavation
- 2. MINOR DRAINAGE

QUANTITY	UNIT COST	TOTAL
10,000 CY	6.67	67,000
50 CY	15.00	1,000
10,000 CY	4.25	43,000
0.70 MI	37,709	26,000
<b>GRADING AND DRAINAGE SUBTOTAL</b>		<b>\$137,000</b>

**BASE AND PAVING**

- 1. GRADED AGGREGATE BASE
- 2. ASPHALT PAVING
  - a. Asph Conc 9.5 mm Superpave
  - b. Asph Conc 19 mm Superpave
  - c. Asph Conc 25 mm Superpave
  - d. Bituminous Tack Coat
- 3. CONCRETE PAVING
  - a. Curb and Gutter
  - b. Miscellaneous
- 4. OTHER PAVING

THICKNESS and SPREAD RATE	QUANTITY	UNIT COST	TOTAL
10"	6,578 TN	28.38	187,000
1 1/4" (135 LB/SY)	776 TN	74.59	58,000
3" (330 LB/SY)	1,917 TN	71.41	137,000
4" (440 LB/SY)	2,231 TN	77.22	172,000
	1,310 GL	2.39	3,000
		LF	
	0.70 MI	18,776	13,000
<b>BASE AND PAVING SUBTOTAL</b>			<b>\$627,000</b>

**LUMP ITEMS**

- 1. TRAFFIC CONTROL
- 2. CLEARING AND GRUBBING
- 3. EROSION CONTROL
- 4. SIGNING & MARKING
- 5. MISCELLANEOUS

QUANTITY	UNIT COST	TOTAL
0.70 MI	10,696	7,000
12.73 AC	6,000	76,000
0.70 MI	174,425	122,000
0.70 MI	6,603	5,000
0.70 MI	22,514	16,000
<b>LUMP ITEM SUBTOTAL</b>		<b>\$226,000</b>

**MISCELLANEOUS PROJECT ITEMS**

- 1. GUARDRAIL
- 2. GUARDRAIL ANCHORS
- 3. DETOURS
- 4. SPECIAL FEATURES

QUANTITY	UNIT COST	TOTAL
160 LF	19.53	3,000
4 EA	528.26	2,000
	MI	327,097
<b>MISCELLANEOUS SUBTOTAL</b>		<b>\$5,000</b>

**Typical Section**

Rural New Location: 2-Lanes with 24 ft Pavement

Typical Section Length  Miles

Right-of-Way Width  Feet

**GRADING AND DRAINAGE**

- 1. EARTHWORK
  - a. Unclassified Excavation Soil
  - b. Unclassified Excavation Rock
  - c. Borrow Excavation
- 2. MINOR DRAINAGE

QUANTITY	UNIT COST	TOTAL
2,000 CY	6.67	13,000
2,000 CY	4.25	9,000
0.10 MI	37,709	26,000
<b>GRADING AND DRAINAGE SUBTOTAL</b>		<b>\$48,000</b>

**BASE AND PAVING**

- 1. GRADED AGGREGATE BASE
- 2. ASPHALT PAVING
  - a. Asph Conc 9.5 mm Superpave
  - b. Asph Conc 19 mm Superpave
  - c. Asph Conc 25 mm Superpave
  - d. Bituminous Tack Coat
- 3. CONCRETE PAVING
  - a. Curb and Gutter
  - b. Miscellaneous
- 4. OTHER PAVING

THICKNESS and SPREAD RATE	QUANTITY	UNIT COST	TOTAL
10"	940 TN	28.38	27,000
1 1/4" (135 LB/SY)	111 TN	74.59	8,000
3" (330 LB/SY)	274 TN	71.41	20,000
4" (440 LB/SY)	319 TN	77.22	25,000
	187 GL	2.39	
	500 LF	34.92	17,000
	0.10 MI	18,776	2,000
<b>BASE AND PAVING SUBTOTAL</b>			<b>\$109,000</b>

**LUMP ITEMS**

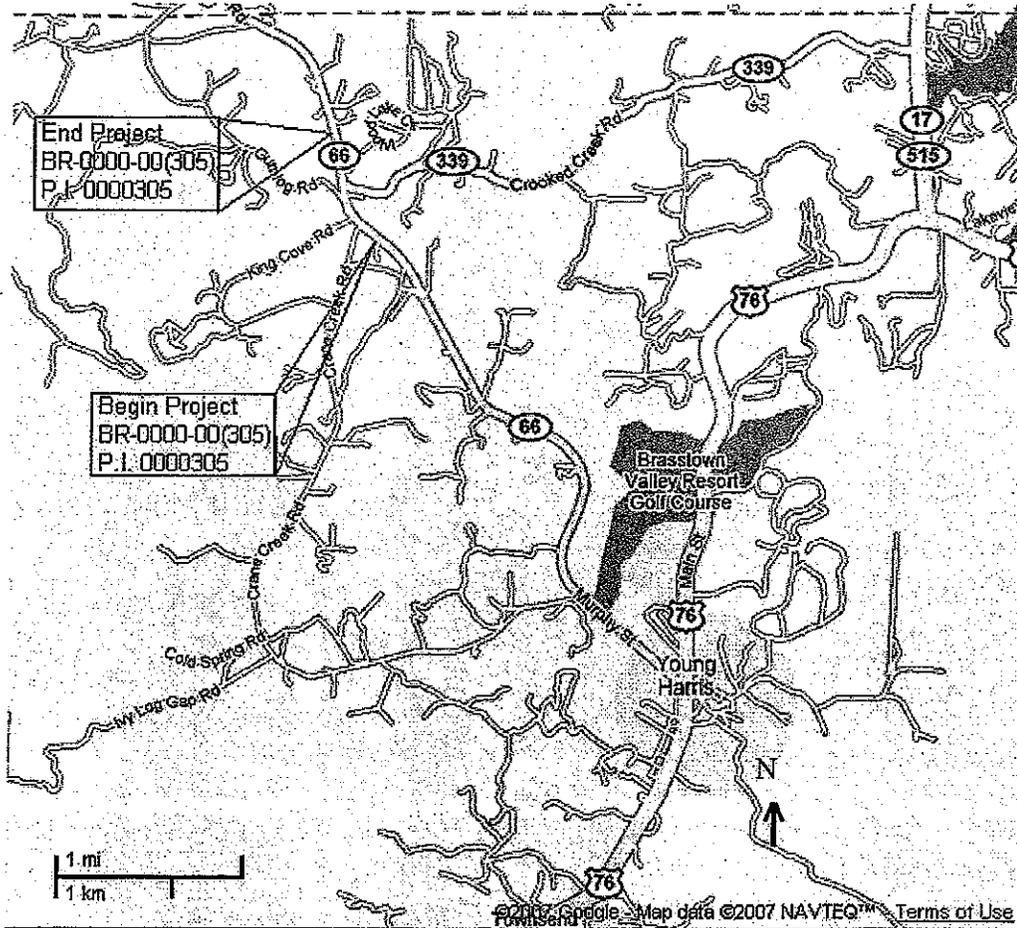
- 1. TRAFFIC CONTROL
- 2. CLEARING AND GRUBBING
- 3. EROSION CONTROL
- 4. SIGNING & MARKING
- 5. MISCELLANEOUS

QUANTITY	UNIT COST	TOTAL
0.10 MI	10,696	1,000
1.21 AC	6,000	7,000
0.10 MI	174,425	17,000
0.10 MI	6,603	1,000
0.10 MI	22,514	2,000
<b>LUMP ITEM SUBTOTAL</b>		<b>\$28,000</b>

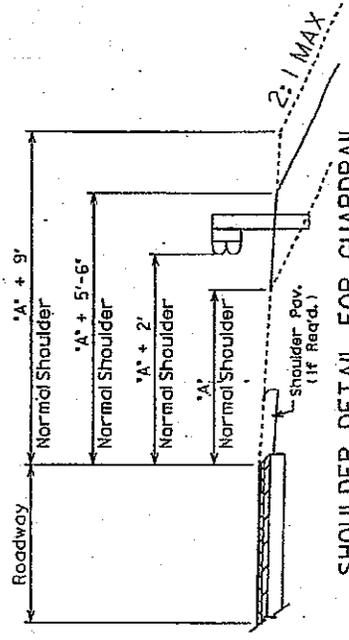
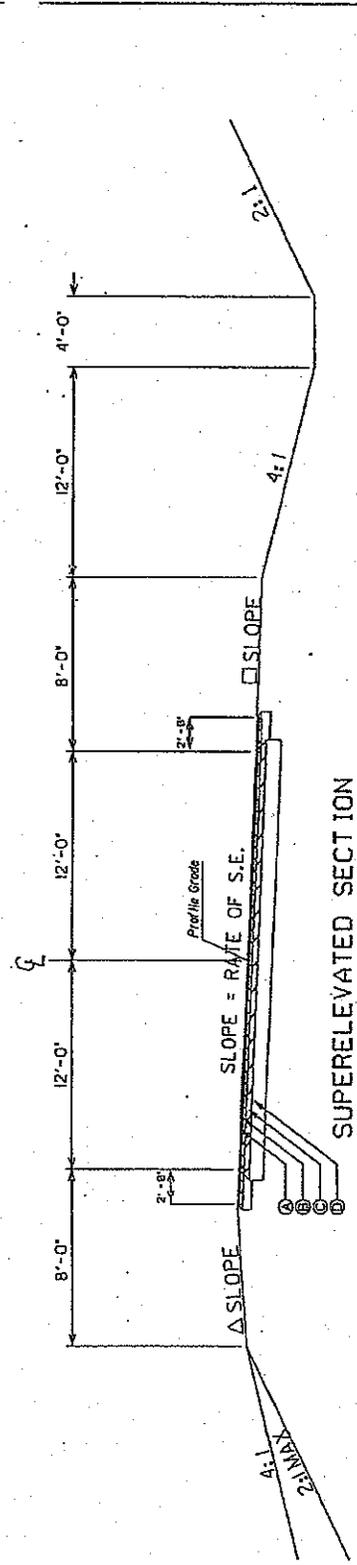
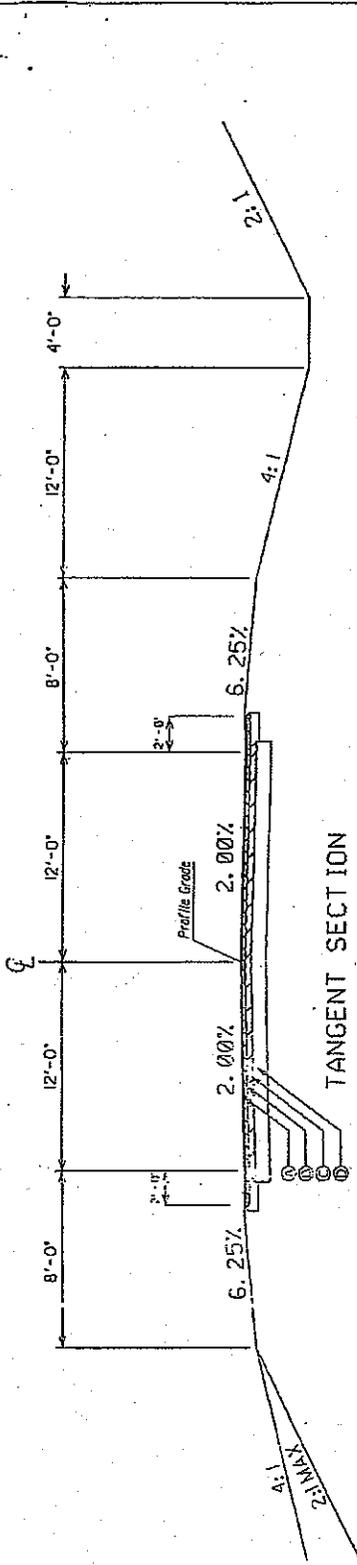
## ESTIMATE SUMMARY

<b>TYPICAL SECTION</b>	<b>COST (per mile)</b>
1. Rural New Location: 2-Lanes with 24 ft Pavement	\$ 1,414,000
2. Rural New Location: 2-Lanes with 24 ft Pavement	\$ 1,850,000
<b>PROJECT COST</b>	
A. MAJOR STRUCTURES	\$ 1,044,000
B. GRADING AND DRAINAGE	\$ 185,000
C. BASE AND PAVING	\$ 736,000
D. LUMP ITEMS	\$ 254,000
E. MISCELLANEOUS	\$ 5,000
<b>SUBTOTAL CONSTRUCTION COST</b>	<b>\$ 2,224,000</b>
<b>ENGINEERING &amp; CONTINGENCIES (10%)</b>	<b>\$ 222,000</b>
INFLATION ____ yr(s) @ <u>5</u> % per yr	
<b>GRAND TOTAL CONSTRUCTION COST</b>	<b>\$ 2,446,000</b>

**PROJECT LOCATION MAP**



**BR-0000-00(305); P.I. 0000305**  
**S.R. 66 over Crooked Creek**



SEE PLAN FOR LOCATION  
SEE GA STD 4051 OR 4052 FOR DETAILS

BR-0000-00(305)TOWNS CO.  
P.I. NO. 00000305

TYPICAL SECTION