

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P. I. No. 421900, Coffee-Telfair Counties **OFFICE** Preconstruction
EDS-441(26)
Us 441 Widening **DATE** December 7, 2005

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

TO *MBP* SEE DISTRIBUTION

SUBJECT APPROVED REVISED PROJECT CONCEPT REPORT

Attached for your files is the approval for subject project.

MBP/cj

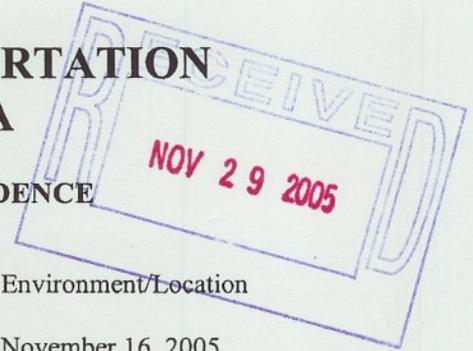
Attachment

DISTRIBUTION:

Brian Summers
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DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE



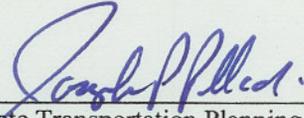
FILE: EDS-441(26) **OFFICE:** Environment/Location
P.I. No. 421900
Coffee County **DATE:** November 16, 2005
HDK/DRP
FROM: Harvey D. Keeper, State Environmental/Location Engineer
TO: Meg Pirkle, Assistant Director of Preconstruction
SUBJECT: **Revised Project Concept Report** – US 441/SR 31 Improvements from mile post 10.0 north of Douglas to just south of the Broxton city limits at mile post 15.5

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

In order to minimize environmental impacts, it is recommended to revise the typical section and speed design, and proposed right-of-way. It is recommended to extend the existing 14-foot flush median rural typical section north of Douglas in order to minimize impacts to historic resources and to reduce the corresponding design speed in accordance with Department policy for GRIP corridors. It is further recommended to widen the Seventeen Mile Creek Bridge in Coffee County to a 14-foot flush median typical section. A revision to the proposed right-of-way for the 14-foot flush median section is also recommended to minimize impacts to historic resources. This project is part of a designated bike route.

The revised concept as presented herein and submitted for approval is not currently listed in the State Transportation Improvement Program (STIP), but is consistent with that which is included in the Department's Construction Work Program (CWP).

DATE: 11/28/05


State Transportation Planning Administrator

HDK/KET/DRP/gtw

Attachments

Distribution:

Brian Summers, Project Review Engineer
Keith Golden, State Traffic Safety & Design Engineer
Joe Palladi, State Transportation Planning Administrator
Jamie Simpson, State Transportation Financial Management Administrator
Babs Abubakari, State Program Delivery & Consultant Design Engineer
Joe Sheffield, District 4 Engineer
Paul Liles, State Bridge & Structural Design Engineer

REVISED PROJECT CONCEPT REPORT

EDS-441(26) - COFFEE COUNTY

P.I. No. 421900

Need and Purpose:

The US 441/SR 31 Improvements are part of the Governors Road Improvement Program (G.R.I.P.) and involves the multi-laning of this primary north-south corridor in South Georgia, serving as a catalyst for the development of this region. The improvements will aid in the economic development of sparsely populated rural areas and small towns along this route. Traffic carrying capacity will be increased; safety and operational characteristics along this segment will be improved.

Project Location:

Project EDS-441(26) in Coffee County would begin approximately at mile post 10.2. The proposed alignment would widen and reconstruct US 441/SR 31 from approximately 1,480 feet south of the intersection of US 441/SR 31 and CR 416/Jardine Road in Coffee County to just south of the Broxton city limits for a project length of 5.0 miles. The terminus would be approximately at mile post 15.2.

Description of the approved concept:

The proposed concept is at a 55 MPH desirable speed which meets 65 MPH minimum; this will allow a posted speed limit of 65 MPH. It was revised based upon the latest environmental studies.

The project would begin at the intersection of US 441/SR 31 and CR 416/Chariot Trail in Coffee County and would reconstruct US 441/SR 31 symmetrically using a 14-foot flush median with four 12-foot lanes of pavement. It would continue northward to approximately 1,100 feet south of CR 415/Leroy Sapp Road. This concept would reduce displacements, but would impact a historical resource along the east side of the existing roadway just south of CR 415/Leroy Sapp Road resulting in a programmatic 4F. There, the median would begin making a transition to a 44 foot grassed median. At a point just south of the 17 mile Creek bridge, the concept would utilize the existing pavement and add two 12-foot lanes, widening to the east side, while continuing northward to just north of CR 168/Tickle Toe Road. This concept would avoid impacting a historical resource along the west side of the existing roadway just north of CR 415/Leroy Sapp Road. The alignment would then shift to the west side adding four lanes of roadway with a 44-foot grassed median, while utilizing the existing right of way along the east side. This shift would minimize impacts to wetlands and residential displacements. The project would continue northward and end approximately 3,300 feet north of CR 357/Currin Road. The existing bridge at Seventeen Mile Creek would be utilized and a new one built parallel to the existing bridge along the east side.

PDP Classification: Major Minor

Federal Oversight: Full Oversight () Exempt () State Funded () Other ()

Functional Classification: Rural Principal Arterial

U.S. Route Number(s): 441 **State Route Number(s):** 31

Traffic (AADT) as shown in the approved concept:

Initial Design Year:	1997	Daily Volume:	3,100
Final Design Year:	2017	Daily Volume:	5,200

Proposed features to be revised:

- **Project Description:** Due to multiple changes along the project, the description is recommended to be revised.
- **Terminus:** The southern project terminus is proposed to be revised.
- **Typical Section:** In order to reduce impacts to historical resources, lessen residential impacts, and minimize impacts to wetlands the typical section is proposed to be revised.
- **Speed Design:** The speed design of the 14-foot flush median section is proposed to be revised.
- **Right-of-way:** To reduce impacts historical resources and to correspond to the proposed typical section changes, right-of-way adjustments are needed along the project EDS-441(26) in Coffee County.
- **Bridge Revisions:** It is suggested that the previously approved parallel bridges over Seventeen Mile Creek be revised to widen the existing bridge.

Describe the revised feature(s) to be approved:

- **Project Description/Right-of-way:** Project EDS-441(26) is a part of a bike corridor. This project will begin approximately 600 feet south of the intersection of US 441/SR 31 and CR 417/Thomas Road in Coffee County and reconstruct the existing roadway symmetrically using a 14-foot flush median rural typical section with four 12-foot lanes of pavement, on approximately 150 feet minimum of right-of-way. Using this typical section, the alignment would continue on US 441/SR 31 northward. It begins to shift slightly to the west side after the intersection of US 441/SR 31 and CR 416/Chariot Road, north of CR 417, to avoid impacting a historic resource east of the existing roadway located approximately 1,000 feet north of the same intersection. After passing the historic resource to the east of US 441/SR 31, the alignment would shift back to the east side of the roadway, crossing at CR 415/Leroy Sapp Road avoiding impact to another historic resource to the west, located approximately 200 feet north of CR 415/Leroy Sapp Road. North of the historic resource located to the west of US 441/SR 31, the concept would shift to hold the existing west side of edge-of-pavement, widening the existing roadway to the east. Widening east of the existing pavement would be carried across the existing Seventeen Mile Creek Bridge, which would widen to accommodate the new typical section. Approximately 1,200 feet north of the intersection of US 441/SR 31 and CR 534/Riverbend Estate Road, the typical section will transition to a 44-foot depressed median rural typical section, with four 12-foot lanes of pavement, and a proposed right-of-way of 250 feet. In this 44-foot depressed median typical section, the alignment would continue to hold the existing west side right-of-way in order to minimize impacts to wetlands and residential displacements. The alignment continues holding the west side existing right-of-way to approximately CR 168/Tickle Toe Road, where the alignment shifts to widen to the west of the existing roadway, minimizing impacts to wetlands and streams. About 1,700 feet north of CR 357/Currin Road, project EDS-441(26) ends, just south of the south Broxton city limits. The northern terminus of this project will tie to the beginning terminus of EDS-441(35).
- **Terminus:** The southern terminus of the project is proposed to be moved approximately 1,500 feet south to mile post 10.0. This revision is required in order to avoid impacting a historic resource on the east side of the roadway.
- **Speed Design:** The 55 MPH desirable/65 MPH minimum speed design is recommended to be revised for the 14-foot flush median section of the project. The speed design for the 14-foot flush median section is recommended to be revised to 55 MPH minimum in order to remain consistent with the existing posted speed limit. It is further recommended that a design exception be requested during the design phase that would allow for designing a 14-foot flush median typical section with a 55 MPH speed design.
- **Typical section:** The 14-foot flush median rural typical section is to be extended beyond CR 534/Riverbend Estate Road to minimize impacts to historical resources, wetlands, and to minimize residential displacements. The transition to a 44-foot depressed median rural typical section will begin

approximately 1,200 feet north of CR 534/Riverbend Estate Road, requiring a minimum of 250 feet of right-of-way, and continue to the northern terminus of the project.

- **Bridge Revisions:** The 14-foot flush median typical section is to be carried over the Seventeen Mile Creek Bridge. This change in typical section allows widening the existing Seventeen Mile Creek Bridge instead of building a second parallel bridge as previously proposed.

Updated traffic data (AADT):

Current Traffic:	Design Traffic:
Year: 2010 AADT: 7,600 – 11,900	Year: 2030 AADT: 12,400 – 19,500

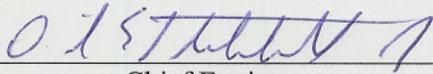
Revised Cost Estimates:	Proposed	Approved
Construction (incl. E&C + infl.):	\$16,185,000.00	\$ 11,150,000.00
Right-of-way	\$ 1,763,776.00	\$ 2,246,600.00
Utilities	\$ 212,000.00	\$ 13,000.00

Programmed/Schedule:		
P.E.: 2002	R/W: 2007	Construction: 2008

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

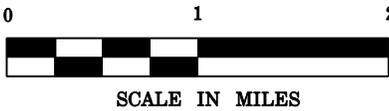
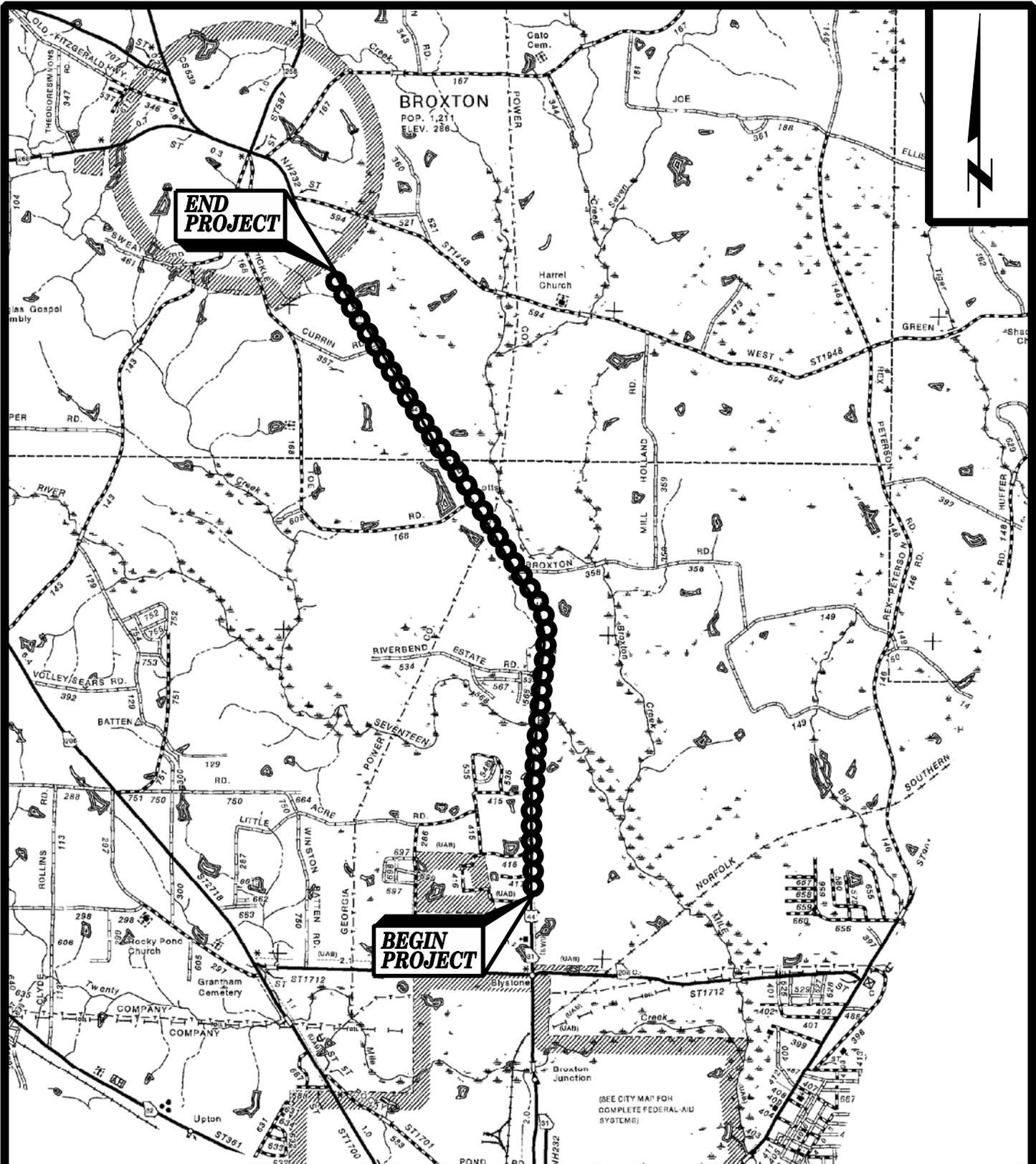
Recommendation: It is recommended that the proposed revision to the concept be approved for implementation.

Concur: 
Director of Preconstruction

Approve: 
Chief Engineer

DRP/gtw

Attachments: Location Map
Cost Estimate
Typical Sections



STRIPMAP
 EDS-441(26)
 IMPROVEMENTS TO US 441\SR 31
 COFFEE COUNTY
 P.I.# 421900

SOURCE: GENERAL HIGHWAY MAP, COFFEE CO., GEORGIA
 PREPARED BY THE GEORGIA DEPARTMENT OF TRANSPORTATION, 1996.

CONCEPT COST ESTIMATE

Office of Environment/Location

November 16, 2005 10:47 AM

County(s)

PI Number Project Number

Project Name Project Length Miles

Project Description

SR 31/US 441 from CR 416/Chariot Road north to north of CR 357/Currin Road

Existing Roadway

two lane highway with rural shoulders

Comments

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 Widening: 2 To 4-Lanes with 14 ft Flush Median	<input type="text" value="1.90"/> Miles
Rural New Location: 4-Lanes with 44 ft Divided Median	<input type="text" value="3.10"/> Miles
Rural New Location: 2-Lanes with 24 ft Pavement	<input type="text" value="1.80"/> 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	Q T Y	CROSSING TYPE	WIDTH	LENGTH	UNIT COST	TOTAL
1	17 MILE CREEK	1	Stream-Widen	38.50	325.0	120.00	1,502,000
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						
2						
3						
4						
5						
6						

MAJOR STRUCTURES SUBTOTAL \$ 1,502,000

Typical Section

Rural Widening: 2 To 4-Lanes with 14 ft Flush Median

Typical Section Length MilesRight-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
61,496 CY	2.18	134,000
6,150 CY	5.90	36,000
1.90 MI	49,076	93,000
GRADING AND DRAINAGE SUBTOTAL		\$263,000

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"	30,498 TN	15.25	465,000
1 1/2" (165 LB/SY)	6,897 TN	43.87	303,000
3" (330 LB/SY)	9,464 TN	42.08	398,000
4" (440 LB/SY)	9,587 TN	39.47	378,000
	6,902 GL	1.03	7,000
	1.90 MI	12,432	24,000
			158,000
BASE AND PAVING SUBTOTAL			\$1,733,000

LUMP ITEMS

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

QUANTITY	UNIT COST	TOTAL
1.90 MI	59,304	113,000
34.55 AC	6,000	207,000
1.90 MI	167,679	319,000
1.90 MI	34,804	66,000
1.90 MI	57,960	110,000
LUMP ITEM SUBTOTAL		\$815,000

MISCELLANEOUS PROJECT ITEMS

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

QUANTITY	UNIT COST	TOTAL
3,000 LF	10.37	31,000
12 EA	432.93	5,000
2.00 MI	354,098	708,000
MISCELLANEOUS SUBTOTAL		\$744,000

Typical Section

Rural New Location: 4-Lanes with 44 ft Divided Median

Typical Section Length MilesRight-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
201,600	CY	2.18	439,000
	CY		
20,160	CY	5.90	119,000
3.10	MI	82,114	156,000
GRADING AND DRAINAGE SUBTOTAL			\$714,000

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"	67,098	TN	15.25	1,023,000
1 1/2" (165 LB/SY)	9,753	TN	43.87	428,000
3" (330 LB/SY)	19,678	TN	42.08	828,000
4" (440 LB/SY)	24,272	TN	39.47	958,000
	14,285	GL	1.03	15,000
		LF		
	3.10	MI	59,170	183,000
				344,000
BASE AND PAVING SUBTOTAL				\$3,779,000

LUMP ITEMS

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

QUANTITY		UNIT COST	TOTAL
3.10	MI	41,000	127,000
93.94	AC	6,000	564,000
3.10	MI	167,267	519,000
3.10	MI	24,305	75,000
3.10	MI	112,128	348,000
LUMP ITEM SUBTOTAL			\$1,633,000

Typical Section

Rural New Location: 2-Lanes with 24 ft Pavement

Typical Section Length MilesRight-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
	CY		
	CY		
101,111	CY	5.90	597,000
1.80	MI	26,069	50,000
GRADING AND DRAINAGE SUBTOTAL			\$647,000

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"	19,765	TN	15.25	301,000
1 1/2" (165 LB/SY)	3,223	TN	43.87	141,000
3" (330 LB/SY)	6,497	TN	42.08	273,000
4" (440 LB/SY)	5,736	TN	39.47	226,000
	4,111	GL	1.03	4,000
		LF		
	1.80	MI	22,322	40,000
				99,000
BASE AND PAVING SUBTOTAL				\$1,084,000

LUMP ITEMS

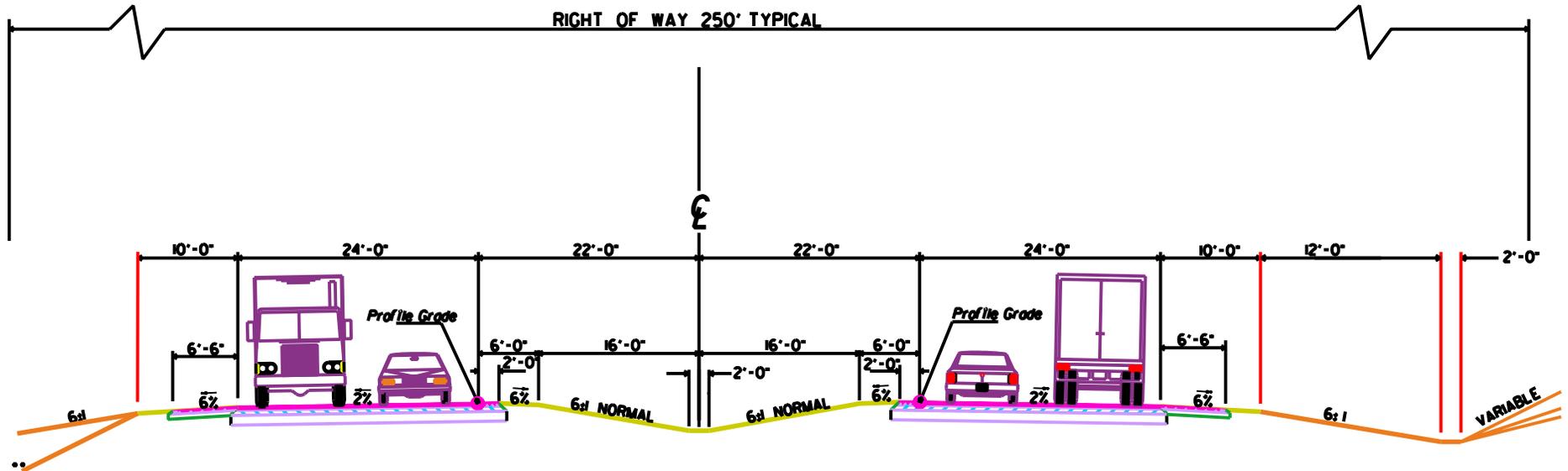
- 1. TRAFFIC CONTROL
- 2. CLEARING AND GRUBBING
- 3. EROSION CONTROL
- 4. SIGNING & MARKING
- 5. MISCELLANEOUS

QUANTITY		UNIT COST	TOTAL
1.80	MI	10,696	19,000
21.82	AC	6,000	131,000
1.80	MI	117,737	212,000
1.80	MI	8,801	16,000
1.80	MI	29,251	53,000
LUMP ITEM SUBTOTAL			\$431,000

ESTIMATE SUMMARY

TYPICAL SECTION	COST (per mile)
1. Rural Widening: 2 To 4-Lanes with 14 ft Flush Median	\$ 1,479,000
2. Rural New Location: 4-Lanes with 44 ft Divided Median	\$ 1,976,000
3. Rural New Location: 2-Lanes with 24 ft Pavement	\$ 1,201,000
PROJECT COST	
A. MAJOR STRUCTURES	\$ 1,502,000
B. GRADING AND DRAINAGE	\$ 1,624,000
C. BASE AND PAVING	\$ 6,596,000
D. LUMP ITEMS	\$ 2,879,000
E. MISCELLANEOUS	\$ 744,000
SUBTOTAL CONSTRUCTION COST	\$ 13,345,000
ENGINEERING & CONTINGENCIES (10%)	\$ 1,335,000
INFLATION <u>2</u> yr(s) @ <u>5</u> % per yr	\$ 1,505,000
GRAND TOTAL CONSTRUCTION COST	\$ 16,185,000

TYPICAL SECTION 44-FOOT DEPRESSED GRASS MEDIAN RURAL SECTION 65 MPH SPEED DESIGN

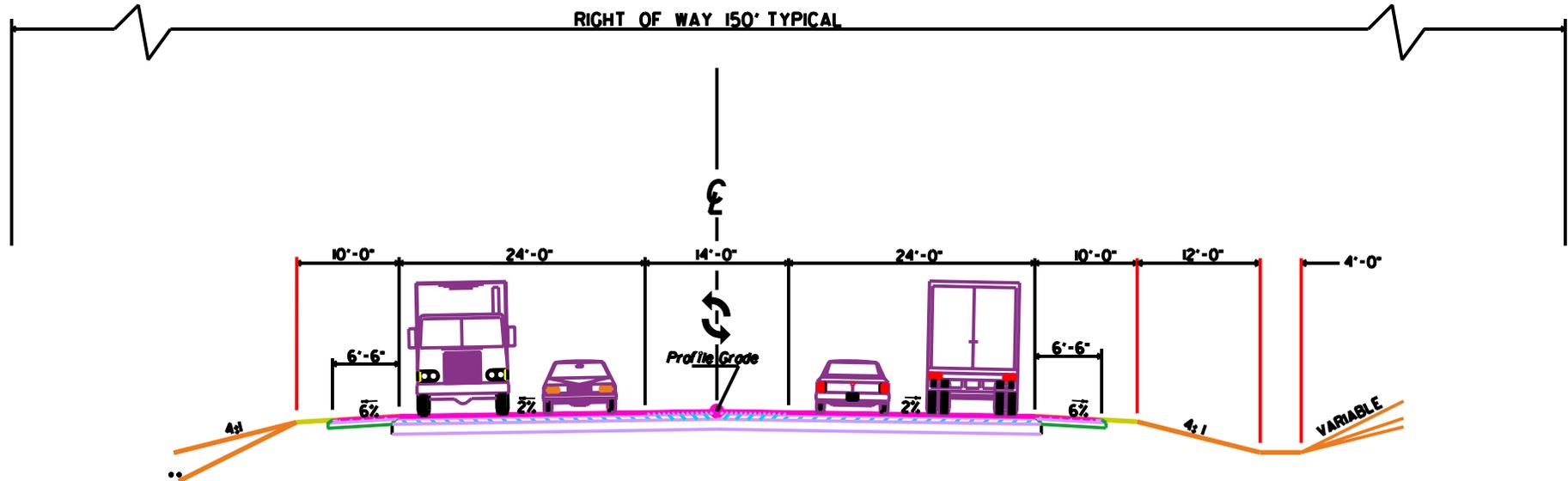


•• Guardrail Required when steeper than 6:1
15'-6" shoulder with guardrail

US 441 IMPROVEMENTS
EDS-441 (26, 35, 27, 37 & 36) COFFEE CO. & TELFAIR CO.
FROM APPROX. 1,700 FT NORTH OF CR 534/RIVERBEND RD.
TO APPROX. 1,200 FT SOUTH OF SR 149 CONNECTOR

NOT TO SCALE

TYPICAL SECTION 14-FOOT FLUSH MEDIAN RURAL SECTION 55 MPH SPEED DESIGN



** Guardrail Required when steeper than 4:1
15'-6" shoulder with guardrail

US 441 IMPROVEMENTS
EDS-441 (26, 35, 27, 37 & 36) COFFEE CO. & TELFAIR CO.
FROM APPROX. 600 FT SOUTH OF CR 416/CHARIOT TR
TO APPROX. 1,700 FT NORTH OF CR 534/RIVERBEND RD

NOT TO SCALE