

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE: NH000-0001-04(060) Clayton **OFFICE:** Engineering Services
P.I. No.: 722030-
SR3/US19/41 Widening **DATE:** February 27, 2013

FROM: Lisa L. Myers, State Project Review Engineer *llm*

TO: Genetha Rice-Singleton, State Program Delivery Engineer
Attn.: Robert Murphy

SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES

The VE Study for the above project was held April 30 – May 3, 2012. The attached revised responses were received on February 27, 2013. Recommendations for implementation of Value Engineering Study Alternatives are indicated in the table below. The Project Manager shall incorporate the VE alternatives recommended for implementation to the extent reasonable in the design of the project. Please note, if the implementation of a VE recommendation requires a Design Exception (DE) and/or Design Variance (DV), the DE or DV must be requested separately.

ALT #	Description	Potential Savings/ LCC	Implement	Comments
A-2	Develop a 10' wide multi-use path on the west side instead of using bike lanes in the road. Also, replace curb & gutter with a rural ditch.	Proposed = \$2,037,000 Actual = \$0	Yes, with modifications	A 14' shoulder with an 8' paved buffer will be implemented along the west side of SR 3. The urban shoulder will encompass a 10' shared use path and will eliminate the on-road bike lanes as requested by FHWA. Partial implementation of A-5 necessitates an 8' buffer from the travel way to the face of curb for all roadway segments designed at 55 mph. Therefore, no actual savings will be reported for this partial implementation.
A-3	Retain and re-use the existing pavement instead of full depth replacement.	\$4,834,000	Yes	This will be done.
A-5	Reduce speed design from 55 mph to 45 mph to allow for more flexibility in the design elements.	Proposed = \$1,390,000 Actual = \$0	Yes, with modifications	A 55 mph speed design will be implemented along the corridor up to Justice Blvd. However, due to the transitional nature of the roadway at this location (from Justice Blvd. to SR 54) a 45 mph speed design will be implemented approximately 2000' south of the SR 54 intersection

				improvement project (PI# 721440-) which also has a 45 mph design. Partially implementing A-10 will negate the use of a 20' raised median and by maintaining the existing 32' depressed median the need for the additional 2' inside shoulder width is also eliminated. The use of 12.5 mm Superpave in lieu of OGFC and SMA will not be implemented. Therefore, according to the revised calculations no actual savings can be reported for this partial implementation.
A-10	Retain and re-use the existing 32' wide median and construct the widening to the outside.	Proposed = \$1,340,000 Actual = \$1,259,000	Yes, with modifications	The existing 32' median will be maintained and the roadway will be widened to the outside of the existing two 12' lanes except in the area where the mainline is parallel to the Central Georgia Railroad. Impacts to the railroad in this area will be avoided by either design changes to the typical section or by an alignment shift. Additional R/W impacts are the intersections will be avoided by eliminating the 8' buffer adjacent to the auxiliary turn lanes.
B-1	Narrow the required R/W template.	\$8,535,000	Yes	This will be done.
D-2	Use a flush, grassed median with cable barrier instead of the raised concrete median with Type 7 curb.	\$383,000	No	D-2 will not be implemented because A-10 was selected and use of an 18' flush grass median with cable barrier will not be required.

An implementation meeting was held on October 25, 2012. Alvin Gutierrez, Mindy Roberson, and Carlos Figueroa with FHWA, Joshua Taylor, Darrell Richardson, Albert Welch, and Andy Casey with Roadway Design, and Matt Sanders of Engineering Services were all in attendance.

The Office of Engineering Services concurs with the Project Manager's revised responses.

Approved: *Russell R McMurry* Date: 3/1/13
Russell McMurry, P.E., Chief Engineer

Approved: *Melinda M Rob* Date: 3/19/13
for Rodney Barry, P.E., FHWA Division Administrator

LLM/RLR/MJS

Attachments

- c: Melinda Roberson/Carlos Figueroa/Alvin Gutierrez/Cody Wilbers - FHWA
Genetha Rice-Singleton/Albert Shelby/Robert Murphy
Andy Casey/Darrell Richardson/Joshua Taylor/Albert (Butch) Welch
Keisha Jackson
Lee Upkins
Ken Werho
Robert Reid Jr./Matt Sanders

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE NH000-0001-04(060) Clayton County OFFICE Program Delivery
P.I. No. 722030- DATE February 21, 2013
US 19/41 SR 3 Tara Boulevard

FROM Genetha Rice-Singleton, State Program Delivery Engineer *Albert Shelby for*

TO Lisa Myers, State Project Review Engineer

SUBJECT Response to Value Engineering Recommendations

The Office of Program Delivery has consulted with the Office of Roadway Design and we offer the attached Value Engineering responses for your review and approval.

Along with our responses, we have included for your review our proposed typical sections, proposed cost analysis worksheet, and pavement calculations.

Any previous value engineering responses please omit and allow this submission to be our official responses to value engineering recommendations. Should you have any additional questions, please feel free to contact the project manager Mr. Robert Murphy @ 404-631-1586.

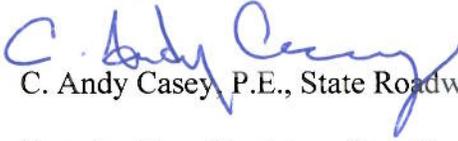
Thank you,

AVS
GRS:AVS:RPM
Attachments

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE: NH000-0001-04(060) Clayton County **OFFICE:** Roadway Design
P.I. No.: 722030
US19/ 41/ SR3/ Tara Boulevard
Widening & Reconstruction **DATE:** February 18, 2013

FROM:  C. Andy Casey, P.E., State Roadway Design Engineer

TO: Genetha Rice-Singleton, State Program Delivery Engineer
Attn.: Robert Murphy, Project Manager

SUBJECT: RESPONSE TO VALUE ENGINEERING STUDY ALTERNATIVES

The Office of Roadway Design's responses and recommendations are attached for the "Value Engineering Study – Final Report" dated May 14, 2012 for the above referenced project.

If you have any questions, please contact Joshua Taylor at 404-631-1659.


CAC:DMR:jbt
Attachments

cc: Engineering Division Director

Attachment: Responses to Value Engineering Recommendations for NH000-0001-04(060)
Clayton County, P.I. No.: 722030, US19/ 41/ SR3/ Tara Boulevard Widening & Reconstruction

Recommendation A-2: Construct a multi-use trail on the west side of SR3 and eliminate the on-road bike lanes.

VE Team Savings: \$2,037,000

Yes, will partially implement.

A 14' urban shoulder with an 8' paved buffer will be implemented along the west side of SR 3. The urban shoulder will encompass a 10' shared use path which will eliminate the on-road bike lanes. Partial implementation of recommendation A-5 necessitates an 8' buffer from the travel way to the face of curb for all roadway segments designed at 55 mph. There will be no savings. (See attached typical section, A-2 cost worksheets and calculations)

Recommendation A-3: Retain and re-use the existing pavement.

VE Team Savings: \$4,834,000

Yes, will implement.

Retention and re-use of the existing pavement structure will depend on the results from the approved pavement evaluation. This recommendation will be implemented for the areas indicated while full-depth replacement will only be used in the areas required. It should be noted the VE team estimated 100% of the existing pavement will be retained and that no milling of the existing pavement surface is required.

Recommendation A-5: Reduce design speed to 45 mph to allow for more flexibility in design elements.

VE Team Savings: \$1,390,000

Yes, will partially implement.

A 55 mph speed design will be implemented along the corridor up to Justice Boulevard. However, due to the transitional nature of the roadway at this location (from Justice Boulevard to SR54), a 45 mph speed design will be implemented approximately 2000-ft south of the SR54 intersection improvement project, PI# 721440, which has a design speed of 45 mph. Implementation of recommendation A-10 will negate the use of a 20' raised median. By maintaining the existing depressed 32-ft median, the need for the additional 2-ft inside shoulder width for the raised median in the preferred alternate is also eliminated. The use of 12.5 mm Superpave in lieu of OGFC and SMA will not be implemented. There will be no savings. (See attached typical section, cost worksheets and calculations)

Recommendation A-10: Use the existing 32 ft. median and widen to the outside.

VE Team Savings: \$1,340,000

Yes, will partially implement.

The existing 32-ft median will be maintained and the roadway will be widened to the outside of the existing two 12-ft lanes except in the area where the mainline is parallel to the Central of

Georgia railroad. Impacts to the railroad in this area will be avoided by either design changes to the typical section or by an alignment shift. Additional right-of-way impacts at the intersections will be avoided by eliminating the 8' buffer adjacent to the auxiliary turn lanes. The estimated savings will be \$1,259,000 (See attached cost worksheet and calculations)

Recommendation B-1: Narrow the required right-of-way template.

VE Team Savings: \$8,535,000

Yes, will implement.

The required right-of-way template will be narrowed to the maximum extent possible.

Recommendation D-2: Use a flush, grassed median with cable rail.

VE Team Savings: \$383,000

No, will not implement.

Due to the implementation of recommendation A-10, the use of an 18-ft flush, grassed median with cable barrier will not be required. Note that the use of a flush, grassed median with cable rail located along the centerline of the roadway does not yield adequate deflection distance. The 2011 Roadside Design Guide states that low tension cable barrier systems yield approximately 12-ft of deflection which exceeds the 9-ft allotted by this recommendation. Positive separation due to any median width reduction in the area near the railroad will be handled via a raised median.

Idea No.: A-5 Cost Worksheet
Project: US 19/41/SR 3 Widening and Reconstruction

Construction Element		Original Estimate			VE Team Estimate			Implementation Estimate		
Item	Unit	No. Units	Cost/Unit	Total Cost	No. Units	Cost/Unit	Total Cost	No. Units	Cost/Unit	Total Cost
Original Design:										
<i>Replace OGFC / SMA w/ 12.5 Superpave</i>										
Asph Conc 12.5 mm OGFC	TN	9105.00	\$81.67	\$743,605.00						
Asph Conc 12.5 mm SMA	TN	16691.00	\$102.27	\$1,706,989.00						
<i>Use 20' Raised Median</i>										
Recyl Asph Conc 19 mm	TN	903.00	\$69.12	\$62,415.00						
Recyl Asph Conc 25 mm	TN	3503.00	\$68.42	\$239,675.00						
GAB 12"	TN	5749.00	\$21.08	\$121,189.00						
<i>Eliminate BL/Buffers</i>										
Sidewalk	SY	10297.00	\$50.31	\$518,042.00						
<i>SB BL / Buffer</i>										
Recyl Asph Conc 19 mm	TN	1807.00	\$69.12	\$124,900.00						
Recyl Asph Conc 25 mm	TN	7006.00	\$68.42	\$479,351.00						
GAB 12"	TN	11499.00	\$21.08	\$242,399.00						
<i>NB BL / Buffer</i>										
Shoulder Paving Unit Cost	SY	13347.00	\$35.00	\$467,145.00						
<i>Urban NB Shoulder</i>										
Type 2 C&G SB Side (SB)	LF	18480.00	\$21.26	\$392,885.00						
Drainage N/A										
VE Design:										
<i>Replace OGFC / SMA w/ 12.5 Superpave</i>										
Asph Conc 12.5 mm SMA	TN				16691.00	\$78.00	\$1,301,898.00			
<i>Multi-Use Trail</i>										
10' Wide Sidewalk	SY				20594.00	\$50.51	\$1,040,203.00			
<i>Urban NB Shoulder</i>										
Type 2 C&G SB Side	LF				36960.00	\$21.26	\$785,770.00			
18" Storm Drain H 1-10	LF				12557.00	\$36.18	\$454,312.00			
Catch Basin, GP 1	EA				60.00	\$2,188.48	\$131,309.00			
Implementation Design:										
<i>SB</i>										
Conc. Sidewalk / Trail	SY							20533.00	\$50.51	\$1,037,122.00
Curb & Gutter	LF							18480.00	\$21.26	\$392,885.00
AC OGFC	TN							740.00	\$81.67	\$60,436.00
AC SMA	TN							1356.00	\$102.27	\$138,678.00
Rec. AC 19 mm	TN							1807.00	\$69.12	\$124,900.00
Rec. AC 25 mm	TN							7007.00	\$68.42	\$479,419.00
GAB	TN							11497.00	\$21.08	\$242,357.00
Tack Coat	GA							3286.00	\$2.06	\$6,769.00
Borrow Exc.	CY							25667.00	\$7.72	\$198,149.00
18" Storm Drain H 1-10	LF							13860.00	\$36.18	\$501,455.00
Catch Basin, GP 1	EA							62.00	\$2,188.48	\$135,686.00
<i>NB</i>										
Conc. Sidewalk	SY							8727.00	\$50.51	\$440,801.00
Curb & Gutter	LF							15708.00	\$21.26	\$333,952.00
AC OGFC	TN							629.00	\$81.67	\$51,370.00
AC SMA	TN							1152.00	\$102.27	\$117,815.00
Rec. AC 19 mm	TN							1536.00	\$69.12	\$106,168.00
Rec. AC 25 mm	TN							5956.00	\$68.42	\$407,510.00
GAB	TN							9772.00	\$21.08	\$205,994.00
Tack Coat	GA							2795.00	\$2.06	\$5,758.00
Borrow Exc.	CY							21817.00	\$7.72	\$168,427.00
18" Storm Drain H 1-10	LF							11781.00	\$36.18	\$426,237.00
Catch Basin, GP 1	EA							53.00	\$2,188.48	\$115,989.00
Subtotal:										
				\$5,098,595.00				\$3,713,492.00		
Total Rounded:										
				\$5,100,000.00				\$3,710,000.00		

Idea No.: A-2 & A-5 Calculations

Project Length = 3.5 MI x 5280 FT/ MI = 18480 FT

SB Calculations:

Muti-Use Trail = (10 FT x 18480 FT) / 9 = 20533 SF

Curb & Gutter = 18480 FT

8 FT Paving = (8 FT x 18480 FT) / 9 = 16427 SY

AC OGFC = (16427 SY x 90 LB/SY) / 2000 = 740 TN

AC SMA = (16427 SY x 165 LB/SY) / 2000 = 1356 TN

AC OGFC = (16427 SY x 220 LB/SY) / 2000 = 1807 TN

AC OGFC = (16427 SY x 853 LB/SY) / 2000 = 7007 TN

GAB = (16427 SY x 1400 LB/SY) / 2000 = 11497 TN

Tack Coat = 4 x 0.05 GAL/SY x 16427 SY = 3286 GAL

Earthwork = (37.5 SF x 18480 FT) / 27 = 25667 CY

Catch Basin TP 1 (300' Spacing) = 18480 FT / 300 FT = 62 Structures

18" Storm Drain H 1-10 (75% of C&B Length) = 18480 FT x 0.75 = 13860 FT

NB Calculations:

Curb & Gutter (85% of Project Length) = 18480 FT x 85% = 15708 FT

Sidewalk = (5 FT x 15708 FT) / 9 = 8727 SF

8 FT Paving = (8 FT x 15708 FT) / 9 = 13963 SY

AC OGFC = (16427 SY x 90 LB/SY) / 2000 = 740 TN

AC SMA = (16427 SY x 165 LB/SY) / 2000 = 1356 TN

AC OGFC = (16427 SY x 220 LB/SY) / 2000 = 1807 TN

AC OGFC = (16427 SY x 853 LB/SY) / 2000 = 7007 TN

GAB = (16427 SY x 1400 LB/SY) / 2000 = 11497 TN

Tack Coat = 4 x 0.05 GAL/SY x 13963 SY = 2795 GAL

Earthwork = (37.5 SF x 15708 FT) / 27 = 21817 CY

Catch Basin TP 1 (300' Spacing) = 15708 FT / 300 FT = 53 Structures

18" Storm Drain H 1-10 (75% of C&B Length) = 15708 FT x 0.75 = 11781 FT

Idea No.: A-10 Calculations

Approximate Length of Raised Median Required = 1100 FT

Concrete Curb & Gutter, Type 7 = $1100 \times 2 = 2200$ FT

Concrete Median; Width = 9 FT; 100% is Raised Median
 $(1100 \text{ FT} \times 100\% \times 9 \text{ ft}) / 9 = 1100$ SY

Proposed 2 FT Inside Shoulders
 $(1100 \text{ FT} \times (2 \text{ FT} + 2 \text{ FT})) / 9 = 489$ SY

PRECONSTRUCTION STATUS REPORT FOR PI:722030-

PROJ ID : 722030-
COUNTY : Clayton
LENGTH (MI) 3.50
PROJ NO.: NH000-0001-04(060)
PROJ MGR: Murphy, Robert P.
AOHD Initials: AVS
OFFICE : Program Delivery
CONSULTANT: No Consultant, GDOT In-House Design
SPONSOR : GDOT
DESIGN FIRM: GDOT Roadway Design J Taylor
SR 3/US 19/41 FM TARA RD NORTH TO CR 1337/FLINT RIVER RD
MPO: Atlanta TMA
TIP #: CL-AR-247
MODEL YR : 2030
TYPE WORK: Widening
CONCEPT: ADD 6U/R(MED20)
PROG TYPE: Reconstruction/Rehabilitation
Prov. for ITS: N
BOND PROJ. :
PRIORITY CODE:
DOT DIST: 7
CONG. DIST: 13
BIKE: Y
MEASURE: E
NEEDS SCORE: 05
BRIDGE SUFF:
MGMT LET DATE : 02/15/2017
MGMT ROW DATE : 06/15/2014
BASELINE LET DATE: 02/17/2017
SCHED LET DATE : 1/31/2018
WHO LETS?: GDOT Let
LET WITH :

BASE START	BASE FINISH	LATE START	LATE FINISH	TASKS	ACTUAL START	ACTUAL FINISH	%	PROGRAMMED FUNDS				Date Auth		
								Activity	Approved	Proposed	Cost		Fund	Status
1/30/2012	1/30/2012	5/16/2013	5/16/2013	Concept Development	1/28/2011	2/9/2012	60	PE	2011	2011	4,181,098.40	L050	AUTHORIZED	12/13/2010
2/13/2012	2/13/2012	4/4/2013	4/4/2013	Concept Meeting	2/9/2012	2/9/2012	100	ROW	2017	2017	11,202,838.53	M001	PRECAST	
2/14/2012	3/26/2012	4/5/2013	5/16/2013	PM Submit Concept Report	10/10/2012		0	CST	2019	2019	23,248,661.58	M001	PRECAST	
3/26/2012	3/26/2012	5/16/2013	5/16/2013	Concept Report Review and Comments			0							
3/26/2012	8/28/2012	5/16/2013	5/16/2013	Management Concept Approval Complete	2/14/2012	3/19/2013	100							
3/28/2012	8/28/2012	5/16/2013	5/16/2013	Value Engineering Study	10/18/2012	10/18/2012	100							
5/8/2012	5/8/2012	11/14/2013	11/14/2013	Public Information Open House Held	11/10/2011		40							
3/27/2012	8/26/2013	9/5/2013	9/5/2013	Environmental Approval	7/14/2011	9/28/2011	100							
4/23/2013	6/17/2013	7/12/2013	7/12/2013	Pub Hear Held/Com Resp (EA/FONSI, GEPA)	4/30/2012	7/30/2012	100							
2/10/2012	3/1/2012			Mapping			20							
4/16/2012	8/16/2013	4/5/2013	4/5/2013	Field Surveys/SDE			0							
3/27/2012	8/6/2012	5/17/2013	9/26/2013	Preliminary Plans			0							
5/17/2016	10/3/2016	4/28/2017	9/14/2017	Underground Storage Tanks			0							
9/24/2013	9/24/2013	9/5/2014	9/5/2014	404 Permit Obtainment			0							
10/30/2013	2/18/2014	10/13/2014	1/30/2015	PPPR Inspection			0							
2/19/2014	4/2/2014	2/2/2015	4/2/2015	R/W Plans Preparation			0							
10/31/2013	11/4/2013	10/14/2014	10/16/2014	R/W Plans Final Approval			0							
5/20/2014	6/16/2014	5/1/2015	5/28/2015	L & D Approval			0							
9/23/2014	10/6/2014	9/4/2015	9/17/2015	R/W Authorization			0							
7/23/2012	3/6/2013		11/14/2013	Stake R/W			0							
11/5/2013	3/30/2015	10/17/2014	3/10/2016	Soil Survey	1/18/2012		50							
4/28/2015	4/28/2015	4/8/2016	4/8/2016	Final Design			0							
5/6/2015	5/19/2015	4/18/2016	4/29/2016	FPPR Inspection			0							
				Submit FPPR Responses (OES)			0							

Activity	Amount	Date	Activity	Cost	Fund	STIP AMOUNTS	
						Cost Estimate Amount	STIP AMOUNTS
PE	\$4,181,098.40	12/10/1995	PE	4,221,301.00	L050		
ROW	\$9,947,800.01	4/27/2011	ROW	0.00	M001		
CST	\$19,072,000.00	6/2/2009	CST	0.00	M001		

PDD: LR: 12-20-95 ASSIGNED ROAD DESIGN
Bridge: NO BRIDGE REQUIRED
Design: RD-Taylor;VE responses submitted, draft Concept Report-aw
EIS: EA\Not\Apvd\OnSch\Updated 6-27-12\ADESEAN
LGPA: PFA REQ CLAYTON DO ROW & UTIL/GDOT TO DO PE & CST 3-15-11|NOTIFICATION LETTER SENT TO CLAYTON & JONESBORO 6-27-06
Planning: Project Justification prepared 8-18-11, Corridor is on the ARC Bike Transportation and Ped Walkways plan pg 61 & 91
Programming: LOCAL RW PER TIP/CONFIRMED FOS PER FHWA 9-7-2012
Traffic Op: KBH:SEND PLANS FOR SIGN & MKG WHEN 50% COMP 12/11/95
UST: MC
Utility: YPF:NEED PLANS 08/07, 03/10,SUE
EMG: FLY 6734/6746 for Mapping & Concept. (H83(94)-W/V88)-INROADS
Engr Services: VE Letter Approved 3/19/13
Cond. Filed: 140
Options - Pending:
Condemnations- Pend:
Acquired by: DOT
Acquisition MGR:
R/W Cert Date:
DEEDS CT: