

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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**INTERDEPARTMENT CORRESPONDENCE**

**FILE:** CSNHS-M003-00(956) Laurens  
CSNHS-M003-00(976) Bleckley Laurens Twigg  
P.I. Nos.: M003956 and M003976  
Rehabilitation of I-16

**OFFICE:** Engineering Services

**DATE:** June 29, 2009

**FROM:** Ronald E. Wishon, Project Review Engineer *REW*

**TO:** David Crim, State Maintenance Engineer  
Attn.: Willie Webb

**SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES**

The VE Study for the above project was held on April 28, 2009. Responses were received on June 4, 2009. 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.

ALT #	Description	Potential Savings/LCC	Implement	Comments
<b>CONSTRUCTABILITY</b>				
1	Consider using incentive/disincentive for project delivery to reduce contract time.	Design Suggestion	No	Special provisions requiring contractor to expedite the work without offering an incentive are included in the contract.
3	Always have 3 lanes open during hurricane evacuation season.	Design Suggestion	Yes	This will be done.
6	During the slab repair on inside lane, traffic will utilize 3' of outside shoulder. Verify that existing shoulder is structurally adequate to withstand continuous traffic.	Design Suggestion	Yes	This will be done. Maintenance has determined that the outside shoulder is structurally sufficient to withstand continuous traffic.
12	Provide means of routing storm water away from inside lane/base during periods when the outside lane and/or outside shoulder have been removed in either superelevated or sag condition.	Design Suggestion	No	Concrete will be removed and replaced within the same day. No pavement will be left open.

MATERIALS				
4	Use HES roller compacted concrete for inside shoulders to expedite construction sequencing.	Design Suggestion	No	ACPA and the Concrete Branch of OMR agree that using HES RCC is not feasible because it is a dry mix. Non-accelerated RCC gains strength very quickly and is often suitable for traffic within 24 hours.
5	Consider using pavement edge drains and/or underdrains.	Design Suggestion	No	Longitudinal edge drains were used in the early 1980's but proved ineffective and became a maintenance issue. The drainage detail provided in the plans using 57 stone and 4" drain tile should be sufficient.
10	Reset and repair all guardrail and repave mowing strips.	Design Suggestion	No	Guardrail removal and rest has been included in the contract.
13	Evaluate existing signage for replacement.	Design Suggestion	No	Signs have been evaluated and do not require upgrade or replacement at this time.
STAGING				
8	Stagger construction segments to improve safety	Design Suggestion	No	Construction segments have been specified as individual 3 mile segments to allow for greater productivity and safety.
15	Modify construction sequences to allow construction of inside shoulder and outside shoulder concurrently.	Design Suggestion	No	The inside shoulder must be constructed first in order to shift traffic to allow enough room for work on the outside lane and shoulder.

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

Approved: Gerald M. Ross Date: 6.29.09  
 Gerald M. Ross, PE, Chief Engineer

Approved: Richard Wayne Fedora Date: 7/13/2009  
 for Rodney Barry, PE, FHWA Division Administrator

REW/LLM  
Attachments

- c: R. Wayne Fedora/Aric Mance/Christy Poon-Atkins - FHWA  
Genetha Rice Singleton  
David Crim/Eric Pitts/Willie Webb/Reid Mathews/John Dantzler  
Alan Smith  
Bill Rountree/Adam Smith  
Rusty Merritt  
Lamar Pruitt  
Lisa Myers  
Matt Sanders
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**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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INTERDEPARTMENT CORRESPONDENCE

**FILE** CSNHS-M003-00(956), Laurens **OFFICE** Maintenance  
CSNHS-M003-00(976), Laurens, Bleckley, Twiggs, Treutlen  
Concrete Rehabilitation of I-16  
PI: M003956 & M003976 **DATE** June 4, 2009

**FROM** Willie L. Webb, Maintenance Design Manager

**TO** Lisa Myers, Transportation Engineer Assistant Administrator- VE Coordinator

**SUBJECT** VE Study Response

Reference is made to the recommendations that were contained in the Value Engineering Study Report dated April 28, 2009 for the above referenced project. Responses and recommendations are as follows.

**1. Value Engineering Alternative No. 1: Consider using incentive/disincentive for project delivery to reduce contract time.**

This alternate is **not** recommended for implementation due to the following reasons:

- Special Provisions are in the contract requiring the contractor to expedite the work without the offering an incentive.

**2. Value Engineering Alternative No. 3: Always have three lanes open during hurricane evacuation season.**

This alternate is accepted for implementation:

- Traffic speed will be reduced and there is adequate room for traffic to be diverted onto either paved shoulder within the work area if this type of event were to occur.
- Special Provision 150 also addresses unforeseen catastrophic natural events.

**3. Value Engineering Alternative No. 4: Use HES Roller Compacted Concrete for Inside Shoulders.**

This alternate is **not** recommended for implementation due to the following reasons:

- ACPA and the Concrete Branch agree that using HES RCC is not feasible because it is a dry mix.
- Non-accelerated RCC gains strength very quickly and is often suitable for light vehicles within 24 hours of laydown.

**4. Value Engineering Alternative No. 5: Consider using pavement edge drains and/or underdrains.**

This alternate is **not** recommended for implementation due to the following reasons:

- In Georgia we ceased using longitudinal edge drains in the early '80s because evidence that showed decrease in durability and maintenance is an issue.
- Longitudinal edge drains located the joint between RCC shoulder and PCC mainline pavement excavating the drains will destroy at least the RCC shoulder that is being constructed to Maximize pavement durability and may destroy the mainline pavement also.
- Instead of edger drains GDOT uses a drainage detail , which is installed at selected sag vertical curves under the shoulder pavement with a 10 foot wide blanket of daylighted 57 stone with a 4" drain tile in the center transverse to the roadway.

**5. Value Engineering Alternative No. 6: Verify that existing outside shoulder is structurally adequate to accommodate Stage 1 traffic.**

This alternate is recommended for implementation due to the following reasons:

- The outside shoulder has been verified through the Maintenance Office and it is structurally sufficient to withstand continuous traffic.

**6. Value Engineering Alternative No. 8: Stagger construction segments to improve safety.**

This alternate is **not** recommended for implementation due to the following reasons:

- Construction segments have been specified as individual 3 mile segments at a time.

**7. Value Engineering Alternative No. 10: Reset and repair all guardrails and repave mowing strips.**

This alternate is **not** recommended for implementation due to the following reasons:

- Guardrail removal and reset has been included in the contract.

**8. Value Engineering Alternative No. 12: Provide means of routing storm water away from inside lane/base during periods when the outside lane and or outside shoulder have been removed in either super elevated or sag condition.**

This alternate is **not** recommended for implementation due to the following reasons:

- Concrete work is set up to remove and replace same day. No pavement will be left open.

**9. Value Engineering Alternative No. 13: Evaluate existing signage for replacement.**

This alternate is **not** recommended for implementation due to the following reasons:

- Signs have been evaluated by the DOT and do not need to be upgraded or replaced.

**10. Value Engineering Alternative No. 15: Modify construction sequence to allow construction of the inside shoulder and outside shoulder concurrently.**

This alternate is **not** recommended for implementation due to the following reasons:

- The inside shoulder must be constructed 1<sup>st</sup> in order to shift traffic and allow enough room for equipment to work on the outside lane and shoulder in order to install concrete pavement joints required.
- If the sections of inside and outside shoulder construction are staggered along the length of the roadway could also violate driver expectancy if not signed well. Concurrent construction on the inside and outside shoulders is likely to result in safety hazard.

The responses are a collaboration of the District Construction, District Maintenance, the Office of Materials and Research, FHWA and the Maintenance Office. If additional information is needed, please contact us.

DCC:wlw

**PRECONSTRUCTION STATUS REPORT FOR PI:M002967,M002970,M003956,M003976**

**PROJ ID :** M003976  
**COUNTY :** Bleckley, Laurens,  
**LENGTH (MI) :** 1.33885  
**PROJ NO.:** CSNHSM00300976  
**PROJ MGR:** Webb, Willie  
**OFFICE :** Maintenance  
**CONSULTANT:** No Consultant, GDOT In-House Design  
**SPONSOR :** GDOT  
**DESIGN FIRM:**

**MGMT LET DATE :** 10/16/2009  
**MGMT ROW DATE :**  
**SCHED LET DATE :** 8/28/2009  
**WHO LETS?:** GDOT Let  
**LET WITH :**

**DOT DIST:** 2, 3  
**CONG. DIST:** 8  
**BIKE:** N  
**MEASURE:** E  
**NEEDS SCORE:**  
**BRIDGE SUFF:**

**MPO:** Not Urban  
**TIP #:**  
**MODEL YR :**  
**TYPE WORK:** Concrete Rehab  
**CONCEPT:** CONC REHAB  
**PROG TYPE:** Maintenance  
**Prov. for ITS:** N  
**BOND PROJ :**

SCHED START	SCHED FINISH	ACTIVITY	ACTUAL START	ACTUAL FINISH	%
6/30/2009		Value Engineering Study	2/12/2009	5/28/2009	82
		Environmental Approval	1/21/2009		100

Phase	Approved	Proposed	Cost	Fund	Status	Date Auth
CST	LUMP	2009	49,457,000.00	C240	PRECST	

PROGRAMMED FUNDS	
Cost	49,457,000.00
Fund	C240

STIP AMOUNTS	
CST Cost Est Amt:	49,457,000.00
Date:	12/11/2008
Phase	CST
Cost	0.00
Fund	C240

**Bridge:** NO BRIDGE REQUIRED  
**EIS:** PCEApproved 5-28-09/Certified CST 5-28-09/Phillips5-28-09  
**LGPA:** NOT APPLICABLE  
**Programming:** LUMP SUM 0006194

**Acquired by:** N/R  
**Acquisition MGR:**  
**R/W Cert Date:**

**Cond. Filed:**  
**Relocations:**  
**Acquired:**

**Total Parcel in ROW System:**  
**Options - Pending:**  
**Condemnations- Pend:**

**Prel. Parcel CT:**  
**Under Review:**  
**Released:**

**DEEDS CT:**

**PRECONSTRUCTION STATUS REPORT FOR PI:M002967,M002970,M003956,M003976**

**I-16 FROM SR 26 TO SR 29**

**MGMT LET DATE : 10/16/2009**

**MGMT ROW DATE :**

**PROJ ID :** M003956

**COUNTY :** Laurens

**LENGTH (MI) :** 28.50

**PROJ NO.:** CSNHSM00300956

**PROJ MGR:** Webb, Willie

**OFFICE :** Maintenance

**CONSULTANT:** No Consultant, GDOT In-House Design

**SPONSOR :** GDOT

**DESIGN FIRM:**

**MPO:** Not Urban

**TIP #:**

**MODEL YR :**

**TYPE WORK:** Concrete Rehab

**CONCEPT:** CONC REHAB

**PROG TYPE:** Maintenance

**Prov. for ITS:** N

**BOND PROJ :**

**DOT DIST:** 2

**CONG. DIST:** 8

**BIKE:** N

**MEASURE:** E

**NEEDS SCORE:**

**BRIDGE SUFF:**

**WHO LETS?:** GDOT Let

**LET WITH :**

SCHED START	SCHED FINISH	ACTIVITY	ACTUAL START	ACTUAL FINISH	%
6/30/2009		Value Engineering Study	2/12/2009	5/28/2009	82
		Environmental Approval	1/21/2009		100

**PROGRAMMED FUNDS**

Phase	Approved	Proposed	Cost	Fund	Status	Date Auth
CST	LUMP	2017	148,490,407.21	L010	PRECST	

STIP AMOUNTS			
Phase	Cost	Fund	Date
CST	100,504,152.49	L010	12/18/2008
CST	0.00	L010	

**Bridge:** NO BRIDGE REQUIRED  
**EIS:** PCE approved 5-28-09/Certified CST 5-28-09/Phillips 5-28-09  
**LGPA:** NOT APPLICABLE  
**Programming:** LUMP SUM 0006194  
**Utility:** (RL) Resurfacing letters pending receipt of plans 4/2/2009

**District Comments**

**Prel. Parcel CT:** Total Parcel in ROW System: N/R  
**Under Review:** Options - Pending: Relocations: N/R  
**Released:** Condemnations- Pend: Acquired: R/W Cert Date: Acquisition MGR: DEEDS CT: