

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

-----  
**INTERDEPARTMENT CORRESPONDENCE**

**FILE:** EDS-72(28) Madison  
P. I. No.: 122100  
S.R. 72 Widening/Reconstruction

**OFFICE:** Engineering Services

**DATE:** July 9, 2007

**FROM:**  Brian Summers, P.E., Project Review Engineer

**TO:** Babs Abubakari, P.E. State Consultant Design and Program Delivery Engineer

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

Recommendations for implementation of Value Engineering Study Alternatives are indicated in the table below. Incorporate alternatives recommended for implementation to the extent reasonable in the design of the project.

ALT No.	Description	Savings PW & LCC	Implement	Comments
<b>ASPHALT PAVEMENT (AP)</b>				
AP-1	Selectively use sections of existing Asphalt Pavement	\$492,870	No	Would result in profile grade adjustments since portions of the existing alignment do not meet the required Stopping Sight Distance.
AP-9	Use reduced pavement section for rural depressed median section	\$317,055	No	The Pavement Design Committee recommended the pavement design shown in the plans for the depressed median section.
<b>UNCLASSIFIED EXCAVATION (UE)</b>				
UE-3	Reduce the width of the depressed median	\$1,546,614	No	Does not apply since Alternate No. RW-1 is recommended to be implemented.
UE-4	Adjust profile grade to minimize earthwork	Design Suggestion	Yes	This should be done where possible.
<b>REMOVE BRIDGE (RB)</b>				
RB-1	Keep portions of existing bridge	Design Suggestion	No	Would result in an alignment shift.

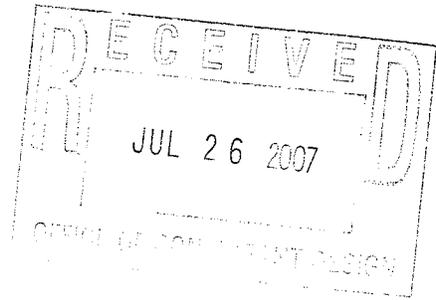
ALT No.	Description	Savings PW & LCC	Implement	Comments
<b>CONSTRUCTION OF BRIDGES (CB)</b>				
CB-1	Shorten westbound bridge	\$299,640	No	The length is required to keep the end rolls from encroaching into the 10' buffer beyond the top of the stream bank.
CB-2	Combine east and westbound bridges (includes keeping turn lane)	\$458,503	No	Does not apply since Alternate No. RW-1 is recommended to be implemented.
CB-3	Combine east and westbound bridges (no turn lane)	\$840,420	No	Does not apply since Alternate No. RW-1 is recommended to be implemented.
CB-8	Eliminate turning lanes at Brickyard Road	\$408,030	No	Would require property owners to travel a longer distance to the next median opening to make a U-turn.
<b>RIGHT OF WAY (RW)</b>				
RW-1	Use 20 foot raised median for entire length of project	\$3,794,863	Yes	This should be done.
<b>MISCELLANEOUS IDEAS (MI)</b>				
MI-1	Review location of Precast Median Barrier in Stage Construction	\$258,104	Yes	This should be done.
MI-2	Relocate intersection of Brickyard Road	Design Suggestion	No	Would result in additional R/W impacts.

A meeting was held on June 29, 2007 to discuss the above recommendations. Robert Moses and Beniquez Jones with PB World, Stanley Hill with Consultant Design, and Brian Summers, Ron Wishon and Lisa Myers with Engineering Services were in attendance.

Approved:  Date: 7/23/07  
 David E. Studstill, Jr., P. E., Chief Engineer

**Attachments**

- c: Gus Shanine
- Todd Long
- Randall Hart
- Stanley Hill
- Lowell James
- Jack Muirhead
- Sandy Moore
- Randy Davis
- Todd Wood
- Ken Werho
- Alexis John
- Lisa Myers

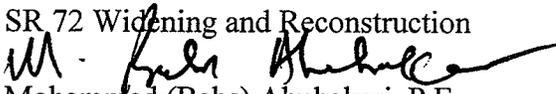


**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

---



**INTERDEPARTMENT CORRESPONDENCE**

FILE EDS-72(28), Madison County OFFICE Office of Consultant Design  
P.I. No. 122100  
SR 72 Widening and Reconstruction DATE June 18, 2007  
FROM   
Mohammed (Babs) Abubakari, P.E.  
State Program Delivery and Consultant Design Engineer  
TO Brian Summers, P.E., Project Review Engineer  
SUBJECT Value Engineering Study - Responses

Reference is made to the recommendations that were contained in the Value Engineering Study Final Report dated April 10, 2007 for the above referenced project. Our responses and recommendations are as follows:

**1. Value Engineering Alternative AP-1 - Selectively use sections of existing asphalt.**

*Approval of the VE Alternative AP-1 is not recommended.*

- *In order to retain the existing pavement in the areas noted, the profile would need to be raised from approximately 106+00 to 146+00.*
- *Profile of existing road does not meet Stopping Sight Distance for 55 mph from 121+50 to 133+00 (and from 148+00 to 196+00). The crest at approximately 123+00 needs to be lowered, not raised.*

**2. Value Engineering Alternative AP-9 – Use reduced pavement section for rural depressed median section.**

*Approval of the VE Alternative AP-9 is not recommended.*

- *On May 14, 2007 a representative from the Pavement Design Committee indicated that the same pavement design will need to be used on both projects – a pavement design based on the curb and gutter section.*
- *We will formally submit the revised pavement design for this project to the Pavement Design Committee and follow their recommendation.*

**3. Value Engineering Alternative UE-3 - Reduce the width of the depressed median.**

*Approval of the VE Alternative UE- 3 is not recommended.*

- *While allowable by AASHTO, this would require a variance to the Department's policy for GRIP corridors as detailed in Frank Danchetz's January 7, 2003 memo. The policy states that for GRIP corridors with a speed design of 50 mph or greater, the median will be a 44' wide depressed grass median.*
- *The median provides separation of the opposing traffic streams. Generally the greater the separation the greater the safety.*
- *One reason for the 44' median is that it facilitates the use of the Type B Median Openings. The remaining 16' of grass can be depressed and carry some stormwater runoff away from the intersection. A 36' median would reduce this to only an 8' grass strip with much-reduced stormwater capacity.*
- *If the area develops in the future, the 44' median also allows a lane to be added in each direction to the inside and still have a 20' raised median.*

Mr. Brian Summers

June 20, 20007

Page Two

- *This project is on a high priority corridor. To change the typical section now for more than half of the project length would result in significant cost and delay to the project without providing an improved design. Right of Way Plans are approved for this project and the Department is ready to begin property negotiation and acquisition. Current let date is August 2008.*

**4. Value Engineering Alternative UE-4 – Adjust profile grade to minimize earthwork.**

*Approval of the VE Alternative UE-4 is not recommended.*

- *This has been done for the current typical section and speed design.*
- *If the typical section is modified, the profile may change also to minimize earthwork.*
- *If the speed design is lowered, smaller vertical curves (and potentially steeper grades) could be used and the profile revised.*
- *If the decision is made to overlay the existing pavement at the beginning of the project, then the profile would need to be revised.*

**5. Value Engineering Design Suggestion RB-1 – Keep portions of existing bridge.**

- *Response not required for a Design Suggestion.*

**6. Value Engineering Alternative CB-1 – Shorten westbound bridge.**

*Approval of the VE Alternative CB-1 is not recommended.*

- *The westbound bridge was lengthened as a result of the end roll staking that was done for an earlier shorter bridge. Staking found that the end rolls would encroach into the 10' buffer beyond the top of bank. Staking also found that the existing end rolls encroach into the buffer.*
- *With new construction we want to maintain the 10' buffer.*

**7. Value Engineering Alternative CB-2 – Combine east and westbound bridges (includes keeping turn lane).**

*Approval of the VE Alternative CB-2 is not recommended.*

- *The dimensions and typical section included in the VE Report do not provide for physical separation of the westbound traffic from the eastbound left turn lane – just double yellow paint stripe.*
- *For safety reasons we do not recommend transitioning from a 44' rural depressed median to a paint stripe separation at a single location.*

**8. Value Engineering Alternative CB-3 – Combine east and westbound bridges (no turn lane).**

*Approval of the VE Alternative CB-3 is not recommended.*

- *The dimensions and typical section included in the VE Report do not provide for physical separation of the westbound traffic from the eastbound traffic – just double yellow paint stripe.*
- *For safety reasons we do not recommend transitioning from a 44' rural depressed median to a paint stripe separation at a single location.*

**9. Value Engineering Alternative CB-8 – Eliminate turning lanes at Brickyard Road.**

*Approval of the VE Alternative CB-8 is not recommended.*

*This would require property owners to travel farther to access the new facility. Vehicles on Brickyard Road could turn west on SR 72. Vehicles on Brickyard wanting to travel east on SR 72 could either travel west on SR 72 to the next median opening at Valley Road and U-turn, or they could travel east on Brickyard Road to SR 98 in Comer and then south to SR 72. Eastbound vehicles on SR 72 wanting to access Brickyard Road would have to proceed to the next median opening and U-turn.*

Mr. Brian Summers  
June 20, 2007  
Page Two

- *A complication is that in this project, the Brickyard median opening is the last median opening before the transition to the existing two-lane facility. We would need to construct a median opening at a location other than a side street intersection. We do not believe this is preferable to the current design – a Type A median opening at Brickyard Road and the left turn lane carried across the eastbound bridge.*

**10. Value Engineering Alternative RW-1 - Use 20' raised median for entire length of project.**

*Approval of the VE Alternative RW-1 is not recommended.*

- *This project is on a high priority corridor. To change the typical section now for more than half of the project length would result in significant delay to the project. Right of Way Plans are approved for this and the Department is ready to begin property negotiation and acquisition. Current let date is August 2008.*
- *The project begins with a 20' raised median to match and connect to the completed project to the west and will require a design variance as a 24' raised median would be recommended under current policy.*

**11. Value Engineering Alternative M-1 - Review location of precast median barrier in stage construction**

*Approval of the VE Alternative M-1 is not recommended.*

- *The larger quantity of median barrier was to reduce the number of end treatments required and also to provide a nearly continuous barrier for the protection of the workers. While a 2:1 slope 6' high may not warrant permanent barrier, during construction there will be people and construction equipment operating in the clear zone of the active roadway.*

**12. Value Engineering Alternative M-2 - Relocate intersection of Brickyard Road**

*Approval of the VE Alternative M-2 is not recommended.*

- *This would require the relocation of the intersection approximately 800' east of existing Brickyard Road and the acquisition of right of way from the McCollum and Burdette parcels.*
- *The Burdette home would likely need to be acquired.*
- *This would also relocate Brickyard up and over a 20' hill.*
- *If relocation is desired, a location 600' east of Brickyard Road would be better although it would require acquisition of the McCollum home. Either relocation would require additional engineering survey and confirmation that these areas are covered by the environmental survey.*

MBA: SH: TAH

cc: Lisa Myers