

**VALUE ENGINEERING CHANGE PROPOSAL  
MISSOURI DEPARTMENT OF TRANSPORTATION**

**Conceptual Proposal**       **Final Proposal**

Date June 16, 2010

Contract ID 070831-501

Job No. J5P0309A/J5P0648A

County Camden/Miller      54

Original Bid Cost \$ 30,581,555.60

Contractor McAninch Corporation

By Don Taylor

Designed By McAninch Corporation

Phone 515-250-2703

VECP# 10-61 (to be completed by C.O.)

VECP  or PDVECP

**1. Description of existing requirements and proposed change(s). Advantages/Disadvantages**

This proposal is to re-design the maintenance of traffic required to connect the newly constructed Route 54 Expressway with the existing Grand Glaize Bridge. This concept has been developed jointly with Rick Simmons, Bob Lynch and the Camdenton Project Office. The concept is to Use As Constructed much of the paving and drainage from approximate M.L. Sta. 143+99.54 to Sta. 150+77.48 on both the EBL and the WBL. Field surveys and site visits verify that the extremely narrow lane widths, and head-to-head traffic on the Grand Glaize Bridge required by Stages #3 and #4 of the J5P0309A project can be eliminated with innovate design modifications. Acceptance of this proposal will greatly increase the factor of safety for all motorists using the Grand Glaize Bridge.

**2. Estimate of reduction in construction costs.**      \$125,000.00

**3. Prediction of any effects the proposed change(s) will have on other department costs, such as maintenance and operations.**

There is no cost impact for Operation or Maintenance. Providing for the safety of the public is a primary responsibility for all project stakeholders. This proposal removes a major restriction of traffic flow over the EB and WB lanes of the Grand Glaize Bridge and will assuredly eliminate a traffic hazard.

**4. Anticipated date for submittal of detailed change(s) of items required by Section 104.6 of the Specifications.**

June 25, 2010  
(date)

**5. Deadline for issuing a change order to obtain maximum cost reduction, noting the effect of contract completion time or delivery schedule.**

July 6, 2010  
(date)

Will reduce the time of construction while easing traffic impacts.  
(effect)

**6. Dates of any previous or concurrent submission of the same proposal.**

None  
(date and/or dates)

**Additional Comments:**

We request an expedited meeting to collaborate on the details of this VECP proposal. Such details to include but not be limited to: A grade separation wall from M.L. Sta. 144+75 to Sta. 150+77; Superelevation geometry; Revised Traffic Control layouts from M.L. Sta. 139+00 to 180+40; Revised pavement markings and signing along M.L. & Ramp 5 within the affected areas. McAninch Corporation regards this concept to be a true Value Engineering proposal and not a Practical Design proposal.

**\*\* Portion Below This Line To Be Filled Out by MoDOT \*\***

**Comments:**

BASED ON MEETING WITH McANINCH / MODOT, I RECOMMEND THIS V.E. CONCEPT BE DENIED AS DESIGN AND CONSTRUCTABILITY ISSUES SEEM UNACHIEVABLE IN THE TIME LEFT TO COMPLETE PROJECT. DRAINAGE CHANGES & RP. 5 WIDENING IDEAS SHOULD BE INCORPORATED IN PROJECT Michael K. O'Malley

Submitted By Resident Engineer

6/24/10

Date

**Comments:**

In accordance with the comments above, it was mutually discussed and agreed upon among McAninch and MODOT that the potential risks of pursuing the VE (RE: design costs + time, construction costs, feasibility, etc.) outweigh the potential benefits. Some ideas will be pursued thru other means.

- Approval Recommended
- Rejection Recommended

Roger Schwab  
District Engineer

6/24/10

Date

**Comments:**

- Approval Recommended
- Rejection Recommended

Federal Highway Administration  
Required for FHWA Full Oversight Projects

Date

**Comments:**

Agree with District and RE comments

- Approval
- Rejection

David D. Cobas

7-8-10

State Construction and Materials Engineer Baw

Date

## Notes and Observations Regarding VECP

1. The profile grade on the EBL from  $\pm$  Sta. 137+50 to Sta. 142+50 will need to be adjusted. The amount of change varies from a minus 0.20' to a plus 0.89'. This range of adjustment is required to match elevations so that the existing pavement may be reused.
2. The profile elevation will have to accommodate the proposed Temporary Barrier Rail and the suggested grade separation structure from Sta. 147+50 to Sta. 150+77.
3. Retaining wall A7355 may need to be raised approximately 1'-0" to match the existing paving. This may be accomplished by merely raising the proposed leveling pad elevation. For reference the location that dictates this suggested modification is M.L. Sta. 140+08 = Ramp 5 Sta. 141+54.98. At this point the wall shall be raised to allow for the proper "free board" along Ramp 5.
4. Josh Kincaid has analyzed the width of Ramp 5 as it pertains to allowable temporary lane widths. Utilizing Ramp 5 as the temporary widening removes the old restricted width of 41'-10½" and replaces this with 52'-0" of pavement available for temporary traffic control.
5. The current design directs traffic onto the shoulder of the EB lanes of the Expressway. This mandates the construction of stronger shoulder paving from Sta. 137+50 to Sta. 150+77. This will not be necessary under the VECP.
6. The thickness/strength of the existing shoulder and median paving must be evaluated by core drilling prior to any final decision on traffic pattern changes.
7. It is advisable to inspect the frames, grates and walls of the existing drainage inlets at  $\pm$ Sta. 150+50. It may become necessary to direct traffic across one or both of these inlets.
8. The existing median at  $\pm$  Sta. 168+00 will require leveling and strengthening under the current traffic control design. This will not be necessary under the VECP.

**CAMDEN COUNTY - CALL #501**

ITEM	ITEM CODE	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	BID AMOUNT
<b>SECTION 0001 ROADWAY ITEMS - J5P0309A</b>						
0020	2022010	REM OF IMPROVEMENTS	1.00	LS	(20,000.00)	(20,000.00)
0030	2037075	COMPACTING IN CUT	(6.00)	STA	600.00	(3,600.00)
0040	2039901	COMPACTING EMBANKMENT	1.00	LS	(1,000.00)	(1,000.00)
0050	2039901	UNCLASSIFIED EXCAVATION	(2.50)	LS	5,000.00	(12,500.00)
0110	3030610A	PLACING ROCK BASE (18 IN. THICK)	(7,000.00)	SQYD	1.95	(13,650.00)
0120	3040143	TYPE 1 AGGREGATE FOR BASE (4 IN. T	(833.00)	SQYD	4.23	(3,523.59)
0140	4013000	BIT PVMT MIXTURE PG64-22 (BAS	(388.01)	TONS	49.55	(19,225.90)
0170	4020520	BIT PVMT MIXTURE PG64-22 (SUR	(16.10)	TONS	230.51	(3,711.21)
0600	6172001	CONC TRAFFIC BARRIER, TYPE B (MOD	750.00	LF	80.25	60,187.50
0640	6175010	RELOCATING TEMP CONC TRAFFIC BAR	1,500.00	LF	10.00	15,000.00
0880	6274000	SURVEYING AND STAKING	1.00	LS	2,500.00	2,500.00
0940	7250430	30 IN. PIPE CULVERT GROUP C	88.00	LF	54.00	4,752.00
0980	7261330	30 IN. CLASS III REINFORCED CONC PIP	126.00	LF	55.00	6,930.00
<b>SECTION 0001 TOTAL</b>						<b>12,158.80</b>
<b>SECTION 0002 ALT. PVMT A ITEMS - J5P0309A (ALT GRP AA1) - ACC OPT.</b>						
1270	4030402	9 IN. ASPH CONC PAVE SP125C	(4,682.00)	SQYD	29.96	(140,272.72)
<b>SECTION 0002 TOTAL</b>						<b>(140,272.72)</b>
<b>TOTALS:</b>						<b>(\$128,113.92)</b>

# VALUE ENGINEERING CHECK SHEET

## *TYPE OF WORK*

(Check one that applies)

- Bridge/Structure/Footings
- Drainage Structures (RCP, RCB, CMP's, ect.)
- TCP/MOT
- Paving (PCCP, ect.)
- Grading/MSE Walls
- Signal/Lighting/ITS
- Misc. \_\_\_\_\_

## *SUMMARY OF PROPOSAL*

(If needed, condense summary to a couple of lines)

The contractor proposed to re-design the maintenance of traffic that would eliminate some items and utilize some in place pavement. MoDOT and the contractor met to discuss this proposal and mutually agreed not to pursue this VE. The design cost & time, construction cost and feasibility outweighed potential benefits.

## *SCANNING OF DOCUMENT*

If the proposal is large, please mark or make note, which pages need to be scanned into the database. If there are special instructions, make note of them here.

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