

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE: MSL-0004-00(688) Paulding
P. I. No.: 0004688
East Hiram Parkway

OFFICE: Engineering Services

DATE: April 11, 2008

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

TO: Brent Story, P.E. State Road and Airport Design 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
RIGHT OF WAY				
A-1	Reduce Median width to 8' from 20'	\$1,140,000	No	The median width would flare in and out at median openings. There would be only 5,630' out of 13,836' of the median that would be suitable for a reduction in width and the County would like to retain the 20' median width.
A-2	Use 11' travel lanes	\$588,000	Yes	This should be done.
A-4	Modify profile to reduce the amount of Borrow Excavation required	\$929,400	Yes	This should be done.

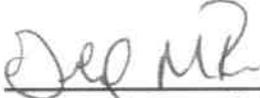
ALT No.	Description	Savings PW & LCC	Implement	Comments
BRIDGE NO. 1				
B-1	Reconfigure Span 1 and Span 2 on Bridge No. 1 to lower profile.	\$501,000	No	Based on existing hydraulic conditions at this bridge site, the span that was proposed in the plans is the minimum length span that would span the meandering flow of Mill Creek.
B-4	Narrow lanes on Bridge No. 1 to 11'.	\$310,000	Yes	This should be done.
ASPHALT PAVEMENT				
C-1	Build two lanes section instead of a four lane section. The Right of Way width will be based on the four lane section.	\$6,780,000	No	Based on Capacity Analysis for a two lane facility there would be several intersections that would have an unacceptable Level of Service (LOS) and would not provide the desired capacity.
C-1.1	Build a three lane section with a striped median. The Right of Way width will be based on the four lane section.	\$3,200,000	No	Based on Capacity Analysis for a two lane facility there would be several intersections that would have an unacceptable Level of Service (LOS) and would not provide the desired capacity.
C-3	Reduce the paved shoulder width in the rural section to 4' from 6.5'.	\$85,000	No	It is recommended to retain the 6.5' paved shoulder to accommodate bicycles on the shoulder.
BRIDGE NO. 3				
E-1	Reduce Span 2 and add a crash wall to accommodate the future 3 rd track on Bridge No. 3.	\$58,000	No	The Railroad has already approved the Bridge Layout and any changes would delay the project's schedule.
E-2	Use Vertical Abutments with MSE Walls on Bridge No. 3.	\$417,000	No	Based on a more detailed cost estimate provided by the Design Consultant, the MSE Wall option is more expensive at this location due to the heights of the required MSE Walls.

ALT No.	Description	Savings PW & LCC	Implement	Comments
BRIDGE NO. 3 - continued				
E-3	Use Urban Section on Bridge No. 3.	\$188,000	No	The bridge is in a rural area that has a rural typical section
E-4	Narrow lanes on Bridge No. 3 to 11'.	\$85,000	Yes	This should be done.
BRIDGE NO. 2				
G-1	Use 2 a span bridge instead of a single span bridge on Bridge No. 2.	\$241,000	No	Based on a more detailed cost estimate provided by the Design Consultant, the 2 span configuration is more expensive than a single span configuration at this location.
G-2	Narrow lanes on Bridge No. 2 to 11'.	\$35,000	Yes	This should be done.
G-2.1	Narrow lanes on Bridge No. 2 to 11' and use two spans.	\$266,000	No	Based on a more detailed cost estimate provided by the Design Consultant, the 2 span configuration is more expensive than a single span configuration at this location.

A meeting was held on February 22, 2008 to discuss the above recommendations. Jeff VanDyke with Carter Burgess, Inc., Steve Tiedmann with JB Trimble, Brent Story, Jason McCook, Eugene Hopkins, and Scott Maclean with Road Design, and Brian Summers, Ron Wishon and Lisa Myers with Engineering Services were in attendance.

Additional information was provided by the Design Consultant on April 10, 2008.

The results above reflect the consensus of those in attendance and those who provided input.

Approved:  Date: 01/22/08
Gerald M. Ross, P. E., Chief Engineer

BKS/REW

Attachments

MSL-0004-00(688) Paulding

P.I. No. 0004688

VE Study Implementation

Page 4.

c: Gus Shanine
Todd Long
Paul Liles
Bill Ingalsbe
Bill Duvall
Joe King
James Magnus
Jason McCook
Eugene Hopkins
Scott Maclean
Larry Bowman
Kenny Beckworth
Ken Werho
Nabil Raad
Lisa Myers

Summers, Brian

From: Hopkins, Eugene
Sent: Tuesday, June 17, 2008 1:16 PM
To: Summers, Brian
Cc: MacLean, Scott; Story, Brent; jeff.j.vandyke@jacobs.com; McCook, Jason
Subject: VE Implementation East Hiram Parkway in Paulding County PI 0004688

Brian,

It is my understanding that Scott Green with Paulding County has discussed the proposed VE Implementation for this project with Gerald Ross and that Gerald has agreed to approve the VE implementation as originally proposed. The County is still interested is looking for ways to save money and will continue to look at/consider some form of a reduced median width to help save money but not to extent recommended by the VE study.

Eugene Hopkins, P.E.

Design Group Manager
Georgia Department of Transportation
Office of Road Design
phone: (404) 631-1642
mobile: (404) 788-8311
ehopkins@dot.ga.gov

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Received 4/10/08

EAST HIRAM PARKWAY				
Potential Median Reduction				
Median Opening	Station	Distance (ft)	Length of 20' Median Suitable for Reduction (ft)	Percentage Reduction
SR 92	10+00			
		3,551	880	25%
Arnold Lane	45+51			
		5,369	3,650	68%
Angham	99+20			
		2,652	1,100	41%
Rosedale	125+72			
		1,478	0	0%
Apartment Ent	140+50			
		786	0	0%
US 278 / SR 6	148+36			
		13,836	5,630	41%

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

FILE: MSL-0004-00(688) Paulding County
East Hiram Parkway
PI No. 0004688

OFFICE: Road and Airport Design

DATE: January 14, 2008

FROM: Brent Story, P.E., State Road and Airport Design Engineer

TO: Brian Summers, P.E., Project Review Engineer
Attn: Lisa Myers

Subject: Responses to Value Engineering Study

Reference is made to the recommendations that were contained in the Value Engineering Report dated December 12, 2007 for the above referenced project. Our responses and recommendations are as follows.

A-1 Reduce median to 8 feet throughout the project

This idea is to reduce the width of the median to 8 feet from the 20 feet proposed. The median would flair out at the intersections where turn lanes are required.

Response:

The functional classification of the proposed East Hiram Parkway is "Urban Minor Arterial." The GDOT Design Policy Manual (as revised May 21, 2007), Chapter 6.8.2 addresses the issue of median widths on Arterial (Non-GRIP) roadways with design speeds less than or equal to 45 mph. This policy requires a 20-foot raised median on such roadways with a Design Year A.D.T. above 24,000 vpd. The policy further requires that projects that do not meet this traffic threshold be designed to incorporate such a median in the future. Building an 8-foot raised median would violate this policy and require a design variance. The wider 20-foot median also enhances safety by separating opposing traffic lanes further apart than the recommended 8-foot raised median. After reviewing the issue, the design team and Paulding County DOT (PCDOT) believe that obtaining such a variance is not appropriate for a new facility project. *Approval of VE Recommendation No. A-1 is not recommended.*

A-2 Reduce the width of the travel lanes to 11 feet from the 12 feet proposed.

The VE team felt this was reasonable given the traffic projections, the 45 mph speed limit and the number of signalized intersections proposed for this project. Savings shown is for road pavement only, the bridge savings are tabulated separately.

Response:

The standard lane width for arterial roadways is 12 feet, as specified in Chapter 6.2.1 of the GDOT Design Policy Manual (rev. May 21, 2007). Varying for the policy would require a variance. After reviewing the issue, the design team and PCDOT agree that 11 feet lanes would be an appropriate cost saving measure. *Approval of VE Recommendation No. A-2 is recommended.*

A-4 Optimize the profile.

The VE team was informed at the presentation this project is in a borrow situation on the order of 500,000 CY. Four areas of the project were evaluated resulting in a reduction in fill height and corresponding right of way reduction resulting in the savings shown below.

Response:

The design team concurs with this assessment and will adjust the proposed profile as recommended in the VE Study Report. *Approval of VE Recommendation No. A-4 is recommended.*

B-1 Reconfigure span 1 and 2 of Bridge #1

The VE team investigated this in an attempt to lower the profile and to save grading and R/W costs. However, it was determined this is not the critical elevation and therefore does not control the critical profile. Span 2 has an existing 140 foot span resulting in large beam sizes. Reducing this to 2-70 foot spans resulted in substantial savings.

Response:

The design team has re-reviewed the hydraulic conditions of this bridge. The Mill Creek channel meanders significantly in the area of the proposed bridge. A section of the channel flows parallel to the construction centerline. The proposed 140 ft long span 2 is the minimum length span that clears this area of longitudinal flow. If this span were split into two, a footing would be located in the channel and/or on the channel bank and this is not recommended. GDOT typically wants to see a 10 ft minimum setback from a concrete bent to the channel bank. Placing the footing in the channel would also create additional environmental impacts. A large straddle bent was considered to span the channel. This option proved to be expensive thus, eliminating any savings by adding the additional bent. *Approval of VE Recommendation No. B-1 is not recommended.*

B-4 Narrow lanes on Bridge #1 to 11 feet from 12 feet proposed in the original design.

Response:

After reviewing the issue, the design team and PCDOT agree that 11 feet lanes would be an appropriate cost saving measure. *Approval of VE Recommendation No. B-4 is recommended.*

C-1 Build two lanes on one side only.

This concept is to build a two lane rural section without a median along the original west bound alignment. This concept will tie into the original concept 4 lane urban section. Right of way will be purchased for the 4 lane build out as in the original concept. This idea was evaluated because of the marginal traffic projections justifying the 4 lane section. If needed, 10-15 years in the future, the project could be expanded at that time. The capital expense could perhaps be totally or partially funded by developers if that was driving the need to expand.

Response:

The design team re-reviewed the level of service (LOS) for the project. The team re-ran the intersection LOS for this proposal. The level of service on a new two-lane facility would be worse than on a new four-lane facility. See table below. In addition, the two lane facility would not provide the desired capacity to relieve some of the congestion on the SR 92 at US 278 intersection. Providing an alternate route for the SR 92 / US 278 intersection is part of the Need & Purpose of this project. *Approval of VE Recommendation No. C-1 is not recommended.*

East Hiram Parkway Intersection	4-Lane Roadway				2-Lane Roadway			
	AM		PM		AM		PM	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
US 278	C	30	C	22	D	43	C	32
Rosedale Lane	B	13	B	12	C	29	C	26
Angham Road	B	16	B	14	D	46	C	30
Arnold Lane	B	13	B	11	F	86	C	20
SR 92	C	24	C	28	C	33	D	35

C-1.1 Build three lanes on one side only and use a striped median

This is a modification of C-1 where an additional lane is included to aid in the ease of future maintenance of traffic and expansion should it become necessary. It would be shown as a striped median at this time but could also serve as left turn lanes at intersections.

Response:

Similar to a two-lane section discussed in section C-1, a three lane section with a striped-out median would not the desired capacity for the project. *Approval of VE Recommendation No. C-1.1 is not recommended.*

C-3 Reduce the paved portion of the shoulder width in the rural section

The typical section shows an outside shoulder consisting of a paved 6.5 foot shoulder followed by a 3.5 foot section to the grade break. The proposed change shows a 4.0 foot paved length with a 6.0 foot graded aggregate base section to the break. This shoulder section matches the existing section at Bill Carruth Parkway and provides adequate room for vehicles to access the shoulder in case of an emergency as well as a paved surface for bicycles to ride on.

Response:

The GDOT Design Policy Manual requires a 6.5-foot outside paved shoulder for four-lane sections, as specified in Table 6.3, "Design Standards for Arterial Roadways." The proposed 6.5-foot section allows for rumble strips to be manually ground into the shoulder pavement to alert motorists and enhance safety. A 4-foot shoulder does not provide adequate space to allow for both the rumble strips and a smooth surface for bicyclists. After discussing the issue, the design team and PCDOT agree that a 6.5-foot shoulder better enhances safety and serves bicyclists on a new transportation facility. *Approval of VE Recommendation No. C-3 is not recommended.*

E-1 For Bridge #3, reduce span 2 and add a crash wall to accommodate the future 3rd track

This concept shows a savings with the alternate design concept, but this could be increased substantially if the potential for a third future track could be eliminated. This is highly unusual when only one track exists and perhaps checking again with the railroad would be appropriate.

Response:

The bridge portion of the design team has received approval from the railroad for the current bridge configuration in March 2006. The railroad requires the third track and construction of adjacent pier outside the right-of-way and without crash walls. Crash walls are acceptable to the railroad in cases where setting bents beyond the clear zone is not practical. In addition, the design team discussed this issue with Mr. Paul Liles, GDOT State Bridge Engineer. Mr. Liles concurred that this alternative is not in accordance with railroad design policy and would not be accepted by the railroad. See attached railroad correspondence. *Approval of VE Recommendation No. E-1 is not recommended.*

E-2 Use vertical abutments (MSE walls) and eliminate the end spans of Bridge #3

This concept is to use MSE walls and eliminate the end spans thus shortening the bridge length substantially. The pavement section and MSE walls are less costly than the bridge unit costs.

Response:

The design team has reviewed this proposal and prepared a detailed construction cost estimate for each alternative. The cost of additional roadway and wall installation is more expensive than the 3-span bridge. See attached cost estimate. *Approval of VE Recommendation No. E-2 is not recommended.*

E-3 Use the Urban Section on Bridge #3

The urban section includes a sidewalk on the bridge and appears to be reasonable for the Angham Road area. This results in a narrower bridge and thus savings in construction costs.

Response:

The proposed facility does not have curb and gutter or sidewalk in the area south of Rosedale Lane where Bridge #3 is located. A sidewalk on the bridge does match the proposed rural outside shoulders and does not seem appropriate at his location. The design team recommends retaining the rural bridge shoulders as shown. *Approval of VE Recommendation No. E-3 is not recommended.*

E-4 Reduce lane width on Bridge #3 to 11 feet

Refer to the discussion under A-2

Response:

After reviewing the issue, the design team and PCDOT agree that 11 feet lanes would be an appropriate cost saving measure. *Approval of VE Recommendation No. E-4 is recommended.*

G-1 Use 2 span bridge in lieu of single span for Bridge # 2

Two 40 foot spans allow for the use of T beams that are more economical and much shallower allowing for a lower profile.

Response:

The design team has previously examined this option and prepared a detailed estimate of the two alternatives. This analysis showed that the two-span arrangement is more expensive than the single-span. See attached cost estimate. *Approval of VE Recommendation No. G-1 is not recommended.*

G-2 Use 11 foot lanes on Bridge #2

Refer to the discussion under A-2

Response:

After reviewing the issue, the design team and PCDOT agree that 11 feet lanes would be an appropriate cost saving measure. *Approval of VE Recommendation No. G-2 is recommended.*

G-2.1 Use a two span bridge and 11 foot lanes

This idea combines the previous two for Bridge #2.

Response:

As discussed above, a single-span bridge is less expensive. However, the design team and PCDOT agree that 11 foot lanes would be an appropriate cost saving measure.

Approval of VE Recommendation No. G-2. is partially recommended.

Please contact Eugene Hopkins or Scott MacLean at 404-656-5449 if you have any additional questions or require any additional information.

BES:WEH:sm

Attachments

BRIDGE EAST HIRAM PKWY OVER NS RAILROAD
 COUNTY PAULDING
 P I NO 0004688
 PROJECT MLS-0004-00(688)



J.B. TRIMBLE, INC.
 JOB NO 31-3038
 DESIGNED BY SHG
 CHECKED BY GLE

3-Span Bridge Option

ITEM NUMBER	ITEM DESCRIPTION	UNITS	UNIT PRICE	QUANTITY	COST
211-0200	BRIDGE EXCAVATION / GRADE SEPARATION	CY	\$30.52	248	\$7,575.73
441-0004	CONC SLOPE PAV 4 IN	SY	\$45.27	1361	\$61,850.32
500-0100	GROOVED CONCRETE	SY	\$4.09	1804	\$7,581.96
500-1006	SUPERSTR CONCRETE CL AA BR NO -	LS	\$883.77	650	\$574,273.25
500-2100	CONCRETE BARRIER	LF	\$43.88	375	\$16,467.61
500-3101	CLASS A CONCRETE	CY	\$647.10	320	\$213,171.11
507-9002	PSC BEAMS, AASHTO TYPE II, BR NO	LF	\$127.06	1013	\$131,249.61
507-9030	PSC BEAMS, AASHTO, BULB TEE, 54 IN, BR NO -	LF	\$181.52	871	\$158,187.11
511-1000	BAR REINF STEEL	LB	\$0.91	62903	\$57,242.04
511-3000	SUPERSTR REINF STEEL BR NO -	LS	\$0.94	163050	\$153,267.00
520-1147	PILING IN PLACE, STEEL H, HP 14 X 73	LF	\$61.88	1450	\$89,720.00
520-4147	LOAD TEST, STEEL H, HP 14 X 73	EA	\$0.89	1	\$0.89
Total Cost =					\$1,470,592.73 = \$83 / SQ FT

MSE Wall Option

ITEM NUMBER	ITEM DESCRIPTION	UNITS	UNIT PRICE	QUANTITY	COST
500-0100	GROOVED CONCRETE	SY	\$4.09	908	\$3,713.52
500-1006	SUPERSTR CONCRETE CL AA BR NO	LS	\$883.77	350	\$314,022.25
500-2100	CONCRETE BARRIER	LF	\$43.88	178	\$7,811.14
500-3002	CLASS AA CONCRETE	CY	\$516.02	66	\$34,039.32
507-9030	PSC BEAMS, AASHTO, BULB TEE, 54 IN, BR NO -	LF	\$181.52	940	\$170,629.20
511-1000	BAR REINF STEEL	LB	\$0.91	9895	\$9,004.05
511-3000	SUPERSTR REINF STEEL BR NO	LS	\$0.94	89025	\$84,283.50
520-1151	PILING IN PLACE, STEEL H, HP 14 X 85	LF	\$74.60	1290	\$96,350.40
520-4151	LOAD TEST, STEEL H, HP 14 X 85	EA	\$1.30	1	\$1.30
Total Cost =					\$720,416 = \$83 / SQ FT
211-0200	BRIDGE EXCAVATION / GRADE SEPARATION	CY	\$30.52	919	\$28,036.68
627-1010	MSE WALL FACE, 10 - 20 FT HT WALL NO -	SF	\$55.15	5291	\$292,025.65
627-1100	COPING A, WALL NO -	LF	\$67.28	402	\$27,080.16
627-1189	ADDITIONAL MSE BACKFILL	CY	\$198.50	835	\$165,802.50
Total Cost =					\$732,924.99
206-0002	BORROW EXCAV, INCL MATL	CY	\$6.76	6997	\$47,282.94
310-5060	GR AGGR BASE CRS, 6 INCH, INCL MATL	SY	\$13.05	143	\$1,866.15
310-5100	GR AGGR BASE CRS, 10 INCH, INCL MATL	SY	\$16.33	594	\$9,700.02
402-3113	RECYCLED ASPH CONC 12.5 MM SUPERPAVE GP 1 OR 2 INCL BITUM	TN	\$68.15	54	\$3,710.70
402-3125	RECYCLED ASPH CONC 25 MM SUPERPAVE GP 1 OR 2, INCL BITUM	TN	\$64.07	116	\$7,472.22
402-3190	RECYCLED ASPH CONC 19 MM SUPERPAVE GP 1 OR 2 INCL BITUM	TN	\$65.58	70	\$4,615.30
441-6740	CONC CURB & GUTTER, 8 IN X 36 IN, TP 7	LF	\$15.27	158	\$2,412.46
Total Cost =					\$77,656
Total Cost =					\$1,530,996



Norfolk Southern Corporation
1200 Peachtree Street N.E.
Atlanta, Georgia 30309-3079
404 526-1408
Fax 404 527-2589

J. N. Carter, Jr.
Chief Engineer
Bridges and Structures

S. W. Overbey, P.E.
Engineer
Public Improvements
Phone 404 527-4549
Fax 404 527-2759

Subject: Hiram, Georgia - Paulding County's Proposed Overhead Bridge Carrying an 11' x 11' Hiram Parkway over NS MP 176.71 (to) 11' x 11' x 11' Project No. MS1-0007-006688 - Paulding County

March 2, 2006
File 117-29021 SAO

Mr. Scott Greene
Paulding County Dept. of Transportation
329 North Industrial Way
Dallas, GA 30132

Dear Mr. Greene:

Reference is made to Steve Tiedemann's letter dated July 14, 2005, and more recent e-mails concerning the above captioned project. Norfolk Southern has completed the review of the plans submitted.

Norfolk Southern management has no objection to the proposed new bridge over our right-of-way if the design provides room for two additional tracks on the south side of our existing track and the signalized Cleburne Parkway/CR 254 at grade crossing is eliminated as part of the proposed project. Our request for room for two additional tracks is to accommodate a track that is already in the planning stages due to our current operations, and for a future track. Our request that the project be designed to accommodate a total of three (3) tracks is consistent with design requirements for the recently completed West Hiram Bypass. The West Hiram Bypass was designed to accommodate a total of three (3) tracks.

Since the project will eliminate a signalized at-grade crossing, we are willing to make a recommendation to our Management that the railway make a contribution of 2% of the eligible project cost in accordance with the Federal-Aid Policy Guide. Please provide a detailed cost estimate for the bridge and approaches from touch-down to touch-down so that we can determine the magnitude of our contribution.

We plan to engage Ralph Whitehead Associates, Inc. (RWA, Inc.) assist the Railway in construction engineering and inspection services. RWA will provide on site inspection of the construction relative to the Railway's right-of-way, review of any plans (drainage, shoring, etc.) and provide coordination between Paulding County's contractor and the Railway's Director, personnel, etc.

Attached is a copy of the railroad force account estimate of \$126,000.

Mr. Scott Greene
March 2, 2006
File 117-29021 SAO
Page 2

Currently we operate 60 trains per day on this line segment at a maximum operating speed of 50 MPH.

Please revise the plans to accommodate a total of three (3) tracks and send only half-sized plans and only include the plan sheets that impact the Railroad.

If you have any questions or wish to discuss this project, please contact me at (404) 582-5588.

Sincerely,

S. A. Overbey
Engineer
Public Improvements

Cc: Jeff VanDyke, P.E.
Day Wilburn & Associates
1718 Peachtree Street NW
Suite 461
Atlanta, GA 30309

Cc: Steven Tiedemann, P.E.
Project Manager
J. B. Trimble, Inc.
6445 Powers Ferry Road
Suite 100
Atlanta, GA 30339

FORCE ACCOUNT ESTIMATE

Work to be Performed By: NORFOLK SOUTHERN RAILWAY COMPANY
For the Account of: PAULDING COUNTY DEPT. OF TRANSPORTATION
Project Description: PROF EAST HIRAM PKWY OH BR.
Location: HIRAM, GEORGIA
Project No.: MSL-0004-00(688)
Milepost: 126.7-H
Date: MARCH 2, 2006
File: 117-29021 SAO

SUMMARY

ITEM A - Preliminary Engineering	7,000
ITEM B - Construction Engineering	31,000
ITEM C - Accounting	2,000
ITEM D - Flagging Services	80,000
ITEM E - Communications Changes	0
ITEM F - Signal & Electrical Changes	0
ITEM G - Track Work	0
GRAND TOTAL	\$ 120,000

ITEM A - Preliminary Engineering

(Review plans and special provisions,
prepare estimates, etc.)

Labor:	60 Hours @ \$100 / hour=	6,000
Travel Expenses:		1,000
Services by Contract Engineer		0
		<hr/>
NET TOTAL - ITEM A		\$ 7,000

ESTIMATE OF ENGINEERING FEES

note: data input in red, all other cells protected . . . also see cell 70 for instructions
N:\PROJ\3297 (RIS 2006)\647 Hiram, GA MP 126.7-H - CEJ\Jobs\ Construction Engineering 012606GTZ_3297-647.dwg

RWA Proposal or Job Number:
Project Description/Location:
Client:
Design Assumptions:

3297-647 Client Job Number: 117-29021
Hiram, GA East Hiram Parkway over Norfolk Southern MP 126.7-H +/-
Norfolk Southern

Prepared By/Date:
Reviewed By/Date:

Const. Engr. & coordination with GDOT. Single track with provision for one future track at 15'
Shoring for foundation not known due to prel. plans so anticipate shoring review
One structure, 3-span w/conc. beams. End fills on each side track and concrete slope protection.
New location with generic piers shown. MVC 23'-0" and MHC 26'-0" min.
No access road, no rr utilities shown. No drainage changes shown. Scheduled letting assumed in 2007
GTZ 1/26/06
DJM 1/26/06

CONSTRUCTION ENGINEERING PHASE

Manhours by Classification

Direct Labor Estimate:	PRIN	SE	PDE	SFE	ADMIN			Total
Project set up and management	2				4			6
Coord. w/RR Departments & GDOT		24						24
Office Engineering:								0
Review contractor support of excavation/misc		2	16					18
Review erection procedure/plan		2	16					18
Field Engineering:								0
Preconstruction meeting				8				8
Clearing along RR R/W & End fill placement				16				16
Shoring installation 2 possible locations				32				32
Pier construction, 2 locations				24				24
Beam placement, over track				16				16
Deck placement (one location) over track				12				12
Site visits after major rain events				16				16
Clean up				16				16
Contingency visits				32				32
Final with Division Engineer				10				10
Manhour Totals:	2	28	32	182	4	0	0	248
Hourly Payroll Rate (uses lookup table):	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Overhead Multiplier (excluding fees):	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Billing Rate (excluding fees):	\$149.00	\$102.00	\$84.00	\$94.00	\$60.00	\$0.00	\$0.00	
TOTAL DL + OH:	\$298.00	\$2,856.00	\$2,688.00	\$17,108.00	\$240.00	\$0.00	\$0.00	

Direct Non-Salary Cost (DNSC) Estimate:

	UNITS	UNIT COST*	ITEM COST
Travel (mileage), per vehicle-mile, (21 trips @ 75 miles R/T)	1,575	\$0.41	\$637.88
Air Fare, per airline ticket assume 1 site meeting		\$250.00	0.00
Ground Transport, per vehicle-trip		50.00	0.00
Meals, per person per day	21	7.00	147.00
Lodging, per room-night	0	75.00	0.00
Photocopies, per copy	100	0.10	10.00
Blackline or Blueline Prints, per sheet		0.80	0.00
Bond or Velum Reproductions, per sheet		1.00	0.00
Paper Sepias, per sheet		3.00	0.00
Mylar Sepias, per sheet		10.00	0.00
Photographs, per roll (including development)		6.00	0.00
Long Distance Telephone, per call		3.00	0.00
Facsimile, per call		2.00	0.00
Overnight Postage, per package		20.00	0.00
Parking		3.00	0.00
other (describe):			0.00
other (describe):			0.00
			0.00
TOTAL DNSC:			\$795

Summary

TOTAL DL + OH:	\$23,190
FEE (cell k56):	0
TOTAL DNSC:	795
FEE (cell k58):	0
TOTAL SUBS:	0
FEE (cell k60):	0
COFC:	

Grand Total: \$23,985

printed 01/26/06 11:35 AM

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* - rates are suggested; modify as needed

Sean Garland

From: John McWhorter
Sent: Wednesday, January 02, 2008 11:20 AM
To: Sean Garland
Subject: FW: Design Alternatives - P.I. 0004688, Paulding Co. East Hiram Parkway over Mill Creek Trib., MSL-0004-00(688)

A little more background on the Mill Creek Tributary site ...

From: Beck, Susan [mailto:Susan.Beck@dot.state.ga.us]
Sent: Friday, January 27, 2006 2:17 PM
To: John McWhorter
Cc: Steve Tiedemann; Sean Garland; Robbie Frizzell; Garrick L. Edwards
Subject: RE: Design Alternatives - P.I. 0004688, Paulding Co, East Hiram Parkway over Mill Creek Trib., MSL-0004-00(688)

Hi John,
I talked to Paul about this project a few minutes ago and he is ok with the single 80 ft Type III span.

Susan T. Beck
Office of Bridge Hydraulics
(404) 656-5285
susan.beck@dot.state.ga.us

From: John McWhorter [mailto:jmcwhorter@JBTrimble.com]
Sent: Friday, January 27, 2006 10:00 AM
To: Beck, Susan
Cc: Steve Tiedemann; Sean Garland; Robbie Frizzell; Garrick L. Edwards
Subject: FW: Design Alternatives - P.I. 0004688, Paulding Co, East Hiram Parkway over Mill Creek Trib., MSL-0004-00(688)

Susan,

As requested here are the roadway plan sheets for this bridge (2 plan & 2 profile). Also included the layout. If you need additional information please let me know. Thanks for your assistance on this.

John

-----Original Message-----

From: John McWhorter
Sent: Thursday, January 26, 2006 9:08 AM
To: 'Susan.Beck@dot.state.ga.us'
Cc: Garrick L. Edwards; Robbie Frizzell; Sean Garland
Subject: FW: Design Alternatives - P.I. 0004688, Paulding Co, East Hiram Parkway over Mill Creek Trib., MSL-0004-00(688)

Susan,

This is a Paulding County project with state funds and GDOT will be doing the review. I don't know if the study will make to your desk or not but we have a question concerning the structure type. This is a new location site and we

1/9/2008

have an 80 ft long bridge proposed in a soggy area. It's currently set-up as a two-span Type I mod bridge and there is no clearly defined channel. We did detailed cost estimates for the two span bridge and an 80 ft long Type III single span bridge and the cost comes out cheaper for the longer span (See attached). Combine this with the hydraulic benefit of eliminating the intermediate bent and the additional area obtained by lowering the superstructure and pushing out the endrolls (we do have clearance), the single span bridge starts looking like the better alternative.

In the past John Tiernan was against single span bridges in general, although did he approve their use in some locations. What is your opinion on this? If you concur with the use of the single span bridge, would you please run it by the front office?

I'll follow up later with a phone call.

Thanks,

John

-----Original Message-----

From: Sean Garland

Sent: Thursday, January 26, 2006 8:39 AM

To: John McWhorter

Cc: Garrick L. Edwards

Subject: Design Alternatives - P.I. 0004688

John, here is the .pdf of the two design alternatives for East Hiram Pkwy Over Mills Creek Tributary (P.I. 0004688). If you have any questions feel free to stop by.

Sean H Garland, P.E.

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