

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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**INTERDEPARTMENT CORRESPONDENCE**

**FILE:** IMNHO-0285-01 DeKalb **OFFICE:** Engineering Services  
P.I. No.: 713300  
I-285 @ Bouldercrest Road Interchange **DATE:** April 25, 2012

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

**TO:** Bobby K. Hilliard, PE, State Program Delivery Engineer  
Attn.: Jeremy Busby, PE

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

The VE Study for the above project was held February 20-23, 2012. Corrected responses were received on April 24, 2012. 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 or Design Variance, it (DE or DV) must be requested separately.

ALT #	Description	Potential Savings /LCC	Implement	Comments
R-1.0	Use a Collector-Distributor (CD) System in lieu of braided ramps with new single combined bridges on each side of I-285.	Proposed = \$17,306,305 Actual = \$17,213,389	Yes, with modifications	This will be done. However, the design team modified this idea by making Ramp C a two-lane ramp rather than a single lane ramp as shown in the VE Study Report.
R-1.1	Use a Collector-Distributor System in lieu of braided ramps along each side of I-285 with a single combined bridge widening across South River.	\$18,746,269	No	R-1.1 will not be implemented because R-1.0 was selected instead.
R-2.0	Combine exit ramps C & E and F & G and use tight exit flyover ramps for H & D (2 bridges over the river on each side).	\$2,436,097	No	R-1.0 will not be implemented because R-1.0 was selected instead.
R-3.0	Shift new Bouldercrest bridge west and stage construction to eliminate re-alignment work on Bouldercrest Road north of Continental Way and south of I-285.	\$3,149,378	Yes	This will be done.

R-4.0	Eliminate improvements on Bouldercrest Road north of Continental Way.	\$2,506,577	Yes	This will be done.
R-6.0	Incorporate dedicated left turn lane into Industrial Drive and eliminate new connector and improvements at Sugar Creek Golf Drive.	Proposed = \$436,876 Actual = \$581,145	Yes, with modifications	This will be done. However, the Design team recommends deleting improvements on Industrial Drive beyond the radius returns for additional savings.
R-7.0	Eliminate sidewalks along Industrial Drive and Sugar Creek Golf Drive.	\$124,550	No	R-7.0 will not be implemented because R-6.0 was selected instead.
R-10.0	Realign Ramp A to intersect at Continental Way and add Loop Ramp (Ramp F revised) from Bouldercrest to I-285 WB; reduce the number of lanes on the Bouldercrest bridge replacement over I-285 to eliminate the 2 lane left turning bay.	Proposed = \$27,978 Actual = (\$44,290) Increase	Yes, with modifications	This will be done for the most part. However, the entrance ramp to I-285 WB from Bouldercrest Road SB will be retained for car and truck access from the Pilot Travel Center.
R-12.0	Reduce Ramp E from two lanes to one.	\$483,761	No	R-12.0 will not be implemented because R-1.0 was selected instead.
R-13.0	Realign Ramp C to intersect at Industrial Drive and add Loop Ramp (Ramp B revised) from Bouldercrest to I-285 EB; reduce the number of lanes on the Bouldercrest bridge replacement over I-285 to eliminate the 2 lane left turning bay.	Proposed = \$800,601 Actual = (\$621,510) Increase	No	Ramp D is a two-lane entrance ramp from I-675 which cannot taper into I-285 EB before the point shown for Ramp B to begin its merge also onto I-285 EB. The AASHTO Green Book recommends 300 feet minimum between the end of the first on-ramp and the theoretical gore for the succeeding on-ramp. To avoid this conflict, 2200' of Ramp B needs to remain to connect to I-285 as shown in the original design. The bridge over I-285 would need to be 60' longer and the wall can only be reduced by 1000' which would negate any proposed savings.
R-14.0	Eliminate the improvements along Continental Way.	Proposed = \$407,799 Actual = (\$66,428) Increase	No	Operations at the truck stop have been observed to result in queuing on Continental Way which would impact the Bouldercrest Road/Continental Way intersection. This requires widening Continental Way to a two-lane facility divided by a 14' center turning lane, so the improvements along Continental Way cannot be eliminated.

R-15.0	Limit project scope to EB I-285 intersection with Bouldercrest Road; widen existing bridge and add Whitehall Forest Connector.	\$50,425,682	No	This alternative does not address the current observed issue at the Bouldercrest Road / Continental Way intersection. It also does not address the issue of queuing on the westbound exit ramp from I-285 to Bouldercrest Road. The existing ramp is only approximately 800' in length.
R-15.1	Limit project scope to braided ramps, EB I-285 intersection with Bouldercrest Road; widen existing bridge and add Whitehall Forest Connector.	\$17,588,633	No	This alternative does not address the current observed issue at the Bouldercrest Road / Continental Way intersection. It also does not address the issue of queuing on the westbound exit ramp from I-285 to Bouldercrest Road. The existing ramp is only approximately 800' in length.

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

Approved:  Date: 4/25/12  
Gerald M. Ross, PE, Chief Engineer

LLM/MJS  
Attachments

- c: Russell McMurry
- Bobby Hilliard/Mike Haithcock/Jeremy Busby
- Paul Liles/Ben Rabun/Bill Duvall/Lyn Clements
- Funmi Adesesan
- Lee Upkins
- Ken Werho/Chris Barrow
- Melissa Harper
- Matt Sanders

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

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INTERDEPARTMENT CORRESPONDENCE

FILE IMNH0-0285-01(352), Dekalb County OFFICE Program Delivery  
PI# 713300  
I-285 @ Bouldercrest Road  
 DATE 04/02/2012  
FROM Bobby Hilliard, State Program Delivery Engineer  
TO Lisa Myers, State Project Review Engineer

SUBJECT **RESPONSE TO VALUE ENGINEERING STUDY ALTERNATIVES**

Attached are the responses for the Value Engineering Study. The Office of Program Delivery concurs with these responses.

If there are any questions please contact the Project Manager, Jeremy Busby, at (404) 631-1154.

BKH: MAH: JTB

Attachments

April 16, 2012

Mr. Jeremy Busby, P.E.  
Georgia Department of Transportation  
One Georgia Center  
600 West Peachtree Street NW  
Atlanta, Georgia 30308

**Subject: Responses to VE Findings  
I-285 at Bouldercrest Road Interchange Improvements  
DeKalb County  
Project # IMNH0-0285-01(352), P.I. No. 713300**

Dear Mr. Busby:

A Value Engineering (VE) Study was held from February 20 to February 23, 2012 for PI 713300, I-285 at Bouldercrest Road Interchange Improvements. The following report contains the responses to the VE findings.

**R-1.0 – Use a Collector-Distributor System in lieu of Braided Ramps with New Single Bridge on Each Side for an estimated cost savings of \$17,306,305.**

**Response:** Yes, we will implement the recommendation. However, we recommend making Ramp C (from the eastbound collector-distributor to Bouldercrest Road) a two-lane ramp rather than the one-lane ramp shown in R-1.0. This will improve traffic operations approaching the split by providing lane balance – the three-lane eastbound collector-distributor will split into a two-lane ramp to I-285 and a two-lane ramp to Bouldercrest Road. The middle lane will be an “either-or” lane. This additional pavement will reduce the estimated cost savings of R-1.0 by approximately \$92,916.

Pavement                      1200 SY \* 77.43 \$/SY                      =                      \$92,916

The revised total estimated cost savings of R-1.0 will now be **\$17,213,389**.

**R-1.1 – Use a Collector-Distributor System in lieu of Braided Ramps along Each Side of I-285 with a single combined bridge widening across South River for an estimated cost savings of \$18,746,269.**

**Response:** No, we will not implement the recommendation because we are implementing R-1.0. Only one of the recommendations can be implemented.

**R-2.0 – Combine Exit Ramps C&E and F&G and use right exit flyover ramps for H&D (2 bridges over the River on each side) for an estimated cost savings of \$2,436,097.**

Response: No, we will not implement the recommendation because we are implementing R-1.0. Only one of the recommendations can be implemented.

**R-3.0 – Shift new Bouldercrest Bridge West and Stage Construct; eliminate re-alignment work on Bouldercrest Road North of Continental Way and South of I-285 for an estimated cost savings of \$3,149,378.**

Response: Yes, we will implement the recommendation.

**R-4.0 – Eliminate Improvements on Bouldercrest Road North of Continental Way for an estimated cost savings of \$2,506,577.**

Response: Yes, we will implement the recommendation.

**R-6.0 – Incorporate Dedicated Left Turn Lane into Industrial Drive and Eliminate New Connector and Improvements at Sugar Creek Golf Drive for an estimated cost savings of \$436,876.**

Response: Yes, we will implement the recommendation. We also recommend only reconstructing the connection to Industrial Drive and deleting the improvements on Industrial Drive beyond the radius returns for additional savings of approximately \$136,678.

Pavement	2200 SY * 41.45 \$/SY	=	\$91,190
Sidewalk	917 SY * 23.78 \$/SY	=	\$21,806
Curb & gutter	1650 LF * 14.09 \$/LF	=	\$23,248
Striping	0.31 LM * 1,400 \$/LM	=	\$ 434
	Total	=	\$136,678

South of Industrial Drive we recommend removing the proposed raised median and associated curb and gutter for additional savings of approximately \$7591.

Concrete median	100 SY * 33.64 \$/SY	=	\$ 3364
Curb & gutter	300 LF * 14.09 \$/LF	=	\$ 4227
	Total	=	\$ 7591

The revised total estimated cost savings of R-6.0 will now be **\$581,145**.

**R-7.0 – Eliminate Sidewalks along Industrial Drive and Sugar Creek Golf Drive for an estimated cost savings of \$124,550.**

Response: No, we will not implement the recommendation. By reducing the proposed work on Industrial Drive in R-6.0, this recommendation is included in R-6.0.

**R-10.0 - Realign Ramp "A" to intersect at Continental Way and add Loop Ramp (Ramp F revised) from Bouldercrest to I-285 WB. Reduce the number of lanes on the Bouldercrest bridge replacement over I-285 to eliminate the 2 lane left turn bay for an estimated cost savings of \$27,978.**

Response: Yes, we will implement the recommendation. However, the VE recommendation shows the elimination of the entrance ramp from Bouldercrest Road southbound to I-285 westbound for a savings of \$72,268. This ramp is needed for car and truck access from the Pilot Travel Center to I-285 westbound. We recommend modifying the proposed loop ramp to only take vehicles from Bouldercrest Road northbound to I-285 westbound. We also recommend allowing for left-turns (and right-turns) from Continental Way to Bouldercrest Road, but not allowing for through movements across to the beginning of the proposed loop ramp. The Pilot Travel Center will lose direct access to Bouldercrest Road due to the proximity to the interchange in both the original concept and with this recommendation implemented. No change to the right of way required on the west side of Bouldercrest Road. The additional right of way in this recommendation is associated with adding the loop ramp in the northeast quadrant and shifting proposed Ramp A.

With the entrance ramp put back in, the revised total estimated cost savings of R-10.0 will now instead be an increase of **\$44,290** (\$27,978 - \$72,268).

**R-12.0 – Reduce Ramp "E" from 2 Lanes to 1 for an estimated cost savings of \$483,761.**

Response: No. This recommendation is included in R-1.0.

**R-13.0 – Realign Ramp "C" to intersect at Industrial Drive and add Loop Ramp (Ramp B revised) from Bouldercrest to I-285 EB. Reduce the number of lanes on the Bouldercrest bridge replacement over I-285 to eliminate the 2-lane left turn bay for an estimated cost savings of \$800,601.**

Response: No, we will not implement the recommendation. Ramp D is a two-lane entrance ramp that will not have tapered into I-285 eastbound by the point shown in the VE study for Ramp B to begin its merge to I-285 eastbound. AASHTO Green Book recommends a minimum of 300' between the end of the taper for the first on-ramp and the theoretical gore for the succeeding on-ramp. So Ramp B will need to connect to I-285 as shown in the original concept. This will cause Ramp B to pass underneath Bouldercrest Road farther from the edge of I-285 than shown in the recommendation. The 2200 LF of Ramp B deleted in the Value Engineering calculations (page 101) must remain. The Bouldercrest Road over I-285 bridge would need to be approximately 60' longer (negating the savings on the width) and the retaining wall would only be reduced by 1000' rather than completely eliminated. The southbound Bouldercrest Road access to Industrial Drive has been addressed in R-6.0 above.

To the cost savings shown in the VE, add back in:

Ramp B	2200 SY * 77.43 \$/SY	=	\$492,111
Bridge	6000 SF * 95.00 \$/SY	=	\$570,000
Retaining wall	9000 SF * 40.00 \$/SF	=	<u>\$360,000</u>

Total = \$1,422,111

The revised total estimated cost savings of R-13.0 will now be instead an increase of **\$621,510** (\$800,601 - \$1,422,111).

**R-14.0 – Eliminate Improvements on Continental Way for an estimated cost savings of \$407,799.**

Response: No, we will not implement the recommendation. Operations at the truck stop have been observed to result in queuing on Continental Way which can impact the Bouldercrest Road / Continental Way intersection. Our recommendation is to widen Continental Way to a three-lane roadway (one lane in each direction with a 14' center turn lane). The existing pavement would remain but would need to be overlaid with 1-1/2" asphalt surface course. The existing curb and gutter along the south side of Continental Way would remain. We recommend rebuilding the sidewalk along the south side of Continental Way but not building the sidewalk along the north side of Continental Way shown in the original concept. The required right of way does not change from the original concept.

Pavement	1867 SY * 41.45 \$/SY	=	\$ 77,387
Concrete median	133 SY * 33.64 \$/SY	=	\$ 4,474
Pavement (exist)	3200 SY * 41.45 \$/SY	=	(\$132,640)
Asphalt overlay	3200 SY * 5.35 \$/SY	=	\$ 17,120
Sidewalk (north)	667 SY * 23.78 \$/SY	=	(\$ 15,861)
Curb & gutter (south)	1200 LF * 14.09 \$/LF	=	<u>(\$ 16,908)</u>
	Total	=	(\$ 66,428)

The revised total estimated cost increase of R-14.0 will now be **\$66,428**.

**R-15.0 – Limit Project Scope to Eastbound I-285 Intersection with Bouldercrest Road. Widen Existing Bridge and Add Whitehall Forest Connector for an estimated cost savings of \$50,425,682.**

Response: No, we will not implement the recommendation. This recommendation does not address observed issue at the Bouldercrest Road at Continental Way intersection (discussed in R-14.0). Also does not address previously observed issue of queuing on the westbound exit ramp from I-285 to Bouldercrest Road. The existing ramp is only approximately 800' in length.

**R-15.1 – Limit Project Scope to Braided Ramps, Eastbound I-285 Intersection with Bouldercrest Road, Widen Existing Bridge and Add Whitehall Forest Connector for an estimated cost savings of \$17,588,633.**

Response: No, we will not implement the recommendation. This recommendation does not address observed issue at the Bouldercrest Road at Continental Way intersection (discussed in R-

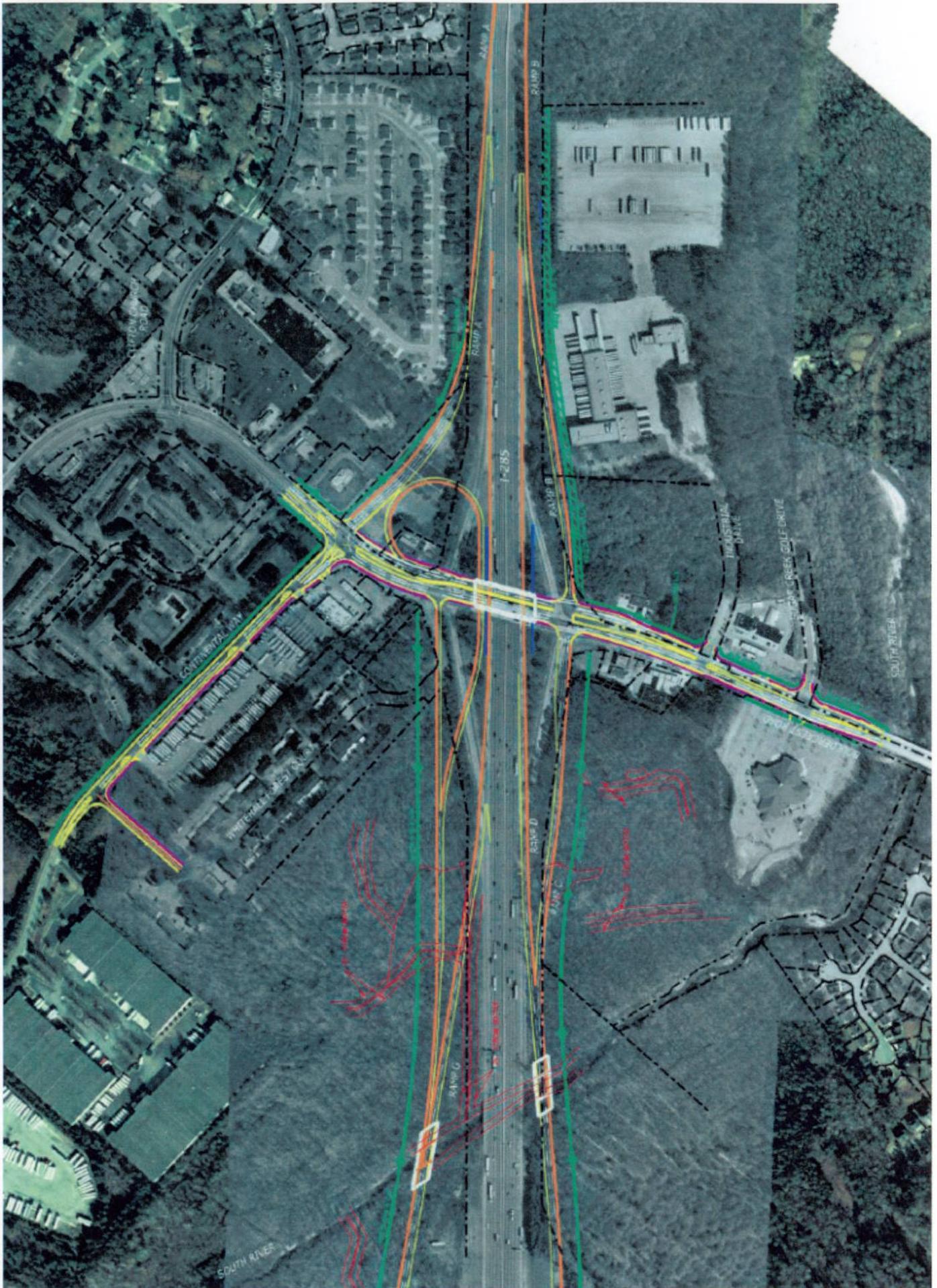
14.0). Also does not address previously observed issue of queuing on the westbound exit ramp from I-285 to Bouldercrest Road. The existing ramp is only approximately 800' in length.

Sincerely,

**Parsons Brinckerhoff**

A handwritten signature in black ink, appearing to read "R. R. Moses". The signature is written in a cursive, somewhat stylized font.

Robert R. Moses, PE  
Project Manager





PRECONSTRUCTION STATUS REPORT FOR PI:713300-

**PROJ ID:** 713300-  
**COUNTY:** DeKalb  
**LENGTH (MI):** 2.93  
**PROJ NO.:** IMNH0-0285-01(352)  
**PROJ MGR:** Busby, Jeremy  
**AOHD Initials:** MAH  
**OFFICE:** Program Delivery  
**CONSULTANT:** Consultant Design (DOT contract)  
**SPONSOR:** GDOT  
**DESIGN FIRM:** Parsons, Brinckerhoff, Quade & Douglas, Inc.

**MGMT LET DATE:**  
**MGMT ROW DATE:**  
**BASELINE LET DATE:**  
**SCHED LET DATE:**  
**WHO LETS?:** GDOT Let  
**LET WITH:**

**PRIORITY CODE:**  
**DOT DIST:** 7  
**CONG. DIST:** 4  
**BIKE:** Y  
**MEASURE:** E  
**NEEDS SCORE:** 04  
**BRIDGE SUFF:** 89.48

BASE START	BASE FINISH	LATE START	LATE FINISH	TASKS	ACTUAL START	ACTUAL FINISH	%
5/9/2011	3/15/2012		6/21/2012	Concept Development	7/14/1999	9/13/2001	100
	6/22/2011			Concept Meeting	9/19/2000	9/19/2000	100
				PM Submit Concept Report	6/16/2001	6/17/2001	100
				Concept Report Review and Comments	6/15/2001	7/5/2001	100
				Management Concept Approval Complete	7/19/2001	9/13/2001	100
				Revise or Re-validate Approved Concept	2/8/2011		25
				Value Engineering Study	11/14/2011	4/25/2012	100
				Public Information Open House Held	2/19/2002	2/19/2002	100
				Environmental Approval	2/28/2011		7
10/10/2014	12/4/2014	11/21/2014		Pub Hear Held/Comm Resp (EA/FONSI, GEPA)			0

**PROGRAMMED FUNDS**

Activity	Approved	Proposed	Cost	Fund	Status	Date Auth
PE	1999	1999	4,112,000.00	Q01	AUTHORIZED	8/10/1998
ROW	2016	2016	27,858,166.83	L010	PRECST	
CST	2018	2019	39,939,998.33	L010	PRECST	

**STIP AMOUNTS**

Activity	Cost Estimate Amount	Date	Activity	Cost	Fund
PE	\$4,112,000.00	6/22/2011	PE	0.00	Q01
ROW	\$25,232,000.00	6/22/2011	ROW	0.00	L010
CST	\$34,088,404.00	6/22/2011	CST	0.00	L010

**PDD:** [01R] W/O FOR CONCEPT. NON-AQE. 6/27/00. W752930. FHWA opposed to concept. 3/10/04.

**Bridge:** DLC 11/7/11  
**Design:** PBOD: IMR, Rev Concept, Environ Studies  
**EIS:** CE7(NotAppvd)\No Scheduled dates\Adesesan\2.01.12  
**LGPA:** DEKALB SGN DO PUB UTL/REF PRIVATE UTL 6-6-03\RESCISSION LETTER SENT TO DEKALB 3-7-08.  
**Planning:** Work Zone Safety: project considered significant; Transportation Management Plan (TMP) required  
**Programming:** PR2/PE=10-14-98#1 2-02#2 3-04\CHANGED TO EXEMPT - NOT ON FHWA LIST 12-20-2010\EXEMPT CONFIRMED BY FHWA 1-26-2011  
**Traffic Op:** SEND PPR PLANS FOR REVIEW 9/30/05\$?  
**UST:** MC  
**Utility:** WW: Need Plan 07/05/2011;OCD SUE  
**EMG:** FLY 6772 for Mapping  
**Engr Services:** VE Impl\Letter Approved 4/25/12

**District Comments**

P.L.M. HELD 2-19-02. FHWA DOES NOT LIKE INTERCHANGE CONFIG. AS SUBMITTED IN CONCEPT. (3/12/03) FHWA HAS REJECTED FINAL CONCEPT. (7/8/03) PROCESSING RESPONSES TO FHWA REGARDING CONCEPT. (3/10/04) DESIGN AWAITS DIRECTION, HOV STUDY.

[JTB 4-19-12] moving on full schedule. footprint greatly reduced after VE study

**Prel. Parcel CT:** 35  
**Under Review:** Total Parcel in ROW System:  
**Released:** Options - Pending:  
 Condemnations- Pend:

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

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

**DEEDS CT:**