

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE P. I. No. 0008415, Fulton County **OFFICE** Preconstruction
CSNHS-0008-00(415)
SR 400/Hammond Drive Interchange
Design-Build **DATE** July 11, 2008

FROM  Genetha Rice-Singleton, Assistant Director of Preconstruction

TO SEE DISTRIBUTION

SUBJECT APPROVED PROJECT CONCEPT REPORT

Attached for your files is the approval for subject project.

Attachment

DISTRIBUTION:

Brian Summers
Glenn Bowman
Ken Thompson
Michael Henry
Keith Golden
Bryant Poole
Paul Liles
Ben Buchan
Mike Lobdell
BOARD MEMBER

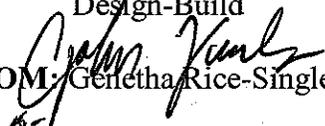
**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENTAL CORRESPONDENCE

FILE: P.I. No. 0008415, Fulton County
CSNHS-0008-00(415)
SR 400/Hammond Drive Interchange -
Design-Build

OFFICE: Preconstruction

DATE: February 27, 2008

FROM:  Genetha Rice-Singleton, Assistant Director of Preconstruction

TO: Gerald M. Ross, P.E., Chief Engineer

SUBJECT: PROJECT CONCEPT REPORT

This project consists of constructing a half-diamond interchange oriented to the north at Hammond Drive with GA 400. This project is an interim project to GDOT project NH-056-1(52). P.I. No. 721850-, Fulton County which, includes the construction of a half diamond interchange at Hammond Drive, auxiliary lanes on GA 400, northbound and southbound (two lane) collector-distributor roadways on GA 400 from I-285 to Spalding Drive and the reconstruction of Abernathy Road Interchange to a single point urban interchange.

The need exists to improve safety, operations and mobility for traffic in the Georgia (GA) 400 corridor to accommodate the growing residential population and employment generators in the Perimeter Center area of Fulton and DeKalb counties. The purpose of this proposed project is to provide additional capacity to enter and exit GA 400 to accommodate the existing and projected volume of trips needing access to the GA 400 corridor. Currently the Abernathy Road interchange is the only access point on GA 400 for both local and regional traffic into and out of the Perimeter Center area, which leads to congestion at the interchange as well as the roadway network serving it. Currently, peak hour traffic conditions at the ramp intersections can cause excessive queuing to occur, extending back into GA 400. The results of the intersection level of service analysis demonstrate that with the construction of the Hammond Drive Interchange, the LOS at the majority of the studied intersections would improve. Traffic congestion on Abernathy Road would be reduced and the diverted traffic would not negatively impact the traffic on Hammond Drive.

The project would include an additional 12' auxiliary lane on GA 400 northbound and southbound from the Hammond Drive north-facing ramps. The project would replace the existing bridge over GA 400 and widen to a six lane curb and gutter facility with dual left turn lanes and a right turn lane at its intersection at the GA 400 northbound on-ramps. Sidewalks (5' wide) would be constructed on both sides of Hammond Drive the entire length of the project. The proposed bridge would be designed to span the future managed lanes, future additional SOV lanes, and future collector-distributor lanes on GA 400.

An Environmental Assessment reevaluation is underway; a Public Information Open House was held 10/19/2007; Time saving procedures is not appropriate.

The estimated costs for this project are:

	<u>PROPOSED</u>	<u>APPROVED</u>	<u>FUNDING</u>	<u>PROG DATE</u>
Construction (includes E&C)	\$ 21,266,000	\$ 19,000,000	L050	2008
Right-of-way	-0-			
Utilities	\$350,000			

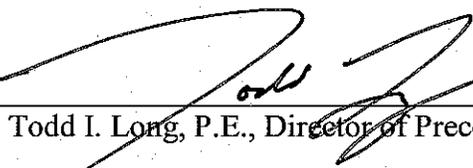
*PMA signed for Sandy Springs to do PE and \$5 million towards construction; DOT to pay 100% over \$5 million

I recommend this project concept be approved.

GRS: JDQ

Attachment

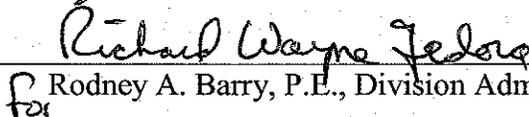
CONCUR



Todd I. Long, P.E., Director of Preconstruction

*

APPROVED



for Rodney A. Barry, P.E., Division Administrator FHWA

APPROVED



Gerald M. Ross, P.E., Chief Engineer

* In accordance with letter of 4/28/2008 and GDOT email of 4/30/2008. ✓



U.S. Department
of Transportation
**Federal Highway
Administration**

Georgia Division

61 Forsyth St. SW 17T100
Atlanta, GA 30303

April 28, 2008

In Reply Refer To:
HTM-GA

Ms. Gena Abraham
Commissioner
Georgia Department of Transportation
No. 2 Capitol Square, S.W.
Atlanta, Georgia 30334-1002

Subject: Concept Report, SR 400 @ Hammond Dr., CSNHS-0008-00(415)

Dear Ms. Abraham:

The Concept Report for the proposed interchange at Georgia 400 and Hammond Drive has been reviewed. The concept for this project is approved. However, we ask that you address the following:

- The design exception/design variance information is inconsistent with the Interchange Justification Report (IJR). Verify which information is correct.
- A design exception or a design modification will be required for the ramp shoulder width because the sum of the left and right shoulder exceeds the AASHTO "Green Book" requirements. This design exception had not been identified in the Concept Report.
- The table depicting the Summary of Intersection Capacity Analysis Results is inconsistent with the information provided in the IJR.

If you have any questions, please contact Melinda Roberson at (404)562-3652.

Sincerely,


for Rodney N. Barry, P.E.
Division Administrator

**MOVING THE
AMERICAN
ECONOMY**





U.S. Department
of Transportation
**Federal Highway
Administration**

Georgia Division

61 Forsyth St. SW 17T100
Atlanta, GA 30303

April 28, 2008

In Reply Refer To:
HTM-GA

Ms. Gena Abraham
Commissioner
Georgia Department of Transportation
No. 2 Capitol Square, S.W.
Atlanta, Georgia 30334-1002

Subject: Interchange Justification Report, SR 400 @ Hammond Dr., CSNHS-0008-00(415)

Dear Ms. Abraham:

The Interchange Justification Request (IJR) for the proposed interchange at Georgia 400 and Hammond Drive has been reviewed. Based on an operations and engineering review, the addition of a half-diamond interchange at this location is acceptable. A design exception or a design modification will be required for the ramp shoulder width because the sum of the left and right shoulder exceeds the AASHTO "Green Book" requirements. This design exception had not been identified in the IJR.

It should be noted that the levels of service being shown for 2015 support the need for project NH000-0056-01(052), which consists of a collector-distributor lane system at this location.

If you have any questions, please contact Melinda Roberson at (404)562-3652.

Sincerely,

Richard Wayne Fedora
for Rodney N. Barry, P.E.
Division Administrator

**MOVING THE
AMERICAN
ECONOMY**



Quarles, Johnny

From: Karla Poshedly [kposhedly@maai.net]
Sent: Wednesday, April 30, 2008 10:45 AM
To: Hancock, John
Cc: Sam Deeb; Chris Kingsbury
Subject: RE: Concept Report status--SR 400 at Hammond Drive, P.I. No.0008415
Attachments: GA400-Hammond-Concept-Report-4-30-08.pdf; IJR_Hammond-4-30-08.pdf

Hi John,

Attached below is concept report and the IJR both revised to show the design exceptions and design variances correctly and with the traffic table matching the IJR.

What happened is after the concept report was sent, more changes were requested on the IJR concerning the traffic analysis. Now, the tables and text match in both documents.

This was the case with the design exceptions and variances. They were added to the IJR after the concept report had been sent to FHWA. Now I made sure that both documents match and the extra design exception in his 2nd comment was added to both documents.

If you have any other questions regarding this, please do not hesitate to contact me.

Karla Poshedly
Moreland Altobelli Associates, Inc
2211 Beaver Ruin Road, Suite 190
Norcross, Georgia 30071
Phone: 770-263-5945
Fax: 770-263-5954
Cell: 770-363-3572
kposhedly@maai.net

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

From: Hancock, John [mailto:jhancock@dot.ga.gov]
Sent: Wednesday, April 30, 2008 9:47 AM
To: 'Karla Poshedly'
Subject: FW: Concept Report status--SR 400 at Hammond Drive, P.I. No.0008415

Karla,

Can you address the third comment from FHWA concerning the table for Summary of Intersection Capacity Analysis Results?

John D. Hancock, P. E.
Design Group Manager
Office of Urban Design
404-656-6963
jhancock@dot.ga.gov -- *email address has changed, please update*

From: Quarles, Johnny
Sent: Wednesday, April 30, 2008 7:57 AM
To: Hancock, John
Cc: Rice-Singleton, Genetha
Subject: FW: Concept Report status--SR 400 at Hammond Drive, P.I. No.0008415

John,

Please address the attached FHWA comments for the SR 400 @ Hammond Drive project...Send the responses to me and I will forward them to FHWA...Thanks

To: Quarles, Johnny; Fedora, R.Wayne
Cc: Rice-Singleton, Genetha; Hancock, John
Subject: RE: Concept Report status--SR 400 at Hammond Drive, P.I. No.0008415

Johnny,

The concept report has been reviewed. We are finalizing an approval letter that will probably make it to you sometime in the beginning part of next week. I'll let you know once it has been approved.

Thanks,
Mindy Roberson

From: Quarles, Johnny [mailto:jquarles@dot.ga.gov]
Sent: Tuesday, April 22, 2008 7:35 AM
To: Fedora, R.Wayne
Cc: Rice-Singleton, Genetha; Roberson, Melinda; Hancock, John
Subject: RE: Concept Report status--SR 400 at Hammond Drive, P.I. No.0008415.

Wayne,
The Concept Report was sent to FHWA for approval on 3/20/2008...Thanks for your assistance....

Johnny Quarles
404.657.0771

We'll get you there.
www.511ga.org



From: Fedora, R.Wayne [mailto:R.Wayne.Fedora@fhwa.dot.gov]
Sent: Tuesday, April 22, 2008 7:24 AM
To: Quarles, Johnny
Cc: Rice-Singleton, Genetha; Roberson, Melinda
Subject: RE: Concept Report status--SR 400 at Hammond Drive, P.I. No.0008415

Johnny,

This project is Mindy Roberson's now. I recall that we received the concept report and have reviewed it. I am copying Mindy on this message so she can respond to you, but it might be a few days, since she is in training.

Please let me know when you sent us the report.

Thanks.

-Wayne

Help GDOT serve you better. Visit <http://www.howmyservice.dot.ga.gov> and rate the service you received from Team GDOT.

PRECONSTRUCTION STATUS REPORT

PROJ ID	COUNTY	DESCRIPTION	MGMT. ROW DATE	SCHED DATE	MGMT. LET DATE
0008415	Fulton	SR 400 FM @ HAMMOND DR LOCAL			Aug-08

CSNHS-0008-00(415)	FIELD DIST: 7				
TIP #: AR-938	TWIN:	US:	Phase	Approved	Proposed
MPO: Atlanta TMA	EST DATE: 11/1/06		CST	2008	2008
			Cost	Fund	Status
			19,000,000.00	L050	PRECST

MODEL YR:	PROJ MGR: Hancock, John	PROJ LENGTH: 1.75
PROG: Reconstruction/Rehabilitat	TYPE WORK: Interchange	
TYPE: ion		
CONCEPT: INTERCHANGE	LET RESP: DOT	Congressional Districts: 5

SCHED START	SCHED FINISH	ACTIVITY	ACTUAL START	ACT/EST FINISH	PCT	DISTRICT COMMENTS
						Design-Build Schedule: RFQ - Dec. 14, 2007 - advertised; SOQs due to GDOT - Jan. 25, 2008 Notice to Short-listed firms - Feb. 15, 2008; Release RFP - March 21, 2008 Proposed letting - May 16, 2008 1/9/08: IJR sent to FHWA; Concept report submitted for signatures; FPR scheduled for 1/23/08. Bridge layout submitted & being reviewed by Bridge Office; BFI submitted to OMR for approval; Soil survey outstanding due to Parcels 5 & 9 access OEL: Fish & Wildlife concurrence needed for EA re-eval.

BIKE PROVISIONS INCLUDED?: N MEASUREMENT E CONSULTANT: L UT EST:

Bridge: ACB 7/01/07 - DESIGN/BUILD - 95% P.L.
Design: C. Robinson - see district comments
EIS: FONSI1-16-1998 Reeval at FHWA/OnSchule/2-5-08/Perkins
LGPA: PFA SGN (L) SANDY SPRINGS DO PE & \$MIL TOWARDS CST|DOT TO PAY 100% OVER \$MIL 12-3-07.
Prog. Develop: Project split from 721850-; PE AND ROW under 721850
Traffic Op: SEND PLANS FOR REVIEW 12-13-07
Utility: CC: PPLANS TO UTILS (-6) 01/08 ;see 0001757 for SUE
EMG: RECST/REHAB (INTERCHANGE); PE BY LOCAL

will
3/2/08

R/W INFORMATION:

PREL PARCEL CT: 0	TOTAL PARCEL CT:	ACQUIRED BY: DOT	ACQ MGR:
UNDER-REVIEW CT:	RELEASED	OPT-PEND CT:	DEEDS CT:
COND-PEND CT:	COND-FILED CT:		
RW CERT DT:	ACQUIRED CT:	RELOCATION CT:	

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

Office of Urban Design

PROJECT CONCEPT REPORT

Project Number: CSNHS-0008-00 (415)

County: Fulton

P. I. Number: 0008415

**SR 400/Hammond Drive Interchange
DESIGN-BUILD**

Federal Route Number: N/A

State Route Number: 400

Date of Report: December 27, 2007

Recommendation for approval:

DATE 12/28/07

Albert Shelby
Project Manager

DATE 1/9/08

James B. Paul
Office Head

The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Plan (RTP) and the State Transportation Improvement Program (STIP).

DATE 1-29-08

Angela S. Alexander
State Transportation Planning Administrator

DATE _____

Office of Financial Management Administrator

DATE _____

State Environmental/Location Engineer

DATE _____

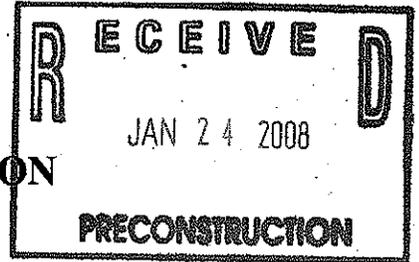
State Traffic Operations Engineer

DATE _____

Project Review Engineer

DATE _____

State Bridge Design Engineer



DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

Office of Urban Design

PROJECT CONCEPT REPORT

Project Number: CSNHS-0008-00 (415)

County: Fulton

P. I. Number: 0008415

SR 400/Hammond Drive Interchange
DESIGN-BUILD

Federal Route Number: N/A

State Route Number: 400

Date of Report: December 27, 2007

Recommendation for approval:

DATE 12/28/07

Albert Shelby
Project Manager

DATE 1/9/08

James B. Paul
Office Head

The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Plan (RTP) and the State Transportation Improvement Program (STIP).

DATE _____

State Transportation Planning Administrator

DATE _____

Office of Financial Management Administrator

DATE _____

State Environmental/Location Engineer

DATE 1-17-08

Shelby
State Traffic Operations Engineer

DATE _____

Project Review Engineer

DATE _____

State Bridge Design Engineer

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE: P.I. No. 0008415

OFFICE: Environment/Location

DATE: January 24, 2008

FROM:  Glenn Bowman, P.E., State Environmental/Location Engineer

TO: Genetha-Rice Singleton, *Assistant Director of PRECONST.*
~~State Transportation Planning Administrator~~

SUBJECT: **PROJECT CONCEPT REPORT**
CSNHS-0008-00(415) / Fulton County
SR 400 / Hammond Drive Interchange Design-Build

The above subject Concept Report has been reviewed and appears satisfactory subject to the following comment:

1. Page 10 – Please note that we are completing a reevaluation for an older EA and not doing a new EA for this project.

If you have any questions, please contact Glenn Bowman at (404) 699-4401.

GB/lc

cc: Brian Summers
Jamie Simpson
Angela Alexander
Keith Golden
Ben Buchan

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

Office of Urban Design

PROJECT CONCEPT REPORT

Project Number: CSNHS-0008-00 (415)

County: Fulton

P. I. Number: 0008415

**SR 400/Hammond Drive Interchange
DESIGN-BUILD**

Federal Route Number: N/A

State Route Number: 400

Date of Report: December 27, 2007

Recommendation for approval:

DATE 12/28/07

Albert Shelby
Project Manager

DATE 1/9/08

James B. Paul
Office Head

The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Plan (RTP) and the State Transportation Improvement Program (STIP).

DATE _____

State Transportation Planning Administrator

DATE _____

Office of Financial Management Administrator

DATE 1/24/08

He Sam

State Environmental/Location Engineer

DATE _____

State Traffic Operations Engineer

DATE _____

Project Review Engineer

DATE _____

State Bridge Design Engineer

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

Office of Urban Design

PROJECT CONCEPT REPORT

Project Number: CSNHS-0008-00 (415)

County: Fulton

P. I. Number: 0008415

**SR 400/Hammond Drive Interchange
DESIGN-BUILD**

Federal Route Number: N/A

State Route Number: 400

Date of Report: December 27, 2007

Recommendation for approval:

DATE 12/28/07

DATE 1/9/08

Albert Shelby

Project Manager

James B. Paul

Office Head

The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Plan (RTP) and the State Transportation Improvement Program (STIP).

DATE _____

State Transportation Planning Administrator

DATE _____

Office of Financial Management Administrator

DATE _____

State Environmental/Location Engineer

DATE _____

State Traffic Operations Engineer

DATE _____

Project Review Engineer

DATE 2/21/08

Paul V. Liles Jr.

State Bridge Design Engineer

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

Office of Urban Design

PROJECT CONCEPT REPORT

Project Number: CSNHS-0008-00 (415)

County: Fulton

P. I. Number: 0008415

**SR 400/Hammond Drive Interchange
DESIGN-BUILD**

Federal Route Number: N/A

State Route Number: 400

Date of Report: December 27, 2007

Recommendation for approval:

DATE 12/28/07

DATE 1/9/08

Albert Shelby
Project Manager
James B. Paul
Office Head

The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Plan (RTP) and the State Transportation Improvement Program (STIP).

DATE _____

State Transportation Planning Administrator

DATE _____

Office of Financial Management Administrator

DATE _____

State Environmental/Location Engineer

DATE _____

State Traffic Operations Engineer

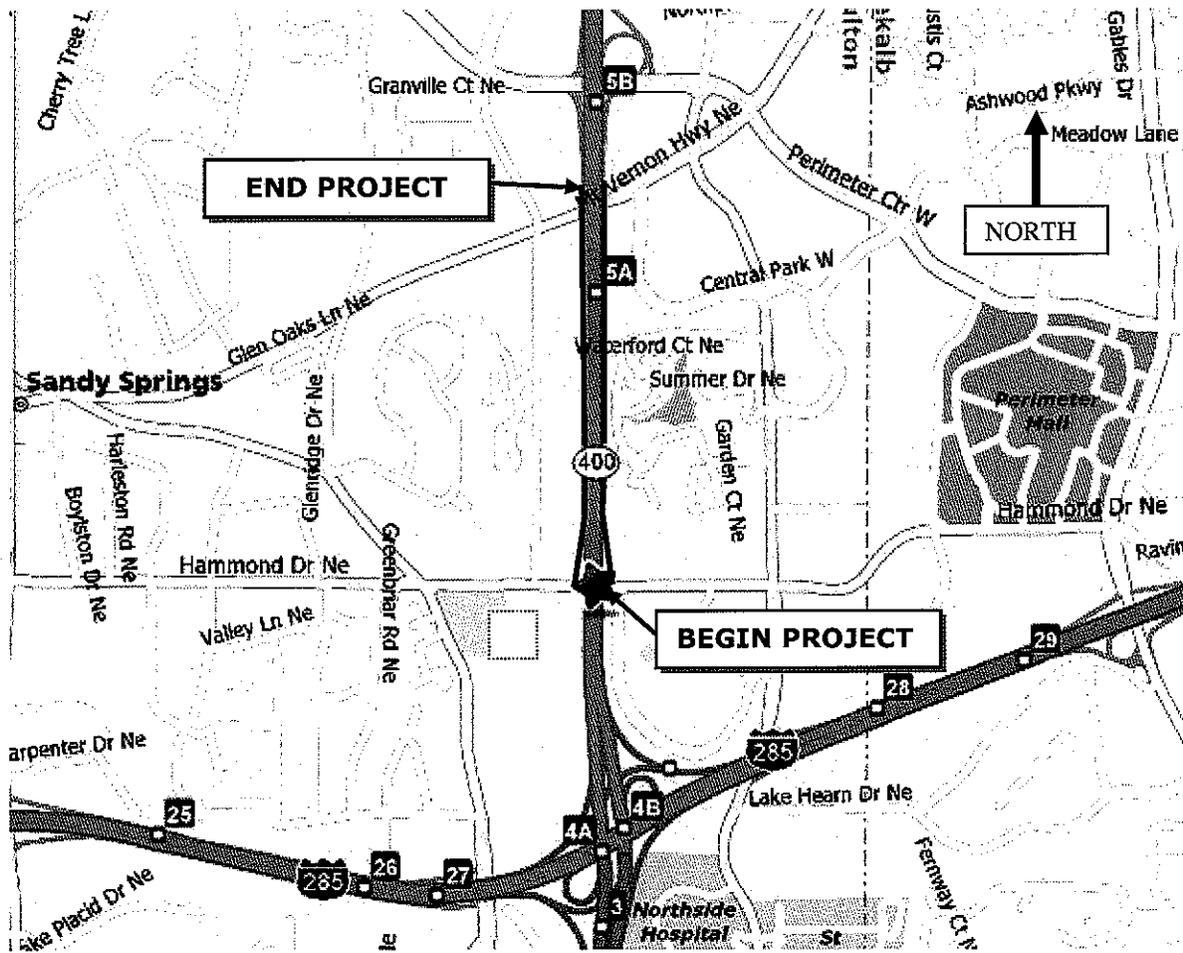
DATE _____

Project Review Engineer

DATE _____

State Bridge Design Engineer

PROJECT LOCATION MAP



Need and Purpose:

The need exists to improve safety, operations and mobility for traffic in the Georgia (GA) 400 corridor to accommodate the growing residential population and employment generators in the Perimeter Center area of Fulton and DeKalb counties. The purpose of this proposed project is to provide additional capacity to enter and exit GA 400 to accommodate the existing and projected volume of trips needing access to the GA 400 corridor. Currently, the Abernathy Road Interchange is the only access point on GA 400 for both local and regional traffic into and out of the Perimeter Center Area, which leads to congestion at the interchange as well as the roadway network serving it. The Perimeter Center Community Improvement Districts (CID's) encompass an area in Fulton and DeKalb Counties that is the region's largest employment center. The district supports approximately 26 million square feet of office space, 6 million square feet of retail and a residential population of approximately 40,000 persons. Employment figures are currently at approximately 115,000 employees and are projected to grow to 213,000 by 2013. Two major regional medical centers with over 400 beds each are also within the CID's area. In 1995, the Georgia Department of Transportation (GDOT) and the Federal Highway Administration (FHWA) approved an Interchange Justification Report (IJR) for constructing a half-diamond interchange at Hammond Road in conjunction with a collector-distributor lane system and a redesigned Abernathy Road Interchange. The Department is currently acquiring the Rights of Way for this project. However, because of funding uncertainties and the potential need for managed lanes in the GA 400 corridor, the implementation dates for construction of the entire project are uncertain. A new IJR is being drafted for review by GDOT and FHWA for renewed approval of the Hammond interchange with access directly to GA 400 as an interim congestion relief project.

The Hammond Drive Bridge over GA 400 will be replaced to accommodate both the future widening of GA 400 to provide a collector-distributor roadway system and managed lanes; as well as accommodate the turn lanes required for operation of the new ramps and improved pedestrian facilities.

Planning Background and Project History

The Atlanta Regional Commission (ARC) adopted a new Transportation Plan for the 18-county Atlanta metropolitan area in 2007. The Plan addresses travel needs through the year 2030. This Regional Transportation Plan (RTP) is the direct result of a comprehensive, cooperative, and continuous planning process conducted by ARC, local governments and the Georgia Department of Transportation in cooperation with the Federal Highway and Federal Transit Administrations.

The current 2030 RTP includes the construction of a half diamond interchange at GA 400 and Hammond Drive in Fulton County in conjunction with a collector distributor lane system as GDOT Project NH-056-1 (52), P.I. Number 721850 (Fulton) which includes -- in addition to the construction of a half-diamond interchange at Hammond Drive and auxiliary lanes on GA 400 -- northbound and southbound two-lane collector-distributor roadways on GA 400 from I-285 to Spalding Drive and the reconstruction of Abernathy Road Interchange to a single point urban interchange with triple left turn lanes in all directions except for westbound Abernathy Road to southbound GA 400. This project described above is listed as number FN-AR-100A in the ARC RTP for construction in 2013. The half-diamond interchange at Hammond Drive is proposed in

the draft 2008-2013 Transportation Improvement Program (TIP) as AR-938. The early implementation of the half-diamond interchange at Hammond Drive is listed as GDOT P.I. Number 0008415 and is programmed for construction in 2008.

Annual Daily Traffic Volumes and Levels of Service

The Abernathy Road Interchange at GA 400 in Fulton County serves as an arterial route for commuters to access GA 400 from the eastern areas of Cobb County and northern DeKalb and Fulton Counties. The existing ramps and roadway do not provide sufficient left-turn and through capacity for the high peak hour turning movements experienced at this interchange. Currently, peak hour traffic conditions at the ramp intersections can cause excessive queuing to occur, extending back onto the GA 400. To alleviate some of this traffic congestion, it is proposed to provide a half-diamond interchange at Hammond Drive.

Existing and future intersection capacity analysis was performed on the major intersections in the study area along Abernathy Road and Hammond Drive under existing and future traffic conditions with and without the proposed project. This analysis was done using the TRAF-CORSIM software. The vehicular delay value that results from the capacity analysis is used to determine the level of service of an intersection. Level of service (LOS) is a letter designation used to describe traffic operating conditions, on a declining scale from A to F. LOS "A" represents free-flow traffic conditions and LOS "F" represents extreme delays with stopped traffic conditions. A summary of the intersection capacity analyses in terms of level of service and delay (seconds per vehicle) for existing, no-build and build conditions are shown in the table below.

Summary of Intersection Capacity Analysis Results

Intersections	Existing Year 2006		No-Build Year 2015		Build Year 2015	
	AM (Delay)	PM (Delay)	AM (Delay)	PM (Delay)	AM (Delay)	PM (Delay)
Abernathy Rd @ Glenridge Dr	27.7 (C)	52.2 (D)	50.9 (D)	91.3 (F)	35.1 (D)	83.6 (F)
Abernathy Rd @ Barfield Rd/Glenlake	60.8 (E)	76.2 (E)	72.9 (E)	162.0 (F)	58.9 (E)	102.9 (F)
Abernathy Road @ GA 400 SB Ramps	94.8 (F)	107.4 (F)	144.4 (F)	106.5 (F)	51.4 (D)	54.1 (D)
Abernathy Road @ GA 400 NB Ramps	6.5 (A)	11.6 (B)	6.2 (A)	28.2 (C)	5.9 (A)	13.3 (B)
Abernathy Rd @ P'tree-Dunwoody Rd	33.9 (C)	41.2 (D)	55.1 (E)	75.6 (E)	54.4 (D)	45.9 (D)
Abernathy Rd @ Mount Vernon Hwy	27.3 (C)	69.3 (E)	32.1 (C)	131.1 (F)	28.4 (C)	127.7 (F)
Hammond Dr @ Glenridge Drive	25.9 (C)	31.8 (C)	27.6 (C)	38.7 (D)	32.7 (C)	37.6 (D)
Hammond Dr @ Barfield Road	33.7 (D)	31.1 (C)	35.8 (D)	42.6 (D)	31.2 (C)	30.2 (C)
Hammond Dr @ GA 400 SB Off-Ramp	N/A	N/A	N/A	N/A	9.3 (B)	13.9 (B)
Hammond Dr @ GA 400 NB On-Ramp/ West Concourse Pkwy	10.8 (B)	15.5 (B)	9.9 (B)	13.4 (B)	14.8 (B)	23.0 (C)
Hammond Dr @ East Concourse Pkwy	16.6 (B)	15.7 (B)	17.2 (B)	15.8 (B)	17.4 (B)	29.8 (C)
Hammond Dr @ P'tree-Dunwoody Rd	27.7 (C)	28.9 (C)	29.0 (C)	32.7 (C)	31.6 (C)	33.4 (C)

The results of the intersection level of service analysis demonstrate that with the construction of the Hammond Drive Interchange, the LOS at the majority of the studied intersections would improve. Traffic congestion on Abernathy Road would be reduced and the diverted traffic would not negatively impact the traffic conditions on Hammond Drive. All of the intersections on Hammond Drive would maintain acceptable levels of service.

Safety Improvements

In addition to the extreme traffic congestion, Abernathy Road Interchange has a high rate of traffic accidents. An inventory of crash data for Abernathy Road and for GA 400 from 2004 to 2006 is provided in the table on the next page.

Accident and Injury Rates for Roadway Segments in the Project Area							
Abernathy Road from Glenridge Drive to Mount Vernon Highway (0.88 mile)							
Urban Minor Arterial							
Year	AADT	No. of Accidents	No. of Injury	Acc. Rate*	Statewide Average Accident Rate*	Injury Rate*	Statewide Average Injury Rate*
2004	51123	92	28	560	490	170	123
2005	51630	108	23	651	534	138	135
2006	48410	111	28	713	531	180	132
GA 400 from I-285 to Abernathy Road (1.48 miles)							
Urban Freeways & Expressways							
Year	AADT	No. of Accidents	No. of Injury	Acc. Rate*	Statewide Average Accident Rate*	Injury Rate*	Statewide Average Injury Rate*
2004	218986	294	89	248	515	75	130
2005	194480	414	115	394	573	109	144
2006	199880	329	112	304	545	103	133

*Values for Rate of Accidents and Injuries are per 100 million vehicle-miles.

The GDOT Office of Traffic Operations and the Georgia Department of Public Safety, Accident Reporting Unit furnished the information shown above. Accident rates were calculated in units of number of accidents per 100 million vehicle-miles. Calculated accident and injury rates for Abernathy Road from Glenridge Drive to Mount Vernon Highway and GA 400 from I-285 to Abernathy Road Interchange were compared to the statewide averages for the corresponding roadway class. These comparisons indicate that the accident and injury rates for Abernathy Road are much higher than the statewide averages. A reduction in traffic congestion on Abernathy Road would have the potential to reduce traffic accidents. Along the segment of GA 400 studied the accident and injury rates are below the statewide averages. This section of GA 400 has had a relatively moderate number of accidents in recent years.

In summary, the proposed construction of the half-diamond interchange at Hammond Drive would reduce traffic volumes at the Abernathy Road Interchange and in doing so would improve traffic safety in the local area.

Other Projects in the Area

- GDOT Project 751310, STP-9250 (1) – Abernathy Road from Johnson Ferry Road to Roswell Road – GRTA – Widens Abernathy Road from Johnson Ferry Road to Roswell Road from 2 lanes to 4 lanes.
- GDOT Project 0006398, CSNHS-0006-00 (398) – SR 400 ATMS Ramp Meters from I-285 to SR 120/Old Milton Pkwy
- GDOT Project 751640, STP-92520 (2) – Widening of Abernathy Road from SR 9 (Roswell Road) to SR 400
- GDOT Project 721850, NH-056-1 (52) – SR 400 from Hammond/Abernathy Rd to north of Spalding including collector-distributor roads. – Reconstruction of Abernathy Road Interchange, auxiliary lanes, half-diamond interchange at Hammond Drive
- GDOT Project 751420, STP-9252 (7) – Johnson Ferry Road/Glenridge Road from Abernathy Road to Hammond Drive/ includes one-way pair – widening, reconstruction & rehabilitation
- GDOT Project M001752, NHS-M001-00 – SR 400 from I-285 to Windward Parkway – Resurface & Maintenance
- GDOT Project 870351 – Non-Interstate Limited Access Highway Sign Upgrade – SR 400
- GDOT Project 722140 – Northern Atlanta Sub-Area Study – Miscellaneous Improvements
- GDOT Project 0002778 – Northern Atlanta Sub-Area Study for Areas Away from SR 400 – Miscellaneous Improvements

Description of the proposed project:

The project, CSNHS-0008-00 (415), P.I. Number 0008415 (Fulton), is located on Hammond Drive over GA 400. The project consists of constructing a half-diamond interchange oriented to the north at Hammond Drive with GA 400. The project would include an additional 12-foot auxiliary lane on GA 400 northbound and southbound from the Hammond Drive north-facing ramps to the Abernathy Road south-facing ramps. The project would replace the existing bridge over GA 400 and widen Hammond Drive approaching the bridge. Hammond Drive through the interchange area would be widened to a 6-lane curb and gutter facility with dual left turn lanes and a right turn lane at its intersection at the GA 400 northbound on-ramp. Sidewalks (5-foot wide) would be constructed on both sides of Hammond Drive the entire length of the project. The proposed bridge would be designed to span the future managed lanes, future additional SOV lanes, and future collector-distributor lanes on GA 400.

This project is an interim project to GDOT Project NH-056-1 (52), P.I. Number 721850 (Fulton) which, includes the construction of a half-diamond interchange at Hammond Drive, auxiliary lanes on GA 400, northbound and southbound (two-lane) collector-distributor roadways on GA 400 from I-285 to Spalding Drive and the reconstruction of Abernathy Road Interchange to a single point urban interchange with triple left turn lanes in all directions except for westbound Abernathy Road to southbound GA 400.

Is the project located in a Non-attainment area? X Yes No. This project conforms to the Transportation Improvement Plan. It is listed as project AR-938 and is described as a construction of a new interchange at Hammond Drive with an auxiliary lane in each direction on GA 400 from the Hammond Drive north facing ramps to the Abernathy Road south facing ramps.

PDP Classification: Major X Minor _____

Federal Oversight: Full Oversight (X), Exempt(), or Other ()

Functional Classification: Urban Minor Arterial

U. S. Route Number(s): N/A **State Route Number(s):** N/A

Traffic (AADT) & Truck Percentages:

	2009	2015	2019	2029	% 24-hr T	% Peak T
• Hammond Drive:	32,600	36,350	37,800	41,700	5%	3%
• Hammond Drive Ramp:	7,450	8,150	8,500	9,400	5%	3%
• GA 400 Auxiliary Lane:	25,550	27,450	29,700	32,800	10%	6% AM 4% PM

Existing design features:

- Typical Sections:
 - Hammond Drive Bridge - Two 12-foot travel lanes in each direction on the bridge with 6-foot sidewalks on both sides
 - Hammond Drive – Two 12-foot travel lanes in each direction with 12-foot left turn lanes at the intersection of Barfield Road and West Concourse Pkwy. A short right turn lane exists at the intersection of West Concourse Pkwy and Hammond Drive.
 - GA 400 Mainline – Four 12-foot express lanes in each direction, separated by a 20-foot median that has a barrier wall next to 4-foot paved inside shoulders. There are 10-foot paved shoulders and 2-foot grass shoulders on the outside of the express lanes.
- Posted speed:
 - Hammond Drive – 35 mph
 - GA 400 Mainline – 55 mph
- Minimum radius of curvature:
 - Hammond Drive – Tangent
 - GA 400 Mainline – Tangent
 - West Concourse Pkwy – 1315'
- Maximum grade:
 - Hammond Drive – 7.8%
 - GA 400 Mainline – 3.7%
- Maximum super-elevation rate for curve: 4.00%
- Width of right-of-way: Hammond Drive - 100 ft.
 GA 400 Mainline – 200 ft.

- Major structures:
 - Hammond Drive Bridge over GA 400

<u>Structure I.D. No.</u>	121-0459-0
<u>Sufficiency Rating</u>	73.3
<u>Bridge Type</u>	Steel
<u>Condition</u>	6
<u>No. of spans</u>	3
<u>Length</u>	247 feet
<u>Maximum Span</u>	70 feet
<u>Deck Structure Width</u>	66.6 feet
<u>Minimum Vertical Clearance</u>	16'-8"
<u>Total Horizontal Clearance</u>	53 feet

- Major interchanges or intersections along the project: Major intersections include Barfield Road at Hammond Drive and West Concourse Pkwy. The interchanges along GA 400 that are closest to the Hammond Drive Interchange is the GA400/Abernathy Interchange, which is 1.00 mile north of the Hammond Drive Bridge and GA 400/I-285 Interchange, which is 0.5 mile south of the Hammond Drive Bridge.

- Project Length of GA 400 0.86 mile
- Beginning mile log for Georgia 400
 - Fulton County mile post: 7.39
- Ending mile log for Georgia 400
Fulton County mile post 8.25
- Project Length of Hammond Drive 0.36 mile
- Beginning mile log for Hammond Drive
 - Fulton County mile post: 0.35
- Ending mile log for Hammond Drive
 - Fulton County mile post 0.71

Proposed Design Features:

- Proposed Typical Sections:
 - Hammond Drive Bridge – The bridge typical section consists of three 12-foot lanes in each direction, a 12-foot eastbound right-turn lane and two 12-foot eastbound left turn lanes. The bridge will also include 6-foot sidewalks on both sides (see typical section).
 - Hammond Drive – Three 12-foot travel lanes in each direction. Two left turn lanes and a right turn lane will be provided in the eastbound direction at West Concourse Parkway and one left turn lane and a right turn lane will be provided in the westbound direction at the GA 400 on-ramp. Eastbound and westbound left turn lanes and an eastbound right turn lane will also be provided at the intersection of Barfield Road. Hammond Drive will have 16-foot urban shoulders, which includes curb and gutter, a 6-foot grass strip and a 5-foot sidewalk on both sides of the road.
 - GA 400 Mainline – Four 12-foot express lanes and one auxiliary lane in each direction from Abernathy Road south-facing ramps to the Hammond Drive north-

facing ramps. The existing northbound and southbound express lanes are separated by a 20-foot median that has a barrier wall next to 4-foot paved inside shoulders. Ten-foot paved shoulders and 2-foot grass shoulders will be provided on the outside of the auxiliary lanes.

- GA 400 ramps – The southbound off-ramp consists of one 16-foot lane that widens to provide two left turn lanes and a right turn lane at its intersection with Hammond Drive. The northbound on-ramp consists of a two lane at its intersection with Hammond Drive, which tapers to a 12-foot northbound auxiliary lane on GA 400. The shoulders of both ramps will include a 6-foot inside paved shoulder and a 10-foot paved and 2-foot grass outside shoulder. The top of the ramps from Hammond Drive through the radius returns will be constructed in concrete.
- West Concourse Pkwy – The typical section consists of four 11-foot approach lanes: two left turn lanes, one through lane and one right turn lane. Two 12-foot departure lanes would be provided. West Concourse Pkwy will have curb and gutter.
- Proposed Design Speed:
 - Hammond Drive – 35mph
 - GA 400 Mainline – 65 mph
 - GA 400 Ramps – 45 mph
- Proposed Maximum grade Maximum grade allowable: 8%
 - Hammond Drive – 7.8%
 - GA 400 Mainline – 3.7%
 - GA 400 Ramps - 4%
- Proposed Maximum grade driveway: 10%
- Proposed Minimum radius of curve
 - Hammond Drive - 8000' Minimum radius allowable: 371'
 - GA 400 Mainline - tangent
 - GA 400 Ramps – 1000' Minimum radius allowable: 340'
- Proposed Minimum radius for curve for side streets: 1315' – West Concourse Pkwy
- Proposed Maximum superelevation rate for curve on Hammond Drive: 4.00%
- Proposed Maximum superelevation rate for curve on GA 400 ramps: 6.00%
- Right-of-way – Has been authorized for GDOT Project NH-056-1 (52), P.I. Number 721850 (Fulton). No additional right-of-way will be required.
 - Width 150 ft. (typical on Hammond Drive)
 - Easements: Temporary (X), Permanent (X), Utility (), Other ().
 - Type of access control: Full (), Partial (), By Permit (X), Other ().
 - Number of parcels: 17 Parcels are necessary & acquired under P.I. 721850
 - Number of displacements:
 - Business: 0
 - Residences: 0
 - Mobile homes: 0
 - Other: 0

- Major Structures:

<u>Bridge Type:</u>	Concrete superstructure
<u>No. of Spans:</u>	3
<u>Length:</u>	370'-3"
<u>Maximum Span:</u>	153'-0"
<u>Deck Structure:</u>	Concrete
<u>Roadway Width:</u>	134'-5"
<u>Minimum Vertical Clearance:</u>	18.67'
<u>Total Horizontal Clearance:</u>	11'-3"

- Major intersections and interchanges: Hammond Drive at Barfield Road, Hammond Drive Interchange, which includes the GA 400 southbound off-ramp and GA 400 northbound on-ramp across from West Concourse Pkwy (See attached intersection lane configurations).
- Traffic control during construction: Traffic control will consist of staged construction of the Hammond Drive bridge over GA 400. Traffic control will be utilized on GA 400 to maintain traffic during construction and on Hammond Drive to maintain four lanes of traffic. Some temporary lane closures and on-site detours may be required during stage construction where grade changes are significant.
- Design Exceptions for controlling criteria anticipated:

	<u>UNDETERMINED</u>	<u>YES</u>	<u>NO</u>
HORIZONTAL ALIGNMENT:	()	()	(X)
ROADWAY WIDTH:	()	()	(X)
SHOULDER WIDTH:	()	()	(X)
VERTICAL GRADES:	()	(X)	()
CROSS SLOPES:	()	()	(X)
STOPPING SIGHT DISTANCE:	()	()	(X)
SUPERELEVATION RATES:	()	()	(X)
HORIZONTAL CLEARANCE:	()	()	(X)
SPEED DESIGN:	()	()	(X)
VERTICAL CLEARANCE:	()	()	(X)
BRIDGE WIDTH:	()	()	(X)
BRIDGE STRUCTURAL CAPACITY:	()	()	(X)

A design exception may be necessary for the profile of Barfield Road near the intersection with Hammond Drive in order to reduce impacts to right-of-way.

- Design Variances: None anticipated.
- Environmental concerns:
 - The noise impact assessment for this project has determined that a noise barrier would be required to mitigate traffic noise along the eastern side of GA 400 between Hammond Drive and Abernathy Road.
- Level of environmental analysis:
 - Are Time Savings Procedures appropriate? Yes () No (X)
 - Categorical exclusion ()
 - Environmental Assessment/Finding of No Significant Impact (FONSI) (X), or
 - Environmental Impact Statement (EIS) ().

- Utility involvements: AT&T telephone lines, Georgia Power poles, Atlanta Gas Light, City of Atlanta, Fulton County water and sewer lines and cable lines.

Project responsibilities:

- Design: Design-Build Contractor
- Right-of-Way Acquisition: Georgia DOT
- Relocation of Utilities: Georgia DOT
- Letting to contract: Georgia DOT
- Supervision of construction: Georgia DOT
- Providing material pits: Contractor (if required)
- Providing detours: Contractor (if required)

Coordination

- Concept Team Meeting: Held on October 18, 2007. See attached minutes.
- PAR.: A Practical Alternatives Report (P.A.R.) is not required for this project.
- FEMA, USCG, and/or TVA. – Not required.
- Public involvement: A Public Information Open House (PIOH) was held on October 19, 2007
- Other projects in the area:
 - GDOT Project 751310, STP-9250 (1) – Abernathy Road from Johnson Ferry Road to Roswell Road – GRTA – Widens Abernathy Road from Johnson Ferry Road to Roswell Road from 2 lanes to 4 lanes.
 - GDOT Project 0006398, CSNHS-0006-00 (398) – SR 400 ATMS Ramp Meters from I-285 to SR 120/Old Milton Pkwy
 - GDOT Project 751640, STP-92520 (2) – Widening of Abernathy Road from SR 9 (Roswell Road) to SR 400
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 - GDOT Project 751420, STP-9252 (7) – Johnson Ferry Road/Glenridge Road from Abernathy Road to Hammond Drive/ includes one-way pair – widening, reconstruction & rehabilitation
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 - GDOT Project 722140 – Northern Atlanta Sub-Area Study – Miscellaneous Improvements
 - GDOT Project 0002778 – Northern Atlanta Sub-Area Study for Areas Away from SR 400 – Miscellaneous Improvements
- Other Coordination: None
- Railroads: Not Applicable

Scheduling – Responsible Parties' Estimate

- Time to complete the environmental process: 6 Months.
- Time to complete preliminary construction plans: 6 Months.
- Time to complete right-of-way plans: 3 Months.
- Time to complete final construction plans: 0 Months. (Design-Build Contract)
- Time to complete to purchase right-of-way: 0 Months. (Right-of-Way is Authorized)
- Time to completion and approval of IJR: 2 Months.

Other alternates considered:

No-Build Alternative

The no-build alternative is an alternative in which there would be no action to construct the project.

Comments: None.

Attachments:

1. Cost Estimates:
 - a. Construction including E&C
 - b. Utilities
2. Typical sections
3. Traffic Flow Diagrams & Weave Analysis on GA 400
4. Benefit-Cost Analysis
5. Intersection Diagrams
6. Bridge Inventory
7. Minutes of the Concept Team Meeting
8. Concept Sketch

Estimate Report for file "0008415"

Section Major Structures					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
500-3101	360	CY	611.14	CLASS A CONCRETE - (BOX CULVERT EXTENSIONS)	220010.40
511-1000	30600	LB	0.94	BAR REINF STEEL (BOX CULVERT EXTENSIONS)	28764.00
511-3001	49900	SF	95.00	CONC. BRIDGE OVER GA 400 (CONCEPT)	4740500.00
540-1101	1	LS	125542.00	REMOVAL OF EXISTING BR, STA NO -	125542.00
624-0400	52500	SF	19.96	SOUND BARRIER, TYPE-	1047900.00
627-1000	1100	SF	54.02	MSE WALL FACE, 0 - 10 FT HT, WALL NO - 1 (Hammond Dr)	59422.00
627-1010	12750	SF	55.04	MSE WALL FACE, 10 - 20 FT HT, WALL NO - 2 (Along GA 400 SB Ramp & Hammond Dr)	701760.00
627-1010	4200	SF	55.04	MSE WALL FACE, 10 - 20 FT HT, WALL NO - 3 (Under Bridge - Along GA 400 NB)	231168.00
627-1010	6200	SF	55.04	MSE WALL FACE, 10 - 20 FT HT, WALL NO - 4 (Under Bridge - Along GA 400 SB)	341248.00
Section Sub Total:					\$7,496,314.40

Section Grading and Drainage					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
207-0203	500	CY	60.01	FOUND BK FILL MATL, TP II	30005.00
210-0100	1	LS	1400000.00	GRADING COMPLETE -	1400000.00
441-0600	30	CY	925.86	CONC HEADWALLS	27775.80
441-3999	1200	LF	20.02	CONCRETE V GUTTER	24024.00
500-3200	75	CY	394.64	CLASS B CONCRETE	29598.00
550-1180	175	LF	42.82	STORM DRAIN PIPE, 18 IN, H 1-10	7493.50
550-1300	2300	LF	72.14	STORM DRAIN PIPE, 30 IN, H 1-10	165922.00
550-1301	175	LF	87.72	STORM DRAIN PIPE, 30 IN, H 10-15	15351.00
550-1302	80	LF	83.37	STORM DRAIN PIPE, 30 IN, H 15-20	6669.60
550-1360	400	LF	83.75	STORM DRAIN PIPE, 36 IN, H 1-10	33500.00
550-1361	200	LF	105.20	STORM DRAIN PIPE, 36 IN, H 10-15	21040.00
550-1363	50	LF	215.53	STORM DRAIN PIPE, 36 IN, H 20-25	10776.50
550-1420	400	LF	124.67	STORM DRAIN PIPE, 42 IN, H 1-10	49868.00
550-1421	80	LF	105.35	STORM DRAIN PIPE, 42 IN, H 10-15	8428.00
550-1481	510	LF	149.01	STORM DRAIN PIPE, 48 IN, H 10-15	75995.10
550-1482	80	LF	144.48	STORM DRAIN PIPE, 48 IN, H 15-20	11558.40
550-1541	50	LF	178.25	STORM DRAIN PIPE, 54 IN, H 10-15	8912.50
550-1542	50	LF	229.00	STORM DRAIN PIPE, 54 IN, H 15-20	11450.00
550-4118	2	EA	452.74	FLARED END SECTION 18 IN, SIDE DRAIN	905.48
550-4130	2	EA	1567.25	FLARED END SECTION 30 IN, SIDE DRAIN	3134.50
550-4136	2	EA	892.00	FLARED END SECTION 36 IN, SIDE DRAIN	1784.00
550-4248	2	EA	2200.00	FLARED END SECTION 48 IN, STORM DRAIN	4400.00
611-3000	10	EA	1955.17	RECONSTR CATCH BASIN, GROUP 1	19551.70
668-1100	10	EA	2784.43	CATCH BASIN, GP 1	27844.30
668-2100	3	EA	3987.53	DROP INLET, GP 1	11962.59
Section Sub Total:					\$2,007,949.97

Section Base & Paving					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
310-1101	39617	TN	18.89	GR AGGR BASE CRS, INCL MATL	748365.13
402-3121	7391	TN	64.38	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	475832.58
402-3130	3982	TN	70.48	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	280651.36
402-3190	7589	TN	65.77	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	499128.53
413-1000	4790	GL	2.05	BITUM TACK COAT	9819.50
Section Sub Total:					\$2,013,797.10

Section Concrete Work					
Item Number	Quantity	Units	Unit Price	Item Description	Cost

430-0220	1000	SY	52.84	PLAIN PC CONC PVMT, CL 1 CONC, 12 INCH THK	52840.00
436-1000	5000	LF	9.13	ASPHALTIC CONCRETE CURB -	45650.00
441-0016	675	SY	44.12	DRIVEWAY CONCRETE, 6 IN TK	29781.00
441-0104	855	SY	39.88	CONC SIDEWALK, 4 IN	34097.40
441-0740	100	SY	30.57	CONCRETE MEDIAN, 4 IN	3057.00
441-0754	500	SY	50.99	CONCRETE MEDIAN, 7 1/2 IN	25495.00
441-6222	2000	LF	19.31	CONC CURB & GUTTER, 8 IN X 30 IN, TP 2	38620.00
441-6740	2000	LF	14.45	CONC CURB & GUTTER, 8 IN X 30 IN, TP 7	28900.00
Section Sub Total:					\$258,440.40

Section Signing and Striping and Signals					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
636-1020	35	SF	14.93	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 3	522.55
636-1029	50	SF	16.27	HIGHWAY SIGNS, TP 2 MATL, REFL SHEETING, TP 3	813.50
636-1032	25	SF	20.80	HIGHWAY SIGNS, TP 2 MATL, REFL SHEETING TP 6	520.00
636-1033	75	SF	19.51	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 9	1463.25
636-1041	30	SF	30.20	HIGHWAY SIGNS, TP 2 MATL, REFL SHEETING, TP 9	906.00
636-1077	1020	SF	27.25	HIGHWAY SIGNS, ALUM EXTRUDED PANELS, REFL SHEETING, TP 9	27795.00
636-2070	55	LF	8.29	GALV STEEL POSTS, TP 7	455.95
636-2080	200	LF	11.23	GALV STEEL POSTS, TP 8	2246.00
636-5010	25	EA	44.01	DELINEATOR, TP 1	1100.25
638-1001	1	LS	82287.76	STR SUPPORT FOR OVERHEAD SIGN, TP I , STA -	82287.76
638-1006	2	LS	52000.00	STR SUPPORT FOR OVERHEAD SIGN, TP VI , STA -	104000.00
639-2002	700	LF	3.27	STEEL WIRE STRAND CABLE, 3/8 IN	2289.00
639-3003	6	EA	6543.11	STEEL STRAIN POLE, TP III	39258.66
639-3004	8	EA	8829.48	STEEL STRAIN POLE, TP IV	70635.84
647-1000	3	Lump Sum	80000.00	TRAFFIC SIGNAL INSTALLATION NO -	240000.00
647-2140	2	EA	1855.21	PULL BOX, PB-4	3710.42
647-2150	2	EA	1956.15	PULL BOX, PB-5	3912.30
653-0110	3	EA	70.73	THERMOPLASTIC PVMT MARKING, ARROW, TP 1	212.19
653-0120	20	EA	71.07	THERMOPLASTIC PVMT MARKING, ARROW, TP 2	1421.40
653-0210	4	EA	114.80	THERMOPLASTIC PVMT MARKING, WORD, TP 1	459.20
653-1501	4000	LF	0.64	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	2560.00
653-1502	4100	LF	0.64	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	2624.00
653-1704	425	LF	5.50	THERMOPLASTIC SOLID TRAF STRIPE, 24 IN, WHITE	2337.50
653-1804	2150	LF	1.84	THERMOPLASTIC SOLID TRAF STRIPE, 8 IN, WHITE	3956.00
653-1810	1000	LF	1.37	THERMOPLASTIC SOLID TRAF STRIPE, 10 IN, WHITE	1370.00
654-1001	25	EA	3.64	RAISED PVMT MARKERS TP 1	91.00
654-1003	1275	EA	3.72	RAISED PVMT MARKERS TP 3	4743.00
655-5000	2	EA	297.72	PVMT ARROW, THERMOPLASTIC, WITH RAISED REFLECTORS	595.44
657-1085	1875	LF	6.74	PREFORMED PLASTIC SOLID PVMT MKG, 8 IN, CONTRAST (BLACK-WHITE), TP PB	12637.50
657-3085	1600	GLF	4.21	PREFORMED PLASTIC SKIP PVMT MKG, 8 IN, CONTRAST (BLACK-WHITE), TP PB	6736.00
657-6085	750	LF	6.78	PREFORMED PLASTIC SOLID PVMT MKG, 8 IN, CONTRAST (BLACK-YELLOW), TP PB	5085.00
682-6233	1100	LF	5.29	CONDUIT, NONMETL, TP 3, 2 IN	5819.00
682-7043	650	LF	35.30	MULTI-CELL CONDUIT SYS, 4-WAY, FIBERGLASS	22945.00
935-1116	3000	LF	2.25	OUTSIDE PLANT FIBER OPTIC CABLE, LOOSE TUBE, SINGLE MODE, 72 FIBER	6750.00

935-1511	300	LF	2.63	OUTSIDE PLANT FIBER OPTIC CABLE, DROP, SINGLE MODE, 6 FIBER	789.00
935-3103	3	EA	708.20	FIBER OPTIC CLOSURE, UNDERGROUND, 24 FIBER	2124.60
935-4010	12	EA	40.92	FIBER OPTIC SPLICE, FUSION	491.04
937-1000	2	EA	3097.36	VIDEO CAMERA SENSOR ASSEMBLY	6194.72
939-1112	2	EA	2305.00	FIBER OPTIC VIDEO TRANSMITTER, 1310 SINGLE MODE	4610.00
939-1117	2	EA	3065.00	FIBER OPTIC VIDEO RECEIVER, 1310 SINGLE MODE	6130.00
939-6000	2	EA	5958.50	HUB UNINTERRUPTIBLE POWER SUPPLY	11917.00
Section Sub Total:					\$694,515.07

Section Guardrail					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
641-1100	200	LF	50.01	GUARDRAIL, TP T	10002.00
641-1200	5200	LF	18.05	GUARDRAIL, TP W	93860.00
641-5001	4	EA	653.72	GUARDRAIL ANCHORAGE, TP 1	2614.88
641-5012	4	EA	1811.86	GUARDRAIL ANCHORAGE, TP 12	7247.44
Section Sub Total:					\$113,724.32

Section Traffic Control					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
150-1000	1	Lump Sum	700000.00	TRAFFIC CONTROL	700000.00
Section Sub Total:					\$700,000.00

Section Landscaping and Erosion Control					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
163-0232	13	AC	726.07	TEMPORARY GRASSING	9438.91
163-0240	39	TN	168.06	MULCH	6554.34
163-0300	6	EA	1518.45	CONSTRUCTION EXIT	9110.70
163-0520	1000	LF	17.12	CONSTRUCT AND REMOVE TEMPORARY PIPE SLOPE DRAIN	17120.00
163-0531	4	EA	7792.46	CONSTRUCT AND REMOVE SEDIMENT BASIN, TP 1, STA NO -	31169.84
165-0010	3900	LF	1.03	MAINTENANCE OF TEMPORARY SILT FENCE, TP A	4017.00
165-0030	9090	LF	1.77	MAINTENANCE OF TEMPORARY SILT FENCE, TP C	16089.30
165-0060	4	EA	1457.77	MAINTENANCE OF TEMPORARY SEDIMENT BASIN, STA NO -	5831.08
165-0101	6	EA	617.94	MAINTENANCE OF CONSTRUCTION EXIT	3707.64
167-1000	1	EA	1334.19	WATER QUALITY MONITORING AND SAMPLING	1334.19
167-1500	18	MO	982.74	WATER QUALITY INSPECTIONS	17689.32
171-0010	3900	LF	2.08	TEMPORARY SILT FENCE, TYPE A	8112.00
171-0030	9090	LF	4.08	TEMPORARY SILT FENCE, TYPE C	37087.20
201-1500	1	LS	750000.00	CLEARING & GRUBBING -	750000.00
700-6910	13	AC	1070.77	PERMANENT GRASSING	13920.01
700-7000	100	TN	70.85	AGRICULTURAL LIME	7085.00
700-7010	80	GL	20.69	LIQUID LIME	1655.20
700-8000	10	TN	350.44	FERTILIZER MIXED GRADE	3504.40
700-8100	1000	LB	2.37	FERTILIZER NITROGEN CONTENT	2370.00
716-2000	50000	SY	1.20	EROSION CONTROL MATS, SLOPES	60000.00
Section Sub Total:					\$1,005,796.13

Section Miscellaneous Items					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
153-1300	1	EA	79134.11	FIELD ENGINEERS OFFICE TP 3	79134.11
634-1200	50	EA	91.17	RIGHT-OF-WAY MARKERS	4558.50
Section Sub Total:					\$83,692.61

Total Estimated Cost: \$14,374,230.00

Subtotal Construction Cost \$14,374,230.00

E&C Rate 10.0 % \$1,437,423.00

Inflation Rate 5.0 % @ 1.0 Years \$790,582.65

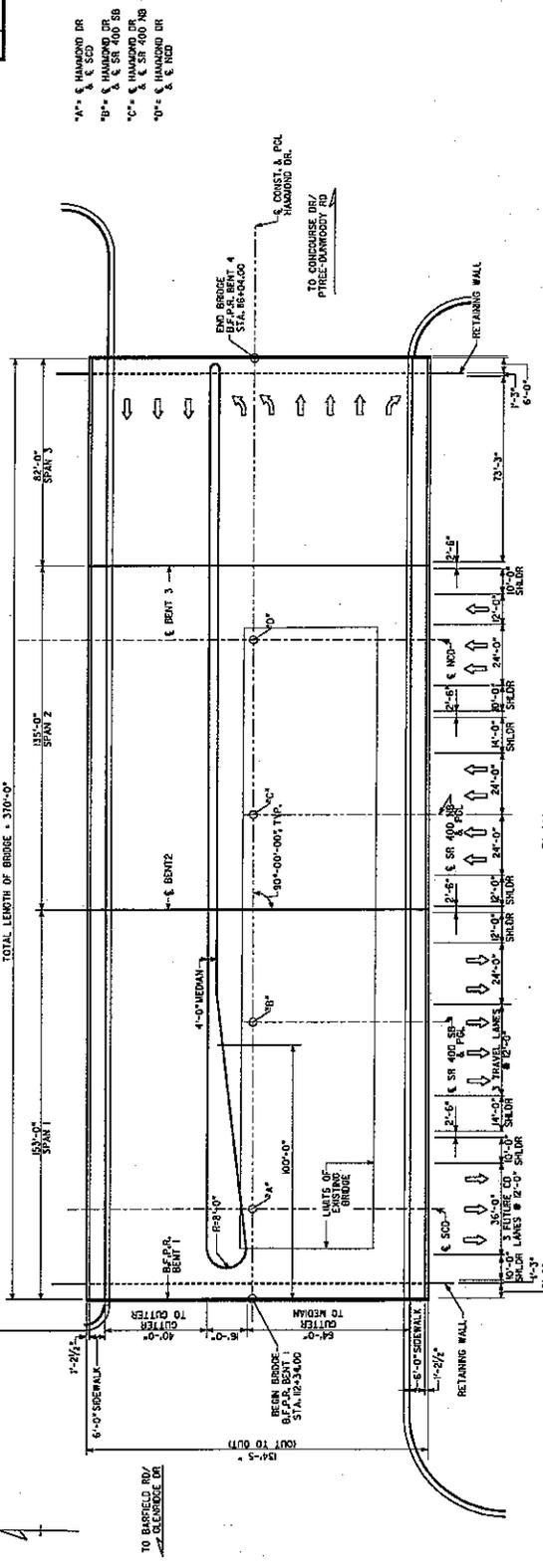
Total Construction Cost \$16,602,235.65

Right Of Way \$0.00

ReImb. Utilities \$350,000.00

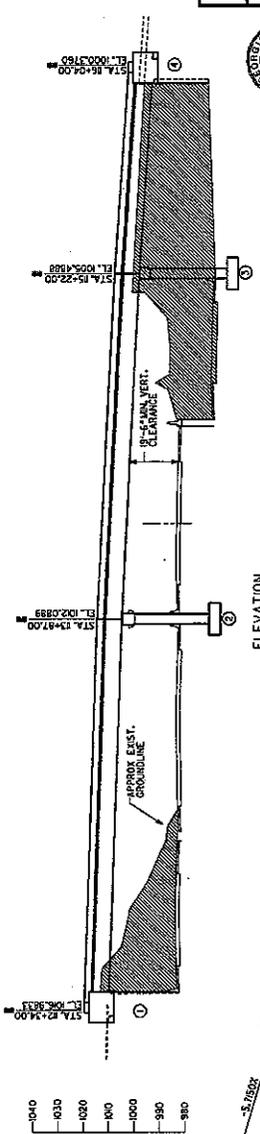
Grand Total Project Cost \$16,952,235.65

DATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
04/11/08	CSNHS-0008-0048R	1	1



PLAN

STATIONS AND ELEVATIONS ARE ALONG PROFILE GRADE LINE AT THE



ELEVATION

VERTICAL CURVE DATA
HAMMOND DRIVE

- NOTES:
- EXCAVATION REQUIRED.
 - ALL BENTS ARE PARALLEL.
 - BRIDGE DECK TO BE BUILT ON A NORMAL CROWN OF 2.00%

EXISTING BRIDGE SERIAL NO. 12-0483-0
BRIDGE, LA. NO. 12-0255A-0042E
PROJECT P.L. NO. 000483

BRIDGE NO.

MA
Meyland A. Iabelli
Professional Engineer
No. 100000000

GEORGIA
DEPARTMENT OF TRANSPORTATION
PRECONSTRUCTION DIVISION-OFFICE OF BRIDGE DESIGN

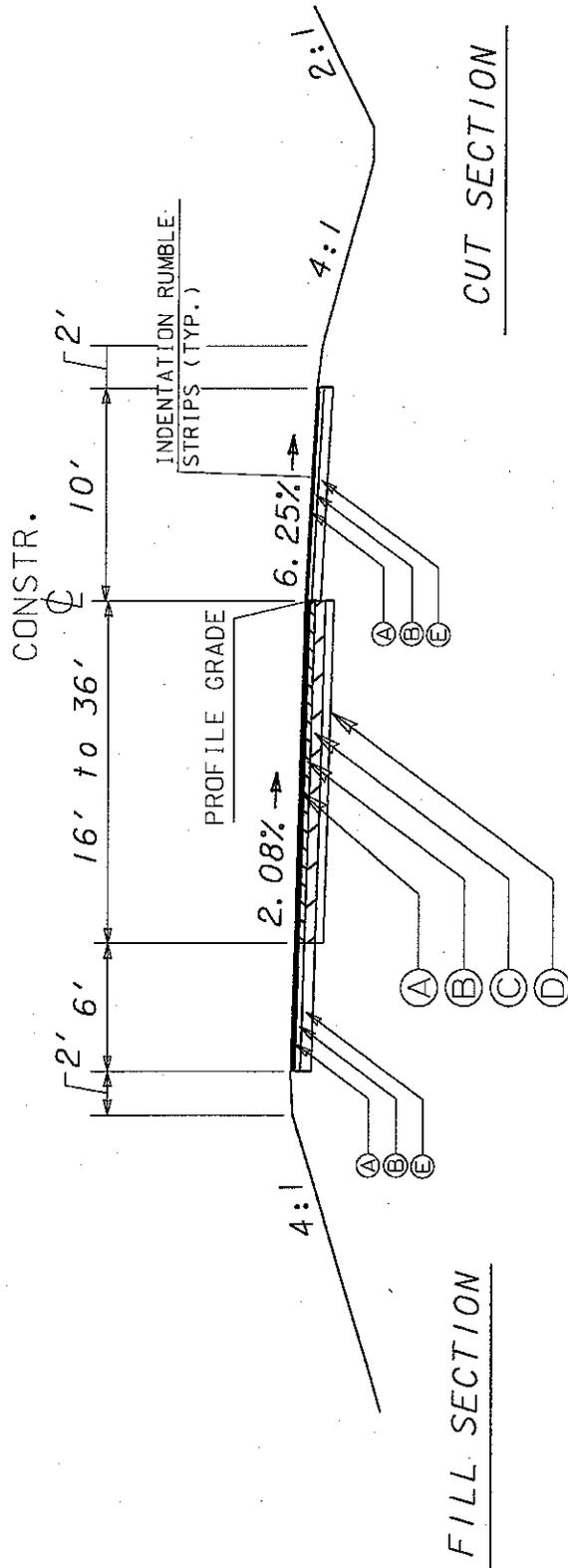
PRELIMINARY LAYOUT
HAMMOND DRIVE OVER S.R. 400
FULTON COUNTY CSNHS-0008-0048R

DESIGNED BY	DATE
APPROVED BY	DATE
CHECKED BY	DATE
BRIDGE SHEET	NO. SCALE
X OF X	



1/08

GA 400 RAMPS



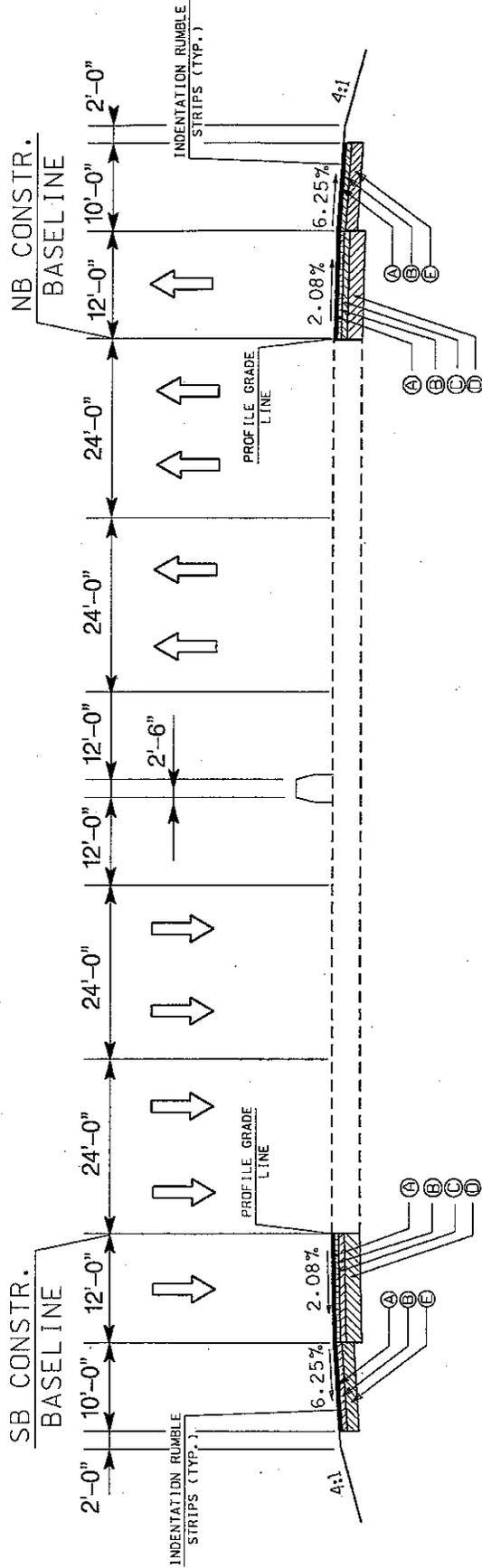
PROPOSED PAVEMENT

- Ⓐ ASPHALTIC CONC. 12.5 mm SUPERPAVE (165 lbs/SY)
- Ⓑ ASPHALTIC CONC. 19 mm SUPERPAVE (220 lbs/SY)
- Ⓒ ASPHALTIC CONC. 25 mm SUPERPAVE (550 lbs/SY)
- Ⓓ GRADED AGGREGATE BASE (12")
- Ⓔ GRADED AGGREGATE BASE (6")

TYPICAL SECTION

NOT TO SCALE

GA 400 AUXILIARY LANES



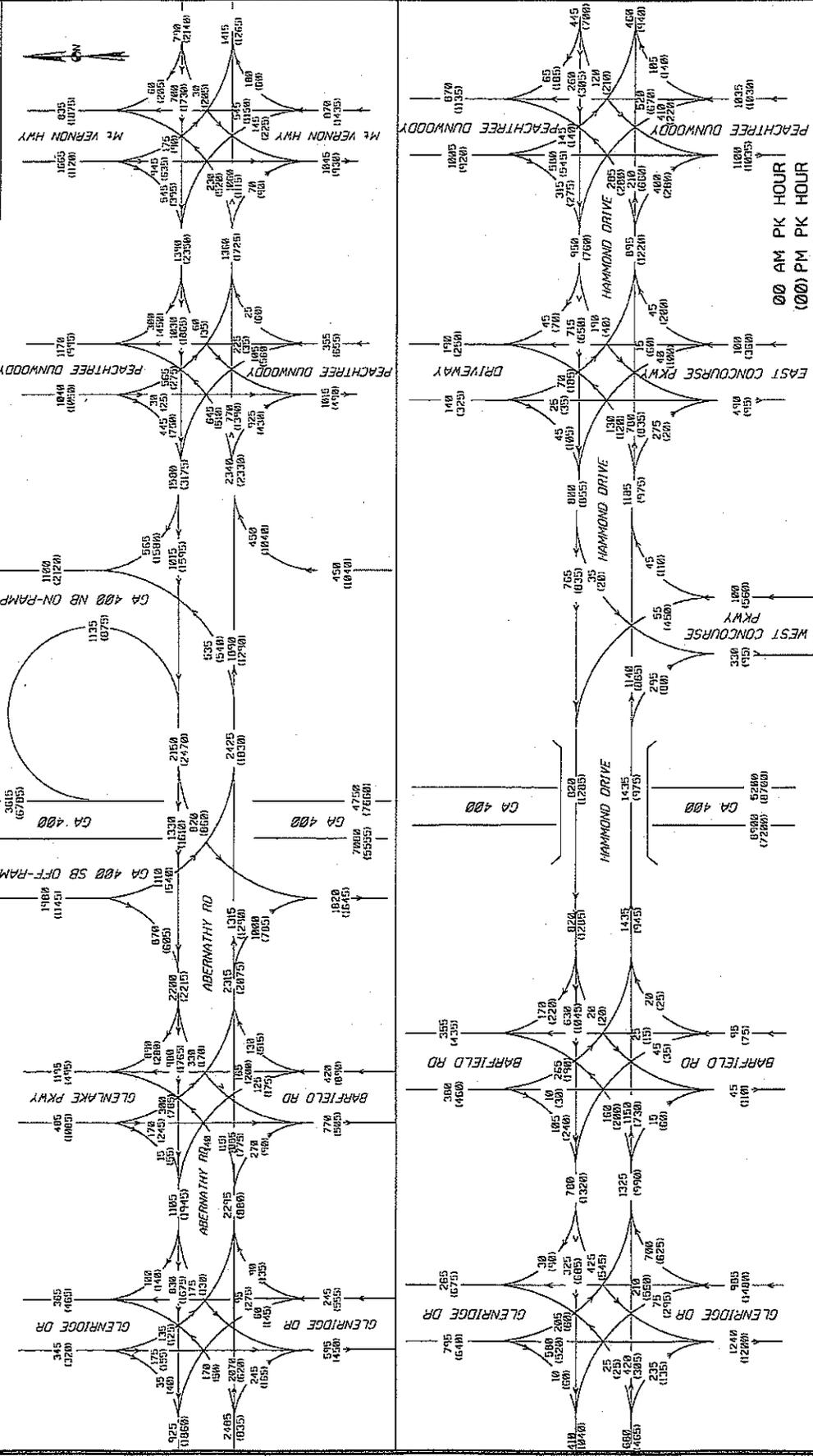
PROPOSED PAVEMENT

- Ⓐ ASPHALTIC CONC. 12.5 mm SUPERPAVE (165 lbs/SY)
- Ⓑ ASPHALTIC CONC. 19 mm SUPERPAVE (220 lbs/SY)
- Ⓒ ASPHALTIC CONC. 25 mm SUPERPAVE (550 lbs/SY)
- Ⓓ GRADED AGGREGATE BASE (12')
- Ⓔ GRADED AGGREGATE BASE (6')

TYPICAL SECTION

NOT TO SCALE

STATE PROJECT NUMBER DATE
 CA. SF-92330 9/27/2006



00 AM PK HOUR
 (00) PM PK HOUR

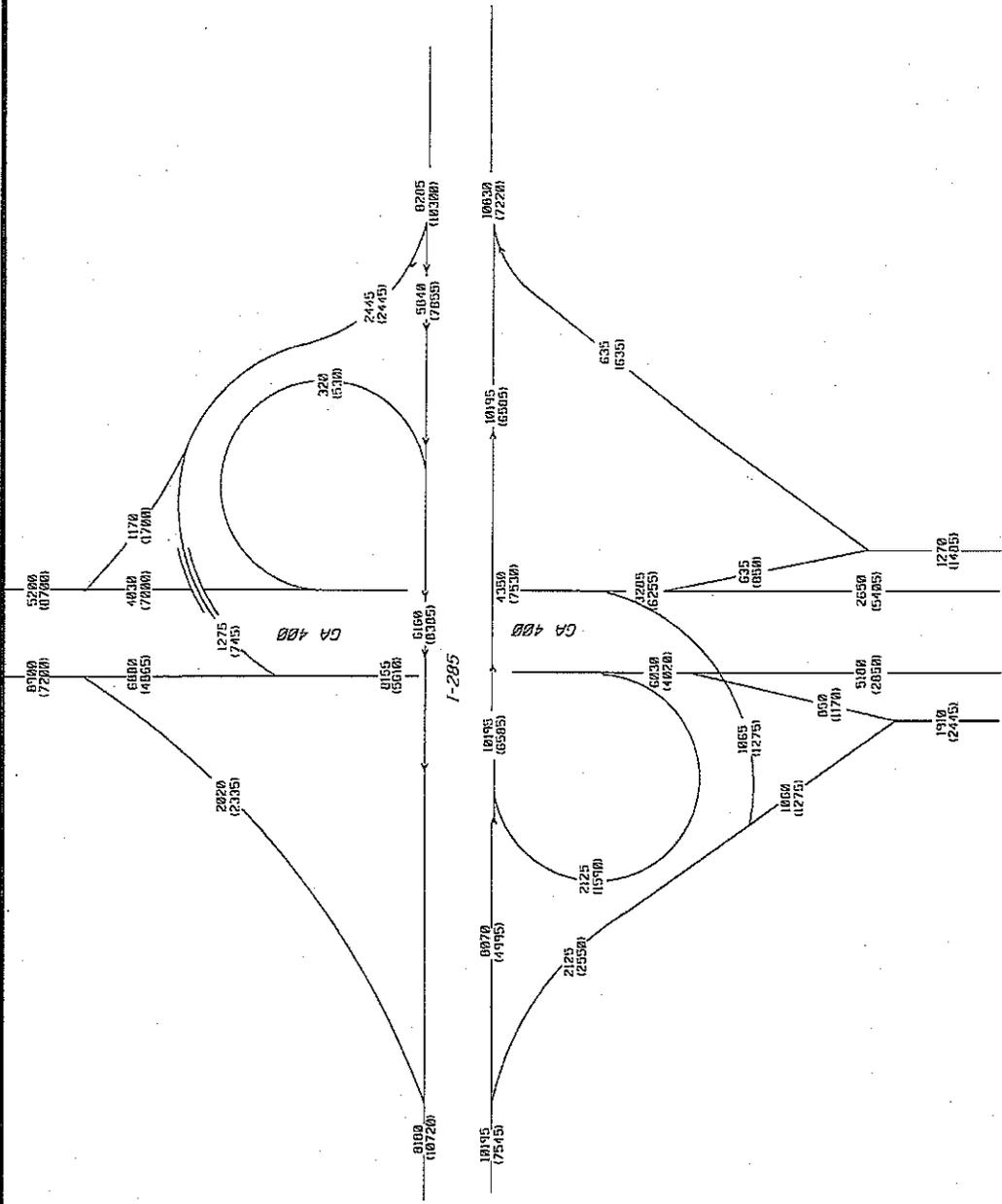
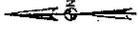
ABERNATHY ROAD WIDENING
 2006 EXISTING PEAK HOUR TRAFFIC
 TRAFFIC FLOW DIAGRAM

DATE: 10-01
 DRAWING NO. 10-01

MA
 Maryland, A. J. Jochell,
 Associates, Inc.,
 2211 South Shore
 Boulevard, Suite 100
 Springfield, VA 22154-3995
 (703) 861-9945

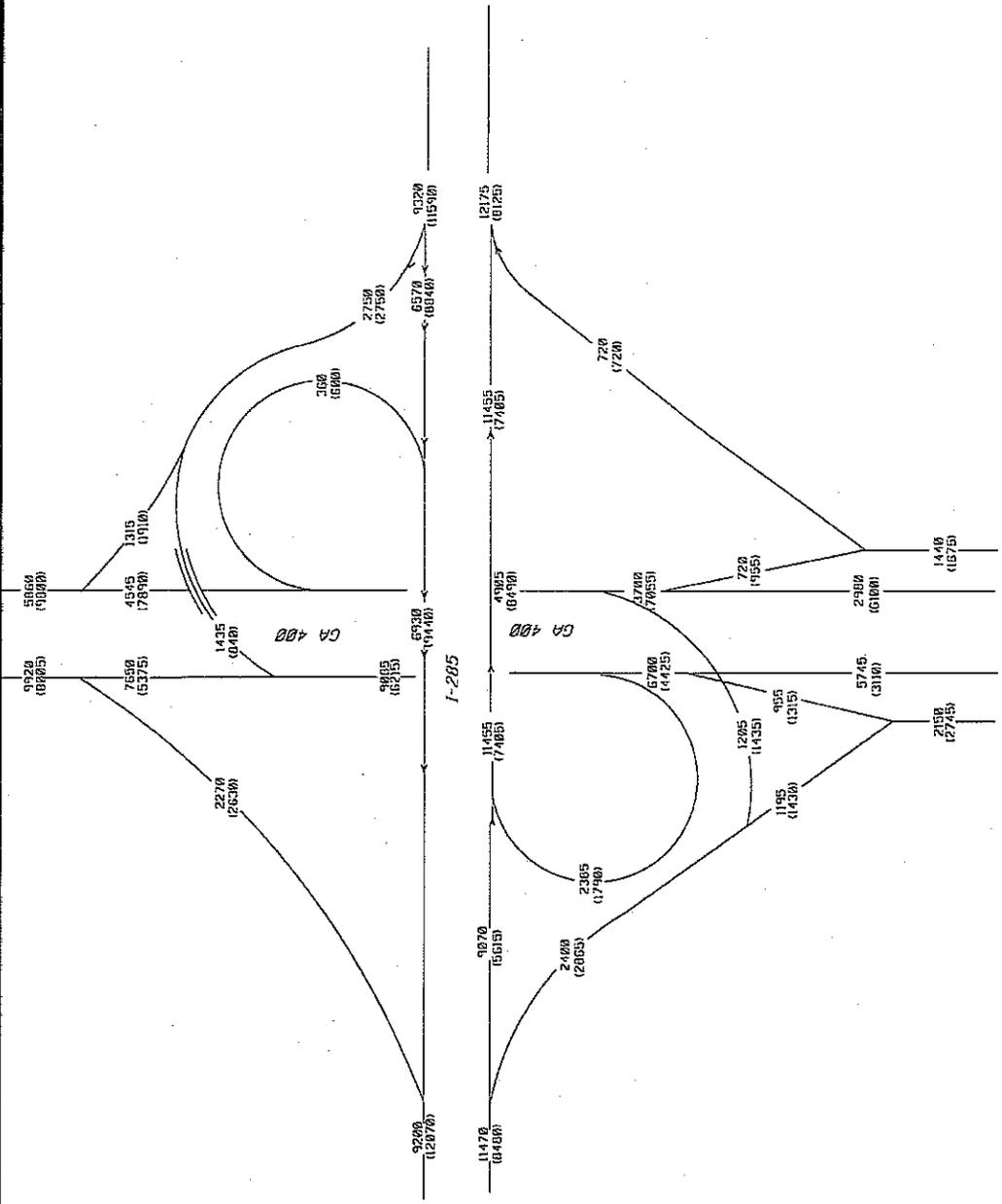
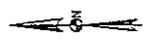
DATE	REVISIONS

STATE	PROJECT NUMBER	SHEET NUMBER
GA.	31V-9820	26



DRAWING NO. 10-02	
GA 400/HAMMOND DR INTERCHANGE 2006 FOR I-285 INTERCHANGE PEAK HOUR TRAFFIC TRAFFIC FLOW DIAGRAM	
M. J. ... 221 ... Telephone 1701 261-5946	
MA	
DATE	REVISIONS

STATE	PROJECT NUMBER	SHEET NUMBER
GA.	SIP-9230	10-05



DRAWING NO.
10-05

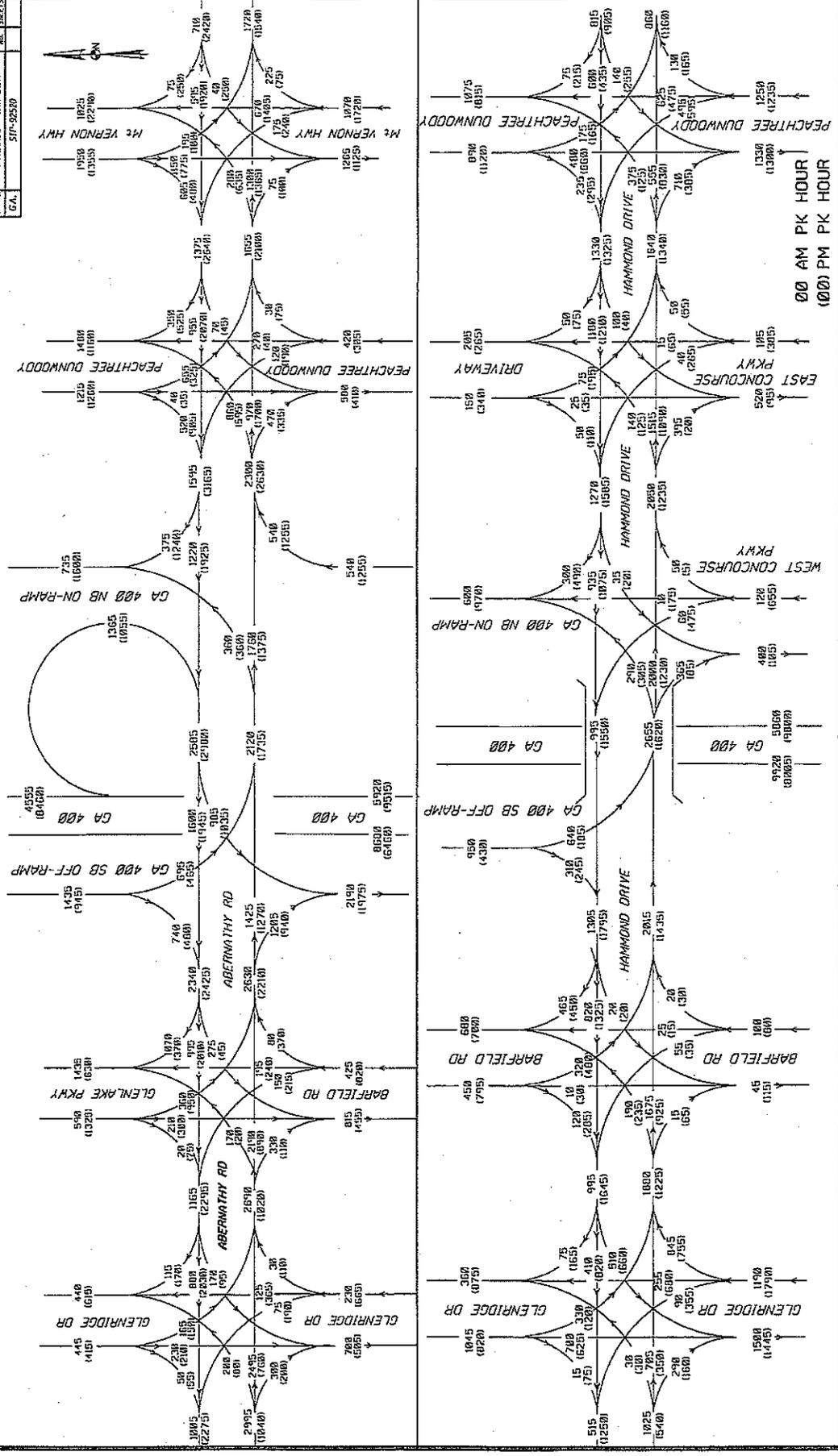
GA 400/HAMMOND DR INTERCHANGE
2015 FOR I-285 INTERCHANGE PEAK HOUR TRAFFIC
TRAFFIC FLOW DIAGRAM

Marshall A. Nicholls
Associates, Inc.
2011 South 10th Street
Decatur, Georgia 30030
Telephone: (770) 596-5945



DATE	REVISIONS

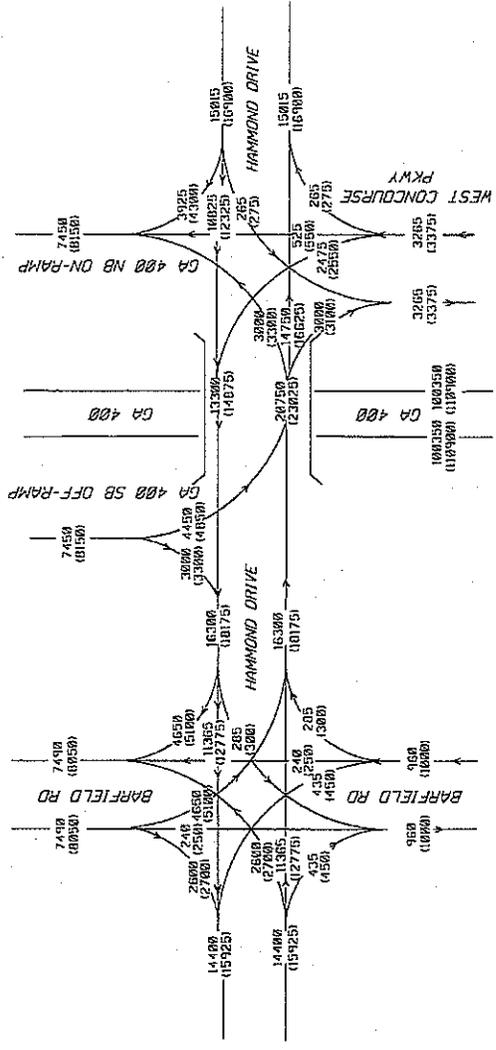
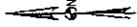
STATE	PROJECT NUMBER	SHEET NO.
GA.	517-92530	10-04



DATE	REVISIONS	DRAWING NO.
		10-04

STATE PROJECT NUMBER
 D.A. SP-9250

SHEET NUMBER
 OF SHEETS



00 AM PK HOUR
 (00) PM PK HOUR

DRAWING NO.
 10-06

GA 400/HAMMOND DR INTERCHANGE
 2009/2015 AVERAGE DAILY TRAFFIC
 TRAFFIC FLOW DIAGRAM

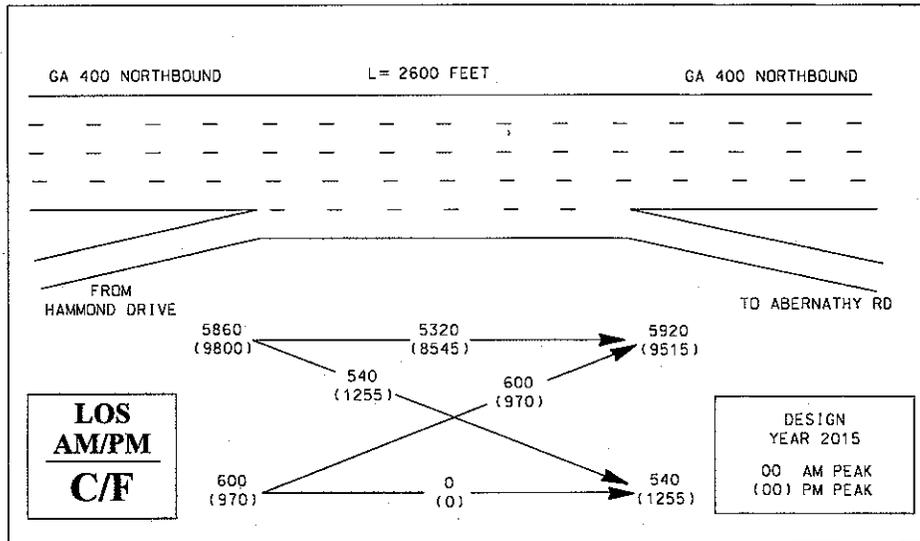
MA
 McDaniel & Johnson
 201 Heavy Duty Blvd
 Marietta, GA 30066
 Telephone: (770) 561-5946

DATE	REVISIONS

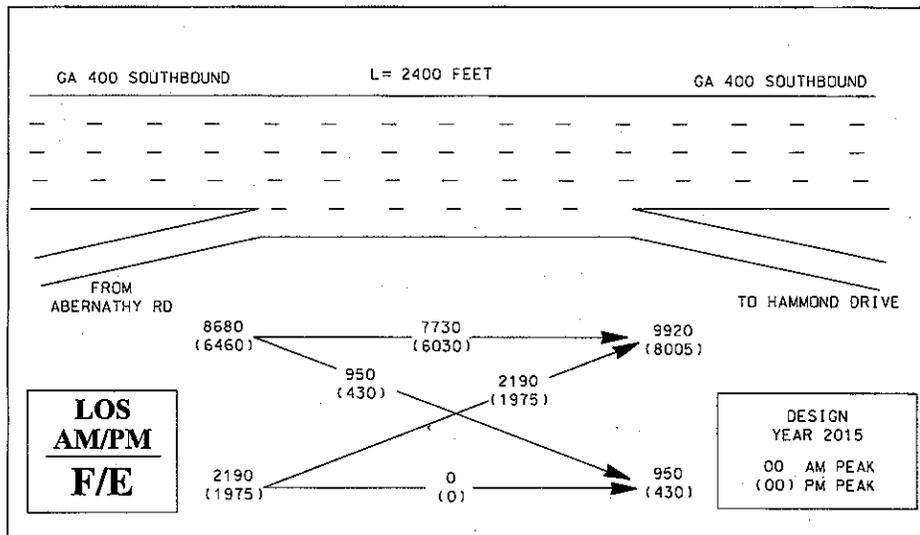
Weaving Analysis

The auxiliary lanes on GA 400 with the proposed ramps at Hammond Drive form a weave condition on GA 400. The northbound and southbound weaving areas on GA 400 were analyzed under the design year 2015 conditions. The results are shown in the weaving diagrams below. Both weaving areas were identified and analyzed as Type "A" weaving areas, or *ramp-weave sections*, consisting of an on-ramp closely followed by an off-ramp, where an auxiliary lane joins the two. The geometric configuration of a Type "A" weave must require one vehicular lane transition to successfully complete the weaving maneuver.

**Weaving Diagram
GA 400 Northbound from Hammond Drive to Abernathy Road**



**Weaving Diagram
GA 400 Southbound from Abernathy Road to Hammond Drive**



Although the weaving areas operate at LOS "F" during the directional peak hour, the overall weaving segment speeds are typical of peak hour conditions on expressways in the Atlanta area. This project is an interim project until GA 400 is improved with collector-distributor lanes and HOV/managed lanes in GDOT Project NH-056-1 (52), P.I. Number 721850 (Fulton) scheduled for construction in 2013 and completion is estimated to be in year 2015. The weaving speeds are listed in the table below.

Weaving Area LOS Analysis Results							
Freeway	Weaving Area Limits (From/To)	Type	Dir.	N*	Length	AM (Speed)	PM (Speed)
GA 400	Hammond Drive to Abernathy Road	A	NB	5	2600	C (57.91)	F (50.30)
	Abernathy Road to Hammond Drive	A	SB	5	2400	F (45.03)	E (48.65)

* Indicates the number of lanes for that particular segment.

Operational Analysis

Analyst: MAAI
 Agency/Co.: GDOT
 Date Performed: 10/11/2007
 Analysis Time Period: AM peak hour
 Freeway/Dir of Travel: GA 400 Northbound
 Weaving Location: Fm Hammond Dr to Abernathy Rd
 Jurisdiction: Fulton County
 Analysis Year: Design Year 2015
 Description: GA 400/Hammond Drive Interchange

Inputs

Freeway free-flow speed, SFF	65	mph
Weaving number of lanes, N	5	
Weaving segment length, L	2500	ft
Terrain type	Level	
Grade		%
Length		mi
Weaving type	A	
Volume ratio, VR	0.18	
Weaving ratio, R	0.47	

Conversion to pc/h Under Base Conditions

	Non-Weaving		Weaving		
	V	V	V	V	
	A-C	B-D	A-D	B-C	
Volume, V	5320	0	540	600	veh/h
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, v15	1446	0	147	163	v
Trucks and buses	3	3	3	3	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.985	0.985	0.985	0.985	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	5869	0	595	661	pc/h

Weaving and Non-Weaving Speeds

	Weaving	Non-Weaving
a (Exhibit 24-6)	0.15	0.00
b (Exhibit 24-6)	2.20	4.00
c (Exhibit 24-6)	0.97	1.30
d (Exhibit 24-6)	0.80	0.75
Weaving intensity factor, Wi	1.10	0.14
Weaving and non-weaving speeds, Si	41.23	63.40
Number of lanes required for unconstrained operation, Nw (Exhibit 24-7)		1.51
Maximum number of lanes, Nw (max) (Exhibit 24-7)		1.40
Type of operation is		Constrained

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	57.91	mph
Weaving segment density, D	24.61	pc/mi/ln
Level of service, LOS	C	
Capacity of base condition, cb	11247	pc/h
Capacity as a 15-minute flow rate, c	11081	pc/h
Capacity as a full-hour volume, ch	10195	pc/h

Limitations on Weaving Segments

	Analyzed	If Max Exceeded	See Note
		Maximum	Note
Weaving flow rate, Vw	1256	2800	a
Average flow rate (pcphpl)	1425	2350	b
Volume ratio, VR	0.18	0.20	c
Weaving ratio, R	0.47	N/A	d
Weaving length (ft)	2500	2500	e

Operational Analysis

Analyst: MAAI
 Agency/Co.: GDOT
 Date Performed: 12/11/07
 Analysis Time Period: PM peak hour
 Freeway/Dir of Travel: GA 400 Northbound
 Weaving Location: Fm Hammond Dr to Abernathy Rd
 Jurisdiction: Fulton County
 Analysis Year: Design Year 2015
 Description: GA 400/Hammond Drive Interchange

Inputs

Freeway free-flow speed, SFF 65 mph
 Weaving number of lanes, N 5
 Weaving segment length, L 2500 ft
 Terrain type Level
 Grade %
 Length mi
 Weaving type A
 Volume ratio, VR 0.21
 Weaving ratio, R 0.44

Conversion to pc/h Under Base Conditions

	Non-Weaving		Weaving		
	V	V	V	V	
	A-C	B-D	A-D	B-C	
Volume, V	8545	0	1255	970	veh/h
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, v15	2322	0	341	264	v
Trucks and buses	3	3	3	3	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.985	0.985	0.985	0.985	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	9427	0	1384	1070	pc/h

Weaving and Non-Weaving Speeds

	Weaving	Non-Weaving
a (Exhibit 24-6)	0.15	0.00
b (Exhibit 24-6)	2.20	4.00
c (Exhibit 24-6)	0.97	1.30
d (Exhibit 24-6)	0.80	0.75
Weaving intensity factor, Wi	1.90	0.29
Weaving and non-weaving speeds, Si	33.94	57.52
Number of lanes required for unconstrained operation, Nw (Exhibit 24-7)		1.77
Maximum number of lanes, Nw (max) (Exhibit 24-7)		1.40
Type of operation is		Constrained

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S 50.30 mph
 Weaving segment density, D 47.24 pc/mi/ln
 Level of service, LOS F
 Capacity of base condition, cb 11090 pc/h
 Capacity as a 15-minute flow rate, c 10926 pc/h
 Capacity as a full-hour volume, ch 10052 pc/h

Limitations on Weaving Segments

	Analyzed	If Max Exceeded	See Note
		Maximum	Note
Weaving flow rate, Vw	2454	2800	a
Average flow rate (pcphpl)	2376	2350	b
Volume ratio, VR	0.21	0.20	c
Weaving ratio, R	0.44	N/A	d
Weaving length (ft)	2500	2500	e

Operational Analysis

Analyst: MAAI
 Agency/Co.: GDOT
 Date Performed: 12/11/2007
 Analysis Time Period: AM peak hour
 Freeway/Dir of Travel: GA 400 Southbound
 Weaving Location: Fm Abernathy Rd to Hammond Dr
 Jurisdiction: Fulton County
 Analysis Year: Design Year 2015
 Description: GA 400/Hammond Drive Interchange

Inputs

Freeway free-flow speed, SFF 65 mph
 Weaving number of lanes, N 5
 Weaving segment length, L 2400 ft
 Terrain type Level
 Grade %
 Length mi
 Weaving type A
 Volume ratio, VR 0.29
 Weaving ratio, R 0.30

Conversion to pc/h Under Base Conditions

	Non-Weaving		Weaving		
	V	V	V	V	
	A-C	B-D	A-D	B-C	
Volume, V	7730	0	950	2190	veh/h
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, v15	2101	0	258	595	v
Trucks and buses	3	3	3	3	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.985	0.985	0.985	0.985	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	8528	0	1048	2416	pc/h

Weaving and Non-Weaving Speeds

	Weaving	Non-Weaving
a (Exhibit 24-6)	0.15	0.00
b (Exhibit 24-6)	2.20	4.00
c (Exhibit 24-6)	0.97	1.30
d (Exhibit 24-6)	0.80	0.75
Weaving intensity factor, Wi	2.30	0.40
Weaving and non-weaving speeds, Si	31.69	54.32
Number of lanes required for unconstrained operation, Nw (Exhibit 24-7)		2.17
Maximum number of lanes, Nw (max) (Exhibit 24-7)		1.40
Type of operation is		Constrained

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	45.03 mph
Weaving segment density, D	53.26 pc/mi/ln
Level of service, LOS	F
Capacity of base condition, cb	11024 pc/h
Capacity as a 15-minute flow rate, c	10861 pc/h
Capacity as a full-hour volume, ch	9992 pc/h

Limitations on Weaving Segments

	Analyzed	If Max Exceeded	See Note
		Maximum	Note
Weaving flow rate, Vw	3464	2800	a
Average flow rate (pcphpl)	2398	2350	b
Volume ratio, VR	0.29	0.20	c
Weaving ratio, R	0.30	N/A	d
Weaving length (ft)	2400	2500	e

Operational Analysis

Analyst: MAAI
 Agency/Co.: GDOT
 Date Performed: 12/11/2007
 Analysis Time Period: PM peak hour
 Freeway/Dir of Travel: GA 400 Southbound
 Weaving Location: Fm Abernathy Rd to Hammond Dr
 Jurisdiction: Fulton County
 Analysis Year: Design Year 2015
 Description: GA 400/Hammond Drive Interchange

Inputs

Freeway free-flow speed, SFF 65 mph
 Weaving number of lanes, N 5
 Weaving segment length, L 2400 ft
 Terrain type Level
 Grade %
 Length mi
 Weaving type A
 Volume ratio, VR 0.29
 Weaving ratio, R 0.18

Conversion to pc/h Under Base Conditions

	Non-Weaving		Weaving		
	V	V	V	V	
	A-C	B-D	A-D	B-C	
Volume, V	6030	0	430	1975	veh/h
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, v15	1639	0	117	537	v
Trucks and buses	3	3	3	3	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.985	0.985	0.985	0.985	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	6652	0	474	2178	pc/h

Weaving and Non-Weaving Speeds

	Weaving	Non-Weaving
a (Exhibit 24-6)	0.15	0.00
b (Exhibit 24-6)	2.20	4.00
c (Exhibit 24-6)	0.97	1.30
d (Exhibit 24-6)	0.80	0.75
Weaving intensity factor, Wi	1.78	0.28
Weaving and non-weaving speeds, Si	34.76	57.86
Number of lanes required for unconstrained operation, Nw (Exhibit 24-7)		2.08
Maximum number of lanes, Nw (max) (Exhibit 24-7)		1.40
Type of operation is		Constrained

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S 48.65 mph
 Weaving segment density, D 38.25 pc/mi/ln
 Level of service, LOS E
 Capacity of base condition, cb 11024 pc/h
 Capacity as a 15-minute flow rate, c 10861 pc/h
 Capacity as a full-hour volume, ch 9992 pc/h

Limitations on Weaving Segments

	Analyzed	If Max Exceeded	See Note
		Maximum	Note
Weaving flow rate, Vw	2652	2800	a
Average flow rate (pcphpl)	1860	2350	b
Volume ratio, VR	0.29	0.20	c
Weaving ratio, R	0.18	N/A	d
Weaving length (ft)	2400	2500	e

Benefit Cost Analysis Work Sheet CONGESTION Projects

PROJECT NUMBER: CSNHS-0008-00(415)

PI NUMBER: 0008415

COUNTY: Fulton

PROJECT DESCRIPTION: SR 400/Hammond Drive Interchange

Congestion Benefit = Tb + CMb + Fb

Person Time Savings Benefit (Tb)

	Hammond Drive	Abernathy Road
*Db (hrs)	0.0412	0.074
ADT	36,350.00	53,250.00
Tb (\$s)	\$51,480,687.50	\$135,454,687.50

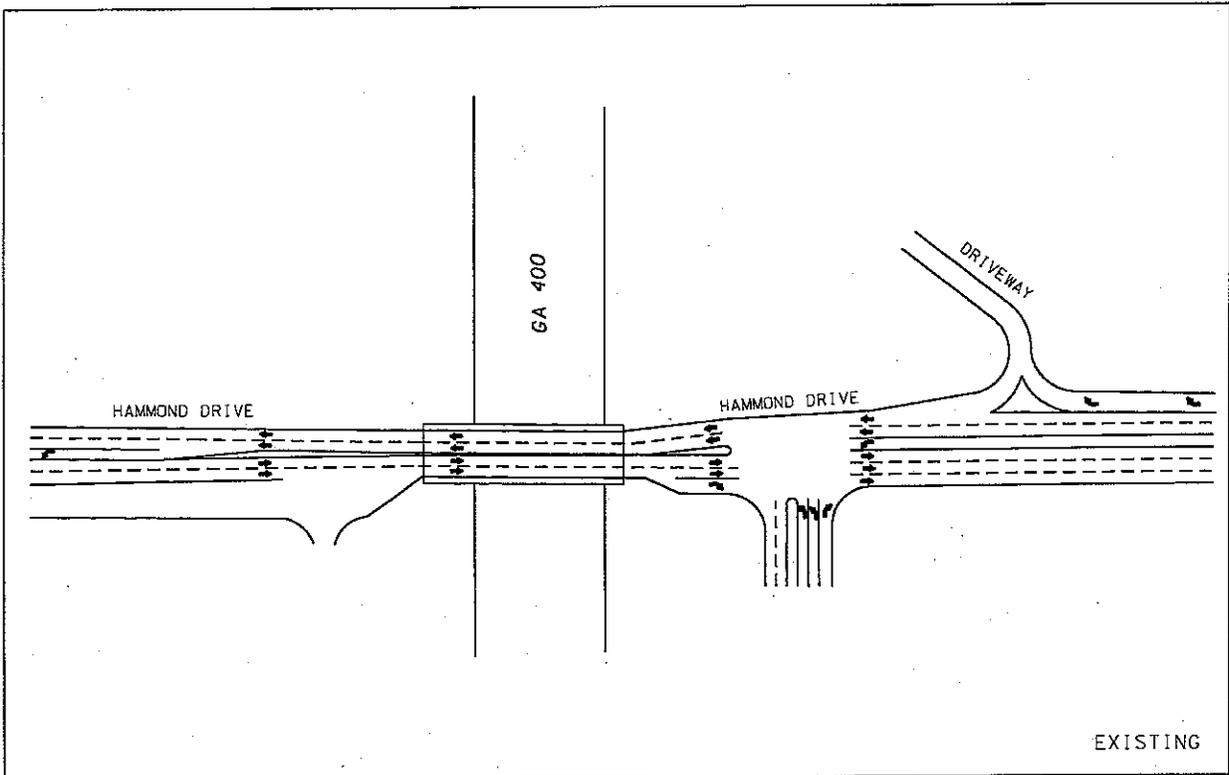
Commercial or Truck Time Savings Benefit (CMb)

	Hammond Drive	Abernathy Road
Db (hrs)	0.0412	0.074
% Truck Traffic	0.03	0.03
ADT	36,350.00	53,250.00
CMb	\$8,160,156.98	\$21,470,799.38

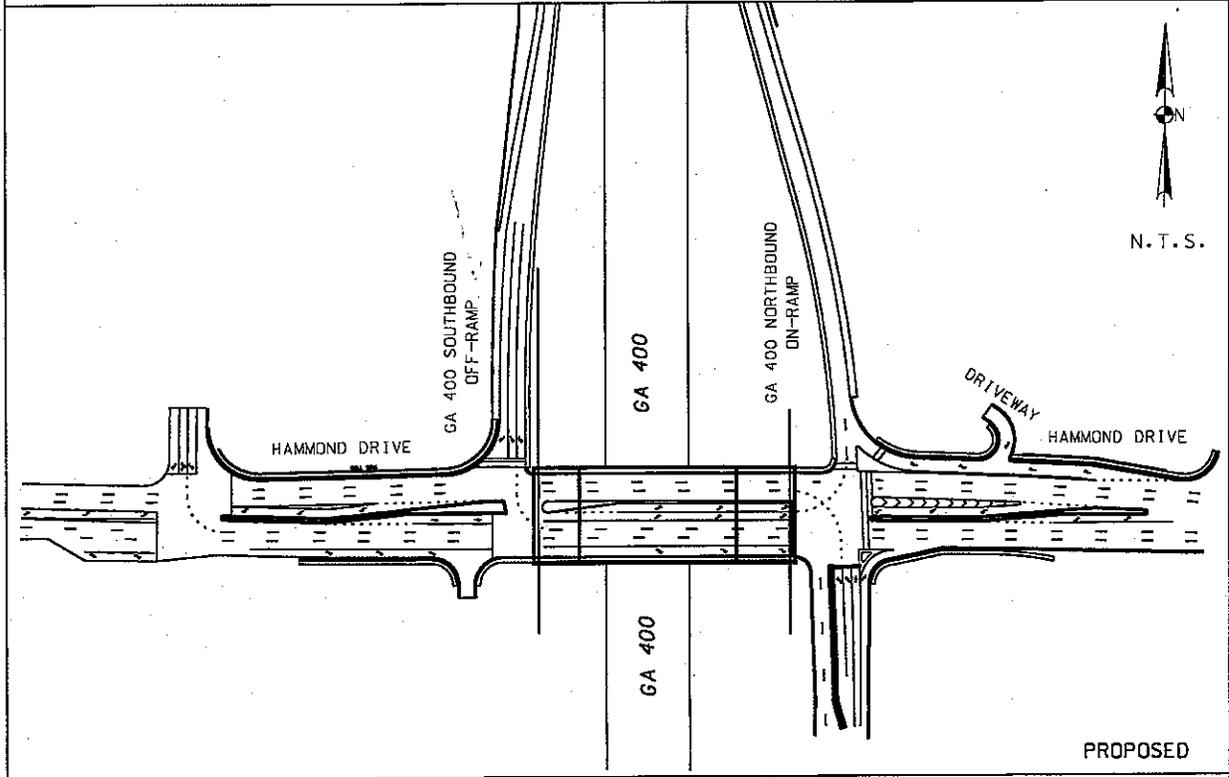
Fuel Savings Benefit (Fb)

	Hammond Drive	Abernathy Road
ADT	36,350.00	53,250.00
Fb (\$s)	\$17,940,239.58	\$47,203,906.25

Total Congestion Benefit	\$77,581,084.06	\$204,129,393.13
Total Project Cost	\$17,152,235.00	
B/C Ratio	16.42	



EXISTING



PROPOSED

MA Moreland Altobelli
Associates, Inc.

**INTERSECTION LANE CONFIGURATION
GA 400 @ HAMMOND DRIVE RAMPS
FULTON COUNTY, GA.**

Signs & Attachments

* 104 Highway System:	0	* 223 Expansion Joint Type:	03
* 26 Functional Classification:	17	* 242 Deck Drains:	0
* 204 Federal Route Type:	M	* 243 Parapet Location:	2
* 110 Truck Route:	0	Height:	2.2
No.:	09255	Width:	1.1
206 School Bus Route:	1	238 Curb:	0.61
217 Benchmark Elevation:	0.00	239 Handrail:	7.2
218 Datum:	0	* 240 Median Barrier Rail:	0
* 19 Bypass Length:	3	241 Bridge Median Height:	0
* 20 Toll:	3	Width:	0
* 21 Maintenance:	01	* 230 Guardrail Loc Dir Rear:	0
* 22 Owner:	01	Fwrd:	0
* 31 Design Load:	6	Oppo Dir Rear:	0
37 Historical Significance:	5	244 Approach Slab:	3
205 Congressional District:	05	224 Retaining Wall:	0
* 27 Year Constructed:	1968	233 Posted Speed Limit:	45
106 Year Reconstructed:	1982	236 Warning Sign:	0
33 Bridge Median:	0	234 Delineator:	0
34 Skew:	00	235 Hazard Boards:	0
35 Structure Flared:	0	237 Utilities Gas:	22
38 Navigation Control:	N	Water:	21
213 Special Steel Design:	0	Electric:	22
267 Type of Point:	5	Telephone:	21
Sewer:		Sewer:	00
* 42 Type Service On:	5	247 Lighting Street:	0
Under:	1	Navigation:	0
214 Movable Bridge:	00	Aerial:	0
203 Type Bridge:	Z-O-M-O	* 248 County Continuity No.:	00
259 Pile Encasement:	3		
* 43 Structure Type Main:	4.02		
45 No. Spans Main:	003		
44 Structure Type Appr:	3.3		
46 No. Spans Appr:	0001		
226 Bridge Curve Horz:	0		
111 Pier Protection:	0		
107 Deck Structure Type:	1		
108 Wearing Surface Type:	6		
Membrane:	1		
Protection:	8		

* Structure I.D. No.:	121-0459-0
* 200 Bridge Information:	04
* 6A Feature Int.:	SR 400 (US 19)
* 6B Critical Bridge:	0
* 7A Route Number Carried:	CR00262
* 7B Facility Carried:	HAMMOND DRIVE
* 9 Location:	.7 MI N OF I-285
2 DOT District:	7
207 Year Photo:	1999
* 91 Inspection Frequency:	24
Date:	12/13/2000
92A Fract Crit Insp Freq:	0.00
Date:	0000
92B Underwater Insp Freq:	0.00
Date:	0000
92C Other Spc. Insp Freq:	0.00
Date:	0000
* 4 Place Code:	68516
* 5 Inventory Route (O/U):	1
Type:	5
Designator:	1
Number:	09255
Direction:	0
* 16 Latitude:	33-55.1
* 17 Longitude:	84 -21.7
98 Border Bridge:	000
99 ID Number:	000000000000000000
%Shared:	00
* 100 Defense Highway:	0
* 101 Parallel Structure:	N
* 102 Direction of Traffic:	2
264 Road Inventory Mile Post:	000.57
* 208 Inspection Area:	09
Initials:	JMC
* Location I.D. No.:	121-09255M-001.25E
* X(Referen I.D. No.:	000-0000000-000.000

Programming Data

201 Project No: M-9255 (1)
 202 Plans Available: 1
 249 Prop. Proj No: 04
 250 Approval Status: 0000
 251 P.I. No: 000000
 252 Contract Date: 0000
 260 Seismic No: 000000
 75 Type Work: 00 0
 94 Bridge Imp. Cost: \$ 0
 95 Roadway Imp. Cost: \$ 0
 96 Total Imp. Cost: \$ 0
 76 Imp. Length: 000000
 97 Imp. Year: 0000
 114 Future ADT: 029250 Year: 2019

Measurements

* 29 ADT: 019500 Year: 1999
 109 % Trucks: 2
 * 28 Lanes On: 04 Under: 08
 210 No. Tracks On: 00 Under: 00
 * 48 Max. Span Length: 0070
 * 49 Structure Length: 247
 51 Br. Rdwy. Width: 53.0
 52 Deck Width: 66.6
 * 47 Tot. Horz. Cl: 53.0
 50 Curb/Sidewlk Width: 5.0/6.0
 32 Approach Rdwy Width: 060
 * 229 Sllder Width:

Rear Lt. 1.5 Type: 1 Rt. 1.5
 Fwrd Lt. 6.0 Type: 5 Rt. 1.5
 Pmnt Width:

Rear: 57.0 Type: 2
 Fwrd: 64.5 Type: 2
 Intersection Rear: 0 Fwrd: 0

36 Safety Features Br. Rail: 2
 Transition: 0
 App. G. Rail: 0
 App. Rail End: 0
 53 Minimum Cl. Over: 99 99"
 Under: H 16' 08"

* 228 Min. Vert. Cl
 Act. Odm. Dir: 99 99"
 Oppo. Dir: 99 99"
 Posted Odm. Dir: 00' 00"
 Oppo. Dir: 00' 00"

55 Lateral Undercl. Rt: H 12.1
 56 Lateral Undercl. Lt: 4.0
 * 10 Max Min Vert Cl: 99 99" Dir: 0
 39 Nav Vert Cl: 000 Horz: 0000

116 Nav Vert Cl Closed: 000
 245 Deck Thickness Main: 8.5
 Deck Thick Approach: 0.0
 246 Overlay Thickness: 2.0
 211 Tons Structural Steel: 0.0
 212 Year Last Painted: Sup: 1996 Sub: 0000

Hydraulic Data

215 Waterway Data
 Highway Elev: 0000.0 Year: 0000
 Flood Elev: 0000.0 Freq: 00
 Avg. Streambed Elev: 0000.0
 Drainage Area: 00000
 Area of Opening: 000000
 113 Scour Critical: N
 216 Water Depth: 00.0 Br Height: 00.0
 222 Slope Protection: 4
 221 Spur Dikes Rear: 0 Fwrd: 0
 219 Fender System: 0
 220 Dolphin: 0
 223 Culvert Cover: 000
 No Barrels: 0
 Width: 0.0
 Height: 0.0
 Length: 0
 Apron: 0
 * 265 U/W Insp. Area: 0 Diver: ZZZ

* Location I.D. No: 121-09255M-001.251E
 * XReference I.D. No: 000-000000-000.000

Ratings

66 Inventory Type: 2 Rating: 36
 64 Operating Type: 2 Rating: 51
 231 Calculated Loads

H-Modified: 20 0
 HS-Modified: 25 0
 Type 3: 28 0
 Type 3s2: 40 0
 Timber: 36 0
 Piggyback: 00 0

261 H Inventory Rating: 20
 262 H Operating Rating: 28
 67 Structural Evaluation:
 58 Deck Condition: 6
 59 Superstructure Condition: 8
 * 227 Collision Damage: 0

60A Substructure Condition: 6
 60B Scour Condition: N
 60C Underwater Condition: N

71 Waterway Adequacy: N
 61 Channel Protection Cond: N
 68 Deck Geometry: 4
 69 Undercl. Horz/Vert: 4
 72 Appr. Alignment: 8
 62 Culvert: N

Posting Data

70 Bridge Posting Required: 5
 41 Struct Open, Posted, Cl: A
 * 103 Temporary Structure: 0

232 Posted Loads H-Modified: 00
 HS-Modified: 00
 Type 3: 00
 Type 3s2: 00
 Timber: 00
 Piggyback: 00

253 Notification Date: 0000
 253 Fed Notify Date: 0000

Minutes of Concept Team Meeting
October 18, 2007, 2:00 P.M. GDOT Urban Conference Room
GA 400 at Hammond Drive Interchange
Project Number: CSNHS-0008-00 (415)
P. I. Number: 0008415
Fulton County

Attendees are listed below:

<u>Name</u>	<u>Company</u>	<u>Phone</u>	<u>Email</u>
Albert Shelby	GDOT-Urban Design	404-656-5440	albert.shelby@dot.state.ga.us
Chris Kingsbury	MAAI	770-263-5945	ckingsbury@maai.net
Karla Poshedly	MAAI	770-263-5945	kposhedly@maai.net
Sam Deeb	MAAI	770-263-5945	sdeeb@maai.net
Shamir Poudel	Arcadis	770-431-8666	shamir.poudel@arcadis-us.com
Keith Kunst	Arcadis	770-431-8666	keith.kunst@arcadis-us.com
Hugh Colton	GDOT-Traffic Ops	404-635-8006	hugh.colton@dot.state.ga.us
Nabil Raad	GDOT	404-635-8126	m.nabil.raad@dot.state.ga.us
Tony Belcher	GDOT-Bridge	404-656-5182	tony.belcher@dot.state.ga.us
Shaun Williams	GDOT-Bridge	404-656-5182	shaun.williams@dot.state.ga.us
Wayne Fedora	FHWA	404-562-3651	r.wayne.fedora@fhwa.dot.gov
Mindy Roberson	FHWA	404-562-3652	melinda.roberson@fhwa.dot.gov
Steve Matthews	GDOT-Engr. Services	404-651-7462	steve.matthews@dot.state.ga.us
Amber Perkins	GDOT-OEL	404-699-3473	amber.perkins@dot.state.ga.us
Todd Hill	MAAI	678-205-7315	thill@maai.net
Ben Buchan	GDOT-Urban	404-656-5436	ben.buchan@dot.state.ga.us
Darrell Richardson	GDOT-Urban	404-656-54	darrell.richardson@dot.state.ga.us

Mr. Darrell Richardson opened the meeting with introductions. He then began to give a brief history of the project. Mr. Richardson explained that years ago the project to construct collector-distributor (CD) roads along GA 400 and construct a half-diamond interchange at Hammond Drive was designed. The right-of-way is still being acquired and the project is moving forward but does not have full funding to construct for several more years. The Perimeter CID came to GDOT and requested intermediate relief from traffic congestion in the area. An independent study was done to determine if the half-diamond ramps could be added now. The results of the study indicated that Hammond Drive would have to be widened in order for the interchange to work. Also, the study showed that auxiliary lanes would be necessary. Therefore, it was decided that ramps and auxiliary lanes could be built as "throwaway" parts for the CD project but that the bridge could be widened and lengthened by flexing the approved federal-aid money that was authorized for the right-of-way phase of the CD project to the construction phase.

Mr. Richardson continued to explain the project. The half-diamond interchange at Hammond Drive, widening Hammond Drive and the auxiliary lanes would be constructed with a design-build contract. The Environmental Assessment (EA) for the CD project was approved but a reevaluation will be required to proceed with the interim half-diamond project. An Interchange Justification Report (IJR) was approved for the CD project but a complete new IJR is required for the interim half-diamond

interchange project. The interchange project is considered the first phase of the CD project. The Perimeter CID agreed to pay for the engineering, the reevaluation of the EA, the costs of the ramps and the costs of the auxiliary lanes.

Ms. Mindy Roberson asked about the construction funding of this project in the draft Transportation Improvement Program (TIP). Mr. Chris Kingsbury said that the project is programmed in the draft TIP for 2008. Ms. Karla Poshedly commented that the project is listed as AR-938.

Mr. Richardson stated that 10 to 12 million dollars would come from the CD project plus the right-of-way is being purchased for the CD project. He said that the CD project is programmed to be constructed in 2013.

Mr. Keith Kunst as MA's design subconsultant was then introduced and asked to explain the roadway design. He began by explaining that he moved the ramp junctions south of their original planned location so that it would be easier to stage construct the future ramps that would be built as part of the CD project.

Mr. Kunst stated that the bridge configuration and the Hammond Drive roadway improvements were basically the same as proposed in the CD project with only minor adjustments. He stated that additional storage was added to the West Concourse Parkway to accommodate projected traffic.

Mr. Kunst pointed out that along the southbound Hammond Drive ramp that the proposed wall in the CD project would be constructed in this interim project at its final grade. The wall would end at a point where the cut and fill line changes so the wall could be easily extended in the future. Mr. Kunst then called on Mr. Kingsbury to explain the noise wall.

Mr. Kingsbury explained that the existing noise levels impact the condominium community now and with the auxiliary lanes the noise levels would rise about 1 decibel. Consequently, the noise wall would be required for this project. He pointed out that the noise wall could not be constructed in its final location because retaining walls have to be built first in the CD project before the noise wall could be constructed. Mr. Richardson said that GDOT had to stop at some point from constructing additional parts of the CD project because of funding limitations. Ms. Poshedly added that the noise wall would cost approximately 1.1 million and the calculated benefit was 1.5 million. Therefore, \$400,000 would be the benefit over the construction cost of the noise wall. Mr. Richardson stated that this noise wall could be there 3 to 4 years or longer depending on the funding of the CD project.

Mr. Sam Deeb was called on to discuss the layout of the bridge. Mr. Deeb stated that he used the original layout of the bridge in the CD project with one major change. He stated that he eliminated a pier on the southwest side to allow for flexibility in providing the future HOV/managed lanes. He stated that staging would be different but the overall bridge concept is the same. Someone asked what is the inside shoulder width along GA 400 and under the bridge. Mr. Deeb said that he used 12-foot shoulders but at the barrier the shoulder would measure 11'-3". Mr. Wayne Fedora said that this design would still exceed standards. Mr. Deeb stated that he also used 12' outside shoulders.

Mr. Richardson opened the meeting to questions and comments.

Mr. Albert Shelby asked about whether the removal of the bridge bent would allow for the possible HOV lanes that Kimley-Horn is currently trying to plan for the GA 400 corridor. Mr. Deeb said that he could provide the typical section to Mr. Shelby to pass on to Kimley-Horn to plan the HOV lanes through the bridge bents. Mr. Richardson pointed out that there appears to be enough space under the bridge to provide two HOV lanes without barrier separation.

Mr. Fedora asked about whether a Value Engineering (VE) study was required of this project. Mr. Richardson stated that the original VE study recommended the widening of the bridge. A VE study would not be required to be redone on this project.

Mr. Hugh Colton asked if consideration was given for the flex lane that would use buses on the shoulders. Mr. Richardson commented that this area could not use buses on the shoulders and that the flex lanes may not need to be used in this area because of the construction of the auxiliary lanes.

Mr. Colton asked how will this project accommodate the ITS cable that will run along the north side of GA 400. Mr. Richardson said that the cable would need to be moved and possibly buried deeper so that it would not be broken in this project or the CD project. Mr. Shelby commented that this information would have to be specified in the 999 bid document.

Mr. Tony Belcher asked if the existing bridge had utilities that need to be moved. Mr. Deeb stated that he knew that City of Atlanta, Bellsouth and Atlanta Gas Light are attached to this bridge. Also, Mr. Deeb indicated that in the staging of the bridge, the utilities would have to be relocated temporarily to the Phase 1 staged-constructed bridge and relocated back to the original location once the entire new bridge is completed. Mr. Richardson commented that all of the utilities should be notified about this project. MA will provide the plans as soon as possible for utility coordination.

Someone commented that the posted speed limits on Hammond Drive and GA 400 in the concept report needs to be corrected.

Mr. Shelby said that the property owners on the northeast corner of the Hammond Drive interchange would not sign the right-of-way documents until their questions are answered. He said they want to know -- How will their access be affected? How will the project affect the lake? Mr. Richardson said that their driveway would be made into a right-out only drive. He said if this type of access is not acceptable to them, GDOT might just buy their access rights. He said that he does not want other traffic movements to be allowed at this location because it will impede and sometimes block the flow of traffic to the ramp. Mr. Fedora stated that he would prefer if the driveway were closed. Mr. Kingsbury commented to Mr. Shelby to send MA the questions the property owner wants answered. MA would provide him with answers to forward to the property owner.

Mr. Shelby asked about if this project would be cutting into the straps of the 30-foot wall that is located at the northeast corner building. Mr. Richardson said that the wall is a modular block wall and that in the CD project the wall would be rebuilt. He said that the issue with this wall would be dealt with in the CD project. Mr. Kunst said the cut and fill line of the interim ramps should not impact the wall.

Mr. Fedora stated that he would like to have the accident comparison for a longer length of Abernathy Road and for the length of GA 400. He said the accident information table needed to be clarified.

Mr. Fedora also asked that the traffic analysis include interchanges at least north and south of Hammond Drive.

Mr. Richardson discussed the schedule of the project. He said that the meeting minutes, final concept report would be submitted to him and that the IJR would need to be submitted to GDOT Planning Office. He said that reviews should be completed in November and that FHWA would receive copies of the IJR and concept report at the end of November. He said the reevaluation of the EA should be completed by the end of this year.

Mr. Richardson said that the project is planned to be let in April or May if all goes well. Mr. Richardson asked FHWA if it was O.K. to advertise the project before final approval of the IJR and Concept report. Mr. Fedora said that it would be O.K.

Mr. Richardson commented to Mr. Deeb to send the new bridge layout for approval to the GDOT Bridge Office. Also, send the typical of the bridge to Kimley-Horn so that the HOV lanes can be set.

Mr. Shelby commented that information should be placed in the 999 bid document to indicate to the contractor that they will be responsible for geotech testing, culvert extensions, drainage, design considerations affecting future projects, walls, utilities, etc

SCORING RESULTS AS PER TOPPS 2440-2

Project Number:		County:		PI No.:	
Report Date:		Concept By:			
<input type="checkbox"/> CONCEPT		DOT Office:			
		Consultant:			
Project Type: Choose One From Each Column		<input type="checkbox"/> Major <input type="checkbox"/> Minor	<input type="checkbox"/> Urban <input type="checkbox"/> Rural	<input type="checkbox"/> ATMS <input type="checkbox"/> Bridge <input type="checkbox"/> Building <input type="checkbox"/> Interchange <input type="checkbox"/> Intersection <input type="checkbox"/> Interstate <input type="checkbox"/> New Location <input type="checkbox"/> Widening & Reconstruction <input type="checkbox"/> Miscellaneous	
FOCUS AREAS	SCORE	RESULTS			
Presentation					
Judgement					
Environmental					
Right of Way					
Utility					
Constructability					
Schedule					



CONCEPT PLAN
 GA 400 / HAMMOND DRIVE INTERCHANGE

LEGEND

- Bridge
- Noise Wall
- Retaining Walls
- Noise Wall - Proposed But Not Feasible
- Existing ROW and Parcel Lines
- Medians
- Striping
- Edge of Pavement
- Shoulders and Sidewalks

1" = 400'
AERIAL PHOTOGRAPHY - MAY 2005

