

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
LIMITED SCOPE PROJECT CONCEPT REPORT**

Project Type: <u>Operational Improvement</u>	P.I. Number: <u>0011828</u>
GDOT District: <u>7</u>	County: <u>Fulton</u>
Federal Route Number: <u>I-20</u>	State Route Number: <u>402</u>

This project will separate all of the I-285 ramp traffic from the I-20 EB mainline traffic before the exit ramps and forces drivers to make lane decisions earlier thus reducing the late weaves and impacts on I-20 EB traffic.

Submitted for approval:

<u>Rachel A. Brown</u> District Seven Engineer	<u>08-15-2014</u> DATE
<u>Albert Shiff</u> State Program Delivery Engineer	<u>8-15-2014</u> DATE
<u>Pat B. Emmons</u> GDOT Project Manager	<u>8-15-2014</u> DATE

Recommendation for approval:

* <u>HIRAL PATEL - [Signature]</u> State Environmental Administrator	<u>8/27/2014</u> DATE
State Traffic Engineer	DATE
* <u>BEN RABUN - [Signature]</u> State Bridge Engineer	<u>8/21/2014</u> DATE

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

* <u>CYNTHIA VAUSDYKE - [Signature]</u> State Transportation Planning Administrator	<u>8/21/2014</u> DATE
--	--------------------------

Approval:

Concur: <u>[Signature]</u> GDOT Director of Engineering	<u>10/8/14</u> DATE
Approve: <u>[Signature]</u> GDOT Chief Engineer	<u>10/10/14</u> DATE

* RECOMMENDATION ON FILE

PROJECT LOCATION



PI 0011828
I-20 EB @ I-285
Operational Improvement Project
Fulton County

PLANNING & BACKGROUND DATA

Project Justification Statement: The I-20 eastbound exit ramps at the I-285 interchange were identified for minor corridor/interchange improvements. The proposed project is to be included in the GDOT Operational Improvement Lump Sum Program from the Office of Traffic Operations. This proposed project was approved by the Operational Improvement Committee as a QUICK project.

I-20/SR 402 in the project area is classified as an Interstate Freeway that runs east/west through the city of Atlanta in Fulton County. I-285 in the project area is classified as an Interstate Freeway that forms a perimeter around the City of Atlanta. The current lane configuration of I-20 EB at the exit ramps for I-285 NB and SB consist of 4 lanes approaching the interchange; 1 EXIT-ONLY, 1 EXIT-OPTION, and 2 through lanes at the I-285 SB Exit; and 1 EXIT-OPTION and 2 through lanes at the I-285 NB Exit.

The Office of Traffic Operations staff provided a brief traffic engineering summary capturing the corridor operations. Field observation showed that vehicle weaving maneuvers at the I-20 EB Exit Ramps caused a breakdown of the I-20 through lanes due to the late merging of vehicles attempting to exit on I-285 NB. This project proposes to barrier separate the I-285 exiting traffic (both NB and SB) from the I-20 EB traffic before the exit ramps. This design will separate all of the I-285 traffic from the I-20 EB traffic before the exit ramps which forces drivers to make lane decisions earlier thus reducing the late weaves and impacts on I-20 EB traffic. This option would require new signage to direct drivers into the appropriate lanes for their desired path.

The interchange was modeled in VISSIM and the results yielded that the queuing for the I-285 NB Exit extends past the I-285 SB Exit during the peak hour. Barrier separation before the Exit ramps showed the greatest improvement in the reduction of weaving since the queue is almost completely separated from I-20 traffic during the peak periods. This caused fewer disturbances on the I-20 through traffic.

This project will also, upgrade the interstate signage along the project limits to supplement the barrier separation, to ensure motorists have adequate distance to get into the appropriate lanes.

The project lies within the boundaries of the Atlanta Regional Commission (ARC), Atlanta's Metropolitan Planning Organization (MPO). As an operational improvement project, this project is categorized under the "operational improvement lump sum category" in the MPO's RTP or TIP.

Existing conditions: I-20/SR 402 in the project area is classified as an Interstate Freeway that runs east/west through the city of Atlanta in Fulton County. I-285 in the project area is classified as an Interstate Freeway that forms a perimeter around the City of Atlanta. The current lane configuration of I-20 EB at the exit ramps for I-285 NB and SB consist of 4 lanes approaching the interchange; 1 EXIT-ONLY, 1 EXIT-OPTION, and 2 through lanes at the I-285 SB Exit; and 1 EXIT-OPTION and 2 through lanes at the I-285 NB Exit.

Other projects in the area:

- PI 0000379 – I-285/I-20 Reconstruct Interchange to reduce truck overturning
- PI 0001760 – I-20 FM SR 6 to SR 280 HOV Lanes
- PI 0003433 – I-285 FM I-20W to I-75N HOV Lanes
- PI 0005132 – I-285 Noise Barriers FM I-85 to I-20 Ease & West Sides
- PI 0010782 – I-285 Variable Speed Limit Signs

PI M004605 – I-20 @ 5 Locations – Bridge Joint Repair
 PI M005198 – I-20 FM Cobb County Line to Hill Street Resurfacing
 PI M005280 – I285 over Del Mar Lane

Description of the proposed project: This project will separate all of the I-285 ramp traffic from the I-20 EB mainline traffic before the exit ramps develop forcing drivers to make lane decisions earlier thus reducing the late weaves and impacts on I-20 EB traffic. This will be done by modifying the current lane configuration of 4 lanes approaching the interchange, and then 1 EXIT-ONLY, 1 EXIT-OPTION, and 2 through lanes at the I-285 SB Exit; and then 1 EXIT-OPTION and 2 through lanes at the I-285 NB Exit. The proposed configuration will maintain the 4 lanes approaching the interchange and then have 1 EXIT ONLY lane and 3 through lanes before the I-285 SB Exit. The new EXIT ONLY lane will be separated from the 3 through I-20 lanes and will have 1 EXIT-OPTION lane to I-285 SB & 1 EXIT ONLY lane to I-285 NB.

This project will also upgrade the interstate signage along the project limits to supplement the separation of traffic to ensure motorists have adequate distance to maneuver into the appropriate lanes.

MPO: Atlanta TMA

TIP #: N/A

TIA Regional Commission: Atlanta RC

RC Project ID: N/A

Congressional District(s): 5

Federal Oversight: Exempt State Funded Other

Projected Traffic: ADT

Current Year (2014): 76,000 Open Year (2016): 77,600 Design Year (2026): 83,600

Traffic Projections Performed by: GDOT Planning Office

Functional Classification (I-20): Urban Interstate Principal Arterial

Complete Streets - Bicycle, Pedestrian, and/or Transit Warrants:

Warrants met: None Bicycle Pedestrian Transit

DESIGN AND STRUCTURAL

Major Structures:

Structure ID	Existing	Proposed
121-0166-0	I-20 over SR 139/Martin Luther King Jr Drive	No Changes
121-0167-0	I-20 over I-285	No Changes
121-0346-0	Fairburn Rd over I-20	No Changes

Mainline Design Features: I-20

Feature	Existing	Standard*	Proposed
Typical Section			
- Number of Lanes	3-4	3-4	3-4
- Lane Width(s)	11'-12'	11'-12'	11'-12'
- Median Width & Type	16' Barrier Separated	16' Barrier Separated	16' Barrier Separated
- Outside Shoulder or Border Area Width	14' (12' Paved)	14' (12' Paved)	14' (12' Paved)
- Outside Shoulder Slope	4%	4%	4%

- Inside Shoulder Width	8'	12' (10' Paved)	1.5'-8'
- Auxiliary Lanes	1-2	1-2	1-2
Posted Speed	55		55
Design Speed	65	65	65
Min Horizontal Curve Radius	3800'	1660'	3800'
Maximum Superelevation Rate	6%	6%	6%
Maximum Grade	3%	4%	3%
Access Control	Full/Limited	Full/Limited	Full/Limited
Design Vehicle	WB-67	WB-67	WB-67

*According to current GDOT design policy if applicable

Major Interchanges/Intersections: I-20 @ I-285

Lighting required: No Yes

Transportation Management Plan [TMP] Required: No Yes
 If Yes: Project classified as: Non-Significant Significant
 TMP Components Anticipated: TTC TO PI

Will Context Sensitive Solutions procedures be utilized? No Yes

Design Exceptions to FHWA/AASHTO controlling criteria anticipated: A Design Exception will be required for the 1.5' shoulders across the bridge over I-285.

Design Variances to GDOT Standard Criteria anticipated: None.

UTILITY AND PROPERTY

Temporary State Route Needed: No Yes Undetermined

Railroad Involvement: N/A

Utility Involvements: N/A

SUE Required: No Yes

Public Interest Determination Policy and Procedure recommended? No Yes

Right-of-Way: Existing width: 100-200 ft Proposed width: 100-200 ft
 Required Right-of-Way anticipated: No Yes Undetermined
 Easements anticipated: None Temporary Permanent Utility Other

Anticipated number of impacted parcels: 0
 Displacements anticipated: Total: 0
 Businesses: 0
 Residences: 0
 Other: 0

ENVIRONMENTAL AND PERMITS

Anticipated Environmental Document:
 GEPA: NEPA: CE PCE

MS4 Compliance – Is the project located in an MS4 area? No Yes

This project is in a MS4 area; however, the disturbed area will be under 1 acre and MS4 will be exempted on this project.

Environmental Permits, Variances, Commitments, and Coordination anticipated: None

Air Quality:

- Is the project located in a PM 2.5 Non-attainment area? No Yes
- Is the project located in an Ozone Non-attainment area? No Yes
- Is a Carbon Monoxide hotspot analysis required? No Yes

NEPA/GEPA Comments & Information: None

COORDINATION, ACTIVITIES, RESPONSIBILITIES, AND COSTS

Project Meetings: ICTM held August 5, 2014 see attached minutes.

Project Activity	Party Responsible for Performing Task(s)
Concept Development	GDOT
Design	GDOT
Right-of-Way Acquisition	N/A
Utility Relocation	GDOT
Letting to Contract	GDOT
Construction Supervision	GDOT
Providing Material Pits	Contractor
Providing Detours	N/A
Environmental Studies, Documents, & Permits	GDOT
Environmental Mitigation	GDOT
Construction Inspection & Materials Testing	GDOT

Other coordination to date: None

Project Cost Estimate and Funding Responsibilities:

	Breakdown of PE	ROW	Reimbursable Utility	CST*	Environmental Mitigation	Total Cost
Funded By	GDOT	N/A	N/A	GDOT	N/A	
\$ Amount	\$175,000			\$2,584,792		\$2,759,792
Date of Estimate	5/12/2014			8/15/2014		

*CST Cost includes: Construction, Engineering and Inspection, and Liquid AC Cost Adjustment.

ALTERNATIVES DISCUSSION

Preferred Alternative: <i>Restripe and separate exit ramps from the mainline</i>			
Estimated Property Impacts:	0	Estimated Total Cost:	\$2,759,792
Estimated ROW Cost:	\$0	Estimated CST Time:	12 months
Rationale: <i>This Alternative best fit the project justification statement.</i>			

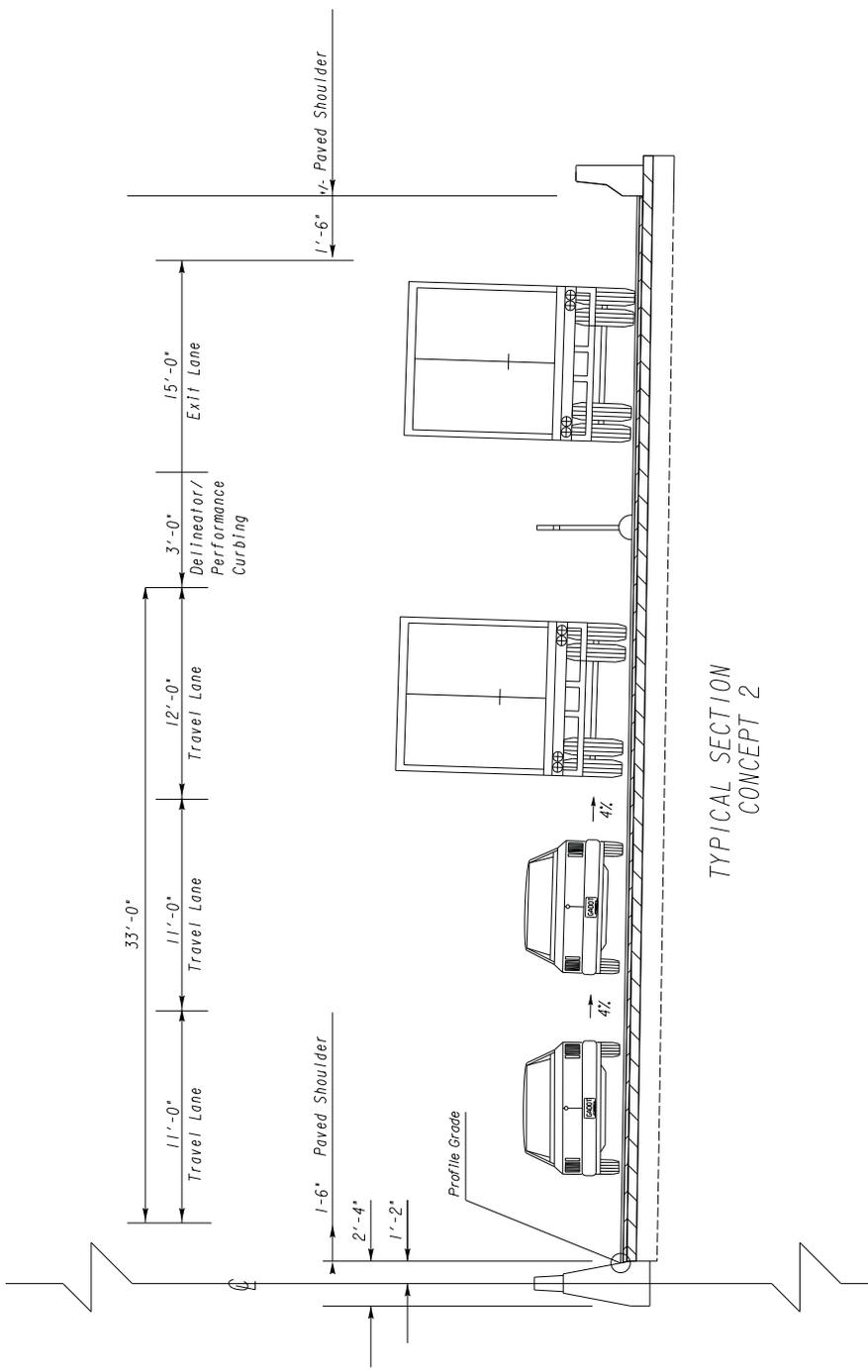
No-Build Alternative:			
Estimated Property Impacts:	0	Estimated Total Cost:	0
Estimated ROW Cost:	0	Estimated CST Time:	0
Rationale: <i>This alternative does not support the project justification statement.</i>			

Alternative 1: <i>Reconstruct I-20 @ I-285 Interchange in Fulton county, PI 0000379</i>			
Estimated Property Impacts:	45	Estimated Total Cost:	\$300,000,000+
Estimated ROW Cost:	\$10,000,000	Estimated CST Time:	36 months
Rationale: <i>Project cost and ROW impacts are too high.</i>			

Comments/Additional Information: None

LIST OF ATTACHMENTS/SUPPORTING DATA

1. Concept Layout
2. Typical sections
3. Cost Estimates
4. Crash summaries
5. Traffic Diagrams
6. TE Study
7. Bridge Inventory Data
8. ICTM Meeting Minutes



TYPICAL SECTION
CONCEPT 2

STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE: DISTRICT 7 PRECONSTRUCTION TYPICAL SECTIONS 1-20 @ 1-285 INTERCHANGE IMPROVEMENTS		REVISION DATES <table border="1"> <tr><td> </td><td> </td></tr> </table>																					DRAWING NO. 5-002
GEORGIA DEPARTMENT OF TRANSPORTATION																							

DETAILED COST ESTIMATE



Job: 0011828

JOB NUMBER 0011828

FED/STATE PROJECT NUMBER

SPEC YEAR: 13

DESCRIPTION: I-20 EB @ I-285

ITEMS FOR JOB 0011828

0010 - ROADWAY

ine Numb	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0010	150-1000	1.000	LS	\$250,000.00	TRAFFIC CONTROL - PI # 0011828	\$250,000.00
0005	210-0100	1.000	LS	\$25,000.00	GRADING COMPLETE - PI # 0011828	\$25,000.00
0035	400-3206	3106.000	TN	\$95.00	ASPH CONC 12.5 MM OGFC,GP 2,INCL PMBM&HL	\$295,070.00
0015	402-1802	150.000	TN	\$120.18	RECYL AC PATCHING, INCL BM&HL	\$18,026.29
0020	402-1812	150.000	TN	\$91.15	RECYL AC LEVELING,INC BM&HL	\$13,672.92
0040	402-3600	5018.000	TN	\$80.00	RECY AC 12.5,SMA,GP2 ON,INCLP-,BM&HL	\$401,440.00
0030	413-1000	750.000	GL	\$3.71	BITUM TACK COAT	\$2,781.88
0045	432-5010	62740.000	SY	\$1.63	MILL ASPH CONC PVMT,VARB DEPTH	\$102,496.46
0050	620-0100	1000.000	LF	\$29.80	TEMP BARRIER, METHOD NO. 1	\$29,797.63
0185	621-3020	600.000	LF	\$300.00	CONCRETE BARRIER, TYPE 20	\$180,000.00
0055	632-0003	8.000	EA	\$8,760.83	CHANGEABLE MESS SIGN,PORT,TP 3	\$70,086.66
0060	641-1100	100.000	LF	\$63.40	GUARDRAIL, TP T	\$6,340.29
0065	641-1200	1100.000	LF	\$17.99	GUARDRAIL, TP W	\$19,788.43
0070	641-5001	6.000	EA	\$846.78	GUARDRAIL ANCHORAGE, TP 1	\$5,080.70
0075	641-5012	6.000	EA	\$2,018.24	GUARDRAIL ANCHORAGE, TP 12	\$12,109.44
0190	649-0018	600.000	LF	\$22.53	CONCRETE GLARE SCREEN, 18 INCH	\$13,516.32
SUBTOTAL FOR ROADWAY:						\$1,445,207.02

0020 - SIGNING & MARKING

ine Numb	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0115	610-9401	1.000	LS	\$6,000.00	REM STR SUP/TP 1/INC I. SIGN S 2	\$6,000.00
0125	610-9401	1.000	LS	\$6,000.00	REM STR SUP/TP 1/INC I. SIGN S 3	\$6,000.00
0135	610-9401	1.000	LS	\$6,000.00	REM STR SUP/TP 1/INC I. SIGN S 5	\$6,000.00
0140	610-9401	1.000	LS	\$6,000.00	REM STR SUP/TP 1/INC I. SIGN S 6	\$6,000.00
0120	610-9402	1.000	LS	\$6,000.00	REM STR SUP/TP 2/INC ILL SIGN 1	\$6,000.00
0130	610-9407	1.000	LS	\$6,000.00	REM STR SUP/TP 7/INC ILL SIGN, STA - 4	\$6,000.00
0170	636-1041	90.000	SF	\$35.11	HWY SIGNS,TP 2MAT,REFL SH TP 9	\$3,159.90
0110	636-1072	1600.000	SF	\$23.83	HWY SIGNS,ALUM EXTRD PNLS, RS TP 3	\$38,121.54
0175	636-2070	150.000	LF	\$8.06	GALV STEEL POSTS, TP 7	\$1,209.50
0080	638-1001	1.000	LS	\$65,000.00	STR SUPPORT OVHD SIGN,TP I,STA 2	\$65,000.00
0085	638-1001	1.000	LS	\$65,000.00	STR SUPPORT OVHD SIGN,TP I,STA 1	\$65,000.00
0090	638-1001	1.000	LS	\$65,000.00	STR SUPPORT OVHD SIGN,TP I,STA 3	\$65,000.00
0095	638-1001	1.000	LS	\$65,000.00	STR SUPPORT OVHD SIGN,TP I,STA 4	\$65,000.00
0100	638-1001	1.000	LS	\$65,000.00	STR SUPPORT OVHD SIGN,TP I,STA 5	\$65,000.00
0105	638-1001	1.000	LS	\$65,000.00	STR SUPPORT OVHD SIGN,TP I,STA 6	\$65,000.00
0235	653-0293	1.000	EA	\$500.00	THERM PVMT MARK, WORD, TP 12	\$500.00
0150	658-1200	5280.000	LF	\$3.01	SOLID POLYUREA TRAF STRIPE,5IN, WHITE	\$15,893.17
0145	658-1201	4765.000	LF	\$3.03	SOLID POLYUREA TRAF STRIPE, 5IN, YELLOW	\$14,457.20
0155	658-1210	2000.000	LF	\$6.00	SOLID POLYUREA TRAF STRIPE,10IN, WHITE	\$12,000.00
0160	658-1300	14295.000	GLF	\$2.97	SKIP POLYUREA TRAF STRIPE,5IN, WHITE	\$42,439.71
0165	658-1310	1000.000	GLF	\$6.00	SKIP POLYUREA TRAF STRIPE,10IN, WHITE	\$6,000.00
0240	999-0250	2500.000	LF	\$60.00	REMOVABLE TRAFFIC SEPARATOR	\$150,000.00
SUBTOTAL FOR SIGNING & MARKING:						\$709,781.02

DETAILED COST ESTIMATE



Job: 0011828

0030 - EROSION CONTROL

Line Numb	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0215	163-0232	1.000	AC	\$115.45	TEMPORARY GRASSING	\$115.45
0220	165-0030	500.000	LF	\$0.91	MAINT OF TEMP SILT FENCE, TP C	\$456.60
0225	171-0030	1000.000	LF	\$3.03	TEMPORARY SILT FENCE, TYPE C	\$3,027.68
0195	700-6910	1.000	AC	\$683.05	PERMANENT GRASSING	\$683.05
0200	700-7000	1.000	TN	\$121.60	AGRICULTURAL LIME	\$121.60
0205	700-8000	5.000	TN	\$543.62	FERTILIZER MIXED GRADE	\$2,718.10
0210	700-8100	50.000	LB	\$3.03	FERTILIZER NITROGEN CONTENT	\$151.46
0230	716-2000	100.000	SY	\$1.37	EROSION CONTROL MATS, SLOPES	\$137.16
SUBTOTAL FOR EROSION CONTROL:						\$7,411.10

TOTALS FOR JOB 0011828

ITEMS COST:	\$2,162,399.14
COST GROUP COST:	\$0.00
ESTIMATED COST:	\$2,162,399.14
CONTINGENCY PERCENT:	0.08
ENGINEERING AND INSPECTION:	0.05
ESTIMATED COST WITH CONTINGENCY AND E&I:	\$2,432,699.03

PROJ. NO.	
P.I. NO.	0011828
DATE	8/15/2014

CALL NO.

INDEX (TYPE)	DATE	INDEX
REG. UNLEADED	Aug-14	\$ 3.500
DIESEL		\$ 3.835
LIQUID AC		\$ 608.00

Link to Fuel and AC Index:

<http://www.dot.ga.gov/doingbusiness/Materials/Pages/asphaltcementindex.aspx>

LIQUID AC ADJUSTMENTS

$PA = (((APM - APL) / APL) \times TMT) \times APL$

Asphalt

Price Adjustment (PA)				150917.76	\$	150,917.76
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	972.80		
Monthly Asphalt Cement Price month project let (APL)			\$	608.00		
Total Monthly Tonnage of asphalt cement (TMT)				413.7		

ASPHALT	Tons	%AC	AC ton
Leveling	150	5.0%	7.5
12.5 OGFC	3106	5.0%	155.3
12.5 mm	5018	5.0%	250.9
9.5 mm SP		5.0%	0
25 mm SP		5.0%	0
19 mm SP		5.0%	0
	8274		413.7

BITUMINOUS TACK COAT

Price Adjustment (PA)				\$	1,175.14	\$	1,175.14
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	972.80			
Monthly Asphalt Cement Price month project let (APL)			\$	608.00			
Total Monthly Tonnage of asphalt cement (TMT)				3.221325691			

Bitum Tack	Gals	gals/ton	tons
	750	232.8234	3.22132569

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)				0	\$	-
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	972.80		
Monthly Asphalt Cement Price month project let (APL)			\$	608.00		
Total Monthly Tonnage of asphalt cement (TMT)				0		

Bitum Tack	SY	Gals/SY	Gals	gals/ton	tons
Single Surf. Trmt.		0.20	0	232.8234	0
Double Surf. Trmt.		0.44	0	232.8234	0
Triple Surf. Trmt		0.71	0	232.8234	0
					0

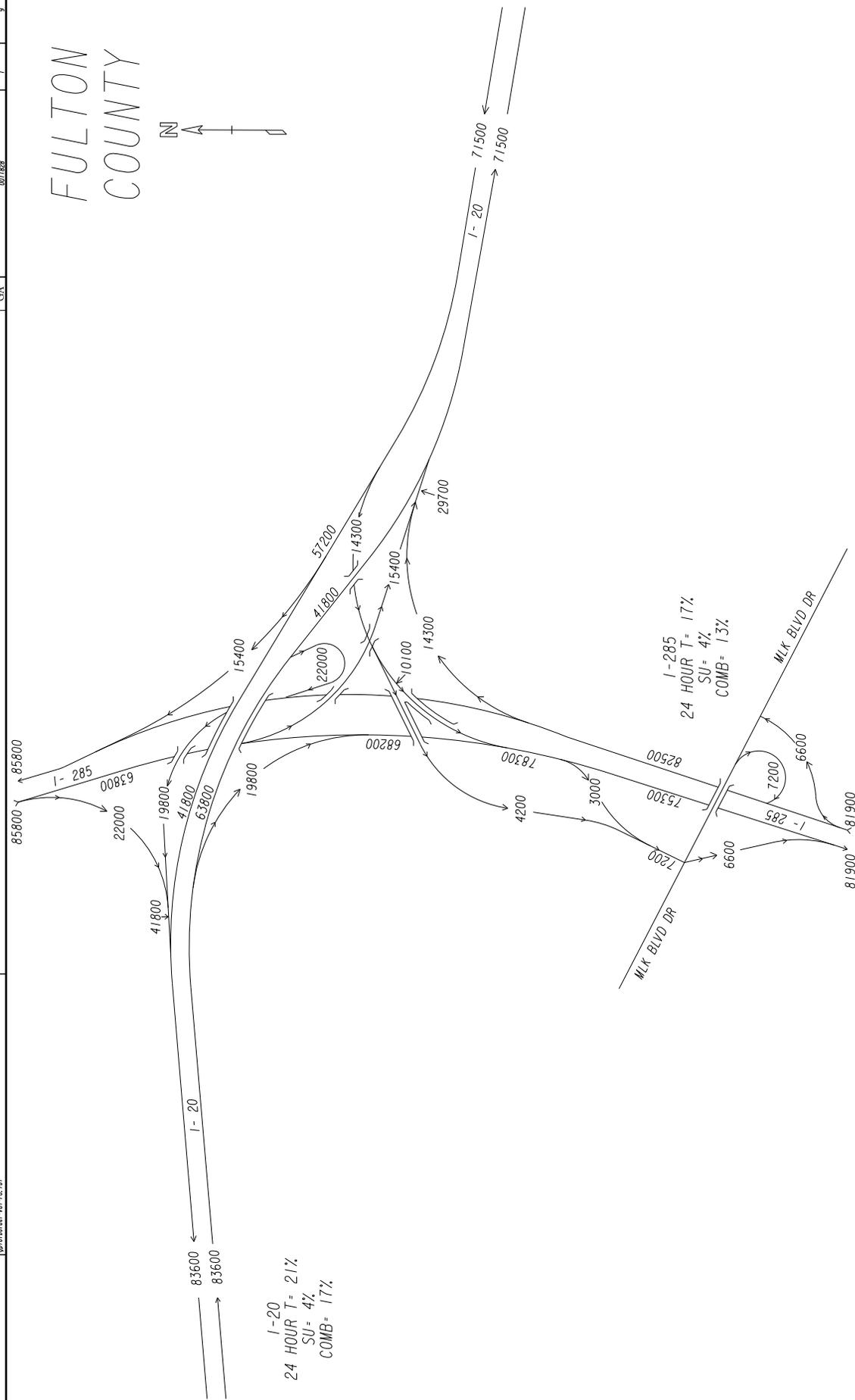
TOTAL LIQUID AC ADJUSTMENT \$ **152,092.90**

PI 0011828, I-20 @ I-285 Crash Summary

Type of Collisions

Year	Angle	Not with Vehicle	Head-On	Rear-End	Sideswipe (same direction)	Sideswipe (opposite direction)
2009	1	2	0	9	6	0
2010	1	3	0	7	7	0
2011	2	2	1	3	7	0
2012	1	0	1	1	2	0
2013	0	5	1	2	1	0
2014	1	0	1	1	2	0
Total	6	12	4	23	25	0

FULTON COUNTY

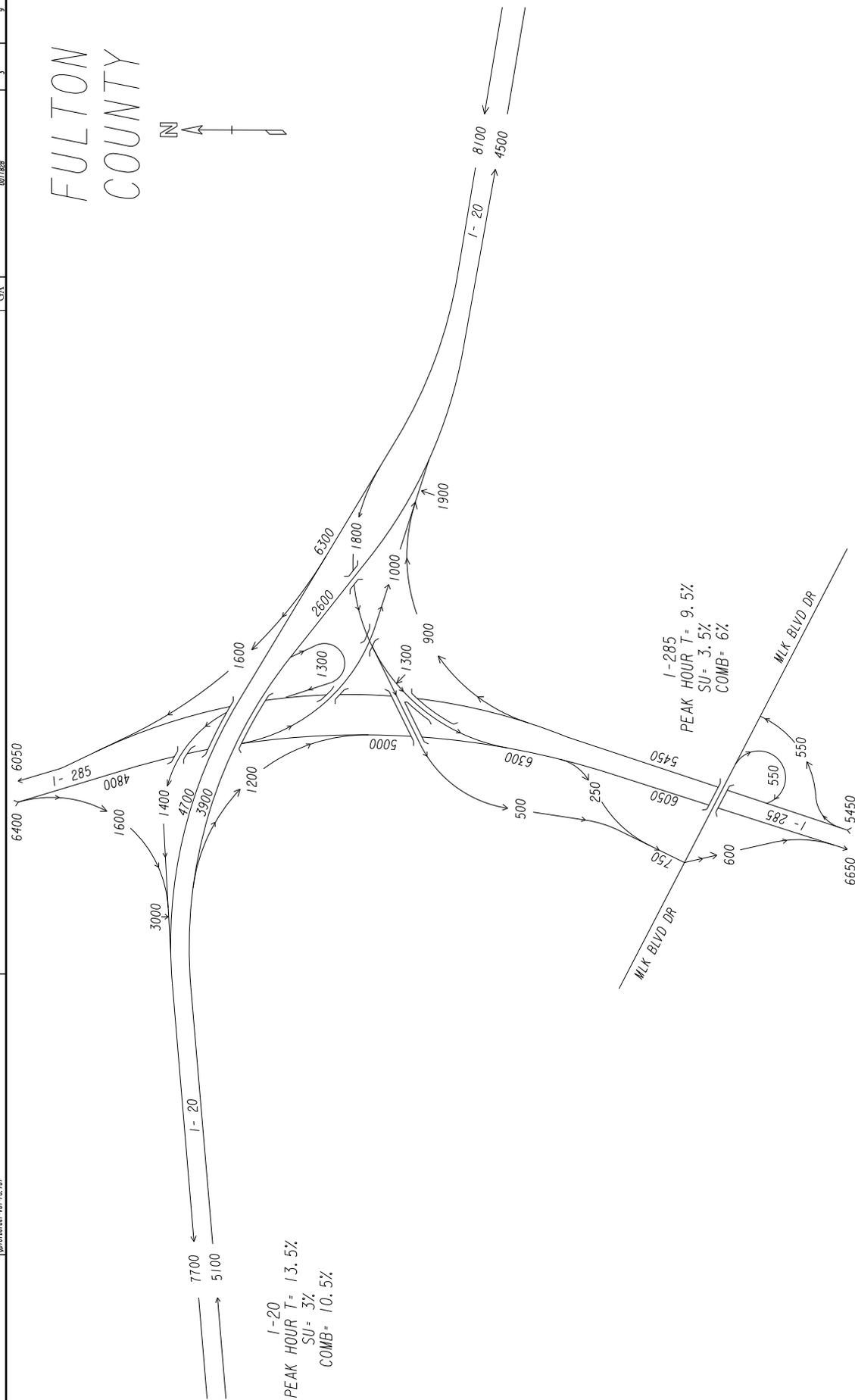


I-20
 24 HOUR T= 21%
 SU= 4%
 COMB= 17%

I-285
 24 HOUR T= 17%
 SU= 4%
 COMB= 13%

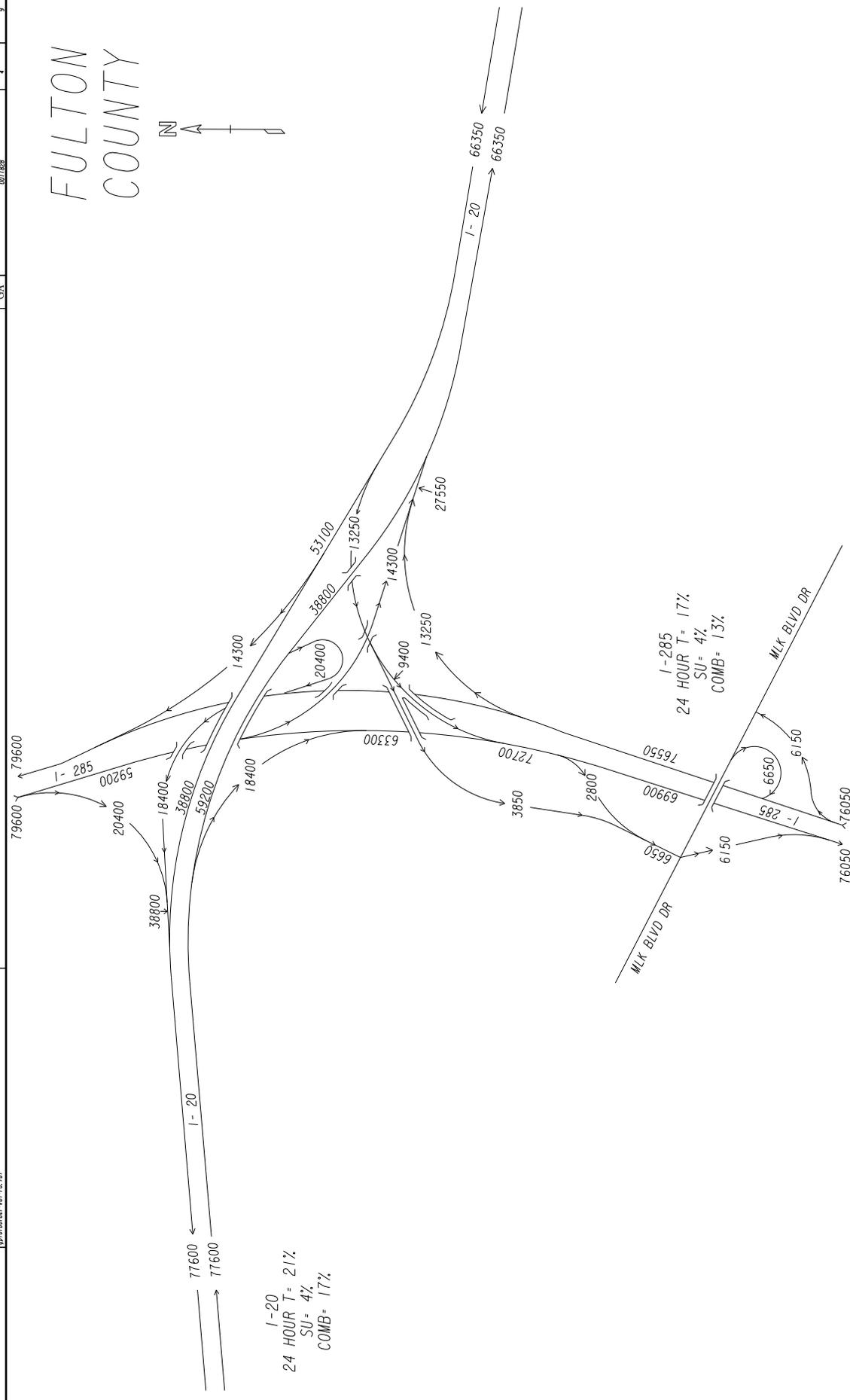
PI # 0011828 FULTON COUNTY I-20 at I285	2026 ADT	GEORGIA DEPARTMENT OF TRANSPORTATION	BUILD = NO BUILD	REVISION DATES DATE / BY / DESCRIPTION	STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE: PLANNING	TRAFFIC DIAGRAM
				DRAWING NO. 10-1		

FULTON COUNTY



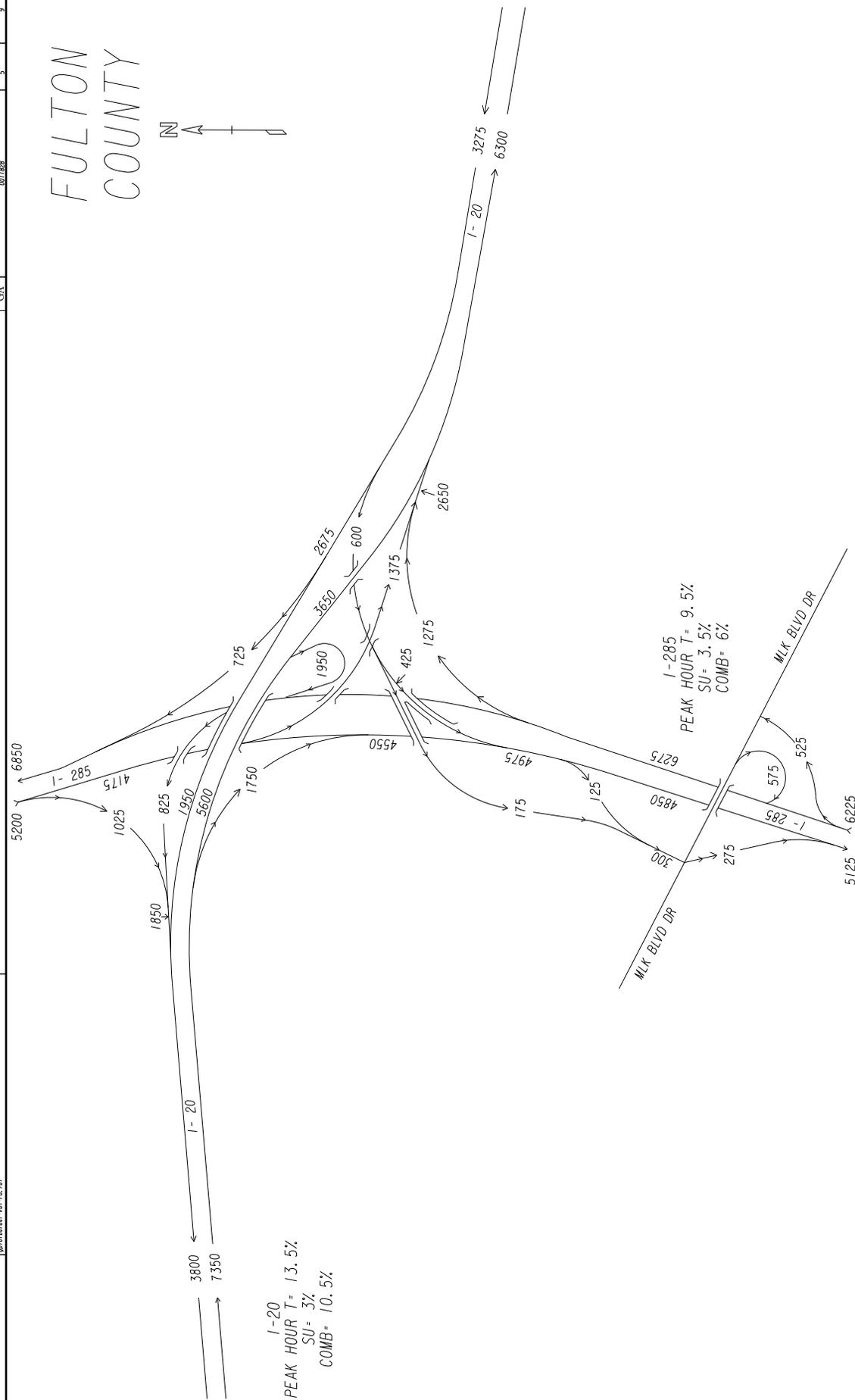
PI # 0011828 FULTON COUNTY I-20 at I-285	2026 PM DHV	GEORGIA DEPARTMENT OF TRANSPORTATION	BUILD = NO BUILD	REVISION DATES	STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION
				DATE	OFFICE: PLANNING
				TRAFFIC DIAGRAM	
				DRAWING NO. 10-3	

FULTON COUNTY



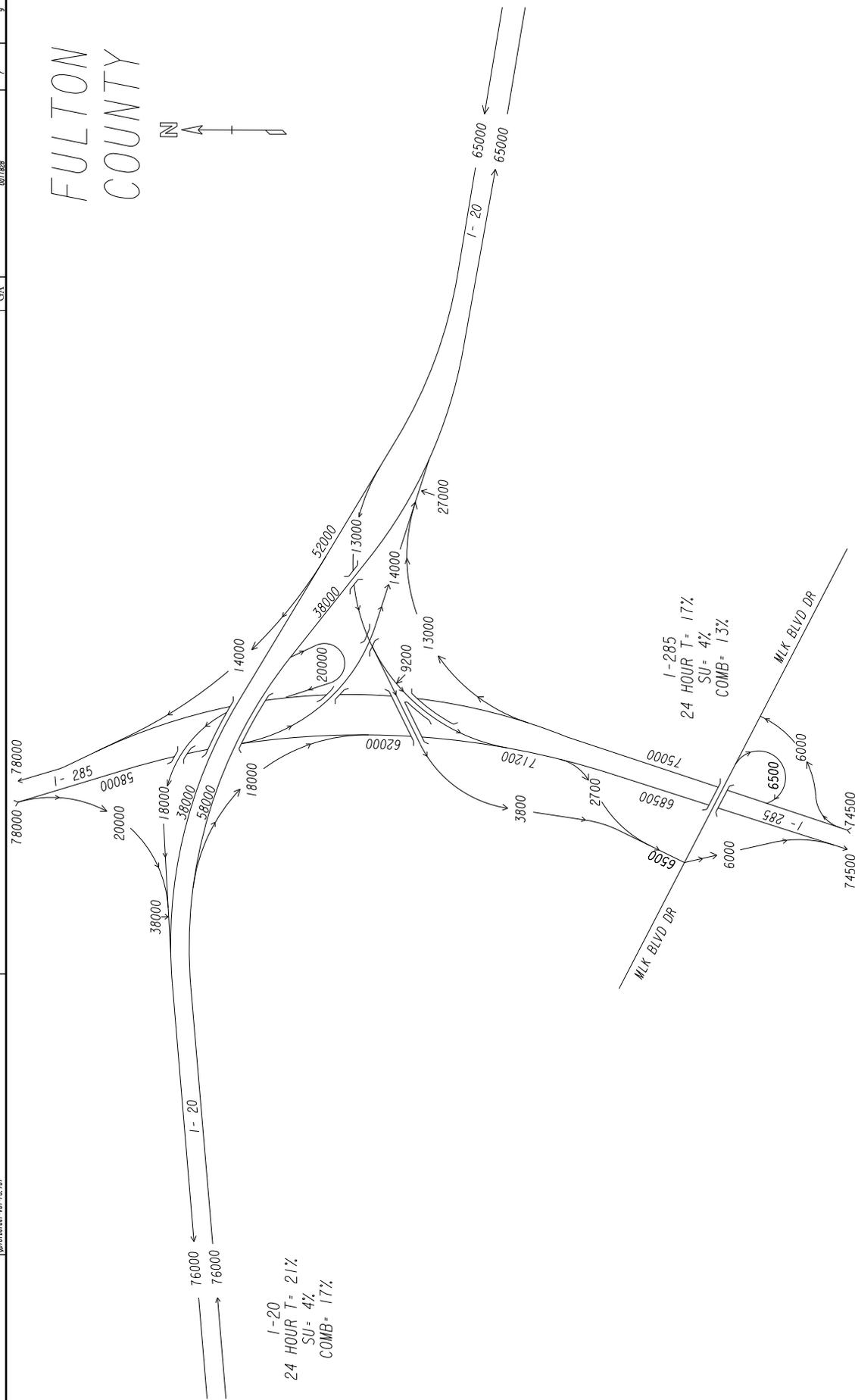
PI # 0011828 FULTON COUNTY I-20 at I285	GEORGIA DEPARTMENT OF TRANSPORTATION	BUILD = NO BUILD	REVISION DATES DATE BY	STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE: PLANNING	DRAWING NO. 10-4
			2016 ADT	TRAFFIC DIAGRAM	(Empty Revision Table)

FULTON COUNTY



PI # 0011828 FULTON COUNTY I-20 at I-285	GEORGIA DEPARTMENT OF TRANSPORTATION	BUILD = NO BUILD	REVISION DATES	STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION
			OFFICE: PLANNING	OFFICE: PLANNING TRAFFIC DIAGRAM
			DRAWING NO. 10-5	

FULTON COUNTY



I-20
24 HOUR T = 21%
SU = 4%
COMB = 17%

I-285
24 HOUR T = 17%
SU = 4%
COMB = 13%

PI # 0011828 FULTON COUNTY I-20 at I285	2014 ADT EXISTING	GEORGIA DEPARTMENT OF TRANSPORTATION	BUILD = NO BUILD	REVISION DATES	STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION
				DATE	OFFICE: PLANNING
					TRAFFIC DIAGRAM
					DRAWING NO. 10-7

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

TRAFFIC ENGINEERING REPORT

For the interchange of:
I-20/SR 402 AND I-285/SR407
In the City of Atlanta,
County of Fulton
At Mile Post 2.30.



Report prepared by:
Christina Barry
Traffic Engineer III

Telephone Number: (404) 635 2886
E-mail Address: cbarry@dot.ga.gov

Date report prepared: _____

Location:

The project includes the I-20 Eastbound Exit Ramps at I-285 Northbound and Southbound interchange. The project lies within Fulton County and the boundaries of the Atlanta Regional Commission (ARC), Atlanta's Metropolitan Planning Organization (MPO).

Reason for the investigation:

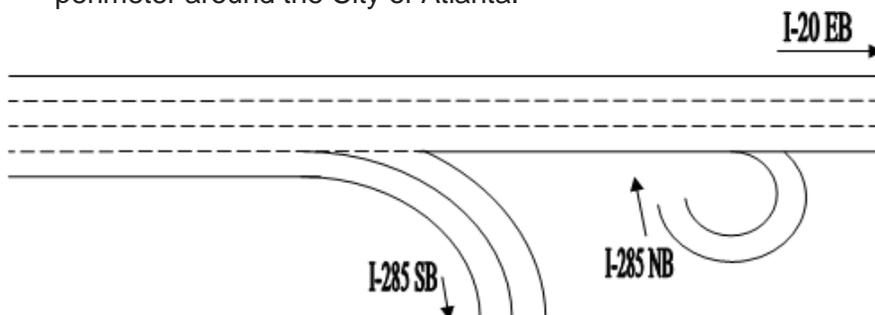
Field observation showed that vehicle weaving maneuvers and a residual queue from the I-20 EB Exit Ramps caused a breakdown of the I-20 through lanes due to the late merging of vehicles attempting to exit on I-285 NB. This project proposes to barrier separate the I-285 exiting traffic (both NB and SB) from the I-20 EB traffic before the exit ramps. This design will separate all of the I-285 traffic from the I-20 EB traffic before the exit ramps which forces drivers to make lane decisions earlier thus reducing the late weaves and impacts on I-20 EB traffic. This option would require new signage to direct drivers into the appropriate lanes for their desired path.

The interchange was modeled in VISSIM and the results yielded that the queuing for the I-285 NB Exit extends past the I-285 SB Exit during the peak hour. Barrier separation before the Exit ramps showed the greatest improvement in the reduction of weaving since the queue is almost completely separated from I-20 traffic during the peak periods. This caused fewer disturbances on the I-20 through traffic.

This project will also, upgrade the interstate signage along the project limits to supplement the barrier separation, to ensure motorists have adequate distance to get into the appropriate lanes.

Description of the interchange:

- **I-20/SR 402** is classified as an Interstate Freeway that runs East/West through the city of Atlanta in Fulton County. The current lane configuration of I-20 EB at the exit ramps for I-285 NB and SB consist of 4 lanes approaching the interchange; 1 EXIT-ONLY, 1 EXIT-OPTION, and 2 through lanes at the I-285 SB Exit; and 1 EXIT-OPTION and 2 through lanes at the I-285 NB Exit.
- **I-285/SR 407** in the project area is classified as an Interstate Freeway that forms a perimeter around the City of Atlanta.



Traffic volumes in vehicles per day (vpd):

Year	I-20 (2- way) (vpd)	I-20 SB Ramps (vpd)	I-20 NB Ramps (vpd)	I-285 (2-way) (vpd)
2012	146,330	16,340	19,740	117,550
2011	155,290	18,200	20,430	118,200
2010	144,000	17,990	20,980	115,010
2009	179,260	18,890	34,850	112,730

Existing Traffic Control:

Existing signage on I-20 EB approaching the I-285 exits warns drivers of the I-285 exits at the 2 mile marker and at the 1 mile marker. Three signs are in place to guide drivers for I-285 SB into the appropriate lanes. For the I-285 NB exit a guide sign warns of the exit at ¾ mile and at ¼ mile then a diverging exit sign at the exit.



Vehicular speeds:

- The posted speed limit on I-20/SR 402 is 60 mph in the project vicinity.
- The posted speed limit on I-285/SR 407 is 55 mph in the project vicinity.

Pedestrian movements: N/A

Other modes of transportation present: N/A

Delay:

The main cause of congestion at this location is the tight radius on the I-285 NB ramp which causes trucks to reduce their speed to about 15 mph in order to safely navigate the ramp. With the high truck traffic at this location, a queue forms for the I-285 NB ramp in the right lane past the I-285 SB exits. Congestion is increased with late mergers trying to avoid the queue or not realizing that the queue is for their exit which causes delays in the middle lane and affects the flow of traffic in the left lane.

Parking: N/A

Accident History:

Year	Accidents							Injury	Fatal
	Rear-end	Side-swipe	Angle	Head-on	Struck Object	Run off Road	Total		
2013	2	1	0	1	1	4	9	1	0
2012	1	2	1	1	0	0	5	3	0
2011	3	7	2	1	1	1	15	1	0
2010	7	7	1	0	0	3	18	7	0

Adjacent Signalized Intersections: N/A

Warrant Analysis: N/A

Roundabout: N/A

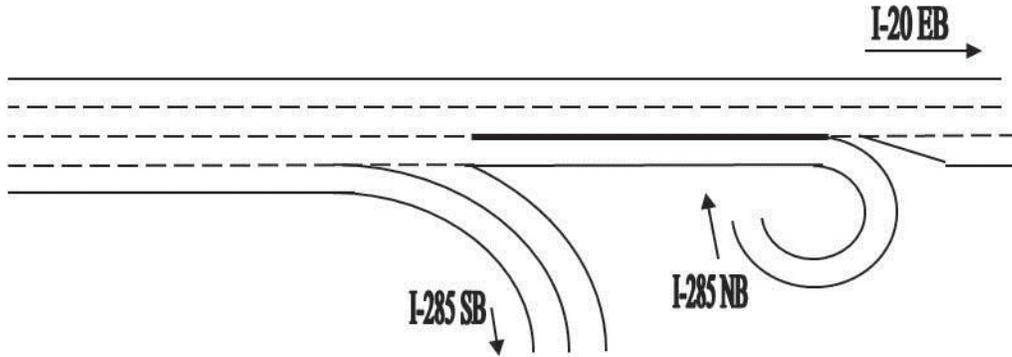
Alternatives:

The Office of Traffic Operations was asked to review the current field conditions and model alternatives to help improve the conditions for I-20 EB. Alternatives are limited to restriping, resigning or other traffic control measures that do not require new construction.

The existing bridge is 54' wide with an 8' inside shoulder, 3- 12' travel lanes and a 10' outside shoulder.

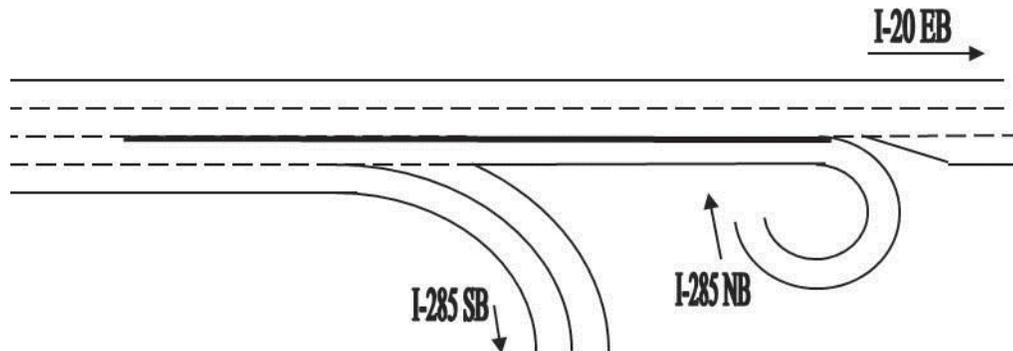
Several alternatives were suggested for consideration:

1. Barrier separate the I-285 NB exiting Traffic from the I-20 EB traffic after the I-285 SB exit



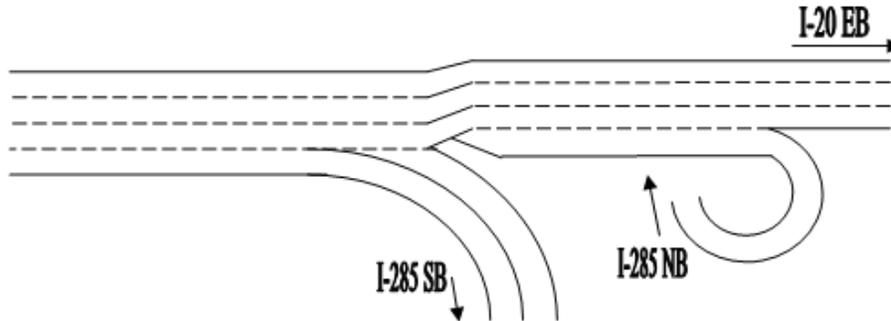
This option reduces the I-20 EB traffic through lanes from 3 lanes to 2 lanes across the bridge and then picks up the 3rd lane again after the I-285 NB Exit. By barrier-separating the traffic, an assumption can be made that the late weaving will be reduced causing a reduction in the impact of the I-20 EB traffic. This option would require additional signage to warn drivers of separation and direct drivers into the appropriate lanes for their desired path.

2. Barrier separate the I-285 exiting traffic (both NB and SB) from the I-20 EB traffic before the exit ramps



This option separates out all I-285 traffic from the I-20 EB traffic before the exit ramps which forces drivers to make lane decisions earlier thus reducing the late weaves and impacts on I-20 EB traffic. This option would require new signage to direct drivers into the appropriate lanes for their desired path.

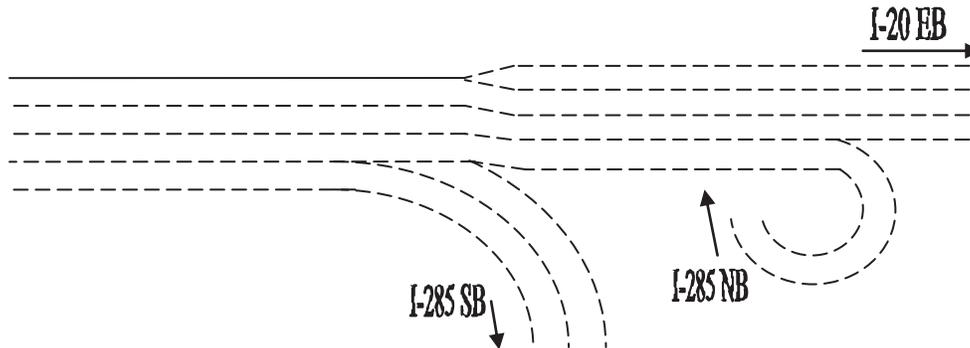
3. Restripe the bridge to add a 4th lane which would be EXIT-ONLY I-285 NB



This option would shift the I-20 EB traffic to the left in order to accommodate the new EXIT-ONLY lane, which would leave a 3' inside shoulder and a 4' outside shoulder.

4. Restripe bridge to add a 4th lane for I-20 EB traffic

 - 1.



This option would shift the I-20 EB traffic to the right in order to accommodate the new I-20 EB through lane, which would leave a 3' inside shoulder and 4' outside shoulder.

Analysis:

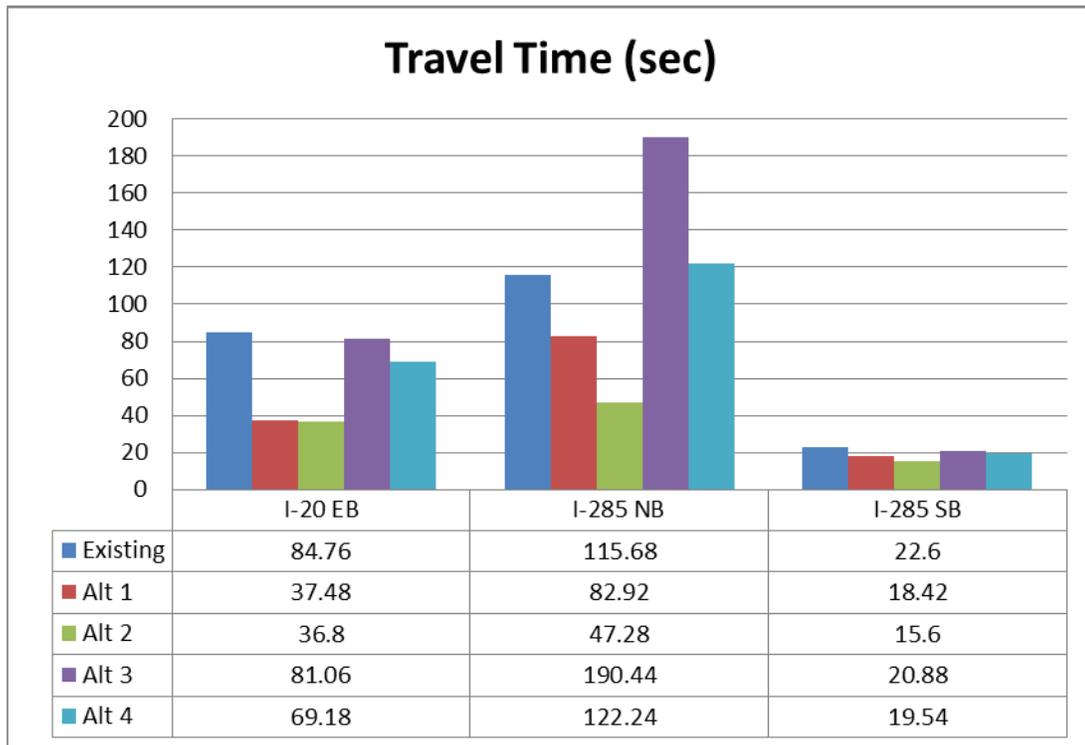
A VISSIM analysis was completed for the existing conditions, Alternative 1, Alternative 2, Alternative 3 and Alternative 4. The models analyzed the travel times, minimum speeds and average speeds that occurs at the I-285 Exits and the breakdown of the I-20 EB lanes because of late merging.

The data collected from the models showed that two I-20 EB through lanes were sufficient for the existing traffic. Breakdown of the I-20 through lanes at this interchange was from the late merging of vehicles attempting to exit on I-285 NB.

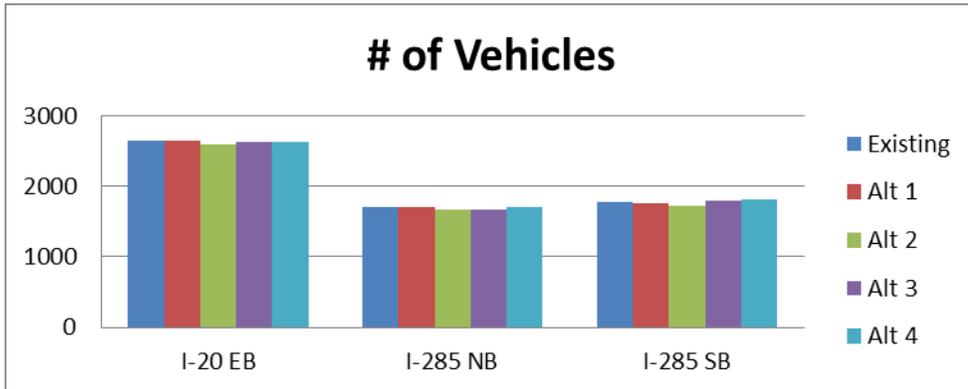
Data from the model displayed that the queuing for the I-285 NB Exit extends past the

I-285 SB Exit during the peak hour. Barrier separating the traffic in Alternative 1 did eliminate late weaving on the bridge but caused the late weaving to occur right at the I-285 SB exit (where the barrier ended) since there was a queue past this point. Alternative 2 showed a greater improvement in the reduction of weaving since the queue is almost completely separated from I-20 traffic during the peak periods. This caused fewer disturbances on the I-20 through traffic.

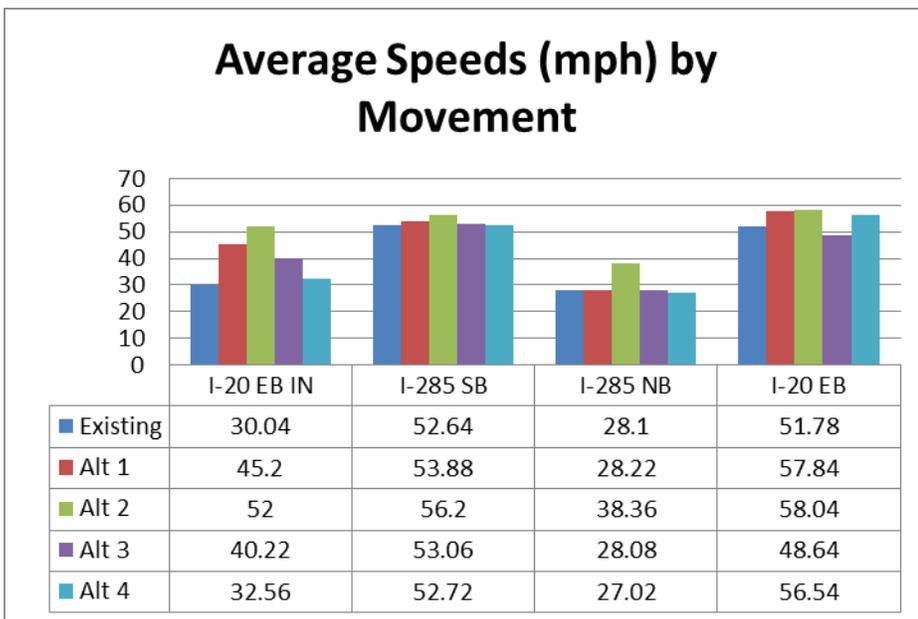
Travel Times for the existing conditions and the four alternatives was collected from the VISSIM model. The alternatives which barrier separated the NB exit lane from the I-20 through lanes (Alt 1 & Alt 2) showed the greatest improvement for the I-20 traffic with a 56% decrease in the travel times. Alt 1 and Alt 2 also showed significant improvements for both of the I-285 exit movements. Based on the Travel Times, alternative 2 would be the best recommendation for improving the operation at this interchange.



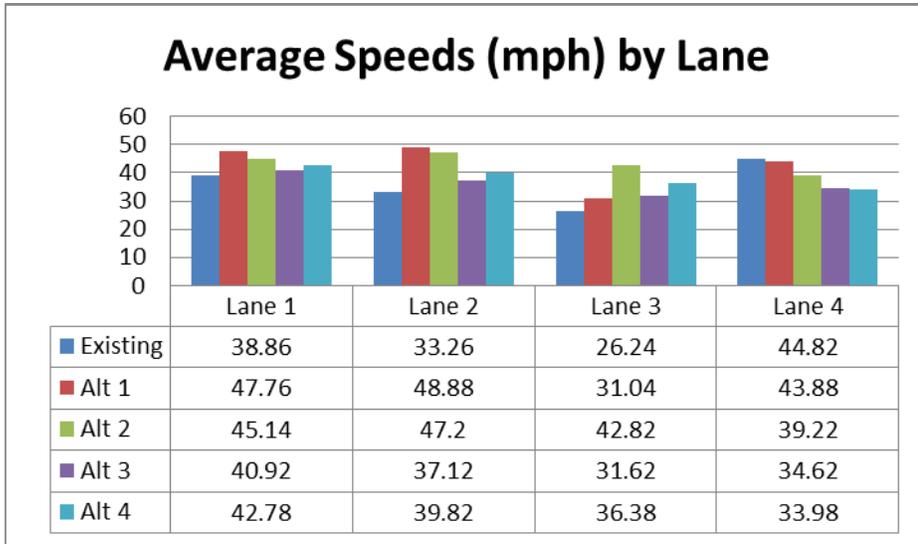
Capacity for I-20 and both the I-285 Exit ramps did not significantly increase with any of the alternatives reviewed. A chart of the vehicles counts is show below.



Average Speeds and minimum speeds were collected from various data collection points in the VISSIM model for each alternative. Data collection points were placed in each lane on the approach of the interchange, before the I-285 SB Exit, after the I-285 SB Exit, before the I-285 NB Exit and for I-20 past the interchange. A summary of the average speeds are shown below for each alternative by movement and by lane. The average speeds by movement shows improvement over the existing conditions for almost all movements with all four alternatives. The most significant improvement is shown with Alternative 2 (barrier separating both I-285 exits).

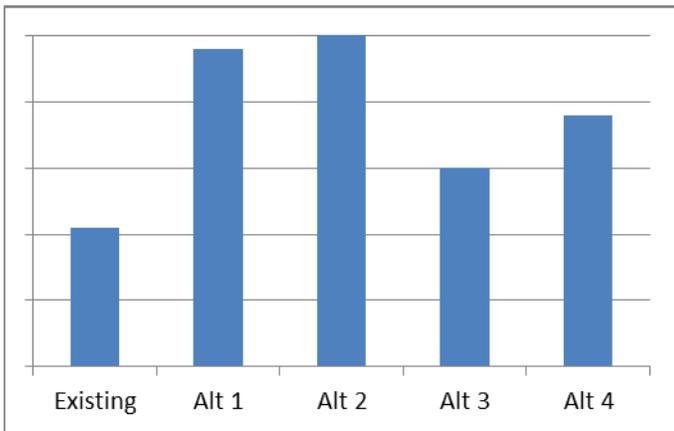


The average speeds by lane shows similar improvements as the average speed by movement. A greater improvement was observed by Alternative 1 (barrier separating only I-285 NB) than Alternative 2 (barrier separating both I-285 exits) for Lane 1 and Lane 2, which are the through lanes for I-20 traffic.



Alternatives Comparison Summary:

A comparison of thirteen data points using travel times, minimum speeds and average speeds collected in the VISSIM model was conducted. A best-to-worst alternative list was created for each of the data points. A rating scale of 5-4-3-2-1 was then applied to each of the best-to-worst data points (Ex: 5 points for the best alternative in travel times and 1 point for the worst alternative). The total of all points was then summed up for each alternative and the results are shown in the graph below. Alternative 2, had the best result from this analysis followed closely by alternative 1. All alternatives showed improvement over the existing conditions.



Safety Considerations:

In terms of the safety of the alternatives, there was some concern with reducing the

shoulder widths, especially the outside shoulder if a barrier is installed. If an accident does occur inside the barrier, would an emergency vehicle be able to access the accident and would the ramp be completely shut down? By only striping two through lanes for I-20 across the bridge, a 6' inside shoulder could be used with 2-12' lanes, a 6' barrier/shoulder, a 12' EXIT-ONLY lane and a 6' outside shoulder. This would leave enough room to access any problems inside the barriers.

Signage:

Improved signage could significantly decrease the congestion at this interchange by modifying driver behavior to position themselves in the proper lane for their routing decisions.

Recommendations:

The Office of Traffic Operations recommends barrier separating I-285 traffic for both the NB and SB exit ramps (Alternative 2). By barrier separating both exits from I-20 traffic, there is less confusion for drivers about which lanes they need to be in for their desired destination. New signage would be required to warn drivers of the approaching exits and to direct them into the appropriate lane. An example of the signage and the recommended alternative is shown in the appendix.

Recommend: _____
District Traffic Engineer Date

Recommend: _____
State Traffic Engineer Date

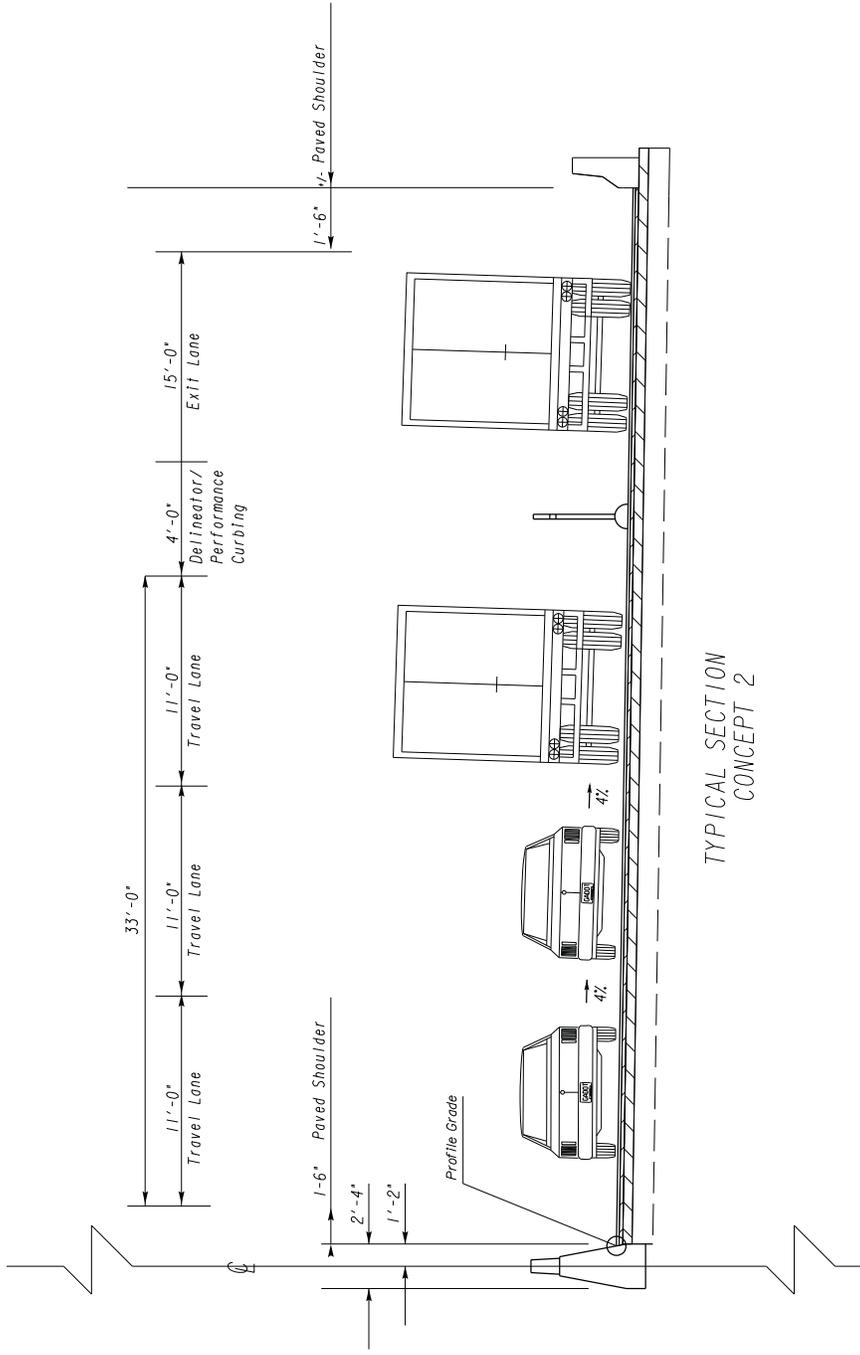
Approve: _____
Director of Operations Date

Traffic Engineering Report Appendix

- Sign Layout
- Typical Sections
- Conceptual Sketch

Overhead Sign Structure Modifications





TYPICAL SECTION
CONCEPT 2

STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE: DISTRICT 7 PRECONSTRUCTION TYPICAL SECTIONS 1-20 & 1-205 INTERCHANGE IMPROVEMENTS		REVISION DATES	TRAINING NO. 5-
GEORGIA DEPARTMENT OF TRANSPORTATION			







I-20 @ I-285 WB
OFF RAMP



Bridge Inventory Data Listing

Processed Date: 8/4/2014

Parameters: Bridge Serial Num

Structure ID: 121-0166-0

Programming Data

AC19-FI-20-1 (42) 44 CT.2
 201 Project No: 4
 202 Plans Available: NHS-0001-00(760)
 249 Prop Proj No: 0000
 250 Approval Status: M004605
 251 PI Number: 02/01/1901
 252 Contract Date: 00000
 260 Seismic No: 00 0
 75 Type Work: \$1,807
 94 Bridge Imp Cost: \$181
 95 Roadway Imp Cost: \$2711
 96 Total Imp Cost: 000000
 76 Imp Length: 2013
 97 Imp Year: 219495 Year: 2032
 114 Future ADT:

Hydraulic Data

215 Waterway Data:
 High Water Elev: 0000.0 Year: 1900
 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 Fwd: 0
 219 Fender System 0
 220 Dolphin: 0
 223 Culvert Cover: 000

Measurements:

*29 ADT 146330 Year: 2012
 109 % Trucks: 1
 * 28 Lanes On: 09 Under: 04
 210 No. Tracks On: 00 Under: 00
 * 48 Max. Span Length: 0072
 * 49 Structure Length: 159
 51 Br. Rwdy. Width: 128.00
 52 Deck Width: 137.80
 * 47 Tot. Horiz. Cl: 65
 50 Curb / Sidewalk Width: 0.00 / 0.00
 32 Approach Rdwy. Width: 128
 *229 Shoulder Width:
 Rear Lt: 6.00 Type: 2 Rt: 10.00
 Fwd. Lt: 6.00 Type: 2 Rt: 10.00

Pavement Width:

Rear: 48.00 Type: 2
 48.00 Type: 2
 Intersection Rear: 0 Fwd: 0

Safety Features Br. Rail:

Transition: 2
 App. G. Rail: 2
 App. Rail End: 1
 53 Minimum Cl. Over: 99' 99" *
 Under: H 16' 07"

***228 Minimum Vertical Cl**

Act. Odm Dir: 99' 99"
 Oppo. Dir: 99' 99"
 Posted Odm. Dir: 00' 00"
 Oppo. Dir: 00' 00"

55 Lateral Undercl. Rt:

H 2.50
 56 Lateral Undercl. Lt: 0.00
 *10 Max Min Vert Cl: 99' 99" Dir: 0
 39 Nav Vert Cl: 000 Horiz: 0000

116 Nav Vert Cl Closed:

000
 245 Deck Thickness Main: 7.00
 Deck Thick Approach: 0.00
 246 Overlay Thickness: 4.00

212 Year Last Painted:

Sup: 1993 Sub: 0000

65 Inventory Rating Method: 2
 63 Operating Rating Method: 2
 66 Inventory Type: 2 Rating: 36
 64 Operating Type: 2 Rating: 52
 231 Calculated Loads:
 H-Modified: 20 0
 HS-Modified: 25 0
 Type 3: 28 0
 Type 3s2: 40 0
 Timber: 36 0
 Piggyback: 40 0
 261 H Inventory Rating: 20
 262 H Operating Rating: 28
 67 Structural Evaluation: 6
 58 Deck Condition: 7
 59 Superstructure Condition: 7
 * 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: 7
 69 UnderClr. HorzVert: 2
 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: 02/01/1901
 258 Fed Notify Date: 02/01/1901



Bridge Inventory Data Listing

Processed Date: 8/4/2014

Parameters: Bridge Serial Num

Structure ID: 121-0167-0

Programming Data

201 Project No: AC19-FI-20-1 (42) 44 CT.2
 202 Plans Available: 4
 249 Prop ProjNo: NHS-0001-00(760)
 250 Approval Status: 0000
 251 PI Number: M004605
 252 Contract Date: 02/01/1901
 260 Seismic No: 00000
 75 Type Work: 00 0
 94 Bridge Imp. Cost: \$4,550
 95 Roadway Imp. Cost: \$455
 96 Total Imp Cost: \$6826
 76 Imp Length: 000000
 97 Imp x car: 2013
 114 Ynure ADT: 219495 Year:2032

Hydraulic Data

215 Waterway Data:
 High Water Elev: 0000.0 Year:1900
 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 Fwd:0
 219 Yender System 0
 220 Dolphnt: 0
 223 Culvert Cover: 000

Measurements:

*29 ADT 146330 Year:2012
 109 %Trucks: 1
 * 28 Lanes On: 06 Under:08
 210 No. Tracks On: 00 Under:00
 * 48 Max. Span Length 0097
 * 49 Structure Length: 557
 51 Br. Rwdy. Width 117.60
 52 Deck Width: 120.80
 * 47 Tot. Horiz. Cl: 66
 50 Curb / Sidewalk Width 0.00 / 0.00
 32 Approach Rdwy. Width 121
 *229 Shoulder Width:
 Rear Lt: 7.00 Type:2 Rt:12.00
 Fwd. Lt: 10.00Type:2 Rt:20.00

Pavement Width:

Rear: 36.00 Type: 2
 36.00 Type: 2
 Intersection Rear: 1 Fwd: 1

Safety Features Br. Rail:

Transition: 1
 App. G. Rail: 1
 App. Rail End: 1
 53 Minimum Cl. Over: 99' 99"

***228 Minimum Vertical Cl**

Act. Odm Dir: 99' 99"
 Oppo. Dir: 99' 99"
 Posted Odm. Dir: 00' 00"
 Oppo. Dir: 00' 00"

55 Lateral Undercl. Rt:

H 8.00
 56 Lateral Undercl. Lt: 3.00
 *10 Max Min Vert Cl: 99' 99" Dir:0

39 Nav Vert Cl:

000 Horiz:0000
 116 Nav Vert Cl Closed: 000
 245 Deck Thickness Main 7.00
 Deck Thick Approach: 0.00
 246 Overlay Thickness: 3.50

212 Year Last Painted:

Sup:1994 Sub:0000

65 Inventory Rating Method: 1
 63 Operating Rating Method: 1
 66 Inventory Type: 2 Rating: 26
 64 Operating Type: 2 Rating: 44
 231 Calculated Loads:
 H-Modified: 20 0
 HS-Modified: 25 0
 Type 3: 28 0
 Type 3s2: 40 0
 Timber: 36 0
 Piggyback: 40 0
 261 H Inventory Rating: 20
 262 H Operating Rating 28
 67 Structural Evaluation: 5
 58 Deck Condition: 7
 59 Superstructure Condition: 7
 * 227 Collision Damage: 0
 60A Substructure Condition: 7
 60B Scour Condition: N
 60C Underwater Condition N
 71 Waterway Adequacy: N
 61 Channel Protection Cond.: N
 68 Deck Geometry: 9
 69 UnderClr. HorzVert: 5
 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: 02/01/1901
 258 Fed Notify Date: 02/01/1901



Bridge Inventory Data Listing

Parameters: Bridge Serial Num

Structure ID: 121-0346-0

Fulton

SUFF. RATING: 79.14

Location & Geography

Structure ID:	121-0486-0	*104 Highway System:	1	Signs & Attachments	
200 Bridge Information:	07	*26 Functional Classification:	16	225 Ejection Joint Type:	02
*6A Feature Int:	I-20	*204 Federal Route Type:	/ No: 09038	282 Deck Drains:	0
*6B Critical Bridge:	0	105 Federal Lands Highway:	0	284 Parapet Location:	0
*7A Route No Carried:	CR01489	*110 Truck Route:	0	Height:	0.00
*7B Facility Carried:	FAIRBURN ROAD	206 School Bus Route:	1	5 idth:	0.00
9 Location:	IN 5 AMLANMA	217 Benchmark Elevation:	0000.00	24T Curb Height:	1
2 Dot District:	7	218 Datum:	0	Curb / aterial:	1
207 Year Photo:	2014	*19 Bypass Length:	04	249 Handrail:	7 7
*91 Inspection Frequency:	28 Date: 06/17/014	*20 Toll:	4	*280 / edian Barrier Rail:	0
92A Fract Crit Insp Freq:	0 Date: 02/01/0901	*21 Maintenance:	01	281 Bridge / edian Height:	0
92B Underwater Insp Freq:	0 Date: 02/01/0901	*22 Owner:	01	* Bridge / edian 5 idth:	0
92C Other Spc. Insp Freq:	0 Date: 02/01/0901	*31 Design Load:	6	240 Guardrail Loc. Dir. Rear:	4
*4 Place Code:	08000	37 Historical Significance:	3	Fwd:	4
*5 Inventory Route(O/U):	1	205 Congressional District:	3	Oppo. Dir. Rear:	0
Type:	3	27 x ear Constructed:	1964	Oppo. Fwd:	0
Designation:	1	106 x ear Reconstructed:	0000	288 Approach Slab:	4
Number:	09038	33 Bridge Median:	0	228 Retaining 5 all:	0
Direction:	0	34 Skew:	10	244 Posted Speed Limit:	43
*16 Latitude:	44 - 83.9634 H / S Prefix:	35 Structure Ylared:	0	246 5 arning Sign:	0.00
*17 Longitude:	T8 - 40.007 H / S Suffix:	38 Navigation Control:	N	248 Delineator:	0.00
	/ P: 0.00	213 Special Steel Design:	0	243 Hazard Boards:	0
98 Border Bridge:	000 % Shared:00	267 Type of Paint:	2	247 Utilities Gas:	22
99 ID Number:	0000000000000000	*42 Type of Service On:	3	5 ater:	21
*100 STRAHNET:	1	Type of Service Under:	1	Electric:	00
12 Base Highway Network:	1	214 Movable Bridge:	0	Telephone:	22
13A LRS Inventory Route:	1214610404	203 Type Bridge:	Z - O - / - O	Sewer:	00
13B Sub Inventory Route:	1	239 Pile Encasement:	4	287 Lighting Street:	1
*101 Parallel Structure:	N	*84 Structure Mpe / ain:	8 02	Navigation:	0
*102 Direction of Traffic:	2	83 No.Spans / ain:	008	Aerial:	0
*264 Road Inventory Mile Post:	001.94	88 Structure Mpe Appr:	0 00	*28T County Continuity No.:	00
*208 Inspection Area:	07	86 No Spans Appr:	0000		
Engineer's Initials:	ljd	226 Bridge Curve Horz	0 Vert: 0.00		
* Location ID No:	121-09038/ -009.73N	111 Pier Protection:	0		
		107 Deck Structure Mpe:	1		
		10T 5 earing Structure Mpe:	1		
		/ embrane Mpe:	0		
		Deck Protection:	T		



Bridge Inventory Data Listing

Processed Date: 8/4/2014

Parameters: Bridge Serial Num

Structure ID: 121-0486-0

Programming Data		Measurements:	
201 Project No:	I-20-1 (3) 83 CM2	004100	Year: 2012
202 Plans Available:	8	109 % Trucks:	1
249 Prop Proj No:	NHS-0001-00(760)	* 2T Lanes On:	02 Under: 09
250 Approval Status:	0000	210 No. Trucks On:	00 Under: 00
251 PI Number:	0001760	* 8T / ax. Span Length:	0110
252 Contract Date:	02/01/00	* 89 Structure Length:	294
260 Seismic No.:	00000	31 Br. Rwdy. 5 idth:	2T.00
75 Type Work:	48 1	32 Deck 5 idth:	46.30
94 Bridge Imp. Cost:	\$1,183	* 87 Mbt. Horiz. Cl:	2T
95 Roadway Imp. Cost:	\$118	50 Curb / Sidewalk Width:	2.00 W4.60
96 Total Imp Cost:	\$1717	42 Approach Rdwy. 5 idth:	040
76 Imp Length:	001614	* 229 Shoulder 5 idth:	
97 Imp x car:	2014	Rear Lt:	2.00 Mpe: 1 Rt: 2.00
114 Yrure ADT:	008630	Fwd. Lt:	2.00 Mpe: 1 Rt: 2.00
Hydraulic Data			
215 Waterway Data:			
High 5 ater Elev:	0000.0	Year:	1900
Flood Elev:	0000.0	Freq:	00
Avg Streambed Elev:	0000.0	Intersection Rear:	1 Fwd: 1
Drainage Area:	00000	46 Safety Features Br. Rail:	2
Area of Opening:	000000	Mansition:	2
114 Scour Critical:	N	App. G. Rail:	2
216 5 ater Depth:	00.0	App. Rail End:	2
222 Slope Protection:	8	34 / inimum Cl. Over:	99' 99" *
221 Spur Dikes Rear:	0	Under:	H 16' 06"
219 Yender System:	0	* 22T / inimum Vertical Cl	
220 Dolphnt:	0	Act. Odm Dir::	99' 99"
223 Culvert Cover:	000	Oppo. Dir:	99' 99"
Type:	0	Posted Odm. Dir:	00' 00"
No. Barrels:	0	Oppo. Dir:	00' 00"
Width:	0.00	33 Lateral Undercl. Rt:	H 10.30
Length:	0	36 Lateral Undercl. Lt:	8.00
* 265 U/W Insp. Area:	0	* 10 / ax / in Vert Cl:	99' 99" Dir: 0
* Location ID No:	121-09038/ -009.73N	49 Nav Vert Cl:	000 Horiz: 0000
		116 Nav Vert Cl Closed:	000
		283 Deck Thckness / ain:	7.30
		Deck Whick Approach:	0.00
		286 Overlay Thckness:	0.00
		212 Year Last Painted:	Sup: 1998 Sub: 0000
		63 Inventory Rating / athod:	2
		64 Operating Rating / ethod:	2
		66 Inventory Mpe:	2 Rating: 46
		68 Operating Mpe:	2 Rating: 31
		241 Calculated Loads:	
		H-Modified:	20 0
		HS- / odified:	23 0
		Mpe 4:	2T 0
		Type 3s2:	80 0
		Timber:	46 0
		Piggyback:	00 0
		261 H Inventory Rating:	20
		262 H Operating Rating:	2T
		67 Structural Evaluation:	7
		58 Deck Condition:	7
		59 Superstructure Condition:	7
		* 227 Collision Damage:	0
		60A Substructure Condition:	7
		60B Scour Condition:	N
		60C Underwater Condition:	N
		71 5 aterway Adequacy:	N
		61 Channel Protection Cond.:	N
		6T Deck Geometry:	8
		69 UnderClr. HorzWert:	6
		72 Appr. Alignment:	6
		62 Culvert:	N
		Posting Data	
		70 Bridge Posting Required:	3
		81 Struct Open, Posted, CL:	A
		* 104 Memporary Structure:	0
		242 Posted Loads	
		H- / odified:	00
		HS- / odified:	00
		Mpe 4:	00
		Mpe 4s2:	00
		Mmber:	00
		Piggyback:	00
		234 Notification Date:	02/01/001
		23T Fed Notify Date:	02/01/001

MEETING MINUTES

Subject: P.I. No. 0011828
I-20 @ I-285 Operational Improvement
Fulton County, Georgia

Meeting Date: August 5, 2014 (3:00 pm – 3:50 pm)

Location: 600 West Peachtree Street, Atlanta, GA – 25th Floor Large Conference Room

Attendees: See Sign-In sheet (last page)

Transcription Date: August 7, 2014

Meeting Materials: Draft Concept Report, Draft Conceptual Layout, QUICK Schedule Template

Purpose: Initial Concept Team Meeting for PI#0011828, Fulton County

- Below are the highlights of the Initial Concept Team Meeting (ICTM) discussions and the action items in blue.
 - Discussion:
 - This meeting will serve as both the project kickoff meeting and concept team meeting.
 - The project is classified as a QUICK project with a 9 month accelerated schedule to authorize construction funds by April 2015 with a proposed Management Let date of May 22, 2015.
 - All aspect of preconstruction are proposed to be handled In-House.
 - The existing configuration of I-20 @ I-285 shows that vehicle weaving maneuvers at the I-20 EB Exit Ramps caused a breakdown of the I-20 through lanes due to the late merging vehicles attempting to exit on I-285 NB.
 - Traffic Operation would work with Office of Financial Management (OFM) to label the project “QUICK”
 - Concept Report/Proposed Project Description/Typical Section
 - This project proposes to separate the I-285 exiting traffic (both NB and SB) from the I-20 EB traffic before the exit ramps using performance curb delineators.
 - This solution will force drivers on I-285 to make lane decisions earlier thus reducing the late weaves and impacts on I-20 EB traffic.
 - This will require new signage to direct drivers into the appropriate lanes for their desired path.
 - The interstate signage along the project limits will be upgraded to supplement the performance curb delineators and to ensure motorists have adequate distance to get into the appropriate lanes.
 - Traffic counts will be obtained from various resources to provide traffic projections within two weeks to update the traffic data in the concept report. Office of Traffic Operations will coordinate with Office of Planning Traffic Group for consensus.
 - Since the project construction funding is proposed for fiscal year 2015, the ARC TIP# is identified as AR-106-2015 under the lump sum PI#0007498.
 - It was noted that a design exception would be needed for the shoulder work and that it can be submitted concurrently with the concept report for approval.
 - Office of Traffic Operations (OTO) noted that Federal Highway Administration (FHWA) are fully aware of the scope and proposal for this project. Office of Program Delivery (OPD) asks for documentation of the high level discussion with FHWA.
 - Office of Engineering Services noted that the proposed 11-ft travel lane for the truck should be increased to 12-ft lanes by reducing the 4-ft width provided for the performance curbing/delineators. District 7 Design Office will consider the suggestion and implement if practical.
 - Project limits will need to be increased to include sign structure that will be replaced and/or modify.
 - Pavement, Maintenance, & Bridge Consideration
 - Office of Bridge Maintenance noted that there are two existing, under construction projects in the area that will be completed on and/or before this project is let to construction. It was recommended to

MEETING MINUTES

include Special Provision 105 with 0011828 if the two maintenance projects M004605 and M003054 are still in construction.

- M004605 & M003054 – Bridge Joint Repair & Deck Rehab works at I-20 over I-285 were noted as being processed as a PCE Type III environmental document.
 - M005198 was noted as a resurfacing of I-20 project and that the proposed pavement thickness could be used for 0011828. Pavement core and evaluation was noted by the Office of Maintenance as already being requested from the Office of Materials and Testing (OMAT).
 - It was decided to conduct pavement core of 0011828 especially the existing shoulder, which is proposed to be full depth and provide results to OPD within 3 months from the date of the ICTM. OMAT requested for a set of plans to use.
 - It was decided to establish shoulder pavement structure, milling depths for outside lanes, and carry SMA into the outside shoulder.
 - It was also recommended that SMA be used across entire lane width through milling/inlay process.
 - It was noted to prevent any design that may require the expansion of the existing bridge shoulder.
 - Office of Maintenance was asked to verify that the vertical clearance (approximately 17-ft) of I-20 at I-285 Bridge will not be an issue.
- **Traffic Consideration**
 - OTO mentioned that Performance Curbing specification would be emailed to District 7 Design Office.
 - TMP-Temporary TTC was noted as needed for the project.
 - The proposal to retain/modify some of the existing sign structures was noted as a constructability issues. OPD advised that OTO review their standard sign specification to ensure whether or not the sign structures should be retained or completely replaced. If replacement is the recommendation, OPD has a similar project that has sign issues which is resolved that can be used as a standard.
 - OPD requested for OTO to coordinate with OFM for the increase of the project's construction cost estimate to \$2.5 million dollars based on the preliminary construction cost estimate showing on the draft concept report without contingency.
 - **Survey/Field Enhancement Consideration**
 - It was noted that a mapping and field enhancement survey is unnecessary and that the design can be done from aerial maps/images.
 - D7 Design Office will evaluate and determine if there are critical areas in need of site check/spot survey.
 - Statewide Location Bureau will be contacted for any field enhancement needs.
 - **Environmental Consideration**
 - Office of Environmental Services (OES) confirmed that peak hour traffic for existing, build, and design years, posted (existing) speed limit, and design speed for the design year will be needed for Air/Noise report and maybe PM 2.5.
 - It was noted that sound barrier already existed on the project and won't be required for this project, but that the Noise report still need to be conducted to submit a write off.
 - OES noted that the Initial Special Studies Request may need to be updated to reflect correct terminology for "barrier separation".
 - OES confirmed the project can be process as a PCE Type III.
 - **Utilities Consideration**
 - Office of Utilities noted they are no utilities in the area.
 - OTO was advised to verify they are no ITS/ATMS in the project limit that may be impacted.
 - **Schedule Refinement**
 - OPD to coordinate with the Office of Program Control for a May 22, 2015 let schedule.
 - One field plan review (FPR) was requested to streamline the schedule but Office of Engineering Services differs and recommended that both PFPR and FFPR be kept in the schedule. Engineering Services noted that the PFPR and FFPR schedule durations should be reduced in half and/or



MEETING MINUTES

streamline to help with the desire let date, and that FFPR waiver may be granted if quality FFPR plans are received.

- It was noted for District 7 Design to submit 8 ½ x 11 letter size paper for FPR.

■ These meeting minutes reflect the notes of Peter Emmanuel and District 7 Design Office. If there are any questions or corrections needed, please contact Peter Emmanuel at 404-631-1158 or pemmanuel@dot.ga.gov.

GEORGIA DEPARTMENT OF TRANSPORTATION MEETING / CONFERENCE RECORD OF ATTENDEES			
PURPOSE: 0011828 Initial Concept Team Meeting (ICTM)			
LOCATION: OGC			
DATE: 8/5/2014		TIME: 3:00pm	
MODERATOR: Peter B. Emmanuel			
NAME	ORGANIZATION	PHONE NO.	GDOT suffix: @dot.ga.gov E-MAIL ADDRESS
1 Peter B. Emmanuel	GDOT-OPD	404-631-1158	pemmanuel@dot.ga.gov
2 Mac Cranford	GDOT-D7 Design	770-986-1260	mcranford@dot.ga.gov
3 Kevin Cowan	GDOT-DPPE	7-986-1288	Kcowan@dot.ga.gov
4 STEPHON DES VIGNES	GDOT-DT DESIGN	(7) 996-1113	sdesvignes@dot.ga.gov
5 Dwayne Wilson	GDOT-Survey	(4) 505-4890	dwilson@dot.ga.gov
6 Paul Alimia	GDOT-OES	(404) 631-1353	palimia@dot.ga.gov
7 E. REID MATHEWS	GDOT-MAINT	404 631-1391	rmathews@dot.ga.gov
8 DERRICK CAMERON	GDOT	404 631 1223	DCAMERON@DOT.GA.GOV
DAN FUNK	TRAFFIC	404 631 1959	dfunk@dot.ga.gov
10 Miles Kemp	GDOT-OES	(404) 631-1127	mkemp@dot.ga.gov
11 Mike Lobdell	D7-TO	7/986-1765	mlobdell@dot.ga.gov
12 Kimberly Nesbitt	OPD	(4) 631-1571	knesbitt@dot.ga.gov
13 Dave Peters	DPTS	4/631-1738	dpeters@dot.ga.gov
14 Paul Denard	GDOT-Traffic Ops	4) 635-2843	pdenard@dot.ga.gov
15 CHESTER THOMAS	GDOT-TRAFFIC OPS	4) 635-2851	chthomas@dot.ga.gov
16 ABBY EBODAGHE	GDOT	(4) 631-1923	aebodaghe@dot.ga.gov
17 AJ Jubran	GDOT-OMAT	404-608-4771	ajubran@dot.ga.gov
18 Patrick Allen	GDOT-DT UTIL	770-986-1117	paallen@dot.ga.gov
19 Clayton Bennett	GDOT-Bridge	404-635-2889	clbennett@dot.ga.gov
20 Albert Shelby	GDOT-OPD	404-631-1758	ashelby@dot.ga.gov
21			