

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

**OFFICE OF DESIGN POLICY & SUPPORT
INTERDEPARTMENTAL CORRESPONDENCE**

FILE P.I. #0010290 **OFFICE** Design Policy & Support
GDOT District 1 - Gainesville
GDOT District 7 - Metro Atlanta
Forsyth and Fulton Counties **DATE** January 13, 2012
SR 400 NB Lane Exit - from CR458/McFarland Rd
to Big Creek Greenway

FROM  for Brent Story, State Design Policy Engineer

TO SEE DISTRIBUTION

SUBJECT APPROVED CONCEPT REPORT

Attached is the approved Concept Report for the above subject project.

Attachment

DISTRIBUTION:

Genetha Rice-Singleton, Program Control Administrator
Bobby Hilliard, State Program Delivery Engineer
Darryl VanMeter, State Innovative Program Delivery Engineer
Cindy VanDyke, State Transportation Planning Administrator
Angela Robinson, Financial Management Administrator
Glenn Bowman, State Environmental Administrator
Kathy Zahul, State Traffic Engineer
Georgene Geary, State Materials & Research Engineer
Ron Wishon, State Project Review Engineer
Jeff Baker, State Utilities Engineer
Ken Thompson, Statewide Location Bureau Chief
Michael Henry, Systems & Classification Branch Chief
Kenny Whitworth, Acting District 1 Engineer
Bryant Poole, District 7 Engineer
Robert Mahoney, District 1 Preconstruction Engineer
Scott Lee, District 7 Preconstruction Engineer
Allen Ferguson, District 1 Utilities Engineer
Jonathan Walker, District 7 Utilities Engineer
Loren Bartlett, Project Manager
BOARD MEMBER - 9th Congressional District

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

Project Type: Operational
 GDOT District: One, Seven
 Federal Route Number: 19

P.I. Number: 0010290
 County: Forsyth, Fulton
 State Route Number: 400

SR 400 FROM CR 458/MCFARLAND RD TO BIG CREEK GREENWAY – NB LANE EXT

Submitted for approval:
 Gary Newton, P.E.; Kimley-Horn and Associates, Inc.

Consultant Designer & Firm or GDOT Concept/Design Phase Office Head & Office

DATE
11/17/2011

Office Head

DATE
11/14/2011

GDOT Project Manager

DATE

Recommendation for approval:

Program Control Administrator

DATE
12/02/2011

State Environmental Administrator

DATE

State Traffic Engineer

DATE
11/21/2011

Project Review Engineer

DATE

State Utilities Engineer

DATE

District Engineer

DATE

State Transportation Financial Management Administrator

DATE

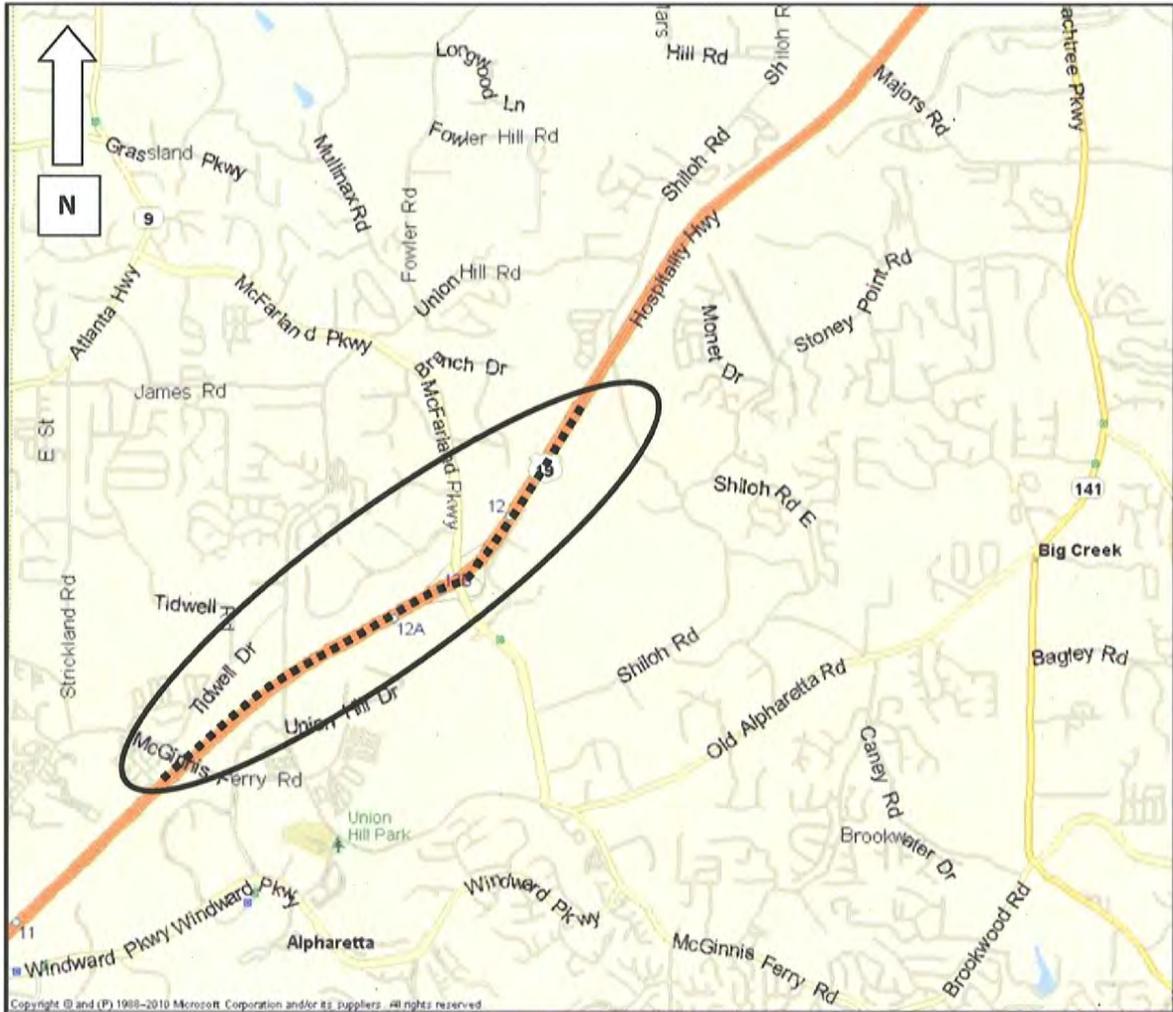
The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Plan (RTP) and/or the State Transportation Improvement Program (STIP).

State Transportation Planning Administrator *(recommendation required)*

DATE
11-21-11

**Recommendation on File*

PROJECT LOCATION



PLANNING & BACKGROUND DATA

Project Justification Statement: The Georgia Department of Transportation (GDOT) and the State Road and Tollway Authority (SRTA) are making a constructive effort to improve transportation along State Route (SR) 400. The inside northbound lane in the vicinity of the McFarland Parkway interchange is one such area that experiences a congestion bottleneck as traffic merges onto northbound SR 400 from McFarland Parkway.

PI 0010290 is currently shown in Fiscal Year (FY) 2012-2017 Transportation Improvement Program (TIP) under the Atlanta Regional Commission (ARC) Project Number FT-321.

Project Limits

The project limits for this project are of a sufficient length to improve traffic congestion on SR 400 in the vicinity of the McFarland Parkway interchange. The proposed southern terminus is suitable because it would extend the existing three northbound lanes beyond the exit only lane drop at McFarland Parkway. The northern terminus for this project should terminate prior to the Big Creek bridge SR 400 northbound just north of the McFarland Parkway northbound on-ramp merge.

Project Goal

The goal of the project would be to improve traffic mobility in the vicinity of the SR 400 at McFarland Parkway interchange. Improvements are needed to alleviate the traffic bottleneck created by the simultaneous reduction in lanes along this portion of SR 400 while motorists are merging northbound onto SR 400 from McFarland Parkway.

Description of the proposed project:

This project is to extend the third northbound lane along SR 400 from McFarland Parkway to the Big Creek bridge. The total length of the project is 2.33 miles.

Currently, the third lane ends near the McGinnis Ferry Road overpass and the planned extension would carry it beyond McFarland Parkway interchange ramps. The proposed lane extension would involve extending the inside lane approximately 1,000 feet beyond the McFarland northbound on-ramp for a total extension of 9,800 feet. Approximately 6,200 feet of the lane extension can be completed with restriping alone, while the remaining 3,600 feet will require additional pavement to be constructed.

Federal Oversight: Full Oversight Exempt State Funded Other

MPO: N/A MPO – Atlanta Regional Commission (ARC)
MPO Project TIP # FT-321

Regional Commission: N/A RC – Atlanta Regional Commission (ARC)
RC Project ID # FT-321

Congressional District(s): 6, 9

Projected Traffic: ADT

Current Year (2011): 47,300 Open Year (2012): 48,000 Design Year (2032): 62,625

Functional Classification (Mainline): Urban Freeway and Expressway

Is this project on a designated bike route? No YES

Is this project located on a pedestrian plan? No YES

CONTEXT SENSITIVE SOLUTIONS

Issues of Concern: N/A

Context Sensitive Solutions: N/A

DESIGN AND STRUCTURAL DATA

Mainline Design Features: SR 400

Feature	Existing	Standard*	Proposed
Typical Section			
- Number of Lanes	2	N/A	2-3
- Lane Width(s)	12 ft	12 ft	12 ft
- Median Width & Type	64' grass	52 ft to 64 ft	52 ft
- Outside Shoulder Width & Type	14 ft (10' pvd)	14 ft (12' pvd)	N/A
- Outside Shoulder Slope	5%	2-6%	N/A
- Inside Shoulder Width & Type	4' pvd	12 ft (10' pvd)	12 ft (10' pvd)
- Sidewalks	N/A	N/A	N/A
- Auxiliary Lanes	12 ft	12 ft	N/A
- Bike Lanes	N/A	N/A	N/A
Posted Speed	65		65
Design Speed	65	65	65
Min Horizontal Curve Radius	2920 ft	1660 ft	2920 ft
Superelevation Rate	6.7%	6%	6.7%
Grade	2.5%	4%	2.5%
Access Control	Full	Full	Full
Right-of-Way Width	320' to 500'	N/A	320' to 500'
Maximum Grade – Crossroad	N/A	N/A	N/A
Design Vehicle	-	WB-50	WB-50
<i>Additional Items as needed</i>			

*According to current GDOT design policy if applicable

Major Interchanges/Intersections: SR 400 at McFarland Parkway

Utility Involvements: GDOT ATMS, Atlanta Gas Light, Forsyth County, AT&T, Sawnee EMC, Ga Power - Distribution

Public Interest Determination Policy and Procedure recommended (Utilities)? YES NO *RRM*

SUE Required: Yes No *RRM*

Railroad Involvement: None

Right-of-Way:

Required Right-of-Way anticipated: YES NO Undetermined
 Easements anticipated: Temporary Permanent Utility Other

Anticipated number of impacted parcels: 0
 Anticipated number of displacements (Total): 0
 Businesses: 0
 Residences: 0
 Other: 0

Location and Design approval: Not Required Required

Off-site Detours Anticipated: No Yes Undetermined

Transportation Management Plan Anticipated: YES NO

Design Exceptions to FHWA/AASHTO controlling criteria anticipated:

FHWA/AASHTO Controlling Criteria	YES	Appvl Date (if applicable)	NO	Undetermined
1. Design Speed	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Lane Width	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Shoulder Width	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Bridge Width	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Horizontal Alignment	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Superelevation	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
7. Vertical Alignment	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Grade	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. Stopping Sight Distance	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. Cross Slope	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
11. Vertical Clearance	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
12. Lateral Offset to Obstruction	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
13. Bridge Structural Capacity	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>

*The superelevation rate for the existing horizontal curve at SR 400 and McFarland Parkway is 6.7%. A design exception is required since the State's policy for this facility is 6.0%, but within overall AASHTO guidance. This project will match the existing cross slope for the widening.

Design Variances to GDOT standard criteria anticipated:

GDOT Standard Criteria	Reviewing Office	Appvl Date (if applicable)		Undetermined
		YES	NO	
1. Access Control - Median Opening Spacing	DP&S	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Median Usage & Width	DP&S	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Intersection Skew Angle	DP&S	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Lateral Offset to Obstruction	DP&S	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Intersection Sight Distance	DP&S	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

6. Bike & Pedestrian Accommodations	DP&S	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. GDOT Drainage Manual	DP&S	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Georgia Standard Drawings	DP&S	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. GDOT Bridge & Structural Manual	Bridge Design	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. Roundabout Illumination - (if applicable)	DP&S	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
11. Rumble Strips/Safety Edge	DP&S	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>

VE Study anticipated: No Yes Completed – Date:

ENVIRONMENTAL DATA

Anticipated Environmental Document:

GEPA: NEPA: Categorical Exclusion EA/FONSI EIS

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

This project is located in the Metro-Atlanta non-attainment area for PM 2.5 and Ozone. The project is listed in the approved FY 2012-2017 Transportation Improvement Program (TIP). The reference number in the TIP is FT-321. It is anticipated that this project will not require a qualitative PM2.5 hotspot analysis since it is not a project of local air quality concern under 40 CFR 93.123(b)(1). Because the average annual daily traffic exceeds 10,000 vehicles and the level-of-service (LOS) will be LOS D or worse, a carbon monoxide analysis is required.

Environmental Permits/Variations/Commitments/Coordination anticipated:

Permit/ Variance/ Commitment/ Coordination Anticipated	YES	NO	Remarks
1. U.S. Coast Guard Permit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2. Forest Service/Corps Land	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3. CWA Section 404 Permit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
4. Tennessee Valley Authority Permit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
5. Buffer Variance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6. Coastal Zone Management Coordination	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
7. NPDES	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
8. FEMA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
9. Cemetery Permit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
10. Other Permits	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
11. Other Commitments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
12. Other Coordination	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Is a PAR required? No Yes Completed – Date:

NEPA/GEPA: No significant issues anticipated. While Big Creek Greenway, a Section 4(f) resource, is in the area, it is located outside of the project limits.

Ecology: A combined Ecology Resource Survey and Assessment of Effects Report is appropriate for this project. The federally listed and candidate species known to occur in Forsyth County include the Cherokee darter (*Etheostoma scotti*), amber darter (*Percina antesella*), Etowah darter (*Etheostoma etowahae*), and Georgia aster (*Symphotrichum georgianum*). It is anticipated that there will be no suitable habitat for any of the species. It is also anticipated that there will be no significant ecological issues. A survey for the Georgia aster was completed during the 2011 flowering season.

History: There are no potential or known historic resources present in the survey corridor. A historic survey is required. It is anticipated that a No Historic Properties Affected would be appropriate for this project.

Archeology: There are no potential or known archaeological resources present in the survey corridor. An archeology survey is required. It is anticipated that an archeology short form will be appropriate for this project.

Air & Noise: A Noise study is not required for this project.

Public Involvement: Public Information Open Houses (PIOH) were held by SRTA on December 7, 8 & 20 2010 and also held January 5 & 6, 2011. The PIOH's were held for various Ga 400 corridor improvement projects including PI 0010311

Major stakeholders: SRTA

PROJECT RESPONSIBILITIES

Project Activities:

Project Activity	Party Responsible for Performing Task(s)
Concept Development	Kimley-Horn and Associates, Inc.
Design	Kimley-Horn and Associates, Inc.
Right-of-Way Acquisition	None
Utility Relocation	GDOT
Letting to Contract	GDOT
Construction Supervision	GDOT
Providing Material Pits	Contractor
Providing Detours	None
Environmental Studies, Documents, and Permits	Kimley-Horn and Associates, Inc.
Environmental Mitigation	None
Construction Inspection & Materials Testing	GDOT

Lighting required: No Yes

Initial Concept Meeting: N/A

Concept Meeting: October 13, 2011 – minutes attached

Other projects in the area:

- 0006398 – SR 400 ATMS Ramp Meters from I-285 to SR 120/Old Milton Parkway. This project has been constructed.
- 0008415 – SR 400 at Hammond Drive Interchange – This project has been constructed.
- 0001757 – SR 400 from I-285 to McFarland Road/Forsyth County HOV Lanes. This project is in design.
- 751580- SR 400/US 19 @ CR145/Northridge Road – this project is in design.
- 0010311 – SR 400 @ Abernathy Road – Northbound Ramp Extension. This project is in design and will be Let with 0010290.

Other coordination to date: N/A

Project Cost Estimate and Funding Responsibilities: *Add additional rows as necessary; Attach current cost estimates to report.*

	Breakdown of PE	ROW	Utility	CST*	Environmental Mitigation	Total Cost
By Whom	GDOT	GDOT	GDOT	GDOT	NA	
\$ Amount	\$1,000,000	\$0	\$0	\$1,221,593.23	NA	\$2,221,593.23
Date of Estimate	04/29/2011	N/A	11/10/2011	10/12/2011		

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

ALTERNATIVES DISCUSSION

Alternative selection:

Preferred Alternative: Extending the third NB lane from McGinnis Ferry overpass to the Big Creek Bridge just beyond the McFarland Parkway interchange ramps.			
Estimated Property Impacts:	None	Estimated Total Cost:	\$2,221,593.23
Estimated ROW Cost:	None	Estimated CST Time:	9 months
Rationale: This alternative was selected as it improves traffic operations in this section of SR 400 where the inside lane tapers to an end and the outside lane drops into the McFarland Parkway off ramps. This alternative can be constructed entirely within the existing right of way, eliminating the need to acquire right of way and/or easements.			

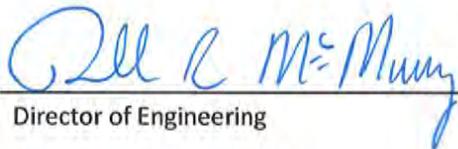
No-Build Alternative: <i>No-Build</i>			
Estimated Property Impacts:	0	Estimated Total Cost:	0
Estimated ROW Cost:	0	Estimated CST Time:	0
Rationale: The no-build alternative was not selected as it does not satisfy the need for the project. Congestion due to the lane reductions occurring in close proximity to the multiple northbound ramps would only reduce travel times along the corridor in the future.			

Comments: N/A

Attachments:

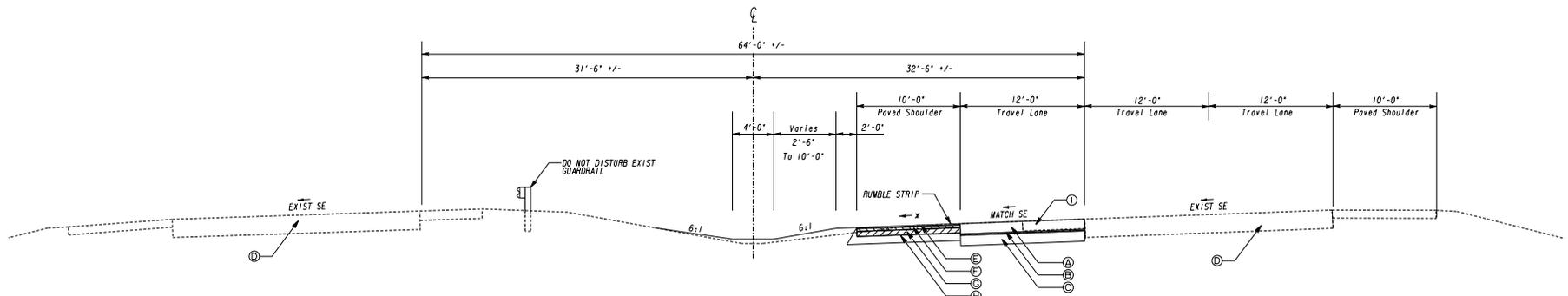
1. Concept Layout
2. Typical sections
3. Detailed Cost Estimates:
 - a. Construction including Engineering and Inspection
 - b. Completed Fuel & Asphalt Price Adjustment forms
 - c. Utilities
4. Traffic diagrams
5. Traffic data including crash and capacity analysis summaries (*tabular format*)
6. Summary of TE Study and/or Signal Warrant Analysis
7. Minutes of Concept meetings

APPROVALS

Concur: 
Director of Engineering

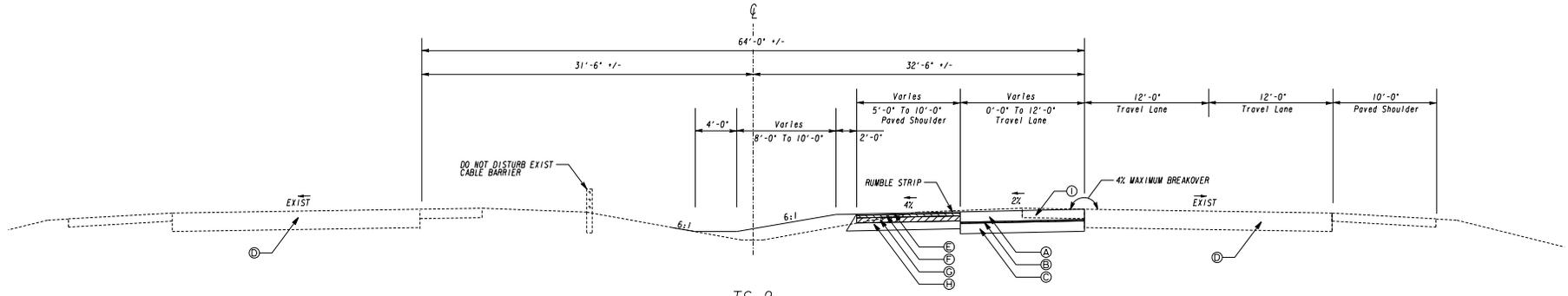
Approve: 
Chief Engineer

1/10/12
Date



TS 1
 SUPERELEVATED SECTION
 SR 400/US 19 NORTHBOUND
 STA 286+73.24 TO STA 299+00.00
 N. T. S.

x 4% OR RATE OF S.E. WHICHEVER IS GREATER



TS 2
 TANGENT SECTION
 SR 400/US 19 NORTHBOUND
 STA 299+00.00 TO STA 323+30.00
 N. T. S.

- REQUIRED PAVEMENT
- A PLAIN PC CONC PYMT, CL 3 CONC, 12 INCH THK
 - B RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME (330 LB/SY)
 - C GRADED AGGREGATE BASE, 12"
 - D EXISTING PAVEMENT TO REMAIN
 - E RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME (165 LB/SY)
 - F RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME (220 LB/SY)
 - G RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME (440 LB/SY)
 - H GRADED AGGREGATE BASE, 10"
 - I EXISTING ASPHALT PAVED SHOULDER TO BE REMOVED



REVISION DATES	

STATE OF GEORGIA
 DEPARTMENT OF TRANSPORTATION
 OFFICE: INNOVATIVE PROGRAM DELIVERY
 TYPICAL SECTIONS

Attachment 3

STATE HIGHWAY AGENCY

DATE : 08/31/2011
PAGE : 1

JOB ESTIMATE REPORT

=====

JOB NUMBER : 0010290 SPEC YEAR: 01
DESCRIPTION: SR 400 @ MCFARLAND PKWY

ITEMS FOR JOB 0010290

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0020	150-1000		LS	TRAFFIC CONTROL - PI 0010290	1.000	150000.00	150000.00
0025	210-0100		LS	GRADING COMPLETE - PI 0010290	1.000	100000.00	100000.00
0030	207-0203		CY	FOUND BKFILL MATL, TP II	50.000	46.66	2333.20
0040	402-3130		TN	RECYL AC 12.5MM SP,GP2,BM&HL	340.000	82.74	28131.62
0045	402-3190		TN	RECYL AC 19 MM SP,GP 1 OR 2 ,INC BM&HL	1165.000	67.60	78756.41
0050	402-3121		TN	RECYL AC 25MM SP,GP1/2,BM&HL	900.000	67.63	60870.36
0055	413-1000		GL	BITUM TACK COAT	630.000	2.76	1741.81
0060	439-0026		SY	PLN PC CONC PVMT CL3 12" THK	4330.000	65.17	282199.83
0065	310-1101		TN	GR AGGR BASE CRS, INCL MATL	5335.000	19.58	104495.74
0085	550-1180		LF	STM DR PIPE 18",H 1-10	500.000	37.80	18902.08
0100	611-3010		EA	RECONSTR DROP INLET, GROUP 1	4.000	1353.06	5412.27
0105	620-0100		LF	TEMP BARRIER, METHOD NO. 1	3700.000	24.87	92022.55
0110	631-0005		EA	PERM CHGABLE MSG SIGN,P/1L/TP- 3	3.000	7000.00	21000.00
0114	641-1100		LF	GUARDRAIL, TP T	40.000	65.50	2620.09
0115	641-1200		LF	GUARDRAIL, TP W	250.000	18.61	4653.18
0125	641-5012		EA	GUARDRAIL ANCHORAGE, TP 12	1.000	1786.47	1786.48
0130	668-2100		EA	DROP INLET, GP 1	8.000	1503.71	12029.69
0150	657-5005		EA	PRF PL PVT MKG,WD/SYM,B/W,TPPB	2.000	863.46	1726.93
0155	657-6054		LF	PRF PL SD PVMT MKG,5",YW,TP PB	9850.000	2.76	27201.27
0165	654-1003		EA	RAISED PVMT MARKERS TP 3	50.000	6.14	307.18
0170	163-0232		AC	TEMPORARY GRASSING	1.000	377.92	377.92
0175	163-0240		TN	MULCH	35.000	247.48	8661.90
0180	163-0300		EA	CONSTRUCTION EXIT	2.000	1020.88	2041.77
0185	163-0550		EA	CONS & REM INLET SEDIMENT TRAP	11.000	89.58	985.41
0189	165-0010		LF	MAINT OF TEMP SILT FENCE, TP A	1000.000	1.01	1019.99
0190	165-0030		LF	MAINT OF TEMP SILT FENCE, TP C	1000.000	0.89	897.54
0195	165-0101		EA	MAINT OF CONST EXIT	2.000	485.29	970.59
0200	165-0105		EA	MAINT OF INLET SEDIMENT TRAP	11.000	50.01	550.19
0205	167-1000		EA	WATER QUALITY MONITORING AND SAMPLING	2.000	298.53	597.08
0210	167-1500		MO	WATER QUALITY INSPECTIONS	6.000	600.39	3602.34
0214	171-0010		LF	TEMPORARY SILT FENCE, TYPE A	2000.000	1.36	2735.42
0215	171-0030		LF	TEMPORARY SILT FENCE, TYPE C	2000.000	2.78	5560.54
0220	700-6910		AC	PERMANENT GRASSING	1.000	679.25	679.25
0225	700-7000		TN	AGRICULTURAL LIME	3.000	83.02	249.09
0230	700-8000		TN	FERTILIZER MIXED GRADE	1.000	482.99	483.00
0235	700-8100		LB	FERTILIZER NITROGEN CONTENT	80.000	2.57	206.30
0240	656-3600		SY	REM EX TRAF STRIPE,ALL KND/TYP	13000.000	5.00	65000.00
0245	657-4054		GLM	PRF PL SK PVMT MKG,5",WH,TP PB	2.000	12000.00	24000.00
0250	657-5002		SY	PREFORMED PLASTIC PVMT MKG, YE, TP PB	550.000	16.46	9056.45

STATE HIGHWAY AGENCY

DATE : 08/31/2011
PAGE : 2

JOB ESTIMATE REPORT

=====

ITEM TOTAL	1123865.45
INFLATED ITEM TOTAL	1123865.45

TOTALS FOR JOB 0010290

ESTIMATED COST:	1123865.45
CONTINGENCY PERCENT (5.0):	56193.27
ESTIMATED TOTAL:	1180058.72

PROJ. NO.: 0
P.I. NO. 0010290
DATE: 10/12/2011

Base Construction Cost		\$	1,123,865.45
E & I	5%	\$	56,193.27
Construction Contingency		\$	-
Subtotal Construction Cost		\$	<u>1,180,058.72</u>
Liquid AC Adjustment (50 % cap)		\$	<u>41,534.51</u>
Total Construction Cost		\$	<u>1,221,593.23</u>

PROJ. NO.

[Redacted]

CALL NO.

P.I. NO.

0010290

DATE

10/12/2011

INDEX (TYPE)

INDEX (TYPE)	DATE	INDEX
REG. UNLEADED	Oct-11	\$ 3.258
DIESEL		\$ 3.769
LIQUID AC		\$ 563.00

Link to Fuel and AC Index:

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

LIQUID AC ADJUSTMENTS

PA=[((APM-APL)/APL)]xTMTxAPL

Asphalt

Price Adjustment (PA)				40620.45	\$	40,620.45
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	900.80		
Monthly Asphalt Cement Price month project let (APL)			\$	563.00		
Total Monthly Tonnage of asphalt cement (TMT)				120.25		

ASPHALT	Tons	%AC	AC ton
Leveling		5.0%	0
12.5 OGFC		5.0%	0
12.5 mm	340	5.0%	17
9.5 mm SP		5.0%	0
25 mm SP	900	5.0%	45
19 mm SP	1165	5.0%	58.25
	2405		120.25

BITUMINOUS TACK COAT

Price Adjustment (PA)			\$	914.06	\$	914.06
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	900.80		
Monthly Asphalt Cement Price month project let (APL)			\$	563.00		
Total Monthly Tonnage of asphalt cement (TMT)				2.705913581		

Bitum Tack

Gals	gals/ton	tons
630	232.8234	2.70591358

PROJ. NO.

[Redacted]

CALL NO.

P.I. NO.

0010290

DATE

10/12/2011

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)					0	\$	-
Monthly Asphalt Cement Price month placed (APM)		Max. Cap	60%	\$	900.80		
Monthly Asphalt Cement Price month project let (APL)				\$	563.00		
Total Monthly Tonnage of asphalt cement (TMT)					0		

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

TOTAL LIQUID AC ADJUSTMENT	\$ 41,534.51
-----------------------------------	---------------------

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE PI No. 00010290 Forsyth Co. OFFICE Gainesville
SR 400 NB Lane Ext. FM
McFarland Rd To Big CR Greenway DATE November 10, 2011

FROM 
Allen Ferguson
District Utilities Engineer

TO Lauren Bartlett, Project Manager, Innovative Program Delivery

SUBJECT PRELIMINARY UTILITY COST (ESTIMATE)

As requested by your office, we are furnishing you with a Preliminary Utility Cost estimate for the subject project.

FACILITY OWNER	NON-REIMBURSABLE	REIMBURSABLE
AT&T	\$0.00	\$0.00
Atlanta Gas Light	\$0.00	\$0.00
Georgia Power-Distribution	\$0.00	\$0.00
Forsyth Co Water and Sewer	\$0.00	\$0.00
Sawnee EMC	\$0.00	\$0.00

Due to scope of project, it is anticipated that there will be no utility conflicts.

If you have any questions, please contact Allen Ferguson at 770-532-5510.

RAF

C: Jeff Baker P.E., State Utilities Engineer
Angie Robinson, Office of Financial Management
Matt Needham, Area Engineer
File

Department of Transportation State of Georgia

INTERDEPARTMENT CORRESPONDENCE

FILE Forsyth County **OFFICE** Planning
P.I. # 0010290
DATE August 26, 2011

FROM Cindy VanDyke, State Transportation Planning Administrator

TO Daryl VanMeter, State Innovative Engineer
Attention: Andrew Hoenig

SUBJECT **Reviewed** Design Traffic for SR 400 FM CR 458/MCFARLAND RD TO BIG CRK GREENWAY-NB LN EXT.

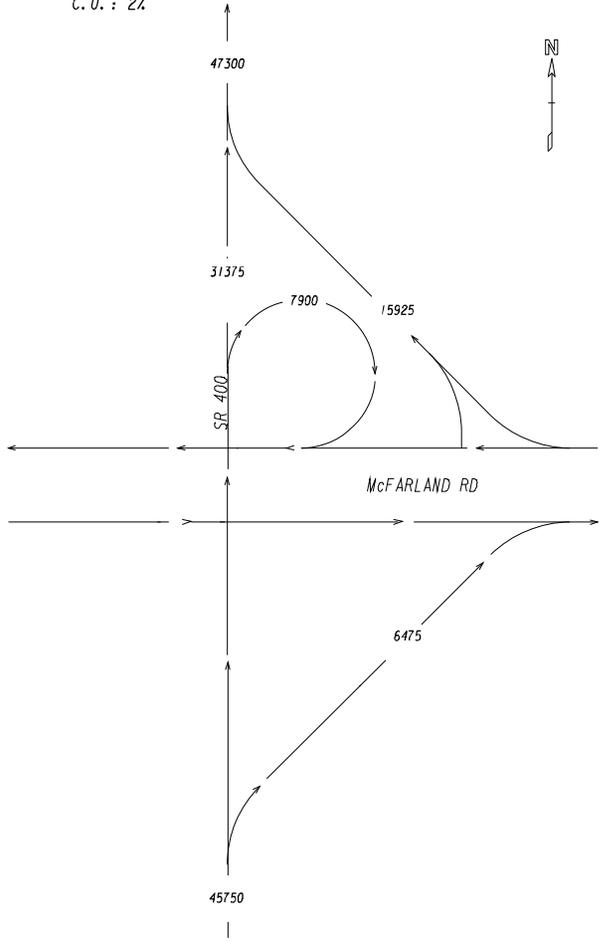
We have Reviewed Design Traffic for the above project.

The traffic is approved based on the information furnished. If you have any questions concerning this information please contact Abby Ebodaghe at (404) 631-1923.

CLV/AFE

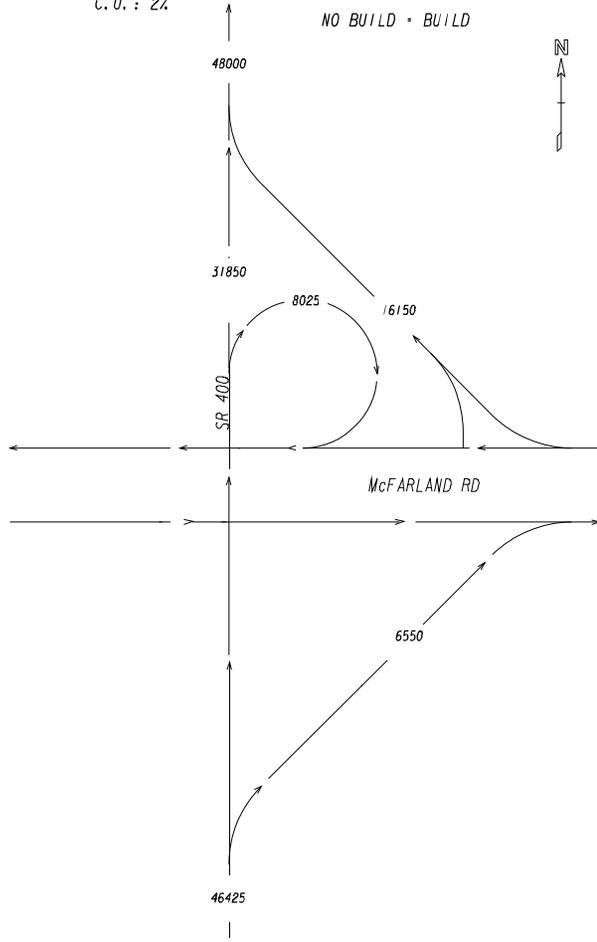
24 HR TRUCKS: 6%
S. U. : 4%
C. U. : 2%

EXISTING YEAR 2011 ADT
TRAFFIC VOLUMES



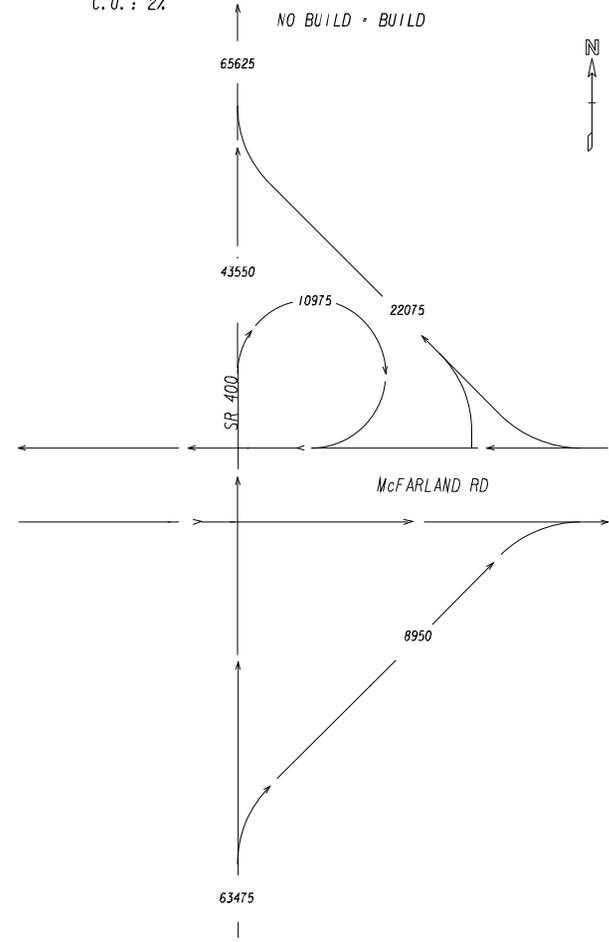
24 HR TRUCKS: 6%
S. U. : 4%
C. U. : 2%

BASE YEAR 2012 ADT
TRAFFIC VOLUMES
NO BUILD - BUILD



24 HR TRUCKS: 6%
S. U. : 4%
C. U. : 2%

DESIGN YEAR 2032 ADT
TRAFFIC VOLUMES
NO BUILD - BUILD



FORSYTH COUNTY
SR 400 @ McFARLAND RD
PI • 0010290 8/11



GEORGIA
DEPARTMENT
OF
TRANSPORTATION

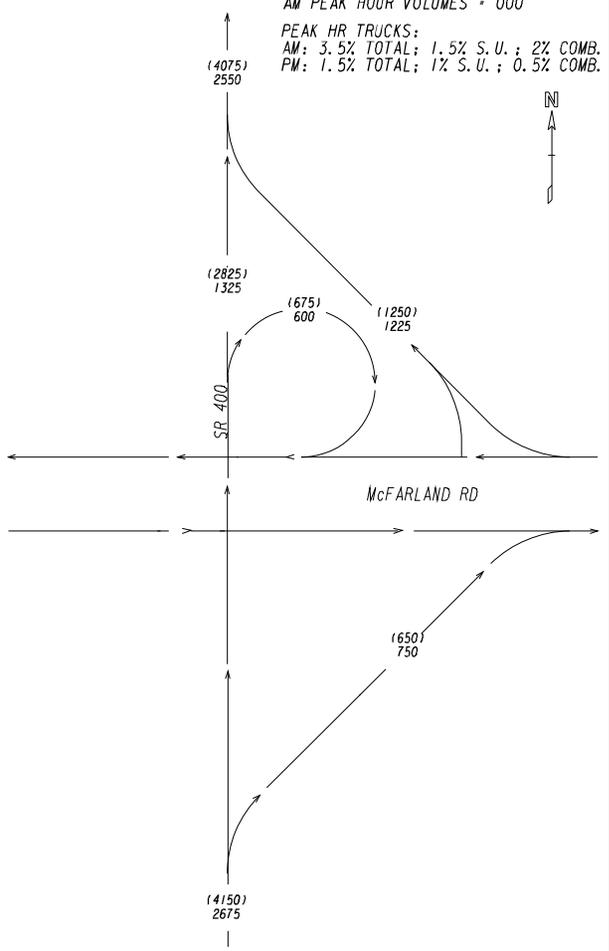
REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: INNOVATIVE PROGRAM DELIVERY
TRAFFIC DIAGRAM
SR 400 @ McFARLAND RD - NB LANE EXTENSION

DRAWING No.
10-01

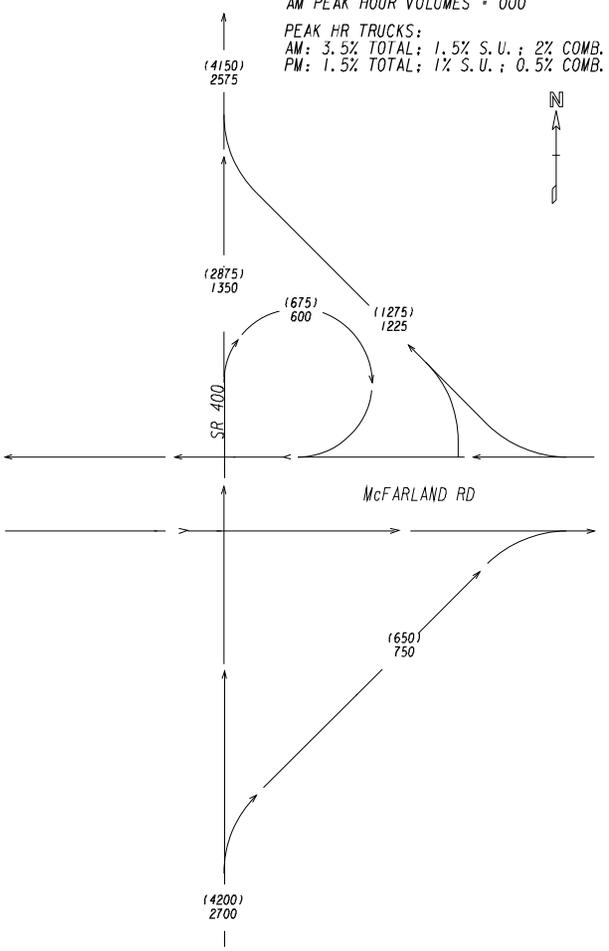
EXISTING YEAR 2011
TRAFFIC VOLUMES
PM PEAK HOUR VOLUMES = (000)
AM PEAK HOUR VOLUMES = 000

PEAK HR TRUCKS:
AM: 3.5% TOTAL; 1.5% S.U.; 2% COMB.
PM: 1.5% TOTAL; 1% S.U.; 0.5% COMB.



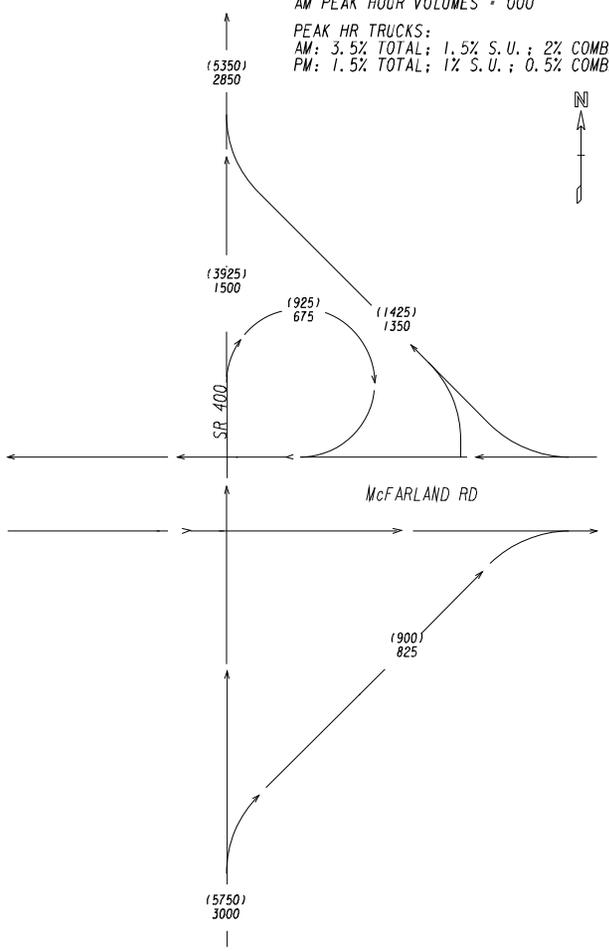
BASE YEAR 2012
TRAFFIC VOLUMES
PM PEAK HOUR VOLUMES = (000)
AM PEAK HOUR VOLUMES = 000

PEAK HR TRUCKS:
AM: 3.5% TOTAL; 1.5% S.U.; 2% COMB.
PM: 1.5% TOTAL; 1% S.U.; 0.5% COMB.



DESIGN YEAR 2032
TRAFFIC VOLUMES
PM PEAK HOUR VOLUMES = (000)
AM PEAK HOUR VOLUMES = 000

PEAK HR TRUCKS:
AM: 3.5% TOTAL; 1.5% S.U.; 2% COMB.
PM: 1.5% TOTAL; 1% S.U.; 0.5% COMB.



FORSYTH COUNTY
SR 400 @ McFARLAND RD
PI * 0010290 8/11



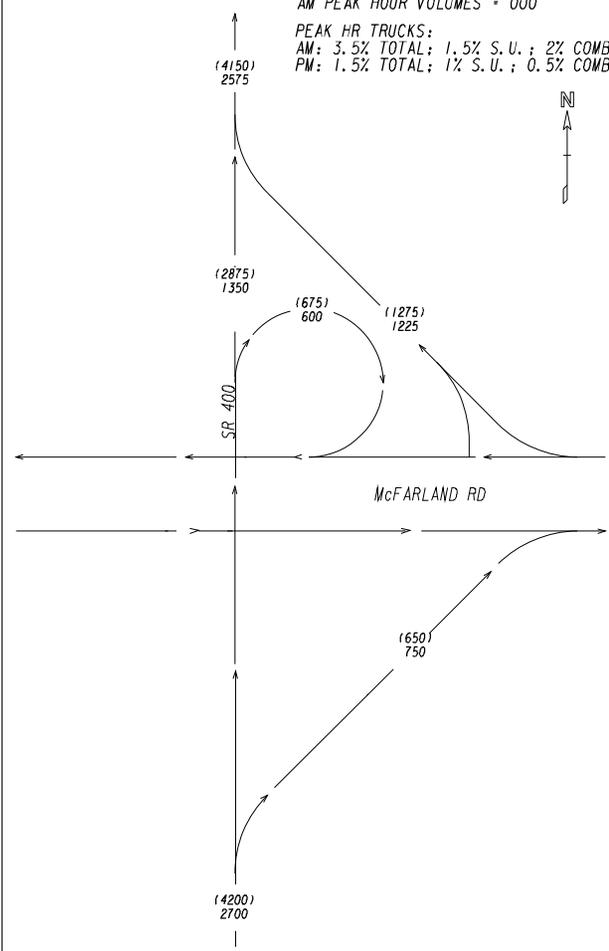
REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: INNOVATIVE PROGRAM DELIVERY
TRAFFIC DIAGRAM
SR 400 @ McFARLAND RD - NB LANE EXTENSION

DRAWING No.
10-02

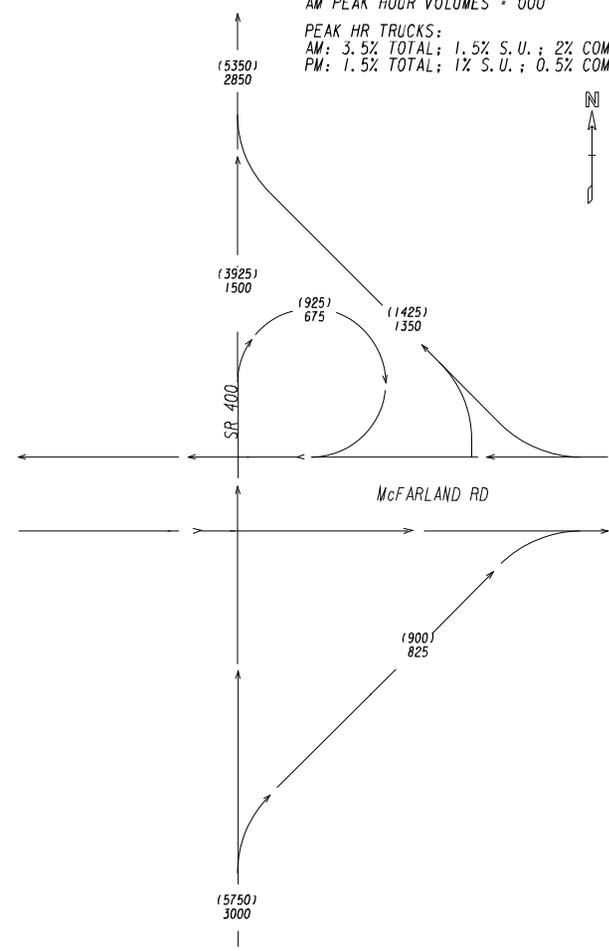
NO BUILD BASE YEAR 2012
 TRAFFIC VOLUMES
 PM PEAK HOUR VOLUMES = (000)
 AM PEAK HOUR VOLUMES = 000

PEAK HR TRUCKS:
 AM: 3.5% TOTAL; 1.5% S.U.; 2% COMB.
 PM: 1.5% TOTAL; 1% S.U.; 0.5% COMB.



NO BUILD DESIGN YEAR 2032
 TRAFFIC VOLUMES
 PM PEAK HOUR VOLUMES = (000)
 AM PEAK HOUR VOLUMES = 000

PEAK HR TRUCKS:
 AM: 3.5% TOTAL; 1.5% S.U.; 2% COMB.
 PM: 1.5% TOTAL; 1% S.U.; 0.5% COMB.



FORSYTH COUNTY
 SR 400 @ McFARLAND RD
 PI # 0010290 8/11



REVISION DATES

STATE OF GEORGIA
 DEPARTMENT OF TRANSPORTATION
 OFFICE: INNOVATIVE PROGRAM DELIVERY
TRAFFIC DIAGRAM
 SR 400 @ McFARLAND RD - NB LANE EXTENSION

DRAWING No.
10-03

P.I. Number 0010290

SR 400 From CR 458/McFarland Road to Big Creek Greenway – NB Lane Extension

Existing Conditions

This section of SR 400 is functionally classified as an Urban Expressway and Freeway. The existing conditions in the area are as follows:

SR 400 – South of McFarland Parkway – Northbound (NB)

- Two (2) 12-foot through lanes (NB)
- One (1) 12-foot Exit Only lane

SR 400 – Between the McFarland Parkway off-ramp and on-ramp

- Two (2) 12-foot through lanes (NB)
- One (1) 12-foot Exit Only lane

SR 400 – North of McFarland Parkway

- Two (2) 12-foot through lanes (NB)

The current posted speed limit along SR 400 is 65 miles per hour (MPH) south and north of the McFarland Parkway interchange.

Existing and Projected Traffic Volumes

The current (2011) Average Daily Traffic (ADT) ranges from 31,375 between the SR 400 McFarland Parkway off and on-ramps to 46,300 on SR 400 north of McFarland Parkway. The McFarland Parkway northbound on-ramp current (2011) ADT is 15,925. Table 1 provides a listing of existing (2011) traffic volumes on SR 400 in the vicinity of the McFarland Parkway interchange. The 2010 regional travel demand model has an annual growth rate of 0.7% along SR 400 and the McFarland Parkway interchange.

Table 1 Volume Summary for (2011) Existing			
Segment	AM Peak	PM Peak	ADT
SR 400 North of McFarland Parkway	2,550	4,025	47,300
SR 400 between the McFarland Parkway Off-Ramps and On-Ramp	1,325	2,825	31,375
SR 400 South of McFarland Parkway	2,675	4,150	45,750
Northbound On-Ramp	1,225	1,225	15,925
Northbound Off-Ramp to Westbound McFarland Parkway	600	675	7,900
Northbound Off-Ramp to Eastbound McFarland Parkway	750	650	6,475

Sources: Kimley-Horn and Associates, Inc. 2011
Georgia's State Traffic and Reporting Statistics, 2011

Table 2 Volume Summary for (2032) No-Build			
Segment	AM Peak	PM Peak	ADT
SR 400 North of McFarland Parkway	6,900	6,100	65,625
SR 400 between the McFarland Parkway Off-Ramps and On-Ramp	925	2,125	43,350
SR 400 South of McFarland Parkway	2,675	4,150	63,475
Northbound On-Ramp	1,225	1,225	22,075
Northbound Off-Ramp to Westbound McFarland Parkway	600	675	10,975
Northbound Off-Ramp to Eastbound McFarland Parkway	750	650	8,950

Note: Traffic volumes grown from 2010 regional travel demand model used for PLAN 2040

Levels-of-Service (LOS)

A substantial portion of the traffic congestion in this area is the result of a traffic bottle neck created by a simultaneous reduction in lanes as traffic is merging onto SR 400 off of McFarland Parkway. The existing (2011) LOS in this area ranges from “B” and “C” in the AM Peak Hour along SR 400 to a “D” to “F” for this segment in the PM Peak Hour as depicted in Table 3. The design traffic volumes provide for LOS to decrease to a “F” for this segment in the PM Peak Hour as shown in Table 4.

Table 3 Existing Year 2011 AM and PM LOS Analysis				
Segment	AM Peak Hour		PM Peak Hour	
	Density (VPLPM)**	Overall LOS	Density (VPLPM)**	Overall LOS
SR 400 North of McFarland Parkway	20.5	C	45.0	F
SR 400 between the McFarland Parkway Off-Ramps and On-Ramp	11.4	B	35.4	E
SR 400 South of McFarland Parkway	14.4	B	28.0	D
Northbound On-Ramp	21.0	C	21.4	C
Northbound Off-Ramp to Westbound McFarland Parkway	15.9	B	13.0	B
Northbound Off-Ramp to Eastbound McFarland Parkway	15.4	B	17.6	B

** VPLPM represents vehicles per lane per mile
 Source: Kimley-Horn and Associates, Inc. 2011

Table 4 Design Year 2032 No-Build AM and PM LOS Analysis				
Segment	AM		PM	
	Density (VPLPM)**	Overall LOS	Density (VPLPM)**	Overall LOS
SR 400 North of McFarland Parkway	23.2	C	62.4	F
SR 400 between the McFarland Parkway Off-Ramps and On-Ramp	13.0	B	120.9	F
SR 400 South of McFarland Parkway	16.1	B	96.5	F
Northbound On-Ramp	24.0	C	28.3	D
Northbound Off-Ramp to Westbound McFarland Parkway	17.2	B	15.7	B
Northbound Off-Ramp to Eastbound McFarland Parkway	17.3	B	20.6	C

** VPLPM represents vehicles per lane per mile
 Source: Kimley-Horn and Associates, Inc. 2011

Table 8 Design Year 2032 Build AM and PM LOS Analysis				
Segment	AM		PM	
	Density (VPLPM)**	Overall LOS	Density (VPLPM)**	Overall LOS
SR 400 North of McFarland Parkway	16.8	B	90.4	F
SR 400 between the McFarland Parkway Off-Ramps and On-Ramp	8.4	A	42.9	E
SR 400 South of McFarland Parkway	12.9	B	30.9	D
Northbound On-Ramp	24.1	C	71.0	F
Northbound Off-Ramp to Westbound McFarland Parkway	17.7	B	17.4	B
Northbound Off-Ramp to Eastbound McFarland Parkway	17.3	B	24.0	C

** VPLPM represents vehicles per lane per mile
 Source: Kimley-Horn and Associates, Inc. 2011

Crash Data

Crash data for SR 400 from Windward Parkway to Majors Road were obtained from the Georgia Department of Transportation accident records for the years 2006, 2007, and 2008. Table 6 summarizes the number of crashes, injuries, and fatalities for this section of SR 400 for each year. This table shows that the accident rate for this section of SR 400 has been consistently lower than the statewide average.

Table 5 GDOT Accident History SR 400 from Windward Parkway to Majors Road									
Year	Study Corridor Quantity			Study Corridor Rates			Georgia Statewide Average Rates		
	Accidents	Injuries	Fatalities	Accidents	Injuries	Fatalities	Accidents	Injuries	Fatalities
2006	44	18	0	28	11	0.00	200	43	0.37
2007	95	23	0	60	20	0.00	205	45	0.27
2008	78	5	0	50	20	0.00	207	47	0.87
Total	217	82	0	-	-	-	-	-	-

Note: Segment accident rates are number of accidents per 100 million vehicle miles.
 Source: Georgia Department of Transportation, 2011

11.0 CONCLUSION

The existing inside lane along northbound SR 400 that currently ends at McFarland Parkway is scheduled to be extended by approximately 9,800' in the year 2012 in order to relieve the existing bottleneck that is created by the reduction in lanes occurring in close proximity to the multiple northbound ramps.

The traffic analyses indicate that by extending the inside northbound lane, the mainline section of SR 400 north of McGinnis Ferry to Big Creek is expected to operate at an improved LOS. Particularly, the LOS and travel times improve significantly during the PM peak hour. Most of the benefits are realized along SR 400 in the vicinity of the McFarland Parkway ramps and south of McFarland Parkway. Although this section of SR 400 is ultimately limited by the two lane section at the Big Creek bridge, the extension of the inside northbound lane will improve the traffic operations along the corridor.



To: Attendees

From: Gary Newton, P.E.
Kimley-Horn and Associates, Inc.

Subject: PI #0010290 – SR 400 from CR 458/McFarland Pkwy to Big Creek Greenway –
Northbound Lane Extension

Date: October 13, 2011

A concept team meeting was held on October 13, 2011 at 10:30 AM in the GDOT General Office, conference room 408. The following is a list of attendees (see attachment for e-mail addresses & phone numbers):

Mike Dover (Moderator/PM)	GDOT – IPD
Andrew Hoenig	GDOT – IPD
Dave Peters	GDOT – Design Policy
David Zoeckler	GDOT Engineering Services
Nabil Raad	GDOT – Traffic Operations
David Hannon	HNTB
Doretha Cannon	SRTA
Gary Newton	Kimley-Horn (KHA)
John Walker	Kimley-Horn (KHA)
Nathan Currie	Kimley-Horn (KHA)

- Joining via video conference from District One office:

Robert Mahoney	GDOT – District One Preconstruction
Brent Cook	GDOT – District One Traffic
Todd McDuffie	GDOT – District One Engineer

Agenda:

- Introductions
- Project Introduction (Mike Dover)
 - Design-Build project to be let together with PI #0010311, Fulton County – SR 400 @ Abernathy Road – NB Lane Ext.
 - SRTA providing 100% of funding for project
 - Loren Bartlett will be the GDOT PM
 - Andrew Hoenig is currently serving as GDOT PM
- Project Summary and Concept Layout Summary (Gary Newton)
 - This project will extend the third northbound lane along SR 400 from McFarland Parkway to the Big Creek bridge. The total project length is approximately two miles.
 - Traffic, capacity, and crash summaries overview (John Walker)
 - Project length will be extended from Forsyth County into Fulton County approximately 1000’ due to removal of existing pavement markings

- Planning Office has stated the need for TIP amendment due to increased project length and the inclusion of Fulton County
- Concern was expressed about simply moving location of current traffic bottleneck from McFarland Pkwy exit ramp to location of McFarland Pkwy entrance ramp.
 - Agreed upon that traffic conditions would be improved as a result of project although problems could still exist
 - Highest area of concern would move from area prior to McFarland Pkwy interchange to area past McFarland Pkwy interchange, which should improve operations.

- Concept Report review (Gary Newton)
 - MPO and RC to fall under Atlanta Regional Commission (ARC)
 - Office of Planning will approve Justification Report
 - Noted that Office of Design Policy had previously asked about need for Design Variance due to 10' inside paved shoulder width
 - Design Variance will not be needed since project falls beneath threshold of 250 trucks per hour during peak hour
 - Existing restriped area provides an adequate shoulder
 - Current SE rate within SR 400 curve at McFarland Pkwy exceeds 6% (6.7%)
 - Add note stating that GDOT design recommendations will not be met but AASHTO requirements will be satisfied (Dave Peters)
 - Engineering Services later stated a Design Variance will be required
 - Potential utility impacts
 - 2 GDOT ATMS conduits cross SR 400 beneath proposed widening
 - SUE QL-B has been accepted by the State Utilities Office. Six Utility Owners are identified in the SUE plans and none are expected to be in conflict. MOUs will be sent out shortly.
 - Allen Ferguson to investigate in field
 - Environmental impacts and schedule were discussed
 - NPDES permit will be required
 - No PIOH will be held as determined by OES; dates of prior SRTA open house will be added in report
 - Ecology, Archeology & History reports have been submitted by KHA and no major impacts are expected
 - Air Quality impacts are being investigated
 - No state water buffers are expected by KHA
 - SRTA is the major stakeholder
 - Other projects within the surrounding area:
 - PI 0001757 – SR 400 from I-285 to McFarland Parkway/Forsyth County HOV Lanes. This project is in the design phase.
 - Project to install ramp meters at McFarland on-ramp is under construction
 - ATMS project along SR 400
 - Construction costs will increase once costs of micro-mill have been added
 - Design-Build team will be responsible for gaining approval of soil survey and pavement study
 - Discussed possibility of using previous soil survey completed for SR 400 NB south of McFarland Pkwy
 - IPD later followed up with Materials & Research Office and confirmed that D-B team will be responsible for submitting a Soil Survey

- Also discussed possibility of using pavement study for this same portion, depending on change in traffic counts
 - IPD later followed up with Materials & Research Office and confirmed that a pavement evaluation will not be necessary

- Comments (Mike Dover)
 - Project is currently scheduled for letting in April 2012. Design of costing plans by KHA is currently underway and may be finished early
 - Mr Dover asked which district will be responsible for construction supervision
 - Due to location of PI #0010311 entirely within Fulton County and due to the location of PI #0010290 adjacent to county line, District One recommends that District Seven supervise construction (Robert Mahoney and Brent Cook)
 - GDOT District One (Robert Mahoney) - Investigate need for micro milling to remove existing pavement markings and hatching.
 - GDOT Traffic Operations (Nabil Raad) - Review and note signs to be removed at location of existing lane drop
 - No overhead signs will be affected by proposed project

This document represents Kimley-Horn's interpretation of the meeting. Please contact Gary Newton at gary.newton@kimley-horn.com or at 770-825-0074 if you have any questions, comments or concerns.