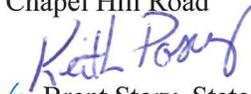


**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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

**FILE** P.I. # 0012622 **OFFICE** Design Policy & Support  
Douglas County  
GDOT District 7 - Metro Atlanta **DATE** 4/22/2015  
ITS Expansion: SR 5, SR 29 & CR 812/  
Chapel Hill Road

**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:**

Glenn Bowman, Director of Engineering  
Joe Carpenter, Director of P3/Program Delivery  
Genetha Rice-Singleton, Assistant Director of P3/Program Delivery  
Albert Shelby, State Program Delivery Engineer  
Bobby Hilliard, Program Control Administrator  
Cindy VanDyke, State Transportation Planning Administrator  
Hiral Patel, State Environmental Administrator  
Andrew Heath, State Traffic Engineer  
Angela Robinson, Financial Management Administrator  
Lisa Myers, State Project Review Engineer  
Charles "Chuck" Hasty, State Materials Engineer  
Mike Bolden, State Utilities Engineer  
Richard Cobb, Statewide Location Bureau Chief  
Kathy Zahul, District Engineer  
Scott Lee, District Preconstruction Engineer  
Elaine Armster, Project Manager  
BOARD MEMBER - 13th Congressional District

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

Project Type:	<u>Reconstruction/Rehabilitation</u>	P.I. Number:	<u>0012622</u>
GDOT District:	<u>13</u>	County:	<u>Douglas</u>
Federal Route Number:	<u>US 78</u>	State Route Number:	<u>SR 92</u>
	Project Number:		<u>DO-297</u>

This project includes the installation of fiber optic communication, closed circuit television cameras, and intelligent transportation devices to the Douglas County traffic control center. Traffic signal systems on south Chapel Hill Road, SR 92, and US 78 will be connected and integrated into the existing system.

**Submitted for approval:**

<u>Scott Mohler, PE, URS</u> Consultant Designer & Firm or GDOT Concept/Design Phase Office Head &	<u>1/16/15</u> Date
<u>STEVEN SHEFFIELD, DCDOT</u> Local Government Sponsor	<u>1/16/15</u> Date
<u>Albert V. Shelby, III</u> State Program Delivery Engineer	<u>1/22/15</u> Date
<u>Elaine Armster</u> GDOT Project Manager	<u>January 21, 2015</u> Date

**Recommendation for approval: (Delete any inapplicable signature lines)**

* <u>HIRAL PATEL</u> State Environmental Administrator	<u>2/23/2015</u> Date
* <u>ANDREW HEATH</u> State Traffic Engineer	<u>1/29/2015</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).

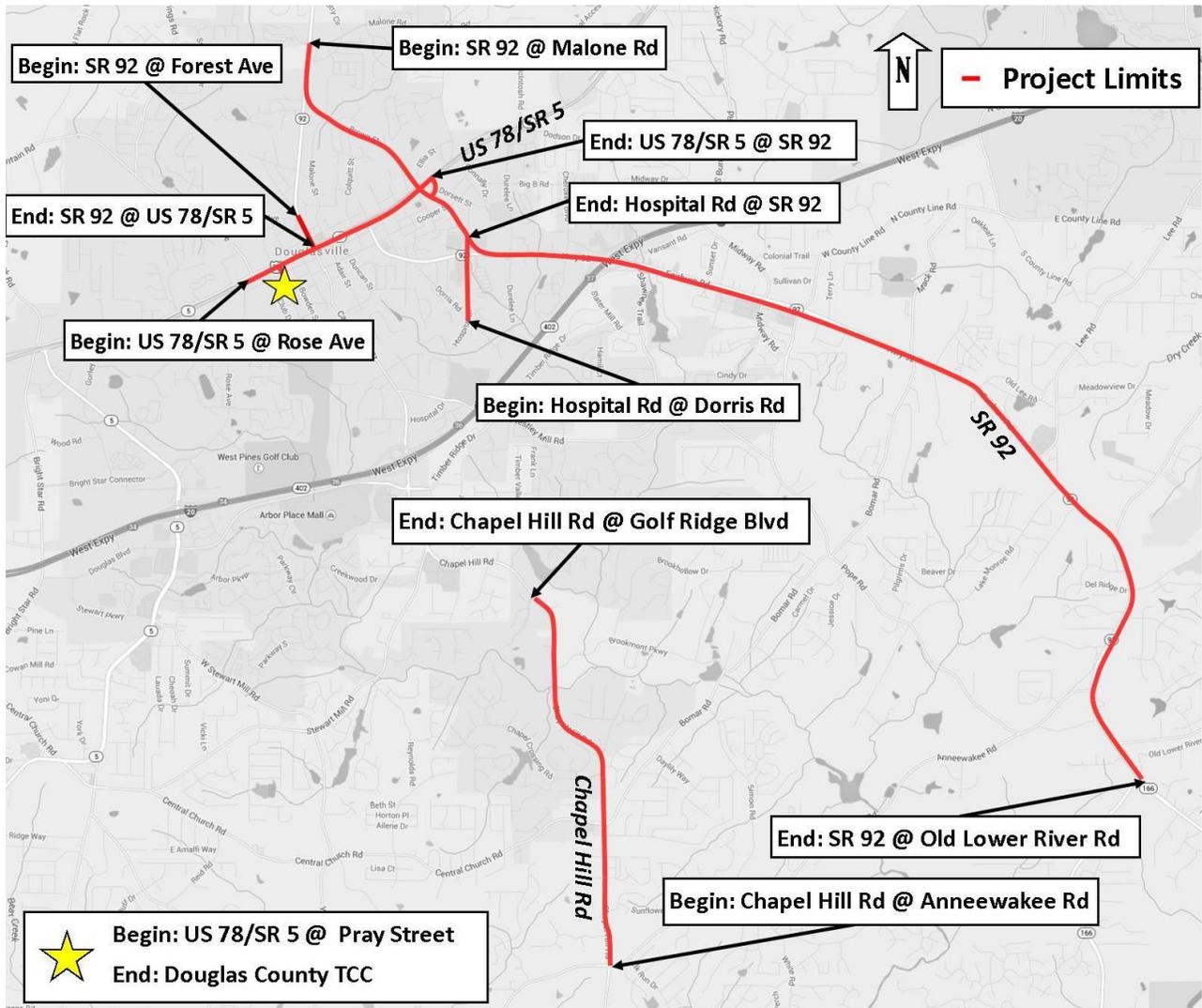
* <u>CHOTHIA L. VANDYKE</u> State Transportation Planning Administrator	<u>2/3/2015</u> Date
--	-------------------------

**Approval:**

Concur: <u>[Signature]</u> GDOT Director of Engineering	<u>4/7/2015</u> DATE
Approve: <u>[Signature]</u> GDOT Chief Engineer	<u>4.15.15</u> DATE

\* RECOMMENDATION ON FILE - [Signature]

# PROJECT LOCATION



PI Number: 0012622

County: Douglas County

Description: ITS System Expansion-Congestion Reduction & Traffic Flow Improvements at SR 92, US 78, and Chapel Hill Rd

County: Douglas

## PLANNING & BACKGROUND DATA

### Project Justification Statement:

This project includes the installation of fiber optic communication, closed circuit television cameras, and intelligent transportation devices to the Douglas County Traffic Control Center (TCC). Traffic signal systems on south Chapel Hill Road from Anneewakee Road to Golf Ridge Blvd, SR 92 (Fairburn Road) from Forrest Avenue to SR 166/SR 92, and US 78 (Bankhead Hwy/Broad Street) from Rose Avenue to Mozley Street will be connected and integrated into the system. This project was identified in the Intelligent Transportation Systems element of the Douglas County Comprehensive Transportation Plan. The corridor traffic signals require minor upgrades to be able to utilize ethernet network capabilities and be connected into the TCC. All three corridors have some existing fiber optic cable but are missing vital links, preventing connectivity to the TCC. The project includes completing the missing links by installing 5 miles of fiber optic communications cable, connecting 36 traffic signals, and installing intelligent transportation devices. SR 92 and US 78 are both designated as Regional Thoroughfares and are also included on the Atlanta Strategic Truck Route Master Plan (ASTRoMap) system, a regional network of roadways critical for truck traffic and freight movement. Chapel Hill Road is on the Regional Strategic Transportation System (RSTS) network and provides connectivity to both of these major state routes, while also providing access to downtown Douglasville and Arbor Place Mall.

### Existing conditions:

The project is located on minor arterials within Douglas County on SR 92, US 78, and Chapel Hill Road. These corridors vary in the number of turning and through lanes. Properties on the project corridors are commercial, retail, and residential. There are three major intersections in the project area which includes SR 92 at I-20 eastbound and westbound ramps and SR 92 at US 78. Major utilities on the corridor are natural gas, overhead electric, water, sewer, cable TV, and telecommunications.

### Other projects in the area:

I-20 from SR 5 to Fulton County Line (P.I. M005199) – Maintenance  
 SR 5/SR 8 from SR 92 E to CR 15/Sweetwater Road (P.I. 721590-) – Road Widening  
 SR 92 Relocation (P.I. 720970-) – Road Relocation  
 SR 5/SR 8 from SR92 to CS 710/McCarley Street (P.I. 0010728) – Douglasville Welcome Center and Streetscaping  
 SR 5 from CS 573/Rose Ave to CR 173/Central Church Road (P.I. 0012618) – Operational and Traffic Flow Improvements  
 I-20 @ SR 5 and Bright Star Road Interchange Alternatives Analysis (P.I. 0012619) – Interchange Improvements  
 I-20 ITS Expansion to SR 5 (P.I. 0013326)  
 GDOT ITS Comprehensive Maintenance Contract

### Description of the proposed project:

**MPO:** Atlanta Regional Commission

TIP # *if applicable*: DO-297

**Federal Oversight:**  Exempt  State Funded  Other

### Projected Traffic: AADT

Chapel Hill Road

Current Year (2014): 18,070 Open Year (2017): N/A

Design Year (2037): N/A

SR 92/Fairburn Road

Current Year (2014): 28,660 Open Year (2017): N/A

Design Year (2037): N/A

US 78/Broad Street

Current Year (2014): 10,260 Open Year (2017): N/A

Design Year (2037): N/A

Traffic Projections Performed by: N/A (Data gathered from Georgia's State Traffic and Report Statistics (STARS))

**Functional Classification (Mainline):**

Chapel Hill Road – 04 Minor Arterial  
 SR 92/Fairburn Road – 04 Minor Arterial  
 US 78/Broad Street – 04 Minor Arterial

**Complete Streets – Bicycle, Pedestrian, and/or Transit Standards Warrants:**

Warrants met:  None  Bicycle  Pedestrian  Transit

**DESIGN AND STRUCTURAL**

**Description of Proposed Project:**

**Major Structures:**

Structure ID	Existing
097-5064-0	Bridge on SR 92 over I-20

**Mainline Design Features:** N/A

**Major Interchanges/Intersections:**

SR 92 @ I-20 WB Ramp  
 SR 92 @ I-20 EB Ramp  
 SR 92 @ SR 5/SR 8/US 78

**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:** None

**Design Variances to GDOT Standard Criteria anticipated:** None

**UTILITY AND PROPERTY**

**Temporary State Route Needed:**  No  Yes  Undetermined

**Railroad Involvement:** None

**Utility Involvements:**

Utility Owner	Utility Type/Description
Atlanta Gas & Light	natural gas
AT&T	telecommunications
Douglas County Water & Sewer	water & sanitary sewer
Comcast	television
Greystone Power Corporation	electric power
Level 3 Communication	fiber optic telecommunications
Georgia Power	electric power
Plantation Pipeline	natural gas transmission

**SUE Required:**  No  Yes

**Public Interest Determination Policy and Procedure recommended?**  No  Yes

**Right-of-Way:** Existing width: Varied  
 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

### Environmental Permits, Variances, Commitments, and Coordination anticipated:

#### 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  
*(if any of the above are answered “Yes”, additional analysis may be required)*

#### NEPA/GEPA Comments & Information:

The project is of a type that typically does not have significant adverse effects to the environment. The project is not anticipated to have any impact on waters of the US or state waters, or protected species. The project is a type with no potential to cause effects to cultural resources and therefore is covered by the MOU between GDOT, FHWA, and GA DNR HPD (executed on May 14, 2013). As such, the project is exempt from cultural resource surveys and reporting. Insofar as the project is not adding capacity, it should qualify for a qualitative air quality assessment and be determined to be a project that is not a cause for air quality concern (air modeling will not be necessary). Regarding noise, the undertaking is a Type III project and will qualify for a qualitative noise assessment (noise modeling will not be necessary). The project will cause no relocations or change in access to properties, nor is it likely to be a source of public controversy; and no disproportionate impact to disadvantaged communities is anticipated; therefore, no public involvement is necessary. As proposed, the project should qualify as a PCE. The need for either a 404 permit or a buffer variance is not anticipated.

## COORDINATION, ACTIVITIES, RESPONSIBILITIES, AND COSTS

### Project Meetings and Coordination:

Concept Phase Activity	Party Responsible for Performing Task(s)
DO-297 ARC Project Concept Development (2012)	Douglas County
Consultant Kickoff Meeting (5/15/14)	URS
Concept Alternatives Development	URS
Concept Field Review Meeting to review communications and CCTV locations (9/4/14)	URS & Douglas County
Initial Concept Alternatives Meeting (9/22/14)	URS
Final Concept Alternatives Meeting (10/21/14)	URS

Future Project Activity	Party Responsible for Performing Task(s)
Design	URS
Right-of-Way Acquisition	N/A
Utility Relocation	Contractor of Utility Owner
Letting to Contract	Douglas County
Construction Supervision	Douglas County
Providing Material Pits	Contractor
Providing Detours	No detours are anticipated
Environmental Studies, Documents, and Permits	URS
Environmental Mitigation	No environmental mitigation anticipated
Construction Inspection & Materials Testing	Douglas County

**Project Cost Estimate and Funding Responsibilities:**

	Breakdown of PE		ROW	Reimbursable Utility	CST*		Environmental Mitigation	Total Cost
	ARC	Douglas County			CMAQ	Douglas County		
Funded By	ARC	Douglas County	N/A	Douglas County	CMAQ	Douglas County	N/A	
\$ Amount	\$84,000	\$21,000	\$0	\$37,500	\$476,000	\$119,000	\$0	\$737,500
	Subtotal = \$105,000				Subtotal = \$595,000			
Date of Estimate	6/12/2013	6/12/2013	6/12/2013	3/19/2015	6/12/2013	3/17/2015	6/12/2013	

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

**ALTERNATIVES DISCUSSION**

<b>(Preferred) Alternative A: ITS Expansion (Aerial/Underground Fiber Communications Option)</b>			
Estimated Property Impacts:	0	Estimated Total Cost:	\$595,000
Estimated ROW Cost:	\$0	Estimated CST Time:	12 months
<b>Rationale:</b> This alternative uses both aerial and underground fiber optic communications providing the best value to achieve the desired improvements in congestion reduction and traffic flow improvements at SR 92, US 78, and Chapel Hill Rd. It provides the same improvements as Alt. B at a lesser cost, so it is the preferred option.			

<b>Alternative B: ITS Expansion (All Underground Fiber Communications Option)</b>			
Estimated Property Impacts:	0	Estimated Total Cost:	\$878,665
Estimated ROW Cost:	\$0	Estimated CST Time:	12 months
<b>Rationale:</b> This alternative uses all underground fiber optic communications, which costs significantly more than the preferred aerial/underground Alt. A option. Alt. B exceeds the available construction budget.			

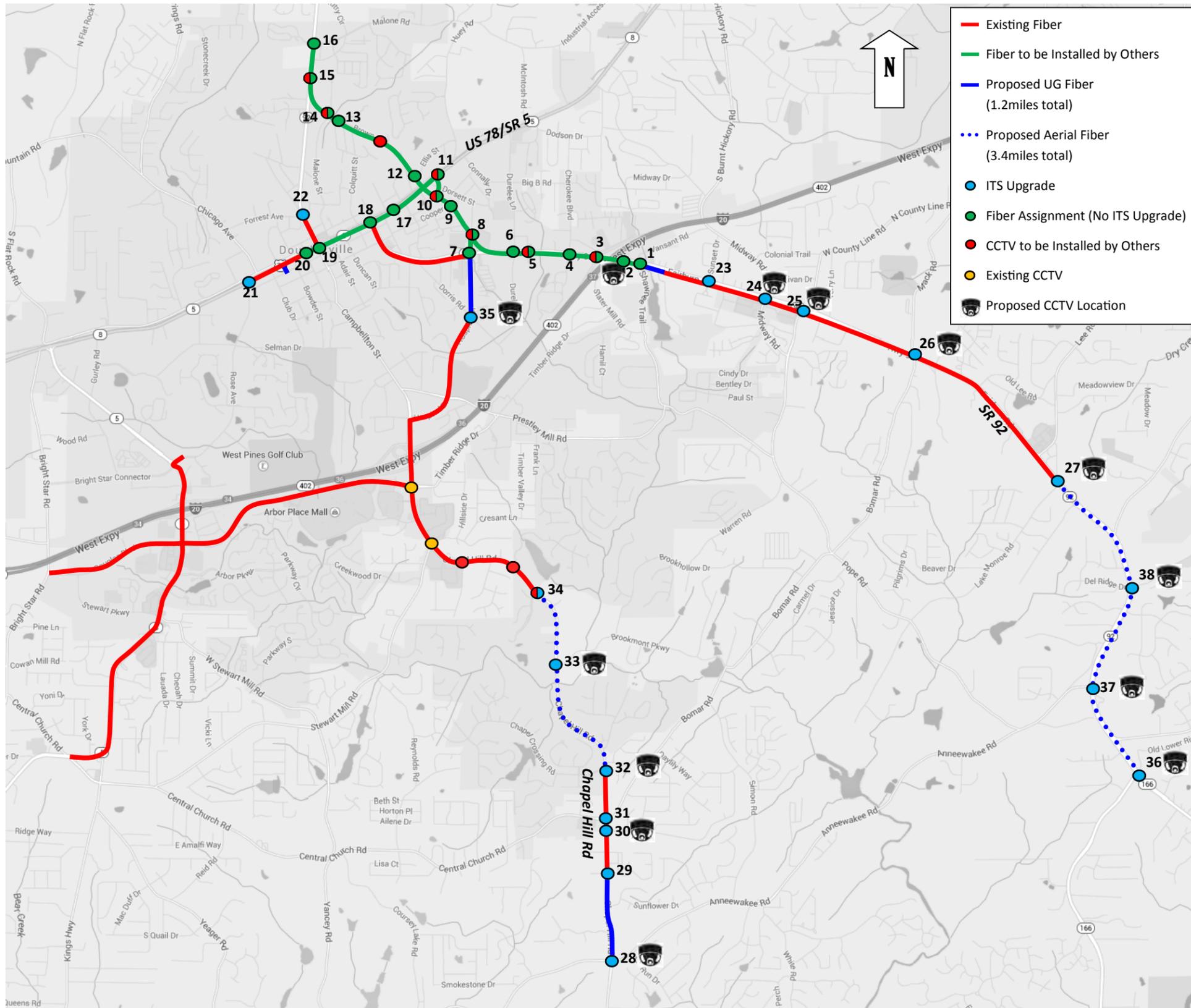
## **LIST OF ATTACHMENTS/SUPPORTING DATA**

1. Concept Layout
2. Cost Estimates (Alt. A – Aerial/Underground; Alt B. – All Underground; Reimbursable Utility)
3. Meeting Minutes (Consultant Kickoff Meeting and Concept Alternatives Meetings)
4. Signed Agreements (Project Framework Agreement)
5. Concept of Operations

# **ATTACHMENT 1**

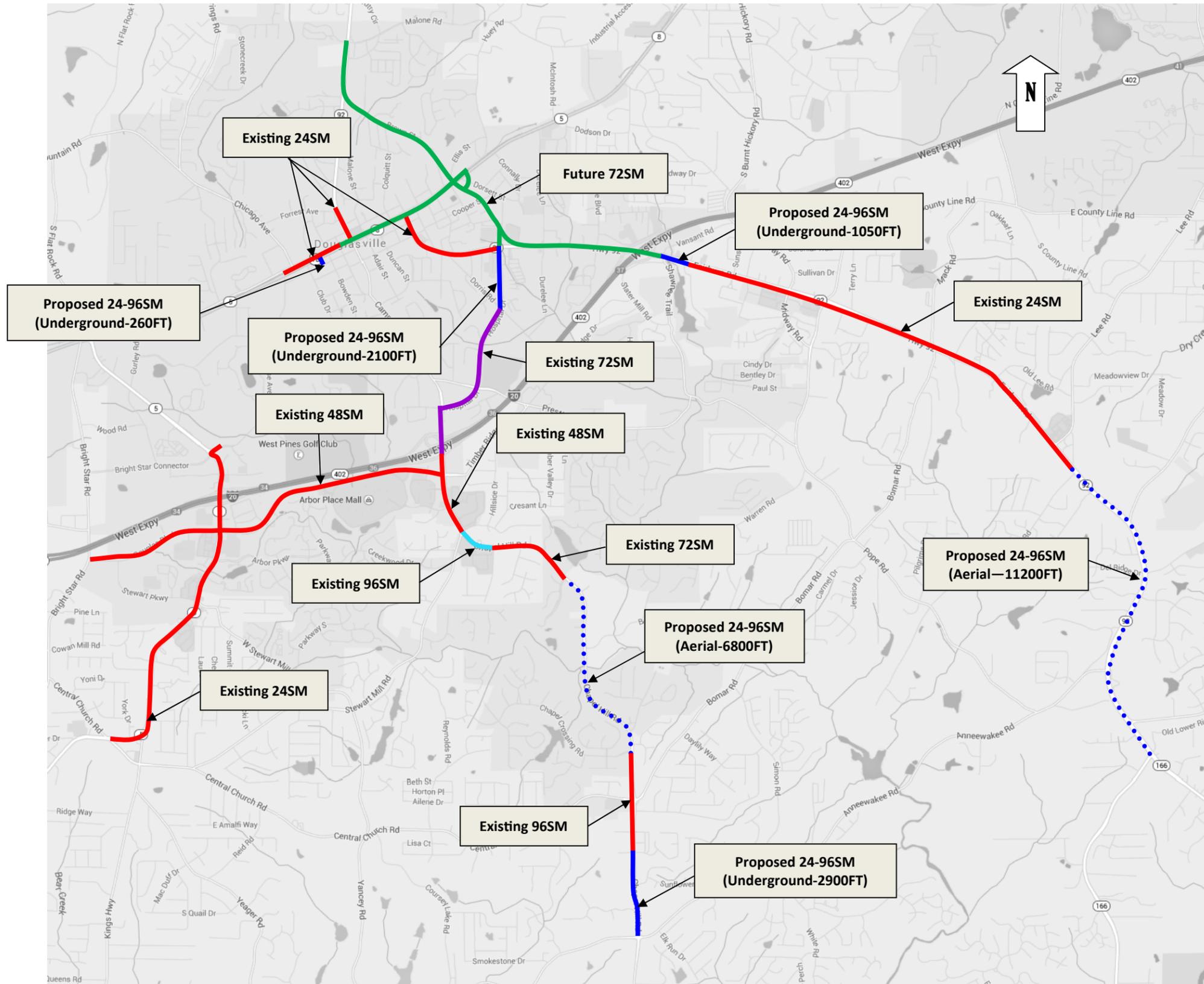
## **Concept Layout**

# Douglas County ITS Expansion Map—Intersection Updates and CCTV Locations



Intersection ID	Main Street	Cross Street
1	SR92	@ Vanstant Rd
2	SR92	@ I-20 EB Ramp
3	SR92	@ I-20 WB Ramp
4	SR92	@ Cherokee Blvd/Earl D. Lee Blvd
5	SR92	@ Durelee Ln
6	SR92	@ Fairburn Rd
7	Hospital Dr	@ Fairburn Rd
8	SR92	@ Hospital Dr
9	SR92	@ Cooper St
10	SR92	@ Ramp onto US78
11	US78	@ Ramp onto SR92
12	SR92	@ Ellis St
13	SR92	@ Colquitt St
14	SR92	@ Malone St
15	SR92	@ Fire Station
16	SR92	@ Malone Rd
17	US78	@ Hwy 92
18	US78	@ Campbellton St
19	US78	@ McCarley St
20	US78	@ Rose Ave
21	US78	@ Forrest Ave
22	SR92	@ Sunset Dr
23	SR92	@ Midway Rd
24	SR92	@ Pope Rd/W County Line Rd
25	SR92	@ Bomar Rd/Mack Rd
26	SR92	@ Lee Rd
27	SR92	@ Lee Rd
28	Chapel Hill Rd	@ Annewakee Rd
29	Chapel Hill Rd	@ Fielding Dr
30	Chapel Hill Rd	@ Willow Ridge Rd
31	Chapel Hill Rd	@ Central Church Rd
32	Chapel Hill Rd	@ Chapel Crossing Rd/Bomar Rd
33	Chapel Hill Rd	@ Brookmont Pkwy
34	Chapel Hill Rd	@ Golf Ridge Blvd
35	Hospital Rd	@ Dorris Rd
36	SR92	@ SR92/Old Lower River Rd
37	SR92	@ Annewakee Rd
38	SR92	@ Factory Shoals Dr

# Douglas County ITS Expansion Map—Fiber



**NOTE:**  
 THE TOTAL PROPOSED UNDERGROUND FIBER IS APPROXIMATELY 1.2 MILES.  
 THE TOTAL PROPOSED AERIAL FIBER IS APPROXIMATELY 3.4 MILES.

# **ATTACHMENT 2**

## **Cost Estimates**

**Alt. A – Aerial/Underground Fiber Communications (Preferred)**

**Alt. B – All Underground Fiber Communications**



**Douglas County ITS Expansion Summary**  
**Alternative B - All Underground**

ITEM NO.	ITEM DESCRIPTION	UNITS	ESTIMATED QUANTITY							UNIT COST	TOTAL COST
			CH HILL MID	CH HILL LOW	TCC	HOSPITAL	SR92 LOW	SR 92 UP	ITS		
639-2001	Steel Wire Strand Cable, 1/4"	LF	0	0	0	0	0	0	0	\$2.25	\$0.00
639-5000	Strain Pole, TP IV, 50'	EA	0	0	0	0	0	0	0	\$10,000.00	\$0.00
647-2141	Pull Box, PB-4S	EA	7	3	2	3	13	1	19	\$1,000.00	\$48,000.00
647-2170	Pull box, PB-7	EA	0	0	0	0	0	0	5	\$1,770.00	\$8,850.00
682-6120	Conduit, Rigid, 2 IN (Riser)	LF	0	0	0	0	0	0	0	\$19.20	\$0.00
682-6233	Conduit, Nonmetal, TP 3, 2 IN	LF	6800	2500	260	2100	12400	1050	1000	\$3.00	\$78,330.00
682-9950	Directional Bore	LF	6800	2500	260	2100	12400	1050	1000	\$15.00	\$391,650.00
935-1116	OSP Fiber Optic Cable, 48 Fiber	LF	6800	3450	480	2540	13940	1160	0	\$2.00	\$56,740.00
935-1512	OSP Fiber Optic Cable, Drop, 6 Fiber	LF	0	100	0	0	0	0	0	\$1.45	\$145.00
935-3101	Fiber Optic Closure, UG, 6 Fiber	EA	0	0	0	0	0	0	0	\$550.00	\$0.00
935-3105	Fiber Optic Closure, UG, 48 Fiber	EA	2	2	2	2	2	2	0	\$800.00	\$9,600.00
935-3201	Fiber Optic Closure, Aerial, 6 Fiber	EA	0	0	0	0	0	0	0	\$600.00	\$0.00
935-3205	Fiber Optic Closure, Aerial, 48 Fiber	EA	0	0	0	0	0	0	0	\$800.00	\$0.00
935-3501	Fiber Optic Closure, FDC (Wall Mounted), 6 Fiber	EA	0	0	0	0	0	0	5	\$900.00	\$4,500.00
935-4010	Fiber Optic Fusion Splices	EA	180	52	48	96	36	72	0	\$50.00	\$24,200.00
936-1001	CCTV Camera, TP C w/ Mounting Bracket	EA	0	0	0	0	0	0	13	\$6,350.00	\$82,550.00
939-2230	GBIC, TP LX	EA	0	0	0	0	0	0	36	\$200.00	\$7,200.00
939-2300	Field Switch, TP A	EA	0	0	0	0	0	0	18	\$2,400.00	\$43,200.00
939-4040	Type D Cabinet	EA	0	0	0	0	0	0	13	\$4,900.00	\$63,700.00
939-5010	Electrical Power Service Assembly	EA	0	0	0	0	0	0	0	\$2,500.00	\$0.00
940-1000	Navigator Integration	Lump								\$20,000.00	\$20,000.00
150-1000	Traffic Control	Lump								\$40,000.00	\$40,000.00
	<b>TOTAL</b>										<b>\$878,665.00</b>

**UTILITY MAKE READY COST ESTIMATE  
DOUGLAS COUNTY ATMS EXPANSION  
P.I. No. 0012622  
3-19-15**

Pole No.	Sheet No.	Sta. No.	New Power Pole	Adjust Low	
				Voltage Cables	Total
5-1	28-005	65+10	\$8,000	\$1,500	\$9,500
5-3	28-005	67+85		\$2,000	\$2,000
5-4	28-005	70+40		\$2,000	\$2,000
6-1	28-006	73+00		\$1,500	\$1,500
6-2	28-006	74+70		\$1,500	\$1,500
6-4	28-006	77+80		\$1,000	\$1,000
6-5	28-006	79+25		\$1,000	\$1,000
6-8	28-006	85+50		\$1,000	\$1,000
7-1	28-007	89+00	\$8,000	\$1,500	\$9,500
8-1	28-008	102+85		\$500	\$500
8-6	28-008	113+70		\$1,500	\$1,500
9-1	28-009	116+70		\$2,000	\$2,000
9-2	28-009	119+20		\$2,000	\$2,000
13-4	28-0013	5+45		\$500	\$500
14-1	28-0014	16+80		\$500	\$500
14-2	28-0014	20+10		\$500	\$500
14-5	28-0014	27+50		\$500	\$500
20-8	28-0020	17+85		\$500	\$500

**TOTAL      \$37,500**

# **ATTACHMENT 3**

## **Meeting Minutes**

**Consultant Kickoff Meeting (5/15/14)**

**Initial Concept Alternatives Meeting (9/22/14)**

**Final Concept Alternatives Meeting (10/21/14)**



## Meeting Minutes

**PROJECT:** ITS Expansion Project  
PI #0012622  
Douglas County Project No. 13-015

**MEETING DATE:** May 15, 2014  
3:15 PM at Douglas County Courthouse  
1<sup>st</sup> Floor Development Services Conference Room #4

**PARTICIPANTS:** Gary Westmoreland, DCDOT  
Randy Hulseley, DCDOT  
Steven Sheffield, DCDOT  
Robert Baker, GDOT  
Elaine Armster, GDOT  
Michelle Wright, City of Douglasville  
Scott Mohler, URS  
BJ Martin, URS  
Vern Wilburn, Wilburn Engineering

**DISCUSSION:** Kickoff meeting to discuss goals and objectives for the project.

A meeting of the above listed participants was held on May 15, 2014 at the Douglas County Courthouse. Gary Westmoreland moderated the meeting and provided the introductions.

A new GDOT Project Manager has been assigned: Elaine Armster. Project schedule will be coordinated with Elaine.

RJ Surgi, ITS Technical Expert was not in attendance due to being on vacation. He will attend future meetings.

Scott Mohler is the Project Manager and led a discussion of the agenda items using the attached presentation slides. The following is a list of the key items that were discussed:

1. Discussed project goals
2. Noted that schedule has not been entered in T-Pro. Proposed construction authorization in FY 2016 is reasonable.
3. All correspondence with GDOT should include Douglas County. Deliverables to Douglas County will be in the form of pdf documents.

4. No public meetings are anticipated at this time; URS will coordinate with GDOT to verify public involvement requirements. Expectations are that only a project fact sheet, signage and website notices to inform public will be needed. Public feedback will be handled by Douglas County and shared with GDOT. URS to develop the project fact sheet.
5. GDOT recently committed to expanding Navigator out to Villa Rica on I-20. Programming design to start in FY2015.
6. EarthCams coming to I-20. GDOT will relocate the ones used by SRTA on the I-85 Hot Lanes project.
7. The County is installing BlueToad travel time readers at three locations. Steven Sheffield will share the locations with URS.
8. Email communication with GDOT has a 5MB limitation.
9. Agreed to coordinating with RTOP and holding our project coordination meetings directly following RTOP (currently held every third Tuesday from 9:30am – 11:00am)
10. Proposed invoice format of percent complete by task is acceptable to the County. Example format was shown in presentation. Invoice needs to include the PI number.

**ACTION ITEMS:**

1. Coordinate a revised schedule with the County and have entered into TPro (Scott Mohler)
2. Verify public involvement requirements (Scott Mohler)
3. Develop a project fact sheet for the project (Scott Mohler)
4. Share with URS the locations of BlueToad readers installed in the County (Steven Sheffield)

Attachments:

Kickoff Meeting Agenda

Kickoff Meeting Sign-in Sheet

Kickoff Meeting Presentation Slides

*Please notify Scott Mohler with any corrections or additions to these minutes.*



# AGENDA

## KICKOFF MEETING ITS SYSTEM EXPANSION PROJECT MAY 15, 2014 AT 3:15 PM

PI #0012622

Douglas County Project No. 13-015

1. Introductions
2. Project Goals
3. Scope of Work & Schedule
4. Quality Assurance / Quality Control Plan
5. Project Staffing and Responsibilities
6. Communication Methods and Documentation
7. Project Software
8. Invoicing
9. Open Discussion

Key Staff	Role	Email	Office	Cell
Scott Mohler, PE	Project Manager	scott.mohler@urs.com	678-808-8811	770-313-5147
Stevie Berryman, PE	Project Design Lead	stevie.berryman@urs.com	678.808.8964	404-569-4605
Patrick Smith	Environmental Lead	patrick.n.smith@urs.com	678.808.8876	678-643-0267
Vern Wilburn, PE	Plans & Utilities	vwilburn@WilburnEngineering.com	678-423-0050	770-362-6184
RJ Surgi, PE	ITS Technical Expert	rj.surgi@urs.com	678-808-8847	770-331-0357





# ***Kick-off Meeting Douglas County ITS Expansion***

May 15, 2014



## AGENDA

**KICKOFF MEETING  
ITS SYSTEM EXPANSION PROJECT  
MAY 15, 2014 AT 3:15 PM**

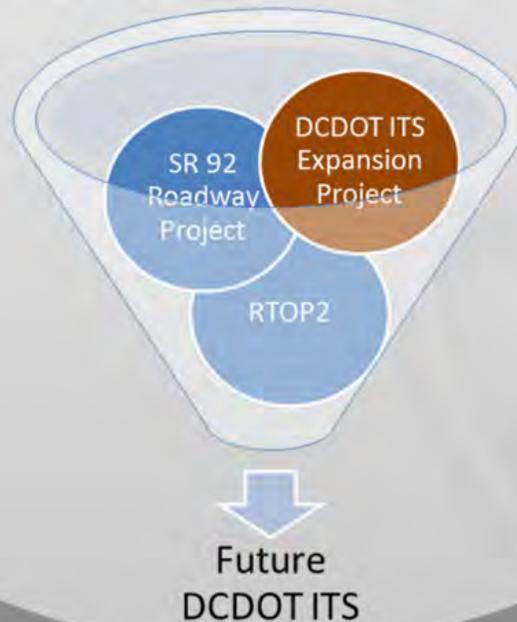
PI #00126122  
Douglas County Project No. 13-015

1. Introductions
2. Project Goals
3. Scope of Work & Schedule
4. Quality Assurance / Quality Control Plan
5. Project Staffing and Responsibilities
6. Communication Methods and Documentation
7. Project Software
8. Invoicing
9. Open Discussion

Key Staff	Role	Email	Office	Cell
Scott Mohler, PE	Project Manager	scott.mohler@urs.com	678-808-8811	770-313-5147
Stevie Berryman, PE	Project Design Lead	stevie.berryman@urs.com	678.808.8964	404-569-4605
Patrick Smith	Environmental Lead	patrick.n.smith@urs.com	678.808.8876	678-643-0267
Vern Wilburn, PE	Plans & Utilities	vwilburn@WilburnEngineering.com	678-423-0050	770-362-6184
RJ Surgi, PE	ITS Technical Expert	rj.surgi@urs.com	678-808-8847	770-331-0357

# Project Goals

- Deliver quality products
- On time...on budget
- Balance projects



# Scope of Work

## Project Phases

- Concept/Pre-Phase**
  - Concept of Operations
  - Limited Scope Concept Report
- Investigation**
  - Prepare NCE Report for RFP process
  - Solicitor Review of CC
- Initial Design Considerations**
  - 1 Million construction
  - Design within 1/4 mile of site
- Final Design Considerations**
  - GDOT work to be done, State approval
  - Prepare 100% plans for RFP
  - Receive final RFP
- Final Design Considerations**
  - Prepare final RFP
  - Final construction with GDOT to notify all state & FTRQ administrators of final



## Design

- Design Considerations**
  - State approval
  - Prepare NCE Report
  - Solicitor Review of CC
  - Design within 1/4 mile of site
- Final Design Considerations**
  - GDOT work to be done, State approval
  - Prepare 100% plans for RFP
  - Receive final RFP
- Final Design Considerations**
  - Prepare final RFP
  - Final construction with GDOT to notify all state & FTRQ administrators of final

## Inter-agency Involvement & Coordination

- Key Agencies:**
  - DCDOT
  - Douglas County IT
  - GDOT Program Delivery
  - GDOT District 7
  - GDOT RTOP2

## Schedule

- Proposed FY2016
- Schedule not entered in TRM
- Working with County and GDOT to finalize

# Project Phases

## Concept Phase

- Concept of Operations
- Limited Scope Concept Report

## Environmental

- Pursue PCE (normal for ITS projects)
- Schedule based on CE

## Utilities / Right-of-Way

- Utilities coordination
- Design within right of way

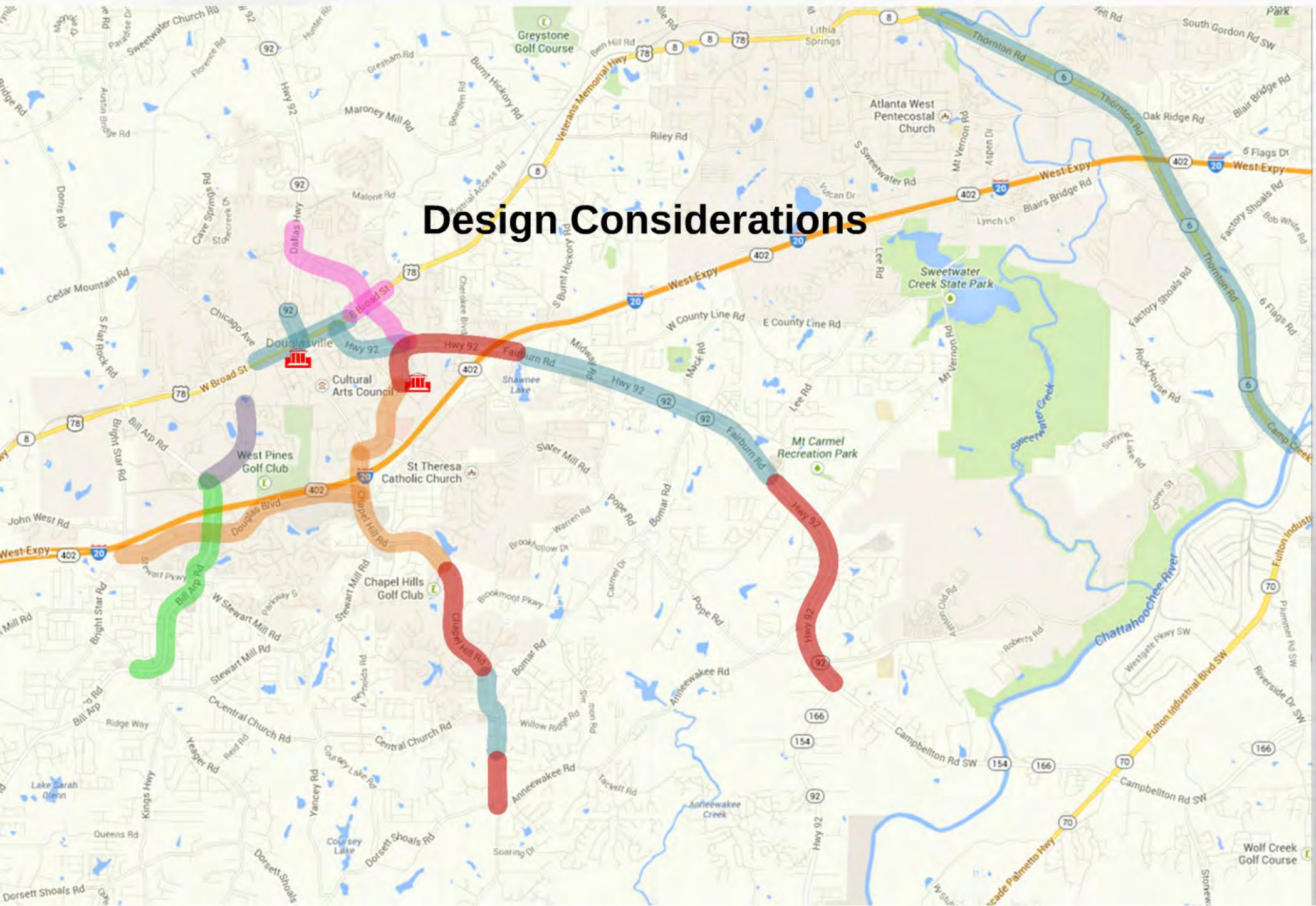
## Prelim Design / PFPR

- Don't have to wait for Env. Doc. approval
- Prepare 90% plans for PFPR
- Request email FFPR

## Final Design / FFPR

- Pursue email FFPR
- Close coordination with GDOT to verify all steps to CMAQ authorization are achieved

# Design Considerations



## Short Title

ITS SYSTEM EXPANSION - CONGESTION REDUCTION AND TRAFFIC FLOW IMPROVEMENTS AT SR 92 (FAIRBURN ROAD), US 78 (BANKHEAD STREET/BROAD STREET) AND CHAPEL HILL ROAD

## GDOT Project No.

0012622

## Federal ID No.

N/A

## Status

Programmed

## Service Type

Roadway / Operations &amp; Safety

## Sponsor

Douglas County

## Jurisdiction

Douglas County

## Analysis Level

Exempt from Air Quality Analysis (40 CFR 93)

## Existing Thru Lane

N/A

## Planned Thru Lane

N/A



## Network Year

2020

## Corridor Length

10.7 miles

## Detailed Description and Justification

This project includes the installation of fiber optic communication, closed circuit television cameras, and intelligent transportation devices to the Douglas County traffic control center. Traffic signal systems on south Chapel Hill Road from Annewakee Road to Golf Ridge Blvd, SR 92 (Fairburn Road) from Forrest Avenue to SR 166/SR 92, and US 78 (Bankhead Hwy/Broad Street) from Rose Avenue to Mozley Street will be connected and integrated into the system. This project was identified in the Intelligent Transportation Systems element of the Douglas County Comprehensive Transportation Plan. The corridor traffic signals require minor upgrades to be able to utilize Ethernet network capabilities and be connected into the County's Traffic Control Center (TCC). All three corridors have some existing fiber optic cable, but have a few missing vital links preventing connectivity to the TCC. The project includes expanding underground conduit and fiber optic communication cable for 7 additional miles and connecting an additional 24 traffic signals to the system and implementing a traffic responsive signal system, signal system timing, monitoring, and signal upgrades. The project is being funded under the Roadway Operations and Safety Program, a regional program defined in PLAN 2040 to make smaller-scale improvements along existing roadways which are the most critical for cross-jurisdictional travel. SR 92 and US 78 are both designated as Regional Thoroughfares and are also included on the ASTRoMap system, a regional network of roadways critical for truck traffic and freight movement. Chapel Hill Road is on the RSTS network and provides connectivity to both of these major state routes, while also providing access to downtown Douglasville and Arbor Place Mall.

Phase Status & Funding Information	Status	FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/PRIVATE
PE - STP - Urban (>200K) (ARC)	AUTH.	2013	\$105,000	\$84,000	\$0,000	\$0,000	\$21,000
CST - Congestion Mitigation & Air Quality Improvement (CMAQ)		2015	\$595,000	\$476,000	\$0,000	\$0,000	\$119,000
			\$700,000	\$560,000	\$0,000	\$0,000	\$140,000

SEP: Scoping PE: Preliminary engineering / engineering / design / planning PF-OV: GDOT oversight services for engineering ROW: Right-of-way Acquisition  
 UTI: Utility relocation CST: Construction / Implementation ALL: Total estimated cost, inclusive of all phases

# Design

## Key Project Elements

- Fiber communications
- Signals, CCTV's, IVDS, Monitors
- Bluetooth Travel-Time
- Consider TCC enhancements
- Design for Future
- \$595k Construction Budget

## Post-Design Services

- ITS Construction Engineering and Inspection
- 30 hours - RJ Surgi



For additional information about this project, please call (404) 463-3100 or email [transportation@iitintarregional.com](mailto:transportation@iitintarregional.com).



# Inter-agency Involvement & Coordination

## Key Agencies

- DC DOT
- Douglas County IT
- GDOT Program Delivery
- GDOT District 7
- GDOT RTOP2

# Schedule

- Proposed FY2016
- Schedule not entered in TPro
- Working with County and GDOT to finalize

# QA / QC

- Project Execution Plan (PXP)
- QC Procedures per URS QA Manual
  - Detail Checks
  - Independent Technical Reviews
- QA Procedure

# Project Staffing & Responsibilities



## Legend

URS

Wilburn Engineering

Edwards-Pitman Env., Inc. (DBE)

So Deep

GPLS

Contour (DBE)

# Communication Methods and Documentation

- Communications via email
- Drafts – Email soft copies
- Final Docs – Hard & soft copies
- Monthly Status Meetings
  - Teleconference / In-person
  - "Building" Status Agenda



# Project Software

- MicroStation v8i
- Word, Excel, PowerPoint 2003
- FTP / Secure Folders





# Meeting Minutes

Monthly Project Status Meeting

## **ITS SYSTEM EXPANSION PROJECT SEPTEMBER 22, 2014 AT 1:30 PM**

PI No. 0012622

Douglas County Project No. 13-015

URS Project No. 15281648

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### **Attendees Present:**

Randy Hulseley, Douglas County DOT  
Steven Sheffield, Douglas County DOT  
Robert Eidson, Douglas County DOT  
Michelle Wright, City of Douglasville  
Sam Samu, GDOT  
Scott Mohler, URS  
Vern Wilburn, Wilburn Engineering  
Speedy Boutwell, Wilburn Engineering

### **CC:**

Elaine Armster, GDOT Project Manager  
Brittany Brickman, URS  
Stevie Berryman, URS  
Patrick Smith, URS  
Glenn Martin, URS

---

### **Handouts (attached):**

Status Meeting Agenda  
Initial Concept Drawings  
Draft Concept Estimates

### **Discussion Points:**

#### Task 1 – Concept Development (50% Complete)

- Accomplishments this period:
  - Conducted site review with Robert Eidson, DCDOT
  - Analyzed aerial vs underground options
  - Developed and submitted concept layout and alternative options
  - Continued draft Concept of Operations document
  - Continued draft Concept Report development
- Presented Option A, B, and C drawings and construction cost estimates
  - Option B using both aerial and underground fiber is preferred



- Attendee's requested moving the CCTV's from intersections 35 through 38 to intersections 22 through 25
- Consider adding Bluetooth readers for travel times and origin and destination studies

Task 2 – Database Preparation (35% Complete)

- Wilburn Engineering continued preparing base mapping

Task 3 – Environmental Document (10% Complete)

- Gathered data for ecology worksheet
- Determined shortcut process is available if no poles are installed

**Action Items:**

1. Move CCTVs and consider adding bluetooth readers (Scott)
2. Finalize concept and present at 10-21-14 meeting (Scott)



# STATUS MEETING AGENDA

## ITS SYSTEM EXPANSION PROJECT SEPTEMBER 22, 2014 AT 1:30 PM

PI #0012622

Douglas County Project No. 13-015

### 1. Project Status

#### Task 1 – Concept Development (50% Complete)

- Conducted kick-off meeting on 5/15/14
- **Conducted site review with Robert Eidson, DCDOT**
- **Analyzed aerial vs underground options**
- **Developed and submitted concept layout and alternative options**
- **Continued draft Concept of Operations document**
- **Continued draft Concept Report development**

#### Task 2 – Database Preparation (35% Complete)

- Acquired GIS files from DCDOT
- **Continued preparing baseline plan sheets**

#### Task 3 – Environmental Document (10% Complete)

- **Gathered data for ecology worksheet**
- **Determined shortcut process is available if no poles are installed**

#### Task 4 – Preliminary Design (Not started)

#### Task 5 – ROW Coordination (Not started)

#### Task 6 – Final Design (Not started)

#### Project Management

- Received executed contract on 7/10/14
- Coordinated proposed schedule edits with GDOT PM

### 2. Discussion Topics

- Review and discuss concept options
- Review and discuss proposed schedule

**3. Issues/Concerns**

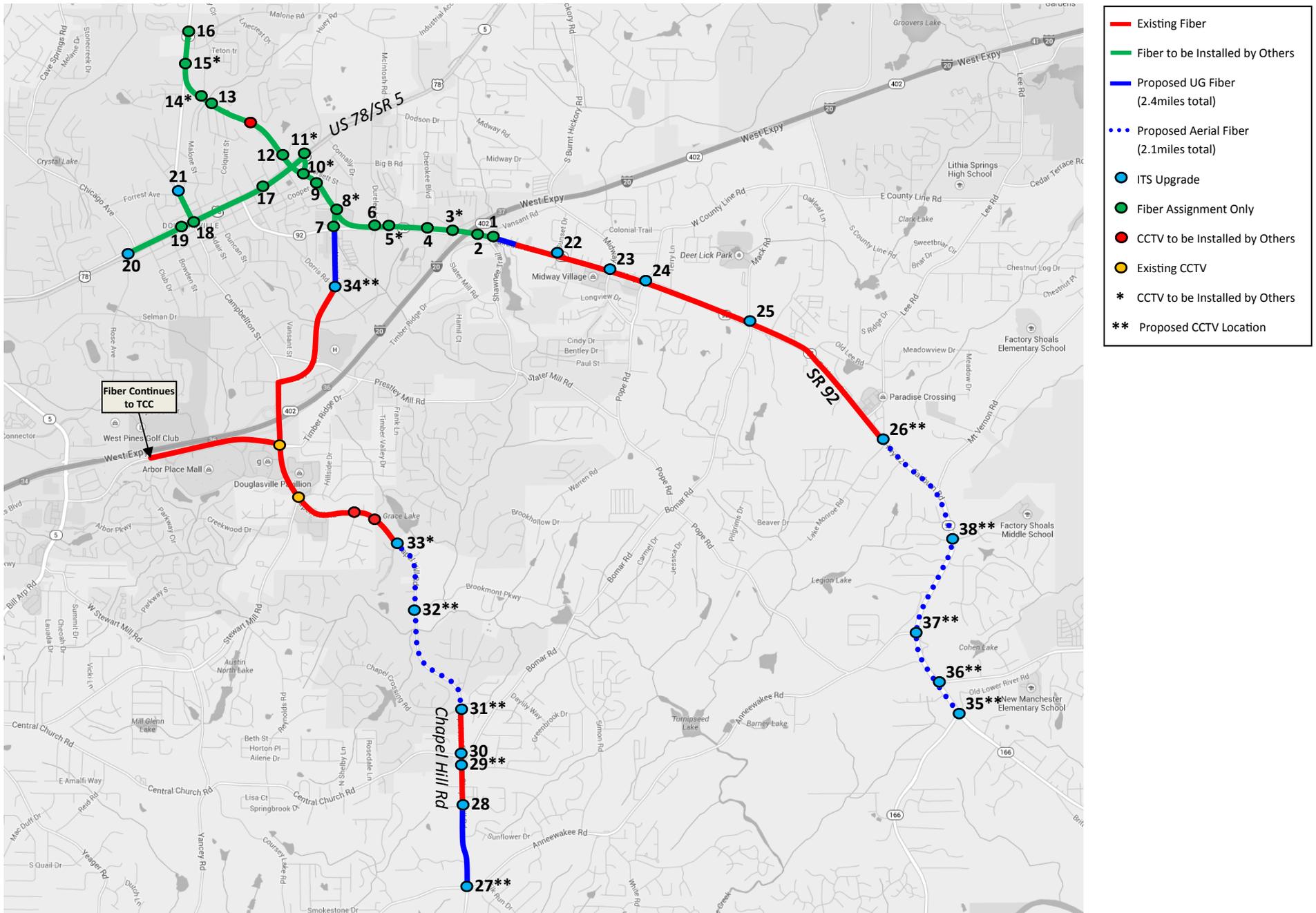
- None

**4. Open Discussion**

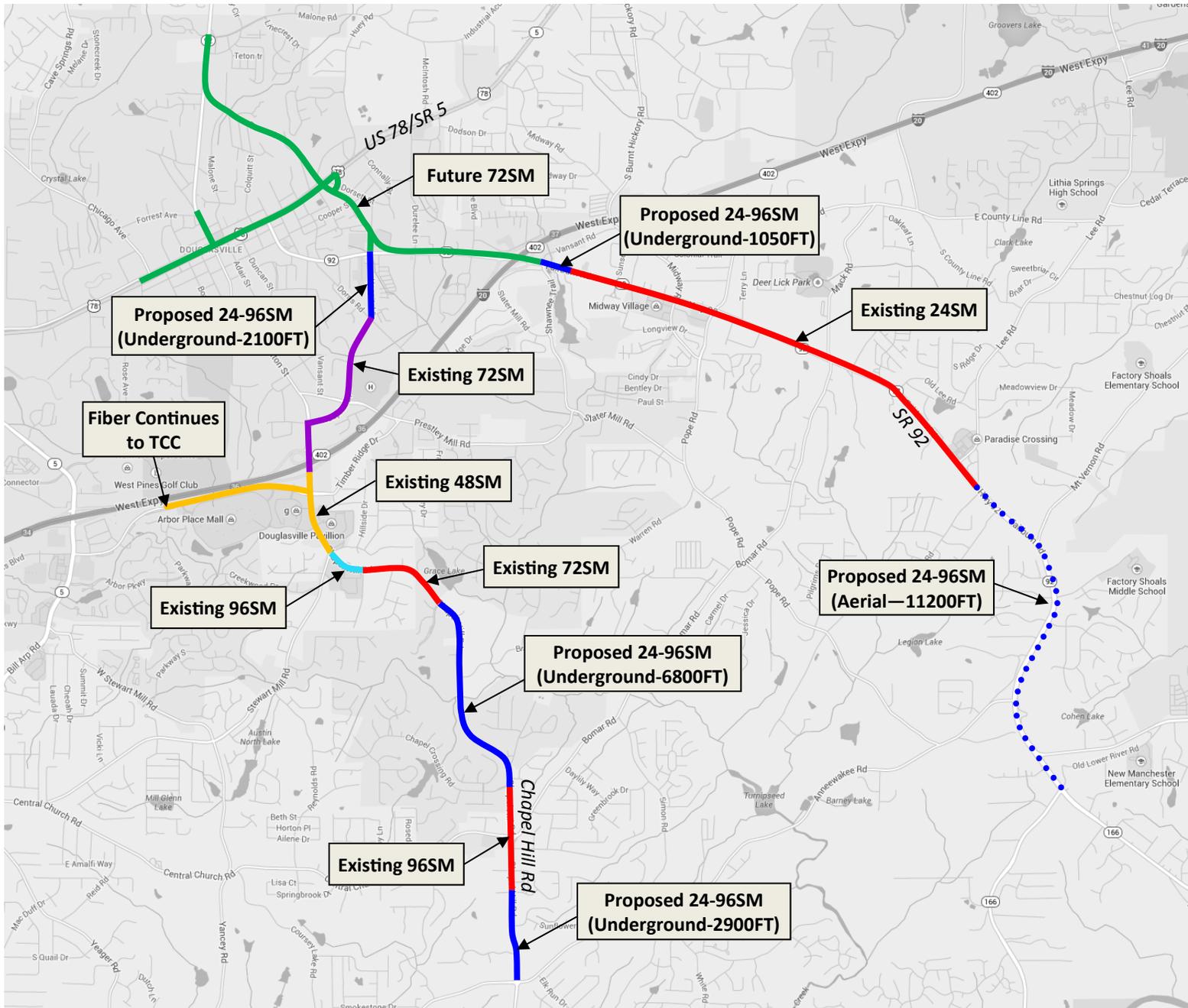
*Next Status Meeting is Tuesday, October 21<sup>st</sup>*

<b>Key Staff</b>	<b>Role</b>	<b>Email</b>	<b>Office</b>	<b>Cell</b>
Scott Mohler, PE	Project Manager	scott.mohler@urs.com	678-808-8811	770-313-5147
Stevie Berryman, PE	Project Design Lead	stevie.berryman@urs.com	678.808.8964	404-569-4605
Patrick Smith	Environmental Lead	patrick.n.smith@urs.com	678.808.8876	678-643-0267
Vern Wilburn, PE	Plans & Utilities	vwilburn@WilburnEngineering.com	678-423-0050	770-362-6184
RJ Surgi, PE	ITS Technical Expert	rj.surgi@urs.com	678-808-8847	770-331-0357

# Douglas County ITS Expansion Map—Intersection Updates and CCTV



# Douglas County ITS Expansion—Fiber



**NOTE:**  
THE TOTAL PROPOSED UNDERGROUND FIBER IS APPROXIMATELY 2.4 MILES. THE TOTAL PROPOSED AERIAL FIBER IS APPROXIMATELY 2.1 MILES.

**DOUGLAS COUNTY ITS EXPANSION**  
**CONCEPT LEVEL CONSTRUCTION COST ESTIMATE**  
**9/22/2014**

Programmed Construction Budget = \$595,000

**OPTION A: Capture all Intersections & Install Two Conduit**

SECTION	FIBER INTALL. OPTIONS		MAKE-READY	PROJECTED COST	LENGTH	COST/LF		
	AERIAL	UG				AERIAL	UG	SELECTED
Chapel Hill Middle	\$116,353.50	\$220,185.00	\$40,000.00	\$116,353.50	6,800	\$17.11	\$32.38	\$17.11
Chapel Hill Lower	\$67,569.50	\$89,547.50	\$0.00	\$89,547.50	2,900	\$23.30	\$30.88	\$30.88
Hospital Dr	\$72,512.00	\$76,177.50	\$0.00	\$76,177.50	2,100	\$34.53	\$36.28	\$36.28
SR 92 Upper	\$42,026.25	\$34,575.00	\$0.00	\$34,575.00	1,050	\$40.03	\$32.93	\$32.93
SR 92 Lower	\$160,923.00	\$374,575.00	\$30,000.00	\$160,923.00	12,400	\$12.98	\$30.21	\$12.98
ITS Upgrades Only	-	-	\$0.00	\$158,650.00	-	-	-	-
<b>TOTAL</b>	<b>\$459,384.25</b>	<b>\$795,060.00</b>	<b>\$70,000.00</b>	<b>\$636,226.50</b>	<b>25250</b>	<b>\$25.59</b>	<b>\$32.53</b>	<b>\$26.03</b>

**OPTION B: Capture all Intersections & Install Single Conduit**

SECTION	FIBER INTALL. OPTIONS		MAKE-READY	PROJECTED COST	LENGTH	COST/LF		
	AERIAL	UG				AERIAL	UG	SELECTED
Chapel Hill Middle	\$116,353.50	\$199,785.00	\$40,000.00	\$116,353.50	6,800	\$17.11	\$29.38	\$17.11
Chapel Hill Lower	\$67,569.50	\$80,737.50	\$0.00	\$80,737.50	2,900	\$23.30	\$27.84	\$27.84
Hospital Dr	\$72,512.00	\$96,567.50	\$0.00	\$96,567.50	2,100	\$34.53	\$45.98	\$45.98
SR 92 Upper	\$42,026.25	\$28,885.00	\$0.00	\$28,885.00	1,050	\$40.03	\$27.51	\$27.51
SR 92 Lower	\$160,923.00	\$344,575.00	\$30,000.00	\$160,923.00	12,400	\$12.98	\$27.79	\$12.98
ITS Upgrades Only	-	-	\$0.00	\$158,650.00	-	-	-	-
<b>TOTAL</b>	<b>\$459,384.25</b>	<b>\$750,550.00</b>	<b>\$70,000.00</b>	<b>\$642,116.50</b>	<b>25250</b>	<b>\$25.59</b>	<b>\$31.70</b>	<b>\$26.28</b>

**OPTION C: Remove Intersection 35 & Install Two Conduit**

SECTION	FIBER INTALL. OPTIONS		MAKE-READY	PROJECTED COST	LENGTH	COST/LF		
	AERIAL	UG				AERIAL	UG	SELECTED
Chapel Hill Middle	\$116,353.50	\$220,185.00	\$40,000.00	\$116,353.50	6,800	\$17.11	\$32.38	\$17.11
Chapel Hill Lower	\$67,569.50	\$89,547.50	\$0.00	\$89,547.50	2,900	\$23.30	\$30.88	\$30.88
Hospital Dr	\$72,512.00	\$76,177.50	\$0.00	\$76,177.50	2,100	\$34.53	\$36.28	\$36.28
SR 92 Upper	\$42,026.25	\$34,575.00	\$0.00	\$34,575.00	1,050	\$40.03	\$32.93	\$32.93
SR 92 Lower	\$121,492.00	\$331,740.00	\$26,000.00	\$121,492.00	11,000	\$11.04	\$30.16	\$11.04
ITS Upgrades Only	-	-	\$0.00	\$158,650.00	-	-	-	-
<b>TOTAL</b>	<b>\$419,953.25</b>	<b>\$752,225.00</b>	<b>\$66,000.00</b>	<b>\$596,795.50</b>	<b>23850</b>	<b>\$25.20</b>	<b>\$32.52</b>	<b>\$25.65</b>

**OPTION D: Remove Intersection 35 & Install Single Conduit**

SECTION	FIBER INTALL. OPTIONS		MAKE-READY	PROJECTED COST	LENGTH	COST/LF		
	AERIAL	UG				AERIAL	UG	SELECTED
Chapel Hill Middle	\$116,353.50	\$199,785.00	\$40,000.00	\$116,353.50	6,800	\$17.11	\$29.38	\$17.11
Chapel Hill Lower	\$67,569.50	\$80,737.50	\$0.00	\$80,737.50	2,900	\$23.30	\$27.84	\$27.84
Hospital Dr	\$72,512.00	\$96,567.50	\$0.00	\$96,567.50	2,100	\$34.53	\$45.98	\$45.98
SR 92 Upper	\$42,026.25	\$28,885.00	\$0.00	\$28,885.00	1,050	\$40.03	\$27.51	\$27.51
SR 92 Lower	\$121,492.00	\$298,740.00	\$26,000.00	\$121,492.00	11,000	\$11.04	\$27.16	\$11.04
ITS Upgrades Only	-	-	\$0.00	\$158,650.00	-	-	-	-
<b>TOTAL</b>	<b>\$419,953.25</b>	<b>\$704,715.00</b>	<b>\$66,000.00</b>	<b>\$602,685.50</b>	<b>23850</b>	<b>\$25.20</b>	<b>\$31.57</b>	<b>\$25.90</b>



# Meeting Minutes

Monthly Project Status Meeting

## **ITS SYSTEM EXPANSION PROJECT OCTOBER 21, 2014 AT 10:30 AM**

PI No. 0012622

Douglas County Project No. 13-015

URS Project No. 15281648

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### **Attendees Present:**

Randy Hulseley, Douglas County DOT  
Steven Sheffield, Douglas County DOT  
Robert Eidson, Douglas County DOT  
Michelle Wright, City of Douglasville  
Sam Samu, GDOT  
Scott Mohler, URS  
Brittany Brickman, URS  
Stevie Berryman, URS  
Vern Wilburn, Wilburn Engineering  
Speedy Boutwell, Wilburn Engineering  
Elaine Armster, GDOT Project Manager

### **CC:**

Patrick Smith, URS  
Glenn Martin, URS

---

### **Handouts (attached):**

Status Meeting Agenda  
Revised/Final Concept Drawings  
Concept Estimates

### **Discussion Points:**

#### Task 1 – Concept Development (50% Complete)

- URS distributed the final concept layout and construction cost estimate. Attendees had the following comments:
  - Move CCTV #23 to new intersection #1 or #2
  - Verify existing fiber between intersection #17 and #18
  - Int. #7 to US 78 is existing fiber on SR 92. Add comm. to intersections 18 – 21 early using old SR 92 fiber
  - Add fiber form TCC to Multimodal Center on Duralee Rd [*Update: DCDOT decided they will accomplish this under a different project.*]



- For joint use agreement with Graystone Power, change Paulding Co. to Douglas County
- URS plans to use the Limited Scope Concept Report format. Elaine will verify this is the correct CR format.
- URS prepared draft Concept of Operations document and will distribute next period

Task 2 – Database Preparation (40% Complete)

- Wilburn Engineering continued preparing base mapping

Task 3 – Environmental Document (20% Complete)

- URS' ecologist prepared to conduct initial field reviews

**Action Items:**

1. Incorporate comments received about Concept Plans (Scott)
2. Update joint use agreement with Graystone Power to show Douglas County instead of Paulding County (DCDOT)
3. Submit Concept of Operations document for review (Scott)



# STATUS MEETING AGENDA

## ITS SYSTEM EXPANSION PROJECT OCTOBER 21, 2014 AT 10:30 AM

PI #0012622

Douglas County Project No. 13-015

### 1. Project Status

#### Task 1 – Concept Development (50% Complete)

- Conducted kick-off meeting on 5/15/14
- Conducted site review with Robert Eidson, DCDOT
- Analyzed aerial vs underground options
- Developed and submitted concept layout and alternative options
- **Finalized concept layout**
- **Prepared construction cost estimate and entered into GDOT CES**
- **Prepared draft Concept of Operations document**
- **Continued draft Concept Report development**

#### Task 2 – Database Preparation (40% Complete)

- Acquired GIS files from DCDOT
- **Continued preparing baseline plan sheets**

#### Task 3 – Environmental Document (20% Complete)

- Gathered data for ecology worksheet
- Determined shortcut process is available if no poles are installed
- **Conducted ecology field survey week of 10/13/14**

#### Task 4 – Preliminary Design (Not started)

#### Task 5 – ROW Coordination (Not started)

#### Task 6 – Final Design (Not started)

#### Project Management

- Received executed contract on 7/10/14
- Coordinated proposed schedule edits with GDOT PM

**2. Discussion Topics**

- Review and discuss concept options
- Review and discuss proposed schedule

**3. Issues/Concerns**

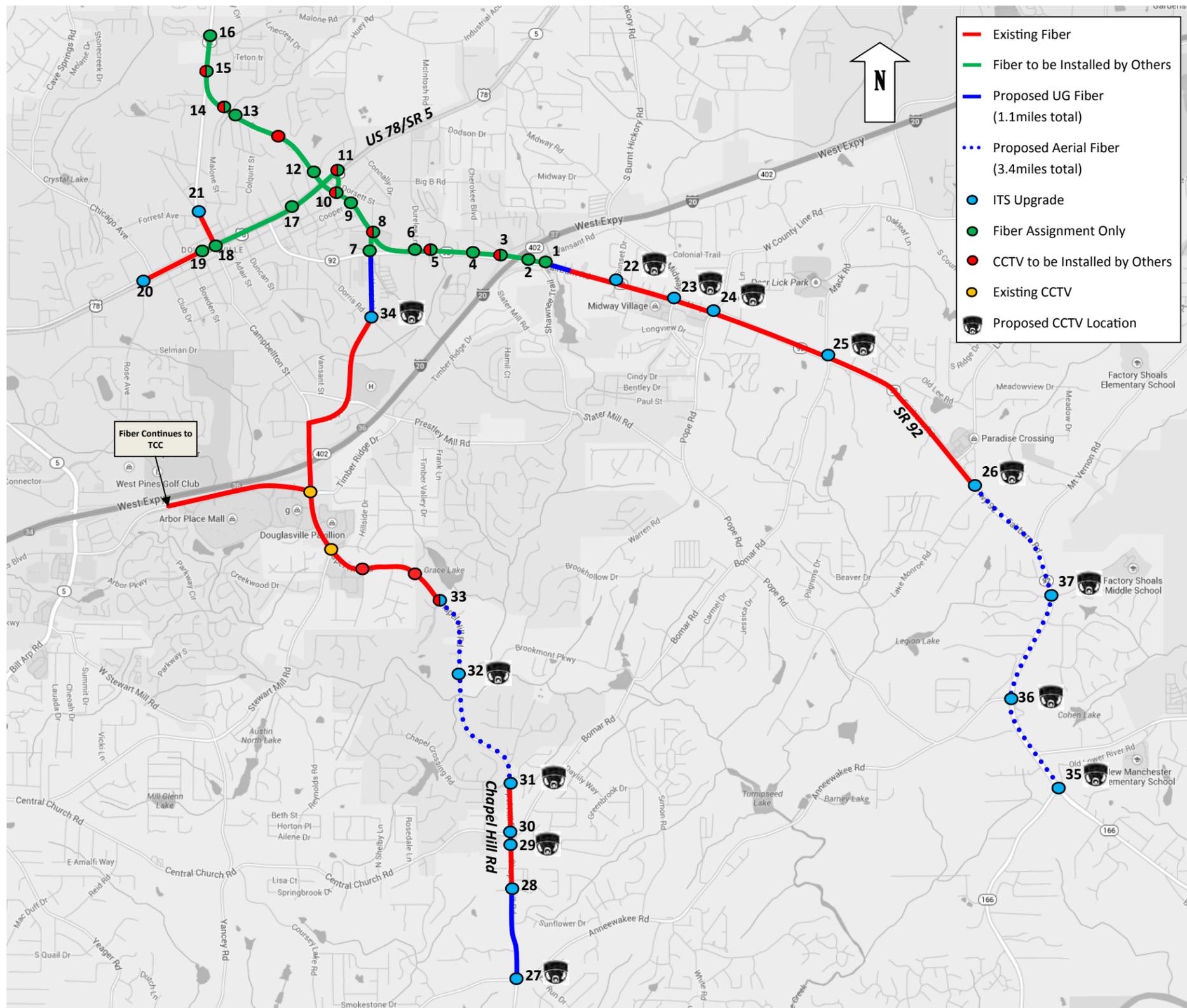
- None

**4. Open Discussion**

*Next Status Meeting is Tuesday, October 21<sup>st</sup>*

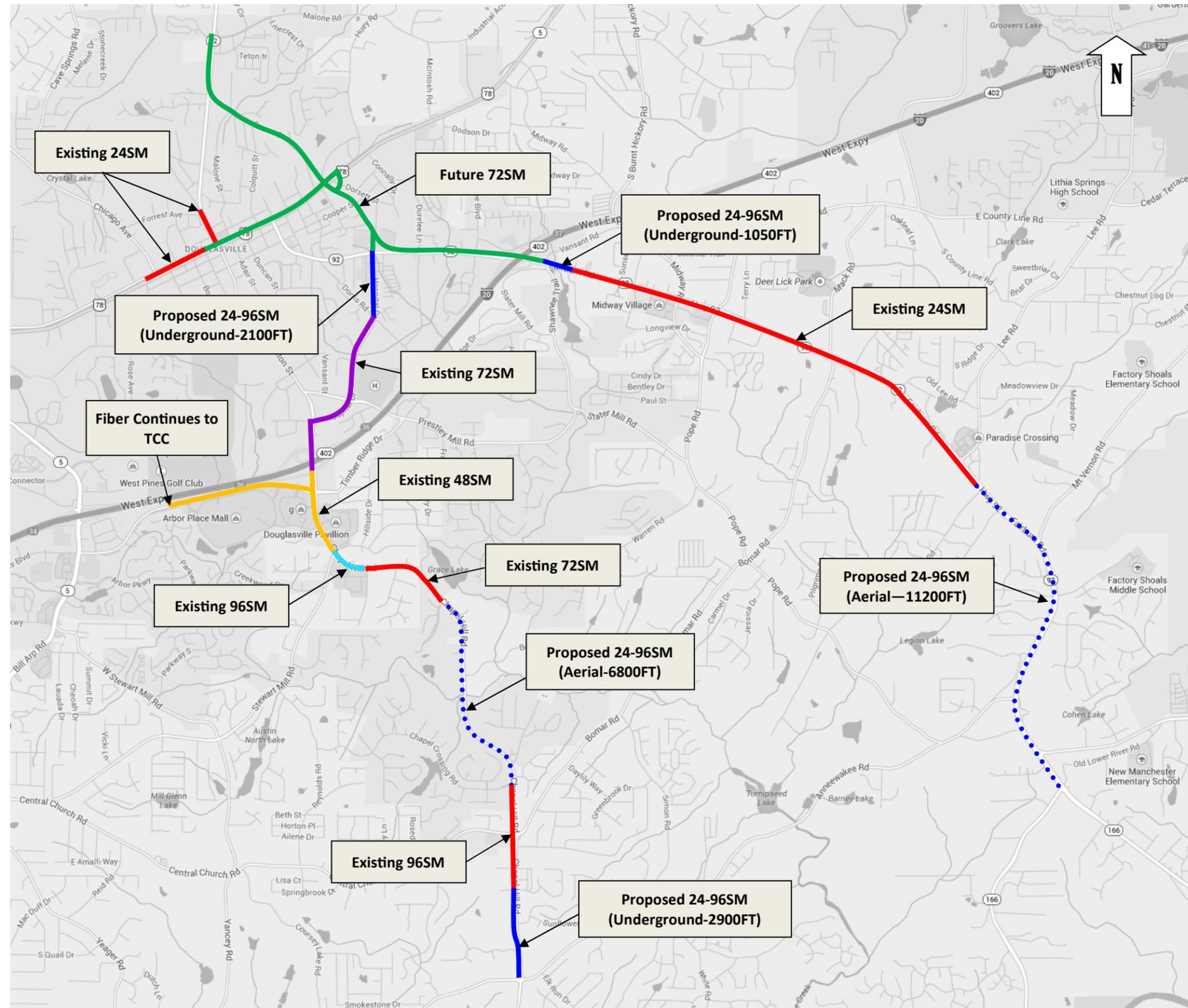
<b>Key Staff</b>	<b>Role</b>	<b>Email</b>	<b>Office</b>	<b>Cell</b>
Scott Mohler, PE	Project Manager	scott.mohler@urs.com	678-808-8811	770-313-5147
Stevie Berryman, PE	Project Design Lead	stevie.berryman@urs.com	678.808.8964	404-569-4605
Patrick Smith	Environmental Lead	patrick.n.smith@urs.com	678.808.8876	678-643-0267
Vern Wilburn, PE	Plans & Utilities	vwilburn@WilburnEngineering.com	678-423-0050	770-362-6184
RJ Surgi, PE	ITS Technical Expert	rj.surgi@urs.com	678-808-8847	770-331-0357
Elaine Armster	GDOT PM	<a href="mailto:ELArmster@dot.ga.gov">ELArmster@dot.ga.gov</a>	404-631-1784	

# Douglas County ITS Expansion Map—Intersection Updates and CCTV Locations



Intersection ID	Main Street	Cross Street
1	SR92	@ Vanstant Rd
2	SR92	@ I-20 EB Ramp
3	SR92	@ I-20 WB Ramp
4	SR92	@ Cherokee Blvd/Earl D. Lee Blvd
5	SR92	@ Durelee Ln
6	SR92	@ Fairburn Rd
7	Hospital Dr	@ Fairburn Rd
8	SR92	@ Hospital Dr
9	SR92	@ Cooper St
10	SR92	@ Ramp onto US78
11	US78	@ Ramp onto SR92
12	SR92	@ Ellis St
13	SR92	@ Colquitt St
14	SR92	@ Malone St
15	SR92	@ Fire Station
16	SR92	@ Malone Rd
17	US78	@ Mozley St
18	US78	@ Campbellton St
19	US78	@ McCarley St
20	US78	@ Rose Ave
21	SR92	@ Forrest Ave
22	SR92	@ Sunset Dr
23	SR92	@ Midway Rd
24	SR92	@ Pope Rd/W County Line Rd
25	SR92	@ Bomar Rd/Mack Rd
26	SR92	@ Lee Rd
27	Chapel Hill Rd	@ Annewakee Rd
28	Chapel Hill Rd	@ Fielding Dr
29	Chapel Hill Rd	@ Willow Ridge Rd
30	Chapel Hill Rd	@ Central Church Rd
31	Chapel Hill Rd	@ Chapel Crossing Rd/Bomar Rd
32	Chapel Hill Rd	@ Brookmont Pkwy
33	Chapel Hill Rd	@ Golf Ridge Blvd
34	Hospital Rd	@ Dorris Rd
35	SR92	@ SR92/Old Lower River Rd
36	SR92	@ Annewakee Rd
37	SR92	@ Factory Shoals Dr

# Douglas County ITS Expansion Map—Fiber



**NOTE:**  
 THE TOTAL PROPOSED UNDERGROUND FIBER IS APPROXIMATELY 1.1 MILES.  
 THE TOTAL PROPOSED AERIAL FIBER IS APPROXIMATELY 3.4 MILES.



# **ATTACHMENT 4**

## **Signed Agreements**

**Project Framework Agreement**

Keith Golden, P.E., Commissioner



GEORGIA DEPARTMENT OF TRANSPORTATION

One Georgia Center, 600 West Peachtree Street, NW  
Atlanta, Georgia 30308  
Telephone: (404) 631-1000

January 8, 2014

Mr. Randy Hulse, Director  
Douglas County Transportation  
8700 Hospital Drive  
Douglasville, GA 30134

Dear Mr. Hulse:

I am returning for your files an executed agreement between the Georgia Department of Transportation and Douglas County for the following project:

**Douglas County, PI# 0012622**

We look forward to working with you on the successful completion of the joint project.  
Should you have any questions, please contact the Project Manager Carleton Fisher at (404) 631-1981.

Sincerely,

A handwritten signature in blue ink, appearing to read "Angela Robinson".

Angela Robinson,  
Financial Management Administrator

AR:kp

Enclosure

c: Bob Rogers  
Rachel Brown – District 7 Engineer  
Scott Lee – District 7 Planning & Programming Engineer  
Patrick Allen, P.E. – District 7 Utilities Engineer  
Mike Bolden – State Utilities Engineer

RECEIVED  
JAN 13 2014  
Douglas Co. D.O.T.

**AGREEMENT  
BETWEEN  
DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
AND  
DOUGLAS COUNTY  
FOR  
TRANSPORTATION FACILITY IMPROVEMENTS**

This Framework Agreement is made and entered into this 2<sup>nd</sup> day of January, 2014 by and between the DEPARTMENT OF TRANSPORTATION, an agency of the State of Georgia, hereinafter called the "DEPARTMENT", and DOUGLAS COUNTY, acting by and through its Board of Commissioners, hereinafter called the "LOCAL GOVERNMENT".

WHEREAS, the LOCAL GOVERNMENT has represented to the DEPARTMENT a desire to improve the transportation facility described in Attachment "A", attached and incorporated herein by reference and hereinafter referred to as the "PROJECT"; and

WHEREAS, the LOCAL GOVERNMENT has represented to the DEPARTMENT a desire to participate in certain activities, including the funding of certain portions of the PROJECT and the DEPARTMENT has relied upon such representations; and

Revised: 12/2011

**WHEREAS, the DEPARTMENT has expressed a willingness to participate in certain activities of the PROJECT as set forth in this Agreement; and**

**WHEREAS, the DEPARTMENT has provided an estimated cost to the LOCAL GOVERNMENT for its participation in certain activities of the PROJECT; and**

**WHEREAS, the Constitution authorizes intergovernmental agreements whereby state and local entities may contract with one another "for joint services, for the provision of services, or for the joint or separate use of facilities or equipment; but such contracts must deal with activities, services or facilities which the parties are authorized by law to undertake or provide." Ga. Constitution Article IX, §III, ¶(a).**

**NOW THEREFORE, in consideration of the mutual promises made and of the benefits to flow from one to the other, the DEPARTMENT and the LOCAL GOVERNMENT hereby agree each with the other as follows:**

**1. The LOCAL GOVERNMENT has applied for and received "Qualification Certification" to administer federal-aid projects. The GDOT Local Administered Project (LAP) Certification Committee has reviewed, confirmed and approved the certification for the LOCAL GOVERNMENT to develop federal project(s) within the scope of its certification using the DEPARTMENT'S Local Administered Project Manual procedures. The LOCAL GOVERNMENT shall contribute to the PROJECT by funding all or certain portions of the PROJECT costs for the preconstruction engineering (design) activities,**

Revised: 12/2011

hereinafter referred to as "PE", all reimbursable utility relocations, all non-reimbursable utilities owned by the LOCAL GOVERNMENT, railroad costs, right of way acquisitions and construction, as specified in Attachment "A", affixed hereto and incorporated herein by reference. In addition, the September 17, 2010 Planning Office memorandum titled "Preliminary Engineering Oversight for Project Managers/Project Delivery Staff", outlines the five (5) conditions when the LOCAL GOVERNMENT will be requested to fund the PE oversight activities at 100%, and is enclosed as Attachment "C" and incorporated herein by reference. Expenditures incurred by the LOCAL GOVERNMENT prior to the execution of this AGREEMENT or subsequent funding agreements shall not be considered for reimbursement by the DEPARTMENT. PE expenditures incurred by the LOCAL GOVERNMENT after execution of this AGREEMENT shall be reimbursed by the DEPARTMENT once a written notice to proceed is given by the DEPARTMENT.

2. The DEPARTMENT shall contribute to the PROJECT by funding all or certain portions of the PROJECT costs for the PE, right of way acquisitions, reimbursable utility relocations, railroad costs, or construction (specified in Attachment "A") affixed hereto and incorporated herein by reference, and none of the five (5) conditions apply from the Planning Office memorandum dated September 17, 2010 (specified in Attachment "C").

3. The DEPARTMENT shall provide a PE Oversight Estimate to the LOCAL GOVERNMENT, if appropriate, appended as Attachment "D" and incorporated by reference as if fully set out herein. The LOCAL GOVERNMENT will be responsible for

Revised: 12/2011

providing payment, which represents 100% of the DEPARTMENT's PE Oversight Estimate at the time of the Project Framework Agreement execution.

If at any time the PE Oversight funds are depleted within \$5,000 of the remaining PE Oversight balance and project activities and tasks are still outstanding, the LOCAL GOVERNMENT shall, upon request, make additional payment to the DEPARTMENT. The payment shall be determined by prorating the percentage complete and using the same estimate methodology as provided in Attachment "D". If there is an unused balance after completion of all tasks and phases of the project, then pending a final audit, the remainder will be refunded to the sponsor.

4. It is understood and agreed by the DEPARTMENT and the LOCAL GOVERNMENT that the funding portion as identified in Attachment "A" of this Agreement only applies to the PE. The Right of Way and Construction funding estimate levels as specified in Attachment "A" are provided herein for planning purposes and do not constitute a funding commitment for right of way and construction. The DEPARTMENT will prepare LOCAL GOVERNMENT Specific Activity Agreements for funding applicable to other activities when appropriate.

Further, the LOCAL GOVERNMENT shall be responsible for repayment of any expended federal funds if the PROJECT does not proceed forward to completion due to a lack of available funding in future PROJECT phases, changes in local priorities or

cancellation of the PROJECT by the LOCAL GOVERNMENT without concurrence by the DEPARTMENT.

5. In accordance with Georgia Code 32-2-2, the LOCAL GOVERNMENT shall be responsible for all costs for the continual maintenance and operations of any and all sidewalks and the grass strip between the curb and sidewalk within the PROJECT limits. The LOCAL GOVERNMENT shall also be responsible for the continual maintenance and operation of all lighting systems installed to illuminate any roundabouts constructed as part of this PROJECT. Furthermore, the LOCAL GOVERNMENT shall also be responsible for the maintaining of all landscaping installed as part of any roundabout constructed as part of this PROJECT.

6. Both the LOCAL GOVERNMENT and the DEPARTMENT hereby acknowledge that Time is of the Essence. It is agreed that both parties shall adhere to the schedule of activities currently established in the approved Transportation Improvement Program/State Transportation Improvement Program, hereinafter referred to as "TIP/STIP". Furthermore, all parties shall adhere to the detailed project schedule as approved by the DEPARTMENT, attached as Attachment "B" and incorporated herein by reference. In the completion of respective commitments contained herein, if a change in the schedule is needed, the LOCAL GOVERNMENT shall notify the DEPARTMENT in writing of the proposed schedule change and the DEPARTMENT shall acknowledge the change through written response letter; provided that the DEPARTMENT shall have final authority for approving any change.

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If, for any reason, the LOCAL GOVERNMENT does not produce acceptable deliverables in accordance with the approved schedule, the DEPARTMENT reserves the right to delay the PROJECT's implementation until funds can be re-identified for right of way or construction phases, as applicable.

7. The LOCAL GOVERNMENT shall certify that the regulations for "CERTIFICATION OF COMPLIANCES WITH FEDERAL PROCUREMENT REQUIREMENTS, STATE AUDIT REQUIREMENTS, and FEDERAL AUDIT REQUIREMENTS" are understood and will comply in full with said provisions.

8. The LOCAL GOVERNMENT shall accomplish the PE activities for the PROJECT. The PE activities shall be accomplished in accordance with the DEPARTMENT's Plan Development Process hereinafter referred to as "PDP", the applicable guidelines of the American Association of State Highway and Transportation Officials, hereinafter referred to as "AASHTO", the DEPARTMENT's Standard Specifications Construction of Transportation Systems, and all applicable design guidelines and policies of the DEPARTMENT to produce a cost effective PROJECT. Failure to follow the PDP and all applicable guidelines and policies will jeopardize the use of Federal Funds in some or all categories outlined in this agreement, and it shall be the responsibility of the LOCAL GOVERNMENT to make up the loss of that funding. The LOCAL GOVERNMENT's responsibility for PE activities shall include, but is not limited to the following items:

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a. Prepare the PROJECT Concept Report and Design Data Book in accordance with the format used by the DEPARTMENT. The concept for the PROJECT shall be developed to accommodate the future traffic volumes as generated by the LOCAL GOVERNMENT as provided for in paragraph 8b and approved by the DEPARTMENT. The concept report shall be approved by the DEPARTMENT prior to the LOCAL GOVERNMENT beginning further development of the PROJECT plans. It is recognized by the parties that the approved concept may be updated or modified by the LOCAL GOVERNMENT as required by the DEPARTMENT and re-approved by the DEPARTMENT during the course of PE due to updated guidelines, public input, environmental requirements, Value Engineering recommendations, Public Interest Determination (PID) for utilities, utility/railroad conflicts, or right of way considerations.

b. Prepare a Traffic Study for the PROJECT that includes Average Daily Traffic, hereinafter referred to as "ADT", volumes for the base year (year the PROJECT is expected to be open to traffic) and design year (base year plus 20 years) along with Design Hour Volumes, hereinafter referred to as "DHV", for the design year. DHV includes morning (AM) and evening (PM) peaks and other significant peak times. The Study shall show all through and turning movement volumes at intersections for the ADT and DHV volumes and shall indicate the percentage of trucks on the facility. The Study shall also include signal warrant evaluations for any additional proposed signals on the PROJECT.

c. Prepare environmental studies, documentation reports and complete Environmental Document for the PROJECT along with all environmental re-

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evaluations required that show the PROJECT is in compliance with the provisions of the National Environmental Policy Act or the Georgia Environmental Policy Act as per the DEPARTMENT's Environmental Procedures Manual, as appropriate to the PROJECT funding. This shall include any and all archaeological, historical, ecological, air, noise, community involvement, environmental justice, flood plains, underground storage tanks, and hazardous waste site studies required. The completed Environmental Document approval shall occur prior to Right of Way funding authorization. A re-evaluation is required for any design change as described in Chapter 7 of the Environmental Procedures Manual. In addition, a re-evaluation document approval shall occur prior to any Federal funding authorizations if the latest approved document is more than 6 months old. The LOCAL GOVERNMENT shall submit to the DEPARTMENT all studies, documents and reports for review and approval by the DEPARTMENT, the FHWA and other environmental resource agencies. The LOCAL GOVERNMENT shall provide Environmental staff to attend all PROJECT related meetings where Environmental issues are discussed. Meetings include, but are not limited to, concept, field plan reviews and value engineering studies.

d. Prepare all PROJECT public hearing and public information displays and conduct all required public hearings and public information meetings with appropriate staff in accordance with DEPARTMENT practice.

e. Perform all surveys, mapping, soil investigations and pavement evaluations needed for design of the PROJECT as per the appropriate DEPARTMENT Manual.

f. Perform all work required to obtain all applicable PROJECT permits, including, but not limited to, Cemetery, TVA and US Army Corps of Engineers permits, Stream Buffer Variances and Federal Emergency Management Agency (FEMA) approvals. The LOCAL GOVERNMENT shall provide all mitigation required for the project, including but not limited to permit related mitigation. All mitigation costs are considered PE costs. PROJECT permits and non-construction related mitigation must be obtained and completed 3 months prior to the scheduled let date. These efforts shall be coordinated with the DEPARTMENT.

g. Prepare the stormwater drainage design for the PROJECT and any required hydraulic studies for FEMA Floodways within the PROJECT limits. Acquire of all necessary permits associated with the Hydrology Study or drainage design.

h. Prepare utility relocation plans for the PROJECT following the DEPARTMENT's policies and procedures for identification, coordination and conflict resolution of existing and proposed utility facilities on the PROJECT. These policies and procedures, in part, require the Local Government to submit all requests for existing, proposed, and relocated facilities to each utility owner within the project area. Copies of all such correspondence, including executed agreements for reimbursable utility/railroad relocations, shall be forwarded to the DEPARTMENT's Project Manager and the District Utilities Engineer and require that any conflicts with the PROJECT be resolved by the LOCAL GOVERNMENT. If it is determined that the PROJECT is located on an on-system route or is a DEPARTMENT LET PROJECT, the LOCAL GOVERNMENT and the District Utilities Engineer shall ensure that permit applications are approved for each utility company in conflict with

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the project. If it is determined through the DEPARTMENT's Project Manager and State Utilities Office during the concept or design phases the need to utilize Overhead/Subsurface Utility Engineering, hereinafter referred to as "SUE", to obtain the existing utilities, the LOCAL GOVERNMENT shall be responsible for acquiring those services. SUE costs are considered PE costs.

i. Prepare, in English units, Preliminary Construction plans, Right of Way plans and Final Construction plans that include the appropriate sections listed in the Plan Presentation Guide, hereinafter referred to as "PPG", for all phases of the PDP. All drafting and design work performed on the project shall be done utilizing Microstation V8i and InRoads software respectively using the DEPARTMENT's Electronic Data Guidelines. The LOCAL GOVERNMENT shall further be responsible for making all revisions to the final right of way plans and construction plans, as deemed necessary by the DEPARTMENT, for whatever reason, as needed to acquire the right of way and construct the PROJECT.

j. Prepare PROJECT cost estimates for construction, Right of Way and Utility/railroad relocation at the following project stages: Concept, Preliminary Field Plan Review, Right of Way plan approval (Right of Way cost only), Final Field Plan Review and Final Plan submission using the applicable method approved by the DEPARTMENT. The cost estimates shall also be updated annually if the noted project stages occur at a longer frequency. Failure of the LOCAL GOVERNMENT to provide timely and accurate cost estimates may delay the PROJECT's implementation until additional funds can be identified for right of way or construction, as applicable.

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k. Provide certification, by a Georgia Registered Professional Engineer, that the Design and Construction plans have been prepared under the guidance of the professional engineer and are in accordance with AASHTO and DEPARTMENT Design Policies.

l. Provide certification, by a Level II Certified Design Professional that the Erosion Control Plans have been prepared under the guidance of the certified professional in accordance with the current Georgia National Pollutant Discharge Elimination System.

m. Provide a written certification that all appropriate staff (employees and consultants) involved in the PROJECT have attended or are scheduled to attend the Department's PDP Training Course. The written certification shall be received by the Department no later than the first day of February of every calendar year until all phases have been completed.

9. The Primary Consultant firm or subconsultants hired by the LOCAL GOVERNMENT to provide services on the PROJECT shall be prequalified with the DEPARTMENT in the appropriate area-classes. The DEPARTMENT shall, on request, furnish the LOCAL GOVERNMENT with a list of prequalified consultant firms in the appropriate area-classes. The LOCAL GOVERNMENT shall comply with all applicable state and federal regulations for the procurement of design services and in accordance with the Brooks Architect-Engineers Act of 1972, better known as the Brooks Act, for any consultant hired to perform work on the PROJECT.

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10. The DEPARTMENT shall review and has approval authority for all aspects of the PROJECT provided however this review and approval does not relieve the LOCAL GOVERNMENT of its responsibilities under the terms of this agreement. The DEPARTMENT will work with the FHWA to obtain all needed approvals as deemed necessary with information furnished by the LOCAL GOVERNMENT.

11. The LOCAL GOVERNMENT shall be responsible for the design of all bridge(s) and preparation of any required hydraulic and hydrological studies within the limits of this PROJECT in accordance with the DEPARTMENT's policies and guidelines. The LOCAL GOVERNMENT shall perform all necessary survey efforts in order to complete the hydraulic and hydrological studies and the design of the bridge(s). The final bridge plans shall be incorporated into this PROJECT as a part of this Agreement.

12. The LOCAL GOVERNMENT unless otherwise noted in Attachment "A" shall be responsible for funding all LOCAL GOVERNMENT owned utility relocations and all other reimbursable utility/railroad costs. The utility costs shall include but are not limited to PE, easement acquisition, and construction activities necessary for the utility/railroad to accommodate the PROJECT. The terms for any such reimbursable relocations shall be laid out in an agreement that is supported by plans, specifications, and itemized costs of the work agreed upon and shall be executed prior to certification by the DEPARTMENT. The LOCAL GOVERNMENT shall certify via written letter to the DEPARTMENT's Project Manager and District Utilities Engineer that all Utility owners' existing and proposed facilities are shown on the plans with no conflicts 3 months prior

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to advertising the PROJECT for bids and that any required agreements for reimbursable utility/railroad costs have been fully executed. Further, this certification letter shall state that the LOCAL GOVERNMENT understands that it is responsible for the costs of any additional reimbursable utility/railroad conflicts that arise during construction.

13. The DEPARTMENT will be responsible for all railroad coordination on DEPARTMENT Let and/or State Route (On-System) projects; the LOCAL GOVERNMENT shall address concerns, comments, and requirements to the satisfaction of the Railroad and the DEPARTMENT. If the LOCAL GOVERNMENT is shown to LET the construction in Attachment "A" on off-system routes, the LOCAL GOVERNMENT shall be responsible for all railroad coordination and addressing concerns, comments, and requirements to the satisfaction of the Railroad and the DEPARTMENT for PROJECT.

14. The LOCAL GOVERNMENT shall be responsible for acquiring a Value Engineering Consultant for the DEPARTMENT to conduct a Value Engineering Study if the total estimated PROJECT cost is \$10 million or more. The Value Engineering Study cost is considered a PE cost. The LOCAL GOVERNMENT shall provide project related design data and plans to be evaluated in the study along with appropriate staff to present and answer questions about the PROJECT to the study team. The LOCAL GOVERNMENT shall provide responses to the study recommendations indicating whether they will be implemented or not. If not, a valid response for not implementing

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shall be provided. Total project costs include PE, right of way, and construction, reimbursable utility/railroad costs.

15. The LOCAL GOVERNMENT, unless shown otherwise on Attachment "A", shall acquire the Right of way in accordance with the law and the rules and regulations of the FHWA including, but not limited to, Title 23, United States Code; 23 CFR 710, et. Seq., and 49 CFR Part 24 and the rules and regulations of the DEPARTMENT. Upon the DEPARTMENT's approval of the PROJECT right of way plans, verification that the approved environmental document is valid and current, a written notice to proceed will be provided by the DEPARTMENT for the LOCAL GOVERNMENT to stake the right of way and proceed with all pre-acquisition right of way activities. The LOCAL GOVERNMENT shall not proceed to property negotiation and acquisition whether or not the right of way funding is Federal, State or Local, until the right of way agreement named "Contract for the Acquisition of Right of Way" prepared by the DEPARTMENT's Office of Right of Way is executed between the LOCAL GOVERNMENT and the DEPARTMENT. Failure of the LOCAL GOVERNMENT to adhere to the provisions and requirements specified in the acquisition contract may result in the loss of Federal funding for the PROJECT and it will be the responsibility of the LOCAL GOVERNMENT to make up the loss of that funding. Right of way costs eligible for reimbursement include land and improvement costs, property damage values, relocation assistance expenses and contracted property management costs. Non reimbursable right of way costs include administrative expenses such as appraisal, consultant, attorney fees and any in-house property management or staff expenses. The LOCAL GOVERNMENT

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shall certify that all required right of way is obtained and cleared of obstructions, including underground storage tanks, 3 months prior to advertising the PROJECT for bids.

16. The DEPARTMENT unless otherwise shown in Attachment "A" shall be responsible for Letting the PROJECT to construction, solely responsible for executing any agreements with all applicable utility/railroad companies and securing and awarding the construction contract for the PROJECT when the following items have been completed and submitted by the LOCAL GOVERNMENT:

- a. Submittal of acceptable PROJECT PE activity deliverables noted in this Agreement.
- b. Certification that all needed rights of way have been obtained and cleared of obstructions.
- c. Certification that the environmental document is current and all needed permits and mitigation for the PROJECT have been obtained.
- d. Certification that all Utility/Railroad facilities, existing and proposed, within the PROJECT limits are shown, any conflicts have been resolved and reimbursable agreements, if applicable, are executed.

If the LOCAL GOVERNMENT is shown to LET the construction in Attachment "A", the LOCAL GOVERNMENT shall provide the above deliverables and certifications and shall follow the requirements stated in Chapters 10, 11, 12 and 13 of the DEPARTMENT's Local Administered Project Manual. The LOCAL GOVERNMENT

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shall be responsible for providing qualified construction oversight with their personnel or by employing a Consultant firm prequalified in Area Class 8.01 to perform construction oversight. The LOCAL GOVERNMENT shall be responsible for employing a GDOT prequalified consultant in area classes 6.04a and 6.04b for all materials testing on the PROJECT, with the exception of field concrete testing. All materials testing, including field concrete testing shall be performed by GDOT certified technicians who are certified for the specific testing they are performing on the PROJECT. The testing firm(s) and the individual technicians must be submitted for approval prior to Construction.

17. The LOCAL GOVERNMENT shall provide a review and recommendation by the engineer of record concerning all shop drawings prior to the DEPARTMENT review and approval. The DEPARTMENT shall have final authority concerning all shop drawings.

18. The LOCAL GOVERNMENT agrees that all reports, plans, drawings, studies, specifications, estimates, maps, computations, computer files and printouts, and any other data prepared under the terms of this Agreement shall become the property of the DEPARTMENT if the PROJECT is being let by the DEPARTMENT. This data shall be organized, indexed, bound, and delivered to the DEPARTMENT no later than the advertisement of the PROJECT for letting. The DEPARTMENT shall have the right to use this material without restriction or limitation and without compensation to the LOCAL GOVERNMENT.

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19. The LOCAL GOVERNMENT shall be responsible for the professional quality, technical accuracy, and the coordination of all reports, designs, drawings, specifications, and other services furnished by or on behalf of the LOCAL GOVERNMENT pursuant to this Agreement. The LOCAL GOVERNMENT shall correct or revise, or cause to be corrected or revised, any errors or deficiencies in the reports, designs, drawings, specifications, and other services furnished for this PROJECT. Failure by the LOCAL GOVERNMENT to address the errors, omissions or deficiencies within 30 days of notification shall cause the LOCAL GOVERNMENT to assume all responsibility for construction delays and supplemental agreements caused by the errors and deficiencies. All revisions shall be coordinated with the DEPARTMENT prior to issuance. The LOCAL GOVERNMENT shall also be responsible for any claim, damage, loss or expense, to the extent allowed by law that is attributable to errors, omissions, or negligent acts related to the designs, drawings, specifications, and other services furnished by or on behalf of the LOCAL GOVERNMENT pursuant to this Agreement.

20. The DEPARTMENT shall be furnished with a copy of all contracts and agreements between the LOCAL GOVERNMENT and any other agency or contractor associated with construction activities. The DEPARTMENT's Project Manager shall be the primary point of contact unless otherwise specified.

21. The LOCAL GOVERNMENT shall provide the DEPARTMENT with a detailed project schedule that reflects milestones, deliverables with durations for all pertinent

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**activities to develop critical path elements. An electronic project schedule shall be submitted to the Project Manager after execution of this agreement.**

**This Agreement is made and entered into in FULTON COUNTY, GEORGIA, and shall be governed and construed under the laws of the State of Georgia.**

**The covenants herein contained shall, except as otherwise provided, accrue to the benefit of and be binding upon the successors and assigns of the parties hereto.**

IN WITNESS WHEREOF, the DEPARTMENT and the LOCAL GOVERNMENT have caused these presents to be executed under seal by their duly authorized representatives.

DEPARTMENT OF  
TRANSPORTATION

LOCAL GOVERNMENT NAME

BY: [Signature]  
Commissioner

BY: [Signature]  
Tom Worthan  
Chairman, Board of Commissioners

ATTEST: [Signature]  
Treasurer

Signed, sealed and delivered this 3  
day of December, 2013, in the  
presence of:

[Signature]  
Witness



[Signature]  
Notary Public

This Agreement approved by Local  
Government, the 3 day of  
December, 2013

Attest  
[Signature]  
Lisa Watson, County Clerk

FEIN: 58-6000818

Revised: 12/2011

Preliminary Engineering Phase I		Preliminary Engineering - Phase I <sup>1</sup>				GOOT Oversight for PE (Phase I) <sup>2</sup>				Preliminary Engineering Grand Total (Phase I)			
	Percentage	PE Amount	Minimum PE Participation Amount (\$)	Participant	PE Activity Sponsor	Percentage	Amount	Participant	Percentage	Amount	Participant	Percentage	Amount
1	80%	\$84,000.00	\$84,000.00	Federal	Local Government	80%/0%	\$0.00	Federal	80%	\$84,000.00	Federal	80%	\$84,000.00
2	0%	\$0.00	\$0.00	State	Local Government	0%/0%	\$0.00	State	0%	\$0.00	State	0%	\$0.00
3	20%	\$21,000.00	N/A	Local	Local Government	0%	\$0.00	Local	20%	\$21,000.00	Local	20%	\$21,000.00
4	0%	\$0.00	\$0.00	Other	Local Government	0%/0%	\$0.00	Other	0%	\$0.00	Other	0%	\$0.00
Total	100%	\$105,000.00				80%/0%	\$0.00		100%	\$105,000.00		100%	\$105,000.00

Right of Way Phase II		Right of Way - Phase II <sup>1</sup>				GOOT Oversight for ROW (Phase II) <sup>2</sup>				Utility Relocation - Phase IV			
	Percentage	ROW Amount	Minimum ROW Participation Amount (\$)	Participant	Acquisition By:	Percentage	Amount	Participant	Percentage	Amount	Participant	Percentage	Amount
1	100%/0%	\$0.00	\$0.00	Federal	Local Government	100%/0%	\$0.00	Federal	100%	\$0.00	Federal	100%	\$0.00
2	100%/0%	\$0.00	\$0.00	State	Local Government	0%/0%	\$0.00	State	0%	\$0.00	State	0%	\$0.00
3	100%/0%	\$0.00	N/A	Local	Local Government	0%	\$0.00	Local	0%	\$0.00	Local	0%	\$0.00
4	100%/0%	\$0.00	\$0.00	Other	Local Government	0%/0%	\$0.00	Other	0%	\$0.00	Other	0%	\$0.00
Total	100%	\$0.00				100%/0%	\$0.00		100%	\$0.00		100%	\$0.00

Construction Phase III		Construction - Phase III <sup>1</sup>				GOOT Oversight for Construction (Phase III) <sup>2</sup>				Construction Oversight Phases V & VI			
	Percentage	CT Amount	Minimum CST Participation Amount (\$)	Participant	Letting By:	Percentage	Amount	Participant	Percentage	Amount	Participant	Percentage	Amount
1	80%	\$476,000.00	\$476,000.00	Federal	Local Govt	80%/0%	\$0.00	Federal	80%	\$0.00	Federal	80%	\$0.00
2	0%	\$0.00	\$0.00	State	Local Govt	0%/0%	\$0.00	State	0%	\$0.00	State	0%	\$0.00
3	20%	\$119,000.00	N/A	Local	Local Govt	0%	\$0.00	Local	20%	\$21,000.00	Local	20%	\$21,000.00
4	0%	\$0.00	\$0.00	Other	Local Govt	0%/0%	\$0.00	Other	0%	\$0.00	Other	0%	\$0.00
Total	100%	\$595,000.00				80%/0%	\$0.00		100%	\$21,000.00		100%	\$21,000.00

Summary of Phases I Through III			
Percentage	TOTAL Amount	Maximum Participation Amount (\$)	Participant
1	\$550,000.00	\$550,000.00	Federal
2	\$0.00	\$0.00	State
3	\$140,000.00	N/A	Local
4	\$0.00	\$0.00	Other
Total	\$700,000.00		

<sup>1</sup>The maximum allowable GOOT participating amounts for PE phase are shown above. The local government will only be reimbursed the percentage of the accrued invoiced amounts up to but not to exceed the maximum amount indicated.

<sup>2</sup>GOOT Oversight for PE (Phase I) is detailed in Attachment "D".

<sup>3</sup>Right-of-Way and Construction amounts shown are for budget planning purposes only.

NOTE: Separate GOOT P.O.s will be established for each funding phase  
 Revised: 12/2011

**ATTACHMENT "B" Project Timeline**

**PI # 0012622 – Douglas County**

**Proposed Project Timeline**

	Execute Agreement	Month/Year (Approve Concept)	Month/Year (Approve Env. Document)	Month/Year (Authorize Right of Way funds)	Month/Year (Authorize Const. funds)
<b>Environmental Phase</b>					
<b>Concept Phase</b>					
<b>Preliminary Plan Phase</b>					
<b>Right of Way Phase</b>					
<b>Deadlines for Responsible Parties</b>		7-14	12-14	N/A	3-15

**Annual Reporting Requirements**

The Local Government shall provide a written status report to the Department's Project Manager with the actual phase completion date(s) and the percent complete/proposed completion date of incomplete phases. The written status report shall be received by the Department no later than the first day of February of every calendar year until all phases have been completed.

Revised: 12/2011

# ATTACHMENT "C"

Project # 0012622 Douglas County

D.O.T. 08

## DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

### INTERDEPARTMENTAL CORRESPONDENCE

**FILE** OFFICE Planning  
**DATE** September 17, 2010

**FROM**   
Angela T. Alexander, State Transportation Planning Administrator

**TO** Todd I. Long, PE, PTOE, Director of Planning  
Gerald M. Ross, PE, Chief Engineer/Deputy Commissioner

**SUBJECT** Preliminary Engineering Oversight for Project Managers/Project Delivery Staff

*Note: This memo supersedes the previous PE Oversight Memo, dated August 17, 2010. PE Oversight funding for Safe Route to School (SRTS) projects are eligible for PE Oversight funds, paid for with funding from the SRTS program. No other changes were made to the memo.*

As you are aware, the Department is unable to continue funding PE oversight with 100% motor fuel funds due to the decline in motor fuel revenues. As a result, the Department needs an established procedure detailing the circumstances under which the Department will fund PE oversight with federal-aid funds (matched with state motor fuel funds) and when the Department will request that the local government/project sponsor fund the Department's expenses associated with PE oversight. The PE Oversight funds will be used to fund staff man-hours and any other associated expenses incurred by any GDOT employee working on the project. Please note that the process detailed below applies equally to routes both on and off the state highway system.

#### **GDOT Funds PE Oversight with Federal-Aid:**

The Department will fund PE oversight with federal-aid funds (and matching motor fuel funds), only if a subsequent project phase (ROW, UTL, CST) is programmed within the first 4 active years of the currently approved TIP/STIP. The source of federal-aid funds to be used for the PE oversight activities is as follows:

- 1) Projects on the National Highway System will use NHS funds (L050) to finance GDOT's PE oversight expenses
- 2) Projects *not* on the National Highway System but eligible for Surface Transportation Program (STP) funds, will follow one of the scenarios below:
  - a) Projects in urban areas between 5,000 and 199,999 in population will use L200 funds (with MPO approval, if applicable)
  - b) Projects in urban areas with a population greater than 200,000 will use L230 funds (with MPO approval)
  - c) Projects in rural areas with a population less than 5,000 will use L250 funds
  - d) The Department may, at the joint discretion of the Chief Engineer and Director of Planning, apply L240 funds to any federal-aid eligible project

- 3) Projects which have received an earmark in federal legislation, will use a portion of the earmark funding for GDOT's PE oversight expenses, pending MPO approval if applicable. (Note: earmark funded projects could receive PE oversight funding regardless of the funding being programmed within the first 4 active years of a currently approved TIP/STIP).
- 4) Projects funded with Safe Route to School (SRTS) funds will use SRTS funds to finance GDOT's PE oversight expenses, regardless of whether or not a subsequent phase of the project appears in the STIP/TIP.

**GDOT Requests Local Government/Project Sponsor to Fund PE Oversight:**

The Department will request that the local government fund PE oversight with 100% local funds under the following conditions:

- 1) A subsequent phase of the project is not programmed within the first 4 active years of the Currently approved TIP/STIP
- 2) The MPO has elected to not approve the use of L200 or L230 funds for GDOT's PE oversight expenses
- 3) The project is funded with CMAQ funds
- 4) The project is funded with an earmark identified in federal legislation and the local government/entity which secured the earmark (or MPO, if applicable) declines to allow GDOT to use a portion of the earmark for PE oversight expenses
- 5) The project is currently funded entirely with local funds; however, the local government intends to secure federal funding at a future date

Once the PE oversight process is implemented, it will be the responsibility of the GDOT Project Manager to work with the GDOT Office of Financial Management to establish an appropriate amount of federal-aid funded PE oversight funding, or work with the local government to secure locally sourced PE oversight funds.

If you approve of this process, please sign below. Once an acceptable process is developed and approved by both the Chief Engineer and Director of Planning, we will provide the finalized process to the Office of Program Control for distribution to the GDOT Project Managers and incorporation into future Project Framework Agreements. If you have any questions, please contact Matthew Fowler at 404-631-1777.

Approved: \_\_\_\_\_

Todd I. Long, PE, PTOE, Director of Planning

7/27/10  
Date

Approved: \_\_\_\_\_

Gerald M. Ross, PE, Chief Engineer/Deputy Commissioner

10/7/20  
Date

ATA:MF

**ATTACHMENT "D"**  
**GDOT Oversight Estimate for Locally Administered Project**

Thursday, April 11, 2013 3:12 PM

<b>PI Number</b>	<input type="text" value="0012622"/>	<b>Project Number</b>	<input type="text"/>
<b>County</b>	<input type="text" value="Douglas"/>	<b>Project Length</b>	<input type="text" value="10.7"/> Miles
<b>Project Manager</b>	<input type="text" value="Burney, Cynthia"/>	<b>Project Cost</b>	<input type="text" value="\$ 25,000,000.00"/>
<b>Project Type</b>	<input type="text" value="ITS (Intelligent Transportation System)"/>		
<b>Project Description</b>	<input type="text" value="SR 5; SR 92 &amp; CR 812/Chapel Hill Road - ITS Expansion"/>		
<b>Expected Life of Project</b>	<input type="text" value="2.00"/> Years		

Project Phase	Oversight Hours	Oversight Cost
1. Project Initiation	0	\$ 0.00
2. Concept Development	0	\$ 0.00
3. Database Preparation*	0	\$ 0.00
4. Preliminary Design	0	\$ 0.00
5. Environmental	0	\$ 0.00
6. Final Design	0	\$ 0.00
Travel Expenses		\$ -
<b>Total Oversight Estimate</b>	<b>0</b>	<b>\$ 0.00</b>
Percentage of Project Cost	.00%	

C:\Documents and Settings\vgavalas\My Documents\Oversight Estimate 0010000.doc

**ATTACHMENT "E"  
GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT  
AFFIDAVIT**

Name of Contracting Entity: Douglas County  
Contract No. and Name: PI# 0012622

By executing this affidavit, the undersigned person or entity verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm, or entity which is contracting with the Georgia Department of Transportation has registered with, is authorized to participate in, and is participating in the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91.

The undersigned person or entity further agrees that it will continue to use the federal work authorization program throughout the contract period, and it will contract for the physical performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the undersigned with the information required by O.C.G.A. § 13-10-91(b).

The undersigned person or entity further agrees to maintain records of such compliance and provide a copy of each such verification to the Georgia Department of Transportation within five (5) business days after any subcontractor is retained to perform such service.

112382  
E-Verify / Company Identification Number  
4-8-08  
Date of Authorization  
[Signature]  
Signature of Authorized Officer or Agent  
Tom Worthan  
Printed Name of Authorized Officer or Agent  
Chairman  
Title of Authorized Officer or Agent  
12-9-2013  
Date

SUBSCRIBED AND SWORN  
BEFORE ME ON THIS THE  
9 DAY OF December, 2013  
Lisa M Watson  
Notary Public  
My Commission Expires: 5-26-17



**ATTACHMENT "F"**

**TITLE VI INTRODUCTION**

As a sub-recipient of federal funds from Georgia Department of Transportation, all municipalities are required to comply with Title VI of the Civil Rights Act of 1964 which provides that:

**"No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, or be denied the benefits of, or be subjected To discrimination under any program or activity receiving federal assistance under This title or carried out under this title."**

Additionally, the Civil Rights Restoration Act of 1987, expanded the definition of the terms "programs and activities" to include all programs or activities of federal recipients, subrecipients, and contractors, whether or not such programs and activities are federally assisted.

The provisions of Title VI apply to all contractors, subcontractors, consultants and suppliers. And is a condition for receiving federal funds. All sub recipients must sign Title VI assurances that they will not discriminate as stated in Title VI of the Civil Rights Act of 1964.

In the event that the sub recipient distributes federal aid funds to second tier entity, the sub-recipient shall include Title VI language in all written documents and will monitor for compliance. If, these assurances are not signed, the City or County government may be subjected to the loss of federal assistance.

All sub recipients that receive federal assistance must also include Federal Highways Administrations 1273 in their contracts. The FHWA 1273 sets out guidance for ensuring non discrimination and encouraging minority participation and outreach.

Enclosed you will find Title VI acknowledgment form and the Title VI assurances. The Title VI acknowledgment form and Title VI assurances must be signed by your local government official if it has not been signed.

Revised: 12/2011

**ATTACHMENT "F"**

**TITLE VI ACKNOWLEDGEMENT FORM**

The Douglas County assures that no person shall on the grounds of race, color, national origin or sex as provided by Title VI of the Civil Rights Act of 1964, and the Civil Rights Restoration Act of 1987 be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any City or County sponsored program or activity. The Douglas County assures that every effort will be made to ensure non discrimination in all of its programs or activities, whether those programs are federally funded or not.

Assurance of compliance therefore falls under the proper authority of the City Council or the County Board of Commissioners. The Title VI Coordinator or Liaison is authorized to ensure compliance with provisions of this policy and with the Law, including the requirements of 23 Code of Federal Regulations (CFR) 200 and 49 CFR 21.

Chairman, [Signature]  
Official Name and Title

12.9.13  
Date

**Citations:**

Title VI of the Civil Rights Act of 1964; 42 USC 2000d to 2000d-4; 42 USC 4601 to 4655; 23 USC 109(h); 23 USC 324; DOT Order 1050.2; EO 12250; EO 12898; 28CFR 50.3

**Other Nondiscrimination Authorities Expanded the range and scope of Title VI coverage and applicability**

- The 1970 Uniform Act (42 USC 4601)
- Section 504 of the 1973 Rehabilitation Act (29 USC 790)
- The 1973 Federal-aid Highway Act (23 USC 324)
- The 1975 Age Discrimination Act (42 USC 6101)
- Implementing Regulations (49 CFR 21 & 23 CFR 200)
- Executive Order 12898 on Environmental Justice (EJ)
- Executive Order 13166 on Limited English Proficiency (LEP)

# **ATTACHMENT 5**

## **Concept of Operations**



# **Concept of Operations Douglas County Intelligent Transportation System (ITS) Expansion**

## **P.I. No:**

PI #0012622, RFQ #13-015  
(ITS Expansion on SR 92, US 78, and Chapel Hill Rd)

## **Prepared for:**

DOUGLAS COUNTY BOARD OF COMMISSIONERS  
8700 HOSPITAL DRIVE  
DOUGLASVILLE, GA 30134

## **Prepared by:**



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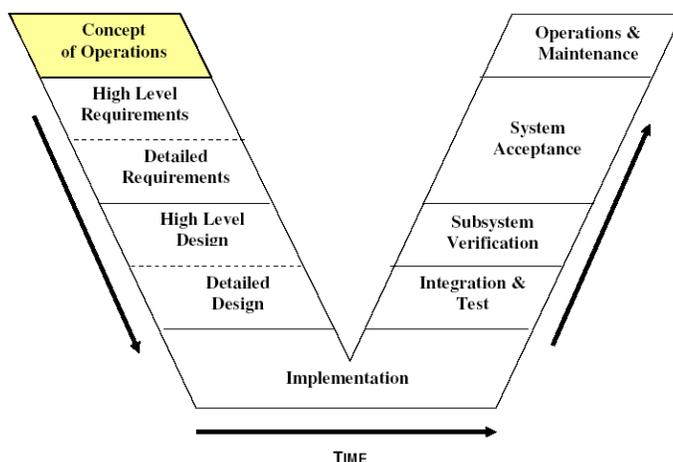
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# 1 INTRODUCTION

The Concept of Operations describes Douglas County and stakeholders operational goals, needs and Intelligent Transportation Systems (ITS) solutions to improve transportation operations and incident management on SR 92, US 78, and Chapel Hill Road.

The Concept of Operations represents the first step in the systems engineering process, depicted below in Figure 1-1 and is consistent with Federal Highway Administration (FHWA) guidelines for preparation of Operational Concept documents.



**Figure 1 – Systems Engineering Process**

## 1.1 Study Process

Douglas County and area stakeholders have previously identified their issues, needs and requirements for the project. The following documents were referenced during the development of the Concept of Operations as they document these issues, needs, requirements as well as the existing system and current operations of the ITS:

1. *Douglas County Comprehensive Transportation Plan (November 2009)*

## 1.2 Document Organization

The Concept of Operations document has been organized to give a broad over view and then provide additional details to meet the needs of the intended audience.

- *Chapter 2* begins with the overall Scope of the project – the road map that was used to develop the Concept of Operations. This chapter includes high-level information on the geographical boundary of the project, the users of the corridors as well as the overall project mission and vision.
- *Chapter 3* describes the operational needs of the SR 92, US 78, and Chapel Hill Road corridors, including the current traffic conditions experienced, how the County manages the corridors and how the implementation of an ATMS along the corridors could help improve traffic operations.
- *Chapter 4* offers a system overview of the current and future ATMS for the SR 92, US 78, and Chapel Hill Road corridors. This section includes a set of figures that show the scope of the project design concept (field devices, equipment and infrastructure) along with solutions that address the operational needs.
- *Chapter 5* describes the operational and support environment required for the proposed ITS expansion.
- *Chapter 6* provides operational scenarios from the perspective of the user using real-world operational scenarios to describe the proposed system capabilities and how they relate to each other and could be used / operated.
- *Appendix A* provides the reader with a set of acronyms used in the document.

## 2 SCOPE OF PROJECT

The Douglas County ITS Expansion Concept of Operations is intended to meet the requirements of the proposed Scope of Work. The document has been written with a specific purpose while addressing the mission of Douglas County and the future vision for the SR 92, US 78, and Chapel Hill Road corridors. The document is written to address an audience who is interested in improving transportation operations along the SR 92, US 78, and Chapel Hill Road corridors while gaining a better understanding of who uses the corridor.

### 2.1 Purpose for Developing the Concept of Operations

The Concept of Operations describes current operations in the project area, as well as addresses what is needed to operate the SR 92, US 78, and Chapel Hill Road corridors more efficiently and safely. The objective is to coordinate traffic operations and incident management along the corridor. The Concept will describe the future ITS operations on SR 92, US 78, and Chapel Hill Road that address the needs of the corridors and meets the stated objective.

### 2.2 ATMS Vision and Mission

The vision for the SR 92, US 78, and Chapel Hill Road corridors are well-managed corridors that include a robust Ethernet fiber communications network connecting well-maintained ITS field devices. These field devices will be used by the County to perform CCTV surveillance and travel time reporting. The system will have excess capacity to accommodate future devices and upgrades.

The mission for the ITS expansion was derived from information gathered from the meetings with the Douglas County where the following requirements became evident:

- Balance the flow of traffic using the corridors safely and efficiently
- Manage incidents and special events along the system
- Facilitate communication to incident responders and the public

## 2.3 User Description

The document identifies the users and managers of the corridor and their relationships. The primary user of the Douglas County ITS Expansion Concept of Operations will be Douglas County, the City of Douglasville, and its Municipal Departments.

### Douglas County Department of Transportation

The County has a primary function of managing traffic signals, maintaining and adjusting timing plans and performing maintenance on the traffic signal equipment. The County also manages both planned and unplanned incidents that impact the SR 92, US 78, and Chapel Hill Road corridors. This incident management includes activities that clear incidents and restore traffic to normal conditions as soon as possible.

### Georgia DOT

SR 92 and US 78 are state routes and are under the jurisdiction of GDOT. GDOT has delegated signal operations and maintenance along the project corridors. Any significant change that the County makes to the SR 92 and US 78 is of interest to GDOT. GDOT seeks to obtain as much information as possible on incidents and maintenance and construction activities that involve road closures.

### City of Douglasville

The City of Douglasville has a primary function of managing traffic signals, maintaining and adjusting timing plans and performing maintenance on the traffic signal equipment within the City limits. The City manages both planned and unplanned incidents that may impact the SR 92, US 78, and Chapel Hill Road corridors. This incident management includes activities that clear incidents and restore traffic to normal conditions as soon as possible.

### Douglasville Police, Fire Departments and EMS

Emergency responders often use SR 92, US 78, and Chapel Hill Road corridors for incident response. Emergency responders primary concern at an incident is safety; however they are also interested in clearing the scene as quickly as possible to limit the time of exposure to responders and others on the scene.

### 911 Center

Dispatchers rely on reliable traffic information, such as knowing about lane closures due to construction and maintenance. With this information they can dispatch emergency responders along the fastest route to incidents.

### Local Motorists

Local motorists on SR 92, US 78, and Chapel Hill Road corridors are typically making short-distance trips within the City or to an adjacent city or county using the corridor. Local motorists expect SR 92, US 78, and Chapel Hill Road corridors to be routes that have limited traffic signal stops and a predictable mean speed, especially during non-peak hours.

### Commuters

Most commuters travel SR 92, US 78, and Chapel Hill Road on a daily basis traveling to and from their places of employment, traveling primarily during the AM and PM peak traffic times. The majority of SR 92, US 78, and Chapel Hill Road commuters are traveling towards I-20 eastbound in the AM peak and traveling from I-20 westbound in the PM peak. These corridors experience significant congestion in both the AM and PM peak, leaving commuters with limited options. These options include altering the time they start their trip, telecommuting, or a hybrid of these options. Most commuters seek consistent commute times, so a well-managed system is important to meet this need. In the future, the number of commuters is expected to increase as growth occurs in the west and north of the corridor.

### Media

Members of the media typically include television, radio and private information service providers (ISPs). These groups are interested in obtaining information on traffic issues along SR 92, US 78, and Chapel Hill Road so they can broadcast this information to their viewers, listeners and subscribers.

## **2.4 Intended Audience**

The primary audience for the Concept of Operations is Douglas County and City of Douglasville, specifically the following departments:

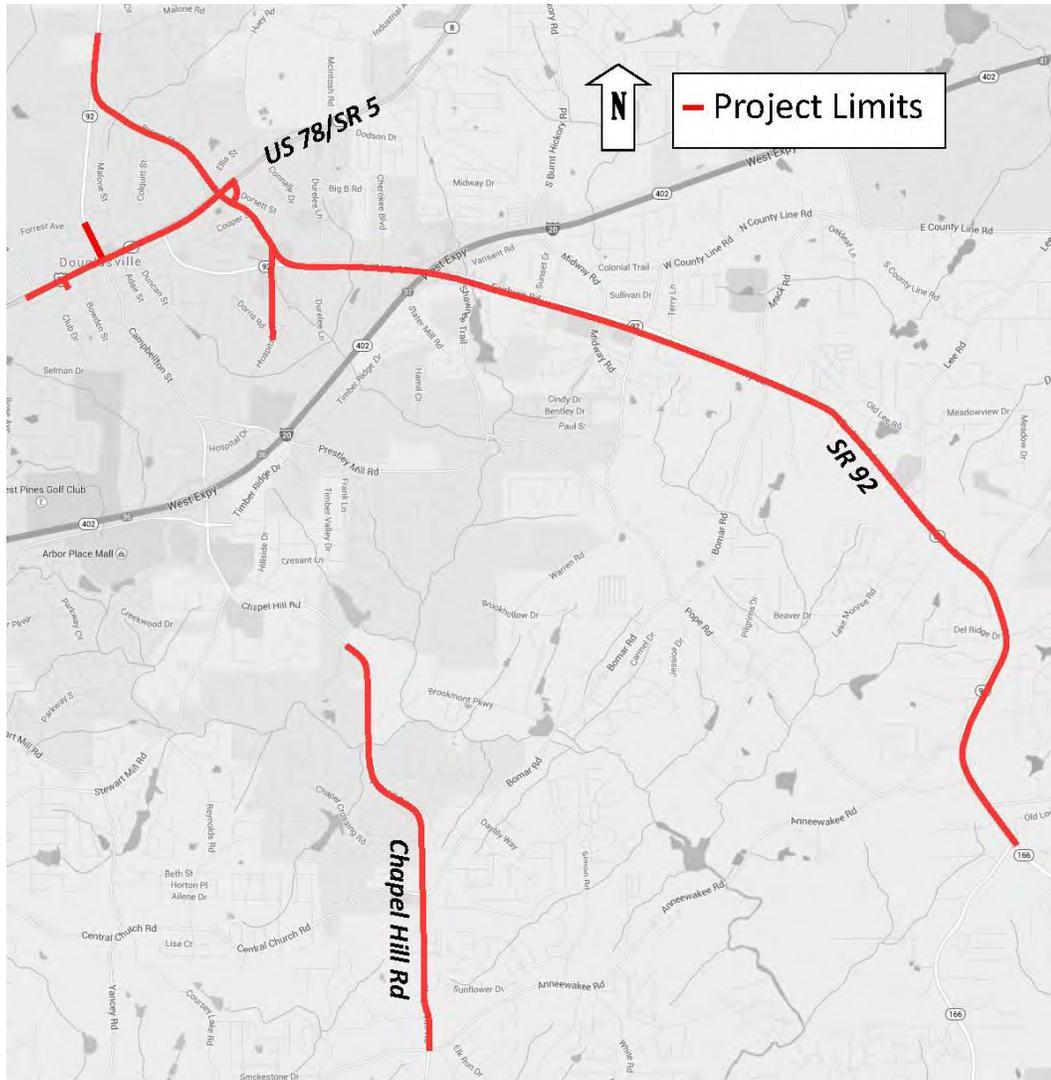


- Transportation
- Police
- Fire
- Emergency Management Services (EMS)
- Public Works
- Information Technology (IT)
- Maintenance

Others who will be interested in this document include GDOT, private information service providers, neighboring areas; and others who are actively using, planning to use, or advising other agencies on how to use ITS operations to manage transportation across Georgia.

## **2.5 Boundary**

The boundary of the area to be served by the project covers multiple arterial roadways as depicted in Figure 2-1. ITS field devices and associated communications devices will be located along the arterial roadways and will be used to provide benefit to travelers on these corridors as well as those entering and exiting the corridor from a cross streets or arterials. Communication between the City Traffic Control Center (TCC) and the ITS field devices along the corridors must be provided.



**Figure 2-1 – Douglas County ITS Expansion Project Boundaries**

### 3 OPERATIONAL NEEDS

Table 3-1 is a list of needs identified by the County along the SR 92, US 78, Chapel Hill Corridors along with the relevant user service from the ITS Architecture and the proposed measures that could be employed to address each need.

**Table 3-1 Needs and Recommended ITS Measures**

ID	User Services	Needs	Measures
1.	Traffic Management	Better communications for the entire corridor	Fill communication gaps on SR 92, US 78, and Chapel Hill Road to create continuous communications infrastructure to the Douglas County traffic control center
2.	Traffic Management	Effective management of maintenance and construction activities	<ul style="list-style-type: none"> <li>• Electronic tracking of all maintenance activities</li> <li>• Automated notification of loop failures</li> <li>• Develop an inventory tracking system</li> </ul>
3.	Traffic Management	Improve signal timing coordination and effectiveness	<ul style="list-style-type: none"> <li>• Re-time signals every 2 to 3 years</li> <li>• Measure the effectiveness of existing signal timing plans</li> <li>• Explore Adaptive signal timing</li> </ul>
4.	Traffic Management	Share traffic and incident information with neighboring jurisdictions when needed	Provide capability to view traffic and incident information from neighboring jurisdictions
5.	Traveler Information	Traveler information dissemination along SR 92, US 78, and Chapel Hill Road	<ul style="list-style-type: none"> <li>• Install CCTV where necessary</li> <li>• Install Travel Time System</li> <li>• Develop web site(s) for SR 92, US 78, and Chapel Hill Road</li> <li>• Explore individual subscriber alert notification system</li> <li>• Disseminate benefits of altering trip times using travel time information provided by the system</li> </ul>
6.	Traveler Information	SR 92, US 78, and Chapel Hill Road information to 511 system	Provide capability to send information to the GDOT 511 system
7.	Traveler Information	Notification of maintenance activities and special events to the public	<ul style="list-style-type: none"> <li>• Provide information on web site(s)</li> <li>• Explore individual subscriber alert notification system</li> <li>• HAR (Highway Advisory Radio) for special events</li> </ul>

ID	User Services	Needs	Measures
8.	Incident / Emergency Management	Respond to and clear incidents quickly.	<ul style="list-style-type: none"> <li>• Provide access of CCTV cameras to the 911 centers</li> <li>• Provide real time road conditions, maintenance and construction activities to the 911 center</li> </ul>
9.	Incident / Emergency Management	Douglas County Police & Fire need road conditions for SR 92, US 78, and Chapel Hill Road as it is a primary response route and they lack good alternate routes	<ul style="list-style-type: none"> <li>• Same measures as ID #1 above</li> <li>• Complete CCTV coverage on SR 92, US 78, and Chapel Hill Road</li> <li>• Enhanced CCTV viewing capability in 911 center</li> <li>• Consider fixed CCTV cameras at desired locations</li> </ul>
10.	Incident / Emergency Management	Diversion timing plans for SR 92, US 78, and Chapel Hill Road during major incident	Develop diversion timing plans in coordination with the other cities
11.	Incident / Emergency Management	Track emergency vehicles for quicker incident response	Evaluate the need for AVL in emergency vehicles
12.	Incident / Emergency Management	Improve response time and safety of fire trucks through traffic signals	Evaluate the need for pre-emption
13.	Special Events Management	Enhance Special Events Management	<ul style="list-style-type: none"> <li>• Enhance coordination between the agencies for special events</li> <li>• Provide CMS, CCTV, pre-event traveler information</li> <li>• Develop SOP between the local cities and their Police Departments regarding the ability to manually override signals during special events</li> </ul>
14.	Public Transportation	Communications for future transit services	Design additional communications capacity for future transit use

### **3.1 Existing Operational Characteristics**

The SR 92, US 78, and Chapel Hill Road ITS Expansion project is comprised of 10.7-miles of roadway. SR 92 and US 78 are both designated as Regional Thoroughfares and are also included on the ASTRoMap system, a regional network of roadways critical for truck traffic and freight movement. Chapel Hill Road is on the RSTS network and provides connectivity to both SR 92 and US 78, while also providing access to downtown Douglasville and Arbor Place Mall. This roadway services a number of commercial, residential housing, schools and retail establishments. The entire segment has unrestricted access. The roadway is heavily congested during weekday AM and PM rush hours, leading to delays. However, the roadway is also busy during non-peak hours as well. Some intersections frequently operate well beyond design capacity.

SR 92 and Chapel Hill Road intersect with I-20, one of the heaviest traveled roadways in the state. These routes are major thoroughfares for commuters working near downtown Atlanta. Traffic volumes are anticipated to increase over time as more residents move into the area and along the corridors and more retail and other establishments are built along the routes.

### **3.2 Incident and Emergency Management**

Incident and Emergency Management on SR 92, US 78, and Chapel Hill Road is performed by the County and the County DOTs' main role during an incident or emergency is helping with traffic control at the scene. Although Incident and Emergency are two separate user services, in the context of SR 92, US 78, and Chapel Hill Road, many of the needs and resulting measures as described in Table 3-1 relate to both services.

Incident Management is defined as the tasks and tools needed to assist emergency responders (Police, Fire and EMS) respond to and clear incidents quickly. This may involve closing and re-opening lanes of traffic as needed while providing the fastest incident access possible for emergency - Police, Fire and EMS as well as wrecker

services, especially through signalized intersections. The 911 Center also needs to be notified of maintenance and construction-related activity and/or lane closures along or in the vicinity of SR 92, US 78, and Chapel Hill Road.

The County needs to be able to view incidents that occur on SR 92, US 78, and Chapel Hill Road and be able to provide the best traffic management support to emergency responders. Quick and efficient communication between all entities involved within the County as well as between neighboring cities is necessary and critical to the success of the corridor's Transportation Incident Management (TIM) plan.

Emergency Management is defined as the ability to manage emergencies that impact the roadway network. In the context of the SR 92, US 78, and Chapel Hill Road corridors, the County is primarily concerned with maintaining a high level of safety for all emergency responders and motorists during emergency situations and/or evacuations.

### **3.3 Special Events Management**

There are several regularly occurring special events within Douglas County that impact traffic. Although the local Police Department is the main player in managing special events, the County DOT has a supporting role to assist in traffic management. Coordination with the neighboring agencies and GDOT will ensure that traffic operations are minimally impacted during special events.

### **3.4 Safety**

The County has identified a need to provide a way for their TCC staff to remotely monitor video images at high crash intersections and at other locations where pedestrian safety is a known concern.

### **3.5 Traffic Management**

The County performs Traffic Management on SR 92, US 78, and Chapel Hill Road with a main focus on maintaining up-to-date signal timing plans that minimize delay while not causing excessive delay on cross streets. Once the existing fiber optic communications



network project is upgraded and expanded, and new CCTVs are added, it will be possible for the City to further expand their remote traffic signal operations and maintenance activities from the Douglas County TCC at a significant cost benefit.

## 4 SYSTEM OVERVIEW

The purpose of this section is to provide a high-level description of the proposed system components, focusing on the interrelationships among the elements, system capabilities (functions) and the goals and objectives.

Chapter 3 discussed the operational needs for the SR 92, US 78, and Chapel Hill Road corridors that were identified by the County. Chapter 4 describes what the corridors would “look like” if all of the recommended measures were implemented. In other words, this chapter describes the ultimate advanced traffic management system considering financial or other constraints. Those constraints will be evaluated during the development of the Concept Report that follows this Concept of Operations.

### 4.1 Recommended ATMS

This project involves the expansion and upgrade of ATMS/ITS and Traffic Signal Control components and capabilities along multiple local arterial and state roads within Douglas County. The project would provide enhanced and improved traffic signal and management operations, incident/emergency management and surveillance capabilities as well as fill-in gaps in the existing communications coverage within Douglas County. Improvements and upgrades to be provided under this project would include the following:

#### ***Field Components –***

***Description*** - would include multiple ITS/traffic field devices and fiber optic communications equipment and infrastructure as follows:

- a. *Fiber Optic Communications* –includes approximately 4.5 miles of new fiber optic infrastructure (i.e., both overhead/aerial and underground) to expand the existing and/or planned fiber communications to support improved traffic signal operations, support video surveillance and other ITS devices.

- b. *Cabinet Communications Upgrades* – would include communications network upgrades to traffic signal cabinets to provide hardened Ethernet switches to provide IP network communications to/from the signalized intersection.
- c. *CCTV Video Surveillance System* – would include approximately 10 CCTV IP cameras located at intersections and along the major arterial routes and corridors to better monitor traffic flow conditions and better respond to incidents. Cameras will primarily be mounted to traffic signal mast arm pole extensions to provide comprehensive video surveillance coverage at key/critical intersections.
- d. *Supporting Infrastructure* – The proposed project ITS devices will utilize existing power sources and signal poles wherever possible to minimize construction time and limit environmental impacts. It is expected that new ITS field cabinets will be required. The ITS devices provided under this project will communicate with the Douglas County TCC via the proposed and existing fiber optic infrastructure.
- e. *Bluetooth Travel Time Measuring Device* – would provide real time travel times of vehicles along the project corridors.

***Anticipated Benefits --***

- 1. Fiber optic communications expansion and cabinet network communications upgrades will provide the County with a more reliable system resulting in a reduction in traffic signal down time, provide better coordination with decreased congestion along routes / corridors, provide the capability to remotely monitor and configure system components reducing maintenance cost and providing faster response to system failures, and provide the necessary network bandwidth that allows for CCTV video surveillance cameras to be deployed at multiple critical intersections and along corridors to facilitate overall incident management and response.

2. Fiber optic communications network upgrades will allow for monitoring in real-time of traffic signal intersection controller and other system equipment operations and performance. Each traffic signal cabinet upgraded on this project will be provided with an Ethernet switch and fiber optic connectivity allowing for centralized network monitoring of the system's health and performance. County Traffic Operators will be able to remotely monitor, troubleshoot and optimize each intersection from the County's TCC and will have the capability of receiving warnings of traffic signal failures and addressing them from the TCC as opposed to waiting for someone to call in an issue and having to send a staff member out to the intersection. Of course, some instances will require hands-on attention, but the new system will significantly reduce the signal maintenance response times.
3. Expansion of CCTV surveillance cameras at intersections with a high crash frequency will facilitate traffic and emergency management operations, coordination and improve safety. The additional CCTV cameras will allow County Traffic Operators to monitor, verify, confirm and respond to incidents and coordinate with emergency responders and law enforcement agencies, remotely review traffic signal issues, and other operations along the roadway/corridor in a more efficient and timely manner.
4. Bluetooth travel time technology is used to measure the average speed and travel times of vehicles along a corridor. This technology can be used to track the performance of a corridor over time, and provide ongoing performance measurements needed to assess to the effectiveness of the signal timing plans.

Appendix B and C show the proposed fiber network and ITS / traffic signal components included in the project.



## **5 OPERATIONAL and SUPPORT ENVIRONMENT**

This section of the Concept of Operations describes the environment in which the ITS and the Douglas County TCC will operate, including information about the system's environment in the following categories: facilities, equipment, hardware, software, personnel, operational procedures and support necessary to operate the deployed system.

### **5.1 Facilities, Equipment, Hardware, and Software**

The Douglas County TCC is currently in operation and outfitted to handle the ITS Expansion project.

### **5.2 Personnel**

It is expected that existing County Traffic Engineering will continue to handle the TCC duties once the ITS/traffic components are upgraded and expanded.

## **6 OPERATIONAL SCENARIOS**

The Concept of Operations is easier to understand when the items that are addressed in the earlier chapters of the document are expressed in the manner of real-world operational scenarios. Two common scenarios have been included in this chapter to help the audience better understand the items described in the Concept.

### **6.1 Signal Failure and Timing Updates**

Monday Morning: It is a typical Monday morning in Douglas County. George, a TCC Operator, arrives in the TCC and begins his work day. He settles into his chair at the main operator console, adjusts the console monitors, keyboard height, and logs into the system to begin his daily routine. Using the systems at his disposal he:

- Views surveillance video to determine if any major traffic problems exist.
- Selects video feeds to be displayed on the display wall and his various monitors.
- Reviews all connected traffic signals to verify that they are on-line and operating properly.

George is notified that a citizen has complained about the operation of the traffic signal on Chapel Hill Road at Anneewakee Road. Specifically, the citizen has complained that eastbound traffic is not getting a left turn signal. George selects the surveillance camera at the intersection and puts the video image on one of his monitors. On a separate monitor, he brings up the data from the traffic signal controller at the intersection. Using the real-time video images in concert with the controller data, he realizes that the citizen is correct – eastbound vehicles are not being recognized by the vehicle detectors at the intersection. He checks TACTICS and the CCTV camera for any failure information and attempts to remotely fix the problem. Unsuccessful, George prepares a maintenance ticket and uses the County radio at his console to call Pete, the County's Traffic Signal Technician, and asks him to correct the problem.

*Using the systems available, the TCC staff can check the operation of many of the roadways and signals in the area. They can also verify operational complaints and in many cases, resolve the problem without sending crews to the scene. By verifying the complaints, crew time is not wasted driving to a signal just to determine that a problem does not exist.*

Meanwhile, Alex, one of the City's Traffic Signal Engineers has entered the TCC to begin his day. He has been working the entire month developing new signal timing plans for signals on Chapel Hill Road south of I-20. This area gets a lot of traffic from the shopping centers and Arbor Place Mall. During the month, he has collected hours of video data of traffic on the route using the video recording software in the TCC computers. Viewed at high-speed playback, he is able to view traffic patterns over several hours in just a few minutes. This information has helped him in setting up his timing plans. Supported by field crews, Alex uses the computers in the work area of the TCC to download the new timing plans to the controllers in the field. Once the timing plans are downloaded and verified as operational, the field crews are dispatched to other tasks. Alex spends the next few hours observing traffic along the route using the surveillance cameras and connects to the individual traffic signals as necessary to make small adjustments in the timing plans.

*Operating from the TCC, the signal engineer has access to a more comprehensive view of the impacts of his signal timing plan. Changes to the operation of any individual signal controller can be performed in less than the amount of time it would take for the signal engineer to drive from one intersection to the other, park his vehicle, access the signal controller and reprogram the database.*

## 6.2 Emergency Signal Timing Implementation

One Friday afternoon in August about 4:00 PM there is a major accident on I-20 Westbound between SR 92 (exit 37) and Chapel Hill Rd (exit 36). The accident involves an overturned tractor-trailer that lost control on the wet pavement. The accident not only blocks 2 out of 3 lanes on I-20 but also causes secondary rear-end accidents with two vehicles at the end of the queue. This completely closes I-20. Due to the severe backups caused by the accidents on I-20 for commuters traveling westbound, the 911 center in Douglasville starts receiving calls from motorists. The information is verified by Jack, the 911 dispatcher by viewing the appropriate CCTV cameras on located on SR 92 at I-20. The 911 Center dispatches Police, Fire and Emergency Services as well as wrecker services to clear the incident as quickly as possible. The GDOT TMC is notified about the incident and their operator updates the NaviGator and 511 systems. The Douglas County TCC is also notified of the accident and their TCC operator verifies it by looking at the SR 92 shared video and the NaviGator system. Westbound traffic on I-20 begins detouring onto the SR 92/Fairburn Rd. north exit.

At 4:30 PM, the Douglas County TCC operator decides to deploy the emergency signal timing plan to help north bound traffic flow on SR 92. The signal timing plans deployed have a high cycle length that favors north bound traffic flow. The county has a SOP prepared for situations like this which describes the communications and signal timing plan activation protocols and procedures.

It was 6:00 PM when GDOT had successfully cleared the truck and the other accidents from the interstate. By this time there was still heavy congestion on both I-20 and SR 92 and US 78. Douglas County continues to check traffic conditions through CCTV cameras and update the GDOT accordingly. By 8:00 PM, the traffic is cleared and traffic has returned to normal conditions, so the TCC operator decides to switch back to the normal signal timing plans.

*By successful coordination between the three agencies and traveler information dissemination through CMS, 511 and web sites the motorist is kept informed about the incident, and by using the high cycle emergency signal timing plans conditions were improved during the event and conditions return to normal more quickly after the event.*

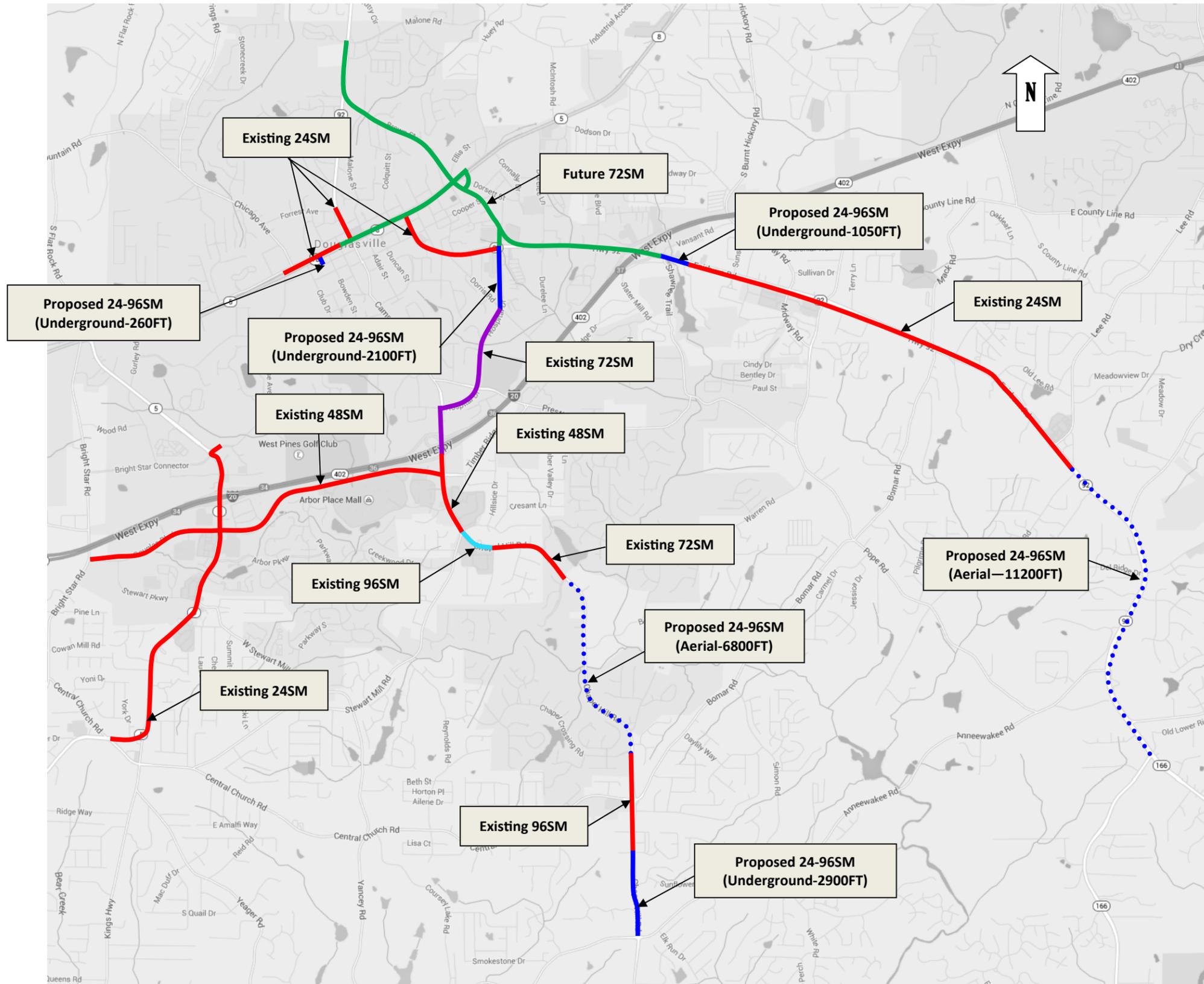
## 7 APPENDIX A – LIST OF ACRONYMS

ATMS .....	Advanced Transportation Management System
AVL .....	Automatic Vehicle Location
CAD .....	Computer Aided Dispatch
CCTV .....	Closed Circuit Television
CMS .....	Changeable Message Sign(s)
DOT .....	Department of Transportation
EMS .....	Emergency Management Service(s)
FHWA .....	Federal Highway Administration
GDOT.....	Georgia Department of Transportation
HAR .....	Highway Advisory Radio
HOV .....	High Occupancy Vehicle
ISP .....	Information Service Provider
IT.....	Information Technology
ITS .....	Intelligent Transportation System
MOU.....	Memorandum of Understanding
PD .....	Police Department
RLS .....	Reversible Lane System
SOP .....	Standard Operating Procedures
SR.....	State Route
TCC.....	Traffic Control Center
TIM.....	Transportation Incident Management
TMC .....	Transportation Management Center



## 8 APPENDIX B – FIBER NETWORK MAP

# Douglas County ITS Expansion Map—Fiber

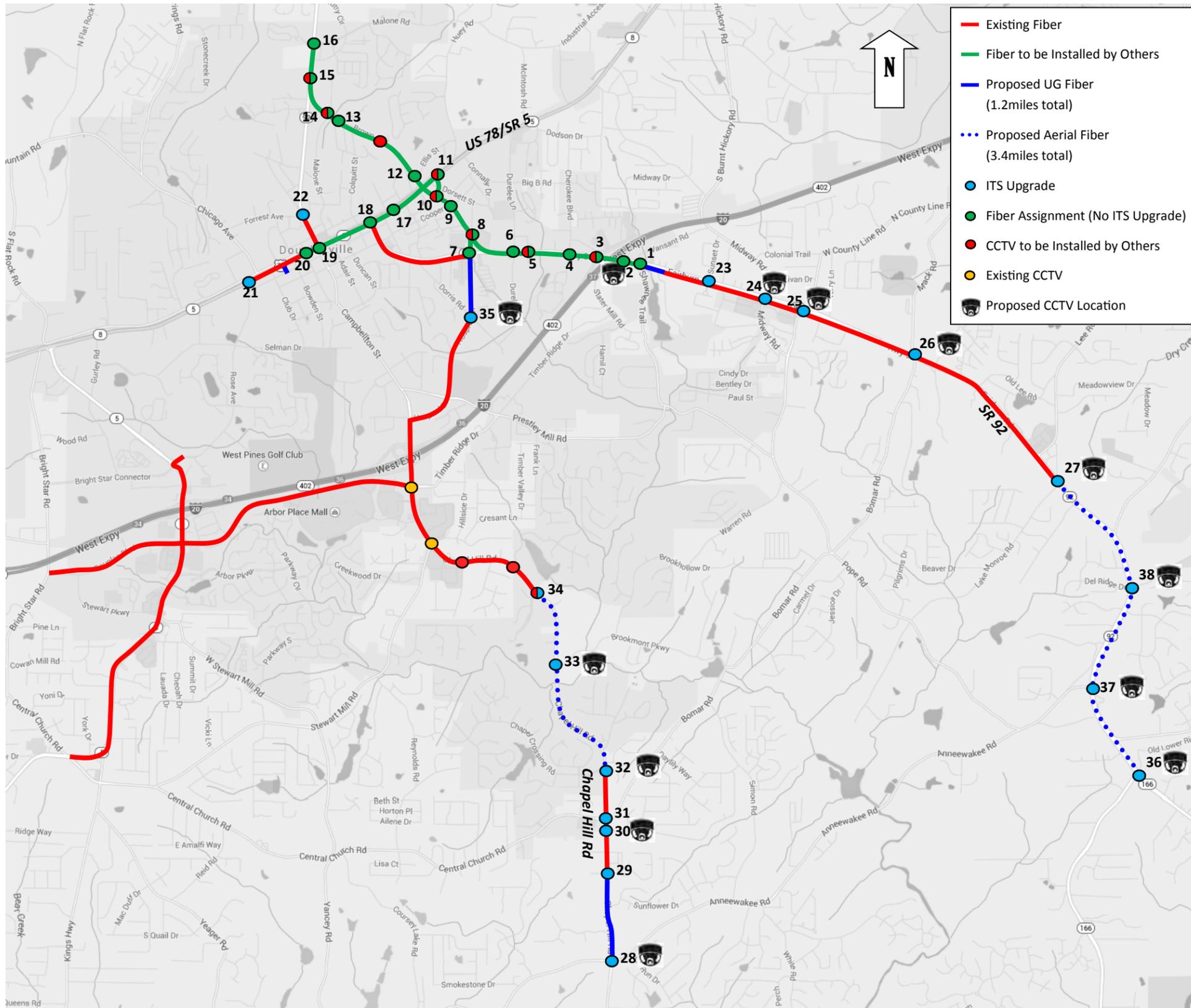


**NOTE:**  
 THE TOTAL PROPOSED UNDERGROUND FIBER IS APPROXIMATELY 1.2 MILES.  
 THE TOTAL PROPOSED AERIAL FIBER IS APPROXIMATELY 3.4 MILES.



## 9 APPENDIX C – ITS COMPONENT LOCATIONS

# Douglas County ITS Expansion Map—Intersection Updates and CCTV Locations



Intersection ID	Main Street	Cross Street
1	SR92	@ Vanstant Rd
2	SR92	@ I-20 EB Ramp
3	SR92	@ I-20 WB Ramp
4	SR92	@ Cherokee Blvd/Earl D. Lee Blvd
5	SR92	@ Durelee Ln
6	SR92	@ Fairburn Rd
7	Hospital Dr	@ Fairburn Rd
8	SR92	@ Hospital Dr
9	SR92	@ Cooper St
10	SR92	@ Ramp onto US78
11	US78	@ Ramp onto SR92
12	SR92	@ Ellis St
13	SR92	@ Colquitt St
14	SR92	@ Malone St
15	SR92	@ Fire Station
16	SR92	@ Malone Rd
17	US78	@ Hwy 92
18	US78	@ Campbellton St
19	US78	@ McCarley St
20	US78	@ Rose Ave
21	US78	@ Forrest Ave
22	SR92	@ Sunset Dr
23	SR92	@ Midway Rd
24	SR92	@ Pope Rd/W County Line Rd
25	SR92	@ Bomar Rd/Mack Rd
26	SR92	@ Lee Rd
27	SR92	@ Lee Rd
28	Chapel Hill Rd	@ Annewakee Rd
29	Chapel Hill Rd	@ Fielding Dr
30	Chapel Hill Rd	@ Willow Ridge Rd
31	Chapel Hill Rd	@ Central Church Rd
32	Chapel Hill Rd	@ Chapel Crossing Rd/Bomar Rd
33	Chapel Hill Rd	@ Brookmont Pkwy
34	Chapel Hill Rd	@ Golf Ridge Blvd
35	Hospital Rd	@ Dorris Rd
36	SR92	@ SR92/Old Lower River Rd
37	SR92	@ Annewakee Rd
38	SR92	@ Factory Shoals Dr