

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

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

FILE P.I. # 0012676 **OFFICE** Design Policy & Support
Forsyth County
GDOT District 1 - Gainesville **DATE** 1/12/2015
Signals: SR 9; SR 20; SR 306; SR 369;
& SR 371 at 10 Locations

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
Ben Rabun, State Bridge Engineer
Kathy Zahul, 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
Brent Cook, District Engineer
David Olson, District Traffic Engineer
Neil Kantner, District Utilities Engineer
Steven Heng, Project Manager
BOARD MEMBER - 7th and 9th Congressional Districts

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

Project Type: <u>Signals (Reconstruction/ Rehabilitation)</u>	P.I. Number: <u>0012676</u>
GDOT District: <u>1</u>	County: <u>Forsyth</u>
Federal Route Number: <u>N/A</u>	State Route Number: <u>9,20,306,369,371</u>
Project Number: _____	

SR 9; SR 20; SR 306; SR 369 & SR 371 @ 10 LOC IN FORSYTH CO.

Submitted for approval:

<u>Chris B. Stewart</u> Chris B. Stewart, Wilburn Engineering	<u>10/9/2014</u> DATE
<u>Albert Shelby</u> State Program Delivery Engineer	<u>10/21/14</u> DATE
<u>Stum Heng</u> GDOT Project Manager	<u>10/14/2014</u> DATE

Recommendation for approval:

* <u>HIRAL PATEL</u> State Environmental Administrator	<u>11/17/2014</u> DATE
* <u>KATHY ZAHUL</u> State Traffic Engineer	<u>10/29/2014</u> DATE

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

* <u>CYNTHIA VAN DYKE</u> State Transportation Planning Administrator	<u>10/28/2014</u> DATE
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Approval:

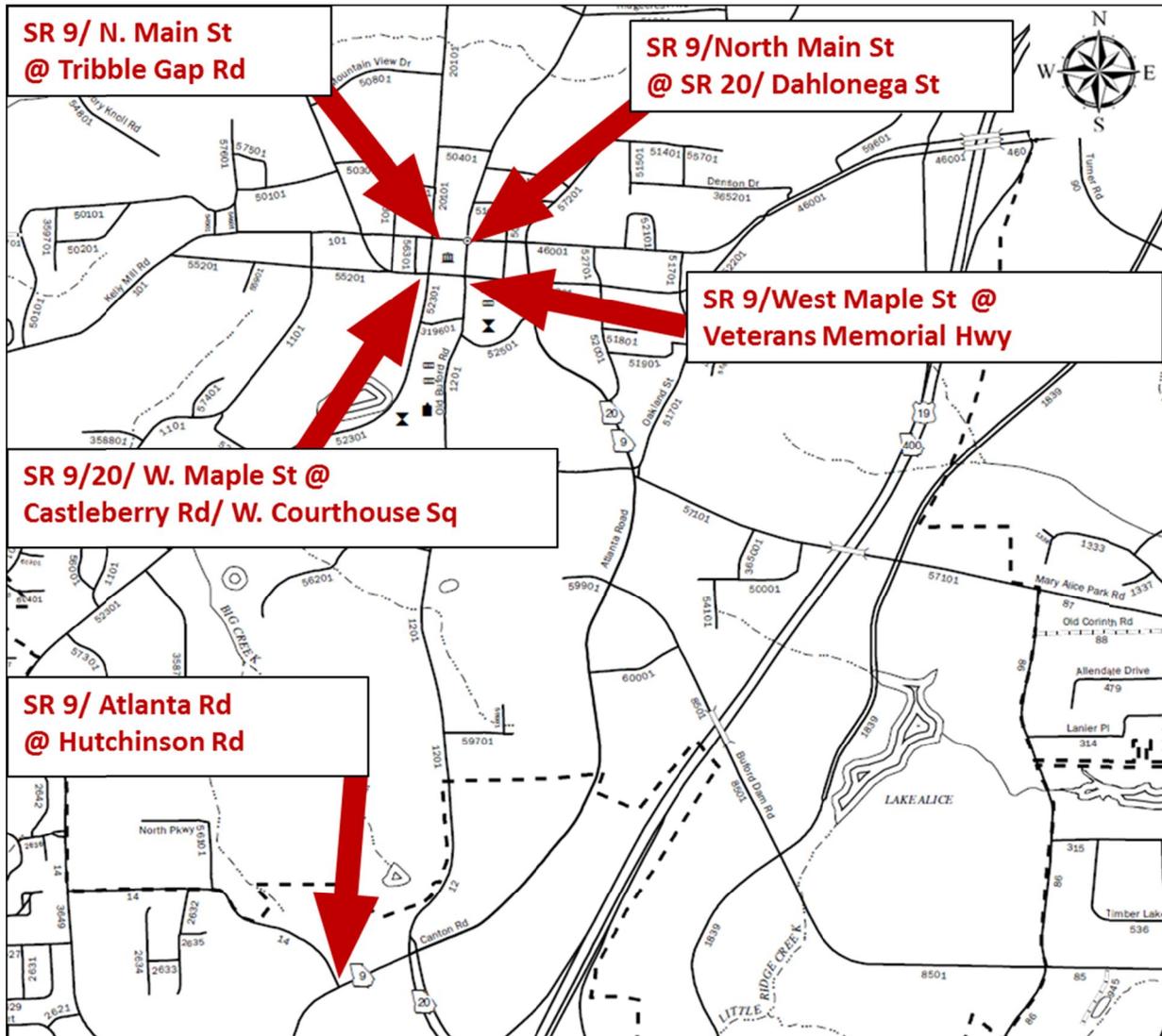
Concur: <u>She Donna</u> GDOT Director of Engineering	<u>1/5/2015</u> DATE
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Approve: <u>Margaret B. Pirkle</u> GDOT Chief Engineer	<u>1/6/15</u> DATE
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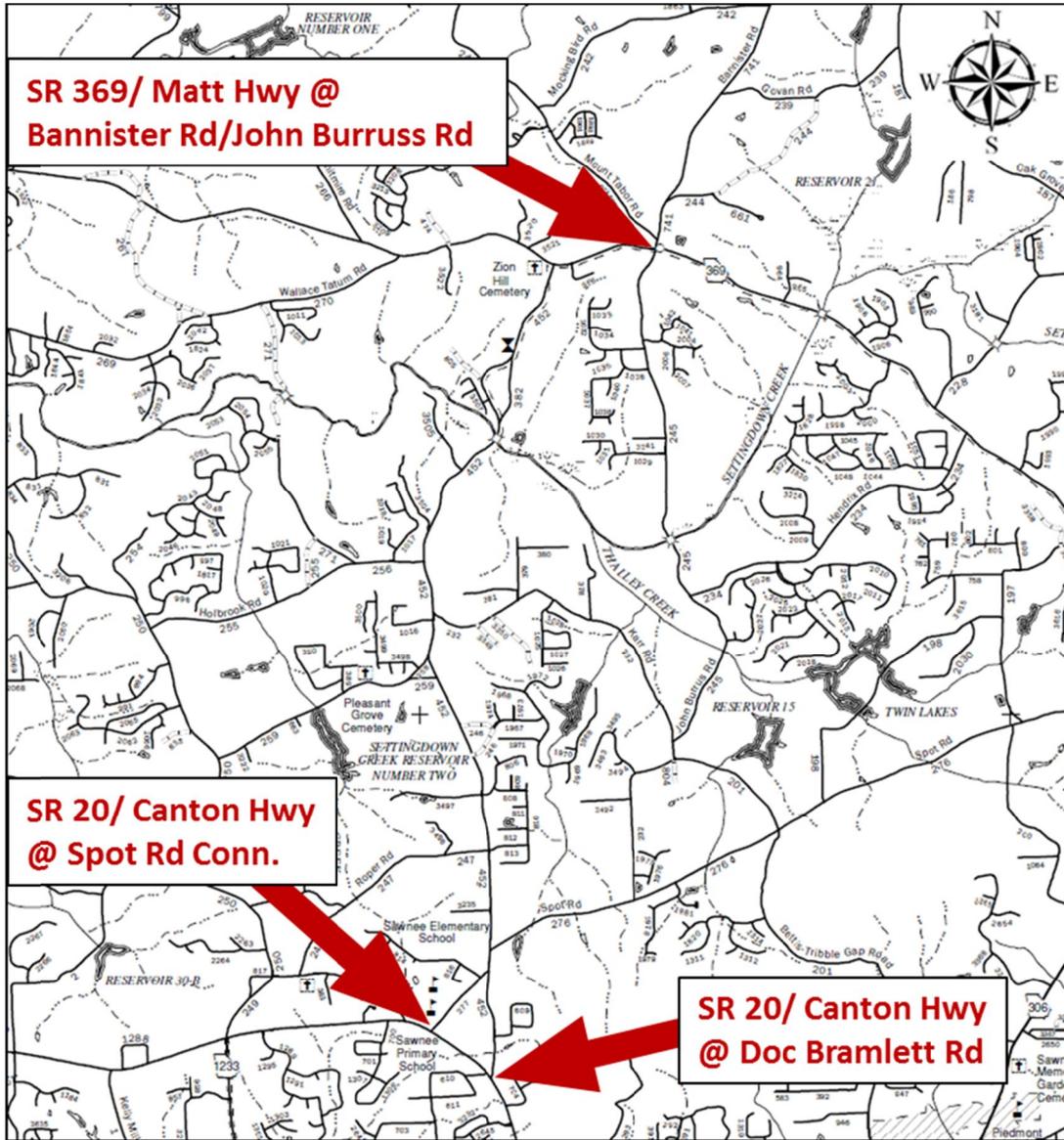
* RECOMMENDATION ON FILE - [Signature]

PROJECT LOCATION

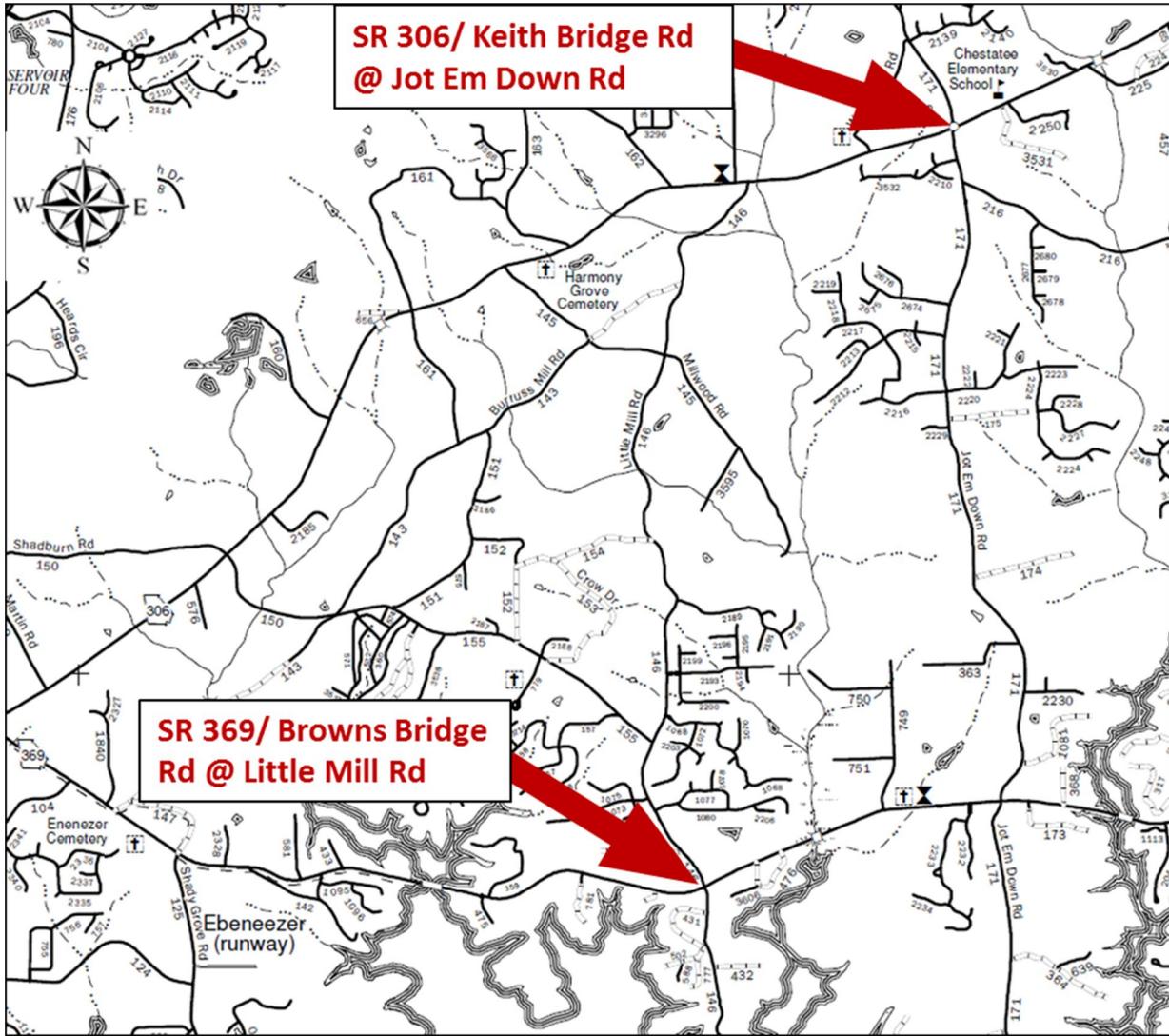
SR 9, SR 20 (Map Not to Scale)



SR 20, SR 369 (Map Not to Scale)



SR 306, SR 369 (Map Not to Scale)



PLANNING & BACKGROUND DATA

Project Justification Statement: This project consists of traffic signal upgrades at 10 locations in Forsyth County. The intersections will be upgraded to meet GDOT and Manual on Uniform Traffic Control Devices (MUTCD) standards. The intersection improvements will include replacing signal poles with new mast arms or strain poles, LED vehicular and pedestrian signal heads, new vehicle detection and signal control equipment. The intersections will be made ADA compliant with new wheelchair ramps and crosswalks.

The project is to upgrade equipment, accommodate pedestrians, and to bring intersections to ADA standards. The following Table will show what the District has noted as reason to upgrade each intersection.

Table 1: Intersection Upgrade Needs

County	City	Primary Route	Intersecting Road	Reason for Upgrade
Forsyth	Cumming	SR 9	Hutchinson Rd	Obsolete Equipment/ADA
Forsyth	Cumming	SR 9/SR 20	Castleberry Rd/W. Courthouse Sq	Obsolete Equipment/ADA
Forsyth	Cumming	SR 9	Veterans Memorial Blvd	Obsolete Equipment/ADA
Forsyth	Cumming	SR 9	Tribble Gap Rd	Obsolete Equipment/ADA
Forsyth	Cumming	SR 9	SR 20/Dahlonega St	Obsolete Equipment/ADA
Forsyth	Cumming	SR 20	Doc Bramlett Rd	Obsolete Equipment/ADA
Forsyth	Cumming	SR 20	Spot Rd Connector	Obsolete Equipment/ADA
Forsyth	Cumming	SR 369	Bannister Rd/ John Burruss Rd	Obsolete Equipment/ADA
Forsyth	Cumming	SR 369	Little Mill Rd	Obsolete Equipment/ADA
Forsyth	Cumming	SR 306	Jot Em Down Rd	Obsolete Equipment/ADA

Existing conditions:

- Intersection No. 1
 - SR 9/ Atlanta Rd at Hutchinson Rd is four-lane roadway with twelve-foot lanes, left turn lanes, and a right turn lane into the shopping center. The southbound lanes on SR 9 merge into one lane leaving the intersection. This signal is a part of the GDOT Regional Traffic Operations program.
- Intersection No. 2
 - SR 9/ SR 20/ West Maple St at Castleberry Rd/ West Courthouse Square is an eastbound one-way, two-lane roadway with 12-foot lanes and a right turn lane onto Castleberry Road.
- Intersection No. 3
 - SR 9 at Veterans Memorial Blvd is a two-lane roadway with twelve-foot lanes. SR 9 travels southbound to the intersection and then joins with SR 20 leaving the intersection eastbound on West Maple Street.
- Intersection No. 4
 - SR 9/ N. Main St at Tribble Gap Rd is a one-way westbound two-lane roadway with twelve-foot lanes and a right turn lane onto Tribble Gap Road.
- Intersection No. 5
 - SR 9/ N. Main St at SR 20/ Dahlonega St is a one-way westbound two-lane roadway with left and right turn lanes onto Dahlonega St.

- Intersection No. 6
 - SR 20/ Canton Hwy at Doc Bramlett Rd is a two-lane roadway with twelve-foot lanes, a southbound left turn lane, northbound two-way left turn lane, and a right turn lane into the car dealership.
- Intersection No. 7
 - SR 20/ Canton Hwy at Spot Rd Connector is a two-lane roadway with twelve-foot lanes, left turn lanes, and a right turn lane into the car dealership.
- Intersection No. 8
 - SR 369/ Matt Hwy at Bannister Rd/ John Burruss Rd is a two-lane roadway with twelve-foot lanes, left turn lanes, and westbound right turn lane onto Bannister Rd.
- Intersection No. 9
 - SR 369/ Browns Bridge Rd at Little Mill Rd is a two-lane roadway with twelve-foot lanes and left and right turn lanes.
- Intersection No. 10
 - SR 306/ Keith Bridge Rd at Jot Em Down Rd is a two-lane roadway with twelve-foot lanes, left turn lanes, and right turn pockets.

Other projects in the area:

- Project ID: 121690 – The project consists of 2.82 miles of widening and reconstruction of S.R. 9 north of S.R. 141 to S.R. 20 in Forsyth County. The proposed section will be two 12-foot travel lanes in each direction separated by a 24-foot raised median, with a 16-foot shoulder on each side incorporating curb and gutter and a 5-foot sidewalk.
- Project ID: 0003682 – GDOT is sponsoring the preparation of an Environmental Impact Statement (EIS) to identify potential improvements to the State Route 20 corridor between the cities of Canton and Cumming. The SR 20 Improvements study area extends for approximately 24 miles, between I-575 in Canton and SR 400 in Cumming. Jurisdictions along the corridor including the City of Canton, unincorporated communities of Buffington, Macedonia, Irange, and Free Home in Cherokee County, as well as the unincorporated community of Ducktown and the City of Cumming in Forsyth County. The SR 20 Improvements project will conduct engineering and environmental studies to evaluate possible alternatives to relieve congestion, improve mobility, and reduce crashes along SR 20 between Canton and Cumming.

Description of the proposed project: The project will upgrade equipment, accommodate pedestrians, and update pedestrian facilities to meet current ADA standards. The Office of Traffic Operations has justified these upgrade based on the following deficiencies: pedestrian Accommodations, ADA Compliance, old conductor cable, 332 cabinet w/2070, support poles/mast arms, utility issues, and signal interconnect. The standard project limits will be 200 feet from the center point of the intersection; should setback loops need replacement, the project limits will be 500 feet from the center point of the intersection. If setback loops are present, the survey should include the edge of pavement and property lines to the setback loop. Standard erosion control details should be used. Traffic studies are not needed for this project. The scope of this project will be limited to equipment upgrades, pedestrian accommodations, and updating pedestrian facilities to meet ADA standards. Funding is provided by ARC. All communications and meetings involving this project should include the Office of Traffic Operations.

MPO: Atlanta TMA

TIP #: N/A

TIA Regional Commission: Not a TIA Project - RC Project ID N/A

Congressional District(s): 7,9

Federal Oversight: Exempt State Funded Other

Projected Traffic: N/A

Current Year (20WW): N/A Open Year (20XX): N/A Design Year (20YY): N/A
 Traffic Projections Performed by: N/A

Functional Classification (Mainline):

- SR 9 - Urban Minor Arterial Street
- SR 20 - Urban Principal Arterial
- SR 306 - Urban Collector Street
- SR 369 - Urban Collector Street

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

Warrants met: None Bicycle Pedestrian Transit

DESIGN AND STRUCTURAL

Description of Proposed Project:

Major Structures: N/A

Mainline Design Features:

SR 9 – Urban Minor Arterial Street

Feature	Existing	Standard*	Proposed
Typical Section			
- Number of Lanes	Varies	N/A	N/A
- Lane Width(s)	12 ft – 14 ft	N/A	N/A
- Sidewalks	Yes and No	N/A	N/A
Posted Speed	25 mph - 45 mph		N/A

SR 20 – Urban Principal Arterial

Feature	Existing	Standard*	Proposed
Typical Section			
- Number of Lanes	Varies	N/A	N/A
- Lane Width(s)	12 ft – 14 ft	N/A	N/A
- Sidewalks	Yes and No	N/A	N/A
Posted Speed	25 mph - 45 mph		N/A

SR 306 – Urban Collector Street

Feature	Existing	Standard*	Proposed
Typical Section			
- Number of Lanes	Varies	N/A	N/A
- Lane Width(s)	12 ft – 14 ft	N/A	N/A
- Sidewalks	Yes and No	N/A	N/A
Posted Speed	55 mph		N/A

SR 369 – Urban Collector Street

Feature	Existing	Standard*	Proposed
Typical Section			
- Number of Lanes	Varies	N/A	N/A
- Lane Width(s)	12 ft – 14 ft	N/A	N/A
- Sidewalks	Yes and No	N/A	N/A
Posted Speed	45 mph - 55 mph		N/A

Major Interchanges/Intersections:

- SR 9 at Veterans Memorial Hwy
- SR 9 at SR 20/ Dahlonega St

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: N/A

Design Variances to GDOT Standard Criteria anticipated: None anticipated

UTILITY AND PROPERTY

Temporary State Route Needed: No Yes Undetermined

Railroad Involvement: N/A

Utility Involvements:

- AT&T - communications
- Atlanta Gas Light - gas
- City of Cumming - water, sewer
- Comcast CATV - television
- Forsyth County - water
- Georgia Power Distribution - electric
- Sawnee EMC - electric

SUE Required: No Yes

Public Interest Determination Policy and Procedure recommended? No Yes

County: Forsyth

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

Anticipated number of impacted parcels: N/A
 Displacements anticipated: Total: N/A
 Businesses: N/A
 Residences: N/A
 Other: N/A

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:

None 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

NEPA/GEPA Comments & Information: Based on the nature of the project, impacts to history, archaeology, air, and noise are expected to be minimal to none.

COORDINATION, ACTIVITIES, RESPONSIBILITIES, AND COSTS

Project Meetings: Kickoff Meeting, June 12th, 2014

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

Other coordination to date: None

Project Cost Estimate and Funding Responsibilities:

	Breakdown of PE	ROW	Reimbursable Utility	CST*	Environmental Mitigation	Total Cost
Funded By	GDOT	GDOT	GDOT	GDOT	N/A	
\$ Amount	\$440,925.19	0	0	\$1,662,330.37	0	\$2,103,255.56
Date of Estimate	4/1/2013			9/4/2014		

*CST Cost includes: Construction, Engineering and Inspection.

ALTERNATIVES DISCUSSION:

No-Build Alternative:			
Estimated Property Impacts:	N/A	Estimated Total Cost:	N/A
Estimated ROW Cost:	N/A	Estimated CST Time:	N/A
Rationale: Doesn't fulfill the objectives of the Project Justification Statement.			

Comments/Additional Information:

LIST OF ATTACHMENTS/SUPPORTING DATA

1. Revisions to Programmed Costs
2. Cost Estimate
3. Kickoff Meeting Minutes

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No. 0012676

OFFICE Program Delivery

PROJECT DESCRIPTION

SR 9; SR 20; SR 306; SR 369 & SR 371 @ 10 LOC IN FORSYTH COUNTY

DATE September 4, 2014

From: Albert Shelby, PE, State Program Delivery Engineer

To: Lisa L. Myers, State Project Review Engineer

Subject: REVISIONS TO PROGRAMMED COSTS

PROJECT MANAGER Steven Heng

MGMT LET DATE

MGMT ROW DATE

PROGRAMMED COSTS (TPro W/OUT INFLATION)

LAST ESTIMATE UPDATE

CONSTRUCTION \$ 875,000.00

DATE

RIGHT OF WAY \$ 375,000.00

DATE

UTILITIES \$

DATE

REVISED COST ESTIMATES

CONSTRUCTION* \$ 1,662,330.37

RIGHT OF WAY \$ -

UTILITIES \$

*Cost Contains 5 % Contingency

REASONS FOR COST INCREASE AND CONTINGENCY JUSTIFICATION:

Original project cost was the programming estimate. After field visits and determination of the work that will be required the updated construction cost estimate was generated. At the kick off field meeting it was determined that right of way will most likely not be required.
Project Type: Reconstruction/Rehabilitation; Risk:Low; Project Phase: Concept

CONTINGENCY SUMMARY

A. CONSTRUCTION COST ESTIMATE:	\$	1,507,782.65	Base Estimate From CES
B. ENGINEERING AND INSPECTION (E & I):	\$	75,389.13	Base Estimate (A) x 5 %
C. CONTINGENCY:	\$	79,158.59	Base Estimate (A) + E & I (B) x 5 % See % Table in "Risk Based Cost Estimation" Memo
D. TOTAL LIQUID AC ADJUSTMENT:	\$		Total From Liquid AC Spreadsheet
E. CONSTRUCTION TOTAL:	\$	1,662,330.37	(A + B + C + D = E)

REIMBURSABLE UTILITY COSTS

UTILITY OWNER	REIMBURSABLE COST
TOTAL	\$ -

ATTACHMENTS:

Detailed Cost Estimate Printout From TRAQS

CONSTRUCTION COST ESTIMATE

JOB NUMBER: 0012676

JOB DESCRIPTION: SR 9; SR 20; SR 306; 369 & SR 371 @ 10 LOC IN FORSYTH COUNTY

DATE: 09/04/2014

PAY ITEM	DESCRIPTION	UNIT	TOTAL	PRICE	AMOUNT
150-1000	TRAFFIC CONTROL	LUMP	LUMP	\$55,000.00	55,000.00
163-0232	TEMPORARY GRASSING	AC	1	\$453.32	453.32
163-0240	MULCH	TN	10	\$144.94	1,449.40
441-0108	CONC SIDEWALK, 8 IN	SY	875	\$61.38	53,707.50
441-0748	CONC MEDIAN, 6 IN	SY	200	\$46.31	9,262.00
441-6222	CONC CURB & GUTTER, 8 IN X 30 IN, TP 2	LF	1000	\$13.81	13,810.00
636-1041	HIGHWAY SIGNS, TP 2 MATL, REFL SHEETING, TP 9	SY	232	\$34.31	7,959.92
639-3004	STEEL STRAIN POLE, TP IV, W/ MAST ARM	EA	4	\$13,107.30	52,429.20
639-3004	STEEL STRAIN POLE, TP IV, W/ TANDEM MAST ARMS	EA	18	\$15,500.00	279,000.00
639-4004	STRAIN POLE, TP IV	EA	12	\$7,530.21	90,362.52
647-1000	TRAFFIC SIGNAL INSTALLATION NO. 1	LUMP	LUMP	\$65,000.00	\$65,000.00
647-1000	TRAFFIC SIGNAL INSTALLATION NO. 2	LUMP	LUMP	\$65,000.00	\$65,000.00
647-1000	TRAFFIC SIGNAL INSTALLATION NO. 3	LUMP	LUMP	\$65,000.00	\$65,000.00
647-1000	TRAFFIC SIGNAL INSTALLATION NO. 4	LUMP	LUMP	\$65,000.00	\$65,000.00
647-1000	TRAFFIC SIGNAL INSTALLATION NO. 5	LUMP	LUMP	\$65,000.00	\$65,000.00
647-1000	TRAFFIC SIGNAL INSTALLATION NO. 6	LUMP	LUMP	\$65,000.00	\$65,000.00
647-1000	TRAFFIC SIGNAL INSTALLATION NO. 7	LUMP	LUMP	\$65,000.00	\$65,000.00
647-1000	TRAFFIC SIGNAL INSTALLATION NO. 8	LUMP	LUMP	\$65,000.00	\$65,000.00
647-1000	TRAFFIC SIGNAL INSTALLATION NO. 9	LUMP	LUMP	\$65,000.00	\$65,000.00
647-1000	TRAFFIC SIGNAL INSTALLATION NO. 10	LUMP	LUMP	\$65,000.00	\$65,000.00
647-2170	PULL BOX, PB-7	EA	6	\$1,368.03	\$8,208.18
653-0120	THERM PVMT MARKING ARROW, TP 2	EA	20	\$85.63	\$1,712.60
653-1501	THERM SOLID TRAF STRIPE, 5 IN, WHITE	LF	1300	\$0.48	\$624.00
653-1502	THERM SOLID TRAF STRIPE, 5 IN, YELLOW	LF	650	\$0.52	\$338.00
653-1704	THERM SOLID TRAF STRIPE, 24 IN, WHITE	LF	864	\$6.03	\$5,209.92
653-1804	THERM SOLID TRAF STRIPE, 8 IN, WHITE	LF	8250	\$2.26	\$18,645.00
682-6233	CONDUIT, NONMETL, TP 3, 2 IN	LF	5985	\$5.00	\$29,925.00
682-9950	DIRECTIONAL BORE - 3 IN	LF	4490	\$10.05	\$45,124.50
682-9950	DIRECTIONAL BORE - 6 IN	LF	1335	\$13.00	\$17,355.00
700-6910	PERMANENT GRASSING	AC	1	\$1,028.22	\$1,028.22
700-7000	AGRICULTURAL LIME	TN	3	\$90.16	\$270.48
700-8000	FERTILIZER MIXED GRADE	TN	3	\$134.61	\$403.83
700-8100	FERTILIZER NITROGEN CONTENT	LB	300	\$2.45	\$735.00
713-3011	WOOD FIBER BLANKET, TP I, SHOULDERS	SY	3250	\$0.87	\$2,827.50
935-1115	OUTSIDE PLANT FIBER OPTIC CABLE, LOOSE TUBE, SINGLE MODE, 48 FIBER	LF	10000	\$2.15	\$21,500.00
935-1512	OUTSIDE PLANT FIBER OPTIC CABLE, DROP SINGLE MODE, 12 FIBER	LF	500	\$1.52	\$760.00
935-3105	FIBER OPTIC CLOSURE, UNDERGROUND, 48 FIBER	EA	6	\$750.00	\$4,500.00
935-3603	FIBER OPTIC CLOSURE, FDC PRE-TERMINATED, TYPE A, 12-FIBER	EA	6	\$859.12	\$5,154.72
935-4010	FIBER OPTIC SPLICE, FUSION	EA	20	\$40.49	\$809.80
935-8500	TRAINING (FIBER OPTIC)	LS	LS	\$2,000.00	2,000.00
937-6050	INT VIDEO DET SYS ASMBLY, TP A	EA	24	\$5,300.71	\$127,217.04
937-8010	TESTING (VIDEO DETECTION)	LS	LS	\$878.03	\$878.03
937-8530	TRAINING (VIDEO DETECTION)	LS	LS	\$1,240.40	\$1,240.40
939-2300	FIELD SWITCH, TYPE A	EA	6	\$1,505.69	\$9,034.14
ITEM TOTAL					\$1,507,782.65
TOTALS FOR JOB 0012676					
ENGINEERING AND INSPECTION					\$79,158.59
CONTINGENCY PERCENT (5%)					\$75,389.13
ESTIMATED TOTAL					\$1,662,330.37

Meeting notes



Project:	0012676 – 10 Locations in Forsyth County		
Subject:	Kickoff Meeting Minutes		
Date and time:	12 June 2014 – 11:30	Meeting no:	1
Meeting place:	Field	Minutes by:	Chris Stewart
Present:	Steven Heng Harold Mull Kevin York Chris McJunkin Doug Fadool Vickie Simmons Troy Galloway Samuel Harris Alan Davis Ted Brown Lorie Short Chris Stewart Ashlyn Morgan	Representing:	GDOT - Program Delivery D1 - Construction D1 - Right-of-Way D1 - Right-of-Way D1 - Utilities D1 - Utilities GDOT - Traffic Operations GDOT - Traffic Operations GDOT - Traffic Operations Sawnee E.M.C. AT&T Wilburn Engineering Atkins

MINUTES

- **SR 9 @ SR 306/ Keith Bridge Rd**

Removed from project – Replaced with SR 9 @ SR 20/Dahlonoga Street

- **SR 9 @ Hutchinson Rd**

Intersection is a part of the SR 20 RTOP II corridor

Overhead and underground utilities on North side of SR 9 – phone, cable, and power

Possible mast arms to avoid utilities

Cabinet will be relocated to a different corner, most likely NW corner

Flashing Yellow Arrow (FYA) will be added for mainline left turns

Pedestrian signals and ADA accommodations will be designed for all legs

Concrete islands will be reconstructed on the South side of SR 9

Possible right-of-way issues on the SW corner

Existing fiber optic cable runs aerially on the North side of SR 9

- **SR 20 @ Bethelview Rd**

Removed from project – Replaced with SR 9 @ Castleberry Road/West Courthouse Square

- **SR 20 @ Doc Bramlett Rd**

Overhead and underground utilities – phone, cable, and power on cabinet corner

Intersection is split phased

Possible tandem mast arm on SW corner and NE corner, depending on utilities and right-of-way

Pedestrian signals and ADA accommodations will be designed for all legs

IVDS will be used for vehicle detection

FYA will be added for mainline left turn

Existing painted island will be removed

- **SR 20 @ Spot Rd Conn**

Drainage improvements may be needed on the NW corner

Possible tandem mast arms on the NW and SE corner, depending on right-of-way and utilities

Cabinet will be located on the South side of SR 20 for power service

Pedestrian signals and ADA accommodations will be designed for 3 legs; will coordinate with GDOT TMC on adding across driveway

FYA will be added for mainline left turn

- **SR 20 @ SR 306**

Removed from project – Replaced with SR 9 @ Tribble Gap Road

- **SR 306 @ Jot-em-down Rd**

Existing underground and aerial utilities – phone, cable, power

Drainage improvements will be needed on the SE corner

Possible environmental issues on the NE corner

Cabinet will be relocated from current location

Possible tandem mast arms, depending on right-of-way

Pedestrian signals and ADA accommodations will be designed for all corners

Existing painted islands will be removed

IVDS will be used for vehicle detection

- **SR 369 @ Bannister Rd**

New strain poles will be installed close to existing strain poles

New cabinet will be installed on the NE corner

Standard loops will be used for vehicle detection

FYA will be added for mainline left turns

Pedestrian signals and ADA accommodations will be designed for all corners

Existing painted islands will be removed

Existing yield signs will be removed and stop bars added for right turn lanes

- **SR 369 @ Little Mill Rd**

Overhead utilities on the North side of SR 369

Possible tandem mast arm configuration on the NW and SE corners, depending on right-of-way

IVDS will be used for vehicle detection

FYA will be added for mainline left turns

Pedestrian signals and ADA accommodations will be designed for all corners

Existing painted islands will be removed

Existing yield signs will be removed and stop bars added for mainline right turn lanes

- **SR 371 @ Kelly Mill Rd**

Removed from project – recently upgraded - Replaced with SR 9 @ Veterans Memorial Boulevard
