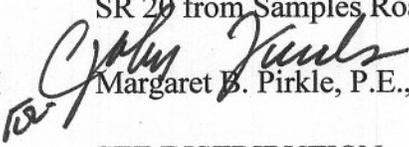


D.O.T. 66

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE P. I. No. 0002392, Forsyth County **OFFICE** Preconstruction
STP-0002-00(392)
SR 20 from Samples Road to Burgess Road **DATE** August 15, 2005

FROM  Margaret B. Pirkle, P.E., Assistant Director of Preconstruction

TO SEE DISTRIBUTION

SUBJECT APPROVED PROJECT CONCEPT REPORT

Attached for your files is the approval for subject project.

MBP/cj

Attachment

DISTRIBUTION:

Brian Summers
Harvey Keepler
Ken Thompson
Jamie Simpson
Michael Henry
Keith Golden
Joe Palladi (file copy)
Paul Liles
Babs Abubakari
Brent Story
Russell McMurry
BOARD MEMBER

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No. 0002392, Forsyth County **OFFICE** Preconstruction
STP-0002-00(392)
SR 20 from Samples Road to Burgess Road **DATE** August 4, 2005

FROM *Cybil Kunkle*
Margaret B. Pirkle, P.E., Assistant Director of Preconstruction

TO *David E. Studstill, Jr.*
David E. Studstill, Jr., P.E., Chief Engineer

SUBJECT PROJECT CONCEPT REPORT

This project is the widening and reconstruction of SR 20 from just south of Samples Road/CR 80 to James Burgess Road/CR 450 for a total of 2.68 miles. Forsyth County's Major Transportation Plan (MTP) 2002 update identifies SR 20 as a major east-west route connecting SR 400, I-85, and I-985. State Route 20 also serves as a principal crossing over the Chattahoochee River, linking Forsyth and Gwinnett counties south of Lake Lanier. State Route 20 is currently a two lane rural arterial east of SR 400. This route has a center two-way left turn lane south of SR 400 to just north of Windermere Parkway. State Route 20 is classified as a urban minor arterial and is part of the National Highway System. State Route 20 is also included in the Forsyth County Bicycle Transportation and Pedestrian Walkways 2025 plan. The purpose of the project is to improve east-west mobility along SR 20, which serves as a primary arterial between Forsyth County and Gwinnett County in this location. With SR 20 experiencing high traffic volumes today, the widening of this section of roadway will reduce congestion and improve safety on this important east-west arterial.

The proposed construction will provide two lanes in each direction with a 44' grass median. This section includes two, 12' travel lanes in each direction, 4' paved inside shoulders, and a 16' outside shoulder, which will include curb and gutter. A 5' sidewalk will be provided on both sides of SR 20. Type "B" median crossovers will be utilized for left turns where applicable.

Environmental concerns include requiring a COE 404 Permit; an Environmental Assessment will be prepared; a public hearing open house will be held; time saving procedures are not appropriate.

David Studstill

Page 2

P. I. No. 0002392, Forsyth

August 4, 2005

The estimated costs for this project are:

	<u>PROPOSED</u>	<u>APPROVED</u>	<u>FUNDING</u>	<u>PROG DATE</u>
Construction (includes E&C and inflation)	\$11,347,000	\$ 5,565,000	Q24	2012
Right-of-Way	\$19,960,000	\$19,960,000	Q24	2009
Utilities*	LGPA	LGPA		

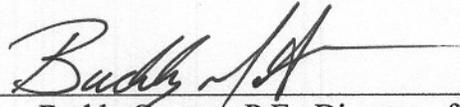
*Forsyth County signed PMA on 6-6-04 for PE and utilities.

I recommend this project concept be approved.

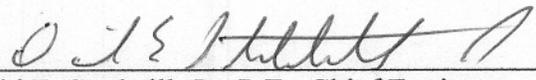
MBP:JDQ/cj

Attachment

CONCUR


Buddy Gratton, P.E., Director of Preconstruction

APPROVE


David E. Studstill, Jr., P.E., Chief Engineer

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

Office of Road Design

PROJECT CONCEPT REPORT

Project Number: STP-0002-00(392)

County: Forsyth County

P. I. Number: 0002392

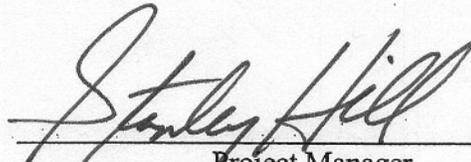
Federal Route Number: N/A

State Route Number: SR 20

*Regional or Wide area location sketch and Project
Description (See Page 2)*

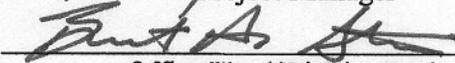
Recommendation for approval:

DATE 7/13/05



Project Manager

DATE 8/1/05



Office Head/District Engineer

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

DATE _____

State Transportation Planning Administrator

DATE _____

State Transportation Financial Management Administrator

DATE _____

State Environmental/Location Engineer

DATE _____

State Traffic Safety & Design Engineer

DATE _____

District Engineer

DATE _____

Project Review Engineer

DATE _____

State Bridge & Structural Engineer

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

Office of Road Design

PROJECT CONCEPT REPORT

Project Number: STP-0002-00(392)

County: Forsyth County

P. I. Number: 0002392

Federal Route Number: N/A

State Route Number: SR 20

*Regional or Wide area location sketch and Project
Description (See Page 2)*

Recommendation for approval:

DATE _____

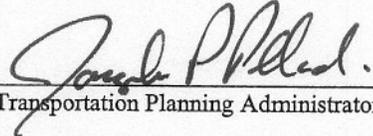
Project Manager

DATE _____

Office Head/District Engineer

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

DATE 7/19/05



State Transportation Planning Administrator

DATE _____

State Transportation Financial Management Administrator

DATE _____

State Environmental/Location Engineer

DATE _____

State Traffic Safety & Design Engineer

DATE _____

District Engineer

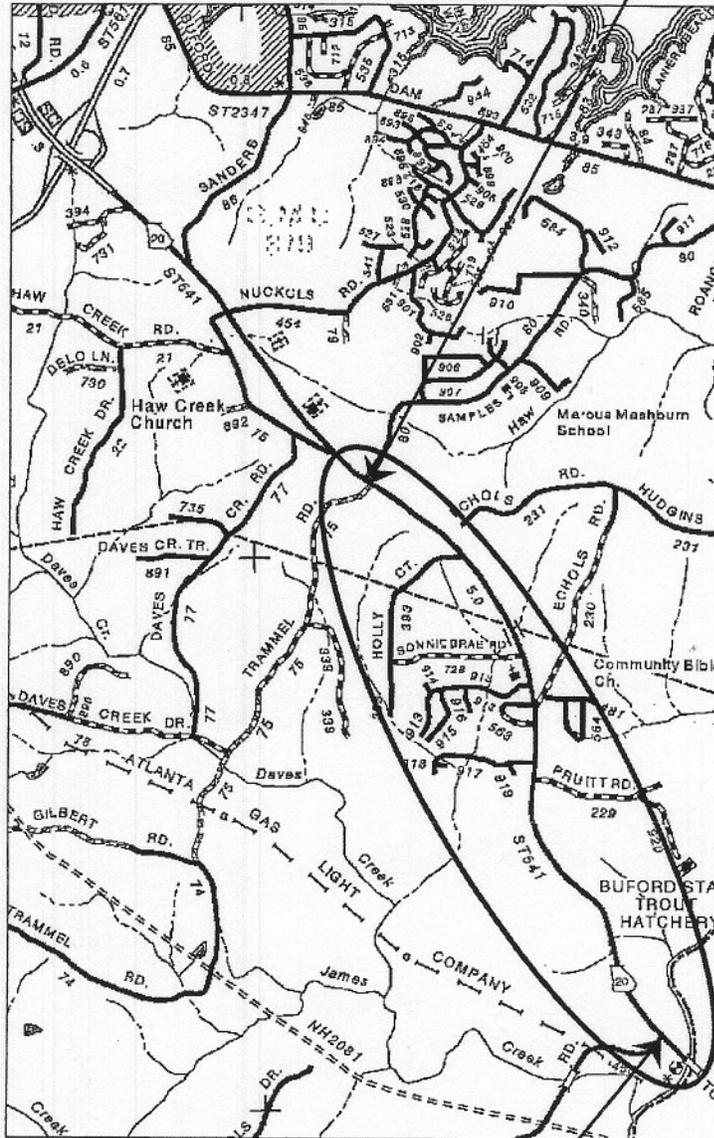
DATE _____

Project Review Engineer

DATE _____

State Bridge & Structural Engineer

Begin Project PI 0002392



End Project PI 0002392

Concept Cost Estimate

Project: S.R. 20 from Samples Rd to James Burgess Rd Date: Jun-05
Project No.: STP-0002-00(392) Length 2.67 mi
County: Forsyth Phase: Concept

SUMMARY OF PROJECT COSTS

Non-Construction Costs

A.	RIGHT OF WAY (GDOT)	\$19,960,000
B.	REIMBURSABLE UTILITIES (LGPA)	\$1,102,600
	Total Non-Construction Cost	\$21,062,600

C.	CONSTRUCTION COST	
	1. Major Structures	\$647,815
	2. Grading and Drainage	\$2,514,003
	3. Base and Paving	\$2,568,921
	4. Concrete Work	\$1,453,364
	5. Signing, Striping, and Signals	\$378,345
	6. Guardrail	\$44,137
	7. Traffic Control & Mobilization	\$328,000
	8. Landscaping and Erosion Control	\$963,807
	9. Miscellaneous	\$124,053
	Construction Cost Subtotal	\$9,022,445
	Inflation (5%)	\$1,422,163
	E & C (10%)	\$902,245
	Number of years - 3	
	Total Construction Cost	\$11,346,853
	Total Project Cost	\$32,409,453

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE STP-0002-00(392), Forsyth County **OFFICE** Road Design
PI 0002392
SR 20 from Samples Rd to Burgess Rd **DATE** July 13, 2005

FROM *B.A. Story*
Brent A. Story, P.E., State Road and Airport Design Engineer

TO Margaret Pirkle, P.E., Assistant Director of Preconstruction

SUBJECT **Project Concept Report**

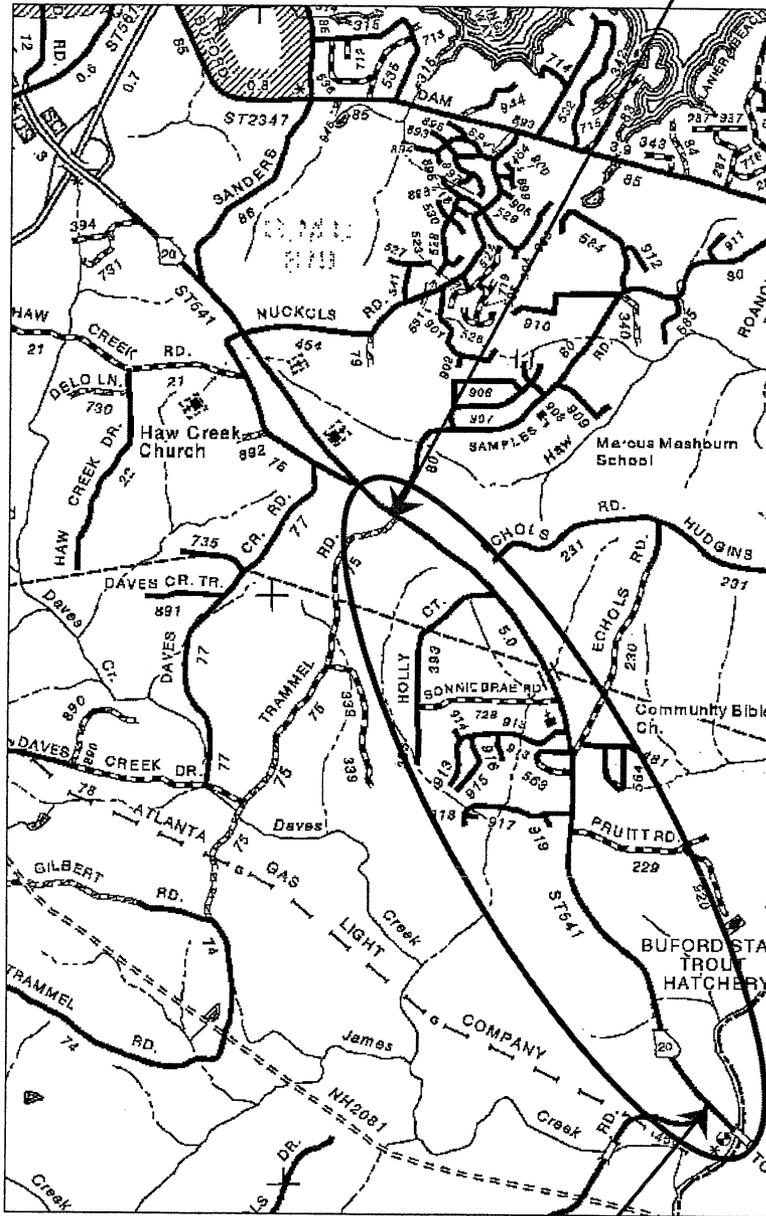
Attached is the original copy of the Concept Report for your further handling for approval in accordance with the Plan Development Process (PDP).

If you have any questions concerning this matter, please call Stanley Hill or Vinesha C. Pegram at (404) 463-2988.

BAS:SH:VCP:ss

cc: Bryan Summers, Project Review Engineer
Harvey Keepler, State Environmental/Location Engineer
Keith Golden, State Traffic Safety and Design Engineer
Joseph Palladi, State Transportation Planning Administrator
Jamie Simpson, Office of Financial Management Administrator
Russell McMurry, District 1 Engineer

Begin Project PI 0002392



End Project PI 0002392

Need and Purpose:

The proposed project would widen SR 20 from 2-lanes to 4-lanes between Samples Road and the James Burgess Road in Forsyth County, Georgia. The purpose of the project is to improve east-west mobility along SR 20, which serves as a primary arterial between Forsyth County and Gwinnett County in this location. With SR 20 experiencing high traffic volumes today, the widening of this section of roadway would reduce congestion and improve safety on this important east-west arterial.

Planning Background and Project History:

Forsyth County's Major Transportation Plan (MTP) 2002 Update identifies SR 20 as a major north-south route connecting SR 400, I-85 and I-985. SR 20 also serves as a principal crossing over the Chattahoochee River, linking Forsyth and Gwinnett Counties south of Lake Lanier. SR 20 is currently a two-lane rural arterial east of SR 400. This route has a center two-way left turn lane south of SR 400 to just north of Windermere Parkway.

The 2002 MTP Update lists widening of SR 20 south of Samples Road to four lanes as a short-term priority, with implementation recommended by 2005. Additionally, the MTP recommends further widening SR 20 to six lanes by 2010. This project would include SR 20 north of Samples Road to SR 400, which is currently being widened to four lanes.

This project is also included in the Atlanta Regional Commission's ARC Draft 2030 Regional Transportation Plan. The model includes a four-lane section on SR 20. The project is listed as FT-61D in the draft RTP, with PE programmed for 2005, and ROW and construction in long range (2011-2020).

SR 20 is classified as an urban minor arterial and is part of the National Highway System. SR 20 is also included in the Forsyth County Bicycle Transportation and Pedestrian Walkways 2025 Plan. This plan proposes constructing five-foot sidewalks on Samples Road, Trammel Road, Echols Drive, and SR 20 between Samples Road and Chamonix Drive. SR 20 is not listed as a designated bicycle and pedestrian route in any other transportation plans.

Land Use and Development Trends:

Intense residential and commercial development along the SR 20 corridor has driven a steady increase in traffic volumes over the past decade. This trend is expected to continue as development spreads northwards along SR 400 from Fulton County and available properties around Lake Lanier become built out. As outlined in the Buford/GA 20 East Subarea Land Use Report in Forsyth County's Comprehensive Plan, much of the undeveloped and agricultural areas are expected to become residential by 2020. The Windermere mixed-use development along Windermere Parkway will be responsible for a significant portion of this growth, as it is only partially built-out. This development and the Chattahoochee River Club residential community, which is mostly complete, are listed as Developments of Regional Impact (DRI). This level of residential growth is likely to encourage complementary retail development on the northern end of the study corridor. Although there may be isolated residences owned or occupied by low income or minority individuals, it appears that there are no defined low income or minority communities or populations. An Environmental Justice analysis will be performed as part of the Environmental Assessment underway.

Project Description:

This proposed project involves widening Buford Highway/SR 20 from just south of Samples Road/CR 80 to James Burgess Road/CR 450. The cross section would include four through lanes with a 44-foot grassed median, designed to accommodate two additional lanes in the future.

Logical Termini:

This project would begin just south of Samples Road/CR 80 (ML 12.03) on the north, where it would tie into a separate widening project (PI 122250). The southern terminus would be just beyond James Burgess Road/CR 450 (ML 14.70), tying into a proposed widening of SR 20 over the Chattahoochee River to Peachtree Industrial Boulevard in Gwinnett County (PI 0004430).

Other Projects in the Area:

- SR 400 @ SR 20 Interchange Reconstruction:
ARC TIP: FT-011, GDOT PI: 132630
This project would rebuild the interchange at SR 400 and tie into project PI 122250.
- SR 20/Canton Highway from Post Rd (SR 371) to GA 400:
ARC RTP: AR-920, GDOT PI: 0003682
This project widens SR 20 from Post Road (SR 371) East to GA 400. The typical section of SR 20 would include 4 through lanes.
- SR 20/Cumming Highway from Burgess Road to Peachtree Industrial Boulevard:
ARC TIP: GW-074A, GDOT PI: 004430
This project widens SR 20 south of James Burgess Road/CR 450 across the Gwinnett County line at the Chattahoochee River. The typical section of SR 20 would include 4 through lanes.
- SR 20/Cumming Highway @ Chattahoochee River @ Forsyth County Line:
ARC TIP: GW-288, GDOT PI: 132985
This project involves reconstructing the existing bridge to accommodate the future widening of SR 20 south of James Burgess Road/CR 450. Refer to project PI 004430.
- SR 20 from SR 400 to Samples Road/CR 80
GDOT PI: 122250
SR 20 from SR 400 to Samples Road/CR 80 is currently being widened to 4 through lanes with a 44-foot grassed median. The northern terminus ties into an existing 4-lane section and the proposed reconstruction of the SR 400 interchange (refer to PI 132630). This segment of SR 20 would be designed to accommodate a two additional through lanes as part of a future project.
- Windermere Parkway:
Forsyth County Project
Windermere Parkway currently consists of a two-lane section extending south of SR 20 into the Windermere mixed-use development. This road is currently being extended further south to Mathis Airport Road to provide a continuous north-south arterial connection between SR 20 and SR 141. Although the existing section of Windermere Parkway has only two lanes, the road is graded for an anticipated full build of four through lanes and a median.

Existing and Projected Traffic Volumes:

In May of 2004, turning movement counts as well as 24-hour AADT counts were collected on SR 20 in the study area. Traffic growth rates are based on historical GDOT traffic counts, Forsyth County's Major Transportation Plan (MTP) 2002 Update, and the Atlanta Regional Commission (ARC) 2030 regional transportation model. The GDOT data includes traffic counts collected between 1996 and 1998 supplemented by 1999-2002 traffic forecasts. Regression of this data suggests an annual growth rate of approximately 4.0%. The Forsyth County MTP also forecasts traffic growth in this range through 2020, based on existing development and socioeconomic trends. The Forsyth County model assumes a six-lane section on SR 20, allowing for unrestricted traffic growth. The ARC regional model, however, projects roughly 2.0% growth through 2030 based on a four-lane typical section. Ultimately, a 2.0% annual growth rate was selected as a reasonable basis for projecting traffic growth for this four-lane typical section.

The 2.0% growth rate was applied to all roads in the study area, with the exception of Windermere Parkway and River Club Drive. The Forsyth County Planning Department was consulted in an attempt to understand the future development along Windermere Pkwy and along River Club Drive. Upon an analysis of existing zoning and future land-use maps in this area of Forsyth County, this report assumes approximately 4% annual growth rate for Windermere Parkway to account for the Windermere mixed-use development and additional through traffic once the parkway extension to Mathis Airport Road is complete. Additionally, 25% of projected traffic on James Burgess Road was diverted to Windermere Parkway to represent changing through-traffic patterns due to the improvement and connection of Windermere Pkwy and Mathis Airport Road. Windermere Parkway traffic was further adjusted to reflect a new intersection with Trammel Road south of the study corridor. This study assumes approximately 10% total traffic growth on River Club Drive because the neighborhood it serves is nearing build out.

Level of Service Analysis:

Under existing conditions, SR 20 operates near capacity. LOS ratings worsen to F by 2028 in the No-Build scenario. The Four-Lane Build alternative would raise overall LOS values to an acceptable level, with an overall segment LOS of C. Compared to this scenario, the Six-Lane Build alternative would result in a slight improvement in segment LOS values, but an overall increase in intersection delay. This is caused by the additional traffic growth associated with the higher-capacity alternative. The table below summarized the segment and intersection LOS values for the study area:

Intersection LOS (Seconds of Delay)	2004 Base Network		2028 No-Build		2028 Build (4-Lane)	
	AM	PM	AM	PM	AM	PM
SR 20 @ Samples Rd.	C (26.2)	C (30.9)	C* (28.3)	D* (42.1)	C* (28.3)	D* (42.1)
SR 20 @ Windermere Pkwy.	C (20.3)	B (16.2)	F (142.0)	F (137.1)	D (42.2)	C (32.1)
SR 20 @ James Burgess Rd.	B (18.4)	B (15.9)	E (60.9)	C (27.5)	C (20.1)	A (8.6)
Roadway Segment LOS	2004 Base Network (V/C Ratio)		2028 No-Build (V/C Ratio)		2028 Build (4-Lane) (pc/m i/ln)	
	AM	PM	AM	PM	AM	PM
SR 20 South of Samples Road	E (0.71)	E (0.85)	F (1.14)	F (1.21)	C (21.7)	C (25.6)
SR 20 North of Burgess Road	E (0.72)	E (0.72)	F (1.18)	F (1.17)	C (21.6)	C (21.4)

* - Currently being reconstructed with a 4-lane section as part of a separate project (PI 122250).

The traffic analysis produced several recommendations for intersection improvements along the study corridor. These improvements would apply to both build alternatives, and are listed below:

SR 20 at Samples Road (CR 80)/Trammel Road (CR 75):

Note: Currently being reconstructed as part of a separate project (PI 122250). The new configuration is incorporated into the No-Build and Four-Lane Build alternatives.

- Reevaluate intersection operations as part of the long-range six-lane widening project.

SR 20 at Windermere Parkway/River Club Drive:

- Add double left turn lanes on the westbound SR 20 approach.
- Add a right turn lane on the southbound River Club Drive approach.
- Reconfigure the northbound through lane as a shared left turn lane.

SR 20 at James Burgess Road (CR 450):

- Add double left turn lanes on the northbound Burgess Road approach.

Safety Analysis:

Historical accident and injury rates were calculated based on 2000, 2001, and 2002 data, as shown in the table below. The historical data includes no record of fatalities during this time period. The table also shows statewide average accident and injury rates corresponding to an urban minor arterial functional classification.

Year	Accidents			Injuries		
	Total	Rate	Statewide	Total	Rate	Statewide
2000	52	214	660	21	86	258
2001	49	193	564	22	87	218
2002	48	181	282	14	53	93

Note: Rates per 100 Million Vehicle Miles

The analysis indicates a declining trend over the three-year period, with SR 20 accident rates below the statewide average for all three years. The injury rate also declined and was below the statewide average for all three years. Of the 149 total accidents, 100 involved rear-end collisions and 18 involved angle collisions. One possible cause for the high number of rear-end collisions is the relatively high traffic volumes and congestion on this two lane arterial. With numerous driveways and side streets, turning vehicles are being struck in the rear by fast moving traffic. This project will reduce these accidents by providing two through lanes in each direction and turn lanes where necessary. Twenty-two incidents were classified as not collisions with motor vehicles, typically involving fixed objects along the right-of-way.

This project includes several improvements that would improve safety along SR 20. Constructing a 44-foot median would limit left-turn movements and crossover traffic to median openings build with dedicated turn lanes. This would reduce the risk for incidents involving rear-end and angle collisions.

Description of the proposed project:

This proposed project involves widening Buford Highway/SR 20 from just south of Samples Road/CR 80 to James Burgess Road/CR 450. The existing three-lane section would be widened to include four through lanes with a 44-foot grassed median, designed to accommodate two additional lanes in the future. The typical section would include sidewalks, curbs, and gutters on both sides of the road.

Is the project located in a Non-attainment area? X Yes No.

This project is included in the Atlanta Regional Commission's 2030 RTP. The conforming plan's model description is to widen SR 20 from just south of Samples Road/CR 80 and James Burgess Road/CR 450 from two to four lanes. The RTP lists a programmed construction year of 2011-2020.

PDP Classification: Major X Minor

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

Functional Classification: Urban Minor Arterial

U. S. Route Number(s): N/A **State Route Number(s):** SR 20

Traffic (AADT):

Current Year: (2008) 30,700 Design Year: (2028) 45,375

Existing design features:

- Typical Section: SR 20 currently includes one through lane in each direction with a continuous left turn lane. Turn lanes are in place at several intersections along the route. The existing rural section consists of approximately 10' grassed shoulders and does not include sidewalks, curbs, or gutters.
- Posted speed 45 mph Maximum degree of curvature: 3°00'
- Maximum super-elevation rate for curve: 6.0 percent
- Maximum grade: 5 %
- Width of right of way: Varies 80-150 ft.
- Major structures: None
- Major interchanges or intersections along the project: Windermere Parkway and James Burgess Road
- Existing length of roadway segment 2.87 miles
- Beginning mile logs for each county segment.
 - Begin: MP 12.13 (Samples Road)
 - End: MP 15.00 (south of James Burgess Road)

Proposed Design Features:

- Proposed typical section(s): The typical sections require a right-of-way width of 125 feet. The section generally includes two travel lanes in each direction, with a 44-foot grass median. This section includes two 12-foot travel lanes in each direction, 4-foot paved inside shoulders, and a 16-foot outside shoulder, which will include curb and gutter. A

5-foot wide sidewalk will be provided on both sides of S.R. 20. Type B median crossovers will be utilized for left-turn lanes where applicable.

- Proposed Design Speed Mainline 45 mph
- Proposed Posted Speed Mainline 45 mph
- Proposed Maximum grade Mainline 5 % Maximum grade 7%
- Proposed Maximum grade Side Street 7 % Maximum grade 7%
- Proposed Maximum grade driveway 10 % (Com.) 15% (Res.)
- Proposed Minimum radius for curve 2000' Minimum radius 711'
- Proposed Maximum super-elevation rate for curve: 4%
- Right of way
 - Width Varies, 140 ft. minimum
 - Easements: Temporary (X), Permanent (X), Utility (), Other ().
 - Type of access control: Full (), Partial (), By Permit (x), Other ().
 - Number of parcels: 54 Number of displacements:
 - Business: 4
 - Residences: 1
 - Mobile homes: 0
 - Other: 0
- Structures:
 - Bridges: There are no bridges on the project
 - Culvert: Approximately 6'x6' Concrete Box Culvert, 90' in length; located approximately 500' north of Bonnie Brae Drive.
 - Retaining walls: Minor Retaining walls may be required for Right of Way control. The proposed retaining walls are anticipated along the commercial properties just south of the project beginning and on the west side of S.R. 20 just north of Ruth Lane.
- Major intersections and interchanges: The project corridor includes major intersections at Windermere Parkway and at James Burgess Road. Both intersections are currently signalized. Improvements proposed for the Windermere Parkway intersection include installing a second left turn lane on the westbound approach and adding a right turn lane on the southbound River Club Drive approach. At the James Burgess Road intersection, a second left turn lane would be added to the northbound approach. The proposed intersection improvements are based on the results of an HCS Capacity Analysis conducted on each of the intersections.
- Traffic control during construction: Traffic control will consist of staged construction and allow for the roadway to remain open during construction. Staged construction would be divided into phases to allow for partial width construction. Minor detours may be required to provide access to properties with frontage and current access to S.R. 20. Access will be maintained during all construction phases of the project.

- Design Exceptions to controlling criteria anticipated:

	<u>UNDETERMINED</u>	<u>YES</u>	<u>NO</u>
HORIZONTAL ALIGNMENT:	()	()	(X)
ROADWAY WIDTH:	()	()	(X)
SHOULDER WIDTH:	()	()	(X)
VERTICAL GRADES:	()	()	(X)
CROSS SLOPES:	()	()	(X)

STOPPING SIGHT DISTANCE:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
SUPERELEVATION RATES:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
HORIZONTAL CLEARANCE:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
SPEED DESIGN:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VERTICAL CLEARANCE:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
BRIDGE WIDTH:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
BRIDGE STRUCTURAL CAPACITY:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- Design Variances: None Anticipated.
- Environmental concerns: An environmental screening was performed for the project. It is anticipated that the widening of SR 20 will cause stream impacts to several small perennial streams as well as wetland impacts to a small wetland area on the south side of SR 20. It is anticipated that a Section 404 Nationwide Permit Application from the Corps of Engineers (COE) will be needed for this widening project. The environmental screening also identified one potentially historic property. This property will be examined further as part of the Environmental Assessment (EA) that is underway.
- Level of environmental analysis:
 - Are Time Savings Procedures appropriate? Yes (), No (x),
 - GEPA Type B Letter ()
 - Categorical exclusion (),
 - Environmental Assessment/Finding of No Significant Impact (FONSI) (X), or
 - Environmental Impact Statement (EIS) ().
- Utility involvements: The following is a list of utilities with facilities within the project area:
 - Atlanta Gas Light
 - BellSouth
 - City of Cumming Water and Sewer
 - Prestige Cable
 - Sawnee Electric

Project responsibilities:

- Design: Forsyth County (100%)
The design is being completed by Moreland Altobelli Associates, Inc.
- Right of Way Acquisition: GDOT
- Relocation of Utilities: Forsyth County
- Letting to contract: GDOT
- Supervision of construction: GDOT
- Providing material pits: Contractor (if required)
- Providing detours: GDOT

Coordination

- Initial Concept Team Meeting was held on October 28th, 2004 at the GDOT District 1 office in Gainesville. The meeting reviewed the draft concept report and the proposed concept alignment. The meeting attendees generally accepted the alignment and typical section. No major issues or changes to the project arose from the Initial Concept Team Meeting. See attached minutes for additional information.
- The Concept Team Meeting was held on March 29th, 2005 at the GDOT District 1 office

in Gainesville. The meeting reviewed the draft concept report including the traffic analysis, need and purpose, cost estimates and proposed concept alignment. The meeting attendees generally accepted the alignment and typical section. No major issues or changes to the project arose from the Concept Team Meeting. See attached minutes for additional information.

- Forsyth County Commissioners have been vocal regarding their commitment in the advancement of this project.
- Additional coordination has occurred with Gwinnett County regarding the adjacent S.R. 20 widening project at the Chattahoochee River (PI No. 132985) and from the Chattahoochee River to Peachtree Industrial Boulevard (PI No. 004430). The concept alignment reflects this coordination, see attached meeting minutes.
- A Public Information Open House is scheduled for this project on July 19th, 2005.

Scheduling – Responsible Parties’ Estimate

- Time to complete the environmental process: 12 Months.
- Time to complete preliminary construction plans: 12 Months.
- Time to complete right of way plans: 6 Months.
- Time to complete the Section 404 Permit: 6 Months.
- Time to complete final construction plans: 8 Months.
- Time to complete to purchase right of way: 18 Months.

Other alternates considered:

No-Build Alternative

The no-build alternative would include no improvements along SR 20 east of Samples Road/CR 80 to James Burgess Road/CR 450. The analysis of the no-build alternative took into account ongoing projects impacting the SR 20 corridor, including the reconstruction of SR 20 west from Samples Road and the widening and extension of Windermere Parkway. This alternative is not prudent because SR 20 would not be capable of handling the projected increase in traffic over the next 24 years. This would result in excessive delays and extremely poor Levels of Service on the study corridor.

Comments:

Attachments:

1. Cost Estimate
 - a. Construction including E&C
 - b. Right-of-Way
 - c. Utilities
2. Typical Section
3. Initial Concept Team Meeting minutes, 10/28/04
4. Concept Team Meeting Minutes, 3/29/05
5. Gwinnett County Coordination Meeting Minutes, 1/5/05
6. Traffic Diagrams

Concept Cost Estimate

Project: S.R. 20 from Samples Rd to James Burgess Rd
 Project No.: STP-0002-00(392)
 County: Forsyth

Date: Jun-05
 Length: 2.67 mi
 Phase: Concept

Project Cost

A.	Right of Way (Easements) - GDOT	\$19,960,000
B.	Reimbursable Utilities - LGPA	\$1,102,600

Construction:

1. Major Structures

a.	Bridges	0	SF	\$65.00	\$0
b.	Retaining walls				
	1) Class B Concrete for Retaining Wall	150	CY	\$425.95	\$63,893
	2) MSE Retaining Wall Face, 0-10 ft	1,200	SF	\$38.40	\$46,080
c.	Concrete Box Culverts				
	1) Concrete	365	CY	\$425.95	\$155,472
	2) Reinforcing Steel	43,680	LB	\$8.52	\$372,154
	3) Foundation Backfill Material, TP II	280	CY	\$36.49	\$10,217
					\$647,815

2. Grading and Drainage

a.	Unclassified Earthwork				
	1) Unclassified Excavation	232,311	CY	\$2.44	\$566,839
	2) Borrow Excavation	125,810	CY	\$5.90	\$742,279
b.	Drainage - Longitudinal System				
	1) 18" Storm Drain Pipe	14,500	LF	\$34.20	\$495,900
	2) 24" Storm Drain Pipe	4,600	LF	\$40.48	\$186,208
	3) 30" Storm Drain Pipe	2,200	LF	\$43.81	\$96,382
	4) 36" Storm Drain Pipe	1,500	LF	\$52.49	\$78,735
	4) 42" Storm Drain Pipe	500	LF	\$66.90	\$33,450
	4) 48" Storm Drain Pipe	300	LF	\$70.05	\$21,015
	5) Catch Basins	110	EA	\$1,611.52	\$177,267
	5) Flared End Section	20	EA	\$1,292.00	\$25,840
	6) Safety End Section	15	EA	\$749.00	\$11,235
	7) Median Drain	30	EA	\$1,694.00	\$50,820
	7) Manholes	6	EA	\$1,477.12	\$8,863
	8) Rip Rap	620	SY	\$30.92	\$19,170
				Subtotal	\$2,514,003

3. Base & Paving

a.	Graded Aggregate Base	47,681	TN	\$17.00	\$810,569
b.	Asphalt Concrete 9.5 mm	8,561	TN	\$44.00	\$376,688
c.	Asphalt Concrete 12.5 mm	9,621	TN	\$44.43	\$427,446
d.	Asphalt Concrete 19 mm	7,770	TN	\$56.01	\$435,206
e.	Asphalt Concrete 25 mm	11,655	TN	\$44.00	\$512,830
f.	Bituminous tack coat	4,945	GAL	\$1.25	\$6,181
				Subtotal	\$2,568,921

4. Concrete Work

a.	Sidewalk	23,320	SY	\$35.00	\$816,200
b.	Curb and gutter, type 2	31,540	LF	\$11.32	\$357,033

c. Curb and Gutter, type 7	800	LF	\$9.67	\$7,736
d. Raised Median	240	SY	\$53.73	\$12,895
e. Class B Pavement Widening	1,500	CY	\$173.00	\$259,500
			Subtotal	\$1,453,364
5. Signing, Striping, and Signals				
a. Roadway Signs (w/ post)	80	EA	\$228.18	\$18,254
b. Signal Retiming	2	EA	\$30,000.00	\$60,000
c. New Signals	4	EA	\$65,000.00	\$260,000
b. Pavement Striping	85,300	LF	\$0.47	\$40,091
			Subtotal	\$378,345
6. Guardrail				
a. Guardrail, Type W	1,850	LF	\$14.71	\$27,214
b. Anchors TP 12	10	EA	\$1,306.78	\$13,068
c. Anchors TP 1	10	EA	\$385.61	\$3,856
			Subtotal	\$44,137
7. Traffic Control & Mobilization				
a. Traffic Control	24	MTS	\$12,000.00	\$288,000
b. Mobilization	1	EA	\$40,000.00	\$40,000
			Subtotal	\$328,000
8. Landscaping and Erosion Control				
a. Clearing & Grubbing	32	AC	\$5,500.00	\$176,000
b. Grassing	14	AC	\$2,500.00	\$35,000
c. Erosion Control				
1) Const. And Remove Silt Fence, TP A	29,500	EA	\$2.00	\$59,000
2) Const. And Remove Silt Fence, TP C	1,330	EA	\$3.65	\$4,855
3) Construct and Remove Sediment Basin	2	EA	\$6,334.26	\$12,669
4) Const. And Remove Silt Control Gate	100	EA	\$666.66	\$66,666
5) Const. and Remove Ditch Checks	1,330	EA	\$249.96	\$332,447
6) Const. and Remove Inlet Sediment Trap	40	EA	\$435.97	\$17,439
7) Maint. of Temp. Silt Fence, TP A	29,500	EA	\$1.12	\$33,040
8) Maint. of Temp. Silt Fence, TP C	1,350	EA	\$1.50	\$2,025
9) Maint. of Temp. Sediment Basin	2	EA	\$996.19	\$1,992
10) Maint. of Temp. Silt Control Gate	100	EA	\$128.00	\$12,800
11) Maint. of Temp. Ditch Checks	1,330	EA	\$82.06	\$109,140
12) Maint. of Temp. Inlet Sediment Trap	40	EA	\$145.32	\$5,813
13) Permanent Grass Seed	30	AC	\$939.99	\$28,200
14) Temporary Grassing	11	AC	\$572.86	\$6,301
15) Temporary Mulch	80	TN	\$326.23	\$26,098
16) Construction Exit	10	EA	\$1,070.84	\$10,708
17) Water Quality Sampling	3	EA	\$61.16	\$183
18) Water Quality Monitoring	24	MO	\$976.30	\$23,431
			Subtotal	\$963,807
9. Miscellaneous				
a. Field Engineer's Office, Type 3	1	EA	\$45,850.00	\$45,850
b. Pavement Removal	4,500	SY	\$4.00	\$18,000
c. Misc. Removal	1	LS	\$55,000.00	\$55,000
d. Rightof Way Markers	60	EA	\$86.71	\$5,203
			Subtotal	\$124,053



Project: S.R. 20 From Samples Road to James Burgess
 P.I. No. 0002392
Meeting: Initial Concept Meeting
Location: GDOT Gainesville District Office
Prepared By: Kevin Skinner
Prepared On: 10/29/04

Meeting Date	10/28/04
MA Project No.	FOR048
CC:	Attendees File Alva Byrom

ATTENDEES	ORGANIZATION	PHONE	EMAIL
Russell McMurry	GDOT District 1	770-532-5520	Russell.mcmurry@dot.state.ga.us
Brent Cook	GDOT District 1	770-532-5563	Brent.cook@dot.state.ga.us
Kevin Skinner	MAAI	770-263-5945	kskinner@maai.net
Ron Osterloh	MAAI	770-263-5945	rosterloh@maai.net
Patrick Smeeton	MAAI	770-263-5945	psmeeton@maai.net
Jimmy Vaughan	MAAI	770-781-5507	
Bill Crowder	Precision Planning	770-338-8188	105bc@precisionplanning.com
Asad Hadadzadeh	Precision Planning	770-338-8188	288ah@precisionplanning.com
Robby Oliver	GDOT-Util	770-532-5510	Robby.oliver@dot.state.ga.us
Verdell Hawkins	GDOT-Planning	404-463-4376	Verdell.Hawkins@dot.state.ga.us
Selby Bearden	BellSouth	706-353-4300	Selby.bearden@bellsouth.com
Wates Keller	GDOT-Relocation	770-986-1530	Wates.keller@dot.state.ga.us
Chuck Cobb	GDOT-R/W Relocation	404-656-3774	Charles.cobb@dot.state.ga.us
John Cunard	Forsyth County	770-886-2785	jvcunard@forsythco.com
Jerry Milligan	GDOT-R/W	770-986-1541	Jerry.milligan@dot.state.ga.us
Jason McCook	GDOT-Road Design	404-656-5406	Jason.mccook@dot.state.ga.us

Items Discussed

A project meeting for the above referenced project was held on Thursday October 28th, 2004 at the Georgia Department of Transportation, District One office in Gainesville. The meeting began at approximately 9:45 a.m. and ended at approximately 10:45 a.m. Those listed above were in attendance.

After introductions, Jason McCook went through the draft version of the project concept report. Ron Osterloh then gave an overview of the project layout. He described the reasoning behind the proposed side to widen and the location of the median openings. There is one potentially historic property along the alignment, and this will be verified when the Environmental Document is completed. The proposed alignment does not affect the potential historic parcel. This stretch of S.R. 20 will tie to a widening already completed to the east and will end just before the Chattahoochee River, near James Burgess Road. A separate project has been created for the bridge widening. Precision Planning is in the early concept phase of design for the adjoining widening east of the Chattahoochee River. Patrick noted that there will be one environmental document for all three projects.

Russell asked about this section eventually becoming a six-lane section. Patrick replied that there are currently no plans in place to construct a six-lane section, although the median width and proposed R/W would allow it. The R/W for this project is programmed for 2006 and construction in the 2011-2020 ARC Plan.



It was stated that if the county can provide the construction documents early, the ARC would move the funding to 2008 to match the adjoining projects. Verdell Hawkins will investigate changing the funding date in the program.

The R/W needs to be adjusted to 140' in order to be consistent with Gwinnett County. Brent asked to make a couple of updates to the need & purpose and the adjacent project lists. The page numbers of the documents are in error and will be corrected.

Discussion of Ruth Lane. It was recommended by Russell that Ruth Lane be will need to be configured as a cul-de-sac until the bridge is completed, then reopened as a right-in, right-out intersection. John Cunard did not object to this situation. There is a discrepancy in the exact project length. 2.67 miles or 2.87 miles. MAAI will verify.

Windermere will have a 10' multi-use path and 5' sidewalk. MAAI will coordinate with John Cunard to ensure the design adequately ties into the path and sidewalk.

Jason asked the county for the utility relocation cost. City of Cumming Water & Sewer needs to be added to the list of utilities, and the contact names and numbers are not needed in the concept report. Jason asked MAAI to provide a roll plot showing displacements and to include a Forsyth Co. Project number to Windermere Parkway. Forsyth County will provide this to MAAI.

Discussion of the cost estimate. It was noted that it appears low. Another comment was that for this level of project, it should be around \$3.3M - \$3.5M per mile. The \$10.1M included in the estimate shows R/W paid for by GDOT, and LGPA. MAAI will review the cost estimate and update the concept report.

Selby Bearden stated that BellSouth has an easement at the church near Echols Road. There are no Georgia Power Transmission facilities along the project. Prestige Cable should be Adelpia Cable.

It was recommended by Jason and Patrick that the upcoming Concept Team Meeting be held in conjunction with Precision Planning, preferably in early December. A Public Information Open House should occur in February/March 2005.

SR20 Bridge over Chattahoochee River
Gwinnett Co. PN 3146-01

Meeting Minutes – Initial Initial Concept Meeting

January 5, 2005

Those present:

David Tucker-Gwinnett County (770.822.7485) david.tucker@gwinnettcountry.com
Alan Chapman-Gwinnett County (770.822.7485) alan.chapman@gwinnettcountry.com
Ron Braziel-Moreland Altobelli/Gwinnett (770.822.7487) Ron.braziel@gwinnettcountry.com
Christopher Parypinski-Moreland-Altobelli/Gwinnett (678.728.9050) cparypinski@maai.net
Jason McCook-GDOT (404.656.5386) Jason.mccook@dot.state.ga.us
Richard Meehan- Lowe Engineers, LLC (770.857.8434) meehan@loweengineers.com
Abbie Dement- Lowe Engineers, LLC (770.857.8403) dement@loweengineers.com
Asad Hadazadeh-Precision Planning (770.338.8151) 288ah@precisionplanning.com
Adam Smith-Precision Planning
Ron Osterloh-Moreland Altobelli (770.263.5945) rosterloh@moreland-altobelli.com

General Items

- All agreed that the station equity to be at the split between the Forsyth Project (MA) and the Bridge Project (Lowe)
- It was discussed that a 4F is probably required. Everyone is to note the large banked hill on the east side in the US Park land. The US Park trail path in the future will probably be located on the west side of the Chattahoochee River. However, to potentially accommodate a path on the east side, there may be a need to be a benching of the slope under the bridge for the path.
- Precision Planning discussed a route possibility for general approval by group
- Lowe Engineers, LLC presented two typical sections one for the normal rural section and one for the bridge. On the bridge typical the following items were discussed
 - 20' raised medians
 - 8' raised medians
 - striping out lanes for future traffic
 - Additional Shoulder to closer match the 16' shoulder off the bridge (as opposed to just the 8' shoulder/sidewalk as proposed)
- Median openings and bridge alternatives were discussed. Everyone was informed that future large tracts will likely develop and may require new median cuts closer to the bridge, making a narrow median less desirable.
- During the discussion of typical sections, it was noted that narrow versus wide medians on the bridge may affect funding of touchdown to touchdown or the length required to return to a 44' median.

- Jason McCook is to follow up with GDOT on the bridge typical. Specially, questions about building one bridge as opposed to two and the shoulder, sidewalk, and median width
- At this moment, the GDOT liaison is leaning toward one bridge with 6 lanes to accommodate future traffic, with the extra lanes striped out, and have a construction impact at one time.
- Because of the projected traffic volumes, it is felt that 6 lanes will be required in 2018, after the open to traffic year of the project but before design year
- A joint PIM will be planned for all three projects because the projects are linked
- The Req'd R/W width will be 140' to include the clear zone plus any bump outs necessary for drainage. An additional 15' (85' from cl) will be necessary for right turn lanes. Permanent Slope easement will used outside of the R/W as needed.
- Because of the 44' median, no additional pavement/bumpouts will be needed for u-turns
- The initial concept team meeting will be next and will include utilities. A R/W cost estimate and utility cost estimate will be included. This will be followed by a concept team meeting. Gwinnett County to estimate R/W costs since they will be buying the R/W for these projects.
- GDOT liaison is to do further research to see if separate bridge plans will be required, or included in this set. The main question is quantities.
- Future cost benefit analyses may be required to determine if existing bridge to be replaced or widened.

Action Items

Lowe+subs

- Lowe is determining the sufficiency rating of the existing bridge
- Lowe to consider the following items in bridge design:
 - Narrow Median
 - Where will the crane sit? Will it fit?
 - How will the order of construction work?
 - Is the siting appropriate?
- Lowe will need to create a profile of the bridge to determine actual bridge limits
- Lowe to calculate total acreage of R/W and guess on easement.
- Lowe will place bridge on tangent
- Lowe to coordinate staging plans with Moreland Altobelli as that time approaches.

Gwinnett

- Gwinnett to find out who will take the lead in the PIM meeting
- Gwinnett is doing the cost estimate for R/W.

GDOT

- Jason to follow up on Bridge Typical Section
- Jason to set up initial concept meeting



Moreland Altobelli Associates, Inc.
 2211 Beaver Ruin Road, Suite 190
 Norcross, Georgia 30071
 Phone: 770-263-5945 Fax: 770-263-0166

MEETING MINUTES

Project: SR 20 Samples Road to James Burgess

Meeting: Final Concept Team Meeting

Location: District 1 Office, Gainesville

Prepared By: Kevin Skinner

Prepared On: 4/8/05

Meeting Date	3/29/05
MA Project No.	FOR048
CC:	Attendees File

ATTENDEES	ORGANIZATION	PHONE	E-MAIL
Stanley Hill	GDOT	404-656-5180	Stanley.hill@dot.state.ga.us
Terry McCollister (for Jerry Milligan)	GDOT	678-230-8603	jerry.milligan@dot.state.ga.us
John Cunard	Forsyth Co.	770-781-2165	jvcunard@forsythco.com
Carl Mauldin	Sawnee EMC	404-403-4823	cmauldin@pdahome.com
Jimmy Vaughan	MAAI	770-781-5507	N/A
Kevin Skinner	MAAI	770-263-5945	kskinner@maai.net
Jason McCook	GDOT	404-657-8249	jason.mccook@dot.state.ga.us
Jeff Jacques	GDOT	770-718-5031	jeffrey.jacques@dot.state.ga.us
Robby Oliver	GDOT Utilities	770-532-5510	robby.oliver@dot.state.ga.us
Neil Kantner	GDOT	770-532-5520	neil.kantner@dot.state.ga.us
Jack Conway	Forsyth Co.		
Jason Crane	GDOT	404-463-0010	jason.crane@dot.state.ga.us
David Tucker	Gwinnett DOT	770-822-7485	david.tucker@gwinnettcountry.com
Billy Cantrell	GDOT		
Patrick Smeeton	MAAI	770-263-5945	psmeeton@maai.net
Alan Chapman	Gwinnett DOT	770-822-7485	
Ron Osterloh	MAAI	770-263-5945	rosterloh@maai.net

Items Discussed

A meeting for the above referenced project was held on Tuesday March 29th, 2005 at the District One office in Gainesville. Those listed above were in attendance.

Stanley Hill of GDOT Road Design began the meeting with an introduction and project identification. Ron Osterloh went over the need and purpose statement. A stretch of SR 20 from Samples Road to GA 400 is currently under construction, P.I. 122250. This project will tie into that section of SR 20 at Samples Road. The ultimate section calls for a six-lane section but this project is programmed for only four lanes. A 44' depressed grassed median will enable a future widening to six lanes without additional required right of way. Right of way is scheduled for FY06 and construction for FY08. This project ends just before the bridge replacement project at the Chattahoochee River, P.I. 0004430.

Ron described the widening and explained the reasoning behind direction of widening and the intent to utilize the two existing lanes of SR 20. He also explained median opening locations. There are two signals on this project, both of which will be upgraded. Since this project generally sits on a ridge, there is only one major drainage structure. A box culvert approximately 6' x 6' will need to be extended.



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MEETING MINUTES

Neil Kantner asked about the traffic projections. Pat Smeeton explained that the traffic was projected into the design year in two ways. The first was to project traffic based on current and planned development patterns as well as traffic growth rates in the project area in order to predict the traffic demand along SR-20 in the design year. This traffic projection predicted that a 6-lane roadway was necessary to accommodate the predicted traffic along the corridor. He then explained that the roadway was programmed as a 4-lane roadway due to funding constraints in the region. A traffic projection was then performed assuming only 4-lanes along SR-20. Since a 4-lane roadway will carry significantly less traffic in the peak hour and throughout the day than a 6-lane roadway, this traffic projection differed from the previous predictions. These two analyses were performed in order to highlight the need for this project to be built with additional right-of-way to accommodate a future widening to six lanes.

Pat Smeeton said there are no eligible historical parcels anticipated on this project. An environmental assessment and a 404 permit is required. A Public Information Open-House is required in addition to a Public Hearing. The Public Information Open-House will be scheduled about the same time frame as the adjacent Gwinnett Projects. Three business acquisitions are required along this project; A tire shop, cabinet shop, and peanut shack. Large advertising billboard signs are in the area and may require relocation.

BellSouth has recently installed equipment at the corner of Echols and SR 20. Investigate possibility of saving this equipment.

Neil Kantner noted that the current typical section shows a clear zone of 16', but more may be required at this traffic volume and speed design. The typical section will be modified to show a necessary ditch. The front slope on the typical section will be modified to show a 4:1 slope to provide adequate clear zone. Guardrail will be utilized at locations with 2:1 front slopes.

The concept report shall be modified to remove references to six-lane traffic data.

Comments from attendees:

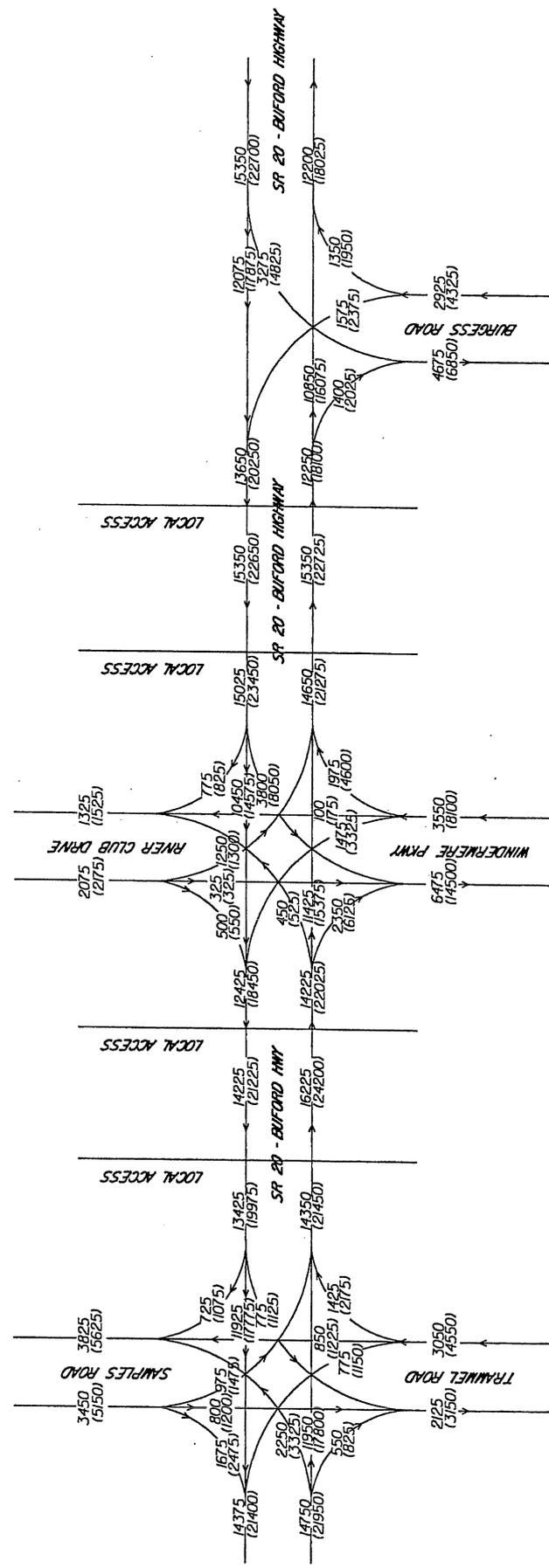
- a. Forsyth Co. – No comments.
- b. Engineering Services – No comments.
- c. Office of Financial Management – No comments.
- d. Traffic and Safety Design – No comments.
- e. Environmental/Location – No comments.
- f. Planning – No comments.
- g. District – See Neil Kantner comments above.
- h. Right of way – No comments.
- i. Utilities – See BellSouth comment above. No other utility comments.

Additional comments:

Alan Chapman (Gwinnett County DOT) will be holding two SR20 concept meetings soon. One is for the bridge replacement and the other is for Gwinnett County widening.

Attachments: Concept Report

STATE	PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS

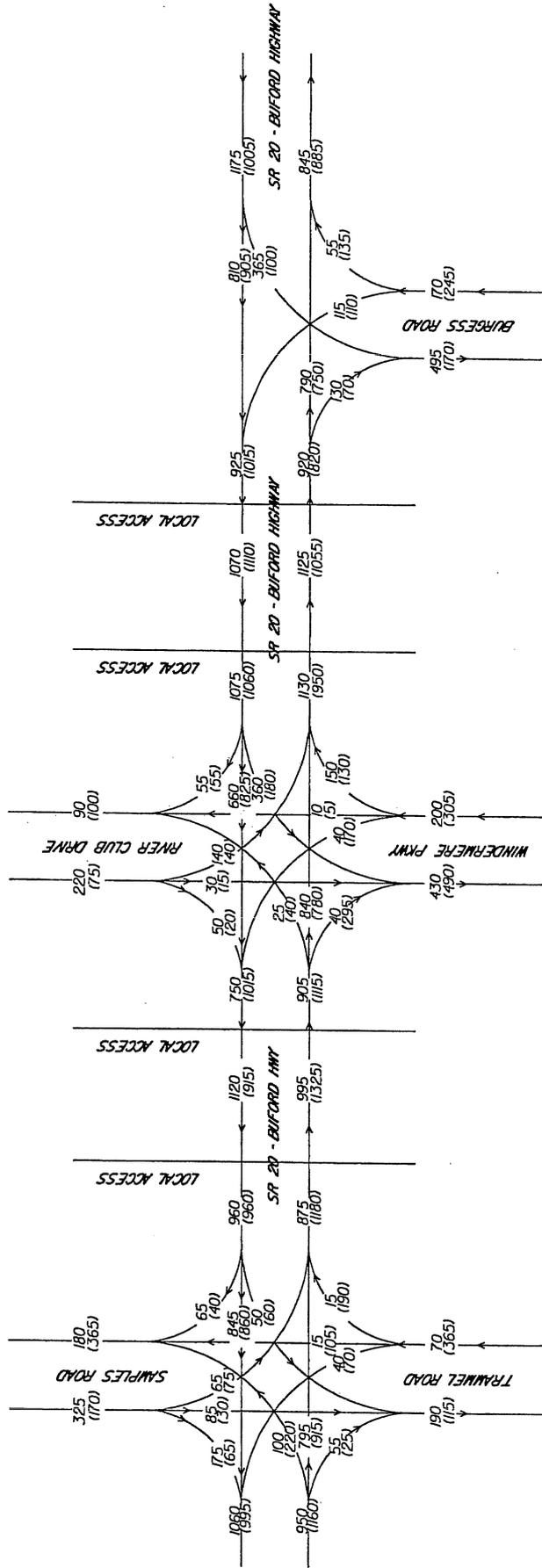


LEGEND

00	2008 AADT
(00)	2028 AADT

SR 20 BUFORD HIGHWAY 2008 AND 2028 AADT TRAFFIC FLOW DIAGRAM		Department of Transportation State of Georgia	DIVISION NUMBER
DATE: _____ DRAWN BY: _____ CHECKED BY: _____ DATE: _____	DATE: _____ DATE: _____ DATE: _____ DATE: _____	DATE: _____ DATE: _____ DATE: _____ DATE: _____	DATE: _____ DATE: _____ DATE: _____ DATE: _____
Prepared by: MA M. J. ... 2511			

STATE	PROJECT NUMBER	SHEET TOTAL NUMBER/SHEETS



MA Maryland A. J. Kelli Associates, Inc. 2215 Suite 100 Mechanicsville, MD 21102-2844 Phone: 410-786-2844		Department of Transportation State of Georgia	SR 20 BUFORD HIGHWAY OPENING YEAR 2008 PEAK HOUR TRAFFIC TRAFFIC FLOW DIAGRAM
REGION: _____ COUNTY: _____ SURVEYED BY: _____	DATE: _____ DRAWN BY: _____ CHECKED BY: _____	DATE: _____ SUBMITTED BY: _____ DATE: _____	DIVISION NUMBER: _____