ORIGINAL TO GENERAL FILES

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P. I. No. 0003168, Gwinnett County
MSL-0003-00(168)
SR 316 HOV Lanes

OFFICE Preconstruction

DATE September 27, 2005

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

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
Ben Buchan
Bryant Poole
BOARD MEMBER

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No. 0003168, Gwinnett County
MSL-0003-00(168)
SR 316 HOV Lanes

OFFICE Preconstruction

DATE September 26, 2005

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

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

SUBJECT PROJECT CONCEPT REPORT

This project is the addition of high occupancy vehicle (HOV) lanes on SR 316 and the construction of HOV interchanges/bridges. The proposed project will begin 2,200'± west of Breckinridge Boulevard where it will tie-in with the concurrent HOV lanes entering SR 316 from the interchange reconstruction project at SR316 and I-85 and end 1,500'± east of Progress Center Avenue. The project length is 5.13 miles. The Clean Air Act Amendment of 1990 and the Intermodal Surface Transportation and Efficiency Act of 1991 encouraged and prescribed a more efficient use of the existing transportation system. One of the major strategies promoted by these acts is to increase the vehicle occupancy rate. The creation of HOV lanes in major commuter corridors is an effective means to promote and encourage higher occupancy rates in the metro area vehicles. Express, or HOV, lanes are intended to provide choice, mobility, and relief from congestion for HOV users, particularly during peak hours.

The existing SR 316 within the project limits consists of two, 12' lanes in each direction, separated by a 40' depressed grassed median from the beginning of the project to just west of Collins Hill Road. Then the depressed median widens to 64' from just west of Collins Hill Road to the end of the project. Accident history for three years (2000-2002) within the project limits indicate a total of 1,117 accidents including rear-end, side swipes, and angle accidents. The base year (2009) and design year (2029) traffic volumes are:

	2009 AADT	2029 AADT
SR 316 General Purpose	92,300	135,400
SR 316 HOV	16,300	24,400

The proposed project, MSL-0003-00(168), will construct barrier separated HOV lanes and allow for HOV only access points throughout the project corridor. The HOV lanes will be constructed within the existing median along SR 316. No additional Single Occupant Vehicle (SOV) lanes will be added as a result of this project.

In order to accommodate the addition of the HOV lanes, other improvements throughout the corridor are necessary. These improvements include the reconstruction of SR 316 to accommodate the barrier separated HOV lanes within the median and the addition of new bridges

to accommodate the HOV lanes. New HOV interchanges/bridges include Herrington Road, Lawrenceville-Suwanee Road, Walther Boulevard, and Hi-Hope Road. Additionally, a new bridge is required at SR 120, and widening of the existing bridges at the Yellow River and the gas line easement west of Collins Hill Road will be required. All new bridges will be designed in such a manner as to not preclude future identified improvements within the corridor. Other improvements necessary to accommodate the HOV lanes include grade separation and interchange construction at the existing at-grade intersection of Collins Hill Road and SR 316. Connections between the Collins Hill Road and SR 20 interchanges will be created to facilitate operational efficiency. These connections are needed due to the proximity of these interchanges to one another. HOV interchanges will be constructed at Herrington Road, Lawrenceville-Suwanee Road (west side ramps only), Walther Boulevard and Hi-Hope Road (west side ramps only). An additional access point will be provided in the vicinity of Sugarloaf Parkway as a direct merge from the HOV lane westbound to the SOV lanes westbound. This will provide an opportunity for HOV users to exit to I-85 north or to access the proposed Collector-Distributor (C-D) Road between Old Peachtree Road and Pleasant Hill Road that is being constructed as part of the I-85/SR 316 interchange construction project.

The proposed typical sections are as follows:

Mainline: 2.5' median barrier to be placed on the centerline of the project to separate the eastbound and westbound HOV lanes, inside HOV shoulders 4' wide, one 12' wide HOV lane in each direction, outside HOV shoulders 10' wide, 2.5' wide barriers, 14' inside general purpose lane shoulders, reconstruct pavement full depth for the existing two, 12' general purpose lanes in each direction (reconstruct pavement full depth existing additional 12' wide auxiliary lanes when present), 14' outside shoulders (12' paved), tie-in slopes vary from 6:1 to 2:1 (with guardrail).

Collector-Distributor Road: two, 12' lanes with 10' paved inside and outside shoulders; separation between mainline travelway and inside C-D lane is approximately 58', but varies at bridge openings and ramp transitions.

Ramps: one to two lane sections with 12-16' travel lanes, 6' inside shoulders (4' paved, 2' grass), 8' outside shoulders (6' paved, 2' grass), and side ditches. Some ramps open to 4 lanes at the side street intersection.

Side Streets: 12' lanes in both directions, number of lanes vary; shoulders to be urban, 16' wide with sidewalks.

Environmental concerns include requiring a COE 404 Permit; an Environmental Assessment will be prepared; a public hearing open house was held June 17, 2004; time saving procedures are not appropriate.

P. I. No. 0003168, Gwinnett
September 26, 2005

The estimated costs for this project are:

	PROPOSED	APPROVED	FUNDING	PROG DATE
Construction (includes E&C and inflation)	$101,167,000	$101,133,000	GRVA	2009
Right-of-Way	$ 26,074,000	$ 26,074,000	Q05	2006/2008
Utilities*	-----	-----		

*LGPA sent 2-14-02 requesting Gwinnett County do utilities; recission letter sent to Gwinnett County 4-25-05.

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

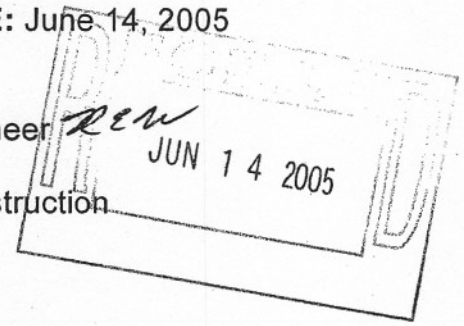
DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

FILE: MSL-0003-00(168) Gwinnett
P.I. No. 0003168
S.R. 316 HOV Lanes

OFFICE: Engineering Services

DATE: June 14, 2005



FROM: Brian K. Summers, P.E., Project Review Engineer

TO: Meg Pirkle, Assistant P.E., Director of Preconstruction

SUBJECT: **CONCEPT REPORT**

We have reviewed the Concept Report submitted June 2, 2005 from Ben Buchan, and have no comments.

The costs for this project are:

Construction	$75,655,050
Inflation	$16,304,136
E & C	$9,195,920
Reimbursable Utilities	Not provided
Right of Way	$26,074,000

REW

c: Ben Buchan, Attn.: Neal O'Brien

SCORING RESULTS AS PER TOPPS 2440-2

Project Number:	County:	PI No.:
MSL-0003-00(168)	Gwinnett	0003168

Report Date:	Concept By:
June 2, 2005	DOT Office: Urban Design
☒ Concept Stage	Consultant: PBS & J

Project Type: Choose One From Each Column			
	☒ Major ☐ Minor	☒ Urban ☐ Rural	☐ ATMS ☐ Bridge Replacement ☐ Building ☐ Interchange Reconstruction ☐ Intersection Improvement ☐ Interstate ☐ New Location ☐ Widening & Reconstruction ☒ Miscellaneous

FOCUS AREAS	SCORE	RESULTS
Presentation	100	
Judgement	100	
Environmental	100	
Right of Way	100	
Utility	100	
Constructability	100	
Schedule	100	

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
Office of Urban Design
Project Concept Report

Project Number: MSL-0003-00(168)
County: Gwinnett
P. I. Number: 0003168
SR 316 from I-85 to SR 20 for HOV Lanes
Federal Route Number: NA
State Route Number: SR 316

(See following page for Location Map)

Recommended for approval:

DATE: 6-21-05 _____ Project Manager

DATE: 6-21-05 _____ State Urban Design Engineer

This concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Improvement Program (RTP) and/or 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 and Design Engineer

DATE: _____ District Engineer

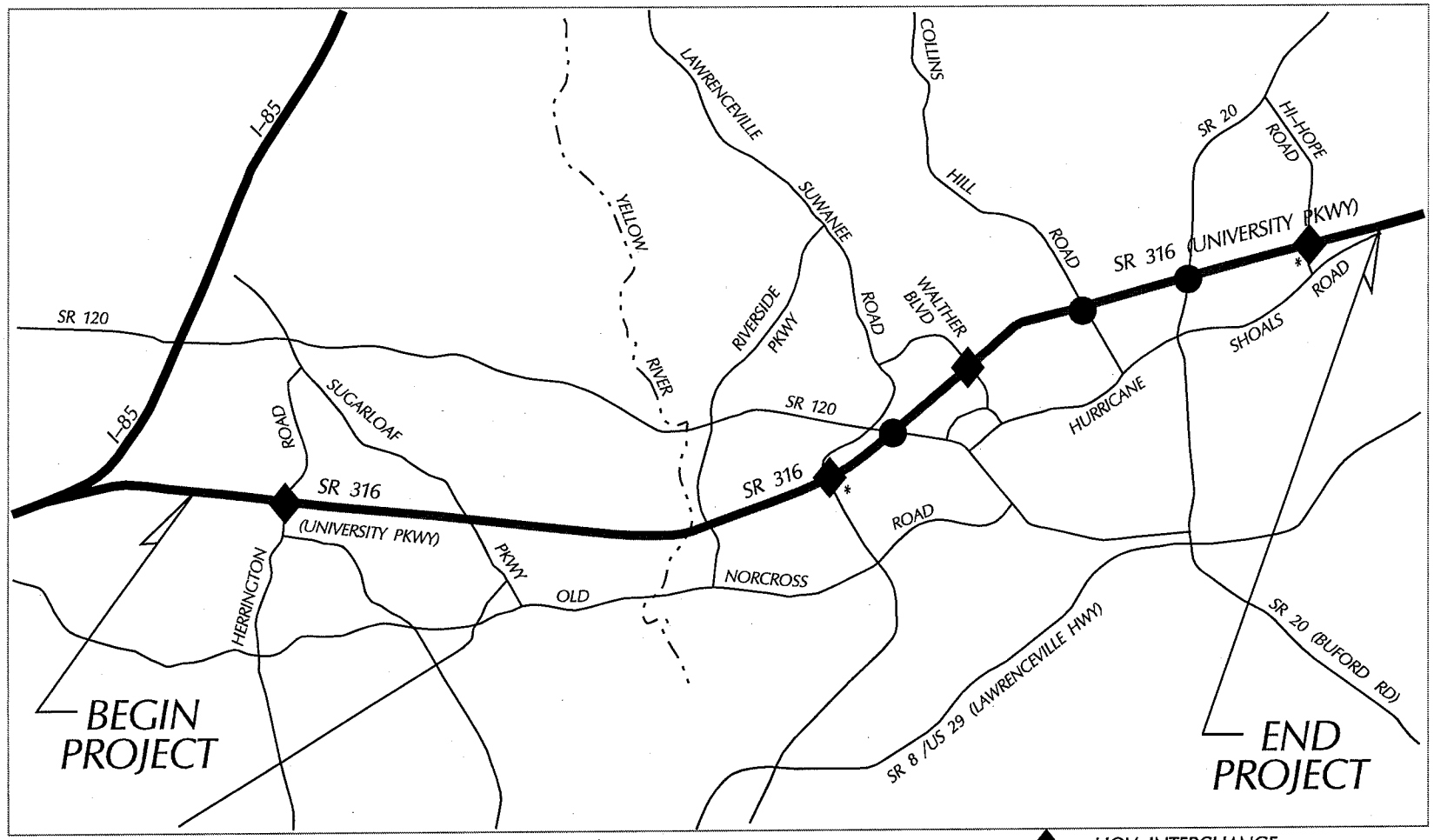
DATE: _____ Project Review Engineer

DATE: _____ State Bridge & Structural Design Engineer

SR 316 FROM I-85 TO SR 20 – HOV LANES

MSL-0003-00(168), GWINNETT COUNTY

PI#0003168



* Note: Lawrenceville-Suwanee Road and Hi-Hope HOV Interchanges are half-diamonds (west side only).

◆ – HOV INTERCHANGE

● – NEW BRIDGE OR INTERCHANGE

LOCATION MAP

Project Concept Report Page: 2
Project Number: MSL-0003-00(168)
P. I. Number: 0003168
County: Gwinnett

NEED AND PURPOSE

MSL-0003-00(168), Gwinnett County
SR 316 from I-85 to SR 20 for HOV Lanes
P.I. No. 0003168

Background

The growth in traffic congestion in the Metro Atlanta area over the years has been well documented. Efforts to accommodate this growing congestion have included many major additions and improvements to the area's arterials streets, freeways and transit rail lines.

During 1973, the Atlanta Regional Commission (ARC), in cooperation with the affected local governments, the Metropolitan Atlanta Rapid Transit Authority (MARTA), and the Georgia Department of Transportation (GDOT), began a comprehensive planning process designed to develop a long-range guide for regional growth and development. In 1975, the Commission adopted a guide for growth, known as the Regional Development Plan (RDP). Extensive detailed analysis and evaluation of the transportation element of the RDP resulted in the preparation of the Regional Transportation Plan (RTP), which indicated that a system of good arterial and collector roads would be needed to complement the major transit facilities of the Atlanta region.

Today, this program of major facility construction is reaching the point where additional such projects carry increasing economic, social and environmental costs. This situation has been addressed in two major Legislative acts ~ the Clean Air Act Amendment of 1990, and the Intermodal Surface Transportation and Efficiency Act of 1991. These legislative acts encourage and prescribe more efficient use of the existing transportation system in order to both improve the air quality and to provide an effective transportation system. One of the major strategies promoted by these acts is to increase the vehicle occupancy rate. The creation of high occupancy vehicle (HOV) lanes in major commuter corridors is an effective means to promote and encourage higher occupancy rates in the metro area's vehicles.

Express or HOV lanes are intended to provide choice, mobility and relief from congestion for HOV users, particularly during the peak hours. During this time period, auto occupancy rates tend to be higher overall, and the origins and destinations of work trips are more concentrated, lending themselves to ride sharing and transit usage. There are other objectives of HOV lanes, including reduced energy consumption, improved air quality, reduced total person travel time and improved efficiency of public transit operations and reliability of transit service in order to induce mode shifts.

Deficiencies

There currently is no HOV service within the SR 316 corridor. However, traffic studies estimate that 19 percent of the 2029 projected Daily Traffic Volumes and Peak Hour Traffic Volumes will be High Occupancy Vehicles. For SR 316, the 2029 AADT forecasts show 24,400 vehicles in the proposed HOV facility and 135,400 in general lanes. Therefore effective opportunities exist to accommodate the current volumes and encourage greater volumes of HOV traffic along SR 316. Along with proposed changes to the interchanges, the proposed project could maintain a 2029 Level of Service (LOS) C in HOV lanes under these conditions. Currently, LOS F exists during peak hours and would continue to operate at LOS F in 2029 without HOV and interchange improvements.

Accident Data and Trends

Below is the accident summary for SR 316 within the limits of this project. The table presents the available data from the most recent three years, and a comparison of the rates to the statewide averages from all Georgia Urban Principal Arterial NHS Freeways.

For SR 316, the accident data rates are slightly higher than the statewide average. Improvements to the SR 316 corridor such as addition of interchanges at existing at-grade intersections and barrier separation of HOV vehicles from the general purpose lanes should have a positive impact to the safety and accident rates shown below.

Accident Summary for SR 316 (Milepost 0.4 - 8.56)

Length: 8.16 Mi., Principal Arterial, Freeway, NHS, Urban
Average Daily Traffic: 69,000
*** Rates in Accidents per 100 million vehicle miles**

	YEAR			Average Statewide
	2000	2001	2002	Average	2000-2002
Crashes					
Number	264	347	506	372.3	
Rate*	128.5	168.8	246.2	181.2	171
Annual Change		31.4%	45.8%		
Injuries					
Number	81	127	167	125.0	
Rate*	39.4	61.8	81.3	60.8	40
Annual Change		56.8%	31.5%		
Fatalities					
Number	2	2	0	1.3	0.52
Rate*	0.97	0.97	0.00	0.6	

Existing traffic north of SR 316 on SR 20 is approximately 49,000 AADT and the 2029 projected AADT is 100,500. The existing traffic on SR 316 approaching SR 20 from the west is 69,000 and the 2030 projected AADT is 135,400.

The first two existing signalized intersections traveling eastbound on SR 316 are Collins Hill Road and SR 20. While the existing Collins Hill Road intersection has significant volumes that continue to increase, the real delay on SR 316 is from the signalized intersection at SR 20 and SR 316. The existing traffic demand at the intersection of SR 316 and SR 20 presents significant delay and congestion to the traveling public along the SR 316 corridor and nearby cross streets. Because of the high volumes of traffic entering at all legs of this intersection, the existing signal cannot be timed in such a way to give enough green time to accommodate the demands placed on this intersection. This intersection therefore operates at a Level of Service F. Delay at this intersection causes the failure of the adjacent at-grade intersections at Collins Hill Road, Hi-Hope Road, Progress Center Avenue, and Cedars Road.

Logical Termini

Proposed project MSL-0003-00(168) has logical termini as its western terminus would connect with proposed project HPP-IM-85-2(146), P.I. Number 110530, which will reconstruct the I-85/SR 316 interchange including HOV lanes. This connection will occur approximately 2,200 feet west of Breckinridge Boulevard.

The eastern terminus is logical as it ends at the proposed HOV interchange at Hi-Hope Road and continues east through the Progress Center Drive intersection. Addition of the HOV lanes between Interstate 85 and Hi-Hope Road will represent significant time savings for HOV users over those traveling in the SOV lanes. These time savings are represented below:

SR 316 HOV Time Savings (I-85 to Hi-Hope Road HOV Interchange)			
Facility	**Direction**	**Time of Day**	**Time Savings**
SR 316	Eastbound	PM	23.5 minutes
SR 316	Westbound	AM	8 minutes
SR 316	Westbound	PM	12+ minutes

Consistency with Other Plans

In September 2001, the Georgia Department of Transportation (GDOT) initiated a contract to develop a High-Occupancy Vehicle (HOV) Strategic Implementation Plan for the Atlanta Region. This implementation plan builds on the early planning efforts of the Atlanta Regional Commission's (ARC) 2025 Regional Transportation Plan (RTP). The purpose of this plan was to provide GDOT and its regional partners with a strategy for building HOV lanes now and in the future. The study was completed in October of 2003. This study clearly designated the need for HOV on SR 316 from Interstate 85 to Drowning Creek Road in eastern Gwinnett County, and eventually to US 78 in Barrow County.

The HOV ingress and egress ramps will be located based on the recommendations of the October 2003 HOV Implementation Plan, which were validated through traffic studies forecasting proposed HOV demand.

Several other projects in the area that will be coordinated in project development (if necessary) include:

1. HPP-IM-85-2(146), Gwinnett County, P.I. No. 110530, ***I-85 at SR 316 Interchange and HOV Lanes***
2. CSNHS-M002-00(825), Gwinnett County, P.I. No. M002825, ***SR 316 from SR 120 to SR 8/US 29 Concrete Rehab***
3. PE(CS)STP-0007-00(016), Gwinnett County, P.I. No. 0007016, ***SR 316 at CR 183/Progress Center Avenue Operational Improvement***
4. RWNHS-0006-00(306), Gwinnett County, P.I. No. 0006306, ***SR 316 from SR 20 East to Barrow County Line –Advance R/W Acquisition Only***

Need &Purpose

The purpose of the proposed project is to provide managed lanes that create realistic travel time savings that will lead to the traveling public taking advantage of the alternative modes of transportation that will be made available.

The proposed managed lanes are intended to provide users a safer, less congested, more reliable alternative to move through the corridor. The vehicles that would use these facilities would include automobiles with at least two occupants, van pools and buses. The primary purpose of this facility is to encourage the use of high occupancy vehicles.

The express bus system currently being implemented by GRTA and metro county local governments would be a prime user of these facilities. Park and ride lots along the corridor will be coordinated with to the extent possible to support this type of use.

Access points for the HOV system and/or bus park and ride facilities will be provided at strategic points to ensure the maximum usage of the system is encouraged.

Adding grade-separated interchanges at Collins Hill Road/SR 316 and SR 20/SR 316 will significantly reduce delay along SR 316 from SR 120 to east of the proposed interchange at SR 20/SR 316.

Reducing congestion in the vicinity of this intersection should significantly improve the safety in the vicinity and result in a substantial reduction of accidents.

DESCRIPTION OF THE PROPOSED PROJECT

MSL-0003-00(168), Gwinnett County
SR 316 from I-85 to SR 20 for HOV Lanes
P.I. No. 0003168

The proposed project would begin approximately 2,200 feet west of Breckinridge Boulevard where it would tie-in with the proposed concurrent High-Occupancy Vehicle (HOV) lanes entering SR 316 from the interchange reconstruction project at SR 316 and I-85 (Project Number HPP-IM-85-2(146), P.I. Number 110530). The proposed project would end approximately 1,500 feet east of Progress Center Avenue.

The proposed project, MSL-0003-00(168), would construct barrier separated HOV lanes and allow for HOV only access points throughout the project corridor. The HOV lanes would be constructed within the existing median along SR 316. No additional Single Occupant Vehicle (SOV) lanes would be added as a result of this project.

In order to accommodate the addition of the HOV lanes, other improvements throughout the corridor are necessary. These improvements include the reconstruction of SR 316 to accommodate the barrier separated HOV lanes within the median, and the addition of new bridges to accommodate the HOV lanes. New HOV interchanges/bridges include Herrington Road, Lawrenceville-Suwanee Road, Walther Boulevard, and Hi-Hope Road. Additionally, a new bridge is required at SR 120, and widening of the existing bridges at the Yellow River and the gas line easement west of Collins Hill Road. All new bridges would be designed in such a manner as to not preclude future identified improvements within the corridor.

Other improvements necessary to accommodate the HOV lanes include grade separation and interchange construction at the existing at-grade intersection of Collins Hill Road and SR 316. Connections between the Collins Hill Road and SR 20 interchanges would be created to facilitate operational efficiency. These connections are needed due to the proximity of these interchanges to one another.

HOV interchanges would be constructed at Herrington Road, Lawrenceville-Suwanee Road (west side ramps only), Walther Boulevard and Hi-Hope Road (west side ramps only). An additional access point will be provided in the vicinity of Sugarloaf Parkway as a direct merge from the HOV lane westbound to the SOV lanes westbound. This will provide an opportunity for HOV users to exit to Interstate 85 north or to access the proposed Collector Distributor (C-D) Road between Old Peachtree Road and Pleasant Hill Road that is being constructed as part of the Interstate 85/SR 316 interchange construction project.

No direct access for businesses that currently have direct, at-grade access from SR 316 will be provided. All direct access to SR 316 for these businesses will be removed. A new access road will be constructed between Collins Hill Road and SR 20 to provide better access for the existing businesses adjacent to SR 316. A new connection will be provided to the Arrington-Blount Ford dealership on the southwest corner of Collins Hill Road and SR 316.

Existing connections of Hosea Road and Progress Center Drive to SR 316 will be closed. Existing surface street connections of these roadways provide access between SR 20, Hi-Hope Road, and Cedars Road.

The project will also include construction of grade separated interchanges at Collins Hill Road/SR 316 and SR 20/SR 316. These will improve the operational efficiency and capacity of the existing at-grade, signal-controlled intersections and promote a much better Level of Service for this portion of the corridor.

The Collins Hill Road bridge will span over SR 316. SR 316 mainline will remain approximately at its current grade and alignment. The SR 316 mainline profile will be modified in the vicinity of SR 20 so that SR 20 will be bridged over SR 316, elevating SR 20 slightly over its existing grade.

Because of the close proximity of Collins Hill Road to SR 20, it will be necessary to construct a Collector-Distributor (C-D) system between the two interchanges. This will improve the operational efficiency of these interchanges.

SOV Vehicles traveling eastbound on SR 316 will exit prior to Collins Hill Road to reach either Collins Hill Road or SR 20. A ramp has been provided underneath Collins Hill Road so that vehicles traveling to SR 20 will not have to pass through the signalized intersection at Collins Hill Road.

SOV traffic traveling westbound on SR 316, vehicles will exit prior to SR 20 to reach SR 20 or Collins Hill Road. The Collins Hill Road ramp is a loop ramp on the north side of SR 316.

Bridges and ramps will be designed to accommodate future improvements to the SR 316 corridor.

Is the project located in a Non-attainment area? ☒ **Yes** ☐ **No**
The proposed project concept matches the conforming plan's model description. The project limits are the interchange limits. The proposed changes are scheduled to be open to traffic in 2011.

PDP Classification: Major ☒, Minor ☐

Federal Oversight: Full Oversight ☐, Exempt ☒, State Funded ☐, or Others ☐

Functional Classification: Principal Urban Arterial (non-Interstate)

U. S. Route Number(s): NA **State Route Number(s):** SR 316

Traffic (AADT):

	Base Year: (2009)	Design Year: (2029)
SR 316 General Purpose	92,300	135,400
SR 316 HOV	16,300	24,400
Herrington Road	11,800	32,800
Walther Boulevard	6,900	19,700
Collins Hill Road	20,000	30,100
SR 20 (Buford Road)	58,800	98,200
Hi-Hope Road	13,800	25,200

Existing Design Features:

- Typical Section:

  SR 316: 4-lane divided facility with a 40' depressed median from the beginning of project to just west of Collins Hill Road. Then the depressed median widens to 64' from just west of Collins Hill Road to the end of the project. All travel lanes are 12' wide, inside shoulder slopes are 8:1 and 2' wide (paved), outside shoulders are 10' wide (paved) with slopes varying from 4:1 to 2:1 (with guardrail). From the beginning of the project to SR 120, SR 316 is a limited access facility with interchanges at Sugarloaf Boulevard, Riverside Drive and SR 120. East of SR 120, there are only signalized at-grade intersections with access points provided for developed and undeveloped commercial driveway openings.

  Herrington Road: 2-lane rural roadway, lane widths vary from 10'-12', shoulders vary from 4' to 12'. Existing bridge is a grade-separation with no access provided to SR 316. The existing bridge width is 32' wide.

  Lawrenceville-Suwanee Road: 5-lane roadway with 12' lanes and a 20' raised median. Shoulders are approximately 4' wide with a rural section. Existing bridge is a grade-separation with no access provided to SR 316. The existing bridge width is approximately 92' wide.

SR 120 (Duluth Highway/W. Pike Street): 5-lane urban section over SR 316 with 12' lanes. North of SR 316, roadway opens to 7-12' lanes. All shoulders are 12' wide; sidewalks are provided only on the north side of SR 316.

Walther Boulevard: 3-lane urban roadway, 1-12' lane in each direction with a 14' two-way left-turn lane, shoulders are 12' wide with sidewalks provided on the north side of SR 316. Walther Boulevard has right-in/right-out access to SR 316 both eastbound and westbound.

Collins Hill Road: 4-lane section at the existing approaches to SR 316 with 12' lanes. Roadway tapers to 2 or 3-lane sections away from SR 316, shoulders vary from rural to urban.

SR 20 (Buford Road): 5-lane section with 2-12' turn lanes in each direction. Auxiliary lanes at both approaches to SR 316 bring the lane total to 6, primarily an urban section with 12' shoulders, no sidewalks.

Hi-Hope Road: 2-lane section with 1-12' lane in each direction. Additional turn lanes are provided at intersection with SR 316. There are no sidewalks on Hi-Hope Road adjacent to SR 316.

- Posted Speed SR 316 Mainline: 55 mph, Ramps: No Speed Posted, Minimum radius for mainline curve 1909.86' (3°00' curve)
- Maximum super-elevation rate for curve: 0.08
- Maximum Grade: 3.5%
- Width of right of way: Mainline - 300 ft. typical, but varies throughout corridor, Sidestreets - vary from 80' to 200'
- Major structures: 8 bridges at 6 locations (Herrington Road overpass, Sugarloaf overpass, twin bridges over the Yellow River, Lawrenceville-Suwanee Road overpass, SR 120 overpass, and twin bridges over the gas line easement just west of Collins Hill Road.
- Major interchanges or intersections along the project: Sugarloaf Parkway Interchange, Riverside Drive Interchange, SR 120 Interchange, Collins Hill Road at SR 316 Intersection (signalized), SR 20 at SR 316 Intersection (signalized), Hi-Hope Road at SR 316 Intersection (signalized), and Progress Center Drive/Hurricane Shoals Road at SR 316 Intersection (unsignalized).
- Existing length of roadway segment and the beginning mile logs for each county segment. Project begins at ML 0.40 and extends east approximately 8.16 miles to ML 8.56. The entire project is in Gwinnett County.

Proposed Design Features:

- Proposed typical section(s):
  Mainline: 2.5-foot median barrier to be placed on the centerline of the project to separate the eastbound and westbound HOV lanes, inside HOV shoulders 4' wide, one 12' wide HOV lane in each direction, outside HOV shoulders 10' wide, 2.5 foot wide barriers, 14' inside general purpose lane shoulders, reconstruct pavement full depth for the existing 2-12' general purpose lanes in

each direction (reconstruct pavement full depth existing additional 12' wide auxiliary lanes when present), 14' outside shoulders (12' paved), tie-in slopes vary from 6:1 to 2:1 (with guardrail).

Collector-Distributor Road: 2-12' lanes with 10' paved inside shoulder and 10' paved outside shoulder, separation between mainline travel way and inside C-D lane is approximately 58', but varies at bridge openings and ramp transitions.

Ramps: One to two lane sections with 12 to 16-foot travel lanes, 6-foot inside shoulders (4-foot paved, 2-foot grass), 8-foot outside shoulders (6-foot paved, 2-foot grass) and side ditches. Some ramps open to 4 lanes at the sidestreet intersection.

Sidestreets: 12' lanes in both directions, number of lanes vary, shoulders to be urban, 16' wide with sidewalks.

- Proposed Design Speed Mainline: 65 mph, Ramps: 45-55 mph, Loop Ramp: 25 MPH, Sidestreets: 35-45 MPH
- Proposed Maximum grade Mainline 3.5% — Maximum grade allowable 4 %
- Proposed Maximum grade Ramps 4.2% — Maximum grade allowable 5 %
- Proposed Maximum grade Sidestreets (Arterials) 5% — Maximum grade allowable 7%
- Proposed Maximum grade Sidestreets (Collectors) 5% — Maximum grade allowable 8%
- Proposed Maximum grade driveway 15% (Residential) 11% (Commercial) — Maximum grade allowable 15%
- Proposed Minimum radius of curve, Mainline 1909.86' — Minimum radius allowable 1485'
- Proposed Minimum radius of curve, Ramps 1100' — Minimum Radius allowable 600'
- Proposed Minimum radius of curve, Loop Ramp 320' — Minimum Radius allowable 275'
- Proposed maximum super-elevation rate for curve: 0.08
- Right of way
  - Mainline: Width 300-450' (some strip acquisitions, more R/W required at interchanges)
  - Sidestreets: Varies from 80' to 200'
  - Easements: Temporary ☐, Permanent ☒, Utility ☐, Others ☐
  - Type of access control:
    - SR 316 - Full ☒, Partial ☐, By Permit ☐, Others ☐
    - Sidestreets - Full ☐, Partial ☐, By Permit ☒, Others ☐
  - Number of parcels 68 — Number of displacements:
    - Business: 6
    - Residences: 0
    - Mobile Homes: 0
    - Other: 1 (6 LP Storage Tanks)
- Structures:
  - **Bridges:** (all bridge widths and lengths are approximate)
    Herrington Road overpass– HOV interchange in the median of SR 316, northern bridge 135'x76', southern bridge 135'x76'

    SR 316 bridge over Yellow River – Replace or widen existing bridges over the Yellow River. Final bridge will be approximately 180'x160'.

Lawrenceville-Suwanee Road overpass – HOV Interchange (west side ramps only), existing bridge will require replacement because of addition of HOV Interchange and HOV Barrier separated lanes. Bridge will be stage constructed to leave open during construction. New bridge will be approximately 210'x100'to the north and 210'x100' to the south.

SR 120 (Duluth Highway/E. Pike Street) overpass/interchange – Replace because of inadequate horizontal and vertical clearance. Bridge will be stage constructed to maintain traffic during construction. Bridge 460'x108'.

Walther Boulevard Overpass – HOV interchange in the median of SR 316, northern bridge 210'x52', southern bridge 210'x52'.

SR 316 over Colonial Pipeline Easement – Widen bridges to north and south and to span center median of SR 316. Widening to north 98'x35', widen in median 88'x44', widen to south 95'x35'.

Collins Hill Road overpass/interchange – 370' x 90'.

SR 20 (Buford Road) over SR 316/interchange – 375'x114'.

Hi-Hope Road overpass – HOV interchange (west side ramps only), northern bridge 215'x52', southern bridge 215'x52'.

- **Retaining walls** (all dimensions are approximate)
  MSE walls at HOV interchanges at Herrington Boulevard, Walther Boulevard, and Hi-Hope Road. These are approximately 500' long, and 25' high at the cross street. There are four walls per interchange accounting for approximately 25,000 square feet of wall per interchange.

  Retaining wall at NE corner of SR 120 – 1,600' long with an average height of 12'.

  Retaining wall at SE corner of SR 120 – 800' long with an average height of 12'.

  Retaining wall at NW corner of Collins Hill Road (GMC Dealership) – 1,300' long with an average height of 15'.

  Retaining wall at SW corner of Collins Hill Road (Ford Dealership) – 550' long with an average height of 10'.

  Retaining wall at SE corner of Collins Hill Road (adjacent to SR 316 EB ramp) – 425' long with an average height of 15'.

  Retaining wall at SW corner of SR 20 – 200' long with an average height of 10'.

  - Major intersections and interchanges: Construct new HOV interchanges at Herrington Road, Lawrenceville-Suwanee Road (west side only), Walther Boulevard and Hi-Hope Road (west side only). Construct new interchanges at the previously signalized, at-grade intersections of Collins Hill Road and SR 20. Reconstruct the existing SR 120 interchange. Also will include a direct merge east of Sugarloaf Parkway. This will allow HOV vehicles traveling westbound on SR 316 to merge in to general purpose lanes of SR 316 to have access to Interstate 85 northbound, and the Pleasant Hill Road future C-D road.
- Traffic control during construction: Maintain traffic on existing facilities during construction.
  - Herrington Road may be closed for construction.
  - The new Lawrenceville-Suwanee bridge and SR 120 bridge will be stage constructed.
  - SR 316 will be lowered underneath the existing grade of SR 20. After C-D roads are constructed, traffic will be diverted onto the C-D roads while the mainline is lowered.

- Design Exceptions to controlling criteria anticipated:

	UNDETERMINED	YES	NO
HORIZONTAL ALIGNMENT:	☐	☐	☒
ROADWAY WIDTH:	☐	☐	☒
SHOULDER WIDTH:	☐	☐	☒
VERTICAL GRADES:	☐	☐	☒
CROSS SLOPES:	☐	☐	☒
STOPPING SIGHT DISTANCE:	☐	☐	☒
SUPERELEVATION RATES:	☐	☐	☒
HORIZONTAL CLEARANCE	☐	☐	☒
SPEED DESIGN:	☐	☐	☒
VERTICAL CLEARANCE:	☐	☐	☒
BRIDGE WIDTH:	☐	☐	☒
BRIDGE STRUCTURAL CAPACITY:	☐	☐	☒

- Design Variances: None
- Environmental concerns: No historical resources were identified that will be impacted by this project. There will be impacts to streams and wetlands as part of this project. It will be necessary to have an Individual Permit from the Corps of Engineers with stream and wetland mitigation credits required.
- Level of environmental analysis:
  - Are Time Saving Procedures appropriate? Yes ☐, No ☒
  - Categorical Exclusion
  - Environmental Assessment/Finding of No Significant Impact (FONSI): ☒ Anticipated
    - Documents: Air/Noise, Archeology, Historic Resources, Ecology, Conceptual Stage Study
  - Environmental Impact Statement (EIS)
- Utility involvement: To Be Determined

Project responsibilities:

- Design, GDOT (PBS&J as consultant)
- Right of Way Acquisition, GDOT
- Relocation of Utilities, GDOT
- Letting to contract, GDOT
- Supervision of construction, GDOT
- Providing material pits, Contractor
- Providing detours, On-Site Detours, GDOT

Coordination:

- Initial Concept Meeting Date March 24, 2004
- Concept Meeting Date March 17, 2005
- PAR Meeting Date To Be Determined
- FEMA, USCG, and/or TVA
- Public Involvement – Public Information Open House Held June 17, 2004
- Local government commitments: None
- Other projects in area:
  1. HPP-IM-85-2(146), Gwinnett County, P.I. No. 110530, ***I-85 at SR 316 Interchange and HOV Lanes***
  2. CSNHS-M002-00(825), Gwinnett County, P.I. No. M002825, ***SR 316 from SR 120 to SR 8/US 29 Concrete Rehab***
  3. PE(CS)STP-0007-00(016), Gwinnett County, P.I. No. 0007016, ***SR 316 at CR 183/Progress Center Avenue Operational Improvement***
  4. RWNHS-0006-00(306), Gwinnett County, P.I. No. 0006306, ***SR 316 from SR 20 East to Barrow County Line –Advance R/W Acquisition Only***STP-114-1(72), P.I. No. 721310, SR 120/Roswell Road Widening
- Other coordination to date: None
- Railroads: None

Scheduling – Responsible Parties' Estimate

- Time to complete the Section 404 Permit: 8 to 12 Months.
- Time to complete environmental process: 18 to 24 Months.
- Time to complete preliminary construction plans: 10 Months.
- Time to complete right of way plans: 3 Months.
- Time to complete final construction plans: 10 Months.
- Time to complete to purchase right of way: 12 Months.
- List other major items that will affect the project schedule: None.

Alternates considered:

1) Construct SR 316 HOV as barrier separated in the median. Will require new HOV interchanges at Herrington Road, Lawrenceville-Suwanee Road (west side ramps only), Walther Boulevard and Hi-Hope Road (west side ramps only). Interchanges will be constructed at Collins Hill Road and SR 20. To enhance the operational efficiency of the closely spaced interchanges of Collins Hill Road and SR 20 along SR 316, a split-diamond Collector-Distributor alternative was selected.
2) HOV interchange was considered at Lawrenceville-Suwanee Road and SR 316. This would replace the interchange being considered at Walther Boulevard. Detailed traffic analysis of the Lawrenceville-Suwanee HOV interchange showed that although it attracted more vehicles, it would fail because of the inability of the nearby intersections to support the projected traffic volumes.
3) A true Collector-Distributor Concept was developed which ran the C-D roads underneath the endspans of all cross-street bridges on Collins Hill Road and SR 20. This was eliminated due to cost and operational problems, and because the Split Diamond C-D alternative (Alternative Number1) operates at an acceptable Level of Service for the Design Year (2029). Alternative 1 has been designed to accommodate future addition of the C-D roads through all of the endspans.
4) No Build – eliminated due to level of service F for current and future traffic.

Programmed Dates:

- Right of Way: 2006 & 2008
- Construction: 2009

Comments: None

Attachments:

1. Cost Estimates:
    a) Construction, including E&C
    b) Right of Way
    c) Utilities
2. Typical Sections
3. Capacity Analysis
4. Minutes of Initial Concept Meeting
5. 11"x 17" Concept Drawings
6. Public Involvement Summary
7. Environmental Investigation Summary
8. Minutes of Concept Team Meeting (3-17-05)
9. Responses to Value Engineering Study
10. Benefit-Cost Analysis

Concept Report Attachments
Attachment 1 – Cost Estimate

Estimate Report for file "0003168"

Section ROADWAY ITEMS

Item Number	Quantity	Units	Unit Price	Item Description	Cost
150-1000	1	LS	3300000.00	TRAFFIC CONTROL -	3300000.00
153-1300	4	EA	48309.78	FIELD ENGINEERS OFFICE TP 3	193239.12
205-0001	680000	CY	3.19	UNCLASS EXCAV	2169200.00
206-0002	250000	CY	3.95	BORROW EXCAV, INCL MATL	987500.00
207-0203	600	CY	31.95	FOUND BKFILL MATL, TP II	19170.00
310-5100	50000	SY	13.79	GR AGGR BASE CRS, 10 INCH, INCL MATL	689500.00
310-5120	604200	SY	12.28	GR AGGR BASE CRS, 12 INCH, INCL MATL	7419576.00
400-3624	32900	TN	65.69	ASPH CONC 12.5 MM PEM, GP 2 ONLY, INCL POLYMER-MODIFIED	2161201.00
402-3112	106100	TN	46.30	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	4912430.00
402-3121	308200	TN	34.87	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	10746934.00
402-3130	43300	TN	36.73	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM	1590409.00
413-1000	196200	GL	0.91	BITUM TACK COAT	178542.00
433-1000	5700	SY	111.59	REINF CONC APPROACH SLAB	636063.00
441-0740	3300	SY	22.75	CONCRETE MEDIAN, 4 IN	75075.00
500-3101	1000	CY	410.56	CLASS A CONCRETE	410560.00
500-3800	60	CY	681.87	CLASS A CONCRETE, INCL REINF STEEL	40912.20
511-1000	101600	LB	0.60	BAR REINF STEEL	60960.00
550-1150	1600	LF	29.85	STORM DRAIN PIPE, 15 IN, H 1-10	47760.00
550-1180	12300	LF	28.86	STORM DRAIN PIPE, 18 IN, H 1-10	354978.00
550-1240	1000	LF	33.84	STORM DRAIN PIPE, 24 IN, H 1-10	33840.00
550-1300	200	LF	41.68	STORM DRAIN PIPE, 30 IN, H 1-10	8336.00
550-1360	800	LF	51.94	STORM DRAIN PIPE, 36 IN, H 1-10	41552.00
550-1420	400	LF	68.25	STORM DRAIN PIPE, 42 IN, H 1-10	27300.00
550-1480	500	LF	80.55	STORM DRAIN PIPE, 48 IN, H 1-10	40275.00
550-1540	500	LF	196.74	STORM DRAIN PIPE, 54 IN, H 1-10	98370.00
621-3020	115400	LF	129.90	CONCRETE BARRIER, TYPE 20	14990460.00
627-1000	126000	SF	39.64	MSE WALL FACE, 0 - 10 FT HT, WALL NO -	4994640.00
634-1200	210	EA	88.06	RIGHT OF WAY MARKERS	18492.60
668-1100	70	EA	1735.86	CATCH BASIN, GP 1	121510.20
668-2100	170	EA	1775.08	DROP INLET, GP 1	301763.60
716-2000	1	SY	2300000.00	EROSION CONTROL MATS, SLOPES	2300000.00
				Section Sub Total:	**$58,970,548.72**

Section BRIDGE ITEMS

Item Number	Quantity	Units	Unit Price	Item Description	Cost
540-1101	5	LS	120000.00	REMOVAL OF EXISTING BRIDGE	600000.00
543-1100	1	LS	17000000.00	CONSTR OF BRIDGE - COMPLETE - TO BOTTOM OF CAP	17000000.00
				Section Sub Total:	**$17,600,000.00**

Section Signing & Marking

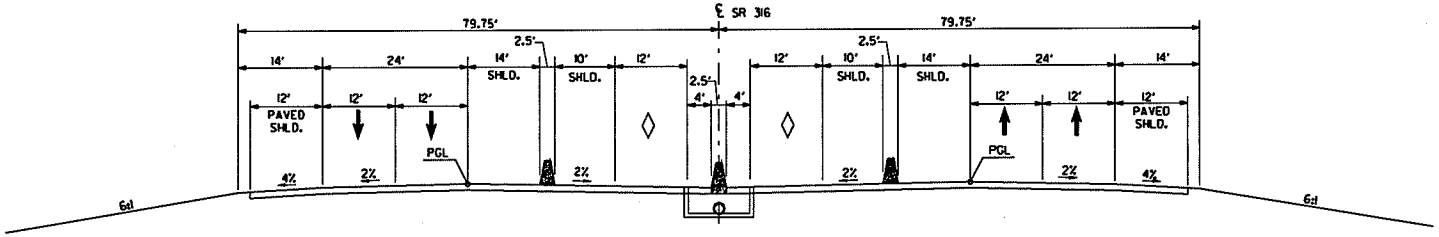
Item Number	Quantity	Units	Unit Price	Item Description	Cost
653-XXXX	1	Lump Sum	1500000.00	SIGNING & MARKING	1500000.00
				Section Sub Total:	**$1,500,000.00**

Total Estimated Cost: $78,070,548.72

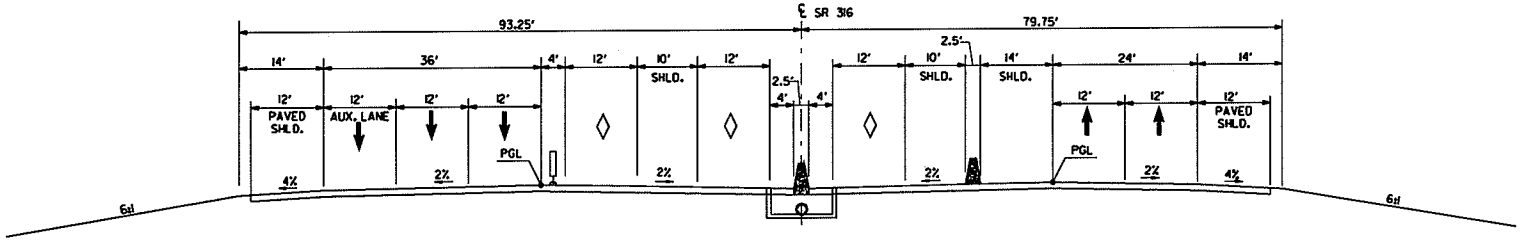
Subtotal Construction Cost	**$78,070,548.72**
E&C Rate 10.0 %	$7,807,054.87
Inflation Rate 5.0 % @ 4.0 Years	$18,507,160.31
Total Construction Cost	**$104,384,763.90**
Right Of Way	$26,074,000.00
ReImb. Utilities	$0.00
Grand Total Project Cost	**$130,458,763.90**

Concept Report Attachments
Attachment 2 – Typical Sections

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	MSL-0003-00(168)	1	6



SR 316 BARRIER SEPARATED HOV
TYPICAL SECTION
SCALE: 1"=10'



SR 316 BARRIER SEPARATED
HOV W/DIRECT MERGE LANE
TYPICAL SECTION
SCALE: 1"=10'

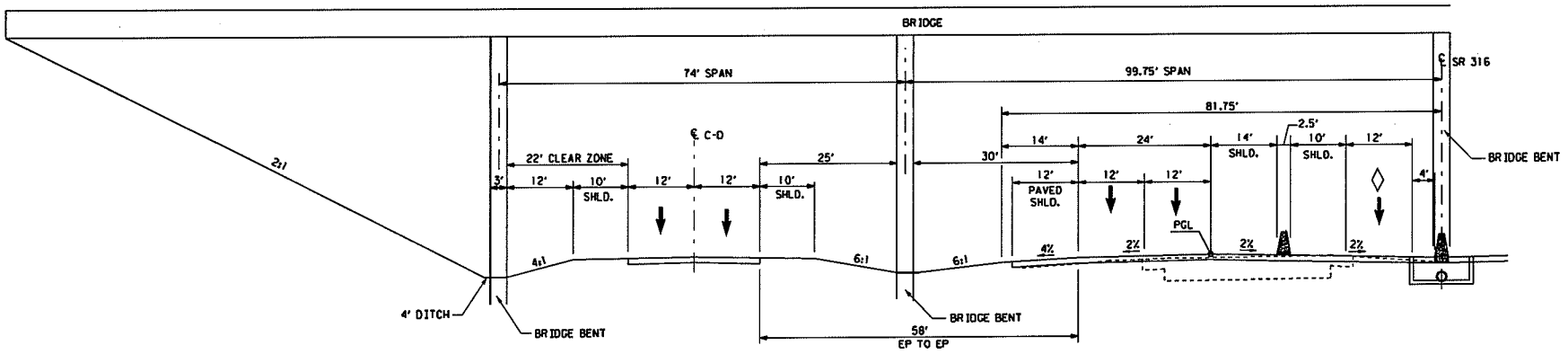
PBS&J

DATE	REVISIONS	DATE	REVISIONS

STATE OF GEORGIA
DEPARTMENT
OF
TRANSPORTATION

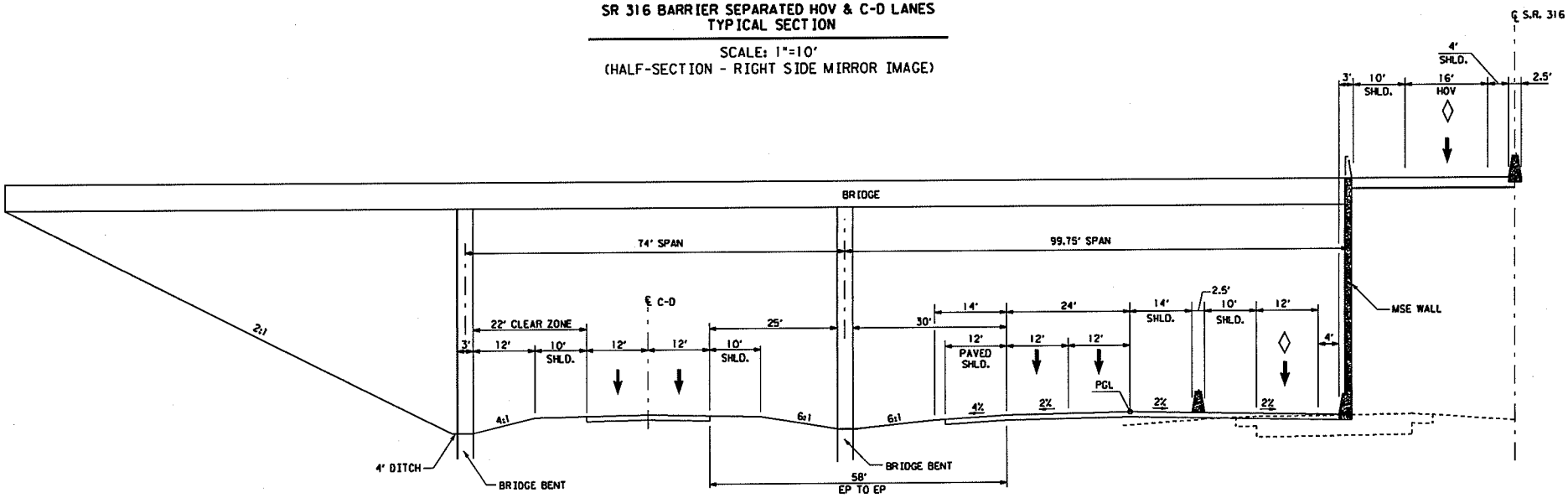
GEORGIA
DEPARTMENT OF TRANSPORTATION
TYPICAL SECTION
PROJECT
SR 316 BARRIER SEPARATED HOV

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	MSL-0003-00(168)	2	6



SR 316 BARRIER SEPARATED HOV & C-D LANES
TYPICAL SECTION

SCALE: 1"=10'
(HALF-SECTION - RIGHT SIDE MIRROR IMAGE)



S.R. 316 BARRIER SEPARATED HOV LANES
AND C-D LANES @ HOV INTERCHANGES
TYPICAL SECTION

SCALE: 1"=10'
(HALF-SECTION - RIGHT SIDE MIRROR IMAGE)

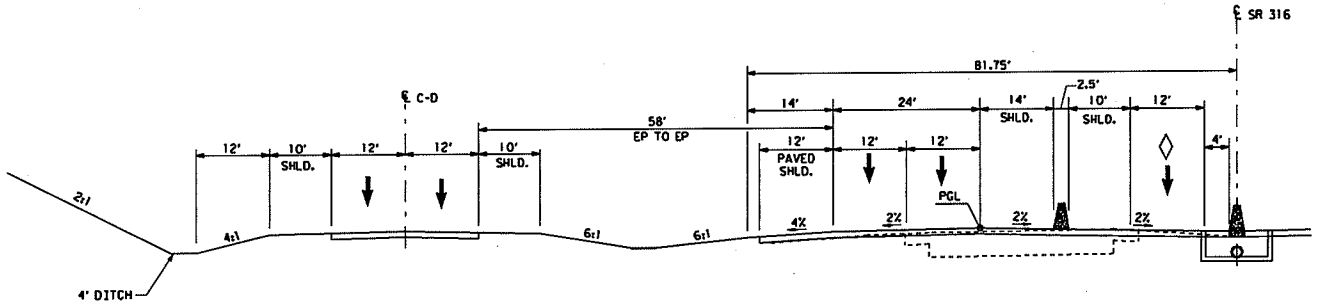
PBS&J

DATE	REVISIONS	DATE	REVISIONS

STATE OF GEORGIA
DEPARTMENT
OF
TRANSPORTATION

GEORGIA
DEPARTMENT OF TRANSPORTATION
TYPICAL SECTION
PROJECT
SR 316 BARRIER SEPARATED HOV
@ BRIDGES

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	MSL-0003-00(168)	3	6



SR 316 BARRIER SEPARATED HOV & C-D LANES
TYPICAL SECTION

SCALE: 1"=10'
(HALF-SECTION - RIGHT SIDE MIRROR IMAGE)

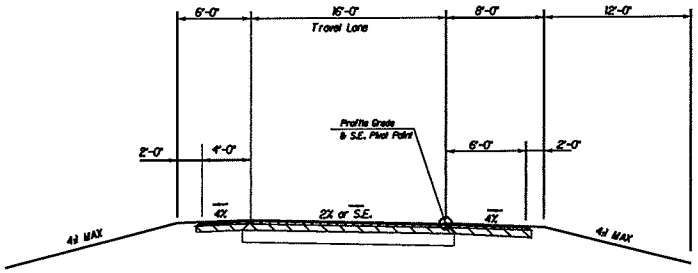
PBS&J

DATE	REVISIONS	DATE	REVISIONS

STATE OF GEORGIA
DEPARTMENT
OF
TRANSPORTATION

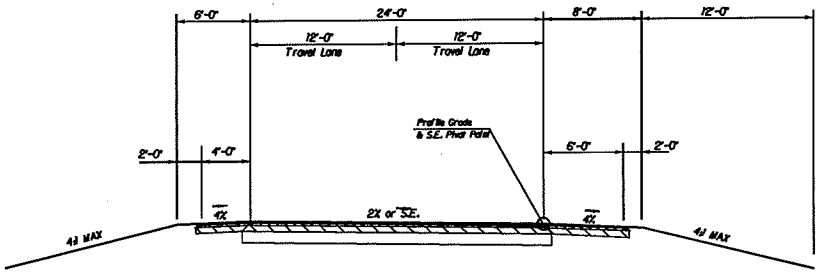
GEORGIA
DEPARTMENT OF TRANSPORTATION
TYPICAL SECTION
PROJECT
SR 316 BARRIER SEPARATED HOV
& C-D AND RAMPS

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	MSL-0003-00(168)	4	6



ONE LANE RAMP
TYPICAL SECTION

SCALE: 1"=5'



TWO LANE RAMP
TYPICAL SECTION

SCALE: 1"=5'

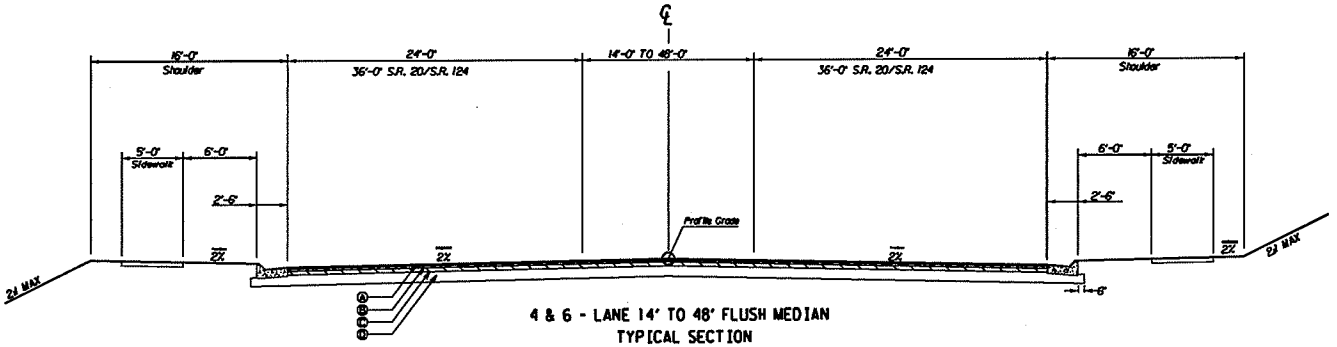
DATE	REVISIONS	DATE	REVISIONS

PBS&J

STATE OF GEORGIA
DEPARTMENT
OF
TRANSPORTATION

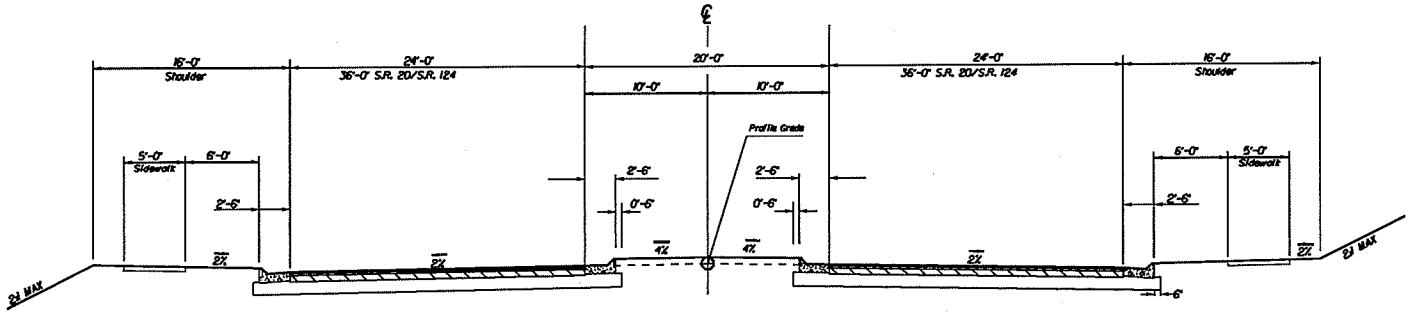
GEORGIA
DEPARTMENT OF TRANSPORTATION
TYPICAL SECTION
PROJECT
RAMPS

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	MSL-0003-00168)	5	6



4 & 6 - LANE 14' TO 48' FLUSH MEDIAN
TYPICAL SECTION
HERRINGTON ROAD
S.R. 120
COLLINS HILL ROAD
S.R. 20/S.R. 124
HI-HOPE ROAD

SCALE: 1"=5'



4 & 6 - LANE WITH MEDIAN
TYPICAL SECTION
S.R. 120
COLLINS HILL ROAD
S.R. 20/S.R. 124
HI-HOPE ROAD

SCALE: 1"=5'

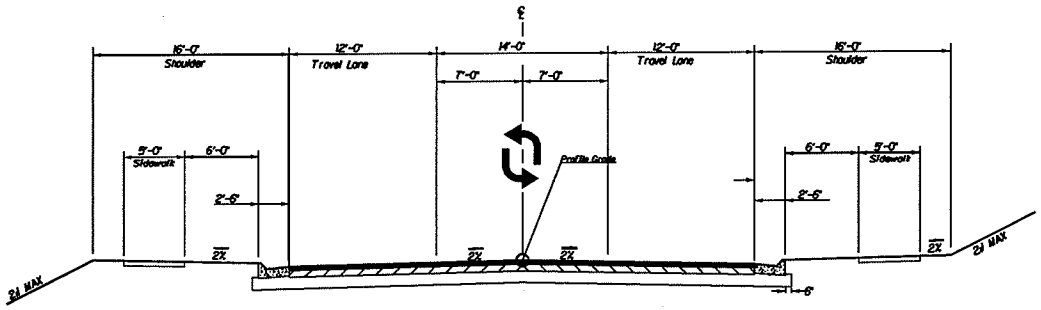
PBS&J

DATE	REVISIONS	DATE	REVISIONS

STATE OF GEORGIA
DEPARTMENT
OF
TRANSPORTATION

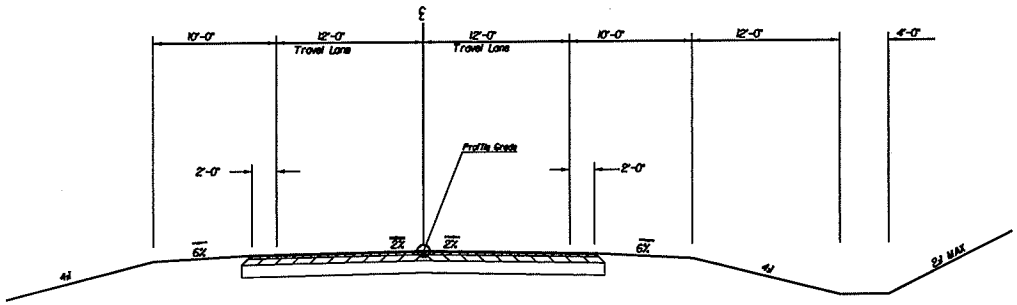
GEORGIA
DEPARTMENT OF TRANSPORTATION
TYPICAL SECTION
PROJECT
SIDE ROAD

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	MSL-0003-00(168)	6	6



2 - LANE 14' FLUSH MEDIAN
TYPICAL SECTION
WALTHER BLVD

SCALE: 1"=5'



2 - LANE
TYPICAL SECTION
ACCESS ROAD

SCALE: 1"=5'

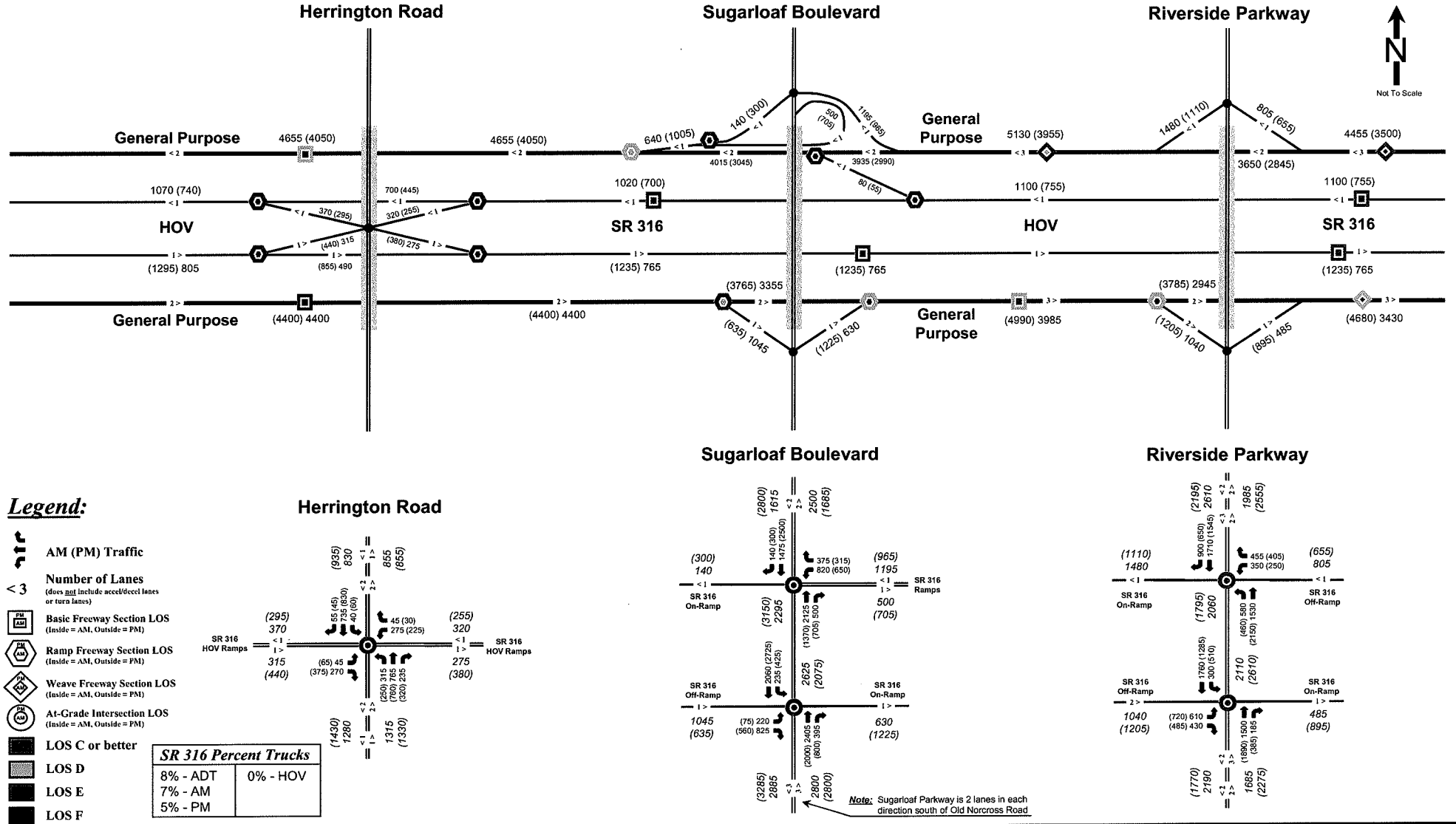
PBS&J

DATE	REVISIONS	DATE	REVISIONS

STATE OF GEORGIA
DEPARTMENT
OF
TRANSPORTATION

GEORGIA
DEPARTMENT OF TRANSPORTATION
TYPICAL SECTION
PROJECT
SIDE ROAD

Concept Report Attachments
Attachment 3 – Capacity Analysis



Legend:

- AM (PM) Traffic
- < 3 — Number of Lanes (does not include accel/decel lanes or turn lanes)
- Basic Freeway Section LOS (Inside = AM, Outside = PM)
- Ramp Freeway Section LOS (Inside = AM, Outside = PM)
- Weave Freeway Section LOS (Inside = AM, Outside = PM)
- At-Grade Intersection LOS (Inside = AM, Outside = PM)
- LOS C or better
- LOS D
- LOS E
- LOS F

SR 316 Percent Trucks	
8% - ADT	0% - HOV
7% - AM	
5% - PM	

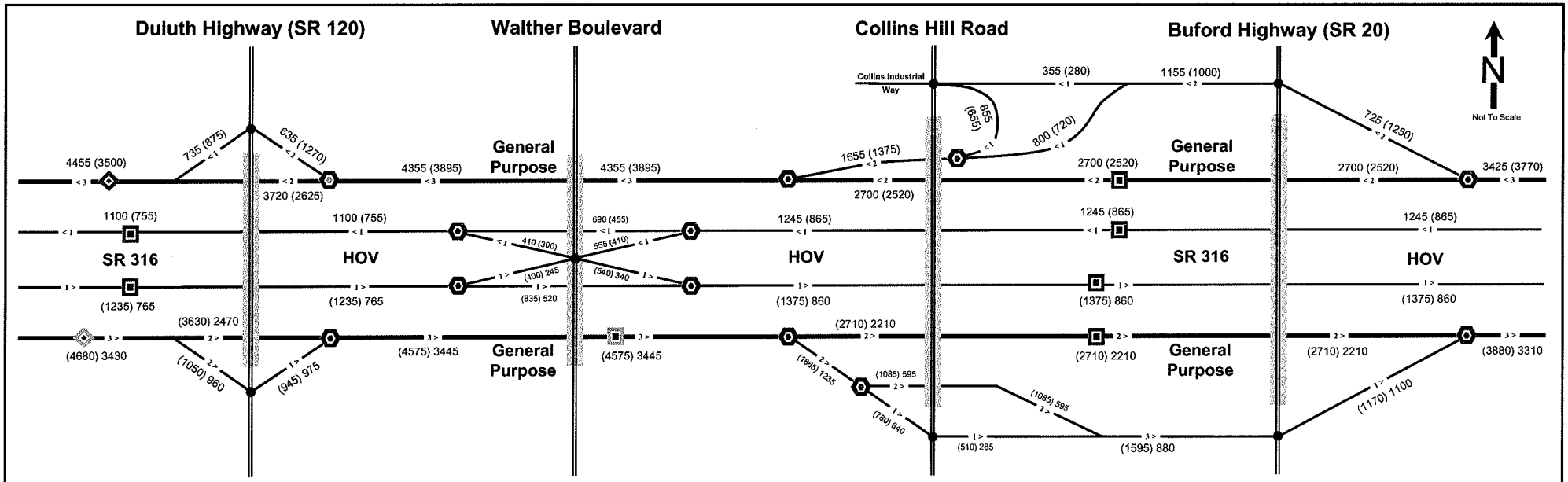
Herrington Road

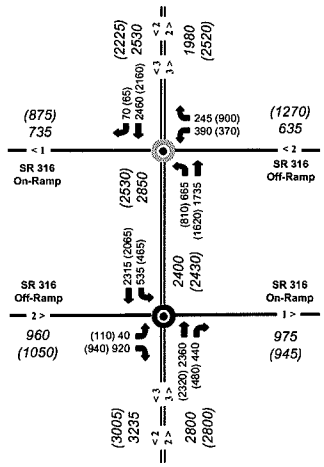
Sugarloaf Boulevard

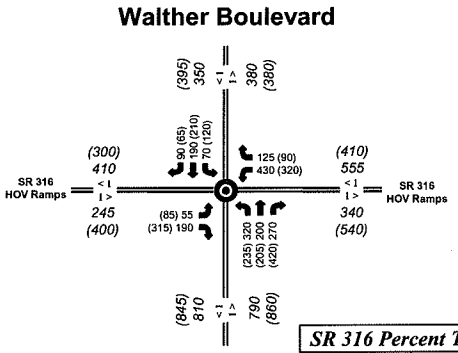
Note: Sugarloaf Parkway is 2 lanes in each direction south of Old Norcross Road

Riverside Parkway

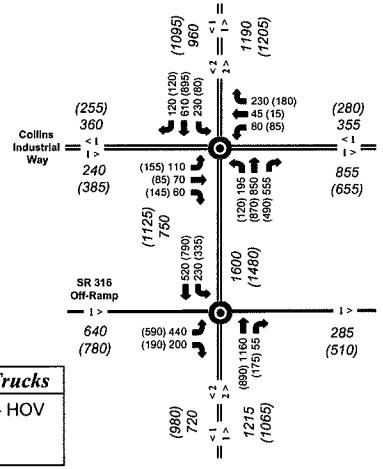
PBS&J	**SR 316 HOV Project Traffic Analysis**	**2029 DHV & Level of Service – Build Alternative** **SR 316 between Herrington Road and Riverside Parkway**
		Figure 1.1

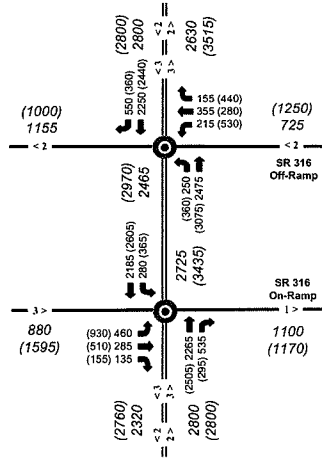






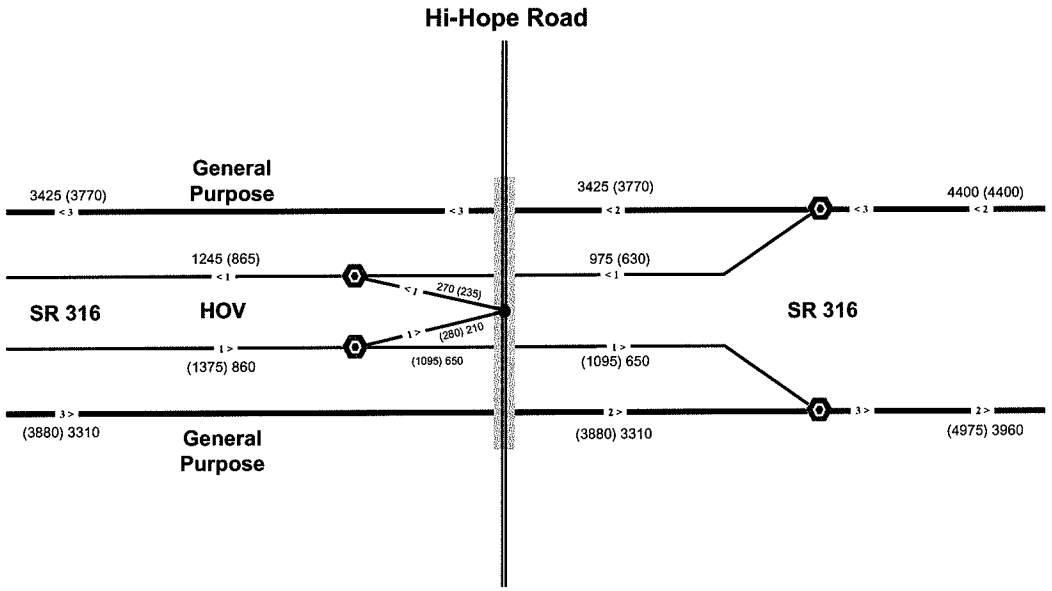
SR 316 Percent Trucks	
8% - ADT	0% - HOV
7% - AM	
5% - PM	

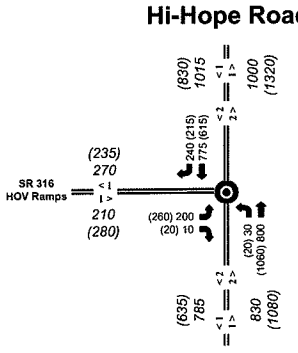




PBS&J	**SR 316 HOV Project** **Traffic Analysis**	**2029 DHV & Level of Service – Build Alternative** **SR 316 between Duluth Highway and Buford Highway**

Figure 1.2





SR 316 Percent Trucks	
8% - ADT 7% - AM 5% - PM	0% - HOV

Not To Scale

PBS&J	**SR 316 HOV Project** **Traffic Analysis**	**2029 DHV and Level of Service – Build Alternative** **SR 316 at Hi-Hope Road**	**Figure 1.3**

Concept Report Attachments
Attachment 4
Initial Concept Team Meeting Minutes (3-30-04)

Initial Concept Team Meeting Minutes

Project: **SR 316 from I-85 to SR 20 for HOV Lanes**
MSL-003-00(168), Gwinnett County
P.I. No. 003168

SR 316 at SR 20 Interchange Construction
MSL-0004-00(86), Gwinnett County
P.I. No. 0004086

Date/Time: **March 30, 2004, 10:00AM-11:45AM**

Location: **GDOT General Office, Conference Rooms 401 B & C**

Attendees:

GDOT
Steve Reynolds – GDOT Board

Urban Design
Ben Buchan
Neal O'Brien
Glenn Bowman
Jill Franks
Anthony Eadie
Balogun Bisi
Kellee Newman

Brent Cook – District 1
Joe Garland – District 1
Teri Pope – District 1
Russell McMurry – District 1
Ron Wishon – Engineering Services
Willie Webb - Maintenance
Corey Carter – OE&L
Gail D'Avino – OE&L
Keisha Jackson – OE&L
J.T. Rabun – OMR
Scott Zehngraff – OTS
Verdell Hawkins – Planning
Wesley Brock – Right-of-Way
Eugene Hopkins – Roadway Design
Jim Simpson – Roadway Design
Robby Oliver – Utilities
Jun Birnkammer - Utilities
Wndy Bickers - GDOT

PBS&J
Jim Breland
Denny Meier
Ron Morris
James Evans
Daniel McDuff

Government/Municipalities
Dave Painter – FHWA
Brian Allen – Gwinnett County DOT
Alan Chapman – Gwinnett County DOT
GRTA – Roger Henze

Utilities
David McMullen – Georgia Power
Joel Johnson – Georgia Power
Eddie King – Bellsouth

Attendees (Continued)

Consultants/other

E.H. Culpepper
Michele Nanna – Jacobs
Robert Goodwin – Earth Tech
Mike Connor – Earth Tech
Larry Askew – University Parkway Alliance
Erick Fry – Washington Group
Bill Berry – Washington Group
Shannon Hebb – GCDPU/Jacobs
Wayne Markham 0 James W. Markham & Assoc.
Jim Pounds – PMCM International
Rodney Givens – Parsons Corp

Neal O'Brien, project manager for Urban Design opened the meeting with a description of the project and introductions for all attendees. Issues discussed by Mr. O'Brien include:

- The purpose of this meeting is to establish communications between all parties and facilitate communications throughout the life of this project.
- A well thought out and communicative Public Involvement Program will be critical to the success of this project.
- A thorough investigation and review of environmental considerations early in the project will prevent project delays at later stages in the project.
- At this initial meeting, not all of the answers are known. The Concept work is preliminary and will continue to develop and change as the project is moved forward.
- GDOT is well aware of the Public-Private Initiative (PPI) Proposal for the SR 316 project. At this stage, it is not known how this will affect the SR 316 HOV project. All parties that submitted proposals or letters of intent for the PPI were invited and are in attendance of this meeting.

Ron Morris, project manager for PBS&J gave an overview of the current project status. Issues addressed by Mr. Morris include:

- Project limits are from the proposed I-85/SR 316 interchange to Gwinnett Progress Center Drive, just east of SR 20. The project is divided into two separate project numbers, one for SR 316 HOV and the other for the SR 20/SR 316 interchange.
- The project schedule was reviewed. Highlights include scheduling a Public Meeting Open House in June of 2004, an approved EA in early 2005, and holding the Preliminary Field Plan Review in October 2005.
- The project scope includes development of concept alternatives for barrier-separated HOV on SR 316, evaluating the addition of HOV interchanges at Herrington Road, Sugarloaf Parkway (Directional) and Walther Boulevard. This agrees with the HOV Strategic Plan. The concept is not to preclude other future warranted improvements to the SR 316 corridor.
- Existing characteristics of SR 316 were discussed including existing laneage and median width, and deficiencies. Some deficiencies include very poor Level of Service resulting from extremely high traffic volumes, weaves, anticipated higher

than average accident values (accident data requested but not yet received), and substandard vertical curves if a 70 MPH design speed was needed within the project limits. Using a 55 MPH design speed, all existing vertical curves would meet current design standards.

- Environmental considerations already identified in this project include the sensitivity of the area in the vicinity of the Yellow River crossing (wetlands and streams) and noise impacts throughout the project corridor. Stream and wetland impacts will require Corps of Engineer permits. Additionally, a residence north and east of the proposed interchange with Herrington Road may be a potential historic resource. The church and cemetery near the northeast corner of SR 120 and SR 316 should be avoided.
- Public Involvement will include a Public Information Meeting Open House (PIOH) in June of 2005, six meetings w/ local governments and stakeholders, one additional PIOH (if necessary) and a Public Meeting required to satisfy environmental requirements.
- Typical sections developed to date include several sections following the recommendations of the HOV Strategic Plan for barrier separated HOV lanes. Half-sections were developed to show the typical sections at the bridges and HOV interchanges along SR 316.

At this point, Mr. Morris introduced Daniel McDuff, lead design engineer for this project to discuss the Concept Alternative Alignments that have been developed to date. Mr. McDuff discussed in detail the two alternatives that had been developed to date on this project. The alternatives were plotted at 1"=100'on raster aerials and displayed in the room. Additionally, computer displays of the raster imagery were projected on the two screens at the front of the Conference Room, allowing the project to be scrolled through as each location was discussed.

The two alignment alternatives are identical from I-85 to SR 316 at Lawrenceville-Suwanee Road. At that point, Alternative 1 develops collector-distributor (C-D) roads in both directions through SR 20. Alternative 2 utilizes a split-diamond concept in the vicinity of the Collins Hill and SR 20 interchanges.

The proposed interchange at SR 316 and I-85 is in the final stages of design and is scheduled to let late in 2005. For the SR 316 HOV project, the proposed concurrent HOV lanes (one lane in each direction) from the I-85 interchange will connect with the proposed barrier separated HOV lanes proposed from just east of the I-85/SR 316 Interchange to east of SR 20. Final design drawings have been obtained from Moreland-Altobelli and have been used to coordinate the concept for this project.

An HOV interchange is proposed at Herrington Road. Projected demand traffic volumes indicate a 5-lane section should be used on the bridge on Herrington Road. Developing the HOV ramp to Herrington Road would require significant "bowing-out" of the lanes

on SR 316. The widening at Herrington Road will need to avoid the potentially eligible historic parcel north and west of the proposed Herrington Road/SR 316 interchange (shown on conceptual layout).

Although recommended in the HOV Strategic Plan for SR 316, a directional merge for the HOV lanes in the vicinity of Sugarloaf Parkway is not advisable. A directional merge requires the addition of a lane and buffer between the HOV and general-purpose lanes for over 1,000 feet. Adding in the tapers to achieve this widening will result in several thousand feet of impacts and widening of the mainline. This would require undesirable weaves in close proximity with the approach to the I-85 interchange. Additionally, if widening were required in this area, there would be significant impacts to wetlands directly adjacent to the corridor in this vicinity. The conceptual plan recommends ending the barrier separated HOV in the vicinity of Herrington Road, which would match the proposed concurrent HOV lanes designed as part of the I-85/SR 316 interchange. This would provide for the ability of westbound SR 316 HOV vehicles to merge across the general-purpose lanes to take the existing I-85 northbound exit.

Widening on SR 316 will be required to accommodate the HOV barrier-separated section, but with some work at the existing interchanges, no significant impacts will occur to the existing interchanges with the exception of SR 120 which will be reconstructed.. The proposed typical section will fit through the Sugarloaf Parkway, Riverside Parkway and Lawrenceville-Suwanee Road bridge crossings. In some cases narrower shoulders are required.

From the Lawrenceville-Suwanee Road bridge eastbound, Alternatives 1 and 2 are developed. These are described below:

Alternative 1

Alternative 1 utilizes Collector-Distributor (C-D) Roads from Lawrenceville-Suwanee Road to east of SR 20. The C-D road is required because of the close proximity between the interchanges at SR 120, Collins Hill Road and SR 20. The C-D Roads will run through the endspans of the proposed bridges.

Eastbound traffic would exit off of the mainline onto the C-D road west of SR 120. This exit would be signed for SR 120 and Collins Hill Road. A slip ramp in the vicinity of Collins Hill Road would provide access to the C-D road for eastbound SR 316 exit onto SR 20.

Westbound traffic would exit off of the mainline onto the C-D road east of SR 20. This exit would be signed for both SR 20 and Collins Hill Road. A slip ramp in the vicinity of Walther Boulevard would be provided for SR 316 westbound to exit onto the C-D road for access to SR 120.

A new grade separated HOV interchange is proposed at Walther Boulevard. This will require significant widening of SR 316 mainline and the C-D road to accommodate this section.

Because of the higher design year traffic volumes and lack of weave distance between the Collins Hill Road and SR 20 interchanges, it will be necessary to add braided ramps both eastbound SR 316 at the Collins Hill Road interchange and westbound SR 316 at the SR 20 interchange. This will significantly improve the operational capacity of this system.

The ramp for SR 316 westbound is proposed to enter Collins Hill Road directly across from the existing Collins Industrial Boulevard. This will make good use of the land acquired in protective buying by the Department. Other efforts were made throughout this project for both alternatives to utilize the parcels that had already been acquired. The entrance ramp to SR 316 westbound will be accessed from the east side of Collins Hill Road and loop around under the Collins Hill Road bridge. This ramp configuration is proposed as part of Alternative 2.

Because of the need to transition the HOV lanes, the C-D Roads, the SR 20 ramp to SR 316 eastbound, it is recommended that Hi-Hope Road be grade separated with no access to SR 316. This will provide the necessary room to complete all the tapers as the project transitions back to the existing 4-lane divided section.

A new signalized intersection is proposed at Gwinnett Progress Center Drive. This will be required because of the grade-separation of Hi-Hope Road. This is the main entrance to the Gwinnett County Airport (Briscoe Field).

Alternative 2

Alternative 2 is the "Split-Diamond Alternative" developed for this project. This alternative does not preclude future utilization of C-D roads. Alternative 2 contains the same design for the center HOV interchange and grade-separation at Walther Boulevard.

Eastbound on SR 316, an exit is provided for SR 120, an exit is signed for both Collins Hill Road and SR 20, and a grade separation is still proposed at Hi-Hope Road to assist in providing the necessary taper distances to bring the proposed section to the existing 4-lanes divided section. Along westbound SR 316 one exit is signed for SR 20 and Collins Hill Road and one exit is signed for SR 120.

The split diamond is proposed between Collins Hill Road and SR 20. Vehicles traveling eastbound enter the split diamond at Collins Hill Road will have to travel through the SR 20 interchange before entering SR 316 east of SR20. Likewise, vehicles from SR 20 traveling westbound will pass through the Collins Hill interchange before entering SR 316.

Structures

Because of inadequate horizontal and vertical clearance to accommodate the proposed section, the Herrington Road and SR 120 bridges will require replacement. The Breckenridge Boulevard, Sugarloaf Parkway, Riverside Parkway, and Lawrenceville-Suwanee bridges will accommodate the current design. The twin bridges over the Yellow River will require widening or replacement. The twin bridges over the Colonial gas pipeline west of Collins Hill Road will require widening or replacement. Additionally, the gas pipeline will require additional bridges on each side to accommodate the C-D roads and/or ramps. New structures will be required for the Collins Hill and SR 20 interchanges and the new grade-separation at Hi-Hope Road.

All new structures will be built to accommodate future widening of SR 316 and the addition of future C-D lanes throughout the corridor.

Walls will be required throughout the corridor. Current walls that have been identified include:

- North and east of the SR 120/SR 316 interchange adjacent to the Home Depot development along the proposed ramp for SR 120. This is to avoid interference with the circulation road between this shopping center.
- South and east of the SR 120 interchange adjacent to the McDonald's parking lot.
- South and west of the Collins Hill interchange at the Ford dealership parking lot. This is to minimize impacts to the existing business.
- North and west of the Collins Hill interchange at the GMC dealership. This will probably be required adjacent to the ramps for SR 316 and along Collins Hill Road.

Access

There are several businesses along the corridor that have direct access to SR316 via right-in/right-out driveway connections. Maintaining access to these businesses will be critical to the success of this project. These access points and proposed solutions are listed below:

- Walther Boulevard – There is existing access to eastbound and westbound SR 316 (no through) at this roadway. Access will be removed from SR 316, with the exception of the proposed HOV ramp in the center and the proposed grade-separation.
- Ford Dealership – New access is proposed behind dealership to Collins Hill Road.
- GMC Dealership – Two driveway connections to Collins Hill Road will be closed. Existing entrance off Collins Industrial Way will remain.
- The existing driveway entrance on the north side of SR 316 between Collins Hill Road and SR 20 is proposed to be closed.
- Park Access Drive will need to be closed because of the proposed interchange at Collins Hill Road. Park Access Drive is in the southeast quadrant of the

interchange. A new roadway will connect these businesses. This roadway will connect to Lyle Circle.

- RV Rental location on the south side of SR 316 between Collins Hill Road and SR 20 will be provided new access from SR 20.
- Hosea Road is located east of SR 20 on the south side of SR 316. This access point is proposed to be closed. Access is still available to these businesses on Hurricane Shoals Road, which has good access to SR 20 and a connection further east to SR 316.
- The SR 316 entrance to the Gwinnett County Sheriff's Department is proposed to be closed. A new access is proposed from the extension of Hurricane Shoals Road west across Hi-Hope Road. This is shown on the Concept Layouts for both alternatives.

Jim Evans from PBS&J was introduced to discuss the traffic issues that were investigated as part of the Concept Development of this project. Assumptions for traffic were based on previous investigations carried out by PBS&J for the SR 316 Corridor Study, recent traffic counts and the ARC 2030 model.

Volumes developed by some of these models suggested volumes that would exceed the capacities to enter or exit the system at each end of the project. Volumes were restricted at each end of the project by only allowing 2,200 pcphpl. This amounts to entering and exiting volumes on the existing 2-lane facility (each direction) to be 4,400 per hour. Applying these restrictions to the model and applying estimated volumes from recent traffic counts throughout the corridor, the traffic model was developed for the corridor for 2010 (build year) and 2030 (design year).

The Corsim run for this model shows that SR 316, the interchanges and the weaves operate well through the design year, mostly performing at a LOS C or better. Alternative 2 works best from a traffic standpoint, because significant weaving that occurs near the SR 20 interchange includes tapering out ramps and HOV lanes, but do not include the tapering out of the C-D lanes required in Alternative 1.

Question and Answer

FHWA

Question: In Alternative 1, does the Hi-Hope structure accommodate extension of the C-D roads?

Answer: Yes, all new structures within the project limits are to be constructed to accommodate HOV lanes, future C-D lanes and future widening already programmed for this corridor.

Question: Several access points are proposed along the C-D roads or split diamond access roads. How will these access points affect the function of these facilities?
Answer: Not detrimental. Since the Initial Concept Team Meeting, these access points were removed and will be shown that way for the upcoming Public Information Open House.

Statement: Look closely at the first HOV interchange at Herrington Road. FHWA will not have oversight of this project, but will mostly be involved regarding the environmental studies, documentation and approval.

GRTA

Question: Has barrier separated versus concurrent HOV lanes been evaluated for this project?
Answer: No. The project scope identified for PBS&J specifically included barrier separated HOV.

Question: If widening in the future, why not go ahead and construct CD roads now?
Answer: Alternative 2 does not preclude the future construction of C-D Roads.

GDOT

Question (Urban Design): The westbound entrance from Herrington (HOV) appears to have a short weave for vehicles wishing to travel to I-85 northbound.
Answer: This has been evaluated and appears to be adequate. This will be revisited when refining the Conceptual Layout.

Question (Urban Design): The entrance/exit ramps between Collins Hill and SR 20 look short.
Answer: These will be refined during Concept Development, particularly when mapping is available.

Statement (Urban Design): Setting up the loop ramp exit at Collins Hill across from Collins Industrial Way is a potential problem for wrong-way drivers.
Answer: This loop ramp was developed to attempt to follow previous concepts at this location which utilize the loop ramp to minimize impacts to the GMC dealership, use property already purchased through protective buying and to provide a good access point to businesses along Collins Industrial Boulevard and access to the new 4-year college on this roadway. Further investigation of the suitability of this interchange will be reviewed during the Concept Development of this project.

Statement (Urban Design): Access points on the C-D road should be discouraged.

Statement (Roadway Design): The I-85/SR 316 interchange project is currently scheduled for an August 2004 letting. Roadway design has a long-range project to improve SR 316 to Athens.

Question (OE&L): Is a PAR anticipated on this project?
Answer: No.

Statement (SUE/Utilities): So-Deep is the SUE sub on this project. They can be given NTP as soon as survey control is approved. There are 2 main transmission crossings on this project.

Statement (Construction): Look at constructability throughout project, particularly at bridges and MSE walls.

Statement (Construction): There seems to be a problem with merging the C-D roads and HOV lanes out at Progress Center Drive. A left-hand merge is not desirable.
Response: These appear to work operationally. This will be looked at in more depth during the completion of Concept Development.

Statement (Maintenance): There is a maintenance project scheduled for this summer for slab replacement from Collins Hill to US 29.

Statement (OMR): There are two different pavements in the project limits. One is the original concrete and the other is concrete overlaid with asphalt. These will have to be closely evaluated to decide on what pavement is to be used.
Response: PBS&J has already submitted a Pavement Evaluation Package to OMR for their pavement review.

Statement (General): The HOV project is scheduled for R/W in 2006 and construction in 2009. Currently, the SR 20 interchange project is in long range for R/W and construction.

Question (Urban): Should further efforts on this project wait until some direction is determined on the Public-Private Initiative proposal?
Answer: Proposals are due from the competing firms on May 19th. It could be a while before any decisions are made. Recommendation that upper management at GDOT be consulted to determine if we should continue pushing forward on these projects. *Several days after this meeting, the response from upper management was to aggressively proceed forward with this project.*

Statement (Communications): At the Public Information Open House (PIOH), there will be a lot of questions about the PPI/toll road proposal and the SR 316/I-

85 interchange project. This will significantly increase the attendance of the meeting. It needs to be clearly stated at this meeting that these projects are not a part of either of these two projects. GDOT needs 6 weeks to make signs for the PIOH.

Statement (Urban Design): Recommend holding the PIOH in early June. We should probably only display the recommended option (Alternative 2) at this meeting.

GWINNETT COUNTY

Statement (Utilities): Gwinnett County has a lot of water and sewer lines crossing SR 316. Most of these are 10" or 16" water and gravity/force main sewers. Coordination with Gwinnett County to obtain as-built plans and locations of facilities should be done through Tommy Hunter at 678-376-7127.

It was agreed that a future meeting would be held with Gwinnett County to discuss their desires/concerns for this project. This was scheduled for May 5, 2004.

Other issues:

There was a fire drill in the middle of the presentation (near the end of the presentation of alignment alternatives). The fire drill lasted about 45 minutes and there were a number of attendees that did not return after the drill for the remainder of the presentation.

Concept Report Attachments
Attachment 5 - 11"x17" Concept Drawings

Concept Report Attachments
Attachment 6 – PIOH Summary

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P. I. No. 0003168, 0004086 OFFICE Environmental/Location

DATE June 21, 2004

FROM Harvey D. Keepler, State Environmental/Location Engineer

TO Distribution Below

SUBJECT PUBLIC INFORMATION OPEN HOUSE SYNOPSIS

PROJECT No. & COUNTY:	MSL-0003-00(168), MSL-0004-00(86) Gwinnett County
PROJECT DESCRIPTION:	SR 316 from I-85 to SR 20 HOV Lanes, SR 20 Interchange
DATE:	June 17, 2004
NUMBER IN ATTENDANCE:	200
FOR:	28
CONDITIONAL:	9
UNCOMMITTED:	1
AGAINST:	1
OFFICIALS IN ATTENDANCE:	Steve Reynolds - Ex GDOT Board Member Ron Johnson - City of Sugar Hill Brian Allen - Gwinnett County DOT Ron Braziel - Gwinnett County DOT (MAAI) Harold Bowers - Gwinnett County
ADDITIONAL COMMENTS:	Court reporter did not arrive until 4:!0 PM. There were several members of the media in attendance. Of the 200 in attendance, 39 comments were left. General consensus seemed to be positive for both projects. There were a numbers of business owners within the corridor that were opposed or concerned about the project because of the negative impacts that it would have on their business. In particular, access concerns were the major issue for these

business owners. Comments are anticipated from these business owners before the end of the comments period (June 17, 2004). Additionally, some of these comments may have been made via the court reporter.

PREPARED BY: Daniel McDuff, PBS&J for Corey Carter, GDOT OE&L

TELEPHONE No.: (404) 699-4441 (Corey Carter)

c: Paul V. Mullins, P. E.
Thomas L. Turner, P. E.
Todd Long, P.E.
Neal O'Brien, GDOT Urban

Jonathan Cox/Rich Williams
Jerry Hobbs

:

Concept Report Attachments
Attachment 7 – Environmental Investigation Summary

SUMMARY OF ENVIRONMENTAL STUDY

SR 316 from I-85 to SR 20 for HOV Lanes
Project No. MSL-003-00(168), Gwinnett County, P.I. No. 003168

SR 316 at SR 20 Interchange Construction
Project No. MSL-0004-00(86), Gwinnett County, P.I. No. 0004086

In compliance with the 1969 National Environmental Policy Act, the Georgia Department of Transportation is conducting an assessment of the social, economic and environmental effects for the proposed SR 316 HOV and SR 20/SR 316 Interchange project. The following information gives a summary of ongoing assessment.

Waters of the U.S.

In accordance with Executive Order 11990, the proposed project was surveyed for wetland and stream involvement. Eleven wetlands, 6 sediment detention ponds, and 27 streams were identified within the study corridor of this project. The present design of the project indicates that approximately 2.60 acres of wetlands and approximately 4323.5 linear feet of stream would be permanently impacted due to project construction and current cut-and-fill lines. Temporary wetland impacts were calculated for jurisdictional waters that are within existing and proposed right-of-way, but outside of current cut-and-fill lines. Approximately 0.72 acre of wetlands would be temporarily impacted due to project construction. It should be noted that final cut and fill lines have not been set. Wetland and stream impacts may either increase or decrease depending on final construction limits. It is anticipated that a U.S. Army Corps of Engineers permit would be needed.

Due to these anticipated impacts, mitigation would be necessary. Permanent impacts due to project construction would require 22.24 wetland mitigation credits and 22,194.13 stream mitigation credits. Temporary impacts due to project construction would require 4.82 wetland mitigation credits. This amounts to a total of 27.06 wetland mitigation credits and 22,194.13 stream mitigation credits.

Floodplains

In accordance with Executive Order 11988, the proposed project was surveyed for floodplain involvement. Transverse crossings of the 100 year floodplain associated with tributaries to Lee Daniel Creek, Wolf Creek, and the Yellow River have been identified. The project would be designed in such a way as to have no significant

encroachment on these floodplains; it would not represent a significant risk to life or property; would not support incompatible floodplain development; and it would not interrupt or terminate a transportation facility which is needed for emergency vehicles or provides a community's only evacuation route. The project would not have an adverse effect on water quality within the project corridor.

Air

The proposed project is not anticipated to exceed state and federal air quality standards and is consistent with the State Implementation Plan for the attainment of clean air quality in the state.

Noise

Existing, future no-build, and future build noise levels were determined for the 78 receptors identified in the project area of SR 316. Land use within the project limits consist of commercial and industrial development with some multi- and single-family residential. The residential structures are located within two apartment complexes and a single-family home subdivision. A small number of residences lie outside the complexes and subdivision. One institutional use, the Gwinnett Technical College, exists adjacent to the project corridor. A 70 decibel (dBA) L_{10} criterion has been established for schools, libraries, residences, churches, playgrounds, and recreation areas; while a 75 dBA L_{10} criterion has been established for commercial and industrial activities. The noise impact assessment is underway. Specific impacts have not been determined to date.

Threatened and Endangered Species

The proposed project would not affect any federally listed threatened or endangered plant or wildlife species, as none are located in or frequent the project area. Suitable habitat for three state listed threatened or endangered species is located within the SR 316 corridor; however, none of the species were observed during the field survey.

It is not anticipated that the project would not involve any farmland as defined in the Farmland Protection Policy Act, 7 CFR Part 658, due to the large amount of land in the corridor that is already developed.

Invasive Species

Four invasive species identified by GDOT were identified within the project right-of way, kudzu (*Pueraria montana*), Chinese privet (*Ligustrum sinense*), mimosa (*Albizia julibrissin*), multiflora rose (*Rosa multiflora*), and Japanese honeysuckle (*Lonicera japonica*).

Water Quality

The proposed projects are located in the Upper Ocmulgee River basin. The Yellow River is located within the proposed projects' corridor and is listed on the state's 303(d) stream list for high levels of fecal coliform. In addition to the Yellow River, a total of 26 other streams were located in the project area; however, none of these streams are listed on the State of Georgia 303 (d) list. Water quality would not be compromised due to project construction. Provisions in the construction contract would require the contractor to prevent the pollution of streams in the project vicinity.

History

In compliance with Section 106 of the National Historic Preservation Act of 1966, the project has been surveyed for existing and eligible National Register properties. Two listed or eligible historic resources were found to be located within the project's area of potential effect. These are the ca. 1900 New South Cottage located at 1556 Herrington Road and the Fairview Presbyterian Cemetery. Project implementation is not anticipated to have an affect on these resources.

Archeology

The Archeological Assessment for the proposed project is underway.

Relocations

The purchase of right-of-way associated with the proposed project would not displace any owner-occupied or renter-occupied residences. However, the proposed project would displace five businesses. There are three additional business locations in the project area; however, these sites have been previously acquired by GDOT. The values of the five owner-occupied commercial properties range from approximately $57,500 to $687,000. These businesses employ approximately 35 persons of which approximately 11 percent are minority. The businesses consist of a La Petite daycare, a Shell gas station, a Volvo car service center, a Hardee's fast food restaurant, and a LP gas tank storage facility. The businesses previously acquired by GDOT are vacant gas stations.

UST/Hazardous Materials

The proposed project has been surveyed for potential sites where contaminated soil and/or water from leaking underground storage tanks may exist. Approximately, five facilities that may contain underground storage tanks were identified within the proposed right-of-way of the project. Subsurface testing will be conducted to determine if there is any soil and/or water contamination from leaking underground storage tanks.

Concept Report Attachments
Attachment 8 – Minutes of Concept Team Meeting (3-17-05)

Concept Team Meeting Minutes

Project: **SR 316 from I-85 to East of SR 20 for HOV Lanes**
MSL-0003-00(168), Gwinnett County
P.I. No. 0003168

Date/Time: **March 17, 2005, 2:00PM-3:30PM**

Location: **GDOT General Office, Conference Rooms 401 B & C**

Attendees:

GDOT
Urban Design
Neal O'Brien
Glenn Bowman
Jill Franks
Sal Pirzad

Other GDOT
Brent Cook - District 1
Russell McMurry - District 1
Robby Oliver - District 1
Ron Wishon - Engineering Services
Robert Huff - Maintenance
Christa Wilkinson - OE&L
A.J. Jubron - OMR
Scott Zehngraff - OTS
Verdell Hawkins - Planning
Jerry Milligan - Right-of-Way
Eugene Hopkins - Roadway Design
Randall Davis
John Hancock
Neil Kantner
Gene Bachmann

PBS&J
Denny Meier
Ron Morris
Scott Rumble
Daniel McDuff

Government/Municipalities
Michelle Lindberg – FHWA
Brian Allen – Gwinnett County DOT
Alan Chapman – Gwinnett County DOT

Utilities
Scott Morgan – Georgia Power

Consultants/other
Tommy Crochet – McGee Partners
Erick Fry – Washington Group
Mike Connor – Washington Group

Neal O'Brien, project manager for Urban Design opened the meeting with a description of the project and introductions for all attendees. Issues discussed by Mr. O'Brien include:

- There has been a Value Engineering study for this project scheduled for April 19th. The Concept Report will be circulated for approval after the V.E. Study responses are completed.
- Currently, this project is scheduled for R/W funding in 2006 and 2008 with Construction Funding in 2009.
- Originally this project was defined by two project numbers: one for SR 316 HOV and the other for the Collins Hill Road/SR 20 Interchanges. These projects have been combined together and now are represented by the SR 316 HOV project number ((MSL-0003-00(168), Gwinnett County; P.I. No. 0003168)).
- Neal turned the meeting over to Ron Morris (PBS&J Project Manager) to discuss the Conceptual Alignment developed for this project.

Ron Morris described the Conceptual Alignment for the project, focusing on some of the following elements:

- Project limits are from the proposed I-85/SR 316 interchange to east of Gwinnett Progress Center Drive.
- The project begins by tying into the Interchange Construction project at SR 316 and Interstate 85. This project is set to let for construction this summer.
- The project will be barrier-separated HOV throughout the corridor. This conforms to the current policies in GDOT and FHWA for construction of HOV facilities in the metro Atlanta region.
- The typical section was discussed. The project includes one barrier-separated HOV lane in each direction, with ample shoulders provided for the General Purpose Lanes and the HOV. These wider shoulders would provide for future addition of an HOV lane in each direction.
- Bridge Replacements would be required at Herrington Road and SR 120. These two bridges were built in the early 1960's and do not meet the needed horizontal or vertical clearances required for the addition of HOV lanes. It is anticipated that the Herrington Road bridge would be closed during construction and that the SR 120 bridge over SR 316 would be stage constructed under traffic.
- The Sugarloaf Parkway and Riverside Drive interchanges will remain as they are with the exception of some minor modifications to tie-in the proposed ramps to the existing interchange.
- A direct merge will be provided for vehicles traveling WB on SR 316 to merge into the General Purpose Lanes in the vicinity of Sugarloaf Parkway. This would provide those vehicles the opportunity to access the I-85 NB ramps and the Pleasant Hill Road C-D Road (part of the proposed SR 316/I-85 Re-construction project letting this Summer). This connection will provide plenty of distance for weaving. This connection will not provide a means for the General Purpose Lanes to enter the HOV system at this point.
- The Lawrenceville-Suwanee Road bridge over SR 316 will remain as is.

- The existing twin bridges over the Yellow River will need to be widened or replaced.
- A new grade-separated HOV interchange will be placed at Walther Boulevard. Walther Boulevard is currently right-in, right-out both EB and WB on SR 316.
- Between Collins Hill Road and SR 20, it will be necessary to construct C-D lanes adjacent to the mainline. This is because of the close proximity of the interchanges to one another and the weaving problems that would result if more traditional diamond interchanges were used.
- The Collins Hill Road interchange was developed with a loop ramp, which utilizes existing GDOT R/W that was previously acquired and minimizes the impacts to the car dealership on the northwest corner of this interchange.
- There are a number of existing access points that are present in the area of Collins Hill Road and SR 20. Given the nature of the proposed facility, the Department recommends that SR 316 and the C-D roads become a limited-access facility. This requires closing all driveway connections to SR 316. As a solution to some of these issues, a new access road is proposed between Collins Hill Road and SR 20 to provide access to the businesses in this area. An additional connection was provided to the Ford dealership on the southwest corner of the Collins Hill interchange to maintain access. Additional access closures to SR 316 include the Gwinnett County Sheriff's Department facility, Hosea Road, Progress Center Drive, car dealership east of Hosea Road, and the main entrance to the airport.
- Due to the topography in the area, it was determined that the most cost-effective solution for the SR 316/SR 20 interchange was to lower the SR 316 mainline and keep SR 20 at, or just above its present grade. Although there are several displacements at this interchange, this will spare many others.
- A new grade separation will be proposed at SR 316 and Hi-Hope Road. This will be an HOV interchange, providing west-facing ramps only, but will be designed in such a way to allow for the future addition of the east facing ramps. After the Hi-Hope Road HOV interchange, the HOV lane will drop the barriers and HOV status eastbound and will become the left-most through lane, matching up with the existing left through lane. Westbound, the HOV lane will develop with the addition of an impact attenuator and HOV signing and striping.
- Throughout the corridor, the endspans of the bridges will be developed to allow for the addition of C-D lanes programmed in the corridor. Also, the clear zone for the General Purpose Lanes are adequate enough to provide for a future through lane or auxiliary lane on SR 316.

After discussion of the SR 316 Conceptual Layout, Scott Rumble, Lead Traffic Engineer for PBS&J, discussed in detail some of the traffic issues that were investigated as part of the traffic studies for this project.

- There was a discussion of the existing traffic issues within the corridor and the projected growth trends for the area.
- The model used for SR 316 is a very robust network, created and modified from the original SR 316 Corridor Planning Study and capturing all of the trips on SR 316, calculated design hour traffic and future design hour volumes.
- The model utilizes constrained volumes in the corridor. This limits the input into the system to 2,200 vehicles/lane on the mainline and sets the maximum vehicles that could enter from the cross streets. This has been the traffic approach presented throughout this study.
- The existing Level of Service (LOS) deficiencies on this corridor start EB from Riverside, SR 120 and the signalized intersections of Collins Hill Road and SR 20. These conditions will continue to deteriorate with the growth anticipated in the corridor.
- Scott Rumble discussed the evaluation of a proposed Lawrenceville-Suwanee HOV interchange versus the Walther Boulevard HOV interchange. Using a Corsim model on the screen, Scott showed how traffic would rapidly back up from the SR 120/Lawrenceville-Suwanee Road intersection towards the HOV interchange on Lawrenceville-Suwanee Road. This would result in the unacceptable condition of backing the queue for the EB SR 316 HOV exit onto the HOV thru-lane. This would also significantly increase the overall delay at the SR 120/Lawrenceville-Suwanee Road intersection. Significant improvements would need to be made in order to provide acceptable conditions. Lawrenceville-Suwanee Road would need to be 6-lanes from Walther Boulevard to Old Norcross Road. At the SR 120/Lawrenceville-Suwanee Road intersection, it would be necessary to add dual lefts and a right at nearly all approaches.
- Evaluation of the HOV interchange at Walther Boulevard, the traffic operations are much better with no problems queuing onto the mainline HOV. Traffic counts and studies were performed at some of the local intersections along Philips Boulevard, Hurricane Shoals Road, Walther Boulevard and Lawrenceville-Suwanee Road. It was found that some improvements would be necessary, but that most of the delays on these roadways were the result of inadequacy of the existing roadway system to handle the future capacities (with or without the HOV interchange). It may be necessary to look at signal installations at Walther Boulevard/Philip Boulevard and Philip Boulevard/Hurricane Shoals Road as traffic continues to grow.

- The Hi-Hope Road HOV interchange provides good utility for an HOV location. It will provide an additional HOV access east of SR 20, eliminating the need for some of these vehicles to travel through the SR 20 interchange. The addition of these grade separations also helps provide an additional access point to mitigate the impacts of taking away the access of Airport Road and Progress Center Drive from SR 136.
- Overall, time savings for HOV travelers was substantial throughout the corridor. In the PM, EB, time savings are approximately 23.5 minutes over existing. WB in the AM saves about 8 minutes and WB in the PM saves about 12.5 minutes.

Following a discussion of the Corridor Traffic Study, Daniel McDuff went through the Concept Report.

- Dan covered the project background, location, limits, existing conditions, traffic and accident data.
- Logical termini for this project was presented as being the connection to the proposed SR 316 HOV interchange on the west side of the project, and east of SR 20 on the east side of the project because of the HOV time savings found as a result of constructing the HOV lanes in this corridor.
- The Need and Purpose for this project was discussed as a result of the time savings for the HOV traveler, a safer corridor because of less congestion , the ability to make transit a more viable option because of the time savings found in the corridor, HOV access points provide a more attractive route to HOV users, addition of interchanges at Collins Hill Road and SR 20 will have a major positive impact on the overall delay experienced in the corridor.
- Typical sections were discussed on the mainline and sidestreets.
- Proposed structures and walls required within the corridor were discussed. Much of this echoed Ron Morris's previous discussion of the Conceptual Alignment.
- Environmental issues were discussed. These issues included:
    - History – The history report for this project has been completed, but is waiting on SHPO concurrence. Only two historic resources were identified as being potentially eligible in this corridor. Both of these are being avoided and will not be impacted directly. The first of these is the residence at the northwest corner of Herrington Road and SR 316. The second is the church and cemetery found at the northeast corner of SR 120 and SR 316.
    - Ecology – The ecology report for this project was submitted and approved. This included the impact to over 40 identified streams in the corridor and a number of wetland impacts. Significant stream and wetland impacts will need to be mitigated or credits purchased. A PAR meeting and Individual Permit from the Corps of Engineers will need to be submitted.
    - Archaeology – Archaeology will be given a Notice to Proceed within a couple of weeks.

  - Public Involvement – A Public Information Open House was held on June 17, 2004. Additional Public Involvement activities will occur throughout the project, including a Public Hearing Open House to satisfy the requirements of the Environmental Document (EA).
  - Office of Environment & Location requested that the time to complete the environmental process be changed from 6 months to 12 months.
- Project schedule, alternatives and attachments were discussed.

Throughout the presentation, there were a number of comments that made by attendees. Some of these comments are noted below:

- (Brian Allen, Gwinnett DOT) Brian is concerned about several elements of the Concept Layout.
  - Brian wanted to make sure that the travel demand model takes into account the planned Gwinnett University Center expansion plans.
  - There are concerns regarding cutting off access to SR 316 for Airport Road and Progress Center Boulevard.
  - There were other concerns regarding access to businesses along SR 316, especially since these appeared to be the majority of the comments from the Public Information Open House.
  - Brian stated that although the issue has been brought up a number of times, Gwinnett County's position is that they prefer an HOV interchange provided at Lawrenceville-Suwanee overpass to SR 316. They feel that would best serve the travelers in that area.
  - The project should include the ability to accommodate the future 6-laning of SR 20.
- Neal O'Brien, Glenn Bowman or GDOT District brought up several issues.
  - SR 316 will be a limited-access corridor, so there is no choice but to close all existing driveway connections or sideroad at-grade connections.
  - Glenn said that maintaining an opening in the bridge endspans to support future programmed C-D roads should not be a problem for this project, particularly if no additional R/W or displacements resulted.
  - (In regards to a request to taper out and drop HOV lane on east side of project instead of dropping outside lane). Glenn stated that current GDOT policy was to give and maintain priority access for HOV lanes. Therefore, the EB HOV lane will become the existing left-most lane on SR 316 (as shown in the Conceptual Layout).
  - Due to the R/W schedule for this project, a provisional Notice to Proceed for the Preliminary plans for this project will be issued shortly.
  - Maintenance of Traffic will need to be coordinated with Gwinnett County for the temporary closure of any roadway. The detours will need to be shown at the Public Information Open Houses.

- One of the three southbound through lanes on SR 20 is shown as dropping into the proposed frontage road on SR 20, south of SR 316. It would be much better to carry this further south and drop the as a right-turn only lane onto Hurricane Shoals Road.

- GDOT Traffic Ops comments:
  - It was requested why EB HOV lane became left most through lane at end of project instead of tapering into the mainline. This issue addressed by Glenn Bowman, above.
  - Since closing airport entrance, consider carrying a frontage road to Cedars Road.
  - Consider taking 3rd thru lane EB all the way to Cedars Road and dropping there.
- Georgia Power stated that there are several of their facilities present and would like us to minimize impacts with adjustments to alignment (if necessary).

Concept Report Attachments
Attachment 10 – Benefit Cost Analysis

Benefit Cost Analysis Work Sheet
CONGESTION Investment Strategy Projects

MSL-0003-00(168)
0003168
Gwinnett County

SR 316 from I-85 to SR 20 for HOV Lanes

Congestion Benefit = Tb + CMb + Ab

Time Benefit (Tb)	
Db (hrs)	0.0515
ADT	160,000
Tb ($s)	$257,825,121.63
Commercial Benefit (CMb)	
Db (hrs)	0.0515
% Truck Traffic	0.07
ADT	160,000
CMb	$102,513,750.04
Total Congestion Benefit	**$360,338,871.67**
Construction Cost	**$127,229,103.00**
B/C Ratio	**2.83**

2029 Travel Time Data for CORSIM Models

Network	Period	Total VHT	Total Vehicles Entering Network	Average Travel Time per Veh (Hrs)
No-Build	AM	3,010.71	27,054	0.1113
	PM	3,591.73	27,433	0.1309
	Average	6,602.44	54,487	0.1212
Build	AM	2,553.91	36,781	0.0694
	PM	2,701.89	38,685	0.0698
	Average	5,255.80	75,466	0.0696
Difference	AM			0.0418
	PM			0.0611
	Average			0.0515

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
Office of Urban Design
Project Concept Report

Project Number: MSL-0003-00(168)
County: Gwinnett
P. I. Number: 0003168
SR 316 from I-85 to SR 20 for HOV Lanes
Federal Route Number: NA
State Route Number: SR 316

(See following page for Location Map)

Recommended for approval:

DATE: 6-21-05 — Project Manager

DATE: 6-21-05 — State Urban Design Engineer

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

DATE: _____ — State Transportation Planning Administrator

DATE: _____ — State Transportation Financial Management Administrator

DATE: _____ — State Environmental/Location Engineer

DATE: 7/1/05 — State Traffic Safety and Design Engineer

DATE: _____ — District Engineer

DATE: _____ — Project Review Engineer

DATE: _____ — State Bridge & Structural Design Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
Office of Urban Design
Project Concept Report

Project Number: MSL-0003-00(168)
County: Gwinnett
P. I. Number: 0003168
SR 316 from I-85 to SR 20 for HOV Lanes
Federal Route Number: NA
State Route Number: SR 316

(See following page for Location Map)

Recommended for approval:

DATE: 6-2-05 — Project Manager

DATE: 6-2-05 — State Urban Design Engineer

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

DATE: _____ — State Transportation Planning Administrator

DATE: _____ — State Transportation Financial Management Administrator

DATE: _____ — State Environmental/Location Engineer

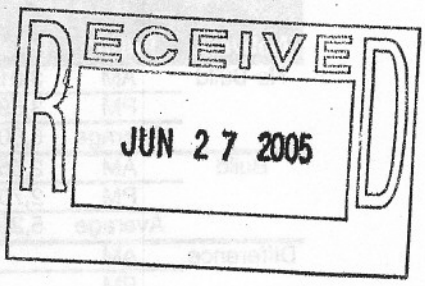
DATE: 6-7-05 — State Traffic Safety and Design Engineer

DATE: _____ — District Engineer

DATE: _____ — Project Review Engineer

DATE: _____ — State Bridge & Structural Design Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
Office of Urban Design
Project Concept Report



Project Number: MSL-0003-00(168)
County: Gwinnett
P. I. Number: 0003168
SR 316 from I-85 to SR 20 for HOV Lanes
Federal Route Number: NA
State Route Number: SR 316

(See following page for Location Map)

Recommended for approval:

DATE: 6-21-05 _____ Project Manager

DATE: 6-21-05 _____ State Urban Design Engineer

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

DATE: 6/22/05 _____ State Transportation Planning Administrator

DATE: _____ _____ State Transportation Financial Management Administrator

DATE: _____ _____ State Environmental/Location Engineer

DATE: _____ _____ State Traffic Safety and Design Engineer

DATE: _____ _____ District Engineer

DATE: _____ _____ Project Review Engineer

DATE: _____ _____ State Bridge & Structural Design Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
Office of Urban Design
Project Concept Report

Project Number: MSL-0003-00(168)
County: Gwinnett
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SR 316 from I-85 to SR 20 for HOV Lanes
Federal Route Number: NA
State Route Number: SR 316

(See following page for Location Map)

Recommended for approval:

DATE: 6-2-05 _____ Project Manager

DATE: 6-2-05 _____ State Urban Design Engineer

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

DATE: _____ State Transportation Planning Administrator

DATE: _____ State Transportation Financial Management Administrator

DATE: 6.7.05 _____ State Environmental/Location Engineer

DATE: _____ State Traffic Safety and Design Engineer

DATE: _____ District Engineer

DATE: _____ Project Review Engineer

DATE: _____ State Bridge & Structural Design Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
Office of Urban Design
Project Concept Report

Project Number: MSL-0003-00(168)
County: Gwinnett
P. I. Number: 0003168
SR 316 from I-85 to SR 20 for HOV Lanes
Federal Route Number: NA
State Route Number: SR 316

(See following page for Location Map)

Recommended for approval:

DATE: 6-2-05 — William N. O'Brien Jr
Project Manager

DATE: 6-2-05 — James B. Buch
State Urban Design Engineer

This concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Improvement Program (RTP) and/or 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 and Design Engineer

DATE: _____
District Engineer

DATE: 6/14/05 — Brian K. Summers REW
Project Review Engineer

DATE: _____
State Bridge & Structural Design Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
Office of Urban Design
Project Concept Report

Project Number: MSL-0003-00(168)
County: Gwinnett
P. I. Number: 0003168
SR 316 from I-85 to SR 20 for HOV Lanes
Federal Route Number: NA
State Route Number: SR 316

(See following page for Location Map)

Recommended for approval:

DATE: 6-21-05 _____ Project Manager

DATE: 6-21-05 _____ State Urban Design Engineer

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DATE: _____ State Environmental/Location Engineer

DATE: _____ State Traffic Safety and Design Engineer

DATE: _____ District Engineer

DATE: _____ Project Review Engineer

DATE: _____ State Bridge & Structural Design Engineer