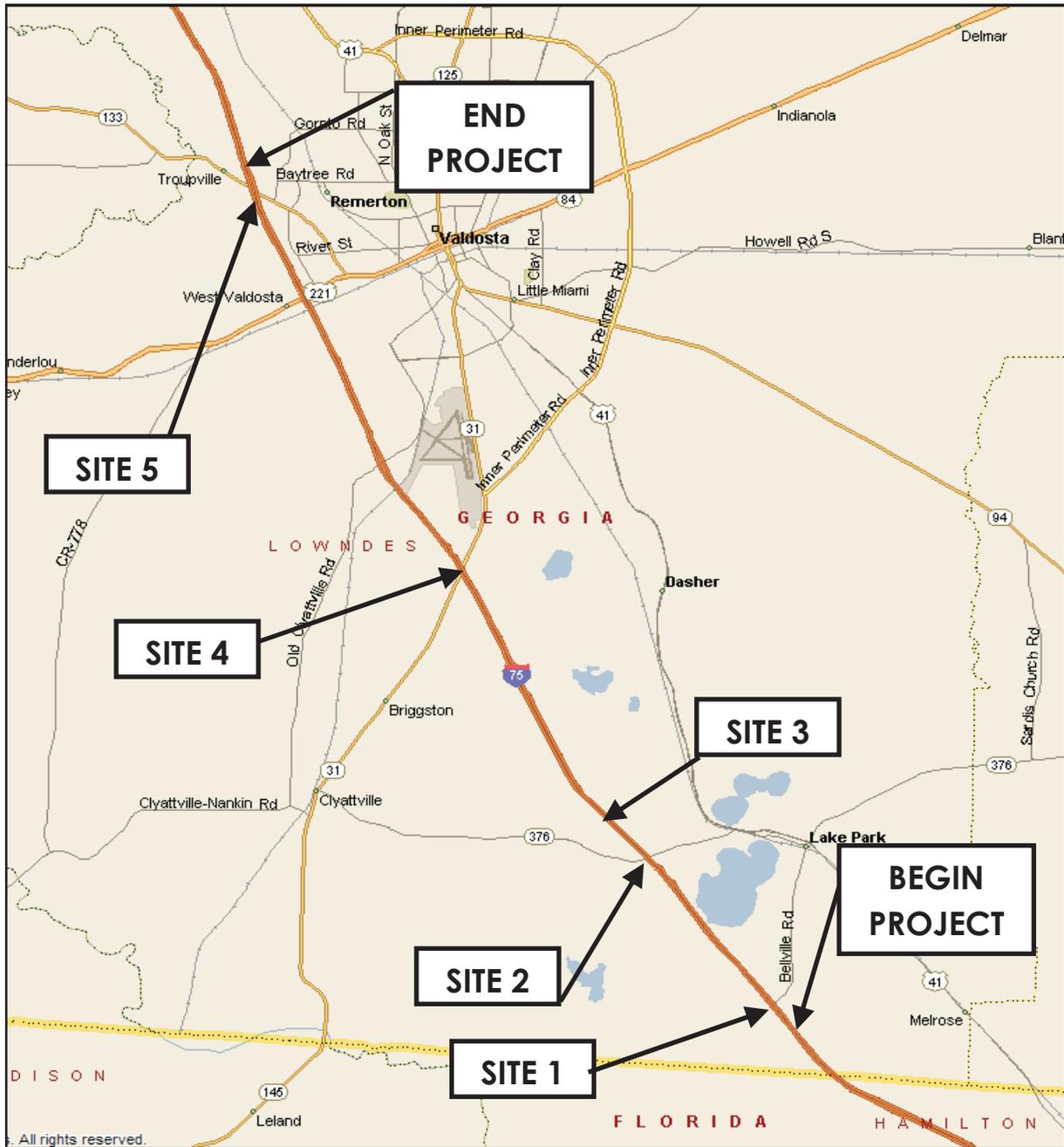






### Project Location Map



This project is the reconstruction of four interchanges and one overpass in Lowndes County. The locations are:

- Site 1 I-75 Exit No 2 - CR 274 / Lake Park Rd / Bellville Rd Interchange
- Site 2 I-75 Exit No 5 - SR 376 / Lakes Blvd Interchange
- Site 3 I-75 MP 6.12 - CR 783 Loch Laurel Rd Overpass
- Site 4 I-75 Exit No 11 – SR 31 / Madison Hwy Interchange
- Site 5 I-75 Exit No 18 – SR 133 / North St. Augustine Rd

**Need and Purpose:** The GDOT is planning to increase the capacity of I-75 through Lowndes County by adding an additional lane in each direction. The typical section on I-75 from the Florida State Line is three general use traffic lanes in each direction. The department has determined that there is a need to add an additional general use lane in each direction to I-75. Before these improvements to the mainline can be implemented, four existing interchanges and one overpass must be reconstructed. These five facilities span the existing six lanes on I-75 but are not adequate to span the interstate with an additional lane in each direction.

Without these improvements, a new lane could not be added to I-75 in each direction. In short, the no-build alternative would not address the current problem which is that the bridges are not wide enough to span I-75 with four general use lanes in each direction. This would cause a bottle neck in road traffic on I-75 in Lowndes County.

To ensure that the four interchanges and the overpass will provide an adequate level of service in the design year 2034 and beyond, and to improve safety at each location, certain geometric and operational improvements have been identified and are also proposed at each site.

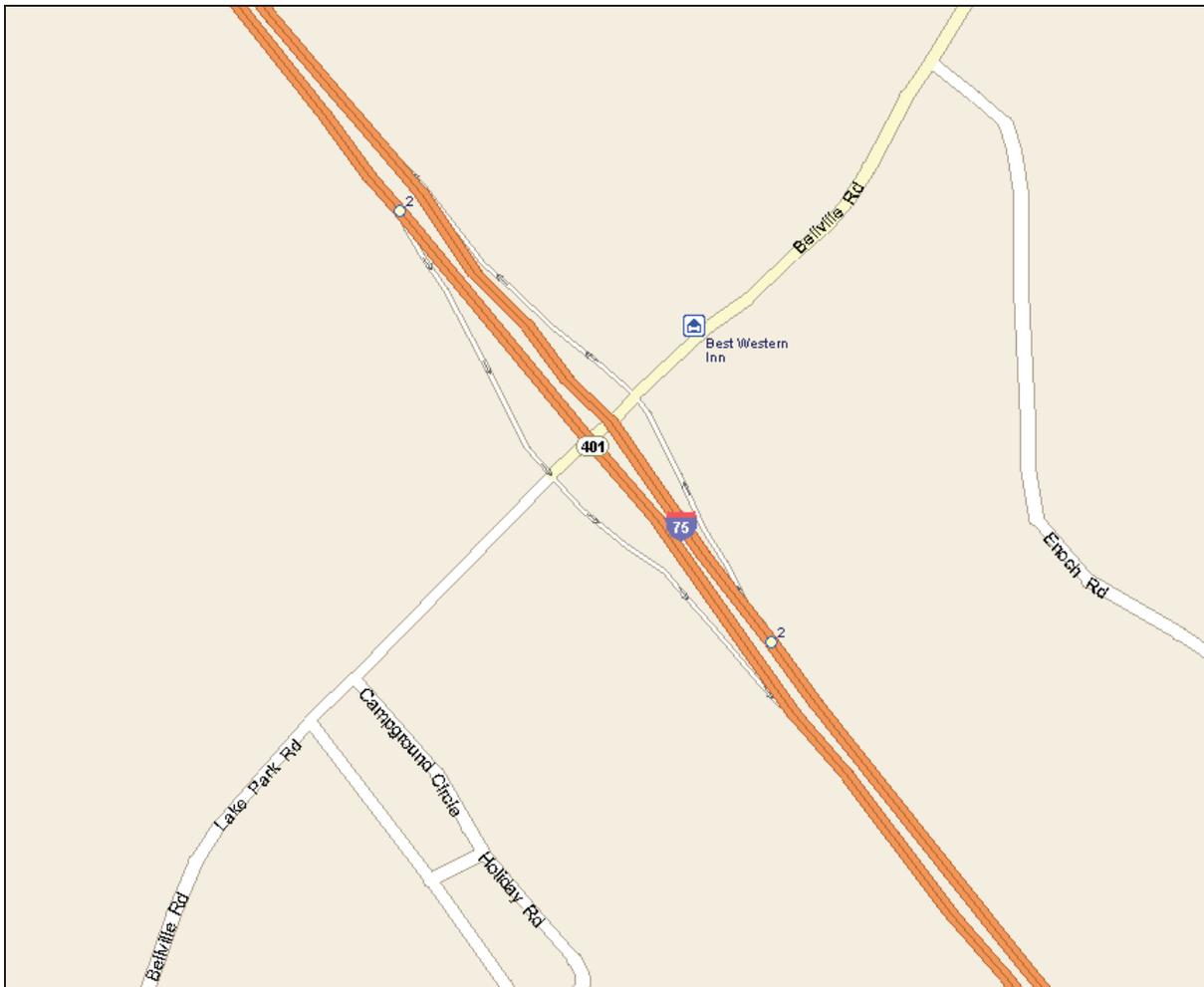
The Greater Lowndes community has grown tremendously over the past two decades and growth is anticipated to remain consistent. Numerous developments within the region are anticipated. These include the development of a truck operation/750,000 square foot Distribution Center to be located at Exit 2 (CR 274/Lake Park Road/Bellville Road) intersection. Exit 2 is also the proposed location for an Active Adult Community, Southern Landings, which will consist of a mixed use development. At Exit 5 (SR 376/Lakes Boulevard) the City of Lake Park is anticipating the development of a multi-use trail which will connect this intersection with the historic downtown/park area.

Improving these intersections and the overpass will not only assist with the connectivity within the region but it will allow for the widening of I-75, a major north-south connector between Florida and the cities of Valdosta, Macon and Atlanta. These improvements will also improve the operational safety of the roadway and provide safer roads for motorists and trucks. This project is expected to be a benefit to all communities.

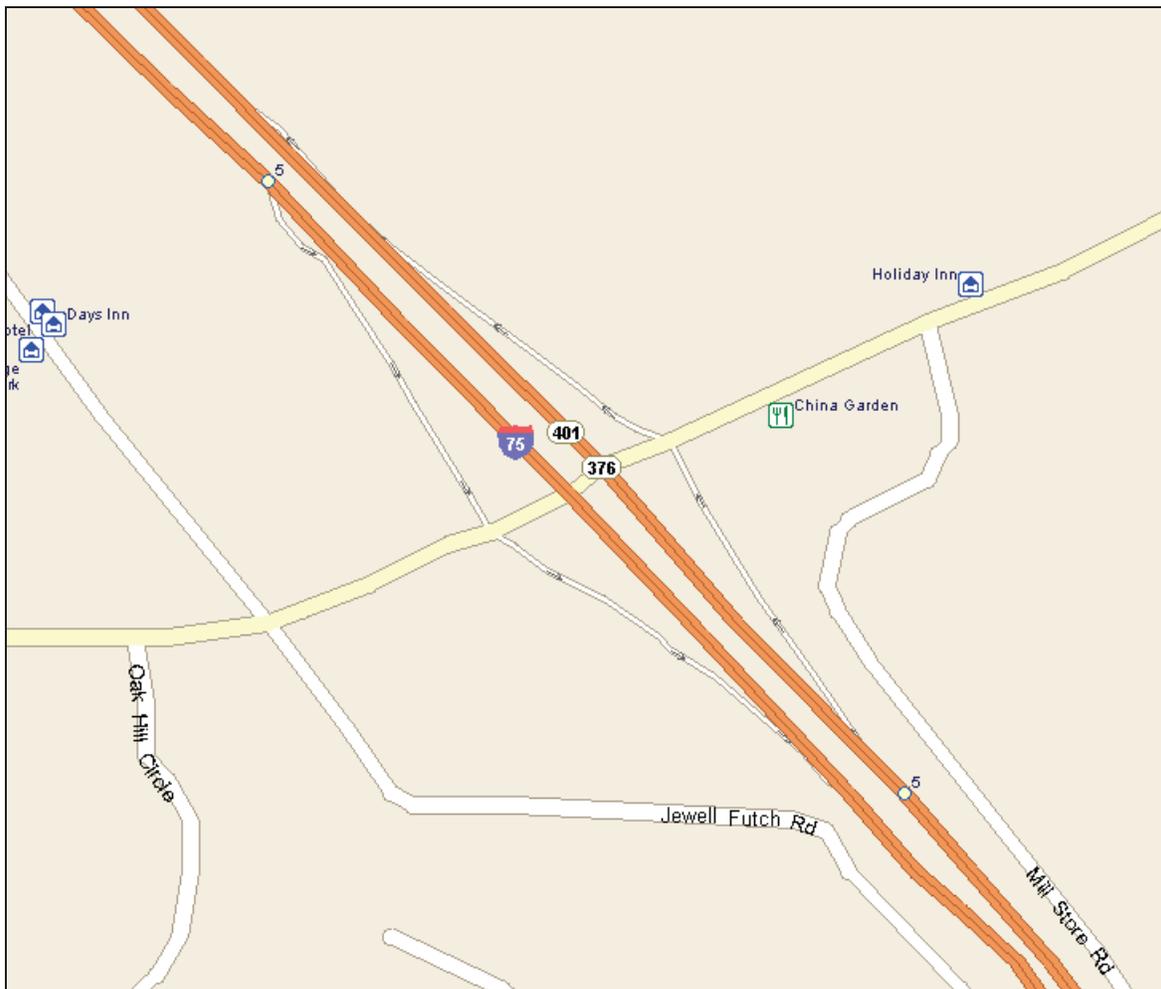
Note: See attachments for additional Need & Purpose data.

**Description of the proposed project:**

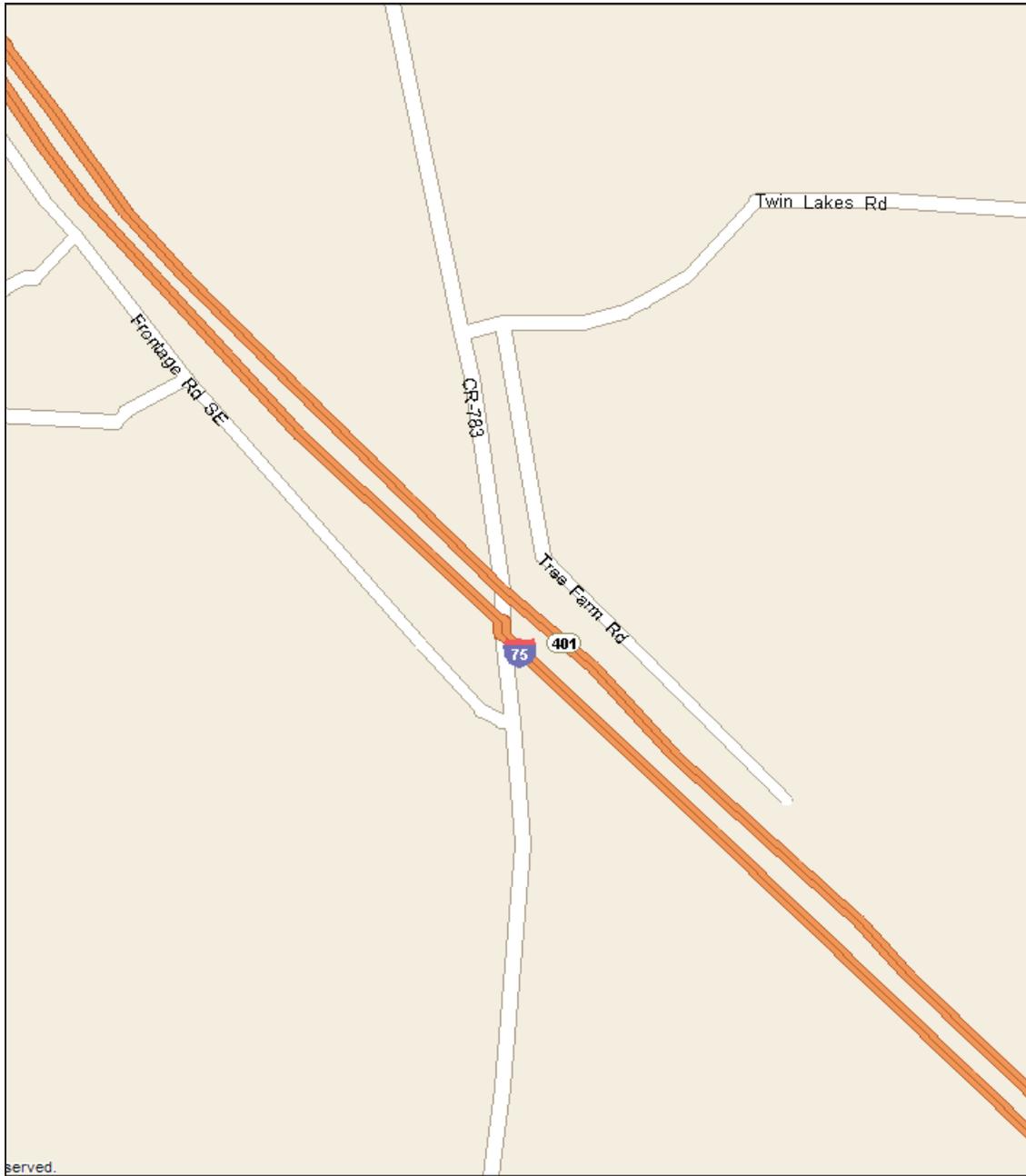
**Site 1:** Project CSNHS-0000-00(311) would begin at exit #2 Bellville Rd./Lake Park Rd. The existing bridge (CR274/Lake Park Rd./Bellville Road over I-75) will be replaced. The new bridge will be longer to accommodate future widening of I-75, and will be wider to provide a three-lane facility with a center turn lane for left-turn bay storage. The existing bridge is constructed on vertical alignment that does not provide the necessary stopping sight distance for the proposed 45 mph design speed, and limits the intersection sight distance at the ramp terminals for exiting traffic from both directions. The typical section of the bridge and the cross-road is a rural section with a 10' paved outside shoulder to accommodate a disabled tractor-trailer. The vertical alignment of the bridge will be improved to match the 45 MPH speed of Bellville Road. A minimum of 150' of turn lane storage will be provided at the ramp intersections; and channelized right turn lanes will be provided for traffic turning onto the interstate on-ramps. The entrance and exit ramps to and from I-75 will be lengthened and widened to accommodate future traffic volumes, provide adequate storage, and provide sufficient acceleration /deceleration distances for entering and exiting traffic. Additional limit of access will be acquired to comply with current DOT policy.



**Site 2:** The existing bridge (SR 376/Lakes Boulevard over I-75) will be replaced. The new bridge will be longer to accommodate future widening of I-75 and will maintain the existing six-lanes that includes two through lanes and a left turn lane in each direction. The typical section will remain the same as the existing roadway with the same number of lanes and curb and gutter for the shoulders. The only difference will be a 14' shoulder as opposed to the existing 10' one in place now. A minimum of 150' of left-turn lane storage will be provided at the ramp intersections. Dual left-turns from I-75 south bound ramp to SR 376 eastbound will be provided as well as channelized right turn lanes on both off ramps. The entrance and exit ramps to and from I-75 will be lengthened and widened to accommodate future traffic volumes, provide adequate storage, and provide sufficient acceleration /deceleration distances for entering and exiting traffic. The intersections of Jewell Futch Road and Mill Store Road with CR 376/Lakes Boulevard are expected to provide sufficient capacity to handle the projected traffic volumes. However, the frontage roads will have to be relocated to provide for the future widening of the ramps and the interstate. Additional limit of access will be acquired to comply with current DOT policy; this will affect driveway access of parcels that are next to the existing ramps.

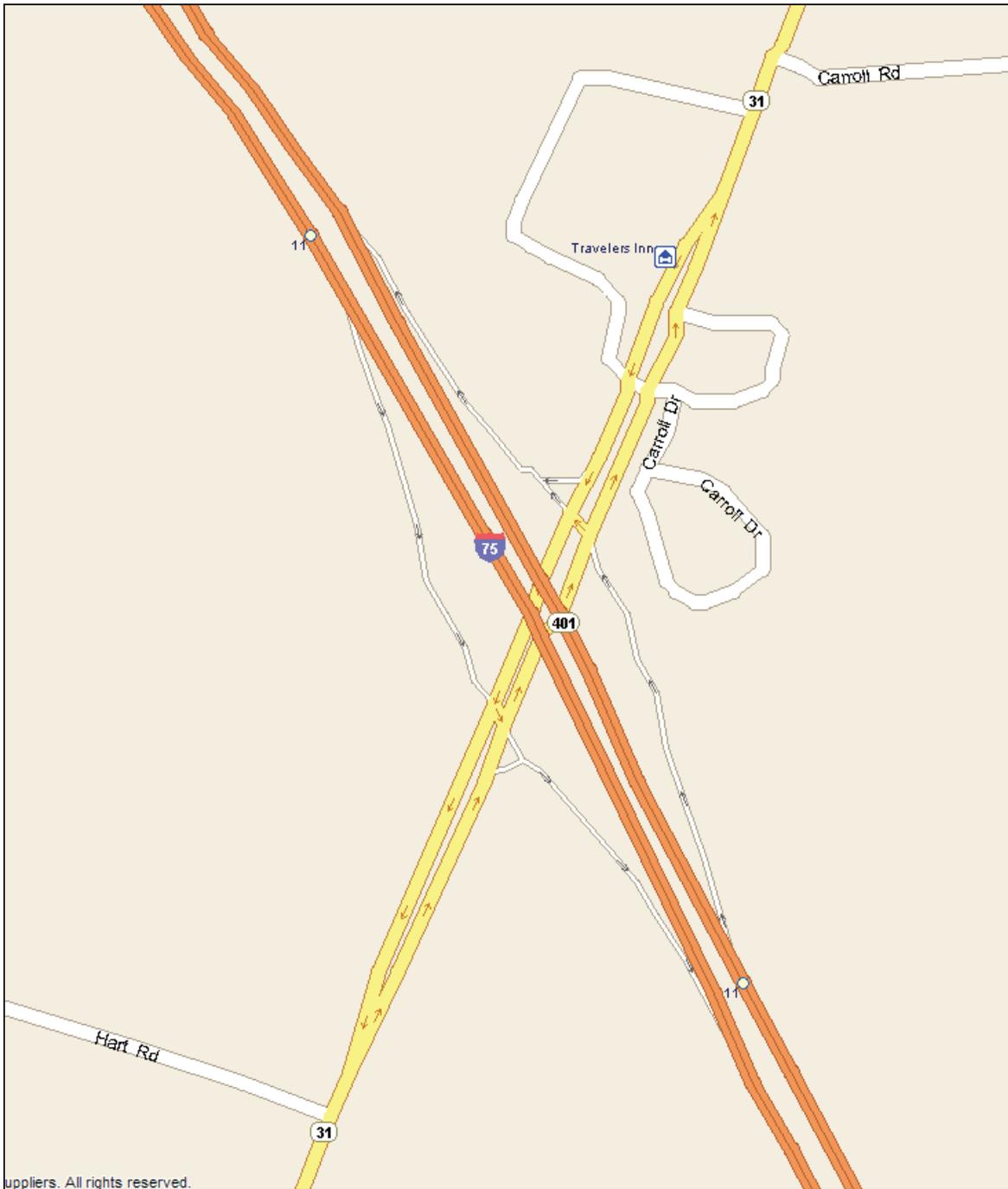


**Site 3:** The existing bridge (CR 783/Loch Laurel Road over I-75) will be replaced. The new bridge will be longer to accommodate future widening of I-75. The typical section will be rural with an 8-foot shoulder. The new bridge will be constructed just south of the existing one so that Loch Laurel Road can remain open during construction. Frontage Road will be relocated further away from the bridge to improve safety at the intersection with CR 783. Turn lanes are not required based on capacity and will not be considered on CR 783 since their incorporation would mean a widening of the bridge.



**Site 4:** The project will consist of reconstructing the I-75 diamond type interchange at SR 31. The project will include improvements to the safety and operations of the interchange by providing additional capacity on the bridge and approaches over I-75 as well as additional capacity for the entrance and exit ramps to and from I-75. Safety will be enhanced by providing additional turning lanes, increased intersection and stopping sight distance, and increased storage capacity. The entrance and exit ramps to and from I-75 will be lengthened and widened to accommodate future traffic volumes, provide adequate storage, and provide sufficient acceleration /deceleration distances for entering and exiting traffic. Currently the I-75 interchange approaches on SR 31 are composed of two lanes in each direction separated by a 36 foot wide depressed median. The roadway section has rural shoulders. The existing twin bridges over I-75 are two lanes wide each carrying the east and westbound traffic with no separate turn lanes provided on the bridge deck. The existing bridges are constructed on vertical alignment that does not provide the necessary stopping sight distance for the proposed 45 mph design speed, and limits the intersection sight distance at the ramp terminals for exiting left turn and right turn traffic from both directions on I-75. The project will replace the twin bridges with a new single structure that will provide two lanes in each direction with a double left turn lane for westbound traffic entering I-75 southbound and a single left turn lane for eastbound traffic entering I-75 northbound making the new bridge 7 lanes wide. The new bridge will have 8'-2 1/2" foot wide outside shoulders and the opposing lanes will be separated by a 4 foot wide raised median. The new bridge will be constructed on vertical alignment which meets the proposed design speed of 45 mph creating a need for raising the grade of SR 31 through the interchange area. The new bridge will be designed to span four lanes of I-75 in each direction and provide an additional 32 feet for clear zone. The bridge will be staged-constructed to provide for four lanes of traffic to be maintained throughout the construction period except at specific times where temporary lane closures are necessary.

Site 4:

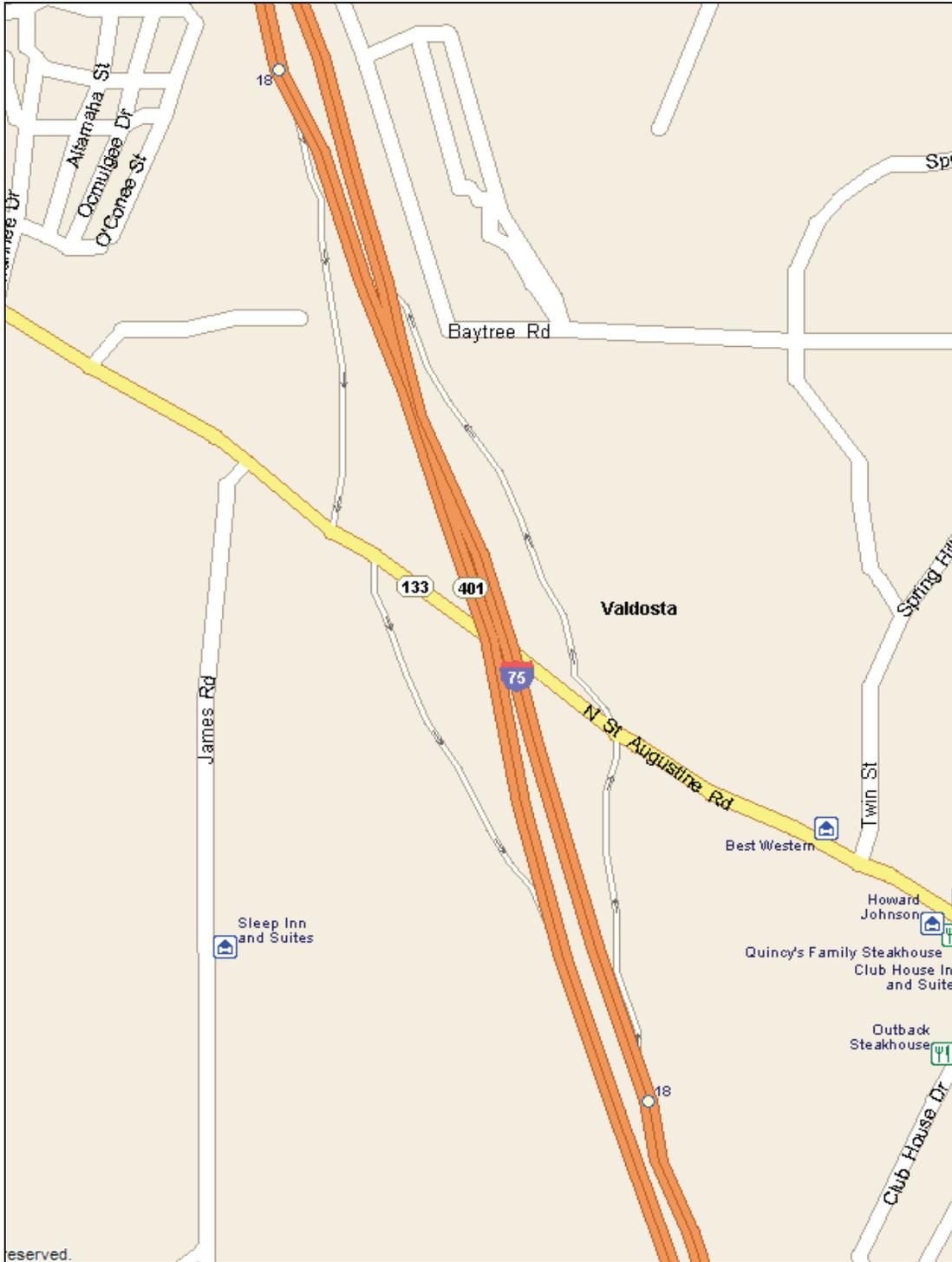


**Site 5:** The project will consist of reconstructing the I-75 interchange at SR 133 (St. Augustine Road/ Billy Langdale Parkway). The project will include improvements to the safety and operations of the interchange by providing additional capacity on the bridge and approaches over I-75 as well as additional capacity for the entrance and exit ramps to and from I-75. Safety will be enhanced by providing additional turning lanes, increased storage capacity, and a raised median, varying from 18' to 40', through the interchange area. The median will be as narrow as 8' on the bridge to accommodate turning movements. The entrance and exit ramps to and from I-75 will be lengthened and widened to accommodate future traffic volumes, provide adequate storage, and provide sufficient acceleration /deceleration distances for entering and exiting traffic. Currently, SR 133 crosses over I-75 on a skew of 35 degrees. Due to this sharp skew angle, the intersections for the entering and exiting traffic at each ramp terminal are staggered with signalization provided for the exiting traffic movements only. The project proposes to realign the intersections so that the left turning exiting and entering traffic at each ramp terminal will be controlled by a traffic signal. The alternates being considered for these improvements are as follows:

**Alternate A:** This alternate proposes to realign SR 133 south of its current alignment to allow the staged construction of a new 8 lane wide bridge and approaches which will provide three eastbound thru lanes and one eastbound left turn lane and two westbound thru lanes and two westbound left turn lanes. Channelized right turn lanes will also be provided at each ramp terminal for I-75 exiting and entering traffic. A raised median will be provided east of I-75 along SR 133 from the ramp terminal to Spring Hill Road, a distance of 550 feet. A raised median will be provided west of I-75 along SR 133 from the ramp terminal to a relocated James Road, a distance of 885 feet. Public service roads will be needed to serve existing businesses east of I-75 whose access will be compromised with the project construction or increased limits of access. West of I-75, the project proposes to relocate James Road further westward to allow for increased limits of access. The new bridge will be designed to span four lanes of I-75 in each direction and provide an additional 32 feet for clear zone. This alternate will provide for five lanes of traffic to be maintained throughout the construction period except at specific times where temporary lane closures are necessary.

**Alternate B:** This alternate proposes to jack and retain the existing bridge over I-75 and widen it to accommodate the same lane configurations defined in Alternate A. The existing bridge was widened and improved in 1990 and will provide adequate horizontal clearance for four lanes in each direction provided a design exception is approved for substandard inside shoulders ( 5 ft. ). This alternate also requires that the additional future I-75 (fourth lane) lanes be added to the I-75 median and a concrete median barrier constructed to separate the opposing travel lanes. All other improvements to the SR 133 roadway, the I-75 ramps, the raised median, the public service roads outlined in Alternate A will also apply to this alternate.

Site 5:



Is the project located in a PM 2.5 Non-attainment area? \_\_\_\_\_ Yes \_\_\_X\_\_\_ No

Is this project located in an Ozone Non-attainment area? \_\_\_\_\_ Yes \_\_\_X\_\_\_ No

PDP Classification: Major \_\_\_X\_\_\_ Minor \_\_\_\_\_

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

Functional Classification: \_\_\_\_\_

- I-75/SR 401 – Rural Interstate
- CR 274/Bellville Road/Lake Park Road – Rural Major Collector
- SR 376/Lakes Boulevard – Rural Major Collector
- CR 783/Loch Laurel Road – Rural Major Collector
- SR 31/Madison Highway – Urban Principal Arterial
- SR 133/N St Augustine Road – Urban Principal Arterial

U. S. Route Number: \_\_\_\_\_ I-75 State Route Number(s): SR401, SR376, SR31, & SR133 \_\_\_\_\_

Traffic (AADT):  
 Base Year: (2009) \_\_\_\_\_ Design Year: (2034) \_\_\_\_\_

Site 1 Roads	2009 ADT	2014 ADT	2034 ADT
I-75	36200	40400	63200
Lake Park Road	5150	5800	9050
CR 274/Bellville Road	3350	3800	5850

Site 2 Roads	2009 ADT	2014 ADT	2034 ADT
I-75	37780	42300	66000
SR 376/Lakes Boulevard	11100	12600	19600
Jewell Futch Road	1620	1800	2900
Mill Store Road	3720	4200	6500

Site 3 Roads	2009 ADT	2014 ADT	2034 ADT
I-75	37780	42300	66000
CR 783/Loch Laurel Road	2120	2400	3700
Frontage Road	440	600	800

Site 4 Roads	2009 ADT	2014 ADT	2034 ADT
I-75	37780	42300	66000
SR 31/Madison Highway	11840	13200	20700

Site 5 Roads	2009 ADT	2014 ADT	2034 ADT
I-75	36740	41000	64000
SR 133/N St Augustine Road	20970	23300	36400

**Existing design features:**

- Typical Section:
  - I-75 – six lane rural interstate with limited access
  - Site 1 - CR 274/Bellville Road/Lake Park Road – two lane rural undivided
  - Site 2 - SR 376/Lakes Boulevard – five lane with center turn lane urban undivided facility
  - Site 3 - CR 783/Loch Laurel Road – two lane rural undivided
  - Site 4 - SR 31/Madison Highway – four lane rural divided
  - Site 5 - SR 133/N St Augustine Road – five lane with center turn lane urban undivided facility (EAST), four lane divided rural (WEST)
- Posted speed:
  - I-75 – 70 mph
  - Site 1 - CR 274/Bellville Road/Lake Park Road – 45 mph
  - Site 2 - SR 376/Lakes Boulevard – 35 mph
  - Site 3 - CR 783/Loch Laurel Road – 35 mph
  - Site 4 - SR 31/Madison Highway – 45 mph
  - Site 5 - SR 133/N St Augustine Road – 35 mph (EAST), 45 mph (WEST)
- Minimum radius for curve:
  - I-75 – N/C
  - Site 1 - CR 274/Bellville Road/Lake Park Road – 1534'
  - Site 2 - SR 376/Lakes Boulevard – 1700'
  - Site 3 - CR 783/Loch Laurel Road – 5650'
  - Site 4 - SR 31/Madison Highway – 8000'
  - Site 5 - SR 133/N St Augustine Road – 3600'
- Maximum super-elevation rate of curve:
  - I-75 – N/C
  - Site 1 - CR 274/Bellville Road/Lake Park Road – 8%
  - Site 2 - SR 376/Lakes Boulevard – 8%
  - Site 3 - CR 783/Loch Laurel Road – 8%
  - Site 4 - SR 31/Madison Highway – 8%
  - Site 5 - SR 133/N St Augustine Road – 8%
- Maximum grade:
  - I-75 -- 4%
  - Site 1 - CR 274/Bellville Road/Lake Park Road – 4.8%
  - Site 2 - SR 376/Lakes Boulevard – 4.6%
  - Site 3 - CR 783/Loch Laurel Road – 5%

- Site 4 - SR 31/Madison Highway – 3.8%
- Site 5 - SR 133/N St Augustine Road – 5.1%
- Driveways 10%
- Width of right of way:
  - I-75 -300-350 feet
  - Site 1 - CR 274/Bellville Road/Lake Park Road – 80-100 feet
  - Site 2 - SR 376/Lakes Boulevard – 100 feet
  - Site 3 - CR 783/Loch Laurel Road – 80-120 feet
  - Site 4 - SR 31/Madison Highway – 100-200 feet
  - Site 5 - SR 133/N St Augustine Road - 80 feet
- Limits of Access:
  - Site 1 – East of I-75: Eastbound - 400’ Westbound – 225’  
West of I-75: Eastbound - 450’ Westbound – 225’
  - Site 2 – East of I-75: Eastbound – 175’ Westbound – 275’  
West of I-75: Eastbound – 175’ Westbound – 275’
  - Site 4 – East of I-75: Eastbound – 500’ Westbound – 325’  
West of I-75: Eastbound – 525’ Westbound – 245’
  - Site 5 – East of I-75: Eastbound – 235’ Westbound – 400’  
West of I-75: Eastbound – 175’ Westbound – 450’
- Major structures:
  - I-75 –N/A
  - Site 1 - CR 274/Bellville Road/Lake Park Road -- Length: 208’, span: 70’; deck width 34.10’; sufficiency rating: 62.09; Structure ID#: 185-0032-0
  - Site 2 - SR 376/Lakes Boulevard-- Length: 226’, span: 75’; deck width 95.6’; sufficiency rating: 76.45; Structure ID#: 185-0034-0
  - Site 3- CR 783/Loch Laurel Road-- Length: 331’, span: 113’; deck width 32.00’; sufficiency rating: 62.97; Structure ID#: 185-0073-0
  - Site 4 - SR 31/Madison Highway over I-75
    - Northbound --Length: 274’, span: 90’; deck width 34.00’; sufficiency rating: 67.92; Structure ID#: 185-0012-0
    - Southbound -- Length: 274’, span: 90’; deck width 34.00’; sufficiency rating: 67.31; Structure ID#: 185-0013-0
  - Site 5 - SR 133/N St Augustine Road over I-75-- Length: 354’, span: 124’; deck width 80.50’; sufficiency rating: 76.12; Structure ID#: 185-0020-0
- Major interchanges or intersections along the project:
  - I-75 – NC
  - Site 1 - CR 274/Bellville Road/Lake Park Road -- None
  - Site 2 - SR 376/Lakes Boulevard – Jewell Futch Road/Timber Drive (signalized); Mill Store Road (signalized)
  - Site 3 - CR 783/Loch Laurel Road – Frontage Road (unsignalized)
  - Site 4 - SR 31/Madison Highway -- None
  - Site 5 - SR 133/N St Augustine Road – Spring Hill Place (unsignalized); James Road (unsignalized)

- Existing length of roadway segment and the beginning mile logs for each county segment.
  - I-75 – N/A
  - Site 1 - CR 274/Bellville Road/Lake Park Road – 0.52 mi./ starting at MP 0.90.
  - Site 2 - SR 376/Lakes Boulevard – 0.33 mi./ starting at MP 5.49
  - Site 3 - CR 783/Loch Laurel Road – 0.57 mi./starting at MP 4.55
  - Site 4 - SR 31/Madison Highway – 0.65 mi/starting at MP 8.51
  - Site 5 - SR 133/N St Augustine Road – 0.53 mi./starting at MP 2.20

**Proposed Design Features:**

- Proposed typical section(s):
  - I-75 – No change on this project. Overpasses will accommodate future four lane section .
  - CR 274/Bellville Road/Lake Park Road – existing two lane bridge replaced with three lane bridge to accommodate left turning vehicles at the ramp intersections
  - SR 376/Lakes Boulevard – existing five lane bridge replaced to accommodate two through lanes and a left turn lane in each direction (six lanes)
  - CR 783/Loch Laurel Road – existing two lane bridge replaced with two lane bridge.
  - SR 31/Madison Highway- Existing two lane twin bridges replaced with single bridge; two lanes each direction with a double westbound left turn lane and a single eastbound left turn lane lanes (seven lanes).
  - SR 133/N St Augustine Road- Existing five lane bridge replaced with three eastbound through lanes with a single eastbound left turn lane and two westbound through lanes with two westbound left turn lanes (eight lanes).
- Proposed Design Speed:
  - I-75 – 70 mph
  - Site 1 - CR 274/Bellville Road/Lake Park Road – 45 MPH
  - Site 2 - SR 376/Lakes Boulevard – 35 MPH
  - Site 3 - CR 783/Loch Laurel Road – 35 MPH
  - Site 4 - SR 31/Madison Highway – 45 MPH
  - Site 5 - SR 133/N St Augustine Road – 45 MPH
- Proposed Maximum grade: (Level)
  - I-75 – N/A
  - Site 1 - CR 274/Bellville Road/Lake Park Road – 6%
  - Site 2 - SR 376/Lakes Boulevard – 5%
  - Site 3 - CR 783/Loch Laurel Road – 6%
  - Site 4 - SR 31/Madison Highway – 6%
  - Site 5 - SR 133/N St Augustine Road – 6%
- Maximum grade allowable: (Level)
  - I-75 – 5%
  - Site 1 - CR 274/Bellville Road/Lake Park Road – 7%
  - Site 2 - SR 376/Lakes Boulevard – 7%
  - Site 3 - CR 783/Loch Laurel Road – 7%
  - Site 4 - SR 31/Madison Highway – 6%
  - Site 5 - SR 133/N St Augustine Road – 6%
  - Driveways 10%

- Proposed Minimum radius of curve:
  - I-75 – N/A
  - Site 1 - CR 274/Bellville Road/Lake Park Road – 8° 54' 38.51" (643')
  - Site 2 - SR 376/Lakes Boulevard – 16° 51' 6.12" (340')
  - Site 3 - CR 783/Loch Laurel Road – 16° 51' 6.12" (340')
  - Site 4 - SR 31/Madison Highway – 8° 3' 30.52" (711')
  - Site 5 - SR 133/N St Augustine Road – 8° 3' 30.52" (711')
- Minimum radius allowable:
  - I-75 – N/A
  - Site 1 - CR 274/Bellville Road/Lake Park Road – 8° 54' 38.51" (643')
  - Site 2 - SR 376/Lakes Boulevard – 16° 51' 6.12" (340')
  - Site 3 - CR 783/Loch Laurel Road – 16° 51' 6.12" (340')
  - Site 4 - SR 31/Madison Highway – 8° 3' 30.52" (711')
  - Site 5 - SR 133/N St Augustine Road – 8° 3' 30.52" (711')
- Maximum super-elevation rate of curve:
  - I-75 – N/C
  - Site 1 - CR 274/Bellville Road/Lake Park Road – 6%
  - Site 2 - SR 376/Lakes Boulevard – 6%
  - Site 3 - CR 783/Loch Laurel Road – 6%
  - Site 4 - SR 31/Madison Highway – 4%
  - Site 5 - SR 133/N St Augustine Road – 4%
- Right of way
  - Site 1 Width: 100'
    - Easements: Temporary ( ), Permanent ( X ), Utility ( ), Other ( ).
    - Type of access control: Full ( X ), Partial ( ), By Permit ( ), Other ( ).
    - Number of parcels: 12      Number of displacements:
      - Business: 3
      - Residences: none
      - Mobile homes: none
      - Other: \_\_\_\_\_
  - Site 2 Width: 100'
    - Easements: Temporary ( X ), Permanent ( X ), Utility ( ), Other ( ).
    - Type of access control: Full ( X ), Partial ( ), By Permit ( ), Other ( ).
    - Number of parcels: 19      Number of displacements:
      - Business: 3
      - Residences: none
      - Mobile homes: none
      - Other: \_\_\_\_\_
  - Site 3 Width: 90'
    - Easements: Temporary ( X ), Permanent ( X ), Utility ( ), Other ( ).
    - Type of access control: Full ( ), Partial ( X ), By Permit ( ), Other ( ).
    - Number of parcels: 9      Number of displacements:
      - Business: none
      - Residences: none
      - Mobile homes: none
      - Other: \_\_\_\_\_

- Site 4 Width: Construction to be within existing right of way
- Easements: Temporary ( X ), Permanent ( X ), Utility ( ), Other ( ).
- Type of access control: Full ( ), Partial ( X ), By Permit ( ), Other ( ).
- Number of parcels: 24      Number of displacements:
  - Business: 1
  - Residences: 0
  - Mobile homes: 0
  - Other: \_\_\_\_\_
- Site 5 Width: Varies 122' – 144'
- Easements: Temporary ( X ), Permanent ( X ), Utility ( ), Other ( ).
- Type of access control: Full ( ), Partial ( X ), By Permit ( ), Other ( ).
- Number of parcels: 20      Number of displacements:
  - Business: 3
  - Residences: 0
  - Mobile homes: 0
  - Other: \_\_\_\_\_
- Limits of Access:
  - Site 1 – Approximately 400' western side and 500' eastern side
  - Site 2 – Approximately 400' western side and 500' eastern side
  - Site 4 – Approximately 700' western side and 950' eastern side
  - Site 5 – Approximately 900' western side and 650' eastern side
- Structures:
  - Bridges:
    - Site 1 - CR 274/Bellville Road/Lake Park Road – one through lane in each direction with a left turn center lane (three lanes total) and 10' rural shoulder
    - Site 2 - SR 376/Lakes Boulevard – two through lanes and a left turn lane in each direction (six lanes) with 2' gutters and 5'-6" sidewalks.
    - Site 3 - CR 783/Loch Laurel Road – one through lane in each direction (two lanes total) with an 8' rural shoulder
    - Site 4 - SR 31/Madison Highway – two through lanes in each direction with two left turn lanes westbound and one left turn lane eastbound (seven lanes total) and 2' gutters with 5'-6" sidewalks.
    - Site 5 - SR 133/N St Augustine Road – two through lanes westbound and two westbound left turn lanes; three through lanes eastbound and one eastbound left turn lane (eight lanes total) with 2' gutters with 5'-6" sidewalk on each side.
  - Retaining walls –
    - Site 1 – Retaining wall on I-75 northbound off ramp along the parking area of existing truck stop to reduce property impacts.
    - Site 5 - Retaining wall on I-75 southbound entrance ramp to prevent displacement of hotel. Retaining wall on I-75 northbound exit ramp to prevent acquisition of hotel parking. Retaining wall on south side of S.R. 133 East of the interchange to minimize impacts to restaurant parking.
- Major intersections and interchanges: None

- Traffic control during construction: Traffic will be maintained during all phases of construction.
- Design Exceptions to controlling criteria anticipated:

	<u>UNDETERMINED</u>	<u>YES</u>	<u>NO</u>
HORIZONTAL ALIGNMENT:	( )	( )	(x)
ROADWAY WIDTH:	( )	( )	(x)
SHOULDER WIDTH:	( )	( )	(x)
VERTICAL GRADES:	( )	( )	(x)
CROSS SLOPES:	( )	( )	(x)
STOPPING SIGHT DISTANCE:	( )	( )	(x)
SUPERELEVATION RATES:	( )	( )	(x)
HORIZONTAL CLEARANCE:	( )	( )	(x)
SPEED DESIGN:	( )	( )	(x)
VERTICAL CLEARANCE:	( )	( )	(x)
BRIDGE WIDTH:	( )	( )	(x)
BRIDGE STRUCTURAL CAPACITY:	( )	( )	(x)

- Design Variances: None Required
- Environmental concerns: Section 404 permit will be required; Several UST exist on the project sites and will require a Phase 1 Environmental Assessment; there are no anticipated historical or archaeological concerns.
- Level of environmental analysis:
  - Are Time Savings Procedures appropriate? Yes ( ), No ( X ),
  - Categorical exclusion ( X ), Site's 1-5
  - Environmental Assessment/Finding of No Significant Impact (FONSI) ( ), or
  - Environmental Impact Statement (EIS) ( ).
- Utility involvements: Telephone (AT&T), Cable (Mediacom Communications), Power (Georgia Power Company), Gas (AGL), Water & Sewer (Lowndes County), Highway lighting (Colquitt EMC)
- VE Study Held: August 31, 2007
- Benefit/Cost Ratio – See attached memo.

**Project Cost Estimate and Funding Responsibilities:**

	PE	ROW	UTILITY	CST	MITIGATION
By Whom	GDOT	GDOT	GDOT	GDOT	GDOT
\$ Amount	\$7,553,722.61	\$98,780,000	\$765,000	\$66,606,198.56	\$51,180.00

*\*CST Cost includes: Construction, Engineering and Inspection, Fuel Cost Adjustment, and Asphalt Cement Cost*

### **Project Activities Responsibilities:**

- Design – GDOT Consultant Jacobs
- Right of Way Acquisition – GDOT / Acquisition Services – Jacobs
- Right of Way Funding (real property)
- Relocation of Utilities – Local / GDOT
- Letting to contract – GDOT
- Supervision of construction – GDOT
- Providing material pits – Contractor
- Providing detours – On site by Contractor
- Environmental Studies/Documents/Permits – Edwards Pitman/ AECOM
- Environmental Mitigation - GDOT

### **Coordination**

- OEL Project Briefing: 05-03-07 See Attached Minutes
- Initial Team Concept Meeting: 04-09-07 See Attached Minutes.
- Concept Team Meeting: 01-08-08 See Attached Minutes
- P. A. R. meetings, dates and results. – *N/A*
- FEMA, USCG, and/or TVA – *N/A*
- Public Involvement: PIOH 07-10-07 See Attached Summary
- Local government comments: None
- Other projects in the area:
  - Project M003653 – SR31 – Resurfacing from Inner Perimeter Rd. to SR11
  - Project 0003896 – I-75 – Interstate Gateway Landscaping
  - Project 0000762 – I-75 – Interchanges from north of SR133 to Cook Co. line
  - Project 0005950 – turn lanes – SR 125 @ CR 784/ Northside Dr. & SR 133 @ CR 485/River St.
- Other coordination to date: None
- Railroads – *N/A*

### **Scheduling – Responsible Parties’ Estimate**

- Time to complete the environmental process: 12 Months.
- Time to complete preliminary construction plans: 12 Months.
- Time to complete right of way plans: 2 Months.
- Time to complete the Section 404 Permit: 6 Months.
- Time to complete final construction plans: 6 Months.
- Time to complete to purchase right of way: 18 Months.
- List other major items that will affect the project schedule: - *N/A*.

### **Other alternates considered: (Site 5)**

**Alternate A:** This alternate proposes to realign SR 133 south of its current alignment to allow the staged construction of a new 8 lane wide bridge and approaches which will provide three eastbound thru lanes and one eastbound left turn lane and two westbound thru lanes and two westbound left turn lanes. This is the preferred alternate.

**Alternate B:** This alternate proposes to jack and retain the existing bridge over I-75 and widen it to accommodate the same lane configurations defined in Alternate A. This alternate was not chosen. While this would be more cost effective than constructing new bridge and demolition of

existing bridge this alternate creates a typical section on I-75 that is not consistent with what has been proposed. In particular, this alternate would require a design exception for substandard inside shoulders (5' paved) and would require the future 4<sup>th</sup> lane be added to the inside. Thus the median at Site 5 would have to taper from depressed median to one with a center median barrier and the travel lanes on I-75 would have to shift toward the median and out again as one travels through this interchange. Also, the new requirement that we provide a 45'-9" outside clear zone to also accommodate future truck only lane would preclude the use of the existing bridge as the outside piers will now interfere with the ultimate lane configuration.

- **Comments:** See attached Initial Team Concept Meeting and concept Team meeting minutes for comments. Also, recommendations derived from the Value Engineering Study will be implemented in the preliminary phase. The cost estimate for Site 5 reflects the change to the bridge from four spans to two spans. In addition, a more detailed analysis of crash types will be performed in order to make any design recommendations. This will be done at the Preliminary Design stage.
- **Additional Recommendations:**  
Recommend creating separate Project Identification (P.I.) Numbers for each of the following Sites:
  - Site 1 - I-75 Exit 2 at CR 274 / Lake Park Rd / Bellville Rd Interchange – To Remain  
P.I. 0007386
  - Site 2 - I-75 Exit 5 at SR 376 / Lakes Blvd Interchange – P.I. No. To Be Determined
  - Site 3 - I-75 MP 6.12 at CR 783 Loch Laurel Rd Overpass – P.I. No. To Be Determined
  - Site 4 - I-75 Exit 11 at SR 31 / Madison Hwy Interchange – P.I. No. To Be Determined
  - Site 5 - I-75 Exit 18 at SR 133 / North St. Augustine Rd – P.I. No. To Be Determined

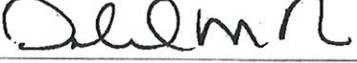
**Attachments:**

1. Need and Purpose
2. Detailed Cost Estimates:
  - a. Construction including Contingencies, Engineering and Inspection.
  - b. Right-of-Way.
  - c. Utilities.
3. Completed Fuel/Asphalt price adjustment form.
4. Mitigation Cost Estimate
5. Typical sections
6. Traffic Operations Analysis
7. Traffic Analysis performed by Moreland Altobelli (I-75 @ SR7)
8. Bridge inventory
9. Minutes OEL Project Briefing 05-03-07
10. Minutes of Initial Concept Team Meeting 04-09-07
11. Minutes of Concept Team Meeting 01-08-08
12. PIOH Summary
13. Benefit Cost Analysis
14. Implementation of Value Engineering Study Alternatives

Project Concept Report page 20  
Project Number: NHS-0007-00(386)  
P.I. Number: 0007386  
County: Lowndes

Concur:   
Director of Engineering

Approve:   
Per Division Administrator, FHWA

Approve:   
Chief Engineer

Date: 11-16-10

**NEED and PURPOSE**  
**I-75 at 5 Locations from Florida to SR 133 – Phase 2**  
**Project NHS – 0007-00 (386) Lowndes County**  
**PI No. 0007386**

**Location**

Project NHS-0007-00(386) is located along Interstate 75 (I-75) in Lowndes County, Georgia. The project consists of reconstructing four interchanges and one overpass as follows:

- Site 1: I-75 interchange with CR 274 - Exit 2 CR 274 (Bellville Road)/Lake Park Road,
- Site 2: I-75 interchange with SR 376 - Exit 5 (SR 376/Lakes Boulevard),
- Site 3: CR 783/Loch Laurel Road overpass at MP 6.12,
- Site 4: I-75 interchange with SR 31 - Exit 11 (SR 31/Madison Highway); and
- Site 5: I-75 interchange with SR 133 - Exit 18 (SR 133/N St. Augustine Road).

**Need and Purpose**

The Georgia Department of Transportation (GDOT) is considering the reconstruction of four interchanges and an overpass along I-75 in Lowndes County, GA to allow room for I-75 to be widened in the future from six lanes to eight lanes. I-75 is a major north-south connector providing connectivity between Florida and the cities of Valdosta, Macon and Atlanta, Georgia.

The GDOT is planning to increase the capacity of I-75 through Lowndes County by adding an additional lane in each direction. The typical section on I-75 from the Florida State Line is currently three general use traffic lanes in each direction. The Department has determined that there is a need to add an additional general use lane to I-75 in each direction. Before these improvements to the mainline can be implemented, four existing interchanges and one overpass must be reconstructed.

Without these improvements, a new lane could not be added to I-75 in each direction. The no-build alternative would not address the current problem which is that the bridges are not long enough to span I-75 with four general use lanes in each direction.

The Greater Lowndes community has grown tremendously over the past two decades and growth is anticipated to remain consistent. Numerous developments within the region are anticipated. These include the development of a truck operation/750,000 square foot Distribution Center to be located at Exit 2 (CR 274/Lake Park Road/Bellville Road) intersection. Exit 2 is also the proposed location for an Active Adult Community, Southern Landings, which will consist of a mixed use development. At Exit 18 (SR 133) the City of Lake Park is anticipating the development of a multi-use trail which will connect this intersection with the historic downtown/park area. At Exit 18, a planned commercial development has been proposed. The development will consist of a Bass Pro Shop, theater, multiple large scale department stores and boutique style shops adjacent to I-75.

To ensure that the four interchanges and the overpass will provide an adequate level of service in the design year of 2034 and beyond, and to improve safety at each location, certain geometric and operational improvements have been identified and are also proposed at each site.

To maintain desirable capacity at Exit 2 (CR 274/Lake Park Road/Bellville Road), the new bridge should be constructed with three lanes, with a center turn lane for left-turn bay storage. Based on projected traffic volumes in the opening year 2014, traffic signals are also warranted. The existing

interchange features a two-lane bridge and stop-controlled exit ramps. The existing bridge has a substandard vertical curve that limits sight distance over the interchange; the new bridge should correct this geometric deficiency to improve safety.

At Exit 5 (SR 376/Lakes Boulevard), the new bridge should be developed as a six-lane facility with separate left-turn lanes in each direction to maintain desirable LOS based on the year 2034 traffic projections, and the ramp intersections should include channelized right turns. The existing bridge includes only two through lanes in each direction with a center two-way-left-turn lane.

At Site 3, the CR 783/Loch Laurel Road overpass, the existing two lanes on the bridge over I-75 provide a sufficient LOS based on 2034 traffic projections. Traffic from Frontage Road currently has limited sight distance due to the skew of the intersection with Loch Laurel, and the obstruction of the bridge rails. Frontage Road will be realigned to intersect Loch Laurel Road at an angle closer to 90 degrees and further away from the new bridge so as to provide adequate sight distance.

At Exit 11, SR 31/Madison Highway is currently a divided highway with two bridges spanning I-75, each with two through lanes. The exit ramps are stop-controlled. To maintain desirable LOS in the 2034 design year, the new bridge should be designed as a seven-lane bridge with two through lanes in each direction with two westbound left-turn lanes and one eastbound left-turn lane. Based on opening year 2014 traffic projections, both of the ramp intersections with SR 31 warrant the installation of a traffic signal and including channelized right turn lanes.

Exit 18 (SR 133/N St. Augustine Road) currently features a five-lane bridge over I-75 with a center turning lane. The interchange is of a staggered formation, with the on-ramp and off-ramps (both northbound and southbound directions) staggered approximately 200 feet apart. The off-ramp approaches to SR 133 contain left and right-turn lanes and are signalized, whereas the on-ramps are unsignalized and feature one lane. To provide an acceptable level of service in 2034, the new bridge should be an eight-lane facility that includes three eastbound through lanes, one eastbound left-turn lane, two westbound through lanes, and two westbound left-turn lanes. Additionally, the on-ramps and off-ramps should be aligned on both sides of the interchanges, and both ramp intersections with SR 133 should be signalized in the 2014 opening year. Nearby intersections of SR 133 at James Road and SR 133 at Spring Hill Place also meet criteria for a signal in the opening year.

Improving these interchanges and the overpass will not only assist with the connectivity within the region but it will allow for the widening of I-75, a major north-south connector between Florida and the cities of Valdosta, Macon and Atlanta. This project will also improve the operational safety of the roadways and provide safer roads for motorists and trucks.

### **Planning Background and Project History**

Lowndes County is traversed north-south by I-75, providing direct intra/interstate access from Michigan to Florida. This interstate was built 40 years ago and carries an average of 40,000 vehicles per day (VPD). At present, I-75 is under construction in southern Georgia to increase capacity. The segment from milepost 18 (Georgia (GA) 133) northward to the Crisp/Dooly County line near milepost 106 is being expanded from 4 to 6-lanes of travel. The installation of a concrete barrier within the median and raising several overpasses to increase overall clearance is planned to coincide with construction. Recently, GDOT completed an Interstate Systems Plan which identified deficiencies and needs along I-75 and recommended improvements at Exits 2 and 11.

The five facilities, related to this project, span the existing six lanes on I-75 but are not adequate to span the interstate with an additional lane in each direction. This project will correct the substandard

shoulders under the bridges which were done during previous widening projects of I-75. According to the Statewide Interstate Study, long term, I-75 would eventually be widened with an eighth lane. The improvements to the shoulders and the reconstruction of the interchanges and overpass would allow for the additional lane as well as improve the overall safety and operational deficiencies that currently exist.

### **Logical Termini**

The four interchanges and overpass over I-75 act as a major route collector and distributor system of vehicular and truck traffic in this region. The reconstruction of these sites would allow for the eventual widening of I-75 to eight lanes, improvement of the substandard shoulders and improvement of the overall safety and capacity of users of the businesses in the area. The proposed improvements would not restrict any considerations of alternatives for other foreseeable improvements along I-75. Each of these sites is also considered to be of independent utility due to the usable and reasonable expenditure even if no additional transportation improvements in the area are made. Each site is described below.

- **Site 1: I-75 interchange with CR 274 - Exit 2 CR 274 (Bellville Road)/Lake Park Road**

CR 274 is presently a two-lane rural facility with a speed limit of 45 miles per hour (mph). The only operational deficiency observed in the field was restricted sight distance from the off-ramps looking towards the bridge over I-75. The vertical curvature and railing of the bridge restricts the line of sight for vehicles turning from the off-ramps onto CR 274/Lake Park Road. The existing 2-lane bridge with 2 foot shoulders will be replaced by a wider bridge offset 24 feet further to the south. The new bridge should be constructed with three lanes, with a center turn lane for left-turn bay storage. The span length will increase to 118 feet to allow for future expansion of I-75. Due to the increased span length the height of the bridge will increase 2 to 3 feet to compensate for the extra bridge deck depth.

The northbound exit ramp to Belleville Road will be extended 750 feet to the south where it will tie into the crossroad 140 feet further to the east. The northbound entrance ramp will tie into the crossroad 140 feet further to the east while the entrance ramp terminus will be extended 1850 feet further up I-75. The southbound exit ramp begins 900 feet further north and ties to the crossroad 180 feet further to the west and the southbound entrance ramp will tie into the crossroad 180 feet further to the west. Its terminus is 2000 feet further south on I-75.

- **Site 2: I-75 interchange with SR 376 - Exit 5 (SR 376/Lakes Boulevard)**

The new bridge will be shifted further to the north by 10 feet to allow for staging of traffic on the existing facility. The bridge width will remain the same but the 10 foot rural shoulder will be replaced by curb and gutter and sidewalk. The existing lane configuration (2 through lanes in each direction with a dedicated left-turn lane for the entrance ramps) will not change; but the span length will increase to 125 feet to allow for future expansion of I-75. The height of the bridge will increase 1 to 2 feet due to increased bridge depth.

The northbound exit ramp to SR 376 will begin 625 feet further south on I-75; and will tie to SR 376 110 feet further to the east. The left-turn storage will be lengthened 100 feet. The northbound entrance ramp will tie into SR 376 110 feet further to the east and the ramp terminus will end 1825 feet further north on I-75. The southbound exit ramp will begin 625 feet further north on I-75 and will tie to SR 376 90 feet further to the west. Another left-lane will be added and additional storage length of 140 feet will be added. The southbound entrance ramp ties to the crossroad 90 feet further to the west. Its terminus is 2600 feet further south on I-75.

- **Site 3: CR 783/Loch Laurel Road overpass at MP 6.12**

The existing 2-lane bridge will be demolished and replaced by a wider bridge with 2-12 foot lanes and 8-foot rural shoulders. The bridge will be constructed just south of the existing bridge; the frontage road will also be reconstructed to tie into Loch Laurel Road approximately 100 feet further from its existing tie-in point. The spans will be increased to 185 feet to allow for the future expansion of I-75, and because of the span increase, the overall height of the bridge will increase approximately 2-feet. Tree Farm Road will also be relocated further from Loch Laurel Road to allow for the construction slopes to be built.

- **Site 4: I-75 interchange with SR 31 - Exit 11 (SR 31/Madison Highway)**

SR 31 currently consists of a four-lane typical section with depressed median, rural shoulders and no left-turn lanes at the on-ramp intersections. The proposed project would maintain two through lanes in each direction and add dual westbound left-turn lanes for the southbound on-ramp and also add an eastbound left-turn lane for the northbound on-ramp. The proposed section will have urban shoulders including curb and gutter and sidewalk and will have a raised median with grass and/or concrete. In order to comply with GDOT standards of access control, a two-lane frontage road will be constructed on the north and south side of SR 31 to provide access to the existing businesses located on each side of the roadway. Eliminating all other drives between I-75 and these frontage road intersections will provide approximately 1000 feet of access control.

The proposed project consists of improvements to the interchange of I-75 at SR 31. These improvements extend along SR 31 from Hart Road (approximately 1100 feet west of the southbound on/off ramp intersection) to approximately 1200 feet east of the northbound on/off ramp intersection. Improvements along I-75 consist of the reconstruction of the entrance and exit ramps to/from SR 31.

The entrance and exit ramps to and from I-75 at SR 31 would be upgraded as part of the project. All existing ramps are a single lane. The improvements on the entrance ramps would include an additional lane to accommodate the dual westbound left-turn lanes from SR 31. Improvements to the exit ramps would include additional turn lanes, additional storage as well as improved signage and sight distance from the Interstate. The northbound exit ramp will have a single left/dual right configuration. The southbound exit ramp will have a dual left/single right configuration. All ramp convergence/divergence points on I-75 will accommodate the future 4<sup>th</sup> lane on I-75 northbound and southbound and will tie at the following distances from the centerline of SR 31:

- Northbound exit ramp – 1400 feet south
- Northbound entrance ramp – 3500 feet north
- Southbound exit ramp – 1700 feet north
- Southbound entrance ramp – 3300 feet south

Currently the I-75 interchange approaches on SR 31 are composed of two lanes in each direction separated by a 36-foot wide depressed median. The existing twin bridges over I-75 are two lanes wide each carrying the east and westbound traffic with no separate turn lanes provided on the bridge deck. The project will replace the twin bridges with a new single structure that will provide two lanes in each direction with a double left-turn lane for westbound traffic entering I-75 southbound and a single left-turn lane for eastbound traffic entering I-75 northbound making the new bridge 7-lanes wide. The new bridge will have 10-foot wide outside shoulders and the opposing lanes will be separated by a 4-foot wide raised median. The new bridge will be constructed on vertical alignment which meets the proposed design speed of 45 mph creating a need for raising the grade of SR 31 through the interchange area.

- **Site 5: I-75 interchange with SR 133 - Exit 18 (SR 133/N St. Augustine Road)**

Currently, SR 133 crosses over I-75 on a skew of 35 degrees. Due to this sharp skew angle, the intersections for the entering and exiting traffic at each ramp terminal are staggered with signalization provided for the exiting traffic movements only. The project proposes to realign the intersections so that the left-turning exiting and entering traffic at each ramp terminal will be controlled by a traffic signal. The entrance and exit ramps to and from I-75 at SR 133 would be upgraded as part of the project. The existing exit ramps are dual lanes (single left and single right) while the existing entrance ramps are single lane ramps. The improvements on the entrance ramps would include an additional lane to accommodate the dual westbound left-turn lanes from SR 133. Improvements to the exit ramps would include additional turn lanes, additional storage as well as improved signage and sight distance from the Interstate. The northbound exit ramp will have a single left/dual right configuration. The southbound exit ramp will have a dual left/single right configuration. All ramp convergence/divergence points on I-75 will accommodate the future 4<sup>th</sup> lane on I-75 northbound and southbound and will tie at the following distances from the centerline of SR 133:

- NB exit ramp – 1700’ south
- NB entrance ramp – 3000’ north
- SB exit ramp – 1600’ north
- SB entrance ramp – 3000’ south

This project will realign SR 133 south of its current alignment to allow the staged construction of a new 8 lane wide bridge and approaches. Channelized right turn lanes will also be provided at each ramp terminal for I-75 exiting and entering traffic. A raised median will be provided east of I-75 along SR 133 from the ramp terminal to Spring Hill Road, a distance of 550 feet. A raised median will be provided west of I-75 along SR 133 from the ramp terminal to a relocated James Road, a distance of 885 feet. Public service roads will be needed to serve existing businesses east of I-75 whose access will be compromised with the project construction or increased limits of access. The new bridge will be designed to span four lanes of I-75 in each direction and provide 14 foot wide outside shoulders and an additional 18 feet for clear zone. The new bridge will be constructed on vertical alignment which meets the proposed design speed of 45 mph creating a need for raising the grade of SR 133 through the interchange area.

#### **Other Projects in the Area**

Other projects in the area include the following from the GDOT State Transportation Improvement Program (STIP):

- Project numbers M003598 and M003277 are combined shoulder paving maintenance projects for a total of 8.7 miles on State Route (SR) 31, which intersects with I-75 in Lowndes County.
- P.I. No. 430770 is a widening project for 1.56 miles on SR 376, which goes under I-75 and is now under construction.
- P.I. No. 0003896 is a landscaping project funded under Transportation Enhancements (TE) funding called “Interstate Gateway Landscaping” to beautify the visual entrance into Georgia from Florida. It is one mile in length.

Projects included in the Valdosta – Lowndes County Long Range Transportation Master Plan (Metro 2030) identifies the following projects that are in the vicinity of I-75:

- SR 122 widening project. Local PI Number VLMPO17 widens SR122 from Union Road to Main Street (Old US 41 in Hahira) from 2-lanes to 4-lanes for one mile (goes under I-75).
- Widen Old Clyattville from Exit 13 at I-75. Local PI Number VLMPO14, expands Old Clyattville from Exit 13 to Ousley Road from 2 to 4-lanes at Wild Adventures (for 1.3 miles).
- Baytree Extension widening from 2 to 4-lanes from Gornto Road to I-75 for a total of 0.4 miles. Local PI Number VLMPO5.
- James Road Relocation. Local PI Number VLMPO4 relocates James Road west of the current location at on-ramp I-75 to tie in with the Baytree flyover concept. A total of 0.2 miles (no widening).
- County Road (CR) 868 (Old US 41) from SR7/N. Valdosta Road to SR 122. Local PI Number VL11 (GDOT PI Number 431480). Widens Old US 41 from SR 7 (North Valdosta Road) to SR 122 (Main Street-Hahira) from 2 to 4-lanes for a total length of 7.33 miles. (parallel to I-75).
- I-75 from North of SR 133 to Cook County Line (Phase 2). Local PI Number VL05 (GDOT PI Number 0000762). Reconstructs the interchange bridges from SR133 to Cook County from 4-lanes to 6 for a total distance of 13.54 miles.

### **General Land Use in the Project Area**

A comprehensive land use inventory of the region was completed for the Greater Lowndes 2030 Comprehensive Plan. The land use along this corridor is predominately a rural landscape with many rural communities and farmland. In recent years, this region has been developing into a more commercial and residential subdivision environment. Large tracts of land designated for industrial use are currently undeveloped. Once served with infrastructure, these holdings are anticipated to accommodate heavy or light manufacturing facilities.

Long range transportation planning for the Greater Lowndes community is addressed through the Valdosta-Lowndes Metropolitan Planning Organization (MPO). The MPO recently completed the *Valdosta-Lowndes Metro 2030 Long Range Transportation Plan (LRTP)*. Development of the document was based on a comprehensive forecasting for four main areas: population, housing, employment and enrollment. As the community continues to grow, a highly functioning transportation network will become more important in maintaining and improving the community's desired quality of life. The LRTP discusses the proposed development of sidewalks, bike, pedestrian, multiuse and Thoroughfare Plans, as well as a complete comprehensive transportation master plan which includes a number of proposed improvements within the project area. These improvements include reconstruction of these intersections and overpass along I-75.

The Valdosta-Lowndes Bicycle and Pedestrian Master Plan currently states that only two statewide bike routes transect the Valdosta-Lowndes area, which follow roughly US 41 (GA 7) and GA 122. Neither of these routes impact the subject projects on I-75. The Valdosta-Lowndes Bicycle and Pedestrian Master Plan (draft version out for comment) has been published under contract to the

South Georgia Regional Development Center (SGRDC) which is also the MPO for Valdosta and Lowndes County. This plan identifies a bike route going over I-75 along Highway 38/84 and a second location where SR 376 meets Loch Laurel Road.

### **Environmental Justice**

Due to the existing commercial development in the vicinity of the interchanges and the overpass over I-75, no environmental justice impacts are anticipated.

### **Community Issues**

According to the Greater Lowndes 2030 Comprehensive Plan, in 1970, Greater Lowndes (Lowndes County and the communities of Dasher, Hahira, Lake Park, Remerton and Valdosta) had a population of 55,112. Between 1970 and 2000, Greater Lowndes increased in population by 37,003 individuals, which represents an average increase of 22.3% every ten years. In 2000, the population of this region had risen to 92,115. The population projection for 2030 is 132,094, which represents a 14.4% 10-year average growth rate.

Overall, the average age of a Greater Lowndes resident continues to increase. This region has experienced a moderate increase in the number of 18 to 34-year olds. While future projections still depict an increase, it is at a slower rate than historical trends. The number of residents between the ages of 35 and 54 has increased 16% over the past 20 years and is projected to continue to increase at a faster rate than any other age group. This increase is attributed to the relocation of older active adults from Florida seeking more affordable housing, less traffic congestion and lower taxes. The number of senior citizens (65+) has increased in every community, except Remerton. Lake Park and the unincorporated areas have seen the highest historical increase in this age group. This trend is projected to continue over the next 25 years.

Greater Lowndes is also experiencing an increase in minority populations which are growing at a stronger rate than the majority population (white/Caucasian). The Hispanic, American Indian, and Asian populations have increased 32%, 33% and 46% respectively over the past 20-years and are projected to continue to increase through 2030. However, despite the increase, these minorities still represent a small percentage within the general population. Comparing Lowndes County to the South Georgia region reveals similar trends with increases in minority populations, which have historically grown and are projected to grow at stronger rates than the majority population (white/Caucasian). Since the proposed interchange improvements and overpass span I-75 and are not located within the vicinity of any residential communities, no environmental justice impacts are anticipated.

Over the past 20-years, all communities in the region have experienced an increase in per-capita income. Lake Park has experienced the fastest growing increase and is projected to have the highest income rate in 2030. Concerning the distribution of income of Lowndes County, the historic and predicted trends reveals an increase in the disparity between the number of houses classified above and below low to moderate income levels. This increase in disparity at the County level is echoed at both the state and national levels.

## Functional Classification

### **Site 1, I-75 interchange with CR 274**

CR 274 is functionally classified as a Rural Major Collector and is presently a two-lane rural facility with a speed limit of 45 miles per hour (mph). In the vicinity of the interchange are gas stations, tourist shops and fast food restaurants. The only operational deficiency observed in the field was restricted sight distance from the off-ramps looking towards the bridge over I-75.

At this interchange, I-75 is classified as a rural interstate. The vertical curvature and railing of the bridge restricts the line of sight for vehicles turning from the off-ramps onto CR 274/Lake Park Road.

### **Site 2, I-75 interchange with SR 376**

SR 376 is functionally classified as a Rural Major Collector and is presently a five-lane with center turning lane rural undivided facility with a posted speed of 35 mph extending west from US 41 spanning I-75 to Loch Laurel Road. To the west of Loch Laurel Road, CR 376 is named Clyattville Lake Park Road and is a two-lane rural facility that extends to SR 31. West of the interchange are gas stations, hotels and a tourist shop while to the east there exists gas stations and fast food restaurants. At this interchange, I-75 is classified as a rural interstate. No major operational deficiencies were observed other than the significant driveway movements at the various commercial establishments around this interchange.

### **Site 3, CR 783/Loch Laurel Road overpass at MP 6.12**

CR 783 is functionally classified as a Rural Major Collector and is presently a two-lane rural undivided facility with a posted speed limit of 35 mph extending south from the Florida State Line to SR 31 to the north. Both east and west of I-75 in the vicinity of CR 783 is undeveloped farmland. At this interchange, I-75 is classified as a rural interstate. Field observations at the site revealed low traffic volumes and minimal delays for all movements at the CR 783 intersection with Frontage Road. No major operational deficiencies were observed.

### **Site 4, I-75 interchange with SR 31**

SR 31 is functionally classified as a Urban Principal Arterial and is presently a four-lane rural divided facility with a posted speed limit of 45 mph extending west from US 41 spanning I-75 to the Florida State Line. At this interchange, I-75 is classified as an urban interstate. West of the interchange is a gas station and truck stop and to the east gas stations fast food restaurants and a hotel. The only operational deficiency observed in the field was restricted sight distance from the off-ramps looking towards the bridge over I-75. The vertical curvature and railing of the bridge restricts the line of sight for vehicles turning from the off-ramps onto SR 31. Warning signs are present along SR31 alerting drivers of the limited sight distance with advisory plates recommending a speed of 35 mph.

### **Site 5, I-75 interchange with SR 133**

SR 133 is functionally classified as an Urban Minor Arterial and to the east of the interchange; SR 133 is presently a five-lane with a center turning lane urban principal arterial undivided facility with a posted speed limit of 35 mph. To the west of the interchange, SR 133 is a four-lane divided rural facility with a posted speed of 45 mph. At this interchange, I-75 is classified as an urban interstate. In the vicinity of the interchange are gas stations, hotels, tourist shops and fast food restaurants. No major operational deficiencies observed other than the significant driveways movements at the various commercial establishments.

### **Travel Demand and Operational Conditions**

The Average Annual Daily Traffic (AADT) at Site 1 for the year 2009 ranges from 3,350 vehicles per day (vpd) east of I-75 to 5,150 vpd to the west. I-75 carried 36,200 vpd north of CR 274/Lake Park Road and 35,440 vpd to the south. Traffic for the year 2034 is projected to be 5,850 vpd east of I-75 and 9,050 vpd to the west. I-75 volumes are expected to rise to 63,200 vpd north of the interchange and 61,800 vpd to the south. For the design year 2014, ramp operations are expected to operate at a Level-of-Service (LOS) A during both the AM and PM peak hours if coordinated with traffic signals; otherwise, they will operate at a LOS C. In 2034, ramp operations are expected to operate at a LOS F during both the AM and PM peak hours. However, both ramp intersections would be expected to operate at overall LOS B or better during both peak hours if traffic signals and improvements are installed. (See Table 1.1, Figure 1.3 & Figure 1.4 of the Traffic Operations Analysis)

The AADT at Site 2 for the year 2009 ranged from 11,100 vpd east of I-75 to 8,260 vpd to the west of I-75. I-75 carried 37,780 vpd north of SR 376 and 36,200 vpd to the south. For the design year 2014, ramp operations are expected to operate at a LOS B during both the AM and PM peak hours if coordinated with traffic signals. For the design year 2034, the two ramp intersections are expected to operate at overall LOS C or better during both the AM and PM peak hours. However, both ramp intersections would be expected to operate at overall LOS B during peak hours if channelized right turn lanes were constructed and traffic signals were to be coordinated. Both the SR 376 intersections with Jewell Futch Road/Timber Drive and the Mill Store Road are expected to operate at overall LOS B or better during the AM and PM peak hours. (See Table 2.1, Figure 2.3 & Figure 2.4 of the Traffic Operations Analysis)

For Site 3 in year 2009, CR 783 carried 1,060 vpd both east and west of I-75. I-75 carried 37,780 vpd in the vicinity of the CR 783 overpass. The projected year 2034 ADT (Average Daily Traffic) is expected to be 1,850 vpd both east and west of I-75. I-75 volumes are expected to rise to 88,900 vpd in the vicinity of the overpass. For the design year 2014, all approach movements are expected to operate at a LOS B during both the AM and PM peak hours. For the design year 2034, all approach movements are expected to operate at LOS B or better during both the AM and PM peak hours. (See Table 3.1, Figure 3.3 & Figure 3.4 of the Traffic Operations Analysis)

The year 2009 results for Site 4, indicated that SR 31 carried 11,840 vpd east of I-75 and 6,380 vpd to the west. I-75 carried 37,480 vpd north of SR 31 and 37,780 vpd to the south. The projected year 2034 ADT is expected to be 20,700 vpd east of I-75 and 11,100 vpd to the west. I-75 volumes are expected to rise to 65,400 vpd north of the interchange and 66,000 vpd to the south. For the design year 2014, ramp operations are expected to operate at a LOS B during both the AM and PM peak hours if coordinated with traffic signals. For the design year 2014, ramp operations are expected to operate at a LOS C during the AM and LOS F during the PM peak hours. However, if coordinated with traffic signals the movements have a LOS B during both the AM and PM peak hours. Ramp movements are expected to operate at LOS F during both the AM and PM peak hours based on the design year 2034 traffic projections. However, both ramp intersections would be expected to operate at overall LOS B or better during both peak hours if traffic signals were installed. (See Table 4.1, Figure 4.3 & Figure 4.4 of the Traffic Operations Analysis)

For Site 5, in year 2009, SR 133 carried 21,970 vpd east of I-75 and 12,220 vpd to the west. I-75 carried 36,020 vpd north of SR 133 and 36,740 vpd to the south. The projected year 2034 ADT is expected to be 36,400 vpd east of I-75 and 21,300 vpd to the west. I-75 volumes are expected to rise to 62,900 vpd north of the interchange and 64,000 vpd to the south. For the design year 2014, ramp operations are expected to operate at a LOS C during the AM and LOS B during the PM peak hours. However, if coordinated with traffic signals, the movement operate at a LOS A. For the design year

2034, the two ramp intersections are expected to operate at overall LOS C or better during both the AM and PM peak hours. Future operations at the ramp and adjacent intersections with SR 133 were analyzed for the design year 2034 volumes. The exiting lane configurations and traffic control devices for the intersections were assumed. During peak hours, the ramp intersections are expected to operate at LOS C or better if traffic signals are installed and coordinated with ramp intersections. The SR 133 intersections with James Road and with Spring Hill Place are expected to operate at overall LOS B or better during AM and PM peak hours if traffic signals were installed and coordinated with the ramp intersections. (See Table 5.1, Figure 5.3 & Figure 5.4 of the Traffic Operations Analysis)

A review of the historical traffic volume data collected for all five sites indicated a growth rate of 2.25%. Using the traffic count data collected for these five sites, the heavy vehicle percentage in the study area was determined to be 25%.

The next interchange is located four miles north of Site 5. A traffic analysis was performed in 2007 by Moreland Altobelli. Please see the attached analysis for the results.

### Crash Data

#### **Site 1, I-75 interchange with CR 274**

For Site 1, historic crash data was analyzed for years 2006-2008 for CR 274 (Bellville Road/Lake Park Road), the ramps, and the interstate mainline north and south of the interchange. Crash data was analyzed for approximately one-half mile on CR 274 (Bellville Road)/Lake Park Road in the vicinity of I-75, and on I-75 mainline for 0.5 miles on either side of the interchange. Figures 1.a-1.c provide a summary of the number of crashes by location.

In total, 7 crashes occurred on CR 274 (Bellville Road)/Lake Park Road over the three year period. I-75 mainline had a total of 13 collisions over the three year period, and a total of 26 crashes occurred on the four ramps with the most occurring on the northbound off-ramp, which experienced a total of 16 crashes over the three year period.

In order to gauge the frequency of collisions occurring in the study area, crash rates were calculated for CR 274 (Bellville Road)/Lake Park Road, I-75 mainline, and the ramps, and were compared to the statewide average for similar facilities. CR 274 (Bellville Road)/Lake Park Road was compared with Rural Major Collector routes and the I-75 mainline was compared with Rural Interstate. Tables 1.a-1.c summarize how the compiled 2006-2008 crash data compares with statewide averages for crash, injury and fatality rates.

**Table 1.a – Site 1 Crash Rates for CR 274 (Bellville Road)/Lake Park Road**

Year	# of Crashes	Crash Rate per 100 MVT	Statewide Average Rate per 100 MVT	# of Injury Crashes	Injury Crash Rate per 100 MVT	Statewide Average Injury Rate per 100 MVT	# of Fatality Crashes	Fatality Crash Rate per 100 MVT	Statewide Average Fatality Rate per 100 MVT
2006	4	974	156	2	487	54	0	0.00	1.56
2007	2	522	168	0	0	57	0	0.00	1.87
2008	1	267	141	1	267	46	0	0.00	1.45

Note: Crash data represents approximately 0.5 mile of roadway

**Table 1.b – Site 1 Crash Rates for I-75 near CR 274 (Bellville Road)/Lake Park Road**

Year	# of Crashes	Crash Rate per 100 MVT	Statewide Average Rate per 100 MVT	# of Injury Crashes	Injury Crash Rate per 100 MVT	Statewide Average Injury Rate per 100 MVT	# of Fatality Crashes	Fatality Crash Rate per 100 MVT	Statewide Average Fatality Rate per 100 MVT
2006	3	38	61	0	0	19	0	0.00	0.84
2007	7	92	58	3	39	17	1	13.00	0.82
2008	3	41	62	1	14	18	0	0.00	0.78

Note: Crash data represents approximately 1 mile of roadway

**Table 1.c – Site 1 Crash Rates for I-75 Ramps at CR 274 (Bellville Road)/Lake Park Road**

Year	# of Crashes	Crash Rate per 100 MVT	Statewide Average Rate per 100 MVT	# of Injury Crashes	Injury Crash Rate per 100 MVT	Statewide Average Injury Rate per 100 MVT	# of Fatality Crashes	Fatality Crash Rate per 100 MVT	Statewide Average Fatality Rate per 100 MVT
<b>Northbound Off-Ramp</b>									
2006	7	220	156	5.0	157	54	0	0	1.56
2007	5	172	168	1.0	34	57	0	0	1.87
2008	4	141	141	3.0	106	46	0	0	1.45
<b>Northbound On-Ramp</b>									
2006	0	0	156	0.0	0	54	0	0	1.56
2007	2	62	168	1.0	31	57	0	0	1.87
2008	2	65	141	1.0	32	46	0	0	1.45
<b>Southbound Off-Ramp</b>									
2006	2	75	156	0.0	0	54	0	0	1.56
2007	3	118	168	0.0	0	57	0	0	1.87
2008	0	0	141	0.0	0	46	0	0	1.45
<b>Southbound On-Ramp</b>									
2006	0	0	156	0.0	0	54	0	0	1.56
2007	1	27	168	0.0	0	57	0	0	1.87
2008	0	0	141	0.0	0	46	0	0	1.45

As shown in Table 1.a, the crash and injury rate for CR 274 (Bellville Road)/Lake Park Road exceeds the statewide averages. This is mainly due to the relatively low traffic volumes on CR 274 (Bellville Road)/Lake Park Road as one or two accidents can cause the crash rate to be higher than the statewide average. No fatalities occurred on CR 274 (Bellville Road)/Lake Park Road in the vicinity of the interchange.

I-75 crash and injury rates in the vicinity of the interchange were less than the statewide averages, as shown in Table 1.b with the exception of 2007. One fatality occurred on I-75 in the vicinity of the interchange.

The northbound off-ramp, shown in Table 1.c, has relatively higher crash and injury rates than the other ramps at the interchange. No fatalities occurred on the four interchange ramps.

**Site 2, I-75 interchange with SR 376**

Historic crash data was analyzed for years 2006-2008 for Site 2, SR 376 (Lakes Boulevard), the ramps, and the interstate mainline north and south of the interchange. Crash data was analyzed for approximately one-half mile on SR 376 (Lakes Boulevard) in the vicinity of I-75, and on I-75 mainline for 0.5 miles on either side of the interchange. Figures 2.a-2.c provides a summary of the number of crashes by location. In total, 83 crashes occurred on SR 376 (Lakes Boulevard) over the three year period. I-75 mainline had a total of 24 collisions over the three year period, and a total of 31 crashes occurred on the four ramps with the most occurring on the northbound off-ramp, which

experienced a total of 13 crashes each over the three year period. In order to gauge the frequency of collisions occurring in the study area, crash rates were calculated for SR 376 (Lakes Boulevard), I-75 mainline, and the ramps, and were compared to the statewide average for similar facilities. SR 376 (Lakes Boulevard) was compared with Rural Major Collector routes and the I-75 mainline was compared with Rural Interstate. Tables 2.a-2.c summarize how the compiled 2006-2008 crash data compares with statewide averages for crash, injury and fatality rates.

**Table 2.a – Site 2 Crash Rates for SR 376 (Lakes Boulevard)**

Year	# of Crashes	Crash Rate per 100 MVT	Statewide Average Rate per 100 MVT	# of Injury Crashes	Injury Crash Rate per 100 MVT	Statewide Average Injury Rate per 100 MVT	# of Fatality Crashes	Fatality Crash Rate per 100 MVT	Statewide Average Fatality Rate per 100 MVT
2006	35	1925	203	10	550	73	0	0	3.28
2007	25	1468	203	8	470	72	0	0	3.27
2008	23	1295	194	5	282	68	0	0	3.03

Note: Crash data represents approximately 0.5 mile of roadway

**Table 2.b – Site 2 Crash Rates for I-75 near SR 376 (Lakes Boulevard)**

Year	# of Crashes	Crash Rate per 100 MVT	Statewide Average Rate per 100 MVT	# of Injury Crashes	Injury Crash Rate per 100 MVT	Statewide Average Injury Rate per 100 MVT	# of Fatality Crashes	Fatality Crash Rate per 100 MVT	Statewide Average Fatality Rate per 100 MVT
2006	10	124	61	5	62	19	0	0	0.84
2007	2	26	58	1	13	17	0	0	0.82
2008	12	159	62	6	79	18	1	13	0.78

Note: Crash data represents approximately 1 mile of roadway

**Table 2.c – Site 2 Crash Rates for I-75 Ramps at SR 376 (Lakes Boulevard)**

Year	# of Crashes	Crash Rate per 100 MVT	Statewide Average Rate per 100 MVT	# of Injury Crashes	Injury Crash Rate per 100 MVT	Statewide Average Injury Rate per 100 MVT	# of Fatality Crashes	Fatality Crash Rate per 100 MVT	Statewide Average Fatality Rate per 100 MVT
<b>Northbound Off-Ramp</b>									
2006	6	253.0	156	2	84	54	0	0	1.56
2007	3	130.0	168	0	0	57	0	0	1.87
2008	4	179.0	141	1	45	46	0	0	1.45
<b>Northbound On-Ramp</b>									
2006	2	69.0	156	0	0	54	0	0	1.56
2007	1	35.0	168	0	0	57	0	0	1.87
2008	1	36.0	141	0	0	46	0	0	1.45
<b>Southbound Off-Ramp</b>									
2006	3	116.0	156	1	39	54	0	0	1.56
2007	3	122.0	168	3	122	57	0	0	1.87
2008	6	246.0	141	0	0	46	0	0	1.45
<b>Southbound On-Ramp</b>									
2006	1	28.0	156	0	0	54	0	0	1.56
2007	0	0.0	168	0	0	57	0	0	1.87
2008	1	29.0	141	1	29	46	0	0	1.45

As shown in Table 2.a, the crash and injury rate for SR 376 (Lakes Boulevard) exceeds the statewide averages. This is due, in part, to the numerous driveways on SR 376 (Lakes Boulevard) in the vicinity of the interchange and the conflicting turning movements associated with them. No fatalities occurred on SR 376 (Lakes Boulevard) in the vicinity of the interchange. I-75 crash and injury rates in the vicinity of the interchange exceeded the statewide averages in 2006 and 2008, as shown in

Table 2.b. One fatality occurred on I-75 in the vicinity of the interchange. As shown in Table 2.c, the crash and injury rates on the northbound off-ramp in 2006 and 2008 and the southbound off-ramp in the year 2008 were higher than the statewide averages. The above average rates on the northbound on-ramps are well below statewide averages. No fatalities occurred on the SR 376 (Lakes Boulevard) interchange ramps.

**Site 3, CR 783/Loch Laurel Road overpass at MP 6.12**

Historic crash data was analyzed for years 2006-2008 for CR 783 (Loch Laurel Road) for approximately one-half mile in the vicinity of I-75. Figure 3.a provides a summary of the number of crashes by location. In total, 9 crashes occurred on CR 783 (Loch Laurel Road) over the three year period. No fatalities occurred on CR 783 (Loch Laurel Road).

**Table 3 – Site 3 Crash Rates for CR 783**

Year	# of Crashes	Crash Rate per 100 MVT	Statewide Average Rate per 100 MVT	# of Injury Crashes	Injury Crash Rate per 100 MVT	Statewide Average Injury Rate per 100 MVT	# of Fatality Crashes	Fatality Crash Rate per 100 MVT	Statewide Average Fatality Rate per 100 MVT
2006	2	442	203	1	220	73	0	0	3.28
2007	5	1087	203	1	217	72	0	0	3.27
2008	2	435	194	1	217	68	0	0	3.03

As shown in Table 3, the crash and injury rate for CR 783 exceed the statewide averages. This is mainly due to the relatively low traffic volumes on CR 783 as one or two accidents can cause the crash rate to be higher than the statewide average. As noted above, no fatalities occurred on CR 783 in the vicinity of I-75.

**Site 4, I-75 interchange with SR 31**

Historic crash data was analyzed for years 2006-2008 for SR 31 (Madison Highway), the ramps, and the interstate mainline north and south of the interchange. Crash data was analyzed for approximately one-half mile on SR 31 (Madison Highway) in the vicinity of I-75, and on I-75 mainline for 0.5 miles on either side of the interchange. Figures 4.a-4.c provide a summary of the number of accidents by location. In total, 39 crashes occurred on SR 31 (Madison Highway) over the three year period. I-75 mainline had a total of 10 collisions over the three year period, and a total of 65 crashes occurred on the four ramps with the most occurring on the southbound off-ramp, which experienced a total of 46 crashes over the three year period. In order to gauge the frequency of collisions occurring in the study area, crash rates were calculated for SR 31 (Madison Highway), I-75 mainline, and the ramps, and were compared to the statewide average for similar facilities. SR 31 (Madison Highway) was compared with Urban Principal Arterial routes and the I-75 mainline was compared with Urban Interstate. Tables 4.a-4.b summarize how the compiled 2006-2008 crash data compares with statewide averages for crash, injury and fatality rates.

**Table 4.a – Site 4 Crash Rates for SR 31 (Madison Highway)**

Year	# of Crashes	Crash Rate per 100 MVT	Statewide Average Rate per 100 MVT	# of Injury Crashes	Injury Crash Rate per 100 MVT	Statewide Average Injury Rate per 100 MVT	# of Fatality Crashes	Fatality Crash Rate per 100 MVT	Statewide Average Fatality Rate per 100 MVT
2006	13	834	156	8	513	54	0	0	1.56
2007	14	1069	168	8	611	57	1	76	1.87
2008	12	790	141	6	395	46	2	132	1.45

**Table 4.b – Site 4 Crash Rates for I-75 near SR 31 (Madison Highway)**

Year	# of Crashes	Crash Rate per 100 MVT	Statewide Average Rate per 100 MVT	# of Injury Crashes	Injury Crash Rate per 100 MVT	Statewide Average Injury Rate per 100 MVT	# of Fatality Crashes	Fatality Crash Rate per 100 MVT	Statewide Average Fatality Rate per 100 MVT
2006	5	62	200	1	12	46	0	0.00	0.66
2007	3	38	186	2	25	43	0	0.00	0.52
2008	2	25	187	1	13	43	0	0.00	0.56

Note: Crash data represents approximately 1 mile of roadway

**Table 4.c – Site 4 Crash Rates for I-75 Ramps at SR 31 (Madison Highway)**

Year	# of Crashes	Crash Rate per 100 MVT	Statewide Average Rate per 100 MVT	# of Injury Crashes	Injury Crash Rate per 100 MVT	Statewide Average Injury Rate per 100 MVT	# of Fatality Crashes	Fatality Crash Rate per 100 MVT	Statewide Average Fatality Rate per 100 MVT
<b>Northbound Off-Ramp</b>									
2006	5	119	1	1.0	24	85	0	0	1.06
2007	4	97	2	2.1	49	89	0	0	0.94
2008	3	74	2	2.1	49	68	0	0	0.98
<b>Northbound On-Ramp</b>									
2006	4	131	3	3.3	100	85	0	0	1.06
2007	1	33	0	0.0	0	89	0	0	0.94
2008	1	33	1	1.1	33	68	0	0	0.98
<b>Southbound Off-Ramp</b>									
2006	16	416	6	6.5	156	85	0	0	1.06
2007	11	283	5	5.5	129	89	0	0	0.94
2008	19	493	8	8.7	208	68	1	1	0.98
<b>Southbound On-Ramp</b>									
2006	1	34	1	1.0	34	85	0	0	1.06
2007	0	0	0	0.0	0	89	0	0	0.94
2008	0	0	0	0.0	0	68	0	0	0.98

As shown in Table 4.a, the crash and injury rate for SR 31 (Madison Highway) exceeds the statewide averages. This is due, in part, to the driveways on SR 31 (Madison Highway) in the vicinity of the interchange and the conflicting turning movements associated with them. Three fatalities occurred on SR 31 (Madison Highway) in the vicinity of the interchange.

I-75 crash and injury rates in the vicinity of the interchange were less than the statewide averages, as shown in Table 4.b. No fatalities occurred on I-75 in the vicinity of the interchange.

As shown in Table 4.c, the crash and injury rates on the northbound off-ramp and the southbound off-ramp were higher than the statewide averages, and for most years the injury rate was slightly higher also. The above average rates on the off-ramps are attributed, in part, to the relatively low volumes on the ramps. One fatality occurred on the SR 31 (Madison Highway) interchange ramps.

#### **Site 5, I-75 interchange with SR 133**

Historic crash data was analyzed for years 2006-2008 for Site 5, SR 133 (N. St. Augustine Road), the ramps, and the interstate mainline north and south of the interchange. Crash data was analyzed for approximately one-half mile on SR 133 (N. St. Augustine Road) in the vicinity of I-75, and on I-75 mainline for 0.5 miles on either side of the interchange. Figures 5.a-5.c provide a summary of the number of crashes by location.

In total, 144 crashes occurred on SR 133 (N. St. Augustine Road) over the three year period. I-75 mainline had a total of 44 collisions over the three year period, and a total of 65 crashes occurred on

the four ramps with the most occurring on the southbound on-ramp, which experienced 19 crashes over the three year period.

In order to gauge the frequency of collisions occurring in the study area, crash rates were calculated for SR 133 (N. St. Augustine Road), I-75 mainline, and the ramps, and were compared to the statewide average for similar facilities. SR 133 (N. St. Augustine Road) was compared with Urban Minor Arterial routes and the I-75 mainline was compared with Urban Interstate. Tables 5.a-5.c summarize how the compiled 2006-2008 crash data compares with statewide averages for crash, injury and fatality rates.

**Table 5.a – Site 5 Crash Rates for SR 133 (N. St. Augustine Road)**

Year	# of Crashes	Crash Rate per 100 MVT	Statewide Average Rate per 100 MVT	# of Injury Crashes	Injury Crash Rate per 100 MVT	Statewide Average Injury Rate per 100 MVT	# of Fatality Crashes	Fatality Crash Rate per 100 MVT	Statewide Average Fatality Rate per 100 MVT
2006	66	1548	298	11	258	77	0	0	1.19
2007	38	1041	445	7	192	113	0	0	1.42
2008	40	1189	430	9	267	108	0	0	1.31

Note: Crash data represents approximately 0.5 mile of roadway

**Table 5.b – Site 5 Crash Rates for I-75 near SR 133 (N. St. Augustine Road)**

Year	# of Crashes	Crash Rate per 100 MVT	Statewide Average Rate per 100 MVT	# of Injury Crashes	Injury Crash Rate per 100 MVT	Statewide Average Injury Rate per 100 MVT	# of Fatality Crashes	Fatality Crash Rate per 100 MVT	Statewide Average Fatality Rate per 100 MVT
2006	22	289	200	7	92	46	0	0	0.66
2007	8	99	186	2	25	43	0	0	0.52
2008	14	172	187	4	49	43	0	0	0.56

Note: Crash data represents approximately 1 mile of roadway

**Table 5.c – Site 5 Crash Rates for I-75 Ramps at SR 133 (N. St. Augustine Road)**

Year	# of Crashes	Crash Rate per 100 MVT	Statewide Average Rate per 100 MVT	# of Injury Crashes	Injury Crash Rate per 100 MVT	Statewide Average Injury Rate per 100 MVT	# of Fatality Crashes	Fatality Crash Rate per 100 MVT	Statewide Average Fatality Rate per 100 MVT
<b>Northbound Off-Ramp</b>									
2006	4	123	382	0	0	85	0	0	1.06
2007	7	209	407	3	90	89	0	0	0.94
2008	5	146	317	0	0	68	0	0	0.98
<b>Northbound On-Ramp</b>									
2006	4	89	382	1	22	85	0	0	1.06
2007	6	125	407	2	42	89	1	21	0.94
2008	7	144	317	2	41	68	0	0	0.98
<b>Southbound Off-Ramp</b>									
2006	2	68	382	1	34	85	0	0	1.06
2007	7	231	407	1	33	89	0	0	0.94
2008	4	130	317	1	32	68	0	0	0.98
<b>Southbound On-Ramp</b>									
2006	4	117	382	1	29	85	0	0	1.06
2007	9	257	407	3	86	89	0	0	0.94
2008	6	168	317	2	56	68	0	0	0.98

As shown in Table 5.a, the crash and injury rate for SR 133 (N. St. Augustine Road) exceeds the statewide averages. This is due, in part, to the numerous driveways on SR 133 (N. St. Augustine Road) in the vicinity of the interchange and the conflicting turning movements associated with them. No fatalities occurred on SR 133 (N. St. Augustine Road) in the vicinity of the interchange. I-75 crash and injury rates in the vicinity of the interchange were less than the statewide averages, as shown in Table 5.b, except crash rates in 2006 and injury rates in 2006 & 2008. In the three year period, no fatality crashes occurred on I-75 in the vicinity of the interchange. As shown in Table 5.c, the crash and injury rates for all four ramps at the interchange were less than the statewide averages, except the injury rate the northbound off-ramp in 2007. One fatality occurred on the I-75 interchange ramps.

**PRELIMINARY COST ESTIMATE**  
**OFFICE OF CONSULTANT DESIGN**

DATE: 06/10/10  
PROJECT NO: CSNHS-0007-00(386) Lowndes  
P.I. NO: 0007386  
PROJECT PHASE: Concept

<b>SITE</b>	<b>CONST (Incl 5% E&amp;C)</b>	<b>ROW</b>	<b>UTIL</b>	<b>TOTAL</b>
Site #1 Lake Pk/Bellville Rd./CR27	\$13,895,901	\$24,900,000	\$170,000	<b>\$38,965,901</b>
Site #2 SR 376/Lakes Blvd.	\$13,879,067	\$46,640,000	\$120,000	<b>\$60,639,067</b>
Site #3 CR 783/Loch Laurel Rd.	\$2,994,234	\$170,000	\$0	<b>\$3,164,234</b>
Site #4 SR31/Madison Hwy.	\$14,914,928	\$6,160,000	\$210,000	<b>\$21,284,928</b>
Site #5 Alternate A SR133/North St. Augustine	\$19,037,380	\$20,910,000	\$265,000	<b>\$40,212,380</b>
<b>TOTAL</b>	<b>\$64,721,509</b>	<b>\$98,780,000</b>	<b>\$765,000</b>	<b>\$164,266,509</b>

**NOTE: Estimate does not include inflation.**

**Estimate Report for Lowndes Site 1 Concept  
NHS-0007-00(386)**

<b>SECTION ROADWAY</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
150-1000	TRAFFIC CONTROL -	LS	1	\$2,500,000.00	\$ 2,500,000.00
201-1500	CLEARING & GRUBBING -	LS	1	\$2,000,000.00	\$ 2,000,000.00
208-0100	IN PLACE EMBANKMENT	CY	90000	\$ 6.50	\$ 585,000.00
310-1101	GR AGGR BASE CRS, INCL MATL	TN	19028	\$ 25.00	\$ 475,700.00
402-1812	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	TN	500	\$ 75.00	\$ 37,500.00
402-3121	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	TN	4250	\$ 75.00	\$ 318,750.00
402-3130	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM	TN	1590	\$ 75.00	\$ 119,250.00
402-3190	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	TN	6550	\$ 80.00	\$ 524,000.00
413-1000	BITUM TACK COAT	GL	1600	\$ 2.30	\$ 3,680.00
430-0620	PLAIN PC CONC PVMT, CL HES CONC, 12 INCH THK	SY	13520	\$ 62.00	\$ 838,240.00
440-0001	PLAIN PC CONC SHLDR TP -	SY	11830	\$ 36.00	\$ 425,880.00
441-6222	CONC CURB & GUTTER, 8 IN X 30 IN, TP 2	LF	2330	\$ 30.00	\$ 69,900.00
620-0100	TEMPORARY BARRIER, METHOD NO. 1	LF	10000	\$ 38.00	\$ 380,000.00
634-1200	RIGHT OF WAY MARKERS	EA	20	\$ 118.00	\$ 2,360.00
641-1110	GUARDRAIL, TP T	LF	200	\$ 63.00	\$ 12,600.00
641-1200	GUARDRAIL, TP W	LF	1300	\$ 20.00	\$ 26,000.00
641-5001	GUARDRAIL ANCHORAGE, TP 1	EA	4	\$ 700.00	\$ 2,800.00
641-5012	GUARDRAIL ANCHORAGE, TP 12	EA	4	\$ 1,950.00	\$ 7,800.00
<b>Section Sub Total:</b>					<b>\$ 8,329,460.00</b>

<b>SECTION BRIDGE</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
	19,572 SF BRIDGE @ \$85/SF	LS	1	\$1,663,620.00	\$ 1,663,620.00
433-1000	REINF CONC APPROACH SLAB	SY	459	\$ 172.00	\$ 78,948.00
515-2020	GALV STEEL PIPE HANDRAIL, 2 IN, ROUND	LF	560	\$ 41.00	\$ 22,960.00
540-1101	REMOVAL OF EXISTING BR, STA NO -	LS	1	\$ 300,000.00	\$ 300,000.00
610-1055	REM GUARDRAIL	LF	400	\$ 2.30	\$ 920.00
610-2705	REM CONC APPROACH SLAB	SY	170	\$ 41.00	\$ 6,970.00
<b>Section Sub Total:</b>					<b>\$ 2,073,418.00</b>

<b>SECTION RETAINING WALL</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
522-1000	SHORING	LS	2	\$ 120,000.00	\$ 240,000.00
627-1000	MSE WALL FACE, 0 - 10 FT HT, WALL NO -	SF	5200	\$ 49.00	\$ 254,800.00
627-1010	MSE WALL FACE, 10 - 20 FT HT, WALL NO -	SF	2600	\$ 53.00	\$ 137,800.00
627-1120	COPING B, WALL NO -	LF	520	\$ 300.00	\$ 156,000.00
627-1180	ADDITIONAL MSE BACKFILL	CY	4333	\$ 38.00	\$ 164,654.00
<b>Section Sub Total:</b>					<b>\$ 953,254.00</b>

<b>SECTION DRAINAGE</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
550-1240	STORM DRAIN PIPE, 24 IN, H 1-10	LF	400	\$ 60.00	\$ 24,000.00
550-2240	SIDE DRAIN PIPE, 24 IN, H 1-10	LF	200	\$ 40.00	\$ 8,000.00
550-4124	FLARED END SECTION 24 IN, SIDE DRAIN	EA	4	\$ 670.00	\$ 2,680.00
550-4224	FLARED END SECTION 24 IN, STORM DRAIN	EA	4	\$ 870.00	\$ 3,480.00
668-1100	CATCH BASIN, GP 1	EA	2	\$ 2,700.00	\$ 5,400.00
<b>Section Sub Total:</b>					<b>\$ 43,560.00</b>

<b>SECTION PERMANENT EROSION CONTROL</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
603-2024	STN DUMPED RIP RAP, TP 1, 24 IN	SY	60	\$ 55.00	\$ 3,300.00
603-7000	PLASTIC FILTER FABRIC	SY	60	\$ 5.40	\$ 324.00
700-6910	PERMANENT GRASSING	AC	22	\$ 1,000.00	\$ 22,000.00
700-7000	AGRICULTURAL LIME	TN	43	\$ 67.00	\$ 2,881.00
700-7010	LIQUID LIME	GL	54	\$ 25.00	\$ 1,350.00
700-8000	FERTILIZER MIXED GRADE	TN	19	\$ 340.00	\$ 6,460.00
700-8100	FERTILIZER NITROGEN CONTENT	LB	1070	\$ 3.40	\$ 3,638.00
<b>Section Sub Total:</b>					<b>\$ 39,953.00</b>

<b>SECTION TEMPORARY EROSION CONTROL</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
163-0232	TEMPORARY GRASSING	AC	11	\$ 570.00	\$ 6,270.00
163-0240	MULCH	TN	310	\$ 300.00	\$ 93,000.00
163-0550	CONSTRUCT AND REMOVE INLET SEDIMENT TRAP	EA	2	\$ 300.00	\$ 600.00
165-0010	MAINTENANCE OF TEMPORARY SILT FENCE, TP A	LF	2900	\$ 1.70	\$ 4,930.00
165-0105	MAINTENANCE OF INLET SEDIMENT TRAP	EA	2	\$ 140.00	\$ 280.00
167-1000	WATER QUALITY MONITORING AND SAMPLING	EA	2	\$ 1,330.00	\$ 2,660.00
171-0010	TEMPORARY SILT FENCE, TYPE A	LF	5800	\$ 3.00	\$ 17,400.00
<b>Section Sub Total:</b>					<b>\$ 125,140.00</b>

<b>SECTION SIGNAL</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
647-1000	TRAFFIC SIGNAL INSTALLATION NO -	LS	1	\$ 150,000.00	\$ 150,000.00
647-1000	TRAFFIC SIGNAL INSTALLATION NO -	LS	1	\$ 150,000.00	\$ 150,000.00
<b>Section Sub Total:</b>					<b>\$ 300,000.00</b>

<b>SECTION SIGNING &amp; MARKING</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST

636-1033	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 9	SF	72	\$	23.00	\$	1,656.00
636-1072	HIGHWAY SIGNS, ALUM EXTRUDED PANELS, REFL SHEETING, TP 3	SF	500	\$	33.00	\$	16,500.00
636-2070	GALV STEEL POSTS, TP 7	LF	104	\$	10.00	\$	1,040.00
638-1001	STR SUPPORT FOR OVERHEAD SIGN, TP 1, STA -	LS	2	\$	82,000.00	\$	164,000.00
653-1501	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	LF	15000	\$	1.00	\$	15,000.00
653-1502	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	LF	5000	\$	1.00	\$	5,000.00
653-1810	THERMOPLASTIC SOLID TRAF STRIPE, 10 IN, WHITE	LF	1000	\$	1.20	\$	1,200.00
653-6004	THERMOPLASTIC TRAF STRIPING, WHITE	SY	1000	\$	3.70	\$	3,700.00
653-6006	THERMOPLASTIC TRAF STRIPING, YELLOW	SY	1000	\$	3.70	\$	3,700.00
654-1001	RAISED PVMT MARKERS TP 1	EA	16	\$	4.50	\$	72.00
654-1003	RAISED PVMT MARKERS TP 3	EA	84	\$	4.40	\$	369.60
<b>Section Sub Total:</b>						<b>\$</b>	<b>212,237.60</b>

<b>SECTION LIGHTING</b>							
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST		
441-0004	CONC SLOPE PAV 4 IN	SY	198	\$	51.00	\$	10,098.00
500-3101	CLASS A CONCRETE	CY	248	\$	700.00	\$	173,600.00
511-1000	BAR REINFORCEMENT STEEL	LB	28026	\$	0.65	\$	18,216.90
615-1200	DIRECTIONAL BORE	LF	200	\$	55.00	\$	11,000.00
618-6605	REMOVE LIGHTING STANDARD	EA	6	\$	2,000.00	\$	12,000.00
682-3424	MUTL COND CABLE, TP RHW, 2-#2-1-#4	LF	16000	\$	6.25	\$	100,000.00
682-6120	CONDUIT, RIGID 2 IN	LF	500	\$	16.44	\$	8,220.00
682-6222	CONDUIT, NONMETL, TP 2, 2 IN	LF	13000	\$	10.35	\$	134,550.00
682-9000	MAIN SERVICE PICK UP POINT 1	LS	1	\$	6,000.00	\$	6,000.00
682-9000	MAIN SERVICE PICK UP POINT 2	LS	1	\$	6,000.00	\$	6,000.00
682-9000	MAIN SERVICE PICK UP POINT 3	LS	1	\$	6,000.00	\$	6,000.00
682-9000	MAIN SERVICE PICK UP POINT 4	LS	1	\$	6,000.00	\$	6,000.00
682-9021	ELECTRICAL JUNCTION BOX, CONC GROUND MOUNTED	EA	6	\$	2,142.00	\$	12,852.00
683-1101	LIGHTING TOWER, STEEL, 100 FT MH, INCL LOWERING EQUIP	EA	27	\$	20,000.00	\$	540,000.00
681-6586	HIGH LEVEL LUMINAIRE, TP 5, 1000 W, HP SODIUM	EA	156	\$	722.00	\$	112,632.00
<b>Section Sub Total:</b>						<b>\$</b>	<b>1,157,168.90</b>

**Total Estimated Construction Cost: \$13,234,191.50**

**E & I Rate 5.0% \$ 661,709.58**

**Total Construction Cost: \$13,895,901.08**

Right of Way: \$24,900,000.00

Relmb. Utilities: \$ 100,000.00

**Grand Total Project Cost: \$38,895,901.08**

**Estimate Report for Lowndes Site 2 Concept  
NHS-0007-00(386)**

<b>SECTION ROADWAY</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
150-1000	TRAFFIC CONTROL -	LS	1	\$2,000,000.00	\$ 2,000,000.00
201-1500	CLEARING & GRUBBING -	LS	1	\$1,750,000.00	\$ 1,750,000.00
208-0100	IN PLACE EMBANKMENT	CY	42000	\$ 6.50	\$ 273,000.00
310-1101	GR AGGR BASE CRS, INCL MATL	TN	1110	\$ 20.00	\$ 22,200.00
402-1812	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	TN	500	\$ 75.00	\$ 37,500.00
402-3113	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	TN	1674	\$ 87.10	\$ 145,805.40
402-3121	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	TN	13390	\$ 75.00	\$ 1,004,250.00
402-3190	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	TN	3348	\$ 80.00	\$ 267,840.00
413-1000	BITUM TACK COAT	GL	812	\$ 2.30	\$ 1,867.60
430-0620	PLAIN PC CONC PVMT, CL HES CONC, 12 INCH THK	SY	9245	\$ 62.00	\$ 573,190.00
440-0001	PLAIN PC CONC SHLDR TP -	SY	8089	\$ 36.00	\$ 291,204.00
441-0105	CONC SIDEWALK, 5 IN	SY	600	\$ 42.00	\$ 25,200.00
441-6222	CONC CURB & GUTTER, 8 IN X 30 IN, TP 2	LF	5000	\$ 30.00	\$ 150,000.00
610-0215	REM CHAIN LINK FENCE, 6 FT W/ BARBED WIRE & EXT ARMS	LF	2870	\$ 6.00	\$ 17,220.00
611-5020	RESET CHAIN LINK FENCE, 6 FT W/BARBED WIRE & EXT ARMS	LF	2870	\$ 20.00	\$ 57,400.00
620-0100	TEMPORARY BARRIER, METHOD NO. 1	LF	10000	\$ 38.00	\$ 380,000.00
634-1200	RIGHT OF WAY MARKERS	EA	24	\$ 118.00	\$ 2,832.00
641-1100	GUARDRAIL, TP T	LF	1500	\$ 63.00	\$ 94,500.00
641-5001	GUARDRAIL ANCHORAGE, TP 1	EA	8	\$ 700.00	\$ 5,600.00
641-5012	GUARDRAIL ANCHORAGE, TP 12	EA	12	\$ 1,950.00	\$ 23,400.00
<b>Section Sub Total:</b>					<b>\$ 7,123,009.00</b>

<b>SECTION BRIDGE</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
	29,400 SF BRIDGE @ \$85/SF	LS	1	\$2,499,000.00	\$ 2,499,000.00
211-0200	BRIDGE EXCAVATION, GRADE SEPARATION	CY	200	\$ 100.00	\$ 20,000.00
433-1000	REINF CONC APPROACH SLAB	SY	615	\$ 172.00	\$ 105,780.00
515-2020	GALV STEEL PIPE HANDRAIL, 2 IN, ROUND	LF	600	\$ 41.00	\$ 24,600.00
540-1101	REMOVAL OF EXISTING BR, STA NO -	LS	1	\$ 300,000.00	\$ 300,000.00
610-2705	REM CONC APPROACH SLAB	SY	615	\$ 41.00	\$ 25,215.00
<b>Section Sub Total:</b>					<b>\$ 2,974,595.00</b>

<b>SECTION RETAINING WALL</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
522-1000	SHORING	LS	2	\$ 120,000.00	\$ 240,000.00
627-1000	MSE WALL FACE, 0 - 10 FT HT, WALL NO -	SF	520	\$ 49.00	\$ 25,480.00
627-1010	MSE WALL FACE, 10 - 20 FT HT, WALL NO -	SF	312	\$ 53.00	\$ 16,536.00
627-1120	COPING B, WALL NO -	LF	2758	\$ 300.00	\$ 827,400.00
627-1180	ADDITIONAL MSE BACKFILL	CY	462	\$ 38.00	\$ 17,556.00
<b>Section Sub Total:</b>					<b>\$ 1,126,972.00</b>

<b>SECTION DRAINAGE</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
441-0600	CONC HEADWALLS	CY	2	\$ 1,900.00	\$ 3,800.00
550-1180	STORM DRAIN PIPE, 18 IN, H 1-10	LF	1042	\$ 54.00	\$ 56,268.00
550-1240	STORM DRAIN PIPE, 24 IN, H 1-10	LF	565	\$ 60.00	\$ 33,900.00
550-2600	SIDE DRAIN PIPE, 60 IN, H 1-10	LF	505	\$ 84.00	\$ 42,420.00
610-9099	REM WINGWALLS & PARAPETS, STA -	LS	1	\$ 6,800.00	\$ 6,800.00
668-1100	CATCH BASIN, GP 1	EA	11	\$ 2,700.00	\$ 29,700.00
668-1200	CATCH BASIN, GP 2	EA	3	\$ 2,800.00	\$ 8,400.00
668-4300	STORM SEWER MANHOLE, TP 1	EA	5	\$ 2,500.00	\$ 12,500.00
<b>Section Sub Total:</b>					<b>\$ 193,788.00</b>

<b>SECTION PERMANENT EROSION CONTROL</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
166-0651	RESTORATION OF LAKE, STA -	EA	1	\$ 14,450.00	\$ 14,450.00
603-2024	STN DUMPED RIP RAP, TP 1, 24 IN	SY	65	\$ 55.00	\$ 3,575.00
603-7000	PLASTIC FILTER FABRIC	SY	65	\$ 5.40	\$ 351.00
700-6910	PERMANENT GRASSING	AC	7	\$ 1,000.00	\$ 7,000.00
700-7000	AGRICULTURAL LIME	TN	8	\$ 67.00	\$ 536.00
700-7010	LIQUID LIME	GL	19	\$ 25.00	\$ 475.00
700-8000	FERTILIZER MIXED GRADE	TN	4	\$ 340.00	\$ 1,360.00
700-8100	FERTILIZER NITROGEN CONTENT	LB	550	\$ 3.40	\$ 1,870.00
<b>Section Sub Total:</b>					<b>\$ 29,617.00</b>

<b>SECTION TEMPORARY EROSION CONTROL</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
163-0232	TEMPORARY GRASSING	AC	4	\$ 570.00	\$ 2,280.00
163-0240	MULCH	TN	122	\$ 300.00	\$ 36,600.00
163-0530	CONSTRUCT AND REMOVE BALED STRAW EROSION CHECK	LF	5200	\$ 4.70	\$ 24,440.00
165-0010	MAINTENANCE OF TEMPORARY SILT FENCE, TP A	LF	525	\$ 1.70	\$ 892.50
165-0030	MAINTENANCE OF TEMPORARY SILT FENCE, TP C	LF	225	\$ 2.20	\$ 495.00
165-0070	MAINTENANCE OF BALED STRAW EROSION CHECK	LF	2600	\$ 4.00	\$ 10,400.00
167-1000	WATER QUALITY MONITORING AND SAMPLING	EA	2	\$ 1,330.00	\$ 2,660.00
171-0010	TEMPORARY SILT FENCE, TYPE A	LF	1050	\$ 3.00	\$ 3,150.00
171-0030	TEMPORARY SILT FENCE, TYPE C	LF	450	\$ 4.00	\$ 1,800.00
<b>Section Sub Total:</b>					<b>\$ 82,717.50</b>

SECTION SIGNAL					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
647-1000	TRAFFIC SIGNAL INSTALLATION NO -	LS	1	\$ 150,000.00	\$ 150,000.00
647-1000	TRAFFIC SIGNAL INSTALLATION NO -	LS	1	\$ 150,000.00	\$ 150,000.00
<b>Section Sub Total:</b>					<b>\$ 300,000.00</b>

SECTION SIGNING & MARKING					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
610-6515	REM HIGHWAY SIGN, STD	EA	19	\$ 70.72	\$ 1,343.68
611-5360	RESET HIGHWAY SIGN	EA	19	\$ 171.48	\$ 3,258.12
636-1033	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 9	SF	143	\$ 23.00	\$ 3,289.00
636-1072	HIGHWAY SIGNS, ALUM EXTRUDED PANELS, REFL SHEETING, TP 3	SF	500	\$ 33.00	\$ 16,500.00
636-2070	GALV STEEL POSTS, TP 7	LF	238	\$ 10.00	\$ 2,380.00
638-1001	STR SUPPORT FOR OVERHEAD SIGN, TP 1, STA -	LS	2	\$ 82,000.00	\$ 164,000.00
653-0120	THERMOPLASTIC PVMT MARKING, ARROW, TP 2	EA	160	\$ 71.39	\$ 11,422.40
653-0170	THERMOPLASTIC PVMT MARKING, ARROW, TP 7	EA	15	\$ 81.14	\$ 1,217.10
653-0210	THERMOPLASTIC PVMT MARKING, WORD, TP 1	EA	6	\$ 112.40	\$ 674.40
653-1501	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	LF	10200	\$ 1.00	\$ 10,200.00
653-1502	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	LF	2500	\$ 1.00	\$ 2,500.00
653-1704	THERMOPLASTIC SOLID TRAF STRIPE, 24 IN, WHITE	LF	76	\$ 8.50	\$ 646.00
653-1804	THERMOPLASTIC SOLID TRAF STRIPE, 8 IN, WHITE	LF	630	\$ 2.30	\$ 1,449.00
653-3501	THERMOPLASTIC SKIP TRAF STRIPE, 5 IN, WHITE	GL	5000	\$ 0.75	\$ 3,750.00
653-6004	THERMOPLASTIC TRAF STRIPING, WHITE	SY	1000	\$ 3.70	\$ 3,700.00
653-6006	THERMOPLASTIC TRAF STRIPING, YELLOW	SY	400	\$ 3.70	\$ 1,480.00
654-1001	RAISED PVMT MARKERS TP 1	EA	131	\$ 4.50	\$ 589.50
654-1003	RAISED PVMT MARKERS TP 3	EA	430	\$ 4.40	\$ 1,892.00
<b>Section Sub Total:</b>					<b>\$ 230,291.20</b>

SECTION LIGHTING					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
ITEM #	DESCRIPTION	UNIT	QUANTITY	COST	TOTAL
441-0004	CONC SLOPE PAV 4 IN	SY	198	\$ 51.00	\$ 10,098.00
500-3101	CLASS A CONCRETE	CY	248	\$ 700.00	\$ 173,600.00
511-1000	BAR REINFORCEMENT STEEL	LB	28026	\$ 0.65	\$ 18,216.90
615-1200	DIRECTIONAL BORE	LF	200	\$ 55.00	\$ 11,000.00
618-6605	REMOVE LIGHTING STANDARD	EA	6	\$ 2,000.00	\$ 12,000.00
682-3424	MUTL COND CABLE, TP RHW, 2-#2-1-#4	LF	16000	\$ 6.25	\$ 100,000.00
682-6120	CONDUIT, RIGID 2 IN	LF	500	\$ 16.44	\$ 8,220.00
682-6222	CONDUIT, NONMETL, TP 2, 2 IN	LF	13000	\$ 10.35	\$ 134,550.00
682-9000	MAIN SERVICE PICK UP POINT 1	LS	1	\$ 6,000.00	\$ 6,000.00
682-9000	MAIN SERVICE PICK UP POINT 2	LS	1	\$ 6,000.00	\$ 6,000.00
682-9000	MAIN SERVICE PICK UP POINT 3	LS	1	\$ 6,000.00	\$ 6,000.00
682-9000	MAIN SERVICE PICK UP POINT 4	LS	1	\$ 6,000.00	\$ 6,000.00
682-9021	ELECTRICAL JUNCTION BOX, CONC GROUND MOUNTED	EA	6	\$ 2,142.00	\$ 12,852.00
683-1101	LIGHTING TOWER, STEEL, 100 FT MH, INCL LOWERING EQUIP	EA	27	\$ 20,000.00	\$ 540,000.00
681-6586	HIGH LEVEL LUMINAIRE, TP 5, 1000 W, HP SODIUM	EA	156	\$ 722.00	\$ 112,632.00
<b>Section Sub Total:</b>					<b>\$ 1,157,168.90</b>

Total Estimated Construction Cost: \$13,218,158.60

E & 1 Rate 5.0% \$ 660,907.93

Total Construction Cost: \$13,879,066.53

Right of Way: \$46,635,000.00

Relmb. Utilities: \$ 100,000.00

Grand Total Project Cost: \$60,614,066.53

**Estimate Report for Lowndes Site 3 Concept  
NHS-0007-00(386)**

<b>SECTION ROADWAY</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
150-1000	TRAFFIC CONTROL -	LS	1	\$ 100,000.00	\$ 100,000.00
201-1500	CLEARING & GRUBBING -	LS	1	\$ 220,000.00	\$ 220,000.00
208-0100	IN PLACE EMBANKMENT	CY	50000	\$ 6.50	\$ 325,000.00
310-1101	GR AGGR BASE CRS, INCL MATL	TN	4085	\$ 20.00	\$ 81,700.00
402-1812	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	TN	500	\$ 75.00	\$ 37,500.00
402-3121	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	TN	75	\$ 75.00	\$ 5,625.00
402-3130	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM	TN	734	\$ 75.00	\$ 55,050.00
402-3190	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	TN	979	\$ 80.00	\$ 78,320.00
413-1000	BITUM TACK COAT	GL	890	\$ 2.30	\$ 2,047.00
634-1200	RIGHT OF WAY MARKERS	EA	7	\$ 118.00	\$ 826.00
641-1100	GUARDRAIL, TP T	LF	100	\$ 63.00	\$ 6,300.00
641-1200	GUARDRAIL, TP W	LF	650	\$ 20.00	\$ 13,000.00
641-5001	GUARDRAIL ANCHORAGE, TP 1	EA	2	\$ 700.00	\$ 1,400.00
641-5012	GUARDRAIL ANCHORAGE, TP 12	EA	2	\$ 1,950.00	\$ 3,900.00
<b>Section Sub Total:</b>					<b>\$ 930,668.00</b>

<b>SECTION BRIDGE</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
	17200 SF BRIDGE @ \$85/SF	LS	1	\$1,462,000.00	\$ 1,462,000.00
433-1000	REINF CONC APPROACH SLAB	SY	179	\$ 172.00	\$ 30,788.00
515-2020	GALV STEEL PIPE HANDRAIL, 2 IN, ROUND	LF	640	\$ 41.00	\$ 26,240.00
540-1101	REMOVAL OF EXISTING BR, STA NO -	LS	1	\$ 300,000.00	\$ 300,000.00
610-1055	REM GUARDRAIL	LF	600	\$ 2.30	\$ 1,380.00
610-2705	REM CONC APPROACH SLAB	SY	98	\$ 41.00	\$ 4,018.00
<b>Section Sub Total:</b>					<b>\$ 1,824,426.00</b>

<b>SECTION DRAINAGE</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
550-1240	STORM DRAIN PIPE, 24 IN, H 1-10	LF	170	\$ 60.00	\$ 10,200.00
550-2240	SIDE DRAIN PIPE, 24 IN, H 1-10	LF	80	\$ 40.00	\$ 3,200.00
550-4124	FLARED END SECTION 24 IN, SIDE DRAIN	EA	2	\$ 670.00	\$ 1,340.00
550-4224	FLARED END SECTION 24 IN, STORM DRAIN	EA	2	\$ 870.00	\$ 1,740.00
<b>Section Sub Total:</b>					<b>\$ 16,480.00</b>

<b>SECTION PERMANENT EROSION CONTROL</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
603-2024	STN DUMPED RIP RAP, TP 1, 24 IN	SY	20	\$ 55.00	\$ 1,100.00
603-7000	PLASTIC FILTER FABRIC	SY	20	\$ 5.40	\$ 108.00
700-6910	PERMANENT GRASSING	AC	7	\$ 1,000.00	\$ 7,000.00
700-7000	AGRICULTURAL LIME	TN	13	\$ 67.00	\$ 871.00
700-7010	LIQUID LIME	GL	16	\$ 25.00	\$ 400.00
700-8000	FERTILIZER MIXED GRADE	TN	6	\$ 340.00	\$ 2,040.00
700-8100	FERTILIZER NITROGEN CONTENT	LB	330	\$ 3.40	\$ 1,122.00
<b>Section Sub Total:</b>					<b>\$ 12,641.00</b>

<b>SECTION TEMPORARY EROSION CONTROL</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
163-0232	TEMPORARY GRASSING	AC	4	\$ 570.00	\$ 2,280.00
163-0240	MULCH	TN	96	\$ 300.00	\$ 28,800.00
165-0010	MAINTENANCE OF TEMPORARY SILT FENCE, TP A	LF	2050	\$ 1.70	\$ 3,485.00
167-1000	WATER QUALITY MONITORING AND SAMPLING	EA	2	\$ 1,330.00	\$ 2,660.00
171-0010	TEMPORARY SILT FENCE, TYPE A	LF	4100	\$ 3.00	\$ 12,300.00
<b>Section Sub Total:</b>					<b>\$ 49,525.00</b>

<b>SECTION SIGNING &amp; MARKING</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
636-1033	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 9	SF	63	\$ 23.00	\$ 1,449.00
636-2070	GALV STEEL POSTS, TP 7	LF	91	\$ 10.00	\$ 910.00
653-1501	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	LF	7500	\$ 1.00	\$ 7,500.00
653-1502	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	LF	7500	\$ 1.00	\$ 7,500.00
653-1704	THERMOPLASTIC SOLID TRAF STRIPE, 24 IN, WHITE	LF	12	\$ 8.50	\$ 102.00
654-1001	RAISED PVMT MARKERS TP 1	EA	100	\$ 4.50	\$ 450.00
<b>Section Sub Total:</b>					<b>\$ 17,911.00</b>

**Total Estimated Construction Cost: \$ 2,851,651.00**

**E & I Rate 5.0% \$ 142,582.55**

**Total Construction Cost: \$ 2,994,233.55**

Right of Way: \$ 168,500.00

Relmb. Utilities: \$ 100,000.00

**Grand Total Project Cost: \$ 3,262,733.55**

**Estimate Report for Lowndes Site 4 Concept  
NHS-0007-00(386)**

<b>SECTION ROADWAY</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
150-1000	TRAFFIC CONTROL -	LS	1	\$ 1,500,000.00	\$ 1,500,000.00
201-1500	CLEARING & GRUBBING -	LS	1	\$ 300,000.00	\$ 300,000.00
208-0100	IN PLACE EMBANKMENT	CY	60000	\$ 6.50	\$ 390,000.00
310-1101	GR AGGR BASE CRS, INCL MATL	TN	31000	\$ 25.00	\$ 775,000.00
402-1812	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	TN	1100	\$ 75.00	\$ 82,500.00
402-3113	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	TN	1785	\$ 87.10	\$ 155,473.50
402-3121	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	TN	17000	\$ 75.00	\$ 1,275,000.00
402-3190	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	TN	2380	\$ 80.00	\$ 190,400.00
413-1000	BITUM TACK COAT	GL	757	\$ 2.30	\$ 1,741.10
430-0620	PLAIN PC CONC PVMT, CL HES CONC, 12 INCH THK	SY	18122	\$ 62.00	\$ 1,123,564.00
610-1055	REM GUARDRAIL	LF	750	\$ 2.30	\$ 1,725.00
611-5020	RESET CH LK FENCE GATE -	LF	1500	\$ 290.00	\$ 435,000.00
620-0100	TEMPORARY BARRIER, METHOD NO. 1	LF	10000	\$ 38.00	\$ 380,000.00
634-1200	RIGHT OF WAY MARKERS	EA	12	\$ 118.00	\$ 1,416.00
641-1110	GUARDRAIL, TP T	LF	3200	\$ 63.00	\$ 201,600.00
641-5001	GUARDRAIL ANCHORAGE, TP 1	EA	6	\$ 700.00	\$ 4,200.00
641-5012	GUARDRAIL ANCHORAGE, TP 12	EA	6	\$ 1,950.00	\$ 11,700.00
682-9000	MAIN SERVICE PICK UP POINT	LS	1	\$ 8,701.72	\$ 8,701.72
<b>Section Sub Total:</b>					<b>\$ 6,829,319.60</b>

<b>SECTION BRIDGE</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
	50957 SF BRIDGE @ \$85/SF	LS	1	\$4,331,345.00	\$ 4,331,345.00
433-1000	REINF CONC APPROACH SLAB	SY	733	\$ 172.00	\$ 126,076.00
515-2020	GALV STEEL PIPE HANDRAIL, 2 IN, ROUND	LF	800	\$ 41.00	\$ 32,800.00
540-1101	REMOVAL OF EXISTING BR, STA NO -	LS	2	\$ 300,000.00	\$ 600,000.00
610-2705	REM CONC APPROACH SLAB	SY	355	\$ 41.00	\$ 14,555.00
<b>Section Sub Total:</b>					<b>\$ 5,104,776.00</b>

<b>SECTION RETAINING WALL</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
500-3107	CLASS A CONCRETE, RETAINING WALL	CY	50	\$ 824.32	\$ 41,216.00
522-1000	SHORING	LS	1	\$ 120,000.00	\$ 120,000.00
<b>Section Sub Total:</b>					<b>\$ 161,216.00</b>

<b>SECTION DRAINAGE</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
550-1240	STORM DRAIN PIPE, 24 IN, H 1-10	LF	2000	\$ 60.00	\$ 120,000.00
550-1300	STORM DRAIN PIPE, 30 IN, H 1-10	LF	200	\$ 74.43	\$ 14,886.00
550-4224	FLARED END SECTION 24 IN, STORM DRAIN	EA	20	\$ 870.00	\$ 17,400.00
550-4230	FLARED END SECTION 30 IN, STORM DRAIN	EA	2	\$ 905.14	\$ 1,810.28
<b>Section Sub Total:</b>					<b>\$ 154,096.28</b>

<b>SECTION PERMANENT EROSION CONTROL</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
603-2024	STN DUMPED RIP RAP, TP 1, 24 IN	SY	100	\$ 55.00	\$ 5,500.00
700-6910	PERMANENT GRASSING	AC	7	\$ 1,000.00	\$ 7,000.00
700-7000	AGRICULTURAL LIME	TN	8	\$ 67.00	\$ 536.00
700-7010	LIQUID LIME	GL	19	\$ 25.00	\$ 475.00
700-8000	FERTILIZER MIXED GRADE	TN	4	\$ 340.00	\$ 1,360.00
700-8100	FERTILIZER NITROGEN CONTENT	LB	500	\$ 3.40	\$ 1,700.00
<b>Section Sub Total:</b>					<b>\$ 16,571.00</b>

<b>SECTION TEMPORARY EROSION CONTROL</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
163-0232	TEMPORARY GRASSING	AC	7	\$ 570.00	\$ 3,990.00
163-0240	MULCH	TN	200	\$ 300.00	\$ 60,000.00
163-0530	CONSTRUCT AND REMOVE BALED STRAW EROSION CHECK	LF	5000	\$ 4.66	\$ 23,300.00
165-0010	MAINTENANCE OF TEMPORARY SILT FENCE, TP A	LF	8000	\$ 1.70	\$ 13,600.00
165-0030	MAINTENANCE OF TEMPORARY SILT FENCE, TP C	LF	5000	\$ 2.18	\$ 10,900.00
165-0070	MAINTENANCE OF BALED STRAW EROSION CHECK	LF	2500	\$ 3.92	\$ 9,800.00
167-1000	WATER QUALITY MONITORING AND SAMPLING	EA	2	\$ 1,330.00	\$ 2,660.00
171-0010	TEMPORARY SILT FENCE, TYPE A	LF	16000	\$ 3.00	\$ 48,000.00
171-0030	TEMPORARY SILT FENCE, TYPE C	LF	1000	\$ 4.37	\$ 4,370.00
603-7000	PLASTIC FILTER FABRIC	SY	100	\$ 5.40	\$ 540.00
<b>Section Sub Total:</b>					<b>\$ 177,160.00</b>

<b>SECTION SIGNAL</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
647-1000	TRAFFIC SIGNAL INSTALLATION NO -	LS	1	\$ 150,000.00	\$ 150,000.00
647-1000	TRAFFIC SIGNAL INSTALLATION NO -	LS	1	\$ 150,000.00	\$ 150,000.00
<b>Section Sub Total:</b>					<b>\$ 300,000.00</b>

<b>SECTION SIGNING &amp; MARKING</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
610-6515	REM HIGHWAY SIGN, STD	EA	30	\$ 108.00	\$ 3,240.00
611-5360	RESET HIGHWAY SIGN	EA	30	\$ 1,353.80	\$ 40,614.00
636-1033	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 9	SF	200	\$ 23.00	\$ 4,600.00

636-1072	HIGHWAY SIGNS, ALUM EXTRUDED PANELS, REFL SHEETING, TP 3	SF	400	\$	33.00	\$	13,200.00
636-2070	GALV STEEL POSTS, TP 7	LF	200	\$	10.00	\$	2,000.00
653-0120	THERMOPLASTIC PVMT MARKING, ARROW, TP 2	EA	50	\$	79.15	\$	3,957.50
653-0210	THERMOPLASTIC PVMT MARKING, WORD, TP 1	EA	20	\$	125.09	\$	2,501.80
653-1501	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	LF	12000	\$	1.00	\$	12,000.00
653-1502	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	LF	10000	\$	1.00	\$	10,000.00
653-1704	THERMOPLASTIC SOLID TRAF STRIPE, 24 IN, WHITE	LF	168	\$	8.44	\$	1,417.92
653-3501	THERMOPLASTIC SKIP TRAF STRIPE, 5 IN, WHITE	GL	6000	\$	0.74	\$	4,440.00
653-6004	THERMOPLASTIC TRAF STRIPING, WHITE	SY	555	\$	3.70	\$	2,053.50
654-1001	RAISED PVMT MARKERS TP 1	EA	225	\$	4.50	\$	1,012.50
654-1003	RAISED PVMT MARKERS TP 3	EA	450	\$	4.40	\$	1,980.00
<b>Section Sub Total:</b>						<b>\$</b>	<b>103,017.22</b>

<b>SECTION LIGHTING</b>							
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST		
441-0004	CONC SLOPE PAV 4 IN	SY	198	\$	51.00	\$	10,098.00
500-3101	CLASS A CONCRETE	CY	248	\$	700.00	\$	173,600.00
511-1000	BAR REINFORCEMENT STEEL	LB	28026	\$	0.65	\$	18,216.90
615-1200	DIRECTIONAL BORE	LF	200	\$	55.00	\$	11,000.00
618-6605	REMOVE LIGHTING STANDARD	EA	7	\$	2,000.00	\$	14,000.00
681-6586	LUMINAIRE, TP 5, 150 W, HP SODIUM	EA	156	\$	2,000.00	\$	312,000.00
682-3424	MUTL COND CABLE, TP RHW, 2-#2-1-#4	LF	16000	\$	6.25	\$	100,000.00
682-6120	CONDUIT, RIGID 2 IN	LF	500	\$	16.44	\$	8,220.00
682-6222	CONDUIT, NONMETL, TP 2, 2 IN	LF	13000	\$	10.35	\$	134,550.00
682-9000	MAIN SERVICE PICK UP POINT 1	LS	1	\$	6,000.00	\$	6,000.00
682-9000	MAIN SERVICE PICK UP POINT 2	LS	1	\$	6,000.00	\$	6,000.00
682-9000	MAIN SERVICE PICK UP POINT 3	LS	1	\$	6,000.00	\$	6,000.00
682-9000	MAIN SERVICE PICK UP POINT 4	LS	1	\$	6,000.00	\$	6,000.00
682-9021	ELECTRICAL JUNCTION BOX, CONC GROUND MOUNTED	EA	6	\$	2,142.00	\$	12,852.00
683-1101	LIGHTING TOWER, STEEL, 100 FT MH, INCL LOWERING EQUIP	EA	27	\$	20,000.00	\$	540,000.00
<b>Section Sub Total:</b>						<b>\$</b>	<b>1,358,536.90</b>

**Total Estimated Construction Cost: \$14,204,693.00**

**E & I Rate 5.0% \$ 710,234.65**

**Total Construction Cost: \$14,914,927.65**

Right of Way: \$ 6,150,440.00

Relmb. Utilities: \$ 100,000.00

**Grand Total Project Cost: \$21,165,367.65**

**Estimate Report for Lowndes Site 5 Concept Alt A  
NHS-0007-00(386)**

<b>SECTION ROADWAY</b>					
<b>ITEM NO.</b>	<b>ITEM DESCRIPTION</b>	<b>UNITS</b>	<b>QUANTITY</b>	<b>UNIT PRICE</b>	<b>COST</b>
150-1000	TRAFFIC CONTROL -	LS	1	\$1,200,000.00	\$ 1,200,000.00
201-1500	CLEARING & GRUBBING -	LS	1	\$ 325,000.00	\$ 325,000.00
208-0100	IN PLACE EMBANKMENT	CY	110000	\$ 6.50	\$ 715,000.00
310-1101	GR AGGR BASE CRS, INCL MATL	TN	27000	\$ 25.00	\$ 675,000.00
402-1812	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	TN	1832	\$ 75.00	\$ 137,400.00
402-3113	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	TN	3000	\$ 87.10	\$ 261,300.00
402-3121	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	TN	21000	\$ 75.00	\$ 1,575,000.00
402-3190	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	TN	4000	\$ 80.00	\$ 320,000.00
413-1000	BITUM TACK COAT	GL	1283	\$ 2.30	\$ 2,950.90
430-0620	PLAIN PC CONC PVMT, CL HES CONC, 12 INCH THK	SY	18762	\$ 62.00	\$ 1,163,244.00
441-0105	CONC SIDEWALK, 5 IN	SY	4000	\$ 42.00	\$ 168,000.00
441-6222	CONC CURB & GUTTER, 8 IN X 30 IN, TP 2	LF	11000	\$ 30.00	\$ 330,000.00
620-0100	TEMPORARY BARRIER, METHOD NO. 1	LF	10000	\$ 38.00	\$ 380,000.00
634-1200	RIGHT OF WAY MARKERS	EA	50	\$ 118.00	\$ 5,900.00
641-1110	GUARDRAIL, TP T	LF	3000	\$ 63.00	\$ 189,000.00
641-5001	GUARDRAIL ANCHORAGE, TP 1	EA	6	\$ 700.00	\$ 4,200.00
641-5012	GUARDRAIL ANCHORAGE, TP 12	EA	6	\$ 1,950.00	\$ 11,700.00
<b>Section Sub Total:</b>					<b>\$ 7,463,694.90</b>

<b>SECTION BRIDGE</b>					
<b>ITEM NO.</b>	<b>ITEM DESCRIPTION</b>	<b>UNITS</b>	<b>QUANTITY</b>	<b>UNIT PRICE</b>	<b>COST</b>
	49166 SF BRIDGE @ \$120/SF	LS	1	\$5,899,920.00	\$ 5,899,920.00
	8400 SF MSE WALL @ \$60/SF	LS	1	\$ 504,000.00	\$ 504,000.00
433-1000	REINF CONC APPROACH SLAB	SY	800	\$ 172.00	\$ 137,600.00
515-2020	GALV STEEL PIPE HANDRAIL, 2 IN, ROUND	LF	1000	\$ 41.00	\$ 41,000.00
540-1101	REMOVAL OF EXISTING BR, STA NO -	LS	1	\$ 300,000.00	\$ 300,000.00
610-2705	REM CONC APPROACH SLAB	SY	533	\$ 41.00	\$ 21,853.00
<b>Section Sub Total:</b>					<b>\$ 6,904,373.00</b>

<b>SECTION RETAINING WALL</b>					
<b>ITEM NO.</b>	<b>ITEM DESCRIPTION</b>	<b>UNITS</b>	<b>QUANTITY</b>	<b>UNIT PRICE</b>	<b>COST</b>
500-3107	CLASS A CONCRETE, RETAINING WALL	CY	1200	\$ 824.32	\$ 989,184.00
522-1000	SHORING	LS	1	\$ 120,000.00	\$ 120,000.00
<b>Section Sub Total:</b>					<b>\$ 1,109,184.00</b>

<b>SECTION DRAINAGE</b>					
<b>ITEM NO.</b>	<b>ITEM DESCRIPTION</b>	<b>UNITS</b>	<b>QUANTITY</b>	<b>UNIT PRICE</b>	<b>COST</b>
441-0600	CONC HEADWALLS	CY	10	\$ 1,897.50	\$ 18,975.00
550-1180	STORM DRAIN PIPE, 18 IN, H 1-10	LF	600	\$ 53.59	\$ 32,154.00
550-1240	STORM DRAIN PIPE, 24 IN, H 1-10	LF	600	\$ 60.00	\$ 36,000.00
550-1300	STORM DRAIN PIPE, 30 IN, H 1-10	LF	600	\$ 74.43	\$ 44,658.00
550-4218	FLARED END SECTION 18 IN, STORM DRAIN	EA	4	\$ 699.73	\$ 2,798.92
550-4224	FLARED END SECTION 24 IN, STORM DRAIN	EA	4	\$ 870.00	\$ 3,480.00
550-4230	FLARED END SECTION 30 IN, STORM DRAIN	EA	4	\$ 905.14	\$ 3,620.56
668-1100	CATCH BASIN, GP 1	EA	20	\$ 2,700.00	\$ 54,000.00
668-1200	CATCH BASIN, GP 2	EA	5	\$ 2,775.52	\$ 13,877.60
668-4300	STORM SEWER MANHOLE, TP 1	EA	8	\$ 2,443.70	\$ 19,549.60
<b>Section Sub Total:</b>					<b>\$ 229,113.68</b>

<b>SECTION PERMANENT EROSION CONTROL</b>					
<b>ITEM NO.</b>	<b>ITEM DESCRIPTION</b>	<b>UNITS</b>	<b>QUANTITY</b>	<b>UNIT PRICE</b>	<b>COST</b>
603-2024	STN DUMPED RIP RAP, TP 1, 24 IN	SY	100	\$ 55.00	\$ 5,500.00
700-6910	PERMANENT GRASSING	AC	7	\$ 1,000.00	\$ 7,000.00
700-7000	AGRICULTURAL LIME	TN	8	\$ 67.00	\$ 536.00
700-7010	LIQUID LIME	GL	19	\$ 25.00	\$ 475.00
700-8000	FERTILIZER MIXED GRADE	TN	4	\$ 340.00	\$ 1,360.00
700-8100	FERTILIZER NITROGEN CONTENT	LB	500	\$ 3.40	\$ 1,700.00
<b>Section Sub Total:</b>					<b>\$ 16,571.00</b>

<b>SECTION TEMPORARY EROSION CONTROL</b>					
<b>ITEM NO.</b>	<b>ITEM DESCRIPTION</b>	<b>UNITS</b>	<b>QUANTITY</b>	<b>UNIT PRICE</b>	<b>COST</b>
163-0232	TEMPORARY GRASSING	AC	7	\$ 570.00	\$ 3,990.00
163-0240	MULCH	TN	200	\$ 300.00	\$ 60,000.00
163-0530	CONSTRUCT AND REMOVE BALED STRAW EROSION CHECK	LF	5000	\$ 4.66	\$ 23,300.00
165-0010	MAINTENANCE OF TEMPORARY SILT FENCE, TP A	LF	20000	\$ 1.70	\$ 34,000.00
165-0030	MAINTENANCE OF TEMPORARY SILT FENCE, TP C	LF	500	\$ 2.18	\$ 1,090.00
165-0070	MAINTENANCE OF BALED STRAW EROSION CHECK	LF	2500	\$ 3.92	\$ 9,800.00
167-1000	WATER QUALITY MONITORING AND SAMPLING	EA	2	\$ 1,330.00	\$ 2,660.00
171-0010	TEMPORARY SILT FENCE, TYPE A	LF	40000	\$ 3.00	\$ 120,000.00
171-0030	TEMPORARY SILT FENCE, TYPE C	LF	1000	\$ 4.37	\$ 4,370.00
603-7000	PLASTIC FILTER FABRIC	SY	100	\$ 5.40	\$ 540.00
<b>Section Sub Total:</b>					<b>\$ 259,750.00</b>

<b>SECTION SIGNAL</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
647-1000	TRAFFIC SIGNAL INSTALLATION NO -	LS	1	\$ 150,000.00	\$ 150,000.00
647-1001	TRAFFIC SIGNAL INSTALLATION NO -	LS	1	\$ 150,000.00	\$ 150,000.00
647-1002	TRAFFIC SIGNAL INSTALLATION NO -	LS	1	\$ 150,000.00	\$ 150,000.00
647-1003	TRAFFIC SIGNAL INSTALLATION NO -	LS	1	\$ 150,000.00	\$ 150,000.00
<b>Section Sub Total:</b>					<b>\$ 600,000.00</b>

<b>SECTION SIGNING &amp; MARKING</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
610-6515	REM HIGHWAY SIGN, STD	EA	30	\$ 108.00	\$ 3,240.00
611-5360	RESET HIGHWAY SIGN	EA	30	\$ 1,353.80	\$ 40,614.00
636-1033	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 9	SF	200	\$ 23.00	\$ 4,600.00
636-1072	HIGHWAY SIGNS, ALUM EXTRUDED PANELS, REFL SHEETING, TP 3	SF	500	\$ 33.00	\$ 16,500.00
636-2070	GALV STEEL POSTS, TP 7	LF	300	\$ 10.00	\$ 3,000.00
638-1001	STR SUPPORT FOR OVERHEAD SIGN, TP 1, STA -	LS	1	\$ 82,000.00	\$ 82,000.00
653-0120	THERMOPLASTIC PVMT MARKING, ARROW, TP 2	EA	50	\$ 79.15	\$ 3,957.50
653-0210	THERMOPLASTIC PVMT MARKING, WORD, TP 1	EA	20	\$ 125.09	\$ 2,501.80
653-1501	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	LF	4200	\$ 1.00	\$ 4,200.00
653-1502	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	LF	9800	\$ 1.00	\$ 9,800.00
653-1704	THERMOPLASTIC SOLID TRAF STRIPE, 24 IN, WHITE	LF	300	\$ 8.44	\$ 2,532.00
653-3501	THERMOPLASTIC SKIP TRAF STRIPE, 5 IN, WHITE	GL	9628	\$ 0.74	\$ 7,124.72
653-6004	THERMOPLASTIC TRAF STRIPING, WHITE	SY	1200	\$ 3.70	\$ 4,440.00
654-1001	RAISED PVMT MARKERS TP 1	EA	250	\$ 4.50	\$ 1,125.00
654-1003	RAISED PVMT MARKERS TP 3	EA	450	\$ 4.40	\$ 1,980.00
<b>Section Sub Total:</b>					<b>\$ 187,615.02</b>

<b>SECTION LIGHTING</b>					
ITEM NO.	ITEM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	COST
441-0004	CONC SLOPE PAV 4 IN	SY	198	\$ 51.00	\$ 10,098.00
500-3101	CLASS A CONCRETE	CY	248	\$ 700.00	\$ 173,600.00
511-1000	BAR REINFORCEMENT STEEL	LB	28026	\$ 0.65	\$ 18,216.90
615-1200	DIRECTIONAL BORE	LF	200	\$ 55.00	\$ 11,000.00
618-6605	REMOVE LIGHTING STANDARD	EA	8	\$ 2,000.00	\$ 16,000.00
681-6586	LUMINAIRE, TP 5, 150 W, HP SODIUM	EA	156	\$ 2,000.00	\$ 312,000.00
682-3424	MUTL COND CABLE, TP RHW, 2-#2-1-#4	LF	16000	\$ 6.25	\$ 100,000.00
682-6120	CONDUIT, RIGID 2 IN	LF	500	\$ 16.44	\$ 8,220.00
682-6222	CONDUIT, NONMETL, TP 2, 2 IN	LF	13000	\$ 10.35	\$ 134,550.00
682-9000	MAIN SERVICE PICK UP POINT 1	LS	4	\$ 6,000.00	\$ 24,000.00
682-9021	ELECTRICAL JUNCTION BOX, CONC GROUND MOUNTED	EA	6	\$ 2,142.00	\$ 12,852.00
683-1101	LIGHTING TOWER, STEEL, 100 FT MH, INCL LOWERING EQUIP	EA	27	\$ 20,000.00	\$ 540,000.00
<b>Section Sub Total:</b>					<b>\$ 1,360,536.90</b>

**Total Estimated Construction Cost: \$ 18,130,838.50**

**E & C Rate 5.0% \$ 906,541.93**

**Total Construction Cost: \$ 19,037,380.43**

Right of Way: \$ 20,910,000.00

Relmb. Utilities: \$ 265,000.00

**Grand Total Project Cost: \$ 40,212,380.43**



### Preliminary Right of Way Cost Estimate

**Date:** June 28, 2007 Revised 7/9/07 & 8/13/07  
**Project:** CSNHS-0007-00(386) SITE 1 Lowndes  
**Existing/Requiring RW:** 1300 ft. W of I-75 - 850ft E of I-75  
**Project Termini:** I-75 @ Bellville Rd/CR 274  
**Project Description:** I-75 @ Bellville Rd/CR 274  
**P.I Number:** 0007386  
**No. Parcels:** 13

**Land:**

Commercial	251,530 s f	@ \$5 75/s f = \$1,446 298	
Industrial	N/A s f	@ \$/s f = \$0	
Residential	N/A s f.	@ \$/s f = \$0	
Agricultural	N/A s f	@ \$s f = \$0	
<b>TOTAL</b>			<b>\$ 1,446 298</b>

**Improvements:**

C-store Dairy Queen  
 3 signs \$5,515 000

**Relocation:**

(2) Commercial @ \$25,000/parcel \$ 50,000  
 (0) Residential @ \$40 000/parcel \$0

**TOTAL** \$ 5,565,000

**Damages:**

Proximity - \$ 100,000  
 Consequential \$ 0  
 Cost To Cure \$ 50 000

**TOTAL** \$ 150,000

**SUB-TOTAL**

57 181,298

Net Cost		\$ 7 161,298
Scheduling Contingency	55%	\$ 3,938,714
Adm/Court Cost	60%	\$ 6,660,007
Inflation Factor	40%	\$ 7,104,008
		<u>\$ 24 864,027</u>

**Total Cost** \$ 24,900,000

Prepared By: Harvey P. Booker, Consultant  
 Booker Real Estate Services, LLC

Approved: Bernard R. Nelson  
 GDOT RW

### Preliminary Right of Way Cost Estimate

**Date:** June 28, 2007 (Corrected 8/13/2007)  
**Project:** CSNHS-0007-00(388) SITE 2 Lowndes  
**Existing/Requiring R/W:** P.I. Number: 0007305  
**Project Termini:** 850 ft W of I-75 & 1050 ft E of I-75  
**Project Description:** I-75 @ SR 376/Lakes Blvd Interchange  
 No. Parcels: 22

**Land:**

Commercial	186,350 s f	@ \$5 75/s f = \$ 956,513	
Industrial	N/A s f	@ \$/s f = \$0	
Residential	N/A s f	@ \$/s f = \$0	
Agricultural	N/A s f	@ \$/s f = \$0	
<b>TOTAL</b>			<b>\$ 956,513</b>

**Improvements:**

3 C-stores, 3 com bldgs  
 8 signs, 3 lights, landscaping \$12,250,000

**Relocation:**

(6) Commercial @ \$25,000/parcel \$ 150,000  
 (0) Residential @ \$40,000/parcel \$0

**TOTAL** \$12,400,000

**Damages:**

Proximity - \$ 0  
 Consequential \$ 0  
 Cost To Cure \$ 75,000

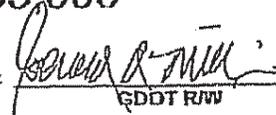
**TOTAL** \$ 75,000

**SUB-TOTAL** \$13,431,513

Net Cost		\$ 13,431,513
Scheduling Contingency	55%	\$ 7,387,332
Adm/Court Cost	60%	\$ 12,491,307
Inflation Factor	40%	\$ 13,324,081
		<u>\$ 46,634,213</u>

**Total Cost** \$ **46,635,000**

Prepared By: Harvey P Booker, Consultant  
 Booker Real Estate Services, LLC

Approved:   
 GDDT RW

### Preliminary Right of Way Cost Estimate

Date: June 28, 2007 (Corrected 8/13/2007)  
 Project: CSNHS-0007-00(386) SITE 3 Lowndes  
 Existing/Requiring R/W: P.I. Number: 0007386  
 Project Termini: 1200 ft S of I-75 & 1800ft N of I-75  
 No. Parcels: 6

Project Description: Loch Laurel Road Overpass

**Land:**

Commercial		
N/A s.f	@ \$5.75/s.f =	\$ 0
Industrial		
N/A s.f	@ \$/s.f =	\$ 0
Residential		
25,000 s.f.	@ \$ 17/s.f. =	\$ 4,250
Agricultural		
36,000 s.f	@ \$ 23/s.f =	<u>\$ 8,280</u>
<b>TOTAL</b>		<b>\$ 12,630</b>

**Improvements:**

Billboard & Fence		\$ 36,000
Relocation:		
(0) Commercial @ \$25,000/parcel		\$ 0
(0) Residential @ \$40,000/parcel		<u>\$ 0</u>
<b>TOTAL</b>		<b>\$ 36,000</b>

**Damages:**

Proximity -	\$	0
Consequential	\$	0
Cost To Cure	\$	0
<b>TOTAL</b>		<b>\$ 0</b>

**SUB-TOTAL** \$ 48,530

Not Cost		\$	48,530
Scheduling Contingency 55%		\$	26,692
Adm/Court Cost 60%		\$	45,133
Inflation Factor 40%		<u>\$</u>	<u>48,142</u>
		\$	168,497

**Total Cost** \$ **168,500**

Prepared By: Harvey P. Booker, Consultant  
 Booker Real Estate Services, LLC

Approved: *Genie R. Miller*  
 GDOT R/W

**PRELIMINARY - Right of Way Cost Estimate**

Date: 25-Jul-07  
 Project: CSNH5-0007-00(180) Site 4  
 Existing/Required ROW: 182,000 sq. ft.  
 Project Terminals: 175 @ SR231  
 Project Description: Interstate Intersection Improvement

PI Number 000736  
 No Parcels 10

Land	Area	Stat				
Commercial						
		Ⓢ	13.00	=	\$	
Industrial						
	182,000	Ⓢ	2.92	=	\$	5531,440.00
						\$531,440
<b>Improvements</b>						
Signs Paving, Hinton Oil Bldg., Fruit Stand Fuel Island						\$550,000
<b>Relocation</b>						
	0 Residential	Ⓢ	\$40,000.00	=		50.00
	2 Commercial	Ⓢ	\$25,000.00	=		\$50,000.00
						\$50,000
<b>Damages</b>						
	Proximity/Access				\$600,000	
	Consequential				\$0	
	Cost to Care	2	Ⓢ	20,000	\$40,000	
						\$640,000
						<u>\$1,771,440</u>
<b>Net Cost</b>						\$1,771,440
<b>Scheduling Contingency</b>						65% \$1,074,202
<b>Adm/Court Cost</b>						60% \$1,047,439
<b>Market Appreciation</b>						40% \$1,757,200

**TOTAL COST \$6,150,440**

Prepared By: Terry Hundley & Carol RW&I

Approved:   
 SDDT ROW





**Memorandum**

JUN 12 2008  
OFFICE OF CONCEPT ENGINEERING

**To:** Tim Warren, GDOT District Four Utility Engineer  
**From:** Jeff VanDyke, Jacobs Carter Burgess  
**Date:** June 4, 2008  
**Subject:** NHS-0007-00(386) Lowndes  
P.I. No. 0007386:  
I-75 at 5 Locations From Florida to SR 133 -- Phase 2  
Concept Phase Reimbursable Utilities Cost Estimate

Attached are a location sketch of the noted project and a summary of estimated reimbursable utility costs for the subject project.

The JCB team has studied all the electronic topographic, utility, and SUE files available at this time. The JCB team identified all the utilities located off the public right of way and assumed that they were on utility easements because they were on private property. If the utility was on private property / utility easement, we assumed they were reimbursable. Attachments A through D summarize the number of reimbursable utilities by site. Attachment E summarizes the estimate reimbursable utilities for the project. The total Concept Phase Reimbursable Utility Cost Estimated is **\$765,000.00**

Please note that this estimate will need updating during the life of the project as more information becomes available and the utility owners become more engaged with the project. Please sign below if you concur with the estimate.

Concur with Concept Phase Reimbursable Utility Estimate:

Tim Warren, DUE  
District Four Utility Office

6/9/08  
Date



NHS-0007-00(386) Lowndes  
 P I. No 0007386  
 I-75 at 5 Locations from Florida to SR 133 - Phase 2

Attachment A  
 Site 1: I-75 Exit No 2 - CR 274 / Lake Park Road / Bellville Road Interchange  
 Utilities on Private Property

Parcel Owner Name	Number of Impacted Facilities		
	Utility Pole	Utility Box	Utility Man Hole
CFS Properties		1	
Country Hospitality INC	4		1
JRE Developers	5		
Land O'Sun Management			2
Tammy Wallace & Shannon Hurst	1		
Taylor Slocumb Properties LLC	3		
Travelcenters Properties LLC	2		
<b>TOTAL</b>	<b>15</b>	<b>1</b>	<b>3</b>
Estimated Value per Facility	\$ 10,000.00	\$ 5,000.00	\$ 5,000.00
<b>Total Utility Easement Value</b>	<b>\$150,000.00</b>	<b>\$ 5,000.00</b>	<b>\$ 15,000.00</b>

<b>SITE 1 TOTAL</b>	
<b>REIMBURSABLE UTILITIES</b>	<b>\$ 170,000.00</b>

NHS-0007-00(386) Lowndes  
 P I No 0007386  
 I-75 at 5 Locations from Florida to SR 133 - Phase 2

Attachment B  
 Site 2: I-75 Exit No 5 - SR 376 / Lakes Boulevard Interchange  
 Utilities on Private Property

Parcel Owner Name	Number of Impacted Facilities
	Utility Pole
#89 Cracker Barrell Old Country Store Inc	2
A & M Hospitalities LLC	1
David P & Jane P Motley	2
Davis Jimmy Enterprises	1
Dee H Food System Inc	1
Magic 44 Properties LLC	1
The Johnson Company	1
Thomas D Akins Jr	1
Waffle House Inc	1
Wendell L Bowden	1
<b>TOTAL</b>	<b>12</b>
Estimated Value per Facility	\$ 10,000.00
<b>Total Utility Easement Value</b>	<b>\$ 120,000.00</b>

<b>SITE 2 TOTAL</b>	
<b>REIMBURSABLE UTILITIES</b>	<b>\$ 120,000.00</b>

NHS-0007-00(386) Lowndes  
P. I. No 0007386  
I-75 at 5 Locations from Florida to SR 133 - Phase 2

Attachment C  
Site 2: I-75 Exit No 5 - SR 376 / Lakes Boulevard Interchange  
Utilities on Private Property

Quadrant	Owner Name	Utility Pole	Utility Box	Man Hole
SW	None			
NW	None			
NE	None			
SE	None			
	TOTALS	0	0	0

<b>SITE 3 TOTAL REIMBURSABLE UTILITIES</b>	<b>\$0.00</b>
--	---------------

NHS-0007-00(386) Lowndes  
 P I. No 0007386  
 I-75 at 5 Locations from Florida to SR 133 - Phase 2

Attachment C  
 Site 4: I-75 Exit No 11 - SR 31 / Madison Highway Interchange  
 Utilities on Private Property

Parcel Owner Name	Number of Impacted Facilities			
	Utility Pole	Water Valve	Electrical Box	Utility Manhole
Augusta Ulmer (Pilot Travel Center)	5	3	1	
Augusta Wisenbaker Est (Fruit Stand)	1			
Cowart & Son (EPES Transport System Inc)	2			1
Georgia Rideshare	1			
Reeya Inc (Traveler's Inn)	2			
Waffle House Inc		1		
Wilcohell LLC (Wilco Travel Plaza)	5			
Owner Unknown	2			
<b>TOTAL</b>	<b>18</b>	<b>4</b>	<b>1</b>	<b>1</b>
Estimated Value per Facility	\$ 10,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00
<b>Total Utility Easement Value</b>	<b>\$ 180,000.00</b>	<b>\$ 20,000.00</b>	<b>\$ 5,000.00</b>	<b>\$ 5,000.00</b>

<b>SITE 4 TOTAL</b>	
<b>REIMBURSABLE UTILITIES</b>	<b>\$ 210,000.00</b>

NHS-0007-00(386) Lowndes  
 P I No 0007386  
 I-75 at 5 Locations from Florida to SR 133 - Phase 2

Attachment D  
 Site 5: I-75 Exit No 18 - SR 133 / North Saint Augustine Road  
 Utilities on Private Property

Parcel Owner Name	Number of Impacted Facilities				
	Utility Pole	Sanitary Sewer MH	Water Valve	Electrical Box	Fire Hydrant
6650 Valdosta LLC (Denny's)	6			1	
Apple Jame Inc (Applebee's)	1				
Loch-Winn Farms LTD	2				
Mountainprize Inc (Raceway)		2			
PLD Limited Partnerships (Wendy's)	1				
Ray Howard Construction	1		1		
Sirkis Family LLC (Fazoli's)	7		4		
Tejas Jivan Inc (Country Inn Suites)	1		3		1
Williams Investment Co (Howard Johnson)		3			
<b>TOTAL</b>	<b>19</b>	<b>5</b>	<b>8</b>	<b>1</b>	<b>1</b>
Estimated Value per Facility	\$ 10,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00
<b>Total Utility Easement Value</b>	<b>\$190,000.00</b>	<b>\$ 25,000.00</b>	<b>\$ 40,000.00</b>	<b>\$ 5,000.00</b>	<b>\$ 5,000.00</b>

<b>SITE 5 TOTAL</b>	
<b>REIMBURSABLE UTILITIES</b>	<b>\$265,000.00</b>

NHS-0007-00(386) Lowndes  
P.I. No 0007386  
I-75 at 5 Locations from Florida to SR 133 - Phase 2

Attachment E

Reimbursable Utilities Cost Estimate Summary		
Site 1	\$	170,000.00
Site 2	\$	120,000.00
Site 3	\$	0.00
Site 4	\$	210,000.00
Site 5	\$	265,000.00
<b>GRAND TOTAL</b>	<b>\$</b>	<b>765,000.00</b>

P.I. Number 7386

County Lowndes

Project Number NHS-0007-00(386)

**Special Provision, Section 109-Measurement and Payment**  
**FUEL PRICE ADJUSTMENT (ENGLISH 125% MAX)**

ENTER FPL DIESEL	3.097
ENTER FPM DIESEL	6.968

ENTER FPL UNLEADED	2.859
ENTER FPM UNLEADED	6.43275

<b>INCREASE ADJUSTMENT</b>
125.00%

<b>INCREASE ADJUSTMENT</b>
125.00%

ROADWAY ITEMS	QUANTITY	DIESEL FACTOR	GALLONS DIESEL	UNLEADED FACTOR	GALLONS UNLEADED	REMARKS
Excavations paid as specified by Sections 205 (CUBIC YARD)	352000.000	0.29	102080.00	0.15	52800.00	
Excavations paid as specified by Sections 206 (CUBIC YARD)		0.29		0.15		
GAB paid as specified by the ton under Section 310 (TON)	82223.000	0.29	23844.67	0.24	19733.52	
Hot Mix Asphalt paid as specified by the ton under Sections 400 (TON)		2.90		0.71		
Hot Mix Asphalt paid as specified by the ton under Sections 402 (TON)	86187.000	2.90	249942.30	0.71	61192.77	
PCC Pavement paid as specified by the square yard under Section 430 (SY)	59649.000	0.25	14912.25	0.20	11929.80	

BRIDGE ITEMS	Quantity	Unit Price	QF/1000	Diesel Factor	Gallons Diesel	Unleaded Factor	Gallons Unleaded	REMARKS
Bridge Excavation (CY) Section 211				8.00		1.50		
Class __ Concrete (CY) Section 500				8.00		1.50		
Class __ Concrete (CY) Section 500				8.00		1.50		
Class __ Concrete (CY) Section 500				8.00		1.50		
Superstru Con Class __ (CY) Section 500				8.00		1.50		
Superstru Con Class __ (CY) Section 500				8.00		1.50		
Superstru Con Class __ (CY) Section 500				8.00		1.50		
Concrete Handrail (LF) Section 500				8.00		1.50		
Concrete Barrier (LF) Section 500				8.00		1.50		

BRIDGE ITEMS	Quantity	Unit Price	QF/1000	Diesel Factor	Gallons Diesel	Unleaded Factor	Gallons Unleaded	REMARKS
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Stru Steel <u>Plan Quantity</u> (LB) Section 501				8.00		1.50	
Stru Steel <u>Plan Quantity</u> (LB) Section 501				8.00		1.50	
PSC Beams____ (LF) Section 507				8.00		1.50	
PSC Beams____ (LF) Section 507				8.00		1.50	
PSC Beams____ (LF) Section 507				8.00		1.50	
Stru Reinf <u>Plan Quantity</u> (LB) Section 511				8.00		1.50	
Stru Reinf <u>Plan Quantity</u> (LB) Section 511				8.00		1.50	
Bar Reinf Steel (LB) Section 511				8.00		1.50	
Piling____ inch (LF) Section 520				8.00		1.50	
Piling____ inch (LF) Section 520				8.00		1.50	
Piling____ inch (LF) Section 520				8.00		1.50	
Piling____ inch (LF) Section 520				8.00		1.50	
Piling____ inch (LF) Section 520				8.00		1.50	
Piling____ inch (LF) Section 520				8.00		1.50	
Drilled Caisson,____ (LF) Section 524				8.00		1.50	
Drilled Caisson,____ (LF) Section 524				8.00		1.50	
Drilled Caisson,____ (LF) Section 524				8.00		1.50	
Pile Encasement,____(LF) Section 547				8.00		1.50	
Pile Encasement,____(LF) Section 547				8.00		1.50	

<b>SUM QF DIESEL=</b>	<b>390779.22</b>	<b>SUM QF UNLEADED=</b>	<b>145656.09</b>
-----------------------	------------------	-------------------------	------------------

<b>DIESEL PRICE ADJUSTMENT(\$)</b>	<b>\$1,391,779.73</b>
<b>UNLEADED PRICE ADJUSTMENT(\$)</b>	<b>\$478,895.38</b>



# ASPHALT CEMENT PRICE ADJUSTMENT FOR BITUMINOUS TACK COAT(Surface Treatment 125% MAX)

APPLICABLE TO CONTRACTS CONTAINING THE 413 SPEC. SECTION 413.5.01 ADJUSTMENTS ASPHALT PRICE ADJUSTMENT FOR BITUMINOUS TACK COAT

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

ENTER APL

ENTER APM

**MISSING APL OR APM**                      **MISSING APL OR APM**

Use this side for Asphalt Emulsion Only		
L.I.N.	TYPE	ASPHALT EMULSION (GALLONS)
TMT =		<input style="width: 150px;" type="text"/>
REMARKS:		

Use this side for Asphalt Cement Only		
L.I.N.	TYPE	TACK (GALLONS)
TMT =		<input style="width: 150px;" type="text"/>
REMARKS:		

**MONTHLY PRICE ADJUSTMENT(\$)**                      **MISSING APL OR APM**

## ADJUSTMENT SUMMARY

FUEL PRICE ADJUSTMENT ( <i>ENGLISH 125% MAX</i> )	
DIESEL PRICE ADJUSTMENT(\$)	<u>\$1,391,779.73</u>
UNLEADED PRICE ADJUSTMENT(\$)	<u>\$478,895.38</u>
ASPHALT CEMENT PRICE ADJUSTMENT ( <i>BITUMINOUS TACK COAT 125% MAX</i> )	<u>\$14,014.45</u>
400 / 402 ASPHALT CEMENT PRICE ADJUSTMENT <i>125% MAX</i>	<u>MISSING APL OR APM</u>
ASPHALT CEMENT PRICE ADJUSTMENT FOR BITUMINOUS TACK COAT( <i>Surface Treatment 125% MAX</i> )	<u>MISSING APL OR APM</u>

REMARKS:

<b>TOTAL ADJUSTMENTS</b>	<b>\$1,884,689.56</b>
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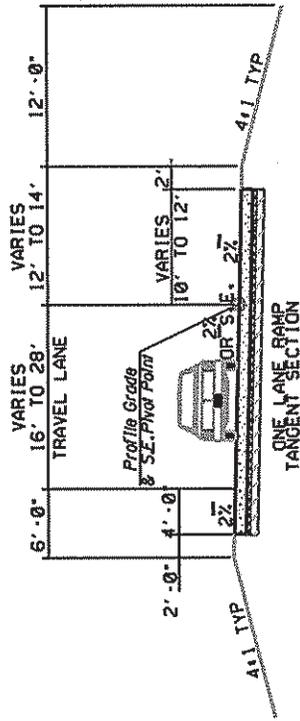
## Mitigation Cost Estimate

	Site	Credits	Cost/Credit*	Total
1	CR 274/Bellville Road			
	Wetland	0.52	\$3,500.00	\$1,820.00
	Stream	0	\$45	\$0.00
	Subtotal			\$1,820.00
2	SR 376/Lake Boulevard			
	Wetland	7.37	\$3,500	\$25,795.00
	Stream	0	\$45	\$0.00
	Subtotal			\$25,795.00
3	Loch Laurel Road			
	Wetland	0.38	\$3,500	\$1,330.00
	Stream	0	\$45	\$0.00
	Subtotal			\$1,330.00
4	SR 31/Madison Highway			
	Wetland	1.03	\$3,500	\$3,605.00
	Stream	130	\$45	\$5,850.00
	Subtotal			\$9,455.00
5	SR 133/St. Augustine Road			
	Wetland	1.53	\$3,500	\$5,355.00
	Stream	165	\$45	\$7,425.00
	Subtotal			\$12,780.00
	Total			\$51,180.00

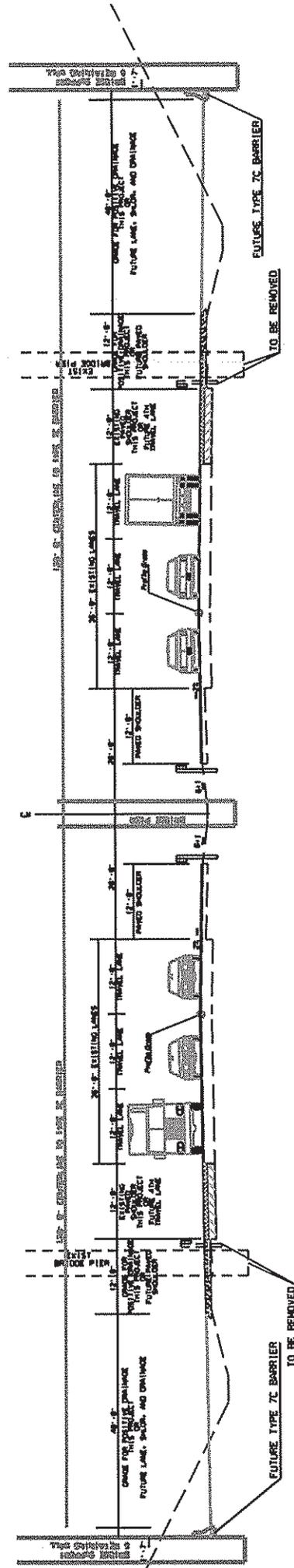
\* Cost estimates based upon GDOT guidance dated December 2, 2009 for the Withlacoochee Service Area.

NHS-0007-00(386)

I-75



# RAMP WIDENING/RELOCATION

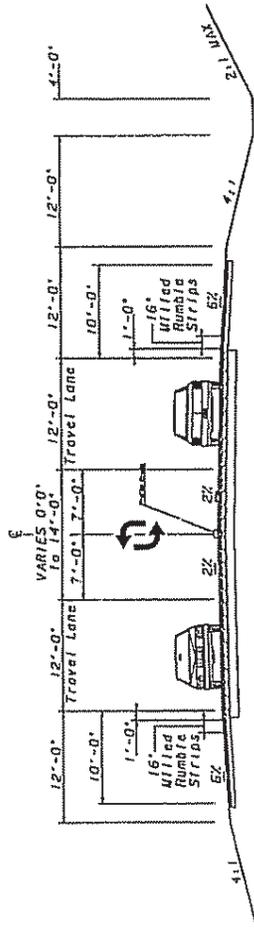


# TYPICAL INTERSTATE SECTION AT BRIDGE

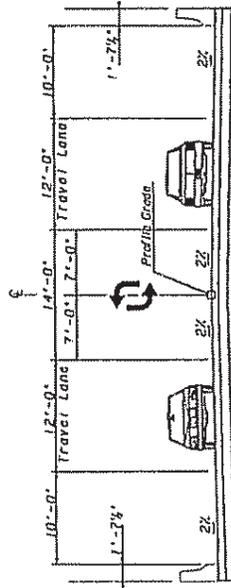
NOT TO SCALE

NHS-0007-00(386)

SITE #1 CR 274/BELLVILLE RD./LAKE PARK RD.



TYPICAL SECTION - 1



TYPICAL SECTION - 2  
BRIDGE

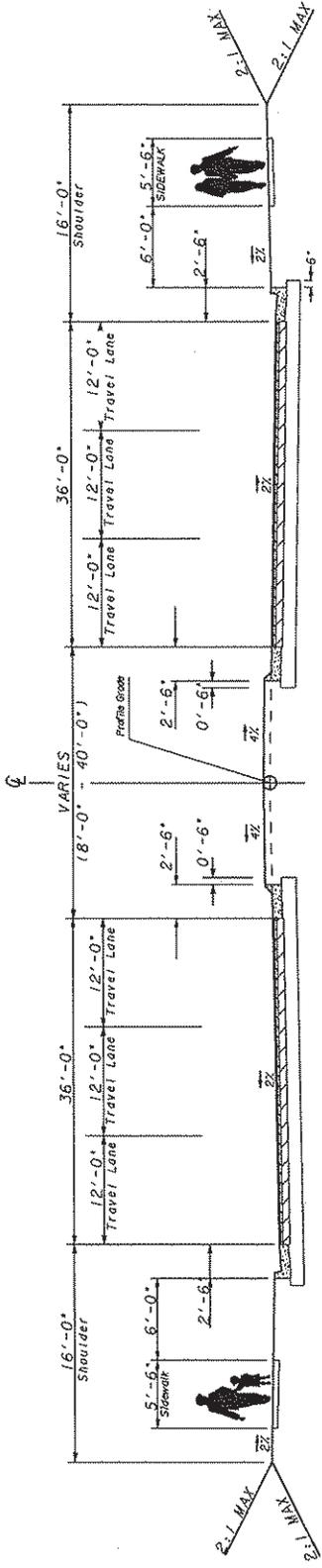




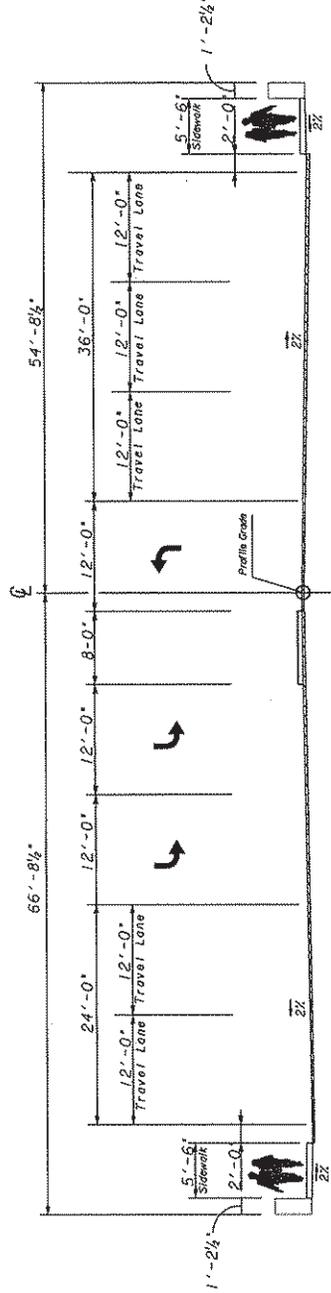


NHS-0007-00(386)

SITE # 5 SR 133/N. ST. AUGUSTINE ROAD



TYPICAL SECTION - 1



TYPICAL SECTION - 2  
BRIDGE

# TECHNICAL MEMORANDUM

## Traffic Operations Analysis for I-75 at Five Locations from Florida State Line to SR 133 – Phase 2

Project #: NHS-0007-00(386) Lowndes  
P.I. No. 0007386

Prepared for:



Prepared by:

**JACOBS**

1718 Peachtree Street NW, Suite 400  
Atlanta, Georgia 30309  
Phone: (404) 249-7550  
Fax: (404) 249-7705  
[www.c-b.com](http://www.c-b.com)

February 2010

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- Figure 5.6b – Site 5 Lane Geometry and Storage Lengths (with Stagger)

## 0 - INTRODUCTION

Jacobs performed traffic analyses at five locations on Interstate 75 (I-75) in Lowndes County, Georgia. The five locations consist of four interchanges and one overpass as follows:

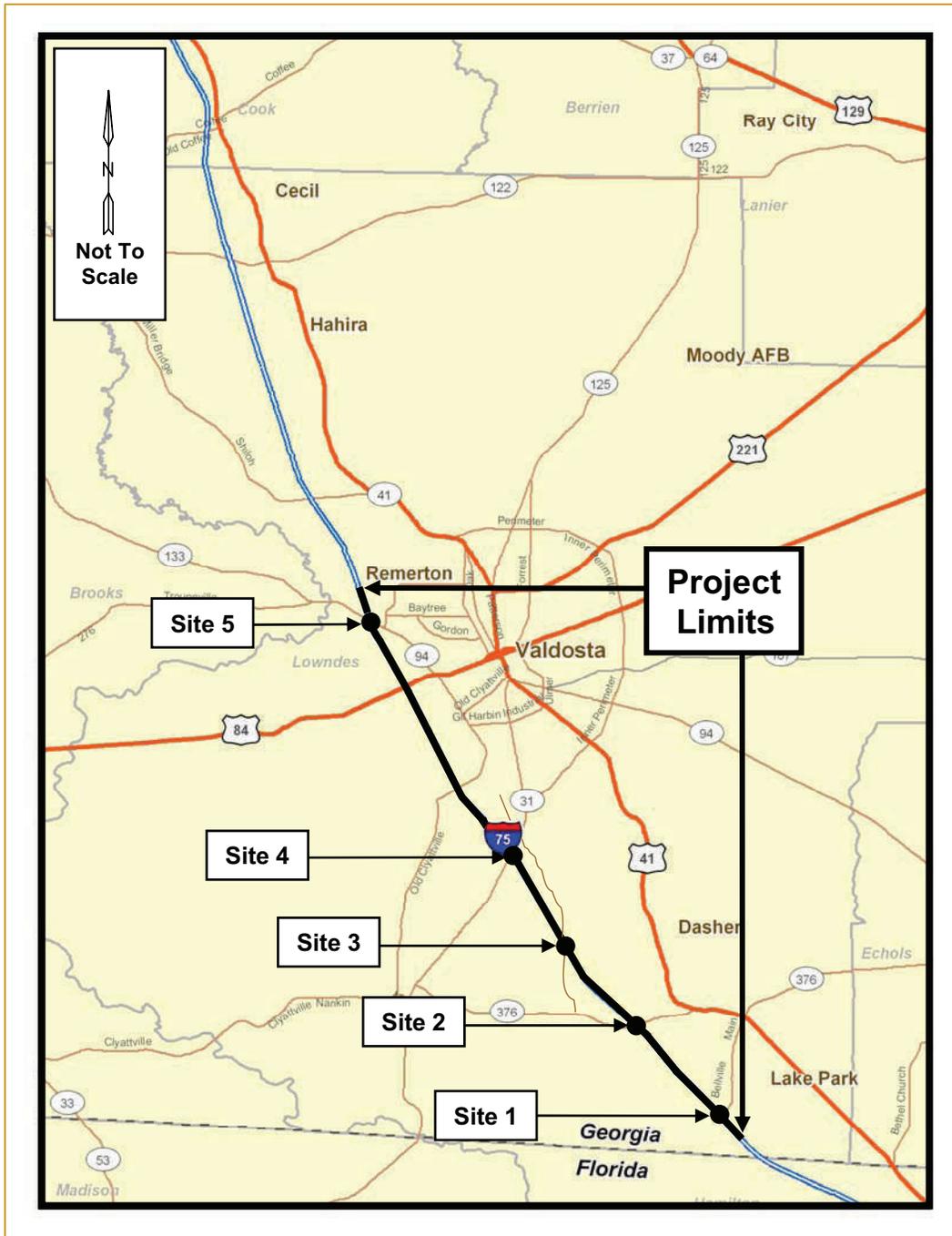
- Site 1 – I-75 interchange with CR 274 (Bellville Road/Lake Park Road)
- Site 2 – I-75 interchange with SR 376 (Lakes Boulevard)
- Site 3 – CR 783 (Loch Laurel Road) overpass
- Site 4 – I-75 interchange with SR 31 (Madison Highway)
- Site 5 - I-75 interchange with SR 133 (North St. Augustine Road)

The Georgia Department of Transportation (GDOT) previously widened I-75 from four lanes to six lanes from the Florida State Line to SR 133 (Phase 1). The Phase 1 I-75 widening required substandard outside shoulders at the five locations noted for this project. This project, Phase 2, was created to eliminate the substandard outside shoulders on I-75. In addition, a comprehensive interstate study noted the long range need to widen I-75 from six lanes to eight lanes throughout the state. This project proposes to reconstruct the five sites to eliminate the substandard I-75 shoulders and allow for I-75 to be widened in the future. This technical memorandum summarizes the traffic analysis performed for the proposed interchange reconstruction. The study limits extend from the Florida State Line to just north of SR 133 (N. St. Augustine Road). The location map shown in Figure 0.1 illustrates the project limits (study area) along I-75 and the location of the five sites.

This memorandum is composed of traffic analysis results for the ramp intersections at the four interchanges, basic freeway sections north and south of the interchanges, the merge and diverge operations of the ramps with the interstate; and at Sites 2 and 5, intersections in close proximity to the ramp intersections were also analyzed. At Site 3, one intersection close to the overpass was analyzed. The analysis was performed under the no-build (six-lane) and build (eight-lane) scenarios.

Historic crash information was also analyzed for the roadways near the interchanges and along the I-75 mainline north and south of the interchange. The crash data was summarized and compared to the statewide average for similar facilities.

In the Traffic Data Section, 25% is the 24-hr heavy vehicle percentage and 19% is the peak hour heavy vehicle percentage. This is shown in the traffic flow diagrams for each site. Since the HCS Analysis was done for the AM and PM peak hours, 19% was assumed in the analysis.



- Site 1: Exit 2, CR 274 (Lake Park Rd) / Bellville Rd
- Site 2: Exit 5, SR 376 (Lakes Blvd)
- Site 3: MP 6.12, CR 783 (Loch Laurel Rd) Overpass
- Site 4: Exit 11, SR 31 (Madison Hwy)
- Site 5: Exit 18, SR 133 (N. St. Augustine Rd)

I-75 Traffic Analysis	
FIGURE	<b>Project Location Map</b>
<b>0.1</b>	
January 2010	
<b>JACOBS</b>	

## 1 – Site 1: CR 274 (Bellville Road)/Lake Park Road

### 1.1 EXISTING CONDITIONS

The I-75 interchange with CR 274 (Bellville Road)/Lake Park Road is located approximately two miles north of the Florida State Line. Figure 1.1 shows the location of the interchange (Site 1). To the west of the I-75 interchange, the roadway is named Lake Park Road and to the east the roadway is named CR 274 (Bellville Road). CR 274 (Bellville Road) extends from the interchange eastward to US 41. Lake Park Road extends westward from the interchange to the Florida State Line. Lake Park Road/CR 274 (Bellville Road) is a two-lane undivided facility with a posted speed limit of 45 miles per hour (mph), and its Functional Classification is Rural Major Collector. West of the interchange, gas stations and tourist shops exist on the north and south sides of Lake Park Road. Similarly east of the interchange, there are gas stations and fast food restaurants. No left or right turn lanes are provided on CR 274 (Bellville Road)/Lake Park Road at the ramp intersections or at driveways to the adjacent developments. Figure 1.2 depicts existing conditions at the interchange.

Single lane ramps provide access between CR 274 (Bellville Road)/Lake Park Road and I-75, and no turn lanes are provided on the off-ramp intersections. The off-ramp approaches to CR 274 (Bellville Road)/Lake Park Road are presently under stop sign control.

#### 1.1.1 Field Observations

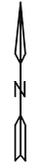
Field observations at the site revealed low traffic volumes and minimal delay for all movements at the ramp intersections with CR 274 (Bellville Road)/Lake Park Road. The only operational deficiency observed in the field was restricted sight distance from the off-ramps looking towards the bridge over I-75. The vertical curvature and railing of the bridge restricts the line of sight for vehicles turning from the off-ramps onto CR 274 (Bellville Road)/Lake Park Road. Warning signs are present along CR 274 (Bellville Road)/Lake Park Road alerting drivers of the limited sight distance with 35 mph advisory plates.

### 1.2 TRAFFIC DATA

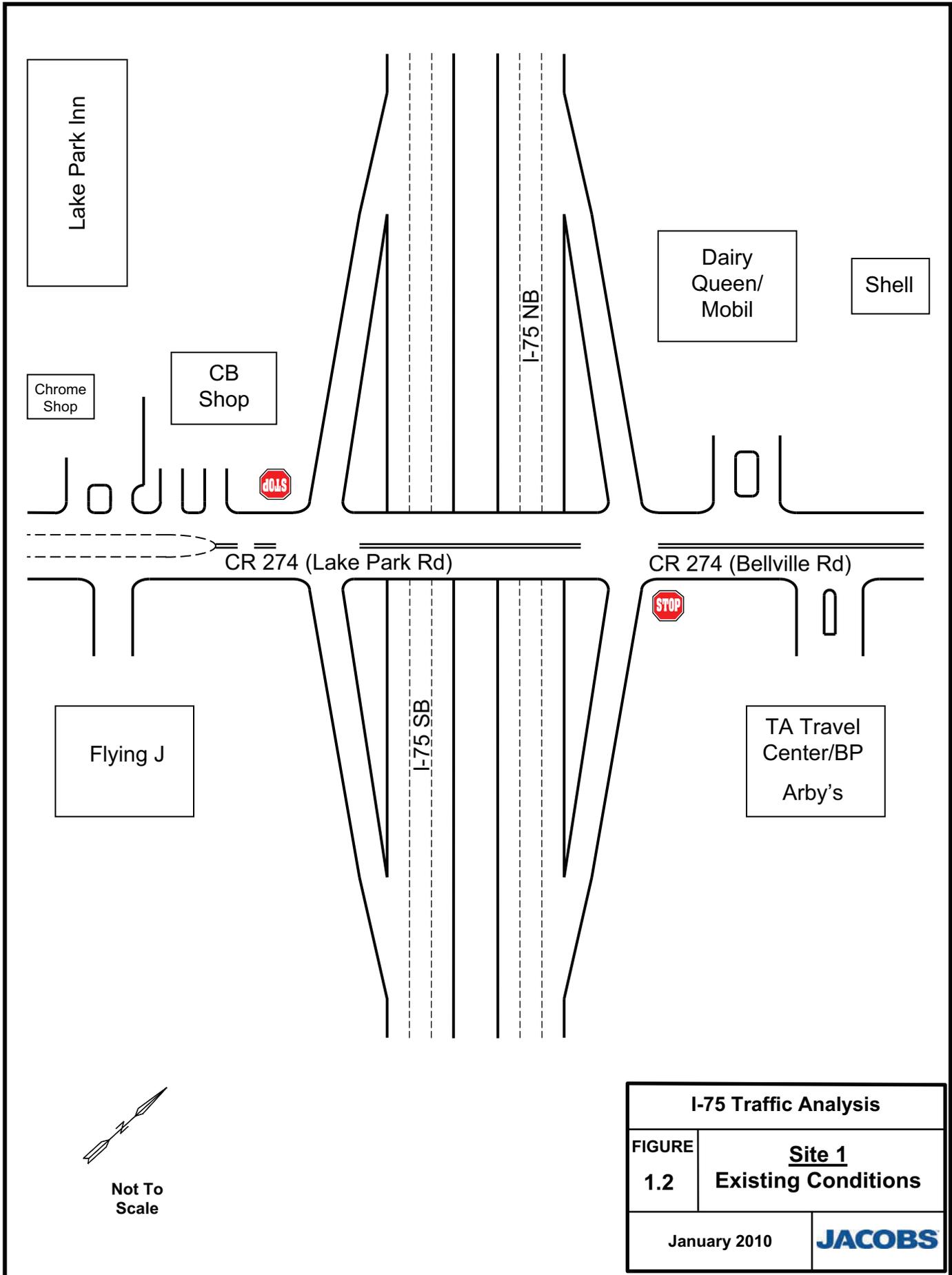
The analysis performed for this study utilized historical traffic volumes provided by the Georgia Department of Transportation (GDOT). To supplement the GDOT counts, additional traffic count data was collected at Site 1 in August 2006 as follows:

- 24-hour bi-directional vehicle classification and speed counts on CR 274 (Bellville Road)/Lake Park Road east and west of the interchange
- 24-hour bi-directional volume counts on northbound and southbound on-ramps and off-ramps at the interchange
- 24-hour bi-directional volume counts on I-75 south of the interchange



  
 Not To  
 Scale

<b>I-75 Traffic Analysis</b>	
<b>FIGURE</b> <b>1.1</b>	<b>Site 1</b> <b>Location Map</b>
January 2010	<b>JACOBS</b>



Lake Park Inn

Dairy Queen/  
Mobil

Shell

Chrome Shop

CB Shop



CR 274 (Lake Park Rd)

CR 274 (Bellville Rd)



Flying J

TA Travel Center/BP  
Arby's

I-75 NB

I-75 SB



Not To Scale

<b>I-75 Traffic Analysis</b>	
<b>FIGURE</b>	<b>Site 1</b>
<b>1.2</b>	<b>Existing Conditions</b>
January 2010	<b>JACOBS</b>

## Traffic Operations Analysis for I-75 at Five Locations

- AM and PM peak period turning movement counts at the ramp intersections with CR 274 (Bellville Road)/Lake Park Road

These counts were adjusted to Year 2009 traffic levels per instruction from GDOT OEL using GDOT database historical counts in the area. The 2009 counts are shown in Figure 1.3 for Site 1.

A review of the historical traffic volume data identified a growth rate of 2.25% per year for the five sites. Also, using the traffic count data collected at all five sites, the heavy vehicle percentage in the study area was determined to be 25%. Figure 1.4 shows the projected year 2034 traffic volumes.

The existing 2009 and Year 2034 traffic volumes were approved by GDOT OEL in December 2009.

### 1.3 TRAFFIC ANALYSIS

The 2034 design hourly volumes were used for the traffic analysis. Peak hour analyses were performed for the ramp intersections with CR 274 (Bellville Road)/Lake Park Road, the basic freeway sections, and the ramp merge and diverge movements with the I-75 mainline.

#### 1.3.1 Intersection Analysis

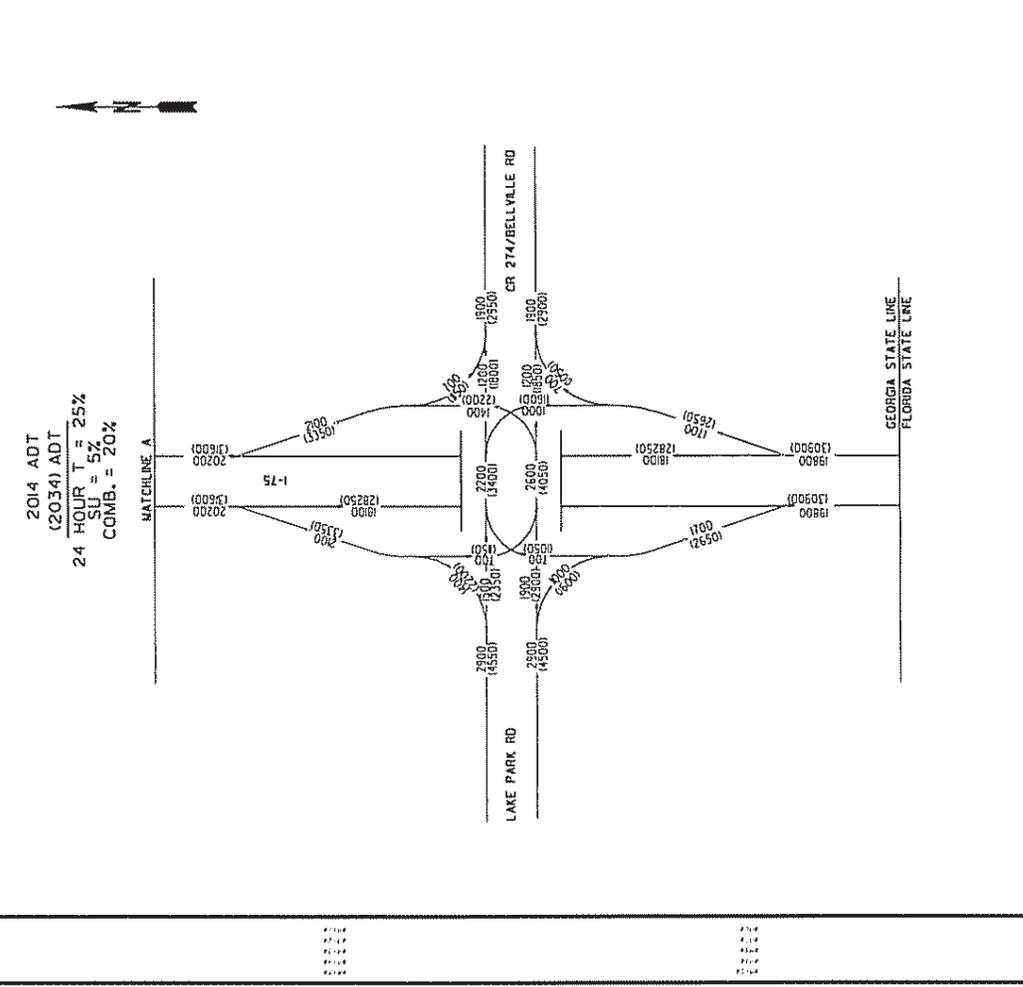
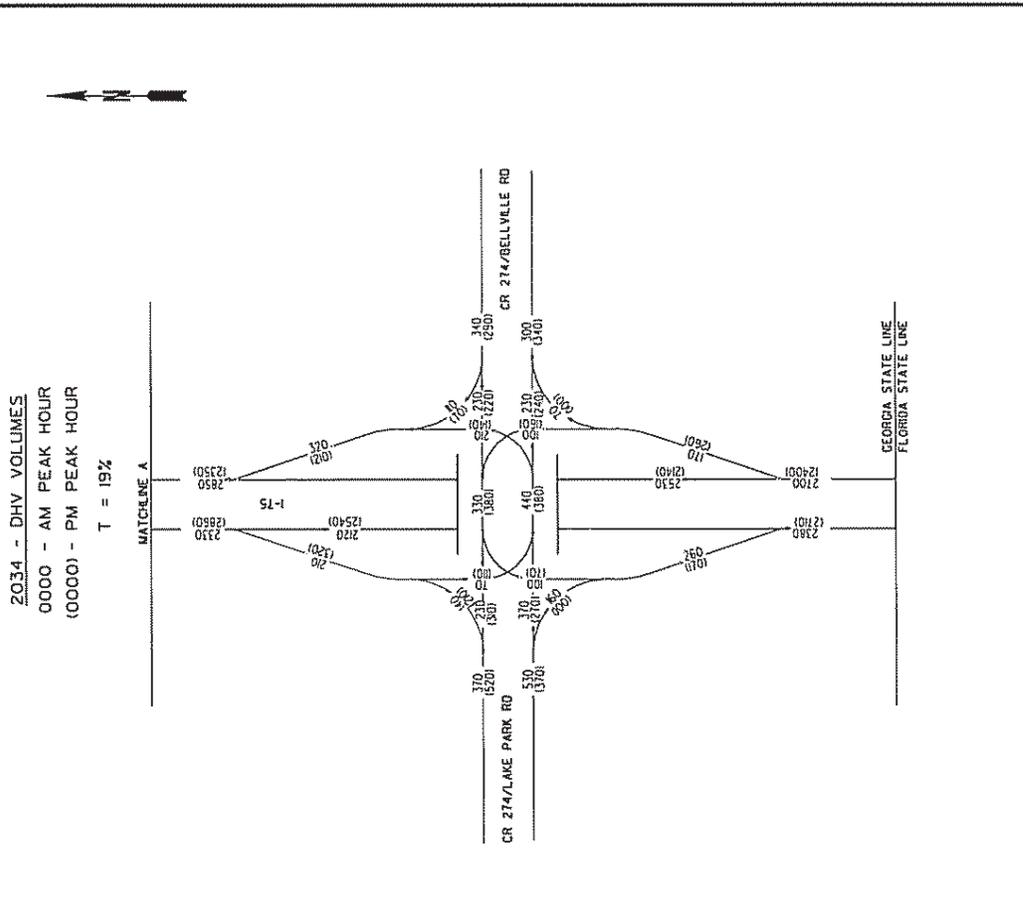
The future operations at the ramp intersections CR 274 (Bellville Road)/Lake Park Road were analyzed for the design year 2034 volumes. The existing lane configurations and traffic control devices for the ramp intersections were assumed. The analysis was performed to determine if the existing configuration and traffic control would be sufficient for the future year volumes. Synchro Software (Version 6) was used to evaluate the intersection operations.

Table 1.1 depicts the results of the intersection operations analysis. As shown, the ramp movements are expected to operate at Level of Service (LOS) E and F during the AM and PM peak hours based on the design year 2034 traffic projections. However, both ramp intersections would be expected to operate at overall LOS B or better during both peak hours if traffic signals were installed.

**Table 1.1 – Site 1 Year 2034 Ramp Intersection Operations**

Intersection	Control	Movement	AM Peak Hour		PM Peak Hour	
			LOS	Delay (Sec)	LOS	Delay (Sec)
CR 274 (Bellville Rd)/Lake Park Rd @ I-75 SB Ramps	Stop Sign	WBL	A	3.3	A	2
		SBL+R	E	36.3	F	>50
	Traffic Signal	Overall	B	11	B	12.4
CR 274 (Bellville Rd)/Lake Park Rd @ I-75 NB Ramps	Stop Sign	EBL	A	5.5	A	4
		NBL+R	F	>50	F	>50
	Traffic Signal	Overall	A	9.2	B	12





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 LOWNDEN COUNTY

SCALE: H. T. S.

STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE:

**TRAFFIC DIAGRAM**  
**FIGURE 1.4 - 5 TICS**  
 CR 274/LANE PARK RD/BELLEVILLE RD INTERCHANGE @ I-75

10-03

## 1.3.2 Basic Freeway Section

The I-75 segment north and south of CR 274 (Bellville Road)/Lake Park Road was analyzed under the build (eight-lane) and no-build (six-lane) scenarios for year 2034. Highway Capacity Software (HCS) 2000 was used to determine the expected LOS and vehicle density along the freeway sections. In order to effectively run the HCS analysis for the freeway section, the following assumptions were made:

- Base free-flow speed of 70 miles per hour (mph)
- Peak hour factor of 0.90
- Grade set as “level” (short grades of 2% or less)
- Heavy vehicle percentage of 19 percent

The results of the freeway segment analysis are shown in Table 1.2. In the no-build condition, the freeway is expected to operate at LOS B conditions during both the AM and PM peak hours. Under the build condition, the freeway will operate at LOS B or better during both peak hours.

**Table 1.2 – Site 1 Year 2034 Mainline Freeway Analysis**

Freeway Section	Condition	Direction	AM Peak Hour		PM Peak Hour	
			LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-75 North of CR 274 (Bellville Rd)/Lake Park Rd	No Build	NB	B	16.5	B	13.6
		SB	B	13.5	B	16.6
	Build	NB	B	12.4	A	10.2
		SB	A	10.1	A	10.1
I-75 South of CR 274 (Bellville Rd)/Lake Park Rd	No Build	NB	B	15.6	B	13.9
		SB	B	13.8	B	15.7
	Build	NB	B	11.7	A	10.4
		SB	A	10.3	B	11.8

## 1.3.3 Ramp Merge and Diverge Analysis

The I-75 ramps at CR 274 (Bellville Road)/Lake Park Road were analyzed at their merge or diverge points with I-75. HCS 2000 was used to determine the expected LOS and vehicle density at the merge and diverge locations.

The ramp analysis for the no-build condition was based on ramp measurements conducted in the field to determine the exact length of ramps (gore to intersection with cross street), length of acceleration/deceleration lanes, taper distances, and distance between the gore area of the adjacent ramp. For the build condition, the measurements were taken from the proposed concept drawing to reflect the longer merge areas and greater distances between ramps of a rebuilt interchange.

Like the freeway sections, several assumptions were needed to run the HCS analysis for the ramp merge and diverge analysis, including:

## Traffic Operations Analysis for I-75 at Five Locations

- Ramp free-flow speed of 35 mph
- Peak hour factor of 0.90
- Heavy vehicle percentage of 19 percent
- Grade of 3% for the diamond-style ramps
- “Level” freeway setting for I-75 in advance of the ramps

The results of the merge/diverge analysis are shown in Table 1.3. As shown, all movements are expected to operate at LOS C or better with the six-lane no build scenario. The six-lane build scenario will improve all ramp merge and diverge movements to LOS B.

**Table 1.3 – Site 1 Year 2034 Merge and Diverge Analysis**

Freeway Section	Condition	AM Peak Hour		PM Peak Hour	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-75 North Off-Ramp	No Build	C	20.8	B	19.1
	Build	B	12.2	B	11.3
I-75 North On-Ramp	No Build	B	17.4	B	14.2
	Build	B	13.2	B	11.3
I-75 South Off-Ramp	No Build	B	18.9	C	22.4
	Build	B	10.7	B	13.8
I-75 South On-Ramp	No Build	B	14.6	C	16.2
	Build	B	11.5	B	12.5

### 1.4 SIGNAL WARRANT ANALYSIS

Based on the results of the operations analysis, the two ramp intersections were identified as requiring a traffic signal in order to maintain acceptable Levels of Service during the peak hours in the design year 2034. In order to evaluate the need for a traffic signal, warrant analyses were performed for each of the intersections for opening year 2012 traffic volume projections. Approach volumes for each intersection were compared to the traffic signal warrants criteria contained in the 2003 Manual on Uniform Traffic Control Devices (MUTCD). Based on the warrant analyses both of the ramp intersections satisfy the criteria for installing a traffic signal based on the opening year 2012 traffic projections.

### 1.5 CRASH DATA

Historic crash data was analyzed for years 2006-2008 for CR 274 (Bellville Road)/Lake Park Road, the ramps, and the interstate mainline north and south of the interchange. Crash data was analyzed for approximately one-half mile on CR 274 (Bellville Road)/Lake Park Road in the vicinity of I-75, and on I-75 mainline for 0.5 miles on either side of the interchange. Figure 1.5 provides a summary of the number of crashes by location.

## Traffic Operations Analysis for I-75 at Five Locations

In total, 7 crashes occurred on CR 274 (Bellville Road)/Lake Park Road over the three year period. I-75 mainline had a total of 13 collisions over the three year period, and a total of 26 crashes occurred on the four ramps with the most occurring on the northbound off-ramp, which experienced a total of 16 crashes over the three year period.

In order to gauge the frequency of collisions occurring in the study area, crash rates were calculated for CR 274 (Bellville Road)/Lake Park Road, I-75 mainline, and the ramps, and were compared to the statewide average for similar facilities. CR 274 (Bellville Road)/Lake Park Road was compared with Rural Major Collector routes and the I-75 mainline was compared with Rural Interstate. Tables 1.4-1.6 summarize how the compiled 2006-2008 crash data compares with statewide averages for crash, injury and fatality rates.

**Table 1.4 – Site 1 Crash Rates for CR 274 (Bellville Road)/Lake Park Road**

Year	# of Crashes	Crash Rate per 100 MVT	Statewide Average Rate per 100 MVT	# of Injury Crashes	Injury Crash Rate per 100 MVT	Statewide Average Injury Rate per 100 MVT	# of Fatality Crashes	Fatality Crash Rate per 100 MVT	Statewide Average Fatality Rate per 100 MVT
2006	4	974	156	2	487	54	0	0.00	1.56
2007	2	522	168	0	0	57	0	0.00	1.87
2008	1	267	141	1	267	46	0	0.00	1.45

Note: Crash data represents approximately 0.5 mile of roadway

**Table 1.5 – Site 1 Crash Rates for I-75 near CR 274 (Bellville Road)/Lake Park Road**

Year	# of Crashes	Crash Rate per 100 MVT	Statewide Average Rate per 100 MVT	# of Injury Crashes	Injury Crash Rate per 100 MVT	Statewide Average Injury Rate per 100 MVT	# of Fatality Crashes	Fatality Crash Rate per 100 MVT	Statewide Average Fatality Rate per 100 MVT
2006	3	38	61	0	0	19	0	0.00	0.84
2007	7	92	58	3	39	17	1	13.00	0.82
2008	3	41	62	1	14	18	0	0.00	0.78

Note: Crash data represents approximately 1 mile of roadway

## Traffic Operations Analysis for I-75 at Five Locations

**Table 1.6 – Site 1 Crash Rates for I-75 Ramps at CR 274 (Bellville Road)/Lake Park Road**

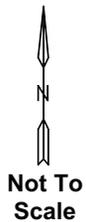
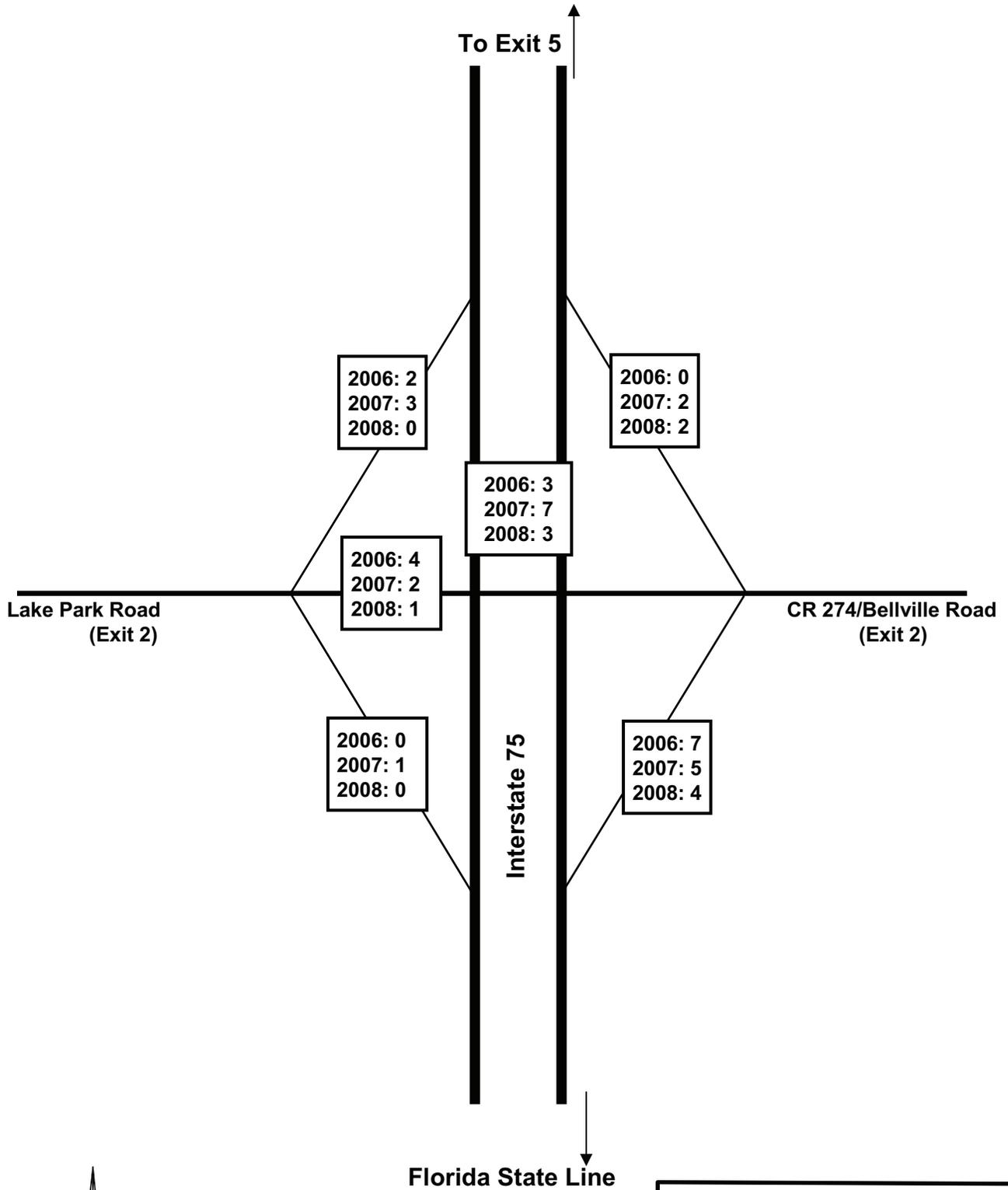
Year	# of Crashes	Intersection Crash Rate per MEV	# of Injury Crashes	Intersection Injury Crash Rate per MEV	# of Fatality Crashes	Intersection Fatality Crash Rate per MEV
<b>Northbound Off-Ramp</b>						
2006	7	12.6	5	9.0	0	0
2007	5	45.1	1	1.8	0	0
2008	4	36.0	3	5.4	0	0
<b>Northbound On-Ramp</b>						
2006	0	0.0	0	0.0	0	0
2007	2	2.9	1	1.4	0	0
2008	2	2.9	1	1.4	0	0
<b>Southbound Off-Ramp</b>						
2006	2	2.9	0	0.0	0	0
2007	3	4.3	0	0.0	0	0
2008	0	0.0	0	0.0	0	0
<b>Southbound On-Ramp</b>						
2006	0	0.0	0	0.0	0	0
2007	1	1.8	0	0.0	0	0
2008	0	0.0	0	0.0	0	0

Note: Crash data at intersection ramp

As shown in Table 1.4, the crash and injury rates for CR 274 (Bellville Road)/Lake Park Road generally exceed the statewide averages. This is mainly due to the relatively low traffic volumes on CR 274 (Bellville Road)/Lake Park Road as one or two accidents can cause the crash rate to be higher than the statewide average. No fatalities occurred on CR 274 (Bellville Road)/Lake Park Road in the vicinity of the interchange.

I-75 crash and injury rates in the vicinity of the interchange were generally less than the statewide averages, as shown in Table 1.5, with exception of Year 2007. One fatality occurred on I-75 in the vicinity of the interchange in Year 2007.

As shown in Table 1.6, the northbound off-ramp has a relatively higher crash rate and injury crash rate compared to the other ramps at the interchange. No fatalities occurred on the four interchange ramps.



LEGEND	
46	# of Crashes

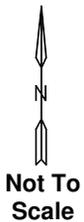
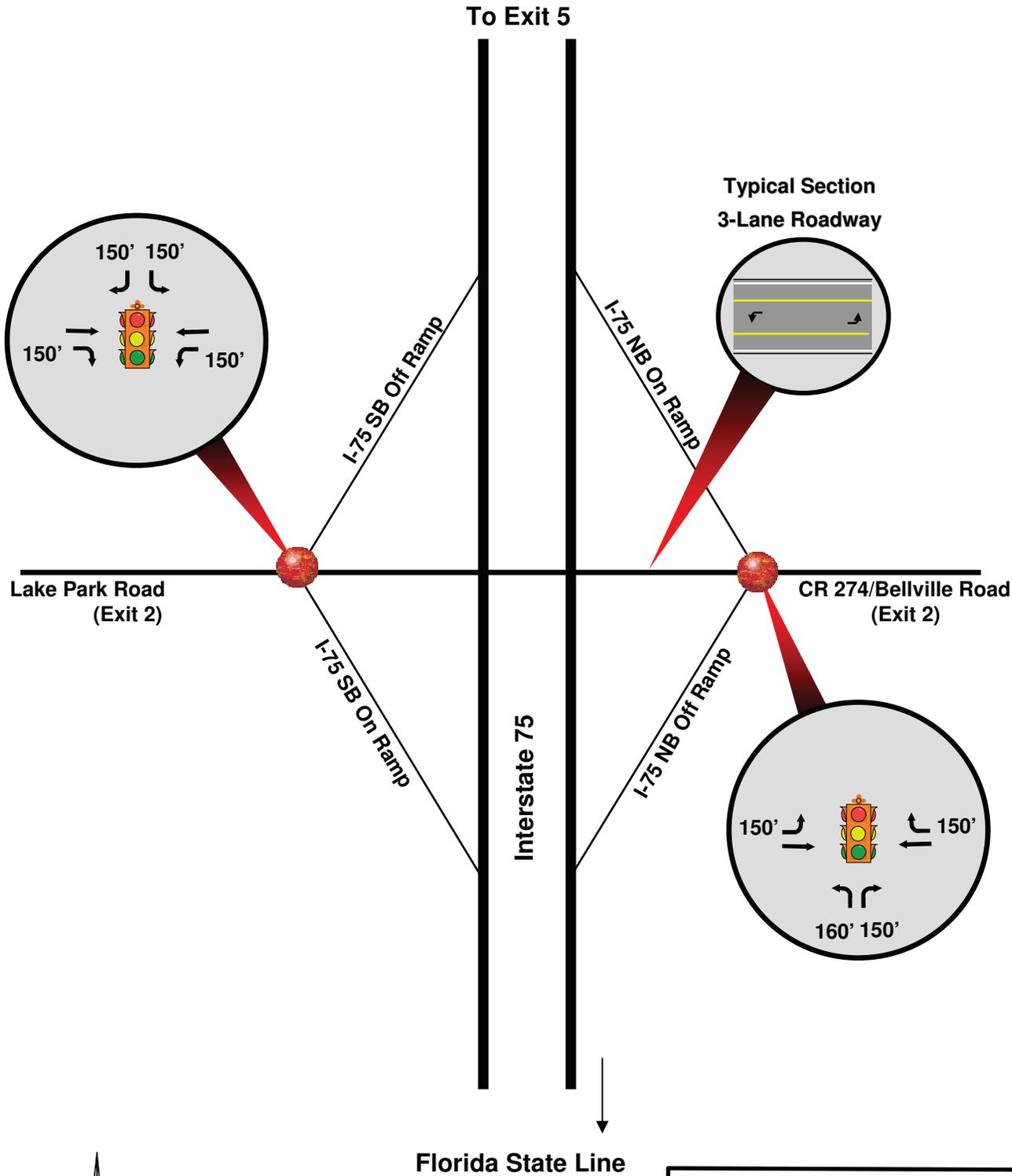
I-75 Traffic Analysis	
FIGURE	Site 1
1.5	Historic Crash Data
January 2010	<b>JACOBS</b>

### 1.6 DESIGN RECOMMENDATIONS

Based on the traffic analysis, the I-75 ramp intersections with CR 274 (Bellville Road)/Lake Park Road will require additional capacity to meet the projected traffic volumes. To maintain the desirable through capacity, the new bridge should be developed as a three-lane facility that has back to back left-turn lanes, based on the year 2034 traffic projections.

It is recommended that the new bridge be constructed as a three-lane bridge that includes one through lane in each direction and back to back left turn lanes. Figure 1.6 shows the recommended lane geometry and the turn lane storage lengths at the ramp intersections.

From the capacity analysis at the ramp intersections, it was determined that traffic signals are required for additional capacity during the peak hours. Based on the projected traffic volumes in opening year 2012, the traffic signals are warranted. It is recommended that the ramp intersections with the proposed geometry shown in Figure 1.6 be constructed. As shown, a minimum of 150 feet of turn lane storage should be provided at the ramp intersections and should include channelized right turn lanes. The entrance and exit ramps to and from I-75 will be lengthened and widened to accommodate future traffic volumes, provide adequate storage, and provide sufficient acceleration/deceleration distances for entering and exiting traffic.



I-75 Traffic Analysis	
FIGURE	Site 1
1.6	Lane Geometry & Storage Lengths
January 2010	<b>JACOBS</b>

## 2 – Site 2: SR 376 Lakes Boulevard

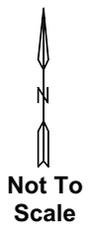
### 2.1 EXISTING CONDITIONS

The I-75 interchange with SR 376 (Lakes Boulevard) is located approximately five miles north of the Florida State Line. Figure 2.1 shows the location of the interchange (Site 2). SR 376 (Lakes Boulevard) is a five-lane with center turning lane undivided facility with a posted speed limit of 35 miles per hour (mph) extending west from US 41 spanning I-75 to Loch Laurel Road. Its Functional Classification is Rural Major Collector. To the west of Loch Laurel Road, CR 376 is named Clyattville Lake Park Road and is a two-lane facility that extends to SR 31 (Madison Highway). West of the interchange, gas stations, hotels and tourist shops exist on the north and south sides of CR 376 (Lakes Boulevard). Similarly east of the interchange, there are gas stations and fast food restaurants. Approximately 0.15 mile to the west of the interchange is the signalized intersection of Jewell Futch Road/Timber Drive with SR 376 (Lakes Boulevard), and approximately 0.15 mile to the east of the interchange is the signalized intersection of Mill Store Road with SR 376 (Lakes Boulevard). Figure 2.2 depicts existing conditions at the interchange.

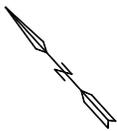
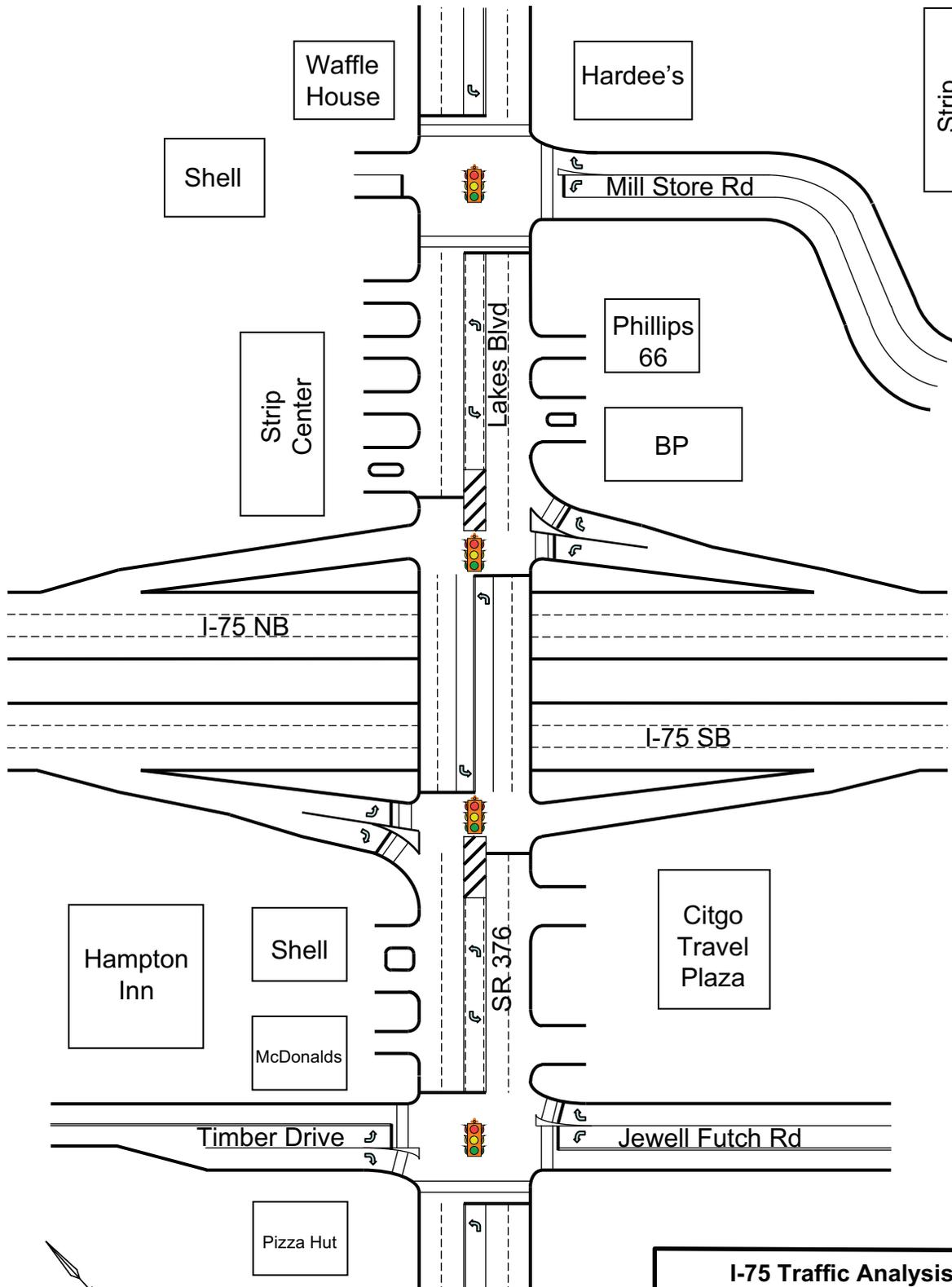
Single lane ramps provide access between SR 376 (Lakes Boulevard) and I-75, and separate left and right turn lanes are provided on the off-ramp intersections. The off-ramp approaches to SR 376 (Lakes Boulevard) are signalized.

#### 2.1.1 Field Observations

Field observations at the site revealed moderate traffic volumes and minimal delay for all movements at the ramp intersections with SR 376 (Lakes Boulevard). No major operational deficiencies were observed other than the significant driveways movements at the various commercial establishments.



<b>I-75 Traffic Analysis</b>	
<b>FIGURE</b> <b>2.1</b>	<b>Site 2</b> <b>Location Map</b>
January 2010	<b>JACOBS</b>



Not To Scale

I-75 Traffic Analysis	
FIGURE	<b>Site 2</b>
<b>2.2</b>	<b>Existing Conditions</b>
January 2010	<b>JACOBS</b>

## 2.2 TRAFFIC DATA

The analysis performed for this study utilized historical traffic volumes provided by the Georgia Department of Transportation (GDOT). To supplement the GDOT counts, additional traffic count data was collected at Site 2 in August 2006 as follows:

- 24-hour bi-directional vehicle classification and speed counts on SR 376 (Lakes Boulevard) east and west of the interchange;
- 24-hour bi-directional volume counts on:
  - northbound on-ramps and off-ramps at the interchange
  - southbound on-ramps and off-ramps at the interchange
  - Timber Drive, Jewell Futch Road and SR 376 (Lakes Boulevard) west of its' intersection with Timber Drive/Jewell Futch Road
  - Mill Store Road, SR 376 (Lakes Boulevard) east of its' intersection with Mill Store Road, and the north leg driveway to this intersection
- AM and PM peak period turning movement counts at the ramp intersections with SR 376 (Lakes Boulevard), and SR 376 (Lakes Boulevard) intersections with Jewell Futch Road/Timber Drive and with Mill Store Road.

These counts were adjusted to Year 2009 traffic levels per instruction from GDOT OEL using GDOT database historical counts in the area. The 2009 counts are shown in Figure 2.3 for Site 2.

A review of the historical traffic volume data identified a growth rate of 2.25% per year for the five sites. Also, using the traffic count data collected at all five sites, the heavy vehicle percentage in the study area was determined to be 25%. Figure 2.4 shows the projected year 2034 traffic volumes.

The existing 2009 and Year 2034 traffic volumes were approved by GDOT OEL in December 2009.

## 2.3 TRAFFIC ANALYSIS

The 2034 design hourly volumes were used for the traffic analysis. Peak hour analyses were performed for the ramp intersections with SR 376 (Lakes Boulevard), the two intersections on either side of the interchange, the basic freeway sections, and the ramp merge and diverge movements with the I-75 mainline.

### 2.3.1 Intersection Analysis

The future operations at the ramp and adjacent intersections with SR 376 (Lakes Boulevard) were analyzed for the design year 2034 volumes. The existing lane configurations and traffic control devices for the intersections were assumed. The analysis was performed to determine if the existing configuration and traffic control would be sufficient for the future year volumes. Synchro Software (Version 6) was used to evaluate the intersection operations.

## Traffic Operations Analysis for I-75 at Five Locations

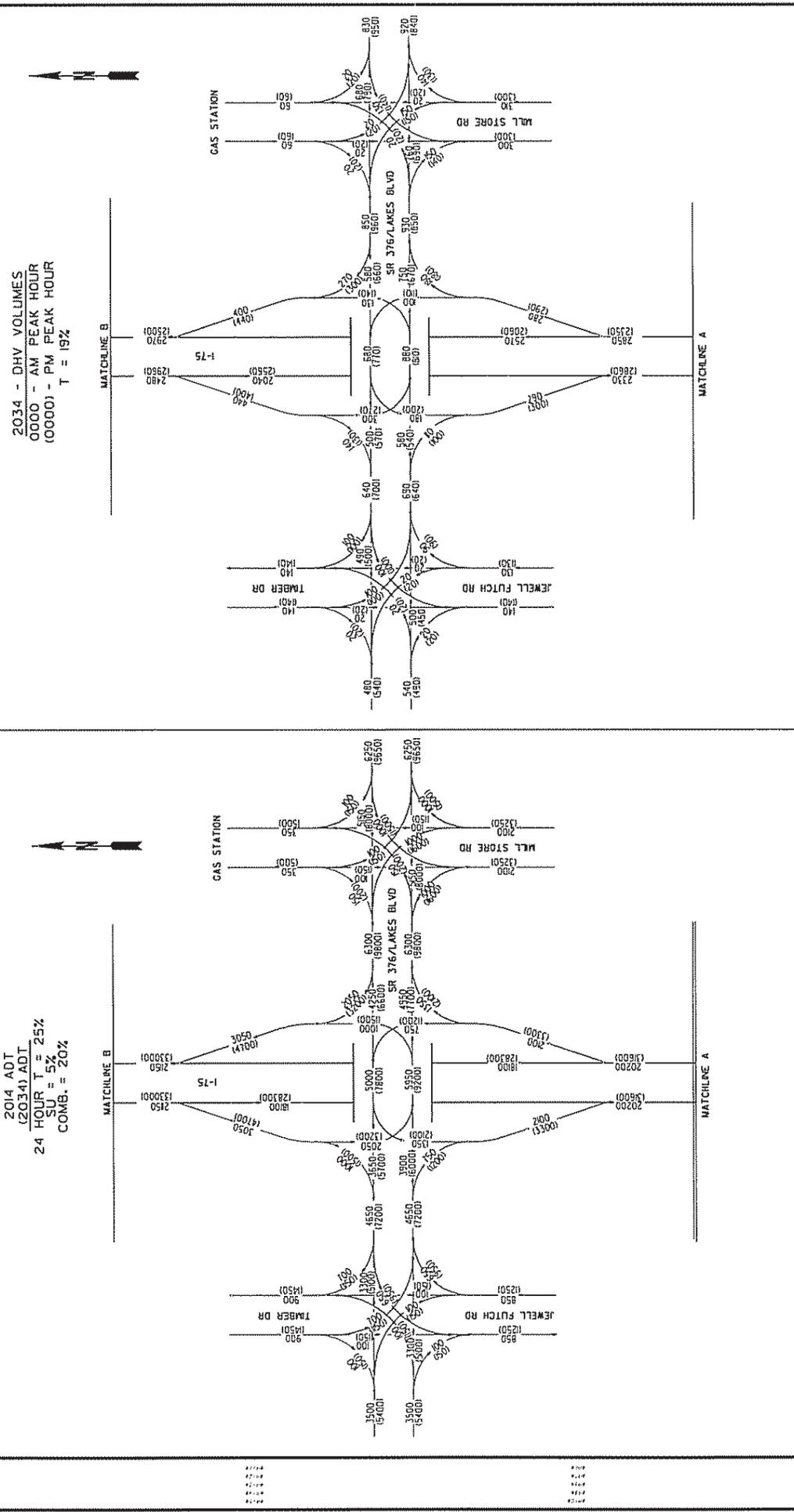
Table 2.1 depicts the results of the intersection operations analysis. As shown, the two ramp intersections are expected to operate at overall Level of Service (LOS) B or better during the both the AM and PM peak hours based on the design year 2034 traffic projections. Both ramp intersections would be expected to operate at overall LOS B during both peak hours if channelized right turn lanes were constructed and traffic signals were to be coordinated. Both the SR 376 (Lakes Boulevard) intersections with Jewell Futch Road/Timber Drive and with Mill Store Road are expected to operate at overall LOS B or better during the AM and PM peak hours.

**Table 2.1 – Site 2 Year 2034 Ramp and Adjacent Intersection Operations**

Intersection	Control	Movement	AM Peak Hour		PM Peak Hour	
			LOS	Delay (Sec)	LOS	Delay (Sec)
SR 376 (Lakes Blvd) @ I-75 SB Ramps	Traffic Signal	Overall	B	15.9	B	16.3
	Traffic Signal w/coord & chan Ins	Overall	B	13.5	B	16.4
SR 376 (Lakes Blvd) @ I-75 NB Ramps	Traffic Signal	Overall	B	10.4	B	11.8
	Traffic Signal w/coord & chan Ins	Overall	B	10.7	B	11
SR 376 (Lakes Blvd) @ Jewell Futch Rd/Timber Dr	Traffic Signal	Overall	A	9.1	B	11.5
	Traffic Signal w/coord	Overall	B	10.8	B	11.3
SR 376 (Lakes Blvd) @ Mill Store Rd	Traffic Signal	Overall	B	11	B	10.2
	Traffic Signal w/coord	Overall	A	9.7	B	14.1



PROJECT NUMBER 0007-386	COUNTY LOWNDES	SHEET NO. 1-75	TOTAL SHEETS 1-75
PROJECT NAME SR 376/LAKES BLVD INTERCHANGE	DESIGNER JACOBS	DATE 10/06	SCALE AS SHOWN



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**LOWNDES COUNTY**

**SCALE: H. T. S.**

**STATE OF GEORGIA**  
**DEPARTMENT OF TRANSPORTATION**  
**OFFICE:**

**TRAFFIC DIAGRAM**  
**FIGURE 2.4 - 2014/2034 ADT & PEAK HOUR**  
**SITE 2**  
**SR 376/LAKES BLVD**  
**INTERCHANGE 1-75**

**10-06**

## 2.3.2 Basic Freeway Section

The I-75 segment north and south of SR 376 (Lakes Boulevard) was analyzed under the build (eight-lane) and no-build (six-lane) scenarios for year 2034. Highway Capacity Software (HCS) 2000 was used to determine the expected LOS and vehicle density along the freeway sections. In order to effectively run the HCS analysis for the freeway section, the following assumptions were made:

- Base free-flow speed of 70 miles per hour (mph)
- Peak hour factor of 0.90
- Grade set as “level” (short grades of 2% or less)
- Heavy vehicle percentage of 19 percent

The results of the freeway segment analysis are shown in Table 2.2. In the no-build condition, the freeway is expected to operate at LOS B conditions during both the AM and PM peak hours. Under the build condition, the freeway will operate at LOS B or better during both peak hours.

**Table 2.2 – Site 2 Year 2034 Mainline Freeway Analysis**

Freeway Section	Condition	Direction	AM Peak Hour		PM Peak Hour	
			LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-75 North of SR 376 (Lakes Blvd)	No Build	NB	B	17.2	B	14.5
		SB	B	14.4	B	17.1
	Build	NB	B	12.9	A	10.9
		SB	A	10.8	B	12.9
I-75 South of SR 376 (Lakes Blvd)	No Build	NB	B	16.5	B	13.6
		SB	B	13.5	B	16.6
	Build	NB	B	12.4	A	10.2
		SB	A	10.1	B	12.4

## 2.3.3 Ramp Merge and Diverge Analysis

The I-75 ramps at SR 376 (Lakes Boulevard) were analyzed at their merge or diverge points with I-75. HCS 2000 was used to determine the expected LOS and vehicle density at the merge and diverge locations.

The ramp analysis for the no-build condition was based on ramp measurements conducted in the field to determine the exact length of ramps (gore to intersection with cross street), length of acceleration/deceleration lanes, taper distances, and distance between the gore area of the adjacent ramp. For the build condition, the measurements were taken from the proposed concept drawing to reflect the longer merge areas and greater distances between ramps of a rebuilt interchange.

Like the freeway sections, several assumptions were needed to run the HCS analysis for the ramp merge and diverge analysis, including:

## Traffic Operations Analysis for I-75 at Five Locations

- Ramp free-flow speed of 35 mph
- Peak hour factor of 0.90
- Heavy vehicle percentage of 19 percent
- Grade of 3% for the diamond-style ramps
- “Level” freeway setting for I-75 in advance of the ramps

The results of the merge/diverge analysis are shown in Table 2.3. As shown, all movements are expected to operate at LOS C or better with the six-lane no build scenario. The eight-lane build scenario will improve all ramp merge and diverge movements to LOS B.

**Table 2.3 – Site 2 Year 2034 Merge and Diverge Analysis**

Freeway Section	Condition	AM Peak Hour		PM Peak Hour	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-75 North Off-Ramp	No Build	C	22.7	B	19.6
	Build	B	13.5	B	11.3
I-75 North On-Ramp	No Build	B	25.2	B	16.4
	Build	B	13.8	B	12.3
I-75 South Off-Ramp	No Build	C	20.7	C	23.5
	Build	B	12.8	B	14.7
I-75 South On-Ramp	No Build	B	13.5	B	16.6
	Build	B	11.4	B	13.2

### 2.4 CRASH DATA

Historic crash data was analyzed for years 2006-2008 for SR 376 (Lakes Boulevard), the ramps, and the interstate mainline north and south of the interchange. Crash data was analyzed for approximately one-half mile on SR 376 (Lakes Boulevard) in the vicinity of I-75, and on I-75 mainline for 0.5 miles on either side of the interchange. Figure 2.5 provides a summary of the number of crashes by location.

In total, 83 crashes occurred on SR 376 (Lakes Boulevard) over the three year period.

In order to gauge the frequency of collisions occurring in the study area, crash rates were calculated for SR 376 (Lakes Boulevard), I-75 mainline, and the ramps, and were compared to the statewide average for similar facilities. SR 376 (Lakes Boulevard) was compared with Rural Major Collector routes and the I-75 mainline was compared with Rural Interstate. Tables 2.4-2.6 summarize how the compiled 2006-2008 crash data compares with statewide averages for crash, injury and fatality rates.

## Traffic Operations Analysis for I-75 at Five Locations

**Table 2.4 – Site 2 Crash Rates for SR 376 (Lakes Boulevard)**

Year	# of Crashes	Crash Rate per 100 MVT	Statewide Average Rate per 100 MVT	# of Injury Crashes	Injury Crash Rate per 100 MVT	Statewide Average Injury Rate per 100 MVT	# of Fatality Crashes	Fatality Crash Rate per 100 MVT	Statewide Average Fatality Rate per 100 MVT
2006	35	1925	203	10	550	73	0	0.00	3.28
2007	25	1468	203	8	470	72	0	0.00	3.27
2008	23	1295	194	5	282	68	0	0.00	3.03

Note: Crash data represents approximately 0.5 mile of roadway

**Table 2.5 – Site 2 Crash Rates for I-75 near SR 376 (Lakes Boulevard)**

Year	# of Crashes	Crash Rate per 100 MVT	Statewide Average Rate per 100 MVT	# of Injury Crashes	Injury Crash Rate per 100 MVT	Statewide Average Injury Rate per 100 MVT	# of Fatality Crashes	Fatality Crash Rate per 100 MVT	Statewide Average Fatality Rate per 100 MVT
2006	10	124	61	5	62	19	0	0.00	0.84
2007	2	26	58	1	13	17	0	0.00	0.82
2008	12	159	62	6	79	18	1	13.00	0.78

Note: Crash data represents approximately 1 mile of roadway

**Table 2.6 – Site 2 Crash Rates for I-75 Ramps at SR 376 (Lakes Boulevard)**

Year	# of Crashes	Intersection Crash Rate per MEV	# of Injury Crashes	Intersection Injury Crash Rate per MEV	# of Fatality Crashes	Intersection Fatality Crash Rate per MEV
<b>Northbound Off-Ramp</b>						
2006	6	8.7	2	2.9	0	0
2007	3	4.3	0	0.0	0	0
2008	4	5.8	1	1.4	0	0
<b>Northbound On-Ramp</b>						
2006	2	2.0	0	0.0	0	0
2007	1	1.0	0	0.0	0	0
2008	1	1.0	0	0.0	0	0
<b>Southbound Off-Ramp</b>						
2006	3	3.0	1	1.0	0	0
2007	3	3.0	3	3.0	0	0
2008	6	6.1	0	0.0	0	0
<b>Southbound On-Ramp</b>						
2006	1	1.0	0	0.0	0	0
2007	0	0.0	0	0.0	0	0
2008	1	1.0	1	1.0	0	0

Note: Crash data at intersection ramp

## Traffic Operations Analysis for I-75 at Five Locations

As shown in Table 2.4, the crash and injury rate for SR 376 (Lakes Boulevard) exceeds the statewide averages. This is due, in part, to the numerous driveways on SR 376 (Lakes Boulevard) in the vicinity of the interchange and the conflicting turning movements associated with them. No fatalities occurred on SR 376 (Lakes Boulevard) in the vicinity of the interchange.

I-75 crash and injury rates in the vicinity of the interchange were less than the statewide average in 2007 only, as shown in Table 2.5. One fatality occurred on I-75 in the vicinity of the interchange in Year 2008.

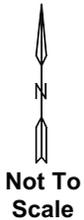
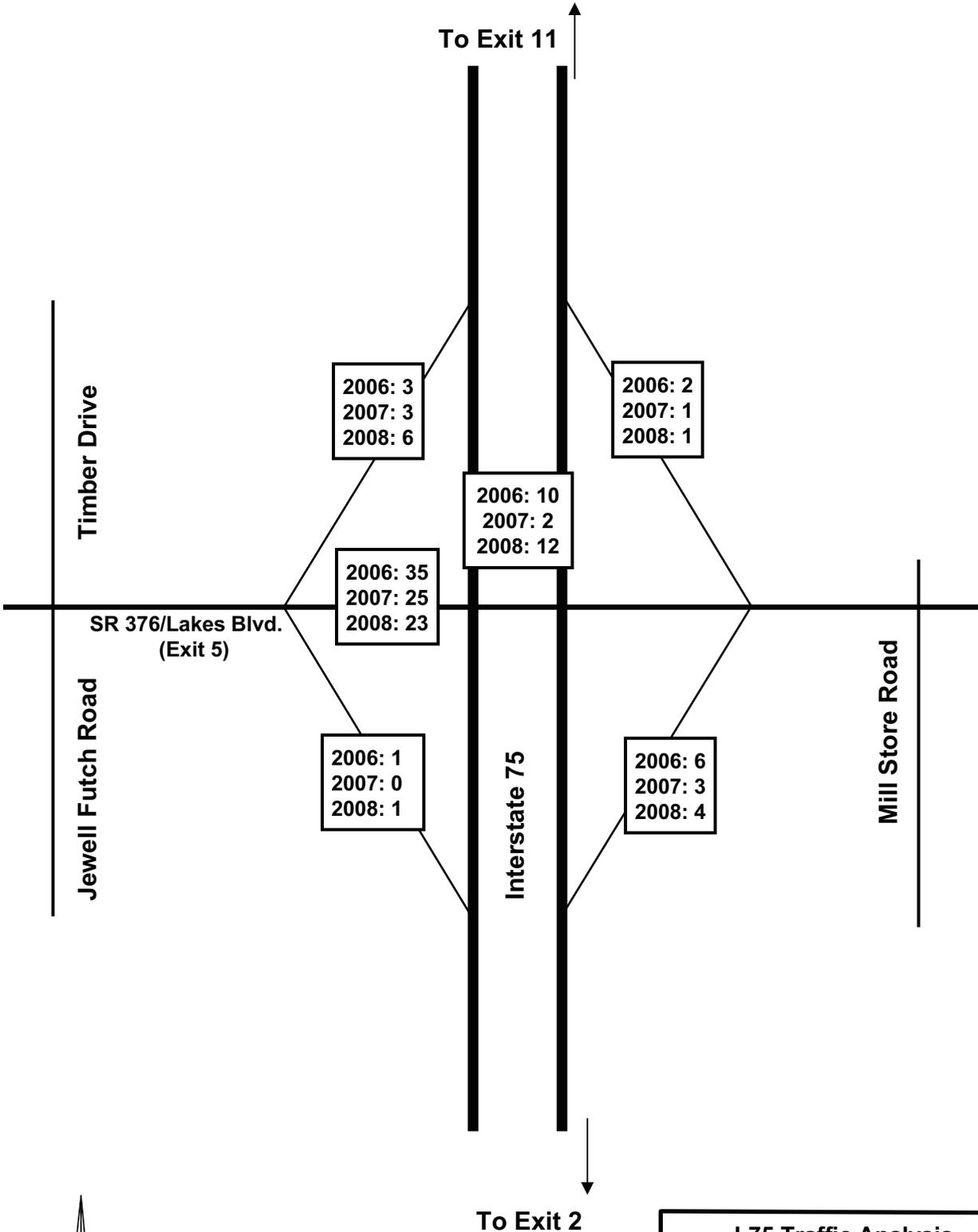
As shown in Table 2.6, the crash and injury rates on the two off-ramps were higher than the on-ramps. No fatalities occurred on the SR 376 (Lakes Boulevard) interchange ramps.

A more detailed analysis of crash types will need to be performed in order to make any design recommendations, this will be done at the Preliminary Design stage.

### 2.6 DESIGN RECOMMENDATIONS

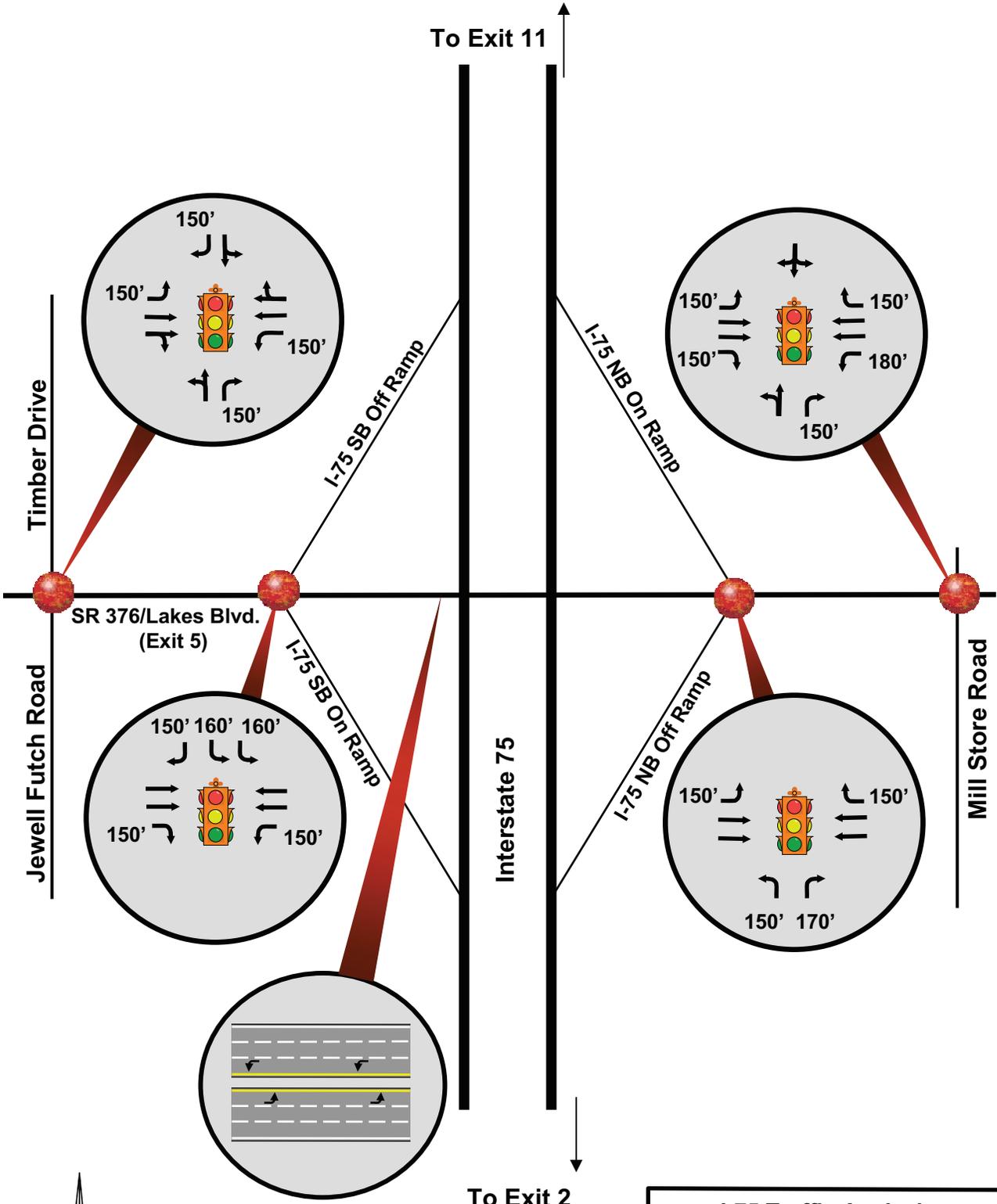
Based on the traffic analysis, the I-75 ramp intersections with SR 376 (Lakes Boulevard), and the SR 376 (Lakes Boulevard) intersections with Jewell Futch Road/Timber Drive and with Mill Store Road are expected to provide sufficient capacity to meet the projected traffic volumes. To maintain the desirable through capacity, the new bridge should be developed at least as a six-lane facility that has separate left-turn lanes in each direction, based on the year 2034 traffic projections.

It is recommended that the new bridge be constructed as a six-lane bridge that includes two through lanes and a left-turn lane in each direction. Figure 2.6 shows the recommended lane geometry and the turn lane storage lengths at the ramp intersections. As shown, a minimum of 150 feet of turn lane storage should be provided at the ramp intersections and should include channelized right turn lanes. The entrance and exit ramps to and from I-75 will be lengthened and widened to accommodate future traffic volumes, provide adequate storage, and provide sufficient acceleration/deceleration distances for entering and exiting traffic.



LEGEND	
138	# of Crashes

I-75 Traffic Analysis	
FIGURE	Site 2
2.5	Historic Crash Data
January 2010	<b>JACOBS</b>



Not To Scale

I-75 Traffic Analysis	
FIGURE 2.6	Site 2 Lane Geometry & Storage Lengths
January 2010	<b>JACOBS</b>

## 3 – Site 3: CR 783 Loch Laurel Road

### 3.1 EXISTING CONDITIONS

The CR 783 (Loch Laurel Road) overpass over I-75 is located approximately 6.5 miles north of the Florida State Line. Figure 3.1 shows the location of the overpass (Site 3). CR 783 (Loch Laurel Road) is a two-lane undivided facility with a posted speed limit of 45 miles per hour (mph) extending south from the Florida State Line to SR 31 (Madison Highway) to the north. Its Functional Classification is Rural Major Collector. Both east and west of I-75 in the vicinity of CR 783 (Loch Laurel Road) is undeveloped farmland. Approximately 300 feet to the west of I-75 is the unsignalized intersection of Frontage Road with CR 783 (Loch Laurel Road). Figure 3.2 depicts existing conditions at the overpass.

#### 3.1.1 Field Observations

Field observations at the site revealed low traffic volumes and minimal delay for all movements at the CR 783 (Loch Laurel Road) intersection with Frontage Road. Turning traffic from Frontage Road has limited sight distance due to the bridge rails and intersection skew. No additional operational deficiencies were observed.

### 3.2 TRAFFIC DATA

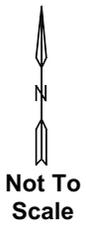
The analysis performed for this study utilized historical traffic volumes provided by the Georgia Department of Transportation (GDOT). To supplement the GDOT counts, additional traffic count data was collected at Site 3 in August 2006 as follows:

- 24-hour bi-directional vehicle classification and speed counts on CR 783 (Loch Laurel Road) east of I-75
- 24-hour bi-directional volume counts on Frontage Road north of CR 783 (Loch Laurel Road)
- AM and PM peak period turning movement counts at the CR 783 (Loch Laurel Road) intersection with Frontage Road

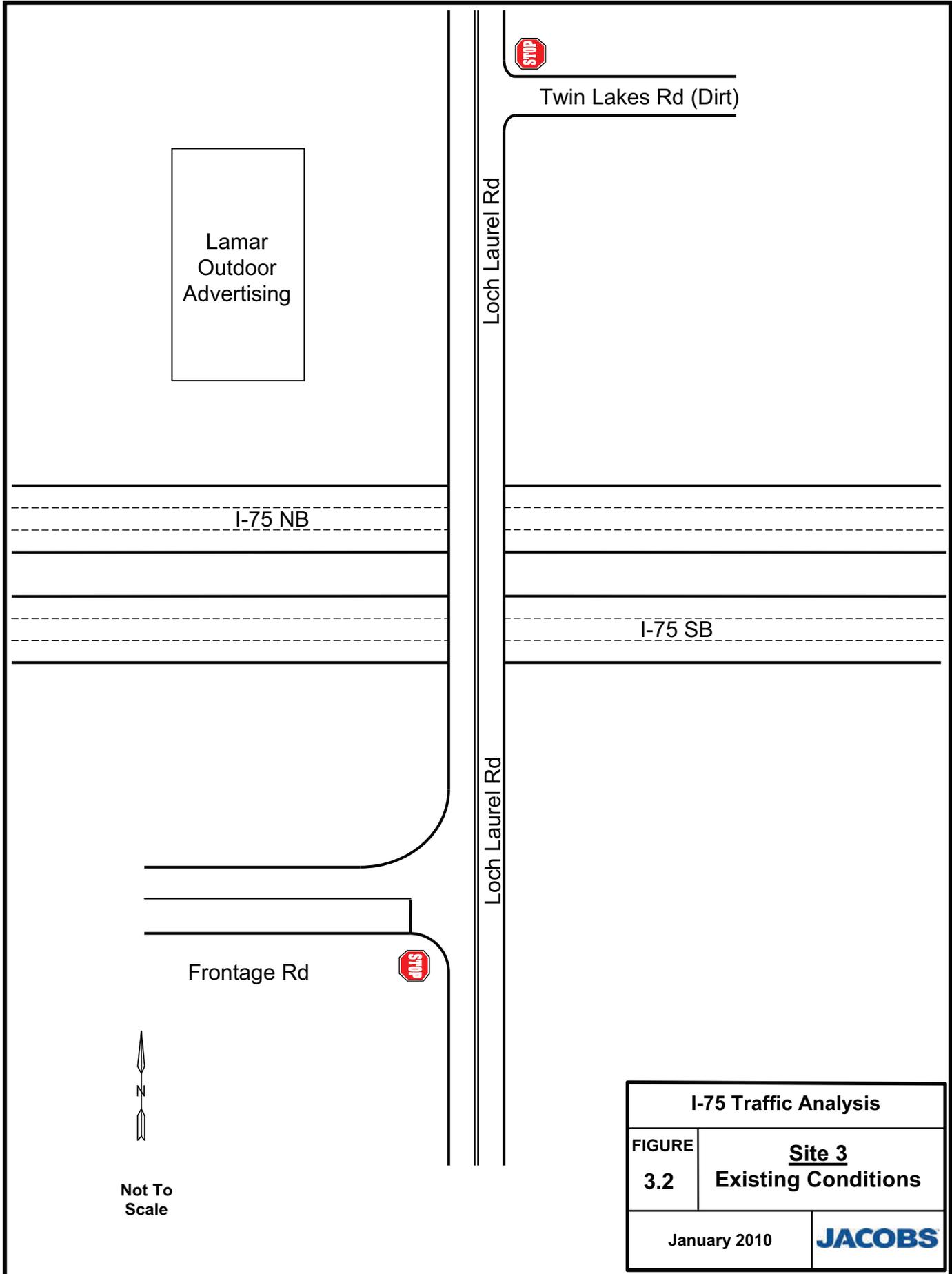
These counts were adjusted to Year 2009 traffic levels per instruction from GDOT OEL using GDOT database historical counts in the area. The 2009 counts are shown in Figure 3.3 for Site 3.

A review of the historical traffic volume data identified a growth rate of 2.25% per year for the five sites. Also, using the traffic count data collected at all five sites, the heavy vehicle percentage in the study area was determined to be 25%. Figure 3.4 shows the projected year 2034 traffic volumes.

The existing 2009 and Year 2034 traffic volumes were approved by GDOT OEL in December 2009.



<b>I-75 Traffic Analysis</b>	
<b>FIGURE</b> <b>3.1</b>	<b>Site 3</b> <b>Location Map</b>
January 2010	<b>JACOBS</b>



<b>I-75 Traffic Analysis</b>	
<b>FIGURE</b>	<b>Site 3</b>
<b>3.2</b>	<b>Existing Conditions</b>
January 2010	<b>JACOBS</b>





### 3.3 TRAFFIC ANALYSIS

The 2034 design hourly volumes were used for the traffic analysis. Peak hour analyses were performed for the CR 783 (Loch Laurel Road) intersection with Frontage Road.

#### 3.3.1 Intersection Analysis

The future operations at the CR 783 (Loch Laurel Road) intersection with Frontage Road were analyzed for the design year 2034 volumes. The existing lane configurations and traffic control devices for the ramp intersections were assumed. The analysis was performed to determine if the existing configuration and traffic control would be sufficient for the future year volumes. Synchro Software (Version 6) was used to evaluate the intersection operations.

Table 3.1 depicts the results of the intersection operations analysis. As shown, all approach movements are expected to operate at Level of Service (LOS) B or better during the both the AM and PM peak hours based on the design year 2034 traffic projections.

**Table 3.1 – Site 3 Year 2034 Intersection Operations**

Intersection	Control	Movement	AM Peak Hour		PM Peak Hour	
			LOS	Delay (Sec)	LOS	Delay (Sec)
CR 783 (Loch Laurel Rd) @ Frontage Rd	Stop Sign	EBL+R	B	11	B	10.9
		NBL+T	A	1.3	A	1.1

### 3.4 CRASH DATA

Historic crash data was analyzed for years 2006-2008 for CR 783 (Loch Laurel Road) for approximately one-half mile in the vicinity of I-75. Figure 3.5 provides a summary of the number of crashes by location.

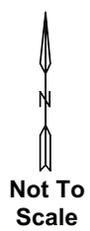
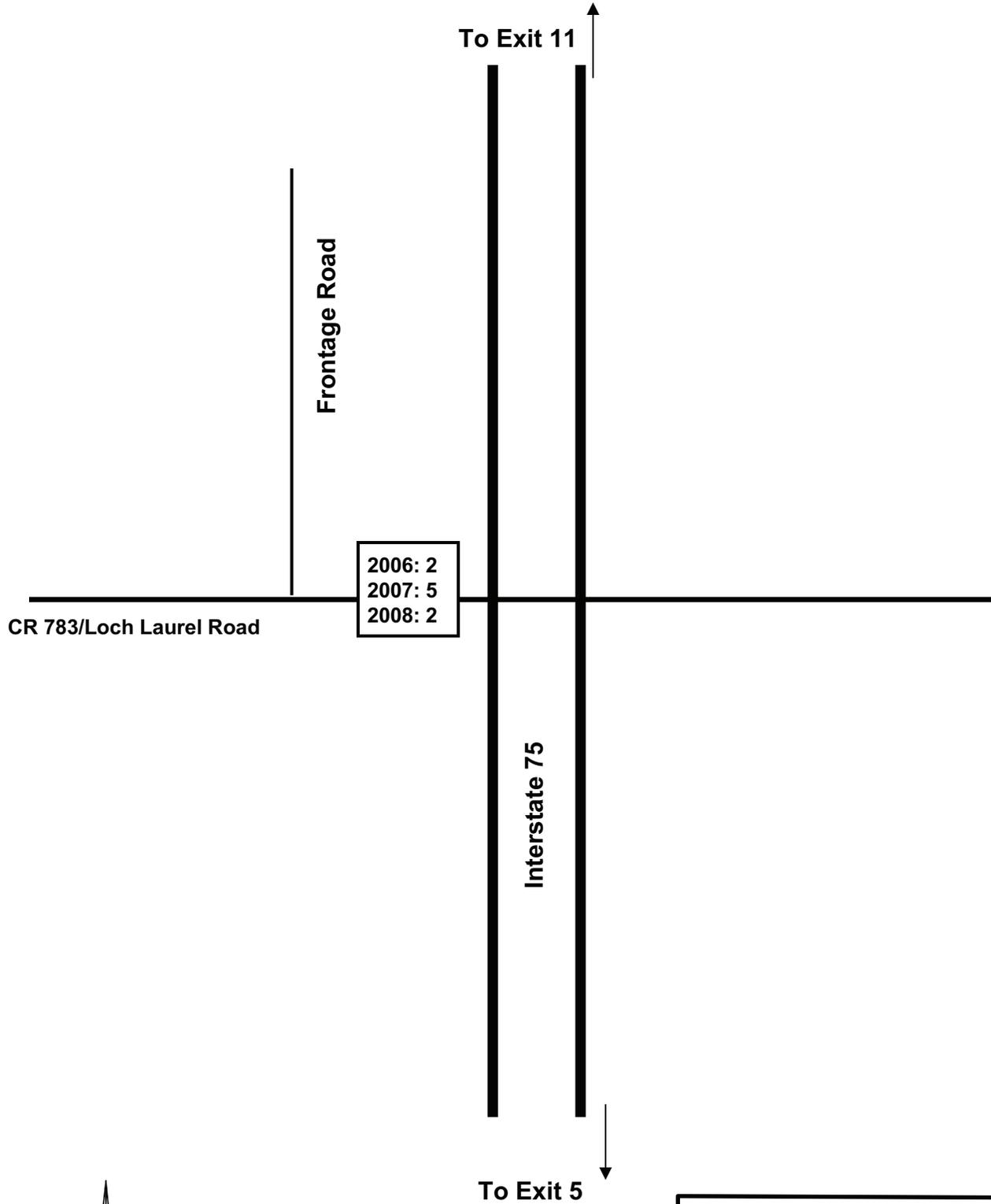
In total, 9 crashes occurred on CR 783 (Loch Laurel Road) over the three year period. No fatalities occurred on CR 783 (Loch Laurel Road).

In order to gauge the frequency of collisions occurring in the study area, crash rates were calculated for CR 783 (Loch Laurel Road) and compared to the statewide average for a similar facility. CR 783 (Loch Laurel Road) was compared with Rural Major Collector routes. Table 3.2 summarizes how the compiled 2006-2008 crash data compares with statewide averages for crash, injury and fatality rates.

**Table 3.2 – Site 3 Crash Rates for CR 783 (Loch Laurel Road)**

Year	# of Crashes	Crash Rate per 100 MVT	Statewide Average Rate per 100 MVT	# of Injury Crashes	Injury Crash Rate per 100 MVT	Statewide Average Injury Rate per 100 MVT	# of Fatality Crashes	Fatality Crash Rate per 100 MVT	Statewide Average Fatality Rate per 100 MVT
2006	2	442	203	1	220	73	0	0	3.28
2007	5	1087	203	1	217	72	0	0	3.27
2008	2	435	194	1	217	68	0	0	3.03

Note: Crash data represents approximately 0.5 mile of roadway



LEGEND	
9	# of Crashes

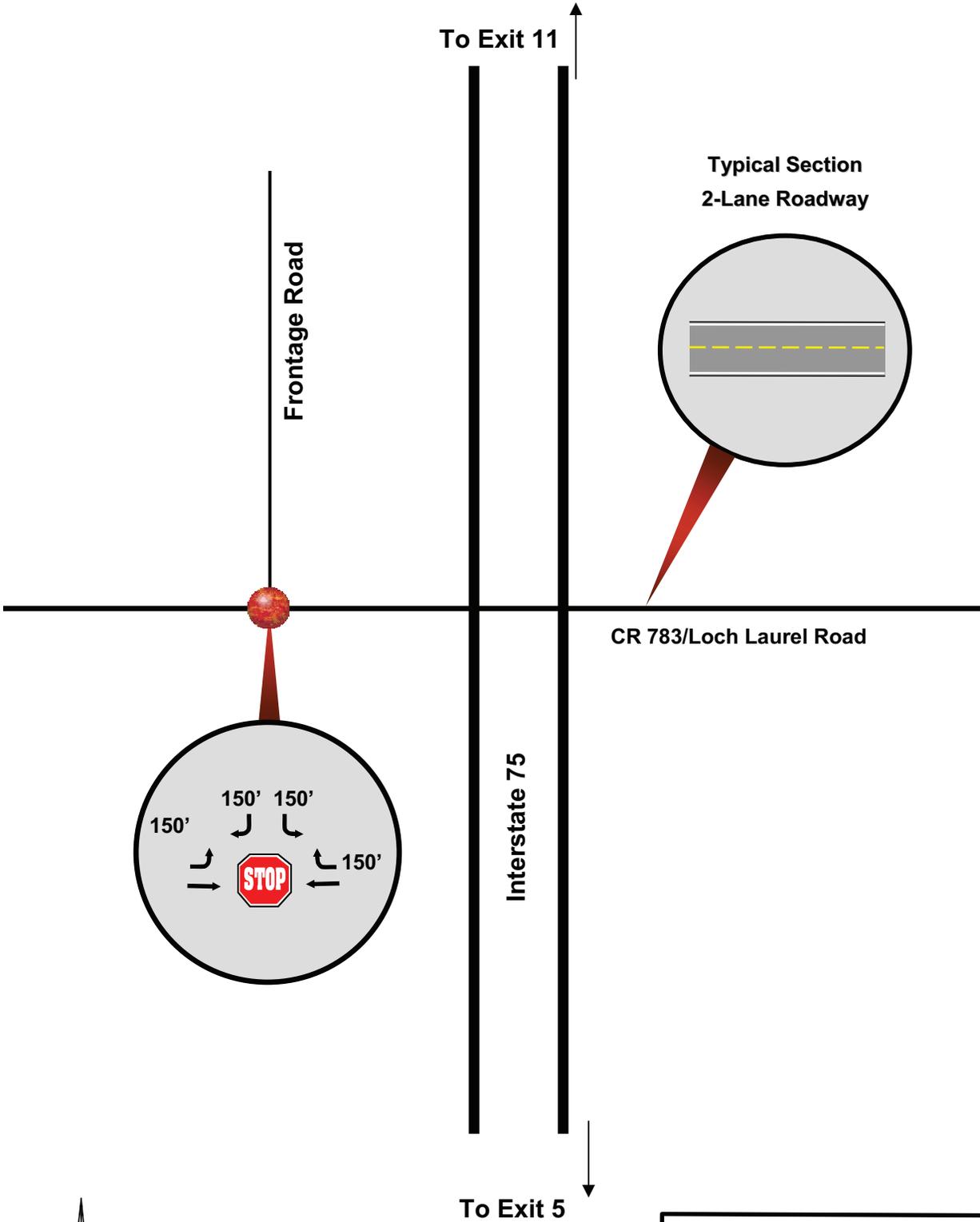
I-75 Traffic Analysis	
FIGURE	Site 3
3.5	Historic Crash Data
January 2010	<b>JACOBS</b>

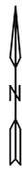
As shown in Table 3.2, the crash and injury rate for CR 783 (Loch Laurel Road) are above the statewide. This is mainly due to the relatively low traffic volumes on CR 783 (Loch Laurel Road) as one or two accidents can cause the crash rate to be higher than the statewide average). As noted above, no fatalities occurred on CR 783 (Loch Laurel Road) in the vicinity of I-75.

### 3.5 DESIGN RECOMMENDATIONS

Based on the traffic analysis, the CR 783 (Loch Laurel Road) intersection with Frontage Road is expected to provide sufficient capacity to meet the projected traffic volumes. To maintain the desirable through capacity, the new bridge should be developed at least as a two-lane facility, based on the year 2034 traffic projections.

It is recommended that the new bridge be constructed as a two-lane bridge. Although not required for capacity purposes, turn lanes should be considered to facilitate safer and efficient movements at the intersection. Figure 3.6 shows the recommended lane geometry and the turn lane storage lengths at the CR 783 (Loch Laurel Road) intersection. As shown, a minimum of 150 feet of turn lane storage should be provided and should include channelized right turn lanes.



  
 Not To  
 Scale

<b>I-75 Traffic Analysis</b>	
<b>FIGURE</b>	<b>Site 3</b>
<b>3.6</b>	<b>Lane Geometry &amp; Storage Lengths</b>
January 2010	<b>JACOBS</b>

## 4 – Site 4: SR 31 Madison Highway

### 4.1 EXISTING CONDITIONS

The I-75 interchange with SR 31 (Madison Highway) is located approximately 11 miles north of the Florida State Line. Figure 4.1 shows the location of the interchange (Site 4). In the vicinity of the I-75 interchange, SR 31 (Madison Highway) is presently a four-lane divided facility with a posted speed limit of 45 miles per hour (mph) extending west from US 41 spanning I-75 to the Florida State Line. Its Functional Classification is Urban Principal Arterial. West of the interchange, there is a gas station to the north of SR 31 (Madison Highway) and to the south is a truck stop. To the east of the interchange, there are gas stations, fast food restaurants and a hotel. Figure 4.2 depicts existing conditions at the interchange. Left and right turn lanes are provided on SR 31 (Madison Highway) at the ramp intersections and at driveways to the adjacent developments. Figure 4.2 depicts existing conditions at the interchange.

Single lane ramps provide access between SR 31 (Madison Highway) and I-75, and no turn lanes are provided on the off-ramp intersections. The off-ramp approaches to SR 31 (Madison Highway) are presently under stop sign control.

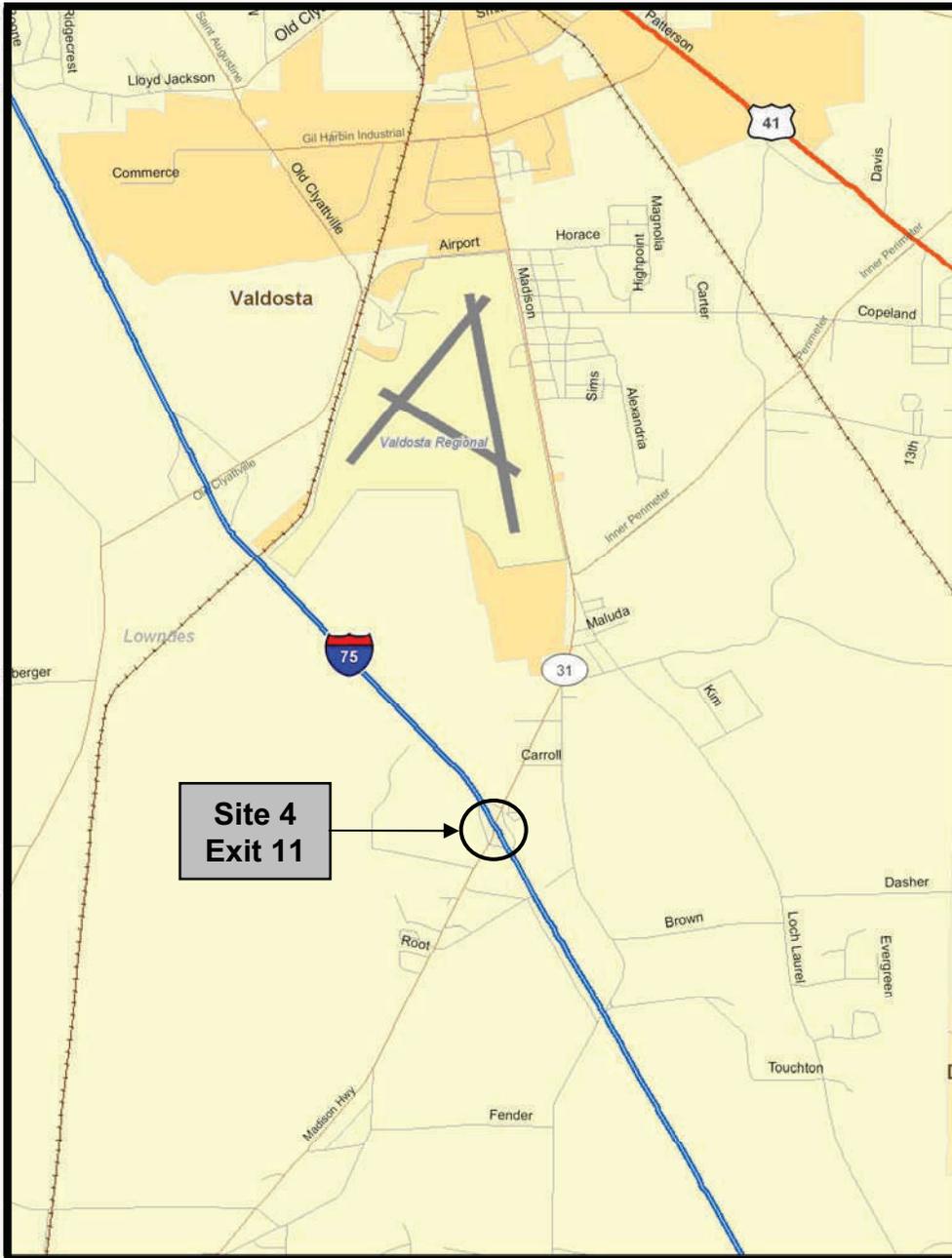
#### 4.1.1 Field Observations

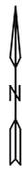
Field observations at the site revealed moderate traffic volumes and minimal delay for all movements at the ramp intersections with SR 31 (Madison Highway). The only operational deficiency observed in the field was restricted sight distance from the off-ramps looking towards the bridge over I-75. The vertical curvature and railing of the bridge restricts the line of sight for vehicles turning from the off-ramps onto SR 31 (Madison Highway). Warning signs are present along SR 31 (Madison Highway) alerting drivers of the limited sight distance with 35 mph advisory plates.

### 4.2 TRAFFIC DATA

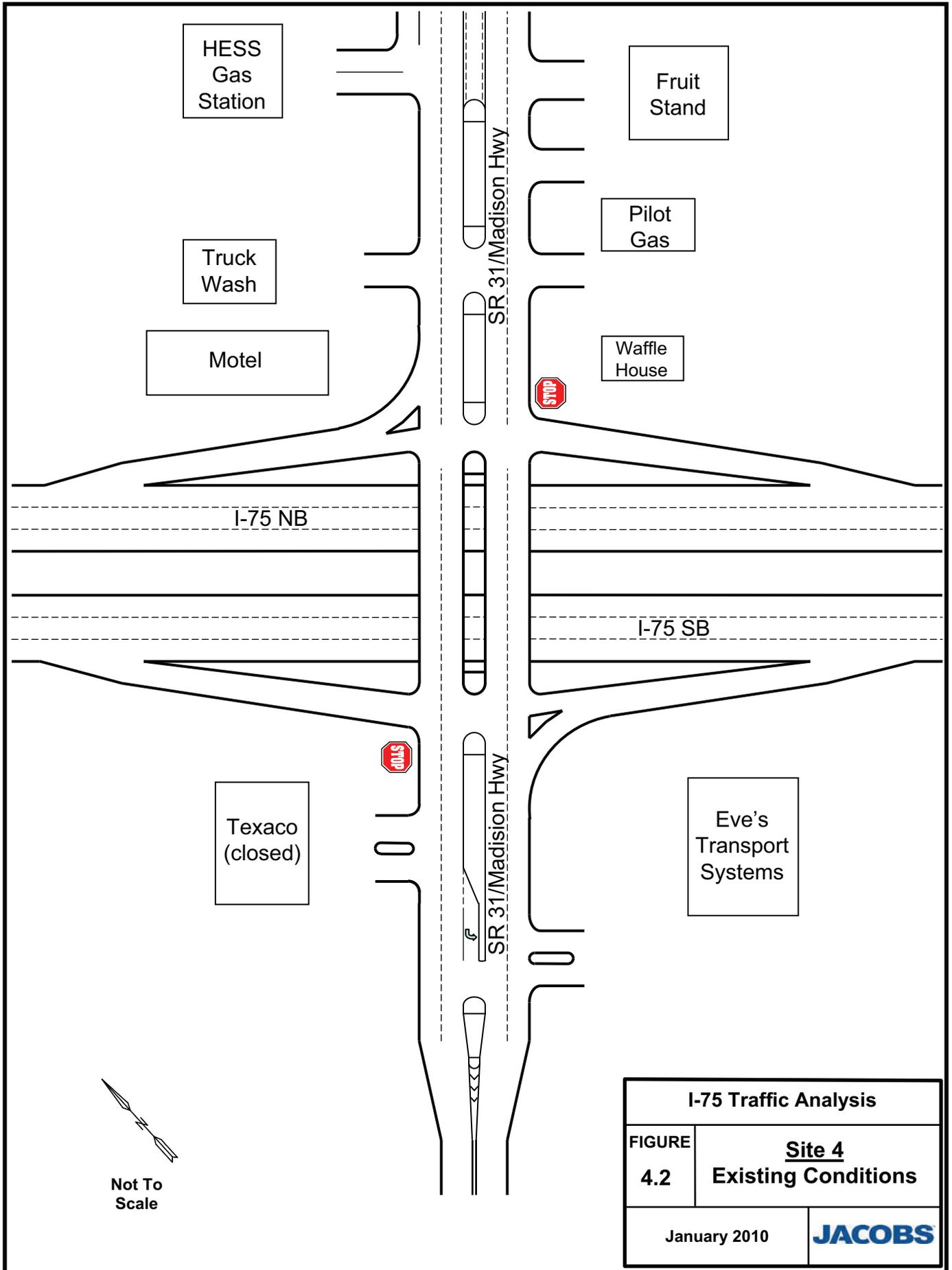
The analysis performed for this study utilized historical traffic volumes provided by the Georgia Department of Transportation (GDOT). To supplement the GDOT counts, additional traffic count data was collected at Site 4 in August 2006 as follows:

- 24-hour bi-directional vehicle classification and speed counts on SR 31 (Madison Highway) east and west of the interchange
- 24-hour bi-directional volume counts on northbound and southbound on-ramps and off-ramps at the interchange
- AM and PM peak period turning movement counts at the ramp intersections with SR 31 (Madison Highway)



  
 Not To  
 Scale

<b>I-75 Traffic Analysis</b>	
<b>FIGURE 4.1</b>	<b>Site 4 Location Map</b>
January 2010	<b>JACOBS</b>



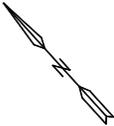
Hess Gas Station

Truck Wash

Motel

I-75 NB

Texaco (closed)



Not To Scale

Fruit Stand

Pilot Gas

Waffle House

I-75 SB

Eve's Transport Systems

SR 31/Madison Hwy

SR 31/Madison Hwy

<b>I-75 Traffic Analysis</b>	
FIGURE <b>4.2</b>	<b>Site 4</b> <b>Existing Conditions</b>
January 2010	<b>JACOBS</b>

## Traffic Operations Analysis for I-75 at Five Locations

These counts were adjusted to Year 2009 traffic levels per instruction from GDOT OEL using GDOT database historical counts in the area. The 2009 counts are shown in Figure 4.3 for Site 4.

A review of the historical traffic volume data identified a growth rate of 2.25% per year for the five sites. Also, using the traffic count data collected at all five sites, the heavy vehicle percentage in the study area was determined to be 25%. Figure 4.4 shows the projected year 2034 traffic volumes.

The existing 2009 and Year 2034 traffic volumes were approved by GDOT OEL in December 2009.

### 4.3 TRAFFIC ANALYSIS

The 2034 design hourly volumes were used for the traffic analysis. Peak hour analyses were performed for the ramp intersections with SR 31 (Madison Highway), the basic freeway sections, and the ramp merge and diverge movements with the I-75 mainline.

#### 4.3.1 Intersection Analysis

The future operations at the ramp intersections SR 31 (Madison Highway) were analyzed for the design year 2034 volumes. The existing lane configurations and traffic control devices for the ramp intersections were assumed. The analysis was performed to determine if the existing configuration and traffic control would be sufficient for the future year volumes. Synchro Software (Version 6) was used to evaluate the intersection operations.

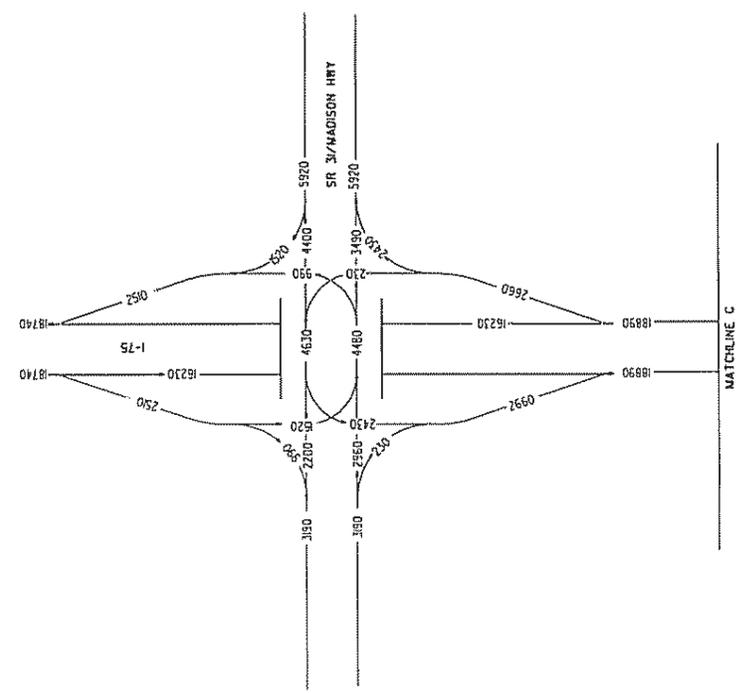
Table 4.1 depicts the results of the intersection operations analysis. As shown, the ramp movements are expected to operate at Level of Service (LOS) E and F during the both the AM and PM peak hours based on the design year 2034 traffic projections. However, both ramp intersections would be expected to operate at overall LOS B or better during both peak hours if traffic signals were installed.

**Table 4.1 – Site 4 Year 2034 Ramp Intersection Operations**

Intersection	Control	Movement	AM Peak Hour		PM Peak Hour	
			LOS	Delay (Sec)	LOS	Delay (Sec)
SR 31 (Madison Hwy) @ I-75 SB Ramps	Stop Sign	WBL	A	9.4	B	10
		SBL+R	F	>50	F	>50
	Traffic Signal	Overall	B	19.2	B	16.4
SR 31 (Madison Hwy) @ I-75 NB Ramps	Stop Sign	EBL	A	4.8	A	8.4
		NBL+R	F	>50	E	42.8
	Traffic Signal	Overall	A	11	B	11.9

SHEET NO. 0007386  
 PROJECT NO. 0007-001386  
 COUNTY: LOWWODES  
 SHEET NO. TOTAL SHEETS: 10-10  
 DATE: 07/20/09  
 PROJECT: SR 31/MADISON HWY  
 DRAWING: TRAFFIC DIAGRAM  
 SCALE: R.T.S.  
 PROJECT NO. 0007-001386  
 COUNTY: LOWWODES  
 SHEET NO. TOTAL SHEETS: 10-10

2009 ADT  
 24 HOUR T = 25%  
 SU = 5%  
 COMB. = 20%



**JACOBS**  
 1718 Peachtree Street  
 Suite 400  
 Atlanta, Georgia 30309  
 Tel. (404) 476-3900  
 Fax (404) 249-7705

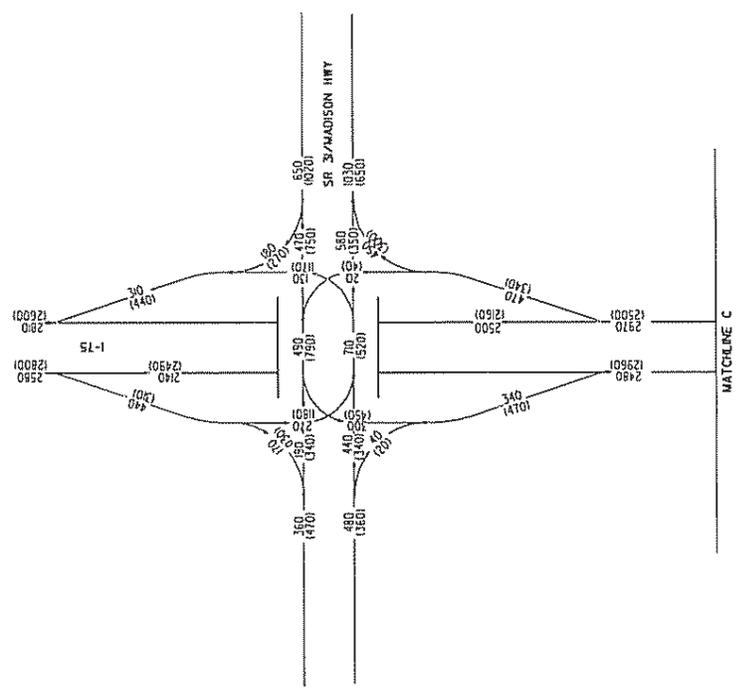
P. I. NO. 0007386  
 LOWWODES COUNTY

STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE:  
**TRAFFIC DIAGRAM**  
**FIGURE 4.3 - 2009 TRAFFIC VOLUMES**  
 SR 31/MADISON HWY  
 INTERCHANGE @ I-75  
 10-10

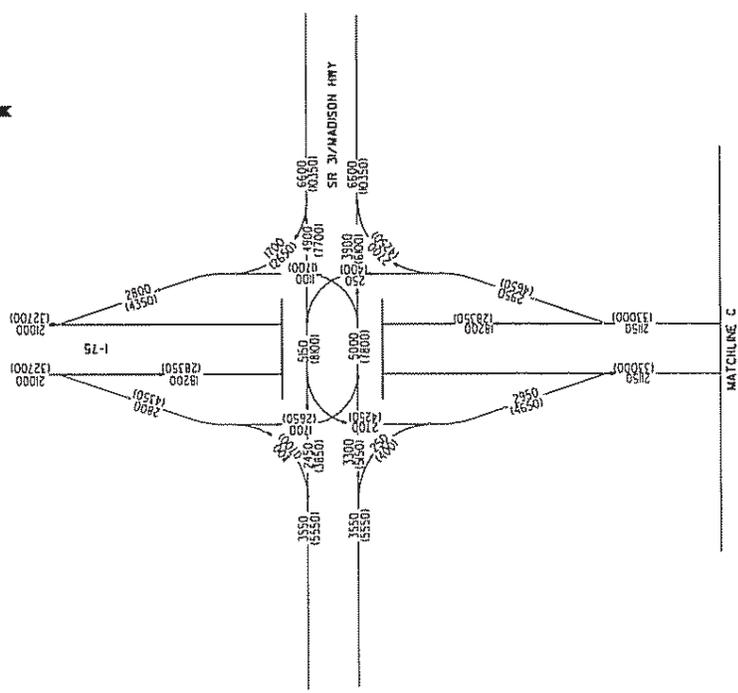
REVISION DATES

SCALE: R. T. S.

2034 - DHV VOLUMES  
 0000 - AM PEAK HOUR  
 (0000) - PM PEAK HOUR  
 T = 19%



2014 ADT  
 (2034) ADT  
 24 HOUR T = 25%  
 SU = 5%  
 COMB. = 20%



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 LOWWODES COUNTY

STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE:  
**TRAFFIC DIAGRAM**  
**FIGURE 4.4 - SITE 1**  
 SR 31/MADISON HWY  
 INTERCHANGE @ I-75  
 10-12

REVISION DATES

SCALE: H. T. S.

### 4.3.2 Basic Freeway Section

The I-75 segment north and south of SR 31 (Madison Highway) was analyzed under the build (eight-lane) and no-build (six-lane) scenarios for year 2034. Highway Capacity Software (HCS) 2000 was used to determine the expected LOS and vehicle density along the freeway sections. In order to effectively run the HCS analysis for the freeway section, the following assumptions were made:

- Base free-flow speed of 70 miles per hour (mph)
- Peak hour factor of 0.90
- Grade set as “level” (short grades of 2% or less)
- Heavy vehicle percentage of 19 percent

The results of the freeway segment analysis are shown in Table 4.2. In the no-build condition, the freeway is expected to operate at LOS B conditions during both the AM and PM peak hours. Under the build condition, the freeway will operate at LOS B or better during both peak hours.

**Table 4.2 – Site 4 Year 2034 Mainline Freeway Analysis**

Freeway Section	Condition	Direction	AM Peak Hour		PM Peak Hour	
			LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-75 North of SR 31 (Madison Hwy)	No Build	NB	B	16.3	B	15.1
		SB	B	14.9	B	16.2
	Build	NB	B	12.2	B	11.3
		SB	B	11.2	B	12.2
I-75 South of SR 31 (Madison Hwy)	No Build	NB	B	17.2	B	14.5
		SB	B	14.4	B	17.1
	Build	NB	B	12.9	A	10.9
		SB	A	10.8	B	12.9

### 4.3.3 Ramp Merge and Diverge Analysis

The I-75 ramps at SR 31 (Madison Highway) were analyzed at their merge or diverge points with I-75. HCS 2000 was used to determine the expected LOS and vehicle density at the merge and diverge locations.

The ramp analysis for the no-build condition was based on ramp measurements conducted in the field to determine the exact length of ramps (gore to intersection with cross street), length of acceleration/deceleration lanes, taper distances, and distance between the gore area of the adjacent ramp. For the build condition, the measurements were taken from the proposed concept drawing to reflect the longer merge areas and greater distances between ramps of a rebuilt interchange.

Like the freeway sections, several assumptions were needed to run the HCS analysis for the ramp merge and diverge analysis, including:

- Ramp free-flow speed of 35 mph

## Traffic Operations Analysis for I-75 at Five Locations

- Peak hour factor of 0.90
- Heavy vehicle percentage of 19 percent
- Grade of 3% for the diamond-style ramps
- “Level” freeway setting for I-75 in advance of the ramps

The results of the merge/diverge analysis are shown in Table 4.3. As shown, all movements are expected to operate at LOS C or better with the six-lane no build scenario. The eight-lane build scenario will improve all ramp merge and diverge movements to LOS B.

**Table 4.3 – Site 4 Year 2034 Merge and Diverge Analysis**

Freeway Section	Condition	AM Peak Hour		PM Peak Hour	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-75 North Off-Ramp	No Build	C	22.4	B	19.2
	Build	B	15.2	B	12.3
I-75 North On-Ramp	No Build	B	16.9	B	16.1
	Build	B	13.1	B	12.7
I-75 South Off-Ramp	No Build	C	20.1	C	21.2
	Build	B	13.2	B	13.5
I-75 South On-Ramp	No Build	B	14.8	B	18
	Build	B	12	B	13.9

### 4.4 SIGNAL WARRANT ANALYSIS

Based on the results of the operations analysis, the two ramp intersections were identified as requiring a traffic signal in order to maintain acceptable Levels of Service during the peak hours in the design year 2034. In order to evaluate the need for a traffic signal, warrant analyses were performed for each of the intersections for opening year 2012 traffic volume projections. Approach volumes for each intersection were compared to the traffic signal warrants criteria contained in the 2003 Manual on Uniform Traffic Control Devices (MUTCD). Based on the warrant analyses, both of the ramp intersections with SR 31 (Madison Highway) satisfy the criteria for installing a traffic signal based on the opening year 2012 traffic projections.

### 4.5 CRASH DATA

Historic crash data was analyzed for years 2006-2008 for SR 31 (Madison Highway), the ramps, and the interstate mainline north and south of the interchange. Crash data was analyzed for approximately one-half mile on SR 31 (Madison Highway) in the vicinity of I-75, and on I-75 mainline for 0.5 miles on either side of the interchange. Figure 4.5 provides a summary of the number of accidents by location.

In total, 39 crashes occurred on SR 31 (Madison Highway) over the three year period. I-75 mainline had a total of 10 collisions over the three year period, and a total of 65 crashes occurred on the four ramps with the most occurring on the southbound off-ramp, which experienced a total of 46 crashes over the three year period.

## Traffic Operations Analysis for I-75 at Five Locations

In order to gauge the frequency of collisions occurring in the study area, crash rates were calculated for SR 31 (Madison Highway), I-75 mainline, and the ramps, and were compared to the statewide average for similar facilities. SR 31 (Madison Highway) was compared with Urban Principal Arterial routes and the I-75 mainline was compared with Urban Interstate. Tables 4.4-4.6 summarize how the compiled 2006-2008 crash data compares with statewide averages for crash, injury and fatality rates.

**Table 4.4 – Site 4 Crash Rates for SR 31 (Madison Highway)**

Year	# of Crashes	Crash Rate per 100 MVT	Statewide Average Rate per 100 MVT	# of Injury Crashes	Injury Crash Rate per 100 MVT	Statewide Average Injury Rate per 100 MVT	# of Fatality Crashes	Fatality Crash Rate per 100 MVT	Statewide Average Fatality Rate per 100 MVT
2006	13	834	156	8	513	54	0	0.00	1.56
2007	14	1069	168	8	611	57	1	76.00	1.87
2008	12	790	141	6	395	46	2	132.00	1.45

Note: Crash data represents approximately 0.5 mile of roadway

**Table 4.5 – Site 4 Crash Rates for I-75 near SR 31 (Madison Highway)**

Year	# of Crashes	Crash Rate per 100 MVT	Statewide Average Rate per 100 MVT	# of Injury Crashes	Injury Crash Rate per 100 MVT	Statewide Average Injury Rate per 100 MVT	# of Fatality Crashes	Fatality Crash Rate per 100 MVT	Statewide Average Fatality Rate per 100 MVT
2006	5	62	200	1	12	46	0	0.00	0.66
2007	3	38	186	2	25	43	0	0.00	0.52
2008	2	25	187	1	13	43	0	0.00	0.56

Note: Crash data represents approximately 1 mile of roadway

**Table 4.6 – Site 4 Crash Rates for I-75 Ramps at SR 31 (Madison Highway)**

Year	# of Crashes	Intersection Crash Rate per MEV	# of Injury Crashes	Intersection Injury Crash Rate per MEV	# of Fatality Crashes	Intersection Fatality Crash Rate per MEV
<b>Northbound Off-Ramp</b>						
2006	5	5.1	1	1.0	0	0
2007	4	4.1	2	2.1	0	0
2008	3	3.1	2	2.1	0	0
<b>Northbound On-Ramp</b>						
2006	4	4.4	3	3.3	0	0
2007	1	1.1	0	0.0	0	0
2008	1	1.1	1	1.1	0	0
<b>Southbound Off-Ramp</b>						
2006	16	17.5	6	6.5	0	0
2007	11	12.0	5	5.5	0	0
2008	19	20.7	8	8.7	1	1
<b>Southbound On-Ramp</b>						
2006	1	1.0	1	1.0	0	0
2007	0	0.0	0	0.0	0	0
2008	0	0.0	0	0.0	0	0

Note: Crash data at intersection ramp

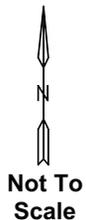
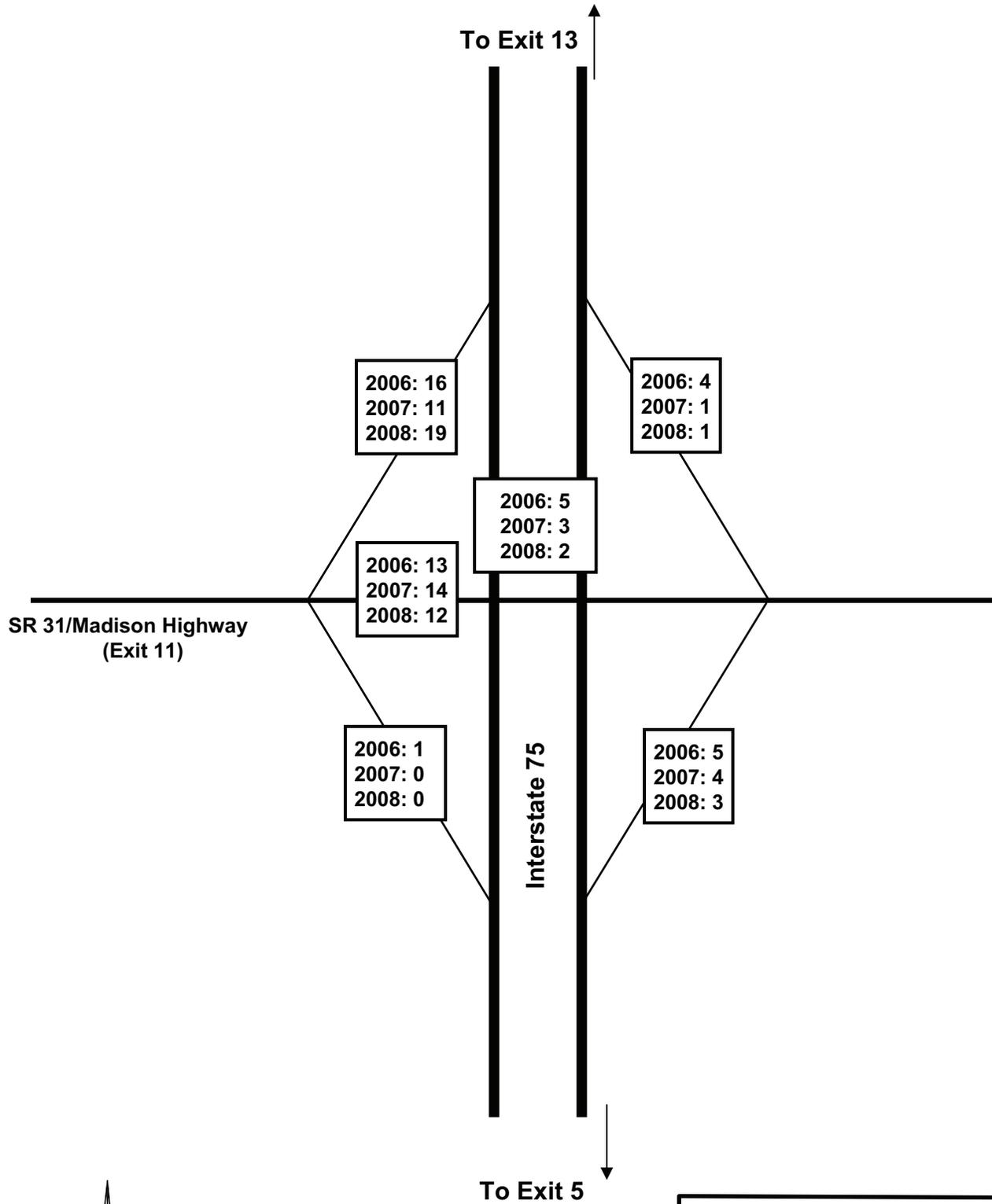
## Traffic Operations Analysis for I-75 at Five Locations

As shown in Table 4.4, the crash and injury rate for SR 31 (Madison Highway) exceeds the statewide averages. This is due, in part, to the driveways on SR 31 (Madison Highway) in the vicinity of the interchange and the conflicting turning movements associated with them. Three fatalities occurred on SR 31 (Madison Highway) in the vicinity of the interchange.

I-75 crash and injury rates in the vicinity of the interchange were less than the statewide averages, as shown in Table 4.5. No fatalities occurred on I-75 in the vicinity of the interchange.

As shown in Table 4.6, the southbound off-ramp had relatively higher crash rates and injury crash rates compared to the other ramps at the interchange. The southbound off-ramp experienced a fatality crash in 2008.

A more detailed analysis of crash types will need to be performed in order to make any design recommendations, this will be done at the Preliminary Design stage.



LEGEND	
114	# of Crashes

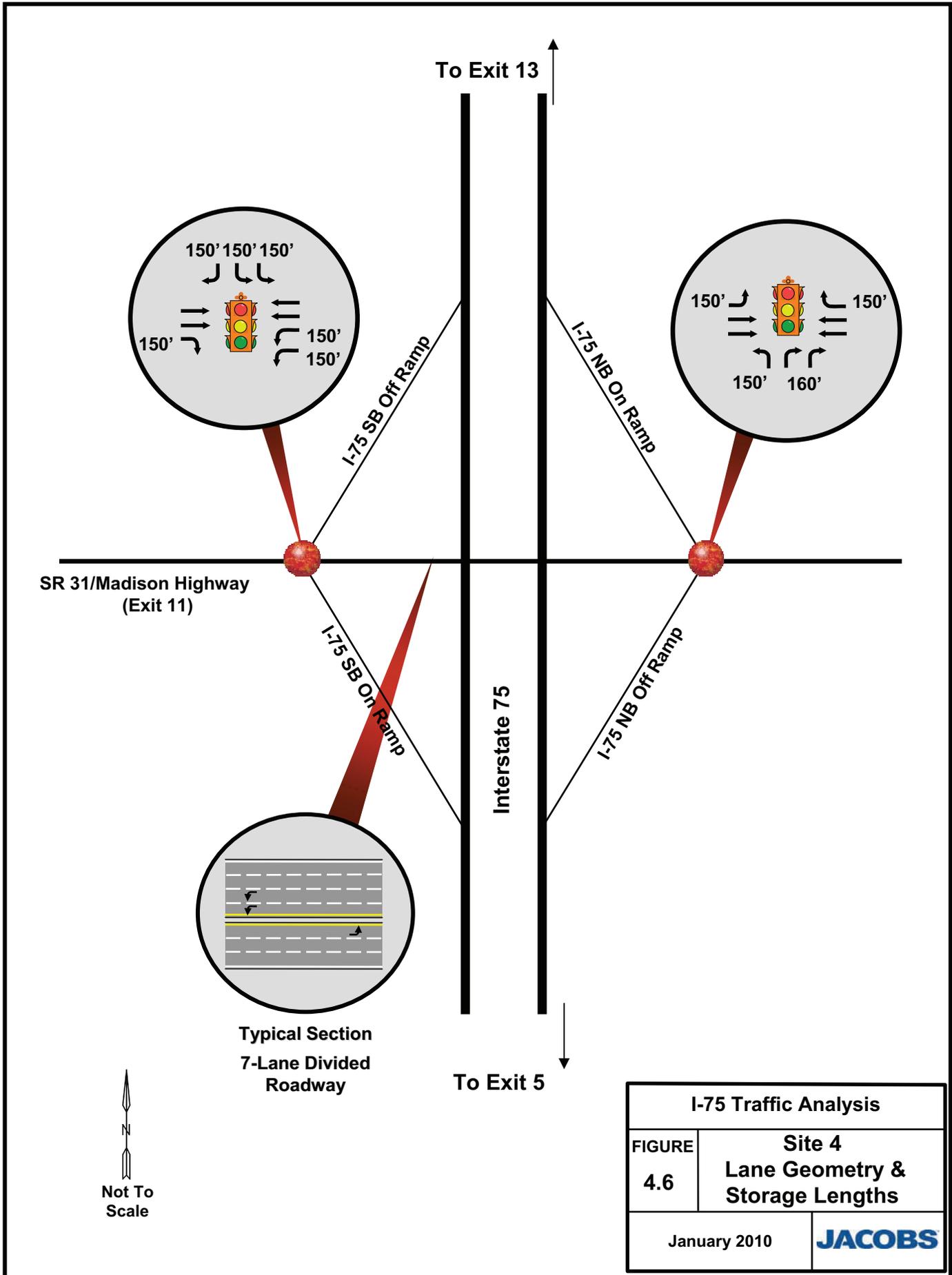
I-75 Traffic Analysis	
FIGURE	Site 4
4.5	Historic Crash Data
January 2010	<b>JACOBS</b>

### 4.6 DESIGN RECOMMENDATIONS

Based on the traffic analysis, the I-75 ramp intersections with SR 31 (Madison Highway) will require additional capacity to meet the projected traffic volumes. To achieve desirable through capacity, the new bridge should be developed at least as a seven-lane divided facility with left-turn bay storages, based on the year 2034 traffic projections.

It is recommended that at least a seven-lane bridge be constructed that includes two through lanes in each direction with two westbound left-turn lanes and one eastbound left-turn lane. Figure 4.6 shows the recommended lane geometry and the turn lane storage lengths at the ramp intersections.

From the capacity analysis at the ramp intersections, it was determined that traffic signals are required for additional capacity during the peak hours. Based on the projected traffic volumes in opening year 2012, both of the ramp intersections with SR 31 (Madison Highway) satisfy the criteria for installing a traffic signal. It is recommended that the ramp intersections with the proposed geometry shown in Figure 4.6 be constructed. As shown, a minimum of 150 feet of turn lane storage should be provided at the ramp intersections and should include channelized right turn lanes. The entrance and exit ramps to and from I-75 will be lengthened and widened to accommodate future traffic volumes, provide adequate storage, and provide sufficient acceleration/deceleration distances for entering and exiting traffic.



Not To Scale

I-75 Traffic Analysis	
FIGURE 4.6	Site 4 Lane Geometry & Storage Lengths
January 2010	<b>JACOBS</b>

## 5 – Site 5: SR 133 North St. Augustine Road

### 5.1 EXISTING CONDITIONS

The I-75 interchange with SR 133 (N. St. Augustine Road) is located approximately 18 miles north of the Florida State Line. Figure 5.1 shows the location of the interchange (Site 5). SR 133 extends west from Valdosta spanning I-75 to Albany. East of the interchange, SR 133 (N. St. Augustine Road) is presently a five-lane with center turning lane undivided facility with a posted speed limit of 35 miles per hour (mph). Its Functional Classification is Urban Principal Arterial. To the west of the interchange, SR 133 (N. St. Augustine Road) is a four-lane divided facility with a posted speed limit of 45 mph. Its Functional Classification is Urban Minor Arterial. West of the interchange, gas stations, hotels and tourist shops exist to the north and south of SR 133 (N. St. Augustine Road). Similarly east of the interchange, there are gas stations, hotels and fast food restaurants. Approximately 0.15 mile to the west of the interchange is the unsignalized intersection of James Road with SR 133 (N. Augustine Road), and approximately 0.20 mile to the east of the interchange is the unsignalized intersection of Spring Hill Place with SR 133 (N. St. Augustine Road). Figure 5.2 depicts existing conditions at the interchange.

The interchange is of a staggered formation, with the on-ramp/off-ramps (both northbound and southbound directions) staggered approximately 200 feet apart. Single lane ramps provide access between SR 133 (N. St. Augustine Road) and I-75, and separate left and right turn lanes are provided on the off-ramp intersections. The off-ramp approaches to SR 133 (N. Augustine Road) are signalized, whereas the on-ramp intersections are unsignalized.

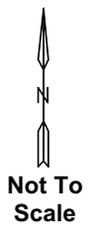
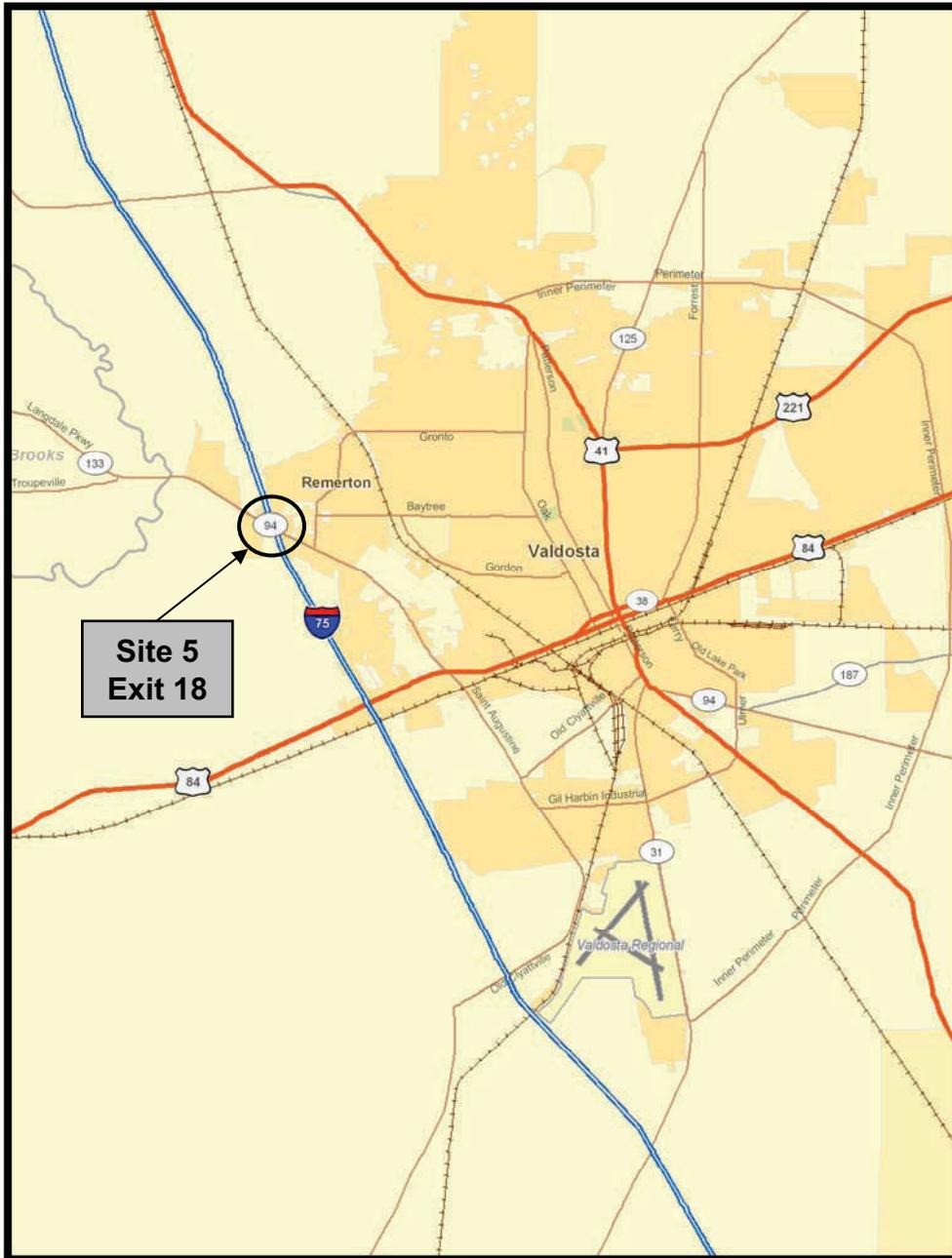
#### 5.1.1 Field Observations

Field observations at the site revealed moderate traffic volumes and minimal delay for all movements at the ramp intersections with SR 133 (N. St. Augustine Road). No major operational deficiencies observed other than the significant driveways movements at the various commercial establishments.

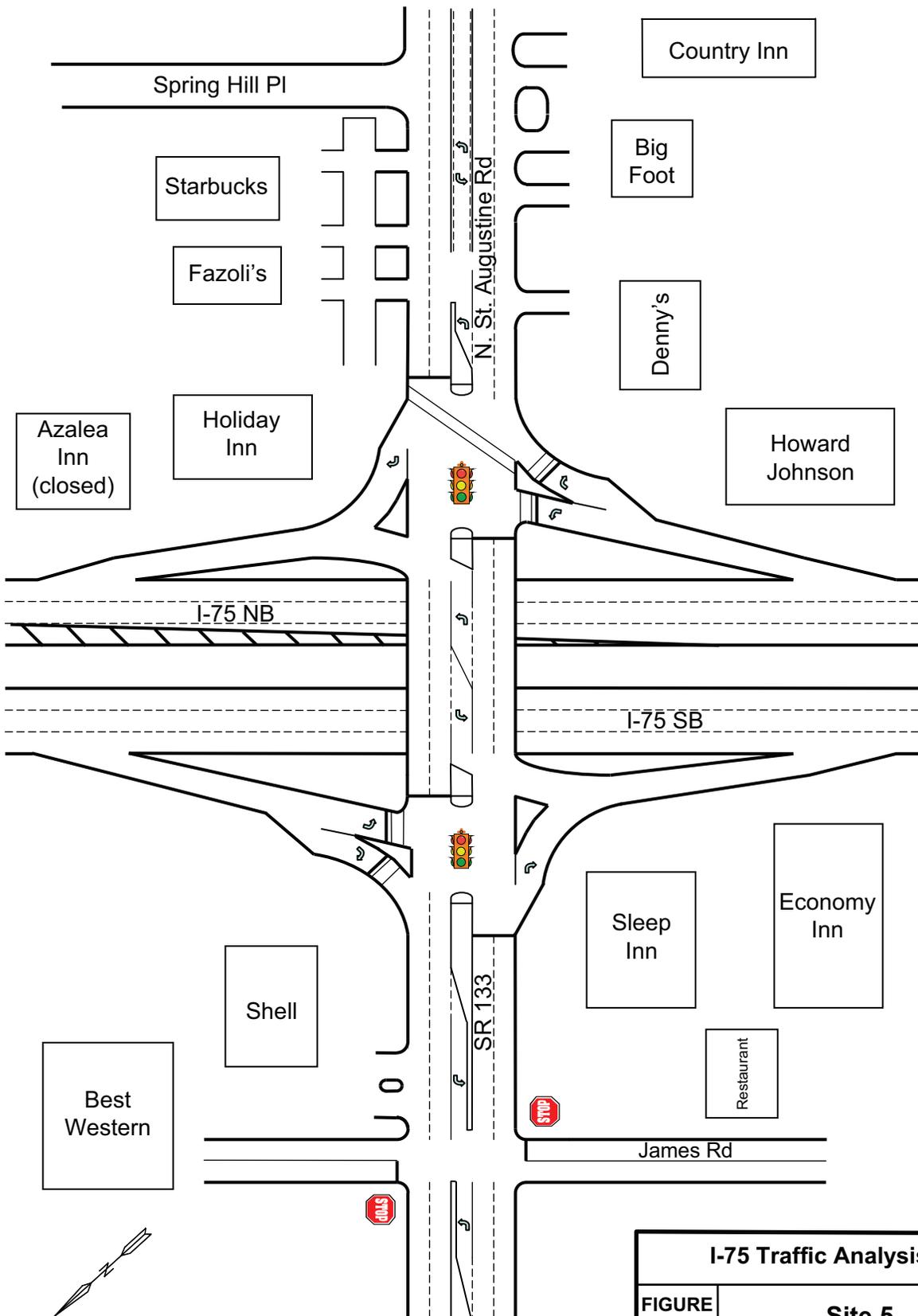
### 5.2 TRAFFIC DATA

The analysis performed for this study utilized historical traffic volumes provided by the Georgia Department of Transportation (GDOT). To supplement the GDOT counts, additional traffic count data was collected at Site 5 in August 2006 as follows:

- 24-hour bi-directional vehicle classification and speed counts on SR 133 (N. St. Augustine Road) east and west of the interchange
- 24-hour bi-directional volume counts on:
  - northbound on-ramps and off-ramps at the interchange
  - southbound on-ramps and off-ramps at the interchange
  - I-75 north of the interchange



<b>I-75 Traffic Analysis</b>	
<b>FIGURE</b>	<b>Site 5</b>
<b>5.1</b>	<b>Location Map</b>
January 2010	<b>JACOBS</b>



Not To Scale

**I-75 Traffic Analysis**

FIGURE

5.2

**Site 5**

**Existing Conditions**

January 2010

**JACOBS**

## Traffic Operations Analysis for I-75 at Five Locations

- James Road, SR 133 (N. St. Augustine Road) west of its intersection with James Road, and the north leg driveway to this intersection
- Spring Hill Place and SR 133 (N. St. Augustine Road) east of its intersection with Spring Hill Place
- AM and PM peak period turning movement counts at the ramp intersections with SR 133 (N. St. Augustine Road), and SR 133 (N. St. Augustine Road) intersections with James Road and with Spring Hill Place.

These counts were adjusted to Year 2009 traffic levels per instruction from GDOT OEL using GDOT database historical counts in the area. The 2009 counts are shown in Figure 5.3 for Site 5.

A review of the historical traffic volume data identified a growth rate of 2.25% per year for the five sites. Also, using the traffic count data collected at all five sites, the heavy vehicle percentage in the study area was determined to be 25%. Figure 5.4 shows the projected year 2034 traffic volumes.

The existing 2009 and Year 2034 traffic volumes were approved by GDOT OEL in December 2009.

### 5.3 TRAFFIC ANALYSIS

The 2034 design hourly volumes were used for the traffic analysis. Peak hour analyses were performed for the ramp intersections with SR 133 (N. St. Augustine Road), the two intersections on either side of the interchange, the basic freeway sections, and the ramp merge and diverge movements with the I-75 mainline.

#### 5.3.1 Intersection Analysis

The future operations at the ramp and adjacent intersections with SR 133 (N. St. Augustine Road) were analyzed for the design year 2034 volumes. The existing lane configurations and traffic control devices for the intersections were assumed. The analysis was performed to determine if the existing configuration and traffic control would be sufficient for the future year volumes. Synchro Software (Version 6) was used to evaluate the intersection operations.

Table 5.1a depicts the results of the intersection operations analysis where the current staggered ramp formation is maintained. As shown, the ramps operate at LOS D or better during the peak hours based on the design year 2034 traffic projections. The two unsignalized on-ramp intersections are expected to operate at overall LOS F during the peak hours. All ramp intersections would be expected to operate at overall LOS B or better during both peak hours if traffic signals were installed at the on-ramp intersections and additional through and turn lanes were constructed. The identified improvements are discussed in detail in Section 5.6. Also, both the SR 133 (N. St. Augustine Road) intersections with James Road and with Spring Hill Place are expected to operate at





## Traffic Operations Analysis for I-75 at Five Locations

overall LOS A during the AM and PM peak hours if traffic signals were installed and coordinated with the ramp intersections.

**Table 5.1a – Site 5 Year 2034 Staggered Ramp and Adjacent Intersection Operations Analysis**

Intersection	Control	Movement	AM Peak Hour		PM Peak Hour	
			LOS	Delay (Sec)	LOS	Delay (Sec)
SR 133 @ I-75 SB Off Ramp	Traffic Signal	Overall	C	27.9	B	12.3
	Traffic Signal w/coord	Overall	B	15.8	A	9.8
SR 133 @ I-75 SB On Ramp	Stop Sign	WBL	C	18.4	C	16.9
	Traffic Signal w/coord	Overall	A	7.7	A	9
SR 133 @ I-75 NB On Ramp	Stop Sign	EBL	B	10.9	C	19.3
	Traffic Signal w/coord	Overall	A	1.9	A	1.2
SR 133 @ I-75 NB Off Ramp	Traffic Signal	Overall	D	36.9	C	33.1
	Traffic Signal w/coord	Overall	B	13.2	A	6.8
SR 133 @ James Rd	Stop Sign	EBL	A	9.2	B	11.9
		WBL	B	13.3	B	10.4
		NBLTR	F	>60	F	>60
		SBLTR	F	>60	F	>60
	Traffic Signal w/coord	Overall	A	9.9	A	7.9
SR 133 @ Spring Hill Pl	Stop Sign	EBL	B	12.4	D	31.5
		SBLTR	F	>60	F	>60
	Traffic Signal w/coord	Overall	A	4.3	A	5.9

Additional intersection analysis was performed for a full diamond interchange without the staggered formation. Table 5.1b depicts the results of the intersection operations analysis. As shown, the two ramp intersections are expected to operate at overall Level of Service (LOS) C or better during the both the AM and PM peak hours based on the design year 2034 traffic projections if additional through and turn lanes were constructed. Both the SR 133 (N. St. Augustine Road) intersections with James Road and with Spring Hill Place are expected to operate at overall LOS B or better during the AM and PM peak hours.

**Table 5.1b – Site 5 Year 2034 Aligned Ramp and Adjacent Intersection Operations Analysis**

Intersection	Control	Movement	AM Peak Hour		PM Peak Hour	
			LOS	Delay (Sec)	LOS	Delay (Sec)
SR 133 @ I-75 SB Ramps	Traffic Signal w/coord	Overall	C	25.7	B	13.9
SR 133 @ I-75 NB Ramps	Traffic Signal w/coord	Overall	B	16.3	A	8.7
SR 133 @ James Rd	Traffic Signal w/coord	Overall	B	11	B	10.8
SR 133 @ Spring Hill Pl	Traffic Signal w/coord	Overall	B	16.3	A	8.7

## 5.3.2 Basic Freeway Section

The I-75 segment north and south of SR 133 (N. St. Augustine Road) was analyzed under the build (eight-lane) and no-build (six-lane) scenarios for year 2034. For the purposes of this analysis, the segment of I-75 north of SR 133 (N. St. Augustine Road) was taken as a four-lane roadway. Highway Capacity Software (HCS) 2000 was used to determine the expected LOS and vehicle density along the freeway sections. In order to effectively run the HCS analysis for the freeway section, the following assumptions were made:

- Base free-flow speed of 70 miles per hour (mph)
- Peak hour factor of 0.90
- Grade set as “level” (short grades of 2% or less)
- Heavy vehicle percentage of 19 percent

The results of the freeway segment analysis are shown in Table 5.2. In the no-build condition, the freeway is expected to operate at LOS E or better conditions during both the AM and PM peak hours in the four-lane segment and LOS C or better in the six-lane segment. Under the build condition, the freeway will operate at LOS B or better during both peak hours.

**Table 5.2 – Site 5 Year 2034 Mainline Freeway Analysis**

Freeway Section	Condition	Direction	AM Peak Hour		PM Peak Hour	
			LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-75 North of sr 133 (N St. Augustine Rd)	No Build	NB	E	35.3	C	23.6
		SB	C	23.7	D	34.3
	Build	NB	B	15.4	B	11.7
		SB	B	11.7	B	15.2
I-75 South of sr 133 (N St. Augustine Rd)	No Build	NB	C	21.5	B	14.5
		SB	B	14.5	C	21.2
	Build	NB	B	16.1	A	10.9
		SB	A	10.9	B	15.9

## 5.3.3 Ramp Merge and Diverge Analysis

The I-75 ramps at SR 133 (N. St. Augustine Road) were analyzed at their merge or diverge points with I-75. HCS 2000 was used to determine the expected LOS and vehicle density at the merge and diverge locations.

The ramp analysis for the no-build condition was based on ramp measurements conducted in the field to determine the exact length of ramps (gore to intersection with cross street), length of acceleration/deceleration lanes, taper distances, and distance between the gore area of the adjacent ramp. For the build condition, the measurements were taken from the proposed concept drawing to reflect the longer merge areas and greater distances between ramps of a rebuilt interchange.

## Traffic Operations Analysis for I-75 at Five Locations

Like the freeway sections, several assumptions were needed to run the HCS analysis for the ramp merge and diverge analysis, including:

- Ramp free-flow speed of 35 mph
- Peak hour factor of 0.90
- Heavy vehicle percentage of 19 percent
- Grade of 3% for the diamond-style ramps
- “Level” freeway setting for I-75 in advance of the ramps

The results of the merge/diverge analysis are shown in Table 5.3. As shown, in the no-build scenario, all movements in the four-lane segment are expected to operate at LOS E or better, whereas in the six-lane segment, all movements operate at LOS C or better. The eight-lane build scenario will improve all ramp merge and diverge movements to LOS B.

**Table 5.3 – Site 5 Year 2034 Merge and Diverge Analysis**

Freeway Section	Condition	AM Peak Hour		PM Peak Hour	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-75 North Off-Ramp	No Build	C	25.8	B	18.5
	Build	B	19	B	12.6
I-75 North On-Ramp	No Build	E	35.8	C	27.5
	Build	B	15.7	B	13.3
I-75 South Off-Ramp	No Build	C	22.4	C	26.7
	Build	B	14.7	B	17.2
I-75 South On-Ramp	No Build	B	17.8	C	24.7
	Build	B	12.3	B	16.2

### 5.4 SIGNAL WARRANT ANALYSIS

Based on the results of the operations analysis, the on-ramp intersections, and intersections of James Road and Spring Hill Place with SR 133 (N. St. Augustine Road) were identified as requiring a traffic signal in order to maintain acceptable Levels of Service during the peak hours in the design year 2034. In order to evaluate the need for a traffic signal, warrant analyses were performed for each of the intersections for opening year 2012 traffic volume projections. For the intersections SR 133 (N. St. Augustine Road with James Road and with Spring Hill Place, approach volumes for each intersection were compared to the traffic signal warrants criteria contained in the 2003 Manual on Uniform Traffic Control Devices (MUTCD). Based on the warrant analyses, both the intersections of SR 133 (N. St. Augustine Road) at James Road and at Spring Hill Place satisfy the criteria for installing a traffic signal based on the opening year 2012 traffic projections.

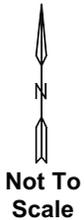
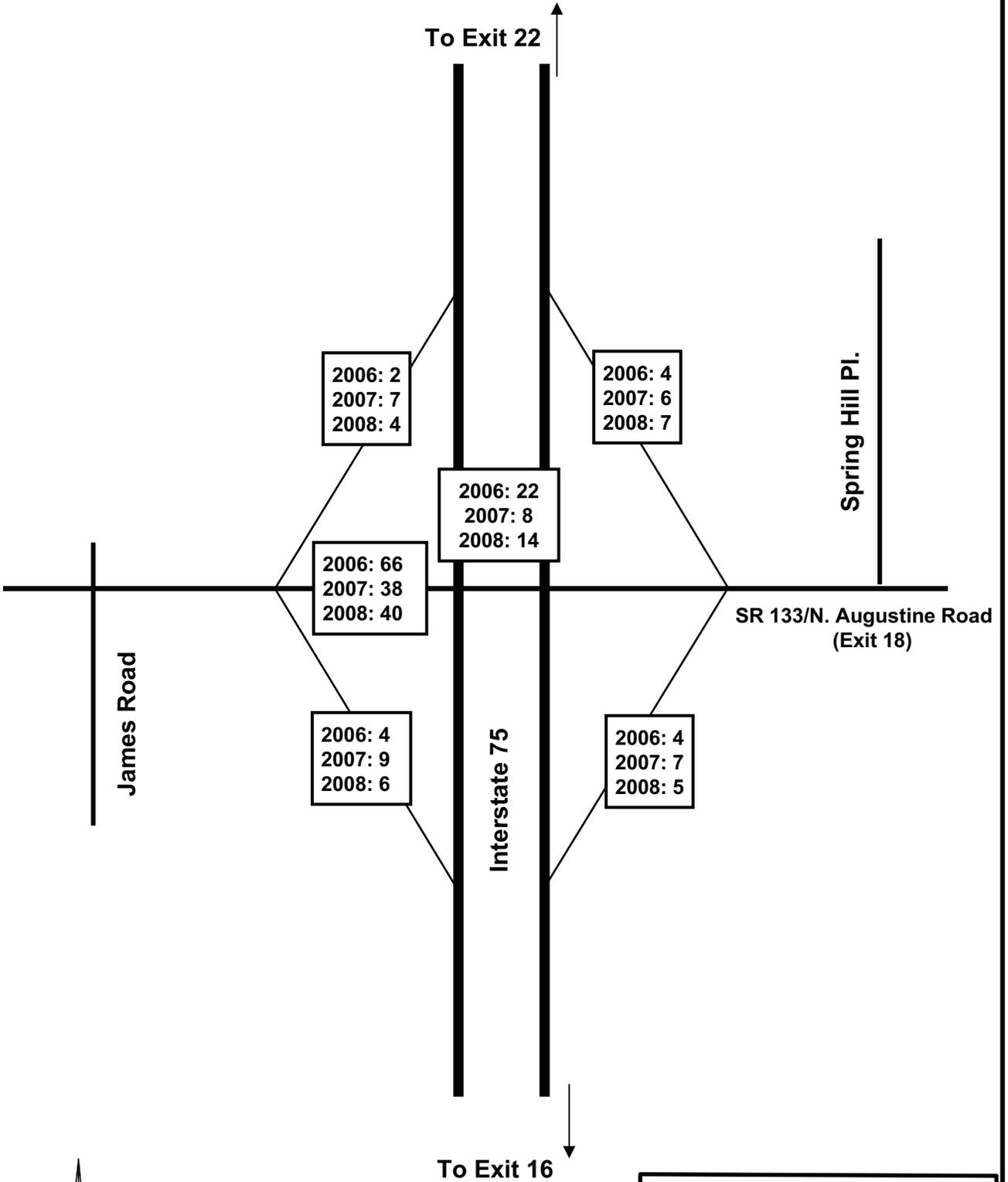
For the two on-ramp intersections with SR 133 (N. St. Augustine Road), the main street left turn volume onto the on-ramp was taken as the “minor” approach volume and the opposing through volume as the “major” approach volume as outlined in the MUTCD. Based on the warrant analyses, the southbound on-ramp intersection satisfies the criteria, but northbound on-ramp intersection does not.

### 5.5 CRASH DATA

Historic crash data was analyzed for years 2006-2008 for SR 133 (N. St. Augustine Road), the ramps, and the interstate mainline north and south of the interchange. Crash data was analyzed for approximately one-half mile on SR 133 (N. St. Augustine Road) in the vicinity of I-75, and on I-75 mainline for 0.5 miles on either side of the interchange. Figure 5.5 provides a summary of the number of crashes by location.

In total, 144 crashes occurred on SR 133 (N. St. Augustine Road) over the three year period. I-75 mainline had a total of 44 collisions over the three year period, and a total of 65 crashes occurred on the four ramps.

A more detailed analysis of crash types will need to be performed in order to make any design recommendations, this will be done at the Preliminary Design stage.



LEGEND	
253	# of Crashes

I-75 Traffic Analysis	
FIGURE	Site 5
5.5	Historic Crash Data
January 2010	<b>JACOBS</b>

## Traffic Operations Analysis for I-75 at Five Locations

In order to gauge the frequency of collisions occurring in the study area, crash rates were calculated for SR 133 (N. St. Augustine Road), I-75 mainline, and the ramps, and were compared to the statewide average for similar facilities. SR 133 (N. St. Augustine Road) was compared with Urban Minor Arterial routes and the I-75 mainline was compared with Urban Interstate. Tables 5.4-5.6 summarize how the compiled 2006-2008 crash data compares with statewide averages for crash, injury and fatality rates.

**Table 5.4 – Site 5 Crash Rates for SR 133 (N. St. Augustine Road)**

Year	# of Crashes	Crash Rate per 100 MVT	Statewide Average Rate per 100 MVT	# of Injury Crashes	Injury Crash Rate per 100 MVT	Statewide Average Injury Rate per 100 MVT	# of Fatality Crashes	Fatality Crash Rate per 100 MVT	Statewide Average Fatality Rate per 100 MVT
2006	66	1548	298	11	258	77	0	0.00	1.19
2007	38	1041	445	7	192	113	0	0.00	1.42
2008	40	1189	430	9	267	108	0	0.00	1.31

Note: Crash data represents approximately 0.5 mile of roadway

**Table 5.5 – Site 5 Crash Rates for I-75 near SR 133 (N. St. Augustine Road)**

Year	# of Crashes	Crash Rate per 100 MVT	Statewide Average Rate per 100 MVT	# of Injury Crashes	Injury Crash Rate per 100 MVT	Statewide Average Injury Rate per 100 MVT	# of Fatality Crashes	Fatality Crash Rate per 100 MVT	Statewide Average Fatality Rate per 100 MVT
2006	22	289	200	7	92	46	0	0.00	0.66
2007	8	99	186	2	25	43	0	0.00	0.52
2008	14	172	187	4	49	43	0	0.00	0.56

Note: Crash data represents approximately 1 mile of roadway

**Table 5.6 – Site 5 Crash Rates for I-75 Ramps at SR 133 (N. St. Augustine Road)**

Year	# of Crashes	Intersection Crash Rate per MEV	# of Injury Crashes	Intersection Injury Crash Rate per MEV	# of Fatality Crashes	Intersection Fatality Crash Rate per MEV
<b>Northbound Off-Ramp</b>						
2006	4	3.0	0	0.0	0	0
2007	7	5.3	3	2.3	0	0
2008	5	3.8	0	0.0	0	0
<b>Northbound On-Ramp</b>						
2006	4	3.3	1	0.8	0	0
2007	6	5.0	2	1.7	1	1
2008	7	5.8	2	1.7	0	0
<b>Southbound Off-Ramp</b>						
2006	2	1.7	1	0.8	0	0
2007	7	5.8	1	0.8	0	0
2008	4	3.3	1	0.8	0	0
<b>Southbound On-Ramp</b>						
2006	4	3.0	1	0.8	0	0
2007	9	6.8	3	2.3	0	0
2008	6	4.6	2	1.5	0	0

Note: Crash data at intersection ramp

As shown in Table 5.4, the crash and injury rate for SR 133 (N. St. Augustine Road) exceeds the statewide averages. This is due, in part, to the numerous driveways on SR 133 (N. St. Augustine Road) in the vicinity of the interchange and the conflicting turning movements associated with them. No fatalities occurred on SR 133 (N. St. Augustine Road) in the vicinity of the interchange.

I-75 crash and injury rates in the vicinity of the interchange were close to (or exceeded) the statewide averages, as shown in Table 5.5. In the three year period, no fatality crashes occurred on I-75 in the vicinity of the interchange.

As shown in Table 5.6, the crash and injury rates for all four ramps at the interchange were comparable to each other. One fatality occurred in Year 2007 on the Northbound On-Ramp.

### 5.6 DESIGN RECOMMENDATIONS

Based on the traffic analysis, the I-75 ramp intersections with SR 133 (N. St. Augustine Road), and the SR 133 (N. St. Augustine Road) intersections with James Road and with Spring Hill Place will require additional capacity to meet the projected traffic volumes. To maintain the desirable through capacity and to maintain the current staggered ramp formation, the new bridge should be developed at least as a seven-lane facility that has separate left-turn lanes in each direction, based on the year 2034 traffic projections (Figure 5.6b). However, if the interchange were to be reconstructed as a full diamond without the staggered ramps, then the new bridge should be developed as an eight-lane facility with separate turn lanes in each direction (Figure 5.6a).

It is recommended that the interchange be reconstructed without the staggered formation and that at least an eight-lane bridge be constructed that includes three eastbound through lanes with one eastbound left-turn lane, and two westbound through lanes with two left-turn lanes. Figure 5.6a shows the recommended lane geometry and the turn lane storage lengths at the ramp intersections. As shown, a minimum of 150 feet of turn lane storage should be provided at the ramp intersections and should include channelized right turn lanes.

From the capacity analysis at the intersections adjacent to the ramps, it was determined that traffic signals are required for additional capacity during the peak hours. Based on the projected traffic volumes in opening year 2012, both the intersections of SR 133 (N. St. Augustine Road) at James Road and at Spring Hill Place satisfy the criteria for installing a traffic signal. It is recommended that the ramp intersections and the adjacent intersections with the proposed geometry shown in Figure 5.6a be constructed. As shown, a minimum of 150 feet of turn lane storage should be provided at the ramp intersections and should include channelized right turn lanes.

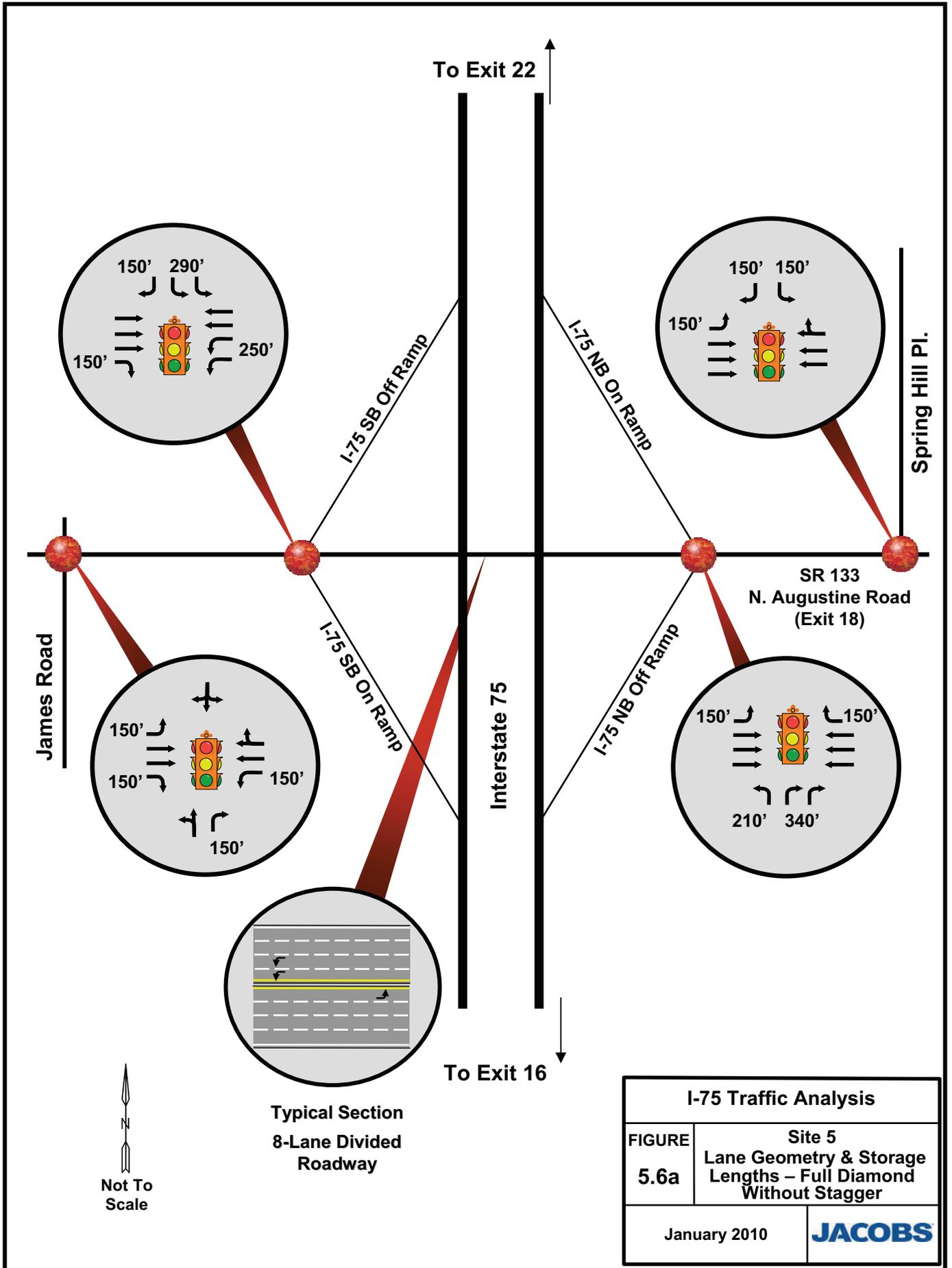
An alternative recommendation would be to maintain the staggered ramp formation and that at least an seven-lane bridge be constructed that includes two through lanes in each direction with two westbound left-turn lanes and one eastbound left-turn lane. Figure 5.6b shows the recommended lane geometry and the turn lane storage lengths

## Traffic Operations Analysis for I-75 at Five Locations

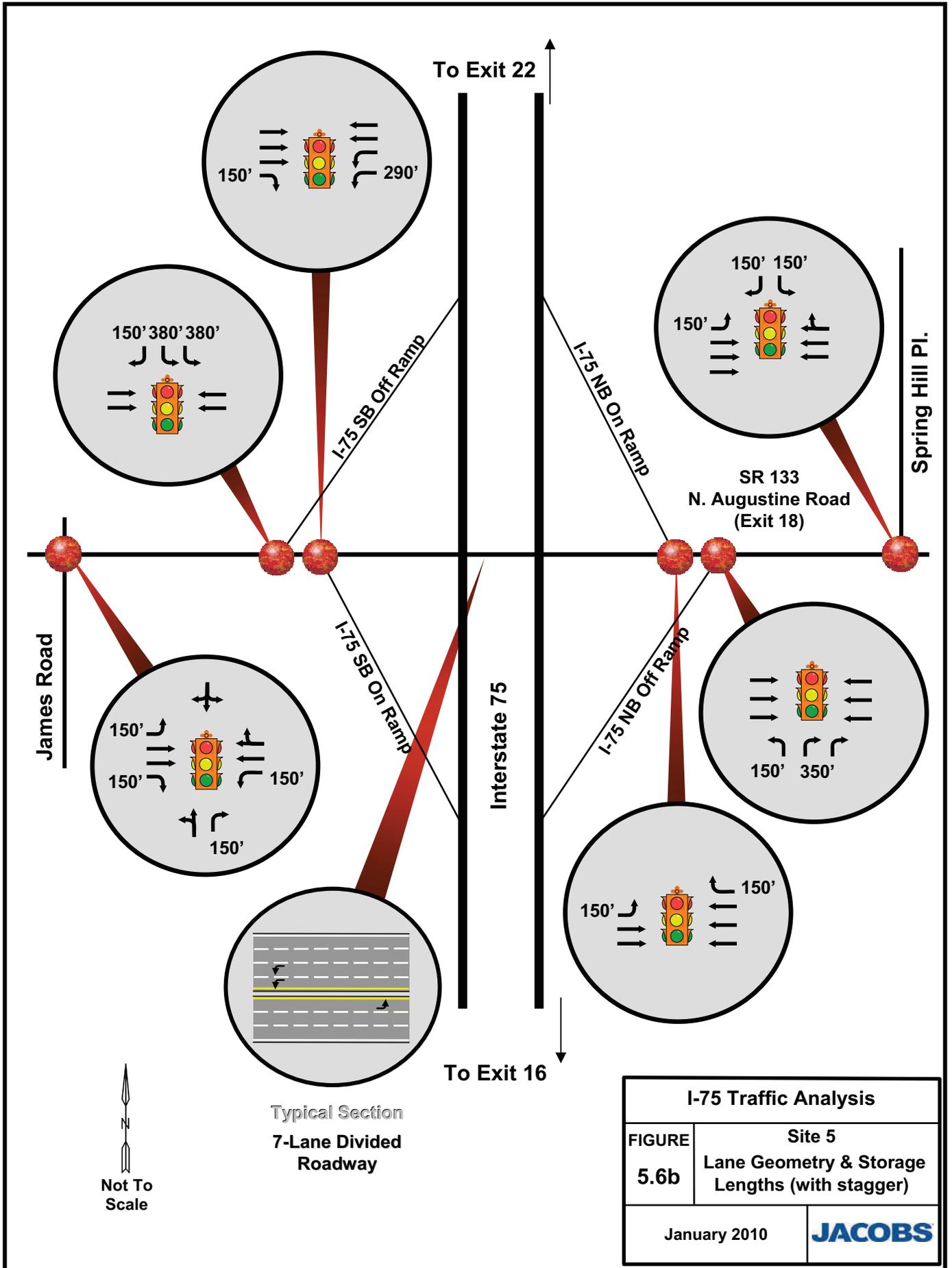
at the ramp intersections. As shown, a minimum of 150 feet of turn lane storage should be provided at the ramp intersections and should include channelized right turn lanes.

From the capacity analysis at the on-ramp intersections, it was determined that traffic signals are required for additional capacity during the peak hours. Based on the projected traffic volumes in opening year 2012, the southbound on-ramp intersection satisfies the criteria for installing a traffic signal, but northbound on-ramp intersection does not.

The entrance and exit ramps to and from I-75 will be lengthened and widened to accommodate future traffic volumes, provide adequate storage, and provide sufficient acceleration/ deceleration distances for entering and exiting traffic.



I-75 Traffic Analysis	
FIGURE 5.6a	Site 5 Lane Geometry & Storage Lengths – Full Diamond Without Stagger
	January 2010
<b>JACOBS</b>	



I-75 Traffic Analysis	
FIGURE 5.6b	Site 5 Lane Geometry & Storage Lengths (with stagger)
January 2010	<b>JACOBS</b>

### 6 – Conclusions

The widening of I-75 to eight lanes from the Florida State Line to just north of SR 133 (N. St. Augustine Road) will improve traffic operations on the mainline and the ramps in year 2014 and 2034. Without the widening, the mainline and ramps on the rural section of I-75 from the Florida State Line to SR 133 (N. St. Augustine Road) will have some freeway sections and ramps that operate with LOS E and D during peak hours.

At the ramp intersections with CR 274 (Bellville Road)/Lake Park Road, acceptable LOS can be provided by constructing a three-lane facility that includes one through lane in each direction and back to back left turn lanes. In 2014, the lowest LOS is C and occurs in the Northbound Lane. This movement deteriorates to a LOS of F in 2034. This issue can be resolved by installing a traffic signal. See Table 6.1.

At the ramp intersections with SR 376 (Lakes Boulevard), acceptable LOS can be provided by constructing a six-lane facility that includes two through lanes and a left-turn lane in each direction. In 2014 and 2034, the lowest LOS is B. See Table 6.1

At the CR 783 (Loch Laurel Road) overpass over I-75, acceptable LOS can be provided by constructing a two-lane facility. In 2014 and 2034, the lowest LOS is B. See Table 6.1.

At the ramp intersections with SR 31 (Madison Highway), acceptable LOS can be provided by constructing a seven-lane facility that includes two through lanes in each direction with two westbound left-turn lanes and one eastbound left-turn lane. In 2014 and 2034, the lowest LOS is F which occurs during the PM Peak hour in the Southbound lane. This issue can be resolved by installing a traffic signal. See Table 6.1.

At the ramp intersections with SR 133 (N. St. Augustine Road), acceptable LOS can be provided by constructing an eight-lane facility without the staggered ramp formation that includes three eastbound through lanes with one eastbound left-turn lane, and two westbound through lanes with two left-turn lanes. In 2014, the worst LOS is C and occurs during the PM Peak Hour in the Southbound Lane. In 2034, the LOS becomes F. This issue can be resolved by installing a traffic signal. See Table 6.1.

Alternatively, by maintaining the staggered ramp formation on SR 133 (N. St. Augustine Road), acceptable LOS can also be provided by constructing a seven-lane facility that includes two through lanes in each direction with two westbound left-turn lanes and one eastbound left-turn lane.

Channelized right turn lanes are recommended at the Interstate on-ramps to improve traffic flow for vehicles entering the Interstate. In addition, the off-ramps should be widened to include a channelized right turn lane for vehicles turning onto the local roadway.

# Traffic Operations Analysis for I-75 at Five Locations

## Table 6.1 – Summary of LOS Analysis for All Sites

SITE	Intersection	Control	Movement	2009				2014				2034				
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
				LOS	Delay (Sec)											
SITE 1	CR 274 (Bellville Rd)/Lake Park Rd @ I-75 SB Ramps	Stop Sign	WBL	A	0.5	A	0.3	A	3.2	A	1.6	A	3.3	A	2	
			SBL+R	B	11.1	B	13.1	B	13.8	B	14.3	E	36.3	F	50+	
			Overall				A	9.2	A	9.4	B	11	B	12.4		
	CR 274 (Bellville Rd)/Lake Park Rd @ I-75 NB Ramps	Stop Sign	EBL	A	0.9	A	0.6	A	4.6	A	3.5	A	5.5	A	4	
			NBL+R	B	13.3	B	14	C	17.4	C	16	F	50+	F	50+	
			Overall				A	7.5	A	9.2	A	9.2	B	12		
SITE 2	SR 376 (Lakes Blvd) @ I-75 SB Ramps	Traffic Signal	Overall	B	11	B	10.5	B	12.5	B	13.3	B	15.9	B	16.3	
		Traffic Signal w/coord & chan Ins	Overall				B	12.2	A	8.3	B	13.5	B	16.4		
	SR 376 (Lakes Blvd) @ I-75 NB Ramps	Traffic Signal	Overall	A	6.6	A	7.3	A	9.3	B	9.3	B	10.4	B	11.8	
		Traffic Signal w/coord & chan Ins	Overall				A	9.7	B	11.3	B	10.7	B	11		
	SR 376 (Lakes Blvd) @ Jewell Futch Rd/Timber Dr	Traffic Signal	Overall	A	7.2	A	6.7	A	8.4	A	9.4	A	9.1	B	11.5	
		Traffic Signal w/coord	Overall				A	9	A	9.3	B	10.8	B	11.3		
	SR 376 (Lakes Blvd) @ Mill Store Rd	Traffic Signal	Overall	A	7.8	A	7.6	A	8.9	A	8.6	B	11	B	10.2	
		Traffic Signal w/coord	Overall				B	10.5	B	10.1	A	9.7	B	14.1		
	SITE 3	CR 783 (Loch Laurel Rd) @ Frontage Rd	Stop Sign	EBL+R	A	9.6	A	9.8	B	10.1	B	10	B	11	B	10.9
				NBL+T				A	1.2	A	0.8	A	1.3	A	1.1	
Overall																
SITE 4	SR 31 (Madison Hwy) @ I-75 SB Ramps	Stop Sign	WBL	A	1.4	A	2.1	A	7.5	A	9.3	A	9.4	B	10	
			SBL+R	C	17.3	F	59.9	C	21	F	165.7	F	50+	F	50+	
			Overall				B	11.9	B	16.8	B	19.2	B	16.4		
	SR 31 (Madison Hwy) @ I-75 NB Ramps	Stop Sign	EBL	A	0.7	A	1.1	A	4.5	A	5.1	A	4.8	A	8.4	
			NBL+R	B	12.4	B	12.7	B	14.4	C	17.2	F	50+	E	42.8	
			Overall				A	9.4	A	8.7	A	11	B	11.9		
SITE 5	SR 133 @ I-75 SB Off Ramp	Traffic Signal	Overall	B	19.4	B	11.2	C	20.9	B	10.5	C	27.9	B	12.3	
		Traffic Signal w/coord	Overall				A	8.6	A	6.8	B	15.8	A	9.8		
	SR 133 @ I-75 SB On Ramp	Stop Sign	WBL	A	9.1	B	10.2	B	11.4	B	10.5	C	18.4	C	16.9	
		Traffic Signal w/coord	Overall				A	5	A	6.4	A	7.7	A	9		
	SR 133 @ I-75 NB On Ramp	Stop Sign	EBL	A	8.3	A	8.7	A	8.5	A	9.6	B	10.9	C	19.3	
		Traffic Signal w/coord	Overall				A	0.4	A	0.4	A	1.9	A	1.2		
	SR 133 @ I-75 NB Off Ramp	Traffic Signal	Overall	C	22.9	B	13.1	C	24.5	B	13.7	D	36.9	C	33.1	
		Traffic Signal w/coord	Overall				A	7.4	A	5.1	B	13.2	A	6.8		
	SR 133 @ James Rd	Stop Sign	EBL	A	9.1	A	8.4	A	8.1	A	8.8	A	9.2	B	11.9	
			WBL	A	9.6	A	8.7	B	10.1	A	8.9	B	13.3	B	10.4	
			NBLTR	C	21.8	C	16.2	C	21.1	C	19.7	F	60+	F	60+	
			SBLTR	D	29.5	C	19.3	C	22.4	C	23.8	F	60+	F	60+	
			Overall				A	7.3	A	5.3	A	9.9	A	7.9		
	SR 133 @ Spring Hill Pl	Stop Sign	EBL	A	9.6	B	13.3	B	10	B	14.8	B	12.4	D	31.5	
			SBLTR	B	12.9	C	21.2	C	15.5	E	41.1	F	60+	F	60+	
			Overall				A	3.9	A	5.2	A	4.3	A	5.9		

ATTACHMENT NUMBER 7

MORELAND ALTOBELLI'S

TRAFFIC ANALYSIS

&

TRAFFIC FLOW DIAGRAMS

The 2009 Average Daily Traffic (ADT) for SR 7 is 16,900 vehicles with a 24-hour truck percentage of 7. The ADT is projected to increase to 20,700 vehicles by the year 2029. The 2009 ADT for SR 122 is 7,700 vehicles with a 24-hour truck percentage of 15. The ADT is projected to increase to 9,500 vehicles by the year 2029. The existing two-lane SR 7 and SR 122 do not have turning lanes. These ADT's in conjunction with the high truck percentages and a two-lane roadway with no provisions for left turning movements serve to impede traffic flow and increase congestion.

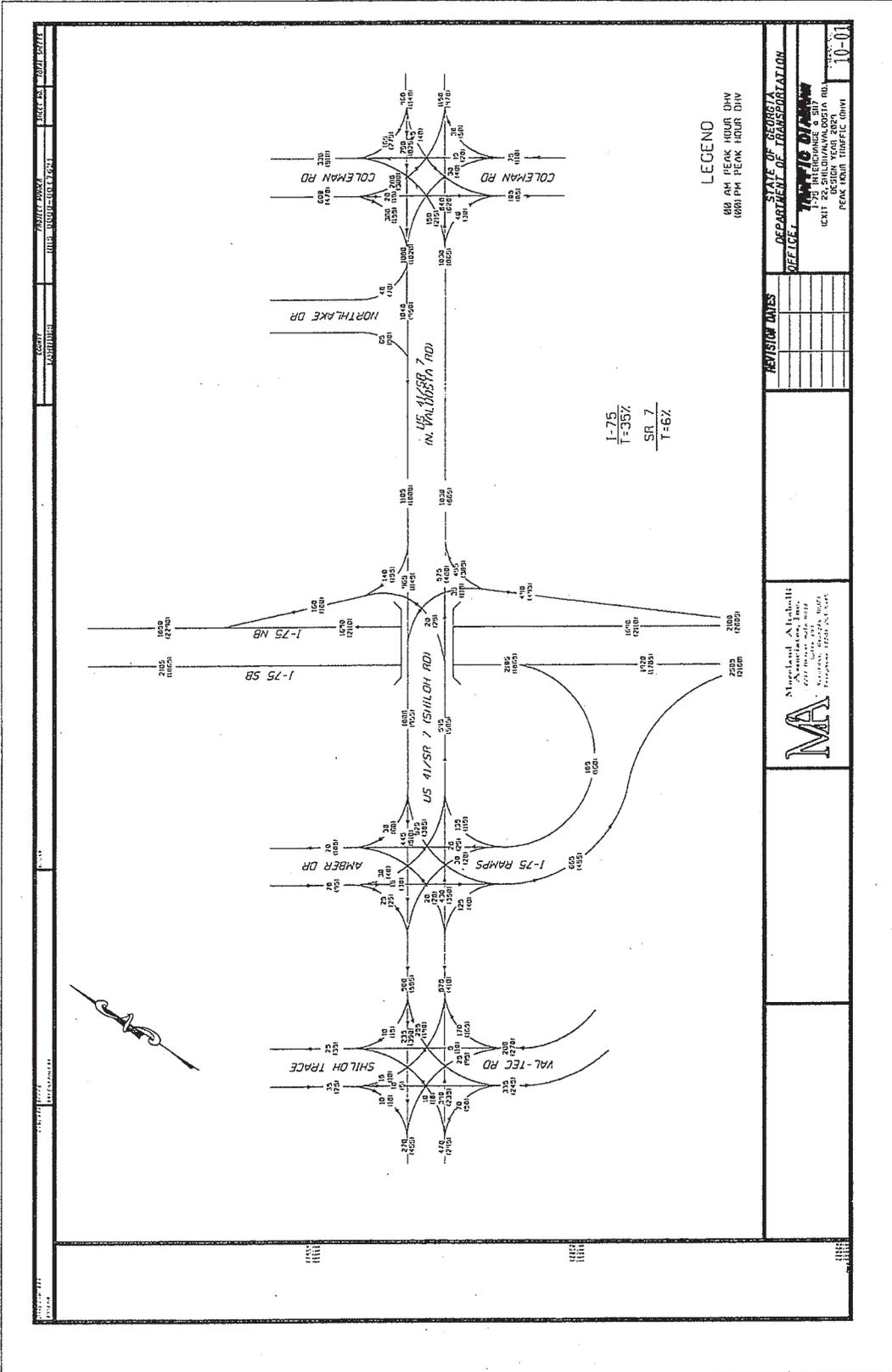
Both roadways were analyzed using the *Highway Capacity Software (HCS), Two-Lane Highway Analysis* to determine the level of service of the roadway. This software utilizes the methodology contained in the *2000 Highway Capacity Manual* for determining level of service. Below is a summary of the level of service results for SR 122 and SR 7. The existing conditions were analyzed for both roadways. Future (2029) traffic volumes were used to analyze both roadways under three different scenarios: a two-lane no-build, a three-lane build and a four-lane build.

**Summary of Level of Service Results**

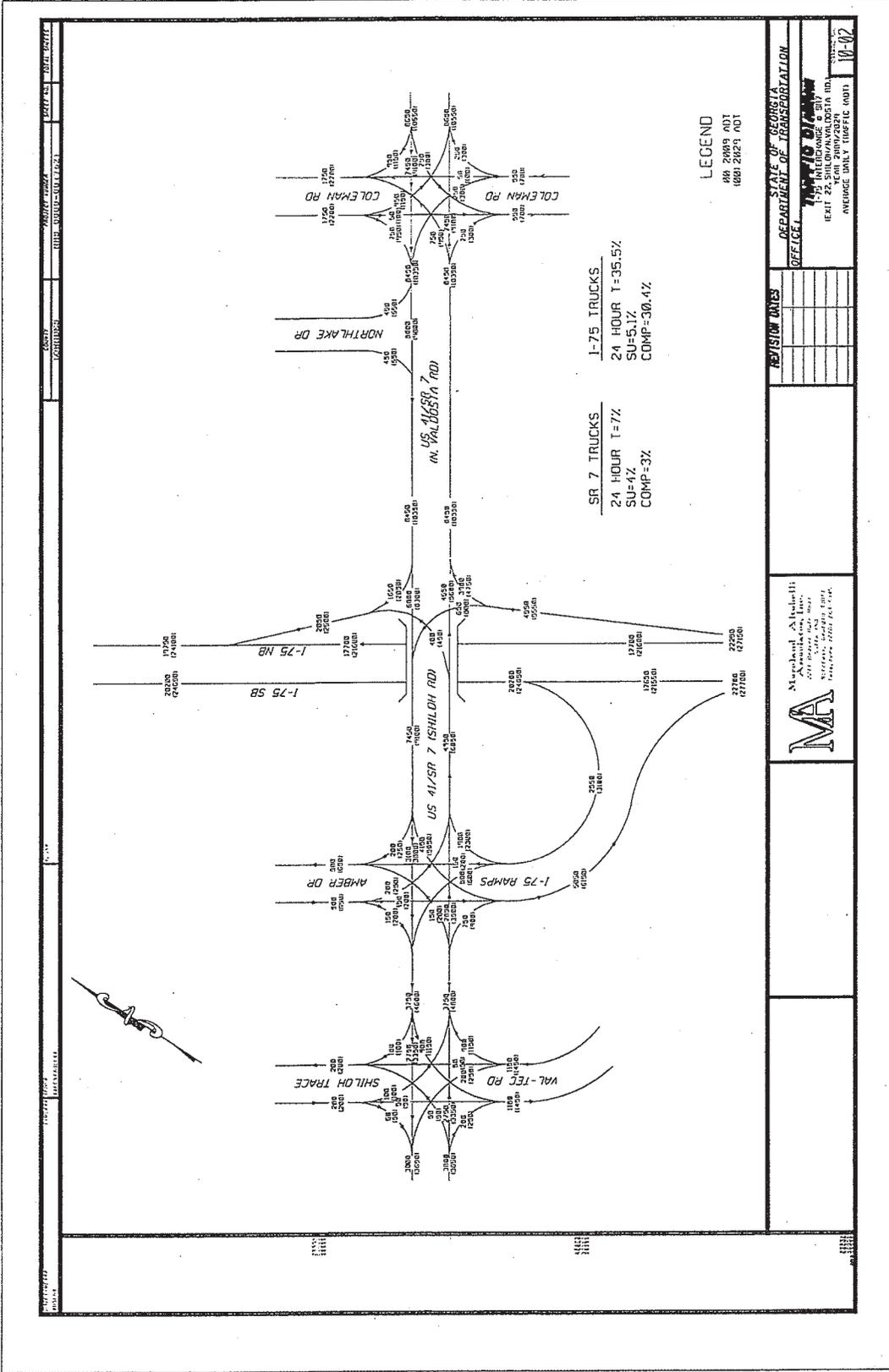
Roadways	Existing Year 2005	No-Build Year 2029	Build (3 Lanes) Year 2029	Build (4 Lanes) Year 2029
SR 122 (Main Street)	E	E	E	A
SR 7 (Shiloh/N Valdosta Rd)	E	E	E	B

The results above indicate that only a four-lane divided typical section would provide a good level of service to meet the future traffic demand. See the attached HCS worksheets.





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HCS+: Two-Lane Highways Release 5.1

Two-Way Two-Lane Highway Segment Analysis

Analyst MAAI  
 Agency/Co. GDOT  
 Date Performed 4/18/2006  
 Analysis Time Period AM Peak Hour  
 Highway SR 7  
 From/To Val-Tech Rd to Coleman Rd  
 Jurisdiction Lowndes  
 Analysis Year Year 2005  
 Description I-75/SR 122 Interchange Reconstruction

Input Data

Highway class Class 1  
 Shoulder width 6.0 ft Peak-hour factor, PHF 0.88  
 Lane width 12.0 ft % Trucks and buses 6 %  
 Segment length 0.0 mi % Recreational vehicles 0 %  
 Terrain type Level % No-passing zones 100 %  
 Grade: Length mi Access points/mi 10 /mi  
     Up/down %  
 Two-way hourly volume, V 1450 veh/h  
 Directional split 51 / 49 %

Average Travel Speed

Grade adjustment factor, fG 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, 0.994  
 Two-way flow rate, (note-1) vp 1658 pc/h  
 Highest directional split proportion (note-2) 846 pc/h  
 Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM - mi/h  
 Observed volume, Vf - veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS 45.0 mi/h  
 Adj. for lane and shoulder width, fLS 0.0 mi/h  
 Adj. for access points, fA 2.5 mi/h  
 Free-flow speed, FFS 42.5 mi/h  
 Adjustment for no-passing zones, fnp 1.4 mi/h  
 Average travel speed, ATS 28.2 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00  
 PCE for trucks, ET 1.0  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 1.000  
 Two-way flow rate, (note-1) vp 1648 pc/h  
 Highest directional split proportion (note-2) 840  
 Base percent time-spent-following, BPTSF 76.5 %  
 Adj. for directional distribution and no-passing zones, fd/np 6.5  
 Percent time-spent-following, PTSF 83.0 %

Level of Service and Other Performance Measures

Level of service, LOS E  
 Volume to capacity ratio, v/c 0.52  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

HCS+: Two-Lane Highways Release 5.1

Two-Way Two-Lane Highway Segment Analysis

Analyst MAAI  
 Agency/Co. GDOT  
 Date Performed 4/18/2006  
 Analysis Time Period AM Peak Hour  
 Highway SR 7  
 From/To Val-Tech Rd to Coleman Rd  
 Jurisdiction Lowndes  
 Analysis Year Year 2029 - No-Build  
 Description I-75/SR 122 Interchange Reconstruction

Input Data

Highway class Class 1  
 Shoulder width 6.0 ft Peak-hour factor, PHF 0.88  
 Lane width 12.0 ft % Trucks and buses 6 %  
 Segment length 0.0 mi % Recreational vehicles 0 %  
 Terrain type Level % No-passing zones 100 %  
 Grade: Length mi Access points/mi 10 /mi  
     Up/down %  
 Two-way hourly volume, V 2135 veh/h  
 Directional split 52 / 48 %

Average Travel Speed

Grade adjustment factor, fG 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, 0.994  
 Two-way flow rate, (note-1) vp 2441 pc/h  
 Highest directional split proportion (note-2) 1269 pc/h  
 Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM - mi/h  
 Observed volume, Vf - veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS 45.0 mi/h  
 Adj. for lane and shoulder width, fLS 0.0 mi/h  
 Adj. for access points, fA 2.5 mi/h  
 Free-flow speed, FFS 42.5 mi/h  
 Adjustment for no-passing zones, fnp 1.1 mi/h  
 Average travel speed, ATS 22.5 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00  
 PCE for trucks, ET 1.0  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 1.000  
 Two-way flow rate, (note-1) vp 2426 pc/h  
 Highest directional split proportion (note-2) 1262  
 Base percent time-spent-following, BPTSF 88.1 %  
 Adj. for directional distribution and no-passing zones, fd/np 2.9  
 Percent time-spent-following, PTSF 91.1 %

Level of Service and Other Performance Measures

Level of service, LOS E  
 Volume to capacity ratio, v/c 0.76  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

HCS+: Two-Lane Highways Release 5.1

Two-Way Two-Lane Highway Segment Analysis

Analyst MAAI  
 Agency/Co. GDOT  
 Date Performed 4/18/2006  
 Analysis Time Period AM Peak Hour  
 Highway SR 7  
 From/To Val-Tech Rd to Coleman Rd  
 Jurisdiction Lowndes  
 Analysis Year Year 2029 - 3-lane typical  
 Description I-75/SR 122 Interchange Reconstruction

Input Data

Highway class Class 1  
 Shoulder width 6.0 ft Peak-hour factor, PHF 0.88  
 Lane width 12.0 ft % Trucks and buses 6 %  
 Segment length 0.0 mi % Recreational vehicles 0 %  
 Terrain type Level % No-passing zones 0 %  
 Grade: Length mi Access points/mi 10 /mi  
     Up/down %  
 Two-way hourly volume, V 1590 veh/h  
 Directional split 53 / 47 %

Average Travel Speed

Grade adjustment factor, fG 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, 0.994  
 Two-way flow rate, (note-1) vp 1818 pc/h  
 Highest directional split proportion (note-2) 964 pc/h  
 Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM - mi/h  
 Observed volume, Vf - veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS 45.0 mi/h  
 Adj. for lane and shoulder width, fLS 0.0 mi/h  
 Adj. for access points, fA 2.5 mi/h  
 Free-flow speed, FFS 42.5 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 28.4 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00  
 PCE for trucks, ET 1.0  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 1.000  
 Two-way flow rate, (note-1) vp 1807 pc/h  
 Highest directional split proportion (note-2) 958  
 Base percent time-spent-following, BPTSF 79.6 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 79.6 %

Level of Service and Other Performance Measures

Level of service, LOS E  
 Volume to capacity ratio, v/c 0.57  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

## OPERATIONAL ANALYSIS

Analyst: MAAI  
 Agency/Co: GDOT  
 Date: 4/18/2006  
 Analysis Period: AM Peak Hour  
 Highway: SR 7  
 From/To: Val-Tech Rd to Coleman Rd  
 Jurisdiction: Lowndes  
 Analysis Year: Year 2029 - 4-lane divided  
 Project ID: I-75/SR 122 Interchange Reconstruction

## FREE-FLOW SPEED

	Direction	1		2	
Lane width		12.0	ft	12.0	ft
Lateral clearance:					
Right edge		6.0	ft	6.0	ft
Left edge		6.0	ft	6.0	ft
Total lateral clearance		12.0	ft	12.0	ft
Access points per mile		0		0	
Median type					
Free-flow speed:		Measured		Measured	
FFS or BFFS		45.0	mph	45.0	mph
Lane width adjustment, FLW		0.0	mph	0.0	mph
Lateral clearance adjustment, FLC		0.0	mph	0.0	mph
Median type adjustment, FM		0.0	mph	0.0	mph
Access points adjustment, FA		0.0	mph	0.0	mph
Free-flow speed		45.0	mph	45.0	mph

## VOLUME

	Direction	1		2	
Volume, V		1185	vph	1030	vph
Peak-hour factor, PHF		0.88		0.88	
Peak 15-minute volume, v15		337		293	
Trucks and buses		6	%	6	%
Recreational vehicles		0	%	0	%
Terrain type		Level		Level	
Grade		0.00	%	0.00	%
Segment length		0.00	mi	0.00	mi
Number of lanes		2		2	
Driver population adjustment, fP		1.00		1.00	
Trucks and buses PCE, ET		1.5		1.5	
Recreational vehicles PCE, ER		1.2		1.2	
Heavy vehicle adjustment, fHV		0.971		0.971	
Flow rate, vp		693	pcphpl	602	pcphpl

## RESULTS

	Direction	1		2	
Flow rate, vp		693	pcphpl	602	pcphpl
Free-flow speed, FFS		45.0	mph	45.0	mph
Avg. passenger-car travel speed, S		45.0	mph	45.0	mph
Level of service, LOS		B		B	
Density, D		15.4	pc/mi/ln	13.4	pc/mi/ln

Overall results are not computed when free-flow speed is less than 45 mph.

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI  
 Agency/Co.: Lowndes County  
 Date Performed: 03/02/2007  
 Analysis Time Period: AM Peak Hour  
 Intersection: SR 7@Val-Tech Rd-Shiloh Tr  
 Jurisdiction: GDOT  
 Units: U. S. Customary  
 Analysis Year: Year 2029  
 Project ID: I-75 at SR 7/US 41 Interchange Reconstruction  
 East/West Street: SR 7/Shiloh Road  
 North/South Street: Val-Tech Road/Shiloh Trace  
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach Movement	Eastbound			Westbound		
	1 L	2 T	3 R	4 L	5 T	6 R
Volume	10	390	70	255	235	10
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	10	423	76	277	255	10
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						
Lanes	1	2	0	1	2	0
Configuration	L	T	TR	L	T	TR
Upstream Signal?	No			No		

Minor Street: Approach Movement	Northbound			Southbound		
	7 L	8 T	9 R	10 L	11 T	12 R
Volume	25	5	170	15	10	10
Peak Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	27	5	184	16	10	10
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach: Exists?/Storage	No		No	/	No	/
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		

Delay, Queue Length, and Level of Service

Approach Movement	EB	WB	Northbound			Southbound		
	1	4	7	8	9	10	11	12
Lane Config	L	L	LTR			LTR		
v (vph)	10	277	216			36		
C(m) (vph)	1311	1075	549			224		
v/c	0.01	0.26	0.39			0.16		
95% queue length	0.02	1.03	1.86			0.56		
Control Delay	7.8	9.5	15.7			24.1		
LOS	A	A	C			C		
Approach Delay			15.7			24.1		
Approach LOS			C			C		

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI  
 Agency/Co.: Lowndes County  
 Date Performed: 03/02/2007  
 Analysis Time Period: PM Peak Hour  
 Intersection: SR 7@Val-Tech Rd-Shiloh Tr  
 Jurisdiction: GDOT  
 Units: U. S. Customary  
 Analysis Year: Year 2029  
 Project ID: I-75 at SR 7/US 41 Interchange Reconstruction  
 East/West Street: SR 7/Shiloh Road  
 North/South Street: Val-Tech Road/Shiloh Trace  
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach Movement	Eastbound			Westbound		
	1 L 	2 T 	3 R 	4 L 	5 T 	6 R 
Volume	10	235	50	190	350	15
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	10	255	54	206	380	16
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						
Lanes	1	2	0	1	2	0
Configuration	L T TR			L T TR		
Upstream Signal?	No			No		

Minor Street: Approach Movement	Northbound			Southbound		
	7 L 	8 T 	9 R 	10 L 	11 T 	12 R 
Volume	95	10	165	10	5	10
Peak Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	103	10	179	10	5	10
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach: Exists?/Storage	No			/ No /		
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		

Delay, Queue Length, and Level of Service

Approach Movement	EB		Northbound			Southbound		
	1 L 	4 L 	7	8 LTR 	9	10	11 LTR 	12
Lane Config	L L		LTR			LTR		
v (vph)	10	206	292			25		
C(m) (vph)	1174	1263	491			324		
v/c	0.01	0.16	0.59			0.08		
95% queue length	0.03	0.58	3.82			0.25		
Control Delay	8.1	8.4	22.5			17.0		
LOS	A	A	C			C		
Approach Delay			22.5			17.0		
Approach LOS			C			C		

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI  
 Agency/Co.: Lowndes County  
 Date Performed: 03/02/2007  
 Analysis Time Period: AM Peak Hour  
 Intersection: SR 7 @ I-75 SB/Amber Drive  
 Jurisdiction: GDOT  
 Units: U. S. Customary  
 Analysis Year: Year 2029  
 Project ID: I-75 at SR 7/US 41 Interchange Reconstruction  
 East/West Street: SR 7/Shiloh Road  
 North/South Street: I-75 Southbound Ramps/Amber Dr  
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach Movement	Eastbound			Westbound		
	1 L	2 T	3 R	4 L	5 T	6 R
Volume	20	430	125	525	445	30
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	21	467	135	570	483	32
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?	No					
Lanes	1	2	1	1	2	0
Configuration	L	T	R	L	T	TR
Upstream Signal?	No			No		

Minor Street: Approach Movement	Northbound			Southbound		
	7 L	8 T	9 R	10 L	11 T	12 R
Volume	30	20	135	30	15	25
Peak Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	32	21	146	32	16	27
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0					
Flared Approach: Exists?/Storage	/			No /		
Lanes	0	1	1	0	1	0
Configuration	LT		R	LTR		

Delay, Queue Length, and Level of Service

Approach Movement Lane Config	EB	WB	Northbound			Southbound		
	1 L	4 L	7 LT	8	9 R	10	11 LTR	12
v (vph)	21	570	53		146		75	
C(m) (vph)	1061	985			774		0	
v/c	0.02	0.58			0.19			
95% queue length	0.06	3.84			0.69			
Control Delay	8.5	13.5			10.7			
LOS	A	B			B		F	
Approach Delay								
Approach LOS								

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI  
 Agency/Co.: Lowndes County  
 Date Performed: 03/02/2007  
 Analysis Time Period: AM Peak Hour  
 Intersection: SR 7 @ I-75 SB/Amber Drive  
 Jurisdiction: GDOT  
 Units: U. S. Customary  
 Analysis Year: Year 2009  
 Project ID: I-75 at SR 7/US 41 Interchange Reconstruction  
 East/West Street: SR 7/Shiloh Road  
 North/South Street: I-75 Southbound Ramps/Amber Dr  
 Intersection Orientation: EW Study period (hrs): 0.25

		Vehicle Volumes and Adjustments					
Major Street:	Approach Movement	Eastbound			Westbound		
		1 L ↙	2 T ↑	3 R ↘	4 L ↙	5 T ↑	6 R ↘
Volume		15	330	100	415	255	25
Peak-Hour Factor, PHF		0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR		16	358	108	451	277	27
Percent Heavy Vehicles		0	--	--	0	--	--
Median Type/Storage		Raised curb				/ 1	
RT Channelized?		No					
Lanes		1	2	1	1	2	0
Configuration		L	T	R	L	T	TR
Upstream Signal?		No			No		

Minor Street:	Approach Movement	Northbound			Southbound		
		7 L ↙	8 T ↑	9 R ↘	10 L ↙	11 T ↑	12 R ↘
Volume		25	15	105	25	10	20
Peak Hour Factor, PHF		0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR		27	16	114	27	10	21
Percent Heavy Vehicles		0	0	0	0	0	0
Percent Grade (%)		0			0		
Flared Approach: Exists?/Storage		/			No /		
Lanes		0	1	1	0	1	0
Configuration		LT		R	LTR		

Approach Movement Lane Config	Delay, Queue Length, and Level of Service							
	EB	WB	Northbound			Southbound		
	1	4	7	8	9	10	11	12
	L ↙	L ↙	LT ↙		R ↘		LTR ↙	
v (vph)	16	451	43		114		58	
C(m) (vph)	1268	1106	107		839		125	
v/c	0.01	0.41	0.40		0.14		0.46	
95% queue length	0.04	2.02	1.67		0.47		2.08	
Control Delay	7.9	10.5	59.6		10.0-		56.6	
LOS	A	B	F		A		F	
Approach Delay				23.6			56.6	
Approach LOS				C			F	

HCS Two-Way Stop Analysis of the intersection of SR 7 / Shiloh Road at I-75 Southbound Ramps / Amber Drive for the 2009 build year indicates LOS F operation for Amber Drive and for the left and thru movements from I-75 SB off-ramp. However, these are low volume movements. The predominant side street movement, the right turn from I-75 SB off-ramp, would operate at LOS A, since it has a separate approach lane. This right-turn volume would not be considered in a signal warrant analysis, and the remaining side street movements would not justify signalization. The westbound left turn volume from SR 7 to I-75 SB is quite high, but would operate at LOS B.

The low volume of traffic on SR 7 obviates the need for a signal at this intersection. It is recommended that this intersection be monitored and reevaluated as conditions change.

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI  
 Agency/Co.: Lowndes County  
 Date Performed: 03/02/2007  
 Analysis Time Period: PM Peak Hour  
 Intersection: SR 7 @ I-75 SB/Amber Drive  
 Jurisdiction: GDOT  
 Units: U. S. Customary  
 Analysis Year: Year 2029  
 Project ID: I-75 at SR 7/US 41 Interchange Reconstruction  
 East/West Street: SR 7/Shiloh Road  
 North/South Street: I-75 Southbound Ramps/Amber Dr  
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach Movement	Eastbound			Westbound		
	1 L ↩	2 T ↑	3 R ↪	4 L ↩	5 T ↑	6 R ↪
Volume	20	350	40	385	510	60
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	21	380	43	418	554	65
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?	No					
Lanes	1	2	1	1	2	0
Configuration	L	T	R	L	T	TR
Upstream Signal?	No			No		

Minor Street: Approach Movement	Northbound			Southbound		
	7 L ↩	8 T ↑	9 R ↪	10 L ↩	11 T ↑	12 R ↪
Volume	20	25	115	40	30	25
Peak Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	21	27	124	43	32	27
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach: Exists?/Storage	/			No /		
Lanes	0	1	1	0	1	0
Configuration	LT		R	LTR		

Delay, Queue Length, and Level of Service

Approach Movement Lane Config	EB	WB	Northbound			Southbound		
	1 L ↩	4 L ↩	7 LT ↩↑	8	9 R ↪	10	11 LTR ↩↑↪	12
v (vph)	21	418	48		124		102	
C(m) (vph)	971	1147	81		826		95	
v/c	0.02	0.36	0.59		0.15		1.07	
95% queue length	0.07	1.69	2.65		0.53		6.64	
Control Delay	8.8	9.9	100.1		10.1		195.8	
LOS	A	A	F		B		F	
Approach Delay				35.2				195.8
Approach LOS				E				F

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI  
 Agency/Co.: Lowndes County  
 Date Performed: 03/02/2007  
 Analysis Time Period: PM Peak Hour  
 Intersection: SR 7 @ I-75 SB/Amber Drive  
 Jurisdiction: GDOT  
 Units: U. S. Customary  
 Analysis Year: Year 2009  
 Project ID: I-75 at SR 7/US 41 Interchange Reconstruction  
 East/West Street: SR 7/Shiloh Road  
 North/South Street: I-75 Southbound Ramps/Amber Dr  
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments						
Major Street: Approach Movement	Eastbound			Westbound		
	1 L	2 T	3 R	4 L	5 T	6 R
Volume	15	275	30	300	325	45
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	16	298	32	326	353	48
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?	No					
Lanes	1	2	1	1	2	0
Configuration	L	T	R	L	T	TR
Upstream Signal?	No			No		

Minor Street: Approach Movement	Northbound			Southbound		
	7 L	8 T	9 R	10 L	11 T	12 R
Volume	15	20	85	30	25	20
Peak Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Hourly Flow Rate, HFR	16	21	92	32	27	21
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0					
Flared Approach: Exists?/Storage				/ No /		
Lanes	0	1	1	0	1	0
Configuration	LT		R	LTR		

Approach Movement Lane Config	Delay, Queue Length, and Level of Service					
	EB 1 L	WB 4 L	Northbound 7 LT		9 R	Southbound 10 11 12 L TR
v (vph)	16	326	37	92	80	
C(m) (vph)	1169	1241	171	877	197	
v/c	0.01	0.26	0.22	0.10	0.41	
95% queue length	0.04	1.06	0.79	0.35	1.82	
Control Delay	8.1	8.9	31.8	9.6	35.2	
LOS	A	A	D	A	E	
Approach Delay				15.9	35.2	
Approach LOS				C	E	

HCS Two-Way Stop Analysis of the intersection of SR 7 / Shiloh Road at I-75 Southbound Ramps / Amber Drive for the 2009 build year indicates LOS F operation for Amber Drive and for the left and thru movements from I-75 SB off-ramp. However, these are low volume movements. The predominant side street movement, the right turn from I-75 SB off-ramp, would operate at LOS A, since it has a separate approach lane. This right-turn volume would not be considered in a signal warrant analysis, and the remaining side street movements would not justify signalization. The westbound left turn volume from SR 7 to I-75 SB is quite high, but would operate at LOS B.

The low volume of traffic on SR 7 obviates the need for a signal at this intersection. It is recommended that this intersection be monitored and reevaluated as conditions change.

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI  
 Agency/Co.: Lowndes County  
 Date Performed: 03/02/2007  
 Analysis Time Period: AM Peak Hour  
 Intersection: SR 7 @ I-85 NB Ramps  
 Jurisdiction: GDOT  
 Units: U. S. Customary  
 Analysis Year: Year 2029  
 Project ID: I-75 at SR 7/US 41 Interchange Reconstruction  
 East/West Street: SR 7/Shiloh Road  
 North/South Street: I-85 Northbound Ramps  
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound			Westbound		
		1 L 	2 T 	3 R	4 L	5 T 	6 R 
Volume		20	575			965	140
Peak-Hour Factor, PHF		0.92	0.92			0.92	0.92
Hourly Flow Rate, HFR		21	624			1048	152
Percent Heavy Vehicles		0	--	--		--	--
Median Type/Storage		Raised curb			/ 1		
RT Channelized?							No
Lanes		1	2			2	1
Configuration		L	T			T	R
Upstream Signal?			No			No	

Minor Street:	Approach Movement	Northbound			Southbound		
		7 L 	8 T	9 R 	10 L	11 T	12 R
Volume		35		455			
Peak Hour Factor, PHF		0.92		0.92			
Hourly Flow Rate, HFR		38		494			
Percent Heavy Vehicles		0		0			
Percent Grade (%)			0			0	
Flared Approach: Exists?/Storage					/		/
Lanes		1		1			
Configuration		L		R			

Delay, Queue Length, and Level of Service

Approach Movement	EB	WB	Northbound			Southbound		
			7 L 	8	9 R 	10	11	12
v (vph)	21		38		494			
C(m) (vph)	589		307		690			
v/c	0.04		0.12		0.72			
95% queue length	0.11		0.42		6.06			
Control Delay	11.3		18.4		22.2			
LOS	B		C		C			
Approach Delay				22.0				
Approach LOS				C				

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI  
 Agency/Co.: Lowndes County  
 Date Performed: 03/02/2007  
 Analysis Time Period: PM Peak Hour  
 Intersection: SR 7 @ I-85 NB Ramps  
 Jurisdiction: GDOT  
 Units: U. S. Customary  
 Analysis Year: Year 2029  
 Project ID: I-75 at SR 7/US 41 Interchange Reconstruction  
 East/West Street: SR 7/Shiloh Road  
 North/South Street: I-85 Northbound Ramps  
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound			Westbound		
		1 L 	2 T 	3 R	4 L	5 T 	6 R 
Volume		25	480			845	155
Peak-Hour Factor, PHF		0.92	0.92			0.92	0.92
Hourly Flow Rate, HFR		27	521			918	168
Percent Heavy Vehicles		0	--	--		--	--
Median Type/Storage		Raised curb			/ 1		
RT Channelized?							No
Lanes		1	2			2	1
Configuration		L	T			T	R
Upstream Signal?			No			No	

Minor Street:	Approach Movement	Northbound			Southbound		
		7 L 	8 T 	9 R 	10 L	11 T	12 R
Volume		110		385			
Peak Hour Factor, PHF		0.92		0.92			
Hourly Flow Rate, HFR		119		418			
Percent Heavy Vehicles		0		0			
Percent Grade (%)			0			0	
Flared Approach: Exists?/Storage					/		/
Lanes		1		1			
Configuration		L		R			

Delay, Queue Length, and Level of Service

Approach Movement	EB 1 L 	WB 4	Northbound			Southbound		
			7 L 	8	9 R 	10	11	12
v (vph)	27		119		418			
C(m) (vph)	650		348		745			
v/c	0.04		0.34		0.56			
95% queue length	0.13		1.48		3.53			
Control Delay	10.8		20.6		15.8			
LOS	B		C		C			
Approach Delay				16.9				
Approach LOS				C				

HCS2000: Signalized Intersections Release 4.1d

Analyst: MAAI Inter.: SR 7/US 41@ Coleman Rd  
 Agency: Lowndes County Area Type: All other areas  
 Date: 03/02/2007 Jurisd: GDOT  
 Period: AM Peak Hour Year : Year 2029  
 Project ID: I-75 at SR 7/US 41 Interchange Reconstruction  
 E/W St: SR 7/US 41/ N. Valdosta Rd N/S St: Coleman Road

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	1	1	1	0	1	1	0
LGConfig	L	T	R	L	T	R	L	TR		L	TR	
Volume	150	840	40	45	750	165	30	15	30	280	20	300
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		P	P		NB Left	P		
EB Thru			P		EB Thru	P		
EB Right			P		EB Right	P		
EB Peds					EB Peds			
WB Left		P	P		SB Left	P		
WB Thru			P		SB Thru	P		
WB Right			P		SB Right	P		
WB Peds					SB Peds			
NB Right					EB Right			
SB Right					WB Right			
Green		10.0	26.0			20.0		
Yellow		4.0	4.0			4.0		
All Red		0.0	1.0			1.0		

Cycle Length: 70.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS
Eastbound								
L	410	1805	0.40	0.57	11.7	B		
T	1341	3610	0.68	0.37	21.3	C	19.7	B
R	600	1615	0.07	0.37	14.4	B		
Westbound								
L	377	1805	0.13	0.57	9.3	A		
T	1341	3610	0.61	0.37	19.9	B	18.9	B
R	600	1615	0.30	0.37	16.8	B		
Northbound								
L	195	683	0.17	0.29	20.6	C		
TR	488	1708	0.10	0.29	18.8	B	19.5	B
Southbound								
L	394	1378	0.77	0.29	36.5	D		
TR	467	1633	0.75	0.29	33.0	C	34.7	C

Intersection Delay = 22.8 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1d

Analyst: MAAI Inter.: SR 7/US 41@ Coleman Rd  
 Agency: Lowndes County Area Type: All other areas  
 Date: 03/02/2007 Jurisd: GDOT  
 Period: PM Peak Hour Year : Year 2029  
 Project ID: I-75 at SR 7/US 41 Interchange Reconstruction  
 E/W St: SR 7/US 41/ N. Valdosta Rd N/S St: Coleman Road

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	1	1	1	0	1	1	0
LGConfig	L	T	R	L	T	R	L	TR		L	TR	
Volume	215	620	30	40	825	275	40	20	50	300	15	155
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			0			0			0			0

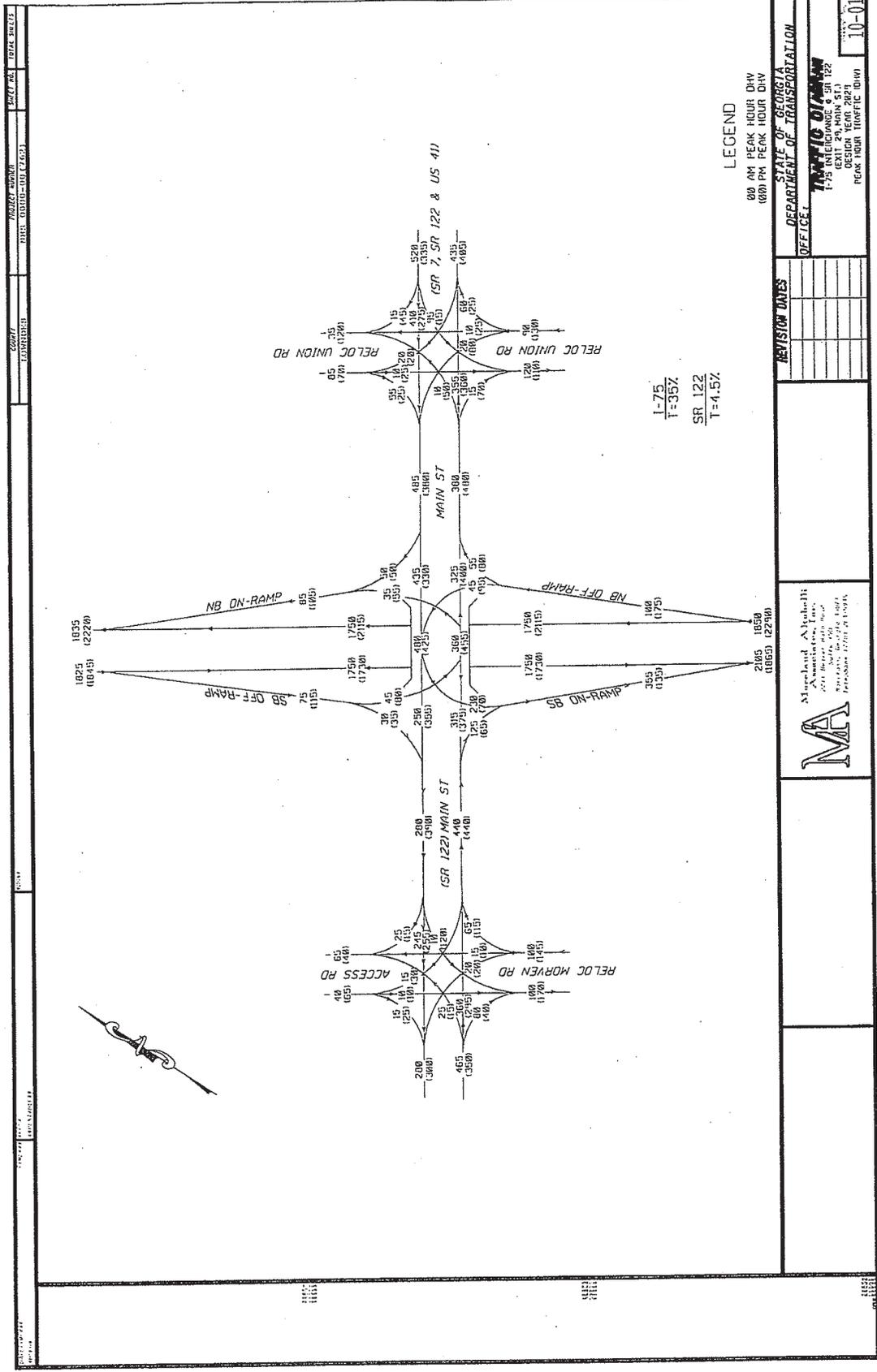
Duration	0.25	Area Type: All other areas							
Signal Operations									
Phase Combination	1	2	3	4	5	6	7	8	
EB Left		P	P		NB Left	P			
Thru			P		Thru	P			
Right			P		Right	P			
Peds					Peds				
WB Left		P	P		SB Left	P			
Thru			P		Thru	P			
Right			P		Right	P			
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right				
Green		10.0	26.0			20.0			
Yellow		4.0	4.0			4.0			
All Red		0.0	1.0			1.0			
Cycle Length: 70.0 secs									

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS
<b>Eastbound</b>								
L	382	1805	0.61	0.57	17.4	B		
T	1341	3610	0.50	0.37	18.4	B	18.0	B
R	600	1615	0.05	0.37	14.3	B		
<b>Westbound</b>								
L	464	1805	0.09	0.57	7.9	A		
T	1341	3610	0.67	0.37	21.1	C	20.3	C
R	600	1615	0.50	0.37	19.9	B		
<b>Northbound</b>								
L	336	1177	0.13	0.29	19.3	B		
TR	485	1698	0.16	0.29	19.4	B	19.4	B
<b>Southbound</b>								
L	384	1344	0.85	0.29	43.9	D		
TR	469	1640	0.39	0.29	22.6	C	36.2	D

Intersection Delay = 22.4 (sec/veh) Intersection LOS = C







HCS+: Two-Lane Highways Release 5.1

Two-Way Two-Lane Highway Segment Analysis

Analyst MAAI  
 Agency/Co. GDOT  
 Date Performed 4/18/2006  
 Analysis Time Period PM Peak Hour  
 Highway SR 122  
 From/To Morven Rd to Union Rd  
 Jurisdiction Lowndes  
 Analysis Year Year 2005  
 Description I-75/SR 122 Interchange Reconstruction

Input Data

Highway class Class 1  
 Shoulder width 6.0 ft Peak-hour factor, PHF 0.88  
 Lane width 12.0 ft % Trucks and buses 5 %  
 Segment length 0.0 mi % Recreational vehicles 0 %  
 Terrain type Level % No-passing zones 100 %  
 Grade: Length mi Access points/mi 10 /mi  
     Up/down %  
 Two-way hourly volume, V 605 veh/h  
 Directional split 56 / 44 %

Average Travel Speed

Grade adjustment factor, fG 1.00  
 PCE for trucks, ET 1.2  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, 0.990  
 Two-way flow rate, (note-1) vp 694 pc/h  
 Highest directional split proportion. (note-2) 389 pc/h  
 Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM - mi/h  
 Observed volume, Vf - veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFFS 45.0 mi/h  
 Adj. for lane and shoulder width, fLS 0.0 mi/h  
 Adj. for access points, fA 2.5 mi/h  
 Free-flow speed, FFS 42.5 mi/h  
 Adjustment for no-passing zones, fnp 3.5 mi/h  
 Average travel speed, ATS 33.6 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.995  
 Two-way flow rate, (note-1) vp 691 pc/h  
 Highest directional split proportion (note-2) 387  
 Base percent time-spent-following, BPTSF 45.5 %  
 Adj. for directional distribution and no-passing zones, fd/np 18.0  
 Percent time-spent-following, PTSF 63.5 %

Level of Service and Other Performance Measures

Level of service, LOS E  
 Volume to capacity ratio, v/c 0.22  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

HCS+: Two-Lane Highways Release 5.1

Two-Way Two-Lane Highway Segment Analysis

Analyst MAAI  
 Agency/Co. GDOT  
 Date Performed 4/18/2006  
 Analysis Time Period PM Peak Hour  
 Highway SR 122  
 From/To Morven Rd to Union Rd  
 Jurisdiction Lowndes  
 Analysis Year Year 2029 - No-Build  
 Description I-75/SR 122 Interchange Reconstruction

Input Data

Highway class Class 1  
 Shoulder width 6.0 ft Peak-hour factor, PHF 0.88  
 Lane width 12.0 ft % Trucks and buses 5 %  
 Segment length 0.0 mi % Recreational vehicles 0 %  
 Terrain type Level % No-passing zones 100 %  
 Grade: Length mi Access points/mi 10 /mi  
     Up/down %  
 Two-way hourly volume, V 860 veh/h  
 Directional split 56 / 44 %

Average Travel Speed

Grade adjustment factor, fG 1.00  
 PCE for trucks, ET 1.2  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, 0.990  
 Two-way flow rate, (note-1) vp 987 pc/h  
 Highest directional split proportion (note-2) 553 pc/h  
 Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM - mi/h  
 Observed volume, Vf - veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFPS 45.0 mi/h  
 Adj. for lane and shoulder width, fLS 0.0 mi/h  
 Adj. for access points, fA 2.5 mi/h  
 Free-flow speed, FFS 42.5 mi/h  
 Adjustment for no-passing zones, fnp 2.6 mi/h  
 Average travel speed, ATS 32.2 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.995  
 Two-way flow rate, (note-1) vp 982 pc/h  
 Highest directional split proportion (note-2) 550  
 Base percent time-spent-following, BPTSF 57.8 %  
 Adj. for directional distribution and no-passing zones, fd/np 12.7  
 Percent time-spent-following, PTSF 70.6 %

Level of Service and Other Performance Measures

Level of service, LOS E  
 Volume to capacity ratio, v/c 0.31  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

HCS+: Two-Lane Highways Release 5.1

Two-Way Two-Lane Highway Segment Analysis

Analyst MAAI  
 Agency/Co. GDOT  
 Date Performed 4/18/2006  
 Analysis Time Period PM Peak Hour  
 Highway SR 122  
 From/To Morven Rd to Union Rd  
 Jurisdiction Lowndes  
 Analysis Year Year 2029 - 3-lane typical  
 Description I-75/SR.122 Interchange Reconstruction

Input Data

Highway class Class 1  
 Shoulder width 6.0 ft Peak-hour factor, PHF 0.88  
 Lane width 12.0 ft % Trucks and buses 5 %  
 Segment length 0.0 mi % Recreational vehicles 0 %  
 Terrain type Level % No-passing zones 0 %  
 Grade: Length mi Access points/mi 10 /mi  
 Up/down %  
 Two-way hourly volume, V 730 veh/h  
 Directional split 56 / 44 %

Average Travel Speed

Grade adjustment factor, fG 1.00  
 PCE for trucks, ET 1.2  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, 0.990  
 Two-way flow rate, (note-1) vp 838 pc/h  
 Highest directional split proportion (note-2) 469 pc/h  
 Free-Flow Speed from Field Measurement:  
 Field measured speed, SFM - mi/h  
 Observed volume, Vf - veh/h  
 Estimated Free-Flow Speed:  
 Base free-flow speed, BFS 45.0 mi/h  
 Adj. for lane and shoulder width, fLS 0.0 mi/h  
 Adj. for access points, fA 2.5 mi/h  
 Free-flow speed, FFS 42.5 mi/h  
 Adjustment for no-passing zones, fnp 0.0 mi/h  
 Average travel speed, ATS 36.0 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00  
 PCE for trucks, ET 1.1  
 PCE for RVs, ER 1.0  
 Heavy-vehicle adjustment factor, fHV 0.995  
 Two-way flow rate, (note-1) vp 834 pc/h  
 Highest directional split proportion (note-2) 467  
 Base percent time-spent-following, BPTSF 52.0 %  
 Adj. for directional distribution and no-passing zones, fd/np 0.0  
 Percent time-spent-following, PTSF 52.0 %

Level of Service and Other Performance Measures

Level of service, LOS E  
 Volume to capacity ratio, v/c 0.26  
 Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi  
 Peak-hour vehicle-miles of travel, VMT60 0 veh-mi  
 Peak 15-min total travel time, TT15 0.0 veh-h

## HCS+: Multilane Highways Release 5.1

## OPERATIONAL ANALYSIS

Analyst: MAAI  
 Agency/Co: GDOT  
 Date: 4/18/2006  
 Analysis Period: PM Peak Hour  
 Highway: SR 122  
 From/To: Morven Rd to Union Rd  
 Jurisdiction: Lowndes  
 Analysis Year: Year 2029 - 4-lane divided  
 Project ID: I-75/SR 122 Interchange Reconstruction

## FREE-FLOW SPEED

	Direction	1		2	
Lane width		12.0	ft	12.0	ft
Lateral clearance:					
Right edge		6.0	ft	6.0	ft
Left edge		6.0	ft	6.0	ft
Total lateral clearance		12.0	ft	12.0	ft
Access points per mile		0		0	
Median type					
Free-flow speed:		Measured		Measured	
FFS or BFFS		45.0	mph	45.0	mph
Lane width adjustment, FLW		0.0	mph	0.0	mph
Lateral clearance adjustment, FLC		0.0	mph	0.0	mph
Median type adjustment, FM		0.0	mph	0.0	mph
Access points adjustment, FA		0.0	mph	0.0	mph
Free-flow speed		45.0	mph	45.0	mph

## VOLUME

	Direction	1		2	
Volume, V		380	vph	480	vph
Peak-hour factor, PHF		0.88		0.88	
Peak 15-minute volume, v15		108		136	
Trucks and buses		5	%	5	%
Recreational vehicles		0	%	0	%
Terrain type		Level		Level	
Grade		0.00	%	0.00	%
Segment length		0.00	mi	0.00	mi
Number of lanes		2		2	
Driver population adjustment, fP		1.00		1.00	
Trucks and buses PCE, ET		1.5		1.5	
Recreational vehicles PCE, ER		1.2		1.2	
Heavy vehicle adjustment, fHV		0.976		0.976	
Flow rate, vp		221	pcphpl	279	pcphpl

## RESULTS

	Direction	1		2	
Flow rate, vp		221	pcphpl	279	pcphpl
Free-flow speed, FFS		45.0	mph	45.0	mph
Avg. passenger-car travel speed, S		45.0	mph	45.0	mph
Level of service, LOS		A		A	
Density, D		4.9	pc/mi/ln	6.2	pc/mi/ln

Overall results are not computed when free-flow speed is less than 45 mph.

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI  
 Agency/Co.: Lowndes County  
 Date Performed: 03/2/2007  
 Analysis Time Period: AM-Peak  
 Intersection: SR 122 Main St @ Reloc Morven  
 Jurisdiction: GDOT  
 Units: U. S. Customary  
 Analysis Year: 2029  
 Project ID:  
 East/West Street: SR 122 Main Street  
 North/South Street: Reloc Morven Rd  
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound			Westbound		
		1 L	2 T	3 R	4 L	5 T	6 R
Volume		25	360	80	10	245	25
Peak-Hour Factor, PHF		0.88	0.88	0.88	0.88	0.88	0.88
Hourly Flow Rate, HFR		28	409	90	11	278	28
Percent Heavy Vehicles		0	--	--	0	--	--
Median Type/Storage		Undivided			/		
RT Channelized?					No		
Lanes		1	2	0	1	1	1
Configuration		L	T	TR	L	T	R
Upstream Signal?		No			No		

Minor Street:	Approach Movement	Northbound			Southbound		
		7 L	8 T	9 R	10 L	11 T	12 R
Volume		20	15	65	15	10	15
Peak Hour Factor, PHF		0.88	0.88	0.88	0.88	0.88	0.88
Hourly Flow Rate, HFR		22	17	73	17	11	17
Percent Heavy Vehicles		0	0	0	0	0	0
Percent Grade (%)		0			0		
Flared Approach: Exists?/Storage					/		
Lanes		0	1	1	0	1	0
Configuration		LT		R	LTR		

Delay, Queue Length, and Level of Service

Approach Movement	EB		Northbound			Southbound		
	1	4	7	8	9	10	11	12
Lane Config	L	L	LT		R		LTR	
v (vph)	28	11	39		73		45	
C(m) (vph)	1266	1075	263		756		406	
v/c	0.02	0.01	0.15		0.10		0.11	
95% queue length	0.07	0.03	0.51		0.32		0.37	
Control Delay	7.9	8.4	21.1		10.3		15.0-	
LOS	A	A	C		B		B	
Approach Delay				14.0			15.0-	
Approach LOS				B			B	

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI  
 Agency/Co.: Lowndes County  
 Date Performed: 03/02/2007  
 Analysis Time Period: PM-Peak  
 Intersection: SR 122 Main St @ Reloc Morven  
 Jurisdiction: GDOT  
 Units: U. S. Customary  
 Analysis Year: 2029  
 Project ID:  
 East/West Street: SR 122 Main Street  
 North/South Street: Reloc Morven Rd  
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach Movement	Eastbound			Westbound		
	1 L 	2 T 	3 R 	4 L 	5 T 	6 R 
Volume	15	295	40	120	255	15
Peak-Hour Factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Hourly Flow Rate, HFR	17	335	45	136	289	17
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?				No		
Lanes	1	2	0	1	1	1
Configuration	L T TR			L T R		
Upstream Signal?	No			No		

Minor Street: Approach Movement	Northbound			Southbound		
	7 L 	8 T 	9 R 	10 L 	11 T 	12 R 
Volume	20	10	115	30	10	25
Peak Hour Factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Hourly Flow Rate, HFR	22	11	130	34	11	28
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach: Exists?/Storage				/		
Lanes	0	1	1	0	1	0
Configuration	LT R			LTR		

Delay, Queue Length, and Level of Service

Approach Movement Lane Config	EB	WB	Northbound			Southbound		
	1 L 	4 L 	7 LT 	8	9 R 	10	11 LTR 	12
v (vph)	17	136	33		130		73	
C(m) (vph)	1266	1190	187		826		296	
v/c	0.01	0.11	0.18		0.16		0.25	
95% queue length	0.04	0.39	0.62		0.56		0.95	
Control Delay	7.9	8.4	28.3		10.2		21.1	
LOS	A	A	D		B		C	
Approach Delay				13.8			21.1	
Approach LOS				B			C	

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI  
 Agency/Co.: Lowndes County  
 Date Performed: 03/02/2007  
 Analysis Time Period: AM-Peak  
 Intersection: SR 122 Main St @ I-75 SB OFF  
 Jurisdiction: GDOT  
 Units: U. S. Customary  
 Analysis Year: 2029  
 Project ID:  
 East/West Street: SR 122 Main Street  
 North/South Street: I-75 SB OFF Ramp  
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach Movement	Eastbound			Westbound		
	1 L	2 T ▲	3 R ↷	4 L ↶	5 T ▲	6 R
Volume		315	125	230	250	
Peak-Hour Factor, PHF		0.88	0.88	0.88	0.88	
Hourly Flow Rate, HFR		357	142	261	284	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage		Undivided		/		
RT Channelized?						
Lanes		2	0	1	2	
Configuration		T	TR	L	T	
Upstream Signal?		No			No	

Minor Street: Approach Movement	Northbound			Southbound		
	7 L	8 T	9 R	10 L ↶	11 T	12 R ↷
Volume				45		30
Peak Hour Factor, PHF				0.88		0.88
Hourly Flow Rate, HFR				51		34
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes				1		1
Configuration				L		R

Delay, Queue Length, and Level of Service

Approach Movement Lane Config	EB	WB	Northbound			Southbound		
	1 L ↶	4 L ↶	7 L ↶	8 L ↶	9 L ↶	10 L ↶	11 L ↶	12 R ↷
v (vph)		261				51		34
C(m) (vph)		1075				189		886
v/c		0.24				0.27		0.04
95% queue length		0.95				1.05		0.12
Control Delay		9.4				30.9		9.2
LOS		A				D		A
Approach Delay							22.3	
Approach LOS							C	

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI  
 Agency/Co.: Lowndes County  
 Date Performed: 03/02/2007  
 Analysis Time Period: PM-Peak  
 Intersection: SR 122 Main St @ I-75 SB OFF  
 Jurisdiction: GDOT  
 Units: U. S. Customary  
 Analysis Year: 2029  
 Project ID:  
 East/West Street: SR 122 Main Street  
 North/South Street: I-75 SB OFF Ramp  
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound			Westbound		
		1 L	2 T	3 R	4 L	5 T	6 R
Volume		375	65	70	355		
Peak-Hour Factor, PHF		0.88	0.88	0.88	0.88		
Hourly Flow Rate, HFR		426	73	79	403		
Percent Heavy Vehicles		--	--	0	--	--	
Median Type/Storage		Undivided			/		
RT Channelized?							
Lanes		2	0		1	2	
Configuration		T	TR		L	T	
Upstream Signal?		No			No		

Minor Street:	Approach Movement	Northbound			Southbound		
		7 L	8 T	9 R	10 L	11 T	12 R
Volume					80	35	
Peak Hour Factor, PHF					0.88	0.88	
Hourly Flow Rate, HFR					90	39	
Percent Heavy Vehicles					0	0	
Percent Grade (%)		0			0		
Flared Approach: Exists?/Storage		/			/		
Lanes					1	1	
Configuration					L	R	

Delay, Queue Length, and Level of Service

Approach Movement	EB 1	WB 4	Northbound			Southbound		
			7	8	9	10	11	12
Lane Config	L	L	L	L	L	T	R	
v (vph)		79				90	39	
C(m) (vph)		1075				314	811	
v/c		0.07				0.29	0.05	
95% queue length		0.24				1.16	0.15	
Control Delay		8.6				21.0	9.7	
LOS		A				C	A	
Approach Delay							17.6	
Approach LOS							C	

TWO-WAY STOP CONTROL SUMMARY

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Analyst: MAAI  
 Agency/Co.: Lowndes County  
 Date Performed: 03/02/2007  
 Analysis Time Period: AM-Peak  
 Intersection: SR 122 Main St @ I-75 NB OFF  
 Jurisdiction: GDOT  
 Units: U. S. Customary  
 Analysis Year: 2029  
 Project ID:  
 East/West Street: SR 122 Main Street  
 North/South Street: I-75 NB OFF Ramp  
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach Movement	Eastbound			Westbound		
	1 L 	2 T 	3 R	4 L	5 T 	6 R 
Volume	35	325			435	50
Peak-Hour Factor, PHF	0.88	0.88			0.88	0.88
Hourly Flow Rate, HFR	39	369			494	56
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided			/		
RT Channelized?						No
Lanes		1 2			2 1	
Configuration		L T			T R	
Upstream Signal?		No			No	

Minor Street: Approach Movement	Northbound			Southbound		
	7 L 	8 T	9 R 	10 L	11 T	12 R
Volume	45		55			
Peak Hour Factor, PHF	0.88		0.88			
Hourly Flow Rate, HFR	51		62			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes	1		1			
Configuration		L	R			

Delay, Queue Length, and Level of Service

Approach Movement Lane Config	EB	WB	Northbound		Southbound		
	1 L 	4	7 L 	8	9 R 	10	11 12
v (vph)	39		51		62		
C(m) (vph)	1030		367		833		
v/c	0.04		0.14		0.07		
95% queue length	0.12		0.48		0.24		
Control Delay	8.6		16.4		9.7		
LOS	A		C		A		
Approach Delay				12.7			
Approach LOS				B			

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI  
 Agency/Co.: Lowndes County  
 Date Performed: 03/02/2007  
 Analysis Time Period: PM-Peak  
 Intersection: SR 122 Main St @ I-75 NB OFF  
 Jurisdiction: GDOT  
 Units: U. S. Customary  
 Analysis Year: 2029  
 Project ID:  
 East/West Street: SR 122 Main Street  
 North/South Street: I-75 NB OFF Ramp  
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach Movement	Eastbound			Westbound		
	1 L	2 T	3 R	4 L	5 T	6 R
Volume	55	400			330	50
Peak-Hour Factor, PHF	0.88	0.88			0.88	0.88
Hourly Flow Rate, HFR	62	454			375	56
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided			/		
RT Channelized?						No
Lanes	1	2			2	1
Configuration		L T			T R	
Upstream Signal?		No			No	

Minor Street: Approach Movement	Northbound			Southbound		
	7 L	8 T	9 R	10 L	11 T	12 R
Volume	95		80			
Peak Hour Factor, PHF	0.88		0.88			
Hourly Flow Rate, HFR	107		90			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1		1			
Configuration		L	R			

Delay, Queue Length, and Level of Service

Approach Movement Lane Config	EB	WB	Northbound			Southbound		
	1 L	4	7 L	8	9 R	10	11	12
v (vph)	62		107		90			
C(m) (vph)	1139		325		782			
v/c	0.05		0.33		0.12			
95% queue length	0.17		1.40		0.39			
Control Delay	8.3		21.4		10.2			
LOS	A		C		B			
Approach Delay				16.3				
Approach LOS				C				

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI  
 Agency/Co.: Lowndes County  
 Date Performed: 03/02/2007  
 Analysis Time Period: AM-Peak  
 Intersection: SR 122 Main St @ Reloc Union  
 Jurisdiction: GDOT  
 Units: U. S. Customary  
 Analysis Year: 2029  
 Project ID:  
 East/West Street: SR 122 Main Street  
 North/South Street: Reloc Union Road  
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments						
Major Street: Approach Movement	Eastbound			Westbound		
	1 L ↶	2 T ↑	3 R ↷	4 L ↶	5 T ↑	6 R ↷
Volume	10	355	15	95	410	15
Peak-Hour Factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Hourly Flow Rate, HFR	11	403	17	107	465	17
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?	No				No	
Lanes	1	1	1	1	1	1
Configuration	L	T	R	L	T	R
Upstream Signal?	No			No		

Minor Street: Approach Movement	Northbound			Southbound		
	7 L ↶	8 T ↑	9 R ↷	10 L ↶	11 T ↑	12 R ↷
Volume	20	10	60	20	10	55
Peak Hour Factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Hourly Flow Rate, HFR	22	11	68	22	11	62
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach: Exists?/Storage	/			/		
Lanes	0	1	1	0	1	1
Configuration		LT	R	LT		R

Approach Movement	Delay, Queue Length, and Level of Service						
	EB 1 L ↶	WB 4 L ↶	Northbound 7 LT ↶↑ 8 R ↷		Southbound 10 LT ↶↑ 11 12 R ↷		
v (vph)	11	107	33	68	33	62	
C(m) (vph)	1091	1150	153	652	152	602	
v/c	0.01	0.09	0.22	0.10	0.22	0.10	
95% queue length	0.03	0.31	0.78	0.35	0.79	0.34	
Control Delay	8.3	8.5	34.9	11.2	35.1	11.7	
LOS	A	A	D	B	E	B	
Approach Delay			18.9	19.8			
Approach LOS			C	C			

HCS Two-Way Stop Analysis of the intersection of SR 122/Main Street at relocated Union Road for the design year 2029 indicates LOS E operation for the combined through and left turn movements on relocated Union Road. However these are low volume movements and would not justify a warrant for signalization. The remaining side street movements operate at LOS B for the right turn lanes from relocated Union Road to SR 122 and LOS A for the left turn lanes from SR 122 to relocated Union Road.

The low volume of traffic on SR 122 obviates the need for a signal at this intersection. It is recommended that this intersection be monitored and reevaluated as conditions change.

HCS2000: Unsignalized Intersections Release 4.1d

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI  
 Agency/Co.: Lowndes County  
 Date Performed: 03/02/2007  
 Analysis Time Period: PM-Peak  
 Intersection: SR 122 Main St @ Reloc Union  
 Jurisdiction: GDOT  
 Units: U. S. Customary  
 Analysis Year: 2029  
 Project ID:  
 East/West Street: SR 122 Main Street  
 North/South Street: Reloc Union Road  
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments							
Major Street:	Approach	Eastbound			Westbound		
	Movement	1	2	3	4	5	6
		L	T	R	L	T	R
Volume		50	360	70	15	275	45
Peak-Hour Factor, PHF		0.88	0.88	0.88	0.88	0.88	0.88
Hourly Flow Rate, HFR		56	409	79	17	312	51
Percent Heavy Vehicles		0	--	--	0	--	--
Median Type/Storage		Undivided			/		
RT Channelized?		No				No	
Lanes		1	1	1	1	1	1
Configuration		L	T	R	L	T	R
Upstream Signal?		No			No		

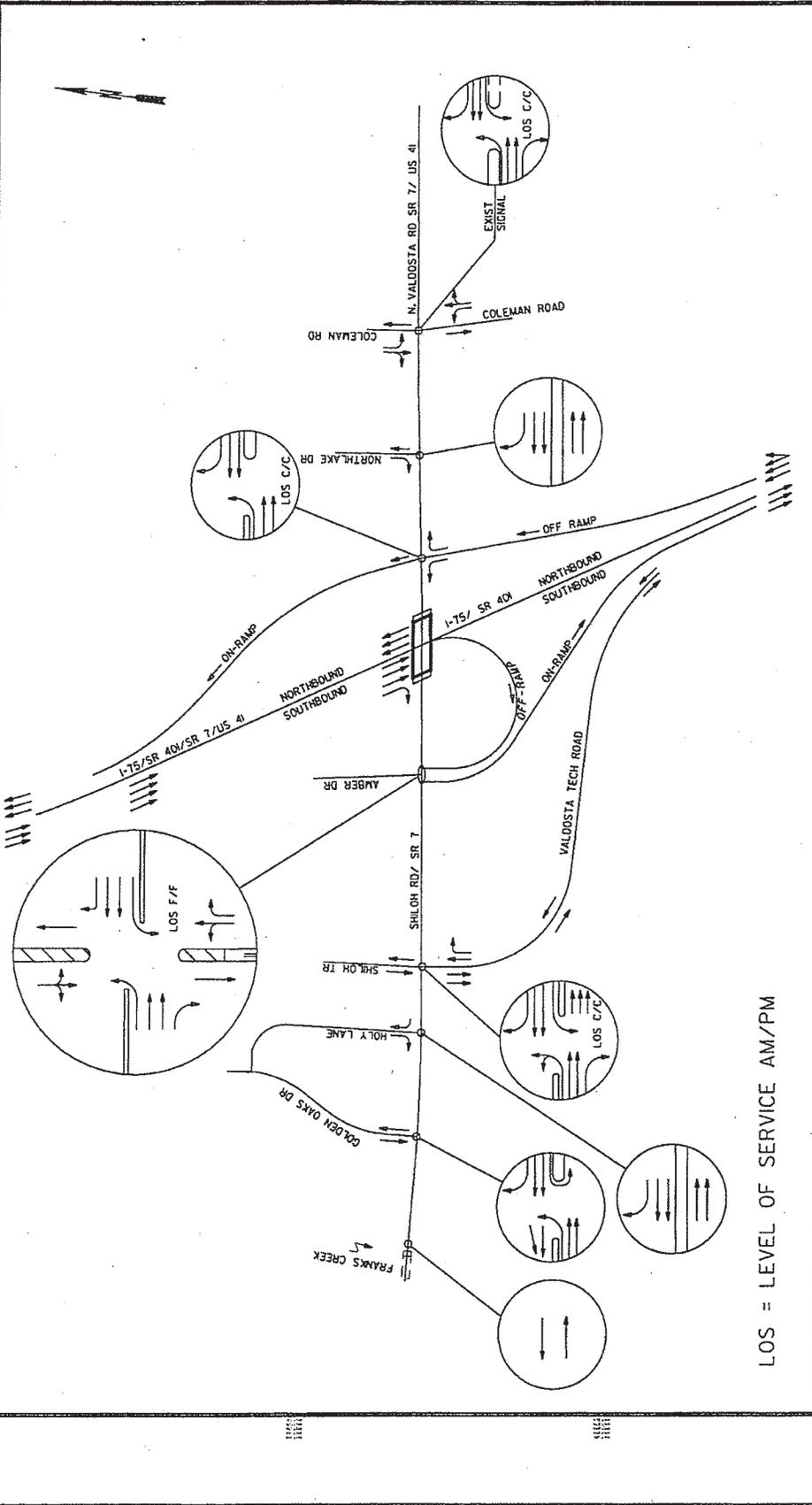
Minor Street:	Approach	Northbound			Southbound		
	Movement	7	8	9	10	11	12
		L	T	R	L	T	R
Volume		80	25	25	20	25	25
Peak Hour Factor, PHF		0.88	0.88	0.88	0.88	0.88	0.88
Hourly Flow Rate, HFR		90	28	28	22	28	28
Percent Heavy Vehicles		0	0	0	0	0	0
Percent Grade (%)		0			0		
Flared Approach: Exists?/Storage					/		
Lanes		0	1	1	0	1	1
Configuration		LT		R	LT		R

Delay, Queue Length, and Level of Service								
Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L	L	LT		R	LT		R
v (vph)	56	17	118		28	50		28
C(m) (vph)	1207	1086	221		647	228		733
v/c	0.05	0.02	0.53		0.04	0.22		0.04
95% queue length	0.15	0.05	2.82		0.14	0.81		0.12
Control Delay	8.1	8.4	38.5		10.8	25.2		10.1
LOS	A	A	E		B	D		B
Approach Delay				33.2			19.8	
Approach LOS				D			C	

HCS Two-Way Stop Analysis of the intersection of SR 122/Main Street at relocated Union Road for the design year 2029 indicates LOS E operation for the combined through and left turn movements on relocated Union Road. However these are low volume movements and would not justify a warrant for signalization. The remaining side street movements operate at LOS B for the right turn lanes from relocated Union Road to SR 122 and LOS A for the left turn lanes from SR 122 to relocated Union Road.

The low volume of traffic on SR 122 obviates the need for a signal at this intersection. It is recommended that this intersection be monitored and reevaluated as conditions change.

PROJECT NUMBER: 100-111  
 SHEET NO.: 10-01  
 DATE: 05/01/2007



LOS = LEVEL OF SERVICE AM/PM

STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE OF TRANSPORTATION PLANNING & REVENUE  
 1-15 INVENTORY & SR  
 SHILOH/N. VALOOSTA RD  
 N. T. S.

MA  
 Metropolitan Atlanta  
 Association, Inc.  
 4411 Peachtree Dunwoody Rd., Suite 400  
 Atlanta, GA 30340  
 Telephone: 404.252.2000

REVISION DATES

10-01





Processed Date: 5/24/2010

# Bridge Inventory Data Listing

Parameters: Bridge Serial Num

Structure ID: 185-0032-0

Lowndes

SUFF. RATING: 62.09

**Location & Geography**

**Structure ID:** 185-0032-0  
 200 Brdge Information: 06  
 \*6A Feature Int: I-75 (EXIT 2)  
 \*6B Critical Bridge: 0  
 \*7A Route No Carried: CR00274  
 \*7B Facility Carried: BELVILLE ROAD  
 9 Location: APP 3.5 MI S OF LAKE PARK  
 2 Dot District: 4  
 207 Year Photo: 2010  
 \*91 Inspection Frequency: 24 Date: 02/20/2010  
 92A Fract Crit Insp Freq: 0 Date: 02/01/1901  
 92B Underwater Insp Freq: 0 Date: 02/01/1901  
 92C Other Spc. Insp Freq: 0 Date: 02/01/1901  
 \*4 Place Code: 00000  
 \*5 Inventory Route(O/U): 1  
 Type: 4  
 Designation: 1  
 Number: 00274  
 Direction: 0  
 \*16 Latitude: 30 38.6168 HMMS Prefix:  
 \*17 Longitude: 83 -11.3498 HMMS Suffix: MP:0.00  
 98 Border Bridge: 000%Shared:00  
 99 ID Number: 0000000000000000  
 \*100 STRAHNET: 0  
 12 Base Highway Network: 1  
 13A LRS Inventory Route: 1852027400  
 13B Sub Inventory Route: 0  
 101 pallel Structure: N  
 \*102 Direction of Traffic: 2  
 \*264 Road Inventory Mile Post: 001.28  
 \*208 Inspection Area: 4 Initials: EFP  
 Engineer's Initials: kww  
 \* Location ID No: 185-00274X-001.28N

\*104 Highway System: 0  
 \*26 Functional Classification: 09  
 \*204 Federal Route Type: 0 No: 00000  
 105 Federal Lands Highway: 0  
 \*110 Truck Route: 0  
 2006 School Bus Route: 1  
 217 Benchmark Elevation: 0175.15  
 218 Datum: 3  
 \*19 Bypass Length: 08  
 \*20 Toll: 3  
 \*21 Maintanance: 01  
 \*22 Owner: 01  
 \*31 Design Load: 6  
 37 Historical Significance: 5  
 205 Congressional District: 01  
 27 Year Constructed: 1961  
 106 Year Reconstructed: 0000  
 33 Bridge Medium: 0  
 34 Skew: 05  
 35 Structure Flared: 0  
 38 Navigation Control: N  
 213 Special Steel Design: 0  
 267 Type of Paint: 2  
 \*42 Type of Service On: 1  
 Type of Service Under: 1  
 214 Movable Bridge: 0  
 203 Type Bridge: Z  
 259 Pile Encasement 3  
 \*43 Structure Type Main: 4 02  
 45 No.Spans Main: 004  
 44 Structure Type Appr: 0 00  
 46 No Spans Appr: 0000  
 226 Bridge Curve Horz 0 Vert: 1  
 111 pier Protection 0  
 107 Deck Structure Type: 1  
 108 Wearing Structure Type: 1  
 Membrane Type: 0  
 Deck Protection: 8

**Signs & Attachments**

225 Expansion Joint Type: 02  
 242 Deck Drains: 1  
 243 Parapet Location: 0  
 Height: 0  
 Width: 0  
 238 Curb Height: 1  
 Curb Material: 1  
 239 Handrail 11  
 \*240 Medium Barrier Rail: 0  
 241 Bridge Median Height: 0  
 \* Bridge Median Width: 0  
 230 Guardrail Loc. Dir. Rear: 3  
 Fwr: 3  
 Oppo. Dir. Rear: 0  
 Oppo. Fwr: 0  
 244 Aproach Slab 3  
 224 Retaining Wall: 0  
 233Posted Speed Limit: 55  
 236 Warning Sign: 1.00  
 234 Delineator: 1.00  
 235 Hazzard Boards: 0  
 237 Utilities Gas: 00  
 Water: 00  
 Electric: 00  
 Telephone: 00  
 Sewer: 00  
 247 Lighting Street: 0  
 Navigation: 0  
 Aerial: 0  
 \*248 County Continuity No.: 00



Processed Date:5/24/2010

### Bridge Inventory Data Listing

Parameters: Bridge Serial Num

Structure ID:185-0032-0

Programming Data		Measurements:				
201 Project No:	I-75-1 (24) 00 CT.2	*29ADT	002050	Year:2007	65 Inventory Rating Method:	1
202 Plans Available:	4	109%Trucks:	0		63 Operating Rating Method:	1
249 Prop Proj No:	00000000000000000000000000000000	* 28 Lanes On:	02	Under:06	66 Inventory Type:	2 Rating: 20
250 Approval Status:	0000	210 No. Tracks On:	00	Under:00	64 Operating Type:	2 Rating: 20
251 PI Number:	00000000	* 48 Max. Span Length	0070		231Calculated Loads:	
252 Contract Date:	02/01/1901	* 49 Structure Length:	208		H-Modified:	20 0
260 Seismic No:	000000	51 Br. Rwdy. Width	28.20		HS-Modified:	21 0
75 Type Work:	00 0	52 Deck Width:	34.10		Type 3:	20 0
94 Bridge Imp. Cost:	\$ 0	* 47 Tot. Horiz. Cl:	28		Type 3s2:	26 0
95 Roadway Imp. Cost:	0	50 Curb / Sidewalk Width	2.00 / 2.00		Timber:	22 0
96 Total Imp Cost:	0	32 Approach Rdwy. Width	024		Piggyback:	00 0
76 Imp Length:	000000	*229 Shoulder Width:			261 H Inventory Rating:	18
97 Imp Year:	0000	Rear Lt:	3.20	Type:8 Rt:2.30	262 H Operating Rating	31
114Future ADT:	003075	Fwd. Lt:	3.20	Type:8 Rt:2.30	67 Structural Evaluation:	5
		Permanent Width:			58 Deck Condition:	5
		Rear:	23.80	Type:8	59 Superstructure Condition:	8
			24.10	Type:2	* 227 Collision Damage:	0
		Intersaction Rear:	1	Fwd: 1	60A Substructure Condition:	6
		36Safety Features Br. Rail:	2		60B Scour Condition:	N
		Transition:	2		60C Underwater Condition	N
		App. G. Rail:	2		71 Waterway Adequacy:	N
		App. Rail End:	2		61 Channel Protection Cond.:	N
		53 Minimum Cl. Over:	99' 99"		68 Deck Geometry:	4
		Under:			69 UnderClr. Horz/Vert:	2
		*228 Minimum Vertical Cl			72 Appr. Alignment:	6
		Act. Odm Dir.:	99' 99"		62 Culvert:	N
		Oppo. Dir:	99' 99"			
		Posted Odm. Dir:	00' 00"		<b>Posting Data</b>	
		Oppo. Dir:	00' 00"		70 Bridge Posting Required	5
		55 Lateral Undercl. Rt:	R 11 11		41 Struct Open, Posted, CL:	A
		56 Lateral Undercl. Lt:	0.00		* 103 Temporary Structure:	0
		*10 Max Min Vert Cl:	99' 99" Dir:0		232 Posted Loads	
		39 Nav Vert Cl:	000 Horiz:0000		H-Modified:	00
		116 Nav Vert Cl Closed:	000		HS-Modified:	00
		245 Deck Thickness Main	7.50		Type 3:	00
		Deck Thick Approach:	0.00		Type 3s2:	00
		246 Overlay Thickness:	0.00		Timber:	00
					Piggyback	00
		212 Year Last Painted:	Sup:2000Sub:0000		253 Notification Date:	02/01/1901
					258 Fed Notify Date:	2/1/1901 12:00:00AM



Processed Date:5/24/2010

# Bridge Inventory Data Listing

Parameters: Bridge Serial Num

Structure ID:185-0034-0

Lowndes

SUFF. RATING: 76.45

**Location & Geography**

**Structure ID:** 185-0034-0  
 200 Bidge Information: 06  
 \*6A Feature Int: I-75 (EXIT5)  
 \*6B Critical Bridge: 0  
 \*7A Route No Carried: SR00376  
 \*7B Facility Carried: SR 376  
 9 Location: 3 MI W OF LAKE PARK  
 2 Dot District: 4  
 207 Year Photo: 2010  
 \*91 Inspection Frequency: 24 Date: 02/20/2010  
 92A Fract Crit Insp Freq: 0 Date: 02/01/1901  
 92B Underwater Insp Freq: 0 Date: 02/01/1901  
 92C Other Spc. Insp Freq: 0 Date: 02/01/1901  
 \* 4 Place Code: 00000  
 \*5 Inventory Route(O/U): 1  
 Type: 3  
 Designation: 1  
 Number: 00376  
 Direction: 0  
 \*16 Latitude: 30 40.8045 HMMS Prefix:SR  
 \*17 Longitude: 83 -13.3742 HMMS Suffix:00 MP:5.74  
 98 Border Bridge: 000%Shared:00  
 99 ID Number: 0000000000000000  
 \*100 STRAHNET: 0  
 12 Base Highway Network: 1  
 13A LRS Inventory Route: 1851037600  
 13B Sub Inventory Route: 0  
 101 pallelle Structure: N  
 \*102 Direction of Traffic: 2  
 \*264 Road Inventory Mile Post: 005.74  
 \*208 Inspection Area: 4 Initials: EFP  
 Engineer's Initials: kww  
 \* Location ID No: 185-00376D-005.74E

\*104 Highway System: 0  
 \*26 Functional Classification: 07  
 \*204 Federal Route Type: S No: 00951  
 105 Federal Lands Highway: 0  
 \*110 Truck Route: 0  
 2006 School Bus Route: 1  
 217 Benchmark Elevation: 0183.13  
 218 Datum: 3  
 \*19 Bypass Length: 00  
 \*20 Toll: 3  
 \*21 Maintanance: 01  
 \*22 Owner: 01  
 \*31 Design Load: 6  
 37 Historical Significance: 5  
 205 Congressional District: 01  
 27 Year Constructed: 1961  
 106 Year Reconstructed: 1990  
 33 Bridge Medium: 0  
 34 Skew: 20  
 35 Structure Flared: 0  
 38 Navigation Control: N  
 213 Special Steel Design: 0  
 267 Type of Paint: 2  
 \*42 Type of Service On: 1  
 Type of Service Under: 1  
 214 Movable Bridge: 0  
 203 Type Bridge: Z  
 259 Pile Encasement 3  
 \*43 Structure Type Main: 4 02  
 45 No.Spans Main: 004  
 44 Structure Type Appr: 0 00  
 46 No Spans Appr: 0000  
 226 Bridge Curve Horz 0 Vert: 1  
 111 pier Protection 0  
 107 Deck Structure Type: 1  
 108 Wearing Structure Type: 1  
 Membrane Type: 0  
 Deck Protection: 8

**Signs & Attachments**

225 Expansion Joint Type: 02  
 242 Deck Drains: 0  
 243 Parapet Location: 0  
 Height: 0  
 Width: 0  
 238 Curb Height: 0  
 Curb Material: 0  
 239 Handrail 99  
 \*240 Medium Barrier Rail: 0  
 241 Bridge Median Height: 0  
 \* Bridge Median Width: 0  
 230 Guardrail Loc. Dir. Rear: 6  
 Fwr: 6  
 Oppo. Dir. Rear: 0  
 Oppo. Fwr: 0  
 244 Aproach Slab 3  
 224 Retaining Wall: 0  
 233Posted Speed Limit: 35  
 236 Warning Sign: 0.00  
 234 Delineator: 1.00  
 235 Hazzard Boards: 0  
 237 Utilities Gas: 00  
 Water: 00  
 Electric: 00  
 Telephone: 00  
 Sewer: 00  
 247 Lighting Street: 0  
 Navigation: 0  
 Aerial: 0  
 \*248 County Continuity No.: 00



Processed Date:5/24/2010

### Bridge Inventory Data Listing

Parameters: Bridge Serial Num

Structure ID:185-0034-0

Programming Data		Measurements:				
201 Project No:	I-75-1 (24) 00 CT.2	*29ADT	010300	Year:2007	65 Inventory Rating Method:	1
202 Plans Available:	4	109%Trucks:	0		63 Operating Rating Method:	1
249 Prop Proj No:	00000000000000000000000000000000	* 28 Lanes On:	06	Under:06	66 Inventory Type:	2 Rating: 22
250 Approval Status:	0000	210 No. Tracks On:	00	Under:00	64 Operating Type:	2 Rating: 22
251 PI Number:	00000000	* 48 Max. Span Length	0075		231Calculated Loads:	
252 Contract Date:	02/01/1901	* 49 Structure Length:	226		H-Modified:	21 0
260 Seismic No:	000000	51 Br. Rwdy. Width	92.30		HS-Modified:	30 0
75 Type Work:	00 0	52 Deck Width:	95.60		Type 3:	21 0
94 Bridge Imp. Cost:	\$ 0	* 47 Tot. Horiz. Cl:	92		Type 3s2:	27 0
95 Roadway Imp. Cost:	0	50 Curb / Sidewalk Width	0.00 / 0.00		Timber:	24 0
96 Total Imp Cost:	0	32 Approach Rdwy. Width	066		Piggyback:	35 0
76 Imp Length:	000000	*229 Shoulder Width:			261 H Inventory Rating:	20
97 Imp Year:	0000	Rear Lt:	2.00	Type:1 Rt:2.00	262 H Operating Rating	33
114Furure ADT:	015450	Fwd. Lt:	2.00	Type:1 Rt:2.00	67 Structural Evaluation:	5
<b>Hydraulic Data</b>		Permanent Width:			58 Deck Condition:	7
215Waterway Data:		Rear:	62.10	Type:1	59 Superstructure Condition:	7
High Water Elev:	0000.0		62.20	Type:2	* 227 Collision Damage:	0
Flood Elev:	0000.0	Intersection Rear:	1	Fwd: 1	60A Substructure Condition:	7
Avg Streambed Elev:	0000.0	36Safety Features Br. Rail:	1		60B Scour Condition:	N
Drainage Area:	00000	Transition:	1		60C Underwater Condition	N
Area of Opening:	000000	App. G. Rail:	1		71 Waterway Adequacy:	N
113 Scour Critical	N	App. Rail End:	1		61 Channel Protection Cond.:	N
216Water Depth:	00.0	53 Minimum Cl. Over:	18' 07 "		68 Deck Geometry:	2
222Slope Protection:	4	Under:			69 UnderClr. Horz/Vert:	2
221Slope Protection	0 Fwd:0	*228 Minimum Vertical Cl			72 Appr. Alignment:	7
219Fender System	0	Act. Odm Dir::	99' 99"		62 Culvert:	N
220Dolphin:	0	Oppo. Dir:	99' 99"		<b>Posting Data</b>	
223Current Cover:	000	Posted Odm. Dir:	00' 00"		70 Bridge Posting Required	5
Type:	0	Oppo. Dir:	00' 00"		41 Struct Open, Posted, CL:	A
No. Barrels:	0	55 Lateral Undercl. Rt:	R 11 11		* 103 Temporary Structure:	0
* Width:	0.00	56 Lateral Undercl. Lt:	0.00		232 Posted Loads	
* Length:	0	*10 Max Min Vert Cl:	99' 99" Dir:0		H-Modified:	00
265 U/W Insp. Area	0	39 Nav Vert Cl:	000 Horiz:0000		HS-Modified:	00
Location ID No:	185-00376D-005.74E	116 Nav Vert Cl Closed:	000		Type 3:	00
		245 Deck Thickness Main	6.00		Type 3s2:	00
		Deck Thick Approach:	0.00		Timber:	00
		246 Overlay Thickness:	0.00		Piggyback	00
		212 Year Last Painted:	Sup:1990Sub:0000		253 Notification Date:	02/01/1901
					258 Fed Notify Date:	2/1/1901 12:00:00AM



Processed Date:5/24/2010

# Bridge Inventory Data Listing

Parameters: Bridge Serial Num

Structure ID:185-0073-0

Lowndes

SUFF. RATING: 62.97

**Location & Geography**

**Structure ID:** 185-0073-0  
 200 Bidge Information: 06  
 \*6A Feature Int: I-75  
 \*6B Critical Bridge: 0  
 \*7A Route No Carried: CR00783  
 \*7B Facility Carried: LOCH LARUEL ROAD  
 9 Location: APP 9.5 MI S OF VALDOSTA  
 2 Dot District: 4  
 207 Year Photo: 2010  
 \*91 Inspection Frequency: 24 Date: 02/20/2010  
 92A Fract Crit Insp Freq: 0 Date: 02/01/1901  
 92B Underwater Insp Freq: 0 Date: 02/01/1901  
 92C Other Spc. Insp Freq: 0 Date: 02/01/1901  
 \* 4 Place Code: 00000  
 \*5 Inventory Route(O/U): 1  
 Type: 4  
 Designation: 1  
 Number: 02509  
 Direction: 0  
 \*16 Latitude: 30 41.6632 HMMS Prefix:  
 \*17 Longitude: 83 -14.3527 HMMS Suffix: MP:0.00  
 98 Border Bridge: 000%Shared:00  
 99 ID Number: 0000000000000000  
 \*100 STRAHNET: 0  
 12 Base Highway Network: 1  
 13A LRS Inventory Route: 1852078300  
 13B Sub Inventory Route: 0  
 101 pallelle Structure: N  
 \*102 Direction of Traffic: 2  
 \*264 Road Inventory Mile Post: 004.72  
 \*208 Inspection Area: 4 Initials: EFP  
 Engineer's Initials: kww  
 \* Location ID No: 185-02509F-004.60N

\*104 Highway System: 0  
 \*26 Functional Classification: 07  
 \*204 Federal Route Type: S No: 02509  
 105 Federal Lands Highway: 0  
 \*110 Truck Route: 0  
 2006 School Bus Route: 1  
 217 Benchmark Elevation: 0207.91  
 218 Datum: 3  
 \*19 Bypass Length: 04  
 \*20 Toll: 3  
 \*21 Maintanance: 01  
 \*22 Owner: 01  
 \*31 Design Load: 2  
 37 Historical Significance: 5  
 205 Congressional District: 01  
 27 Year Constructed: 1961  
 106 Year Reconstructed: 0000  
 33 Bridge Medium: 0  
 34 Skew: 52  
 35 Structure Flared: 0  
 38 Navigation Control: N  
 213 Special Steel Design: 0  
 267 Type of Paint: 2  
 \*42 Type of Service On: 1  
 Type of Service Under: 1  
 214 Movable Bridge: 0  
 203 Type Bridge: Z  
 259 Pile Encasement 3  
 \*43 Structure Type Main: 3 02  
 45 No.Spans Main: 004  
 44 Structure Type Appr: 0 00  
 46 No Spans Appr: 0000  
 226 Bridge Curve Horz 1 Vert: 1  
 111 pier Protection 0  
 107 Deck Structure Type: 1  
 108 Wearing Structure Type: 1  
 Membrane Type: 0  
 Deck Protection: 8

**Signs & Attachments**

225 Expansion Joint Type: 02  
 242 Deck Drains: 1  
 243 Parapet Location: 0  
 Height: 0  
 Width: 0  
 238 Curb Height: 1  
 Curb Material: 1  
 239 Handrail 11  
 \*240 Medium Barrier Rail: 0  
 241 Bridge Median Height: 0  
 \* Bridge Median Width: 0  
 230 Guardrail Loc. Dir. Rear: 3  
 Fwr: 3  
 Oppo. Dir. Rear: 0  
 Oppo. Fwr: 0  
 244 Aproach Slab 3  
 224 Retaining Wall: 0  
 233Posted Speed Limit: 35  
 236 Warning Sign: 0.00  
 234 Delineator: 0.00  
 235 Hazzard Boards: 0  
 237 Utilities Gas: 00  
 Water: 00  
 Electric: 00  
 Telephone: 00  
 Sewer: 00  
 247 Lighting Street: 0  
 Navigation: 0  
 Aerial: 0  
 \*248 County Continuity No.: 00



Processed Date:5/24/2010

### Bridge Inventory Data Listing

Parameters: Bridge Serial Num

Structure ID:185-0073-0

Programming Data		Measurements:				
201 Project No:	I-75-1 (24) 00 CT.2	*29ADT	002520	Year:2007	65 Inventory Rating Method:	1
202 Plans Available:	4	109%Trucks:	0		63 Operating Rating Method:	1
249 Prop Proj No:	00000000000000000000000000000000	* 28 Lanes On:	02	Under:06	66 Inventory Type:	2 Rating: 24
250 Approval Status:	0000	210 No. Tracks On:	00	Under:00	64 Operating Type:	2 Rating: 24
251 PI Number:	00000000	* 48 Max. Span Length	0113		231Calculated Loads:	
252 Contract Date:	02/01/1901	* 49 Structure Length:	331		H-Modified:	21 0
260 Seismic No:	000000	51 Br. Rwdy. Width	26.00		HS-Modified:	28 0
75 Type Work:	34 1	52 Deck Width:	32.00		Type 3:	24 0
94 Bridge Imp. Cost:	\$ 336	* 47 Tot. Horiz. Cl:	26		Type 3s2:	38 0
95 Roadway Imp. Cost:	240	50 Curb / Sidewalk Width	2.00 / 2.00		Timber:	34 0
96 Total Imp Cost:	742	32 Approach Rdwy. Width	021		Piggyback:	00 0
76 Imp Length:	001651	*229 Shoulder Width:			261 H Inventory Rating:	21
97 Imp Year:	1990	Rear Lt:	7.10	Type:8 Rt:7.30	262 H Operating Rating	36
114Future ADT:	003780	Fwd. Lt:	7.30	Type:8 Rt:7.20	67 Structural Evaluation:	5
		Permanent Width:			58 Deck Condition:	5
		Rear:	22.10	Type:8	59 Superstructure Condition:	7
		Intersection Rear:	1	Fwd: 0	* 227 Collision Damage:	0
		36Safety Features Br. Rail:	2		60A Substructure Condition:	7
		Transition:	2		60B Scour Condition:	N
		App. G. Rail:	2		60C Underwater Condition	N
		App. Rail End:	2		71 Waterway Adequacy:	N
		53 Minimum Cl. Over:	99' 99"		61 Channel Protection Cond.:	N
		Under:			68 Deck Geometry:	3
		*228 Minimum Vertical Cl			69 UnderClr. Horz/Vert:	2
		Act. Odm Dir.:	99' 99"		72 Appr. Alignment:	6
		Oppo. Dir:	99' 99"		62 Culvert:	N
		Posted Odm. Dir:	00' 00"		<b>Posting Data</b>	
		Oppo. Dir:	00' 00"		70 Bridge Posting Required	5
		55 Lateral Undercl. Rt:	R 10 10		41 Struct Open, Posted, CL:	A
		56 Lateral Undercl. Lt:	0.00		* 103 Temporary Structure:	0
		*10 Max Min Vert Cl:	99' 99" Dir:0		232 Posted Loads	
		39 Nav Vert Cl:	000 Horiz:0000		H-Modified:	00
		116 Nav Vert Cl Closed:	000		HS-Modified:	00
		245 Deck Thickness Main	7.00		Type 3:	00
		Deck Thick Approach:	0.00		Type 3s2:	00
		246 Overlay Thickness:	0.00		Timber:	00
					Piggyback	00
		212 Year Last Painted:	Sup:2000Sub:0000		253 Notification Date:	02/01/1901
					258 Fed Notify Date:	2/1/1901 12:00:00AM



Processed Date: 5/24/2010

### Bridge Inventory Data Listing

Parameters: Bridge Serial Num

Structure ID: 185-0012-0

Lowndes

SUFF. RATING: 67.92

**Location & Geography**

**Structure ID:** 185-0012-0  
 200 Bidge Information: 06  
 \*6A Feature Int: I-75 (EXIT 11) SR 31 (NB)  
 \*6B Critical Bridge: 0  
 \*7A Route No Carried: SR00031  
 \*7B Facility Carried: SR 31 (NBL)  
 9 Location: APP 5 MI S OF VALDOSTA  
 2 Dot District: 4  
 207 Year Photo: 2010  
 \*91 Inspection Frequency: 24 Date: 02/10/2010  
 92A Fract Crit Insp Freq: 0 Date: 02/01/1901  
 92B Underwater Insp Freq: 0 Date: 02/01/1901  
 92C Other Spc. Insp Freq: 0 Date: 02/01/1901  
 \*4 Place Code: 00000  
 \*5 Inventory Route(O/U): 1  
 Type: 3  
 Designation: 1  
 Number: 00031  
 Direction: 0  
 \*16 Latitude: 30 45.0577 HMMS Prefix:SR  
 \*17 Longitude: 83 -16.418 HMMS Suffix:00 MP:8.98  
 98 Border Bridge: 000%Shared:00  
 99 ID Number: 0000000000000000  
 \*100 STRAHNET: 0  
 12 Base Highway Network: 1  
 13A LRS Inventory Route: 1851003100  
 13B Sub Inventory Route: 0  
 101 pallel Structure: R  
 \*102 Direction of Traffic: 1  
 \*264 Road Inventory Mile Post: 008.91  
 \*208 Inspection Area: 4 Initials: EFP  
 Engineer's Initials: sgm  
 \* Location ID No: 185-00031D-008.98N

\*104 Highway System: 0  
 \*26 Functional Classification: 06  
 \*204 Federal Route Type: F No: 00341  
 105 Federal Lands Highway: 0  
 \*110 Truck Route: 0  
 2006 School Bus Route: 1  
 217 Benchmark Elevation: 0209.42  
 218 Datum: 3  
 \*19 Bypass Length: 01  
 \*20 Toll: 3  
 \*21 Maintanance: 01  
 \*22 Owner: 01  
 \*31 Design Load: 6  
 37 Historical Significance: 5  
 205 Congressional District: 02  
 27 Year Constructed: 1961  
 106 Year Reconstructed: 0000  
 33 Bridge Medium: 1  
 34 Skew: 40  
 35 Structure Flared: 0  
 38 Navigation Control: N  
 213 Special Steel Design: 0  
 267 Type of Paint: 2  
 \*42 Type of Service On: 1  
 Type of Service Under: 1  
 214 Movable Bridge: 0  
 203 Type Bridge: Z  
 259 Pile Encasement 3  
 \*43 Structure Type Main: 4 02  
 45 No.Spans Main: 004  
 44 Structure Type Appr: 0 00  
 46 No Spans Appr: 0000  
 226 Bridge Curve Horz 0 Vert: 0  
 111 pier Protection 0  
 107 Deck Structure Type: 1  
 108 Wearing Structure Type: 1  
 Membrane Type: 0  
 Deck Protection: 8

**Signs & Attachments**

225 Expansion Joint Type: 02  
 242 Deck Drains: 1  
 243 Parapet Location: 0  
 Height: 0  
 Width: 0  
 238 Curb Height: 1  
 Curb Material: 1  
 239 Handrail 11  
 \*240 Medium Barrier Rail: 0  
 241 Bridge Median Height: 0  
 \* Bridge Median Width: 0  
 230 Guardrail Loc. Dir. Rear: 3  
 Fwr: 3  
 Oppo. Dir. Rear: 0  
 Oppo. Fwr: 0  
 244 Aproach Slab 3  
 224 Retaining Wall: 0  
 233Posted Speed Limit: 45  
 236 Warning Sign: 1.00  
 234 Delineator: 0.00  
 235 Hazzard Boards: 0  
 237 Utilities Gas: 00  
 Water: 00  
 Electric: 00  
 Telephone: 00  
 Sewer: 00  
 247 Lighting Street: 0  
 Navigation: 0  
 Aerial: 0  
 \*248 County Continuity No.: 00



Processed Date:5/24/2010

### Bridge Inventory Data Listing

Parameters: Bridge Serial Num

Structure ID:185-0012-0

Programming Data		Measurements:				
201 Project No:	1-75-1 (24) 00	*29ADT	005160	Year:2007	65 Inventory Rating Method:	1
202 Plans Available:	4	109%Trucks:	0		63 Operating Rating Method:	1
249 Prop Proj No:	00000000000000000000000000000000	* 28 Lanes On:	02	Under:06	66 Inventory Type:	2 Rating: 27
250 Approval Status:	0000	210 No. Tracks On:	00	Under:00	64 Operating Type:	2 Rating: 27
251 PI Number:	00000000	* 48 Max. Span Length	0090		231Calculated Loads:	
252 Contract Date:	02/01/1901	* 49 Structure Length:	274		H-Modified:	21 0
260 Seismic No:	000000	51 Br. Rwdy. Width	28.00		HS-Modified:	29 0
75 Type Work:	00 0	52 Deck Width:	34.00		Type 3:	28 0
94 Bridge Imp. Cost:	\$ 0	* 47 Tot. Horiz. Cl:	28		Type 3s2:	34 0
95 Roadway Imp. Cost:	0	50 Curb / Sidewalk Width	2.00 / 2.00		Timber:	31 0
96 Total Imp Cost:	0	32 Approach Rdwy. Width	033		Piggyback:	40 0
76 Imp Length:	000000	*229 Shoulder Width:			261 H Inventory Rating:	26
97 Imp Year:	0000	Rear Lt:	4.70	Type:2 Rt:4.60	262 H Operating Rating	44
114Future ADT:	007740	Fwd. Lt:	2.00	Type:2 Rt:2.00	67 Structural Evaluation:	6
		Permanent Width:			58 Deck Condition:	5
		Rear:	24.20	Type:2	59 Superstructure Condition:	7
		62.00	Type:2		* 227 Collision Damage:	0
		Intersection Rear:	1	Fwd: 1	60A Substructure Condition:	7
		36Safety Features Br. Rail:	2		60B Scour Condition:	N
		Transition:	2		60C Underwater Condition	N
		App. G. Rail:	2		71 Waterway Adequacy:	N
		App. Rail End:	2		61 Channel Protection Cond.:	N
		53 Minimum Cl. Over:	99' 99"		68 Deck Geometry:	3
		Under:			69 UnderClr. Horz/Vert:	5
		*228 Minimum Vertical Cl			72 Appr. Alignment:	7
		Act. Odm Dir.:	99' 99"		62 Culvert:	N
		Oppo. Dir:	99' 99"		<b>Posting Data</b>	
		Posted Odm. Dir:	00' 00"		70 Bridge Posting Required	5
		Oppo. Dir:	00' 00"		41 Struct Open, Posted, CL:	A
		55 Lateral Undercl. Rt:	H 10 10		* 103 Temporary Structure:	0
		56 Lateral Undercl. Lt:	18.20		232 Posted Loads	
		*10 Max Min Vert Cl:	99' 99" Dir:0		H-Modified:	00
		39 Nav Vert Cl:	000 Horiz:0000		HS-Modified:	00
		116 Nav Vert Cl Closed:	000		Type 3:	00
		245 Deck Thickness Main	6.00		Type 3s2:	00
		Deck Thick Approach:	0.00		Timber:	00
		246 Overlay Thickness:	0.00		Piggyback	00
		212 Year Last Painted:	Sup:2000Sub:0000		253 Notification Date:	02/01/1901
					258 Fed Notify Date:	2/1/1901 12:00:00AM



Processed Date: 5/24/2010

# Bridge Inventory Data Listing

Parameters: Bridge Serial Num

Structure ID: 185-0013-0

Lowndes

SUFF. RATING: 67.31

**Location & Geography**

**Structure ID:** 185-0013-0  
 200 Bidge Information: 06  
 \*6A Feature Int: I-75 (EXIT 11) SR31(SBL)  
 \*6B Critical Bridge: 0  
 \*7A Route No Carried: SR00031  
 \*7B Facility Carried: SR 31 (SBL)  
 9 Location: APP 5 MI S OF VALDOSTA  
 2 Dot District: 4  
 207 Year Photo: 2010  
 \*91 Inspection Frequency: 24 Date: 02/10/2010  
 92A Fract Crit Insp Freq: 0 Date: 02/01/1901  
 92B Underwater Insp Freq: 0 Date: 02/01/1901  
 92C Other Spc. Insp Freq: 0 Date: 02/01/1901  
 \*4 Place Code: 00000  
 \*5 Inventory Route(O/U): 1  
 Type: 3  
 Designation: 1  
 Number: 00031  
 Direction: 0  
 \*16 Latitude: 30 45.0708 HMMS Prefix:SR  
 \*17 Longitude: 83 -16.4248 HMMS Suffix:00 MP:8.99  
 98 Border Bridge: 000%Shared:00  
 99 ID Number: 0000000000000000  
 \*100 STRAHNET: 0  
 12 Base Highway Network: 1  
 13A LRS Inventory Route: 1851003100  
 13B Sub Inventory Route: 0  
 101 pallel Structure: L  
 \*102 Direction of Traffic: 1  
 \*264 Road Inventory Mile Post: 008.93  
 \*208 Inspection Area: 4 Initials: EFP  
 Engineer's Initials: sgm  
 \* Location ID No: 185-00031D-008.99N

\*104 Highway System: 0  
 \*26 Functional Classification: 16  
 \*204 Federal Route Type: F No: 00341  
 105 Federal Lands Highway: 0  
 \*110 Truck Route: 0  
 2006 School Bus Route: 1  
 217 Benchmark Elevation: 0209.42  
 218 Datum: 3  
 \*19 Bypass Length: 01  
 \*20 Toll: 3  
 \*21 Maintanance: 01  
 \*22 Owner: 01  
 \*31 Design Load: 6  
 37 Historical Significance: 5  
 205 Congressional District: 01  
 27 Year Constructed: 1961  
 106 Year Reconstructed: 0000  
 33 Bridge Medium: 1  
 34 Skew: 40  
 35 Structure Flared: 0  
 38 Navigation Control: N  
 213 Special Steel Design: 0  
 267 Type of Paint: 2  
 \*42 Type of Service On: 1  
 Type of Service Under: 1  
 214 Movable Bridge: 0  
 203 Type Bridge: Z  
 259 Pile Encasement 3  
 \*43 Structure Type Main: 4 02  
 45 No.Spans Main: 004  
 44 Structure Type Appr: 0 00  
 46 No Spans Appr: 0000  
 226 Bridge Curve Horz 0 Vert: 0  
 111 pier Protection 0  
 107 Deck Structure Type: 1  
 108 Wearing Structure Type: 1  
 Membrane Type: 0  
 Deck Protection: 8

**Signs & Attachments**

225 Expansion Joint Type: 02  
 242 Deck Drains: 1  
 243 Parapet Location: 0  
 Height: 0  
 Width: 0  
 238 Curb Height: 1  
 Curb Material: 1  
 239 Handrail 11  
 \*240 Medium Barrier Rail: 0  
 241 Bridge Median Height: 0  
 \* Bridge Median Width: 0  
 230 Guardrail Loc. Dir. Rear: 3  
 Fwr: 3  
 Oppo. Dir. Rear: 0  
 Oppo. Fwr: 0  
 244 Aproach Slab 3  
 224 Retaining Wall: 0  
 233Posted Speed Limit: 45  
 236 Warning Sign: 1.00  
 234 Delineator: 0.00  
 235 Hazzard Boards: 0  
 237 Utilities Gas: 00  
 Water: 00  
 Electric: 00  
 Telephone: 00  
 Sewer: 00  
 247 Lighting Street: 0  
 Navigation: 0  
 Aerial: 0  
 \*248 County Continuity No.: 00



Processed Date:5/24/2010

# Bridge Inventory Data Listing

Parameters: Bridge Serial Num

Structure ID:185-0013-0

Programming Data		Measurements:				
201 Project No:	I-75-1 (24) 00	*29ADT	010580	Year:2007	65 Inventory Rating Method:	1
202 Plans Available:	1	109%Trucks:	0		63 Operating Rating Method:	1
249 Prop Proj No:	00000000000000000000000000000000	* 28 Lanes On:	02	Under:06	66 Inventory Type:	2 Rating: 27
250 Approval Status:	0000	210 No. Tracks On:	00	Under:00	64 Operating Type:	2 Rating: 27
251 PI Number:	00000000	* 48 Max. Span Length	0090		231Calculated Loads:	
252 Contract Date:	02/01/1901	* 49 Structure Length:	274		H-Modified:	21 0
260 Seismic No:	000000	51 Br. Rwdy. Width	28.00		HS-Modified:	29 0
75 Type Work:	00 0	52 Deck Width:	34.00		Type 3:	28 0
94 Bridge Imp. Cost:	\$ 0	* 47 Tot. Horiz. Cl:	28		Type 3s2:	34 0
95 Roadway Imp. Cost:	0	50 Curb / Sidewalk Width	2.00 / 2.00		Timber:	31 0
96 Total Imp Cost:	0	32 Approach Rdwy. Width	033		Piggyback:	40 0
76 Imp Length:	000000	*229 Shoulder Width:			261 H Inventory Rating:	26
97 Imp Year:	0000	Rear Lt:	4.60	Type:2 Rt:4.70	262 H Operating Rating	44
114Future ADT:	015870	Fwd. Lt:	2.00	Type:2 Rt:2.00	67 Structural Evaluation:	6
		Permanent Width:			58 Deck Condition:	5
		Rear:	24.10	Type:2	59 Superstructure Condition:	7
			62.00	Type:2	* 227 Collision Damage:	0
		Intersection Rear:	1	Fwd: 1	60A Substructure Condition:	7
		36Safety Features Br. Rail:	2		60B Scour Condition:	N
		Transition:	2		60C Underwater Condition	N
		App. G. Rail:	2		71 Waterway Adequacy:	N
		App. Rail End:	2		61 Channel Protection Cond.:	N
		53 Minimum Cl. Over:	99' 99"		68 Deck Geometry:	3
		Under:			69 UnderClr. Horz/Vert:	5
		*228 Minimum Vertical Cl			72 Appr. Alignment:	7
		Act. Odm Dir.:	99' 99"		62 Culvert:	N
		Oppo. Dir:	99' 99"		<b>Posting Data</b>	
		Posted Odm. Dir:	00' 00"		70 Bridge Posting Required	5
		Oppo. Dir:	00' 00"		41 Struct Open, Posted, CL:	A
		55 Lateral Undercl. Rt:	H 10 10		* 103 Temporary Structure:	0
		56 Lateral Undercl. Lt:	18.50		232 Posted Loads	
		*10 Max Min Vert Cl:	99' 99" Dir:0		H-Modified:	00
		39 Nav Vert Cl:	000 Horiz:0000		HS-Modified:	00
		116 Nav Vert Cl Closed:	000		Type 3:	00
		245 Deck Thickness Main	6.60		Type 3s2:	00
		Deck Thick Approach:	0.00		Timber:	00
		246 Overlay Thickness:	0.00		Piggyback	00
		212 Year Last Painted:	Sup:2000Sub:0000		253 Notification Date:	02/01/1901
					258 Fed Notify Date:	2/1/1901 12:00:00AM



Processed Date:5/24/2010

# Bridge Inventory Data Listing

Parameters: Bridge Serial Num

Structure ID:185-0020-0

Lowndes

SUFF. RATING: 76.12

**Location & Geography**

**Structure ID:** 185-0020-0  
 200 Bidge Information: 06  
 \*6A Feature Int: I-75 (EXIT 18)  
 \*6B Critical Bridge: 0  
 \*7A Route No Carried: SR00133  
 \*7B Facility Carried: SR 133  
 9 Location: APP 2 MI NW OF VALDOSTA  
 2 Dot District: 4  
 207 Year Photo: 2010  
 \*91 Inspection Frequency: 24 Date: 02/21/2010  
 92A Fract Crit Insp Freq: 0 Date: 02/01/1901  
 92B Underwater Insp Freq: 0 Date: 02/01/1901  
 92C Other Spc. Insp Freq: 0 Date: 02/01/1901  
 \* 4 Place Code: 78800  
 \*5 Inventory Route(O/U): 1  
 Type: 3  
 Designation: 1  
 Number: 00133  
 Direction: 0  
 \*16 Latitude: 30 50.6982 HMMS Prefix:SR  
 \*17 Longitude: 83 -19.8452 HMMS Suffix:00 MP:2.24  
 98 Border Bridge: 000%Shared:00  
 99 ID Number: 0000000000000000  
 \*100 STRAHNET: 0  
 12 Base Highway Network: 1  
 13A LRS Inventory Route: 1851013300  
 13B Sub Inventory Route: 0  
 101 pallelle Structure: N  
 \*102 Direction of Traffic: 2  
 \*264 Road Inventory Mile Post: 002.24  
 \*208 Inspection Area: 4 Initials: EFP  
 Engineer's Initials: kww  
 \* Location ID No: 185-00133D-002.24N

\*104 Highway System: 0  
 \*26 Functional Classification: 14  
 \*204 Federal Route Type: F No: 00322  
 105 Federal Lands Highway: 0  
 \*110 Truck Route: 0  
 2006 School Bus Route: 1  
 217 Benchmark Elevation: 0223.30  
 218 Datum: 3  
 \*19 Bypass Length: 02  
 \*20 Toll: 3  
 \*21 Maintanance: 01  
 \*22 Owner: 01  
 \*31 Design Load: 6  
 37 Historical Significance: 5  
 205 Congressional District: 01  
 27 Year Constructed: 1961  
 106 Year Reconstructed: 1990  
 33 Bridge Medium: 0  
 34 Skew: 45  
 35 Structure Flared: 0  
 38 Navigation Control: N  
 213 Special Steel Design: 0  
 267 Type of Paint: 2  
 \*42 Type of Service On: 5  
 Type of Service Under: 1  
 214 Movable Bridge: 0  
 203 Type Bridge: Z  
 259 Pile Encasement 3  
 \*43 Structure Type Main: 3 02  
 45 No.Spans Main: 004  
 44 Structure Type Appr: 0 00  
 46 No Spans Appr: 0000  
 226 Bridge Curve Horz 0 Vert: 0  
 111 pier Protection 0  
 107 Deck Structure Type: 1  
 108 Wearing Structure Type: 1  
 Membrane Type: 0  
 Deck Protection: 8

**Signs & Attachments**

225 Expansion Joint Type: 01  
 242 Deck Drains: 0  
 243 Parapet Location: 0  
 Height: 0  
 Width: 0  
 238 Curb Height: 1  
 Curb Material: 1  
 239 Handrail 55  
 \*240 Medium Barrier Rail: 0  
 241 Bridge Median Height: 0  
 \* Bridge Median Width: 0  
 230 Guardrail Loc. Dir. Rear: 6  
 Fwr: 6  
 Oppo. Dir. Rear: 0  
 Oppo. Fwr: 0  
 244 Aproach Slab 3  
 224 Retaining Wall: 0  
 233Posted Speed Limit: 35  
 236 Warning Sign: 1.00  
 234 Delineator: 1.00  
 235 Hazzard Boards: 0  
 237 Utilities Gas: 00  
 Water: 00  
 Electric: 32  
 Telephone: 00  
 Sewer: 00  
 247 Lighting Street: 1  
 Navigation: 0  
 Aerial: 0  
 \*248 County Continuity No.: 00



Processed Date:5/24/2010

### Bridge Inventory Data Listing

Parameters: Bridge Serial Num

Structure ID:185-0020-0

Programming Data		Measurements:				
201 Project No:	I-75-1 (17) 23	*29ADT	014590	Year:2007	65 Inventory Rating Method:	1
202 Plans Available:	4	109%Trucks:	0		63 Operating Rating Method:	1
249 Prop Proj No:	00000000000000000000000000000000	* 28 Lanes On:	05	Under:06	66 Inventory Type:	2 Rating: 23
250 Approval Status:	0000	210 No. Tracks On:	00	Under:00	64 Operating Type:	2 Rating: 23
251 PI Number:	00000000	* 48 Max. Span Length	0124		231Calculated Loads:	
252 Contract Date:	02/01/1901	* 49 Structure Length:	354		H-Modified:	21 0
260 Seismic No:	00000	51 Br. Rwdy. Width	66.50		HS-Modified:	29 0
75 Type Work:	00 0	52 Deck Width:	80.50		Type 3:	27 0
94 Bridge Imp. Cost:	\$ 0	* 47 Tot. Horiz. Cl:	67		Type 3s2:	37 0
95 Roadway Imp. Cost:	0	50 Curb / Sidewalk Width	6.00 / 6.00		Timber:	37 0
96 Total Imp Cost:	0	32 Approach Rdwy. Width	067		Piggyback:	40 0
76 Imp Length:	000000	*229 Shoulder Width:			261 H Inventory Rating:	20
97 Imp Year:	0000	Rear Lt:	2.00	Type:1 Rt:2.00	262 H Operating Rating	34
114Future ADT:	021885 Year:2027	Fwd. Lt:	2.00	Type:1 Rt:2.00	67 Structural Evaluation:	5
<b>Hydraulic Data</b>		Permanent Width:			58 Deck Condition:	5
215Waterway Data:		Rear:	63.00	Type:1	59 Superstructure Condition:	6
High Water Elev:	0000.0 Year:1900		63.00	Type:2	* 227 Collision Damage:	0
Flood Elev:	0000.0 Freq:00	Intersection Rear:	1	Fwd: 1	60A Substructure Condition:	6
Avg Streambed Elev:	0000.0	36Safety Features Br. Rail:	2		60B Scour Condition:	N
Drainage Area:	00000	Transition:	1		60C Underwater Condition	N
Area of Opening:	000000	App. G. Rail:	1		71 Waterway Adequacy:	N
113 Scour Critical	N	App. Rail End:	2		61 Channel Protection Cond.:	N
216Water Depth:	00.0 Br.Height:00.0	53 Minimum Cl. Over:	99' 99"		68 Deck Geometry:	5
222Slope Protection:	4	Under:			69 UnderClr. Horz/Vert:	2
221Slope Protection	0 Fwd:0	*228 Minimum Vertical Cl			72 Appr. Alignment:	8
219Fender System	0	Act. Odm Dir::	99' 99"		62 Culvert:	N
220Dolphin:	0	Oppo. Dir:	99' 99"		<b>Posting Data</b>	
223Current Cover:	000	Posted Odm. Dir:	00' 00"		70 Bridge Posting Required	5
Type:	0	Oppo. Dir:	00' 00"		41 Struct Open, Posted, CL:	A
No. Barrels:	0	55 Lateral Undercl. Rt:	R 12 12		* 103 Temporary Structure:	0
* Width:	0.00 Height:0.00	56 Lateral Undercl. Lt:	0.00		232 Posted Loads	
* Length:	0 Apron:0	*10 Max Min Vert Cl:	99' 99" Dir:0		H-Modified:	00
265 U/W Insp. Area	0 Diver:ZZZ	39 Nav Vert Cl:	000 Horiz:0000		HS-Modified:	00
Location ID No:	185-00133D-002.24N	116 Nav Vert Cl Closed:	000		Type 3:	00
		245 Deck Thickness Main	6.00		Type 3s2:	00
		Deck Thick Approach:	0.00		Timber:	00
		246 Overlay Thickness:	0.00		Piggyback	00
		212 Year Last Painted:	Sup:1990Sub:0000		253 Notification Date:	02/01/1901
					258 Fed Notify Date:	2/1/1901 12:00:00AM

# ***MEETING MINUTES***

**SUBJECT:** NHS-0007-00(386) Lowndes County  
P.I. No. 0007386  
I-75 at Five Locations from the Florida State Line to SR 133 – Phase 2  
**OEL Project Briefing**

**MEETING DATE:** May 3, 2007

**TODAY'S DATE:** May 9, 2007

**PREPARED BY:** Tom Kuzmeskus & Jeff VanDyke, Carter & Burgess, Inc.

**ATTENDEES:**

<b>Name</b>	<b>Agency</b>	<b>Phone</b>	<b>Email</b>
Paul Alimia	GDOT – Environment & Location	404-699-4448	<a href="mailto:paul.alimia@dot.state.ga.us">paul.alimia@dot.state.ga.us</a>
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Stanley Hill	GDOT OCDPD – Assistant Office of Consultant Design Engineer	404-656-6109	<a href="mailto:stanley.hill@dot.state.ga.us">stanley.hill@dot.state.ga.us</a>
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Tyler McIntosh	The LPA Group	770-263-9118	<a href="mailto:kfielder@lpagroup.com">kfielder@lpagroup.com</a>

**LOCATION:** GDOT Office of Environment & Location, 3993 Aviation Circle, Atlanta, GA

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**Project Identification & Meeting Purpose**

Stanley Hill opened the meeting to review project status. Jeff VanDyke opened the discussion on where the consultants were in the concept design process. Each site was reviewed in order and presented with the limit of access shown along with the impacts to businesses, and any environmental resource. Carter & Burgess is designing Sites 1, 2, and 3. The LPA Group is designing Sites 4 and 5. He noted that the purpose of the meeting was to obtain input from Federal Highway on the interchange locations so that potential historic and environmental issues may be addressed in order for the design to proceed smoothly.

## **Action Items:**

### All sites

- A typical section for the bridge widening on the interstate will need to be forwarded to Stanley Hill for approval.
- Add 2:1 slopes and guardrail, or gravity type retaining walls to fill or cut slopes to reduce impacts to either historic properties or wetlands.
- Stanley Hill to send MOG for ramp termini spacing to Carter & Burgess.

### Site 1

- Submit IMR for interchange as part of the concept report.

### Site 2

- Sink hole in SW quadrant of interchange, will need a geotech report; alignment of ramp may have to be modified.
- Submit IMR for interchange as part of the concept report.

### Site 3

- Discuss pros and cons in concept for closing Loch Laurel Road for bridge construction. This may affect the location of the bridge on either existing or new location. The proposed location is offset to the south of the existing.
- Confirm/discuss speed design issues with district 4/locals for Loch Laurel Rd.

### Site 4

- The proposed limit of access needs to be rechecked for 300' minimum, 600' desirable urban and 1000' desirable rural.
- A design variance may be needed for spacing between median openings. The requirement is 660' minimum. The existing condition has openings of approximately 500'.
- A possible historic property will be impacted by an off ramp. LPA will need to coordinate with the historian (Edwards-Pitman) to get final boundary.
- Submit IMR for interchange as part of the concept report.

### Site 5

- The existing bridge over I-75 was rebuilt in 1990. Structurally, it is in good condition.
  - Alternative 1: To preserve the bridge since it is so new, it could be jacked and widened for operational improvements. I-75 would need to be shifted to the center of the opening to accommodate the future fourth lane. A design exception for narrow shoulders under the bridge would likely be required.
  - Alternative 2: Design a new bridge that is long enough to meet shoulder width requirements when the fourth lane is added to I-75.

- James Road is being realigned by a County project so that it intersects N St Augustine Road outside the 300 foot limit of access. The County Engineer will forward the plans to LPA.
- In the NE quadrant of the interchange, a 60:1 taper is used for the on-ramp instead of a standard 70:1 taper. This quicker taper avoids affecting the I-75 river bridge to the north of the project site.
- There will have to be a design variance or exception for the skew on the ramp entrances and exits.
- Submit IMR for interchange as part of the concept report.
- FHWA preferred alternative 2.

These meeting minutes reflect the notes and memory of Tom Kuzmeskus and Jeff VanDyke. If any additions, deletions, or corrections are necessary, please contact Tom Kuzmeskus at 404-249-7550 or [tom.kuzmeskus@c-b.com](mailto:tom.kuzmeskus@c-b.com) If no responses are received within five days, these meeting minutes will be considered final.

# ***MEETING MINUTES***

**SUBJECT:** NHS-0007-00(386) Lowndes County  
 P.I. No. 0007386  
 I-75 at Five Locations from the Florida State Line to SR 133 – Phase 2  
**Initial Team Concept Meeting**

**MEETING DATE:** April 9, 2007

**TODAY'S DATE:** April 16, 2007  
*Revised May 1, 2007*

**PREPARED BY:** Steven Buckley & Jeff VanDyke, Carter & Burgess, Inc.

**ATTENDEES:**

<b>Name</b>	<b>Agency</b>	<b>Phone</b>	<b>Email</b>
W.P. Billy Langdale	GDOT Board Member	229-242-3175	
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Vinesha Pegram	GDOT Office of Consultant Design & Program Delivery (OCDPD) – Design Group Manager	404-463-2988	<a href="mailto:vineshac.peggram@dot.state.ga.us">vineshac.peggram@dot.state.ga.us</a>
Stanley Hill	GDOT OCDPD – Assistant Office of Consultant Design Engineer	404-656-6109	<a href="mailto:stanley.hill@dot.state.ga.us">stanley.hill@dot.state.ga.us</a>
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Micheal Word	Carter & Burgess	404-249-7550	<a href="mailto:micheal.word@c-b.com">micheal.word@c-b.com</a>
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**LOCATION:** GDOT District Four Office, Tifton, Georgia

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**I. Welcome**

Vinesha Pegram and Joe Sheffield welcomed the group to the Initial Concept Team Meeting for NHS-0007-00(386) Lowndes County, I-75 at Five Locations from the Florida State Line to SR 133 – Phase 2.

**II. Introduction of Each Attendee**

The group introduced themselves and their affiliations.

**III. Project Identification & Meeting Purpose**

Vinesha Pegram turned the meeting over to Jeff VanDyke. Jeff VanDyke noted that the Carter & Burgess team was a large team in order to design all sites simultaneously. Carter & Burgess is designing Sites 1, 2, and 3. The LPA Group is designing Sites 4 and 5. Jeff VanDyke should be considered the single point of contact for the consultant team. The consultant team should also be considered an extension of staff for the Department.

Jeff VanDyke reviewed the five sites with the group. Jeff VanDyke noted that the purpose of the meeting from the GDOT Plan Development Process is to “Discuss project issues at early stage to produce better understanding of the project scope and objectives, as well as a higher quality, more detailed final concept.” Although some work has gone into developing layouts for each site, the layouts should be considered the first engineering attempt at the concept.

**IV. Need and Purpose Statement**

Jeff VanDyke discussed the preliminary need and purpose with the group. The preliminary need and purpose of the project is to allow for the future widening of I-75, eliminate the sub-standard shoulders under the bridges from the Phase 1 widening, and improve operations / safety at each site.

**V. Proposed Project Description**

Jeff VanDyke noted the proposed project description and locations.

**VI. Functional Classification**

Jeff VanDyke reviewed the functional classifications with the group. The classifications vary by site. The classification helps set the project design criteria.

## **VII. Traffic Projections**

Jeff VanDyke noted that the consultant team had performed traffic counts on all five sites. The existing volumes have been approved by GDOT. Jeff VanDyke also discussed that traffic projections had been completed and approved by GDOT. A draft traffic study has been prepared and will be forwarded to GDOT for review. Jeff VanDyke reviewed the traffic volumes at each site with the group.

## **VIII. Existing & Proposed Design Features**

Jeff VanDyke discussed the existing and proposed design features of Sites 1, 2, and 3. Alan Rainer discussed features of Sites 4 and 5. The group reviewed the proposed design criteria for each site. Particular comments are noted below:

### Site 1

- Signal warrants are not met at the I-75 ramps for opening year of 2012. By 2032, the warrants will be met and signals will be required. GDOT will need to monitor the volumes after the project is opened and periodically review the signal warrants. The intersections will be designed to accommodate future signals.
- GDOT Policy calls for 300 foot minimum of limited access beyond the ramps to facilitate the efficient operation of the interstate facility / ramps. For this site, driveways at the truck stop and hotel will have to be closed and internal circulation within the property modified.
- Lowndes County staff noted that an active adult retirement community is being developed about ½ mile from the interchange on Enoch Road. The Carter & Burgess staff will coordinate with the County on potential impacts.
- Lowndes County staff also noted that a distribution center is planned in the vicinity of the interchange. The Carter & Burgess staff will coordinate with the County on potential impacts.
- The group noted that there are potential underground tanks on the Dairy Queen parcel. This parcel is currently shown as a potential displacement.
- County staff noted that beautification efforts have been discussed at this site, since it is the first exit in Georgia. The District noted that a Transportation Enhancements project may be planned for this interchange.

### Site 2

- Lowndes County staff noted that Jewel Futch Road speed limit is 25mph.
- Lowndes County staff noted that a new subdivision is being constructed off of Mill Store Road. Lakes Boulevard volumes will likely be affected.
- The Lowndes County and GDOT staff noted that the southbound on-ramp alignment crosses an existing sink hole.

### Site 3

- Lowndes County staff noted that a study had been performed that recommends a speed limit of 45 mph on Frontage Road and Loch Laurel Road.
- Lowndes County staff noted that they have a county SPLOST project to pave Twin Lakes Road. The proposed County project would remove the S-curve immediately south of Loch Laurel in order to move the Twin Lakes/Loch Laurel intersection further away from the I-75 overpass.

- County Staff noted that a new subdivision is being built on Loch Laurel Road south of where it crosses over I-75.
- Jeff VanDyke noted that the site distance of both Loch Laurel side roads would be checked during design.
- Angela Malta noted that the historic area boundaries are still being refined.

#### Site 4

- A rural section is proposed on west side of interchange and an urban section on east side of the interchange.
- The LPA group will study whether the median should be raised or depressed.
- The proposed right turn lane should be extended to Hart Road for a new development and existing Rideshare lot.
- Consensus of the group is that dual right turn lanes and a signal is needed for the northbound off ramp.
- The proposed limit of access needs to be rechecked for 300' minimum, 600' desirable urban and 1000' desirable rural.
- A design variance may be needed for spacing between median openings. The requirement is 660' minimum. The existing condition has openings of approximately 500'.
- It was noted that a new commercial development is planned along the parcel north of SR 31 between the Interstate and Hart Road. The designers need to coordinate with GDOT/ City / County / developers concerning this project.

#### Site 5

- The existing bridge over I-75 was rebuilt in 1990. Structurally, it is in good condition.
  - Alternative 1: To preserve the bridge since it is so new, it could be jacked and widened for operational improvements. I-75 would need to be shifted to the center of the opening to accommodate the future fourth lane. A design exception for narrow shoulders under the bridge would likely be required.
  - Alternative 2: Design a new bridge that is long enough to meet shoulder width requirements when the fourth lane is added to I-75.
  - No cost analysis of widening vs. building new bridge has been performed at this time. The current construction estimate is for the new bridge option.
  - FHWA was not present at this meeting. FHWA should be consulted on this issue. It was noted that standard clearances have been pursued on other current design projects on I-75.
- Maintaining the sidewalk on the SR 133 bridge during construction is preferable but leaves no buffer between travel lane and barriers. In order to get some offset for driver safety/comfort, the bridge will have to shift south and further impact Denny's and maybe the hotel on the west side. If the sidewalk is shortened from 6' to 4' wide, it will allow for easier staging of the bridge construction and the alignment won't have to shift as much.
- James Road is being realigned by a County project so that it intersects N St Augustine Road outside the 300 foot limit of access. The County Engineer will forward the plans to LPA.
- Extending the median to the new realigned James Road should be considered.
- The County / City staff noted that a 900 student elementary school will be built on James Road. The county and city are working together to widen James Road from 2 to 5 lanes and to provide safety improvements to serve the school.

- The exit and entrance ramps at this interchange are currently staggered. The traffic study and the concept designs call for aligning the ramps with each other in order to reduce the number of signalized intersections in close proximity to one another. District Four also prefers the idea of lining the ramps up and removing the stagger.
- Alan Rainer noted that in the NE quadrant of the interchange, a 60:1 taper is used for the on-ramp instead of a standard 70:1 taper. This quicker taper avoids affecting the I-75 river bridge to the north of the project site.
- The Shell station will probably have to be acquired because its frontage falls within the 300' limit of access.
- Brent Thomas suggested providing dual left turn lanes on NB off ramp. Whenever there is an incident on I-75 north of SR 133; people exit and head west on SR 133 as an alternate route. There are already enough receiving lanes for the dual left. This suggestion will need to be reviewed for bridge impacts.

#### **IX. Alternates Considered**

Jeff Van Dyke and Alan Rainer discussed alternatives in the previous features discussion.

#### **X. Preferred Concept Alternate**

Jeff Van Dyke and Alan Rainer discussed preferred alternatives in the previous features discussion.

#### **XI. Right of Way Displacements and Relocations**

The group reviewed the right of way displacements from the previous features discussion. Jeff VanDyke noted that the consultant team will have a right of way cost estimate prepared for the Concept Meeting.

#### **XII. Major Structures**

Jeff Van Dyke and Alan Rainer discussed the proposed bridges and retaining walls. Additional retaining walls will likely be added as consideration for right of way impacts as the project is further developed.

#### **XIII. Staging/Maintenance of Traffic**

Stage construction and maintenance of traffic is a major concern of the consultant team. It was noted that to make the bridges longer, the beams will be deeper. The profile of all the crossing roads will have to be raised. The Department normally maintains the existing number of lanes during construction. The consultant team has looked at the impacts of reducing the number of lanes during construction. The impacts are significant and reducing the number of lanes does not appear to be a viable option. Staging will continue to be studied during additional concept development.

#### **XIV. Design Variances and Exceptions**

None are anticipated except the median opening spacing at Site 4. A design exception for narrow shoulders on I-75 would be required on Site 5 if Alternative 1 (retain existing bridge and widen / jack) is pursued.

**XV. Environmental Concerns/Level of Environmental Analysis**

Angela Malta reported that a Categorical Exclusion (CE) is the anticipated level of environmental documentation for this project. As the CE is developed, the sites will be reviewed for potential delays to the whole project. A problematic site could be separated in order to advance the majority of the sites.

Angela Malta also reported that preliminary environmental screenings were complete. No major environmental concerns were noted at this time. The environmental specialty studies will continue to be refined as the concept is developed.

Jeff VanDyke noted that the sites had numerous underground storage sites. Two geotechnical firms are part of the project team and will be sent out to begin Phase I investigations.

**XVI. Utilities**

Jeff VanDyke noted no major utility issues at this time. County staff noted that water main is proposed at Site 3. Jeff VanDyke noted that two Subsurface Utility Engineering (SUE) firms were part of the team. The SUE firms will be responsible for recording existing utility information in the project corridor.

**XVII. Coordination**

Jeff VanDyke noted that this meeting was the first coordination meeting. A Public Information Open House (PIOH) will likely be the next major meeting. The PIOH will be followed by the Concept Team Meeting.

**XVIII. Other Projects in Area**

The group reviewed other projects in the area. There were no major projects that appear to directly impact this project. The consultant team will need to coordinate on the I-75 Gateway project and the local roadway projects.

The group discussed coordinating with the consultant team on future projects and future development. Jeff VanDyke noted that the consultant team will need the local officials help in coordinating with future projects / development. The sooner the coordination begins, the easier it is for both parties to adjust features.

**XIX. Project Development Schedule**

Stanley Hill noted that the next funding elements, right of way and construction, have been moved to long range in the Department's plan. The consultant team will continue to pursue the project in anticipation that funding will be available as the plans are developed.

**XX. Comments from Attendees**

Stanley Hill lead group question and answer.

- a. Local Government Representatives – Coordination with proposed development is a concern.
- b. Engineering Services – None in Attendance
- c. Office of Financial Management – None in Attendance

- d. Traffic Safety and Design
  - ITS opportunities need to be discussed in the Concept Report. It was also noted that the projects are on hurricane evacuation routes.
  - Any proposed signals warrants will need to be submitted to GDOT District Traffic Operations.
  - All lighting around the interchanges will need to be maintained. Jeff VanDyke noted that this was in the consultant team scope.
- e. Environmental/Location – None in Attendance
- f. Planning – No comments.
- g. District – No comments other than those noted in the site discussions.
- h. Right of Way – No comments.
- i. Utilities – No comments.

**XXI. Other Comments or Concerns – Open Discussion**

None noted.

These meeting minutes reflect the notes and memory of Steven Buckley and Jeff VanDyke. If any additions, deletions, or corrections are necessary, please contact Steven Buckley at 404-249-7550 or [steven.buckley@c-b.com](mailto:steven.buckley@c-b.com) If no responses are received within five days, these meeting minutes will be considered final.

# ***MEETING MINUTES***

**SUBJECT:** NHS-0007-00(386) Lowndes County  
P.I. No. 0007386  
I-75 at Five Locations from the Florida State Line to SR 133 – Phase 2  
**Team Concept Meeting**

**MEETING DATE:** January 8 2008

**TODAY'S DATE:** January 11, 2008

**PREPARED BY:** Steven Buckley & Jeff VanDyke, Jacobs Carter Burgess

**ATTENDEES:**

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**LOCATION:** GDOT District Four Office, Tifton, Georgia

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## **I. Welcome**

Jeff VanDyke welcomed the group to the Initial Concept Team Meeting for NHS-0007-00(386) Lowndes County, I-75 at Five Locations from the Florida State Line to SR 133 – Phase 2.

## **II. Introduction of Each Attendee**

The group introduced themselves and their affiliations.

## **III. Project Identification & Meeting Purpose**

Jeff VanDyke briefly described the project. The project proposed to reconstruct four interchanges and one overpass in Lowndes County:

- Site 1: Exit 2 - CR 274/Lake Park Rd/Bellville Rd
- Site 2: Exit 5 – SR 376/Lakes Blvd
- Site 3: MP 6.12 – Loch Laurel Rd Overpass
- Site 4: Exit 11 – SR 31/Madison Hwy
- Site 5: Exit 18 – SR 133/N St Augustine Rd

Based on funding, the project is classified as long-range. Anticipated completion dates of certain project milestones were discussed:

- Concept Approval – April 2008
- Right of Way Approval – April 2010
- Letting Date – September 2010

Jeff VanDyke stated that the purpose of this concept meeting is to discuss project issues, present the scope, and verify the preferred concept. The Concept Report document is still in draft form and the design team is open to comments.

## **IV. Need and Purpose Statement**

Jeff VanDyke discussed the preliminary need and purpose with the group. Previously, when I-75 was widened from four to six lanes (Phase I), substandard shoulders were left under the bridges at the five locations identified in this project. In addition, GDOT is interested in widening I-75 from six to eight lanes one day, and longer bridges will be needed to span the additional lanes. The purpose of this project (Phase II) is to eliminate the substandard shoulders, allow for additional future widening of I-75, and improve safety and operations at the interchanges.

## **V. Functional Classification**

Jeff VanDyke reviewed the functional classifications with the group, and explained how the classification determines design criteria. The classifications vary by site, and are listed below:

- I-75
  - Rural Interstate
- Site 1: CR 274/Bellville Rd/Lake Park Rd
  - Rural Principal Arterial

- Site 2: SR 376/Lakes Blvd
  - Rural Major Collector
- Site 3: CR 783/Loch Laurel Rd
  - Rural Major Collector
- Site 4: SR 31/Madison Hwy
  - Urban Principal Arterial
- Site 5: SR 133/N St Augustine Rd
  - Urban Principal Arterial

## **VI. Traffic Projections & Accident History**

Jeff VanDyke reviewed the existing volumes, traffic projections, and accident history. A Draft Traffic Report has been prepared.

## **VII. Alternatives Considered**

Jeff VanDyke discussed some alternatives that were considered

1. No Build – Does not meet project need and purpose or planning issues
2. Loop Ramp at site 4 – Would improve operations over preferred concept, but increases right of way costs.
3. Single Point Urban Interchange at site 2 – Suggested in VE study because it could reduce right of way impacts, however it is a more expensive alternative because of the much larger bridge that would be required.

## **VIII. Preferred Concept**

Jeff VanDyke discussed the preferred concept. The I-75 typical assumes a future fourth lane would be a managed lane. The ramp tapers are longer than necessary due to the planned future widening.

## **IX. Existing & Proposed Design Features**

Jeff VanDyke discussed the existing and proposed design features of Sites 1, 2, and 3. Alan Rainer discussed features of Sites 4 and 5. The group reviewed the proposed design criteria for each site. Particular comments are noted below:

### Site 1

- Bridge will use standard pre-stressed beams.
- Effort will be made to improve limit of access. GDOT policy calls for 1000 ft. This is not attainable without completely acquiring access from most of the commercial parcels near the ramps, but the limit of access will be improved to approximately 600 ft. This will require a design variance.
- The bridge will have a rural shoulder and four lanes, including full length left turn lanes for both the NB and SB on ramps.

### Site 2

- The new bridge will be much higher than the existing, so the design must carefully consider maintaining traffic – especially commercial vehicles.
- 14-ft shoulder on the new ramps.
- Limit of access will be acquired to the first intersection on either side of I-75. Again, this is not 1000 feet as per GDOT's preferred policy, but it is better than the existing condition. This will require a design variance.

- The proposed southbound on-ramp partially fills in an existing detention pond. A detention pond with an equal volume of storage will be created elsewhere.
- SR 376 is a bike route, which should be considered in design.
- Lowndes County staff noted that a new subdivision is being constructed off of Mill Store Road. Lakes Boulevard volumes will likely be affected.

### Site 3

- The existing bridge will be replaced with a new longer bridge just south of the current one. Loch Laurel Road alignment will be shifted south onto the new bridge once it is complete and the old bridge will be destroyed.
- Frontage Road will be realigned to provide better sight distance over the road.
- The speed limit has been reduced to 35 mph on Loch Laurel Road by local ordinance. However, this is only because of the limited sight distance over the existing bridge. The proposed bridge will have 10' shoulders and a vertical crest curve that meets the 45 mph design speed on the rest of Loch Laurel Road.
- Lowndes County staff noted that there is a project to pave Twin Lakes Road. The proposed County project would remove the S-curve immediately south of Loch Laurel in order to move the Twin Lakes/Loch Laurel intersection further away from the I-75 overpass.

### Site 4

- The existing twin bridges will be replaced with one bridge which will improve sight distance.
- Two signals will be installed at ramp termini.
- The loop ramp that was examined by the design team as a possible alternative would have narrowed the proposed bridge, but also lengthened it, encroached into wetlands, and increased right of way costs. However, it would have also been more of a benefit to traffic than the preferred design.
- Proposed span length is 145 feet, using standard pre-stressed beams.
- GDOT is considering a new policy specifying greater separation of frontage roads from the mainline. This issue was not considered previously but will be looked at.
- A design variance for limit of access will be required at this site as well (1000 ft of limit of access is not attainable due to right of way considerations).

### Site 5

- Proposed eight-lane bridge will replace existing five-lane bridge to provide additional turn lanes.
- The proposed bridge uses MSE walls and 2 spans, as per a comment from the VE study. This provides a more cost effective design.
- The existing on and off ramps are staggered; the proposed design will align the new ramps.
- The bridge crosses I-75 at a skew resulting in span length of 165 ft to 170 ft. Standard beams can not be used for this length.
- James Road is being relocated and widened from two lanes to five.
- The Valdosta City Engineer will give LPA Group site plans for Holiday Inn Express site.
- Need design variance for limit of access. 1000 ft is not possible due to right of way considerations.

- A new Mega-development/urban center will break ground in the southeast quadrant of this site in March 2008. It is expected to draw 17,000 vehicles per day when open. Von Shipman from the City of Valdosta wants dual left turn lanes and a free-flow right lane at the northbound off-ramp to help deal with this traffic. LPA suggested that during design they can examine this possibility.
- Stanley Hill from GDOT indicated that dual left turn lanes on the ramp must be warranted. Traffic analysis needs to be performed. Jacobs Carter Burgess needs to coordinate with developer (Genesis Group) for traffic numbers and perform the analysis.
- SR 133 is a possible bike route; this should be addressed on the typical section.
- The bridge will have railings/fencing to prevent trash from being thrown onto I-75.

#### **X. Right of Way Displacements and Relocations**

The group reviewed the right of way displacements from the previous features discussion.

#### **XI. Major Structures**

Jeff Van Dyke and Alan Rainer discussed the proposed bridges and retaining walls. Walls are proposed to avoid greater right of way impacts

#### **XII. Staging/Maintenance of Traffic**

Stage construction and maintenance of traffic is a major concern of the consultant team. The existing number of lanes will be maintained during construction. There will be no lane closures on I-75 except at night.

#### **XIII. Design Variances and Exceptions**

Design variances are anticipated for the median opening spacing at Site 4 and for limit of access at sites 1, 2, 4, and 5. No design exceptions are anticipated.

#### **XIV. Environmental Concerns/Level of Environmental Analysis**

- The level of environmental analysis for this project is a Categorical Exclusion (CE).
- Jeff VanDyke noted that the sites have numerous underground storage sites. Two geotechnical firms are part of the project team and will be sent out to begin Phase I investigations.
- Mike Fletcher noted that there is history of a large spill in the detention pond at site 2 that needs to be more fully investigated. The design team should coordinate with Bonnie Pope at the Georgia Environmental Protection Division (229-430-4144) with regards to this spill.
- Archaeology report was approved 9/26/07
- Ecology was submitted 9/7/07. This document was commented on 12/7/07 and a revised document was submitted 1/3/08.
- History is not officially cleared yet because of a set of concrete block houses at the Site #4 (SR 31) interchange. Area research into this type of house is being requested but at the moment, this additional research is still being defined.
- Site 1
  - No History concerns
  - No Archaeological concerns
  - 3 wetland impacts
  - 1 open water

- Site #2
  - No History concerns
  - No Archaeological concerns
  - 5 displacements
  - 1 wetland
  - 2 open water
  - Known Spill in Open water Site southwest quadrant of interchange
- Site #3
  - No archaeology
  - Historic structures in the area although there will not be impacts
  - 2 wetlands
  - 2 open water
- Site #4
  - No Archeology
  - History - several concrete block houses in the southeastern quadrant – not being impacted
  - 2 wetlands
  - 1 open water
  - 3 streams
- Site #5
  - No History concerns
  - No Archaeological concerns
  - 1 Displacement
  - 2 wetland impacts
  - 4 open water
  - 2 streams
- Total:
  - 10 wetlands
  - 10 open water
  - 5 streams

## **XV. Utilities**

- Jeff VanDyke noted no major utility issues at this time.
- A new water main is proposed at Site 3, but does not appear to conflict with the project.
- Subsurface Utility Engineering (SUE) surveys have begun in the area. The SUE survey is quality Level B, and will be submitted as one package for all five sites.
- The SUE survey will need to pick up conduits for all high mast lighting. The consultant team will communicate this to the SUE firms.
- If this project encroaches upon a utility easement GDOT's Utility office prefers to buy right of way for the relocated utility.

## **XVI. Coordination**

Jeff VanDyke noted that as per the plan development process, this is the last public coordination meeting. The previous coordination meetings were:

1. Initial Team Concept Meeting – April 9, 2007
2. FHWA / OEL Briefing – May 3, 2007
3. Public Information Open House – July 10, 2007
4. Value Engineering Study – August, 2007

**XVII. Other Projects in Area**

The group reviewed other projects in the area. The James Road relocation and the Twin Lakes Road paving projects will impact this project. The consultant team will coordinate with these projects. These projects need to be added to the “Other Projects in the Area” section of the concept report.

**XVIII. Cost Estimate**

The overall project cost estimate for all five sites was reviewed.

Construction	\$ 68,600,000
Right of Way	\$ 98,769,000
<u>Utilities</u>	<u>\$ 500,000</u>
Total Cost	\$167,869,000

**XIX. Comments from Attendees**

Jeff VanDyke led a group question and answer / comment.

- a. Local Government Representatives
  - Coordination with proposed development is a concern. No more public opportunities.
- b. Construction
  - There was a question as to whether there will be full width paved shoulders on the mainline between the shoulders. As of now, this is not the proposed design but will be looked at.
- c. MSE walls will assist in raising the bridge at Site 5. A temporary signal may be needed, depending on how staging develops.
- d. Traffic Operations
  - Some locations with proposed signals do not meet warrants.
  - All fiber optic will need to be replaced at Site 5.
  - \$10 million cost estimate for traffic control is probably too high.
  - Signals are planned to be on span wires, not mast arms. The city of Valdosta indicated a willingness to pay the difference in cost to get mast arms if necessary.
- e. Environmental/Location – No additional comments.
- f. Planning
  - Make sure new concept drawings are on GDOT site.
- g. District
  - Exit 18 (Site 5) – Will vertical clearance under the bridge be an issue? The existing clearance is at the minimum.
- h. Right of Way – Appraisal services and pre-acquisition services are in the consultant team’s scope of work.
- i. Utilities – No additional comments.

These meeting minutes reflect the notes and memory of Steven Buckley and Jeff VanDyke. If any additions, deletions, or corrections are necessary, please contact Steven Buckley at 404-249-7550 or [steven.buckley@c-b.com](mailto:steven.buckley@c-b.com). If no responses are received within five days, these meeting minutes will be considered final.



Summary of Comments

CSNHS-0007-00(386) Lowndes – I-75 at Five Locations from Florida State Line to SR 133 – Phase 2

Page 2

July 10, 2007

Rhonda Barnes – Lowndes Community Development

Keith Sandler – Mayor, City of Lake Park

Von Shipman – City Engineer, City of Valdosta

DISPOSITION OF COMMENTS:

The design consultant is requested to respond to the comments listed for the following offices:

Consultant Design / Consultant	1,2,4,5,6,7,8,9,10,12,14
District	3, 13
Right-of-Way	0
Traffic Operations / Consultant	2,10,11
Planning	0

The environmental consultant will respond to comments for the following office:

Environmental	0
Location	0

Please have the consultants send this office copies of your responses to these comments by August 31, 2007.

Attached is a complete transcript of the comments received during the comment period and a copy of the hearing handout.

If you have any questions about the comments, please call Paul Alimia at (404) 699-4448.

GSB/PPA

Attachments

DISTRIBUTION:

David Studstill, Jr., P.E.

Joe Sheffield

Jonathan Cox

Paul Alimia

Zanda Crawford

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENTAL CORRESPONDENCE**

**FILE:** PI 0007386  
Lowndes County

**OFFICE:** Planning

**DATE:** January 27, 2010

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

**TO:** Bobby Hilliard, P.E. State Program Delivery Engineer

**SUBJECT:** B-C analysis for PI 7386: I-75 @ 5 Locations from Florida State line to SR 133 – Phase II

The Office of Planning is providing the benefit cost (B-C) analysis for P.I. 7386 at the request of the assistant project manager for this project. Enclosed with this memo is the b-c score for each of the five interchange sites, including the inputs/outputs associated with the analysis.

Based on the Synchro modeling prepared by the design consultant, Planning took those outputs and prepared the b-c analyses. Please note that this B/C ratio is provided for incorporation into the project's concept report. The B/C ratio should not be used to determine the project's importance or need. A project's need is articulated in the need and purpose statement. A project's importance can be determined based on the project's schedule in the Construction Work Program and/or STIP.

If you have any questions or need additional information, please contact Tamrat (Tim) Kassa at (404) 631-1745.

ATA:tk

## GDOT Benefit-Cost Calculator

enter information in green cells

### Project Information

ID PI 7386  
 Description Site 1: Lake Park/Bellville Rd

### Cost Estimate

Date of estimate 6/18/08  
 PE cost \$39,790,000  
 ROW cost 39,790,000  
 CST cost Total \$ 39,790,000

### Traffic in 2035

Source of traffic data Design traffic  
 Without project (nobuild)  
 Annual VMT 119,750  
 Annual VHT 6,250  
 Average speed (mph) 19  
 With project (build)  
 Annual VMT 116,500  
 Annual VHT 4,750  
 Average speed (mph) 25

### Parameters

	Default	Override	Used
Analysis year	2035		2035
Discount rate	7.0%		7.0%
Design life (years)	25	20	20
Fuel price (\$/gallon)	3.22	2.67	2.67
Fuel economy (mpg)	18.03		18.03
Value of auto travel (\$/hr)	13.75		13.75
Value of truck travel (\$/hr)	72.65		72.65
Percent trucks	12%	19%	19%
Include GSP benefits	No	Yes	Yes

<b>Costs</b>			
Total cost	\$		39,790,000
Annualized cost	\$		<b>3,755,895</b>
<b>Auto Delay Costs</b>			
Nobuild	\$		69,609
Build	\$		52,903
Auto delay savings	\$		<b>16,706</b>
<b>Truck Delay Costs</b>			
Nobuild	\$		86,272
Build	\$		65,567
Truck delay savings	\$		<b>20,705</b>
<b>Fuel Costs</b>			
Nobuild	\$		17,733
Build	\$		17,252
Fuel cost savings	\$		<b>481</b>
<b>Change in GSP</b>			
Auto delay cost adjustment	\$		28,605
Truck delay cost adjustment	\$		(5,012)
Fuel cost adjustment	\$		(20,705)
Total benefit adjustment	\$		<b>2,679</b>
<b>Benefits in 2035</b>			
	\$		<b>40,572</b>
<b>Benefit-Cost Ratio</b>			
			<b>0.01</b>

### Notes

Based on 2034 Traffic; analysis is based on peak hour; annualized factor of 250; trucks were 19%; and fuel per gallon was \$2.67

## GDOT Benefit-Cost Calculator

enter information in green cells

### Project Information

ID PI 7386  
 Description Site 2:SR 376/Lakes Blvd

### Cost Estimate

Date of estimate 6/18/08  
 PE cost  
 ROW cost  
 CST cost \$61,540,000  
 Total \$ 61,540,000

### Traffic in 2035

Source of traffic data Design traffic  
 Without project (nobuild)  
 Annual VMT 457,000  
 Annual VHT 25,000  
 Average speed (mph) 18  
 With project (build)  
 Annual VMT 461,750  
 Annual VHT 25,500  
 Average speed (mph) 18

Parameters	Default	Override	Used
Analysis year	2035		2035
Discount rate	7.0%		7.0%
Design life (years)	25	20	20
Fuel price (\$/gallon)	3.22	2.67	2.67
Fuel economy (mpg)	18.03		18.03
Value of auto travel (\$/hr)	13.75		13.75
Value of truck travel (\$/hr)	72.65		72.65
Percent trucks	12%	19%	19%
Include GSP benefits	No	Yes	Yes

<b>Costs</b>			
Total cost	\$	61,540,000	
Annualized cost	\$	5,808,941	
<b>Auto Delay Costs</b>			
Nobuild	\$	278,438	
Build	\$	284,006	
Auto delay savings	\$	-	
<b>Truck Delay Costs</b>			
Nobuild	\$	345,088	
Build	\$	351,989	
Truck delay savings	\$	-	
<b>Fuel Costs</b>			
Nobuild	\$	67,676	
Build	\$	68,379	
Fuel cost savings	\$	(703)	
<b>Change in GSP</b>			
Auto delay cost adjustment	\$	-	
Truck delay cost adjustment	\$	-	
Fuel cost adjustment	\$	-	
Total benefit adjustment	\$	305	
<b>Benefits in 2035</b>	\$	(399)	
<b>Benefit-Cost Ratio</b>		(0.00)	

### Notes

Based on 2034 Traffic; analysis is based on peak hour; annualized factor of 250; trucks were 19%; and fuel per gallon was \$2.67

## GDOT Benefit-Cost Calculator

enter information in green cells

### Project Information

ID PI 7386  
 Description Site 3:CR 783/Loch Laurel Rd

### Cost Estimate

Date of estimate 6/18/08  
 PE cost  
 ROW cost  
 CST cost \$3,360,000  
 Total \$ 3,360,000

### Traffic in 2035

Source of traffic data Design traffic

### Without project (nobuild)

Annual VMT 33,250  
 Annual VHT 1,000  
 Average speed (mph) 33

### With project (build)

Annual VMT 33,250  
 Annual VHT 1,000  
 Average speed (mph) 33

### Parameters

Parameters	Default	Override	Used
Analysis year	2035		2035
Discount rate	7.0%		7.0%
Design life (years)	25	20	20
Fuel price (\$/gallon)	3.22	2.67	2.67
Fuel economy (mpg)	18.03		18.03
Value of auto travel (\$/hr)	13.75		13.75
Value of truck travel (\$/hr)	72.65		72.65
Percent trucks	12%	19%	19%
Include GSP benefits	No	Yes	Yes

<b>Costs</b>			
Total cost	\$		3,360,000
Annualized cost	\$		317,160
<b>Auto Delay Costs</b>			
Nobuild	\$		11,138
Build	\$		11,138
Auto delay savings	\$		-
<b>Truck Delay Costs</b>			
Nobuild	\$		13,804
Build	\$		13,804
Truck delay savings	\$		-
<b>Fuel Costs</b>			
Nobuild	\$		4,924
Build	\$		4,924
Fuel cost savings	\$		-
<b>Change in GSP</b>			
Auto delay cost adjustment	\$		-
Truck delay cost adjustment	\$		-
Fuel cost adjustment	\$		-
Total benefit adjustment	\$		-
<b>Benefits in 2035</b>			
	\$		-
<b>Benefit-Cost Ratio</b>			
			-

### Notes

Based on 2034 Traffic; analysis is based on peak hour; annualized factor of 250; trucks were 19%; and fuel per gallon was \$2.67

## GDOT Benefit-Cost Calculator

enter information in green cells

### Project Information

ID: PI 7386  
 Description: Site 4: SR 31/Madison Hwy

### Cost Estimate

Date of estimate: 6/18/08  
 PE cost: \$22,340,000  
 ROW cost: 22,340,000  
 CST cost: Total \$ 22,340,000

### Traffic in 2035

Source of traffic data: Design traffic

Without project (nobuild)	243,250	243,250
Annual VMT	44,250	44,250.00
Annual VHT	5	
Average speed (mph)		
With project (build)	243,500	243,500
Annual VMT	11,500	11,500
Annual VHT	21	
Average speed (mph)		

### Parameters

	Default	Override	Used
Analysis year	2035	2035	2035
Discount rate	7.0%	7.0%	7.0%
Design life (years)	25	20	20
Fuel price (\$/gallon)	3.22	2.67	2.67
Fuel economy (mpg)	18.03		18.03
Value of auto travel (\$/hr)	13.75		13.75
Value of truck travel (\$/hr)	72.65		72.65
Percent trucks	12%	19%	19%
Include GSP benefits	No	Yes	Yes

**Costs**  
 Total cost \$ 22,340,000  
 Annualized cost \$ 2,108,738

**Auto Delay Costs**  
 Nobuild \$ 492,834  
 Build \$ 128,081  
 Auto delay savings \$ 364,753

**Truck Delay Costs**  
 Nobuild \$ 610,805  
 Build \$ 158,740  
 Truck delay savings \$ 452,065

**Fuel Costs**  
 Nobuild \$ 36,022  
 Build \$ 36,059  
 Fuel cost savings \$ (37)

**Change in GSP**  
 Auto delay cost adjustment \$ 624,543  
 Truck delay cost adjustment \$ (109,426)  
 Fuel cost adjustment \$ (452,065)  
 Total benefit adjustment \$ 63,068

**Benefits in 2035** \$ 879,849

**Benefit-Cost Ratio** 0.42

### Notes

Based on 2034 Traffic; analysis is based on peak hour; annualized factor of 250; trucks were 19%; and fuel per gallon was \$2.67

## GDOT Benefit-Cost Calculator

enter information in green cells

### Project Information

ID PI 7386  
 Description Site 5: SR 133/ N. St. Augustine

### Cost Estimate

Date of estimate 6/18/08  
 PE cost \$40,240,000  
 ROW cost 40,240,000  
 CST cost  
 Total \$ 40,240,000

### Traffic in 2035

Source of traffic data Design traffic  
 Without project (nobuild)  
 Annual VMT 662,750  
 Annual VHT 67,000  
 Average speed (mph) 10  
 With project (build)  
 Annual VMT 670,000  
 Annual VHT 32,250  
 Average speed (mph) 21

### Parameters

	Default	Override	Used
Analysis year	2035		2035
Discount rate	7.0%		7.0%
Design life (years)	25	20	20
Fuel price (\$/gallon)	3.22	2.67	2.67
Fuel economy (mpg)	18.03		18.03
Value of auto travel (\$/hr)	13.75		13.75
Value of truck travel (\$/hr)	72.65		72.65
Percent trucks	12%	19%	19%
Include GSP benefits	No	Yes	Yes

<b>Costs</b>			
Total cost	\$	40,240,000	
Annualized cost	\$	3,798,371	
<b>Auto Delay Costs</b>			
Nobuild	\$	746,213	
Build	\$	359,184	
Auto delay savings	\$	387,028	
<b>Truck Delay Costs</b>			
Nobuild	\$	924,835	
Build	\$	445,163	
Truck delay savings	\$	479,672	
<b>Fuel Costs</b>			
Nobuild	\$	98,144	
Build	\$	99,218	
Fuel cost savings	\$	(1,074)	
<b>Change in GSP</b>			
Auto delay cost adjustment	\$	662,683	
Truck delay cost adjustment	\$	(116,108)	
Fuel cost adjustment	\$	(479,672)	
Total benefit adjustment	\$	67,367	
<b>Benefits in 2035</b>	\$	932,993	
<b>Benefit-Cost Ratio</b>		0.25	

### Notes

Based on 2034 Traffic; analysis is based on peak hour; annualized factor of 250; trucks were 19%; and fuel per gallon was \$2.67

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

**FILE:** NHS-0007-00(386) & NHS-0000-00(762) Lowndes **OFFICE:** Engineering Services  
P. I. Nos.: 0007386 & 0000762  
I-75 Interchange Improvements

**DATE:** February 1, 2008

**FROM:** Brian Summers, P.E., Project Review Engineer *BSW*

**TO:** Babs Abubakari, P.E. State Consultant Design and Program Delivery Engineer

**SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES**

Recommendations for implementation of Value Engineering Study Alternatives are indicated in the table below. Incorporate alternatives recommended for implementation to the extent reasonable in the design of the project.

ALT No.	Description	Savings PW & LCC	Implement	Comments
A-2(1)	Reduce the CR 274 Bridge width by removing one left-turn lane and changing the 10' rural shoulder design to an urban shoulder design	\$496,000	No	Taking out one lane and not having independent left turn lanes would not provide adequate storage length due to the large amount of trucks at this interchange.
A-2(4)	Reduce the S.R. 31 Bridge width by removing one left-turn lane from the bridge typical section	\$455,000	No	Taking out one lane and not having independent left turn lanes would not provide adequate storage length due to the large amount of trucks at this interchange.
A-2(5)	Reduce the S.R. 133 Bridge width by removing one left-turn lane and one eastbound through lane from the bridge typical section	\$1,086,000	No	Taking out one lane and not having independent left turn lanes would not provide adequate storage length due to the large amount of trucks at this interchange.

NHS-0007-00(386) & NHS-0000-00(762) Lowndes

P.I. Nos. 0007386 & 0000762

VE Study Implementation

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ALT No.	Description	Savings PW & LCC	Implement	Comments
A-2, B-2	Reduce S.R. 122 from a proposed four/five lane roadway section to a three lane section and reduce the S.R. 122 Bridge width by the same amount.	\$1,535,000	No	The results of the Capacity Analysis show a Level of Service (LOS) of E for a three lane section.
A-4	Reduce the overall lengths of the CR 274, S.R. 376, Loch Laurel Road, S.R. 31 and S.R. 133 bridges by changing them from four span structures with 2:1 end slopes to two span structures using MSE Walls with Pile End Bents	(proposed) \$1,873,000  (actual) 1,017,360	Yes	The S.R. 133 Bridge will use MSE Walls and Pile End Bents. All other bridges are located in more rural areas and will remain as proposed.
A-4(b)	Reduce the overall length of the S.R. 7 Bridge by changing it from a four span structure with 2:1 end slopes to a two span structure using MSE Walls with Pile End Bents	(proposed) \$1,282,000  (actual) \$1,058,000	Yes	A variation of the VE Alternative will be used. A MSE Wall will be used in conjunction with a two span bridge that would accommodate the future I-75 off-ramp.
B-2	Reduce the shoulder width on Relocated Morven Road and Union Road from ten feet to six feet	(proposed) \$196,000  (actual) \$120,600	Yes	The shoulder width will be reduced to 6' but the paved part will be 4' instead of the 2' as recommended by the VE Team.
B-5	Eliminate the Interchange Entrance and Exit Ramp Tie-ins for the proposed future fourth lane on I-75 at CR 274, S.R. 376, S.R. 31, and S.R. 133	(proposed) \$1,095,000  (actual) \$306,400	Yes	This will be modified to include 6 other ramps. The ramps will tie to the existing six-lane section as soon as possible to eliminate wide gore areas.
A-5	Identify/Define the ultimate typical section for I-75 throughout the corridor	Design Suggestion	Yes	This should be done.

NHS-0007-00(386) & NHS-0000-00(762) Lowndes

P.I. Nos. 0007386 & 0000762

VE Study Implementation

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ALT No.	Description	Savings PW & LCC	Implement	Comments
A-11	Consider using a Single Point Urban Interchange at S.R. 376	Design Suggestion	No	The Design Consultant considered a SPUI and determined that the bridge would cost approximately \$1.9 million more due to the large bridge that would be required.
A-13	Consider strategies to reduce the bridge depth at S.R. 133	Design Suggestion	Yes	This should be considered during plan development.
A-15	Offset (to the North) the location of the new Bridge to simplify construction under traffic at S.R. 376 & S.R. 31	Design Suggestion	Yes	This should be done.
B-2	Eliminate the reconstruction of a section of Jewell Futch Road at the Georgia Winnebago Property at S.R. 376	Design Suggestion	Yes	This should be done.
C-2	Specify Jacking Bridges as necessary to maintain uniform roadway elevations during bridge reconstruction	Design Suggestion	Yes	This should be done.
C-3	Investigate possible detour routes that would allow the closing of local roads during construction at S.R. 376 and Loch Laurel Road	Design Suggestion	No	Traffic will be maintained by staging traffic during the construction areas; however, consideration could be given to closing one site while the other site is being built and vice versa.
C-4	Use contra-flow traffic lanes on I-75 to aid construction	Design Suggestion	No	The existing median is 40' wide through this corridor which should allow normal staging to occur without contra-flow being required.
G-1	Accommodate additional access on the cross road at S.R. 31	Design Suggestion	Yes	This should be done.

NHS-0007-00(386) & NHS-0000-00(762) Lowndes

P.I. Nos. 0007386 & 0000762

VE Study Implementation

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ALT No.	Description	Savings PW & LCC	Implement	Comments
L-1	Hold the east side ramps at their proposed location while shifting the west side ramps inward (maintain a 660' separation) at CR 274	Design Suggestion	No	Would cause the proposed ramps to be constructed over the existing ramps which would make staging more difficult since there is a significant grade change.
L-4	Investigate whether signals could be installed at the realigned truck stop entrances at CR 274 and S.R. 31	Design Suggestion	Yes	This should be done.

A meeting was held on January 11, 2008 to discuss the above recommendations. Jeff VanDyke with Jacobs Carter Burgess, Ralph C. Ramsdell with Moreland Altobelli, Al Bowman with the LPA Group, Stanley Hill and Vinesha Pegram with Consultant Design, and Brian Summers, Ron Wishon, and Lisa Myers with Engineering Services were in attendance.

Additional information was provided by the Design Consultant on January 24, 2008 and February 1, 2008.

The results above reflect the consensus of those in attendance and those who provided input.

Approved: Gerald M. Ross Date: 2/4/08  
Gerald M. Ross, P. E., Chief Engineer

Approved: Richard Wayne Fedora Date: 4/22/2008  
for Rodney Barry, P.E., FHWA Division Administrator

BKS/REW

NHS-0007-00(386) & NHS-0000-00(762) Lowndes

P.I. Nos. 0007386 & 0000762

VE Study Implementation

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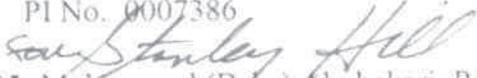
Attachments

c: Gus Shanine  
Todd Long  
Paul Liles  
Bill Duvall  
James Magnus  
Joe Cowan  
Jerry Hughes  
Scott Chambers  
Stanley Hill  
Vinesha Pegram  
Steve Adewale  
Paul Alomia  
Ken Werho  
Nabil Raad  
Lisa Myers

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

**FILE:** NHS-0007-00(386) Lowndes County **OFFICE:** Consultant Design  
I-75 at 7 locations from the Florida State Line to SR 122 **DATE:** December 20, 2007  
PI No. 0007386

  
**FROM:** Mohammed (Babs) Abubakari, P.E., Consultant Design Program Delivery Engineer

**TO:** Brian Summers, P.E., Project Review Engineer  
Attn: Lisa Myers

**Subject: Responses to Value Engineering Study**

Reference is made to the recommendations that were contained in the Value Engineering Report dated August 31, 2007 for the above referenced project. Our responses and recommendations are as follows.

**Value Engineering Recommendation No. A-2(1)**

*The proposed CR 274 Bridge design shows a typical bridge section that carries two through lanes, two left turn lanes, and two 10-foot shoulders across the new bridge. It is recommended that one 12-foot left turn lane be removed from the bridge and that the rural 10-foot shoulder concept is changed to an urban section concept with 6-foot sidewalks, 2-foot curb and gutters, and side parapets.*

**Response:**

The Functional Classification of CR 274 Bellville Road is a Rural Major Collector. The existing facility does not have curb / gutter or sidewalks. The urban bridge shoulder does not seem appropriate at this location due to the tie in with a rural facility. In addition, the rural bridge shoulder would aid the operations of the interchange due to the large number of tractor trailer vehicles (20%).

Back to back turn lanes were considered during project development to reduce the bridge width. After discussions with the District and local officials, the full length turn lanes were shown to aid truck operations and future unforeseen volume increases. There are several large developments that are planned near this interchange.

The design team recommends retaining the rural bridge shoulders and the bridge lanes as shown. *Approval of VE Recommendation No. A-2(1) is not recommended.*

#### **Value Engineering Recommendation No. A-2 (4)**

*The proposed SR 31 Bridge design shows a typical bridge section that carries 4 through lanes and 3 left turn lanes across the new bridge. It is recommended that one of the dual I-75 southbound 12-foot left turn lanes be removed from the bridge cross-section.*

#### **Response:**

The projected year 2032 left turn volumes are 400 vph in the AM and 600 vph in the PM peak hours. The projected year 2032 queue length on the dual left-turn lane onto I-75 southbound on-ramp is 100 feet in the AM and 130 feet in the PM peak hours. With one left-turn lane, the queue lengths are 170 feet in the AM and 310 feet in the PM peak hours. The 310 feet queue length is approximately half of the available length between ramps. However, the design team felt this distance was not adequate due to two tractor trailer stops on the eastern side of the interchange and overall large truck percentage (20%). In addition, a dual left turn will improve signal operation by reducing left turn green time. Dual left turns are recommended to reduce the queuing on the bridge and improve operations. *Approval of VE Recommendation No. A-2(4) is not recommended.*

#### **Value Engineering Recommendation No. A-2 (5)**

*The proposed SR 133 Bridge design shows a typical bridge section that carries five through lanes and three left turn lanes across the new bridge. It is recommended that one of the dual I-75 southbound 12-foot left turn lanes and one of the eastbound through lanes be removed from the bridge typical section*

#### **Response:**

The projected year 2032 left turn volumes onto I-75 are 420 vph in the AM and 740 vph in the PM peak hours. The projected year 2032 queue lengths with dual left-turn lane onto I-75 southbound on-ramp are 180 feet in the AM and 250 feet in the PM peak hours. With a single left-turn lane, the queue lengths increase to 440 feet in the AM and 750 feet in the PM peak hours. The 750 feet PM queue length would spill back across the bridge and block the northbound ramps. (There is approximately 700 feet between the ramps.) This would create an unacceptable operational condition. Dual lefts will allow the interchange to operate more effectively by reducing the queuing on the bridge and reducing signal cycle times.

The projected year 2032 eastbound through volumes are 1,900 vph in the AM and 1,110 vph in the PM peak hours. The projected year 2032 queue length on the three eastbound through lanes is 200 feet in the AM and minimal in the PM peak hours. With the two eastbound through lanes, the queue lengths are 800 feet in the AM and 90 feet in PM peak hours. The 800 feet AM queue would spill back across the bridge and block the southbound ramps. (There is approximately 700 feet between ramps.) This would create an unacceptable operational condition. Three eastbound through lanes will allow the interchange to operate more effectively by reducing queuing on the bridge and reducing signal cycle time.

The design team recommends retaining the dual westbound left turns onto southbound I-75 and the three eastbound through lanes as shown. *Approval of VE Recommendation No. A-2(5) is not recommended.*

**Value Engineering Recommendation No. A-4**

*The proposed design for the 5 Interchange cross road bridges (CR 274, SR 376, Loch Laurel Road, SR 31 and SR 133) crossing I-75 show four-span structures with short end spans and 2:1 end slopes. It is recommended that the end spans of the bridges be removed and replaced with vertical abutments comprised of MSE retaining walls with pile end bents.*

**Response:**

After additional cost analysis, the MSE alternative walls are effective in urban style interchanges due to the bridge encroaching on the ramp intersections. This is especially true of the SR 133 bridge. The additional analysis also shows that short end spans are less expensive on more rural interchanges. The other bridges on this project (CR 274, SR 376, Loch Laurel Road, and SR 31) are more economical as shown. The design team recommends that the SR 133 bridge be changed to a vertical abutment and the other interchanges remain as shown. Contributing factors are the increased cost to build the MSE walls (approximately 25%) and increased construction time to build the bridges with MSE (approximately one month). *Approval of VE Recommendation No. A-4 is recommended for the SR 133 interchange only.*

**Value Engineering Recommendation No. B-5**

*The current design proposes to extend exit and entrance ramp tapers to accommodate possible future widening of I-75 from 6 to 8 lanes for the Interchange ramps at CR 274, SR 376, SR 31 and SR 133. Additional asphalt pavement is provided to tie into a future 4<sup>th</sup> lane in each direction. Additional striping is added to align the current ramp tapers to tie into the existing outside travel lane. It is recommended that the entrance and exit ramp tapers be redesigned to tie into the existing 6-lane section and eliminate additional pavement for possible future widening of the interchange ramps at CR 274, SR 376, SR 31 and SR 133. The ramp alignments will need to be adjusted to account for the shift in the ramp tapers.*

**Response:**

Traditional ramp lengths were considered during concept development. However, accommodating a future I-75 widening is one of the purposes for this project and a major consideration for design. Therefore, the design team reviewed existing design and construction interchange practices for accommodating major future widening projects. An acceptable practice is to lengthen the ramps so that the ramp will have the proper length and breakaway angle after the future widening project is complete. The current project will incur some additional cost and the future widening project will incur some cost savings as a result of the proposed longer ramps. In addition, the future project will be able to retain more pavement, minimize ramp rework, and minimize ramp traffic disruption. The design team recommends retaining the ramp lengths as shown. *Approval of VE Recommendation No. B-5 is not recommended.*

#### **Value Engineering Design Suggestions No. A-5**

*The current design consultants are using various configurations for the ultimate build-out roadway typical section for I-75. These configurations have varying median widths, median shoulder widths, number of traffic lanes, and widths of outside clear areas. It is suggested that a single ultimate typical roadway section be developed for I-75 and that this typical section be provided to all design consultants to ensure designs are based on the same criteria. The ultimate typical roadway section should include all desirable features / conditions, such as, future 4<sup>th</sup> lane location, potential "managed lane" location, bridge pier offsets, clear zone dimensions, inside shoulder width, uniform median width, and vertical / horizontal clearances.*

#### **Response:**

The design team concurs with this assessment and has received a typical section for I-75 from GDOT. The interchanges have been adjusted to meet the new standardized span requirements. *Approval of VE Design Suggestion No. A-5 is recommended.*

#### **Value Engineering Design Suggestion No. A-11**

*The proposed design includes reconstructing the existing Diamond Interchange at I-75 and SR 376 with a new, wider Diamond Interchange. Widening out the Interchange ramps will require significant new ROW. It is suggested that consideration be given to constructing a Single Point Interchange at this location in order to reduce the amount of new ROW required for the facility.*

#### **Response:**

A single point interchange layout was prepared by the design team for analysis. After study, the single point interchange still required a significant amount of ROW due to purchasing additional access rights to meet the GDOT design manual policy 1000' minimum. A design variance will be required for anything less than 1000'. In addition, the construction cost would increase due to the larger bridge. Bridge cost is increased by approximately \$ 1.9 million. The design team does not recommend replacing the diamond interchange with a single point interchange. *Approval of VE Design Suggestion No. A-11 is not recommended.*

#### **Value Engineering Design Suggestion No. A-13**

*The main spans for the proposed bridge at SR 133 are approximately 168 feet long in order to clear the required width of I-75 at an approximate skew of 40 degrees. The proposed design uses an eight-lane typical section for I-75 which may need to be widened to a ten-lane section to meet the desired I-75 ultimate section. It is suggested that consideration be given to various options that could be used to reduce the beam depth for the SR-133 (St Augustine Road) structure.*

#### **Response:**

The design team has reviewed this bridge location and determined that a two span steel continuous beam (10' deep) with a MSE wall at each end is the preferred option for this span length and skew. *Approval of VE Design Suggestion No. A-13 is recommended.*

**Value Engineering Design Suggestion No. A-15**

*The proposed design at SR 376 and SR 31 essentially maintains the centerline of existing cross roads for the centerline of the new up-graded Interchange cross roads. Holding the centerlines the same places the new bridge in the same location as the old bridge. It is suggested that the proposed horizontal alignments for the cross roads at SR 376 and SR 31 be shifted slightly to the north to move part / all of the new bridges away from the existing bridges in order to improve the constructability of the new bridges.*

**Response:**

The design team has reviewed the staging of these interchange and agrees that some modification will be required. The concept is being revised to offset the new bridge. *Approval of VE Design Suggestion No. A-15 is recommended.*

**Value Engineering Design Suggestion No. B-2**

*The SR-376 Interchange shows side road reconstruction at Jewell Futch Rd. at the Georgia Winnebago property and the East Coast Properties in the southwest quadrant. Eliminate this side road reconstruction.*

**Response:**

The design team has reviewed the area. The side road reconstruction is primarily due to ramp relocation slope requirements. This area will be revisited during preliminary plans to minimize the side road reconstruction. *Approval of VE Design Suggestion No. B-2 is recommended.*

**Value Engineering Design Suggestion No. C-2**

*The proposed design essentially maintains the centerline of existing cross roads for the centerline of the new up-graded Interchange cross roads. Holding the same crossroad centerlines requires the new bridges to be reconstructed on the same location as the existing bridges. This work will require the demolition of a portion of the old bridge and the construction a portion of the new bridge while maintaining traffic over the other portion of the old bridge that is left in place. The roadway on the new bridge will be higher than the roadway on the old bridge and due to their close proximity could cause constructability and construction shoring challenges. It is suggested that consideration be given to jacking the existing bridges during reconstruction to minimize the difference in roadway elevations to improve constructability and shoring issues.*

**Response:**

The initial analysis of jacking as a staging technique indicates that it will be more expensive than an intermediate ramp location. However, the design team will review this technique again during preliminary plans phase. *Approval of VE Design Suggestion No. C-2 is recommended.*

**Value Engineering Design Suggestion No. C-3**

*The proposed project anticipates constructing the new Interchange bridges at SR 376 and Loch Laurel Road by staging local traffic through the construction area. This work will require the demolition of a portion of the old bridge and the construction a portion of the new bridge while maintaining traffic over the other portion of the old bridge that is left in place. The process would then be reversed to construct the second half of the bridge. It is suggested that consideration be given to alternately closing the crossroads at SR 376 and Loch Laurel Road and detouring local traffic around the site during construction.*

**Response:**

The design team has discussed closing these interchange / overpass with the District and local officials. The distance between I-75 crossings is not desirable for emergency vehicles. In addition, the Department can not route trucks from a state route to a county route without improving the county route. The design team recommends traffic be maintained during construction as proposed. *Approval of VE Design Suggestion No. C-3 is not recommended.*

**Value Engineering Design Suggestion No. C-4**

*It is assumed that conventional lane reductions / shifts will be used on both directions of I-75 to provide for the new bridge construction at these 7 locations. It is suggested that contra-flow lane (2 lanes in each direction) alignments be considered to accommodate traffic on I-75 during construction in this corridor.*

**Response:**

The existing median on I-75 in this corridor is 40 feet, which can accommodate cranes during construction. The design team anticipates that the new bridges can be constructed without shifting traffic on I-75. Therefore, contra-flow staging should not be required. *Approval of VE Design Suggestion No. C-4 is not recommended.*

**Value Engineering Design Suggestion No. G-1**

*In the proposed layout for SR 31, the Hinton Oil property is shown as a ROW take in the northwest quadrant because of new access control limits. The existing access drive to the Cowart & Sons property in the southwest quadrant is proposed to be relocated to the west. It is suggested that a new access drive / road be created across from the new access drive at the Cowart & Sons property shown on the original concept.*

**Response:**

The design team agrees with the VE study design suggestion. The concept will be modified to show a new access drive located at the proposed median opening and an access break to allow access to the abandoned gas station located in the NW corner of the interchange. *Approval of VE Design Suggestion No. G-1 is recommended.*

#### **Value Engineering Design Suggestion No. L-1**

*The proposed design shows a signal spacing of 770 feet between the new ramp intersections at CR 274. The proposed design also includes a 480-foot limited access control line in the northwest and southwest quadrants. This new access control line eliminates the existing car access entrance (in the southwest quadrant) to the CFJ Properties and also eliminates 14 parking spaces in their parking lot. Existing access to the Wallace/Hurst property and the Land Osun Management property in the northwest quadrant is also eliminated. The elimination of access to these properties is mitigated by shifting the car access entrance to the existing truck access entrance to the CFJ Properties (500 feet south of the new ramp location). New access is also created via a new access drive / road in the northwest quadrant (across from the CFJ truck entrance) which combines access to the Wallace/Hurst property, the Land Osun Management property, and the Country Hospitality property. It is suggested that the ramp location on the west side of I-75 be shifted 110 feet to the east to reduce the spacing between the ramp intersections from 770 feet to 660 feet. It is further suggested that the length of the limited access control line in the northwest and southwest quadrants to be reduced from 480 feet to 320 feet.*

#### **Response:**

After review, the new span requirements discussed in Recommendation A-5 have pushed the ramps out approximately an additional 20 feet. Moving the ramps 110 feet to the east, as suggested above, places the proposed ramps over the existing ramps. It does not appear feasible to construct the new ramps / bridge and maintain traffic on the existing ramps due to changes in elevation. Leaving the proposed ramps as shown will increase ramp spacing and improve constructability.

The GDOT design policy requires 1000' of limited access. The proposed 480' will require a design variance. The proposed limits of access are a balance of anticipated property value and maximizing design considerations. Reducing the limits of access is not recommended at the time. *Approval of VE Design Suggestion No. L-1 is not recommended.*

#### **Value Engineering Design Suggestion No. L-4**

*The proposed design includes new traffic signals at the ramp intersections at CR 274 and SR 31. The design also includes the reconstruction of cross street intersections at the relocated truck stop entrances on the east side of I-75. These cross streets will experience heavy truck turning movements since they serve primarily as access points for several large truck stops. It is suggested that these new cross street intersections be reviewed to see if they meet warrants for the installation of traffic signals.*

#### **Response:**

Initial reviews have shown that this intersections / driveways will not meet signal warrants. The design team will reinvestigate if any new volume data becomes available. *Approval of VE Design Suggestion No. L-4 is recommended.*

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA



INTERDEPARTMENTAL CORRESPONDENCE

FILE: NHS-0000-00 (762), Lowndes County P.I. No. 0000762  
I-75 Improvements from north of SR 133 to Cook County Line, Phase II  
OFFICE: Consultant Design  
DATE: November 27, 2007

FROM: *M. Babs Abubakari*  
Mohammed (Babs) Abubakari, P.E.  
State Consultant Design and Program Delivery Engineer

TO: Brian Summers, P.E., State Project Review Engineer  
Attn: Lisa Myers

SUBJECT: **Value Engineering Study-Responses**

Reference is made to the recommendations that were contained in the Value Engineering Study- Final Report dated August 31, 2007 for the above referenced project. Our responses and recommendations are as follows:

1. **Value Engineering Recommendation No A-2 and B-2** – Reduce SR 122 from the proposed four/five lane roadway section to a three lane section and to reduce the SR 122 Bridge width by the same amount.

**Recommendation**

*Approval of the VE Recommendation No A-2 and B-2 is not recommended.*

- *The results of the capacity analysis for a design year of 2029 show a Level of Service (LOS) of E for a three-lane section and a Level of Service of A for a four-lane divided section. FHWA has approved this configuration. In discussions and coordinations with FHWA, for constructability purposes, this lane configuration is more desirable to design this bridge as shown.*
2. **Value Engineering Recommendation No A-4 (6)**- Use MSE walls versus 2:1 end rolls at the SR 7 bridge over I-75. Construct interim MSE wall behind pier adjacent to I-75 southbound outside shoulder and eliminate bridge span

### **Recommendation**

*Approval of a variation of the VE recommendation No A-4 (6) is recommended with modifications as shown below.*

- A variation of the VE Recommendation proposed to implement use of MSE walls in combination with a two (2) span bridge that would accommodate the future I-75 southbound off-ramp. Bridge span one (1) and two (2) would be approximately 141 feet and 128 feet long respectively. Both spans would provide for a future barrier separated collector distributor lane while span one would also provide for the I-75 southbound off-ramp adjacent to the collector distributor lane.*
- The use of an interim MSE is not recommended. The use of an interim MSE wall behind proposed bent 2 (pier) and removing the pier when the additional bridge span is required to accommodate the relocated southbound off-ramp will disrupt any future construction activities. The impacts are, but not limited to, milling and overlaying for restriping as well as removal and reconstruction of the concrete median and approach slabs required for stage construction of the future span. The Engineering, Mobilization, Traffic Control, Demolition and Construction costs associated with adding the "short" span in the future would exceed the present day estimated savings.*

- 3. Value Engineering Recommendation No B-2-** Reduce Relocated Morven and Union Road shoulder width from 10-foot (6'-6" paved) to 6-foot (2' paved).

### **Recommendation**

*Approval of the VE Recommendation No. B-2 is recommended with modifications.*

- Relocated Union Road and Morven Road will be redesigned to show a 6-foot (4' paved) shoulder.*
- 4. Value Engineering Recommendation No B-5-** Eliminate additional paving provisions for the fourth lane and revise ramps to tie to the existing six-lane I-75. (A cost savings for this recommendation was not provided for SR 122 and SR 22, but does apply to this project)

### **Recommendation**

*Approval of the VE Recommendation No B-5 is recommended.*

- *The current design allows for the accommodation of the future fourth lane at the ramp nosepoints. The required pavement width will accommodate the future fourth lane and then the pavement will taper back to the existing pavement for the three-lane section which will be a shorter taper*

References are made to the design suggestions that were contained in the Value Engineering Study- Final Report dated August 31, 2007 for the above referenced project. Our responses are as follows:

1. **Value Engineering Design Suggestion No. A-5** – Identify/define the ultimate typical section for I-75 throughout the corridor.

- *Management has approved the typical section for I-75. FHWA has concurred with this design. The typical section has been established from these coordinations. The current typical section is the typical section approved for the I-75 corridor.*

2. **Value Engineering Design Suggestion No. C-2** – Specify jacking bridges as necessary to maintain uniform roadway elevations during bridge reconstruction for staging and constructability.

- *The suggestion does not apply. These bridges have been shifted off the current alignment. The proposed bridge centerlines are offset approximately 10-feet to the south of the existing bridge. Construction staging would maintain two-way traffic on the existing bridge and construct the south half of the proposed bridge. Then the two-way traffic would be shifted onto the new bridge, the existing bridge would be removed, and the remaining half of the proposed bridge would be constructed. Maintaining ramp access would be accomplished by using leveling and/or temporary pavement as required.*

MBA:SH:VCP

cc: Todd Long, Director of Preconstruction

## Ralph Ramsdell

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**From:** Ralph Ramsdell [rramsdell@maai.net]  
**Sent:** Wednesday, November 14, 2007 10:43 AM  
**To:** VineshaC.Pegram@dot.state.ga.us  
**Cc:** sdeeb@maai.net; bhale@maai.net  
**Subject:** NHS 0000-00(762) PI 0000762



SR 7 MSE  
Alternate.pdf

Attached, as requested in our morning phone conversation, is the cost analysis for the four span with 2:1 end rolls versus a two span with MSE walls for the SR 7 (N Valdosta Road) bridge over I-75.

Ralph C. Ramsdell  
Senior Design Engineer  
Moreland Altobelli Associates, Inc.  
Tel: 770-263-5945 x141  
Fax: 770-263-0166  
E-Mail: rramsdel@maai.net



I-75 Improvements from north  
of SR 133 to Cook County Line,

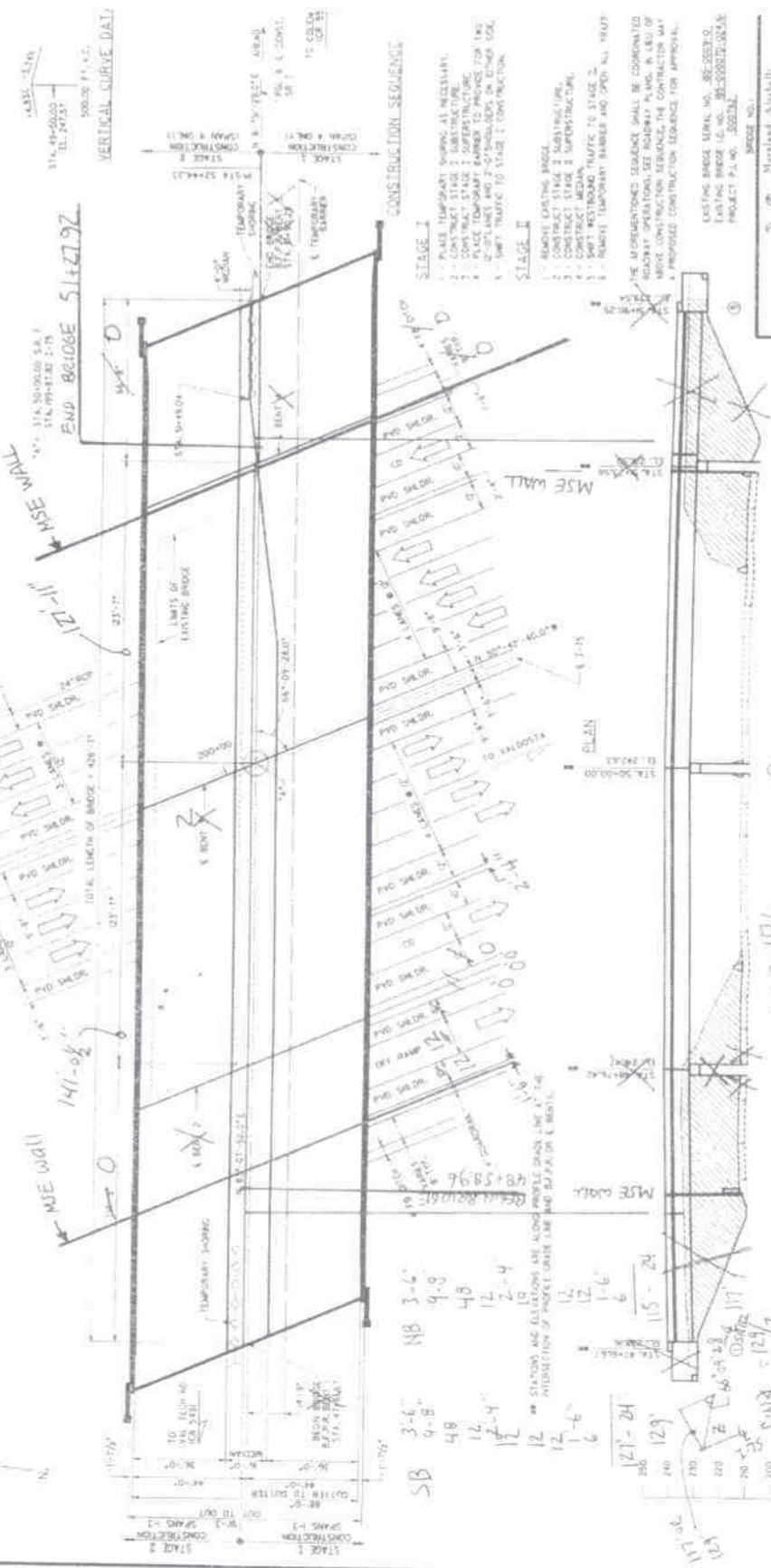
**Cost Estimate**  
Bridge #2  
4 Span  
BT 63/PSC II--Endroll

Project: Phase II  
Project Number: NHS 0000-00(762) PI 0000762  
Made By: HHD Date: 01-Nov-07  
Checked By: Date:

Tag	Pay Item	Description	Quantity	Unit	Unit Cost	Cost
60	211-0200	BRIDGE EXCAVATION, GRADE SEPARATION	192	CY	\$80.17	\$15,366
148	441-0004	CONC SLOPE PAV, 4 IN	5941	SY	\$52.70	\$313,093
201	500-0100	GROOVED CONCRETE	4669	SY	\$4.17	\$19,468
202	500-1006	SUPERSTR CONCRETE, CL AA, BR NO -	1042	LS	\$1,122.40	\$1,169,007
203	500-2100	CONCRETE BARRIER	857	LF	\$56.44	\$48,378
205	500-3002	CLASS AA CONCRETE	820	CY	\$692.53	\$567,647
230	507-9031	PSC BEAMS, AASHTO, BULB TEE, 63 IN, BR NO -	5417	LF	\$190.04	\$1,029,542
227	507-9002	PSC BEAMS, AASHTO TYPE II, BR NO -	1000	LF	\$126.13	\$126,136
235	511-1000	BAR REINF STEEL	120492	LB	\$0.95	\$115,672
236	511-3000	SUPERSTR REINF STEEL, BR NO -	283295	LS	\$0.95	\$268,130
252	520-1147	PILING IN PLACE, STEEL H, HP 14 X 73	5070	LF	\$58.18	\$294,973
285	522-1000	SHORING	1	LS	\$121,892.50	\$121,893
307	540-1101	REMOVAL OF EXISTING BR, STA NO -	1	LS	\$125,542.28	\$125,542
Bridge Sub Total =						\$4,215,847
Deck Area Per Side (sq ft) = 3L (BW) =						39108
Unit Cost (\$ / sq ft) =						\$108
5% Mobilization						\$210,792
5% MOT						\$210,792
2% Contingency						\$84,317
Total Bridge Cost =						\$4,721,748

PROJECT NO. NNS-0000-000 762

**NOTES**  
 1. ALL DIMS ARE PARALLEL UNLESS NOTED OTHERWISE.  
 2. BRIDGE DECK TO BE BUILT ON A NORMAL CROWN OF 2.00%.  
 3. EXISTING ROADWAY



**CONSTRUCTION SEQUENCE**

**STAGE I**

1. PLACE TEMPORARY SHORING AS NECESSARY.
2. CONTRACT STAGE I SUBSTRUCTURE.
3. PLACE TEMPORARY SUPERSTRUCTURE FOR THE CONTRACT STAGE I SUBSTRUCTURE.
4. SHUT TRAFFIC TO STAGE I CONSTRUCTION.

**STAGE II**

1. REMOVE EXISTING BRIDGE.
2. CONTRACT STAGE II SUBSTRUCTURE.
3. CONTRACT STAGE II SUPERSTRUCTURE.
4. SHUT TRAFFIC TO STAGE II CONSTRUCTION.
5. REMOVE TEMPORARY SHORING AND OPEN ALL TRAFFIC.

THE REFERENCED GEORADE SHALL BE COMPLETED BEFORE OPERATIONS. SEE ROADWAY PLANS. A LIST OF ABOVE CONSTRUCTION SEQUENCE, THE CONTRACTOR MAY PROPOSED CONSTRUCTION SEQUENCE FOR APPROVAL.

EXISTING BRIDGE SIGNAL NO. 88-208210  
 EXISTING BRIDGE (L. NO. 88-208210-32436  
 PROJECT P. NO. 202132  
 BRIDGE NO.

**MA** METRO ATLANTA  
 METROPOLITAN AREA  
 TRANSPORTATION

**GEORGIA**  
**DEPARTMENT OF TRANSPORTATION**  
 PRECONSTRUCTION DIVISION OFFICE OF BRIDGE

PRELIMINARY LAYOUT  
 SR 7 IN VALDOSTA RDI OVER I-75  
 LOWMEDES COUNTY NNS-0000-00 (762)

**BERM ELEVATION TABLE**

BENT	LEFT BERM	RIGHT BERM
1	228.42	229.84
2	230.87	229.80

BERM ELEVATIONS AT EDGE OF DECK  
 FOR 60 INCH STAIRS PARAPETS ONLY.

**TRAFFIC**

DESIGN SPEED ..... 40 MPH  
 24 IN. TRUCKS ..... 45 MPH  
 DIETRYING ..... 50-55

**EXISTING UTILITIES**

NONE

**PROPOSED UTILITIES**

NONE

**BRIDGE CONSISTS OF:** Z = 141.0357' → 141'-0 1/2' SPAN

DESIGN DATA

1 - 60" TYPE I PRE BEAM SPAN, 8' HUB TEE AS PER AASHTO BEAMS  
 2 - 24" x 24" BAR TEE AS PER BEAM SPAN, 8' HUB TEE AS PER AASHTO BEAMS  
 3 - 24" x 24" BAR TEE AT 15' PS BEAM SPANS  
 4 - CONCRETE INTERMEDIATE BENTS  
 5 - SPECIAL DESIGN  
 6 - SPECIAL DESIGN

**DESIGN DATA**

SPECIFICATION ..... AASHTO 17TH EDITION, 2007  
 TYPICAL ROADWAY AND/OR BRIDGE LOADING ..... DESIGNED FOR STYNAMIC PERFORMANCE CATEGORY - A  
 FUTURE PAVEMENT ALLOWANCE ..... 20 INCH PER 14 FT

**TRAFFIC**

DESIGN SPEED ..... 40 MPH  
 24 IN. TRUCKS ..... 45 MPH  
 DIETRYING ..... 50-55

**EXISTING UTILITIES**

NONE

**PROPOSED UTILITIES**

NONE

**BRIDGE CONSISTS OF:** Z = 141.0357' → 141'-0 1/2' SPAN

**DESIGN DATA**

1 - 60" TYPE I PRE BEAM SPAN, 8' HUB TEE AS PER AASHTO BEAMS  
 2 - 24" x 24" BAR TEE AS PER BEAM SPAN, 8' HUB TEE AS PER AASHTO BEAMS  
 3 - 24" x 24" BAR TEE AT 15' PS BEAM SPANS  
 4 - CONCRETE INTERMEDIATE BENTS  
 5 - SPECIAL DESIGN  
 6 - SPECIAL DESIGN

SPECIFICATION ..... AASHTO 17TH EDITION, 2007  
 TYPICAL ROADWAY AND/OR BRIDGE LOADING ..... DESIGNED FOR STYNAMIC PERFORMANCE CATEGORY - A  
 FUTURE PAVEMENT ALLOWANCE ..... 20 INCH PER 14 FT



Moreland Altobelli Associates, Inc.

PAGE 2 OF 2

PROJECT NHS 0000-00 (762) LOWNOES CO

SHEET NO 2 OF 2

SUBJECT RAMP TAPERS

JOB NO. 05511

MADE BY RCR DATE 1/16/03

CHKD BY \_\_\_\_\_ DATE \_\_\_\_\_

	AREA (SY)	PEM (135 lbs/sy) (TN)	12.5mm SMA (165 lbs/sy) (TN)	12.5mm superpave (165 lbs/sy) (TN)	19mm superpave (220 lbs/sy) (TN)	25mm superpave (1100 lbs/sy) (TN)	16" GAB (150 lbs/cf) (TN)	BIT TACK (0.035 gal/sy/cft) (Gal)	REF. PAGE
RAMP	871	59	72	-	96	479	784	152	(5)
SHLDR	193	13	-	29	38	190	311	7	(1)
	346	-	-					48	(4)
PVMT REDUCTION		72	72	29	134	669	1095	207	
\$/UNIT		87.81	97.28	65.79	63.21	63.99	19.98	2.00	
\$		6322	7004	1908	8470	42809	21878	414	
estimated savings/RAMP								\$ 88,805	
RAMPs								X 3	
								\$ 266,415	
(10% ETC + 5% INFLATION) ±								39,963	
TOTAL ESTIMATED SAVINGS (ROUNDED)								\$ 306,400	