ORIGINAL TO GENERAL FILES

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

OFFICE OF DESIGN POLICY & SUPPORT
INTERDEPARTMENTAL CORRESPONDENCE

FILE P.I. #0007550/M002960
CSHPP-0007-00(550)/
CSHPP-0007-00(960)
GDOT District 4 - Tifton
Dougherty County
Broad Avenue Bridge Replacement(Flint River)

OFFICE Design Policy & Support

DATE 2/21/2011

FROM for Brent Story, State Design Policy Engineer

TO SEE DISTRIBUTION

SUBJECT **APPROVED CONCEPT REPORT**

Attached is the approved Concept Report for the above subject project.

Attachment

DISTRIBUTION:

Genetha Rice-Singleton, Program Control Administrator
Bobby Hilliard, State Program Delivery Engineer
Cindy VanDyke, State Transportation Planning Administrator
Angela Robinson, Financial Management Administrator
Glenn Bowman, State Environmental Administrator
Ben Rabun, State Bridge Engineer
Kathy Zahul, State Traffic Engineer
Georgene Geary, State Materials & Research Engineer
Ron Wishon, State Project Review Engineer
Jeff Baker, State Utilities Engineer
Ken Thompson, Statewide Location Bureau Chief
Joe Sheffield, District Engineer
Brent Thomas, District Preconstruction Engineer
Tim Warren, District Utilities Engineer
Clinton Ford, Project Manager
BOARD MEMBER - 2nd Congressional District

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

PROJECT CONCEPT REPORT

Project Number: CSHPP-0007-00(550)/CSSTP-M002-00(960)
County: Dougherty
P. I. Number: 0007550/M002960
Federal Route Number: N/A
State Route Number: N/A

Broad Avenue Bridge Replacement over the Flint River

Submitted for approval:

DATE 11-29-2010 — Heath and Lineback Engineers

DATE _____ — City of Albany

DATE 11-18-2010 — Bobby Hilliard — State Program Delivery Engineer

DATE 11-19-2010 — Project Manager

Recommendation for approval:

DATE 1/7/2011 — Genetha Rice-Singleton *
Program Control Administrator

DATE 1/25/2011 — Glenn Bowman *
State Environmental Administrator

DATE 1/4/2011 — Kathy Zahul *
State Traffic Operations Engineer

DATE 1/4/2011 — Ron Wishon *
Project Review Engineer

DATE 12/9/2010 — Lee Upkins *
For State Utility Engineer

DATE 12/9/2010 — Joe Sheffield *
District Engineer

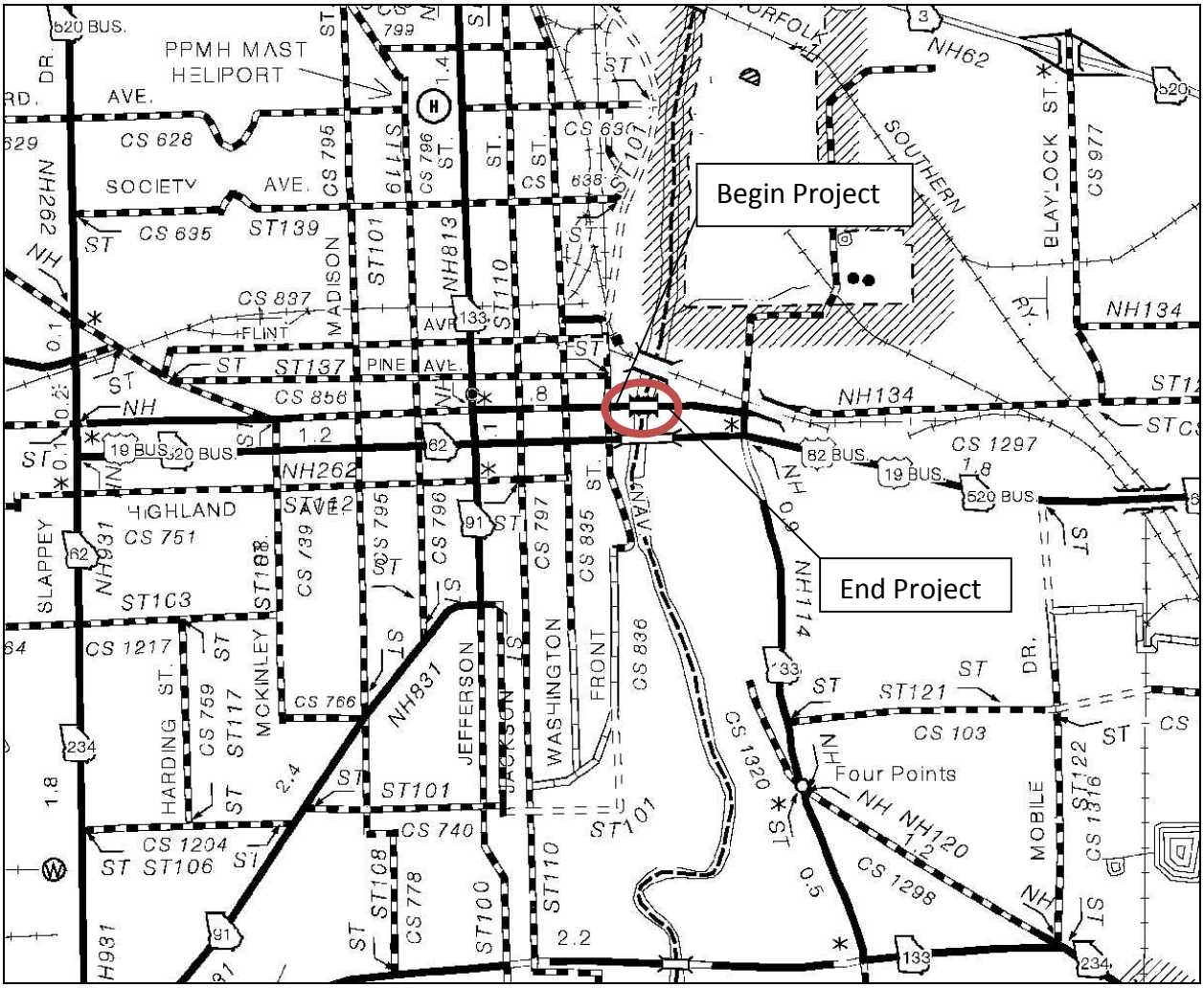
DATE 2/8/2011 — Ben Raburn *
State Bridge Design Engineer

DATE _____
State Transportation Financial Management Administrator

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

DATE 12/16/2010 — Cindy VanDyke *
State Transportation Planning Administrator

* Recommendation on file. KLF



Location Map

Project Numbers: CSHPP-0007-00(550)/CSSTP-M002-00(960)

P.I. Numbers: 0007550/M002960

Description: Broad Avenue Bridge Replacement over the Flint River

Background

County Street 1297, also known as Broad Avenue, is an east-west route in Albany, Georgia that is a well traveled road that crosses the Flint River and is the main connection to downtown Albany. The west end of the bridge is mostly commercial businesses and there is a mix of residential and commercial development on the east end. The Broad Avenue Bridge was first constructed in 1920. It was closed in February 2009 after an underwater inspection team concluded that another heavy rain or release of water from dam could undermine the footing even further and possibly lead to the collapse of the bridge. The bridge is approximately 750 feet in length and 32 feet wide with approximately 5 feet of sidewalk clearance on each side. The project consists of a bridge replacement of an existing closed-to-traffic bridge in the same location. The existing bridge consists of two 12 foot lanes. This project was added to the work program in June, 2004.

Road/Bridge Characteristics

Currently, the typical section of the Broad Avenue Bridge consists of an urban 2-lane section and is functionally classified as an urban minor arterial street. The project is about .25 miles in length. This facility is not a part of the State Bicycle and Pedestrian Plan or a school bus route.

Travel Demand

For the year 2006, design traffic was 11,360 along Broad Avenue which operates at LOS "A" which is considered acceptable by Department standards. In 2026, the expected ADT is 17,040, and considering a no-build scenario, the corridor will operate at a LOS B" which includes 5% truck traffic.

Logical Termini

The proposed bridge replacement will tie into an existing roadway and no additional roadway work is anticipated. The estimated length of the project is to be 0.25 miles. The proposed terminus is logical.

Demographics

According to the U.S. Census Bureau 2006-2008 Community Survey, Dougherty County's population in 1990 was approximately 78,000, in 2000 it was just under 77,000, and in 2008 it was listed as 75,800. Of that, approximately 68% were of African American decent, while 29% were Caucasian. Slightly more than 1% makes up the Hispanic or Latino population in the area. Approximately 22%of the Albany families were below the poverty level and 28% of the individuals were also under the poverty level. In addition, approximately 59% of the population over 16 years of age are part of the workforce.

The project area is located both in census tract 14.02 and census track 107, both having 291 persons per square mile. In comparison, points directly north, south, east and west of the project area range from 12 to 177 persons per square mile.

Bridge Condition Survey

The bridge consists of open and closed spandrel arch spans (the space between two arches) with the two footings for the main open spandrel arch located in the river. The arches have major deterioration of the concrete. During inspections, bridge inspectors stopped testing the concrete with the hammers because large sections of concrete fell away from the bridge. Large portions of the parapets, sidewalks, overhangs and the deck have deteriorated.

In February 2009, during an underwater inspection, one footing had been substantially undermined. It was determined that another heavy rain or release of water from the damn could weaken the footing even further. The bridge was closed to pedestrian and vehicle traffic due to its inability to carry traffic.

Need and Purpose

The need exists to replace a deficient 2-lane bridge that has been closed to traffic due to large portions of the parapets, sidewalks, overhangs and deck having deteriorated. This, along with a heavy rain or substantial release of water along the river could undermine the footing and lead to a potential collapse of the structure. In addition, the demographics show that the closing of this bridge is impactful to enabling the community to access their work place and other destinations. Replacing the bridge would bring it up to current design and Department standards and in doing so will improve the operation of this road.

Description of the Proposed Project

This project involves the demolishing and replacement of a structurally deficient bridge on Broad Avenue over the Flint River. The proposed project is located in the City of Albany, Georgia. The project limits begin east of the intersection of Broad Avenue and South Front Street on the west side of the Flint River and extend to the west of the intersection of Broad Avenue and College Drive on the east side of the Flint River. The proposed project length is approximately 0.25 mile.

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 _____ Minor __X__

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

Functional Classification: Urban Minor Arterial Street

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

Traffic (AADT): Base Year: (2013) 11,970 Design Year: (2033) 15,610

Existing design features:

Broad Avenue

- Typical Section: (Bridge typical section) One 12'-0" Travel Lane, One 16'-0" Travel Lane, One 4'-0" Bike Lane and 5'-0" sidewalks on both sides
- Posted speed: 35 mph Minimum radius for curve: N/A
- Maximum super-elevation rate for curve: N/A
- Maximum grade: 1.85 %
- Width of right-of-way: 115-110 ft.
- Major structures: Broad Avenue Bridge over Flint River, 773'-0" long by 45'-0" wide, Structure ID 095-0051-0, Sufficiency Rating 8.24 (Bridge is closed)
- Major interchanges or intersections along the project: None
- Existing length of roadway: 300'-0"
- Beginning Mile Log: 3.88

Proposed Design Features:

Broad Avenue

- Proposed typical section(s): (Bridge typical section, roadway to match) Two 11'-0" Travel Lanes, Two 4'-0" Bike Lanes and 10'-0" sidewalks on both sides
- Proposed Design Speed Mainline: 35 mph
- Proposed Maximum grade Mainline: 2.52 %
- Maximum grade allowable: 10.0%
- Maximum degree allowable: 15.44°
- Maximum superelevation rate: N/A
- Right-of-Way:
  - Width: N/A
  - Easements: Temporary ( ) Permanent ( ) Utility ( ) Other ( ).
  - Type of access control: Full ( ) Partial ( ) By Permit (X) Other ( ).
  - Number of parcels: 0 Number of displacements: 0
- Structures:
  - Broad Avenue Bridge over the Flint River
    - 52'-5" out to out
    - 780' long (172'-320'-170'-122')

        - Cast-in-place concrete segmental box girder
        - Spans 1, 2 & 3 constructed using the balanced cantilever method
        - Span 4 constructed on falsework
    - Retaining walls at bridge abutments
    - Pedestrian Lighting on Bridge
- Major intersections, interchanges, median openings and signal locations: None
- Transportation Management Plan Anticipated: Yes ( ) No (X)
- Design Exceptions to controlling criteria anticipated:

	YES	NO	UNDETERMINED
HORIZONTAL ALIGNMENT:	( )	(X)	( )
LANE WIDTH:	( )	(X)	( )
SHOULDER WIDTH:	( )	(X)	( )
VERTICAL GRADES:	( )	(X)	( )
CROSS SLOPES:	( )	(X)	( )
STOPPING SIGHT DISTANCE:	( )	(X)	( )
SUPERELEVATION RATES:	( )	(X)	( )
VERTICAL ALIGNMENT:	( )	(X)	( )
SPEED DESIGN:	( )	(X)	( )
VERTICAL CLEARANCE:	( )	(X)	( )
BRIDGE WIDTH:	( )	(X)	( )
BRIDGE STRUCTURAL CAPACITY:	( )	(X)	( )
LATERAL OFFSET TO OBSTRUCTION:	( )	(X)	( )

- Design Variances: Lane taper lengths and left turn bay length. With the geometric constraints at the site, a 125 ft taper is proposed west of the bridge. The requirement is 165 ft. A 50 ft left turn bay length is proposed west of the bridge (matching existing condition). This is less that the 160 ft required length, but provides adequate storage according to traffic study.
- Environmental Concerns:
    - Formal Section 7 Consultation with USFWS is required due to presence of the federally protected Purple Bankclimber Mussel and its designated Critical Habitat in the Flint River
    - River Front Park at west end of bridge
    - Adjacent NRHP Listed Bridge House and the Eligible Albany Downtown Historic District
    - Potential hazardous waste site at the north-east end of the bridge.
    - Anticipated permits include Section 404, Water Quality, and Stream Buffer Variance.
- Anticipated Level of environmental analysis:
    - Are Time Savings Procedures appropriate? Yes ( ) No (x)
    - Categorical exclusion anticipated (X).
- Utility involvements:
    - Telephone/Fiber: AT&T and Windstream Communication
    - Gas: Albany Water, Gas, & Light Commission
    - Water: Albany Water, Gas, & Light Commission

  - Sanitary Sewer: City of Albany
  - Power (Lighting on existing bridge): City of Albany
  - Interconnect for Traffic Control: City of Albany
  - Cable: Mediacom
- VE Study: Held August 3, 2010 (Report Attached)
- Benefit/Cost Ratio: N/A (Bridge replacement due to bridge structure deficiency)

Project Cost Estimate and Funding Responsibilities:

	PE	ROW	UTILITY	CST	MITIGATION
By Whom	GDOT	City of Albany	City of Albany	GDOT	GDOT
$ Amount	$1,500,000	Local	Local	$9,588,865	None Anticipated

Project Activities Responsibilities:

- Design: Heath and Lineback Engineers
- Right-of-Way Acquisition: City of Albany (if required)
- Right-of-Way funding (real property): City of Albany (if required)
- Relocation of Utilities: City of Albany
- Letting to contract: GDOT
- Supervision of construction: GDOT
- Providing material pits: Construction Contractor
- Providing detours: N/A
- Environmental Studies/Documents/Permits: Heath and Lineback Engineers
- Environmental Mitigation: GDOT

Coordination

- Concept Team Meeting date: 6/22/2010
- P A R meetings, dates and results. (Attach minutes, if required) – Not Required
- FEMA, USCG, and/or TVA. – Coordination with FEMA will be required once the project moves into the Design Phase.
- Public Involvement
  - 1st Stakeholder Meeting Date: March 18, 2010 – Stakeholder group was provided an overview of the project and stakeholder involvement process. The Stakeholders then identified the needs, desires and constraints related to the project through a facilitated exercise. The key needs and desires identified were project practicalities (keep utilities operational, keep adjacent streets open, etc.), minimize impacts to the Park and Flint River, "Do it and do it NOW", Connectivity and "Make it look good".
  - 2nd Stakeholder Meeting Date: April 13, 2010 – The Stakeholders were presented eight conceptual bridge alternates. A written survey of the Stakeholders indicated that the Cast-in-Place Post Tensioned Segmental Box Girder Bridge, Continuous Variable Depth Composite Structural Steel Girder Bridge and Prestressed Concrete Girder Bridge were

preferred in this respective order. These structures were selected in an effort to minimize the risk of project delay, including potential delays due to the NEPA process and funding constraints. The Stakeholders also voiced a strong desire for a structure that minimizes future maintenance costs as these will be borne by the City of Albany

- 3rd Stakeholder Meeting Date: May 18, 2010 – The Segmental Box Girder alternate was presented as the alternate generally preferred by the stakeholder group and the public that responded at the PIOH. Stakeholder opinions were solicited with regard to aesthetic treatments for the bridge including, but not limited to, pier shape, railing type and light standard styles. Additionally, stakeholder input was sought on how to carry forward the legacy of the existing bridge and its status as a World War I veteran's memorial. It was generally agreed by all stakeholders that ceremonies to "de-consecrate" the old bridge and perhaps to rededicate the new bridge were in order and would be appropriate. This effort would have to be organized at the local level.
- PIOH Date: April 29, 2010 – The Cast-in-Place Post Tensioned Segmental Box Girder Bridge and Prestressed Concrete Girder Bridge alternates were displayed to the Public for comment. Displays explaining the public involvement to date (Stakeholder Process) and the bridge rehabilitation efforts to date were also included. Of the 43 attending, 12 were for the project, 2 were conditionally for the project and the others did not complete surveys.

- Local government comments – Various departments of the City of Albany participated in the Stakeholder Involvement Process.
- Other projects in the area – There has been a project under planning for many years for the construction of a Clark Avenue extension, which would include a new bridge crossing the Flint River. If built this route would essentially parallel Broad Avenue to the north and would enhance east-west connectivity. This project is currently not funded and is classified as "Long-Range" within the STIP.
- Other coordination to date – Early coordination with the US Fish and Wildlife Service is underway to minimize impacts to the endangered purple bankclimber mussel.

Scheduling – Responsible Parties' Estimate

- Time to complete the environmental process: Begin 4/2010 and Complete 6/2011. Approximately 14 Months.
- Time to complete preliminary construction plans: Begin 9/2010 and Complete 5/2011. Approximately 7 Months.
- Time to complete right-of-way plans: 0 Months.
- Time to complete the Section 404 Permit: Begin 8/2010 and Complete 6/2011. Approximately 10 Months.
- Time to complete final construction plans: Begin 5/2011 and Complete 10/2011. Approximately 5 Months.
- Time to complete to purchase right-of-way: 0 Months.
- Time to complete utility relocation: Begin 10/2010 and Complete 10/2011. Approximately 12 Months.

Other alternates considered:

Rehabilitate
This alternate would involve extensive repair to the existing bridge structure. This alternate was not selected since the cost to rehabilitate the existing bridge would be as much or more than the cost to build a new bridge. Also, the rehabilitated bridge would have a reduced life span and would result in higher long term maintenance cost.

Build a New Bridge
This alternate proposes to replace the existing bridge with a new bridge in the same location. This alternate was selected due to the initial cost as compared to rehabilitating the existing bridge and because the new bridge offers an increased life span with lower maintenance cost.

No Build
This alternate proposes to leave the existing bridge closed to traffic. This alternate was not selected since there has been a bridge crossing at the existing bridge location since 1858, and the City of Albany and GDOT have determined that a crossing at this location is vital to City connectivity.

Comments:

Attachments:

1. Detailed Cost Estimates:
    a. Construction including Contingencies, Engineering and Inspection.
    b. Right-of-Way - None Anticipated
    c. Utilities - Local
    d. Environmental Mitigation (EPD, etc) – None Anticpated
    e. Completed Fuel/Asphalt Price Adjustment Form – Incl. in Detailed Cost Estimate
2. Project Plan Layout
3. Typical Sections
4. Traffic Report
5. Bridge Inventory
6. Minutes of Concept meetings
7. Project Framework Agreement
8. VE Study
9. Bridge Condition Survey

Concur: _____
Director of Engineering

Approve: _____ Date: 2/17/2014
Chief Engineer

Attachment 1

Detailed Cost Estimate

DATE : 01/14/2011
PAGE : 1

JOB ESTIMATE REPORT

JOB NUMBER : 0007550 SPEC YEAR: 01
DESCRIPTION: BROAD AVE BRIDGE IN ALBANY-TRANSPORTATION IMPROVEMENTS

ITEMS FOR JOB 0007550

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0008	150-1000		LS	TRAFFIC CONTROL - HPP-0007-00(550)	1.000	20000.00	20000.00
0009	153-1300		EA	FIELD ENGINEERS OFFICE TP 3	1.000	57470.14	57470.14
0015	161-1000		LS	EROSION CONTROL - HPP-007-00(550)	1.000	80000.00	80000.00
0020	210-0100		LS	GRADING COMPLETE - HPP-007-00(550)	1.000	40000.00	40000.00
0025	402-3100		TN	REC AC 9.5 MM SP,TPI,GP1ORBL1,INCL BM&HL	61.000	88.39	5392.24
0030	402-3121		TN	RECYL AC 25MM SP,GP1/2,BM&HL	145.000	82.24	11925.78
0035	402-3190		TN	RECYL AC 19 MM SP,GP 1 OR 2 ,INC BM&HL	97.000	90.69	8797.81
0040	412-1000		GL	BITUMINOUS PRIME	62.000	1.72	106.64
0045	433-1100		SY	REF CONC APPR SL/INCL CURB	217.000	144.28	31309.00
0050	441-0104		SY	CONC SIDEWALK, 4 IN	464.000	37.97	17618.19
0054	441-5002		LF	CONC HEADER CURB, 6", TP 2	22.000	18.64	410.21
0055	441-6222		LF	CONC CURB & GUTTER/ 8"X30"TP2	462.000	18.16	8390.45
0060	500-2110		LF	CONCRETE PARAPET, SPCL DES	51.000	269.20	13729.63
0065	540-0000		$	SEC 540 REM EXISTING BRIDGE	1.000	600000.00	600000.00
0070	543-9000		LS	CONSTR OF BRIDGE COMPLETE - BRIDGE NO. 1	1.000	7750000.00	7750000.00
0075	550-1180		LF	STM DR PIPE 18",H 1-10	320.000	28.12	9000.69
0080	550-4218		EA	FLARED END SECT 18 IN, ST DR	1.000	508.33	508.33
0085	636-1029		SF	HWY SGN,TP2 MATL,REFL SH TP 3	24.000	16.92	406.27
0090	636-2070		LF	GALV STEEL POSTS, TP 7	40.000	9.03	361.36
0093	653-0120		EA	THERM PVMT MARK, ARROW, TP 2	1.000	72.60	72.60
0094	653-0120		EA	THERM PVMT MARK, ARROW, TP 2	1.000	72.60	72.60
0095	653-1501		LF	THERMO SOLID TRAF ST 5 IN, WHI	442.000	0.61	273.81
0100	653-1502		LF	THERMO SOLID TRAF ST, 5 IN YEL	630.000	0.60	382.99
0105	653-3501		GLF	THERMO SKIP TRAF ST, 5 IN, WHI	106.000	0.44	47.11
0109	654-1001		EA	RAISED PVMT MARKERS TP 1	28.000	4.99	139.78
0110	657-1054		LF	PRF PL SD PVMT MKG,5",WH,TP PB	1560.000	3.93	6136.04
0115	657-6054		LF	PRF PL SD PVMT MKG,5",YW,TP PB	1560.000	3.94	6150.80
0120	668-1200		EA	CATCH BASIN, GP 2	4.000	2694.00	10776.02
0124	682-9030		LS	LIGHTING SYSTEM	1.000	250000.00	250000.00
0125	668-4300		EA	STORM SEW MANHOLE, TP 1	1.000	2154.14	2154.15
ITEM TOTAL							8931632.64
INFLATED ITEM TOTAL							8931632.64

TOTALS FOR JOB 0007550

ESTIMATED COST:	8931632.64
CONTINGENCY PERCENT (0.0):	0.00
ENGINEERING AND INSPECTION (5.0%):	446581.63
TOTAL FUEL ADJUSTMENT:	202135.31
TOTAL LIQUID AC ADJUSTMENT:	8514.55
ESTIMATED TOTAL:	9588864.13

NOTE: The item totals include all alternate items. The estimated totals include only the low cost alternate items.

Date 11/4/2010

P.I. Number **0007550/M002960** County **DOUGHERTY**

Project Number **HPP-0007-00(550)/CSSTP-M002-00(960)**

Special Provision, Section 109-Measurement and Payment

FUEL PRICE ADJUSTMENT (*ENGLISH 125% MAX)*

ENTER FPL DIESEL	2.89
ENTER FPM DIESEL	6.503

ENTER FPL UNLEADED	2.602
ENTER FPM UNLEADED	5.8545

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

INCREASE ADJUSTMENT
125.00%

INCREASE ADJUSTMENT
125.00%

ROADWAY ITEMS	QUANTITY	DIESEL FACTOR	GALLONS DIESEL	UNLEADED FACTOR	GALLONS UNLEADED	REMARKS
Excavations paid as specified by Sections 205 **(CUBIC YARD)**		0.29		0.15		
Excavations paid as specified by Sections 206 **(CUBIC YARD)**		0.29		0.15		
GAB paid as specified by the ton under Section 310 **(TON)**		0.29		0.24		
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)**	260.000	2.90	754.00	0.71	184.60	
PCC Pavement paid as specified by the square yard under Section 430 **(SY)**		0.25		0.20		

BRIDGE ITEMS	Quantity	Unit Price	QF/1000	Diesel Factor	Gallons Diesel	Unleaded Factor	Gallons Unleaded	REMARKS
Bridge Excavation (CY) Section 211	80.00	29.89	2.3912	8.00	19.13	1.50	3.59	
Class __Concrete (CY) Section 500	950.00	500.00	475.0000	8.00	3800.00	1.50	712.50	
Class __Concrete (CY) Section 500				8.00		1.50		
Class __Concrete (CY) Section 500				8.00		1.50		
Superstru Con Class__(CY) Section 500	3376.00	1,200.00	4051.2000	8.00	32409.60	1.50	6076.80	
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	1583.00	150.00	237.4500	8.00	1899.60	1.50	356.18	

BRIDGE ITEMS	Quantity	Unit Price	QF/1000	Diesel Factor	Gallons Diesel	Unleaded Factor	Gallons Unleaded	REMARKS
Stru Steel Plan Quantity (LB) Section 501				8.00		1.50		
Stru Steel Plan Quantity (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 Plan Quantity(LB) Section 511	1350000.00	1.00	1350.0000	8.00	10800.00	1.50	2025.00	
Stru Reinf Plan Quantity(LB) Section 511				8.00		1.50		
Bar Reinf Steel (LB) Section 511	290000.00	1.00	290.0000	8.00	2320.00	1.50	435.00	
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		

SUM QF DIESEL=	52002.33	SUM QF UNLEADED=	9793.66

DIESEL PRICE ADJUSTMENT($)	$172,829.74
UNLEADED PRICE ADJUSTMENT($)	$29,305.57

ASPHALT CEMENT PRICE ADJUSTMENT
(BITUMINOUS TACK COAT 125% MAX)

APPLICABLE TO CONTRACTS/PROJECTS CONTAINING THE 413 SPECIFICATION, SECTION 413.5.01 ADJUSTMENTS ASPHALT PRICE ADJUSTMENT FOR BITUMINOUS TACK COAT

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

ENTER APL 418 **ENTER APM** 940.5

125.00%	INCREASE ADJUSTMENT

L.I.N.	TYPE	TACK (GALLONS)	TACK (TONS)	REMARKS
413-1000	PG 58-22	62	0.2663	

TMT = 0.2663

PRICE ADJUSTMENT($)	$133.57

400 / 402 ASPHALT CEMENT PRICE ADJUSTMENT 125% MAX

ENTER APL 461 **ENTER APM** 1037.25

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

125.00%	INCREASE ADJUSTMENT

L.I.N. / Spec Number	MIX TYPE	HMA	JMF AC%	AC	REMARKS
402-3100	9.5 mm SP TP1	61	5.00	3.05	
402-3121	25 mm SP	145	5.00	7.25	
402-3190	19 mm SP	97	5.00	4.85	
			5.00		
			5.00		
			5.00		
			5.00		
			5.00		
			5.00		
			5.00		
			5.00		
			5.00		
			5.00		
			5.00		
			5.00		
			TMT =	15.15	

PRICE ADJUSTMENT($)	$8,380.98

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 [ ]

NO ADJUSTMENT: WITHIN 5%	NO ADJUSTMENT REQUIRED

Use this side for Asphalt Emulsion Only

L.I.N.	TYPE	ASPHALT EMULSION (GALLONS)

TMT = [ ]

REMARKS:

Use this side for Asphalt Cement Only

L.I.N.	TYPE	TACK (GALLONS)
413-1000		61

TMT = 0.2620

REMARKS:

MONTHLY PRICE ADJUSTMENT($)	MISSING APL OR APM

ADJUSTMENT SUMMARY

FUEL PRICE ADJUSTMENT *(ENGLISH 125% MAX)*

DIESEL PRICE ADJUSTMENT($)	$172,829.74
UNLEADED PRICE ADJUSTMENT($)	$29,305.57
ASPHALT CEMENT PRICE ADJUSTMENT (BITUMINOUS TACK COAT 125% MAX)	$133.57
400 / 402 ASPHALT CEMENT PRICE ADJUSTMENT 125% MAX	$8,380.98
ASPHALT CEMENT PRICE ADJUSTMENT FOR BITUMINOUS TACK COAT(Surface Treatment 125% MAX)	MISSING APL OR APM

REMARKS:

TOTAL ADJUSTMENTS	$210,649.87

DWM 10/08

Attachment 2

Project Plan Layout

6/3/2010 4:05:09 PM USER:wdlmsdale	PRF _PENTBLL_	J:\2009039\007550\Concept\Concept Layout\007550CONCEPT_PLAN.dgn	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			DOUGHERTY	CSHPP-0007-00(550) & CSSTP-M002-00(960)		

BEGIN CONSTRUCTION
BROAD AVENUE
STA. 13+00.00

BEGIN PROJECT
CSHPP-0007-00(550)
STA. 12+80.00
N 573512.6966
E 2302127.5982

END PROJECT CSHPP-0007-00(550)
END CONSTRUCTION BROAD AVENUE
STA. 23+75.00
N 573515.3192
E 2303222.5951

BEGIN BRIDGE
STA. 14+57.00

END BRIDGE
STA. 22+37.00

DOUGHERTY COUNTY

ALBANY DOWNTOWN I LLC A GA

ALBANY-DOUGHERTY INNER CITY

ALBANY HOUSING AUTHORITY

CITY OF ALBANY

JACKIE & RICHARD HAMBRIC

WILLIAM RICHARD & LEON J HAMBRIC

ALBANY SCALE CO

LONNIE R STOKES

BEAUCHAMP PROPERTIES & RENOVATIONS LLC

FLINT RIVER

STREAM 1

NBSW 1

NBSW 2

APPROX. LOW WATER MARK

EDGE

ESA - 25' STREAM BUFFER

EXISTING R/W

℄ CONSTRUCTION
BROAD AVENUE

N 89°51'46" E

15+00

20+00

25+00

200+00

PI 301+14.42

PI 300+00.00

PC 24+65.34

PT 26+39.95

PI 25+92.78

PROPERTY AND EXISTING R/W LINE	
REQUIRED R/W LINE	
CONSTRUCTION LIMITS	—C—F—
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES	
EASEMENT FOR CONSTR OF SLOPES	
EASEMENT FOR CONSTR OF DRIVES	

BEGIN LIMIT OF ACCESS	BLA
END LIMIT OF ACCESS	ELA
LIMIT OF ACCESS	
R/W AND LIMIT OF ACCESS	
EXISTING R/W LINE	

Heath & Lineback Engineers
INCORPORATED
2390 CANTON ROAD, BUILDING 200
MARIETTA, GEORGIA 30066-5393

LAND LOT NO. :
LAND DISTRICT:
GMD: 1097

SCALE IN FEET
0 50 100 200

REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY

CONCEPT LAYOUT

BROAD AVE. BRIDGE REPLACEMENT
DOUGHERTY COUNTY

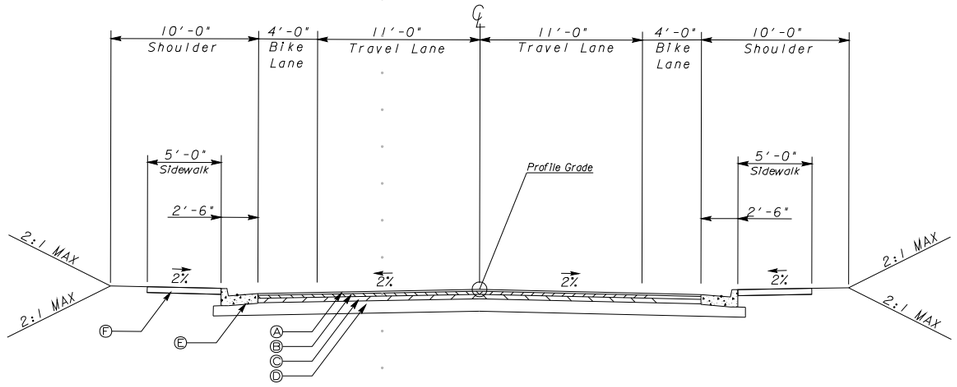
DRAWING No.

GPLN SR07055 SR07045 SR07025 SR07015 SR07005

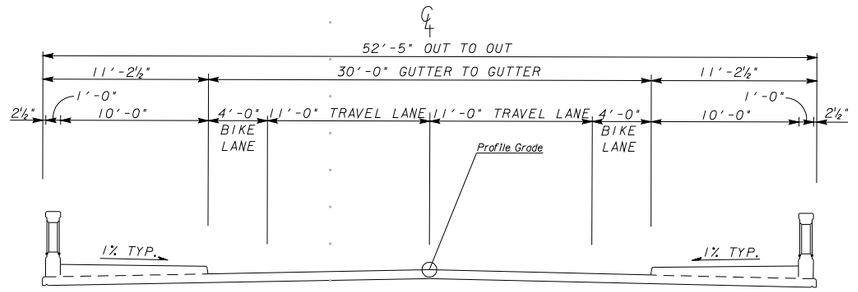
Attachment 3

Typical Sections

DATETIME$$$	TIME$$$	PRF	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		DOUGHERTY	CSHPP-0007-00(550) & CSSTP-M002-00(960)		



TYPICAL SECTION



BRIDGE SECTION

REQUIRED PAVEMENT

Ⓐ RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 1 ONLY, INCL BITUM MATL & H LIME (165 LBS/SY)
Ⓑ RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME (220 LBS/SY)
Ⓒ RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME (330 LBS/SY)
Ⓓ GR AGGR BASE CRS, 8 INCH, INCL MATL
Ⓔ CONC CURB & GUTTER, 8 IN X 30 IN, TP 2
Ⓕ CONC SIDEWALK, 4 IN

Heath & Lineback Engineers
INCORPORATED
2390 CANTON ROAD, BUILDING 200
MARIETTA, GEORGIA 30066-5393

LAND LOT NO. : N/A
LAND DISTRICT: N/A
GMD: 945 & 1097

REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: PROGRAM DELIVERY

TYPICAL SECTIONS BROAD AVENUE

BROAD AVE. BRIDGE REPLACEMENT
DOUGHERTY COUNTY

DRAWING No. 5-01

GPLN

Attachment 4

Traffic Report

TRAFFIC STUDY

for

BRIDGE REPLACEMENT

Broad Avenue over the Flint River

City of Albany, Dougherty County, Georgia

Prepared for:

Heath & Lineback Engineers

Georgia Department of Transportation
Project Numbers CSSTP-M002-00(960)/
CSHPP-007-00(550)
P. I. No. M002960/0007550

May 2010

3160 Main Street • Suite 100
Duluth, Georgia 30096
T: 770.813.0882
F: 770.813.0688
www.streetsmarts.us

TABLE OF CONTENTS

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EXECUTIVE SUMMARY

The Broad Avenue (CS 1297) bridge over the Flint River between Front Street and College Drive in Albany, Georgia was closed to all traffic in February 2009 due to scouring around and deterioration of the bents in the Flint River. The existing two-lane bridge with narrow sidewalks will be replaced with a bridge having one travel lane in each direction, bike lanes, and sidewalks on both sides. The purpose of this study is to report the expected vehicular volumes on Broad Avenue when the bridge is replaced and opened in 2013 and 20 years later in 2033. These will be used to project the operations of the adjacent intersections when the bridge is reopened to determine if the existing geometric configurations and traffic control is adequate for the opening and design year (2013 and 2033) vehicular volumes. In addition, the vehicular crashes reported in the immediate area before and after the Broad Avenue bridge was closed, were also examined.

Based on historical Georgia Department of Transportation (GDOT) supplied daily traffic volumes and consultation with planning staff (Traffic Analyses Section), it was determined that the 2010 AADT would be 11,500 on the bridge and 15,500 in 2030. The peak hour design percentage (K factor) will be 8.5% and the directional distribution (D factor) will be 60%. Trucks will be expected to constitute 3.5% of the peak (Design) hour traffic and 5% of the daily traffic volumes, with half as Single Units (S.U.=2.5%) and half as Combination Units (COMB.=2.5%).

Using this traffic volume data, it was determined that the 2013 Opening Year daily vehicular volume would be 11,970 and 15,610 in 2033. The K factor, D factor, and Truck percentages are expected to remain the same over the 20-year time span, unless there are substantial changes in land use in the immediate vicinity or unusual changes to the area transportation network that result in unanticipated changes to the characteristics of the travel on the Broad Avenue bridge over the Flint River.

The intersections studied currently operated at adequate weekday peak period Levels of Service (LOS) and can be reasonably expected to operate at adequate LOS in both 2013 and 2033 when the Broad Avenue bridge is operational with the existing lane configurations and traffic control.

Records of the reported crashes supplied by GDOT and the City of Albany for the time-period before and after the bridge was closed, were analyzed to determine if the number or rate of crashes reduction could be quantified. Because the new bridge will provide for a dedicated bike lane and wider sidewalks, it is expected that non-vehicular travel over the river will be enhanced and safer. However, a specific reduction in the number or severity of the vehicular crashes expected to occur crossing the river or at adjacent intersections could not be quantified based on the available information.

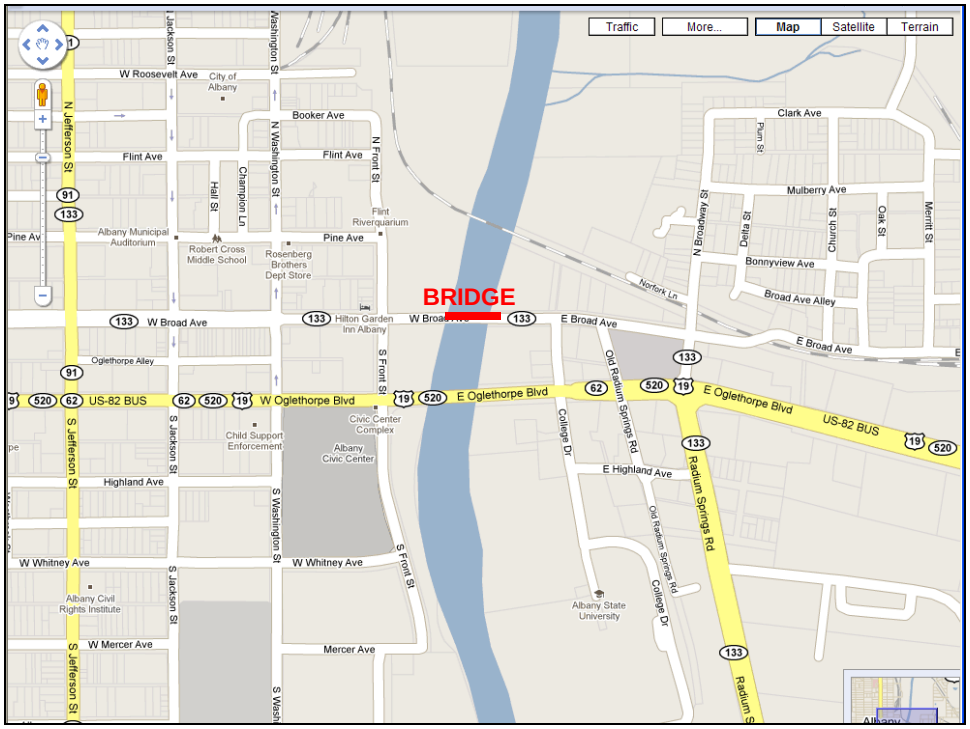
1. INTRODUCTION

This study presents an analysis of the traffic impact expected to result from the proposed reopening of the Broad Avenue (CS 1297) bridge over the Flint River between Front Street and College Drive in Albany, Georgia. The bridge was closed to all traffic in February 2009. The existing two-lane bridge with narrow sidewalks will be replaced with a bridge having one travel lane in each direction, bike lanes, and sidewalks on both sides. The purpose of this study is to report the expected vehicular volumes on Broad Avenue when the bridge is replaced and opened in 2013 and 20 years later in 2033. The operations at the adjacent intersections will be analyzed when the bridge is reopened to determine if the existing geometric configurations and traffic control is adequate for the opening and design year (2013 and 2033) vehicular volumes. In addition, the vehicular crashes reported in the immediate area before and after the Broad Avenue bridge will be examined to determine if safety will be improved by the replacement of the bridge.

Figure 1 shows the site location.

In the following sections, the analysis of traffic operations is described for existing conditions, future background conditions without the bridge, and future conditions with the bridge. Finally, conclusions are presented.

Figure 1. Site Location



Existing typical weekday peak hour traffic volumes were collected at the adjacent intersections on Broad Ave at Old Radium Springs Rd to the east of the bridge and at Front St to the west of the bridge on Wednesday, 3 March 2010. Bi-directional 24-hour vehicular counts were also collected on Broad Ave to the east and west of the study intersections and on Front St north and south of Broad Ave. Bi-directional 24-hour vehicular counts were also collected on College Dr and Old Radium Springs Rd south of Broad Ave and on Oglethorpe Blvd on the bridge over the Flint River, as well as peak period turning movement counts at the intersection of Old Radium Springs Road and Oglethorpe Blvd. These counts were used to provide existing turning movement volumes at other intersections in the area that were used to determine the likely directional distribution of the trips to be reassigned when the new bridge is operational. A 24-hour vehicle classification count was also collected on Broad Avenue. The traffic count printouts are included in the appendix.

Capacity Analysis: Existing Conditions

Using the methodologies described in the EXPLANATION OF LEVEL OF SERVICE Section, the results of the capacity analysis for existing conditions are presented in Table 1.

Table 1. Existing Levels of Service

Intersection		Control	Approach/ Movement	Peak Period LOS	
#	Name			AM	PM
1	Broad Ave at Front St	Traffic Signal	Overall	A	A
2	Broad Ave at College Dr	Side Street STOP Sign	NB	A	A
			EB	A	A
			WB	A	A
3	Broad Ave at Old Radium Springs Rd	Side Street STOP Sign	NB	A	A
			EB	A	A
			WB	A	A
4	Oglethorpe Blvd at Old Radium Springs Rd	Side Street STOP Sign	NB	B	F
			SB	C	C
			EB	C	C
			WB	A	A
5	Oglethorpe Blvd at College Dr	Side Street STOP Sign	SB	C	C
			EB	A	A
			WB	A	A

3. NO BUILD TRAFFIC CONDITIONS

Between the time this study is performed and the replacement bridge opening in 2013 and the Design Year 2033, the traffic volumes on the adjacent roadway network are expected to increase further. This is due to future trip-generating development in both in the study area, as well as growth outside of it, whether or not the bridge is replaced.

Using historical Annual Average Daily Traffic (AADT) provided by the Georgia Department of Transportation (GDOT) at counting stations near the site, and consultation with the GDOT Planning Traffic Staff, a 1.34% per year growth rate was applied to the existing turning movement volumes for three and twenty-three years to account for the future background growth.

Capacity Analysis: No Build Traffic Conditions

Using the methodologies described in the EXPLANATION OF LEVEL OF SERVICE Section, the LOS was determined for No Build Conditions. The results are shown in Table 2

Table 2. Future No Build Levels of Service

Intersection		Control	Approach/ Movement	2013 LOS		2033 LOS	
#	Name			AM	PM	AM	PM
1	Broad Ave at Front St	Signal	Overall	A	A	A	A
2	Broad Ave at College Dr	Side Street STOP Sign	NB	A	A	A	A
			EB	A	A	A	A
			WB	A	A	A	A
3	Broad Ave at Old Radium Springs Rd	Side Street STOP Sign	NB	A	A	A	A
			EB	A	A	A	A
			WB	A	A	A	A
4	Oglethorpe Blvd at Old Radium Springs Rd	Side Street STOP Sign	NB	B	B	B	C
			SB	C	C	E	D
			EB	C	C	D	F
			WB	A	A	A	A
5	Oglethorpe Blvd at College Dr	Side Street STOP Sign	SB	C	C	D	E
			EB	A	A	A	A
			WB	A	A	A	A

As can be seen in Tables 1 and 2, all of the study intersections are currently operating at adequate Levels of Service (LOS) during both weekday peak periods with the existing lane configurations and traffic control and are expected to continue to operate adequately in 2013 and 2033 with the following exception:

The northbound approach of Old Radium Springs Rd at Oglethorpe Blvd operates at LOS F in the PM peak hour for existing conditions, due to the two (2) northbound left turning vehicles that were observered negotiating left turns through the existing eastbound restricted directional median crossover. For future volumes, these two (2) illegal peak hour left-turning trips were expected to use alternate routes that would provide adequate operating conditions; therefore, no left turns northbound at this intersection were included in the 2013 and 2033 analyses. As the through volumes increase from 2013 to 2033 on Oglethorpe Blvd, it will become increasingly difficult for peak hour turning vehicles to find gaps in the opposing traffic stream. The result will be increasing delays in the morning for the southbound Old Radium Springs Rd right-turning vehicles and in the evening for the eastbound left-turning vehicles from Oglethorpe Blvd to Old Radium Springs Rd. The lower LOS for the 2033 conditions reflects this.

For the No Build analyses, all of the study intersections continue to operate adequately, except during the 2033 peak PM hour for the eastbound left turns from Oglethorpe Blvd onto Old Radium Springs Rd.

Also in 2033, the southbound Old Radium Springs Rd approach during the AM peak hour and the southbound College Dr approach during the PM peak hour are expected to operate at capacity.

The capacity analyses worksheets showing the existing intersection turning movement volumes are included in the appendix.

Distribution and Assignment

The weekday peak hour trips expected on the new bridge were calculated from the expected daily volumes in the opening and design years using the peak hour design K factor of 8.5% and the directional distribution D factor of 60% provided by the GDOT Planning Traffic Analysis Section Staff. The existing directional distribution of trips from the existing counts collected were used to reassign the trips that would be relocated to the new bridge to the study intersections. The reassigned trips were combined with the No Build trip volumes for the intersection capacity analyses of 2013 and 2033 Build Conditions.

Capacity Analysis: Future Build Conditions

Using the methodologies described in the EXPLANATION OF LEVEL OF SERVICE Section, the LOS at the study intersections was determined for future Build traffic volumes with the existing lanes and traffic controls. The results are shown in Table 3

Table 3. Future Build Traffic Levels of Service

Intersection		Control	Approach/ Movement	2013 LOS		2033 LOS	
#	Name			AM	PM	AM	PM
1	Broad Ave at Front St	Signal	Overall	A	B	B	A
2	Broad Ave at College Dr	Side Street STOP Sign	NB	C	C	C	D
			EB	A	A	A	A
			WB	A	A	A	A
3	Broad Ave at Old Radium Springs Rd	Side Street STOP Sign	NB	C	B	D	C
			EB	A	A	A	A
			WB	A	A	A	A
4	Oglethorpe Blvd at Old Radium Springs Rd	Side Street STOP Sign	NB	B	B	B	B
			SB	B	B	C	C
			EB	B	B	C	B
			WB	A	A	A	A
5	Oglethorpe Blvd at College Dr	Side Street STOP Sign	SB	B	B	B	C
			EB	A	A	A	A
			WB	A	A	A	A

As can be seen in Tables 3, all of the study intersections are expected to continue to operate adequately in 2013 and 2033 with the existing lane configurations and traffic control for Build Conditions.

The capacity analyses worksheets showing the existing intersection turning movement volumes are included in the appendix.

Crash Analysis:

Crash data for the roadways and intersections in the immediate area that would be affected by the change in traffic patterns resulting from the replacement of the Broad Ave bridge over the Flint River for the last three years was requested and received from the Georgia Department of Transportation. In addition, the City of Albany provided some crash data for the year before the bridge was closed and for the year after closure. This data is included in the appendix.

After careful examination of the crash data, it does not appear that a conclusion can be reached that relocating 12,000 to 16,000 trips per day from the existing four-lane roadway with a center median on the east approach and center pavement grooving across the bridge to the two-lane undivided replacement bridge will be expected to result in a reduction in either the number or severity of crashes. Since the trips would be relocated from a State Route to a City Street where the Statewide crash rate averages are higher, it is not expected that the vehicular crash rate would be improved.

However, because the new bridge will provide for a dedicated bike lane and wider sidewalks, it is expected that non-vehicular travel over the river will be enhanced and safer in the future with the replacement of the bridge.

GLOSSARY OF TERMS

Annual Average Daily Traffic (AADT): The total volume of traffic on a highway segment for one-year, divided by 365.

Capacity: The maximum traffic flow designation for a segment of roadway or a lane, within the control conditions for that particular segment of roadway or lane, usually expressed in persons per hour or vehicles per hour.

Congestion: Highway congestion results when traffic demand approaches or exceeds the available capacity of the transportation facility(ies).

Impacts: The effects of a transportation project, including (a) direct (primary) effects; (b) indirection (secondary) effects; and (c) cumulative effects.

Internal Capture: Trips occurring within the subject site thereby reducing the number of new trips on the external roadway system.

K-Factor: The percentage of daily traffic volume traveling during the peak hour or design hour.

LOS (Level of Service): A qualitative assessment of a road's operating conditions, expressed in terms of A through F – 'A' being the best LOS.

Pass-by trips: Some of the trips are by people who would have been on the road anyway on their way to/from someplace else who stop by and visit the commercial establishment.

Peak Hour: The consecutive sixty minutes within a 24-hour period with the highest traffic volume. A peak hour is generally designated for both A.M. and P.M. traffic conditions.

Peak Hour Factor (PHF): The ratio of total traffic occurring during the peak hour to the peak 15-minute flow rate (4 times the maximum 15 minute volume) within the peak hour.

Volume: The number of persons or vehicles passing a point on a lane, roadway or other trafficway during some time interval, often taken to be one hour, expressed in vehicles.

Volume-to-Capacity ratio (v/c): The ratio of volume (v) to capacity (c) for a traffic facility.

EXPLANATION OF LEVEL OF SERVICE

Capacity analyses of the study intersections were completed using procedures in the Transportation Research Board's *Highway Capacity Manual (HCM), 2000*. This is the usual methodology for the analysis of traffic conditions. The software program *Synchro 6* (a nationally recognized computer software package for analyzing capacities and Levels of Service) was used to perform the actual capacity analyses for the key intersections.

Operating conditions at intersections are evaluated in terms of Levels of Service (LOS). LOS A through D are generally considered to be adequate peak hour operations. LOS E and F are generally considered inadequate conditions.

Levels of Service for signalized intersections are reported in composite fashion, i.e., one LOS for the entire intersection, and are based on average control delay. Individual turning movements at a signalized intersection may experience inadequate LOS, particularly where those volumes are relatively low, while the intersection as a whole has an adequate LOS. This is because the major movements on the major roadway are given priority in assigning signal green time.

Traffic conditions at unsignalized intersections, with STOP sign control on the minor street only, are evaluated for the minor street approach(es) and for the left turns from the major street. This is because the major street traffic is assumed to have no delay since there is no control (no STOP sign). Inadequate Levels of Service for minor street approaches to unsignalized intersections are not uncommon, as the continuous flow traffic will always get the priority.

Levels of Service for all-way STOP controlled intersections are reported both for key intersection movements, and in composite fashion, i.e., one LOS for the entire intersection, and are based on average control delay.

The *Highway Capacity Manual* Level of Service criteria for signalized and unsignalized intersections are shown in the following table:

Highway Capacity Manual Intersection Level of Service Criteria

LOS	Control Delay (seconds per vehicle)	
	Signalized Intersection	Unsignalized Intersection
A	≤ 10	≤ 10
B	>10 and ≤20	>10 and ≤15
C	>20 and ≤35	>15 and ≤25
D	>35 and ≤55	>25 and ≤35
E	>55 and ≤80	>35 and ≤50
F	> 80	> 50

Source: Highway Capacity Manual

APPENDIX A: TRAFFIC COUNTS

Reliable Traffic Data Services, LLC
Tel: (770) 578-8158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data
E Oglethorpe Blvd @
Old Radium Springs Rd
7-9am 4-6pm

File Name : 28550001
Site Code : 28550001
Start Date : 3/3/2010
Page No : 1

Groups Printed- Cars, Trucks & Buses

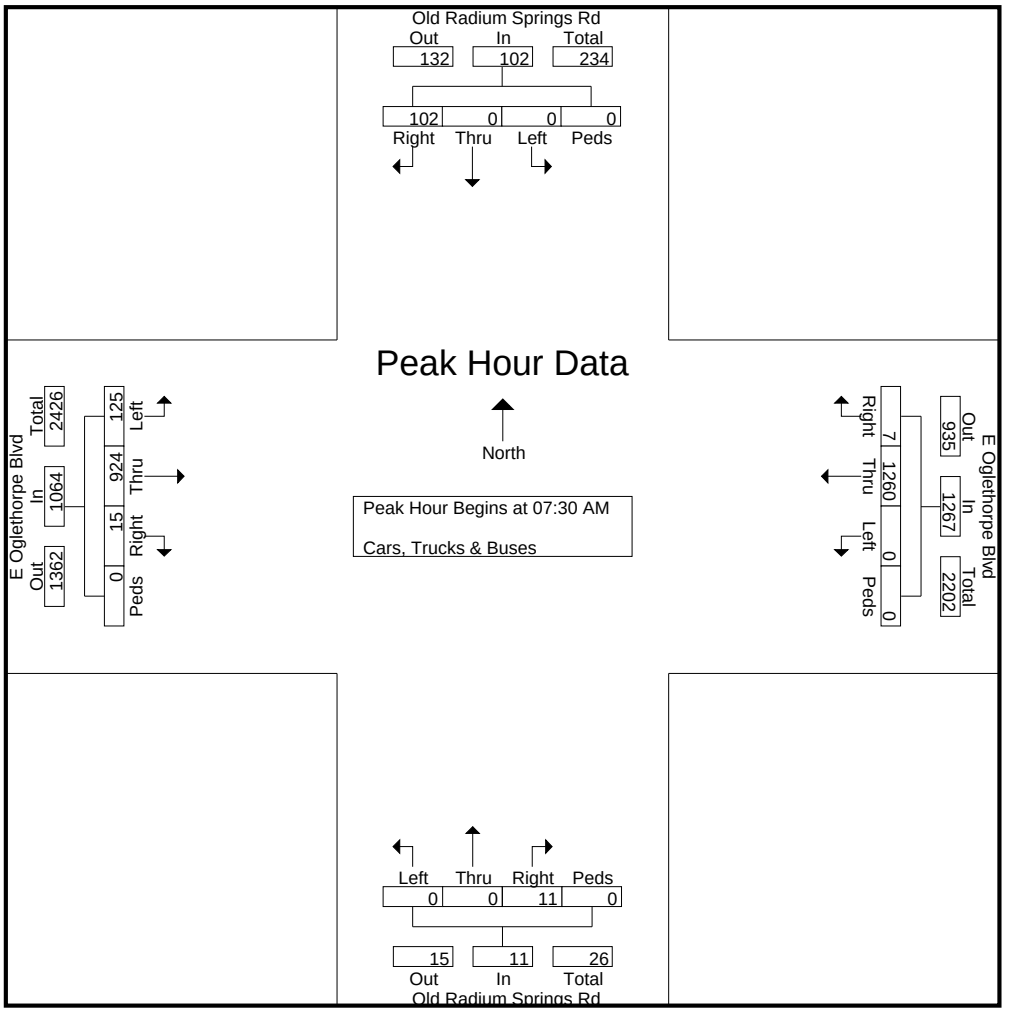
	Old Radium Springs Rd Northbound					Old Radium Springs Rd Southbound					E Oglethorpe Blvd Eastbound					E Oglethorpe Blvd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	1	0	1	0	0	14	0	14	25	151	1	0	177	1	184	1	0	186	378
07:15 AM	0	0	6	0	6	0	0	25	0	25	35	168	1	0	204	0	247	2	0	249	484
07:30 AM	0	0	3	0	3	0	0	31	0	31	29	226	2	0	257	0	348	1	0	349	640
07:45 AM	0	0	4	0	4	0	0	25	0	25	31	245	2	0	278	0	318	4	0	322	629
Total	0	0	14	0	14	0	0	95	0	95	120	790	6	0	916	1	1097	8	0	1106	2131
08:00 AM	0	0	1	0	1	0	0	22	0	22	35	207	5	0	247	0	311	2	0	313	583
08:15 AM	0	0	3	0	3	0	0	24	0	24	30	246	6	0	282	0	283	0	0	283	592
08:30 AM	0	0	2	0	2	0	0	27	0	27	38	237	2	0	277	0	287	1	0	288	594
08:45 AM	0	0	2	0	2	0	0	25	0	25	34	226	3	0	263	0	283	1	0	284	574
Total	0	0	8	0	8	0	0	98	0	98	137	916	16	0	1069	0	1164	4	0	1168	2343
*** BREAK ***																					
04:00 PM	1	0	1	0	2	0	0	21	0	21	63	247	2	0	312	0	254	6	0	260	595
04:15 PM	0	0	2	0	2	0	0	24	0	24	66	260	3	0	329	0	263	5	0	268	623
04:30 PM	1	0	1	0	2	0	0	27	0	27	69	280	2	0	351	0	278	6	0	284	664
04:45 PM	0	0	1	0	1	0	0	31	0	31	72	309	4	0	385	0	297	8	0	305	722
Total	2	0	5	0	7	0	0	103	0	103	270	1096	11	0	1377	0	1092	25	0	1117	2604
05:00 PM	0	0	0	0	0	0	0	29	0	29	79	333	3	0	415	0	318	7	0	325	769
05:15 PM	1	0	3	0	4	0	0	24	0	24	81	277	2	0	360	0	326	9	0	335	723
05:30 PM	1	0	3	0	4	0	0	26	0	26	67	266	5	0	338	0	319	6	0	325	693
05:45 PM	0	0	7	0	7	0	0	24	0	24	51	259	6	0	316	0	307	6	0	313	660
Total	2	0	13	0	15	0	0	103	0	103	278	1135	16	0	1429	0	1270	28	0	1298	2845
Grand Total	4	0	40	0	44	0	0	399	0	399	805	3937	49	0	4791	1	4623	65	0	4689	9923
Apprch %	9.1	0	90.9	0		0	0	100	0		16.8	82.2	1	0		0	98.6	1.4	0		
Total %	0	0	0.4	0	0.4	0	0	4	0	4	8.1	39.7	0.5	0	48.3	0	46.6	0.7	0	47.3	

Reliable Traffic Data Services, LLC
Tel: (770) 578-8158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data
E Oglethorpe Blvd @
Old Radium Springs Rd
7-9am 4-6pm

File Name : 28550001
Site Code : 28550001
Start Date : 3/3/2010
Page No : 2

	Old Radium Springs Rd Northbound					Old Radium Springs Rd Southbound					E Oglethorpe Blvd Eastbound					E Oglethorpe Blvd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	3	0	3	0	0	31	0	31	29	226	2	0	257	0	348	1	0	349	640
07:45 AM	0	0	4	0	4	0	0	25	0	25	31	245	2	0	278	0	318	4	0	322	629
08:00 AM	0	0	1	0	1	0	0	22	0	22	35	207	5	0	247	0	311	2	0	313	583
08:15 AM	0	0	3	0	3	0	0	24	0	24	30	246	6	0	282	0	283	0	0	283	592
Total Volume	0	0	11	0	11	0	0	102	0	102	125	924	15	0	1064	0	1260	7	0	1267	2444
% App. Total	0	0	100	0		0	0	100	0		11.7	86.8	1.4	0		0	99.4	0.6	0		
PHF	.000	.000	.688	.000	.688	.000	.000	.823	.000	.823	.893	.939	.625	.000	.943	.000	.905	.438	.000	.908	.955

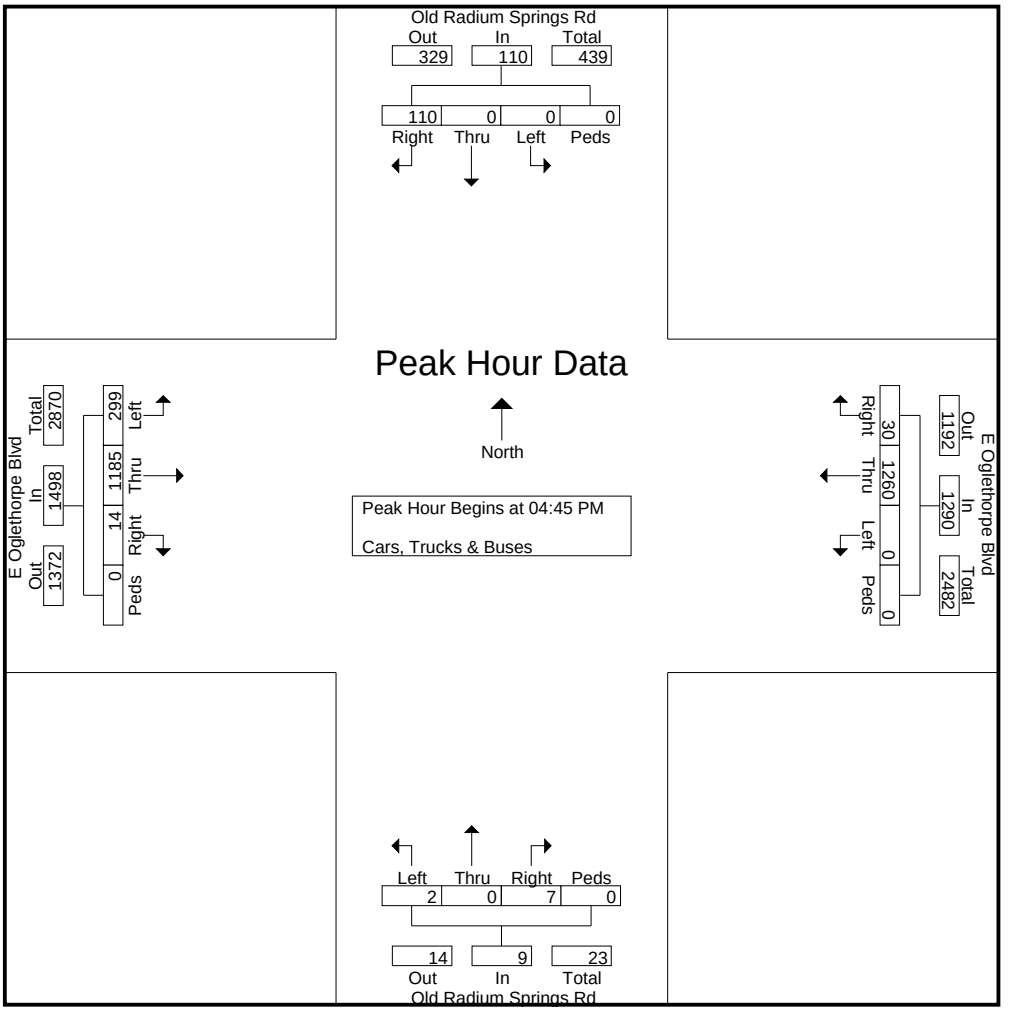


Reliable Traffic Data Services, LLC
Tel: (770) 578-8158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data
E Oglethorpe Blvd @
Old Radium Springs Rd
7-9am 4-6pm

File Name : 28550001
Site Code : 28550001
Start Date : 3/3/2010
Page No : 3

	Old Radium Springs Rd Northbound					Old Radium Springs Rd Southbound					E Oglethorpe Blvd Eastbound					E Oglethorpe Blvd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	0	1	0	1	0	0	31	0	31	72	309	4	0	385	0	297	8	0	305	722
05:00 PM	0	0	0	0	0	0	0	29	0	29	79	333	3	0	415	0	318	7	0	325	769
05:15 PM	1	0	3	0	4	0	0	24	0	24	81	277	2	0	360	0	326	9	0	335	723
05:30 PM	1	0	3	0	4	0	0	26	0	26	67	266	5	0	338	0	319	6	0	325	693
Total Volume	2	0	7	0	9	0	0	110	0	110	299	1185	14	0	1498	0	1260	30	0	1290	2907
% App. Total	22.2	0	77.8	0		0	0	100	0		20	79.1	0.9	0		0	97.7	2.3	0		
PHF	.500	.000	.583	.000	.563	.000	.000	.887	.000	.887	.923	.890	.700	.000	.902	.000	.966	.833	.000	.963	.945



Reliable Traffic Data Services, LLC
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TMC Data

File Name : 28550002
Site Code : 28550002
Start Date : 3/3/2010
Page No : 1

E Broad Ave @ Old Radium Springs Rd
7-9am 4-6pm

Groups Printed- Cars, Trucks & Buses

	Old Radium Springs Rd Northbound					Warehouse Pvt Drwy Southbound					E Broad Ave Eastbound					E Broad Ave Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	13	0	13	0	0	0	0	0	0	0	1	0	1	11	15	0	0	26	40
07:15 AM	1	0	16	0	17	0	0	0	0	0	0	0	0	0	0	18	15	0	0	33	50
07:30 AM	0	0	15	0	15	0	0	0	0	0	0	1	0	0	1	31	16	0	0	47	63
07:45 AM	2	0	18	0	20	0	0	0	0	0	0	0	0	0	0	19	27	0	0	46	66
Total	3	0	62	0	65	0	0	0	0	0	0	1	1	0	2	79	73	0	0	152	219
08:00 AM	1	0	21	0	22	0	0	0	0	0	0	0	0	0	0	15	16	0	0	31	53
08:15 AM	2	0	17	0	19	0	0	0	0	0	0	1	0	0	1	20	28	0	0	48	68
08:30 AM	1	0	19	0	20	0	0	0	0	0	0	0	0	0	0	17	25	0	0	42	62
08:45 AM	1	0	17	0	18	0	0	0	0	0	0	0	0	0	0	13	23	0	0	36	54
Total	5	0	74	0	79	0	0	0	0	0	0	1	0	0	1	65	92	0	0	157	237
*** BREAK ***																					
04:00 PM	1	0	32	0	33	0	0	0	0	0	0	0	0	0	0	20	17	0	0	37	70
04:15 PM	1	0	35	0	36	0	0	0	0	0	0	1	0	0	1	21	20	0	0	41	78
04:30 PM	0	0	38	0	38	0	0	0	0	0	0	0	0	0	0	24	19	0	0	43	81
04:45 PM	1	0	41	0	42	0	0	0	0	0	0	0	0	0	0	20	22	0	0	42	84
Total	3	0	146	0	149	0	0	0	0	0	0	1	0	0	1	85	78	0	0	163	313
05:00 PM	0	0	45	0	45	0	0	0	0	0	0	1	1	0	2	23	24	0	0	47	94
05:15 PM	0	0	37	0	37	0	0	0	0	0	0	0	0	0	0	21	28	0	0	49	86
05:30 PM	1	0	42	0	43	0	0	0	0	0	0	1	2	0	3	19	25	0	0	44	90
05:45 PM	0	0	39	0	39	0	0	0	0	0	0	2	0	0	2	17	21	0	0	38	79
Total	1	0	163	0	164	0	0	0	0	0	0	4	3	0	7	80	98	0	0	178	349
Grand Total	12	0	445	0	457	0	0	0	0	0	0	7	4	0	11	309	341	0	0	650	1118
Apprch %	2.6	0	97.4	0		0	0	0	0		0	63.6	36.4	0		47.5	52.5	0	0		
Total %	1.1	0	39.8	0	40.9	0	0	0	0	0	0	0.6	0.4	0	1	27.6	30.5	0	0	58.1	

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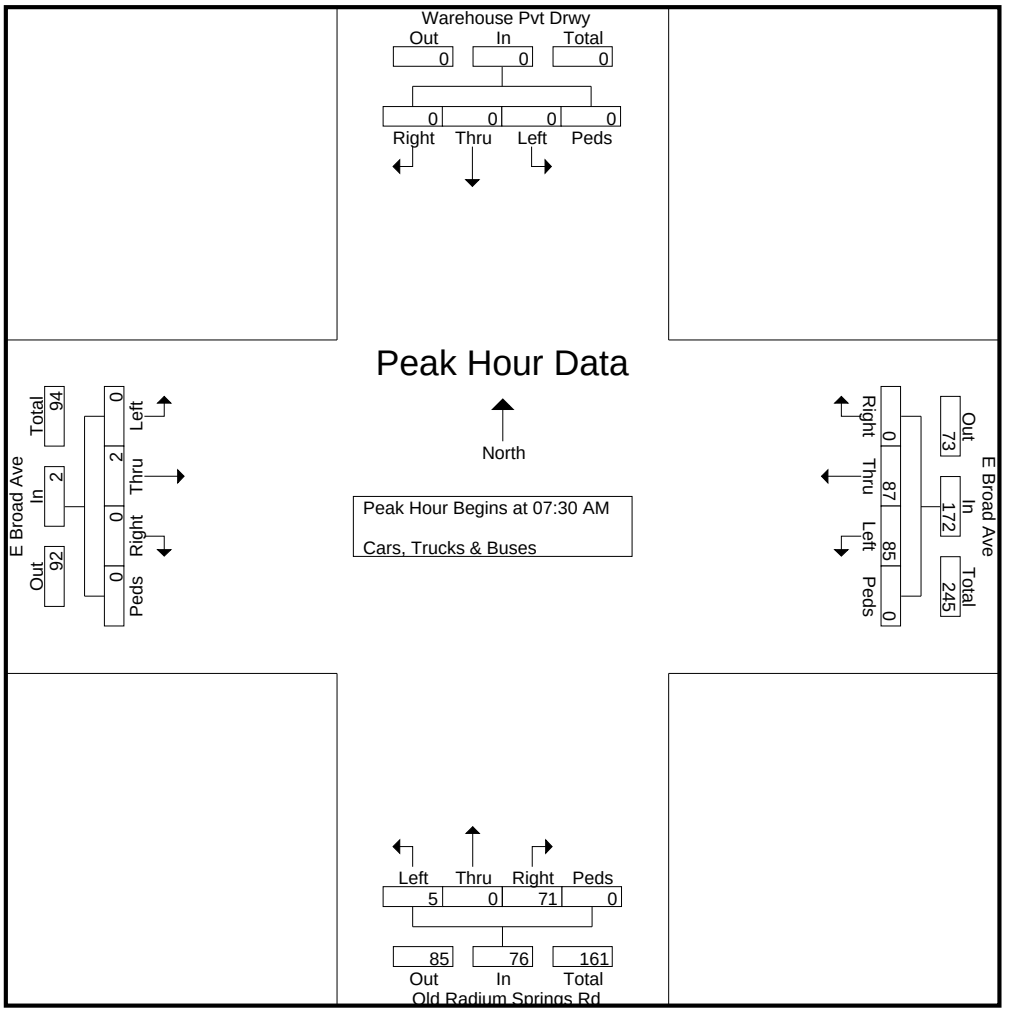
TMC Data

E Broad Ave @ Old Radium Springs Rd
7-9am 4-6pm

File Name : 28550002
Site Code : 28550002
Start Date : 3/3/2010
Page No : 2

	Old Radium Springs Rd Northbound					Warehouse Pvt Drwy Southbound					E Broad Ave Eastbound					E Broad Ave Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	15	0	15	0	0	0	0	0	0	1	0	0	1	31	16	0	0	47	63
07:45 AM	2	0	18	0	20	0	0	0	0	0	0	0	0	0	0	19	27	0	0	46	66
08:00 AM	1	0	21	0	22	0	0	0	0	0	0	0	0	0	0	15	16	0	0	31	53
08:15 AM	2	0	17	0	19	0	0	0	0	0	0	1	0	0	1	20	28	0	0	48	68
Total Volume	5	0	71	0	76	0	0	0	0	0	0	2	0	0	2	85	87	0	0	172	250
% App. Total	6.6	0	93.4	0		0	0	0	0		0	100	0	0		49.4	50.6	0	0		
PHF	.625	.000	.845	.000	.864	.000	.000	.000	.000	.000	.000	.500	.000	.000	.500	.685	.777	.000	.000	.896	.919



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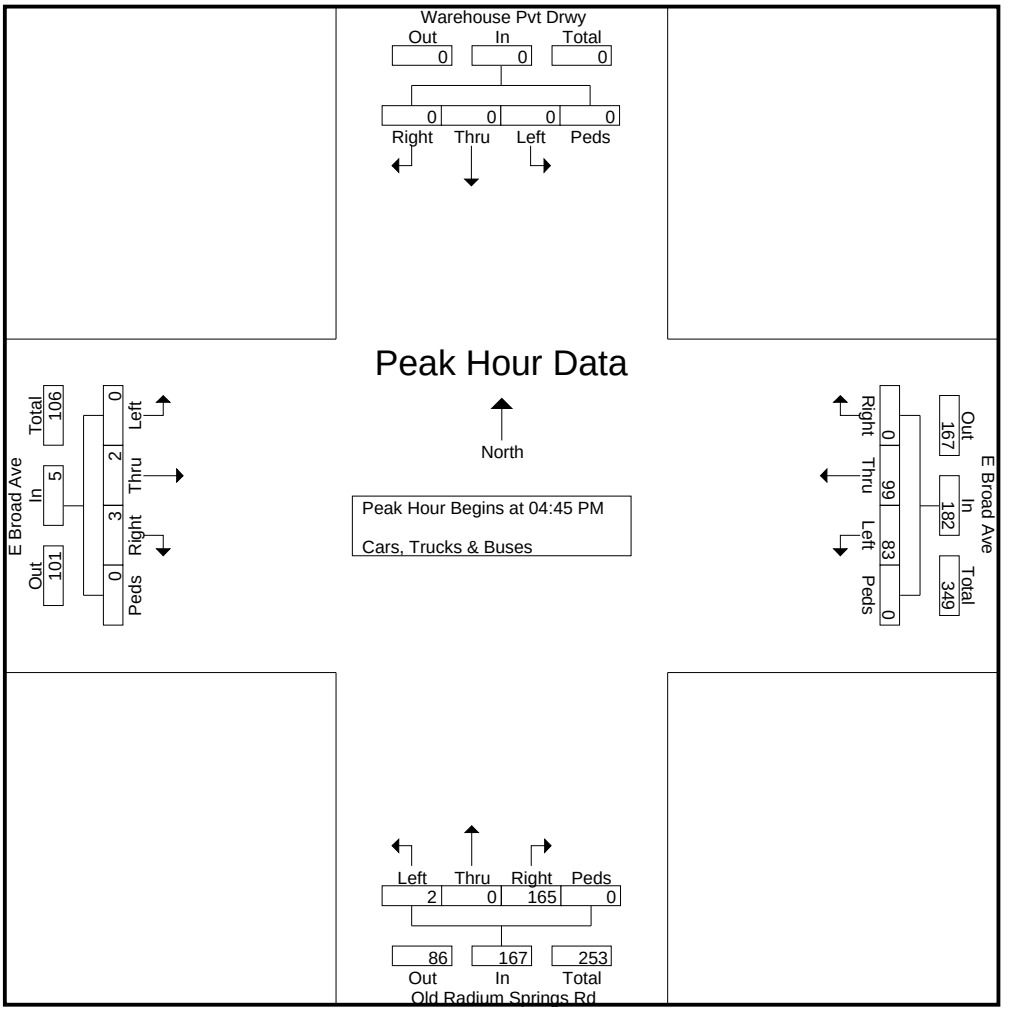
TMC Data

File Name : 28550002
Site Code : 28550002
Start Date : 3/3/2010
Page No : 3

E Broad Ave @ Old Radium Springs Rd
7-9am 4-6pm

	Old Radium Springs Rd Northbound					Warehouse Pvt Drwy Southbound					E Broad Ave Eastbound					E Broad Ave Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	1	0	41	0	42	0	0	0	0	0	0	0	0	0	0	20	22	0	0	42	84
05:00 PM	0	0	45	0	45	0	0	0	0	0	0	1	1	0	2	23	24	0	0	47	94
05:15 PM	0	0	37	0	37	0	0	0	0	0	0	0	0	0	0	21	28	0	0	49	86
05:30 PM	1	0	42	0	43	0	0	0	0	0	0	1	2	0	3	19	25	0	0	44	90
Total Volume	2	0	165	0	167	0	0	0	0	0	0	2	3	0	5	83	99	0	0	182	354
% App. Total	1.2	0	98.8	0		0	0	0	0		0	40	60	0		45.6	54.4	0	0		
PHF	.500	.000	.917	.000	.928	.000	.000	.000	.000	.000	.000	.500	.375	.000	.417	.902	.884	.000	.000	.929	.941



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TMC Data

N Front St @ E Broad Ave
7-9am 4-6pm

File Name : 28550003
Site Code : 28550003
Start Date : 3/3/2010
Page No : 1

Groups Printed- Cars, Trucks & Buses

	N Front St Northbound					N Front St Southbound					W Broad Ave Eastbound					E Broad Ave Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	9	21	0	0	30	0	6	1	0	7	0	0	11	0	11	0	0	0	0	0	48
07:15 AM	11	33	0	0	44	0	9	2	0	11	1	0	14	0	15	0	0	0	0	0	70
07:30 AM	15	37	0	0	52	0	15	1	0	16	0	0	21	0	21	0	0	0	0	0	89
07:45 AM	18	41	0	0	59	0	12	2	0	14	1	0	22	0	23	0	0	0	0	0	96
Total	53	132	0	0	185	0	42	6	0	48	2	0	68	0	70	0	0	0	0	0	303
08:00 AM	17	34	0	0	51	0	16	3	0	19	0	0	20	0	20	0	0	0	0	0	90
08:15 AM	13	38	0	0	51	0	18	2	0	20	2	0	22	0	24	0	0	0	0	0	95
08:30 AM	12	33	0	0	45	0	28	5	0	33	2	0	23	0	25	0	0	0	0	0	103
08:45 AM	10	31	0	0	41	0	25	2	0	27	0	0	20	0	20	0	0	0	0	0	88
Total	52	136	0	0	188	0	87	12	0	99	4	0	85	0	89	0	0	0	0	0	376
*** BREAK ***																					
04:00 PM	15	32	0	0	47	0	35	4	0	39	4	0	35	0	39	0	0	0	0	0	125
04:15 PM	18	36	0	0	54	0	38	5	0	43	3	0	33	0	36	0	0	0	0	0	133
04:30 PM	21	39	0	0	60	0	41	4	0	45	2	0	36	0	38	0	0	0	0	0	143
04:45 PM	19	41	0	0	60	0	47	6	0	53	5	0	41	0	46	0	0	0	0	0	159
Total	73	148	0	0	221	0	161	19	0	180	14	0	145	0	159	0	0	0	0	0	560
05:00 PM	17	35	0	0	52	0	45	5	0	50	3	0	43	0	46	0	0	0	0	0	148
05:15 PM	14	33	0	0	47	0	31	2	0	33	2	0	41	0	43	0	0	0	0	0	123
05:30 PM	15	31	0	0	46	0	29	3	0	32	1	0	38	0	39	0	0	0	0	0	117
05:45 PM	13	27	0	0	40	0	26	2	0	28	2	0	35	0	37	0	0	0	0	0	105
Total	59	126	0	0	185	0	131	12	0	143	8	0	157	0	165	0	0	0	0	0	493
Grand Total	237	542	0	0	779	0	421	49	0	470	28	0	455	0	483	0	0	0	0	0	1732
Apprch %	30.4	69.6	0	0		0	89.6	10.4	0		5.8	0	94.2	0		0	0	0	0		
Total %	13.7	31.3	0	0	45	0	24.3	2.8	0	27.1	1.6	0	26.3	0	27.9	0	0	0	0	0	

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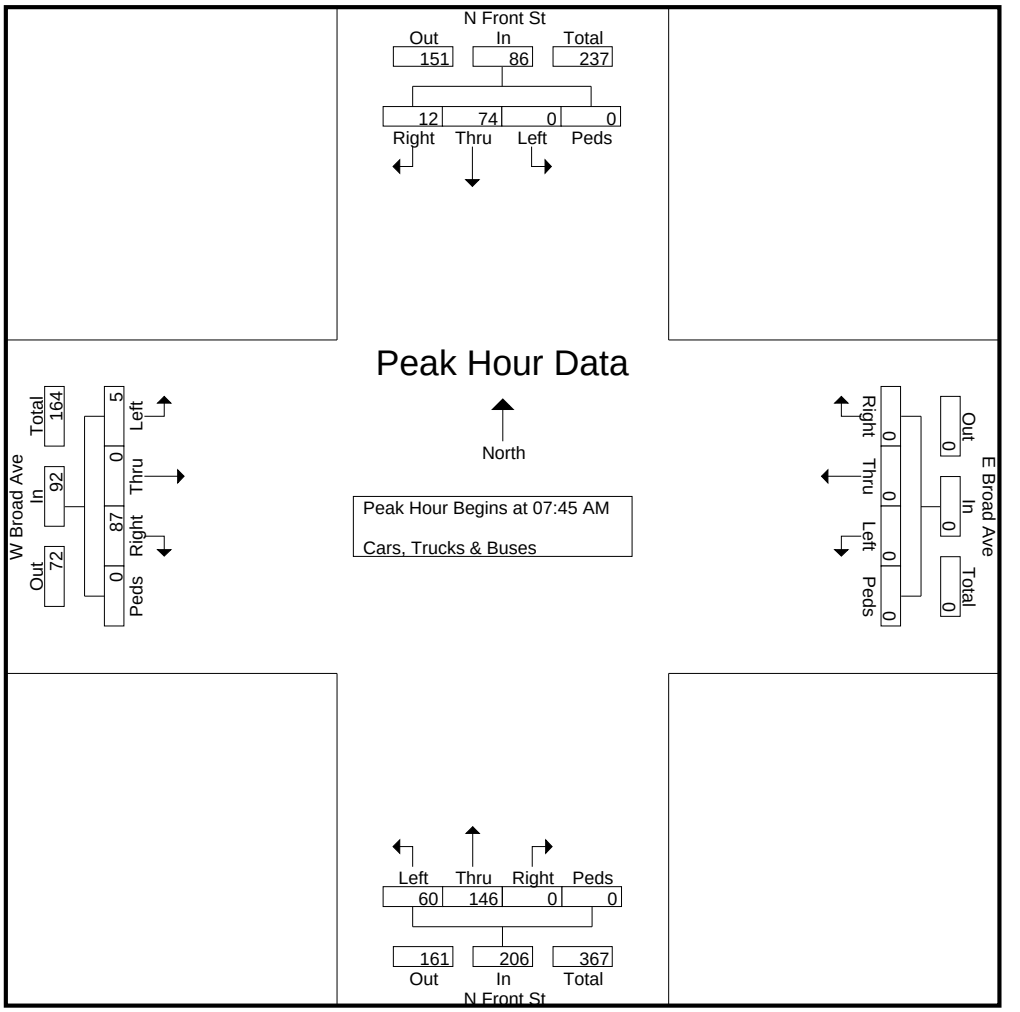
TMC Data

N Front St @ E Broad Ave
7-9am 4-6pm

File Name : 28550003
Site Code : 28550003
Start Date : 3/3/2010

	N Front St Northbound					N Front St Southbound					W Broad Ave Eastbound					E Broad Ave Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	18	41	0	0	59	0	12	2	0	14	1	0	22	0	23	0	0	0	0	0	96
08:00 AM	17	34	0	0	51	0	16	3	0	19	0	0	20	0	20	0	0	0	0	0	90
08:15 AM	13	38	0	0	51	0	18	2	0	20	2	0	22	0	24	0	0	0	0	0	95
08:30 AM	12	33	0	0	45	0	28	5	0	33	2	0	23	0	25	0	0	0	0	0	103
Total Volume	60	146	0	0	206	0	74	12	0	86	5	0	87	0	92	0	0	0	0	0	384
% App. Total	29.1	70.9	0	0		0	86	14	0		5.4	0	94.6	0		0	0	0	0		
PHF	.833	.890	.000	.000	.873	.000	.661	.600	.000	.652	.625	.000	.946	.000	.920	.000	.000	.000	.000	.000	.932



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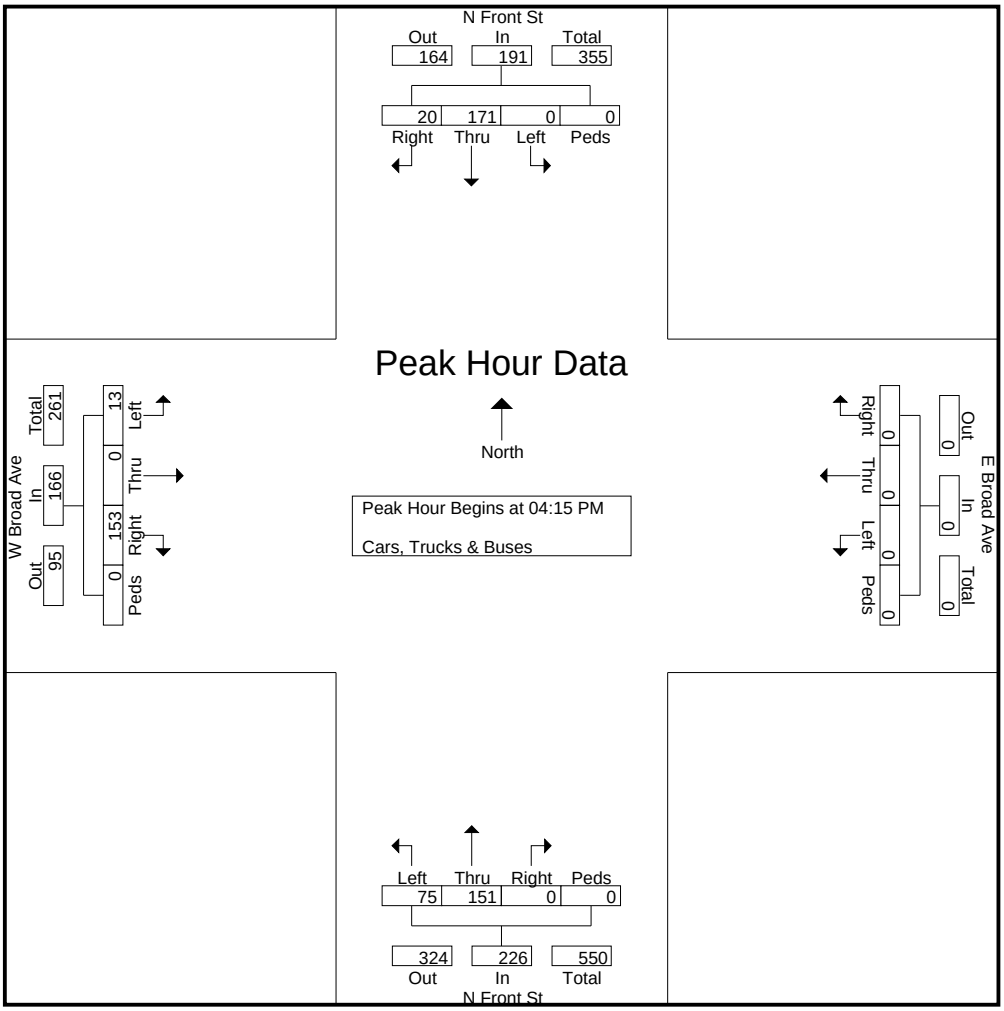
TMC Data

N Front St @ E Broad Ave
7-9am 4-6pm

File Name : 28550003
Site Code : 28550003
Start Date : 3/3/2010
Page No : 3

	N Front St Northbound					N Front St Southbound					W Broad Ave Eastbound					E Broad Ave Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	18	36	0	0	54	0	38	5	0	43	3	0	33	0	36	0	0	0	0	0	133
04:30 PM	21	39	0	0	60	0	41	4	0	45	2	0	36	0	38	0	0	0	0	0	143
04:45 PM	19	41	0	0	60	0	47	6	0	53	5	0	41	0	46	0	0	0	0	0	159
05:00 PM	17	35	0	0	52	0	45	5	0	50	3	0	43	0	46	0	0	0	0	0	148
Total Volume	75	151	0	0	226	0	171	20	0	191	13	0	153	0	166	0	0	0	0	0	583
% App. Total	33.2	66.8	0	0		0	89.5	10.5	0		7.8	0	92.2	0		0	0	0	0		
PHF	.893	.921	.000	.000	.942	.000	.910	.833	.000	.901	.650	.000	.890	.000	.902	.000	.000	.000	.000	.000	.917



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ADT Classified Data

Site Code: 28550101
E Broad Ave East of
Old Radium Springs Rd

Eastbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
03/03/10	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
00:15	0	3	2	0	0	0	0	0	0	0	0	0	0	0	5
00:30	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
00:45	0	6	1	0	0	0	0	0	0	0	0	0	0	0	7
	0	17	3	0	0	0	0	0	0	0	0	0	0	0	20
01:00	0	4	2	0	0	0	0	0	0	0	0	0	0	0	6
01:15	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
01:30	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
01:45	0	4	4	0	0	0	0	0	0	0	0	0	0	0	8
	0	16	6	0	0	0	0	0	0	0	0	0	0	0	22
02:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
02:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:30	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
02:45	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9
03:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:15	0	1	0	0	0	0	0	1	0	0	0	0	0	0	2
03:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
	0	4	0	0	0	0	0	1	0	0	0	0	0	0	5
04:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:15	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2
04:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	4	0	0	0	1	0	0	0	0	0	0	0	0	5
05:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15	0	2	0	0	2	0	0	1	0	0	0	0	0	0	5
05:30	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
05:45	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
	0	6	0	0	3	0	0	2	0	0	0	0	0	0	11
06:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
06:15	0	3	0	0	2	0	0	1	0	0	0	0	0	0	6
06:30	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
06:45	0	8	2	0	1	0	0	0	0	0	0	0	0	0	11
	0	16	2	0	3	0	0	1	0	0	0	0	0	0	22
07:00	0	8	6	1	0	0	0	1	1	0	0	0	0	0	17
07:15	0	8	4	0	2	0	0	1	0	0	0	0	0	0	15
07:30	0	5	0	0	1	0	0	0	0	0	0	0	0	0	6
07:45	0	18	5	0	0	0	0	1	0	0	0	0	0	0	24
	0	39	15	1	3	0	0	3	1	0	0	0	0	0	62
08:00	0	14	2	0	1	0	0	1	0	0	0	0	0	0	18
08:15	0	13	0	0	2	0	0	0	0	0	0	0	0	0	15
08:30	0	12	5	0	0	0	0	1	0	0	0	0	0	0	18
08:45	0	19	3	0	1	0	0	0	0	0	0	0	0	0	23
	0	58	10	0	4	0	0	2	0	0	0	0	0	0	74
09:00	0	14	2	0	2	0	0	0	1	0	0	0	0	0	19
09:15	0	17	7	1	2	0	0	0	0	0	0	0	0	0	27
09:30	1	11	3	0	1	1	0	2	0	0	0	0	0	0	19
09:45	0	13	1	0	0	0	0	1	0	0	0	0	0	0	15
	1	55	13	1	5	1	0	3	1	0	0	0	0	0	80
10:00	0	14	5	0	0	0	0	0	0	0	0	0	1	0	20
10:15	0	17	2	0	2	0	1	0	0	0	0	0	0	0	22
10:30	0	13	7	0	1	0	0	1	0	0	0	0	0	0	22
10:45	0	19	2	0	0	0	0	0	0	0	0	0	0	0	21
	0	63	16	0	3	0	1	1	0	0	0	0	1	0	85
11:00	0	19	5	0	0	0	0	1	0	0	0	0	0	0	25
11:15	0	14	5	0	3	0	0	0	0	0	0	0	0	0	22
11:30	0	25	6	0	0	0	0	1	0	0	0	0	1	0	33
11:45	0	22	9	0	1	0	0	0	0	0	0	0	0	0	32
	0	80	25	0	4	0	0	2	0	0	0	0	1	0	112
Total	1	367	90	2	25	2	1	15	2	0	0	0	2	0	507
Percent	0.2%	72.4%	17.8%	0.4%	4.9%	0.4%	0.2%	3.0%	0.4%	0.0%	0.0%	0.0%	0.4%	0.0%	

Reliable Traffic Data Services, LLC

Tel: (770) 578-8158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

ADT Classified Data

Site Code: 28550101
E Broad Ave East of
Old Radium Springs Rd

Eastbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
12 PM	0	19	9	0	0	0	1	0	0	0	0	0	0	0	29
12:15	0	21	5	0	2	0	0	0	0	0	0	0	0	0	28
12:30	0	11	4	0	0	0	0	0	0	0	0	0	0	0	15
12:45	0	19	4	0	1	0	1	0	0	1	0	0	0	0	26
	0	70	22	0	3	0	2	0	0	1	0	0	0	0	98
13:00	0	23	4	0	0	0	0	2	0	0	0	0	0	0	29
13:15	0	20	2	0	1	0	1	1	0	0	0	0	0	0	25
13:30	0	25	4	0	2	0	0	0	0	0	0	0	0	0	31
13:45	0	25	8	0	0	0	0	0	0	0	0	0	0	0	33
	0	93	18	0	3	0	1	3	0	0	0	0	0	0	118
14:00	0	31	7	0	1	0	0	0	0	0	0	0	0	0	39
14:15	0	20	3	1	1	0	0	1	0	0	0	0	0	0	26
14:30	0	13	11	0	1	0	0	1	0	0	0	0	0	0	26
14:45	0	27	6	1	2	0	1	1	0	0	0	0	0	0	38
	0	91	27	2	5	0	1	3	0	0	0	0	0	0	129
15:00	0	13	2	0	2	0	1	0	0	0	1	0	0	0	19
15:15	0	19	5	0	3	0	0	0	0	0	0	0	0	0	27
15:30	0	22	8	2	1	0	0	0	0	1	0	0	0	0	34
15:45	0	21	6	1	1	0	0	0	0	0	0	0	1	0	30
	0	75	21	3	7	0	1	0	0	1	1	0	1	0	110
16:00	0	30	5	0	2	0	0	0	0	0	0	0	0	0	37
16:15	0	25	10	1	4	0	0	0	0	0	0	0	0	0	40
16:30	1	25	10	0	3	1	0	1	0	0	0	0	0	0	41
16:45	0	17	12	0	1	0	0	1	0	0	1	1	0	0	33
	1	97	37	1	10	1	0	2	0	0	1	1	0	0	151
17:00	0	35	14	0	1	0	1	0	0	0	0	0	0	0	51
17:15	0	27	3	0	2	0	0	1	0	0	0	0	0	0	33
17:30	0	31	7	0	1	0	0	0	0	0	0	0	0	0	39
17:45	0	23	8	0	1	0	0	1	0	0	0	0	0	0	33
	0	116	32	0	5	0	1	2	0	0	0	0	0	0	156
18:00	0	16	0	0	0	0	0	0	0	0	0	0	0	0	16
18:15	0	17	11	0	2	0	0	0	0	0	0	0	0	0	30
18:30	0	25	10	0	0	0	0	0	0	0	0	0	0	0	35
18:45	0	25	10	0	1	0	0	0	0	0	0	0	0	0	36
	0	83	31	0	3	0	0	0	0	0	0	0	0	0	117
19:00	1	11	4	0	1	0	0	0	0	0	0	0	0	0	17
19:15	0	23	5	0	2	0	0	0	1	0	0	0	0	0	31
19:30	0	18	2	0	0	0	0	1	0	0	0	0	0	0	21
19:45	0	17	6	0	1	0	0	0	0	0	0	0	0	0	24
	1	69	17	0	4	0	0	1	1	0	0	0	0	0	93
20:00	1	13	0	0	0	0	0	0	0	0	0	0	0	0	14
20:15	0	10	2	0	0	0	0	0	0	0	0	0	0	0	12
20:30	0	18	2	0	0	0	0	0	0	0	0	0	0	0	20
20:45	0	13	2	0	0	0	0	0	0	0	0	0	0	0	15
	1	54	6	0	0	0	0	0	0	0	0	0	0	0	61
21:00	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9
21:15	0	6	2	0	0	0	0	0	0	0	0	0	0	0	8
21:30	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
21:45	0	8	2	0	0	0	0	0	0	0	0	0	0	0	10
	0	30	4	0	0	0	0	0	0	0	0	0	0	0	34
22:00	0	11	4	0	0	0	0	0	0	0	0	0	0	0	15
22:15	0	8	2	0	0	0	0	0	0	0	0	0	0	0	10
22:30	0	6	2	0	0	0	0	0	0	0	0	0	0	0	8
22:45	0	12	2	0	0	0	0	0	0	0	0	0	0	0	14
	0	37	10	0	0	0	0	0	0	0	0	0	0	0	47
23:00	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
23:15	0	5	0	0	0	0	1	0	0	0	0	0	0	0	6
23:30	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
23:45	0	6	2	0	0	0	0	0	0	0	0	0	0	0	8
	0	22	2	0	0	0	1	0	0	0	0	0	0	0	25
Total	3	837	227	6	40	1	7	11	1	2	2	1	1	0	1139
Percent	0.3%	73.5%	19.9%	0.5%	3.5%	0.1%	0.6%	1.0%	0.1%	0.2%	0.2%	0.1%	0.1%	0.0%	
Grand Total	4	1204	317	8	65	3	8	26	3	2	2	1	3	0	1646
Percent	0.2%	73.1%	19.3%	0.5%	3.9%	0.2%	0.5%	1.6%	0.2%	0.1%	0.1%	0.1%	0.2%	0.0%	

Reliable Traffic Data Services, LLC

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ADT Classified Data

Site Code: 28550101
E Broad Ave East of
Old Radium Springs Rd

Westbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
03/03/10	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
00:15	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
00:30	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
00:45	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
	0	15	2	0	0	0	0	0	0	0	0	0	0	0	17
01:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
01:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
01:30	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
01:45	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
	0	10	2	0	0	0	0	0	0	0	0	0	0	0	12
02:00	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
02:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
	0	7	1	0	0	0	0	0	0	0	0	0	0	0	8
03:00	0	6	1	0	0	0	0	0	0	0	0	0	0	0	7
03:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
03:30	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03:45	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
	0	13	2	0	0	0	0	0	0	0	0	0	0	0	15
04:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
04:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
05:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2
05:45	0	4	0	0	1	0	0	0	0	0	0	0	0	0	5
	0	7	0	0	2	0	0	0	0	0	0	0	0	0	9
06:00	0	1	1	0	1	0	0	0	0	0	0	0	0	0	3
06:15	0	7	3	0	0	0	0	1	0	0	0	0	0	0	11
06:30	0	5	3	0	1	0	0	1	0	0	0	0	0	0	10
06:45	0	7	2	0	1	0	0	0	0	0	0	0	0	0	10
	0	20	9	0	3	0	0	2	0	0	0	0	0	0	34
07:00	0	15	3	0	1	0	0	0	0	0	0	0	0	0	19
07:15	0	19	7	0	1	0	0	0	0	0	0	0	0	0	27
07:30	0	33	5	1	1	0	0	1	0	0	0	0	0	0	41
07:45	0	45	8	0	1	0	0	1	0	0	0	0	0	0	55
	0	112	23	1	4	0	0	2	0	0	0	0	0	0	142
08:00	0	32	5	0	1	0	0	1	0	0	0	0	0	0	39
08:15	0	35	8	0	3	0	0	0	0	0	0	0	0	0	46
08:30	0	29	5	0	3	0	0	0	0	1	0	0	0	0	38
08:45	0	26	4	0	0	0	0	0	0	0	0	0	0	0	30
	0	122	22	0	7	0	0	1	0	1	0	0	0	0	153
09:00	0	22	8	0	1	0	0	0	0	0	0	0	0	0	31
09:15	0	28	8	0	0	0	0	0	0	0	0	0	0	0	36
09:30	0	22	4	0	1	0	0	0	0	0	0	0	0	0	27
09:45	0	33	5	0	0	0	0	2	0	0	0	0	0	0	40
	0	105	25	0	2	0	0	2	0	0	0	0	0	0	134
10:00	0	23	5	0	3	0	0	0	0	0	0	0	0	0	31
10:15	0	23	5	0	1	0	0	0	0	0	0	0	0	0	29
10:30	0	19	8	0	2	1	0	1	0	0	0	0	0	0	31
10:45	0	21	4	0	1	0	0	0	0	0	0	1	0	0	27
	0	86	22	0	7	1	0	1	0	0	0	1	0	0	118
11:00	0	29	5	0	2	0	0	0	0	0	0	0	0	0	36
11:15	0	23	8	0	1	0	0	1	0	0	0	0	0	0	33
11:30	0	24	4	0	2	0	0	0	0	0	0	0	0	0	30
11:45	0	21	7	0	1	0	0	0	0	0	0	0	0	0	29
	0	97	24	0	6	0	0	1	0	0	0	0	0	0	128
Total	0	598	132	1	31	1	0	9	0	1	0	1	0	0	774
Percent	0.0%	77.3%	17.1%	0.1%	4.0%	0.1%	0.0%	1.2%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	

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ADT Classified Data

Site Code: 28550101
E Broad Ave East of
Old Radium Springs Rd

Westbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
12 PM	0	28	4	0	1	0	0	0	0	0	0	0	0	0	33
12:15	0	24	4	0	2	0	0	1	0	0	0	0	0	0	31
12:30	0	26	4	0	3	0	0	0	0	0	0	0	0	0	33
12:45	0	25	12	0	0	0	0	1	0	0	0	0	0	0	38
	0	103	24	0	6	0	0	2	0	0	0	0	0	0	135
13:00	0	21	6	0	1	0	0	1	0	0	0	0	0	0	29
13:15	0	24	8	0	2	0	0	1	0	0	0	0	0	0	35
13:30	0	31	7	0	1	0	0	0	0	0	0	0	0	0	39
13:45	0	28	7	0	1	0	0	0	0	0	0	0	0	0	36
	0	104	28	0	5	0	0	2	0	0	0	0	0	0	139
14:00	0	23	9	1	1	0	0	2	0	0	0	0	0	0	36
14:15	0	31	7	0	1	0	0	0	0	0	0	0	0	0	39
14:30	0	34	8	1	1	0	0	0	0	0	0	0	0	0	44
14:45	0	28	3	0	0	1	0	1	0	0	0	0	0	0	33
	0	116	27	2	3	1	0	3	0	0	0	0	0	0	152
15:00	0	31	4	0	2	0	0	2	0	0	0	0	0	0	39
15:15	0	28	6	0	1	0	0	1	0	0	0	0	0	0	36
15:30	0	27	9	0	1	0	0	1	0	0	0	0	0	0	38
15:45	0	28	9	0	1	0	0	0	0	0	0	0	0	0	38
	0	114	28	0	5	0	0	4	0	0	0	0	0	0	151
16:00	0	29	8	0	2	0	0	0	0	1	0	0	1	0	41
16:15	0	37	8	1	1	0	0	1	0	0	0	0	0	0	48
16:30	0	31	8	0	1	0	0	0	0	0	0	0	0	0	40
16:45	0	28	9	0	1	0	0	0	0	1	0	0	0	0	39
	0	125	33	1	5	0	0	1	0	2	0	0	1	0	168
17:00	0	41	9	0	1	0	0	1	0	0	0	0	0	0	52
17:15	1	37	5	0	1	0	0	0	0	0	0	0	0	0	44
17:30	0	29	7	0	1	0	0	0	0	0	0	0	0	0	37
17:45	0	39	5	0	0	0	0	0	0	0	0	0	0	0	44
	1	146	26	0	3	0	0	1	0	0	0	0	0	0	177
18:00	0	22	5	0	1	0	0	2	0	1	0	0	0	0	31
18:15	0	17	3	0	1	0	0	0	0	0	0	0	0	0	21
18:30	0	20	8	0	1	0	0	0	0	0	0	0	0	0	29
18:45	0	31	4	0	0	0	0	0	0	0	0	0	0	0	35
	0	90	20	0	3	0	0	2	0	1	0	0	0	0	116
19:00	0	27	4	0	1	0	0	1	0	0	0	0	0	0	33
19:15	0	21	2	0	0	0	0	0	0	0	0	0	0	0	23
19:30	0	23	4	0	1	0	0	0	0	0	0	0	0	0	28
19:45	0	12	2	0	1	0	0	1	0	0	0	0	0	0	16
	0	83	12	0	3	0	0	2	0	0	0	0	0	0	100
20:00	0	11	4	0	1	0	0	0	0	0	0	0	0	0	16
20:15	0	12	5	0	1	0	0	0	0	0	0	0	0	0	18
20:30	0	10	1	0	0	0	0	0	0	0	0	0	0	0	11
20:45	0	8	3	0	0	0	0	0	0	0	0	0	0	0	11
	0	41	13	0	2	0	0	0	0	0	0	0	0	0	56
21:00	0	13	3	0	1	0	0	0	0	0	0	0	0	0	17
21:15	0	7	3	0	0	0	0	0	0	0	0	0	0	0	10
21:30	0	6	2	0	0	0	0	0	0	0	0	0	0	0	8
21:45	0	9	1	0	0	0	0	0	0	0	0	0	0	0	10
	0	35	9	0	1	0	0	0	0	0	0	0	0	0	45
22:00	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
22:15	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
22:30	0	13	3	0	0	0	0	0	0	0	0	0	0	0	16
22:45	0	10	1	0	0	0	0	0	0	0	0	0	0	0	11
	0	33	6	0	0	0	0	0	0	0	0	0	0	0	39
23:00	0	9	2	0	1	0	0	0	0	0	0	0	0	0	12
23:15	0	9	1	0	1	0	0	0	0	0	0	0	0	0	11
23:30	0	6	2	0	0	0	0	0	0	0	0	0	0	0	8
23:45	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
	0	28	5	0	2	0	0	0	0	0	0	0	0	0	35
Total	1	1018	231	3	38	1	0	17	0	3	0	0	1	0	1313
Percent	0.1%	77.5%	17.6%	0.2%	2.9%	0.1%	0.0%	1.3%	0.0%	0.2%	0.0%	0.0%	0.1%	0.0%	
Grand Total	1	1616	363	4	69	2	0	26	0	4	0	1	1	0	2087
Percent	0.0%	77.4%	17.4%	0.2%	3.3%	0.1%	0.0%	1.2%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	

Reliable Traffic Data Services, LLC

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ADT Data

Site Code: 28550103
College Dr North of E Oglethorpe Blvd

Start Time	03-Mar-10 Wed	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	2			2	14				
12:15		0	1			2	22				
12:30		0	1			2	15				
12:45		0	0	0	4	3	22	9	73	9	77
01:00		0	2			0	15				
01:15		0	0			0	17				
01:30		0	1			2	28				
01:45		0	1	0	4	2	19	4	79	4	83
02:00		0	1			3	19				
02:15		0	1			2	26				
02:30		0	0			0	33				
02:45		0	1	0	3	1	29	6	107	6	110
03:00		1	0			1	27				
03:15		0	1			2	24				
03:30		0	2			1	26				
03:45		0	0	1	3	2	28	6	105	7	108
04:00		0	0			2	24				
04:15		2	1			0	21				
04:30		1	3			0	20				
04:45		0	0	3	4	0	22	2	87	5	91
05:00		1	2			0	28				
05:15		0	0			0	26				
05:30		1	2			0	24				
05:45		3	0	5	4	0	26	0	104	5	108
06:00		2	0			0	24				
06:15		6	0			0	17				
06:30		7	0			0	22				
06:45		3	0	18	0	5	16	5	79	23	79
07:00		0	0			11	15				
07:15		0	1			16	13				
07:30		0	0			22	16				
07:45		0	0	0	1	25	11	74	55	74	56
08:00		0	0			17	10				
08:15		0	0			29	15				
08:30		0	0			27	10				
08:45		6	0	6	0	19	9	92	44	98	44
09:00		0	0			18	10				
09:15		0	0			18	6				
09:30		1	0			14	8				
09:45		1	0	2	0	29	7	79	31	81	31
10:00		2	0			24	4				
10:15		0	0			21	4				
10:30		0	0			19	12				
10:45		0	0	2	0	20	7	84	27	86	27
11:00		0	0			14	3				
11:15		2	1			23	6				
11:30		0	0			17	2				
11:45		0	0	2	1	15	2	69	13	71	14
Total		39	24			430	804			469	828
Percent		61.9%	38.1%			34.8%	65.2%			36.2%	63.8%
Grand Total		39	24			430	804			469	828
Percent		61.9%	38.1%			34.8%	65.2%			36.2%	63.8%

ADT ADT 1,297 AADT 1,297

Reliable Traffic Data Services, LLC

Tel: (770) 578-8158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

ADT Data

Site Code: 28550104
E Oglethorpe Blvd East of S Front St

Start Time	03-Mar-10 Wed	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		54	255			63	314				
12:15		49	279			53	319				
12:30		39	280			40	338				
12:45		41	276	183	1090	44	339	200	1310	383	2400
01:00		44	272			47	329				
01:15		40	255			41	317				
01:30		38	267			38	331				
01:45		29	254	151	1048	27	302	153	1279	304	2327
02:00		31	250			35	303				
02:15		25	254			23	310				
02:30		31	289			32	358				
02:45		32	284	119	1077	32	350	122	1321	241	2398
03:00		30	267			32	329				
03:15		28	272			32	344				
03:30		25	284			28	334				
03:45		29	301	112	1124	37	356	129	1363	241	2487
04:00		15	321			13	383				
04:15		22	340			26	391				
04:30		20	363			15	390				
04:45		26	397	83	1421	29	370	83	1534	166	2955
05:00		23	408			23	382				
05:15		21	353			20	373				
05:30		32	332			30	339				
05:45		36	312	112	1405	40	287	113	1381	225	2786
06:00		64	314			62	286				
06:15		90	296			89	278				
06:30		114	283			107	257				
06:45		149	271	417	1164	153	247	411	1068	828	2232
07:00		175	262			184	233				
07:15		200	226			289	198				
07:30		253	220			369	206				
07:45		274	193	902	901	405	175	1247	812	2149	1713
08:00		243	170			331	160				
08:15		278	180			347	176				
08:30		273	168			339	152				
08:45		261	139	1055	657	319	115	1336	603	2391	1260
09:00		253	146			296	146				
09:15		237	133			283	109				
09:30		234	130			278	106				
09:45		246	125	970	534	305	104	1162	465	2132	999
10:00		231	122			268	97				
10:15		217	118			239	97				
10:30		236	112			288	98				
10:45		232	109	916	461	283	95	1078	387	1994	848
11:00		259	125			316	107				
11:15		250	123			311	108				
11:30		243	100			298	88				
11:45		245	88	997	436	294	74	1219	377	2216	813
Total		6017	11318			7253	11900			13270	23218
Percent		34.7%	65.3%			37.9%	62.1%			36.4%	63.6%
Grand Total		6017	11318			7253	11900			13270	23218
Percent		34.7%	65.3%			37.9%	62.1%			36.4%	63.6%

ADT ADT 36,488 AADT 36,488

Reliable Traffic Data Services, LLC

Tel: (770) 578-8158 Fax: (770) 578-8159
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ADT Data

Site Code: 28550105
N Front St South of E Broad Ave

Start Time	03-Mar-10 Wed	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		14	55			0	62				
12:15		11	49			0	61				
12:30		9	52			0	69				
12:45		7	41	41	197	0	80	0	272	41	469
01:00		6	43			0	57				
01:15		5	52			0	69				
01:30		6	50			0	62				
01:45		6	35	23	180	0	61	0	249	23	429
02:00		3	55			0	80				
02:15		4	37			0	78				
02:30		3	35			0	56				
02:45		8	29	18	156	5	64	5	278	23	434
03:00		4	39			3	70				
03:15		2	46			3	65				
03:30		3	43			1	60				
03:45		0	47	9	175	2	69	9	264	18	439
04:00		3	49			0	86				
04:15		1	56			1	73				
04:30		2	52			2	69				
04:45		3	49	9	206	0	65	3	293	12	499
05:00		5	40			1	83				
05:15		2	45			2	76				
05:30		2	34			1	62				
05:45		4	40	13	159	4	53	8	274	21	433
06:00		7	33			7	45				
06:15		12	33			5	41				
06:30		16	22			9	38				
06:45		27	25	62	113	11	32	32	156	94	269
07:00		35	23			17	29				
07:15		40	26			24	31				
07:30		53	24			29	27				
07:45		51	21	179	94	35	24	105	111	284	205
08:00		42	23			37	21				
08:15		48	19			38	22				
08:30		51	20			45	17				
08:45		47	18	188	80	59	16	179	76	367	156
09:00		36	15			41	18				
09:15		33	17			43	15				
09:30		35	19			41	13				
09:45		32	22	136	73	57	14	182	60	318	133
10:00		32	25			35	12				
10:15		30	17			50	13				
10:30		38	24			47	10				
10:45		33	21	133	87	49	11	181	46	314	133
11:00		41	24			43	13				
11:15		40	25			64	10				
11:30		46	25			52	9				
11:45		56	15	183	89	50	13	209	45	392	134
Total		994	1609			913	2124			1907	3733
Percent		38.2%	61.8%			30.1%	69.9%			33.8%	66.2%
Grand Total			994	1609			913	2124			1907	3733
Percent			38.2%	61.8%			30.1%	69.9%			33.8%	66.2%

ADT ADT 5,640 AADT 5,640

Reliable Traffic Data Services, LLC

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ADT Data

Site Code: 28550106
N Front St North of
W Broad Ave

Start Time	03-Mar-10 Wed	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		3	40			3	45				
12:15		2	41			5	41				
12:30		3	50			5	54				
12:45		2	35	10	166	3	49	16	189	26	355
01:00		2	37			5	29				
01:15		1	41			1	34				
01:30		1	38			5	36				
01:45		2	30	6	146	3	33	14	132	20	278
02:00		1	47			6	44				
02:15		0	31			4	34				
02:30		2	24			0	31				
02:45		4	51	7	153	1	36	11	145	18	298
03:00		1	28			3	34				
03:15		1	43			1	30				
03:30		0	33			1	49				
03:45		0	51	2	155	0	41	5	154	7	309
04:00		1	35			2	55				
04:15		0	54			1	44				
04:30		0	37			1	41				
04:45		3	41	4	167	1	36	5	176	9	343
05:00		2	38			2	62				
05:15		1	32			0	31				
05:30		2	29			4	30				
05:45		1	32	6	131	0	24	6	147	12	278
06:00		1	22			4	24				
06:15		9	25			6	18				
06:30		5	16			4	23				
06:45		4	17	19	80	8	9	22	74	41	154
07:00		17	14			9	10				
07:15		28	12			11	11				
07:30		33	13			12	12				
07:45		51	10	129	49	14	7	46	40	175	89
08:00		33	9			16	13				
08:15		32	5			19	9				
08:30		41	10			27	10				
08:45		35	6	141	30	31	10	93	42	234	72
09:00		30	10			32	10				
09:15		19	7			23	10				
09:30		28	2			25	1				
09:45		28	3	105	22	21	12	101	33	206	55
10:00		25	8			22	13				
10:15		32	5			21	1				
10:30		26	8			21	7				
10:45		15	6	98	27	32	9	96	30	194	57
11:00		31	6			27	7				
11:15		28	10			48	2				
11:30		29	7			42	1				
11:45		42	4	130	27	40	6	157	16	287	43
Total		657	1153			572	1178			1229	2331
Percent		36.3%	63.7%			32.7%	67.3%			34.5%	65.5%
Grand Total			657	1153			572	1178			1229	2331
Percent			36.3%	63.7%			32.7%	67.3%			34.5%	65.5%

ADT ADT 3,560 AADT 3,560

Reliable Traffic Data Services, LLC

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ADT Data

Site Code: 28550107
W Broad Ave West of N Front St

Start Time	03-Mar-10 Wed	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		12	39			12	37				
12:15		14	37			14	36				
12:30		12	48			12	39				
12:45		11	36	49	160	9	32	47	144	96	304
01:00		12	49			6	37				
01:15		18	46			5	33				
01:30		12	41			7	32				
01:45		10	34	52	170	3	28	21	130	73	300
02:00		13	43			2	30				
02:15		6	40			4	26				
02:30		5	37			0	28				
02:45		19	34	43	154	5	24	11	108	54	262
03:00		20	49			2	22				
03:15		5	44			1	25				
03:30		10	26			1	30				
03:45		3	41	38	160	2	26	6	103	44	263
04:00		2	40			3	27				
04:15		0	39			2	25				
04:30		0	38			1	23				
04:45		0	42	2	159	1	20	7	95	9	254
05:00		1	48			2	23				
05:15		3	43			1	19				
05:30		4	34			3	15				
05:45		5	29	13	154	4	13	10	70	23	224
06:00		2	35			3	16				
06:15		4	26			2	12				
06:30		6	21			5	14				
06:45		10	23	22	105	7	12	17	54	39	159
07:00		10	24			9	15				
07:15		16	20			13	13				
07:30		19	23			16	12				
07:45		23	16	68	83	21	10	59	50	127	133
08:00		22	10			19	13				
08:15		18	10			16	10				
08:30		26	10			18	11				
08:45		23	19	89	49	15	8	68	42	157	91
09:00		16	12			14	9				
09:15		23	14			19	10				
09:30		31	3			20	8				
09:45		37	13	107	42	16	10	69	37	176	79
10:00		21	15			13	14				
10:15		32	13			14	10				
10:30		29	11			13	14				
10:45		24	15	106	54	19	16	59	54	165	108
11:00		32	15			24	22				
11:15		30	14			26	18				
11:30		30	11			30	21				
11:45		40	14	132	54	39	12	119	73	251	127
Total		721	1344			493	960			1214	2304
Percent		34.9%	65.1%			33.9%	66.1%			34.5%	65.5%
Grand Total			721	1344			493	960			1214	2304
Percent			34.9%	65.1%			33.9%	66.1%			34.5%	65.5%

ADT ADT 3,518 AADT 3,518

APPENDIX B: CAPACITY ANALYSES WORKSHEETS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0					4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00					1.00	1.00			1.00	
Frt	1.00	0.85					1.00	1.00			0.98	
Flt Protected	0.95	1.00					0.95	1.00			1.00	
Satd. Flow (prot)	1770	1583					1770	1863			1824	
Flt Permitted	0.76	1.00					0.70	1.00			1.00	
Satd. Flow (perm)	1410	1583					1298	1863			1824	
Volume (vph)	5	0	87	0	0	0	60	146	0	0	74	12
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.87	0.87	0.87	0.92	0.92	0.92
Adj. Flow (vph)	5	0	95	0	0	0	69	168	0	0	80	13
RTOR Reduction (vph)	0	82	0	0	0	0	0	0	0	0	4	0
Lane Group Flow (vph)	5	13	0	0	0	0	69	168	0	0	89	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	3.5	3.5					24.5	24.5			24.5	
Effective Green, g (s)	5.5	5.5					26.5	26.5			26.5	
Actuated g/C Ratio	0.14	0.14					0.66	0.66			0.66	
Clearance Time (s)	6.0	6.0					6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0					3.0	3.0			3.0	
Lane Grp Cap (vph)	194	218					860	1234			1208	
v/s Ratio Prot		c0.06						c0.09			0.05	
v/s Ratio Perm	0.00						0.05					
v/c Ratio	0.03	0.06					0.08	0.14			0.07	
Uniform Delay, d1	14.9	15.0					2.4	2.5			2.4	
Progression Factor	1.00	1.00					0.24	0.23			1.00	
Incremental Delay, d2	0.1	0.1					0.2	0.2			0.1	
Delay (s)	15.0	15.1					0.7	0.8			2.5	
Level of Service	B	B					A	A			A	
Approach Delay (s)		15.1			0.0			0.8			2.5	
Approach LOS		B			A			A			A	

Intersection Summary

HCM Average Control Delay	4.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.19		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	22.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	93	0	0	0
Peak Hour Factor	0.92	0.92	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	0	0	103	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	1248					
pX, platoon unblocked						
vC, conflicting volume			0		207	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		207	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		100	100
cM capacity (veh/h)			1622		714	1084

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	0	0	103	0	0
Volume Left	0	0	103	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1622	1700	1700
Volume to Capacity	0.00	0.00	0.06	0.00	0.00
Queue Length (ft)	0	0	5	0	0
Control Delay (s)	0.0	0.0	7.4	0.0	0.0
Lane LOS			A		A
Approach Delay (s)	0.0		7.4		0.0
Approach LOS					A

Intersection Summary			
Average Delay	7.4		
Intersection Capacity Utilization	8.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	2	0	85	87	5	71
Peak Hour Factor	0.92	0.92	0.90	0.90	0.86	0.86
Hourly flow rate (vph)	2	0	94	97	6	83
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			2		288	1
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			2		288	1
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		99	92
cM capacity (veh/h)			1619		640	1083

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2
Volume Total	1	1	191	6	83
Volume Left	0	0	94	6	0
Volume Right	0	0	0	0	83
cSH	1700	1700	1619	640	1083
Volume to Capacity	0.00	0.00	0.06	0.01	0.08
Queue Length (ft)	0	0	5	1	6
Control Delay (s)	0.0	0.0	3.9	10.7	8.6
Lane LOS			A	B	A
Approach Delay (s)	0.0		3.9	8.7	
Approach LOS				A	

Intersection Summary			
Average Delay	5.4		
Intersection Capacity Utilization	25.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	125	924	15	0	1260	7	0	0	11	0	0	102
Peak Hour Factor	0.94	0.94	0.94	0.91	0.91	0.91	0.92	0.92	0.92	0.82	0.82	0.82
Hourly flow rate (vph)	133	983	16	0	1385	8	0	0	12	0	0	124
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1392			999			2066	2641	491	2154	2650	692
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1392			999			2066	2641	491	2154	2650	692
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	73			100			100	100	98	100	100	68
cM capacity (veh/h)	487			689			17	17	523	21	17	386

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	133	491	491	16	692	692	8	12	124
Volume Left	133	0	0	0	0	0	0	0	0
Volume Right	0	0	0	16	0	0	8	12	124
cSH	487	1700	1700	1700	1700	1700	1700	523	386
Volume to Capacity	0.27	0.29	0.29	0.01	0.41	0.41	0.00	0.02	0.32
Queue Length (ft)	27	0	0	0	0	0	0	2	34
Control Delay (s)	15.1	0.0	0.0	0.0	0.0	0.0	0.0	12.0	18.7
Lane LOS	C							B	C
Approach Delay (s)	1.8				0.0			12.0	18.7
Approach LOS								B	C

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱			↱			↱
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	1043	5	0	1259	1	0	0	5	0	0	93
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1134	5	0	1368	1	0	0	5	0	0	101
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1270										
pX, platoon unblocked												
vC, conflicting volume	1370			1139			1919	2503	567	1941	2508	684
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1370			1139			1919	2503	567	1941	2508	684
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	99	100	100	74
cM capacity (veh/h)	497			609			30	28	467	39	28	391

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	567	567	5	684	684	1	5	101
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	5	0	0	1	5	101
cSH	1700	1700	1700	1700	1700	1700	467	391
Volume to Capacity	0.33	0.33	0.00	0.40	0.40	0.00	0.01	0.26
Queue Length (ft)	0	0	0	0	0	0	1	25
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	12.8	17.4
Lane LOS							B	C
Approach Delay (s)	0.0			0.0			12.8	17.4
Approach LOS							B	C

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	47.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0					4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00					1.00	1.00			1.00	
Frt	1.00	0.85					1.00	1.00			0.98	
Flt Protected	0.95	1.00					0.95	1.00			1.00	
Satd. Flow (prot)	1770	1583					1770	1863			1834	
Flt Permitted	0.76	1.00					0.63	1.00			1.00	
Satd. Flow (perm)	1410	1583					1165	1863			1834	
Volume (vph)	13	0	153	0	0	0	75	151	0	0	171	20
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.94	0.94	0.94	0.90	0.90	0.90
Adj. Flow (vph)	14	0	170	0	0	0	80	161	0	0	190	22
RTOR Reduction (vph)	0	148	0	0	0	0	0	0	0	0	4	0
Lane Group Flow (vph)	14	22	0	0	0	0	80	161	0	0	208	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	5.0	5.0					38.0	38.0			38.0	
Effective Green, g (s)	7.0	7.0					40.0	40.0			40.0	
Actuated g/C Ratio	0.13	0.13					0.73	0.73			0.73	
Clearance Time (s)	6.0	6.0					6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0					3.0	3.0			3.0	
Lane Grp Cap (vph)	179	201					847	1355			1334	
v/s Ratio Prot		c0.11						0.09			c0.12	
v/s Ratio Perm	0.01						0.07					
v/c Ratio	0.08	0.11					0.09	0.12			0.16	
Uniform Delay, d1	21.2	21.2					2.2	2.2			2.3	
Progression Factor	1.00	1.00					0.10	0.10			1.00	
Incremental Delay, d2	0.2	0.2					0.2	0.2			0.2	
Delay (s)	21.3	21.5					0.4	0.4			2.6	
Level of Service	C	C					A	A			A	
Approach Delay (s)		21.5			0.0			0.4			2.6	
Approach LOS		C			A			A			A	

Intersection Summary

HCM Average Control Delay	7.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	100	0	0	4
Peak Hour Factor	0.92	0.92	0.93	0.93	0.92	0.92
Hourly flow rate (vph)	0	0	108	0	0	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	1248					
pX, platoon unblocked						
vC, conflicting volume			0		215	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		215	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		100	100
cM capacity (veh/h)			1622		704	1084

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	0	0	108	0	4
Volume Left	0	0	108	0	0
Volume Right	0	0	0	0	4
cSH	1700	1700	1622	1700	1084
Volume to Capacity	0.00	0.00	0.07	0.00	0.00
Queue Length (ft)	0	0	5	0	0
Control Delay (s)	0.0	0.0	7.4	0.0	8.3
Lane LOS			A		A
Approach Delay (s)	0.0		7.4		8.3
Approach LOS					A

Intersection Summary			
Average Delay	7.4		
Intersection Capacity Utilization	15.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	2	3	83	99	2	165
Peak Hour Factor	0.92	0.92	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	2	3	89	106	2	177
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			5		289	3
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			5		289	3
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		100	84
cM capacity (veh/h)			1614		641	1080

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2
Volume Total	1	4	196	2	177
Volume Left	0	0	89	2	0
Volume Right	0	3	0	0	177
cSH	1700	1700	1614	641	1080
Volume to Capacity	0.00	0.00	0.06	0.00	0.16
Queue Length (ft)	0	0	4	0	15
Control Delay (s)	0.0	0.0	3.6	10.6	9.0
Lane LOS			A	B	A
Approach Delay (s)	0.0		3.6	9.0	
Approach LOS				A	

Intersection Summary			
Average Delay	6.1		
Intersection Capacity Utilization	26.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	299	1185	14	0	1260	30	2	0	7	0	0	110
Peak Hour Factor	0.90	0.90	0.90	0.96	0.96	0.96	0.92	0.92	0.92	0.89	0.89	0.89
Hourly flow rate (vph)	332	1317	16	0	1312	31	2	0	8	0	0	124
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1344			1332			2761	3325	658	2643	3309	656
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1344			1332			2761	3325	658	2643	3309	656
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	35			100			28	100	98	100	100	70
cM capacity (veh/h)	509			514			3	3	407	5	3	408

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	332	658	658	16	656	656	31	10	124
Volume Left	332	0	0	0	0	0	0	2	0
Volume Right	0	0	0	16	0	0	31	8	124
cSH	509	1700	1700	1700	1700	1700	1700	13	408
Volume to Capacity	0.65	0.39	0.39	0.01	0.39	0.39	0.02	0.74	0.30
Queue Length (ft)	117	0	0	0	0	0	0	43	31
Control Delay (s)	24.4	0.0	0.0	0.0	0.0	0.0	0.0	524.2	17.6
Lane LOS	C							F	C
Approach Delay (s)	4.9				0.0			524.2	17.6
Approach LOS								F	C

Intersection Summary

Average Delay	4.9		
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱			↱			↱
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	1520	1	0	1425	4	0	0	27	0	0	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1652	1	0	1549	4	0	0	29	0	0	98
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1270										
pX, platoon unblocked												
vC, conflicting volume	1553			1653			2524	3205	826	2404	3202	774
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1553			1653			2524	3205	826	2404	3202	774
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	91	100	100	71
cM capacity (veh/h)	422			386			10	10	315	16	10	341

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	826	826	1	774	774	4	29	98
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	1	0	0	4	29	98
cSH	1700	1700	1700	1700	1700	1700	315	341
Volume to Capacity	0.49	0.49	0.00	0.46	0.46	0.00	0.09	0.29
Queue Length (ft)	0	0	0	0	0	0	8	29
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	17.6	19.8
Lane LOS							C	C
Approach Delay (s)	0.0			0.0			17.6	19.8
Approach LOS							C	C

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0					4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00					1.00	1.00			1.00	
Frt	1.00	0.85					1.00	1.00			0.98	
Flt Protected	0.95	1.00					0.95	1.00			1.00	
Satd. Flow (prot)	1770	1583					1770	1863			1825	
Flt Permitted	1.00	1.00					0.69	1.00			1.00	
Satd. Flow (perm)	1863	1583					1293	1863			1825	
Volume (vph)	5	0	91	0	0	0	62	152	0	0	77	12
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.87	0.87	0.87	0.92	0.92	0.92
Adj. Flow (vph)	5	0	99	0	0	0	71	175	0	0	84	13
RTOR Reduction (vph)	0	92	0	0	0	0	0	0	0	0	3	0
Lane Group Flow (vph)	5	7	0	0	0	0	71	175	0	0	94	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	3.6	3.6					38.4	38.4			38.4	
Effective Green, g (s)	3.6	3.6					38.4	38.4			38.4	
Actuated g/C Ratio	0.07	0.07					0.77	0.77			0.77	
Clearance Time (s)	4.0	4.0					4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0					3.0	3.0			3.0	
Lane Grp Cap (vph)	134	114					993	1431			1402	
v/s Ratio Prot		c0.06						c0.09			0.05	
v/s Ratio Perm	0.00						0.05					
v/c Ratio	0.04	0.06					0.07	0.12			0.07	
Uniform Delay, d1	21.6	21.6					1.4	1.5			1.4	
Progression Factor	1.00	1.00					0.12	0.12			1.00	
Incremental Delay, d2	0.1	0.2					0.1	0.2			0.1	
Delay (s)	21.7	21.9					0.3	0.3			1.5	
Level of Service	C	C					A	A			A	
Approach Delay (s)		21.9			0.0			0.3			1.5	
Approach LOS		C			A			A			A	

Intersection Summary

HCM Average Control Delay	5.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.19		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	22.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	97	0	0	0
Peak Hour Factor	0.92	0.92	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	0	0	108	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	1248					
pX, platoon unblocked						
vC, conflicting volume			0		216	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		216	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		100	100
cM capacity (veh/h)			1622		703	1084

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	0	0	108	0	0
Volume Left	0	0	108	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1622	1700	1700
Volume to Capacity	0.00	0.00	0.07	0.00	0.00
Queue Length (ft)	0	0	5	0	0
Control Delay (s)	0.0	0.0	7.4	0.0	0.0
Lane LOS			A		A
Approach Delay (s)	0.0		7.4		0.0
Approach LOS					A

Intersection Summary			
Average Delay	7.4		
Intersection Capacity Utilization	8.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	2	0	88	91	5	74
Peak Hour Factor	0.92	0.92	0.90	0.90	0.86	0.86
Hourly flow rate (vph)	2	0	98	101	6	86
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			2		299	1
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			2		299	1
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		99	92
cM capacity (veh/h)			1619		628	1083

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2
Volume Total	1	1	199	6	86
Volume Left	0	0	98	6	0
Volume Right	0	0	0	0	86
cSH	1700	1700	1619	628	1083
Volume to Capacity	0.00	0.00	0.06	0.01	0.08
Queue Length (ft)	0	0	5	1	6
Control Delay (s)	0.0	0.0	3.9	10.8	8.6
Lane LOS			A	B	A
Approach Delay (s)	0.0		3.9	8.7	
Approach LOS				A	

Intersection Summary			
Average Delay	5.4		
Intersection Capacity Utilization	26.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	130	962	16	0	1311	7	0	0	11	0	0	106
Peak Hour Factor	0.94	0.94	0.94	0.91	0.91	0.91	0.92	0.92	0.92	0.82	0.82	0.82
Hourly flow rate (vph)	138	1023	17	0	1441	8	0	0	12	0	0	129
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1448			1040			2150	2748	512	2241	2758	720
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1448			1040			2150	2748	512	2241	2758	720
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	70			100			100	100	98	100	100	65
cM capacity (veh/h)	464			664			14	14	507	17	14	370

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	138	512	512	17	720	720	8	12	129
Volume Left	138	0	0	0	0	0	0	0	0
Volume Right	0	0	0	17	0	0	8	12	129
cSH	464	1700	1700	1700	1700	1700	1700	507	370
Volume to Capacity	0.30	0.30	0.30	0.01	0.42	0.42	0.00	0.02	0.35
Queue Length (ft)	31	0	0	0	0	0	0	2	38
Control Delay (s)	16.0	0.0	0.0	0.0	0.0	0.0	0.0	12.3	19.9
Lane LOS	C							B	C
Approach Delay (s)	1.9				0.0			12.3	19.9
Approach LOS								B	C

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱			↱			↱
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	1085	5	0	1310	1	0	0	5	0	0	97
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1179	5	0	1424	1	0	0	5	0	0	105
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1270										
pX, platoon unblocked												
vC, conflicting volume	1425			1185			1997	2604	590	2019	2609	712
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1425			1185			1997	2604	590	2019	2609	712
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	99	100	100	72
cM capacity (veh/h)	473			585			26	24	451	34	24	375

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	590	590	5	712	712	1	5	105
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	5	0	0	1	5	105
cSH	1700	1700	1700	1700	1700	1700	451	375
Volume to Capacity	0.35	0.35	0.00	0.42	0.42	0.00	0.01	0.28
Queue Length (ft)	0	0	0	0	0	0	1	28
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	13.1	18.3
Lane LOS							B	C
Approach Delay (s)	0.0			0.0			13.1	18.3
Approach LOS							B	C

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0					4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00					1.00	1.00			1.00	
Frt	1.00	0.85					1.00	1.00			0.98	
Flt Protected	0.95	1.00					0.95	1.00			1.00	
Satd. Flow (prot)	1770	1583					1770	1863			1834	
Flt Permitted	0.78	1.00					0.62	1.00			1.00	
Satd. Flow (perm)	1461	1583					1155	1863			1834	
Volume (vph)	14	0	159	0	0	0	78	157	0	0	178	21
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.94	0.94	0.94	0.90	0.90	0.90
Adj. Flow (vph)	16	0	177	0	0	0	83	167	0	0	198	23
RTOR Reduction (vph)	0	162	0	0	0	0	0	0	0	0	3	0
Lane Group Flow (vph)	16	15	0	0	0	0	83	167	0	0	218	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	5.1	5.1					46.9	46.9			46.9	
Effective Green, g (s)	5.1	5.1					46.9	46.9			46.9	
Actuated g/C Ratio	0.08	0.08					0.78	0.78			0.78	
Clearance Time (s)	4.0	4.0					4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0					3.0	3.0			3.0	
Lane Grp Cap (vph)	124	135					903	1456			1434	
v/s Ratio Prot		c0.11						0.09			c0.12	
v/s Ratio Perm	0.01						0.07					
v/c Ratio	0.13	0.11					0.09	0.11			0.15	
Uniform Delay, d1	25.4	25.4					1.5	1.6			1.6	
Progression Factor	1.00	1.00					0.07	0.06			1.00	
Incremental Delay, d2	0.5	0.4					0.2	0.1			0.2	
Delay (s)	25.9	25.7					0.3	0.2			1.8	
Level of Service	C	C					A	A			A	
Approach Delay (s)		25.7			0.0			0.2			1.8	
Approach LOS		C			A			A			A	

Intersection Summary

HCM Average Control Delay	8.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	104	0	0	4
Peak Hour Factor	0.92	0.92	0.93	0.93	0.92	0.92
Hourly flow rate (vph)	0	0	112	0	0	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	1248					
pX, platoon unblocked						
vC, conflicting volume			0		224	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		224	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		100	100
cM capacity (veh/h)			1622		693	1084

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	0	0	112	0	4
Volume Left	0	0	112	0	0
Volume Right	0	0	0	0	4
cSH	1700	1700	1622	1700	1084
Volume to Capacity	0.00	0.00	0.07	0.00	0.00
Queue Length (ft)	0	0	6	0	0
Control Delay (s)	0.0	0.0	7.4	0.0	8.3
Lane LOS			A		A
Approach Delay (s)	0.0		7.4		8.3
Approach LOS					A

Intersection Summary			
Average Delay	7.4		
Intersection Capacity Utilization	15.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	2	3	86	103	2	172
Peak Hour Factor	0.92	0.92	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	2	3	92	111	2	185
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			5		300	3
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			5		300	3
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		100	83
cM capacity (veh/h)			1614		630	1080

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2
Volume Total	1	4	203	2	185
Volume Left	0	0	92	2	0
Volume Right	0	3	0	0	185
cSH	1700	1700	1614	630	1080
Volume to Capacity	0.00	0.00	0.06	0.00	0.17
Queue Length (ft)	0	0	5	0	15
Control Delay (s)	0.0	0.0	3.6	10.7	9.0
Lane LOS			A	B	A
Approach Delay (s)	0.0		3.6	9.0	
Approach LOS				A	

Intersection Summary			
Average Delay	6.1		
Intersection Capacity Utilization	26.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	311	1233	15	0	1311	31	0	0	7	0	0	114
Peak Hour Factor	0.90	0.90	0.90	0.96	0.96	0.96	0.92	0.92	0.92	0.89	0.89	0.89
Hourly flow rate (vph)	346	1370	17	0	1366	32	0	0	8	0	0	128
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1398			1387			2872	3459	685	2749	3443	683
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1398			1387			2872	3459	685	2749	3443	683
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	29			100			100	100	98	100	100	67
cM capacity (veh/h)	485			490			2	2	391	4	2	392

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	346	685	685	17	683	683	32	8	128
Volume Left	346	0	0	0	0	0	0	0	0
Volume Right	0	0	0	17	0	0	32	8	128
cSH	485	1700	1700	1700	1700	1700	1700	391	392
Volume to Capacity	0.71	0.40	0.40	0.01	0.40	0.40	0.02	0.02	0.33
Queue Length (ft)	141	0	0	0	0	0	0	1	35
Control Delay (s)	28.8	0.0	0.0	0.0	0.0	0.0	0.0	14.4	18.6
Lane LOS	D							B	C
Approach Delay (s)	5.7				0.0			14.4	18.6
Approach LOS								B	C

Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱			↱			↱
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	1582	1	0	1483	4	0	0	28	0	0	94
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1720	1	0	1612	4	0	0	30	0	0	102
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1270										
pX, platoon unblocked												
vC, conflicting volume	1616			1721			2628	3336	860	2502	3333	806
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1616			1721			2628	3336	860	2502	3333	806
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	90	100	100	69
cM capacity (veh/h)	399			364			8	8	299	13	8	325

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	860	860	1	806	806	4	30	102
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	1	0	0	4	30	102
cSH	1700	1700	1700	1700	1700	1700	299	325
Volume to Capacity	0.51	0.51	0.00	0.47	0.47	0.00	0.10	0.31
Queue Length (ft)	0	0	0	0	0	0	8	33
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	18.4	21.1
Lane LOS							C	C
Approach Delay (s)	0.0			0.0			18.4	21.1
Approach LOS							C	C

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0					4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00					1.00	1.00			1.00	
Frt	1.00	0.85					1.00	1.00			0.98	
Flt Protected	0.95	1.00					0.95	1.00			1.00	
Satd. Flow (prot)	1770	1583					1770	1863			1825	
Flt Permitted	0.83	1.00					0.68	1.00			1.00	
Satd. Flow (perm)	1552	1583					1260	1863			1825	
Volume (vph)	7	0	118	0	0	0	81	198	0	0	100	16
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.87	0.87	0.87	0.92	0.92	0.92
Adj. Flow (vph)	8	0	128	0	0	0	93	228	0	0	109	17
RTOR Reduction (vph)	0	118	0	0	0	0	0	0	0	0	3	0
Lane Group Flow (vph)	8	10	0	0	0	0	93	228	0	0	123	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	4.8	4.8					47.2	47.2			47.2	
Effective Green, g (s)	4.8	4.8					47.2	47.2			47.2	
Actuated g/C Ratio	0.08	0.08					0.79	0.79			0.79	
Clearance Time (s)	4.0	4.0					4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0					3.0	3.0			3.0	
Lane Grp Cap (vph)	124	127					991	1466			1436	
v/s Ratio Prot		c0.08						c0.12			0.07	
v/s Ratio Perm	0.01						0.07					
v/c Ratio	0.06	0.08					0.09	0.16			0.09	
Uniform Delay, d1	25.5	25.6					1.5	1.6			1.5	
Progression Factor	1.00	1.00					0.11	0.10			1.00	
Incremental Delay, d2	0.2	0.3					0.2	0.2			0.1	
Delay (s)	25.7	25.8					0.3	0.3			1.6	
Level of Service	C	C					A	A			A	
Approach Delay (s)		25.8			0.0			0.3			1.6	
Approach LOS		C			A			A			A	

Intersection Summary

HCM Average Control Delay	6.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	25.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	126	0	0	0
Peak Hour Factor	0.92	0.92	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	0	0	140	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	1248					
pX, platoon unblocked						
vC, conflicting volume			0		280	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		280	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			91		100	100
cM capacity (veh/h)			1622		627	1084

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	0	0	140	0	0
Volume Left	0	0	140	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1622	1700	1700
Volume to Capacity	0.00	0.00	0.09	0.00	0.00
Queue Length (ft)	0	0	7	0	0
Control Delay (s)	0.0	0.0	7.4	0.0	0.0
Lane LOS			A		A
Approach Delay (s)	0.0		7.4		0.0
Approach LOS					A

Intersection Summary			
Average Delay	7.4		
Intersection Capacity Utilization	10.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	3	0	115	118	7	96
Peak Hour Factor	0.92	0.92	0.90	0.90	0.86	0.86
Hourly flow rate (vph)	3	0	128	131	8	112
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			3		390	2
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			3		390	2
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		98	90
cM capacity (veh/h)			1617		540	1082

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2
Volume Total	2	1	259	8	112
Volume Left	0	0	128	8	0
Volume Right	0	0	0	0	112
cSH	1700	1700	1617	540	1082
Volume to Capacity	0.00	0.00	0.08	0.02	0.10
Queue Length (ft)	0	0	6	1	9
Control Delay (s)	0.0	0.0	4.0	11.8	8.7
Lane LOS			A	B	A
Approach Delay (s)	0.0		4.0	8.9	
Approach LOS				A	

Intersection Summary			
Average Delay	5.5		
Intersection Capacity Utilization	29.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	170	1254	20	0	1710	10	0	0	15	0	0	138
Peak Hour Factor	0.94	0.94	0.94	0.91	0.91	0.91	0.92	0.92	0.92	0.82	0.82	0.82
Hourly flow rate (vph)	181	1334	21	0	1879	11	0	0	16	0	0	168
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1890			1355			2804	3586	667	2924	3596	940
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1890			1355			2804	3586	667	2924	3596	940
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	42			100			100	100	96	100	100	36
cM capacity (veh/h)	312			503			2	2	401	4	2	265

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	181	667	667	21	940	940	11	16	168
Volume Left	181	0	0	0	0	0	0	0	0
Volume Right	0	0	0	21	0	0	11	16	168
cSH	312	1700	1700	1700	1700	1700	1700	401	265
Volume to Capacity	0.58	0.39	0.39	0.01	0.55	0.55	0.01	0.04	0.64
Queue Length (ft)	85	0	0	0	0	0	0	3	98
Control Delay (s)	31.2	0.0	0.0	0.0	0.0	0.0	0.0	14.4	39.6
Lane LOS	D							B	E
Approach Delay (s)	3.7				0.0			14.4	39.6
Approach LOS								B	E

Intersection Summary

Average Delay	3.5		
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱			↱			↱
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	1416	7	0	1709	1	0	0	7	0	0	126
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1539	8	0	1858	1	0	0	8	0	0	137
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1270										
pX, platoon unblocked												
vC, conflicting volume	1859			1547			2605	3398	770	2635	3404	929
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1859			1547			2605	3398	770	2635	3404	929
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	98	100	100	49
cM capacity (veh/h)	321			425			6	7	343	11	7	269

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	770	770	8	929	929	1	8	137
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	8	0	0	1	8	137
cSH	1700	1700	1700	1700	1700	1700	343	269
Volume to Capacity	0.45	0.45	0.00	0.55	0.55	0.00	0.02	0.51
Queue Length (ft)	0	0	0	0	0	0	2	67
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	15.7	31.4
Lane LOS							C	D
Approach Delay (s)	0.0			0.0			15.7	31.4
Approach LOS							C	D

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0					4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00					1.00	1.00			1.00	
Frt	1.00	0.85					1.00	1.00			0.98	
Flt Protected	0.95	1.00					0.95	1.00			1.00	
Satd. Flow (prot)	1770	1583					1770	1863			1834	
Flt Permitted	0.76	1.00					0.58	1.00			1.00	
Satd. Flow (perm)	1410	1583					1087	1863			1834	
Volume (vph)	18	0	208	0	0	0	102	205	0	0	232	27
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.94	0.94	0.94	0.90	0.90	0.90
Adj. Flow (vph)	20	0	231	0	0	0	109	218	0	0	258	30
RTOR Reduction (vph)	0	207	0	0	0	0	0	0	0	0	3	0
Lane Group Flow (vph)	20	24	0	0	0	0	109	218	0	0	285	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	6.3	6.3					45.7	45.7			45.7	
Effective Green, g (s)	6.3	6.3					45.7	45.7			45.7	
Actuated g/C Ratio	0.10	0.10					0.76	0.76			0.76	
Clearance Time (s)	4.0	4.0					4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0					3.0	3.0			3.0	
Lane Grp Cap (vph)	148	166					828	1419			1397	
v/s Ratio Prot		c0.15						0.12			c0.16	
v/s Ratio Perm	0.01						0.10					
v/c Ratio	0.14	0.15					0.13	0.15			0.20	
Uniform Delay, d1	24.4	24.4					1.9	1.9			2.0	
Progression Factor	1.00	1.00					0.06	0.06			1.00	
Incremental Delay, d2	0.4	0.4					0.2	0.2			0.3	
Delay (s)	24.8	24.8					0.3	0.3			2.3	
Level of Service	C	C					A	A			A	
Approach Delay (s)		24.8			0.0			0.3			2.3	
Approach LOS		C			A			A			A	

Intersection Summary

HCM Average Control Delay	8.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	136	0	0	5
Peak Hour Factor	0.92	0.92	0.93	0.93	0.92	0.92
Hourly flow rate (vph)	0	0	146	0	0	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	1248					
pX, platoon unblocked						
vC, conflicting volume			0		292	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		292	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			91		100	99
cM capacity (veh/h)			1622		614	1084

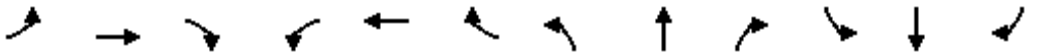
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	0	0	146	0	5
Volume Left	0	0	146	0	0
Volume Right	0	0	0	0	5
cSH	1700	1700	1622	1700	1084
Volume to Capacity	0.00	0.00	0.09	0.00	0.01
Queue Length (ft)	0	0	7	0	0
Control Delay (s)	0.0	0.0	7.4	0.0	8.3
Lane LOS			A		A
Approach Delay (s)	0.0		7.4		8.3
Approach LOS					A

Intersection Summary			
Average Delay	7.5		
Intersection Capacity Utilization	17.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	3	4	113	134	3	224
Peak Hour Factor	0.92	0.92	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	3	4	122	144	3	241
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			8		393	4
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			8		393	4
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		99	78
cM capacity (veh/h)			1611		540	1078

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2
Volume Total	2	5	266	3	241
Volume Left	0	0	122	3	0
Volume Right	0	4	0	0	241
cSH	1700	1700	1611	540	1078
Volume to Capacity	0.00	0.00	0.08	0.01	0.22
Queue Length (ft)	0	0	6	0	21
Control Delay (s)	0.0	0.0	3.7	11.7	9.3
Lane LOS			A	B	A
Approach Delay (s)	0.0		3.7	9.3	
Approach LOS				A	

Intersection Summary			
Average Delay	6.3		
Intersection Capacity Utilization	30.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	406	1608	19	0	1710	41	0	0	10	0	0	149
Peak Hour Factor	0.90	0.90	0.90	0.96	0.96	0.96	0.92	0.92	0.92	0.89	0.89	0.89
Hourly flow rate (vph)	451	1787	21	0	1781	43	0	0	11	0	0	167
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1824			1808			3747	4513	893	3588	4491	891
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1824			1808			3747	4513	893	3588	4491	891
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	0			100			0	0	96	0	0	41
cM capacity (veh/h)	332			336			0	0	284	0	0	286

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	451	893	893	21	891	891	43	11	167
Volume Left	451	0	0	0	0	0	0	0	0
Volume Right	0	0	0	21	0	0	43	11	167
cSH	332	1700	1700	1700	1700	1700	1700	284	286
Volume to Capacity	1.36	0.53	0.53	0.01	0.52	0.52	0.03	0.04	0.59
Queue Length (ft)	562	0	0	0	0	0	0	3	86
Control Delay (s)	212.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2	34.0
Lane LOS	F							C	D
Approach Delay (s)	42.3				0.0			18.2	34.0
Approach LOS								C	D

Intersection Summary			
Average Delay	23.8		
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱			↱			↱
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	2063	1	0	1934	5	0	0	37	0	0	122
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2242	1	0	2102	5	0	0	40	0	0	133
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1270										
pX, platoon unblocked												
vC, conflicting volume	2108			2243			3426	4350	1121	3264	4346	1051
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2108			2243			3426	4350	1121	3264	4346	1051
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	80	100	100	41
cM capacity (veh/h)	257			227			1	2	200	3	2	223

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	1121	1121	1	1051	1051	5	40	133
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	1	0	0	5	40	133
cSH	1700	1700	1700	1700	1700	1700	200	223
Volume to Capacity	0.66	0.66	0.00	0.62	0.62	0.00	0.20	0.59
Queue Length (ft)	0	0	0	0	0	0	18	85
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	27.4	42.3
Lane LOS							D	E
Approach Delay (s)	0.0			0.0			27.4	42.3
Approach LOS							D	E

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.94		1.00	0.87		1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1849		1770	1757		1770	1622		1770	1702	
Flt Permitted	0.38	1.00		0.36	1.00		0.74	1.00		0.70	1.00	
Satd. Flow (perm)	716	1849		674	1757		1379	1622		1313	1702	
Volume (vph)	10	400	20	5	250	152	15	10	60	150	10	14
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.87	0.87	0.87	0.92	0.92	0.92
Adj. Flow (vph)	11	435	22	5	272	165	17	11	69	163	11	15
RTOR Reduction (vph)	0	5	0	0	63	0	0	41	0	0	9	0
Lane Group Flow (vph)	11	452	0	5	374	0	17	39	0	163	17	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	13.6	13.6		13.6	13.6		14.4	14.4		14.4	14.4	
Effective Green, g (s)	15.6	15.6		15.6	15.6		16.4	16.4		16.4	16.4	
Actuated g/C Ratio	0.39	0.39		0.39	0.39		0.41	0.41		0.41	0.41	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	279	721		263	685		565	665		538	698	
v/s Ratio Prot		0.25			c0.25			0.05			0.02	
v/s Ratio Perm	0.02			0.01			0.01			c0.12		
v/c Ratio	0.04	0.63		0.02	0.55		0.03	0.06		0.30	0.02	
Uniform Delay, d1	7.6	9.8		7.5	9.5		7.0	7.1		7.9	7.0	
Progression Factor	1.00	1.00		1.00	1.00		0.57	0.41		1.00	1.00	
Incremental Delay, d2	0.1	1.7		0.0	0.9		0.1	0.2		1.4	0.1	
Delay (s)	7.6	11.6		7.5	10.3		4.1	3.1		9.4	7.1	
Level of Service	A	B		A	B		A	A		A	A	
Approach Delay (s)		11.5			10.3			3.3			9.1	
Approach LOS		B			B			A			A	

Intersection Summary

HCM Average Control Delay	10.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	600	10	5	402	5	10
Peak Hour Factor	0.92	0.92	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	652	11	6	447	5	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	1248					
pX, platoon unblocked						
vC, conflicting volume			663		1115	332
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			663		1115	332
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		97	98
cM capacity (veh/h)			922		201	664

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	435	228	6	447	16
Volume Left	0	0	6	0	5
Volume Right	0	11	0	0	11
cSH	1700	1700	922	1700	375
Volume to Capacity	0.26	0.13	0.01	0.26	0.04
Queue Length (ft)	0	0	0	0	3
Control Delay (s)	0.0	0.0	8.9	0.0	15.0
Lane LOS			A		C
Approach Delay (s)	0.0		0.1		15.0
Approach LOS					C

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	31.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	600	5	10	400	10	5
Peak Hour Factor	0.92	0.92	0.90	0.90	0.86	0.86
Hourly flow rate (vph)	652	5	11	444	12	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			658		1122	329
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			658		1122	329
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		94	99
cM capacity (veh/h)			926		198	667

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2
Volume Total	435	223	456	12	6
Volume Left	0	0	11	12	0
Volume Right	0	5	0	0	6
cSH	1700	1700	926	198	667
Volume to Capacity	0.26	0.13	0.01	0.06	0.01
Queue Length (ft)	0	0	1	5	1
Control Delay (s)	0.0	0.0	0.4	24.4	10.4
Lane LOS			A	C	B
Approach Delay (s)	0.0		0.4	19.7	
Approach LOS				C	

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	39.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	5	770	16	0	1191	7	0	0	11	0	0	5
Peak Hour Factor	0.94	0.94	0.94	0.91	0.91	0.91	0.92	0.92	0.92	0.82	0.82	0.82
Hourly flow rate (vph)	5	819	17	0	1309	8	0	0	12	0	0	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1316			836			1490	2146	410	1741	2156	654
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1316			836			1490	2146	410	1741	2156	654
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	98	100	100	99
cM capacity (veh/h)	521			793			84	47	591	54	47	409

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	5	410	410	17	654	654	8	12	6
Volume Left	5	0	0	0	0	0	0	0	0
Volume Right	0	0	0	17	0	0	8	12	6
cSH	521	1700	1700	1700	1700	1700	1700	591	409
Volume to Capacity	0.01	0.24	0.24	0.01	0.38	0.38	0.00	0.02	0.01
Queue Length (ft)	1	0	0	0	0	0	0	2	1
Control Delay (s)	12.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2	13.9
Lane LOS	B							B	B
Approach Delay (s)	0.1				0.0			11.2	13.9
Approach LOS								B	B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱			↱			↱
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	786	5	0	1197	1	0	0	5	0	0	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	854	5	0	1301	1	0	0	5	0	0	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1270										
pX, platoon unblocked												
vC, conflicting volume	1302			860			1510	2157	427	1734	2161	651
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1302			860			1510	2157	427	1734	2161	651
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	99	100	100	99
cM capacity (veh/h)	528			777			82	47	576	56	47	411

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	427	427	5	651	651	1	5	5
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	5	0	0	1	5	5
cSH	1700	1700	1700	1700	1700	1700	576	411
Volume to Capacity	0.25	0.25	0.00	0.38	0.38	0.00	0.01	0.01
Queue Length (ft)	0	0	0	0	0	0	1	1
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	11.3	13.9
Lane LOS							B	B
Approach Delay (s)	0.0			0.0			11.3	13.9
Approach LOS							B	B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1847		1770	1787		1770	1839		1770	1817	
Flt Permitted	0.26	1.00		0.57	1.00		0.71	1.00		0.72	1.00	
Satd. Flow (perm)	481	1847		1054	1787		1329	1839		1340	1817	
Volume (vph)	14	250	15	60	400	150	20	50	5	152	50	10
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.94	0.94	0.94	0.90	0.90	0.90
Adj. Flow (vph)	16	278	17	65	435	163	21	53	5	169	56	11
RTOR Reduction (vph)	0	6	0	0	38	0	0	3	0	0	7	0
Lane Group Flow (vph)	16	289	0	65	560	0	21	55	0	169	60	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	15.5	15.5		15.5	15.5		12.5	12.5		12.5	12.5	
Effective Green, g (s)	17.5	17.5		17.5	17.5		14.5	14.5		14.5	14.5	
Actuated g/C Ratio	0.44	0.44		0.44	0.44		0.36	0.36		0.36	0.36	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	210	808		461	782		482	667		486	659	
v/s Ratio Prot		0.16			c0.33			0.03			0.04	
v/s Ratio Perm	0.03			0.06			0.02			c0.13		
v/c Ratio	0.08	0.36		0.14	0.72		0.04	0.08		0.35	0.09	
Uniform Delay, d1	6.5	7.5		6.7	9.2		8.3	8.4		9.3	8.4	
Progression Factor	1.00	1.00		1.00	1.00		0.64	0.60		1.00	1.00	
Incremental Delay, d2	0.2	0.3		0.1	3.1		0.2	0.2		2.0	0.3	
Delay (s)	6.7	7.8		6.9	12.4		5.5	5.3		11.3	8.7	
Level of Service	A	A		A	B		A	A		B	A	
Approach Delay (s)		7.7			11.8			5.3			10.5	
Approach LOS		A			B			A			B	

Intersection Summary

HCM Average Control Delay	10.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	402	5	10	600	10	5
Peak Hour Factor	0.92	0.92	0.93	0.93	0.92	0.92
Hourly flow rate (vph)	437	5	11	645	11	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	1248					
pX, platoon unblocked						
vC, conflicting volume			442		1106	221
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			442		1106	221
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		95	99
cM capacity (veh/h)			1114		203	783

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	291	151	11	645	16
Volume Left	0	0	11	0	11
Volume Right	0	5	0	0	5
cSH	1700	1700	1114	1700	269
Volume to Capacity	0.17	0.09	0.01	0.38	0.06
Queue Length (ft)	0	0	1	0	5
Control Delay (s)	0.0	0.0	8.3	0.0	19.2
Lane LOS			A		C
Approach Delay (s)	0.0		0.1		19.2
Approach LOS					C

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	400	10	5	600	5	10
Peak Hour Factor	0.92	0.92	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	435	11	5	645	5	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			446		1096	223
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			446		1096	223
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		97	99
cM capacity (veh/h)			1111		207	781

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2
Volume Total	290	156	651	5	11
Volume Left	0	0	5	5	0
Volume Right	0	11	0	0	11
cSH	1700	1700	1111	207	781
Volume to Capacity	0.17	0.09	0.00	0.03	0.01
Queue Length (ft)	0	0	0	2	1
Control Delay (s)	0.0	0.0	0.1	22.9	9.7
Lane LOS			A	C	A
Approach Delay (s)	0.0		0.1	14.1	
Approach LOS				B	

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	5	969	15	0	1147	31	0	0	7	0	0	5
Peak Hour Factor	0.90	0.90	0.90	0.96	0.96	0.96	0.92	0.92	0.92	0.89	0.89	0.89
Hourly flow rate (vph)	6	1077	17	0	1195	32	0	0	8	0	0	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1227			1093			1691	2315	538	1752	2299	597
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1227			1093			1691	2315	538	1752	2299	597
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	98	100	100	99
cM capacity (veh/h)	564			634			59	37	487	53	38	446

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	6	538	538	17	597	597	32	8	6
Volume Left	6	0	0	0	0	0	0	0	0
Volume Right	0	0	0	17	0	0	32	8	6
cSH	564	1700	1700	1700	1700	1700	1700	487	446
Volume to Capacity	0.01	0.32	0.32	0.01	0.35	0.35	0.02	0.02	0.01
Queue Length (ft)	1	0	0	0	0	0	0	1	1
Control Delay (s)	11.4	0.0	0.0	0.0	0.0	0.0	0.0	12.5	13.2
Lane LOS	B							B	B
Approach Delay (s)	0.1				0.0			12.5	13.2
Approach LOS								B	B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱			↱			↱
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	961	1	0	1174	4	0	0	28	0	0	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1045	1	0	1276	4	0	0	30	0	0	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1270										
pX, platoon unblocked												
vC, conflicting volume	1280			1046			1688	2325	522	1829	2322	638
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1280			1046			1688	2325	522	1829	2322	638
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	94	100	100	99
cM capacity (veh/h)	538			661			60	37	499	45	37	419

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	522	522	1	638	638	4	30	5
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	1	0	0	4	30	5
cSH	1700	1700	1700	1700	1700	1700	499	419
Volume to Capacity	0.31	0.31	0.00	0.38	0.38	0.00	0.06	0.01
Queue Length (ft)	0	0	0	0	0	0	5	1
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	12.7	13.7
Lane LOS							B	B
Approach Delay (s)	0.0			0.0			12.7	13.7
Approach LOS							B	B

Intersection Summary				
Average Delay	0.2			
Intersection Capacity Utilization	42.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.94		1.00	0.87		1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1850		1770	1757		1770	1623		1770	1698	
Flt Permitted	0.28	1.00		0.25	1.00		0.73	1.00		0.69	1.00	
Satd. Flow (perm)	520	1850		474	1757		1369	1623		1284	1698	
Volume (vph)	13	522	26	7	326	198	20	13	78	196	13	18
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.87	0.87	0.87	0.92	0.92	0.92
Adj. Flow (vph)	14	567	28	8	354	215	23	15	90	213	14	20
RTOR Reduction (vph)	0	5	0	0	59	0	0	57	0	0	13	0
Lane Group Flow (vph)	14	590	0	8	510	0	23	48	0	213	21	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	15.2	15.2		15.2	15.2		12.8	12.8		12.8	12.8	
Effective Green, g (s)	17.2	17.2		17.2	17.2		14.8	14.8		14.8	14.8	
Actuated g/C Ratio	0.43	0.43		0.43	0.43		0.37	0.37		0.37	0.37	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	224	796		204	756		507	601		475	628	
v/s Ratio Prot		0.32			c0.32			0.06			0.02	
v/s Ratio Perm	0.03			0.02			0.02			c0.17		
v/c Ratio	0.06	0.74		0.04	0.67		0.05	0.08		0.45	0.03	
Uniform Delay, d1	6.7	9.5		6.6	9.2		8.1	8.2		9.5	8.0	
Progression Factor	1.00	1.00		1.00	1.00		0.69	0.48		1.00	1.00	
Incremental Delay, d2	0.1	3.8		0.1	2.4		0.2	0.2		3.0	0.1	
Delay (s)	6.8	13.3		6.7	11.5		5.7	4.2		12.6	8.1	
Level of Service	A	B		A	B		A	A		B	A	
Approach Delay (s)		13.1			11.5			4.4			12.0	
Approach LOS		B			B			A			B	

Intersection Summary

HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	783	13	7	524	7	13
Peak Hour Factor	0.92	0.92	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	851	14	8	582	8	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	1248					
pX, platoon unblocked						
vC, conflicting volume			865		1456	433
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			865		1456	433
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		94	98
cM capacity (veh/h)			774		119	571

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	567	298	8	582	22
Volume Left	0	0	8	0	8
Volume Right	0	14	0	0	14
cSH	1700	1700	774	1700	246
Volume to Capacity	0.33	0.18	0.01	0.34	0.09
Queue Length (ft)	0	0	1	0	7
Control Delay (s)	0.0	0.0	9.7	0.0	21.1
Lane LOS			A		C
Approach Delay (s)	0.0		0.1		21.1
Approach LOS					C

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	37.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	783	7	13	522	13	7
Peak Hour Factor	0.92	0.92	0.90	0.90	0.86	0.86
Hourly flow rate (vph)	851	8	14	580	15	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			859		1464	429
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			859		1464	429
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		87	99
cM capacity (veh/h)			778		117	574

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2
Volume Total	567	291	594	15	8
Volume Left	0	0	14	15	0
Volume Right	0	8	0	0	8
cSH	1700	1700	778	117	574
Volume to Capacity	0.33	0.17	0.02	0.13	0.01
Queue Length (ft)	0	0	1	11	1
Control Delay (s)	0.0	0.0	0.5	40.3	11.4
Lane LOS			A	E	B
Approach Delay (s)	0.0		0.5	30.2	
Approach LOS				D	

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	7	1004	20	0	1553	9	0	0	15	0	0	7
Peak Hour Factor	0.94	0.94	0.94	0.91	0.91	0.91	0.92	0.92	0.92	0.82	0.82	0.82
Hourly flow rate (vph)	7	1068	21	0	1707	10	0	0	16	0	0	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1716			1089			1945	2799	534	2272	2811	853
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1716			1089			1945	2799	534	2272	2811	853
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			100	100	97	100	100	97
cM capacity (veh/h)	365			636			37	18	490	21	17	302

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	7	534	534	21	853	853	10	16	9
Volume Left	7	0	0	0	0	0	0	0	0
Volume Right	0	0	0	21	0	0	10	16	9
cSH	365	1700	1700	1700	1700	1700	1700	490	302
Volume to Capacity	0.02	0.31	0.31	0.01	0.50	0.50	0.01	0.03	0.03
Queue Length (ft)	2	0	0	0	0	0	0	3	2
Control Delay (s)	15.1	0.0	0.0	0.0	0.0	0.0	0.0	12.6	17.3
Lane LOS	C							B	C
Approach Delay (s)	0.1				0.0			12.6	17.3
Approach LOS								B	C

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱			↱			↱
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	1025	7	0	1561	1	0	0	7	0	0	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1114	8	0	1697	1	0	0	8	0	0	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1270										
pX, platoon unblocked												
vC, conflicting volume	1698			1122			1970	2812	557	2261	2818	848
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1698			1122			1970	2812	557	2261	2818	848
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	98	100	100	98
cM capacity (veh/h)	371			618			36	18	474	22	18	305

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	557	557	8	848	848	1	8	8
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	8	0	0	1	8	8
cSH	1700	1700	1700	1700	1700	1700	474	305
Volume to Capacity	0.33	0.33	0.00	0.50	0.50	0.00	0.02	0.02
Queue Length (ft)	0	0	0	0	0	0	1	2
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	12.7	17.1
Lane LOS							B	C
Approach Delay (s)	0.0			0.0			12.7	17.1
Approach LOS							B	C

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1847		1770	1786		1770	1837		1770	1817	
Flt Permitted	0.16	1.00		0.48	1.00		0.70	1.00		0.71	1.00	
Satd. Flow (perm)	295	1847		889	1786		1306	1837		1318	1817	
Volume (vph)	18	326	20	78	522	196	26	65	7	198	65	13
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.94	0.94	0.94	0.90	0.90	0.90
Adj. Flow (vph)	20	362	22	85	567	213	28	69	7	220	72	14
RTOR Reduction (vph)	0	5	0	0	30	0	0	5	0	0	9	0
Lane Group Flow (vph)	20	379	0	85	750	0	28	71	0	220	77	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	23.3	23.3		23.3	23.3		14.7	14.7		14.7	14.7	
Effective Green, g (s)	25.3	25.3		25.3	25.3		16.7	16.7		16.7	16.7	
Actuated g/C Ratio	0.51	0.51		0.51	0.51		0.33	0.33		0.33	0.33	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	149	935		450	904		436	614		440	607	
v/s Ratio Prot		0.21			c0.44			0.04			0.05	
v/s Ratio Perm	0.07			0.10			0.02			c0.17		
v/c Ratio	0.13	0.41		0.19	0.83		0.06	0.12		0.50	0.13	
Uniform Delay, d1	6.5	7.7		6.7	10.5		11.3	11.5		13.3	11.6	
Progression Factor	1.00	1.00		1.00	1.00		0.72	0.69		1.00	1.00	
Incremental Delay, d2	0.4	0.3		0.2	6.4		0.3	0.4		4.0	0.4	
Delay (s)	7.0	8.0		7.0	16.9		8.5	8.4		17.3	12.0	
Level of Service	A	A		A	B		A	A		B	B	
Approach Delay (s)		7.9			15.9			8.4			15.8	
Approach LOS		A			B			A			B	

Intersection Summary

HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	524	7	13	783	13	7
Peak Hour Factor	0.92	0.92	0.93	0.93	0.92	0.92
Hourly flow rate (vph)	570	8	14	842	14	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	1248					
pX, platoon unblocked						
vC, conflicting volume			577		1443	289
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			577		1443	289
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		88	99
cM capacity (veh/h)			992		121	708

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	380	197	14	842	22
Volume Left	0	0	14	0	14
Volume Right	0	8	0	0	8
cSH	1700	1700	992	1700	171
Volume to Capacity	0.22	0.12	0.01	0.50	0.13
Queue Length (ft)	0	0	1	0	11
Control Delay (s)	0.0	0.0	8.7	0.0	29.1
Lane LOS			A		D
Approach Delay (s)	0.0		0.1		29.1
Approach LOS					D

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	522	13	7	783	7	13
Peak Hour Factor	0.92	0.92	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	567	14	8	842	8	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			582		1431	291
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			582		1431	291
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		94	98
cM capacity (veh/h)			989		124	706

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2
Volume Total	378	203	849	8	14
Volume Left	0	0	8	8	0
Volume Right	0	14	0	0	14
cSH	1700	1700	989	124	706
Volume to Capacity	0.22	0.12	0.01	0.06	0.02
Queue Length (ft)	0	0	1	5	2
Control Delay (s)	0.0	0.0	0.2	35.8	10.2
Lane LOS			A	E	B
Approach Delay (s)	0.0		0.2	19.2	
Approach LOS				C	

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	7	1264	19	0	1496	40	0	0	10	0	0	7
Peak Hour Factor	0.90	0.90	0.90	0.96	0.96	0.96	0.92	0.92	0.92	0.89	0.89	0.89
Hourly flow rate (vph)	8	1404	21	0	1558	42	0	0	11	0	0	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1600			1426			2207	3020	702	2287	2999	779
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1600			1426			2207	3020	702	2287	2999	779
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			100	100	97	100	100	98
cM capacity (veh/h)	405			473			24	13	380	20	13	339

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	8	702	702	21	779	779	42	11	8
Volume Left	8	0	0	0	0	0	0	0	0
Volume Right	0	0	0	21	0	0	42	11	8
cSH	405	1700	1700	1700	1700	1700	1700	380	339
Volume to Capacity	0.02	0.41	0.41	0.01	0.46	0.46	0.02	0.03	0.02
Queue Length (ft)	1	0	0	0	0	0	0	2	2
Control Delay (s)	14.1	0.0	0.0	0.0	0.0	0.0	0.0	14.7	15.9
Lane LOS	B							B	C
Approach Delay (s)	0.1				0.0			14.7	15.9
Approach LOS								B	C

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	51.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱			↱			↱
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	1254	1	0	1531	5	0	0	37	0	0	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1363	1	0	1664	5	0	0	40	0	0	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1270										
pX, platoon unblocked												
vC, conflicting volume	1670			1364			2203	3033	682	2386	3028	832
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1670			1364			2203	3033	682	2386	3028	832
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	90	100	100	98
cM capacity (veh/h)	381			500			24	13	393	16	13	312

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	682	682	1	832	832	5	40	8
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	1	0	0	5	40	8
cSH	1700	1700	1700	1700	1700	1700	393	312
Volume to Capacity	0.40	0.40	0.00	0.49	0.49	0.00	0.10	0.02
Queue Length (ft)	0	0	0	0	0	0	8	2
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	15.2	16.8
Lane LOS							C	C
Approach Delay (s)	0.0			0.0			15.2	16.8
Approach LOS							C	C

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	52.3%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX C: CRASH DATA

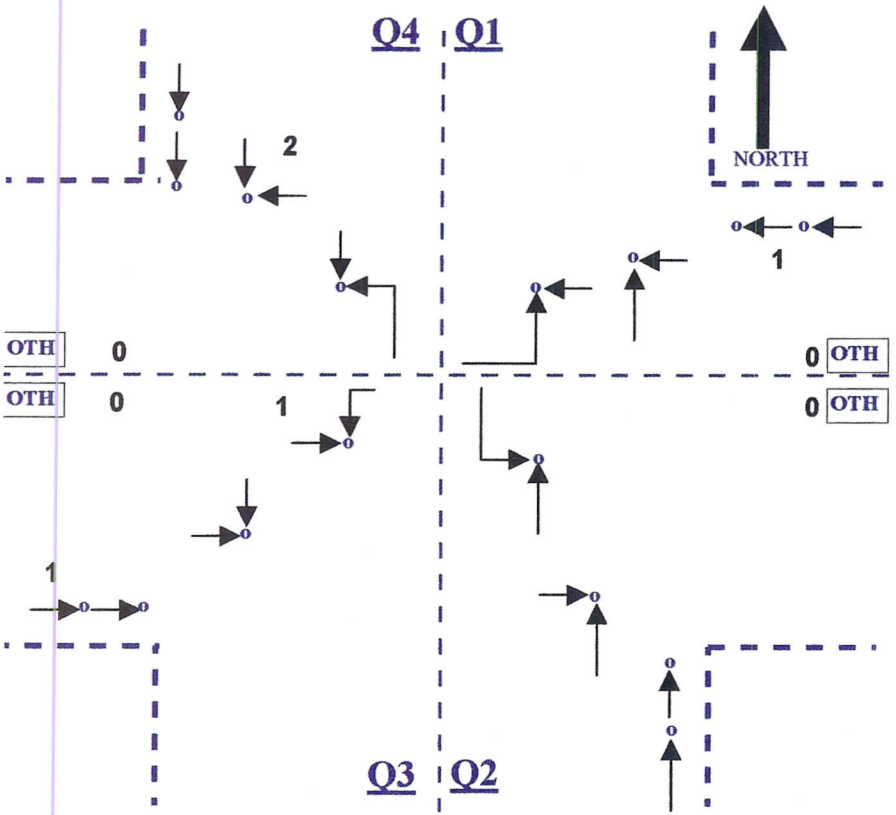
DOUGHERTY COUNTY, W. Broad Avenue (CS 129701) and E. Oglethorpe Blvd. (SR 520BU)														
Accident No	Date	Time	Route	Milelog	Intersecting	Intersecting Rt	Injuries	Fatalities	Harmful Event	Collision	DirVeh1	DirVeh2	MnvrVeh1	MnvrVeh2
'61140390	3/3/2006	8:11 PM	'0520BU	4.59	3	'083601	1	0	Motion	Angle	W	S	Straight	Turning Left
'61690198	4/19/2006	7:13 PM	'0520BU	4.59	3	'083601	0	0	Motion	Angle	W	S	Straight	Turning Left
'63840333	9/29/2006	7:06 PM	'0520BU	4.59	3	'083601	0	0	Motion	Sideswipe - Same Direction	W	W	Changing Lanes	Straight
'62550471	6/13/2006	12:03 PM	'0520BU	4.6		'	0	0	Motion	Sideswipe - Same Direction	W	W	Changing Lanes	Straight
'61140015	3/24/2006	9:37 AM	'0520BU	4.61		'	0	0	Fixed)	Rear End	W	W	Straight	Stopped
'65300377	12/8/2006	6:50 PM	'0520BU	4.61		'	0	0	Motion	Rear End	W	W	Straight	Straight
'62940570	7/4/2006	10:21 PM	'0520BU	4.63		'	5	0	Motion	Rear End	E	E	Straight	Straight
'62080393	5/4/2006	11:33 AM	'0520BU	4.63		'	0	0	Curb	Not A Collision With A Motor Vehicle	E	E	Changing Lanes	Straight
'63310411	8/27/2006	1:10 PM	'0520BU	4.65		'	1	0	Motion	Angle	W	W	Straight	Straight
'64400111	10/12/2006	5:18 PM	'0520BU	4.65		'	0	0	Parked Motor Vehicle	Rear End	E	E	Straight	Straight
'62550430	6/9/2006	6:23 PM	'0520BU	4.65		'	0	0	Motion	Sideswipe - Same Direction	E	E	Changing Lanes	Straight
'62940565	7/4/2006	8:34 PM	'0520BU	4.66		'	1	0	Motion	Rear End	W	W	Straight	Straight
'60280537	1/20/2006	7:30 PM	'0520BU	4.8		'	0	0	Motion	Rear End	W	W	Straight	Straight
'62130327	5/9/2006	3:24 PM	'0520BU	4.82		'	0	0	Fixed)	Not A Collision With A Motor Vehicle	E	E	Straight	Straight
'64740691	11/29/2006	1:33 AM	'0520BU	4.82		'	0	0	Deer	Not A Collision With A Motor Vehicle	E		Straight	
'64400079	10/9/2006	10:11 AM	'0520BU	4.82		'	1	0	Motion	Rear End	E	E	Straight	Straight
'63840240	9/18/2006	9:07 PM	'0520BU	4.83		'	0	0	Utility Pole	Not A Collision With A Motor Vehicle	E		Straight	
'64400243	10/28/2006	5:08 PM	'0520BU	4.83		'	0	0	Motion	Sideswipe - Same Direction	E	E	Changing Lanes	Straight
'63310445	8/23/2006	2:26 PM	'0520BU	4.89		'	0	0	Motion	Rear End	E	E	Changing Lanes	Stopped
'64400123	10/13/2006	11:53 PM	'0520BU	4.89		'	0	0	Motion	Angle	E	E	Changing Lanes	Straight
'62080372	5/3/2006	9:48 AM	'0520BU	4.9	3	'120901	0	0	Curb	Not A Collision With A Motor Vehicle	W		Straight	
'62940567	7/4/2006	9:57 PM	'0520BU	4.9	3	'120901	1	0	Motion	Rear End	E	E	Straight	Straight
'64740550	11/22/2006	12:03 AM	'0520BU	4.9		'	0	0	Motion	Angle	E	E	Changing Lanes	Straight
'61690103	4/7/2006	5:59 PM	'0520BU	4.91		'	0	0	Motion	Rear End	E	E	Straight	Straight
'64400076	10/8/2006	3:01 PM	'0520BU	4.91		'	0	0	Motion	Rear End	E	E	Straight	Stopped
'63840324	9/28/2006	2:11 PM	'0520BU	4.93		'	0	0	Motion	Rear End	E	E	Straight	Stopped
'62080465	5/10/2006	11:23 PM	'0520BU	4.96		'	0	0	Tree	Not A Collision With A Motor Vehicle	W		Turning Left	
'63310543	8/8/2006	12:20 PM	'0520BU	4.96		'	0	0	Motion	Sideswipe - Same Direction	W	W	Turning Right	Straight
'60670163	2/11/2006	2:06 AM	'0520BU	4.96		'	0	0	Motion	Angle	W	W	Straight	Straight
'60280409	1/3/2006	3:42 PM	'0520BU	4.97		'	0	0	Motion	Rear End	E	E	Straight	Stopped
'60670193	2/15/2006	9:21 AM	'0520BU	4.97		'	0	0	Motion	Angle	W	E	Turning Left	Straight
'65300386	12/9/2006	3:35 AM	'0520BU	4.97		'	0	0	Post	Not A Collision With A Motor Vehicle	W		Straight	
'60280441	1/7/2006	6:51 AM	'0520BU	4.98	1	'013300	1	0	Motion	Angle	W	E	Turning Left	Straight
'60670231	2/19/2006	10:30 PM	'0520BU	4.98	1	'013300	3	0	Motion	Angle	W	E	Turning Left	Straight
'61140282	3/31/2006	11:59 AM	'0520BU	4.98	1	'013300	0	0	Fixed)	Not A Collision With A Motor Vehicle	E	N	Straight	Straight
'61140349	3/21/2006	9:57 PM	'0520BU	4.98	1	'013300	1	0	Motion	Head On	E	W	Turning Left	Straight
'60670145	2/9/2006	8:22 PM	'0520BU	4.98	1	'013300	0	0	Motion	Rear End	E	E	Changing Lanes	Stopped
'65300435	12/14/2006	10:03 AM	'0520BU	4.98	1	'013300	0	0	Motion	Angle	W	E	Turning Left	Straight
'64740715	11/30/2006	8:01 AM	'0520BU	4.98	1	'013300	0	0	Motion	Rear End	W	W	Straight	Stopped
'64400015	10/2/2006	5:13 PM	'0520BU	4.98	1	'013300	0	0	Motion	Rear End	E	E	Straight	Stopped
'63840219	9/16/2006	1:44 AM	'0520BU	4.98	1	'013300	0	0	Motion	Angle	N	W	Turning Left	Straight
'64400107	10/12/2006	9:45 AM	'0520BU	4.98	1	'013300	0	0	Motion	Angle	W	N	Straight	Straight
'63840171	9/9/2006	6:14 AM	'0520BU	4.98	1	'013300	1	0	Motion	Angle	N	W	Straight	Straight
'63840142	9/6/2006	5:59 AM	'0520BU	4.98	1	'013300	0	0	Motion	Angle	S	E	Straight	Straight

'62940571	7/5/2006	2:33 PM	'0520BU	4.98	1	'013300	0	0	Motion	Angle	E	E	Changing Lanes	Stopped
'62560014	6/6/2006	7:31 PM	'0520BU	4.98	1	'013300	1	0	Motion	Rear End	W	W	Straight	Stopped
'61690223	4/21/2006	4:19 PM	'0520BU	4.98	1	'013300	0	0	Motion	Angle	S	E	Turning Left	Straight
'61690085	4/5/2006	7:55 AM	'0520BU	4.98	1	'013300	0	0	Motion	Rear End	W	W	Straight	Stopped
'60670284	2/25/2006	5:25 PM	'0520BU	4.98	1	'013300	1	0	Motion	Rear End	E	E	Straight	Stopped
'63310594	8/1/2006	12:53 PM	'083601	1.24		'	0	0	Motion	Rear End	S	N	Straight	Stopped
'62130331	5/17/2006	7:06 AM	'120901	0		'	0	0	Post	Not A Collision With A Motor Vehicle	S		Straight	
'62080492	5/13/2006	9:03 PM	'125701	0		'	2	0	Motion	Rear End	S	S	Straight	Stopped
'63310405	8/27/2006	4:20 AM	'125701	0		'	0	0	Motion	Angle	E	W	Turning Right	Lanes
'72720153	6/18/2007	3:08 PM	'0520BU	4.59	3	'083601	0	0	Motion	Angle	S	W	Turning Left	Straight
'70410799	1/11/2007	3:59 PM	'0520BU	4.59	3	'083601	1	0	Motion	Rear End	E	E	Straight	Stopped
'71580483	3/28/2007	8:04 AM	'0520BU	4.59	3	'083601	0	0	Motion	Angle	E	E	Straight	Lanes
'71580476	3/27/2007	2:33 PM	'0520BU	4.59	3	'083601	0	0	Motion	Angle	E	E	Changing Lanes	Turning Left
'72710576	5/19/2007	12:00 PM	'0520BU	4.59	3	'083601	1	0	Motion	Angle	W	S	Straight	Straight
'75740328	12/7/2007	11:30 AM	'0520BU	4.59	3	'083601	0	0	Motion	Rear End	W	W	Straight	Straight
'74660494	10/28/2007	12:12 PM	'0520BU	4.59	3	'083601	3	0	Motion	Rear End	W	W	Straight	Straight
'74390543	9/14/2007	2:22 PM	'0520BU	4.59	3	'083601	0	0	Motion	Angle	S	S	Changing Lanes	Turning Left
'75240246	11/2/2007	10:06 AM	'0520BU	4.6		'	0	0	Motion	Rear End	W	W	Straight	Stopped
'73810458	8/1/2007	3:10 PM	'0520BU	4.6		'	0	0	Motion	Sideswipe - Same Direction	W	W	Straight	Straight
'71580511	3/30/2007	2:06 PM	'0520BU	4.6		'	1	0	Motion	Rear End	W	W	Straight	Straight
'73810464	8/2/2007	3:47 PM	'0520BU	4.6		'	1	0	Motion	Rear End	W	W	Straight	Straight
'75740394	12/15/2007	11:25 AM	'0520BU	4.61		'	0	0	Parked Motor Vehicle	Rear End	W	W	Straight	Stopped
'71580637	3/13/2007	3:22 PM	'0520BU	4.61		'	0	0	Motion	Angle	E	E	Changing Lanes	Straight
'71580568	3/6/2007	4:50 PM	'0520BU	4.61		'	0	0	Motion	Rear End	W	W	Straight	Straight
'74660478	10/27/2007	11:40 PM	'0520BU	4.62		'	2	0	Motion	Rear End	W	N	Straight	Straight
'72710414	5/1/2007	4:15 PM	'0520BU	4.62		'	0	0	Motion	Rear End	E	E	Straight	Straight
'74660472	10/27/2007	10:17 AM	'0520BU	4.65		'	1	0	Motion	Rear End	E	E	Straight	Straight
'72710471	5/7/2007	5:19 PM	'0520BU	4.75		'	0	0	Motion	Rear End	E	E	Straight	Straight
'72710467	5/7/2007	5:19 PM	'0520BU	4.77		'	0	0	Motion	Rear End	E	E	Straight	Straight
'72720120	6/14/2007	11:35 AM	'0520BU	4.78		'	0	0	Motion	Angle	W	W	Changing Lanes	Straight
'72710469	5/7/2007	5:19 PM	'0520BU	4.8		'	0	0	Motion	Rear End	E	E	Straight	Straight
'71580461	3/26/2007	3:31 PM	'0520BU	4.82		'	0	0	Motion	Sideswipe - Same Direction	W	W	Changing Lanes	Straight
'74660474	2/7/2007	11:13 PM	'0520BU	4.89		'	0	0	Motion	Rear End	W	W	Straight	Straight
'74390580	9/18/2007	8:50 PM	'0520BU	4.89		'	0	0	Motion	Sideswipe - Same Direction	E	E	Changing Lanes	Straight
'73290145	7/16/2007	12:09 PM	'0520BU	4.9	3	'120901	0	0	Motion	Angle	W	W	Straight	Straight
'70410808	1/13/2007	11:17 PM	'0520BU	4.9	3	'120901	0	0	Motion	Angle	S	S	Turning Right	Right
'75740435	12/20/2007	7:23 PM	'0520BU	4.91		'	0	0	Immersion	Rear End	W	W	Straight	Straight
'75980552	10/19/2007	1:25 PM	'0520BU	4.91		'	1	0	Motion	Rear End	E	E	Changing Lanes	Straight
'70950499	2/13/2007	2:56 PM	'0520BU	4.92		'	0	0	Motion	Rear End	E	E	Straight	Straight
'70410597	1/17/2007	4:57 PM	'0520BU	4.94		'	1	0	Motion	Rear End	E	E	Stopped	Straight
'70930253	2/24/2007	2:24 PM	'0520BU	4.96		'	0	0	Motion	Rear End	E	E	Straight	Straight
'73810522	8/8/2007	4:30 PM	'0520BU	4.96		'	0	0	Motion	Rear End	E	E	Straight	Stopped
'73290196	7/24/2007	7:46 AM	'0520BU	4.97		'	0	0	Motion	Angle	N	E	Driveway	Straight
'71580498	3/29/2007	10:01 AM	'0520BU	4.97		'	0	0	Motion	Angle	E	E	Changing Lanes	Straight
'71490429	1/27/2007	1:45 AM	'0520BU	4.97		'	0	0	Motion	Angle	W	S	Straight	Right
'71950284	4/21/2007	2:15 AM	'0520BU	4.98	1	'013300	1	0	Motion	Angle	N	W	Turning Left	Straight
'72710608	5/23/2007	6:51 PM	'0520BU	4.98	1	'013300	0	0	Motion	Angle	W	E	Turning Left	Straight
'74660347	10/13/2007	12:08 AM	'0520BU	4.98	1	'013300	0	0	Motion	Angle	S	E	Turning Left	Straight
'74660489	10/28/2007	3:38 AM	'0520BU	4.98	1	'013300	0	0	Motion	Sideswipe - Same Direction	W	W	Changing Lanes	Straight
'74660306	10/10/2007	10:36 PM	'0520BU	4.98	1	'013300	1	0	Motion	Head On	E	W	Turning Left	Straight

'72710421	5/2/2007	4:39 PM	'0520BU	4.98	1	'013300	0	0	Motion	Rear End	E	S	Straight	Stopped
'75240319	11/19/2007	6:19 PM	'0520BU	4.98	1	'013300	0	0	Motion	Angle	W	N	Straight	Turning Left
'71580603	3/9/2007	6:53 PM	'0520BU	4.98	3	'159501	0	0	Motion	Angle	W	E	Turning Left	Straight
'71580709	3/22/2007	8:01 AM	'0520BU	4.98	3	'159501	0	0	Motion	Rear End	W	W	Straight	Stopped
'70930185	2/16/2007	1:12 PM	'0520BU	4.98	3	'159501	0	0	Motion	Rear End	N	N	Straight	Stopped
'73820024	8/17/2007	2:40 AM	'0520BU	4.98	3	'159501	0	0	Motion	Angle	E	W	Turning Left	Straight
'71580604	3/9/2007	11:21 PM	'0520BU	4.98	3	'159501	3	0	Motion	Angle	E	S	Straight	Turning Left
'71580545	3/2/2007	1:32 PM	'0520BU	4.98	3	'159501	0	0	Motion	Rear End	E	E	Straight	Straight
'73820023	8/17/2007	8:29 AM	'0520BU	4.98	3	'159501	0	0	Motion	Rear End	S	S	Straight	Straight
'74390523	9/12/2007	4:23 PM	'0520BU	4.98	3	'159501	2	0	Fixed)	Rear End	N	W	Straight	Stopped
'74390474	9/6/2007	9:15 AM	'0520BU	4.98	3	'159501	2	0	Motion	Angle	E	N	Straight	Straight
'73290156	7/18/2007	2:05 PM	'0520BU	4.98	3	'159501	1	0	Motion	Angle	E	E	Straight	Stopped
'73820057	8/21/2007	9:02 AM	'083601	1.35	3	'129701	0	0	Motion	Head On	S	N	Turning Left	Straight
'73290160	7/18/2007	5:32 PM	'120901	0.07		'	2	0	Motion	Angle	W	N	Driveway	Straight
'70410608	1/19/2007	2:18 AM	'125701	0		'	0	0	Motion	Sideswipe - Same Direction	N	N	Straight	Stopped
'72720218	6/27/2007	8:09 AM	'129701	0.42		'	0	0	Motion	Rear End	W	W	Straight	Straight
'75740364	12/12/2007	4:56 PM	'129701	0.42		'	0	0	Motion	Rear End	W	W	Straight	Straight
'73820077	8/23/2007	5:21 PM	'129701	0.71		'	0	0	Motion	Angle	N	E	Driveway	Straight
'70930245	2/23/2007	1:35 PM	'129701	0.79		'	0	0	Motion	Rear End	W	W	Straight	Straight
'80800447	2/12/2008	1:26 PM	'0520BU	4.59		'	4	0	Motion	Rear End	W	W	Straight	Stopped
'84440344	10/11/2008	11:59 PM	'0520BU	4.59		'	0	0	Motion	Rear End	W	W	Straight	Stopped
'81680599	4/30/2008	12:35 PM	'0520BU	4.59	3	'083601	1	0	Motion	Angle	W	S	Straight	Right
'81140589	3/4/2008	1:50 PM	'0520BU	4.59	3	'083601	2	0	Motion	Angle	E	E	Making U-Turn	Straight
'83310140	7/11/2008	4:47 PM	'0520BU	4.59	3	'083601	2	0	Motion	Angle	W	S	Straight	Turning Left
'80800480	2/8/2008	4:39 PM	'0520BU	4.59		'	0	0	Overturn	Rear End	E	E	Straight	Stopped
'81680598	4/30/2008	12:16 PM	'0520BU	4.6		'	0	0	Motion	Rear End	W	W	Straight	Stopped
'83470371	8/20/2008	1:20 PM	'0520BU	4.61		'	0	0	Other Non-Collision	Not A Collision With A Motor Vehicle	E	W	Straight	Straight
'83470432	8/28/2008	11:46 AM	'0520BU	4.79		'	0	0	Motion	Rear End	W	W	Straight	Straight
'82470486	6/2/2008	9:26 AM	'0520BU	4.81		'	0	0	Motion	Rear End	E	E	Straight	Straight
'84440425	10/24/2008	6:36 AM	'0520BU	4.83		'	0	0	Fixed)	Not A Collision With A Motor Vehicle	E	E	Straight	Straight
'84440441	10/25/2008	6:30 AM	'0520BU	4.83		'	0	0	Utility Pole	Not A Collision With A Motor Vehicle	E		Straight	
'82100265	5/12/2008	6:34 PM	'0520BU	4.9	3	'120901	0	0	Motion	Rear End	E	E	Straight	Stopped
'85570222	12/13/2008	9:32 AM	'0520BU	4.9		'	0	0	Motion	Rear End	W	W	Straight	Straight
'83470309	8/13/2008	12:32 PM	'0520BU	4.9		'	0	0	Motion	Rear End	W	W	Straight	Straight
'83470387	8/21/2008	4:35 PM	'0520BU	4.91		'	0	0	Motion	Rear End	E	E	Straight	Stopped
'80270233	1/14/2008	8:15 AM	'0520BU	4.92		'	0	0	Motion	Rear End	S	S	Turning Right	Right
'83310238	7/25/2008	5:24 PM	'0520BU	4.95		'	0	0	Motion	Angle	E	E	Straight	Stopped
'82100150	5/2/2008	7:47 PM	'0520BU	4.96		'	1	0	Motion	Rear End	E	E	Straight	Straight
'80270186	1/18/2008	2:15 PM	'0520BU	4.97		'	0	0	Motion	Rear End	E	E	Straight	Stopped
'82100357	5/25/2008	4:37 PM	'0520BU	4.97		'	0	0	Motion	Rear End	E	E	Turning Left	Turning Left
'82100200	5/8/2008	7:55 AM	'0520BU	4.97		'	1	0	Motion	Rear End	W	W	Straight	Straight
'85000047	11/14/2008	5:47 PM	'0520BU	4.97		'	0	0	Fixed)	Rear End	E	E	Straight	Stopped
'85570143	12/4/2008	5:24 PM	'0520BU	4.97		'	0	0	Motion	Rear End	E	E	Turning Right	Right
'84990518	11/6/2008	12:41 PM	'0520BU	4.97		'	0	0	Motion	Rear End	E	E	Straight	Straight
'83310203	7/20/2008	4:13 AM	'0520BU	4.97		'	0	0	Motion	Angle	W	W	Backing	Right
'80270255	1/12/2008	9:29 PM	'0520BU	4.98	3	'159501	0	0	Motion	Angle	W	W	Turning Left	Straight
'81140752	3/22/2008	8:37 PM	'0520BU	4.98	3	'159501	0	0	Motion	Angle	N	S	Straight	Stopped
'81680457	4/14/2008	9:59 PM	'0520BU	4.98	3	'159501	2	0	Motion	Rear End	W	W	Straight	Straight
'81150036	3/23/2008	10:25 PM	'0520BU	4.98	3	'159501	4	0	Motion	Angle	S	E	Turning Left	Straight
'81140599	3/6/2008	9:12 PM	'0520BU	4.98	3	'159501	1	0	Motion	Angle	N	W	Turning Left	Straight

'85570212	12/12/2008	8:04 PM	'0520BU	4.98	3	'159501	0	0	Motion	Sideswipe - Same Direction	W	W	Changing Lanes	Straight
'84440323	10/9/2008	1:34 AM	'0520BU	4.98	3	'159501	2	0	Motion - In Other Roadway	Angle	S	E	Turning Left	Straight
'84440236	9/23/2008	10:02 PM	'0520BU	4.98	3	'159501	0	0	Motion	Angle	N	W	Turning Left	Straight
'83310161	7/13/2008	8:39 PM	'0520BU	4.98	3	'159501	2	0	Motion	Rear End	E	E	Straight	Turning Left
'84090291	9/3/2008	2:47 PM	'0520BU	4.98	3	'159501	1	0	Motion	Rear End	E	E	Straight	Straight
'84090129	9/26/2008	8:40 AM	'0520BU	4.98	3	'159501	0	0	Motion	Sideswipe - Same Direction	E	E	Changing Lanes	Turning Left
'83470352	8/17/2008	12:15 AM	'0520BU	4.98	3	'159501	0	0	Motion	Rear End	W	W	Straight	Stopped
'82100146	5/1/2008	1:20 PM	'0520BU	4.98	3	'159501	1	0	Motion	Angle	W	E	Turning Left	Straight
'80270261	1/10/2008	1:37 PM	'125701	0	3	'129701	0	0	Motion	Angle	W	E	Turning Left	Straight
'82470487	6/2/2008	6:01 PM	'125701	0	3	129701	2	0	Motion	Rear End	S	S	Straight	Stopped
'84440335	10/12/2008	11:47 AM	'125701	0	3	'129701	2	0	Motion	Sideswipe - Opposite Direction	W	E	Turning Left	Straight
'84440444	10/27/2008	2:12 PM	'125701	0	3	129702	0	0	Fixed)	Rear End	W	S	Backing	Stopped
'81680366	4/4/2008	12:13 PM	'125701	0	3	'129702	3	0	Motion	Rear End	N	N	Straight	Straight
'81150039	3/23/2008	4:33 PM	'125701	0	3	'129701	0	0	Motion	Angle	S	E	Straight	Straight
'80270301	1/5/2008	7:09 PM	'129701	0.41		'	0	0	Motion	Rear End	W	W	Straight	Straight
'81680544	4/23/2008	8:01 AM	'129701	0.42		'	1	0	Motion	Sideswipe - Same Direction	W	W	Straight	Stopped
'80800378	2/21/2008	2:57 PM	'129701	0.43		'	3	0	Fixed)	Rear End	W	W	Straight	Stopped
'83310220	7/22/2008	6:22 PM	'129701	0.43		'	0	0	Curb	Not A Collision With A Motor Vehicle	W		Straight	
'80270291	1/7/2008	3:44 PM	'129701	0.48		'	0	0	Motion	Rear End	W	W	Straight	Stopped
'84080019	7/20/2008	4:52 PM	'129701	0.7		'	1	0	Motion	Rear End	W	W	Straight	Stopped
'80270133	1/24/2008	2:49 PM	'129701	0.79		'	0	0	Motion	Rear End	W	W	Straight	Straight
'84440484	10/31/2008	2:21 PM	'129701	0.8		'	1	0	Motion	Rear End	E	E	Straight	Straight
'83470273	8/7/2008	3:12 PM	'129701	0.8		'	0	0	Motion	Rear End	W	W	Straight	Straight
'82100274	5/14/2008	7:51 PM	'159501	1.63		'	0	0	Motion	Rear End	N	N	Straight	Straight
'80800408	2/18/2008	3:07 PM	'159501	1.69		'	0	0	Motion	Angle	W	S	Turning Left	Straight
'91190225	3/5/2009	3:26 PM	'0520BU	4.59	3	'083601	0	0	Motion	Rear End	W	W	Straight	Straight
'93860410	8/15/2009	7:26 PM	'0520BU	4.59	3	'083601	0	0	Other Non-Collision	Not A Collision With A Motor Vehicle	E	E	Changing Lanes	Straight
'94120138	9/24/2009	2:41 PM	'0520BU	4.59	3	'083601	0	0	Motion	Angle	N	S	Turning Right	Turning Left
'91190247	3/7/2009	6:02 AM	'0520BU	4.59	3	'083601	0	0	Motion	Head On	W	E	Turning Left	Straight
'90790061	2/19/2009	2:13 PM	'0520BU	4.6		'	0	0	Motion	Rear End	W	W	Straight	Straight
'91730225	4/26/2009	6:18 PM	'0520BU	4.6		'	0	0	Motion	Sideswipe - Same Direction	W	W	Changing Lanes	Straight
'92370478	5/23/2009	8:57 AM	'0520BU	4.6		'	2	0	Motion	Rear End	W	W	Straight	Straight
'94940114	10/15/2009	6:24 PM	'0520BU	4.6		'	0	0	Motion	Rear End	W	W	Straight	Stopped
'93840090	8/1/2009	1:09 PM	'0520BU	4.6		'	0	0	Motion	Rear End	W	W	Straight	Straight
'92390329	5/29/2009	2:19 PM	'0520BU	4.6		'	1	0	Motion	Rear End	W	W	Straight	Stopped
'91730394	4/7/2009	3:51 PM	'0520BU	4.6		'	0	0	Motion	Angle	E	E	Changing Lanes	Straight
'91730475	4/1/2009	1:37 PM	'0520BU	4.62		'	1	0	Motion	Rear End	W	W	Straight	Straight
'94940184	10/27/2009	1:19 PM	'0520BU	4.63		'	1	0	Motion	Rear End	W	W	Straight	Stopped
'90790003	2/27/2009	4:01 PM	'0520BU	4.65		'	0	0	Motion	Rear End	E	E	Straight	Straight
'91730390	4/8/2009	8:11 AM	'0520BU	4.65		'	0	0	Motion	Rear End	W	W	Straight	Straight
'90790161	2/8/2009	1:08 AM	'0520BU	4.71		'	0	0	Motion	Sideswipe - Same Direction	W	W	Straight	Straight
'90790081	2/17/2009	9:49 AM	'0520BU	4.79		'	0	0	Motion	Rear End	W	W	Straight	Straight
'90570086	1/20/2009	5:55 PM	'0520BU	4.81		'	0	0	Motion	Sideswipe - Same Direction	W	W	Straight	Straight
'92760281	6/5/2009	4:24 PM	'0520BU	4.81		'	0	0	Motion	Rear End	E	E	Straight	Straight
'94940031	10/9/2009	3:54 PM	'0520BU	4.82		'	2	0	Motion	Rear End	W	W	Straight	Stopped
'91730250	4/23/2009	4:51 PM	'0520BU	4.83	3	'098401	2	0	Motion	Rear End	W	W	Straight	Straight
'94940073	10/12/2009	6:09 PM	'0520BU	4.83	3	'098401	0	0	Motion	Rear End	E	E	Straight	Stopped
'94940046	10/12/2009	6:09 PM	'0520BU	4.83	3	'098401	0	0	Motion	Rear End	E	E	Straight	Stopped
'94120048	9/27/2009	12:20 AM	'0520BU	4.83	3	'098401	1	0	Motion	Rear End	W	W	Straight	Straight

'94120045	9/27/2009	12:26 AM	'0520BU	4.83	3	'098401	0	0	Other Non-Collision	Angle	N	N	Straight	Straight
'94120036	9/26/2009	11:55 PM	'0520BU	4.84		'	0	0	Motion	Rear End	W	W	Straight	Straight
'94120205	9/27/2009	12:26 PM	'0520BU	4.84		'	0	0	Other Non-Collision	Rear End	W	W	Straight	Straight
'91730433	4/4/2009	7:44 AM	'0520BU	4.86		'	0	0	Deer	Not A Collision With A Motor Vehicle	E		Straight	
'92370483	5/22/2009	3:06 PM	'0520BU	4.89		'	0	0	Motion	Rear End	E	E	Straight	Stopped
'90790115	2/12/2009	4:35 PM	'0520BU	4.9		'	3	0	Fixed)	Rear End	W	W	Straight	Stopped
'93200525	7/4/2009	11:00 PM	'0520BU	4.9		'	0	0	Motion	Rear End	E	E	Straight	Straight
'92370495	5/22/2009	1:09 PM	'0520BU	4.94		'	1	0	Motion	Rear End	E	E	Straight	Stopped
'92370398	5/7/2009	4:32 PM	'0520BU	4.95		'	0	0	Motion	Rear End	E	E	Straight	Straight
'91190260	3/8/2009	4:11 AM	'0520BU	4.97		'	0	0	Motion	Sideswipe - Same Direction	E	E	Changing Lanes	Straight
'93210017	7/2/2009	11:44 AM	'0520BU	4.97		'	0	0	Motion	Sideswipe - Same Direction	E	E	Changing Lanes	Straight
'93200442	7/15/2009	12:19 PM	'0520BU	4.97		'	0	0	Motion	Rear End	E	E	Straight	Stopped
'94100243	9/10/2009	8:01 PM	'0520BU	4.97		'	2	0	Motion	Rear End	E	E	Straight	Stopped
'90570248	1/7/2009	6:04 PM	'0520BU	4.98	3	'159501	0	0	Motion	Rear End	E	E	Straight	Stopped
'90790208	2/3/2009	2:07 PM	'0520BU	4.98	3	'159501	1	0	Motion	Angle	E	N	Turning Left	Straight
'90790076	2/17/2009	12:36 AM	'0520BU	4.98	3	'159501	0	0	Motion	Angle	N	W	Turning Left	Straight
'91190397	3/23/2009	5:47 PM	'0520BU	4.98	3	'159501	0	0	Motion	Angle	E	W	Turning Left	Straight
'94120243	9/17/2009	7:15 PM	'0520BU	4.98	3	'159501	4	0	Motion	Angle	W	N	Straight	Turning Left
'94100316	9/12/2009	1:10 PM	'0520BU	4.98	3	'159501	0	0	Motion	Angle	W	E	Turning Left	Straight
'93840154	8/7/2009	8:44 PM	'0520BU	4.98	3	'159501	0	0	Motion	Sideswipe - Same Direction	E	E	Changing Lanes	Straight
'93860392	8/27/2009	5:34 PM	'0520BU	4.98	3	'159501	1	0	Motion	Angle	S	E	Turning Left	Straight
'93200519	7/5/2009	3:18 PM	'0520BU	4.98	3	'159501	1	0	Fixed)	Rear End	E	E	Straight	Stopped
'92760365	6/17/2009	7:19 AM	'0520BU	4.98	3	'159501	1	0	Motion	Sideswipe - Opposite Direction	S	E	Turning Left	Straight
'91730366	4/11/2009	12:28 AM	'0520BU	4.98	3	'159501	0	0	Motion	Angle	W	W	Driveway	Turning Left
'91730347	4/12/2009	12:28 AM	'0520BU	4.98	3	'159501	0	0	Motion	Angle	W	W	Driveway	Turning Left
'91730311	4/16/2009	12:58 AM	'0520BU	4.98	3	'159501	0	0	Motion	Sideswipe - Same Direction	N	N	Changing Lanes	Turning Left
'91190459	3/30/2009	12:11 PM	'0520BU	4.98	3	'159501	2	0	Motion	Angle	E	E	Changing Lanes	Straight
'91190398	3/23/2009	7:36 PM	'0520BU	4.98	3	'159501	0	0	Motion	Sideswipe - Opposite Direction	E	W	Turning Left	Straight
'91190236	3/6/2009	4:52 PM	'0520BU	4.98	3	'159501	0	0	Motion	Rear End	E	E	Straight	Stopped
'94100307	9/2/2009	10:26 AM	'120901	0.07		'	0	0	Motion	Angle	W	N	Turning Left	Passing
'92370391	5/8/2009	3:59 PM	'120901	0.08		'	0	0	Motion	Rear End	S	S	Straight	Stopped
'92760350	6/15/2009	5:16 PM	'120901	0.08		'	1	0	Motion	Rear End	S	S	Straight	Stopped
'90570232	1/3/2009	9:12 PM	'125701	0	3	'129701	2	0	Motion	Angle	S	W	Straight	Straight
'93190475	7/26/2009	7:55 PM	'125701	0		'	3	0	Fixed)	Rear End	S	S	Straight	Stopped
'90790054	2/20/2009	4:00 PM	'125701	0	3	'129701	0	0	Motion	Angle	N	W	Straight	Right
'93860369	8/30/2009	4:15 AM	'129701	0.81		'	0	0	Motion	Angle	N	W	Backing	Stopped
'91190370	3/19/2009	5:03 PM	'159501	1.65		'	0	0	Motion	Angle	E	S	Straight	Straight
'92370527	5/31/2009	11:47 PM	'159501	1.65		'	0	0	Motion	Angle	E	S	Straight	Straight
'94120109	9/26/2009	6:32 PM	'159501	1.65		'	0	0	Motion	Angle	E	S	Turning Left	Stopped
'93840112	8/4/2009	2:42 PM	'159501	1.65		'	0	0	Motion	Rear End	S	S	Straight	Stopped



DEPT OF TRAFFIC ENGINEERING
CITY OF ALBANY, GEORGIA

COLLISION DIAGRAM

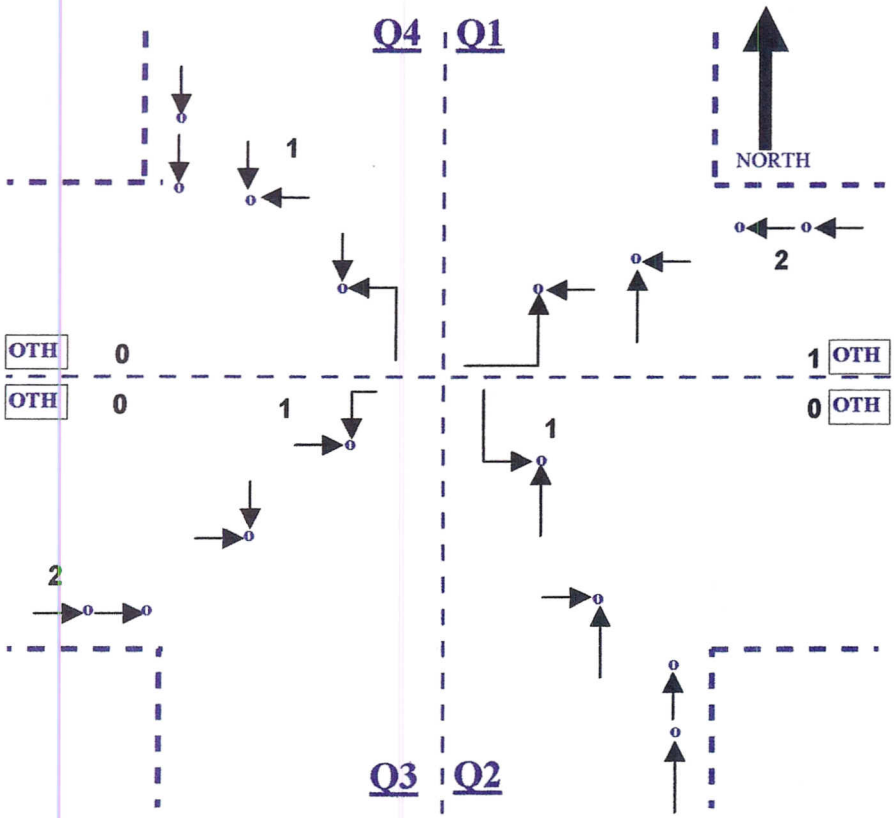
FRONT ST (S) & OGLETHORPE BV (W)

DATE PREPARED	3/4/2010
PERIOD	2/1/2008 - 2/12/2009
NUMBER INJURIES	3
NUMBER FATALITIES	0

ACCIDENT TOTALS BY TYPE

TYPE	DAY	NIGHT	TOT
FATAL	0	0	0
PED INJ	0	0	0
OTH INJ	2	0	2
PROP DMG	1	2	3
TOTAL	3	2	5

Quad	Type	-- Date --	Day	Hour	Day	Night	Wet	Dry	Inj	Ftl	Age	DUI	Acc #
1	RE	10/11/2008	Saturday	24		1	1				22	N	23725
3	RALT	3/7/2008	Friday	6		1	1				59	N	5324
3	RE	2/8/2008	Friday	17	1			1			44	N	2835
4	RA	4/30/2008	Wednesday	13	1			1	1		62	N	9604
4	RA	7/11/2008	Friday	17	1		1		2		25	N	15808
	Totals	⟹			3	2	3	2	3	0			



DEPT OF TRAFFIC ENGINEERING
CITY OF ALBANY, GEORGIA

COLLISION DIAGRAM

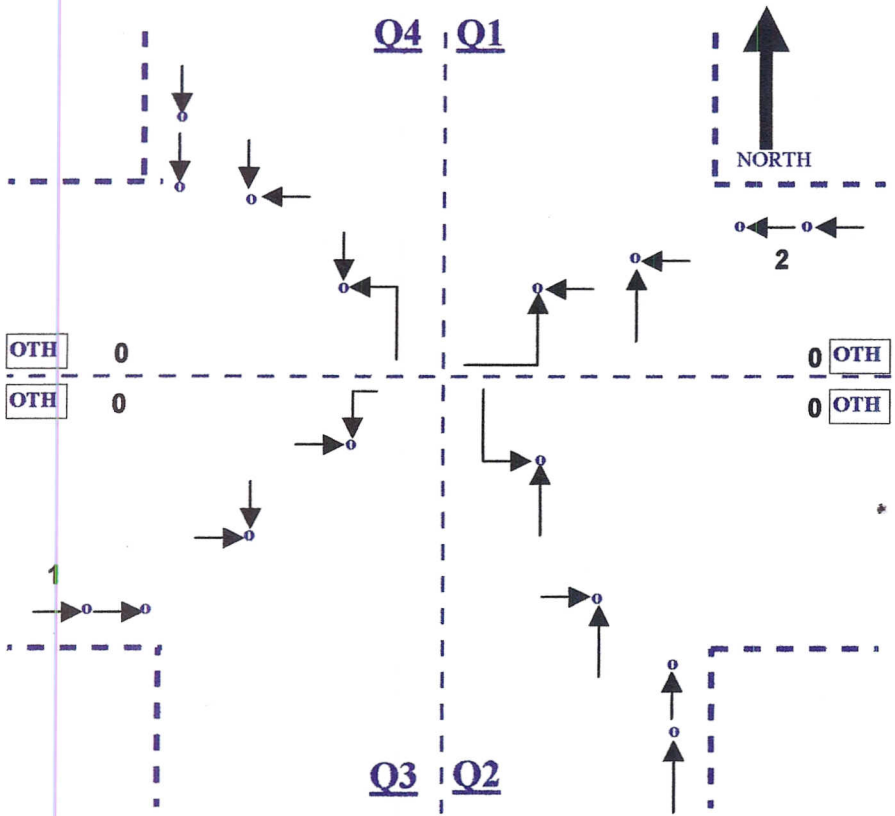
FRONT ST (S) & OGLETHORPE BV (W)

DATE PREPARED	3/4/2010
PERIOD	2/13/2009 - 2/13/2010
NUMBER INJURIES	4
NUMBER FATALITIES	0

ACCIDENT TOTALS BY TYPE

TYPE	DAY	NIGHT	TOT
FATAL	0	0	0
PED INJ	0	0	0
OTH INJ	1	1	2
PROP DMG	5	1	6
TOTAL	6	2	8

Quad	*Type*	*-- Date --*	*Day*	*Hour*	*Day*	*Night*	*Wet*	*Dry*	*Inj*	*Ftl*	*Age*	*DUI*	*Acc #*
1	RE	3/5/2009	Thursday	15	1			1			22	N	5157
1	RE	8/1/2009	Saturday	13	1			1			18	N	19108
1	SSSD	4/26/2009	Sunday	18	1			1			66	N	10235
2	RALT	9/24/2009	Thursday	15	1			1			19	N	23757
3	RALT	3/7/2009	Saturday	6		1	1				60	N	5324
3	RE	12/11/2009	Friday	24		1		1	2		45	N	30192
3	RE	7/13/2009	Monday	18	1			1	2		71	N	17442
4	RA	11/30/2009	Monday	11	1			1			49	N	29271
	Totals	⟹			6	2	1	7	4	0			



DEPT OF TRAFFIC ENGINEERING
CITY OF ALBANY, GEORGIA

COLLISION DIAGRAM

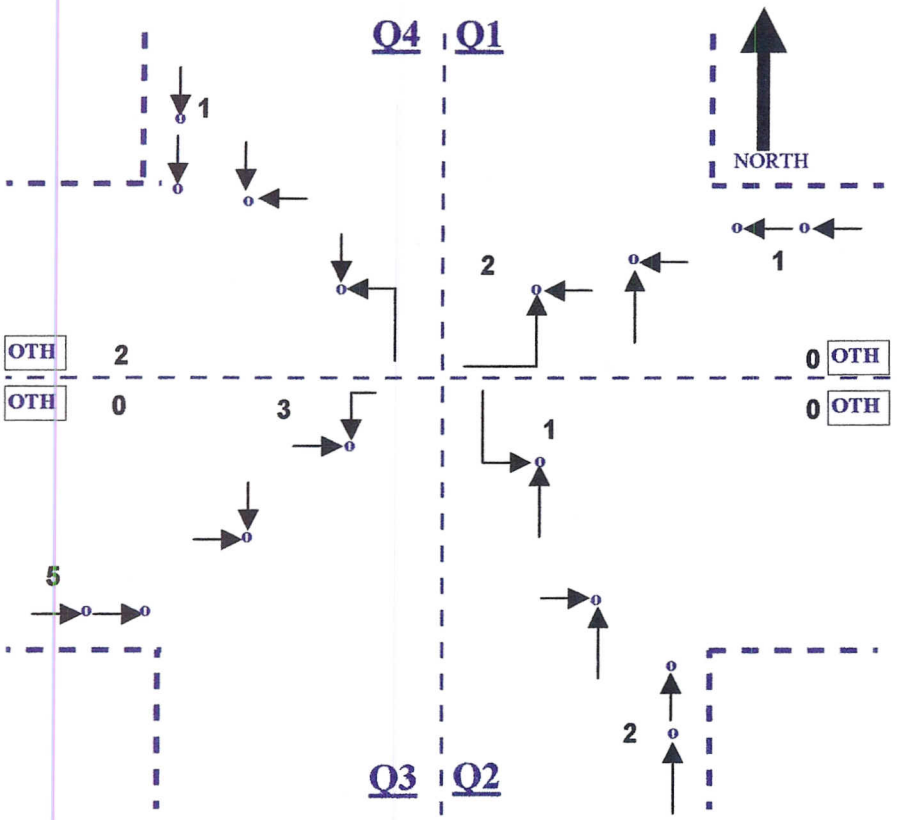
COLLEGE DR & OGLETHORPE BV (E)

DATE PREPARED	3/4/2010
PERIOD	2/13/2009 - 2/13/2010
NUMBER INJURIES	3
NUMBER FATALITIES	0

ACCIDENT TOTALS BY TYPE

TYPE	DAY	NIGHT	TOT
FATAL	0	0	0
PED INJ	0	0	0
OTH INJ	1	1	2
PROP DMG	1	0	1
TOTAL	2	1	3

Quad	*Type*	*- - Date - -*	*Day*	*Hour*	*Day*	*Night*	*Wet*	*Dry*	*Inj*	*Ftl*	*Age*	*DUI*	*Acc #*
1	RE	4/23/2009	Thursday	17	1			1	2		61	N	9913
1	RE	9/27/2009	Sunday	24		1	1		1		19	N	24020
3	RE	10/12/2009	Monday	18	1		1				17	N	25326
	Totals	⟹			2	1	2	1	3	0			



DEPT OF TRAFFIC ENGINEERING
CITY OF ALBANY, GEORGIA

COLLISION DIAGRAM

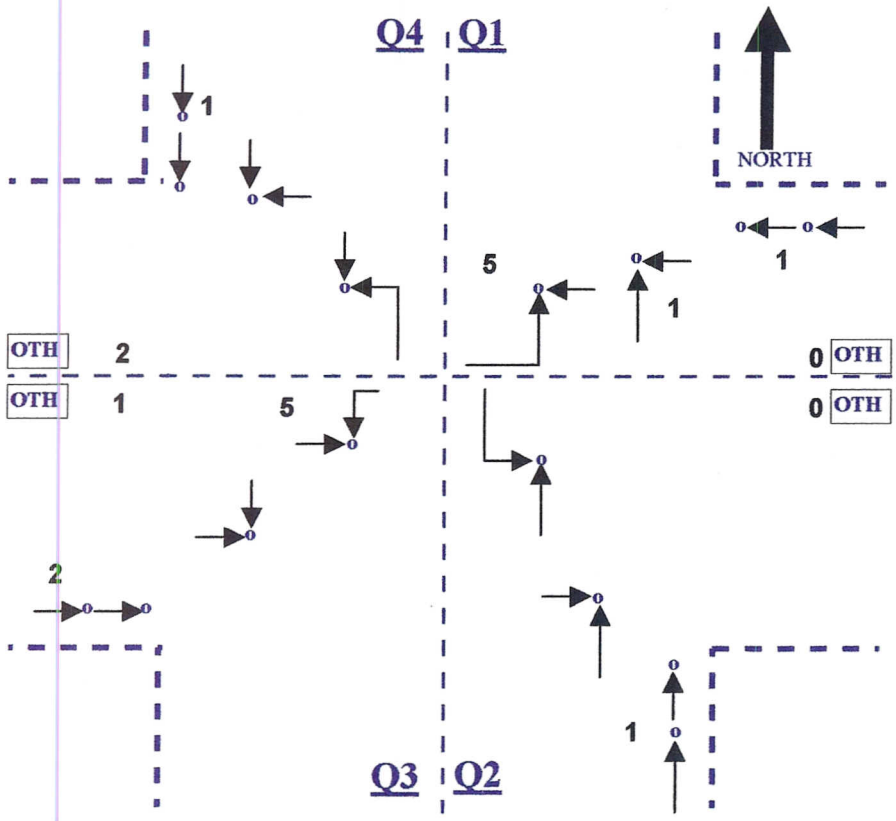
OGLETHORPE BV (E) & RADIUM SPRINGS RD

DATE PREPARED	3/4/2010
PERIOD	2/1/2008 - 2/12/2009
NUMBER INJURIES	12
NUMBER FATALITIES	0

ACCIDENT TOTALS BY TYPE

TYPE	DAY	NIGHT	TOT
FATAL	0	0	0
PED INJ	0	0	0
OTH INJ	3	4	7
PROP DMG	5	5	10
TOTAL	8	9	17

Quad	*Type*	*- - Date - -*	*Day*	*Hour*	*Day*	*Night*	*Wet*	*Dry*	*Inj*	*Ftl*	*Age*	*DUI*	*Acc #*
1	RALT	9/23/2008	Tuesday	22		1		1			18	N	22088
1	RE	8/17/2008	Sunday	24		1		1			56	N	18776
1	RALT	3/6/2008	Thursday	21		1		1	1		60	N	4969
2	RE	9/9/2008	Tuesday	9	1			1			23	N	20706
2	RE	5/14/2008	Wednesday	20	1			1			47	N	10893
2	RALT	2/3/2009	Tuesday	14	1			1	1		64	N	2731
3	RE	12/4/2008	Thursday	17		1		1			28	N	27944
3	RALT	5/1/2008	Thursday	13	1			1	1		43	N	9717
3	RE	1/7/2009	Wednesday	18	1			1			53	N	563
3	RALT	3/23/2008	Sunday	22		1		1	4		53	N	6371
3	RE	9/3/2008	Wednesday	15	1			1	1		56	N	20240
3	RE	7/13/2008	Sunday	21		1	1		2		23	N	15980
3	RE	5/25/2008	Sunday	17	1			1			21	N	11815
3	RALT	10/9/2008	Thursday	2		1		1	2		22	N	23441
4	SSOD	3/22/2008	Saturday	21		1		1				N	6291
4	RE	1/12/2009	Monday	15	1			1			39	N	953
4	HO	5/16/2008	Friday	1		1		1			44	N	11003
	Totals	==========>			8	9	1	16	12	0			



DEPT OF TRAFFIC ENGINEERING
CITY OF ALBANY, GEORGIA

COLLISION DIAGRAM

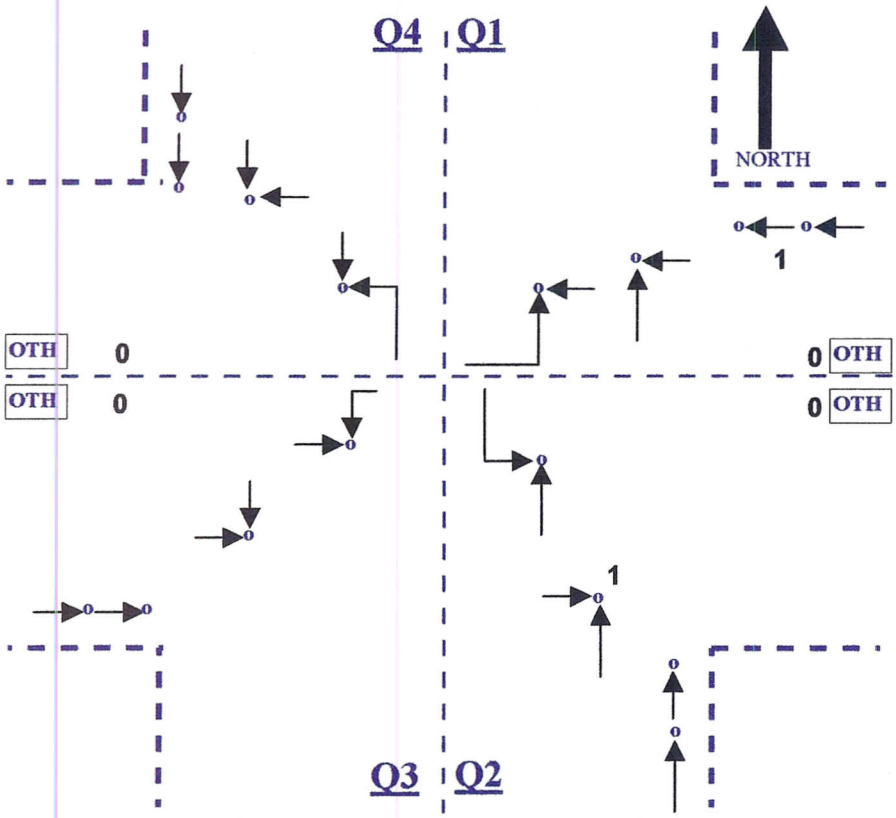
OGLETHORPE BV (E) & RADIUM SPRINGS RD

DATE PREPARED	3/4/2010
PERIOD	2/13/2009 - 2/13/2010
NUMBER INJURIES	14
NUMBER FATALITIES	0

ACCIDENT TOTALS BY TYPE

TYPE	DAY	NIGHT	TOT
FATAL	0	0	0
PED INJ	0	0	0
OTH INJ	5	3	8
PROP DMG	7	4	11
TOTAL	12	7	19

Quad	*Type*	*-- Date --*	*Day*	*Hour*	*Day*	*Night*	*Wet*	*Dry*	*Inj*	*Ftl*	*Age*	*DUI*	*Acc #*
1	RALT	3/23/2009	Monday	20	1			1				N	6882
1	RA	3/23/2009	Monday	18	1			1			32	N	6878
1	RE	3/6/2009	Friday	18	1			1	2		23	N	5258
1	RALT	2/17/2009	Tuesday	1		1		1			22	N	3815
1	RALT	11/7/2009	Saturday	21		1		1	1		28	N	27466
1	RALT	10/2/2009	Friday	23		1		1			17	N	24520
1	RALT	9/17/2009	Thursday	19	1			1	4		32	N	23131
2	RE	10/5/2009	Monday	12	1		1				26	N	24703
3	RE	7/5/2009	Sunday	15	1			1	1		27	N	16746
3	SSSD	8/7/2009	Friday	21	1			1			66	N	19655
3	RALT	8/27/2009	Thursday	18	1		1		1		19	N	21381
3	RALT	9/1/2009	Tuesday	13	1			1			40	N	21763
3	RE	9/10/2009	Thursday	20		1		1	3		19	N	22556
3	RALT	6/17/2009	Wednesday	7	1			1	1		22	N	15138
3	RALT	10/5/2009	Monday	9	1		1				24	N	24689
3	RALT	11/18/2009	Wednesday	21		1		1			20	N	28383
4	SSSD	4/16/2009	Thursday	1		1		1			39	N	9181
4	OFF	12/18/2009	Friday	4		1	1		1		36	N	30716
4	RE	10/6/2009	Tuesday	14	1			1			48	N	24802
	Totals	⟹			12	7	4	15	14	0			



DEPT OF TRAFFIC ENGINEERING
CITY OF ALBANY, GEORGIA

COLLISION DIAGRAM

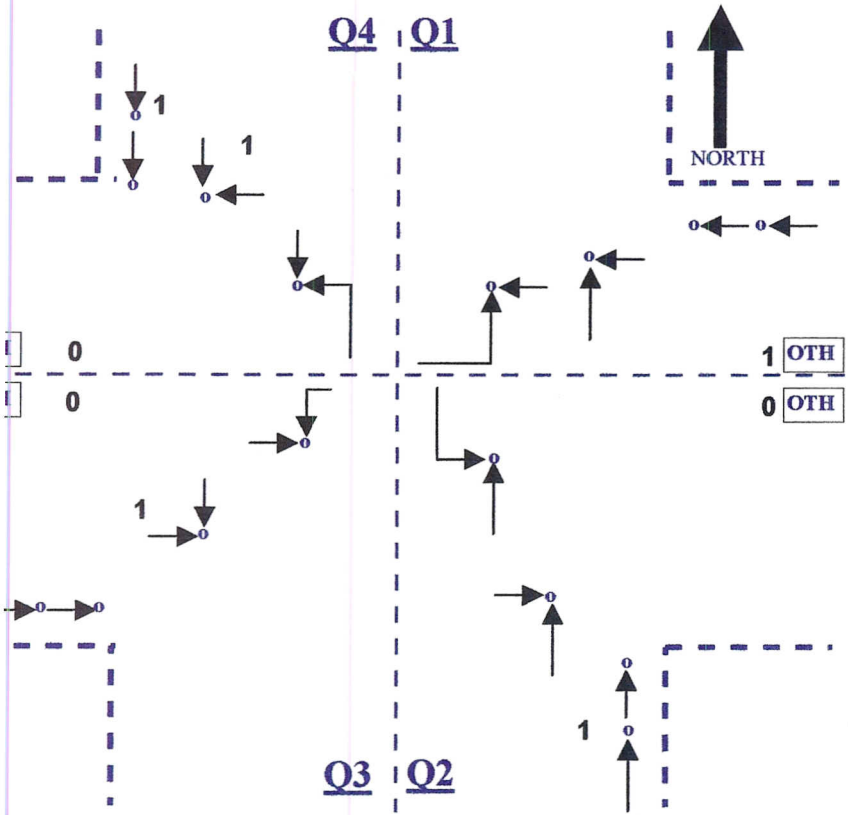
BROAD AV (E) & OLD RADIUM SPRINGS RD

DATE PREPARED	3/4/2010
PERIOD	2/1/2008 - 2/12/2009
NUMBER INJURIES	3
NUMBER FATALITIES	0

ACCIDENT TOTALS BY TYPE

TYPE	DAY	NIGHT	TOT
FATAL	0	0	0
PED INJ	0	0	0
OTH INJ	2	0	2
PROP DMG	0	0	0
TOTAL	2	0	2

Quad	*Type*	*-- Date --*	*Day*	*Hour*	*Day*	*Night*	*Wet*	*Dry*	*Inj*	*Ftl*	*Age*	*DUI*	*Acc #*
1	RE	7/20/2008	Sunday	17	1			1	1		33	N	16526
2	RA	10/11/2008	Saturday	12	1			1	2		34	N	23676
	Totals	⟹			2	0	0	2	3	0			



DEPT OF TRAFFIC ENGINEERING
CITY OF ALBANY, GEORGIA

COLLISION DIAGRAM

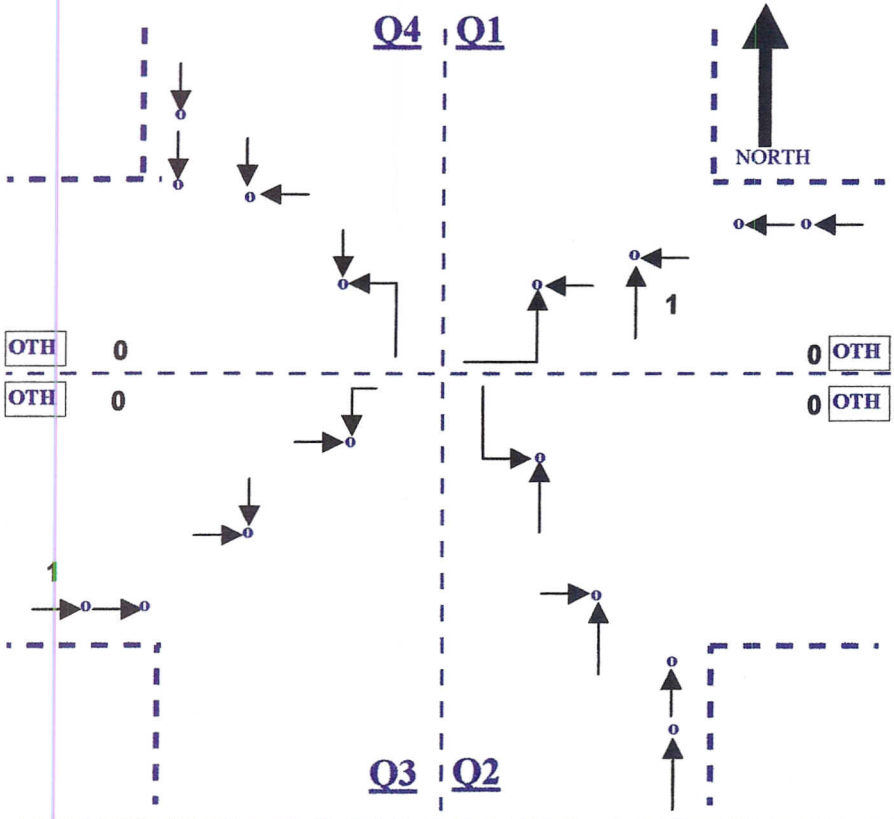
BROAD AV (E) & BROADWAY ST (N)

DATE PREPARED	3/4/2010
PERIOD	2/1/2008 - 2/12/2009
NUMBER INJURIES	6
NUMBER FATALITIES	0

ACCIDENT TOTALS BY TYPE

TYPE	DAY	NIGHT	TOT
FATAL	0	0	0
PED INJ	0	0	0
OTH INJ	2	1	3
PROP DMG	1	1	2
TOTAL	3	2	5

uad	*Type*	*-- Date --*	*Day*	*Hour*	*Day*	*Night*	*Wet*	*Dry*	*Inj*	*Ftl*	*Age*	*DUI*	*Acc #*
1	OFF	9/3/2008	Wednesday	23		1		1			61	N	20276
2	RE	4/4/2008	Friday	12	1			1	3			N	7318
3	RA	3/23/2008	Sunday	17	1			1			21	N	6350
4	RA	1/3/2009	Saturday	21		1		1	1		19	N	230
4	RE	6/2/2008	Monday	18	1			1	2		49	N	12556
	Totals	⟹			3	2	0	5	6	0			



DEPT OF TRAFFIC ENGINEERING
CITY OF ALBANY, GEORGIA

COLLISION DIAGRAM

BROAD AV (E) & BROADWAY ST (N)

DATE PREPARED	3/4/2010
PERIOD	2/13/2009 - 2/13/2010
NUMBER INJURIES	0
NUMBER FATALITIES	0

ACCIDENT TOTALS BY TYPE

TYPE	DAY	NIGHT	TOT
FATAL	0	0	0
PED INJ	0	0	0
OTH INJ	0	0	0
PROP DMG	2	0	2
TOTAL	2	0	2

Quad	*Type*	*-- Date --*	*Day*	*Hour*	*Day*	*Night*	*Wet*	*Dry*	*Inj*	*Ftl*	*Age*	*DUI*	*Acc #*
1	RA	2/20/2009	Friday	16	1			1			44	N	4111
3	RE	7/6/2009	Monday	15	1			1			20	N	16819
Totals					2	0	0	2	0	0			

Attachment 5

Bridge Inventory

Processed Date:5/5/2010

Bridge Inventory Data Listing

Parameters: Bridge Serial Num

Structure ID:095-0051-0 **Dougherty** **SUFF. RATING:** 8.24

Location & Geography

Structure ID:	095-0051-0
200 Brdge Information:	96
*6A Feature Int:	FLINT RIVER
*6B Critical Bridge:	0
*7A Route No Carried:	CS01297
*7B Facility Carried:	BROAD AVENUE
9 Location:	ALBANY - DOWNTOWN
2 Dot District:	4
207 Year Photo:	2010
*91 Inspection Frequency:	06 Date: 01/25/2010
92A Fract Crit Insp Freq:	0 Date: 02/01/1901
92B Underwater Insp Freq:	1 Date: 07/06/2009
92C Other Spc. Insp Freq:	0 Date: 02/01/1901
* 4 Place Code:	01052
*5 Inventory Route(O/U):	1
Type:	5
Designation:	1
Number:	00134
Direction:	0
*16 Latitude:	31 - 34.6157 HMMS Prefix:00
*17 Longtitude:	84 - 08.8202 HMMS Suffix:00 MP:12.39
98 Border Bridge:	000%Shared:00
99 ID Number:	000000000000000
*100 STRAHNET:	0
12 Base Highway Network:	1
13A LRS Inventory Route:	953129701
13B Sub Inventory Route:	0
101 parellel Structure:	N
*102 Direction of Traffic:	2
*264 Road Inventory Mile Post:	003.88
*208 Inspection Area:	4 Initials: EFP
Engineer's Initials:	kww
* Location ID No:	095-00134M-003.88E

*104 Highway System:	0
*26 Functional Classification:	14
*204 Federal Route Type:	M No: 00134
105 Federal Lands Highway:	0
*110 Truck Route:	0
2006 School Bus Route:	0
217 Benchmark Elevation:	0000000
218 Datum:	0
*19 Bypass Length:	01
*20 Toll:	3
*21 Maintanance:	02
*22 Owner:	02
*31 Design Load:	2
37 Historical Significance:	3
205 Congressional District:	02
27 Year Constructed:	1920
106 Year Reconsrtucted:	0000
33 Bridge Medium:	0
34 Skew:	00
35 Structure Flared:	0
38 Navigation Control:	0
213 Special Steel Design:	0
267 Type of Paint:	0
*42 Type of Service On:	5
Type of Service Under:	5
214 Movable Bridge:	0
203 Type Bridge:	A
259 Pile Encasement	3
*43 Structure Type Main:	1 11
45 No.Spans Main:	011
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:	6
Membrane Type:	0
Deck Protection:	0

Signs & Attachments

225 Expansion Joint Type:	00
242 Deck Drains:	0
243 Parapet Location:	0
Height:	0
Width:	0
238 Curb Height:	1
Curb Material:	1
239 Handrail	1 1
*240 Medium Barrier Rail:	0
241 Bridge Median Height:	0
* Bridge Median Width:	0
230 Guardrail Loc. Dir. Rear:	0
Fwrd:	0
Oppo. Dir. Rear:	0
Oppo. Fwrd:	0
244 Aproach Slab	0
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:	21
Telephone:	22
Sewer:	00
247 Lighting Street:	1
Navigation:	0
Aerial:	0
*248 County Continuity No.:	00

Bridge Inventory Data Listing

Structure ID:095-0051-0

Programming Data

201 Project No:	FAP 81
202 Plans Available:	4
249 Prop Proj No:	CSSTP-M002-00(960)
250 Approval Status:	0000
251 PI Number:	M002960
252 Contract Date:	02/01/1901
260 Seismic No:	00000
75 Type Work:	31 1
94 Bridge Imp: Cost:	$3,217
95 Roadway Imp. Cost:	591
96 Total Imp Cost:	4418
76 Imp Length:	002097
97 Imp Year:	1990
114Furure ADT:	010125 Year:2027

Hydralic Data

215Waterway Data:	
High Water Elev:	0185.0 Year:1970
Flood Elev:	0000.0 Freq:00
Avg Streambed Elev:	0149.1
Drainage Area:	00000
Area of Opening:	000000
113 Scour Critical	U
216Water Depth:	12.0 Br.Height:47.8
222Slope Protection:	0
221Slope Protection	0 Fwd:0
219Fender System	0
220Dolphin:	0
223Current Cover:	000
Type:	0
No. Barrels:	0
* Width:	0.00 Height:0.00
* Length:	0 Apron:0
265 U/W Insp. Area	2 Diver:RMO
Location ID No:	095-00134M-003.88E

Measurements:

*29ADT	006750 Year:2007
109%Trucks:	0
* 28 Lanes On:	03 Under:00
210 No. Tracks On:	00 Under:00
* 48 Max. Span Length	0100
* 49 Structure Length:	773
51 Br. Rwdy. Width	32.00
52 Deck Width:	44.60
* 47 Tot. Horiz. Cl:	32
50 Curb / Sidewalk Width	5.30 / 5.30
32 Approach Rdwy. Width	033
*229 Shoulder Width:	
Rear Lt:	6.50 Type:5 Rt:6.50
Fwd. Lt:	6.50 Type:5 Rt:6.50
Permanent Width:	
Rear:	33.00 Type:5
	33.00 Type:2
Intersaction Rear:	1 Fwd: 0
36Safety Features Br. Rail:	2
Transition:	0
App. G. Rail:	0
App. Rail End:	0
53 Minimum Cl. Over:	99' 99 "
Under:	
*228 Minimum Vertical Cl	
Act. Odm Dir::	99' 99"
Oppo. Dir:	99' 99"
Posted Odm. Dir:	00' 00"
Oppo. Dir:	00' 00"
55 Lateral Undercl. Rt:	N 0 0
56 Lateral Undercl. Lt:	0.00
*10 Max Min Vert Cl:	99' 99" Dir:0
39 Nav Vert Cl:	000 Horiz:0000
116 Nav Vert Cl Closed:	000
245 Deck Thickness Main	6.50
Deck Thick Approach:	0.00
246 Overlay Thickness:	0.30
212 Year Last Painted:	Sup:0000Sub:0000

65 Inventory Rating Mathod:	1
63 Operating Rating Method:	1
66 Inventory Type:	2 Rating: 00
64 Operating Type:	2 Rating: 00
231Calculated Loads:	
H-Modified:	00 0
HS-Modified:	00 0
Type 3:	00 0
Type 3s2:	00 0
Timber:	00 0
Piggyback:	00 0
261 H Inventory Rating:	00
262 H Operating Rating	00
67 Structural Evaluation:	0
58 Deck Condition:	4
59 Superstructure Condition:	4
* 227 Collision Damage:	0
60A Substructure Condition:	1
60B Scour Condition:	1
60C Underwater Condition	1
71 Waterway Adequacy:	8
61 Channel Protection Cond.:	5
68 Deck Geometry:	2
69 UnderClr. Horz/Vert:	N
72 Appr. Alignment:	6
62 Culvert:	N

Posting Data

70 Bridge Posting Required	0
41 Struct Open, Posted, CL:	K
* 103 Temporary Structure:	0
232 Posted Loads	
H-Modified:	00
HS-Modified:	00
Type 3:	00
Type 3s2:	00
Timber:	00
Piggyback	00
253 Notification Date:	02/01/1901
258 Fed Notify Date:	2/1/1901 12:00:00AM

Attachment 6

Minutes of Concept Meetings

Heath & Lineback Engineers

Memorandum

To: Clinton Ford

From: W. Allen Krivsky, P.E.

CC: Meeting Attendees

Date: 6/23/2010

Re: Broad Avenue Bridge in Albany Transportation Improvement Project
HPP-0007-00(550), PI No. 0007550, Dougherty County
Concept Team Meeting Minutes

A Concept Team Meeting was held June 22, 2010 at 9:30 in the GDOT Albany Area Office. The purpose of this memorandum is to document the meeting. The meeting sign-in sheet is attached.

General Notes

- Clinton Ford, GDOT Project Manager welcomed everyone to the meeting and turned the meeting over to Allen Krivsky.
- Everyone introduced themselves.
- Allen Krivsky provided a description of the project as well as the public involvement and stakeholder involvement activities to date.
- Allen Krivsky presented the Project Concept Report in detail and invited comment and questions from the group.

Comments and Questions

- A hazardous waste site exists on the north east side of the bridge and River. The property is owned by the City of Albany. Clean up and monitoring has occurred over the years. GDOT Office of Materials personnel conducted a Phase II Environmental Site Assessment of the area within the existing 120 foot right of way on the east side of the River and determined the area clean of any contaminated soils. Their official report is pending. When the report is received by Clinton, it will be forwarded to Bruce Maples, City of Albany, for information only.
- Q:Are construction easements required?- A: No construction easements are anticipated at this time. Forty feet of access width exists on both side of the existing bridge for construction equipment access from the road to the river. Any other area for staging equipment, stockpiling, etc. would be the responsibility of the contractor. Currently and until coordination is completed with the City and County Park groups, access will be restricted along the existing right of way to the Park. Access will be restricted to the City property with potential soil contamination until further coordination is conducted. There exists one property on the southeast corner of the bridge that is privately owned that will not be restricted. This property is a potential staging area for the contractor to work out access to.

- Q: Have preliminary cost for mitigation been established?- A: No mitigation costs have been estimated or anticipated.
- Q: Relative to the project schedule, are utilities relocating prior to construction?- A: Yes. SUE work is complete and pending final approval. GO & District Utility Offices are working on utility coordination. 2nd submission utility plans for relocations will occur after SUE approval. District will give utility companies 30 days to produce relocation plans and the Department will issue authorization to relocate in July/August.
- Q: How will the contractor access the construction site?- A: Forty feet of access width exists on both side of the existing bridge for construction equipment access from the road to the river. Any other area for staging equipment, stockpiling, etc. would be the responsibility of the contractor. Currently and until coordination is completed with the City and County Park groups, access will be restricted along the existing right of way to the Park. Access will be restricted to the City property with potential soil contamination until further coordination is conducted. There exists one property on the southeast corner of the bridge that is privately owned that will not be restricted. This property is a potential staging area for the contractor to work out access to.
- The City has interconnect cable and conduit on the existing bridge for connecting the signals on each end of the bridge. The City desires to have a 2" conduit, interconnect cable and camera pole and camera on the bridge.
- The City desires to have pedestrian and street lighting included in the project. Pedestrian lighting has been discussed and included. Further discussion will occur for the street lighting relative to type, configuration, etc.
- If cofferdams and large mat foundations for tower cranes are anticipated, AT&T and all utilities will need to know the proposed locations.
- Add the following as utility owners:
    - Telephone/Fiber: Windstream
    - Gas: Albany Water, Gas, & Light Commission
    - Water: Albany Water, Gas, & Light Commission
    - Lights: Gas: Albany Water, Gas, & Light Commission
    - Traffic Signal Interconnect: City of Albany
- The Concept Team Meeting ended and after a break, the Constructability Review was conducted.

Broad Ave. over Flint River 6/28/10

CMT + CR

Name	Organization	E-mail
Masood Shabazz	Heath & Lineback	mshabazz@heath-lineback.com
Bruce Maples	City of Albany - Eng	kmaples@albany.ga.us
Tim Warren	GDOT - UTILITIES	TWARREN@DOT.GA.GOV
Lisa Sikes	GDOT - Construction	lsikes@DOT.GA.GOV
Bill Cooper	GDOT - Utilities	WCooper@dot.ga.gov
Larry Rigsby	Windstream Com	larry.rigsby@windstream.com
Judy Bailey	AT&T	JB0322@ATT.COM
Ken Breedlove	City of Albany - Eng	kbreedlove@dougherty.ga.us
Randy Casagrande	City of Albany - Eng.	RCASAGRANDE@Dougherty.ga.us
Sam Pugh	GDOT - Environmental Services	spugh@dot.ga.gov
Keith McCranie	GDOT - R/W	Kmccranie@dot.ga.gov
Geno Hasty	GDOT - TO	ghasty@dot.ga.gov
Scott Chambers	GDOT - CONST.	schambers@dot.ga.gov
Brent Thomas	GDOT - Precast	bthomas@dot.ga.gov
Joe Cowan	GDOT - CONST	JCOWAN@DOT.GA.GOV
Allen Krivsky	H&L	akrivsky@heath-lineback.com
Tony Cravey	GDOT ALBANY	tcravey@dot.ga.gov
Clinton Ford	GDOT PD	cford@dot.ga.gov
George Walls	AWGL	gwalls@wglalbanyga.org

Attachment 7

Project Framework Agreement

Vance C. Smith, Jr., Commissioner

GEORGIA DEPARTMENT OF TRANSPORTATION

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

July 12, 2010

The Honorable Willie Adams, Mayor
City of Albany
P.O. Box 447
Albany, Georgia 31703

Dear Mayor Adams:

I am returning for your files a copy of an executed agreement between the Georgia Department of Transportation and the City of Albany for the following projects:

PROJECT#: CSHPP-0007-00(550) Dougherty County, P.I. #0007550
PROJECT#: CSHPP-0008-00(823) Dougherty County, P.I. #0008823

We look forward to working with you on the successful completion of the joint project.
Should you have any questions, please contact the Project Manager Clinton B. Ford at (678)343-0929.

Sincerely,

Angela Robinson
Financial Management Administrator

AR: rm

Enclosure

c: Bob Rogers
Joe Sheffield - District 4
Shane Pridgen – District 4
Tim Warren – District 4
Jeff Baker – Utilities

AGREEMENT

BETWEEN

DEPARTMENT OF TRANSPORTATION

STATE OF GEORGIA

AND

CITY OF ALBANY

FOR

TRANSPORTATION FACILITY IMPROVEMENTS

This Framework Agreement is made and entered into this 27th day of May, 2010, by and between the DEPARTMENT OF TRANSPORTATION, an agency of the State of Georgia, hereinafter called the "DEPARTMENT", and the **City of Albany,** acting by and through its Mayor and City Council or Board of Commissioners, hereinafter called the "LOCAL GOVERNMENT".

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

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

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

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

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

1. The LOCAL GOVERNMENT shall contribute to the PROJECT by funding all or certain portions of the PROJECT costs for the preconstruction engineering (design), hereinafter referred to as "PE", all reimburseable utility/railroad relocations, all non-reimburseable utilities owned by the LOCAL GOVERNMENT, railroad costs, right of way acquisitions and construction, as specified in Attachment A, attached hereto and incorporated herein by reference. Expenditures incurred by the LOCAL GOVERNMENT prior to the execution of this AGREEMENT or subsequent funding agreements shall not be considered for reimbursement by the DEPARTMENT. Upon execution of this Agreement, the LOCAL GOVERNMENT hereby agrees and shall transfer to the DEPARTMENT the sum of two hundred two thousand four hundred seventy seven and 49/100 Dollars ($202,477.49) for the purpose of providing the DEPARTMENT with the local match for the costs of the PE activities.

2. The DEPARTMENT shall contribute to the PROJECT by funding all or certain portions of the PROJECT costs for the PE activities, right of way acquisitions or construction as specified in Attachment A.

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

Further, the LOCAL GOVERNMENT shall be responsible for repayment of any expended federal funds if the PROJECT does not proceed forward to completion due to a lack of available funding in future PROJECT phases, changes in local priorities or cancelation of the PROJECT by the LOCAL GOVERNMENT without concurrence by the DEPARTMENT.

4. The LOCAL GOVERNMENT shall be responsible for all costs for the continual maintenance and operations of any and all sidewalks and the grass strip between the curb and the sidewalk within the PROJECT limits.

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

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

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

7. The DEPARTMENT shall accomplish all of the PE activities for the PROJECT.

8. The LOCAL GOVERNMENT, unless shown otherwise on Attachment A, shall acquire the Right of way in accordance with the law and the rules and regulations of the FHWA including, but not limited to, Title 23, United States Code; 23 CFR 710, et. Seq., and 49 CFR Part 24 and the rules and regulations of the DEPARTMENT. Upon the DEPARTMENT's approval of the PROJECT right of way plans, verification that the approved environmental document is valid and current, a written notice to proceed will be provided by the DEPARTMENT for the LOCAL GOVERNMENT to stake the right of way and proceed with all pre-acquisition right of way activities. The LOCAL GOVERNEMENT shall not proceed to property negotiation and acquisition whether or not the right of way funding is Federal, State or Local, until the right of way agreement named "Contract for the Acquisition of Right of Way" prepared by the DEPARTMENT's Office of Right of Way is executed between the LOCAL GOVERNMENT and the DEPARTMENT. Failure of the LOCAL GOVERNMENT to adhere to the provisions and requirements specified in the acquisition contract may result in the loss of Federal funding for the PROJECT and it will be the responsibility of the LOCAL GOVERNMENT to make up the loss of that funding. Right of way costs eligible for reimbursement include land and improvement costs, property damage values, relocation assistance expenses and contracted property management costs. Non reimbursable right of way costs include administrative expenses such as appraisal, consultant, attorney fees and any in-house property management or staff expenses. The LOCAL GOVERNMENT shall certify that all required right of way is obtained and cleared of obstructions, including underground storage tanks, 3 months prior to advertising the PROJECT for bids.

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

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

11. The DEPARTMENT, unless otherwise shown in Attachment "A", shall be responsible for Letting the PROJECT to construction, solely responsible for executing any agreements with all applicable utility/railroad companies, and securing and awarding the construction contract for the PROJECT when the certification (that all needed rights of way have been obtained and cleared of obstructions) has been submitted by the LOCAL GOVERNMENT. If the LOCAL GOVERNMENT is shown to LET the construction in Attachment "A", the LOCAL GOVERNMENT shall follow the requirements stated in Chapter 10 of the DEPARTMENT"s Local Administered Project Manual.

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

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

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

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

DEPARTMENT OF TRANSPORTATION

BY: _____
Commissioner

ATTEST: _____
Treasurer

CITY OF ALBANY

BY: _____
Name Willie Adams
Title mayor

Signed, sealed and delivered this 6 day of April, 2010 in the presence of:

_____
Witness

_____
Notary Public

MY COMMISSIONS EXPIRES JANUARY 22, 2012

This Agreement approved by Local Government, the 6th day of April, 2010.

Attest

Sonjia Talbert, City Clerk
Name and Title

FEIN: 58-6000504

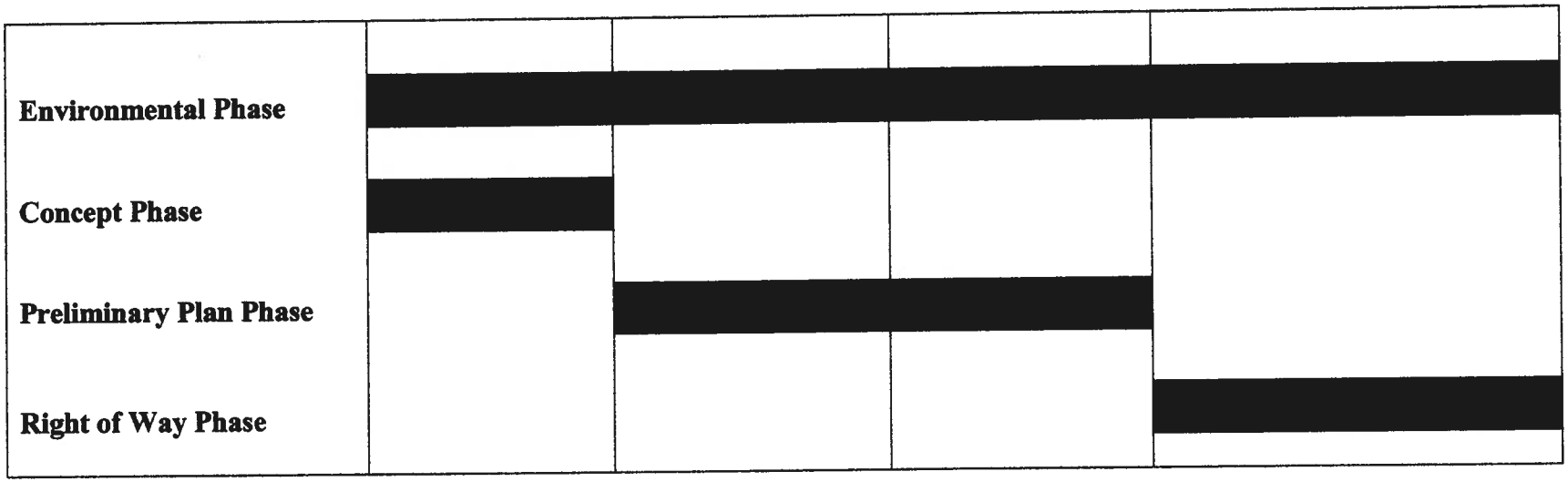
ATTACHMENT "A"
Project #: CSHPP-0007-00(550) & CSHPP-0008-00(823) Dougherty County

Project	Preliminary Engineering		Right of Way			Construction		Utility Relocation	
(PI#, Project #, Description)	Funding	PE Activity by	*Funding of Real Property	Acq. by	Acq. Fund by	*Funding	Letting by	Utility Funding by	Railroad Funding by
0007550, CSHPP-0007-00 (550) BROAD AVE BRIDGE IN ALBANY - TRANSPORTATION IMPROVEMENTS	(80%)Federal ($449,949.98) (0%) State ($0) (20%) LCL GOV ($112,487.49) > ($562,437.47) 100% Local Gov.	GDOT.	100% Local Gov.	Local Gov.	Local Gov.	N/A	GDOT	100% Local Gov.	100% Local Gov.
0008823, CSHPP-0008-00 (823) BROAD AVE BRIDGE IN ALBANY - TRANSPORTATION IMPROVEMENTS	(80%)Federal ($359,960.00) (0%) State ($0) (20%) LCL GOV ($89,990.00) > ($449,950.00) 100% Local Gov.	GDOT	100% Local Gov.	Local Gov.	Local Gov.	N/A	GDOT	100% Local Gov.	100% Local Gov.

Note: Maximum allowable GDOT participating amounts for PE category shall be shown above. Local Government will only be reimbursed the percentage of the accrued invoiced amounts up to but not to exceed the maximum amount indicated. *R/W and Construction amounts shown are estimates for budget planning purposes only.

ATTACHMENT "B"
0007550 & 0008823 – Dougherty County

Proposed Project Schedule



Deadlines for Responsible Parties	**Execute Agreement**	**Sept/2010** (Approve Concept)	**March/2011** (Approve Env. Document)	**April/2011** (Authorize Right of Way funds)	**May/2011** (Authorize Const. funds)

Attachment 8

VE Study

VALUE ENGINEERING STUDY

CSHPP-0007-00(550) Dougherty
PI No.: 0007550
CSSTP-M002-00(960) Dougherty
PI No. M002960
Broad Avenue Bridge @ Flint River

Conducted on August 3, 2010

By

Lisa L. Myers, AVS
Value Engineering Coordinator
Office of Engineering Services

I. INTRODUCTION

GENERAL

This Value Engineering report summarizes the results of the Value Engineering study performed on August 3, 2010.

The scope of the Value Engineering study was limited to a review of common recommendations from similar types of projects.

VALUE ENGINEERING METHODOLOGY

The Value Engineering Study followed the basic Value Engineering procedure for conducting this type of analysis.

This process included the following phases:

1. Investigation
2. Speculation
3. Evaluation
4. Development
5. Presentation (Report Preparation)

Evaluation criteria identified as a basis for the review of recommendations included the following:

- Constructability
- Environmental Impacts
- Delay of project
- Cost of Redesign
- Relevancy to need and purpose of project
- Adherence to constraints and commitments

II. INVESTIGATION PHASE

PROJECT INFORMATION

Project Number: CSHPP-0007-00(550)
County: Dougherty
PI No.: 0007550

Proposed Letting: May 2011
Additional Right of Way or easements are not required.

PE Cost:	$ 462,437
ROW Cost:	200,000
Construction Cost:	9,783,028
TOTAL	$10,445,465

Additional Funding:
CSHPP-0008-00(823) Dougherty PI No. 0008823 PE: $499,950
CSSTP-M002-00(960) Dougherty PI No. M002960 PE: $243,771 CST: $2,673,974

Project Length: 0.25 miles
Functional Classification: Urban Principal Arterial

Traffic ADT:	11,970 (2013)
	15,610 (2033)
% Trucks:	5
Speed Design:	35 MPH

Bridge Work Required: Yes

Project Description: The project consists of the demolition and construction of Broad Avenue over the Flint River in Albany, Georgia. The project is a bridge replacement project with short roadway tie-ins at each end. The existing bridge is a three span open spandrel arch bridge with multiple closed spandrel arch spans in the approaches. The bridge is currently closed to all traffic due to foundation deterioration and undermining. Rehabilitation of the existing structure has been studied but was found to be not feasible due to the high rehabilitation costs, high ongoing maintenance costs and the short life expectancy of the rehabilitated structure.

Need and Purpose: The proposed project is needed to replace the permanently closed 2-lane bridge. The bridge replacement will also be 2-lanes. Presently, traffic is rerouted. Broad Avenue is a main connection into downtown Albany across the Flint River from East Albany. Replacing the bridge would bring it up to current design and Department standards and complete the severed link of the City Street Grid System.

Project Constraints: The following project constraints have been identified:

- There is a political push to open the proposed bridge to the public as soon as possible.
- The protected Purple Bankclimber Mussel has habitat in the vicinity of the existing bridge.
- The west end of the project is located in River Front Park.
- The existing bridge is an eligible historic resource.
- The existing and proposed bridges are in the view shed of the NRHP Listed Bridge House resource and the eligible Albany Downtown Historic District.
- There is the potential for archaeology resources at both banks.
- There are many utilities located on and adjacent to the existing bridge.
- The area is known for severe flooding. Water levels can fluctuate several feet on any given day. Water velocities can be very high.
- The river bed at the existing bridge consists of an exposed erodible and weak lime rock.
- River access is difficult.
- Broad Avenue intersection with Front Street is close to the west abutment.
- GDOT currently has $7 million allotted for the project.

GDOT Commitments: GDOT has committed to the following in the Project Framework Agreement (PFA) executed by GDOT and the City of Albany on May 27, 2010.

- GDOT will contribute to the project funding in accordance with Attachment “A” of the PFA.
- GDOT will adhere to the project schedule established in the approved TIP/STIP. The project is currently programmed for the May 2011 Letting.
- GDOT will accomplish all PE activities for the project.
- GDOT will be responsible for letting the project.

Through public involvement, including three stakeholder meetings and a PIOH, the following commitments were made:

- A bridge typical section that provides for two travel lanes, two bicycle lanes and two wide sidewalks.
- An aesthetically attractive barrier such as Texas Rail.
- Pedestrian lighting on the bridge.
- An aesthetically attractive superstructure and substructure.
- A bridge with minimal maintenance costs.
- A bridge that minimizes the potential for future foundation scour.

- A bridge that minimizes impacts to River Front Park and the Flint River.
- A bridge that allows for future development of the properties at the east end of the bridge and of a future park on the east river bank.
- A bridge that minimizes the risk of design and schedule delay due to environmental permitting and mitigation.
- GDOT will attempt to get the proposed bridge open to the public as soon as possible.

Bridge Type Study: A Bridge Type Study was completed in June 2010.

There are several major constraints with regard to the development of the most appropriate bridge type for the replacement. These are:

- Cost
- Durability (future maintenance cost)
- Environmental Impacts
  - Ecology (purple mussel)
  - Impact on parkland
  - Public opinion (a very visible site in the downtown Albany business and tourist district)
- Constructability
  - Fast flowing, variable water surface elevation, rock bottomed river
  - Demolition of old bridge creating environmental concerns and/or high cost

A public and stakeholder process screened the list of potential bridge alternates down to three viable solutions:

- Prestressed concrete girder bridge
- Cast-in-place post tensioned segmental concrete box girder bridge
- Continuous variable depth composite structural steel girder bridge

This bridge type study discussed the three bridge types with respect to all constraints. A comparison matrix was developed to summarize the discussion. The matrix demonstrated that the steel option was dismissed because the erection of the main river span creates constructability concerns for impact on the river that the long span option was developed to avoid, yet does not provide any balancing benefits over the other two options. The matrix also demonstrated that the prestressed girder bridge is least expensive but is also least acceptable with regard to all other constraints – and therefore offers a potential for delay if mitigation of impact on any constraint is necessary.

III. SPECULATION PHASE

Common recommendations that might apply to this project generated utilizing brainstorming method:

A. 11 foot lanes
B. Adjust vertical profile to minimize earthwork and/or utilize existing pavement
C. Narrow or eliminate sidewalks
D. Eliminate/minimize bicycle lanes
E. Minimize road closure duration and use of detour route.
F. Economical design of bridge

IV. EVALUATION PHASE

A. 11 foot lanes
   Plans already utilize 11 foot lanes.

B. Adjust vertical profile to minimize earthwork and/or utilize existing pavement
   Profile is set to match existing profile as much as possible and cannot be adjusted.

C. Narrow or eliminate sidewalks
   Project is located in an urbanized area. Sidewalks are an important part of this project. GDOT has committed to installing wide sidewalks.

D. Eliminate/minimize bicycle lanes
   Project is located in an urbanized area. Bicycle lanes are an important part of this project. GDOT has committed to installing 4 ft bicycle lanes.

E. Minimize road closure duration and use of detour route.
   The existing bridge has been closed to all traffic in February 2009. GDOT has committed to opening the proposed bridge as soon as possible. The design of the bridge was selected to minimize environmental, design and construction delays.

F. Economical design of bridge
   The proposed bridge design is the most economical choice to meet all structural and environmental requirements. The proposed design also satisfies all commitments. See comparison matrix on the following page from Heath and Lineback's Bridge Type Study.

Comparison Matrix of Options

Constraint	Prestressed Concrete Girders	Segmental Box Girder	Composite Steel Girders
Cost *	$7.3 million	$9.4 million	$10.5 million
Maximize Durability	√	√	
Minimize Environmental Impacts			
Ecology		√	
Parkland		√	√
Public		√	
Maximize Constructability			
River Const.		√	
River Demo.		√	√

* Costs are bridge structure only for comparison purposes and do not represent total project cost
√ Respects the constraint

A comparison of these three options with regard to the project constraints is shown above. The Steel Haunched Composite Girder option is eliminated due to the fact that its primary advantage of clear spanning the river is offset by the ecology constraint (as construction is required in the river) and because it represents the high cost option. The Prestressed Concrete Girder option offers the least expensive solution, but with the most impacts to constraints. The Cast-in-Place Segmental Box Girder option offers a costlier solution, but minimizes the project impacts and the risk of project delay associated with mitigating impacts. The two options, Prestressed Concrete Girder and Segmental Box Girder, offer two solutions that are practical and convenient. The relative "value" of each was derived by considering the total cost of each and the benefits offered in terms of impacts on constraints and possible schedule delays.

V. DEVELOPMENT PHASE

No items were considered for development. Several of the suggestions were already incorporated into the plans and contract documents. The remaining items could not be considered due to the constraints and commitments.

VI. CONCLUSION

The plans do not propose any required right of way or easements. TPro indicates $200,000 for ROW. After selection of the bridge type, it has been determined that no right of way or easements are needed; therefore, the proposed $200,000 can be eliminated and will be considered VE Savings.

The plans have been designed in order to meet the constraints and commitments. Any changes to the project plans would delay the project and not add any additional value.

Attachment 9

Bridge Condition Survey

Bridge Condition Survey

CS 1297 (Broad Avenue) over the Flint River
Dougherty County
PI No. M002960
Structure ID: 095-0051-0

This bridge was constructed in 1920 and consists of open and closed spandrel arch spans with the two footing for the main open spandrel arch located in the river. The arches have major deterioration of the concrete. During inspections, bridge inspectors stopped testing the concrete with the hammers because large sections of concrete fell away from the bridge. Large portions of the parapets, sidewalks, overhangs and deck had deteriorated. Therefore the bridge was posted.

On February 12, 2009 during an BMU Underwater Team inspection, one footing had been undermined. Another heavy rain or release of water from the dam could undermined the footing even further and possibly lead to the collapse of the bridge. Therefore, the bridge was closed.

Initially, the BMU had 2 projects for this bridge

1. Stabilize the bridge and open to pedestrian traffic
    a. Description of work
        i. Rehabilitation of 2 Existing Foundations Located in the River
        ii. Place barrier and fence
        iii. Open bridge to pedestrian traffic
    b. Estimated Construction Costs
        i. Foundation – $1.5 million
        ii. Barrier and fence – $.25 million
        iii. Total – $1.75 million
    c. Estimated Life Expectancy
        i. Foundation: 25 years
        ii. Superstructure: Unknown
        iii. Estimated Construction Time – 2-3 months
2. Rehabilitate the rest of the bridge and open to vehicles and pedestrian Traffic
    a. Description of work
        i. Close bridge to pedestrian traffic
        ii. Rehabilitation of the Rest of the Bridge
        iii. Remove parapet, sidewalk, overhang, deck to top of arches
        iv. Rehab arches of Open Spandrel spans
        v. Build parapet, sidewalk, overhang, deck to top of arches
        vi. Open bridge to pedestrian and vehicular traffic
        vii. Requires complex bridge rehabilitation operation with the Open and Closed Spandrel Arches.
        viii. The future inspection of Open Spandrel Arch Spans will be difficult after rehabilitation due to fiber wrapping of the structural elements.

b. Estimated Construction Costs – $8-24 million (fiber wrapping is a big unknown)
c. Estimated Life Expectancy
    i. Estimated Life Expectancy – 15 years
    ii. Estimated Construction Time – 1.5-2 years

The total cost for these 2 projects would be between $9.75 and $25.75 million.

Due to the rehab costs, several options were created along with cost estimates. The cost estimated range from $4.2 to $13 million. All options were not only less but also provide a bridge with a longer service life when compared to a rehabilitated bridge.

Therefore, the recommendation is to replace this bridge.

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