

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

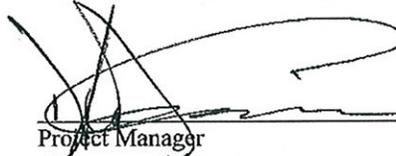
Office of Traffic Operations
PROJECT CONCEPT REPORT
Project Number: CSSFT-0008-00(542)
County: Henry
P. I. Number: 0008542

Federal Route Number: US 23
State Route Number: SR 42

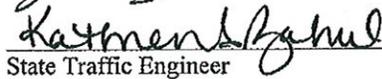
SR 42/US 23 from CR 328/Roberts Road to CR 648/Locust Grove Griffin Road

Submitted for approval:

DATE 7 July 2010


Project Manager

DATE 7-7-10

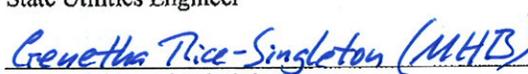

State Traffic Engineer

Recommendation for approval:

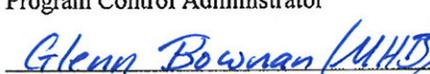
DATE 7/16/10

 *Recommendation on File*
State Utilities Engineer

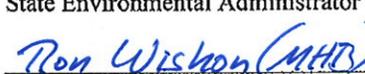
DATE 7/26/10

 *Recommendation on File*
Program Control Administrator

DATE 7/30/10

 *Recommendation on File*
State Environmental Administrator

DATE 7/15/10

 *Recommendation on File*
Project Review Engineer

DATE _____

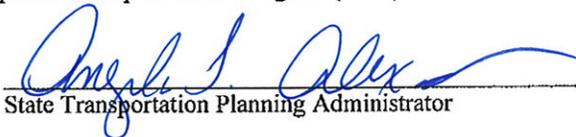
District Engineer

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 7/20/10


State Transportation Planning Administrator

PROJECT LOCATION MAP



Need and Purpose: As shown below, the intersection of SR 42/US 23 at CR 648/Locust Grove Griffin Road operates at a level of service “F” in the build and design year. Also, there have been fifteen crashes at this intersection in the past four years including seven injury crashes. Located approximately 1000’ to the east, the intersection of SR 42/US 23 at CR 328/Roberts Road has had 31 crashes in the last four years including eight injury crashes as shown below. Therefore, a project is needed to reduce the crash frequency and severity of accidents at the intersections on SR 42/US 23 at CR 648/Locust Grove Griffin Road and CR 328/Roberts Road.

SR 42/US 23 @ CR 648/Locust Grove Griffin Rd Intersection Level of Service

Intersection Conditions	Opening Year	Design Year
	2013	2033
	Level of Service (AM/PM)	Level of Service (AM/PM)
Existing Conditions – Side-road Stop Control with No Turn Lanes	F/F	F/F
Proposed Conditions – Signalized with Turn Lanes	B/B	E/E

The purpose of the proposed project is to improve the efficiency and reduce the crash frequency and severity along the corridor of SR 42/US 23, and in particular, at the intersections of Locust Grove Griffin Road and Roberts Road. At the intersection of CR 648, the proposed project includes the installation of a traffic signal and turn lanes. The installation of a traffic signal would reduce the crash frequency and severity at the intersection by providing controlled left and thru movements at the intersection; thereby, reducing the potential for angle collisions. The addition of left and right turn lanes on SR 42 and Locust Grove Griffin Road would allow turning vehicles to have a potential waiting area until acceptable gaps in the opposing traffic allow them to complete the turn. This reduces the potential for conflicts and decreases the number of rear end crashes. The project proposes to change the access from Roberts Road onto SR 42 from full-access to right-in-right-out. The existing skew at the intersection of SR 42 and Roberts Road can limit drivers’ sight distance, increasing potential for side swipes and angle crashes. A right-in-right-out will help alleviate these crashes by reducing the number of conflict points at the intersection. Crosswalks and sidewalks will be installed to provide pedestrians with more protective crossing and better access to the businesses along the south side of SR 42.

Safety at SR 42/US 23 and CR 648/Locust Grove Griffin Road

Crash data at the intersection of SR 42/US 23 and CR 648/Locust Grove Griffin Road was obtained for the period between January 1, 2005 and December 31, 2009. The crash data summarized by severity and by the manner of collision is provided in the two tables below.

Crash History

Year	Crashes		
	Total	Injury	Fatal
2005	4	2	0
2006	1	0	0
2007	5	3	0
2008	5	2	0
2009	2	0	0
Total	17	7	0

There were a total of fifteen crashes at this intersection over a four year period. All of the crashes that occurred were either angle or rear end crashes. Of the total number of crashes, 47% were angle crashes and 53% were rear end crashes.

Summary of Collision Types

Year	Angle	Rear End	Total
2005	4	0	4
2006	0	1	1
2007	1	4	5
2008	2	3	5
2009	0	2	2
Total	7	10	17

Safety at SR 42/US 23 at CR 328/Roberts Road

Crash data at the intersection of SR 42/US 23 and CR 328/Roberts Road was obtained from GDOT for the period between January 1, 2005 and December 31, 2008. The crash data summarized by severity and by the manner of collision is provided in the two tables below.

During the years 2005 through 2008 a total of thirty one crashes including eight injury crashes have occurred at the intersection of SR 42/US 23 and CR 328/Roberts Road.

Crash History

Year	Crashes		
	Total	Injury	Fatal
2005	8	1	1
2006	8	2	0
2007	8	2	0
2008	7	3	0
2009	2	1	0
Total	33	9	1

A detailed analysis of the number and type of crash was summarized to determine crash patterns. There were a

total of thirty one crashes at this intersection over a four year period. The majority of the crashes that occurred were either angle or rear end crashes. Of the total number of crashes, 48% were rear end crashes, 26% were angle crashes, 3% were head on crashes, 3% were sideswipe crashes and 19% were other single vehicle crashes.

Summary of Collision Types

Year	Angle	Head On	Rear End	Sideswipe	Other	Total
2005	2	0	5	0	1	8
2006	2	0	4	0	2	8
2007	1	1	3	0	3	8
2008	3	0	3	1	0	7
2009	0	1	2	0	0	3
Total	8	2	17	1	6	33

Description of the proposed project: The proposed project on SR 42/US 23 begins at milepost 3.66 and ends at milepost 3.28 and includes the intersections of CR 648/Locust Grove Griffin Road and CR 328/Roberts Road. The proposed project is approximately 1.5 miles southeast from the I-75 interchange, Exit #212, Locust Grove/Hampton/Jackson. State Route 42/US 23, CR 648/Locust Grove Griffin Road and CR 328/Roberts Road are all two-lane rural roadways. State Route 42/US 23 is classified as a rural minor arterial. County Road 648/Locust Grove Griffin Road is classified as a rural major collector, and CR 328/Roberts Road is classified as a rural local road.

The project proposes to widen SR 42/US 23 to add turn lanes at the intersections of SR 648/Locust Grove Griffin Road and CR 328/Roberts Road. A traffic signal will be installed at the intersection of CR 648/Locust Grove Griffin Road. Also, the proposed project will change the access on CR 328/Roberts Road to a right-in-right-out intersection. Sidewalk will be added to the south side of SR 42/US 23 with crosswalks at the intersection of CR 648/Locust Grove Griffin Road. In addition, CR 648/Locust Grove Griffin Road will be widened to add left and right turn lanes at the intersection of SR 42/US 23. This project is in the active FY 2008-2011 State Transportation Improvement Plan (STIP).

Environmental Impacts: One potential eligible historic resource has been identified within the project corridor. Also, the project may be located within a historic district, but a full Section 4(f) Evaluation is not anticipated at this time.

Is the project located in a PM 2.5 Non-attainment area? X Yes No

Is the project located in an Ozone Non-attainment area? X Yes No

(Proposed project is exempt from conformity due to potential reduction of crash frequency and severity.)

PDP Classification: Major Minor X

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

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Functional Classification:

- SR 42/US 23 – Rural Minor Arterial
- CR 648/Locust Grove Griffin Road – Rural Major Collector
- CR 328/Roberts Road – Rural Local Road

U. S. Route Number(s): 23

State Route Number(s): 42

Traffic (AADT):

Roadway	Build Year (2013)	Design Year (2033)
SR 42/US 23	20,400	31,500
CR 648 /Locust Grove Griffin Road No-Build Scenario	3,850	5,950
CR 648 /Locust Grove Griffin Road Build Scenario	4,325	6,650
CR 328/Roberts Road No-Build Scenario	715	1,105
CR 328/Roberts Road Build Scenario	240	400

Existing Design Features: SR 42/US 23

- Typical Section: Existing 2-12’ travel lanes and 12’ right turn lane. There is a rural shoulder on the left side with a 2’ paved shoulder and a 2’ grass shoulder. The right shoulder has both urban and rural sections. The urban shoulder has curb and gutter, with a 4’ or 5’ sidewalk in some locations, and the rural shoulder has a 2’ paved shoulder and no grass shoulder.
- Posted speed: 45 mph Minimum radius for curve: 1460’
- Maximum super-elevation rate for curve: : 7.26%
- Maximum grade: 1.86%
- Railroad right-of-way width: 150 ft.
- GDOT right-of-way width: 10-56 ft.
- Total right-of-way width: 160-206 ft.
- Major structures: None
- Major interchanges or intersections along the project:
 - Intersection of SR 42/US 23 and CR 648/Locust Grove Griffin Road
 - Intersection of SR 42/US 23 and CR 328/Roberts Road
 - Intersection of SR 42/US 23 and CR328/Grove Road
- Existing length of roadway segment: 0.4 miles

Proposed Design Features: SR 42/US 23

- Typical Section: Two to four 12' travel lanes with an urban shoulder on the right side and a rural shoulder on the left side. The rural shoulder consists of a 6.5' paved shoulder and a 3.5' grass shoulder. The urban shoulder consists of a 12' shoulder with 30" curb and gutter, 2' grass strip and a 5' sidewalk.
- Proposed Design Speed: 45 mph
- Proposed Maximum grade Mainline 2.65 %
- Maximum grade allowable: 4%
- Proposed Maximum grade driveway 11 %
- Proposed Minimum radius of curve 1425 ft
- Minimum radius allowable 587 ft
- Maximum allowable superelevation rate 8 %
- Proposed maximum superelevation rate 7.2 %
- Width of right-of-way 10'-56'

Existing Design Features: CR 648/Locust Grove Griffin Road

- Typical Section: Existing rural section with 2-9.5' travel lanes and a 4' grass shoulder on the left side. The right side has a grass shoulder that varies from 0' to 12'.
- Posted speed: 35 mph Minimum radius for curve: no curves on project
- Maximum super-elevation rate for curve: N/A – no curves on project
- Maximum grade: 6.33%
- Width of right-of-way: 60 ft.
- Major structures: None
- Major interchanges or intersections along the project:
 - Intersection of CR 648/Locust Grove Griffin Road and Cleveland Street
 - Intersection of CR 648/ Locust Grove Griffin Road and SR 42/US 23
- Existing length of roadway segment: 0.1 miles

Proposed Design Features: CR 648/Locust Grove Griffin Road

- Typical Section: Two to three 12' travel lanes with an urban shoulder on both sides consisting of 30" curb and gutter, 2' grass strip and a 5' sidewalk.
- Proposed Design Speed: 35 mph
- Proposed Maximum grade Mainline 3.17 %
- Maximum grade allowable: 6 %
- Proposed Maximum grade driveway 11 %
- Proposed Minimum radius of curve 366 ft
- Mimum radius allowable 340 ft
- Maximum allowable superelevation rate 4 %
- Proposed maximum superelevation rate 4.0 %
- Width of right-of-way 60'-72'

Existing Design Features: CR 328/Roberts Road

- Typical Section: Existing rural section with 2-9' travel lanes and no shoulder.

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- Posted speed: 25 mph Minimum radius for curve: 1200'
- Maximum super-elevation rate for curve: No SE, road remains in NC
- Maximum grade: 3.19%
- Width of right-of-way: 40 ft.
- Major structures: None
- Major interchanges or intersections along the project:
 - Intersection of CR328/Roberts Road and SR 42/US 23
- Existing length of roadway segment: 0.1 miles

Proposed Design Features: CR 328/Roberts Road

- Typical Section: Two 12' travel lanes with an urban shoulder on both sides consisting of 30" curb and gutter, 2' grass strip and a 5' sidewalk.
- Proposed Design Speed: 25 mph
- Proposed Maximum grade Mainline 4.44 % Maximum grade allowable: 6%
- Proposed Maximum grade driveway 11 %
- Proposed Minimum radius of curve No curves proposed
- Minimum radius allowable 154 ft
- Maximum allowable superelevation rate 4 %
- Proposed maximum superelevation rate 3.1 %
- Width of right-of-way 40'-48'

Proposed Design Features

- Right-of-Way
 - Easements: Temporary (), Permanent (X), Utility (), Other ().
 - Type of access control: Full (), Partial (), By Permit (X), Other ().
 - Number of parcels: 12 Number of displacements:
 - ♦ Business: 0
 - ♦ Residences: 0
 - ♦ Mobile homes: 0
 - ♦ Other: 0
- Structures:
 - Bridges: None
 - Retaining walls: (1) Ga. Std. 9031L Gravity Wall with barrier face with a height of approximately six feet
- Major intersections and interchanges:
 - Intersection of SR 42/US 23 and CR 648/Locust Grove Griffin Road
 - Intersection of SR 42/US 23 and CR328/Grove Road
 - Intersection of CR 648/Locust Grove Griffin Rd and Cleveland Street
- Traffic control during construction: Traffic would be maintained at all times through staged construction per the Section 150, standard shelf special provision.

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▪ Design Exceptions to controlling criteria anticipated:

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

▪ Design Variances: None

▪ Environmental Concerns: An UST investigation has been requested to determine whether potential USTs/hazardous waste sites are located within the project limits.

▪ Anticipated Level of environmental analysis:

- Are Time Savings Procedures appropriate? Yes (X) No ()
- Categorical Exclusion Anticipated (X)

▪ Utility involvements:

- Norfolk Southern - Railroad
- Atlanta Gas Light - Gas
- Georgia Power Company – Electric
- City of Locust Grove – Water and Sewer
- Central Georgia EMC – Electrical Distribution
- Henry County Water and Sewer
- Charter Communication – Cable
- AT &T - Telecommunications

▪ VE Study Required: Yes () No (X)

▪ Benefit/Cost Ratio: 5.83

▪ **Project Cost Estimate and Funding Responsibilities:**

	PE	ROW	UTILITY	CST	MITIGATION
By Whom	GDOT	GDOT	TBD	GDOT	N/A
\$ Amount	\$268,000.00	\$746,738.00	\$50,017.00	\$1,142,176.97	\$0.00

Project Activities Responsibilities:

- Design: Gresham, Smith and Partners
- Right-of-Way Acquisition: GDOT
- Relocation of Utilities: GDOT
- Letting to contract: GDOT
- Supervision of construction: GDOT
- Providing material pits: Contractor
- Providing detours: Not Required
- Environmental Studies/Documents/Permits: Edwards-Pitman Environmental, Inc.
- Environmental Mitigation: N/A

Coordination

- Concept Team Meeting held on December 2, 2009.
- P A R meetings, dates and results. None Anticipated
- FEMA, USCG, and/or TVA. None Anticipated
- PIOH held on April 20, 2010.
- Railroad Coordination with Norfolk Southern for two additional future tracks will be required.
- Other projects in the area:
 - CSTE-0008-00(159) is a transportation enhancement project for streetscapes in downtown Locust Grove. This project is scheduled to begin construction in 2009, but is outside the limits of this project.

Scheduling – Responsible Parties’ Estimate

- Time to complete the environmental process: 6/2010 - 2/2011
- Time to complete preliminary construction plans: 6/2010 – 4/2011
- Time to complete right-of-way plans: 5/2011 – 8/2011
- Time to complete final construction plans: 6/2011 – 11/2012
- Time to complete purchase of right-of-way: 11/2011-11/2012
- List other major items that will affect the project schedule:
Railroad Coordination: 5/2011-11/2012

Other alternates considered:

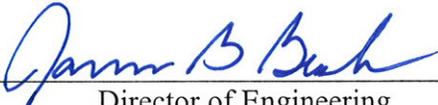
- A roundabout was considered at this location but the traffic volumes did not meet the minimum 80%/20% split between the mainline and side road traffic. Also, a roundabout would require further encroachment into the existing railroad right-of-way.
- The no-build alternate was rejected because traffic analysis shows that the intersection would operate at a level of service “F” in the design year.
- An alternate was considered that would close the intersection of SR 42 and CR 328 by adding a cul-de-sac on CR 328 south of the intersection. This alternate was opposed by both city and county officials.

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Attachments:

1. ~~Location and Design Notice~~ 
2. Cost Estimates:
 - a. Construction including E & I
 - b. Fuel/Asphalt price adjustment form
 - c. Right-of Way
 - d. Railroad
 - e. Summary of Cost Sheet
3. Sketch Location Map (Included in report)
4. Traffic Diagrams
5. Typical Sections
6. Minutes of Concept Team Meeting
7. PIOH Synopsis
8. Accident Summaries (Included in report)
9. Capacity Analysis Summary (Included in report)

Exempt projects

Concur: 
Director of Engineering

Approve: 
Chief Engineer

Date: 9/8/10

STATE HIGHWAY AGENCY

DATE : 07/28/2010
PAGE : 1

JOB ESTIMATE REPORT

JOB NUMBER : PI 0008542
DESCRIPTION: SR 42 FROM CR 328/ROBERTS RD TO CR 648/L G GRIFFIN RD

ITEMS FOR JOB PI 0008542

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	150-1000		LS	TRAFFIC CONTROL - CSSFT-0008-00(542)	1.000	75000.00	75000.00
0010	153-1300		EA	FIELD ENGINEERS OFFICE TP 3	1.000	72342.67	72342.67
0015	210-0100		LS	GRADING COMPLETE - CSSFT-0008-00(542)	1.000	35000.00	35000.00
0020	310-1101		TN	GR AGGR BASE CRS, INCL MATL	3300.000	15.70	51810.00
0025	318-3000		TN	AGGR SURF CRS	500.000	16.80	8400.00
0030	402-1812		TN	RECYL AC LEVELING, INC BM&HL	1500.000	64.57	96855.00
0035	402-3121		TN	RECYL AC 25MM SP, GP1/2, BM&HL	870.000	55.70	48459.00
0040	402-3130		TN	RECYL AC 12.5MM SP, GP2, BM&HL	1300.000	61.44	79872.00
0045	402-3190		TN	RECYL AC 19 MM SP, GP 1 OR 2, INC BM&HL	740.000	64.05	47397.00
0050	413-1000		GL	BITUM TACK COAT	850.000	1.87	1589.50
0055	432-5010		SY	MILL ASPH CONC PVMT, VARB DEPTH	800.000	1.16	928.00
0060	441-0104		SY	CONC SIDEWALK, 4 IN	1500.000	26.69	40035.00
0065	441-0303		EA	CONC SPILLWAY, TP 3	6.000	1488.16	8928.96
0070	441-0740		SY	CONC MEDIAN, 4 IN	170.000	32.08	5453.60
0075	441-4020		SY	CONC VALLEY GUTTER, 6 IN	60.000	41.81	2508.60
0080	441-4030		SY	CONC VALLEY GUTTER, 8 IN	530.000	42.03	22275.90
0085	441-5002		LF	CONC HEADER CURB 6" TP 2	50.000	22.97	1148.50
0090	441-6216		LF	CONC CURB & GUTTER/ 8"X24"TP2	280.000	11.85	3318.00
0095	441-6222		LF	CONC CURB & GUTTER/ 8"X30"TP2	2800.000	13.29	37212.00
0100	446-1002		LF	PVMT REF FABRIC STRIPS, TP2,BIT	4100.000	2.89	11849.00
0105	500-3200		CY	CL B CONC	1.000	395.59	395.59
0110	500-3201		CY	CL B CONC, RET WALL	54.000	499.06	26949.24
0115	500-9999		CY	CL B CONC BASE OR PVMT WIDEN	24.000	168.78	4050.72
0120	550-1180		LF	STM DR PIPE 18" H 1-10	1500.000	32.54	48810.00
0125	550-2150		LF	SIDE DR PIPE 15" H 1-10	62.000	23.80	1475.60
0130	550-2180		LF	SIDE DR PIPE 18" H 1-10	24.000	32.07	769.68
0135	550-3318		EA	SAFETY END SECTION 18", STD, 4:1	3.000	515.22	1545.66
0140	550-3415		EA	SAFETY END SECTION 18", SD, 4:1	4.000	313.87	1255.48
0145	550-3418		EA	SAFETY END SECTION 18", SD, 4:1	2.000	794.36	1588.72
0150	550-4218		EA	FLARED END SECT 18 IN, ST DR	1.000	465.88	465.88
0155	603-2181		SY	STN DUMPED RIP RAP, TP 3, 18"	9.000	31.41	282.69
0160	603-7000		SY	PLASTIC FILTER FABRIC	9.000	3.15	28.35
0165	611-3010		EA	RECONSTR DROP INLET, GROUP 1	2.000	997.50	1995.00
0170	611-8050		EA	ADJUST MANHOLE TO GRADE	1.000	1092.04	1092.04
0175	611-8020		EA	ADJUST DRAIN INLET TO GRADE	2.000	985.00	1970.00
0180	611-9000		EA	CAPPING MINOR STRUCTURE	1.000	351.27	351.27
0185	634-1200		EA	RIGHT OF WAY MARKERS	40.000	83.42	3336.80
0190	668-1100		EA	CATCH BASIN, GP 1	9.000	2209.31	19883.79
0195	668-2100		EA	DROP INLET, GP 1	4.000	2017.82	8071.28
0200	668-4300		EA	STORM SEW MANHOLE, TP 1	2.000	1994.93	3989.86
0205	668-5000		EA	JUNCTION BOX	1.000	1809.00	1809.00
0210	700-6910		AC	PERMANENT GRASSING	2.000	581.33	1162.66
0215	700-7000		TN	AGRICULTURAL LIME	4.000	57.93	231.72
0220	700-7010		GL	LIQUID LIME	5.000	19.14	95.70
0225	700-8000		TN	FERTILIZER MIXED GRADE	2.000	379.36	758.72

STATE HIGHWAY AGENCY

JOB ESTIMATE REPORT

ITEM	DESCRIPTION	QTY	UNIT	EST. PRICE	TOTAL
0230	FERTILIZER NITROGEN CONTENT	100.000		2.23	223.00
0235	EROSION CONTROL MATS, SLOPES	2000.000		0.87	1740.00
0240	TEMPORARY GRASSING	1.000		230.72	230.72
0245	MULCH	45.000		179.99	8099.55
0250	CONSTR AND REMOVE SILT CONTROL GATE, TP 3	2.000		424.28	848.56
0255	CONSTR AND REM FAB CK DAM -TP C SILT FN	500.000		3.47	1735.00
0260	CNST/REM TEMP SED BAR OR BLD STRW CK DM	1800.000		2.82	5076.00
0265	CONS & REM INLET SEDIMENT TRAP	18.000		167.54	3015.72
0270	MAINT OF TEMP SILT FENCE, TP A	400.000		0.48	192.00
0275	MAINT OF CHECK DAMS - ALL TYPES	250.000		1.90	475.00
0280	MAINT OF SEDIMENT BARRIER - BALED STRAW	900.000		0.96	864.00
0285	MAINT OF SILT CONTROL GATE, TP 3	2.000		133.76	267.52
0290	MAINT OF INLET SEDIMENT TRAP	18.000		65.22	1173.96
0295	WATER QUALITY MONITORING AND SAMPLING	2.000		485.90	971.80
0300	WATER QUALITY INSPECTIONS	12.000		502.76	6033.12
0305	TEMPORARY SILT FENCE, TYPE A	800.000		1.25	1000.00
0310	BARRIER FENCE (ORANGE), 4 FT	500.000		2.05	1025.00
0315	HWY SGN, TP/MAT, REFL SH TP 3	140.000		15.54	2175.60
0320	HWY SIGNS, TP/MAT, REFL SH TP 9	45.000		18.99	854.55
0325	GALV STEEL POSTS, TP 7	160.000		8.19	1310.40
0330	GALV STEEL POSTS, TP 8	70.000		11.25	787.50
0335	GALV STEEL POSTS, TP 9	110.000		9.04	994.40
0340	GROUND-MOUNTED BREAKAWAY SIGN SUPPORT	4.000		533.26	2133.04
0344	THERM PVMT MARK, ARROW, TP 2	28.000		69.74	1952.72
0345	THERM SOLID TRAF STRIPE, 24" WH	100.000		3.48	348.00
0350	THERM SOLID TRAF STRIPE, 8" WH	2400.000		1.58	3792.00
0355	THERMO SOLID TRAF ST, 5 IN, WH	2.000		1281.58	2563.16
0360	THERMO SOLID TRAF ST, 5 IN, YE	2.000		1268.98	2537.96
0365	THERMO SKIP TRAF ST, 5 IN, WHI	380.000		0.29	110.20
0370	THERMO SKIP TRAF ST, 5 IN, YEL	870.000		0.33	287.10
0375	THERM TRAF STRIPING, WHITE	150.000		2.61	391.50
0380	THERM TRAF STRIPING, YELLOW	280.000		2.56	716.80
0385	RAISED PVMT MARKERS TP 1	90.000		2.99	269.10
0390	RAISED PVMT MARKERS TP 3	45.000		3.09	139.05
0395	RAISED PVMT MARKERS TP 10	7.000		31.43	220.01
0400	TRAF SIGNAL INSTALLATION NO - 1	1.000		125000.00	125000.00
ITEM TOTAL				962302.22	
INFLATED ITEM TOTAL				962302.22	
TOTALS FOR JOB PI 0008542				962302.22	
ESTIMATED COST:				0.00	
CONTINGENCY PERCENT (0.0):				0.00	
ESTIMATED TOTAL:				962302.22	

P.I. Number P.I. 0008542

County Henry

Project Number CSSFT-0008-00(542)

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

ENTER FPL DIESEL	2.877
ENTER FPM DIESEL	6.473

ENTER FPL UNLEADED	2.716
ENTER FPM UNLEADED	6.111

<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)	3400.000	0.29	986.00	0.24	816.00	
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)	4380.000	2.90	12702.00	0.71	3109.80	
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				8.00		1.50		
Class __Concrete (CY) Section 500				8.00		1.50		
Class __Concrete (CY) Section 500				8.00		1.50		
Class __Concrete (CY) Section 500				8.00		1.50		
Superstru Con Class__(CY) Section 500				8.00		1.50		
Superstru Con Class__(CY) Section 500				8.00		1.50		
Superstru Con Class__(CY) Section 500				8.00		1.50		
Concrete Handrail (LF) Section 500				8.00		1.50		
Concrete Barrier (LF) Section 500				8.00		1.50		

BRIDGE ITEMS	Quantity	Unit Price	QF/1000	Diesel Factor	Gallons Diesel	Unleaded Factor	Gallons Unleaded	REMARKS
Stru Steel <u>Plan Quantity</u> (LB) Section 501				8.00		1.50		
Stru Steel <u>Plan Quantity</u> (LB) Section 501				8.00		1.50		
PSC Beams____ (LF) Section 507				8.00		1.50		
PSC Beams____ (LF) Section 507				8.00		1.50		
PSC Beams____ (LF) Section 507				8.00		1.50		
Stru Reinf <u>Plan Quantity</u> (LB) Section 511				8.00		1.50		
Stru Reinf <u>Plan Quantity</u> (LB) Section 511				8.00		1.50		
Bar Reinf Steel (LB) Section 511				8.00		1.50		
Piling____inch (LF) Section 520				8.00		1.50		
Piling____inch (LF) Section 520				8.00		1.50		
Piling____inch (LF) Section 520				8.00		1.50		
Piling____inch (LF) Section 520				8.00		1.50		
Piling____inch (LF) Section 520				8.00		1.50		
Piling____inch (LF) Section 520				8.00		1.50		
Drilled Caisson,____ (LF) Section 524				8.00		1.50		
Drilled Caisson,____ (LF) Section 524				8.00		1.50		
Drilled Caisson,____ (LF) Section 524				8.00		1.50		
Pile Encasement,____(LF) Section 547				8.00		1.50		
Pile Encasement,____(LF) Section 547				8.00		1.50		
SUM QF DIESEL=				13688.00	SUM QF UNLEADED=		3925.80	
DIESEL PRICE ADJUSTMENT(\$)					\$45,287.43			
UNLEADED PRICE ADJUSTMENT(\$)					\$12,261.84			

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

125.00%	INCREASE ADJUSTMENT
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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	PG 58-22	800

TMT =

REMARKS:

MONTHLY PRICE ADJUSTMENT(\$)	\$2,078.14
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ADJUSTMENT SUMMARY

FUEL PRICE ADJUSTMENT (*ENGLISH 125% MAX*)

DIESEL PRICE ADJUSTMENT(\$) \$45,287.43

UNLEADED PRICE ADJUSTMENT(\$) \$12,261.84

ASPHALT CEMENT PRICE ADJUSTMENT (**BITUMINOUS TACK COAT 125% MAX**) \$2,078.14

400 / 402 ASPHALT CEMENT PRICE ADJUSTMENT **125% MAX** \$132,451.20

ASPHALT CEMENT PRICE ADJUSTMENT FOR BITUMINOUS TACK COAT(**Surface Treatment 125% MAX**) \$2,078.14

REMARKS:

TOTAL ADJUSTMENTS	\$194,156.76
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Preliminary Right of Way Cost Estimate


Phil Copeland
 Right of Way Administrator
 By: Jerry Milligan

Date: September 26, 2008
Project: CSSTP-0008-00(542)Henry
Existing/Required R/W: Varies/Varies
Project Termini : SR 42 from Roberts Road to Locust Grove Griffin Road
Project Description: SR 42 @ Roberts Road Intersection Improvement

P.I. Number: 0008542
No. Parcels: 5

Land: Commercial R/W: 24,053 sf @ \$ 6/sf	\$	144,318	
Residential R/W: 22,978sf. @ \$.60/sf		<u>13,786</u>	\$ 158,104
Improvements : landscaping, signs, fence, misc. site improvements			118,000
Relocation: Commercial (0)			
Residential (0)			0
Damage : Proximity			
Consequential			
Cost to Cure (1)			<u>25,000</u>
		Net Cost	\$ 301,104
		Net Cost	\$ 301,104
		Scheduling Contingency 55 %	165,607
		Adm/Court Cost 60 %	<u>280,027</u>
			\$ 746,738

Total Cost \$746,750

Note: The Market Appreciation (40%) is not included in the updated Preliminary Cost Estimate.

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE CSSFT-0008-00(542), Henry County
P.I. No. 0008542
SR 42 from CR 328/Roberts Rd. to
CR 648/Locust Grove Griffin Rd.
RJC fox
FROM Jeff Baker, State Utilities Engineer

OFFICE: State Utilities Office

DATE: November 23, 2009

TO Kathy Zahul Assistant State Traffic Engineer
ATTN: Lakeshia Osborn

SUBJECT PRELIMINARY RAILROAD COST (CONCEPT ESTIMATE)

A review of railroads located within the project limits on the above referenced project has been conducted based on the proposed concept report provided. Listed below is a breakdown of the estimated railroad costs:

FACILITY OWNER	NON-REIMBURSABLE	REIMBURSABLE
Norfolk Southern	\$0.00	\$38,475.00
Totals	\$0.00	\$38,475.00
30% Utilities Contingency:	\$0.00	\$11,542.00
Total Reimbursement Cost:	\$0.00	\$50,017.00

Total railroad reimbursable cost for the above project is estimated to be:
\$50,017.00.

Please note that this amount does not include other reimbursable utility and railroad warning device costs that may be associated with this project. Please keep the railroad costs separate from other utilities in your designer's cost estimate.

If you have any questions, please contact Richard Crowley, (404)631-1372, rcrowley@dot.ga.gov.

JB:RLC:raf

cc: Lee Upkins, State Utilities Preconstruction Engineer
Angela Whitworth, State Financial Management Administrator
Kerry Gore, District 3 Utilities Engineer
Key Phillips, Railroad Crossing Program Manager

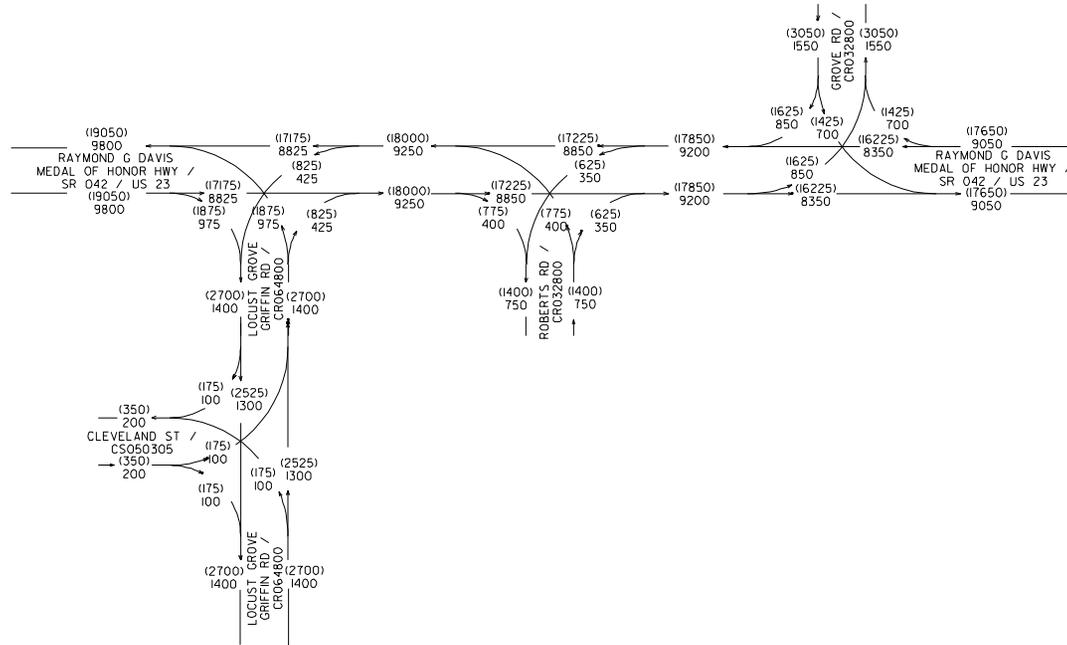
Summary of Estimated Costs

Project P.I. No. 0008542

Subtotal Construction Cost:	\$902,876.40
• Engineering & Inspection 5%	\$45,143.82
• Total Fuel Adjustment	\$57,549.27
• Total Liquid AC Adjustment	\$136,607.48
Total Construction Cost:	\$1,142,176.97
• Right of way	\$746,738.00
• Reimbursable Utilities	\$50,017.00
Total Project Cost	\$1,938,931.97

HENRY COUNTY

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF ENVIRONMENT/LOCATION

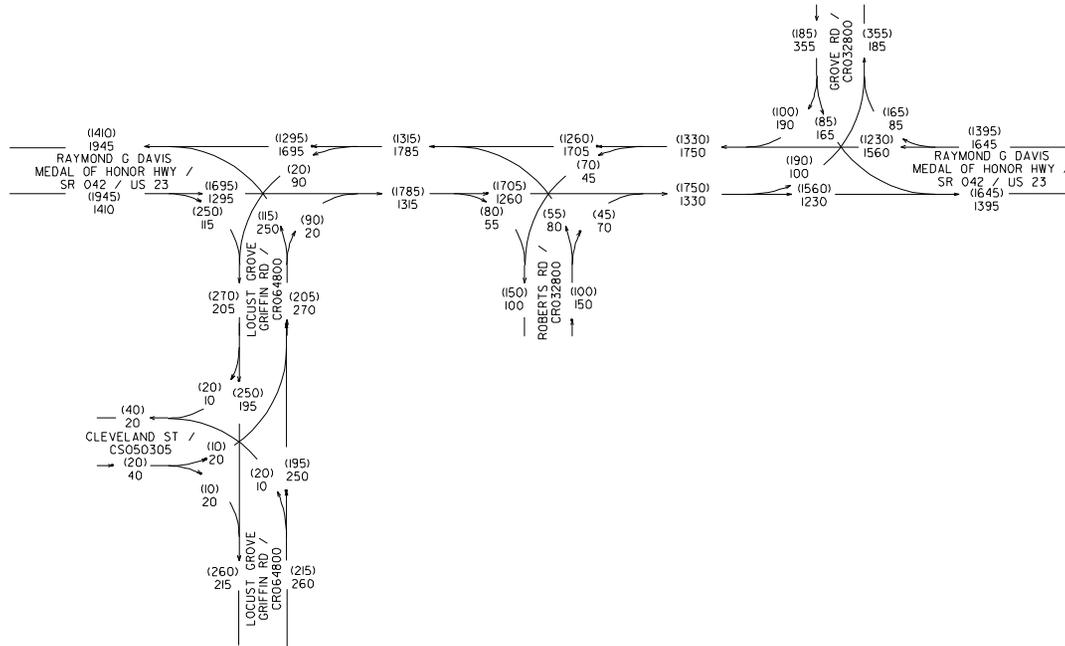


CSSFT-0008-00(542)
P.I.# 0008542
HENRY COUNTY
SR 42 FM CR328/
ROBERTS RD TO
CR 648/LOCUST
GROVE GRIFFIN RD
2034 ADT = 1000
2014 ADT = 000

24 HR. T. = 4.5%
S.U. = 3.0%
COMB = 1.5%
AMW 12/09

HENRY COUNTY

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF ENVIRONMENT/LOCATION



CSSFT-0008-00(542)
P.L.# 0008542
HENRY COUNTY
SR 42 FM CR328/
ROBERTS RD TO
CR 648/LOCUST
GROVE GRIFFIN RD
2034 PM DHV = (000)
2034 AM DHV = 000
T. = 4.0% AMW
12/09

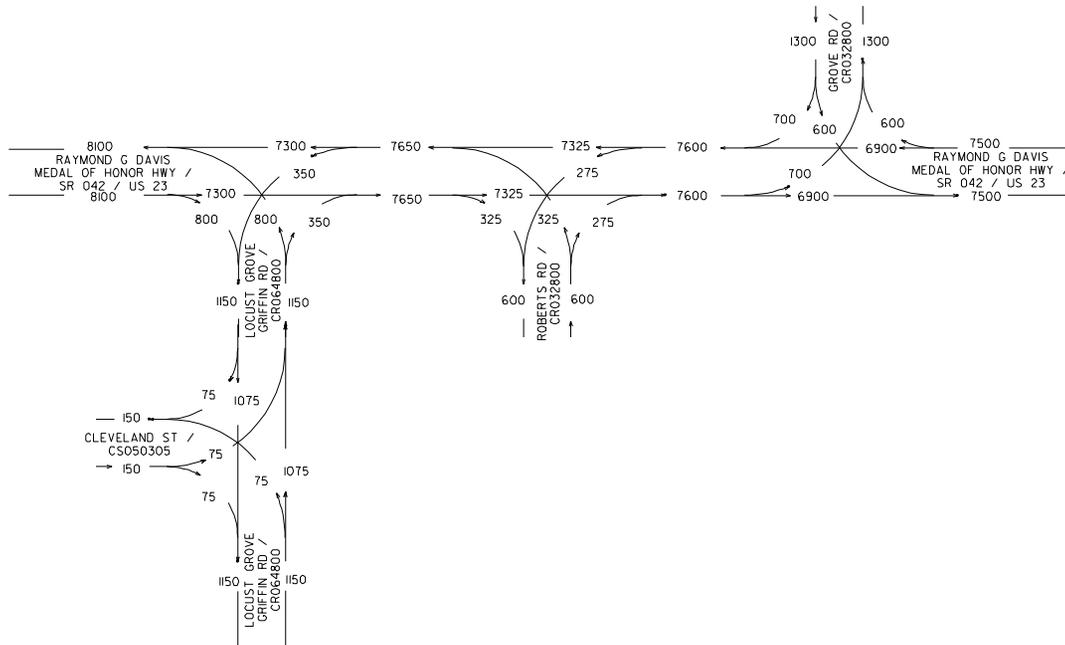
HENRY COUNTY

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF ENVIRONMENT/LOCATION



TC #
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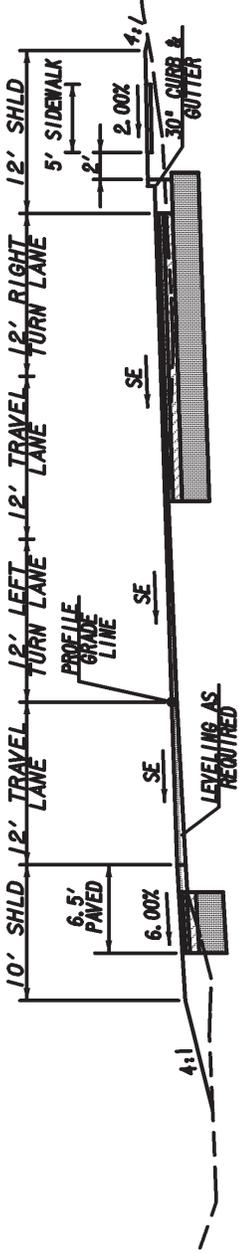
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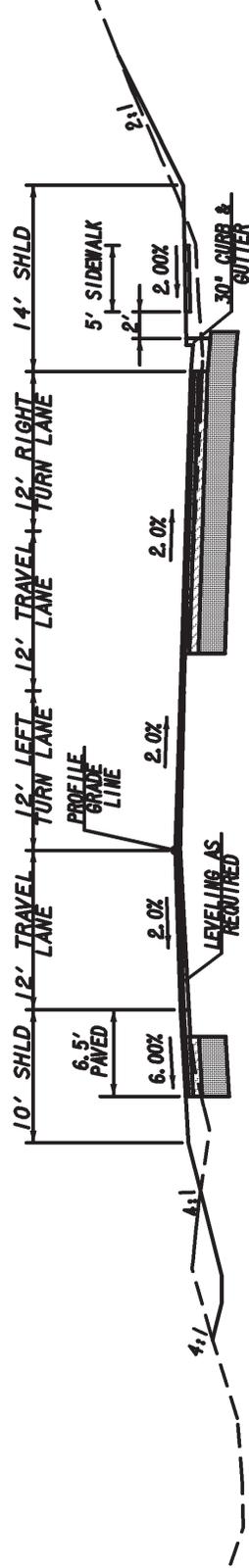
TC #
0367

CSSFT-0008-00(542)
 P.I.# 0008542
 HENRY COUNTY
 SR 42 FM CR328/
 ROBERTS RD TO
 CR 648/LOCUST
 GROVE GRIFFIN RD
 EXISTING 2009
 TRAFFIC

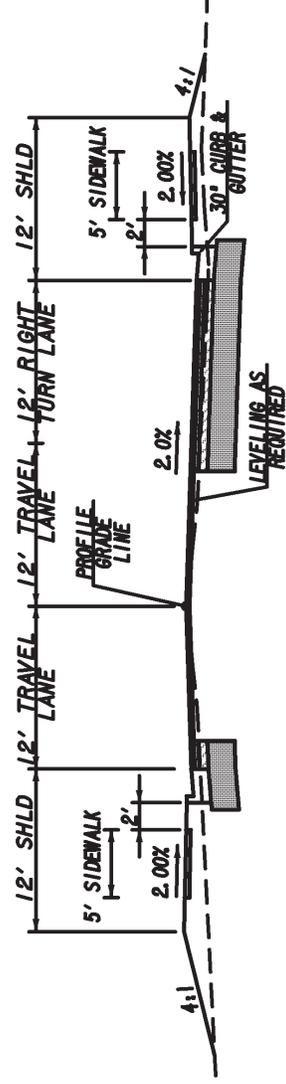
AMW
12/09



TYPICAL SECTION
US 23/SR 42



TYPICAL SECTION
US 23/SR 42



TYPICAL SECTION
CR 648/LOCUST GROVE GRIFFIN ROAD

CONCEPT TEAM MEETING MINUTES

LOCATION: Henry County SPLOST Office

MEETING DATE: Wednesday, December 2, 2009

RE: SR 42/US 23 from CR 648/Locust Grove Griffin Road to CR 328/Roberts Road
CSSFT-0008-00(542) Henry County
P.I. No. 0008542

ATTENDEES: Carol Perry, GDOT, District 3
Derrick Cameron, GDOT, Office of Traffic Operations
Lakeshia Osborn, GDOT, Office of Traffic Operations
Richard Crowley, GDOT, Utilities Office
Sam Pugh, GDOT
Don McKenzie, City of Locust Grove
Otis Hammock, City of Locust Grove
Terry McMickle, Henry County
E. Leon Jackson, Norfolk Southern
David Wyatt, Norfolk Southern
Fritz Jacques, Henry County Water & Sewer Authority
Jeff Harville, Atlanta Gas Light
Jody Braswell, Gresham Smith and Partners
Kerrie Boyette, Wolverton and Associates
Jill Brown, Edwards-Pitman

Derrick Cameron called the meeting to order and asked all the attendees introduce themselves. Kerrie Boyette discussed the Need and Purpose statement, crash history and proposed design features.

The proposed project is to improve the operation and safety of the intersections of SR 42/US 23 at CR 648/Locust Grove Griffin Road and CR 328/Roberts Road. The existing intersection at CR 648/Locust Grove Griffin Road operates at an unacceptable level of service during both the AM and PM peak hour for the build year of 2013. The intersection of CR 328/Roberts Road has a high number of crashes in the past four years with 31 crashes including 8 injury crashes from 2005 through 2008. The proposed project would add turn lanes and a traffic signal at the intersection of SR 42/US 23 and CR 648/Locust Grove Griffin Road to improve the level of service of the intersection. The project would also eliminate the intersection of SR 42/US 23 and CR 328/Roberts Road by adding a cul-de-sac on CR 328/Roberts Road just south of the intersection with SR 42/US 23.

A discussion was held regarding the required right-of-way and easements shown on the concept layout. The GDOT District Three Office would prefer that the area within the construction limits be shown entirely as required right-of-way with no permanent or temporary easements with the exception of driveway easements.

A discussion was held regarding the proposed layout to add a cul-de-sac to CR 328/Roberts Road just south of the intersection with SR 42/US 23. The City of Locust Grove and Henry County would prefer a right-in-right-out intersection rather than a cul-de-sac. The GDOT Office of Traffic Operations will research this possibility. If the access is changed to a right-in-right-out, then a right-turn decel lane will be needed from SR 42/US 23 onto CR 238/Roberts Road.

A discussion was held regarding the northern terminus point on SR 42/US 23. The City of Locust Grove requested that the project be extended an additional 800 feet to the north to tie to the existing three-lane section on SR 42/US 23. The GDOT Office of Traffic Operations will research this possibility.

A discussion was held regarding the existing Norfolk Southern railroad line which runs parallel to SR 42/US 23. A portion of the existing roadway of SR 42/US 23 is located within the railroad right-of-way. A temporary easement agreement will be required between GDOT and Norfolk Southern. Also, a design variance will be required since there are proposed roadway improvements that are not located within GDOT right-of-way.

Norfolk Southern is planning to add two additional rail lines to this corridor in the future. One additional rail line will be added to each side of the existing rail line. This project will need to accommodate the future expansion by Norfolk Southern. Richard Crowley provided a typical section for the railroad bed including the required ditch section between the rail line and the roadway. The future railroad improvements will need to be shown on the roadway cross-section sheets that are submitted for Preliminary Field Plan Review.

Leon Jackson and David Wyatt with Norfolk Southern asked that GDOT consider closing the railroad crossing at CR 328/Grove Road to the north of SR 42/US 23 by adding a cul-de-sac. The GDOT Office of Traffic Operations will research this possibility. Richard Crowley stated that if this crossing was to remain open, additional pavement markings and ground-mounted signs will need to be added to this project to meet the current GDOT design guidelines. Terry McMickle asked that GDOT consider realigning CR 328/Grove Road so that it intersects SR 42/US 23 at a ninety-degree angle. The GDOT Office of Traffic Operations will research this possibility.



June 2, 2010

Bernadette Burch
237 LG Griffin Rd
Locust Grove, GA 30248

Re: Project CSSFT-0008-00(542), Henry County - P.I. No. 0008542 – SR 42/US 23 at CR 648/Locust Grove Griffin Road and CR 328/Roberts Road

Dear Bernadette Burch,

Thank you for your comments concerning the proposed project referenced above. We appreciate all of the input that was received as a result of the April 20, 2010 Public Information Open House (PIOH), and every comment will be made part of the official record of the project.

A total of 24 people attended the PIOH. Of the comments we received, 3 were in support of the project, 1 was opposed to the project, none were uncommitted, and 1 expressed conditional support for the project.

The attendees of the PIOH and those persons sending in comments afterwards raised the following questions and concerns. The Georgia Department of Transportation (Department) has prepared this one response letter that addresses all comments received so that everyone can be aware of the concerns raised and the responses given. Please find the comments summarized below (*in italics*) followed by our response.

- *Meeting notice signs should be placed at intersections because there is too much to read at a quick glance.*

This comment is appreciated and we will strive to place signs in low speed and stopped areas to the extent possible for future meetings.

- *This project should be built soon.*

Prior to construction, engineering design and environmental evaluations must be completed. The project schedule may also be affected by funding constraints. The current project schedule is for right-of-way acquisition to begin in fall of 2011 and construction to begin in spring of 2013. The construction is anticipated to take approximately one year.

- *This proposal should be tabled for 60 days to allow an independent traffic planner to develop a safer route.*

The proposed project is in the preliminary development phase and the GDOT welcomes all input to make its projects better. A report from an independent traffic planner would be accepted and taken into consideration.

- *There will be a safety issue if people cannot turn left or go straight from CR 328/Roberts Road.*

The need for the proposed project was identified based upon the high incidence of crashes, including those with injuries and fatalities, in this area. The majority of the crashes that occurred at this intersection between 2005 and 2008 were rear end or angle crashes related to turning movements or through movements onto or from CR 328/Roberts Road. Preventing the left-turning or through movements to or from CR 328/Roberts Road would reduce the potential for these types of crashes and improve safety at this intersection.

- *Roberts Road should maintain a through movement to keep the east-west corridor from Peeksville Road to Tanger Mall Road. As planned, this would be a detriment to local traffic.*

As mentioned previously, the need for this project was identified based upon the crash history in this area. The intersection of SR 42/US 23 with CR 648/Locust Grove Griffin Road would be signalized and turning lanes would be added as part of the proposed project. These improvements would result in safer conditions for area travelers. The SR 42/US 23 intersections with CR 648/Locust Grove Griffin Road and with CR 328/Roberts Road are in such close proximity that traffic signals cannot safely and effectively be added at both intersections. The proposed traffic signal would be added at the CR 648/Locust Grove Griffin Road because of the higher existing traffic volumes on this roadway and to prevent redirecting traffic onto the smaller, residential street.

- *This project will result in people cutting across my property.*

The intersection of SR 42/US 23 with CR 648/Locust Grove Griffin Road would be signalized and turning lanes would be added as part of the proposed project. The traffic volumes on CR 328/Roberts Road are anticipated to decrease after construction of the proposed safety improvements. The use of private property to make turns is not anticipated because the signalized intersection with turn lanes would provide a safer and easier alternative.

- *Reconsider the traffic light that WalMart wanted to put on Highway 23/42 north of Bill Gardner Parkway.*

This intersection is outside of this proposed project area. However, your comment has been forwarded to the GDOT District Three Office for further consideration. If you have any additional questions regarding that intersection, please contact David Millen, the District Three Engineer, at (706) 646-6906.

- *Look at Locust Road at Highway 42. There have been three fatalities and several serious injuries there.*

This intersection is also outside of this proposed project area. Your comment has also been forwarded to the GDOT District Three Office for further consideration. If you have any additional questions regarding that intersection, please contact David Millen, the District Three Engineer, at (706) 646-6906.

- *I was not given certified notification about this project.*

The purpose of the April 20, 2010, PIOH was to provide an opportunity for affected citizens to comment on the proposal. Notification of the PIOH was provided by roadside signs placed in the project area for ten days and by notices published in the local newspaper. Assuming the project advances and receives the necessary funding and approvals, contact with individual affected property owners will occur during the subsequent right-of-way acquisition phase for the project.

Project CSSFT-0008-00(542), PI No. 0008542, Henry County
June 2, 2010
Page 3 of 3

Thank you again for your comments. Should you have any further questions concerning this project, please call the Department's project manager Derrick Cameron at (404) 635-8153 or Sam Pugh of the Office of Environmental Services at (404) 631-1167.

Sincerely,



Glenn Bowman, P.E.
State Environmental Administrator

GB/SP/jeb

cc: Derrick Cameron, Georgia DOT Project Manager
David Millen, Georgia DOT District Three Engineer



June 2, 2010

Beth & Jeff Floyd
783 Dean Patrick Rd
Locust Grove, GA 30248

Re: Project CSSFT-0008-00(542), Henry County - P.I. No. 0008542 – SR 42/US 23 at CR 648/Locust Grove Griffin Road and CR 328/Roberts Road

Dear Beth & Jeff Floyd,

Thank you for your comments concerning the proposed project referenced above. We appreciate all of the input that was received as a result of the April 20, 2010 Public Information Open House (PIOH), and every comment will be made part of the official record of the project.

A total of 24 people attended the PIOH. Of the comments we received, 3 were in support of the project, 1 was opposed to the project, none were uncommitted, and 1 expressed conditional support for the project.

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- *Meeting notice signs should be placed at intersections because there is too much to read at a quick glance.*

This comment is appreciated and we will strive to place signs in low speed and stopped areas to the extent possible for future meetings.

- *This project should be built soon.*

Prior to construction, engineering design and environmental evaluations must be completed. The project schedule may also be affected by funding constraints. The current project schedule is for right-of-way acquisition to begin in fall of 2011 and construction to begin in spring of 2013. The construction is anticipated to take approximately one year.

- *This proposal should be tabled for 60 days to allow an independent traffic planner to develop a safer route.*

The proposed project is in the preliminary development phase and the GDOT welcomes all input to make its projects better. A report from an independent traffic planner would be accepted and taken into consideration.

- *There will be a safety issue if people cannot turn left or go straight from CR 328/Roberts Road.*

The need for the proposed project was identified based upon the high incidence of crashes, including those with injuries and fatalities, in this area. The majority of the crashes that occurred at this intersection between 2005 and 2008 were rear end or angle crashes related to turning movements or through movements onto or from CR 328/Roberts Road. Preventing the left-turning or through movements to or from CR 328/Roberts Road would reduce the potential for these types of crashes and improve safety at this intersection.

- *Roberts Road should maintain a through movement to keep the east-west corridor from Peeksville Road to Tanger Mall Road. As planned, this would be a detriment to local traffic.*

As mentioned previously, the need for this project was identified based upon the crash history in this area. The intersection of SR 42/US 23 with CR 648/Locust Grove Griffin Road would be signalized and turning lanes would be added as part of the proposed project. These improvements would result in safer conditions for area travelers. The SR 42/US 23 intersections with CR 648/Locust Grove Griffin Road and with CR 328/Roberts Road are in such close proximity that traffic signals cannot safely and effectively be added at both intersections. The proposed traffic signal would be added at the CR 648/Locust Grove Griffin Road because of the higher existing traffic volumes on this roadway and to prevent redirecting traffic onto the smaller, residential street.

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The intersection of SR 42/US 23 with CR 648/Locust Grove Griffin Road would be signalized and turning lanes would be added as part of the proposed project. The traffic volumes on CR 328/Roberts Road are anticipated to decrease after construction of the proposed safety improvements. The use of private property to make turns is not anticipated because the signalized intersection with turn lanes would provide a safer and easier alternative.

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This intersection is outside of this proposed project area. However, your comment has been forwarded to the GDOT District Three Office for further consideration. If you have any additional questions regarding that intersection, please contact David Millen, the District Three Engineer, at (706) 646-6906.

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- *I was not given certified notification about this project.*

The purpose of the April 20, 2010, PIOH was to provide an opportunity for affected citizens to comment on the proposal. Notification of the PIOH was provided by roadside signs placed in the project area for ten days and by notices published in the local newspaper. Assuming the project advances and receives the necessary funding and approvals, contact with individual affected property owners will occur during the subsequent right-of-way acquisition phase for the project.

Project CSSFT-0008-00(542), PI No. 0008542, Henry County
June 2, 2010
Page 3 of 3

Thank you again for your comments. Should you have any further questions concerning this project, please call the Department's project manager Derrick Cameron at (404) 635-8153 or Sam Pugh of the Office of Environmental Services at (404) 631-1167.

Sincerely,



Glenn Bowman, P.E.
State Environmental Administrator

GB/SP/jeb

cc: Derrick Cameron, Georgia DOT Project Manager
David Millen, Georgia DOT District Three Engineer



June 2, 2010

Linda King
4146 Highway 42
Locust Grove, GA 30248

Re: Project CSSFT-0008-00(542), Henry County - P.I. No. 0008542 – SR 42/US 23 at CR 648/Locust Grove Griffin Road and CR 328/Roberts Road

Dear Linda King,

Thank you for your comments concerning the proposed project referenced above. We appreciate all of the input that was received as a result of the April 20, 2010 Public Information Open House (PIOH), and every comment will be made part of the official record of the project.

A total of 24 people attended the PIOH. Of the comments we received, 3 were in support of the project, 1 was opposed to the project, none were uncommitted, and 1 expressed conditional support for the project.

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- *This proposal should be tabled for 60 days to allow an independent traffic planner to develop a safer route.*

The proposed project is in the preliminary development phase and the GDOT welcomes all input to make its projects better. A report from an independent traffic planner would be accepted and taken into consideration.

- *There will be a safety issue if people cannot turn left or go straight from CR 328/Roberts Road.*

The need for the proposed project was identified based upon the high incidence of crashes, including those with injuries and fatalities, in this area. The majority of the crashes that occurred at this intersection between 2005 and 2008 were rear end or angle crashes related to turning movements or through movements onto or from CR 328/Roberts Road. Preventing the left-turning or through movements to or from CR 328/Roberts Road would reduce the potential for these types of crashes and improve safety at this intersection.

- *Roberts Road should maintain a through movement to keep the east-west corridor from Peeksville Road to Tanger Mall Road. As planned, this would be a detriment to local traffic.*

As mentioned previously, the need for this project was identified based upon the crash history in this area. The intersection of SR 42/US 23 with CR 648/Locust Grove Griffin Road would be signalized and turning lanes would be added as part of the proposed project. These improvements would result in safer conditions for area travelers. The SR 42/US 23 intersections with CR 648/Locust Grove Griffin Road and with CR 328/Roberts Road are in such close proximity that traffic signals cannot safely and effectively be added at both intersections. The proposed traffic signal would be added at the CR 648/Locust Grove Griffin Road because of the higher existing traffic volumes on this roadway and to prevent redirecting traffic onto the smaller, residential street.

- *This project will result in people cutting across my property.*

The intersection of SR 42/US 23 with CR 648/Locust Grove Griffin Road would be signalized and turning lanes would be added as part of the proposed project. The traffic volumes on CR 328/Roberts Road are anticipated to decrease after construction of the proposed safety improvements. The use of private property to make turns is not anticipated because the signalized intersection with turn lanes would provide a safer and easier alternative.

- *Reconsider the traffic light that WalMart wanted to put on Highway 23/42 north of Bill Gardner Parkway.*

This intersection is outside of this proposed project area. However, your comment has been forwarded to the GDOT District Three Office for further consideration. If you have any additional questions regarding that intersection, please contact David Millen, the District Three Engineer, at (706) 646-6906.

- *Look at Locust Road at Highway 42. There have been three fatalities and several serious injuries there.*

This intersection is also outside of this proposed project area. Your comment has also been forwarded to the GDOT District Three Office for further consideration. If you have any additional questions regarding that intersection, please contact David Millen, the District Three Engineer, at (706) 646-6906.

- *I was not given certified notification about this project.*

The purpose of the April 20, 2010, PIOH was to provide an opportunity for affected citizens to comment on the proposal. Notification of the PIOH was provided by roadside signs placed in the project area for ten days and by notices published in the local newspaper. Assuming the project advances and receives the necessary funding and approvals, contact with individual affected property owners will occur during the subsequent right-of-way acquisition phase for the project.

Project CSSFT-0008-00(542), PI No. 0008542, Henry County
June 2, 2010
Page 3 of 3

Thank you again for your comments. Should you have any further questions concerning this project, please call the Department's project manager Derrick Cameron at (404) 635-8153 or Sam Pugh of the Office of Environmental Services at (404) 631-1167.

Sincerely,

A handwritten signature in cursive script that reads "Glenn Bowman" followed by a small mark that looks like "MH".

Glenn Bowman, P.E.
State Environmental Administrator

GB/SP/jeb

cc: Derrick Cameron, Georgia DOT Project Manager
David Millen, Georgia DOT District Three Engineer



June 2, 2010

Pamela M. Bettis
450 Higgins Road
Locust Grove, GA 30248

Re: Project CSSFT-0008-00(542), Henry County - P.I. No. 0008542 – SR 42/US 23 at CR 648/Locust Grove Griffin Road and CR 328/Roberts Road

Dear Pamela M. Bettis,

Thank you for your comments concerning the proposed project referenced above. We appreciate all of the input that was received as a result of the April 20, 2010 Public Information Open House (PIOH), and every comment will be made part of the official record of the project.

A total of 24 people attended the PIOH. Of the comments we received, 3 were in support of the project, 1 was opposed to the project, none were uncommitted, and 1 expressed conditional support for the project.

The attendees of the PIOH and those persons sending in comments afterwards raised the following questions and concerns. The Georgia Department of Transportation (Department) has prepared this one response letter that addresses all comments received so that everyone can be aware of the concerns raised and the responses given. Please find the comments summarized below (*in italics*) followed by our response.

- *Meeting notice signs should be placed at intersections because there is too much to read at a quick glance.*

This comment is appreciated and we will strive to place signs in low speed and stopped areas to the extent possible for future meetings.

- *This project should be built soon.*

Prior to construction, engineering design and environmental evaluations must be completed. The project schedule may also be affected by funding constraints. The current project schedule is for right-of-way acquisition to begin in fall of 2011 and construction to begin in spring of 2013. The construction is anticipated to take approximately one year.

- *This proposal should be tabled for 60 days to allow an independent traffic planner to develop a safer route.*

The proposed project is in the preliminary development phase and the GDOT welcomes all input to make its projects better. A report from an independent traffic planner would be accepted and taken into consideration.

- *There will be a safety issue if people cannot turn left or go straight from CR 328/Roberts Road.*

The need for the proposed project was identified based upon the high incidence of crashes, including those with injuries and fatalities, in this area. The majority of the crashes that occurred at this intersection between 2005 and 2008 were rear end or angle crashes related to turning movements or through movements onto or from CR 328/Roberts Road. Preventing the left-turning or through movements to or from CR 328/Roberts Road would reduce the potential for these types of crashes and improve safety at this intersection.

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Project CSSFT-0008-00(542), PI No. 0008542, Henry County
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Page 3 of 3

Thank you again for your comments. Should you have any further questions concerning this project, please call the Department's project manager Derrick Cameron at (404) 635-8153 or Sam Pugh of the Office of Environmental Services at (404) 631-1167.

Sincerely,

A handwritten signature in cursive script that reads "Glenn Bowman" followed by a stylized monogram "MH".

Glenn Bowman, P.E.
State Environmental Administrator

GB/SP/jeb

cc: Derrick Cameron, Georgia DOT Project Manager
David Millen, Georgia DOT District Three Engineer



June 2, 2010

James W. Dixon
PO Box 236
Locust Grove, GA 30248

Re: Project CSSFT-0008-00(542), Henry County - P.I. No. 0008542 – SR 42/US 23 at CR 648/Locust Grove Griffin Road and CR 328/Roberts Road

Dear James W. Dixon,

Thank you for your comments concerning the proposed project referenced above. We appreciate all of the input that was received as a result of the April 20, 2010 Public Information Open House (PIOH), and every comment will be made part of the official record of the project.

A total of 24 people attended the PIOH. Of the comments we received, 3 were in support of the project, 1 was opposed to the project, none were uncommitted, and 1 expressed conditional support for the project.

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Project CSSFT-0008-00(542), PI No. 0008542, Henry County
June 2, 2010
Page 3 of 3

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Sincerely,

A handwritten signature in cursive script that reads "Glenn Bowman".

Glenn Bowman, P.E.
State Environmental Administrator

GB/SP/jeb

cc: Derrick Cameron, Georgia DOT Project Manager
David Millen, Georgia DOT District Three Engineer

HCM Unsignalized Intersection Capacity Analysis

1: SR 42 & LG Griffin Rd

10/14/2009



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	→			←	↔	↔
Volume (veh/h)	340	120	20	1050	135	90
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	370	130	22	1141	147	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)						
pX, platoon unblocked						
vC, conflicting volume			500	1620	435	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			500	1620	435	
tC, single (s)			4.1	6.4	6.2	
tC, 2 stage (s)						
tF (s)			2.2	3.5	3.3	
p0 queue free %			98	0	84	
cM capacity (veh/h)			1064	111	621	

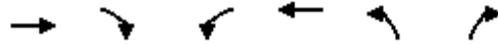
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	500	1163	245
Volume Left	0	22	147
Volume Right	130	0	98
cSH	1700	1064	166
Volume to Capacity	0.29	0.02	1.48
Queue Length 95th (ft)	0	2	393
Control Delay (s)	0.0	0.7	295.4
Lane LOS		A	F
Approach Delay (s)	0.0	0.7	295.4
Approach LOS			F

Intersection Summary			
Average Delay		38.3	
Intersection Capacity Utilization	90.9%		ICU Level of Service E
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis

1: SR 42 & LG Griffin Rd

10/14/2009



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	550	75	35	585	60	35
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	598	82	38	636	65	38
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			679	1351		639
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			679	1351		639
tC, single (s)			4.1	6.4		6.2
tC, 2 stage (s)						
tF (s)			2.2	3.5		3.3
p0 queue free %			96	59		92
cM capacity (veh/h)			913	159		476

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	679	674	103
Volume Left	0	38	65
Volume Right	82	0	38
cSH	1700	913	211
Volume to Capacity	0.40	0.04	0.49
Queue Length 95th (ft)	0	3	61
Control Delay (s)	0.0	1.1	37.5
Lane LOS		A	E
Approach Delay (s)	0.0	1.1	37.5
Approach LOS			E

Intersection Summary			
Average Delay			3.2
Intersection Capacity Utilization	71.6%		ICU Level of Service
Analysis Period (min)			15
C			

HCM Unsignalized Intersection Capacity Analysis

1: SR 42 & LG Griffin Rd

10/14/2009



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	→			←	↔	↔
Volume (veh/h)	950	65	85	520	80	30
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1033	71	92	565	87	33
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			1103		1818	1068
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1103		1818	1068
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			85		0	88
cM capacity (veh/h)			633		73	269

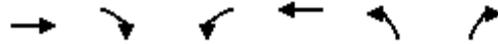
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	1103	658	120
Volume Left	0	92	87
Volume Right	71	0	33
cSH	1700	633	91
Volume to Capacity	0.65	0.15	1.31
Queue Length 95th (ft)	0	13	218
Control Delay (s)	0.0	3.8	282.6
Lane LOS		A	F
Approach Delay (s)	0.0	3.8	282.6
Approach LOS			F

Intersection Summary			
Average Delay		19.3	
Intersection Capacity Utilization		102.3%	ICU Level of Service
Analysis Period (min)		15	G

Queues

1: SR 42 & LG Griffin Rd

10/14/2009



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Volume (vph)	340	120	20	1050	135	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1770	1863	1770	1583
Flt Permitted			0.540		0.950	
Satd. Flow (perm)	1863	1583	1006	1863	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		130				98
Link Speed (mph)	45			45	35	
Link Distance (ft)	1090			1209	1186	
Travel Time (s)	16.5			18.3	23.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	370	130	22	1141	147	98
Shared Lane Traffic (%)						
Lane Group Flow (vph)	370	130	22	1141	147	98
Turn Type		Perm	Perm			Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	15.0	15.0	15.0	15.0	8.0	8.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	58.0	58.0	58.0	58.0	22.0	22.0
Total Split (%)	72.5%	72.5%	72.5%	72.5%	27.5%	27.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effect Green (s)	48.2	48.2	48.2	48.2	11.6	11.6
Actuated g/C Ratio	0.67	0.67	0.67	0.67	0.16	0.16
v/c Ratio	0.30	0.12	0.03	0.91	0.52	0.29
Control Delay	5.9	1.3	4.7	24.1	35.7	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.9	1.3	4.7	24.1	35.7	9.0
LOS	A	A	A	C	D	A
Approach Delay	4.7			23.7	25.1	
Approach LOS	A			C	C	
Queue Length 50th (ft)	56	0	3	359	65	0
Queue Length 95th (ft)	112	16	11	#800	119	38
Internal Link Dist (ft)	1010			1129	1106	
Turn Bay Length (ft)						
Base Capacity (vph)	1368	1196	739	1368	400	434
Starvation Cap Reductn	0	0	0	0	0	0

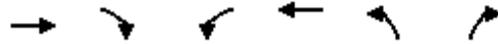
Build

2013 AM Peak

Queues

1: SR 42 & LG Griffin Rd

10/14/2009



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.11	0.03	0.83	0.37	0.23

Intersection Summary

Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	72
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.91
Intersection Signal Delay:	18.9
Intersection LOS:	B
Intersection Capacity Utilization	72.7%
ICU Level of Service	C
Analysis Period (min)	15
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

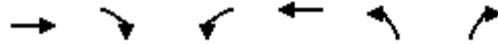
Splits and Phases: 1: SR 42 & LG Griffin Rd



Queues

1: SR 42 & LG Griffin Rd

10/14/2009

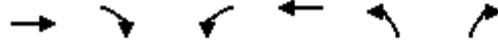


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Volume (vph)	550	75	35	585	60	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1770	1863	1770	1583
Flt Permitted			0.400		0.950	
Satd. Flow (perm)	1863	1583	745	1863	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		82				38
Link Speed (mph)	45			45	35	
Link Distance (ft)	1090			1209	1186	
Travel Time (s)	16.5			18.3	23.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	598	82	38	636	65	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	598	82	38	636	65	38
Turn Type		Perm	Perm			Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	15.0	15.0	15.0	15.0	8.0	8.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	33.0	33.0	33.0	33.0	22.0	22.0
Total Split (%)	60.0%	60.0%	60.0%	60.0%	40.0%	40.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effect Green (s)	26.3	26.3	26.3	26.3	9.4	9.4
Actuated g/C Ratio	0.73	0.73	0.73	0.73	0.26	0.26
v/c Ratio	0.44	0.07	0.07	0.47	0.14	0.09
Control Delay	6.7	1.7	5.2	7.0	16.3	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.7	1.7	5.2	7.0	16.3	7.7
LOS	A	A	A	A	B	A
Approach Delay	6.1			6.9	13.1	
Approach LOS	A			A	B	
Queue Length 50th (ft)	86	0	4	94	13	0
Queue Length 95th (ft)	167	12	14	183	41	18
Internal Link Dist (ft)	1010			1129	1106	
Turn Bay Length (ft)						
Base Capacity (vph)	1406	1215	562	1406	912	834
Starvation Cap Reductn	0	0	0	0	0	0

Queues

1: SR 42 & LG Griffin Rd

10/14/2009



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.07	0.07	0.45	0.07	0.05

Intersection Summary

Area Type:	Other
Cycle Length:	55
Actuated Cycle Length:	35.9
Natural Cycle:	55
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.47
Intersection Signal Delay:	7.0
Intersection LOS:	A
Intersection Capacity Utilization	47.5%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 1: SR 42 & LG Griffin Rd



Queues

1: SR 42 & LG Griffin Rd

10/14/2009



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Volume (vph)	950	65	85	520	80	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.850				0.850
Fl _t Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1770	1863	1770	1583
Fl _t Permitted			0.153		0.950	
Satd. Flow (perm)	1863	1583	285	1863	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		71				33
Link Speed (mph)	45			45	35	
Link Distance (ft)	1090			1209	1186	
Travel Time (s)	16.5			18.3	23.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1033	71	92	565	87	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1033	71	92	565	87	33
Turn Type		Perm	Perm			Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	15.0	15.0	15.0	15.0	8.0	8.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	53.0	53.0	53.0	53.0	22.0	22.0
Total Split (%)	70.7%	70.7%	70.7%	70.7%	29.3%	29.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effect Green (s)	43.3	43.3	43.3	43.3	10.2	10.2
Actuated g/C Ratio	0.74	0.74	0.74	0.74	0.17	0.17
v/c Ratio	0.75	0.06	0.44	0.41	0.28	0.11
Control Delay	12.6	1.3	14.1	5.9	28.8	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.6	1.3	14.1	5.9	28.8	11.1
LOS	B	A	B	A	C	B
Approach Delay	11.9			7.0	23.9	
Approach LOS	B			A	C	
Queue Length 50th (ft)	236	0	14	82	34	0
Queue Length 95th (ft)	#543	11	65	161	72	22
Internal Link Dist (ft)	1010			1129	1106	
Turn Bay Length (ft)						
Base Capacity (vph)	1435	1236	220	1435	548	513
Starvation Cap Reductn	0	0	0	0	0	0

Queues

1: SR 42 & LG Griffin Rd

10/14/2009



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.06	0.42	0.39	0.16	0.06

Intersection Summary

Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	58.6
Natural Cycle:	75
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.75
Intersection Signal Delay:	10.9
Intersection LOS:	B
Intersection Capacity Utilization	84.2%
ICU Level of Service	E
Analysis Period (min)	15
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 1: SR 42 & LG Griffin Rd



HCM Unsignalized Intersection Capacity Analysis

1: SR 42 & LG Griffin Rd

10/14/2009



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	525	185	30	1625	210	140
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	571	201	33	1766	228	152
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			772		2503	671
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			772		2503	671
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		0	67
cM capacity (veh/h)			843		30	456

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	772	1799	380
Volume Left	0	33	228
Volume Right	201	0	152
cSH	1700	843	48
Volume to Capacity	0.45	0.04	7.85
Queue Length 95th (ft)	0	3	Err
Control Delay (s)	0.0	0.2	Err
Lane LOS		A	F
Approach Delay (s)	0.0	0.2	Err
Approach LOS			F

Intersection Summary			
Average Delay		1289.1	
Intersection Capacity Utilization		136.4%	ICU Level of Service H
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis

1: SR 42 & LG Griffin Rd

10/14/2009



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	850	115	55	905	95	55
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	924	125	60	984	103	60
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			1049		2090	986
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1049		2090	986
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			91		0	80
cM capacity (veh/h)			663		53	300

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	1049	1043	163
Volume Left	0	60	103
Volume Right	125	0	60
cSH	1700	663	75
Volume to Capacity	0.62	0.09	2.16
Queue Length 95th (ft)	0	7	376
Control Delay (s)	0.0	2.8	653.0
Lane LOS		A	F
Approach Delay (s)	0.0	2.8	653.0
Approach LOS			F

Intersection Summary			
Average Delay		48.5	
Intersection Capacity Utilization		107.9%	ICU Level of Service
Analysis Period (min)		15	G

HCM Unsignalized Intersection Capacity Analysis

1: SR 42 & LG Griffin Rd

10/14/2009



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	→			←	←	↘
Volume (veh/h)	1470	100	130	805	125	45
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1598	109	141	875	136	49
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			1707		2810	1652
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1707		2810	1652
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			62		0	60
cM capacity (veh/h)			372		12	122

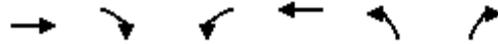
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	1707	1016	185
Volume Left	0	141	136
Volume Right	109	0	49
cSH	1700	372	16
Volume to Capacity	1.00	0.38	11.35
Queue Length 95th (ft)	0	43	Err
Control Delay (s)	0.0	16.6	Err
Lane LOS		C	F
Approach Delay (s)	0.0	16.6	Err
Approach LOS			F

Intersection Summary			
Average Delay		641.3	
Intersection Capacity Utilization		152.7%	ICU Level of Service H
Analysis Period (min)		15	

Queues

1: SR 42 & LG Griffin Rd

10/14/2009



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Volume (vph)	525	185	30	1625	210	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr't		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1770	1863	1770	1583
Flt Permitted			0.424		0.950	
Satd. Flow (perm)	1863	1583	790	1863	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		201				152
Link Speed (mph)	45			45	35	
Link Distance (ft)	1090			1209	1186	
Travel Time (s)	16.5			18.3	23.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	571	201	33	1766	228	152
Shared Lane Traffic (%)						
Lane Group Flow (vph)	571	201	33	1766	228	152
Turn Type		Perm	Perm			Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	15.0	15.0	15.0	15.0	8.0	8.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	128.0	128.0	128.0	128.0	22.0	22.0
Total Split (%)	85.3%	85.3%	85.3%	85.3%	14.7%	14.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effect Green (s)	122.0	122.0	122.0	122.0	16.0	16.0
Actuated g/C Ratio	0.81	0.81	0.81	0.81	0.11	0.11
v/c Ratio	0.38	0.15	0.05	1.17	1.21	0.50
Control Delay	4.6	0.6	2.9	99.7	186.1	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.6	0.6	2.9	99.7	186.1	14.7
LOS	A	A	A	F	F	B
Approach Delay	3.5			98.0	117.5	
Approach LOS	A			F	F	
Queue Length 50th (ft)	126	0	5	-2046	-271	0
Queue Length 95th (ft)	167	13	12	#2307	#447	69
Internal Link Dist (ft)	1010			1129	1106	
Turn Bay Length (ft)						
Base Capacity (vph)	1515	1325	643	1515	189	305
Starvation Cap Reductn	0	0	0	0	0	0

Build

2033 AM Peak

Queues

1: SR 42 & LG Griffin Rd

10/14/2009

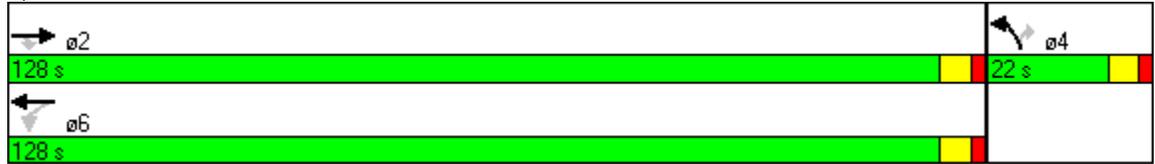


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.15	0.05	1.17	1.21	0.50

Intersection Summary

Area Type:	Other
Cycle Length:	150
Actuated Cycle Length:	150
Natural Cycle:	150
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.21
Intersection Signal Delay:	75.8
Intersection LOS:	E
Intersection Capacity Utilization	107.2%
ICU Level of Service	G
Analysis Period (min)	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

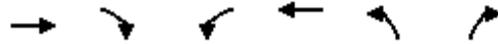
Splits and Phases: 1: SR 42 & LG Griffin Rd



Queues

1: SR 42 & LG Griffin Rd

10/14/2009

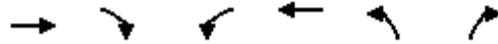


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Volume (vph)	850	115	55	905	95	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1770	1863	1770	1583
Flt Permitted			0.192		0.950	
Satd. Flow (perm)	1863	1583	358	1863	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		125				60
Link Speed (mph)	45			45	35	
Link Distance (ft)	1090			1209	1186	
Travel Time (s)	16.5			18.3	23.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	924	125	60	984	103	60
Shared Lane Traffic (%)						
Lane Group Flow (vph)	924	125	60	984	103	60
Turn Type		Perm	Perm			Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	15.0	15.0	15.0	15.0	8.0	8.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	43.0	43.0	43.0	43.0	22.0	22.0
Total Split (%)	66.2%	66.2%	66.2%	66.2%	33.8%	33.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effect Green (s)	36.5	36.5	36.5	36.5	9.9	9.9
Actuated g/C Ratio	0.70	0.70	0.70	0.70	0.19	0.19
v/c Ratio	0.71	0.11	0.24	0.75	0.30	0.17
Control Delay	12.2	1.4	8.3	13.9	24.3	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.2	1.4	8.3	13.9	24.3	8.2
LOS	B	A	A	B	C	A
Approach Delay	10.9			13.6	18.4	
Approach LOS	B			B	B	
Queue Length 50th (ft)	186	0	7	212	33	0
Queue Length 95th (ft)	#485	15	29	#536	70	26
Internal Link Dist (ft)	1010			1129	1106	
Turn Bay Length (ft)						
Base Capacity (vph)	1322	1159	254	1322	597	574
Starvation Cap Reductn	0	0	0	0	0	0

Queues

1: SR 42 & LG Griffin Rd

10/14/2009



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.11	0.24	0.74	0.17	0.10

Intersection Summary

Area Type:	Other
Cycle Length:	65
Actuated Cycle Length:	52
Natural Cycle:	65
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.75
Intersection Signal Delay:	12.7
Intersection LOS:	B
Intersection Capacity Utilization	64.3%
ICU Level of Service	C
Analysis Period (min)	15
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

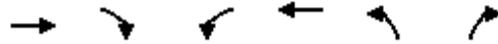
Splits and Phases: 1: SR 42 & LG Griffin Rd



Queues

1: SR 42 & LG Griffin Rd

10/14/2009



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Volume (vph)	1470	100	130	805	125	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.850				0.850
Fl _t Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1770	1863	1770	1583
Fl _t Permitted			0.036		0.950	
Satd. Flow (perm)	1863	1583	67	1863	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		96				49
Link Speed (mph)	45			45	35	
Link Distance (ft)	1090			1209	1186	
Travel Time (s)	16.5			18.3	23.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1598	109	141	875	136	49
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1598	109	141	875	136	49
Turn Type		Perm	Perm			Perm
Protected Phases	2			6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	15.0	15.0	15.0	15.0	8.0	8.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	118.0	118.0	118.0	118.0	22.0	22.0
Total Split (%)	84.3%	84.3%	84.3%	84.3%	15.7%	15.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effect Green (s)	112.0	112.0	112.0	112.0	14.3	14.3
Actuated g/C Ratio	0.81	0.81	0.81	0.81	0.10	0.10
v/c Ratio	1.06	0.08	2.56	0.58	0.74	0.24
Control Delay	56.1	0.8	778.6	6.7	84.2	17.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.1	0.8	778.6	6.7	84.2	17.6
LOS	E	A	F	A	F	B
Approach Delay	52.6			113.9	66.6	
Approach LOS	D			F	E	
Queue Length 50th (ft)	~1611	2	~168	253	121	0
Queue Length 95th (ft)	#1876	13	#312	338	#206	40
Internal Link Dist (ft)	1010			1129	1106	
Turn Bay Length (ft)						
Base Capacity (vph)	1508	1300	55	1508	205	226
Starvation Cap Reductn	0	0	0	0	0	0

Queues

1: SR 42 & LG Griffin Rd

10/14/2009



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.06	0.08	2.56	0.58	0.66	0.22

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	138.3
Natural Cycle:	140
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	2.56
Intersection Signal Delay:	74.9
Intersection LOS:	E
Intersection Capacity Utilization	111.8%
ICU Level of Service	H
Analysis Period (min)	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 1: SR 42 & LG Griffin Rd

