**ORIGINAL TO GENERAL FILES**

# DEPARTMENT OF TRANSPORTATION
# STATE OF GEORGIA

## OFFICE OF DESIGN POLICY & SUPPORT
## INTERDEPARTMENTAL CORRESPONDENCE

**FILE** P.I. #0008459
CSSFT-0008-00(459)
Carroll County
SR 61 @ South Carroll Road

**OFFICE** Design Policy & Support

**DATE** December 14, 2010

**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 Adminstrator
Ron Wishon, State Project Review Engineer
Glenn Bowman, State Environmental Administrator
Ken Thompson, Statewide Location Bureau Chief
Michael Henry, Systems & Classification Branch Chief
Kathy Zahul, State Traffic Engineer
Cindy VanDyke, State Transportation Planning Administrator
Bobby Hilliard, State Program Delivery Engineer
Angela Robinson, Financial Management Administrator
Jeff Baker, State Utilities Engineer
Kerry Bonner, District Utilities Engineer
DeWayne Comer, District Preconstruction Engineer
Kent Sager, District Engineer
Derrick Cameron, Project Manager
BOARD MEMBER - 11th Congressional District

**DEPARTMENT OF TRANSPORTATION**
**STATE OF GEORGIA**
Traffic Operations
PROJECT CONCEPT REPORT
Project Number: CSSFT-0008-00(459)
County: Carroll
P.I. Number: 0008459

**Federal Route Number: N/A**
**State Route Number: 61**

SR 61 @ South Carroll Road

**Submitted for approval:**

DATE 9-29-2010 — Hatch Mott MacDonald
Design Consultant Name and Firm Name

DATE 6 October 2010 — Project Manager

DATE 10-6-10 — State Traffic Engineer

**Recommendation for approval:**

DATE 11/1/2010 — * Genetha Rice-Singleton — Program Control Administrator

DATE 11/8/2010 — * Glenn Bowman — State Environmental Administrator

DATE 10/20/2010 — * Ron Wishon — Project Review Engineer

DATE 10/21/2010 — * Lee Upkins — for State Utilities Engineer

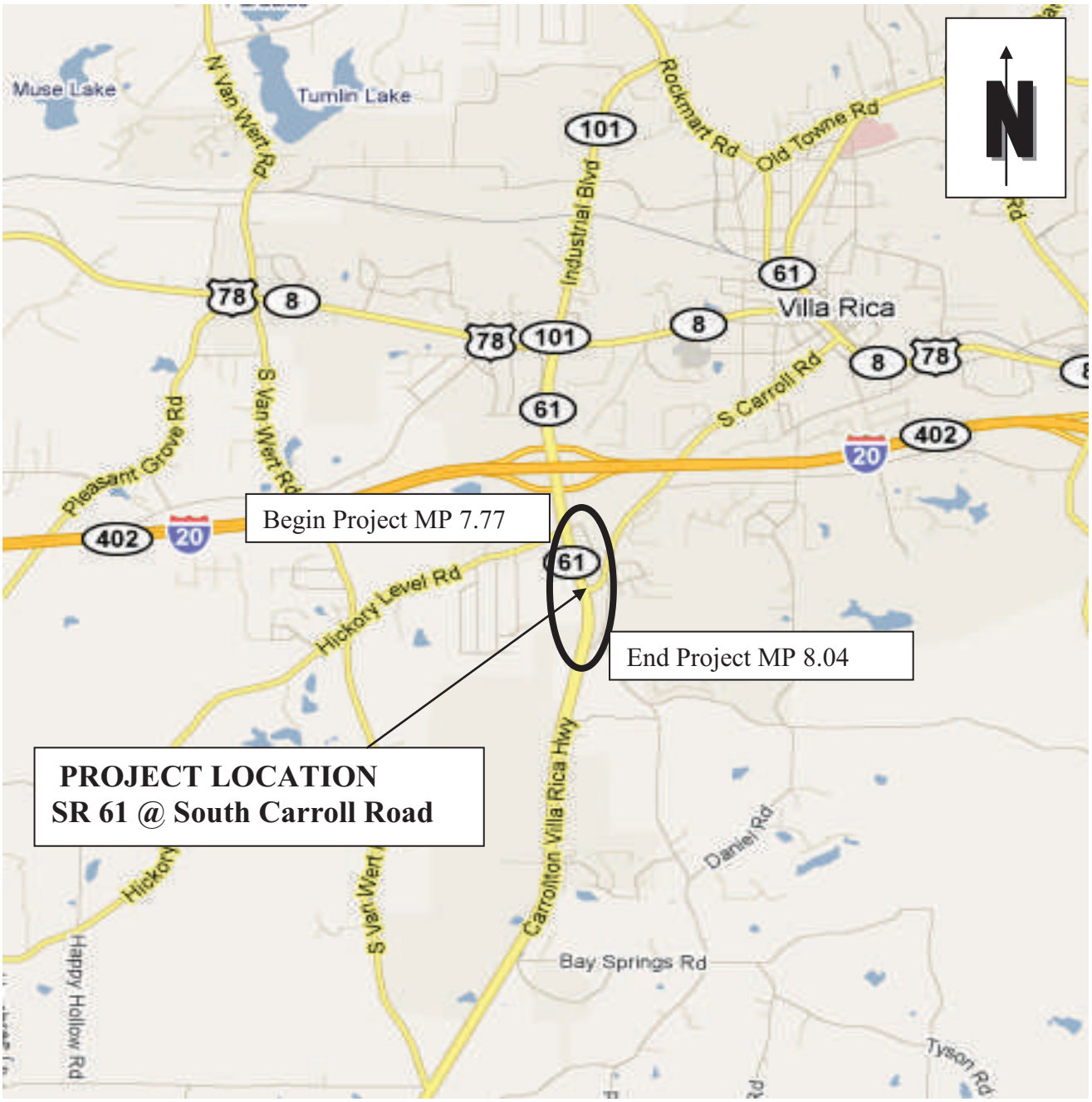
DATE 10/29/2010 — * Kent Sager — District Engineer

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 10/27/10 — State Transportation Planning Administrator

* Recommendation on file




**Project Location Map**
**SR 61 at CS 841/South Carroll Road Safety Improvement Project**

**Need and Purpose:**

*Background*

State Route 61 is a four-lane roadway with a depressed grassed median. The intersection consists of a Type A median opening with a left-turn lane from southbound SR 61 onto eastbound South Carroll Road and a U-turn lane northbound on SR 61. The left-turn lane and U-turn lane are not separated from the through travel lanes. The land use within the intersection area is primarily commercial on the east side of SR 61 and undeveloped on the west side of SR 61.

Project CSSFT-0008-00(459) would maintain the existing Type A median opening at the intersection of SR 61 and CS 841/South Carroll Road. Right turn lanes will be constructed northbound on SR 61 and westbound on South Carroll Road. This intersection has a higher crash rate and higher injury rate than the state average. Continual growth in the area is expected therefore, improvements are needed at this intersection to aid in the possible reduction of crash frequency.

*Crash Data*

SR 61 is functionally classified as a minor arterial. CS 841/South Carroll Road is classified as a major collector. The tables below provide a comparison of the crash rates along SR 61 with the state average for a similarly classified roadway for the years 2005-2008.

| SR 61 from MP 7.95 to MP 8.00 | 2005 | | 2006 | | 2007 | | 2008 | |
|---|---|---|---|---|---|---|---|---|
| | SR 61 | State | SR 61 | State | SR 61 | State | SR 61 | State |
| Crash Rate* | 2,846 | 312 | 2,772 | 308 | 2,852 | 300 | 1,755 | 281 |
| Injury Rate* | 1,423 | 125 | 1,386 | 120 | 219 | 114 | 658 | 106 |
| Fatality Rate* | 0 | 1.57 | 0 | 1.53 | 0 | 1.46 | 0 | 1.39 |

*Per 100 million vehicle miles (mvm).

Fifty percent (50%) of the crashes that occurred in years 2005 through 2009 were angle crashes, 34% were rear end crashes, 12% were side swipes, and 4% were non vehicle/vehicle crashes.

| Year | Angle | Rear End | Side Swipe | Not a Collision with Another Vehicle | Head-On | Fatality |
|---|---|---|---|---|---|---|
| 2005 | 9 | 1 | 2 | 0 | 0 | 0 |
| 2006 | 7 | 2 | 3 | 0 | 0 | 0 |
| 2007 | 7 | 5 | 1 | 0 | 0 | 0 |
| 2008 | 1 | 5 | 0 | 2 | 0 | 0 |
| 2009 | 2 | 5 | 1 | 0 | 0 | 0 |
| Total | 26 | 18 | 7 | 2 | 0 | 0 |

The proposed project is anticipated to reduce the crash frequency and improve the operation of the intersection. The addition of northbound right turn lane onto eastbound South Carroll Road and the westbound right turn lane from South Carroll Road to SR 61 is anticipated to reduce crashes by providing additional storage and reducing the potential for rear end collisions. The existing signal will be modified to account for the road construction changes made. These additional changes will include coordinating with other signalized intersections and adding pedestrian facilities.

*Operational Analysis*
The 2008 traffic data indicates that the total traffic is 24,030 vehicles per day (vpd) for SR 61, which functions as a vital link from I-20 in Villa Rica to Carrollton, Georgia. The 2008 traffic volume is 4,110 vpd on CS 841/South Carroll Road which connects SR 61 to central Villa Rica.

The volume of traffic on SR 61 and CS 841/South Carroll Road has grown significantly in the last few years. The table below lists current and future traffic. Traffic volumes are reported as total average annual daily traffic (AADT) in both directions.

| Roadway Segment | Existing AADT (2010) | Open to Traffic AADT (2012) | Future AADT (2032) Build | Future AADT (2032) No-Build |
|---|---|---|---|---|
| SR 61 | 23,258 | 25,994 | 31,718 | 31,718 |
| CS 841/South Carroll Road | 4,110 | 4,277 | 5,219 | 5,219 |

**Description of the proposed project:** The project is located in the city of Villa Rica about one half mile south of Interstate 20 in a developing urban area consisting of commercial establishments. The length of this project is approximately 0.27 miles from mile post 7.77 to 8.04 and is located in Carroll County. The project involves the construction of right turn lanes on northbound SR 61 and westbound on South Carroll Road. The existing traffic signal will be modified per the roadway improvements and pedestrian signal poles will be added on the southeast and northeast raised islands.

**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
*(The proposed project is exempt from conformity due to its potential to reduce crash frequency and severity.)*

**PDP Classification:** Major ____ Minor _X_

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

**Functional Classification:** Rural Minor Arterial (SR 61), Rural Major Collector (South Carroll Road)

**US Route Number(s):** N/A **State Route Number(s):** 61

**Traffic (AADT):**

Opening Year: (2012) 25,994 Design Year: (2032) 30,152

**Existing design features:**

● Typical Section: State Route 61 consists of four twelve foot wide through lanes, twelve foot wide north and southbound left turn lanes and 10-12 foot shoulders. SR 61 has a grassed median that transitions from 70 feet to 40 feet as it approaches South Carroll Road northbound. The intersection is in a tangent area located near the bottom of a vertical curve that measures +1.8% northbound. Sight distance in both directions is in excess of 1000 feet. The intersection of State Route 61 and South Carroll Road is a signalized "T" intersection. Guardrail exists at various locations along SR 61.

● Posted Speed: 55 mph (SR 61) 45 mph (South Carroll Road)
● Minimum radius for curve: N/A (SR 61) 643-ft (South Carroll Road)
● Maximum Super-elevation rate for curve: N/A (SR 61) 6% (South Carroll Road)
● Maximum Grade: 5% (SR 61) 8 % (South Carroll Road)
● Width of Right of Way: varies 310-350 ft
● Major Structures: None
● Major Interchanges or intersections along the project: State Route 61 at South Carroll Road
● Existing length of roadway segment: 0.27 miles from M.P. 7.77 to M.P. 8.04

**Proposed design features:**

● Proposed Typical Section: The proposed intersection improvement consists of constructing a twelve foot right turn lane on SR 61 northbound and South Carroll Road westbound. Twelve foot outside shoulders with 6.5 feet being paved will be constructed along SR 61 and South Carroll Road.

● Proposed Design Speed Mainline: 55 mph
● Proposed Maximum grade Mainline: 3 % Maximum grade allowable: 5 %
● Proposed Minimum Radius of curve: N/A ft Minimum radius allowable: 1060 ft
● Proposed Maximum Superelevation: N/A Maximum allowable superelevation Rate 6 %
● Proposed Design Speed Side Street: 45 mph
● Proposed Maximum grade Side Street: 2 % Maximum grade allowable: 8 %
● Proposed Maximum grade driveway: N/A %
● Proposed Minimum Radius of curve: 2700 ft Minimum radius allowable: 643 ft
● Proposed Maximum Superelevation: 6 % Maximum allowable superelevation Rate 6 %
● Right of Way:
  ○ Width varies 310-350 ft
  ○ Easements: Temporary ( ), Permanent ( ), Utility ( ), Other ( ).
  ○ Number of parcels: 0 Number of displacements: None
    ○ Business: 0
    ○ Residences: 0
    ○ Mobile homes: 0
    ○ Other: 0

- Structures: None
- Major Interchanges or intersections along the project: State Route 61 at South Carroll Road
- Transportation Management Plan Anticipated: Yes ( ) No (X)
- Design exceptions to controlling criteria anticipated**:** N/A

| | 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: None.
- Environmental Concerns: None anticipated
- Anticipated level of environmental analysis:
    - Are Time Saving Procedures Appropriate? Yes (X) No ( )
    - Categorical Exclusion Anticipated: (X)
    - Environmental Assessment / Finding of No Significant Impact Anticipated (FONSI) ( )
    - Environmental Impact Statement (EIS) ( )
- Utility involvements:
    - Georgia Power Company – Electric Distribution
    - Atlanta Gas Light Company – Natural Gas
- VE Study Anticipated: Yes ( ) No(X)
- Benefit/Cost Ratio: 1.57

**Project Cost Estimate and Funding Responsibilities:**

| | PE | ROW | UTILITY | CST | MITIGATION |
|---|---|---|---|---|---|
| By Whom | GDOT | N/A | GDOT | GDOT | N/A |
| $ Amount | $209,466.57 | $0.00 | TBD | $478,881.44 | $0.00 |

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

**Project Activities responsibilities:**

- Design: GDOT
- Right of Way Acquisition: N/A
- Right of Way Funding (real property): N/A
- Relocation of Utilities: GDOT
- Letting to contract: GDOT
- Supervision of construction: GDOT
- Providing material pits: Contractor
- Providing Detours: N/A
- Environmental Studies/Documents/Permits: Edwards Pitman Environmental, Inc
- Environmental Mitigation: N/A

**Coordination:**

- Initial Concept Meeting Feb. 18, 2010 (See Attached)
- PAR meetings: None
- FEMA, USCG, and/or TVA: None
- Public Involvement: None
- Local government comments: None
- Other projects in area – M003308, Carroll County (I-20 Pavement Reconstruction from M.P 11.81 to M.P. 23.62)
- Railroads: None
- Other coordination to date: None

**Scheduling – Responsible Parties' Estimate**

| | | |
|---|---|---|
| ● Time to complete the environmental process: | Begin: 6/2010 | End: 12/2010 |
| ● Time to complete preliminary construction plans: | Begin: 6/2010 | End: 12/2010 |
| ● Time to complete right-of -way plans: | Begin: N/A | End: N/A |
| ● Time to complete the Section 404 Permit: | Begin: N/A | End: N/A |
| ● Time to complete final construction plans: | Begin: 1/2011 | End: 11/2011 |
| ● Time to purchase right-of-way: | Begin: N/A | End: N/A |

- List other major items that will affect the project schedule: None

**Other Alternates Considered:**

**Alternate 1 –** The "No build" alternative was not considered a viable option due to the high number of crashes and injuries at the intersection.

Alternate 2 - Constructing Type B medians on both the north and southbound approaches was considered but not chosen because the intersection can be improved without extensive construction.

**Attachments:**

1. Detailed Cost Estimates:
    a. Construction including Engineering and Inspection
    b. Completed Fuel & Asphalt Price Adjustment forms
2. Typical sections
3. Traffic Diagrams
4. Capacity Analysis Summary
5. Concept Layout
6. Minutes of Concept meetings

Concur: James B Burk
Director of Engineering

Approve: Daniel Rv Date: 12-8-10
Chief Engineer

# DEPARTMENT OF TRANSPORTATION
# STATE OF GEORGIA

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INTERDEPARTMENT CORRESPONDENCE

**FILE** PROJECT NO. CSSFT-0008-00(459), Carroll
SR 61 at South Carroll Road
Intersection Improvements
P.I. No. 0008459

**OFFICE** Traffic Operations

**DATE** 9/16/2010

**FROM** Kathy Zahul, P.E., State Traffic Engineer

**TO** Ronald E. Wishon, State Project Review Engineer

**SUBJECT REVISIONS TO PROGRAMMED COSTS**

PROJECT MANAGER Derrick Cameron

MNGT LET DATE 5/18/2012

MNGT R/W DATE 5/20/2011

| **PROGRAMMED COST (TPro W/OUT INFLATION)** | | **LAST ESTIMATE UPDATE** |
|---|---|---|
| CONSTRUCTION | $802,432.00 | DATE 3/18/2010 |
| RIGHT OF WAY | $N/A | DATE N/A |
| UTILITIES | $ N/A | DATE Select Date |

**REVISED COST ESTIMATES**

| | |
|---|---|
| CONSTRUCTION* | $478,881.44 |
| RIGHT OF WAY | $ N/A |
| UTILITIES** | $ N/A |

* Costs contain 5% Engineering and Inspection

**REASON FOR COST DECREASE** The project has been revised to only add turn lanes and upgrade the existing signal.

**CONTINGENCY SUMMARY**

| | | |
|---|---|---|
| Construction Cost Estimate: | $ 419,121.17 | (Base Estimate) |
| Engineering and Inspection: | $20,956.06 | (Base Estimate x 5 %) |
| Construction Contingency: | $ | (Base Estimate x 4 %)<br>(The Construction Contingency is based on the Project Improvement Type in TPro.) |
| Total Fuel Adjustment | $ 13,793.25 | (From attached worksheet) |
| Total Liquid AC Adjustment | $ 25,010.96 | (From attached worksheet) |
| **Construction Total:** | $ 478,881.44 | |
| Utility Cost Estimate: | $ N/A | |
| Utility Contingency: | $ N/A | |
| **Utility Total:** | $N/A | |

**REIMBURSABLE UTILITY COST**

| Utility Owner | Reimbursable Costs |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

Attachments

c: Genetha Rice - Singleton, State Program Control Administrator

CES ESTIMATE
STATE HIGHWAY AGENCY

DATE : 09/16/2010
PAGE : 1

JOB ESTIMATE REPORT

JOB NUMBER : 0008459-9-15-10 SPEC YEAR: 01
DESCRIPTION: SR 61 @ SOUTH CARROLL ROAD

ITEMS FOR JOB 0008459-9-15-10

| LINE | ITEM | ALT | UNITS | DESCRIPTION | QUANTITY | PRICE | AMOUNT |
|---|---|---|---|---|---|---|---|
| 0005 | 150-1000 | | LS | TRAFFIC CONTROL - CSSFT-0008-00(459) | 1.000 | 20000.00 | 20000.00 |
| 0010 | 210-0100 | | LS | GRADING COMPLETE - CSSFT-0008-00(459) | 1.000 | 50000.00 | 50000.00 |
| 0015 | 310-1101 | | TN | GR AGGR BASE CRS, INCL MATL | 1350.000 | 17.04 | 23004.00 |
| 0020 | 402-1812 | | TN | RECYL AC LEVELING,INC BM&HL | 10.000 | 66.70 | 667.00 |
| 0025 | 402-3121 | | TN | RECYL AC 25MM SP,GP1/2,BM&HL | 160.000 | 59.47 | 9515.20 |
| 0030 | 402-3130 | | TN | RECYL AC 12.5MM SP,GP2,BM&HL | 190.000 | 64.13 | 12184.70 |
| 0035 | 402-3190 | | TN | RECYL AC 19 MM SP,GP 1 OR 2 ,INC BM&HL | 470.000 | 67.77 | 31851.90 |
| 0040 | 413-1000 | | GL | BITUM TACK COAT | 525.000 | 2.00 | 1050.00 |
| 0045 | 439-0026 | | SY | PLN PC CONC PVMT CL3 12" THK | 1320.000 | 55.60 | 73392.00 |
| 0050 | 500-3200 | | CY | CL B CONC | 15.000 | 411.00 | 6165.00 |
| 0054 | 550-1421 | | LF | STM DR PIPE 42",H 10-15 | 50.000 | 71.30 | 3565.00 |
| 0059 | 550-4242 | | EA | FLARED END SECT 42 IN, ST DR | 1.000 | 1239.57 | 1239.57 |
| 0060 | 641-1200 | | LF | GUARDRAIL, TP W | 1360.000 | 17.89 | 24330.40 |
| 0065 | 641-5001 | | EA | GUARDRAIL ANCHORAGE, TP 1 | 2.000 | 673.15 | 1346.30 |
| 0070 | 641-5012 | | EA | GUARDRAIL ANCHORAGE, TP 12 | 2.000 | 1762.58 | 3525.16 |
| 0075 | 668-2100 | | EA | DROP INLET, GP 1 | 5.000 | 2360.78 | 11803.90 |
| 0080 | 603-2181 | | SY | STN DUMPED RIP RAP, TP 3, 18" | 20.000 | 34.43 | 688.60 |
| 0085 | 603-7000 | | SY | PLASTIC FILTER FABRIC | 20.000 | 3.80 | 76.00 |
| 0090 | 700-6910 | | AC | PERMANENT GRASSING | 1.000 | 674.07 | 674.07 |
| 0095 | 700-7000 | | TN | AGRICULTURAL LIME | 2.000 | 60.51 | 121.02 |
| 0100 | 700-7010 | | GL | LIQUID LIME | 3.000 | 20.53 | 61.59 |
| 0105 | 700-8000 | | TN | FERTILIZER MIXED GRADE | 1.000 | 409.57 | 409.57 |
| 0110 | 700-8100 | | LB | FERTILIZER NITROGEN CONTENT | 1.000 | 2.30 | 2.30 |
| 0115 | 163-0232 | | AC | TEMPORARY GRASSING | 1.000 | 283.37 | 283.37 |
| 0120 | 163-0240 | | TN | MULCH | 6.000 | 129.90 | 779.40 |
| 0125 | 163-0300 | | EA | CONSTRUCTION EXIT | 2.000 | 1148.70 | 2297.40 |
| 0130 | 163-0550 | | EA | CONS & REM INLET SEDIMENT TRAP | 5.000 | 188.29 | 941.45 |
| 0135 | 165-0030 | | LF | MAINT OF TEMP SILT FENCE, TP C | 625.000 | 0.66 | 412.50 |
| 0140 | 165-0101 | | EA | MAINT OF CONST EXIT | 2.000 | 481.34 | 962.68 |
| 0145 | 165-0105 | | EA | MAINT OF INLET SEDIMENT TRAP | 5.000 | 78.69 | 393.45 |
| 0150 | 167-1000 | | EA | WATER QUALITY MONITORING AND SAMPLING | 1.000 | 460.30 | 460.30 |
| 0155 | 167-1500 | | MO | WATER QUALITY INSPECTIONS | 12.000 | 685.80 | 8229.60 |
| 0160 | 171-0030 | | LF | TEMPORARY SILT FENCE, TYPE C | 1250.000 | 2.95 | 3687.50 |
| 0165 | 700-8000 | | TN | FERTILIZER MIXED GRADE | 1.000 | 409.57 | 409.57 |
| 0170 | 636-1020 | | SF | HWY SGN,TP1MAT,REFL SH TP3 | 110.000 | 16.67 | 1833.70 |
| 0175 | 636-2070 | | LF | GALV STEEL POSTS, TP 7 | 200.000 | 8.71 | 1742.00 |
| 0180 | 653-0120 | | EA | THERM PVMT MARK, ARROW, TP 2 | 13.000 | 72.49 | 942.37 |
| 0185 | 653-1501 | | LF | THERMO SOLID TRAF ST 5 IN, WHI | 700.000 | 2.00 | 1400.00 |
| 0190 | 653-1502 | | LF | THERMO SOLID TRAF ST, 5 IN YEL | 520.000 | 2.00 | 1040.00 |
| 0195 | 653-1704 | | LF | THERM SOLID TRAF STRIPE,24",WH | 110.000 | 3.47 | 381.70 |
| 0200 | 653-1804 | | LF | THERM SOLID TRAF STRIPE, 8",WH | 2800.000 | 1.68 | 4704.00 |
| 0205 | 653-3501 | | GLF | THERMO SKIP TRAF ST, 5 IN, WHI | 150.000 | 0.33 | 49.50 |
| 0210 | 653-6004 | | SY | THERM TRAF STRIPING, WHITE | 180.000 | 2.51 | 451.80 |
| 0215 | 654-1002 | | EA | RAISED PVMT MARKERS TP 2 | 16.000 | 2.85 | 45.60 |
| 0220 | 647-1000 | | LS | TRAF SIGNAL INSTALLATION NO - 1 | 1.000 | 112000.00 | 112000.00 |
| ITEM TOTAL | | | | | | 419121.17 | |
| INFLATED ITEM TOTAL | | | | | | 419121.17 | |

TOTALS FOR JOB 0008459-9-15-10

CES ESTIMATE

| | |
|---|---|
| ESTIMATED COST: | 419121.17 |
| CONTINGENCY PERCENT ( 0.0 ): | 0.00 |
| ESTIMATED TOTAL: | 419121.17 |

Date 9/16/2010

P.I. Number **P.I. 0008459** County **Carroll**

Project Number **CSSFT-0008-00(459)**

**Special Provision, Section 109-Measurement and Payment**

# FUEL PRICE ADJUSTMENT *(ENGLISH 125% MAX)*

| ENTER FPL DIESEL | 2.881 |
|---|---|
| ENTER FPM DIESEL | 6.482 |

| ENTER FPL UNLEADED | 2.532 |
|---|---|
| ENTER FPM UNLEADED | 5.697 |

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)** | 1350.000 | 0.29 | 391.50 | 0.24 | 324.00 | |
| 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)** | 830.000 | 2.90 | 2407.00 | 0.71 | 589.30 | |
| PCC Pavement paid as specified by the square yard under Section 430 **(SY)** | 1320.000 | 0.25 | 330.00 | 0.20 | 264.00 | |

| 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 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 | | | | 8.00 | | 1.50 | | |
| Stru Reinf Plan Quantity(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= | 3128.50 | SUM QF UNLEADED= | 1177.30 |
|---|---|---|---|

| DIESEL PRICE ADJUSTMENT($) | $10,365.19 |
|---|---|
| UNLEADED PRICE ADJUSTMENT($) | $3,428.06 |

# 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 | 453 | ENTER APM | 1019.25 |
|---|---|---|---|

| 125.00% | INCREASE ADJUSTMENT |
|---|---|

| L.I.N. | TYPE | TACK (GALLONS) | TACK (TONS) | REMARKS |
|---|---|---|---|---|
| 413-1000 | PG 58-22 | 525 | 2.2549 | |

TMT = 2.2549

| PRICE ADJUSTMENT($) | $1,225.78 |
|---|---|

## 400 / 402 ASPHALT CEMENT PRICE ADJUSTMENT 125% MAX

| ENTER APL | 453 | ENTER APM | 1019.25 |
|---|---|---|---|

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 |
|---|---|---|---|---|---|
| 402-1812 | | 10 | 5.00 | 0.50 | Leveling |
| 402-3121 | 25 mm SP | 160 | 5.00 | 8.00 | |
| 402-3130 | 12.5 mm SP | 190 | 5.00 | 9.50 | |
| 402-3190 | 19 mm SP | 470 | 5.00 | 23.50 | |
| | | | 5.00 | | |
| | | | 5.00 | | |
| | | | 5.00 | | |
| | | | 5.00 | | |
| | | | 5.00 | | |
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| | | | 5.00 | | |
| | | | 5.00 | | |
| | | | 5.00 | | |
| | | | 5.00 | | |
| | | | 5.00 | | |
| | | | 5.00 | | |
| | | | TMT = | 41.50 | |

| PRICE ADJUSTMENT($) | $22,559.40 |
|---|---|

# 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 453

ENTER APM 1019.25

| 125.00% | INCREASE ADJUSTMENT |
|---|---|

**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 | 525 |

TMT = 2.2549

REMARKS:

| MONTHLY PRICE ADJUSTMENT($) | $1,225.78 |
|---|---|

## ADJUSTMENT SUMMARY

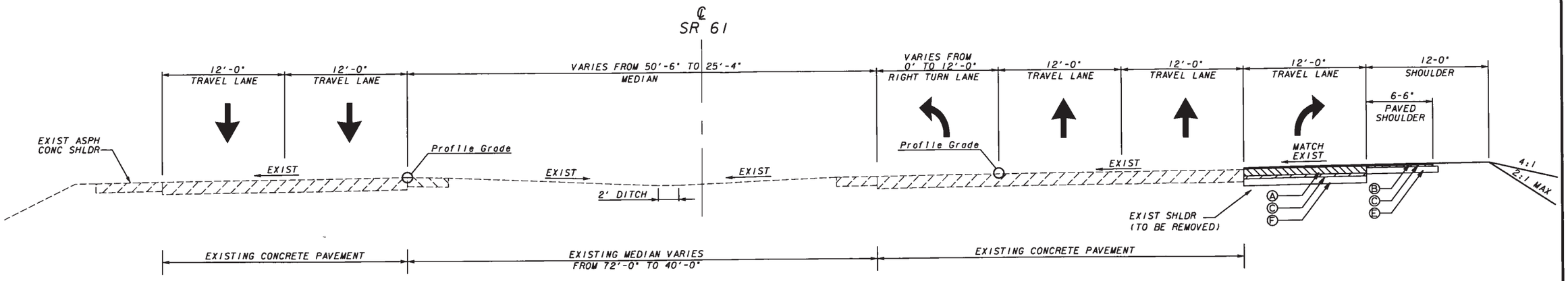
FUEL PRICE ADJUSTMENT *(ENGLISH 125% MAX)*

| | |
|---|---|
| DIESEL PRICE ADJUSTMENT($) | $10,365.19 |
| UNLEADED PRICE ADJUSTMENT($) | $3,428.06 |
| ASPHALT CEMENT PRICE ADJUSTMENT (BITUMINOUS TACK COAT 125% MAX) | $1,225.78 |
| 400 / 402 ASPHALT CEMENT PRICE ADJUSTMENT 125% MAX | $22,559.40 |
| ASPHALT CEMENT PRICE ADJUSTMENT FOR BITUMINOUS TACK COAT(Surface Treatment 125% MAX) | $1,225.78 |

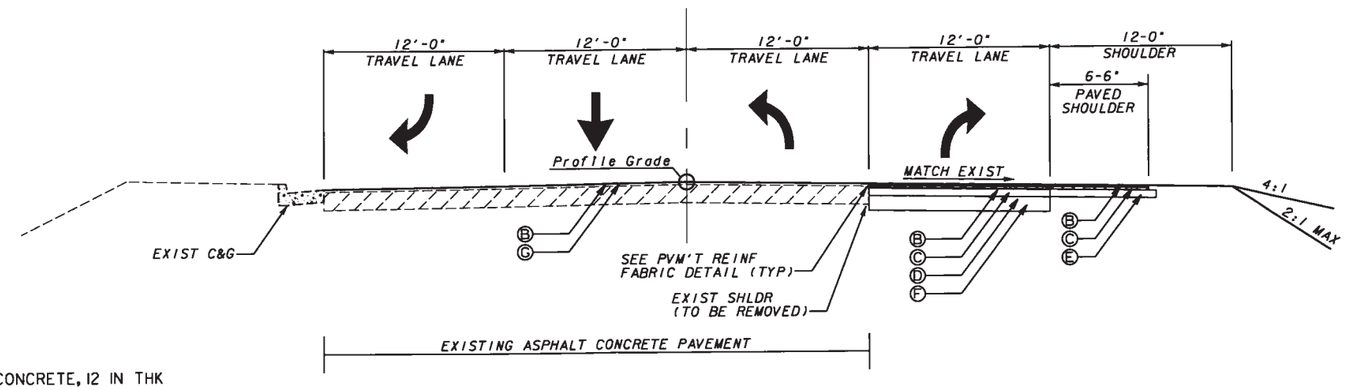
REMARKS:

| TOTAL ADJUSTMENTS | $38,804.21 |
|---|---|

DWM 10/08




## TYPICAL SECTION NO. 1
STA. 26+92 TO STA. 33+65




## TYPICAL SECTION NO. 2
STA. 11+00 TO STA. 16+40

**REQUIRED PAVEMENT**

- Ⓐ PLAIN PC CONCRETE PVMT, CL3 CONCRETE, 12 IN THK
- Ⓑ RECYCLED ASPH CONCRETE 12.5mm SUPERPAVE, GP 2 ONLY, INCL BITUM
- Ⓒ RECYCLED ASPH CONCRETE 19mm SUPERPAVE, GP 1 OR 2, INCL BITUM
- Ⓓ RECYCLED ASPH CONCRETE 25mm SUPERPAVE, GP 1 OR 2, INCL BITUM
- Ⓔ GR AGGR BASE CRS, 6 IN INCL MATL
- Ⓕ GR AGGR BASE CRS, 12 IN INCL MATL
- Ⓖ MILL ASPH CONC PVMT, 1½ IN DEPTH

Hatch Mott MacDonald
2550 Heritage Ct. SE, Suite 250 Atlanta, GA 30339

NTS

REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
TRAFFIC OPERATIONS

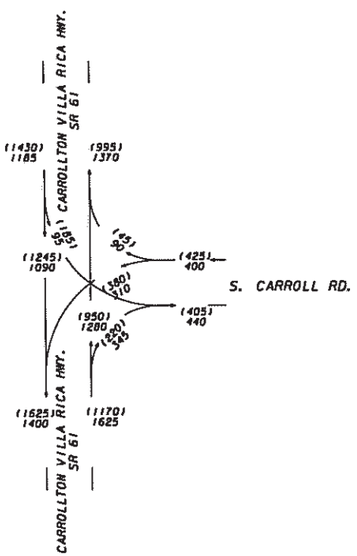
**TYPICAL SECTIONS**

SR 61
SAFETY IMPROVEMENTS

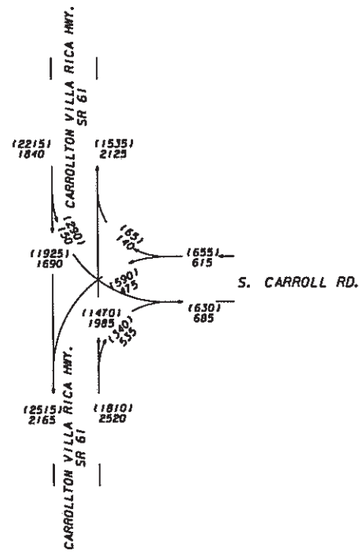
DRAWING No. 5-01

| DATETIME$$$ | TIME$$$ | $$DGN$ | COUNTY | PROJECT NUMBER | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|
| $USER$ | $$PENTABLE$$ | | CARROLL | CCSFT-0008-00(459) | | |

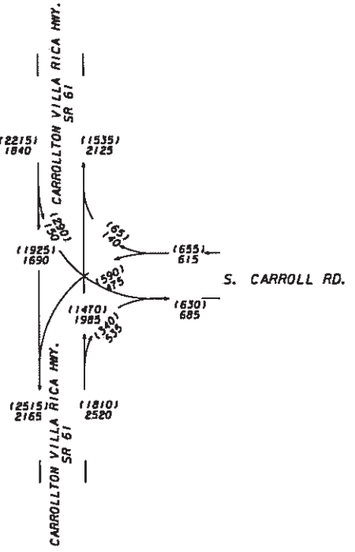
## 2010 AM AND PM PK HR TRAFFIC VOLUMES




## 2032 AM AND PM PK HR NO BUILD TRAFFIC VOLUMES




## 2032 AM AND PM PK HR BUILD TRAFFIC VOLUMES




Hatch Mott MacDonald
2550 Heritage Ct. SE, Suite 250 Atlanta, GA 30339

N. T. S

REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
TRAFFIC OPERATIONS

**TRAFFIC DIAGRAM**

SR 61
SAFETY IMPROVEMENTS

DRAWING No. 10-01

# HCM Signalized Intersection Capacity Analysis
## 1: S. Carroll Road & SR 61

9/16/2010

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 310 | 90 | 1280 | 345 | 95 | 1090 |
| Ideal Flow (vphpl) | 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 | 0.95 | | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 0.97 | | 1.00 | 1.00 |
| Flt Protected | 0.95 | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | 1770 | 1583 | 3426 | | 1770 | 3539 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | | 0.06 | 1.00 |
| Satd. Flow (perm) | 1770 | 1583 | 3426 | | 104 | 3539 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 337 | 98 | 1391 | 375 | 103 | 1185 |
| RTOR Reduction (vph) | 0 | 28 | 18 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 337 | 70 | 1748 | 0 | 103 | 1185 |
| Turn Type | | Perm | | | pm+pt | |
| Protected Phases | 8 | | 2 | | 1 | 6 |
| Permitted Phases | | 8 | | | 6 | |
| Actuated Green, G (s) | 25.8 | 25.8 | 67.4 | | 78.2 | 78.2 |
| Effective Green, g (s) | 25.8 | 25.8 | 67.4 | | 78.2 | 78.2 |
| Actuated g/C Ratio | 0.23 | 0.23 | 0.60 | | 0.70 | 0.70 |
| 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) | 408 | 365 | 2062 | | 174 | 2471 |
| v/s Ratio Prot | c0.19 | | c0.51 | | c0.04 | 0.33 |
| v/s Ratio Perm | | 0.04 | | | 0.38 | |
| v/c Ratio | 0.83 | 0.19 | 0.85 | | 0.59 | 0.48 |
| Uniform Delay, d1 | 41.0 | 34.7 | 18.1 | | 20.5 | 7.7 |
| Progression Factor | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 12.8 | 0.3 | 4.6 | | 5.3 | 0.7 |
| Delay (s) | 53.8 | 34.9 | 22.7 | | 25.8 | 8.3 |
| Level of Service | D | C | C | | C | A |
| Approach Delay (s) | 49.5 | | 22.7 | | | 9.7 |
| Approach LOS | D | | C | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 21.2 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.83 | | |
| Actuated Cycle Length (s) | 112.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 78.8% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 380 | 45 | 950 | 220 | 185 | 1245 |
| Ideal Flow (vphpl) | 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 | 0.95 | | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 0.97 | | 1.00 | 1.00 |
| Flt Protected | 0.95 | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | 1770 | 1583 | 3439 | | 1770 | 3539 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | | 0.10 | 1.00 |
| Satd. Flow (perm) | 1770 | 1583 | 3439 | | 193 | 3539 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 413 | 49 | 1033 | 239 | 201 | 1353 |
| RTOR Reduction (vph) | 0 | 12 | 15 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 413 | 37 | 1257 | 0 | 201 | 1353 |
| Turn Type | | Perm | | | pm+pt | |
| Protected Phases | 8 | | 2 | | 1 | 6 |
| Permitted Phases | | 8 | | | 6 | |
| Actuated Green, G (s) | 30.2 | 30.2 | 57.2 | | 73.3 | 73.3 |
| Effective Green, g (s) | 30.2 | 30.2 | 57.2 | | 73.3 | 73.3 |
| Actuated g/C Ratio | 0.27 | 0.27 | 0.51 | | 0.66 | 0.66 |
| 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) | 479 | 429 | 1764 | | 298 | 2327 |
| v/s Ratio Prot | c0.23 | | c0.37 | | c0.07 | 0.38 |
| v/s Ratio Perm | | 0.02 | | | 0.37 | |
| v/c Ratio | 0.86 | 0.09 | 0.71 | | 0.67 | 0.58 |
| Uniform Delay, d1 | 38.7 | 30.4 | 20.8 | | 17.5 | 10.6 |
| Progression Factor | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 14.7 | 0.1 | 2.5 | | 5.9 | 1.1 |
| Delay (s) | 53.4 | 30.4 | 23.3 | | 23.4 | 11.7 |
| Level of Service | D | C | C | | C | B |
| Approach Delay (s) | 51.0 | | 23.3 | | | 13.2 |
| Approach LOS | D | | C | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 22.4 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.75 | | |
| Actuated Cycle Length (s) | 111.5 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 74.6% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

# HCM Signalized Intersection Capacity Analysis
## 1: S. Carroll Road & SR 61

9/16/2010

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 320 | 95 | 1335 | 360 | 95 | 1135 |
| Ideal Flow (vphpl) | 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 | 0.95 | | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 0.97 | | 1.00 | 1.00 |
| Flt Protected | 0.95 | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | 1719 | 1538 | 3208 | | 1641 | 3438 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | | 0.06 | 1.00 |
| Satd. Flow (perm) | 1719 | 1538 | 3208 | | 98 | 3438 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 348 | 103 | 1451 | 391 | 103 | 1234 |
| RTOR Reduction (vph) | 0 | 29 | 18 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 348 | 74 | 1824 | 0 | 103 | 1234 |
| Heavy Vehicles (%) | 5% | 5% | 10% | 5% | 10% | 5% |
| Turn Type | | Perm | | | pm+pt | |
| Protected Phases | 8 | | 2 | | 1 | 6 |
| Permitted Phases | | 8 | | | 6 | |
| Actuated Green, G (s) | 27.0 | 27.0 | 66.3 | | 77.2 | 77.2 |
| Effective Green, g (s) | 27.0 | 27.0 | 66.3 | | 77.2 | 77.2 |
| Actuated g/C Ratio | 0.24 | 0.24 | 0.59 | | 0.69 | 0.69 |
| 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) | 414 | 370 | 1896 | | 162 | 2366 |
| v/s Ratio Prot | c0.20 | | c0.57 | | c0.04 | 0.36 |
| v/s Ratio Perm | | 0.05 | | | 0.40 | |
| v/c Ratio | 0.84 | 0.20 | 0.96 | | 0.64 | 0.52 |
| Uniform Delay, d1 | 40.6 | 34.0 | 21.8 | | 23.9 | 8.5 |
| Progression Factor | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 14.2 | 0.3 | 13.4 | | 7.9 | 0.8 |
| Delay (s) | 54.8 | 34.3 | 35.2 | | 31.8 | 9.3 |
| Level of Service | D | C | D | | C | A |
| Approach Delay (s) | 50.1 | | 35.2 | | | 11.1 |
| Approach LOS | D | | D | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 28.2 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.91 | | |
| Actuated Cycle Length (s) | 112.2 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 81.4% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

## HCM Signalized Intersection Capacity Analysis
## 1: S. Carroll Road & SR 61

9/16/2010

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 395 | 45 | 985 | 230 | 195 | 1295 |
| Ideal Flow (vphpl) | 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 | 0.95 | | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 0.97 | | 1.00 | 1.00 |
| Flt Protected | 0.95 | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | 1770 | 1583 | 3439 | | 1770 | 3539 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | | 0.09 | 1.00 |
| Satd. Flow (perm) | 1770 | 1583 | 3439 | | 160 | 3539 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 429 | 49 | 1071 | 250 | 212 | 1408 |
| RTOR Reduction (vph) | 0 | 11 | 15 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 429 | 38 | 1306 | 0 | 212 | 1408 |
| Turn Type | | Perm | | | pm+pt | |
| Protected Phases | 8 | | 2 | | 1 | 6 |
| Permitted Phases | | 8 | | | 6 | |
| Actuated Green, G (s) | 31.2 | 31.2 | 56.3 | | 73.2 | 73.2 |
| Effective Green, g (s) | 31.2 | 31.2 | 56.3 | | 73.2 | 73.2 |
| Actuated g/C Ratio | 0.28 | 0.28 | 0.50 | | 0.65 | 0.65 |
| 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) | 491 | 439 | 1723 | | 289 | 2305 |
| v/s Ratio Prot | c0.24 | | 0.38 | | c0.08 | 0.40 |
| v/s Ratio Perm | | 0.02 | | | c0.39 | |
| v/c Ratio | 0.87 | 0.09 | 0.76 | | 0.73 | 0.61 |
| Uniform Delay, d1 | 38.7 | 30.1 | 22.6 | | 24.8 | 11.4 |
| Progression Factor | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 15.7 | 0.1 | 3.2 | | 9.3 | 1.2 |
| Delay (s) | 54.5 | 30.1 | 25.7 | | 34.1 | 12.6 |
| Level of Service | D | C | C | | C | B |
| Approach Delay (s) | 52.0 | | 25.7 | | | 15.4 |
| Approach LOS | D | | C | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 24.5 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.77 | | |
| Actuated Cycle Length (s) | 112.4 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 77.3% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

# HCM Signalized Intersection Capacity Analysis
## 1: S. Carroll Road & SR 61

9/16/2010

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 320 | 95 | 1335 | 360 | 100 | 1135 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 0.95 | 1.00 | 1.00 | 0.95 |
| Frt | 0.97 | | 1.00 | 0.85 | 1.00 | 1.00 |
| Flt Protected | 0.96 | | 1.00 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3360 | | 3539 | 1583 | 1770 | 3539 |
| Flt Permitted | 0.96 | | 1.00 | 1.00 | 0.12 | 1.00 |
| Satd. Flow (perm) | 3360 | | 3539 | 1583 | 216 | 3539 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 348 | 103 | 1451 | 391 | 109 | 1234 |
| RTOR Reduction (vph) | 26 | 0 | 0 | 134 | 0 | 0 |
| Lane Group Flow (vph) | 425 | 0 | 1451 | 257 | 109 | 1234 |
| Turn Type | | | | Perm | pm+pt | |
| Protected Phases | 8 | | 2 | | 1 | 6 |
| Permitted Phases | | | | 2 | 6 | |
| Actuated Green, G (s) | 19.4 | | 74.7 | 74.7 | 86.1 | 86.1 |
| Effective Green, g (s) | 19.4 | | 74.7 | 74.7 | 86.1 | 86.1 |
| Actuated g/C Ratio | 0.17 | | 0.66 | 0.66 | 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) | 574 | | 2329 | 1042 | 265 | 2685 |
| v/s Ratio Prot | c0.13 | | c0.41 | | 0.03 | c0.35 |
| v/s Ratio Perm | | | | 0.16 | 0.28 | |
| v/c Ratio | 0.74 | | 0.62 | 0.25 | 0.41 | 0.46 |
| Uniform Delay, d1 | 44.7 | | 11.2 | 7.9 | 8.8 | 5.1 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 5.1 | | 1.3 | 0.6 | 1.0 | 0.6 |
| Delay (s) | 49.8 | | 12.5 | 8.5 | 9.9 | 5.6 |
| Level of Service | D | | B | A | A | A |
| Approach Delay (s) | 49.8 | | 11.7 | | | 6.0 |
| Approach LOS | D | | B | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 14.3 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.64 | | |
| Actuated Cycle Length (s) | 113.5 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 64.6% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 395 | 45 | 985 | 230 | 195 | 1295 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 0.95 | 1.00 | 1.00 | 0.95 |
| Frt | 0.98 | | 1.00 | 0.85 | 1.00 | 1.00 |
| Flt Protected | 0.96 | | 1.00 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3405 | | 3539 | 1583 | 1770 | 3539 |
| Flt Permitted | 0.96 | | 1.00 | 1.00 | 0.20 | 1.00 |
| Satd. Flow (perm) | 3405 | | 3539 | 1583 | 366 | 3539 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 429 | 49 | 1071 | 250 | 212 | 1408 |
| RTOR Reduction (vph) | 8 | 0 | 0 | 95 | 0 | 0 |
| Lane Group Flow (vph) | 470 | 0 | 1071 | 155 | 212 | 1408 |
| Turn Type | | | | Perm | pm+pt | |
| Protected Phases | 8 | | 2 | | 1 | 6 |
| Permitted Phases | | | | 2 | 6 | |
| Actuated Green, G (s) | 20.6 | | 69.2 | 69.2 | 83.1 | 83.1 |
| Effective Green, g (s) | 20.6 | | 69.2 | 69.2 | 83.1 | 83.1 |
| Actuated g/C Ratio | 0.18 | | 0.62 | 0.62 | 0.74 | 0.74 |
| 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) | 628 | | 2192 | 981 | 397 | 2633 |
| v/s Ratio Prot | c0.14 | | 0.30 | | 0.05 | c0.40 |
| v/s Ratio Perm | | | | 0.10 | 0.35 | |
| v/c Ratio | 0.75 | | 0.49 | 0.16 | 0.53 | 0.53 |
| Uniform Delay, d1 | 43.1 | | 11.6 | 9.0 | 7.1 | 6.1 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 4.9 | | 0.8 | 0.3 | 1.4 | 0.8 |
| Delay (s) | 48.0 | | 12.4 | 9.3 | 8.5 | 6.9 |
| Level of Service | D | | B | A | A | A |
| Approach Delay (s) | 48.0 | | 11.8 | | | 7.1 |
| Approach LOS | D | | B | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 14.6 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.58 | | |
| Actuated Cycle Length (s) | 111.7 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 60.7% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

# HCM Signalized Intersection Capacity Analysis
## 1: S. Carroll Road & SR 61

9/16/2010

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 475 | 140 | 1985 | 535 | 150 | 1690 |
| Ideal Flow (vphpl) | 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 | 0.95 | | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 0.97 | | 1.00 | 1.00 |
| Flt Protected | 0.95 | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | 1719 | 1538 | 3208 | | 1641 | 3438 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | | 0.05 | 1.00 |
| Satd. Flow (perm) | 1719 | 1538 | 3208 | | 87 | 3438 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 516 | 152 | 2158 | 582 | 163 | 1837 |
| RTOR Reduction (vph) | 0 | 27 | 20 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 516 | 125 | 2720 | 0 | 163 | 1837 |
| Heavy Vehicles (%) | 5% | 5% | 10% | 5% | 10% | 5% |
| Turn Type | | Perm | | | pm+pt | |
| Protected Phases | 8 | | 2 | | 1 | 6 |
| Permitted Phases | | 8 | | | 6 | |
| Actuated Green, G (s) | 29.0 | 29.0 | 75.0 | | 83.0 | 83.0 |
| Effective Green, g (s) | 29.0 | 29.0 | 75.0 | | 83.0 | 83.0 |
| Actuated g/C Ratio | 0.24 | 0.24 | 0.62 | | 0.69 | 0.69 |
| 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) | 415 | 372 | 2005 | | 112 | 2378 |
| v/s Ratio Prot | c0.30 | | 0.85 | | c0.05 | 0.53 |
| v/s Ratio Perm | | 0.08 | | | c0.95 | |
| v/c Ratio | 1.24 | 0.34 | 1.36 | | 1.46 | 0.77 |
| Uniform Delay, d1 | 45.5 | 37.6 | 22.5 | | 36.9 | 12.2 |
| Progression Factor | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 128.4 | 0.5 | 163.8 | | 247.4 | 2.5 |
| Delay (s) | 173.9 | 38.1 | 186.3 | | 284.4 | 14.8 |
| Level of Service | F | D | F | | F | B |
| Approach Delay (s) | 143.0 | | 186.3 | | | 36.7 |
| Approach LOS | F | | F | | | D |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 125.6 | HCM Level of Service | F |
| HCM Volume to Capacity ratio | 1.38 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 116.6% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

# HCM Signalized Intersection Capacity Analysis
## 1: S. Carroll Road & SR 61

9/16/2010

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 590 | 65 | 1470 | 340 | 290 | 1925 |
| Ideal Flow (vphpl) | 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 | 0.95 | | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 0.97 | | 1.00 | 1.00 |
| Flt Protected | 0.95 | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | 1770 | 1583 | 3439 | | 1770 | 3539 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | | 0.06 | 1.00 |
| Satd. Flow (perm) | 1770 | 1583 | 3439 | | 118 | 3539 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 641 | 71 | 1598 | 370 | 315 | 2092 |
| RTOR Reduction (vph) | 0 | 10 | 17 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 641 | 61 | 1951 | 0 | 315 | 2092 |
| Turn Type | | Perm | | | pm+pt | |
| Protected Phases | 8 | | 2 | | 1 | 6 |
| Permitted Phases | | 8 | | | 6 | |
| Actuated Green, G (s) | 36.0 | 36.0 | 59.0 | | 76.0 | 76.0 |
| Effective Green, g (s) | 36.0 | 36.0 | 59.0 | | 76.0 | 76.0 |
| Actuated g/C Ratio | 0.30 | 0.30 | 0.49 | | 0.63 | 0.63 |
| 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) | 531 | 475 | 1691 | | 254 | 2241 |
| v/s Ratio Prot | c0.36 | | 0.57 | | c0.13 | 0.59 |
| v/s Ratio Perm | | 0.04 | | | c0.65 | |
| v/c Ratio | 1.21 | 0.13 | 1.15 | | 1.24 | 0.93 |
| Uniform Delay, d1 | 42.0 | 30.6 | 30.5 | | 40.7 | 19.7 |
| Progression Factor | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 110.0 | 0.1 | 76.5 | | 136.9 | 8.7 |
| Delay (s) | 152.0 | 30.7 | 107.0 | | 177.6 | 28.5 |
| Level of Service | F | C | F | | F | C |
| Approach Delay (s) | 139.9 | | 107.0 | | | 48.0 |
| Approach LOS | F | | F | | | D |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 83.7 | HCM Level of Service | F |
| HCM Volume to Capacity ratio | 1.22 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 110.2% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

## HCM Signalized Intersection Capacity Analysis
## 1: S. Carroll Road & SR 61

9/16/2010

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 475 | 140 | 1985 | 535 | 150 | 1690 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 0.95 | 1.00 | 1.00 | 0.95 |
| Frt | 0.97 | | 1.00 | 0.85 | 1.00 | 1.00 |
| Flt Protected | 0.96 | | 1.00 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3361 | | 3539 | 1583 | 1770 | 3539 |
| Flt Permitted | 0.96 | | 1.00 | 1.00 | 0.05 | 1.00 |
| Satd. Flow (perm) | 3361 | | 3539 | 1583 | 101 | 3539 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 516 | 152 | 2158 | 582 | 163 | 1837 |
| RTOR Reduction (vph) | 24 | 0 | 0 | 220 | 0 | 0 |
| Lane Group Flow (vph) | 644 | 0 | 2158 | 362 | 163 | 1837 |
| Turn Type | | | | Perm | pm+pt | |
| Protected Phases | 8 | | 2 | | 1 | 6 |
| Permitted Phases | | | | 2 | 6 | |
| Actuated Green, G (s) | 26.3 | | 69.7 | 69.7 | 83.1 | 83.1 |
| Effective Green, g (s) | 26.3 | | 69.7 | 69.7 | 83.1 | 83.1 |
| Actuated g/C Ratio | 0.22 | | 0.59 | 0.59 | 0.71 | 0.71 |
| 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) | 753 | | 2101 | 940 | 205 | 2505 |
| v/s Ratio Prot | c0.19 | | c0.61 | | 0.06 | c0.52 |
| v/s Ratio Perm | | | | 0.23 | 0.50 | |
| v/c Ratio | 0.86 | | 1.03 | 0.38 | 0.80 | 0.73 |
| Uniform Delay, d1 | 43.7 | | 23.9 | 12.6 | 37.2 | 10.4 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 9.4 | | 26.9 | 1.2 | 18.8 | 1.9 |
| Delay (s) | 53.1 | | 50.8 | 13.8 | 56.1 | 12.4 |
| Level of Service | D | | D | B | E | B |
| Approach Delay (s) | 53.1 | | 42.9 | | | 15.9 |
| Approach LOS | D | | D | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 34.2 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.97 | | |
| Actuated Cycle Length (s) | 117.4 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 91.1% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 590 | 65 | 1470 | 340 | 290 | 1925 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 0.95 | 1.00 | 1.00 | 0.95 |
| Frt | 0.99 | | 1.00 | 0.85 | 1.00 | 1.00 |
| Flt Protected | 0.96 | | 1.00 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3406 | | 3539 | 1583 | 1770 | 3539 |
| Flt Permitted | 0.96 | | 1.00 | 1.00 | 0.06 | 1.00 |
| Satd. Flow (perm) | 3406 | | 3539 | 1583 | 121 | 3539 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 641 | 71 | 1598 | 370 | 315 | 2092 |
| RTOR Reduction (vph) | 8 | 0 | 0 | 178 | 0 | 0 |
| Lane Group Flow (vph) | 704 | 0 | 1598 | 192 | 315 | 2092 |
| Turn Type | | | | Perm | pm+pt | |
| Protected Phases | 8 | | 2 | | 1 | 6 |
| Permitted Phases | | | | 2 | 6 | |
| Actuated Green, G (s) | 28.0 | | 57.7 | 57.7 | 82.1 | 82.1 |
| Effective Green, g (s) | 28.0 | | 57.7 | 57.7 | 82.1 | 82.1 |
| Actuated g/C Ratio | 0.24 | | 0.49 | 0.49 | 0.70 | 0.70 |
| 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) | 808 | | 1729 | 773 | 369 | 2460 |
| v/s Ratio Prot | c0.21 | | c0.45 | | 0.15 | c0.59 |
| v/s Ratio Perm | | | | 0.12 | 0.45 | |
| v/c Ratio | 0.87 | | 0.92 | 0.25 | 0.85 | 0.85 |
| Uniform Delay, d1 | 43.3 | | 28.2 | 17.6 | 37.4 | 13.4 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 10.2 | | 9.9 | 0.8 | 17.2 | 3.9 |
| Delay (s) | 53.5 | | 38.0 | 18.3 | 54.5 | 17.4 |
| Level of Service | D | | D | B | D | B |
| Approach Delay (s) | 53.5 | | 34.3 | | | 22.2 |
| Approach LOS | D | | C | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 31.3 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.91 | | |
| Actuated Cycle Length (s) | 118.1 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 85.6% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| 7/28/2010 10:07:29 AM<br>USER:sto49785 | _PENTBLS_ | n:\TRA\258815 GDOT Safety TO 5\Drawings\Civil\conceptlayout.dgn | COUNTY | PROJECT NUMBER | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|
| | | | CARROLL | CCSFT-0008-00(459) | | |

BEGIN CONSTRUCTION
STA. 26+92.00
SR 61

SR 61
CONST ℄

30.00

EDGE OF ROADWAY
PAVEMENT

EXIST R/W

EDGE OF PAVED
SHOULDER

STA. 33+65.53
SR 61
STA. 11+00.00
SOUTH CARROLL RD
< = 90°00'00"

PT 33+65.77

35.00

END CONSTRUCTION
STA. 35+30.00
SR 61

SR 61
CONST ℄

N 15°18'46" W

SR 61
CONST ℄

40.00

PC 41+14.57

N

R

EXIST R/W

238.93

N 74°41'14" E

PC 12+45.53

EDGE OF PAVED
SHOULDER

FIRST GEORGIA BANKING CO.

EDGE OF ROADWAY
PAVEMENT

WILSON
SIGN
REPAIR
INC

EXIST R/W

BEGIN W-BEAM GRDRL
STA. 13+50 LT
SOUTH CARROLL RD.
TYPE 12 ANCHOR

VILLA RICA MKTPL
OWNERS ASSOC INC

END CONSTRUCTION
STA. 14+30.00
SOUTH CARROLL ROAD

EXIST R/W

SOUTH
CARROLL
ROAD
CONST ℄

15.00

EXIST R/W

VILLA RICA MARKETPLACE LLC

MOORES FERRY CENTER LLC

MOORES FERRY CENTER LLC

EXIST R/W

GPLN

Hatch Mott MacDonald
2550 Heritage Ct. SE, Suite 250 Atlanta, GA 30339

SCALE IN FEET
0 50 100 200

| REVISION DATES | | |
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STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
TRAFFIC OPERATIONS
CONCEPT LAYOUT

SR 61
SAFETY IMPROVEMENTS

DRAWING No.

# PESFT-0008-00(459)
# PI #: 0008459
## Carroll County

**Date of Meeting:** 02/18/2010 @ 1:00 P.M.

**Location of the Meeting:**
**District 6 Area Office**
**Cartersville, GA**

## 1. Purpose of Meeting

- Initial Concept Team Meeting for PI No. 0008459

## 2. Attendance at Meeting

| *Name* | *Company* | *Phone* | *Email* |
|---|---|---|---|
| Charity Belford (CB) | GDOT | 404-635-8154 | cbelford@dot.ga.gov |
| Jeff Reese (JR) | City of Villa Rica | 770-459-7011 | jreese@villarica.org |
| Christopoher Sheahan (CS) | Hatch Mott MacDonald | 770-952-1022 | chris.sheahan@hatchmott.com |
| Eric Lacefield (EL) | City of Villa Rica | 678-785-1016 | elacefield@villarica.org |
| Jim Navis (JN) | Hatch Mott MacDonald | 770-200-1742 | jim.navis@hatchmott.com |
| Brandon Stephens (BS) | Atlanta Gas and Light | 404-584-3915 | bstephen@aglresources.com |
| Jennifer Deems (JD) | GDOT | 770-387-3616 | jdeems@dot.ga.gov |
| Ron Dailey (RD) | GDOT | 770-883-3324 | rdailey@dot.ga.gov |
| Steve Sanders (SS) | GDOT | 770-387-3634 | ssanders@dot.ga.gov |
| Mick Workman (MW) | GDOT | 770-387-3658 | mworkman@dot.ga.gov |
| Derrick Cameron (DC) | GDOT | 404-635-8153 | dcameron@dot.ga.gov |
| Lakeshia Osborn (LO) | GDOT | 404-635-8139 | losborn@dot.ga.gov |
| Jody Braswell (JB) | Greshan, Smith and Partners | 678-518-3655 | jody_braswell@gspnet.com |

## 3. Meeting Notes

- The initial concept team meeting for the above mentioned project was held on February 18, 2010 at GDOT District 6 Office in Cartersville.
- LO opened the meeting stating the purpose of the meeting. She started the introductions.

- After introductions, JB went over the conceptual intersection improvement layout of the project, and a page by page look at the concept report.
- DC brought up the issue of right of way needed for construction of the project, and JN responded that the project would be completed within the existing right of way limits.
- The issue of pavement type was brought up, and DC responded that we will match the pavement type with what is currently out there (SR 61 shall consist of concrete turn lanes with asphalt shoulders, and South Carroll Road shall consist of asphalt widening).
- EL asked if guardrail was necessary along S. Carroll Road. DC responded that it would be needed, because of the steep slopes.
- BS stated that there would be no real issue as far as utilities were concerned.
- DC anticipates a Let date of October 2011 due to the minimal utility involvement and lack of right of way required.
- The existing signal has a wireless connection to the surrounding signals. This wireless configuration shall be incorporated into the new design.

Action Items:

1. Update concept report to new GDOT format.
2.

C: Attendees
File 258815