

D.O.T. 66

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

**FILE** P. I. No. 0005409, Fulton County **OFFICE** Preconstruction  
HPP-0005-00(409)  
Crabapple Road at Chaffin Road Improvements **DATE** July 13, 2005

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

**TO** SEE DISTRIBUTION

**SUBJECT APPROVED PROJECT CONCEPT REPORT**

Attached for your files is the approval for subject project.

MBP/cj

Attachment

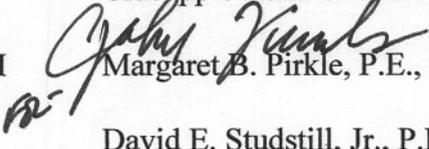
DISTRIBUTION:

Brian Summers  
Harvey Keepler  
Ken Thompson  
Jamie Simpson  
Michael Henry  
Keith Golden  
Joe Palladi (file copy)  
Paul Liles  
Babs Abubakari  
Bryant Poole  
BOARD MEMBER

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

**FILE** P.I. No. 0005409, Fulton County **OFFICE** Preconstruction  
 HPP-0005-00(409)  
 Crabapple Road at Chaffin Road **DATE** June 27, 2005

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

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

**SUBJECT** PROJECT CONCEPT REPORT

This project proposes improvements to the Crabapple Road and Chaffin Road intersection in Fulton County. Crabapple Road is a rural section with one, 10' lane in each direction. Chaffin Road has one, 11' lane in each direction with the addition of an 11' right turn lane onto Crabapple Road. Curb and gutter and sidewalk exist along the right turn lane on the south side of Chaffin Road. Residential growth in the area and limited number of turn lanes and length of turn lanes have contributed to the congestion and unsafe operation of this intersection. Existing 2004 traffic volumes are 18,480 VPD with a projected volume of 21,000 VPD in the design year 2026. The increase in traffic volumes without the proposed improvements has the potential to result in an increase in accidents and/or injuries at this intersection.

The proposed construction will provide a left turn lane along Crabapple Road onto Chaffin Road. Sidewalks (5') and curb and gutter will also be constructed on both sides of Crabapple and Chaffin Roads within the limits of the project. Traffic will be maintained on the existing facility with staged construction.

Environmental concerns include requiring a Categorical Exclusion be prepared; possible historic parcel in the southwest quadrant of the intersection; time saving procedures are not appropriate.

The estimated costs for this project are:

	<u>PROPOSED</u>	<u>APPROVED</u>	<u>FUNDING</u>	<u>PROG DATE</u>
Construction (includes E&C and inflation)	\$431,000	\$250,000	Q92	2007
Right-of-Way & Utilities*	Local	Local		

\*City of Roswell signed PMA on 5-24-04 for PE, right-of-way, and utilities; DOT will reimburse 80% of PE.

D.O.T. 66

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STATE OF GEORGIA**

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HPP-0005-00(409)  
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Margaret B. Pirkle, P.E., Assistant Director of Preconstruction

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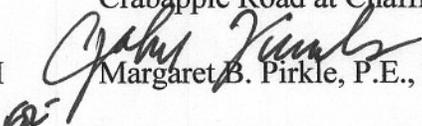
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STATE OF GEORGIA**

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**INTERDEPARTMENT CORRESPONDENCE**

**FILE** P.I. No. 0005409, Fulton County **OFFICE** Preconstruction  
HPP-0005-00(409)  
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**TO**  David E. Studstill, Jr., P.E., Chief Engineer

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Right-of-Way & Utilities*	Local	Local		

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David Studstill

Page 2

P.I. No. 0005409, Fulton

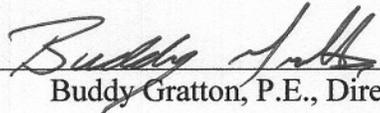
June 27, 2005

I recommend this project concept be approved.

MBP:JDQ/cj

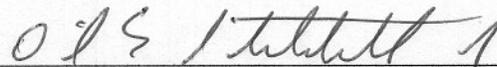
Attachment

CONCUR



Buddy Gratton, P.E., Director of Preconstruction

APPROVE



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

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENTAL CORRESPONDENCE**

**FILE:** HPP-0005-00(409) Fulton  
P.I. No. 0005409  
Crabapple Road at Chaffin Road

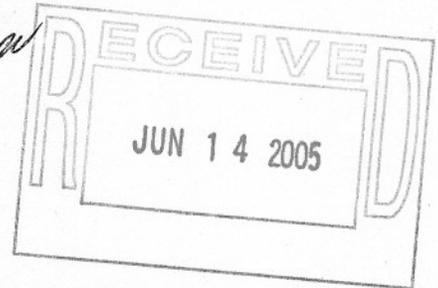
**OFFICE:** Engineering Services

**DATE:** June 14, 2005

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

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

**SUBJECT:** CONCEPT REPORT



We have reviewed the Concept Report submitted May 24, 2005 by the letter from Bryant Poole, dated May 23, 2005, and have no comments.

The costs for this project are:

Construction	<del>\$430,400</del>	400,400
Inflation	<del>\$21,520</del>	20,020
E & C	<del>\$45,192</del>	42,042
Reimbursable Utilities	<del>\$10,000 (LGPA)</del>	10,000 (LGPA)
Right of Way	<del>\$70,000 (LGPA)</del>	70,000 (LGPA)

REW

*John Quach*  
*6/28/05*

c: Bryant Poole, Attn.: Andrea Payne

## SCORING RESULTS AS PER MOG 2440-2

<b>Project Number:</b> HPP-0005-00(409))		<b>County:</b> Fulton		<b>PI No.:</b> 0005409	
<b>Report Date:</b> May 19, 2005		<b>Concept By:</b> DOT Office: District 7			
<input checked="" type="checkbox"/> Concept Stage		Consultant: The PBS&J			
<b>Project Type:</b> Choose One From Each Column		<input type="checkbox"/> Major <input checked="" type="checkbox"/> Minor	<input checked="" type="checkbox"/> Urban <input type="checkbox"/> Rural	<input type="checkbox"/> ATMS <input type="checkbox"/> Bridge Replacement <input type="checkbox"/> Building <input type="checkbox"/> Interchange Reconstruction <input checked="" type="checkbox"/> Intersection Improvement <input type="checkbox"/> Interstate <input type="checkbox"/> New Location <input type="checkbox"/> Widening & Reconstruction <input type="checkbox"/> Miscellaneous	
<b>FOCUS AREAS</b>		<b>SCORE</b>		<b>RESULTS</b>	
<b>Presentation</b>		100			
<b>Judgement</b>		100			
<b>Environmental</b>		100			
<b>Right of Way</b>		100			
<b>Utility</b>		100			
<b>Constructability</b>		100			
<b>Schedule</b>		100			

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

PROJECT CONCEPT REPORT

Project Number: HPP-0005-00(409)  
County: Fulton  
P.I. Number: 0005409

Federal Route Number: N/A  
State Route Number: N/A  
County Route Number: CR1441

Recommendation for approval:

DATE 5/19/05

Mike Ladd  
Project Manager

DATE 5/19/05

Ben Hood  
District Engineer

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 \_\_\_\_\_

\_\_\_\_\_  
State Transportation Planning Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Financial Management Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Environmental / Location Engineer

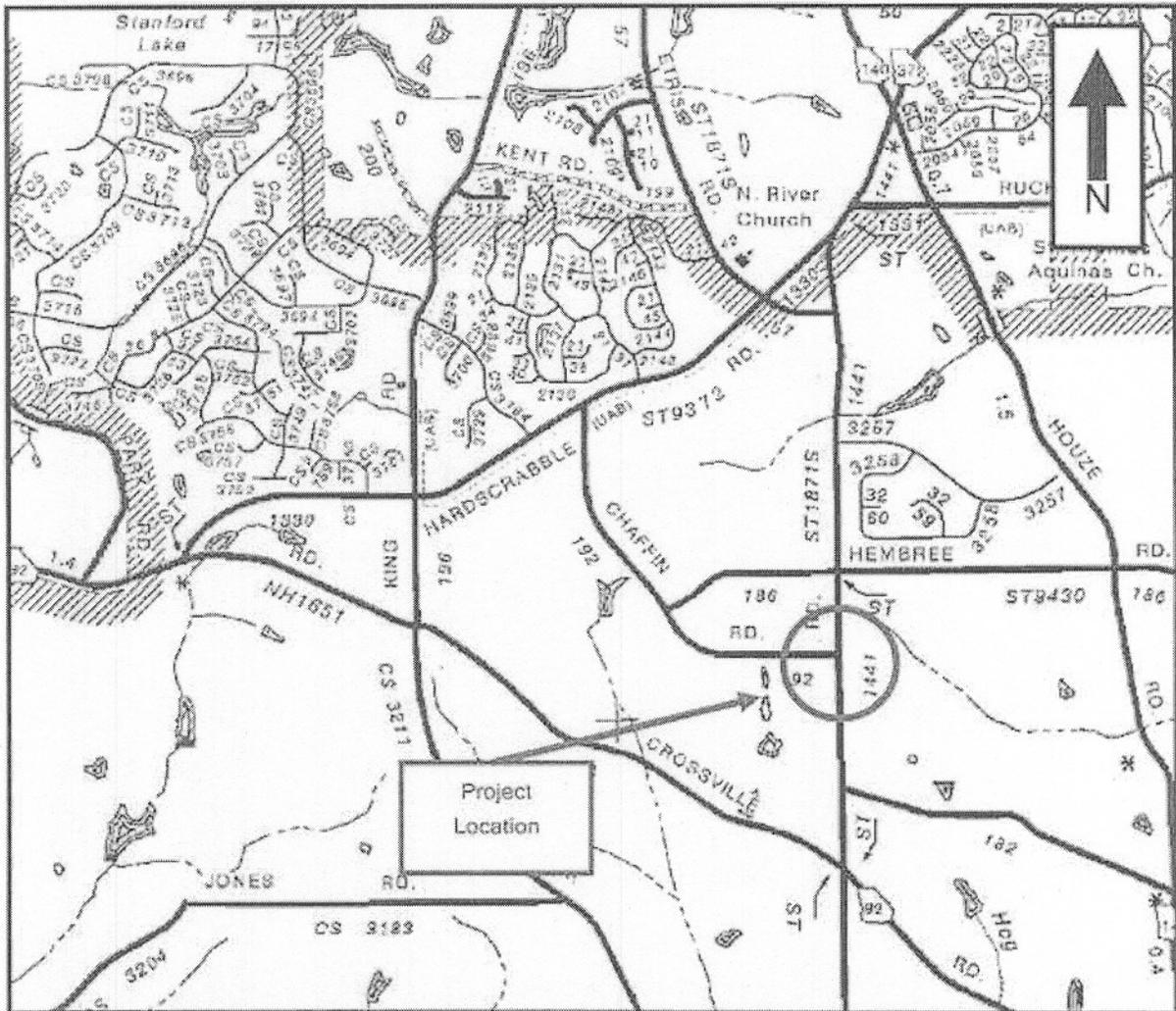
DATE \_\_\_\_\_

\_\_\_\_\_  
State Traffic Safety & Design Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
Project Review Engineer

### Project Location Map



**Crabapple Road @ Chaffin Road Intersection Improvements**  
Project No. HPP-0005-00(409), P.I. No. 0005409  
Roswell, Georgia

*Need and Purpose (approved by GDOT planning March 2005):*

The purpose of a HPP (High Priority Project) project is to permit States to construct a high priority project under section 117(e) of the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) without the aid of Federal funds, and then be reimbursed as the Federal funds become available in accordance with the distribution schedule in section 1601(a) of the Act. TEA-21 legislation contains more than 1,850 high priority projects, each with a specified amount of funding over the 6 years of TEA-21.

The City of Roswell Department of Transportation has identified the intersection of Crabapple Road and Chaffin Road as a high priority project to mitigate congestion by improving capacity and traffic flow at this intersection and to enhance safety through operational improvements at this intersection.

Ensuring more free flowing traffic and vehicle safety along both Crabapple Road and Chaffin Road is essential due to the increase in traffic volumes. Existing 2004 traffic volumes (18,480 ADT) and future 2026 traffic volumes (21,000 ADT) for the proposed intersection improvement at Crabapple Road @ Chaffin Road are presented in Table 2. The increase in traffic volumes without the proposed improvements has the potential to result in an increase in accidents and/or injuries at this intersection.

The intersection currently operates at a LOS C during the AM peak hour and LOS A during the PM peak hour. Proposed (2026) level of service is C during the AM peak hour and A during the PM peak hour. The existing (2004) delay times are 23.9s (AM) and 10.1s (PM). 2026 delay times are 30.5s (AM) and 9.2s (PM).

The Crabapple Road and Chaffin Road intersection is presently unsignalized. Crabapple Road is a rural section with one 10-foot lane in each direction. Chaffin Road has one 11-foot lane in each direction with the addition of an 11-foot right turn lane onto Crabapple Road. Curb and gutter and sidewalk exist along the right turn lane on the south side of Chaffin Road. The residential growth in the area and limited number of turn lanes and lengths of turn lanes have contributed to the congestion and unsafe operation of this intersection.

The proposed improvements shall consist of adding a left turn lane from northbound Crabapple Road to Chaffin Road ~~and signalization of the intersection.~~ <sup>left</sup> 5' wide sidewalks and curb and gutter will also be constructed on both sides of Crabapple and Chaffin Road within the limits of the project.

A four-year history of accidents at this intersection is shown in Table 1. This table provides the number of total accidents at this intersection, per type and per year between 2001 and 2004.

Table 1 Accident History for Crabapple Road @ Chaffin Road Intersection						
Year	Type of Accident					Total
	Angle	Sideswipe	Rear End	Head On	Other	
2001	0	0	1	0	0	1
2002	0	1	2	0	0	3
2003	0	0	0	0	0	0
2004	1	0	2	0	0	3
<b>Total</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>7</b>

The termini are logical for this project since the scope calls for intersection improvements only.

**Description of Project:** This project is located in northern Fulton County within the Roswell city limits. It consists of adding a left turn lane along Crabapple Road onto Chaffin Road. ~~Signalization will be done to ensure a safer and more efficient intersection.~~ Traffic will be maintained on the existing facility with staged construction.

*Del - 6/28/05*  
*SIGNAL IS NOT WARRANTED.*

**Project Length:** 0.25 miles

**Is the project located in a Non-attainment area?**  Yes  No

The project conforms to what is currently programmed in the 2005-2010 Transportation Improvement Program (TIP).

**PDP Classification:** Major  Minor

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

**Functional Classification:** Minor Arterial (Crabapple Road)  
Collector Street (Chaffin Road)

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

Traffic (AADT):

TABLE 2							
Existing and Future Traffic Volumes for Crabapple Road @ Chaffin Road							
Crabapple Road				Chaffin Road			
Existing (2004)		Future (2026)		Existing (2004)		Future (2026)	
NB	SB	NB	SB	EB	WB	EB	WB
9,604	8,876	10,500*	10,500*	1,094	848	2,665	2,070

\* There are no plans to widen Crabapple Road from a two-lane facility. These traffic numbers represent what can be delivered to the intersection on a two-lane facility.

Existing design features:

- Typical Section: Crabapple Road has a rural section with one 10-foot lane in each direction. Chaffin Road has one 11-foot lane in each direction with the addition of an 11-foot right turn lane from Crabapple Road that extends approximately 225' west. Curb and gutter and sidewalk exist along the south side of Chaffin Road from the intersection to approximately 225' west.
- Posted Speed: 40 mph (Crabapple Road) 35 mph (Chaffin Road)
- Maximum Grade: 4%
- Width of Right of Way: 60 ft
- Major Structures: N/A
- Major Interchanges or intersections along the project: Crabapple Road at Strickland Road
- Existing length of roadway segment: 0.25 miles

Proposed design features:

- Proposed typical section: Crabapple Road: one 13' lane in each direction and 2.5' curb and gutter with 5' wide sidewalks and 12' shoulders on both sides of the road. Chaffin Road: three 12' lanes with 2.5' curb and gutter and 5' sidewalk, and 12' shoulders on both sides of the road.
  - Add a left turn lane (175' storage) on Crabapple Road northbound for northbound traffic onto Chaffin Road.

A traffic signal will be added and curb and gutter and sidewalk will be added along the project limits.

- Proposed Design Speed Mainline: 40 mph
- Proposed Maximum grade Mainline: 2 %      Maximum grade allowable: 10 %
- Proposed Maximum grade Side Street: 4 %      Maximum grade allowable: 10 %
- Proposed Maximum grade driveway: 10 %
- Proposed Minimum Radius: N/A

• Right of Way:

- Width 75 ft
- Easements: Temporary (  ), Permanent (  ), Utility (  ), Other (  ).
- Number of parcels: 7      Number of displacements:
  - Business: 0
  - Residences: 0
  - Mobile homes: 0
  - Other: 0

• Structures:

- Bridges: N/A

• Major Interchanges or intersections along the project: Crabapple Road at Strickland Road

• Traffic control during construction: Traffic will be maintained on the existing roadway with staged construction.

• Design exceptions to controlling criteria anticipated:

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

- Design Variances: None
- Environmental Concerns: Possible historic parcel in southwest quadrant of intersection
- Level of Environmental Analysis:

Project Concept Report page 7  
Project Number: HPP-0005-00(409)  
P.I. Number: 0005409  
County: Fulton

State of Georgia  
Department of Transportation

- Are Time Saving Procedures Appropriate?: Yes ( ) No ( X )
- Categorical Exclusion (X),
- Environmental Assessment / Finding of No Significant Impact ( )
- Environmental Impact Statement ( )
- Utility involvements:
  - Water: Fulton County Department of Public Works
  - Telephone: Bell South
  - Power: Georgia Power Company
  - Gas: Atlanta Gas Light Company
  - Cable TV: Unknown at this time

**Project responsibilities:**

- Design: City of Roswell (PBS&J – consultant)
- Right-of-Way Acquisition: City of Roswell
- Relocation of Utilities: City of Roswell
- Letting of Contract: City of Roswell
- Supervision of Construction: City of Roswell
- Providing material pits: Contractor
- Providing detours: N/A

**Coordination:**

- Concept Meeting date:
- PAR meetings, dates and results: None
- FEMA, USCG, and/or TVA: None
- Public Involvement: A Public Information Open House Meeting will be held at a later date.
- Local government comments: PMA signed 5/24/04. Letter requesting revision to PMA sent to GDOT 12/17/04
- Other projects in area: HPP-0000-00(265), P.I. No. 0000265, Hardscrabble Road @ Chaffin Road
- Other coordination to date: Utilities and City of Roswell – Utility Questionnaires have been sent to all utility owners in Fulton County and the City. To date nine owners have responded with only Georgia Power indicating that they have facilities in the area. Discussion of the alternatives has taken place with the City of Roswell Department of Transportation.

**Scheduling – Responsible Parties' Estimate**

- Time to complete the environmental process: 9 Months.
- Time to complete preliminary construction plans: 3 Months.
- Time to complete right-of-way plans: 1 Month.

Project Concept Report page 8  
Project Number: HPP-0005-00(409)  
P.I. Number: 0005409  
County: Fulton

State of Georgia  
Department of Transportation

- Time to complete final construction plans: 3 Months.
- Time to purchase right-of-way: 6 Months.
- List other major items that will affect the project schedule: None

**Other Alternates Considered:**

**Alternate 1 – No-Build.** The No-Build option will not address the congestion and intersection efficiency issues.

**Alternate 2 – Construct roundabout.** This alternative was not selected due to the 2016 and 2026 a.m. and p.m. peak operations at LOS F. This is due to the heavy thru movements both northbound and southbound along Crabapple Road.

**Programmed Dates:**

- Right-of-Way: FY2006
- Construction: FY2007

**Comments:**

**Attachments:**

1. Cost Estimates:
  - a. Construction including E & C
  - b. Right-of-Way, and
  - c. Utilities
2. Typical Sections
3. Four Year Accident History Diagram
4. Intersection Analysis
5. Notice of Location and Design Approval
6. Conceptual Layout

Prepared by: PBS&J

Project Concept Report page 9  
Project Number: HPP-0005-00(409)  
P.I. Number: 0005409  
County: Fulton

State of Georgia  
Department of Transportation

## NOTICE OF LOCATION AND DESIGN APPROVAL

Project No. HPP-0005-00(409) - Fulton County  
P.I. Number 0005409

Notice is hereby given in compliance with Georgia code 22-2-109 that the Georgia Department of Transportation has approved the Location and Design of this project.

The date of location approval is July 13, 2005

The project consists of improvements of Crabapple Road @ Chaffin Road Intersection, located in Fulton County, 1<sup>st</sup> district, Land Lots 395, 396, 403 & 404.

The improvement project includes intersection improvements ~~including signalization~~ at the intersection of Crabapple Road and Chaffin Road. *JWP 6/28/05*

Drawings or maps or plats of the proposed project, as approved, are on file and are available for inspection at the Georgia Department of Transportation.

*Jeff Woodward*  
[jeff.woodward@dot.state.ga.us](mailto:jeff.woodward@dot.state.ga.us)  
862 Barnes Mill Road  
Marietta, Georgia 30062  
(770) 528-3238

Any interested party may obtain a copy of the drawings or maps or plats or portions thereof by paying a nominal fee and requesting in writing to:

*Mike Lobdell*  
*District Preconstruction Engineer*  
[mike.lobdell@dot.state.ga.us](mailto:mike.lobdell@dot.state.ga.us)  
300 Capitol Avenue  
Atlanta, Georgia 30334  
(404) 463-4947

Any written requests or communication in reference to this project or notice SHOULD include the Project and P.I. Numbers as noted at the top of this notice.

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

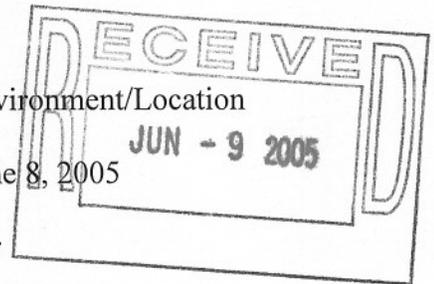
**INTERDEPARTMENT CORRESPONDENCE**

**FILE:** P.I. No. 0005409

**OFFICE:** Environment/Location

**DATE:** June 8, 2005

**FROM:**   
Harvey D. Keepler, State Environmental/Location Engineer



**TO:** Margaret B. Pirkle, Assistant Director of Preconstruction

**SUBJECT: PROJECT CONCEPT REPORT  
HPP-0005-00(409) / Fulton County  
Crabapple Road at Chaffin Road**

The above subject concept report has been reviewed. This Office has no comment at this time.

If you have any questions, please contact me at (404) 699-4401.

HDK/lc

Attachment

cc: Brian Summers  
Bryant Poole  
Keith Golden  
Joe Palladi  
Jamie Simpson

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

PROJECT CONCEPT REPORT

Project Number: HPP-0005-00(409)  
County: Fulton  
P.I. Number: 0005409

Federal Route Number: N/A  
State Route Number: N/A  
County Route Number: CR1441

Recommendation for approval:

DATE 5/19/05

Mike Lott  
Project Manager

DATE 5/19/05

Ben Hood  
District Engineer

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 \_\_\_\_\_

\_\_\_\_\_  
State Transportation Planning Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Financial Management Administrator

6.07.05  
DATE \_\_\_\_\_

Thomas D. King  
State Environmental / Location Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Traffic Safety & Design Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
Project Review Engineer

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

PROJECT CONCEPT REPORT

Project Number: HPP-0005-00(409)

County: Fulton

P.I. Number: 0005409

Federal Route Number: N/A

State Route Number: N/A

County Route Number: CR1441

Recommendation for approval:

DATE 5/19/05

Mike Latta  
Project Manager

DATE 5/19/05

Ray Hood  
District Engineer

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DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Financial Management Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Environmental / Location Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Traffic Safety & Design Engineer

6/14/05  
DATE

Brian L Summers *REN*  
Project Review Engineer

# Crabapple Road at Chaffin Road, Four Year Accident History

→ Year 2004 (3)

1 right-angle  
2 rear-end

Year 2003 (0)

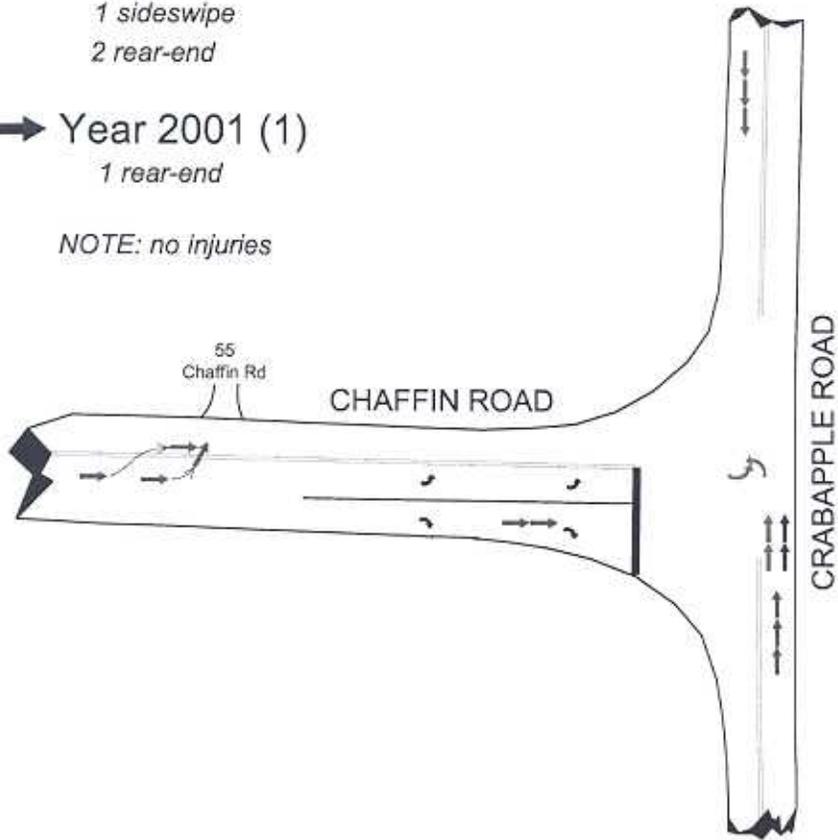
→ Year 2002 (3)

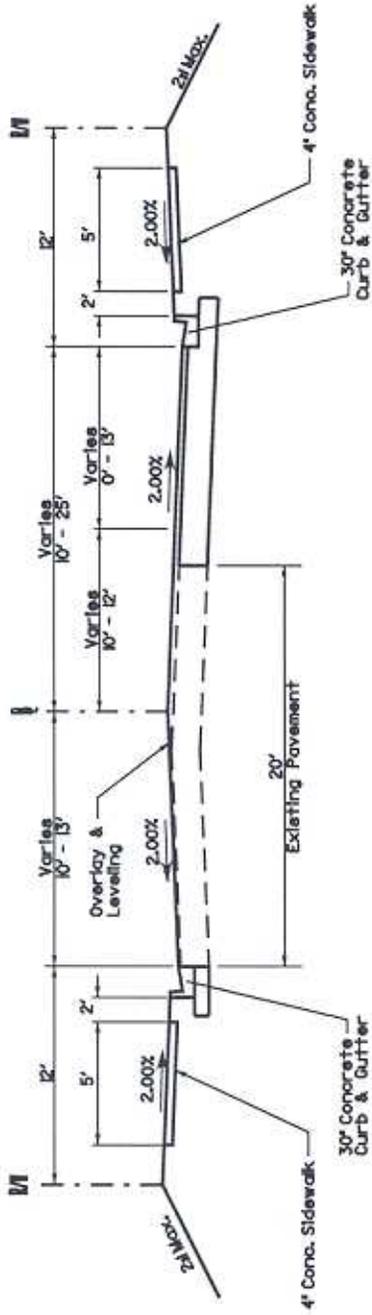
1 sideswipe  
2 rear-end

→ Year 2001 (1)

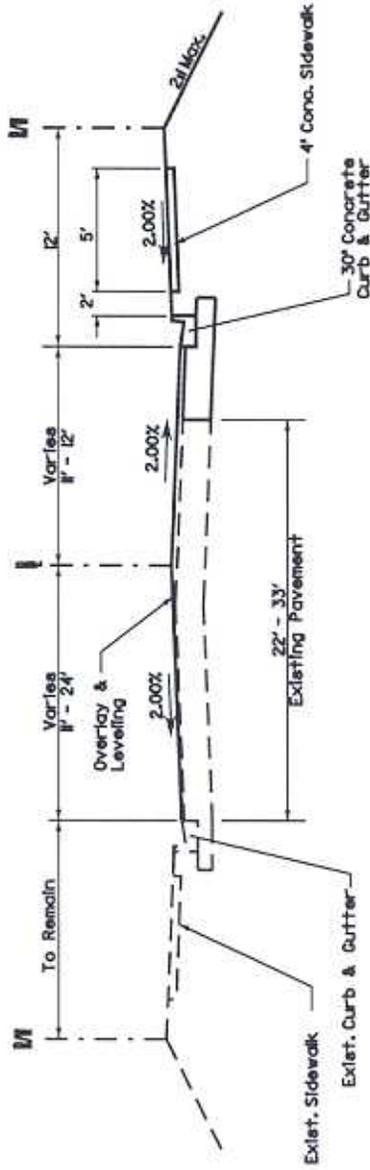
1 rear-end

NOTE: no injuries





TYPICAL SECTION NO. 1  
N.T.S.  
CRABAPPLE ROAD



TYPICAL SECTION NO. 2  
N.T.S.  
CHAFFIN ROAD

TYPICAL SECTIONS

Post, Buckley,  
Schuh & Jernigan, Inc.

Crabapple Road at Chaffin Road  
Intersection Improvements

Project No. HPP-005-00(409)  
P.I. No. 0005409



**Crabapple Rd / Chaffin Rd Intersection Analysis  
Existing Conditions Level of Service Analysis**

**2004 No-Build**

Unsignalized			AM Peak Hour				PM Peak Hour			
Roadway	Approach Direction	Turn Movement	Volume	CORSIM Volume	Control Delay	LOS	Volume	CORSIM Volume	Control Delay	LOS
Chaffin Rd	EB	LT	5	8	5.2	A	4	8	8.3	A
	EB	RT	190	186	26.8	D	63	59	20.9	C
		<i>Total</i>	<i>195</i>	<i>194</i>	<i>25.9</i>	<i>D</i>	<i>67</i>	<i>67</i>	<i>19.4</i>	<i>C</i>
Crabapple Rd	NB	LT	19	20	4.0	A	89	87	2.9	A
		<i>Total</i>	<i>19</i>	<i>20</i>	<i>4.0</i>	<i>A</i>	<i>89</i>	<i>87</i>	<i>2.9</i>	<i>A</i>
<b>Total Intersection</b>			<b>214</b>	<b>214</b>	<b>23.9</b>	<b>C</b>	<b>156</b>	<b>154</b>	<b>10.1</b>	<b>A</b>

**2016 No-Build**

Unsignalized			AM Peak Hour				PM Peak Hour			
Roadway	Approach Direction	Turn Movement	Volume	CORSIM Volume	Control Delay	LOS	Volume	CORSIM Volume	Control Delay	LOS
Chaffin Rd	EB	LT	7	10	365.5	F	6	11	35.5	E
	EB	RT	275	155	870.8	F	91	84	23.7	C
		<i>Total</i>	<i>282</i>	<i>165</i>	<i>840.2</i>	<i>F</i>	<i>97</i>	<i>95</i>	<i>25.1</i>	<i>C</i>
Crabapple Rd	NB	LT	27	26	4.7	A	129	128	6.2	A
		<i>Total</i>	<i>27</i>	<i>26</i>	<i>4.7</i>	<i>A</i>	<i>129</i>	<i>128</i>	<i>6.2</i>	<i>A</i>
<b>Total Intersection</b>			<b>309</b>	<b>191</b>	<b>726.4</b>	<b>F</b>	<b>226</b>	<b>223</b>	<b>14.2</b>	<b>B</b>

**2026 No-Build**

Unsignalized			AM Peak Hour				PM Peak Hour			
Roadway	Approach Direction	Turn Movement	Volume	CORSIM Volume	Control Delay	LOS	Volume	CORSIM Volume	Control Delay	LOS
Chaffin Rd	EB	LT	8	7	399.3	F	7	13	129.8	F
	EB	RT	333	115	1239.3	F	111	107	24.5	C
		<i>Total</i>	<i>341</i>	<i>122</i>	<i>1191.1</i>	<i>F</i>	<i>118</i>	<i>120</i>	<i>35.9</i>	<i>E</i>
Crabapple Rd	NB	LT	33	32	9.0	A	156	159	18.2	C
		<i>Total</i>	<i>33</i>	<i>32</i>	<i>9.0</i>	<i>A</i>	<i>156</i>	<i>159</i>	<i>18.2</i>	<i>C</i>
<b>Total Intersection</b>			<b>374</b>	<b>154</b>	<b>945.5</b>	<b>F</b>	<b>274</b>	<b>279</b>	<b>25.8</b>	<b>D</b>

**Crabapple Rd / Chaffin Rd Intersection Analysis  
Build Alternative Level of Service Analysis**

**2016 Build**

Signalized			AM Peak Hour				PM Peak Hour			
Roadway	Approach Direction	Turn Movement	Volume	CORSIM Volume	Control Delay	LOS	Volume	CORSIM Volume	Control Delay	LOS
Chaffin Rd	EB	LT	7	4	39.9	D	6	12	54.4	D
	EB	RT	275	275	41.4	D	91	85	21.1	C
		<i>Total</i>	<i>282</i>	<i>279</i>	<i>41.4</i>	<i>D</i>	<i>97</i>	<i>97</i>	<i>25.2</i>	<i>C</i>
Crabapple Rd	NB	LT	27	26	25.8	C	129	130	9.8	A
	NB	THRU	695	691	4.6	A	1157	1153	6.5	A
		<i>Total</i>	<i>722</i>	<i>717</i>	<i>5.4</i>	<i>A</i>	<i>1286</i>	<i>1283</i>	<i>6.8</i>	<i>A</i>
Crabapple Rd	SB	THRU	1201	1205	17.8	B	646	642	9.7	A
	SB	RT	6	12	17.3	B	4	6	7.9	A
		<i>Total</i>	<i>1207</i>	<i>1217</i>	<i>17.8</i>	<i>B</i>	<i>650</i>	<i>648</i>	<i>9.7</i>	<i>A</i>
<b>Total Intersection</b>			<b>2211</b>	<b>2213</b>	<b>16.7</b>	<b>B</b>	<b>2033</b>	<b>2028</b>	<b>8.6</b>	<b>A</b>

**2026 Build**

Signalized			AM Peak Hour				PM Peak Hour			
Roadway	Approach Direction	Turn Movement	Volume	CORSIM Volume	Control Delay	LOS	Volume	CORSIM Volume	Control Delay	LOS
Chaffin Rd	EB	LT	8	4	35.2	D	7	13	53.6	D
	EB	RT	333	335	52.3	D	111	105	20.6	C
		<i>Total</i>	<i>341</i>	<i>339</i>	<i>52.1</i>	<i>D</i>	<i>118</i>	<i>118</i>	<i>24.2</i>	<i>C</i>
Crabapple Rd	NB	LT	33	32	40.8	D	156	158	16.1	B
	NB	THRU	841	841	5.2	A	1400	1400	7.0	A
		<i>Total</i>	<i>874</i>	<i>873</i>	<i>6.5</i>	<i>A</i>	<i>1556</i>	<i>1558</i>	<i>7.9</i>	<i>A</i>
Crabapple Rd	SB	THRU	1446	1392	40.2	D	782	777	9.5	A
	SB	RT	7	16	39.7	D	5	7	20.2	C
		<i>Total</i>	<i>1453</i>	<i>1408</i>	<i>40.2</i>	<i>D</i>	<i>787</i>	<i>784</i>	<i>9.6</i>	<i>A</i>
<b>Total Intersection</b>			<b>2668</b>	<b>2620</b>	<b>30.5</b>	<b>C</b>	<b>2461</b>	<b>2460</b>	<b>9.2</b>	<b>A</b>

COST ESTIMATE HPP-0005-00(409), P.I. No 0005409  
 Fulton County  
 Crabapple Road @ Chaffin Road Intersection Improvements

ITEM NO.	ITEM	UNIT	QUANTITY	UNIT COST	TOTAL COST
<b>ROADWAY ITEMS</b>					
150-1000	TRAFFIC CONTROL PROJECT NO. HPP-0005-00(409)	LUMP	LUMP	\$30,000.00	\$30,000.00
201-1500	CLEARING & GRUBBING - HPP-0005-00(409)	LUMP	LUMP	\$15,000.00	\$15,000.00
210-0100	GRADING COMPLETE- PROJECT NO. HPP-0005-00(409)	LUMP	LUMP	\$80,000.00	\$80,000.00
310-5080	GR AGGR BASE CRS, 8 INCH, INCL MATL	SY	2300	\$15.00	\$34,500.00
318-3000	AGGR SURF CRS	TN	200	\$15.63	\$3,126.00
402-1812	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	TN	100	\$50.00	\$5,000.00
402-3110	RECYCLED ASPH CONC 9.5 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL	TN	470	\$45.00	\$21,150.00
402-3112	RECYCLED ASPH CONC 19 mm SUPERPAVE, GP 2 ONLY, INCL BITUM MATL	TN	130	\$60.00	\$7,800.00
402-3121	RECYCLED ASPH CONC 25 MM SUPERPAVE GP 1 OR 2 INCL BITUM MATL	TN	260	\$45.00	\$11,700.00
413-1000	BITUM TACK COAT	GL	570	\$0.96	\$547.20
441-0104	CONC SIDEWALK, 4 IN	SY	1500	\$25.00	\$37,500.00
441-4020	CONC VALLEY GUTTER, 6 IN	SY	40	\$27.73	\$1,109.20
441-6012	CONC CURB & GUTTER, 6 IN X 24 IN, TP 2	LF	2500	\$14.87	\$37,175.00
441-7010	CURB CUT WHEELCHAIR RAMP, TP -	EA	2	\$955.62	\$1,911.64
550-1160	STORM DRAIN PIPE, 18 IN, H 1-10	LF	500	\$28.02	\$14,010.00
550-1240	STORM DRAIN PIPE, 24 IN, H 1-10	LF	300	\$32.87	\$9,861.00
550-4218	FLARED END SECTION 18 IN, STORM DRAIN	EA	2	\$403.32	\$806.64
550-4224	FLARED END SECTION 24 IN, STORM DRAIN	EA	2	\$474.26	\$948.52
603-2024	STN DUMPED RIP RAP, TP 1, 24 IN	SY	50	\$40.91	\$2,045.50
603-7000	PLASTIC FILTER FABRIC	SY	50	\$3.96	\$198.00
688-1100	CATCH BASIN, GP 1	EA	6	\$1,718.35	\$10,310.10
				<b>SUB-TOTAL</b>	<b>\$324,688.80</b>
<b>EROSION CONTROL</b>					
700-6910	PERMANENT GRASSING	AC	4	\$462.63	\$1,850.52
163-0300	CONSTRUCTION EXIT	EA	2	\$1,099.25	\$2,198.50
165-0030	MAINTENANCE OF TEMPORARY SILT FENCE, TYPE C	LF	810	\$1.19	\$963.90
165-0101	MAINTENANCE OF CONSTRUCTION EXIT	EA	2	\$350.26	\$700.52
167-0100	WATER QUALITY MONITORING	MO	12	\$955.65	\$11,467.80
167-0200	WATER QUALITY SAMPLING	EA	2	\$58.24	\$116.48
171-0030	TEMPORARY SILT FENCE, TYPE C	LF	1820	\$3.06	\$4,957.20
				<b>SUB-TOTAL</b>	<b>\$22,254.92</b>
<b>SIGNING AND MARKING</b>					
636-1020	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 3	SF	40	\$13.15	\$526.00
636-2070	GALV STEEL POSTS, TP 7	LF	45	\$6.71	\$301.95
647-1000	TRAFFIC SIGNAL INSTALLATION NO	LUMP	LUMP	\$80,000.00	\$80,000.00
652-0120	PAVEMENT MARKING, ARROW, TP 2	EA	26	\$42.44	\$1,103.44
652-5451	SOLID TRAFFIC STRIPE, 5 IN, WHITE	LF	2850	\$0.12	\$318.00
652-5452	SOLID TRAFFIC STRIPE, 5 IN, YELLOW	LF	2830	\$0.13	\$368.90
652-9002	TRAFFIC STRIPE, YELLOW	SY	630	\$1.26	\$793.80
				<b>SUB-TOTAL</b>	<b>\$83,424.09</b>
				<b>SUB-TOTAL</b>	<b>\$430,377.81</b>
			<b>TOTAL OF ITEMS</b>		<b>\$430,377.81</b>
	RIGHT OF WAY				\$70,000.00
	REIMBURSABLE UTILITIES				\$10,000.00
			<b>TOTAL</b>		<b>\$510,377.81</b>

NOTE: BASE AND PAVING UNIT PRICES WERE INCREASED DUE TO SMALL QUANTITY TOTALS.

→ This looks very cheap.

