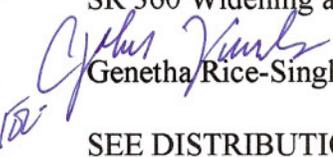


D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P. I. No. 0006049, Cobb-Paulding Counties **OFFICE** Preconstruction
CSSTP-0006-00(049)
SR 360 Widening and Reconstruction **DATE** February 26, 2007

FROM  Genetha Rice-Singleton, Assistant Director of Preconstruction

TO  SEE DISTRIBUTION

SUBJECT APPROVED PROJECT CONCEPT REPORT

Attached for your files is the approval for subject project.

GRS/cj

Attachment

DISTRIBUTION:

Brian Summers
Harvey Keeper
Ken Thompson
Jamie Simpson
Michael Henry
Keith Golden
Angela Alexander (file copy)
Paul Liles
Babs Abubakari
Bryant Poole
Kent Sager
BOARD MEMBER

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE: P. I. No. 0006049, Cobb-Paulding Counties **OFFICE:** Preconstruction
CSSTP-0006-00(049)
SR 360 Widening and Reconstruction **DATE:** February 8, 2007

FROM:  Genetha Rice-Singleton, Assistant Director of Preconstruction

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

SUBJECT: PROJECT CONCEPT REPORT

This project is the widening and reconstruction of SR 360/Maclang Road from SR 120 in Paulding County to SR 176/New Maclang Road in Cobb County, for a total of 5.80 miles. This corridor is experiencing decreasing levels of service (LOS) due to increases in traffic volume. The increase in traffic is generated from development along SR 360 and many urban collector and arterial streets as well as urban and rural local streets that connect to the corridor. Recent developments include several residential neighborhoods and commercial establishments that correspond to the increasingly suburbanized nature of the once rural landscape. Additionally, SR 360 links important routes, two sizeable cities, and several smaller communities. Improvements are needed to increase the existing capacity and improve operational deficiencies. The average daily traffic (ADT) on SR 360 for the build year (2012) is estimated at 24,500 VPD in Cobb County and 20,000 VPD in Paulding County. The projected ADT for the design year (2032) is 43,000 VPD in Cobb County and 34,700 VPD in Paulding County. This traffic represents a 57 to 58 percent increase in ADT on SR 360 and further demonstrates the need for additional road capacity.

The proposed construction consists of widening the existing two lane SR 360 to four, 12' lanes (2 in each direction) with curb and gutter and sidewalks (urban shoulders) and a 24' raised median. The proposed speed design is 45 MPH. The existing triple 10' x 9' culvert over Powder Springs Creek will be replaced with a bridge. The culvert shows scour problems as well as a collapse of one of the wing walls due to undermining. Although repairs have been made, they are also beginning to deteriorate due to additional scouring. Traffic will be maintained during construction.

Environmental concerns include requiring a COE 404 permit; an Environmental Assessment will be prepared; a public hearing open house will be held; time saving procedures are not appropriate.

P. I. No. 0006-00(049), Cobb-Paulding
February 8, 2007

The estimated costs for this project are:

	PROPOSED	APPROVED	FUNDING	PROG DATE
Construction (includes E&C and inflation)	\$41,918,000	\$41,918,000	L240	LR
Right-of-Way	\$47,800,000	\$47,800,000	L240	LR
Utilities*	\$ 1,693,000	-----		

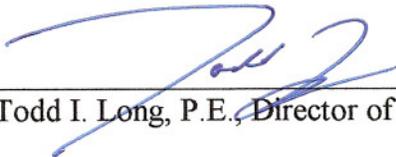
*Notification letter sent to Cobb and Paulding Counties 2-21-05.

I recommend this project concept be approved.

GRS:JDQ/cj

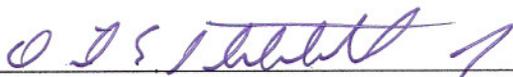
Attachment

CONCUR



Todd I. Long, P.E., Director of Preconstruction

APPROVE



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

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENTAL CORRESPONDENCE

JAN 23 2007

FILE: CSSTP-0006-00(049) Cobb/Paulding **OFFICE:** Engineering Services
P.I. No. 0006049
S.R. 360 Widening/Reconstruction

DATE: January 18, 2007

FROM: Brian K. Summers, P.E., Project Review Engineer *REW*
TO: Genetha Rice-Singleton, Assistant Director of Preconstruction

SUBJECT: CONCEPT REPORT

We have reviewed the Concept Report submitted January 19, 2007, and have no comments.

The costs for this project are:

Construction	\$38,107,700
Inflation	\$0.00
E & C	\$3,810,770
Reimbursable Utilities	\$1,692,500
Right of Way	\$47,800,000

REW

c: Babs Abubakari, Attn.: Stanley Hill

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF CONSULTANT DESIGN**

PROJECT CONCEPT REPORT

Project Number: CSSTP-0006-00(049)
County: Cobb/Paulding
P.I. Number: 0006049

Federal Route Number: N/A
State Route Number: 360

Reconstruct a Two-Lane Roadway to a Four-Lane Facility with a Raised Median

Recommendation for approval:

DATE

Project Manager

DATE

State Program Delivery & Consultant Design 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 and Design Engineer

DATE

District Engineer

1/22/07

DATE

Brian K. Summers *REW*

Project Review Engineer

DATE

State Bridge & Structural Design Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF CONSULTANT DESIGN

PROJECT CONCEPT REPORT

Project Number: CSSTP-0006-00(049)
County: Cobb/Paulding
P.I. Number: 0006049

Federal Route Number: N/A
State Route Number: 360

Reconstruct a Two-Lane Roadway to a Four-Lane Facility with a Raised Median

Recommendation for approval:

DATE

Project Manager

DATE

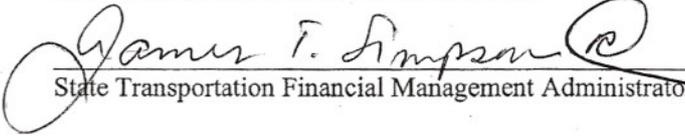
State Program Delivery & Consultant Design Engineer

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

1-22-17

 State Transportation Financial Management Administrator

DATE

State Transportation Financial Management Administrator

DATE

State Environmental / Location Engineer

DATE

State Traffic Safety and Design Engineer

DATE

District Engineer

DATE

Project Review Engineer

DATE

State Bridge & Structural Design Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF CONSULTANT DESIGN

PROJECT CONCEPT REPORT

Project Number: CSSTP-0006-00(049)
County: Cobb/Paulding
P.I. Number: 0006049

Federal Route Number: N/A
State Route Number: 360

Reconstruct a Two-Lane Roadway to a Four-Lane Facility with a Raised Median

Recommendation for approval:

DATE

Project Manager

DATE

State Program Delivery & Consultant Design 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

1/29/07
DATE

Heidi Galt
State Traffic Safety and Design Engineer

DATE

District Engineer

DATE

Project Review Engineer

DATE

State Bridge & Structural Design Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF CONSULTANT DESIGN

PROJECT CONCEPT REPORT

Project Number: CSSTP-0006-00(049)
County: Cobb/Paulding
P.I. Number: 0006049

Federal Route Number: N/A
State Route Number: 360

Reconstruct a Two-Lane Roadway to a Four-Lane Facility with a Raised Median

Recommendation for approval:

DATE

Project Manager

DATE

State Program Delivery & Consultant Design 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).

1/23/07
DATE

for Matthew Fowler
State Transportation Planning Administrator

DATE

State Transportation Financial Management Administrator

DATE

State Environmental / Location Engineer

DATE

State Traffic Safety and Design Engineer

DATE

District Engineer

DATE

Project Review Engineer

DATE

State Bridge & Structural Design Engineer

SCORING RESULTS AS PER MOG 2440-2

Project Number: CSSTP-0006-00(049)		County: Cobb/Paulding		PI No.: 0006049	
Report Date: January 19, 2007		Concept By: DOT Office: Consultant Design			
<input checked="" type="checkbox"/> Concept Stage		Consultant: Mulkey Engineers			
Project Type: Choose One From Each Column		<input checked="" type="checkbox"/> Major <input 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 type="checkbox"/> Intersection Improvement <input type="checkbox"/> Interstate <input type="checkbox"/> New Location <input checked="" type="checkbox"/> Widening & Reconstruction <input type="checkbox"/> Miscellaneous	
FOCUS AREAS	SCORE	RESULTS			
Presentation	100				
Judgement	100				
Environmental	100				
Right of Way	100				
Utility	100				
Constructability	100				
Schedule	100				

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF CONSULTANT DESIGN**

PROJECT CONCEPT REPORT

Project Number: CSSTP-0006-00(049)
County: Cobb/Paulding
P.I. Number: 0006049

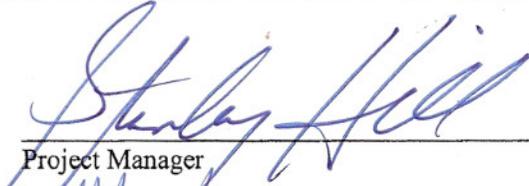
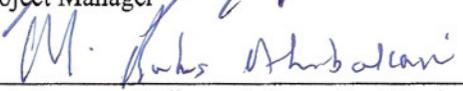
Federal Route Number: N/A
State Route Number: 360

Reconstruct a Two-Lane Roadway to a Four-Lane Facility with a Raised Median

Recommendation for approval:

1/08/07
DATE

1/08/07
DATE


Project Manager

State Program Delivery & Consultant Design 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 and Design Engineer

DATE

District Engineer

DATE

Project Review Engineer

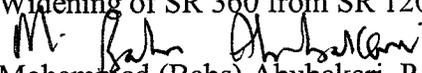
DATE

State Bridge & Structural Design Engineer

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE: CSSTP-0006-00(049) Cobb & Paulding Counties **OFFICE:** Consultant Design
PI 0006049
Widening of SR 360 from SR 120 to SR 176 **DATE:** January 08, 2007

FROM:  Mohammed (Babs) Abubakari, P.E., State Consultant Design & Program Delivery Engineer

TO: Genetha Rice-Singleton, Assistant Director of Preconstruction

SUBJECT: **Project Concept Report**

Attached is the original copy of the Concept Report for your further handling for approval in accordance with the Plan Development Process (PDP).

If you have any questions concerning this matter, please call Stanley Hill at (404) 656-6109.

MBA:SH:VCP

cc: Brian Summers, P.E., Project Review Engineer
Harvey Keepler, State Environmental/Location Engineer
Keith Golden, Office of Traffic Safety and Design
Angela T. Alexander, State Transportation Planning Administrator
Jamie Simpson., Office of Financial Management Administrator
Kent Sager, District 6 Engineer
Bryant Poole, District 7 Engineer
Paul Liles, P.E., State Bridge Design Engineer

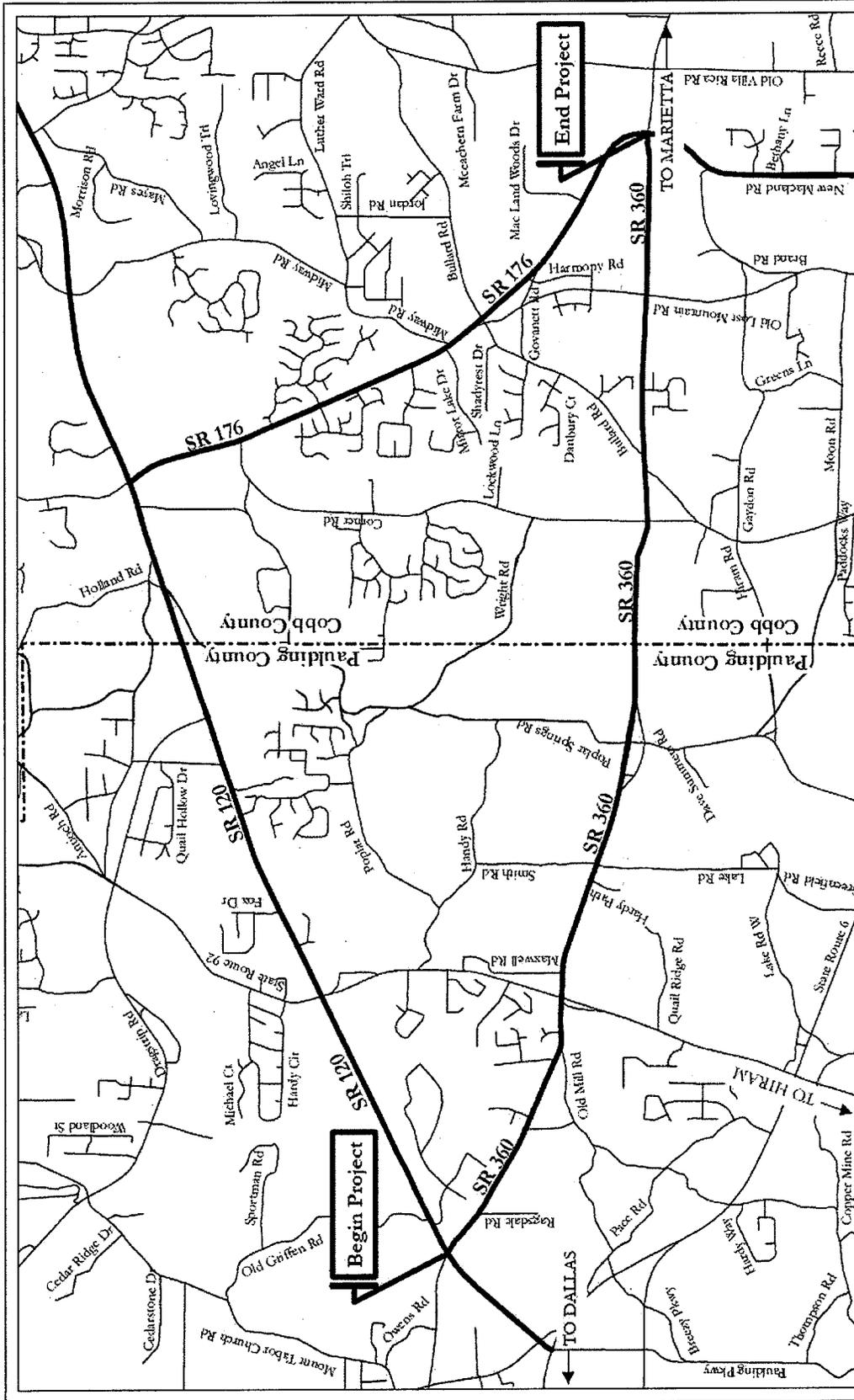
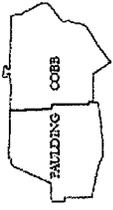


Figure No. 1	
Project Location Map SR 360 from SR 120 to SR 176 Project Number CSSTP-0006-00(049), PI 0006049 Cobb & Paulding Counties, Georgia	
N Courtesy of Georgia Department of Transportation: Roads and Highways County Boundaries	1:42,000 0 0.5 1 2 Miles
Prepared for: 	
	

NEED AND PURPOSE

Project Description and Background

Project CSSTP-0006-00(049) includes the SR 360 corridor between SR 120 in Paulding County and SR 176/New Macland Road in Cobb County and is included in both the Atlanta Regional Commission's (ARC) *Mobility 2030 Regional Transportation Plan* (RTP) and in the *2006-2011 Transportation Improvement Program* (TIP). The corridor is also listed in the *Georgia State Transportation Improvement Program* (STIP) and is TIP number CO-367. In two of these documents, widening the SR 360 facility is recommended to improve increasing congestion. In Cobb County, the *1995-2015 Comprehensive Plan* cited SR 360/Macland Road into Paulding County as a major facility experiencing increasing traffic congestion. In all three plans, the SR 360 corridor is identified as a congested route connecting Paulding County, which is listed as one of the fastest-growing counties in the nation, with Cobb County, a heavily developed suburban area.

The SR 360 facility is not a designated bicycle route, but does carry school bus routes. The area's commuter and transit lines do not operate along the proposed project corridor; however, commuters are able to access the Georgia Regional Transportation Authority's (GRTA) Xpress System in Cobb and Paulding Counties. The GRTA Xpress System is a commuter service system that has park and ride lots just south of the proposed project area along U.S. 278. GRTA Xpress Routes #470/#47 are accessible via the Hiram 278 Theater or the Florence Road-Silver Comet Trail Park and Ride Lots. These bus routes access the cities of Austell, Lithia Springs, and Atlanta and connect to the Metropolitan Atlanta Rapid Transit Authority (MARTA) system, providing commuters in Hiram and Powder Springs with access to downtown Atlanta.

In Paulding County, the proposed project corridor is approximately 3.1 miles in length and the corridor is approximately 3.0 miles in length in Cobb County. The Paulding County beginning mile log is 1.18 and the ending mile log is 4.06. The Cobb County beginning mile log is 0 and the ending mile log is 2.92.

Independent Utility and Logical Termini

The SR 360 corridor extends between SR 120 in Paulding County and SR 176/New Macland Road in Cobb County and has both independent utility and logical termini since SR 360 serves as an urban minor arterial and provides access to the city of Marietta via SR 120, the city of Dallas via US 278, and the city of Hiram via SR 92. The corridor is often used as an alternate route to SR 120 and US 278, two urban principal arterials, between Marietta and Dallas near the corridor's begin and end points. Improvement of this corridor would serve the needs of the traveling public between these two cities even if no other projects along adjacent routes were to be improved.

The CSSTP-0006-00(049) termini are logically located based on travel patterns. Traffic reductions occur on Macland Road/CR 371, a local route that continues westbound from SR 360 from the SR 120 intersection. Approximately half of the traffic traveling westbound on SR 360 turns onto SR 120 at that intersection, and approximately 53 percent of eastbound traffic turns onto SR 120. Generally, westbound traffic (5,250 vehicles per day [vpd]) is split between left turns southbound onto SR 120/SR 360 (2,400 vpd) and through movements along Macland Road/CR 371 (2,400 vpd), and eastbound traffic (4,750 vpd) is split between left turns northbound onto SR 120 (2,000) and through movements along SR 360 (2,400). Further, SR 360 does not continue across its intersection with SR 120 but follows

SR 120/SR 360 southbound to the roadway's intersection with SR 6/SR 120/Jimmy Campbell Parkway near Dallas (see project location map). The eastern project terminus, SR 176, is logical since the roadway ties into the existing four-lane section east of the SR 176/SR 360 intersection.

Need

This corridor is experiencing decreasing levels of service (LOS) due to increases in traffic volumes. The increase in traffic is generated from development along SR 360 and many urban collector and arterial streets as well as urban and rural local streets that connect to the corridor. Recent developments include several residential neighborhoods and commercial establishments that correspond to the increasingly suburbanized nature of the once rural landscape. Additionally, SR 360 links important routes, two sizeable cities, and several smaller communities. Improvements are needed to increase the existing capacity and improve operational deficiencies including:

- substandard capacity for existing and predicted traffic volumes;
- substandard horizontal and vertical geometry that create hazardous sight-distance problems;
- numerous side streets, driveways, and shopping center intersections without turn lanes that cause frequent stops in traffic flow.

Purpose

The purpose of this project is to enhance mobility along the SR 360 corridor to accommodate traffic generated by residential and commercial growth in Cobb and Paulding Counties, and to improve access between Dallas and Marietta. The transportation solution could also correct existing operational deficiencies, improve safety, and improve access to numerous side streets and driveways that cause frequent stops in traffic flow.

Traffic Data

The Average Daily Traffic (ADT) on SR 360 for the build year (2012) is estimated at 24,500 vehicles per day (vpd) in Cobb County and 20,000 vpd in Paulding County. The projected ADT for the design year (2032) is 43,000 vpd in Cobb County and 34,700 in Paulding County. This traffic represents a 57 to 58 percent increase in ADT on SR 360 and further demonstrates the need for additional road capacity.

Operational Conditions

The anticipated Levels of Service (LOS) under the No Build condition in 2012 and 2032 suggest that motorists would experience delays and hazardous conditions created by heavy traffic volumes. At various locations along the corridor, the LOS range from LOS of "D" and "E" for the build year (2012) to a LOS "D" and "F" for the design year (2032) (see Table 1, Average Daily Traffic and Level of Service along SR 360).

TABLE 1
Average Daily Traffic and Level of Service along SR 360

Location		Average Daily Traffic			Level of Service				
From	To	Current Year 2005	Build Year 2012	Design Year 2032	Current Year 2005	Build Year 2012		Design Year 2032	
					No Build	No Build	Build	No Build	Build
SR 120/ Marietta Hwy.	SR 92	12,500	17,000	30,500	D	D	A	D	B
SR 92	CR 3/Poplar Springs Rd.	15,000	20,000	34,700	D	D	B	F	C
CR 3/Poplar Springs Rd.	CR 809/ Corner Rd.	15,400	20,500	35,400	D	D	B	F	C
CR 809/ Corner Rd.	CR 2083/ Bullard Rd.	15,000	19,700	34,200	D	D	B	F	C
SR 2083/ Bullard Rd.	CR 811/ Bullard Rd.	18,700	24,500	43,000	D	E	B	F	C
CR 811/ Bullard Rd.	SR 176/Lost Mountain Rd.	16,400	21,200	37,500	D	E	B	F	C

Accident Data

While safety improvements are not a primary need along the SR 360 corridor, decreases in accidents, injuries, and fatalities would be a secondary benefit of correcting the road deficiencies. While injury rates are higher than the associated statewide rates, accident and fatality rates along the project corridor are generally lower (see Tables 2 and 3). However, particular types of accidents occur more frequently than others along this corridor and highlight the existing deficiencies. For instance, rear end and angle intersecting accidents occurred in 75 and 74 percent of cases during the years 2003 and 2004, respectively. Collisions with objects other than motor vehicles accounted for almost 16 percent of accidents during both 2003 and 2004 (most collisions were with ditches, trees, and deer). Each accident type indicates that creating additional capacity, correcting skews and geometry, and improving operations with turn lanes and traffic signals could improve traffic safety along the corridor. Rear end collisions and angle intersecting accidents, which comprise a large percentage of accidents along this portion of SR 360, often point to a need for improved access control, intersection improvements, and a reduction in the number of locations available for vehicles to stop, turn, or slow down. The controlled location of median openings would reduce the number of opportunities for vehicles turning from driveways and intersections to make turns, and will often require right-in, right-out maneuvers. The addition of left turn lanes at major intersections would also increase the safety effectiveness of the roadway by improving sight distance and by removing the need for through traffic to slow down or stop.

Sideswipe accidents, collisions with objects other than motor vehicles, and head-on collisions suggest that motorists would benefit from increased inside and outside shoulder widths and a median-divided highway that separates traffic. The addition of a raised median would separate opposing traffic and eliminate the need for passing maneuvers that require a driver to merge into the opposing lane of travel. Increased clear zones or distance from the edge of a travel lane to fixed objects or animals will improve sight distance and reaction time for motorists.

Three-year histories of accidents on SR 360 as well as the statewide accident and injury rates for urban minor arterials are shown in Tables 2 and 3.

TABLE 2
Accident History of SR 360
SR 120/Charles Hardy Parkway to SR 176/Lost Mountain Road*

YEAR	Accidents/Accident Rate	Injuries/Injury Rate	Fatalities/Fatality Rate
2002	85/414	40/195	0/0.00
2003	94/374	67/267	1/4.00
2004	76/308	63/255	0/0.00

*All rates are per 100 million vehicle miles.

TABLE 3
Statewide Accident History Rate, Urban Minor Arterial*

YEAR	Accident Rate	Injury Rate	Fatality Rate
2002	568	218	1.22
2003	572	218	1.48
2004	490	187	1.41

*All rates are per 100 million vehicle miles.

DESCRIPTION OF THE PROPOSED PROJECT

The proposed project consists of the reconstruction and widening of SR 360/Maclang Road from SR 120 in Paulding County to SR 176/New Maclang Road in Cobb County for an approximate distance of 5.8 miles (see location map). The Paulding County beginning mile log is 1.18 and the ending mile log is 4.06. The Cobb County beginning mile log is 0 and the ending mile log is 2.92. The proposed typical section will consist of four 12-foot lanes (two lanes in each direction) with curb & gutter and sidewalks (urban shoulders) and a 24' raised median. The proposed design speed is 45 mph. Some areas may require varying right-of-way widths to avoid or minimize impacts. The proposed right-of-way will be approximately 150 feet. The existing triple box culvert (10'W X 9'H) carrying Powder Springs Creek will be replaced with a bridge. The culvert currently shows scour problems as well as a collapse of one of the wing walls due to undermining. Although repairs have been made they are also beginning to deteriorate due to additional scouring. Replacement of the culvert with a bridge will eliminate the scour problem and continued maintenance problem.

Project Concept Report Page 7
Project Number: CSSTP-0006-00(049)
P.I. Number: 0006049
County: Cobb/Paulding

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

The proposed improvements are consistent with the conforming plan's model which consists of widening from 2 to 4 lanes with a median from SR 176 to SR 120 with a completion date of 2014.

PDP Classification: Major Minor

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

Functional Classification: Urban Minor Arterial

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

State Route Number(s): 360

Traffic (AADT):

Current Year: 24,500 (2012)

Design Year: 43,000 (2032)

Existing design features:

- Typical Section:
 - 2 – 12 foot lanes with varying width rural shoulders (2 ft paved and 0-6 ft graded)
- Posted Speed: 45 mph
- Minimum Radius: R = 711 ft
- Maximum grade: Mainline 7.0% Cross roads 9% Driveways 12%
- Width of right of way: Varies 80' to 100'
- Major structures:
 - Triple 10' X 9' Bridge Culvert over Powder Springs Creek
Struct. ID: 067-0063-0 Sufficiency rating: 81.38
- Major intersections along the project:
 - SR 120/Charles Hardy Parkway
 - SR 92/Hiram Acworth Parkway
 - Old Lost Mountain Road
 - SR 176/Lost Mountain Road/New Macland Road
- Existing Signalized Intersections:
 - SR 120/Charles Hardy Parkway

- SR 92/Hiram Acworth Parkway
- Corner Road/Florence Road
- Old Lost Mountain Road
- SR 176/Lost Mountain Road/New Macland Road
- Existing length of roadway segment: 5.8 Miles
- Beginning mile log for Paulding County segment: beginning at 1.18, ending at 4.06
- Beginning mile log for Cobb County segment: beginning at 0.00, ending at 2.92

Proposed Design Features:

- Proposed typical section(s): 4-12 foot lanes (two lanes in each direction) with a 24' raised median and urban shoulders with sidewalks.
- Proposed Design Speed Mainline: 45 mph
- Proposed Maximum grade Mainline: 5.6% Maximum grade: 7%
- Proposed Maximum grade Side Streets:
 - Charles Hardy Parkway (Urban Arterial 55 mph): 3.3% Maximum grade: 6%
 - SR 92 (Urban Arterial 45 mph): 7% Maximum grade: 7%
 - Macland Rd. West of SR 120 (Urban Arterial 45 mph): 3.1% Maximum grade: 10%
 - Collector: Florence Rd/Corner Rd. (Urban Collector 35 mph): 6.9% Maximum grade: 10%
 - Bullard, Poplar Springs, Lake, Smith Rd (Local Roads 35 mph): 7.2% Maximum grade: 10%
 - Old Lost Mountain. Rd, Old Mill Rd, all others (Local Roads 30 mph): 3.7% Maximum grade: 10%
- Proposed Maximum grade driveway: 28%
- Proposed Minimum Radii of curve: 1840 ft Minimum Radii: 711 ft
- Proposed e-max: 4% (urban/suburban)
- Right of Way
 - Width: Varies from 104' to 150'
 - Easements: Temporary(), Permanent(**X**), Utility(), Other().
 - Type of access control: Full(), Partial(), By Permit(**X**), Other().
 - Number of affected parcels: 254

- o Number of displacements:
 - o Business: 8
 - o Residences: 26
 - o Mobile Homes: 1
 - o Other: 0

- Structures: The existing triple 10' X 9' bridge culvert over Powder Springs Creek will be replaced with a bridge.
- Proposed New Signalized Intersections:
 - o SR 360 @ North Bullard Road
 - o SR 360 @ Poplar Springs Road
 - o SR 360 @ Lake Road/Smith Road
- Traffic control during construction: Two lanes of traffic will be maintained throughout project.
- Design Exceptions to controlling criteria anticipated:

	<u>UNDETERMINED</u>	<u>YES</u>	<u>NO</u>
HORIZ 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:
 - o Lane widths on SR 360 on the east side of the intersection with SR 176 will be 11 ft. Currently there is a historic resource located in the North East corner of the intersection and a large church in the south east corner. By reducing the lane widths to 11 ft and the shoulder to include a 7' sidewalk behind the curb and gutter with a retaining wall, the impacts can be minimized to the church while avoiding impacts to the historic resource. The requirement for widening is created by the need for adding an additional left turn lane, for a total of two left turn lanes, in both the southbound to eastbound and westbound to southbound movements as required by the design year traffic. There are 2% trucks for the Design Hourly Volume (DHV) and 4% 24 hr trucks (3% SU and 1% Combination). The Variance is needed in accordance with Section 6.2.1 Lane Widths of the GDOT Design Policy Manual for an Urban Area Type B. 11 ft lanes are shown to be acceptable by AASHTO's Geometric Design of Highways and Streets, 2004 edition page 312 2nd paragraph under the section of Lane Widths.

- Environmental Concerns: (Approximations from conceptual construction limits)
 - 11 Historic Resources located along the project corridor
 - 0.2 Acres of impacted wetlands
 - 0.5 Acres of impacted ponds (fill slopes into pond)
 - 2450 LF of impacted streams
- Level of Environmental Analysis:
 - Are Time Saving Procedures Appropriate? Yes (), No (X)
 - Categorical Exclusion Anticipated? Yes (), No (X)
 - Environmental Assessment/Finding of No Significant Impact: Yes (X), No ()
 - Environmental Impact Statement (EIS): Yes (), No (X)
- Utility Involvements:
 - Telephone: Bell South
 - Power:
 - Greystone Power Corporation
 - Cobb Electric Membership Corporation
 - Georgia Power Company (Distribution)
 - Georgia Transmission Corporation
 - Marietta Power
 - Gas:
 - Austell Gas Company
 - Southern Natural Gas
 - Atlanta Gas & Light
 - Fiber:
 - Metromedia Fiber Network
 - Cable TV:
 - Comcast
 - Charter Communications
 - Water:
 - Paulding County Water Authority
 - Cobb County Marietta Water Authority
 - Cobb County Water System
 - Powder Springs Water System,

Project Responsibilities:

- Design: Mulkey
- Right of way acquisition: Mulkey
- Relocation of utilities: Utility Companies
- Letting to contract: GDOT
- Supervision of construction: GDOT
- Providing material pits: Contractor
- Providing detours: GDOT

Coordination:

- Initial Concept Meeting date(Minutes Attached): 9/15/06
- Concept meeting date and brief summary (Minutes Attached)
- P.A.R. meetings, dates, and results: PAR Report being circulated for approval. No meeting necessary.
- FEMA, USCG and/or TVA: Minor involvement with FEMA for floodplain
- Public involvement: PIOH held December 14, 2006
- Local government comments: None.
- Other Projects in the Area - Nine (9) other projects are planned or in progress in the vicinity of SR 360. The completion of this project would not preclude any decisions required to implement these additional projects along SR 360. Adjacent projects are listed in Table 4-SR 360 Adjoining Projects.

TABLE 4
SR 360 Adjoining Projects

PROJECT NO.	FACILITY	LIMITS	DESCRIPTION	SCHEDULE	OWNER
STP-0001-00(239) P.I. No. 0001239	SR 360 at CR 809/Corner Rd. and CR 2083 and CR 811 /Bullard Rd.	N/A	Intersection Improvements	Let Status: Long Range Concept: 100%	GDOT
CSSTP-M002-00(544) P.I. No.M002544	SR 360	From SR 120 to Cobb County Line	Resurfacing and Maintenance	Let Status: Let Concept: 100%	GDOT
STP-186-1(25) P.I. No. 621720	SR 92	From Nebo Road to SR 120 including Powder Springs Circle	Widening & Reconstruction	Let Status: 2010 Concept: 100%	GDOT
CSSTP-M002-00(543) P.I. No.M002543	SR 92	From SR 8 to Old 381	Resurfacing and Maintenance	Let Status: Let Concept: 100%	GDOT
P.I. No. 051051	Poplar Springs Rd & SR 360 Intersection	Intersection	Intersection Improvements and Signalization	Let Status: Concept: 100%	Paulding Co

Project Concept Report Page 12
 Project Number: CSSTP-0006-00(049)
 P.I. Number: 0006049
 County: Cobb/Paulding

PROJECT NO.	FACILITY	LIMITS	DESCRIPTION	SCHEDULE	OWNER
P.I. No. 051052	Lake and Smith Roads and SR 360 Intersection	Intersection	Intersection Improvements and Signalization	Let Status: Concept: 100%	Paulding Co
CSSFT-0007-00(926) P.I. No. 0007926	SR 12, SR 85, & SR 176 in seven locations in Cobb, Clayton, & Dekalb Counties	SR 12 in Dekalb Co. from SR 10/Mountain Road to SR 124/Turner Hill Road; SR 85 in Clayton Co. from Fayette Co. line to I-85; SR 176 in Cobb Co. from SR 6/Powder Springs Rd. to SR 3/North Cobb Pkwy.	Traffic Safety & Design - Signing	Let Status: Unlet Concept: 100%	GDOT
NH-213-1(3) P.I. No. 721670	South Mars Hill Extension	From SR 6/Old US 278 to SR 120/ Dallas Hwy	Widening & Reconstruction	Let Status: Long Range Concept: 0%	GDOT
CSSTP-0007-00(872) P.I. No. 0007872	SR 176	From SR 120/ Dallas Highway to SR 360/ Macland Road	Widening & Reconstruction	Let Status: Long Range Concept: 0%	GDOT

Other coordination to date: Coordination with Cobb and Paulding Counties, District 7 Area 2 Engineer and District 6, Area 5 Engineer, FHWA, and Cobb County Marietta Water Authority.

Scheduling – Responsible Parties’ Estimate

- Time to complete the environmental process: 15 Months
- Time to complete preliminary construction plans: 12 Months
- Time to complete right of way plans: 6 Months
- Time to complete the section 404 permit: 10 Months
- Time to complete final construction plans: 15 Months
- Time to complete the purchase right-of-way: 18 Months
- Other major items that will affect project schedule:

Other alternates considered:

Alternate 1 4-lane with a 44’ depressed grassed median. This would require 200’ of R/W, which is an additional 50’ of R/W from the preferred typical section and the construction would cost an additional \$2 million. This alternate was also eliminated due to the traffic counts. It was considered that the

Project Concept Report Page 13
Project Number: CSSTP-0006-00(049)
P.I. Number: 0006049
County: Cobb/Paulding

roadway may need to be widened to three lanes in the future and the wider median could accommodate the additional lanes. However, the traffic projections do not require a third lane in each direction in the design year.

Alternate 2 No build.

Comments:

Attachments:

1. Cost Estimates:
 - a. Construction including E&C - \$38,107,700
 - b. Right of Way - \$47,800,000
 - c. Utilities - \$1,692,500 (Reimbursable - Paulding County, District 6)
\$4,029,125 (Non-Reimbursable – Paulding County, Dist 6)
\$0 (Reimbursable – Cobb County, District 7)
2. Typical sections
3. Capacity Analysis (Pending from Traffic Sub Consultant)
4. Bridge (Culvert) Inventory
5. Minutes of Initial Concept and Concept meetings
6. Conforming plan's network schematics showing thru lanes

ATTACHMENT 1

Estimate Report for file "CSSTP-0006-00(049), PI 0006049"

Section 1. Roadway					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
150-1000	1	LS	3500000.00	TRAFFIC CONTROL	3500000.00
153-1300	1	EA	70000.00	FIELD ENGINEERS OFFICE TP 3	70000.00
201-1500	1	LS	780000.00	CLEARING & GRUBBING	780000.00
207-0203	200	CY	20.00	FOUND BKFILL MATL, TP II	4000.00
208-0100	388000	CY	15.00	IN PLACE EMBANKMENT	5820000.00
310-5120	297000	SY	20.00	GR AGGR BASE CRS, 12 INCH, INCL MATL	5940000.00
402-3121	66950	TN	85.00	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	5690750.00
402-3130	24500	TN	85.00	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	2082500.00
402-3190	65350	TN	85.00	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	5554750.00
413-1000	28300	GL	2.00	BITUM TACK COAT	56600.00
Section Sub Total:					\$29,498,600.00

Section 2. Bridge & Culvert Extension					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
207-0203	150	CY	45.00	FOUND BKFILL MATL, TP II	6750.00
433-1000	600	SY	150.00	REINF CONC APPROACH SLAB	90000.00
500-3101	800	CY	600.00	CLASS A CONCRETE	480000.00
511-1000	90000	LB	1.50	BAR REINF STEEL	135000.00
543-1100	1	LS	690000.00	CONSTR OF BRIDGE - COMPLETE	690000.00
Section Sub Total:					\$1,401,750.00

Section 3. Guardrail					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
641-1100	150	LF	35.00	GUARDRAIL, TP T	5250.00
641-1200	3000	LF	20.00	GUARDRAIL, TP W	60000.00
641-5001	10	EA	600.00	GUARDRAIL ANCHORAGE, TP 1	6000.00
641-5012	4	EA	2000.00	GUARDRAIL ANCHORAGE, TP 12	8000.00
Section Sub Total:					\$79,250.00

Section 4. Concrete					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
441-0104	37200	SY	30.00	CONC SIDEWALK, 4 IN	1116000.00
441-0204	100	SY	30.00	PLAIN CONC DITCH PAVING, 4 IN	3000.00
441-0740	7580	SY	30.00	CONCRETE MEDIAN, 4 IN	227400.00
441-6222	78600	LF	18.00	CONC CURB & GUTTER, 8 IN X 30 IN, TP 2	1414800.00
441-6740	63200	LF	13.00	CONC CURB & GUTTER, 8 IN X 30 IN, TP 7	821600.00
441-7011	30	EA	550.00	CURB CUT WHEELCHAIR RAMP, TYPE A	16500.00
441-7014	35	EA	850.00	CURB CUT WHEELCHAIR RAMP, TYPE D	29750.00
620-0100	2500	LF	45.00	TEMPORARY BARRIER, METHOD NO. 1	112500.00
Section Sub Total:					\$3,741,550.00

Section 5. Drainage					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
550-1180	15290	LF	35.00	STORM DRAIN PIPE, 18 IN, H 1-10	535150.00
550-1240	7650	LF	45.00	STORM DRAIN PIPE, 24 IN, H 1-10	344250.00
550-1360	2040	LF	55.00	STORM DRAIN PIPE, 36 IN, H 1-10	112200.00
550-1480	550	LF	110.00	STORM DRAIN PIPE, 48 IN, H 1-10	60500.00
550-4218	20	EA	550.00	FLARED END SECTION 18 IN, STORM DRAIN	11000.00
550-4224	10	EA	750.00	FLARED END SECTION 24 IN, STORM DRAIN	7500.00
550-4236	5	EA	1200.00	FLARED END SECTION 36 IN, STORM DRAIN	6000.00
573-2006	3000	LF	15.00	UNDDR PIPE INCL DRAINAGE AGGR, 6 IN	45000.00
668-1100	260	EA	2000.00	CATCH BASIN, GP 1	520000.00
Section Sub Total:					\$1,641,600.00

Section 6. Signing and Marking

Item Number	Quantity	Units	Unit Price	Item Description	Cost
000-000	1	Lump Sum	30000.00	Signing and Marking Misc.	30000.00
632-0003	2	EA	30000.00	CHANGEABLE MESSAGE SIGN, PORTABLE, TYPE 3	60000.00
639-4002	24	EA	4800.00	STRAIN POLE, TP II	115200.00
647-1000	9	LS	75000.00	TRAFFIC SIGNAL INSTALLATION	675000.00
653-0110	100	EA	60.00	THERMOPLASTIC PVMT MARKING, ARROW, TP 1	6000.00
653-0120	100	EA	60.00	THERMOPLASTIC PVMT MARKING, ARROW, TP 2	6000.00
653-0210	200	EA	150.00	THERMOPLASTIC PVMT MARKING, WORD, TP 1	30000.00
653-1501	64000	LF	0.50	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	32000.00
653-1502	64000	LF	0.50	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	32000.00
653-3501	40000	GLF	0.25	THERMOPLASTIC SKIP TRAF STRIPE, 5 IN, WHITE	10000.00
Section Sub Total:					\$996,200.00

Section 7. Erosion Control

Item Number	Quantity	Units	Unit Price	Item Description	Cost
163-0232	50	AC	550.00	TEMPORARY GRASSING	27500.00
163-0300	20	EA	1500.00	CONSTRUCTION EXIT	30000.00
163-0520	500	LF	15.00	CONSTRUCT AND REMOVE TEMPORARY PIPE SLOPE DRAIN	7500.00
163-0531	15	EA	8000.00	CONSTRUCT AND REMOVE SEDIMENT BASIN, TP 1	120000.00
165-0010	4000	LF	1.50	MAINTENANCE OF TEMPORARY SILT FENCE, TP A	6000.00
165-0020	4000	LF	1.50	MAINTENANCE OF TEMPORARY SILT FENCE, TP B	6000.00
165-0030	50000	LF	2.00	MAINTENANCE OF TEMPORARY SILT FENCE, TP C	100000.00
165-0060	15	EA	1200.00	MAINTENANCE OF TEMPORARY SEDIMENT BASIN	18000.00
165-0101	20	EA	500.00	MAINTENANCE OF CONSTRUCTION EXIT	10000.00
167-1500	48	MO	1000.00	WATER QUALITY INSPECTIONS	48000.00
171-0010	4000	LF	3.00	TEMPORARY SILT FENCE, TYPE A	12000.00
171-0020	4000	LF	3.00	TEMPORARY SILT FENCE, TYPE B	12000.00
171-0030	50000	LF	4.00	TEMPORARY SILT FENCE, TYPE C	200000.00
700-6910	60	AC	850.00	PERMANENT GRASSING	51000.00
700-7000	400	TN	65.00	AGRICULTURAL LIME	26000.00
700-7010	270	GL	25.00	LIQUID LIME	6750.00
700-8000	60	TN	300.00	FERTILIZER MIXED GRADE	18000.00
710-9000	10000	SY	5.00	PERMANENT SOIL REINFORCING MAT	50000.00
Section Sub Total:					\$748,750.00

Total Estimated Cost: \$38,107,700.00

Subtotal Construction Cost	\$38,107,700.00
E&C Rate 10.0 %	\$3,810,770.00
Inflation Rate 0.0 % @ 0.0 Years	\$0.00
<hr/>	
Total Construction Cost	\$41,918,470.00
Right Of Way	\$47,800,000.00
ReImb. Utilities	\$1,692,500.00
<hr/>	
Grand Total Project Cost	\$91,410,970.00

PRELIMINARY RIGHT-of-WAY COST ESTIMATE

 Phil Copeland
 Right-of-Way Administrator

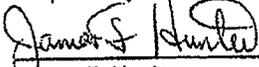
Date: 14-Sep-06 P.I. Number 00060049
 Project: CSSTP - 0006-00(049) Cobb & Paulding Counties
 Existing/Required R/W: 80-100 ft
 Project Terminal SR 120 to SR 176
 Project Description: SR 360/ Macland Road Widening
 Number of Parcels 216

Land:

R-O-W	Commercial - Paulding County 801,076 SF X \$4			\$3,204,304
	Residential - Paulding 314,439 SF X \$2			\$628,878
	Commercial - Cobb County 554,348 SF X \$5			\$2,771,740
	Residential - Cobb 455,302 SF X \$2			\$910,604
Easement	Commercial - Paulding County 303,291 SF X \$4/sf X 50%			\$606,582
	Residential - Paulding 455,302 SF X \$2/sf X 50%			\$455,302
	Commercial - Cobb County 88,585 SF X \$5/sf X 50%			\$221,463
	Residential - Cobb 482,966 SF X \$2/sf X 50%			\$482,966
Improvements:				
	Acquisitions	31 residential buildings		\$1,725,000
		5 commercial buildings		\$1,175,000
Relocations				
		27 houses	X \$20,000	\$540,000
		8 commercial	X \$25,000	\$200,000
Damages				
		27 residential buildings		\$500,000
		4 commercial buildings		<u>\$350,000</u>
	Net Cost of Right-of-Way			\$13,771,839

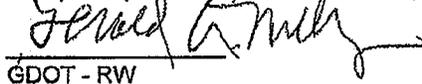
Net Cost of Right-of-Way		\$13,771,839
Scheduling Contingency	55%	\$7,574,511
Admin/Court Cost	60%	\$12,807,810
Inflation Factor	40%	<u>\$13,661,664</u>
Total Estimated Cost		\$47,800,000

Proposed by



James F. Hunter
Moreland Altobelli Associates

Accepted by:



GDOT - RW

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE

OFFICE District Seven Utilities

DATE August 7, 2006

FROM Jonathan Walker, District Utilities Engineer

TO Babs Abubakari, P.E., Consultant Design

SUBJECT **Preliminary Utility Cost Estimate**
SR 360 Fm. SR 120/Charles Hardy Pkwy. To
SR 176/Lost Mountain Road
CSSTP-0006-00(049) Cobb, Paulding Counties

As per your request, a field inspection was conducted on the above referenced project. The following companies have facilities that occupy the public right-of-way and should be relocated at **no cost** to the Department of Transportation:

Austell Gas System
Atlanta Gas Light Company
Charter Communications
City of Marietta
Cobb County Water System
Cobb-Marietta Water Authority
Cobb EMC
Comcast
BellSouth Telecommunications
Georgia Power Company (Distribution)
Georgia Transmission Corporation
Paulding County Water Authority
Greystone Power Corporation
Marietta Power
Metromedia Fiber Network

There were no utilities observed that could potentially have prior rights. Therefore, there are no reimbursable utilities at this time. Please note that this estimate was prepared without the certification of right-of-way and could change when more detailed information is made available. If you have any questions, please contact Mr. Clyde Cunningham at (404) 463-4953.

BP:JW:CAC

c: Jeff Baker, P.E.
File

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE CSSTP-0006-00(049) Paulding/Cobb Co.
P.I. 0006049

OFFICE Cartersville

DATE September 14, 2006

FROM Kerry D. Bonner
District Utilities Engineer

TO Jonathan Walker
District Utilities Engineer

ATTN Clyde Cunningham

SUBJECT PRELIMINARY UTILITY COST ESTIMATE

As requested by your office, we are furnishing you with a Preliminary Utility Cost estimates for each utility with facilities potentially located within the project limits of Paulding County.

FACILITY OWNER	NON- REIMBURSABLE	REIMBURSABLE	LOCAL GOVT. COST
Greystone Power Co.		\$ 367,000.00	
Atlanta Gas Light	\$ 639,125.00		
Paulding Co. Water Auth.	\$3,390,000.00	\$1,000,000.00	
BellSouth		\$ 325,000.00	
Comcast Cable	No Cost		
Totals	\$4,029,125.00	\$1,692,000.00	

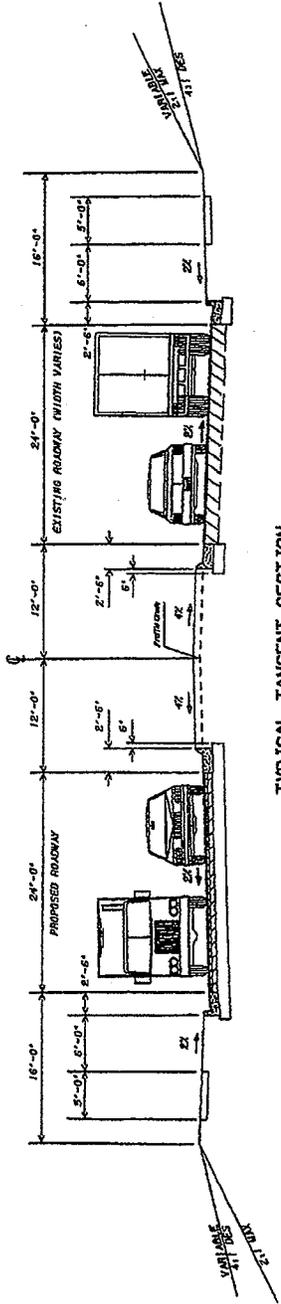
Total Preliminary Utility Cost Estimate \$5,721,625.00.

If you have any questions, please contact Jennifer Deems at 770-387-3616.

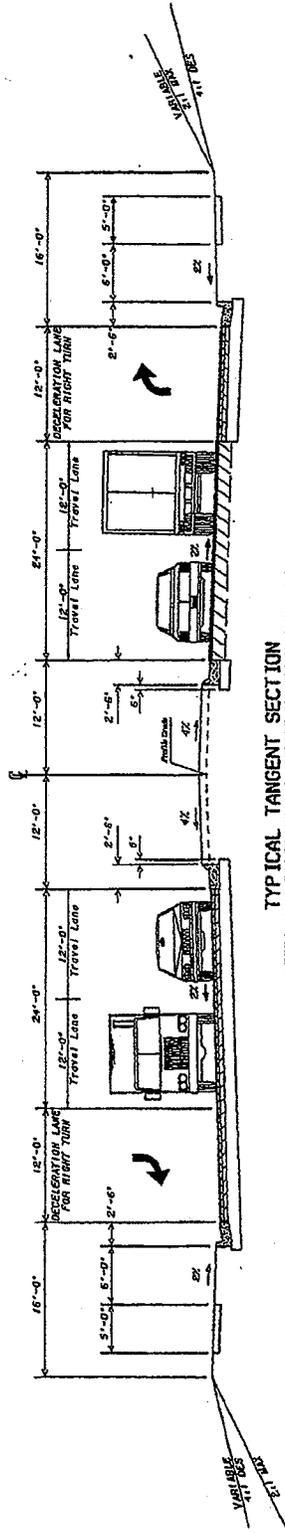
KDB/JLD/jd

C: Jeff Baker, State Utilities Engineer
Robert Reid, Office of Consultant Design
File/Estimating Book

ATTACHMENT 2



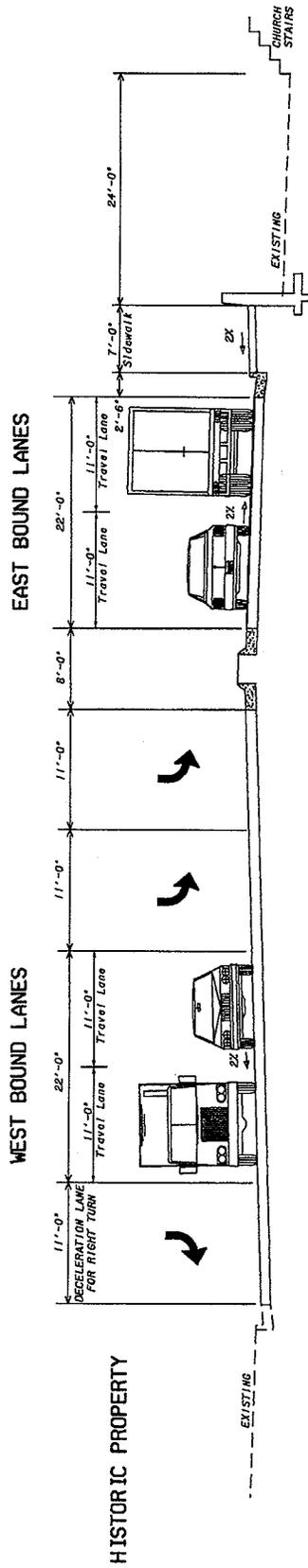
TYPICAL TANGENT SECTION



TYPICAL TANGENT SECTION WITH A RIGHT TURN DECELERATION LANE

TYPICAL SECTIONS
 CSSTP-0006-00(049)
 P.L. NO. 0006049
 STATE ROUTE 360
 PAULDING & COBB COS.

DRAWING NOT TO SCALE



HISTORIC PROPERTY

CROSS-SECTION WITH 11 FT LANES
 EAST LEG OF INTERSECTION
 OF SR 360 WITH SR 176
 (LOOKING EAST)

DRAWING NOT TO SCALE

DESIGN VARIANCE SECTION

CSSTP-0006-00(049)
 P.L. NO. 0006049
 STATE ROUTE 360
 PAULDING & COBB COS.

ATTACHMENT 3

BUILD CONDITIONS ANALYSIS SUMMARY

Table 1		
LOS for Signalized Intersections – Build 2012		
Intersection	Intersection LOS (Control delay in seconds)	
	AM Peak	PM Peak
SR 360 at SR 176	E (55.9)	D (37.9)
SR 360 at Old Lost Mountain Road	C (25.6)	C (28.8)
SR 360 at North Bullard Road	A (4.9)	B (19.2)
SR 360 at Corner Road/Florence Road	C (20.4)	B (19.3)
SR 360 at Poplar Springs Road	A (6.6)	B (19.7)
SR 360 at Smith Road/Lake Road	C (22.2)	A (3.5)
SR 360 at SR 92	C (20.7)	C (20.1)
SR 360 at SR 120	C (31.2)	D (40.2)

Table 2		
LOS for Unsignalized Intersections – Build 2012		
Minor Road Approach	Approach LOS (approach delay in seconds)	
	AM Peak	PM Peak
SR 360 at Pine Tree Lane		
Northbound	C (16.2)	B (15.0)
SR 360 at Covington Drive		
Southbound	C (15.7)	C (21.4)
SR 360 at Macland Springs Drive/Old Mill Road		
Northbound	C (15.2)	B (12.6)
Southbound	C (16.0)	D (27.3)
SR 360 at Heathwood Place		
Southbound	B (11.0)	C (16.3)
SR 360 at Rounddale Rd		
Northbound	C (18.7)	B (11.5)

Table 3		
LOS for Signalized Intersections – Build 2017		
Intersection	Intersection LOS (Control delay in seconds)	
	AM Peak	PM Peak
SR 360 at SR 176	E (64.8)	D (40.0)
SR 360 at Old Lost Mountain Road	D (40.4)	D (35.5)
SR 360 at North Bullard Road	A (6.4)	B (13.6)
SR 360 at Corner Road/Florence Road	C (28.5)	C (20.9)
SR 360 at Poplar Springs Road	A (9.5)	A (7.6)
SR 360 at Smith Road/Lake Road	B (19.5)	A (9.1)
SR 360 at SR 92	C (21.4)	C (21.1)
SR 360 at SR 120	D (36.8)	D (49.1)

Table 4		
LOS for Unsignalized Intersections – Build 2017		
Minor Road Approach	Approach LOS (approach delay in seconds)	
	AM Peak	PM Peak
SR 360 at Pine Tree Lane		
Northbound	C (18.0)	C (16.5)
SR 360 at Dunnington Drive		
Southbound	C (17.3)	C (24.9)
SR 360 at Ireland Springs Drive/Old Mill Road		
Northbound	C (17.2)	B (13.6)
Southbound	C (18.2)	D (33.9)
SR 360 at Heathwood Place		
Southbound	B (11.4)	C (17.8)
SR 360 at Exchange Road		
Northbound	C (20.7)	B (12.0)

Table 5		
LOS for Signalized Intersections – Build 2022		
Intersection	Intersection LOS (Control delay in seconds)	
	AM Peak	PM Peak
SR 360 at SR 176	F (82.7)	D (50.6)
SR 360 at Old Lost Mountain Road	E (56.7)	C (23.9)
SR 360 at North Bullard Road	A (5.3)	B (15.6)
SR 360 at Corner Road/Florence Road	C (29.4)	B (19.7)
SR 360 at Poplar Springs Road	A (7.4)	B (18.6)
SR 360 at Smith Road/Lake Road	B (15.8)	A (3.4)
SR 360 at SR 92	C (23.6)	C (23.5)
SR 360 at SR 120	D (44.2)	D (49.3)

Table 6		
LOS for Unsignalized Intersections – Build 2022		
Minor Road Approach	Approach LOS (approach delay in seconds)	
	AM Peak	PM Peak
SR 360 at Eric Free Lane		
Northbound	C (20.7)	C (18.6)
SR 360 at Covington Drive		
Southbound	C (19.8)	D (30.6)
SR 360 at Macland Springs Drive/Old Mill Road		
Northbound	C (20.9)	C (15.1)
Southbound	C (21.9)	E (45.7)
SR 360 at Heathwood Place		
Southbound	B (11.9)	C (20.0)
SR 360 at Eastgate Rd		
Northbound	C (23.5)	B (12.7)

Note: * - Delay greater than 1,000 seconds

Table 7		
LOS for Signalized Intersections – Build 2027		
Intersection	Intersection LOS (Control delay in seconds)	
	AM Peak	PM Peak
SR 360 at SR 176	F (127.0)	E (57.9)
SR 360 at Old Lost Mountain Road	E (74.1)	D (45.7)
SR 360 at North Bullard Road	A (7.2)	B (18.8)
SR 360 at Corner Road/Florence Road	C (30.5)	C (29.9)
SR 360 at Poplar Springs Road	A (7.6)	C (21.5)
SR 360 at Smith Road/Lake Road	C (21.5)	A (4.8)
SR 360 at SR 92	C (26.0)	C (25.4)
SR 360 at SR 120	E (72.1)	E (67.0)

Table 8		
LOS for Unsignalized Intersections – Build 2027		
Minor Road Approach	Approach LOS (approach delay in seconds)	
	AM Peak	PM Peak
SR 360 at Pine Tree Lane		
Northbound	C (24.8)	C (21.9)
SR 360 at Covington Drive		
Southbound	C (23.6)	E (40.3)
SR 360 at McEland Springs Drive/Old Mill Road		
Northbound	D (28.4)	C (17.6)
Southbound	D (28.3)	F (70.2)
SR 360 at Heathwood Place		
Southbound	B (12.6)	C (23.2)
SR 360 at Rattlesnake Rd		
Northbound	D (27.4)	B (13.6)

Note: * - Delay greater than 1,000 seconds

Table 9		
LOS for Signalized Intersections – Build 2032		
Intersection	Intersection LOS (Control delay in seconds)	
	AM Peak	PM Peak
SR 360 at SR 176	F (168.3)	E (71.0)
SR 360 at Old Lost Mountain Road	F (102.6)	E (69.6)
SR 360 at North Bullard Road	A (6.2)	B (19.8)
SR 360 at Corner Road/Florence Road	D (32.4)	C (32.5)
SR 360 at Poplar Springs Road	A (8.5)	B (19.9)
SR 360 at Smith Road/Lake Road	B (18.7)	A (5.2)
SR 360 at SR 92	C (28.1)	C (27.5)
SR 360 at SR 120	F (106.3)	F (95.6)

Table 10		
LOS for Unsignalized Intersections – Build 2032		
Minor Road Approach	Approach LOS (approach delay in seconds)	
	AM Peak	PM Peak
SR 360 at Lane Free Lane		
Northbound	D (31.1)	D (26.6)
SR 360 at Coughton Drive		
Southbound	D (29.5)	F (57.1)
SR 360 at McLand Springs Drive/Old Mill Road		
Northbound	E (47.0)	C (21.5)
Southbound	E (40.1)	F (126.2)
SR 360 at Hermitage Place		
Southbound	B (13.4)	D (27.5)
SR 360 at Resolute Rd		
Northbound	D (32.6)	B (14.7)

ADDITIONAL IMPROVEMENTS

Improvement measures developed to improve the LOS of the following intersections to "E" for the design year 2032 are listed below. It should be noted that these measures are in addition to the lane geometry shown in the Concept Design.

SR 360 @ SR 120

- Install a third northbound through lane of 500 ft. Install a third receiving lane on the northbound departure to accommodate the additional through lane.
- Install a third southbound through lane of 500 ft. Install a third receiving lane on the southbound departure to accommodate the additional through lane.

SR 360 @ Macland Springs Dr/Old Mill Rd

Install a traffic signal by 2032. This intersection currently does not meet signal warrant. The projected traffic volumes in 2032 will meet signal warrant.

SR 360 @ SR 176

- Install a third westbound left turn lane of 300 ft. Install a third receiving lane on the southbound departure to accommodate the additional left-turn lane.
- Install a second northbound through lane of 500 ft. Install a second receiving lane on the northbound departure to accommodate the additional through lane.
- Install a second northbound left lane of 350 ft.
- Install a third southbound left turn lane of 250 ft. Install a third receiving lane on the eastbound departure to accommodate the additional left-turn lane.
- Install a second southbound through lane of 500 ft
- Signal upgrade

ATTACHMENT 4

BRIDGE INVENTORY DATA LISTING GEORGIA DEPARTMENT OF TRANSPORTATION

Structure ID: 067-0063-0

Cobb

SUFF. RATING

81.38

Location & Geography

Signs & Attachments

* Structure I.D.No:	067-0063-0	* 104 Highway System:	0	* 225 Expansion Joint Type:	00
* 200 Bridge Information	07	* 26 Functional Classification:	J6	* 242 Deck Drains:	0
* 6A Feature Int:	POWDER SPRINGS CREEK	* 204 Federal Route Type:	M	* 243 Parapet Location:	0
* 6B Critical Bridge:	0	* 105 Federal Lands Highway:	0	Height:	0.00
* 7A Route Number Carried:	SR00360	* 110 Truck Route:	0	Width:	0.00
* 7B Facility Carried:	SR 360	* 206 School Bus Route:	1	* 238 Curb:	0.00 0
* 9 Location:	3.8 MI NW OF POWDER SPR	* 217 Benchmark Elevation:	0000.00	* 239 Handrail:	0 0
* 2 DOT District:	7	* 218 Datum:	04	* 240 Median Barrier Rail:	0
* 207 Year Photo:	2003	* 19 Bypass Length:	04	* 241 Bridge Median Height:	0.00
* 91 Inspection Frequency:	24	* 20 Toll:	3	Width:	0.00
* 92A Fract Crit Insp Freq:	00	* 21 Maintenance:	01	* 230 Guardrail Loc Dir Rear:	0
* 92B Underwater Insp Freq:	00	* 22 Owner:	01	Fwrd:	0
* 92C Other Spc. Insp Freq:	00	* 31 Design Load:	6	Oppo Dir Rear:	0
* 4 Place Code:	00000	* 37 Historical Significance:	5	Fwrd:	0
* 5 Inventory Route (O/U):	1	* 205 Congressional District:	06	* 244 Approach Slab:	0
Type:	3	* 27 Year Constructed:	1971	* 224 Retaining Wall:	0
Designation:	1	* 106 Year Reconstructed:	0000	* 233 Posted Speed Limit:	45
Number:	00360	* 33 Bridge Median:	0	* 236 Warning Sign:	0
Direction:	0	* 34 Skew:	00	* 234 Delinctor:	0
* 16 Latitude:	33-54.2	* 35 Structure Flared:	0	* 235 Hazard Boards:	0
* 17 Longitude:	084-43.2	* 38 Navigation Control:	0	Utilities Gas:	00
* 98 Border Bridge:	000	* 213 Special Steel Design:	0	W	00
* 99 ID Number:	0000000000000000	* 267 Type of Paint:	0	Ele	00
* 100 STRAHNET:	0	* 42 Type of Service on:	1	Telephone:	00
* 12 Base Highway Network:	1	* 214 Movable Bridge:	0	St	00
* 13A LRS Inventory Route:	671036000	* 203 Type Bridge:	Q	* 247 Lighting Street:	0
* 13B Sub Inventory Route:	0	* 259 Pile Encasement:	3	Navigaion:	0
* 101 Parallel Structure:	N	* 43 Structure Type Main:	1	Aerial:	0
* 102 Direction of Traffic:	2	* 45 No. Spans Main:	003	* 248 County Continuity No.:	00
* 264 Road Inventory Mile Post:	000.27	* 44 Structure Type Appr:	0		
* 208 Inspection Area:	09	* 46 No. Spans Appr:	0000		
Engineer's Initial:	jal	* 226 Bridge Curve Horz:	0		
		* 111 Pier Protection:	0		
		* 107 Deck Structure Type:	N		
		* 108 Wearing Surface Type:	N		
			M		
			F		
			N		
* Location I.D. No.:	067-00360D-000.26E				

BRIDGE INVENTORY DATA LISTING GEORGIA DEPARTMENT OF TRANSPORTATION

Structure ID: 067-0063-0

Cobb

SUFF. RATING

81.38

Programming Data

201 Project No.: RAB (5) SP-1459-A (2)
 202 Plans Available: 1
 249 Prop. Proj. No.: 000000000000000000
 250 Approval Status: 0000
 251 P.I. No.: 00000000
 252 Contract Date: 02/01/1901
 260 Seismic No.: 00000
 75 Type Work: 00 0
 94 Bridge Imp. Cost: \$ 0
 95 Roadway Imp. Cost: \$ 0
 96 Total Imp Cost: \$ 0
 76 Imp. Length: 000000
 97 Imp. Year: 0000
 114 Future ADT: 020130 Year: 2024

Measurements

* 29 ADT: 013420 Year: 2004
 109 % Trucks: 2
 * 28 Lanes On: 02 Under: 00
 210 No. Tracks On: 00 Under: 00
 * 48 Max. Span Length: 0010
 * 49. Structure Length: 32
 51 Br. Rwdy. Width: 0.00
 52 Deck Width: 0.00
 * 47 Tot. Horz. Cl: 36.00
 50 Curb/Sdewlk Width: 0.00/0.00
 32 Approach Rdwy Width: 024
 * 229 Shoulder Width:
 Rear Lt: 6.00 Type: 8 Rt: 6.00
 Fwrd Lt: 6.00 Type: 8 Rt: 6.00
 Pavement Width:
 Rear: 24.00 Type: 2
 Fwrd: 24.00 Type: 2
 Intersection Rear: 0 Fwrd: 0
 36 Safety Features Br. Rail: 0
 Transition:
 App. G. Rail: 0
 App. Rail End: 0
 53 Minimum Cl. Over:
 Under: N
 * 228 Min. Vertical Cl
 Act. Odm Dir: 99 ' 99 "
 Oppo. Dir: 99 ' 99 "
 Posted Odm. Dir: 00 ' 00 "
 Oppo. Dir: 00 ' 00 "
 55 Lateral Undercl. Rt: N 99.90
 56 Lateral Undercl. Lt: 0.00
 * 10 Max Min Vert Cl: 99 ' 99 " Dir: 0
 39 Nav Vert Cl: 000 Horz: 0000
 116 Nav Vert Cl Closed: 000
 245 Deck Thickness Main: 0.00
 Deck Thick Approach: 0.00
 246 Overlay Thickness: 0.00
 212 Year Last Painted: Sup: 0000 Sub: 0000

Ratings

65 Inventory Rating Method: 5
 63 Inventory Rating Method: 5
 66 Inventory Type: 2 Rating: 36
 64 Operating Type: 2 Rating: 61
 231 Calculated Loads
 H-Modified: 00 0
 HS-Modified: 00 0
 Type 3: 00 0
 Type 3s2: 00 0
 Timber: 00 0
 Piggyback: 00 0

261 H Inventory Rating: 20
 262 H Operating Rating: 34
 67 Structural Evaluation: 5
 58 Deck Condition: N
 59 Superstructure Condition: N
 * 227 Collision Damage: 0
 60A Substructure Condition: N
 60B Scour Condition: 5
 60C Underwater Condition: N
 71 Waterway Adequacy: 9
 61 Channel Protection Cond: 6
 68 Deck Geometry: N
 69 UnderClr. Horz/Vert: N
 72 Appr. Alignment: 8
 62 Culvert: 5

Posting Data

70 Bridge Posting Required: 5
 41 Struct Open, Posted, Cl: A
 * 103 Temporary Structure: 0
 232 Posted Loads H-Modified: 00
 HS-Modified: 00
 Type 3: 00
 Type3s2: 00
 Timber: 00
 Piggyback: 00
 253 Notification Date 02/01/1901
 253 Fed Notify Date: 02/01/1901

Hydraulic Data

215 Waterway Data
 Highwater Elev.: 0000.0 Year: 1900
 Avg. Streambed Elev.: 0000.0 Freq.: 00
 Drainage Area: 00000
 Area Of Opening: 000270
 113 Scour Critical: 8
 216 Water Depth: 03.0 Br. Height: 11.0
 222 Slope Protection: 0
 221 Spur Dikes Rear: 0 Fwrd: 0
 219 Fender System: 0
 220 Dolphin: 0
 223 Culvert Cover:
 Type: 1
 No. Barrels: 3
 Width: 10.00 Height: 9.00
 Length: 52 Apron: 0
 * 265 U/W Insp. Area: 0 Diver: ZZZ
 * Location I.D. No.: 067-00360D-000.26E

ATTACHMENT 5



Mulkey Engineers & Consultants
1255 Canton Street, Suite G
Roswell, Georgia 30075
(678) 461-3511 Fax (678) 461-3494
e-mail: sgero@mulkeyinc.com

MEETING MINUTES

P.I. No.: 0006049
CSSTP-0006-00(049)
Cobb/Paulding Counties
SR 360 From SR 120 to SR 176

File: 2006146.00

DATE: September 15, 2006 1:30pm
SUBJECT: Initial Concept Team Meeting
LOCATION: Georgia Department of Transportation – Rm 444
ATTENDEES: see attached list

Handouts:

- Agenda
- DRAFT Concept Report

- 1) **INTRODUCTIONS** – everyone introduced themselves
- 2) **ROLES AND RESPONSIBILITIES** – Scott went through the following:
 - a) This is a **TURN KEY** Project
 - b) **GDOT-OCD** – Robert Reid, Project Manager; Vinesha Pegram, Assistant PM
 - c) **Mulkey Engineers & Consultants** – Prime
 - i) Neil Davis – Project Manager
 - ii) Scott Gero – Technical Project Manager- Senior Engineer
 - d) Database –
 - i) **3DS** – Mapping – from aerials flown in February/March 2006
 - ii) **Wolverton & Associates** – field enhancements and database
 - iii) **American Engineers** – R/W Staking
 - e) Subsurface Utility Engineering (SUE) –
 - i) Paulding County – **Phoenix Solutions**
 - ii) Cobb County – **Mulkey Engineers & Consultants**
 - f) Environmental –
 - i) **NEPA** – **Mulkey Engineers & Consultants** – Heather Colston
 - ii) **History** – **Mulkey Engineers & Consultants**
 - iii) **Ecology** – **Mulkey Engineers & Consultants**
 - iv) **Archaeology** – **New South Associates**
 - v) **UST Investigations** – **NOVA Engineering**
 - g) **Traffic Engineering** – **Grice & Associates**
 - h) **Geotechnical** – **NOVA Engineering**
 - i) **Drilling** – **Ranger Consulting**
 - i) **Design** –
 - i) **Roadway** - **Mulkey Engineers & Consultants**
 - ii) **Bridge** – **JB Trimble**
 - j) **Right-of-Way** – Estimates and Acquisition – **Moreland Altobelli Associates, Inc.**



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- 3) **NEED & PURPOSE** – Heather read the Need & Purpose statement from the DRAFT Concept Report which was handed out to everyone.
- 4) **DATA COLLECTED TO DATE** – Scott went through the following items:
- a) Survey – preliminary database complete on September 8
 - b) SUE – QL-D complete
 - i) Major Water Line (20”) running along south side of existing SR 360. A 36” water main runs on the east side of Florence Rd, crosses to the west side and continues up Corner Rd.
 - ii) Major transmission line in NW quadrant of SR 360/SR 120 intersection.
 - c) Environmental –
 - i) History – draft DOE to be submitted 9/21/06
 - ii) Ecology – received an approved Ecology report on 8/21/06. We anticipate revising this fall after the Georgia Aster is surveyed during their blooming season.
 - iii) PAR – Draft PAR Report is 90% complete. Keisha Jackson (GDOT-OEL) stated that this PAR appears eligible for a circulation review rather than having a meeting based on the limited amount of wetland impacts (0.2 acres). It was agreed that the PAR does not have to be complete prior to the Concept Team Meeting.
 - iv) Archaeology – holding off on field work pending approval of the concept alignment today.
 - v) UST’s - holding off on field work pending approval of the concept alignment today. It was suggested that a UST is located in the SW corner of SR 360 and Florence Road.
 - vi) Social/Economic –
 - (1) very few low income
 - (2) no minority communities
 - vii) Public Involvement Plan (PIP) – approved 9/13/06
 - d) Traffic Data – Initial Conditions Assessment Report complete. Robert Reid (GDOT-OCD) directed Scott to submit the report to Abby Ebodaghe and Dave Peters (GDOT-OEL) for their review and approval.
- 5) **CONCEPT REPORT \ PREFERRED ALTERNATE** – Scott read through the concept report and walked everyone through the concept layout.
- Design Criteria –
- Functional Classification: Urban Minor Arterial
 - Design Speed: 45 mph
 - E_{max}: 4%
 - R/W Width: Approx. 150’



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Typical Section – two-12 ft lanes in each direction and a 24 ft raised median with curb and gutter and sidewalks

Ken Werho (GDOT-TS&D) informed everyone that the sidewalk will be changing to 6' wide sometime in the next 12 months. This will be for ADA requirements so two wheelchairs can pass.

Ken also recommended that the need for dual left turn lanes for westbound to southbound traffic should be studied at the intersection of SR 360 and Old Lost Mountain Road.

6) COORDINATION –

a) Meetings to date –

- | | |
|---|---------|
| (1) GDOT Kick Off Mtg – | 2/22/06 |
| (2) GDOT SUE Kick Off Mtg - | 3/23/06 |
| (3) Introduction to Paulding Co - | 5/3/06 |
| (4) Introduction to Cobb Co - | 5/16/06 |
| (5) Introduction to District/Area Engineers - | 5/25/06 |
| (6) Cobb County Marietta Water Authority - | 6/20/06 |
| (7) Introduction to FHWA - | 7/6/06 |
| (8) Discussion of Corner Rd Development - | 7/21/06 |
| (9) Coordination with Dist 7 on Intersect. Imp. - | 8/30/06 |

b) Developments/Other Projects – Scott described the proposed improvements and stated that he is working with both Paulding and Cobb counties as the developments are identified.

- (1) Widening of SR 92 – Project STP-186-1(25) PI 621720 – **In Preliminary Plans Phase** (GDOT Road)
- (2) Intersection Improvements at SR 360/Macland Road & Corner Road and Bullard Roads – Project STP-0001-00(239) PI 0001239 – **In Preliminary Plans Phase** (GDOT District 7)
- (3) Intersection Improvements at Poplar Springs Road and SR 360/Macland Road – PI 051051 for Paulding County
- (4) Intersection Improvements at Lake & Smith Roads and SR 360/Macland Road – PI 051052 for Paulding County
- (5) Development – Springfield Subdivision with entrance on Ragsdale Road
- (6) Development – Macland Mill Subdivision with entrance on SR 360 just east of Hearthwood Place
- (7) Development – Oak Crest Subdivision with entrance on Corner Road at intersection of Corner Road and SR 360/Macland Road. Scott explained that if the developer redevelops the property as planned, then Mulkey's historian may need to reevaluate the property for its eligibility on the National Register. If the resource is determined no longer eligible by the historian and concurred with by SHPO, the alignment will shift to widening to the north to minimize impacts to the church on the south side of SR 360 as well as to reduce impacts along the S-



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curve just west of this location. The proposed development will accommodate this shift. It is expected that the developer will soon begin the redevelopment of the property.

- (8) Development – Trinity Village Retirement Community with entrance on SR 360/Macland Road located opposite of church.
- (9) Development – Mixed Use Development in SW corner of SDR 360/Macland Road and SR 176/New Macland Road.
- c) Utility –
 - i) Cobb Marietta Water Authority – proposing to upgrade their 20" line to a 36" or greater in the near future.
 - ii) Blake Pendley (Greystone Power) stated that they have distribution lines throughout the corridor in Paulding County. He also stated that he did not think that Georgia Power had any facilities on this project corridor. Clyde Cunningham (GDOT-Dist 7 Utilities) stated that they may not have any facilities but they have rights along the corridor and therefore are listed on the Concept Report.
- d) Public Involvement – It was agreed that this concept layout can be presented to the public in a PIOH and that the PIOH does not need to take place before the Concept Team Meeting. It was determined to try and schedule the PIOH for early November since OEL is fully booked for the month of October.

7) Schedule

- a) PAR Meeting – Draft report to be complete next Friday. PAR to be circulated for approval rather than holding a meeting.
- b) PIOH – Need to schedule for early November
- c) Concept Team Meeting – We are ready to request this meeting pending revisions to Draft Concept Report based on OCD's comments.
- d) Begin Preliminary Plans – Fall 2006
- e) Complete EA – 12/27/07
- f) FFPR – 2/6/08
- g) R/W Plans – 9/3/08 – Terry McCallister (GDOT-R/W) stated that this is a very aggressive schedule for acquisition and may not be reasonable.
- h) FFPR – 8/28/09
- i) Let – 4/5/10

- 8) Post Meeting – additional comments on Draft Concept Report from Vinesha Pegram were forwarded to Scott Gero on 9/18/06.
 - a) Minor formatting comments – Scott replied that he will make these corrections.
 - b) Comment on the typical section. Vinesha commented that the 24' raised median should be a 20' raised median with 2' paved buffers on each side of the median. Scott replied that he intended the typical section to provide a 24' raised median. SR 360 is an urban minor arterial and is not a high speed facility (D.S. = 45 mph). According to the current