

D.O.T. 66

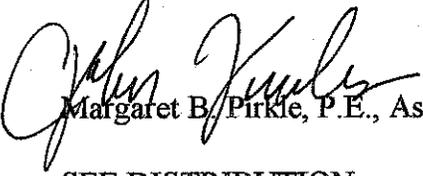
**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE STP-0002-00(637) Cherokee County
P. I. No. 0002637

OFFICE Preconstruction

DATE April 21, 2003

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

TO SEE DISTRIBUTION

SUBJECT PROJECT CONCEPT REPORT APPROVAL

Attached for your files is the approval for subject project.

MBP/cj

Attachment

DISTRIBUTION:

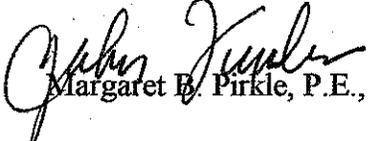
David Mulling
Harvey Keepler
Jerry Hobbs
Percy Middlebrooks
Michael Henry
Phillip Allen
Marta Rosen
Paul Liles
Ben Buchan
Kent Sager
BOARD MEMBER

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE STP-0002-00(637) Cherokee County **OFFICE** Preconstruction
P.I. No. 0002637

DATE April 11, 2003

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

TO Frank L. Danchetz, P.E., Chief Engineer

SUBJECT PROJECT CONCEPT REPORT

This project is the widening and reconstruction of Sixes Road/CR 779 from I-575 to Old SR 5/CR 1061 for a total of 0.32 mile. Currently, this section of Sixes Road is a two lane roadway with a posted speed of 35 MPH. Sixes Road/CR 779 is classified as a minor rural collector providing direct access between rapidly growing areas of Cherokee County and I-575. Traffic projections for this project are 17,825 VPD for 2002 and 33,098 VPD for 2022. This project is coordinated with Cherokee County's current improvements to Sixes Road west of I-575 and future improvements to Sixes Road bridge over I-575.

The proposed construction will provide two, 12' lanes in each direction separated by a 20' raised median and turning lanes. Sidewalks will be constructed on both sides of the roadway. The existing traffic signals at I-575 and Old SR 5 will be upgraded. Traffic will be maintained during construction.

Environmental concerns include requiring a Categorical Exclusion will be prepared; a public information meeting will be held; time saving procedures are appropriate.

The estimated costs for this project are:

	<u>PROPOSED</u>	<u>APPROVED</u>	<u>PROG DATE</u>	<u>LET DATE</u>
Construction (includes E&C and inflation)	\$885,000	\$780,000	2004	2004
Right-of-Way & Utilities*	Local	Local		

*Cherokee County signed PMA on 6-19-02 for PE, right-of-way, and utilities.

Frank L. Danchetz

Page 2

STP-0002-00(637) Cherokee

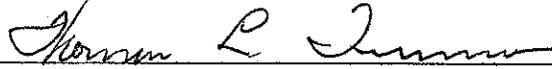
April 11, 2003

I recommend this project concept be approved.

MBP:JDQ/cj

Attachment

CONCUR



Thomas L. Turner, P.E., Director of Preconstruction

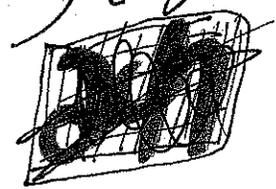
APPROVE



Frank L. Danchetz, P.E., Chief Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

368


FILE: STP-0002-00(637) Cherokee
P.I. Number 0002637

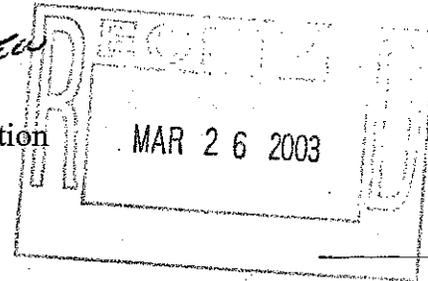
OFFICE: Engineering Services

DATE: March 25, 2003

FROM: David Mulling, Project Review Engineer *REW*

TO: Meg Pirkle, Assistant Director of Preconstruction

SUBJECT: CONCEPT REPORT



We have reviewed the concept report submitted March 17, 2003 by the letter from Kent Sager dated March 14, 2003 and have the following comments:

- The condition of the existing pavement should be considered in overlay quantities.
- The Little River Wildlife area should be considered to determine if Section 4(f) evaluation will be required.

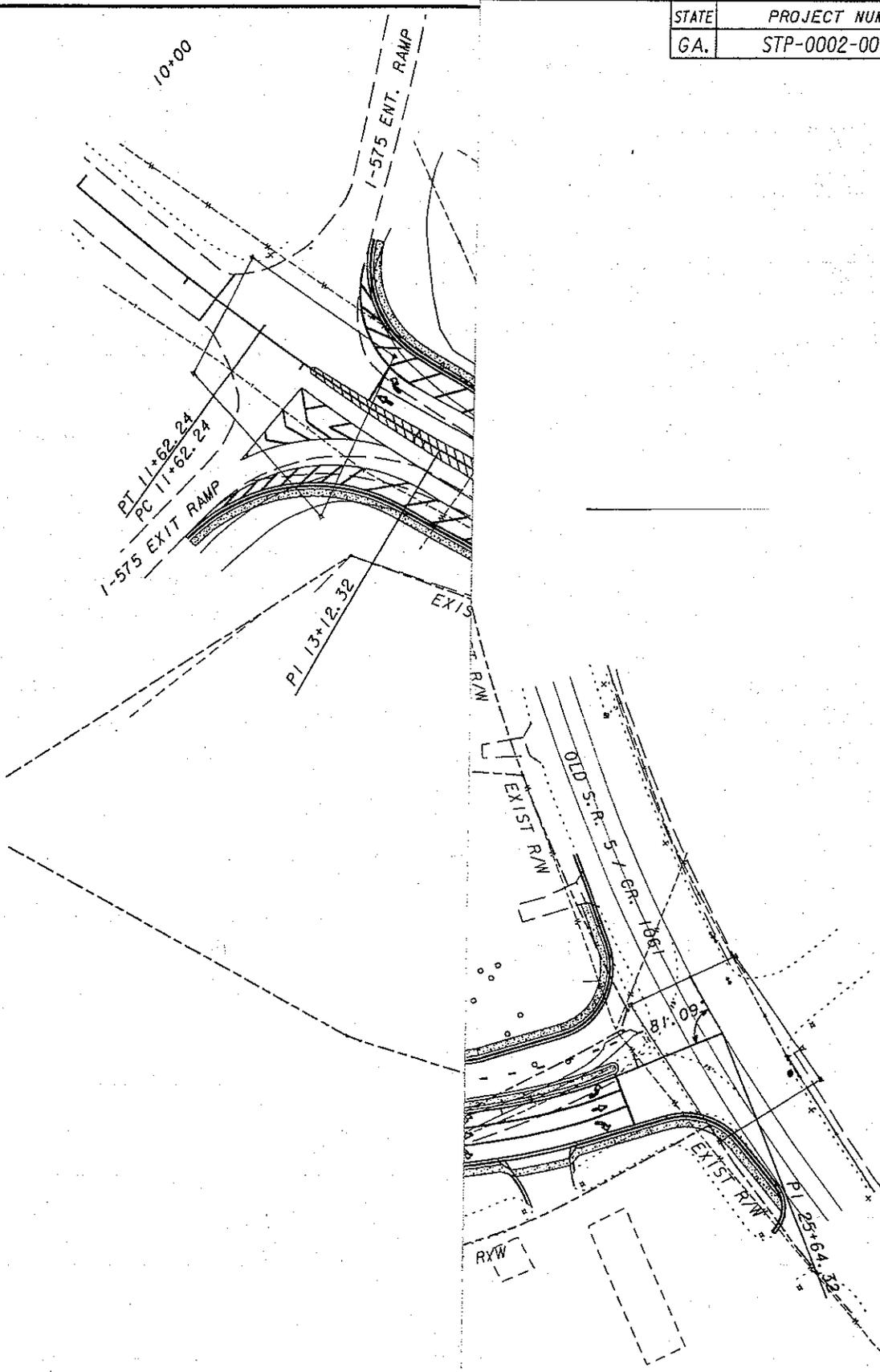
The costs for the project are:

Construction	\$735,175
Inflation	\$75,355
E&C	\$73,518
Reimbursable Utilities	LGPA
Right of Way	LGPA

REW

c: Kent Sager, Attn: Dewayne Comer

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	STP-0002-00(637)		



PLANS PREPARED AND SUBMITTED BY:



74 Lyndon Lane, Suite 9
 Louisville, KY 40222
 (502) 338-0900
 55 Aberdeen Drive, 3580 Cherokee Street, Suite 401
 Glasgow, KY 42403
 (270) 651-1000
 3580 Cherokee Street, Suite 404
 Kennesaw, GA 30144
 (770) 421-8422

AMERICAN ENGINEERS, INC.

PROFESSIONAL ENGINEERING

DESIGN CONSULTANT

GEORGIA
 DEPARTMENT OF TRANSPORTATION
 CONCEPT LAYOUT
 SIXES ROAD

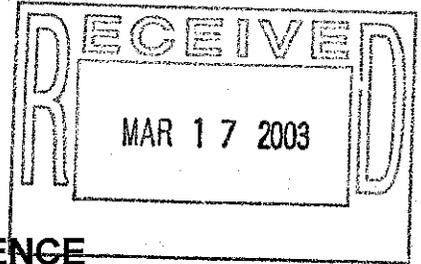
 55

SCORING RESULTS AS PER MOG 2440-2

Project Number: STP-0002-00(637)		County: Cherokee		PI No.: 0002637	
Report Date: March 14, 2003		Concept By: DOT Office: District 6			
<input checked="" type="checkbox"/> Concept Stage		Consultant: American Engineers, Inc.			
Project Type: Choose One From Each Column		<input type="checkbox"/> Major <input checked="" type="checkbox"/> Minor	<input type="checkbox"/> Urban <input checked="" 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	90	Existing pavement should be considered in overlay.			
Environmental	90	Little River Wildlife area should be considered to determine if Section 4(f) evaluation will be required.			
Right of Way	100				
Utility	100				
Constructability	100				
Schedule	100				

DEPARTMENT OF TRANSPORTATION

STATE OF GEORGIA



INTERDEPARTMENT CORRESPONDENCE

FILE: STP-0002-00 (637) Cherokee County
P.I. No. 0002637
Sixes Road Widening

OFFICE: Cartersville

DATE: March 14, 2003

FROM: Kent L. Sager, District Engineer

TO: Meg Pirkle, Asst. 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). This concept was previously submitted in error, please disregard this previous submittal.

If you have any questions please contact David Moore at (770) 387-3622.

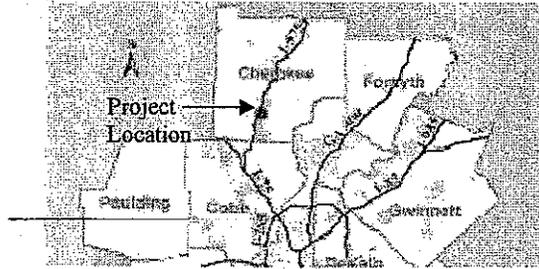
KLS:dpm

Cc: Marta Rosen, State Transportation Planning Administrator
Percy Middlebrooks, State Transportation Programming Engineer
Harvey Keepler, State Environment/Location Engineer
Phillip Allen, State Traffic Safety and Design Engineer
David Mulling, Project Review Engineer

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
PROJECT CONCEPT REPORT**

Project Number: STP-0002-00(637)
County: Cherokee
P. I. Number: 0002637

Federal Route Number: None
State Route Number: None



**Sixes Road Widening
East of I-575 to Old SR 5**

Recommendation for approval:

DATE 3-14-03

Curtis D. Corn
Project Manager

DATE 3/14/03

Ken [Signature]
Office Head/District Engineer

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

DATE _____

State Transportation Planning Administrator

DATE _____

State Transportation Programming Engineer

DATE _____

State Environmental/Location Engineer

DATE _____

State Traffic Safety & Design Engineer

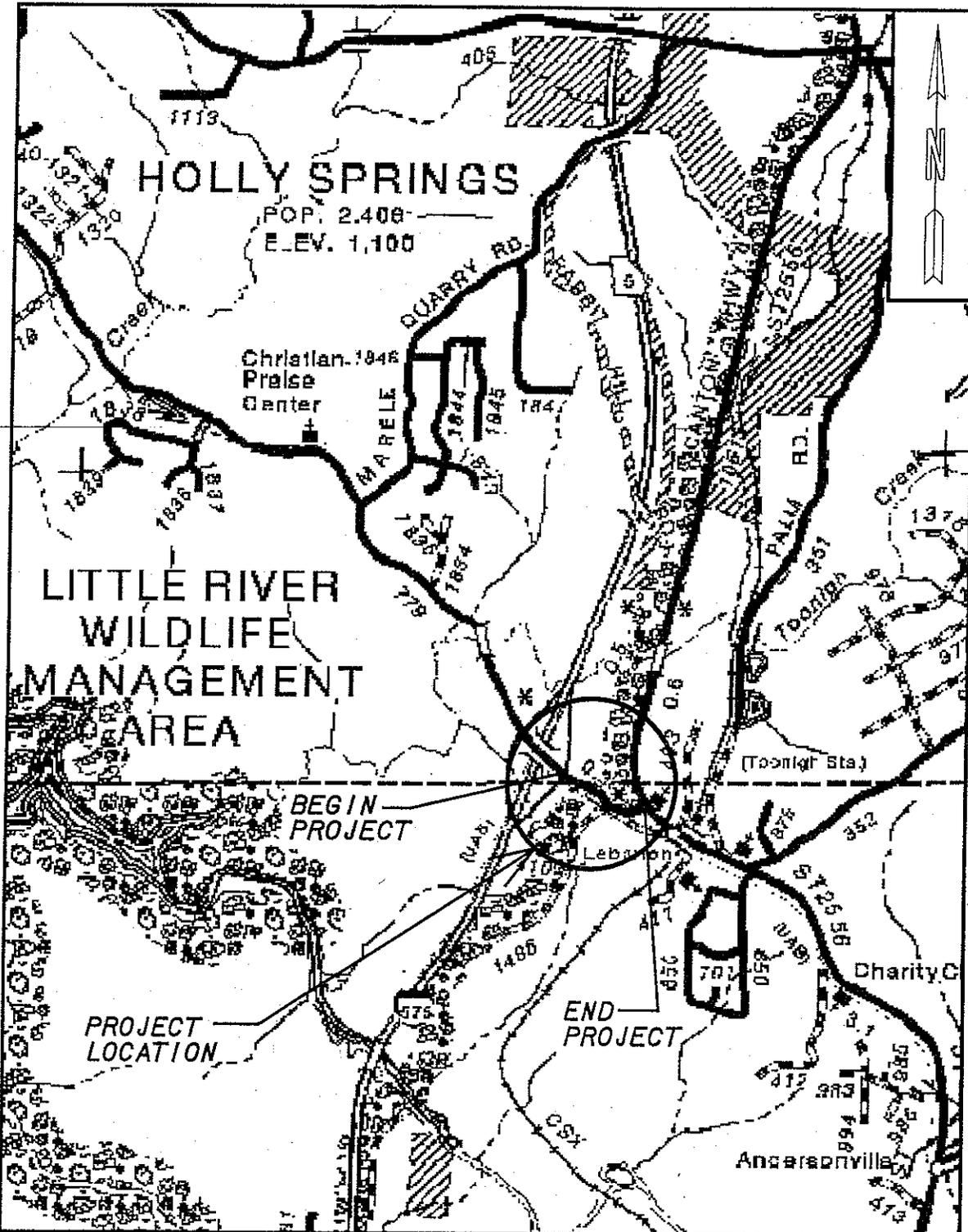
DATE _____

District Engineer

DATE _____

Project Review Engineer

LOCATION MAP



AMERICAN ENGINEERS, INC.
 www.aei.com

Branch Office
 14 Lyndon Lane, Suite 3
 Louisville, KY 40222
 502-339-1090
 2550 Cherokee Street, Suite 401
 Glasgow, KY 42401
 (270) 651-1220
 3001 42nd Street, Suite 401
 Gainesville, GA 30606
 (770) 421-8422

PROFESSIONAL ENGINEERING

SIXES ROAD WIDENING
 STP-0002-00(637) P. I. NO. 0002637
 CHEROKEE COUNTY

Project Concept Report page 3
Project Number: STP-0002-00(637)
P. I. Number: 0002637
County: Cherokee

Need and Purpose: Located in south central Cherokee County, Sixes Road (CR 779) is a rural two lane facility providing direct access between rapidly growing areas of Cherokee County and I-575. Due to zoning changes and rapid growth near I-575, Sixes Road is undergoing a dramatic change from rural, low density to high density mixed use developments. As a result of these changes, Cherokee County has proposed widening Sixes Road from Bells Ferry to Old SR 5/ CR 1061. This project is from I-575 to Old SR 5 (approx. 0.32 Miles). The Sixes Road widening is included in the current State Transportation Improvement Program (STIP). The project is currently scheduled to be let in Fiscal year 2004. The project designation in the Atlanta Regional Transportation Improvement Plan is CH 190.

The proposed improvements will widen the existing two lane facility to four lanes with a 20 ft. raised median and turning lanes. The existing traffic signals at I-575 and Old SR 5 will be upgraded. Traffic projections for this project are 17,825 AADT for year 2002 and 33,098 AADT for year 2022. The west terminus incorporates the I-575 / Sixes Road interchange NB ramps. The east terminus is Old SR 5/CR 1061 which is the current terminus of Sixes Road. This project is coordinated with Cherokee County's current improvements to Sixes Road west of I-575 and future improvements to Sixes Road bridge over I-575. Sixes Road is functionally classified as a minor rural collector.

Sixes Road widening and proposed improvement's are included in the Georgia DOT construction program. The design, right-of-way and utility relocation will be funded by Cherokee County.

Other projects identified in the STIP in vicinity of this project include P.I. 713640 - HOV lanes along I-575 to Sixes Road P.I. 662620 - Old SR 5 from Woodstock City limits to Holly Springs City Limits.

Description of the proposed project: Project STP-0002-00(637) begins at intersection of I-575, mile log 0032 and extends eastward 0.32 miles ± to Old SR 5/CR 1061, mile log 0000. The project is located approximately 1.5 miles south of Holly Springs. The termini at the I-575 interchange and Old SR 5 are logical because they are incorporated into Cherokee County's widening project and improvements along the roadway corridor. The widening of Sixes Road will help in providing better access between rapidly growing areas of Cherokee County and I-575.

Is the project located in a Non-attainment area? Yes No. The conforming plans model describes the project as the widening of Sixes Road east of I-575 to Old SR 5 from 2 to 4 lanes. The project will create continuity with improvements on the west side of I-575 relieving congestion and bottlenecks. The proposed completion date is 2005.

PDP Classification: Major Minor

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

Project Concept Report page 4
Project Number: STP-0002-00(637)
P. I. Number: 0002637
County: Cherokee

Functional Classification: Minor Rural Collector

U. S. Route Number(s): None

State Route Number(s): None

Traffic (AADT):

Current Year: (2002) 17,825 Design Year: (2022) 33,098

Existing design features:

- Typical Section: 2-12ft. travel lanes with auxiliary turn lanes at I-575 NB entrance ramp and at Old SR 5/CR 1061. Sections of existing roadway contain curb and gutter.
- Posted speed 35 mph Maximum degree of curvature: 18°
- - Maximum grade: -5.5 %
- Width of right of way: Existing varies 30 ft. to 60 ft.
- Major structures: None
- Major interchanges or intersections along the project: The project begins at the I-575 NB ramps.
- Existing length of roadway segment: Length of roadway segment is 1800'± and beginning on the West at County mile log 0032 and ending at mile log 0000 at Old SR 5.

Proposed Design Features:

- Proposed typical section(s): 4 – lane curb and gutter with a 20 ft. raised median and turning lanes will be provided. Sidewalks will be provided on both sides of the roadway.
- Proposed Design Speed Mainline 35 mph
- Proposed Maximum grade Mainline 6 %
Maximum grade allowable 9 %.
- Proposed Maximum grade Side Street 5 %
Maximum grade allowable 9 %.
- Proposed Maximum grade driveway 15 %
- Proposed Maximum degree of curve 13°30'.
Maximum degree allowable 13°30'.
- Right of way
 - Width Minimum 92'
 - Easements: Temporary (X), Permanent (X), Utility (), Other ().
 - Type of access control: Full (), Partial (), By Permit (X), Other ().
 - Number of parcels: 3 Number of displacements:
 - Business: 0
 - Residences: 0
 - Mobile homes: 0
 - Other: 0
- Structures:
 - Bridges: None
 - Retaining walls: None
- Major intersections and interchanges: This project is adjacent to the I-575 NB entrance and exit ramps. There will be no significant impacts to the ramps from this project. The east termini is Old SR 5. The Sixes Road approach to the intersection will be widened.

Proposed Design Features (continued):

- Traffic control during construction: It is anticipated that this project will require staging during construction due to removal of existing pavement. Temporary lane closures and diversions will be necessary during construction.
- Design Exceptions to controlling criteria anticipated:

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

The widening of Sixes Road will take place on the North side of the existing alignment, due to the proximity of the cemetery on the South side of the roadway. The AASHTO superelevation rates will be attained on the curves, but there is insufficient length between the curves to provide the required runoff lengths. There are limited options for widening the roadway due to the desire to maintain the 35 MPH design speed, the inclusion of the 20' raised median in the cross section, and the historic property in the northwest quadrant of the Sixes Road/Old SR 5 intersection. These parameters preclude obtaining the desired runoff.

- Design Variances: Median Break Spacing - The minimum desired spacing for median breaks on a rural project is ¼ mile. A median break is proposed at North Rope Mill Road. This roadway has a peak hour volume of 170 turning vehicles. Without the median break, turning vehicles would either travel to Old SR 5 to make a U-turn or to the I-575 NB ramp. U-turns at the ramps would create a dangerous situation, as no turn lane would be provided, due to the safety issues that arise from a turn lane at an exit ramp. A median break at North Rope Mill Road is the logical recommendation.
- The maximum degree of curve is based on 4% superelevation. This is due to the fact that the typical section will be a curb and gutter section. In addition, the land use in the area is quickly transitioning from rural to urban with development occurring on and near the proposed project.

Proposed Design Features (continued):

- Environmental concerns:

It is currently anticipated that the project would meet the requirements for a Categorical Exclusion to satisfy the NEPA requirements. The Sixes Road project:

- Will not require the relocation of people or businesses.
 - Should not have a significant impact on any natural, cultural, recreational, historic, or other resource. There are no jurisdictional waters located in the project corridor and USACOE permitting should not be required. The impacts to the church property near the cemetery will be minimal. There are no recreational facilities impacted by this project and therefore, a 4(f) determination is not necessary. Due to the location and nature of the project, detrimental impacts to existing ecological resources would not be expected. It is not expected that any cultural resources with regard to significant structures and/or archaeological finds will be impacted by the project.
 - Should not involve significant air, noise or water quality impacts. The ADT levels require that an air quality analysis be done and federal funding requires that a noise analysis be completed (historical models for similar projects may negate the need for site specific modeling). Based on the nature of the project, any increases in air and/or noise levels would be expected to be minimal and not of a degree to warrant mitigation.
 - There are no farmlands impacted by this project. A Farmland Conversion Impact Rating is not required.
 - Will not detrimentally impact existing travel patterns.
- Level of environmental analysis:
 - Are Time Savings Procedures appropriate? Yes (), No (X),
 - Categorical exclusion (X)
 - Utility involvements: Coordination with Cherokee County Water, BellSouth, AT&T Broadband, Atlanta Gas Light, and Georgia Power Company will be necessary.

Project responsibilities:

- Design: Cherokee County has selected American Engineers, Inc. to design this project in accordance with the Local Government Project Agreement
- Right of Way Acquisition: Cherokee County
- Relocation of Utilities: Cherokee County
- Letting to contract: Georgia Department of Transportation
- Supervision of construction: Georgia Department of Transportation
- Providing material pits: Construction Contractor
- Providing detours: Cherokee County

Coordination

- Initial Concept Meeting date and brief summary: N/A.
- Concept meeting date and brief summary: March 6, 2003
- P. A. R. meetings, dates and results: N/A
- FEMA, USCG, and/or TVA: N/A
- Public involvement: To be scheduled as directed by the County and GDOT.
- Local government comments: N/A
- Other projects in the area:
 - CH-184 Sixes Road from Bells Ferry Road to I-575
 - AR-318B I-575 HOV-Phase I from I-75 North to Sixes Road (PI 713640)
 - AR-318C I-575 HOV-Phase II from Sixes Road to SR 20
 - CH-181 Old SR5 Intersection Reconstruction from Holly Springs City Limit to Woodstock City Limit
- Other coordination to date: None
- Railroads: None

Scheduling – Responsible Parties' Estimate

- Time to complete the environmental process: 4 Months (CE)
- Time to complete preliminary construction plans: 6 Months.
- Time to complete right of way plans: 3 Month.
- Time to complete the Section 404 Permit: N/A Months.
- Time to complete final construction plans: 2 Months.
- Time to complete to purchase right of way: 9 Months.

Other alternates considered:

No Build alternate – This alternative does not meet the need to reduce congestion and bottlenecks in the vicinity of the project.

Widening with a design speed of 45 MPH – A 45 MPH design speed would necessitate the relocation of the Sixes Road/ Old SR 5 intersection to the north approximately 250-300 ft. which would adversely impact the historic property in the northwest quadrant of the intersection.

Attachments:

1. Cost Estimates:
 - a. Construction including E&C,
 - b. Right of Way, and
 - c. Utilities.
2. Typical sections.
3. Accident Summaries & Capacity Analysis.
See Attached Draft Traffic Report by StreetSmarts.
4. LGPA.
5. Conforming plan's network schematics showing thru lanes.
6. Concept team meeting minutes.
7. Sketch location map: See page 2.

SCORING RESULTS AS PER TOPPS 2440-2

Project Number: STP-0002-00 (637)	County: Cherokee	PI No.: 0002637	
Report Date:			
Concept By:			
DOT Office:			
<input type="checkbox"/> CONCEPT			
Consultant: American Engineers Inc.			
Project Type: Choose One From Each Column	<input type="checkbox"/> Major	<input type="checkbox"/> Urban	<input type="checkbox"/> ATMS
	<input checked="" type="checkbox"/> Minor	<input checked="" type="checkbox"/> Rural	<input type="checkbox"/> Bridge
			<input type="checkbox"/> Building
			<input type="checkbox"/> Interchange
			<input type="checkbox"/> Intersection
			<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%	Good Presentation/Knowledge of Project	
Judgement	90%	Exist Pvmt not considered in overlay	
Environmental	90%	Need to check wildlife area	
Right of Way	100%	Avoided Historical site	
Utility	100%	Identified all utilities	
Constructability	90%	Need to consider stagind due to exist paving	
Schedule	90%	Need to expand times on items	

Attachment 1

Cost Estimates

PRELIMINARY COST ESTIMATE

PROJECT NUMBER: STP-0002-00(637)

COUNTY: Cherokee

DATE: November 1, 2002

ESTIMATED LETTING DATE: 2004

Revised January 20, 2003

PREPARED BY: American Engineers, Inc.

PROJECT LENGTH (0.32 MI)

() PROGRAMMING PROCESS (X) CONCEPT DEVELOPMENT () DURING PROJECT DEV.

PROJECT COST	
A. RIGHT-OF-WAY:	
1. PROPERTY (LAND & EASEMENT)	\$ 0
2. DISPLACEMENTS; RES:0, BUS;0, M.H.:0	\$ 0
3. OTHER COST (ADM./COST, INFLATION)	\$ 0
SUBTOTAL:A	\$ 0
B. REIMBURSABLE UTILITIES:	
1. RAILROAD	\$ 0
2. TRANSMISSION LINES	\$ 0
3. SERVICES	\$ LGPA
SUBTOTAL:B	\$ LGPA
C. CONSTRUCTION:	
1. MAJOR STRUCTURES	\$ 0
a. RETAINING WALLS	\$ 0
b. BRIDGES	\$ 0
c. DETOURS BRIDGES	\$ 0
d. BOX CULVERTS	\$ 0
SUBTOTAL:C-1	\$ 0

2. GRADING AND DRAINAGE:			
a. EARTHWORK 3000 CY @ \$2.80			\$ 8,400
b. DRAINAGE:			
1) Cross Drain Pipe (exclude box culverts)			\$ 0
2) Curb and Gutter			\$ 25,845
3) Longitudinal System(include catch basins)			\$ 54,600
		SUBTOTAL:C-2	\$ 88,845
3. BASE AND PAVING:			
a. AGGREGATE BASE			\$ 127,500
b. ASPHALT PAVING: Surface		\$40	\$ 55,200
Binder		\$37	\$ 84,780
Base		\$35	\$ 135,800
		SUBTOTAL:C-3.b	\$ 275,780
c. CONCRETE PAVING			\$ 0
d. OTHER			\$ 0
		SUBTOTAL:C-3	\$ 403,280
4. LUMP ITEMS:			
a. TRAFFIC CONTROL			\$ 25,000
b. CLEARING AND GRUBBING			\$ 2,800
c. LANDSCAPING			\$ 0
d. EROSION CONTROL			\$ 6,000
e. DETOURS			\$ 0
		SUBTOTAL:C-4	\$ 33,800
5. MISCELLANEOUS:			
a. CONCRETE ITEMS - Raised Median			\$ 76,250
b. SIGNING - STRIPING - SIGNAL			\$ 95,000
c. GUARDRAIL			\$ 0
d. SIDEWALK - MEDIAN BARRIER			\$ 38,000
		SUBTOTAL:C-5	\$ 209,250
6. SPECIAL FEATURES : N/A		SUBTOTAL:C-6	\$ 0

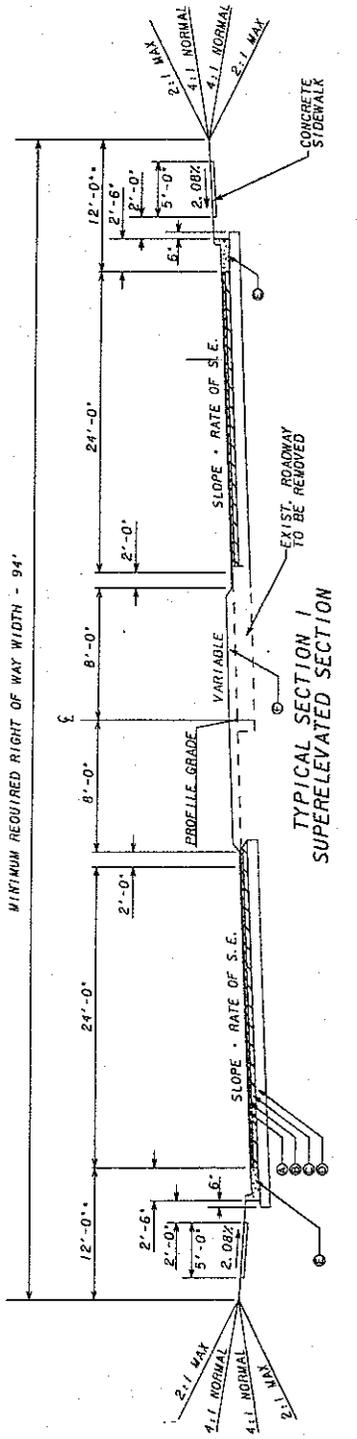
ESTIMATE SUMMARY		
A. RIGHT-OF-WAY		
	\$	BY COUNTY
B. REIMBURSABLE UTILITIES		
	\$	LGPA
C. CONSTRUCTION		
1. MAJOR STRUCTURES		
	\$	0
2. GRADING AND DRAINAGE		
	\$	88,845
3. BASE AND PAVING		
	\$	403,280
4. LUMP ITEMS		
	\$	33,800
5. MISCELLANEOUS		
	\$	209,250
6. SPECIAL FEATURES		
	\$	0
SUBTOTAL CONSTRUCTION COST		
	\$	735,175
E. & B. (10%)		
	\$	73,518
INFLATION (5% PER YEAR)		
	\$	82,891
NUMBER OF YEARS	2 YEARS	
TOTAL CONSTRUCTION COST		
	\$	891,584
GRAND TOTAL PROJECT COST		
	\$	891,584

Attachment 2

Typical Sections

LED NOTICE

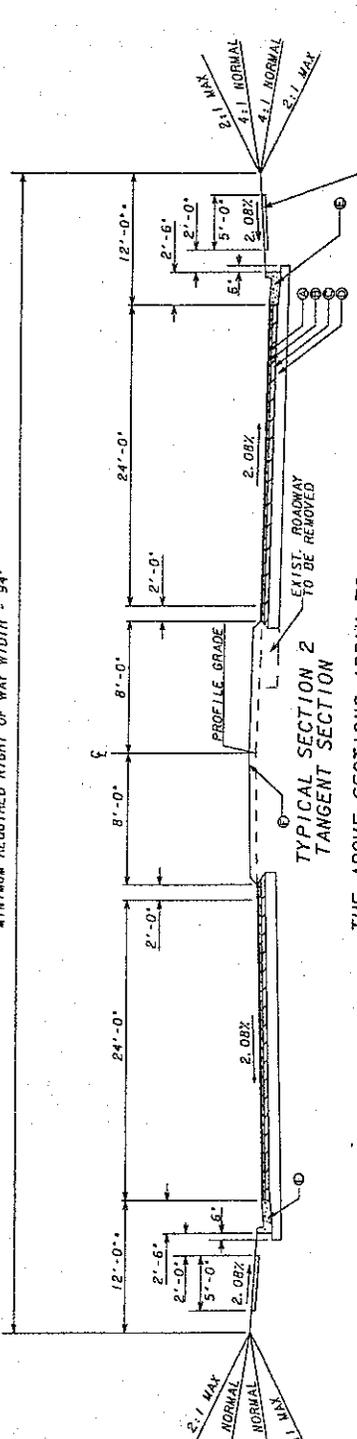
STATE	PROJECT NUMBER	SHEET NO.
GA.	STP-0002-0016371	1



TYPICAL SECTION 1
SUPERELEVATED SECTION

WHERE CUT/FILL SLOPES ARE
STEEPENED, THE SHOULDER
WIDTH SHALL BE WIDENED TO 4'-0"

- Ⓐ 12.5 mm ASPHALTIC CONCRETE SUPERPAVE (165 LB/YD³), MIX DESIGN LEVEL C
- Ⓑ 19 mm ASPHALTIC CONCRETE SUPERPAVE (220 LB/YD³), MIX DESIGN LEVEL C
- Ⓒ 25 mm ASPHALTIC CONCRETE SUPERPAVE (440 LB/YD³), MIX DESIGN LEVEL B
- Ⓓ 10" GRADED AGGREGATE BASE
- Ⓔ 8" X 30" CONC. CURB & GUTTER, TYPE 2
- Ⓕ 7 1/4" RAISED CONC. MEDIAN, TYPE 1 FACE (GA STD 9032 B)



TYPICAL SECTION 2
TANGENT SECTION

THE ABOVE SECTIONS APPLY TO:
SIXES ROAD

SLOPE CONTROL	
SLOPE	CUT
4:1	0' - 6"
2:1	OVER 6'
* REQUIRES GUARDRAIL	

PLANS PREPARED AND LIMITED BY: AMERICAN ENGINEERS, INC. 1111 W. 15th Street, Suite 1100, Fort Lauderdale, FL 33304-4000
 PROJECT NO. STP-0002-0016371-1
 SHEET NO. 1 OF 1
 DATE: 07/10/03
 AMERICAN ENGINEERS, INC. PERFORMANCE CONTRACTOR

DATE	REVISIONS	DATE	REVISIONS

CHEROKEE COUNTY
CAPITAL PROGRAM MANAGEMENT
TYPICAL SECTIONS
CONCEPT REPORT
SIXES ROAD

NOTICE OF LOCATION AND DESIGN APPROVAL

PROJECT STP-0002-00(637)
CHEROKEE COUNTY
P.I. No. 0002637

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 the above project.

The date of location approval is APRIL 2, 2003

Project number STP-0002-00(637) will widen Sixes Road to four lanes with a 20 ft. raised median and turning lanes. The existing traffic signals at I-575 and Old SR 5 will be upgraded. The widening will occur between the northbound ramps of I-575 and Old SR 5.

This project lies entirely within Land District 15, Land Lots 590, 591, 634, and 635 and GMD 890 and 1019 in Cherokee County.

The Sixes Road widening typical section consists of 4-12-ft. lanes divided by a 20-ft. raised concrete median. Turning lanes will be provided. This section will include a 12-ft. urban shoulder with a 5-ft. sidewalk. The project extends approximately 0.32 miles.

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

Mike Thomason, Area Engineer
mike.thomason@dot.state.ga.us
Georgia Department of Transportation
874 Peebles Valley Road, N.W.
Cartersville, Georgia 30120
(770)387-3680

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:

David Moore, District Design Engineer
david.moore@dot.state.ga.us
Georgia Department of Transportation
500 Joe Frank Harris Parkway, S.E.
P.O. Box 10
Cartersville, Georgia 30120
(770)387-3602

Any written request or communication in reference to this project or notice **SHOULD include the PROJECT AND PI NUMBERS AS NOTED AT THE TOP OF THIS NOTICE.**

Attachment 3

Traffic Report
including
Accident Summaries & Capacity Analysis

A CORRIDOR STUDY FOR SIXES ROAD

Prepared for:

Cherokee County

With:

American Engineers, Inc.

Prepared by:



October 2002

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1. INTRODUCTION

This report presents an analysis of Sixes Road between the I-575 Northbound Ramp and Canton Highway (Old SR 5) in Cherokee County, Georgia. The study evaluates the operations of the intersections located within this roadway segment and seeks to identify improvements that will effectively maintain acceptable levels of service over a 20-year time horizon. Following are the alternatives that were evaluated:

Existing Conditions: Existing traffic with existing lane configurations and traffic control.

Future Scenario A: Future traffic with existing lane configurations traffic control.

Future Scenario B: Widen Sixes Road from a 2-lane roadway to a 4-lane median divided roadway from the I-575 northbound ramps to Canton Highway. Turn lanes have been added as needed in order to obtain and maintain an acceptable level of service for the time horizon wherever possible.

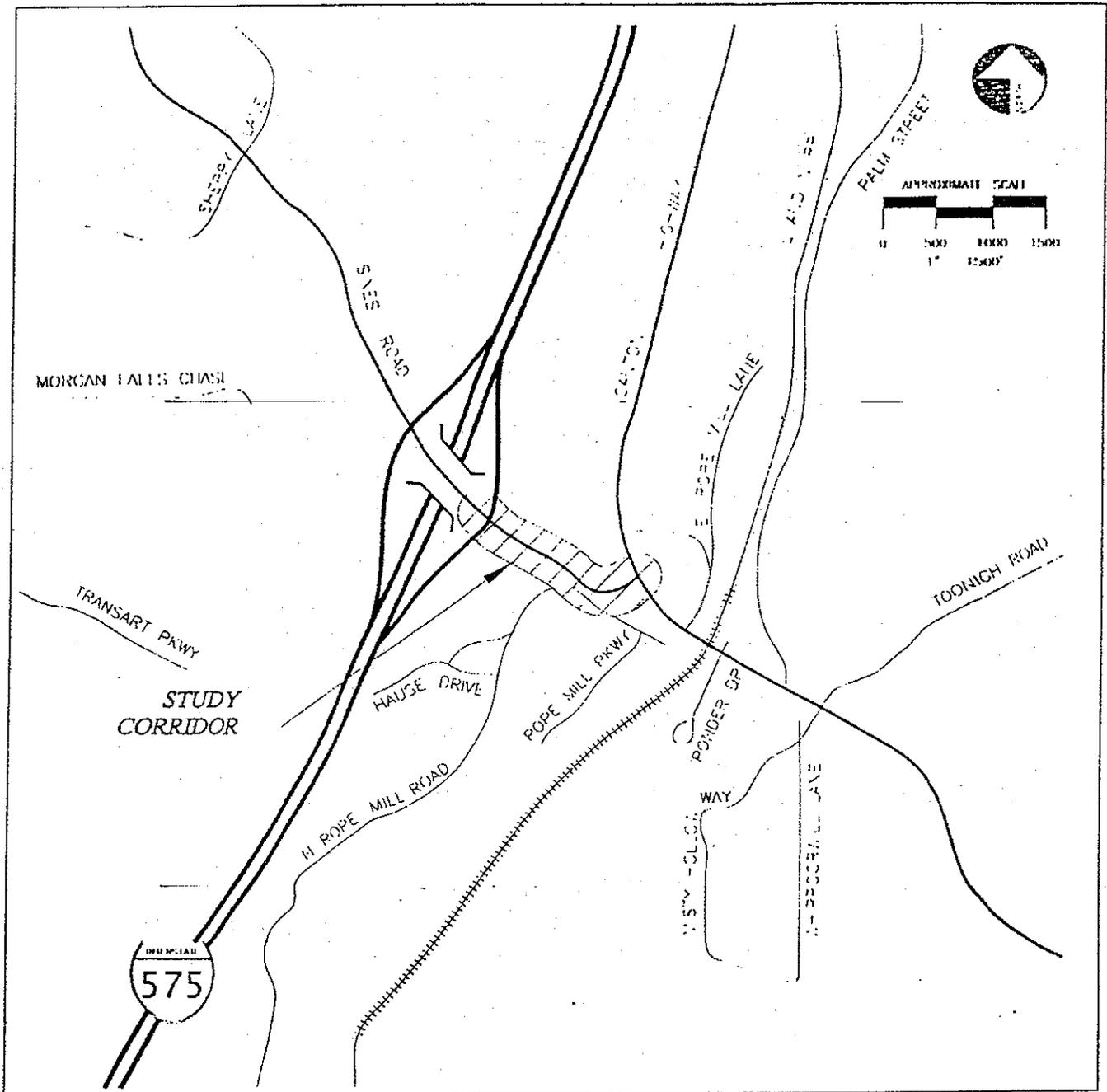
Future Scenario C: Future traffic with necessary improvements to obtain acceptable levels of service.

Figure 1 shows the location of the study corridor.

This report is divided into sections which detail the essential steps in determining the traffic projections and conclusions. The work plan and the organization of material is as follows:

- Inventory the existing roadway network
- Collect existing traffic data
- Develop background growth factors
- Establish future year traffic volumes
- Analyze the study intersections to determine the number of lanes and type of control that will be needed
- Determine the turn bay lengths needed for each alternative
- Report results and conclusions

Figure 1. Study Corridor



2. EXISTING CONDITIONS

Roadway Inventory

A field review of the roadways was conducted to identify the key factors that influence traffic flow and the capacity of the system. The following describes the primary road network in the vicinity of the proposed improvements:

- **I-575** in the vicinity of Sixes Road is a four-lane grass median divided limited access facility with a posted speed limit of 65 mph. I-575 runs north and south between I-75 and Nelson, Georgia. A diamond interchange provides access from I-575 to Sixes Road.
- **Sixes Road** is a two-lane, undivided roadway with a posted speed limit of 35 between the I-575 interchange and Canton Highway. Sixes Road runs primarily east and west from Bells Ferry Road to Canton Highway. Its intersections with the I-575 interchange ramps and at Canton Highway are signalized. Adjacent land uses include a convenience store with gas pumps, a church, and residential developments.
- **North Rope Mill Road** is a two-lane roadway that provides access to both residential and commercial developments from Sixes Road. There is no posted speed limit on the facility. North Rope Mill Road does not connect to another major roadway and dead ends into a residential development.
- **Canton Highway (Old SR 5)** is a two-lane, undivided north-south roadway that runs parallel to I-575 in Cherokee County. The land uses in the vicinity of the site are residential and commercial.

The existing lane configurations are shown in Figure 2.

Roadway Improvements

The Atlanta Regional Commission's published 2002-2004 Transportation Improvement Plan (TIP) and the Georgia Department of Transportation's 2002-2004 State Transportation Improvement Program (STIP) were consulted in order to identify planned roadway improvements in the vicinity of the study corridor. The following improvements were identified from these documents:

- Sixes Road will be widened from 2-lanes to 4-lanes between Bells Ferry Road and I-575, and between I-575 and Canton Highway.
- Intersection improvements on Canton Highway between the City of Holly Springs and the City of Woodstock. The intersection of Sixes Road at Canton Highway/Old SR 5 is included among these intersections.
- High Occupancy Vehicle lanes on I-575 between I-75 and Sixes Road.

At present, there are no planned improvements for the interchange of I-575 and Sixes Road. Additionally, there are no plans to improve the Sixes Road overpass over I-575.

Traffic Volumes

Intersection A.M. (7 to 9 a.m.) and P.M. (4 to 6 p.m.) peak hour turning movement counts were collected on a typical weekday for the following intersections. The existing peak hour volumes are shown in Figure 3.

- Sixes Road and the I-575 northbound ramp
- Sixes Road and Canton Highway

Weekday 24-hour bi-directional volume counts were also collected on Sixes Road within the study corridor.

Turning movement counts for the intersection of Sixes Road at North Rope Mill Road were derived from the traffic counts taken at Sixes Road at the northbound ramp of I-575 and at Canton Highway.

Figure 2. Existing Lane Configurations

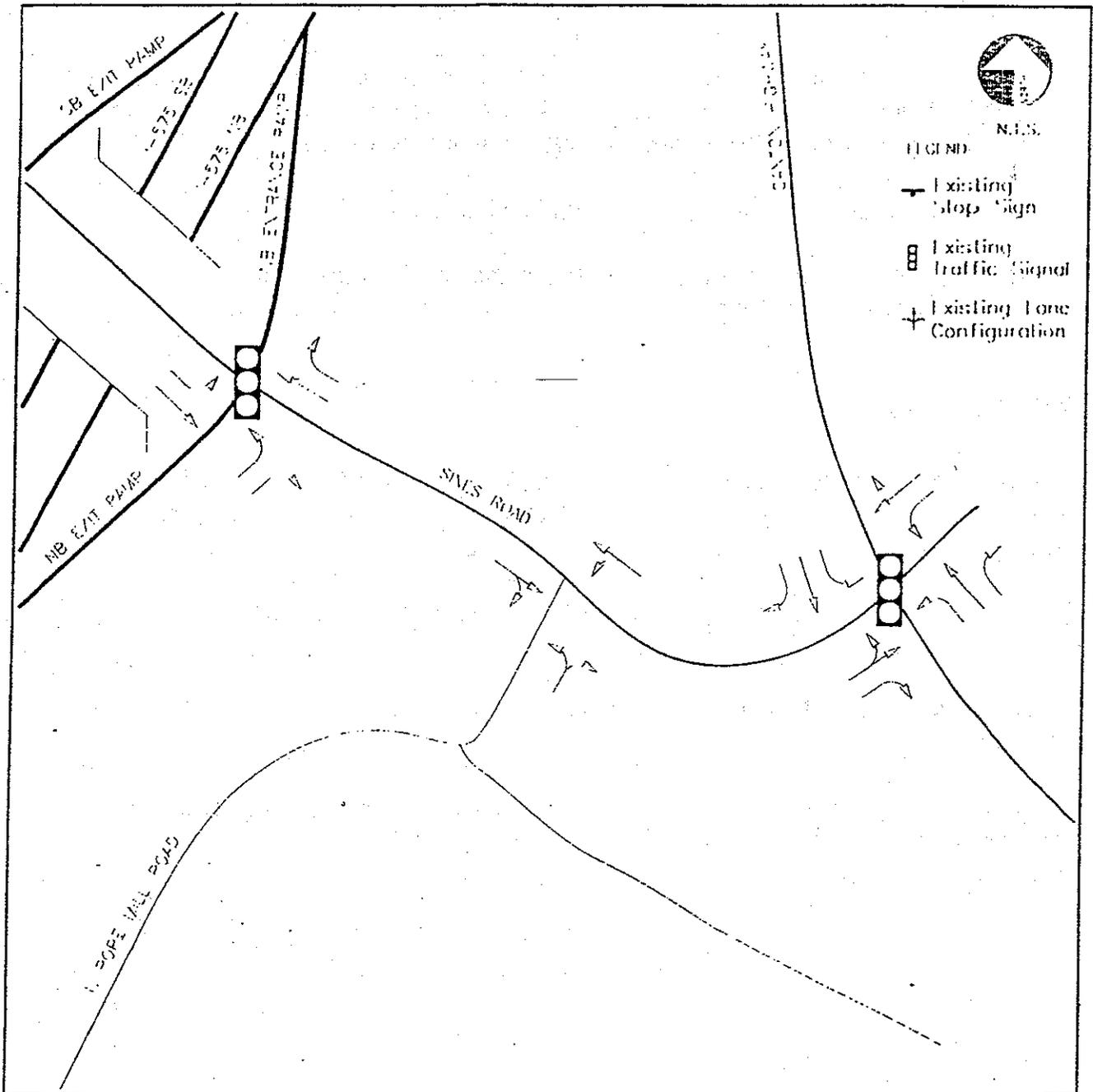
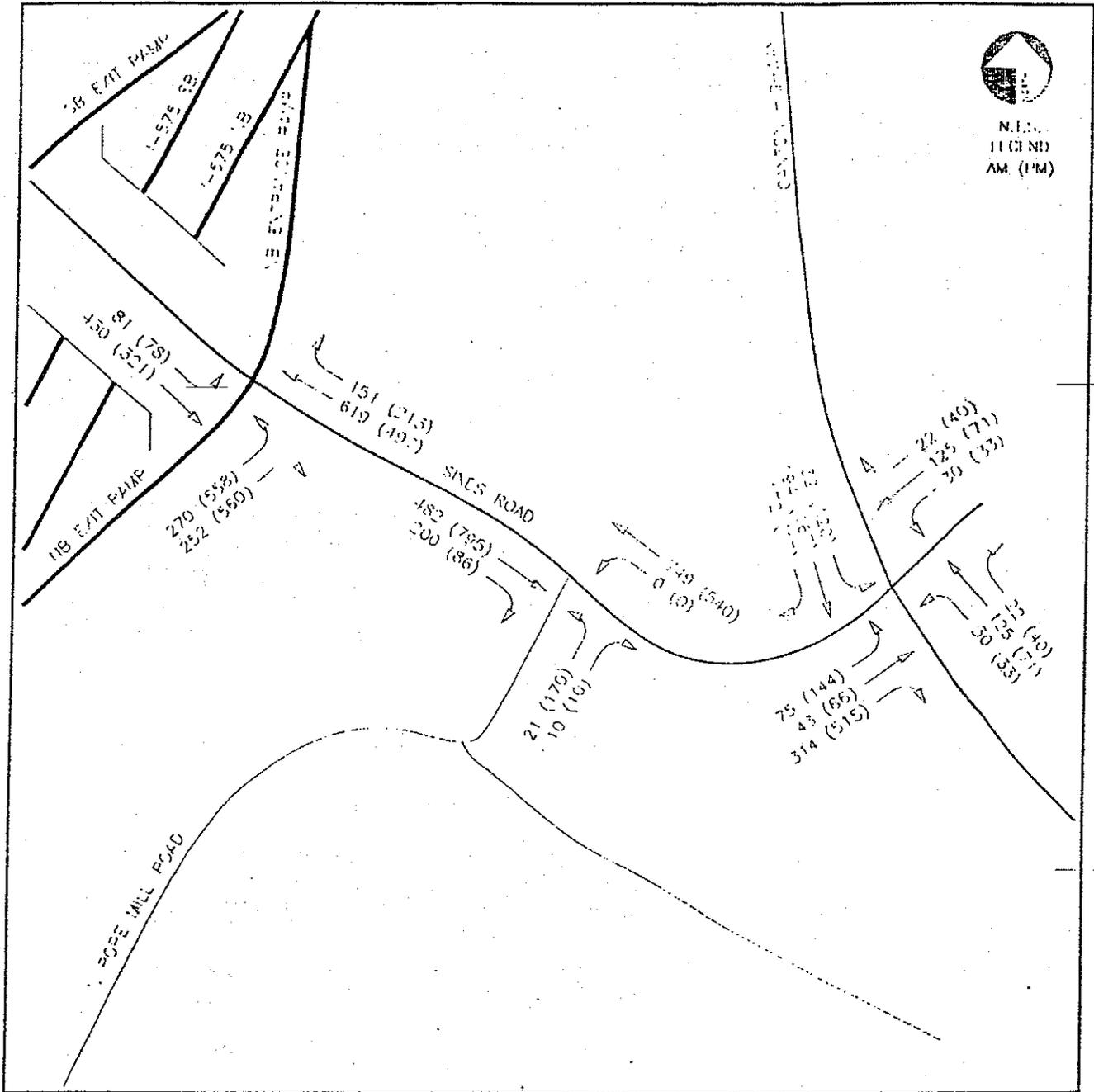


Figure 3. Existing Peak Hour Volumes



Capacity Analysis Methodology

Capacity analyses of the study intersections were completed using procedures in the *Highway Capacity Manual (HCM), Millennium Edition*. This is the usual methodology for the analysis of traffic conditions. Trafficware's software program *Synchro*, which is based on the *HCM*, was used to perform the analysis. The capacity analysis printouts are included in the Appendix.

Operating conditions at intersections are evaluated in terms of levels of service (LOS). Levels of service for signalized intersections are reported in composite fashion, i.e., one LOS for the entire intersection and are presented in terms of control delay. Individual turning movements at signalized intersections may experience poor levels of service, particularly where those volumes are relatively low, while the intersection as a whole has an acceptable level of service. This is because the major movements on the major roadway are given priority in assigning green signal time.

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

The LOS criteria for signalized and unsignalized intersections are shown in Table 1.

Table 1. Level of Service Delay Criteria

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

Source: *Highway Capacity Manual, Millenium Edition*.

For the purposes of this study, LOS A through D is considered acceptable for the overall intersection. In addition, it was considered desirable for individual movements to be above LOS E.

Capacity Analysis - Existing Conditions

Using the methods described above, the level of service was determined for the study intersections for the existing A.M. and P.M. peak hour volumes using the existing lane configurations and intersection control. In all of the analyses, signal timing was optimized. The results can be seen in Table 2.

Table 2. Existing Intersection Levels of Service

Intersection	Control	Approach	Level of Service	
			AM	PM
Sixes Rd & I-575	Signal	--	B	D
Sixes Rd & North Rope Mill Rd	Unsig.	NB App.	D	F
		WBL	--	--
Sixes Rd & Canton Hwy	Signal	--	D	F

As can be seen from Table 3, the intersection of Sixes Road and the I-575 northbound ramps currently function acceptably. The intersection of Sixes Road and Canton Highway is expected to be failing during the P.M. peak hour because of the high volume of northbound left turning vehicles.

The northbound movements of the unsignalized intersection of North Rope Mill Road at Sixes Road are expected to fail. It is important to note, that the capacity analyses for the unsignalized intersection are performed by Synchro assuming that the intersection is isolated. In reality, the close proximity of the intersection to the signalized intersections of Sixes Road at the I-575 northbound ramps and at Canton Highway would create gaps in the traffic. The gaps allow for northbound vehicles at Sixes Road and North Rope Mill Road to make the left turn.

Accident History

Accident records were obtained from the Cherokee County Sheriff's Office for the time period beginning 10 October 1999 and terminating 2 October 2002 for the study intersections.

Table 3 presents a summary of the accidents that occurred during the time period described above for the roadway segment Sixes Road between I-575 and Canton Highway. Of the 26 reported accidents in this segment, 25 of the accidents

occurred at the intersection of Sixes Road and North Rope Mill Road. A single accident was reported at Sixes Road and Canton Highway. No accidents were reported at the I-575 ramp and Sixes Road. Table 3 presents a summary of these accidents by the time period in which they occurred.

Table 3. Summary of Accidents

Period	Accidents with Injuries	Accidents without Injuries	Accidents with Injuries Unknown	Total Number of Accidents	Accidents per Million Vehicle-miles
10/02/1999 - 10/01/2000	5	11	4	20	10.82
10/02/2000 - 10/01/2001	0	4	1	5	2.71
10/02/2001 - 10/01/2002	0	0	1	1	0.54
Totals	5	15	6	26	

**Accident rates reported for a section as noted in the 4th Edition of ITE Traffic Engineering Handbook*

As can be seen in Table 3, a significant number of accidents occurred between October 1999 and October 2000. This period was followed by significant reductions (75% and 80% respectively) in accidents in the corridor. The Cherokee County Sheriff's Office stated that improvements had been made to both the intersection of I-575 at Sixes Road and Sixes Road at Canton Highway prior to the dates reported above. Improvements included:

- > Signalizing the intersections of Sixes Road at I-575 and at Canton Highway
- > Addition of a right-turn lane westbound on Sixes Road at the I-575 northbound ramp
- > Addition of a right-turn lane eastbound on Sixes Road at Canton Highway

The Cherokee County Sheriff's Office attributed the unusually high number of accidents to a failure of drivers to yield to other vehicles. This failure to yield to other vehicles is based on a violation of driver expectations at the intersection of Sixes Road and Canton Highway/Old SR 5. The consequent reductions in accidents signify that drivers adapted to the intersection and roadway improvements.

Observations at the two intersections show that the pavement is in good condition and that there are adequate shoulders on both the north and south side of Sixes Road. Pavement markings and signage on Sixes Road are also adequate.

3. FUTURE SCENARIO A

Traffic Projections

A.M. and P.M. peak hour volumes for the study horizon 2022 were developed for the study intersections.

A growth rate of 3% per year was developed based on information obtained from the Georgia Department of Transportation's permanent count stations. This growth rate was applied to the existing volumes for twenty years to grow them to the design year.

Capacity Analysis

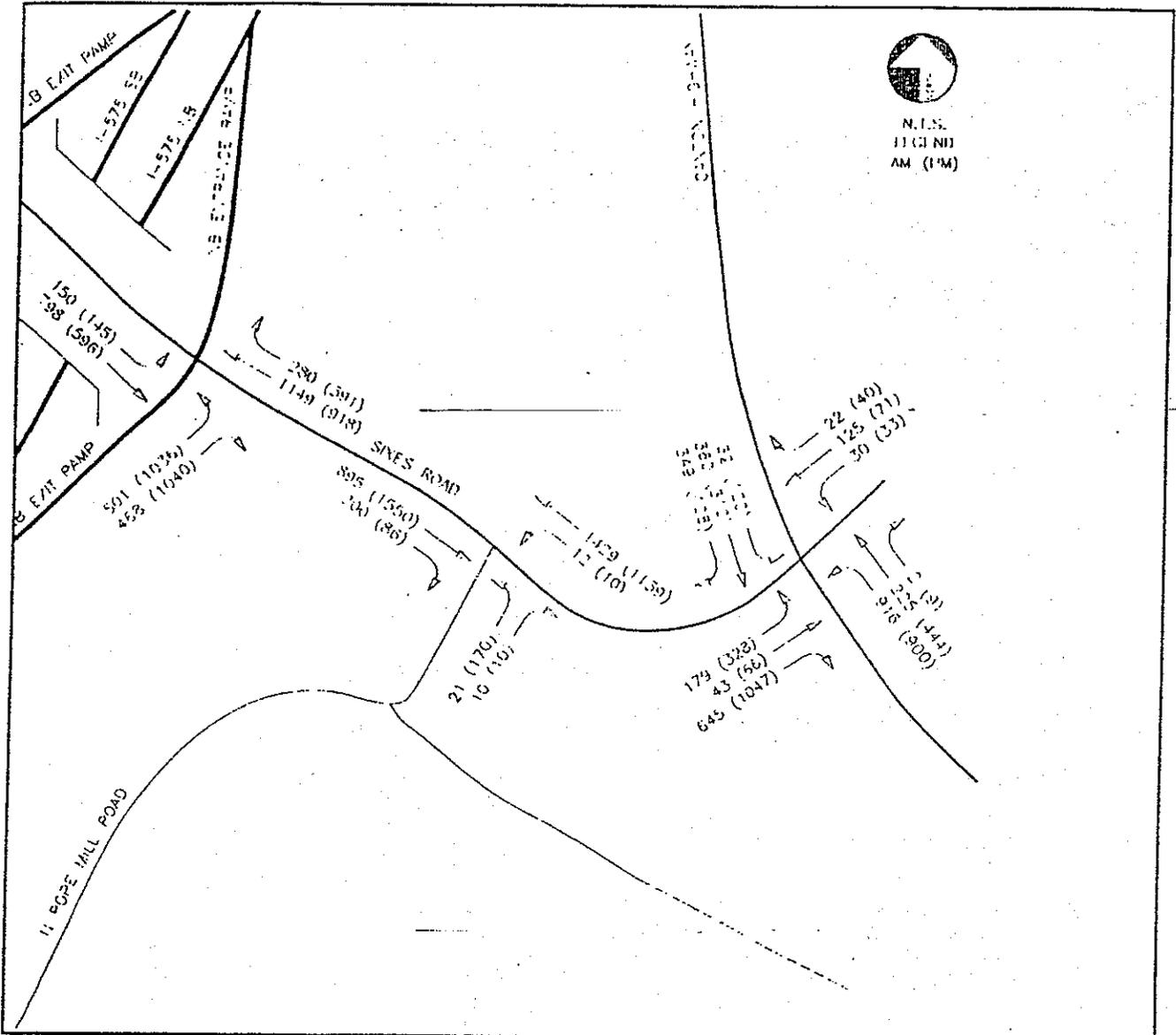
The levels of service were determined for the study intersections for the horizon year A.M. and P.M. peak hour volumes using the existing lane configurations and traffic control. Table 4 shows the results of the capacity analyses. The signal timing was optimized.

Table 4. Future Intersection Levels of Service - Scenario A (No-Build)

Intersection	Control	Approach	Level of Service	
			AM	PM
Sixes Rd & I-575	--- Signal	--	E	F
Sixes Rd & North Rope Mill Rd	Unsig.	NBL	F	F
		WBL	A	A
Sixes Rd & Canton Hwy	Signal	--	F	F

As can be seen from Table 4, for the design year, overall intersection operations at the signalized study intersections are anticipated to deteriorate and/or fail in both the A.M. and P.M. peak hours. The northbound turning movements from North Rope Mill Road are also anticipated to fail as they do under existing conditions.

Figure 4. Design Year Peak (2022) Hour Volumes



4. FUTURE SCENARIO B

Future Scenario B includes the following improvements:

- The widening of Sixes Road from 2-lanes to 4-lanes between I-575 and Canton Highway
- The addition of an eastbound right-turn lane as well as an exclusive left-turn lane on the westbound approach at the intersection of Sixes Road and North Rope Mill Road
- The addition of an exclusive eastbound left-turn lane at the intersection of Sixes Road at Canton Highway
- The addition of dual left-turn lanes northbound on Canton Highway at the intersection with Sixes Road

The lane configurations and control are shown in Figure 5.

Traffic Projections

The projected traffic volumes that were developed for the Future Scenario A were utilized in the analysis of Future Scenario B.

Capacity Analysis

Improvements developed for this alternative include those planned improvements identified in both the TIP and STIP. Additional improvements were based on improving individual movements at intersections as well as the overall intersection operation to acceptable levels of service for the horizon year. The results are shown in Table 5.

Figure 5. Future Lane Configurations – Scenario B

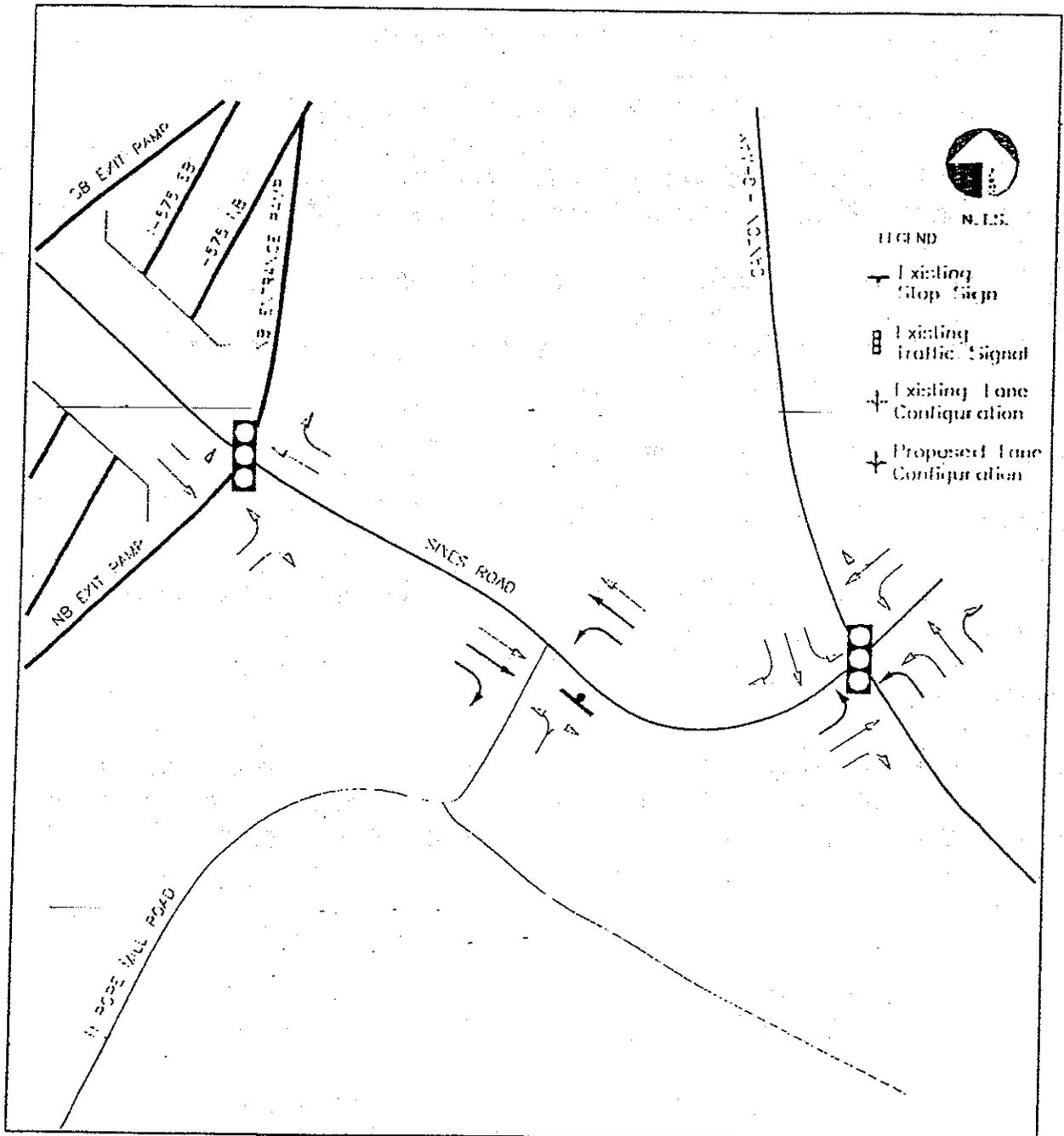


Table 5. Future Intersection Levels of Service - Scenario B

Intersection	Control	Approach	Level of Service	
			AM	PM
Sixes Rd & I-575	Signal	--	E	F
Sixes Rd & North Rope Mill Rd	Unsig.	NBL	F	F
		NBR	A	A
		WBL	B	C
Sixes Rd & Canton Hwy	Signal	--	D	E

As can be seen from Table 5, the intersection of Sixes Road and Canton Highway would be expected to function acceptably for design year conditions during the A.M. peak hour, with no movement below LOS D. During the P.M. peak hour the level of service will drop to E because of the high volume of northbound left-turning traffic at the intersection.

The intersection of Sixes Road at the I-575 Northbound ramp would be expected to fail during both the A.M. and P.M. peak hours because of the heavy traffic expected on the northbound left turn movement. In this scenario no improvements for the overpass were considered so adding another left turn lane for the northbound left turn movement was not considering in this scenario.

The northbound movements at the intersection of Sixes Road and North Rope Mill Road would be expected to fail, as it does under existing conditions. It is important to note, that the capacity analyses for the unsignalized intersection are performed by Synchro assuming that the intersection is isolated. In reality, the close proximity of the intersection to the signalized intersections of Sixes Road at the I-575 northbound ramps and at Canton Highway would create gaps in the traffic. The gaps would allow for northbound vehicles at Sixes Road and North Rope Mill Road to make the left turn.

Queue Analysis

A queue analysis was performed using the Georgia Department of Transportation standard methodology for determining the storage length of a turn bay. Taper lengths were assumed to be 100 feet for a single turn lane and 150 feet for a dual-turn. The practice of adopting these taper lengths is noted as becoming increasingly more common among municipalities and urban counties in the fourth edition of American Association of State Highway and Transportation Officials A *Policy On Geometric Design of Highways And Streets 2001*. Design storage lengths

5. FUTURE SCENARIO C

Future Scenario C includes all of the improvements identified in Future Scenario B plus the following improvements:

- The widening of the Sixes Road bridge over I-575
- The addition of a left-turn lane northbound at the I-575 northbound off-ramp
- The addition of a right turn lane westbound at the I-575 northbound on-ramp

Capacity Analysis

Improvements developed for this alternative include those planned improvements identified in the TIP, the STIP, and Future Scenario B. Improvements were based on improving individual movements at the intersections as well as the overall intersection operation to acceptable levels of service for the horizon year. The results are shown in Table 7. The lane configurations and control are shown in Figure 7.

Table 7. Future Intersection Levels of Service - Scenario C

Intersection	Control	Approach	Level of Service	
			AM	PM
Sixes Rd & I-575	Signal	--	B	C
Sixes Rd & North Rope Mill Rd	Unsig.	NBL	D	F
		NBR	A	A
		WBL	B	C
Sixes Rd & Canton Hwy	Signal	--	D	E

As can be seen from Table 7, the intersection of Sixes Road and the I-575 northbound ramps will operate acceptably during both peak hours. At the intersection of Sixes Road and Canton Highway, during the P.M. peak hour the level of service will drop to E because of the high volume of turning traffic at the intersection.

The northbound movements at the intersection of Sixes Road and North Rope Mill Road would be expected to fail, as it does under existing conditions. It is important to note, that the capacity analyses for the unsignalized intersection are performed by Synchro assuming that the intersection is isolated. In reality, the close proximity of the intersection to the signalized intersections of Sixes Road at the I-575 northbound

for the turn lanes were determined by looking at the periods during which the queues would be the longest. Table 6 shows the required length for the turn lanes added in Scenario B.

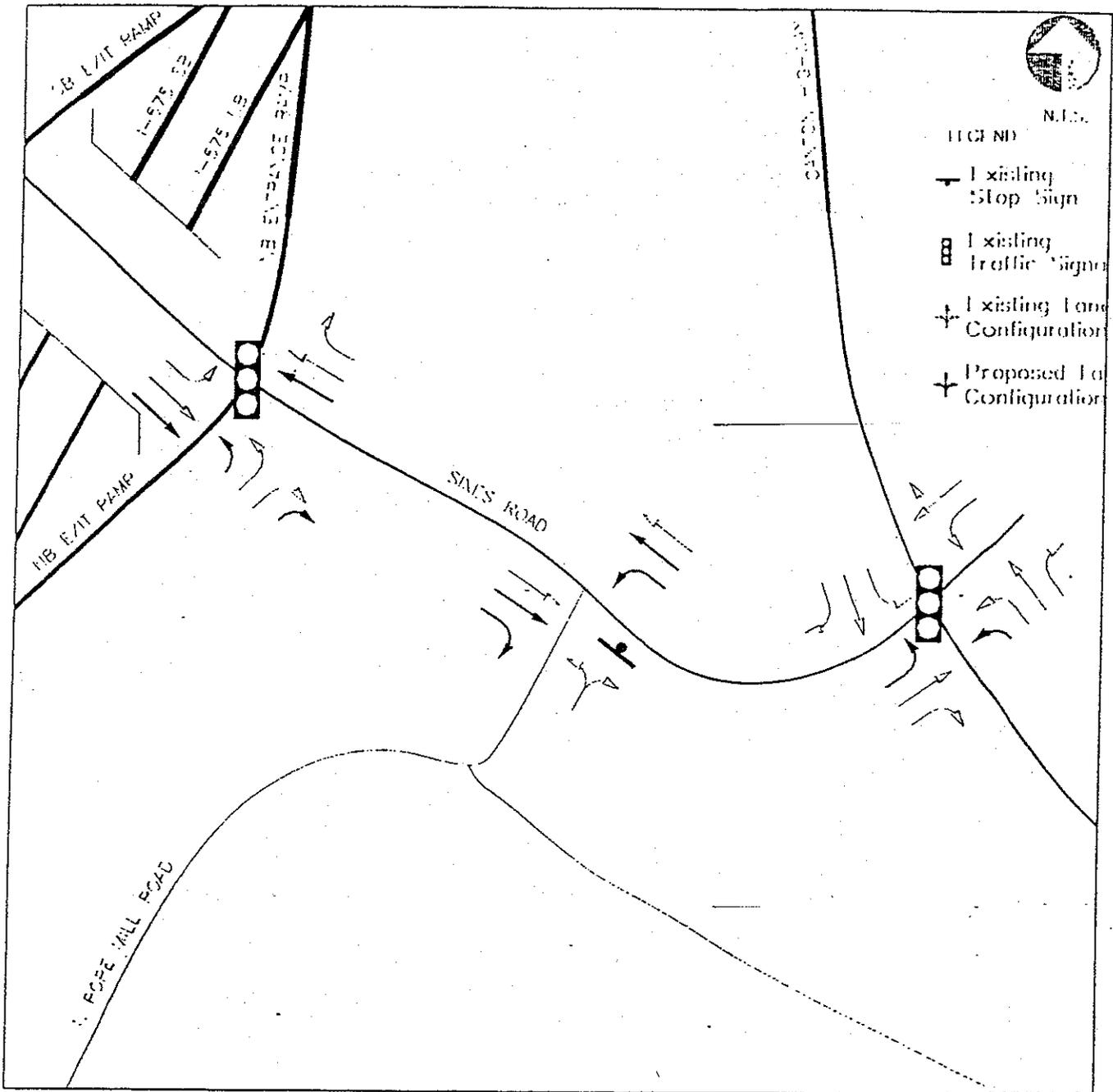
Table 6. Added Turn Lane Lengths - Scenario B

Intersection	Lanes Added	Approach	Storage Length	Design Length*
Sixes Rd & North Rope Mill Rd	1	EBR	130	230
	1	WBL	50	150
Sixes Rd & Canton Hwy	1	EBL	330	430
	1	NBL	485	635

*Storage length plus taper length

ramps and at Canton Highway would create gaps in the traffic. The gaps would allow for northbound vehicles at Sixes Road and North Rope Mill Road to make the left turn.

Figure 6. Future Lane Configurations – Scenario C



6. CONCLUSIONS

This report presents an analysis of Sixes Road between the I-575 Northbound Ramp and Canton Highway (Old SR 5). Three Future Scenarios were assessed:

Future Scenario A (No Build):

- Leave Sixes Road from I-575 Northbound ramp to Canton Highway/ Old SR 5 as it currently exists.

Future Scenario B:

- Widen Sixes Road from 2 to 4-lanes; addition of a right-turn lane on the eastbound approach at the intersection of Sixes Road at North Rope Mill Road as well as the addition of an exclusive left-turn lane on the westbound approach; addition of an exclusive left-turn lane on the eastbound approach of Sixes Road at Old Canton Highway/Old SR 5; addition of a left-turn lane on the northbound approach of Sixes Road at Canton Highway/Old SR 5.

Future Scenario C:

- Improvements included in Scenario B; the addition of a single through-lane at both the eastbound and westbound approaches to the intersection of I-575 at Sixes Road as well as the addition of a left-turn lane on the northbound approach to the intersection of I-575 at Sixes Road. Also included is the addition of a right turn lane on the westbound approach to the intersection of I-575 at Sixes Road.

The signalized study intersections are currently function well. The northbound turning movements from North Rope Mill Road onto Sixes Road have falling levels of service.

Traffic projections were developed for the 2022 horizon year for the Sixes Road corridor. Traffic volumes are expected to increase in the future due to new construction attributable to background growth. A growth rate of 3% per year was developed based on information obtained from the Georgia Department of Transportation's permanent count stations.

Future Scenario A, if no improvements are made for the horizon year, the signalized intersections of I-575 at Sixes Road and Sixes Road at Canton Highway/Old SR 5 would be expected to fail during the P.M. peak hour. During the A.M. peak hour, the signalized intersection of Sixes Road at Canton Highway/Old SR 5 would be expected to fail. The northbound approaches of North Rope Mill Road at Sixes Road would be expected to fail.

For Future Scenario B, if the improvements as described previously are implemented the intersection of I-575 at Sixes Road would be expected to fail during both the A.M. and P.M. peak hours. The intersection of Sixes Road at Canton Highway/Old SR 5 would be expected to operate acceptably. The northbound approaches of North Rope Mill Road at Sixes Road would be expected to fail.

For Future Scenario C, if the improvements as describe previously are implemented, the signalized study intersections excluding the intersection of North Rope Mill Road at Sixes Road would be expected to operate acceptably. The intersection of North Rope Mill Road at Sixes Road may operate at an acceptable level of service but the analysis does not account for the effect that nearby signalized intersections will have through the creation of gaps in traffic on Sixes Rd.



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April 2, 2002

The Honorable Emily M. Lemcke, Commission Chairman
Cherokee County Commission
90 N. Street Suite 310
Canton, Georgia 30114

Dear Chairman Lemcke:

I am pleased to notify you that the Georgia Department of Transportation is agreeable to participate in the improvement of the following project:

PROJECT#:STP-0002-00(637), Cherokee County, P.I.#0002637
Construct the Widening of Sixes Rd. from I-575 to Old SR 5/CR 1061

Please review the attached agreement and if satisfactory, please execute all three (3) originals and return them to this office. Once all parties have signed the agreement, I will return a copy of the agreement to you for your file.

Should you have any questions please call me at (404) 463-2799.

Sincerely yours,

Herman T. Griffin, P.E.

Financial Management Administrator ✓

HTG:as

attachments(3)

c: Percy Middlebrooks w/attachment

Kent Sager - District 6

Attachment 4

Local Government Project Agreement

AGREEMENT

Between

DEPARTMENT OF TRANSPORTATION

STATE OF GEORGIA

And

CHEROKEE COUNTY, GEORGIA

FOR

STP-0002-00(637) CHEROKEE COUNTY

P.I. NUMBER 0002637

This Agreement is made and entered into this _____ day of _____ 2002, by and between the DEPARTMENT OF TRANSPORTATION, an agency of the State of Georgia, hereinafter referred to as the "DEPARTMENT," and CHEROKEE COUNTY, GEORGIA, acting by and through its Chairman and Board of Commissioners, hereinafter referred to as the "COUNTY."

WHEREAS, the COUNTY has represented to the DEPARTMENT a desire to construct the widening of Sixes Road from I-575 to Old SR 5/CR 1061, currently described as Georgia Department of Transportation Project Number STP-0002-00(637), P.I. Number 0002637, and hereinafter referred to as the "PROJECT"; and

WHEREAS, the COUNTY has represented to the DEPARTMENT a desire to participate in providing the design, purchase rights of way, and relocate any utilities needed for the improvements, and the DEPARTMENT has relied upon such representation; and

WHEREAS, the DEPARTMENT has expressed a willingness to participate in the funding of the construction of the PROJECT with funds of the DEPARTMENT, funds apportioned to the DEPARTMENT by the Federal Highway Administration, hereinafter referred to as the "FHWA," under Title 23, United States Code, Section 104, or a combination of funds from any of the above sources; subject to these certain conditions set forth in the Agreement.

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

1. The COUNTY or its assigns shall cause the PROJECT concept, design traffic, environmental studies and documentation, surveys, mapping, preliminary plans, final rights of way plans, soil investigation, secure all required permits, including 404 Wetland permits, perform any hydraulic calculations, obtain any Federal Emergency Management Agency (FEMA) clearances, where required, and final construction plans and specifications to be prepared. The COUNTY agrees it shall bear all costs associated with the development and review of plans. All environmental studies and documentation shall be done in accordance with the Georgia Environmental Policy Act (GEPA), and National Environmental Policy Act (NEPA).
2. Develop the PROJECT'S base year (year facility is expected to be open to traffic) and design year (base year plus 20 years) traffic volumes. This shall include average daily traffic (ADT) and morning (AM) and evening (PM) peak hour volumes. The traffic shall show all through and turning movement volumes at intersections for the ADT and peak hour volumes and shall indicate the percentage of trucks expected on the facility.
3. All Primary Consultant firms hired by the COUNTY to provide services on the PROJECT shall be prequalified with the DEPARTMENT in the appropriate area-classes. The DEPARTMENT shall, on request, furnish the COUNTY with a list of prequalified consultant firms in the appropriate area-classes.
4. PROJECT Construction plans and Right of Way Plans shall be prepared in English units.
5. Both the COUNTY and the DEPARTMENT hereby acknowledge that time is of the essence, and both parties shall adhere to the priorities established in the approved STIP or earlier. Furthermore, all parties shall adhere to the detailed project schedule, as approved by the DEPARTMENT. In the completion of respective commitments contained herein, if a change in the schedule is needed, the DEPARTMENT shall have final authority. If, for any reason,

the COUNTY does not produce acceptable deliverables at the milestone dates defined in the STIP, or in the approved schedule, the DEPARTMENT reserves the right to delay the project's implementation until funds can be re-identified for construction or right of way, as applicable.

6. All drafting and design work performed on the project shall be done utilizing Microstation and CAiCE software, respectively, and shall be organized as per DEPARTMENT guidelines on electronic file management.
7. The COUNTY shall contribute toward the PROJECT by funding all cost for the preconstruction engineering (design). The preconstruction engineering activities shall be accomplished in accordance with the DEPARTMENT'S Plan Development Process, the applicable guidelines of the American Association of State Highway and Transportation Officials, herein referred to as "AASHTO", the DEPARTMENT'S Standard Specifications for the Construction of Transportation Systems, PROJECT schedules, and applicable guidelines of the DEPARTMENT. The COUNTY'S responsibility for design shall include, but is not limited to the following items.
 - a. Prepare the PROJECT concept report in accordance with the format used by the DEPARTMENT. The concept report shall be approved by the DEPARTMENT prior to the COUNTY beginning further development of the PROJECT plans. It is recognized by the parties that the approved concept may be modified by the COUNTY as required by the DEPARTMENT and reapproved by the DEPARTMENT during the course of design due to public input, environmental requirements, or right of way considerations.
 - b. Validate (check and update) the approved PROJECT concept and prepare a PROJECT Design Book for approval by the DEPARTMENT prior to the beginning of preliminary plans.
 - c. Prepare environmental studies, documentation, and reports for the PROJECT that show the PROJECT is in compliance with the provisions of the National Environmental Policy Act and Georgia Environmental Policy Act, as appropriate to the PROJECT funding. This shall include any and all archaeological, historical,

8. The DEPARTMENT shall review and has approval authority for all aspects of the PROJECT. The DEPARTMENT will work with the FHWA to obtain all needed approvals with information furnished by the COUNTY.
9. Upon the COUNTY'S determination of the rights of way required for the PROJECT and the approval of the right of way plans by the DEPARTMENT, the COUNTY shall fund the acquisition and acquire the necessary rights of way for the PROJECT. Right of way acquisition shall be in accordance with the rules and regulations of the FHWA including but not limited to, Title 23, United States Code (Uniform Act), and 49 CFR, Part 24, and the rules and regulations of the DEPARTMENT. The COUNTY shall further be responsible for making all changes to the construction plans, as deemed necessary by the DEPARTMENT, for whatever reason, during the acquisition of right of way. Failure to follow these requirements will result in loss of Federal funding for the project and it will be the responsibility of the COUNTY to make up the loss of that funding.
10. The COUNTY shall be responsible for all costs for the continual maintenance and the continual operations of any and all sidewalks within the PROJECT limits.
11. The COUNTY shall be responsible for all utility relocation costs necessary for the construction of the PROJECT.
12. The COUNTY shall follow the DEPARTMENT'S procedures for identifications of existing and proposed utility facilities on the PROJECT. These procedures, in part, require all requests for existing, proposed, or relocated facilities to flow through the DEPARTMENT'S Project Liaison and the District Utilities Engineer.
13. The COUNTY shall address all railroad concerns, comments and requirements to the satisfaction of the DEPARTMENT.
14. Upon completion and approval of the PROJECT plans, certification that all needed rights of way have been obtained and cleared of obstructions, and certification that all needed permits

ecological, air, noise, underground storage tanks (UST), and hazardous waste site studies required. The COUNTY shall submit to the DEPARTMENT all environmental documents and reports for review and approval by the DEPARTMENT and the FHWA.

- d. Prepare all public hearing and public information displays and conduct all required public hearing and public information meetings in accordance with DEPARTMENT practice.
- e. Perform all surveys, additional mapping, and soil investigation studies needed for design of the PROJECT.
- f. Perform all work required to obtain PROJECT permits, including, but not limited to US Army Corps of Engineers 404 and Federal Emergency Management Agency (FEMA) approvals. These efforts shall be coordinated with the DEPARTMENT.

Prepare preliminary construction plans, preliminary and final utility plans, preliminary and final right of way plans (if required), staking of required right of way, and final construction plans including erosion control plans, traffic handling, and sequence plans and specifications including special provisions for the PROJECT.

- g. Provide certification, by a Georgia Registered Professional Engineer, that the construction plans have been prepared under the guidance of the professional engineer and are in accordance with Georgia Department of Transportation (GDOT) and American Association of State Highway and Transportation Officials (AASHTO) Guidelines.
- h. Failure of the COUNTY to follow the DEPARTMENT's Plan Development Process will jeopardize the use of Federal funds and the COUNTY shall then provide full funding for construction.

for the PROJECT have been obtained by the COUNTY, the DEPARTMENT shall let the PROJECT for construction. Except as provided herein and upon receipt of an acceptable bid, the DEPARTMENT shall bear all costs for construction including all costs associated with inspection and materials testing during construction. The DEPARTMENT shall be solely responsible for securing and awarding the construction contract for the PROJECT.

15. The COUNTY agrees that all reports, plans, drawings, studies, specifications, estimates, maps, computations, computer diskettes and printouts, and any other data prepared under this agreement shall become the property of the DEPARTMENT. This data shall be organized, indexed, bound and delivered to the DEPARTMENT no later than the advertisement of the PROJECT for letting. The DEPARTMENT shall have the right to use this material without restriction or limitation and without compensation to the COUNTY.

16. The COUNTY shall be responsible for the professional quality, technical quality, technical accuracy and the coordination of all designs, drawings, specifications, and other services furnished by or on behalf of the COUNTY pursuant to this AGREEMENT. The COUNTY shall correct or revise, or cause to be revised, any errors or deficiencies in the designs, drawings, specifications, and other services furnished for this PROJECT. All revisions shall be coordinated with the DEPARTMENT prior to issuance.

17. The COUNTY shall review and recommend all shop drawings for approval to the DEPARTMENT for approval by the DEPARTMENT.

17 This Agreement is made and entered into in Fulton County, Georgia, and shall be governed and construed under the laws of the State of Georgia. The covenants herein contained shall, except as otherwise provided, accrue to the benefit of and be binding upon the successors and assigns of the parties hereto.

IN WITNESS WHEREOF, said parties have hereunto set their seals the day and year above first written.

RECOMMENDED:

CHEROKEE COUNTY, GEORGIA

District Engineer

BY: [Signature]
Chairman

Director of Preconstruction

Signed, sealed and delivered this 1st day
May, 2002 in the presence of

[Signature]
Witness

Chief Engineer

[Signature]
Notary Public

NOT COMMISSION EXPIRES APRIL 1, 2004

DEPARTMENT OF TRANSPORTATION

This Agreement approved by the Cherokee
County Commission at a meeting held at

Canton, Georgia

This 10th day of April, 2002

BY: _____
Commissioner

[Signature]
Clerk

ATTEST:

Treasurer

Reviewed as to Legal Form:

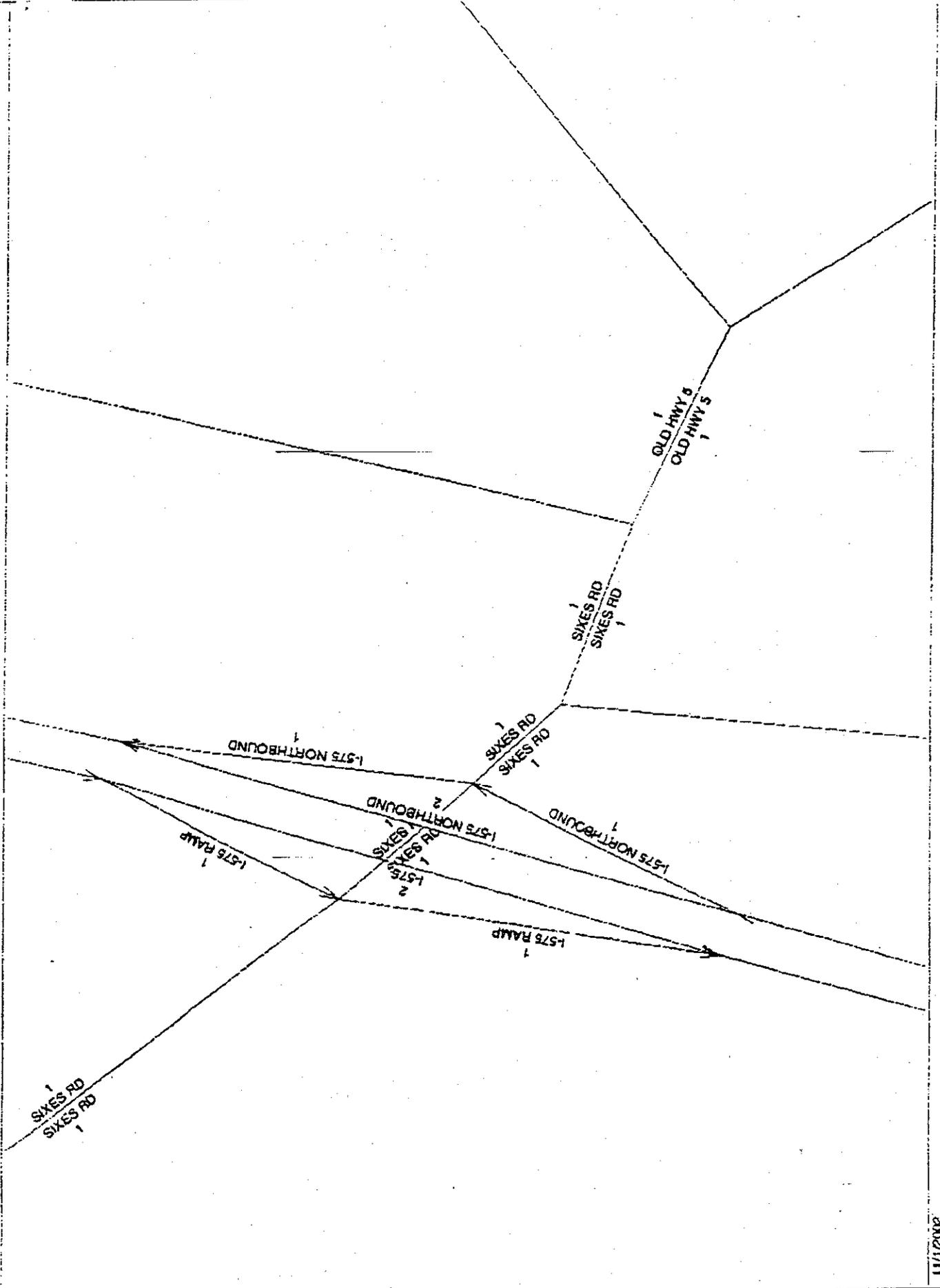
Office of Legal Services

Date: _____

Attachment 5

Conforming Plan's Network Schematics

CH190 Sixes Road b/w I-575 and Old SR 6
Year 2004

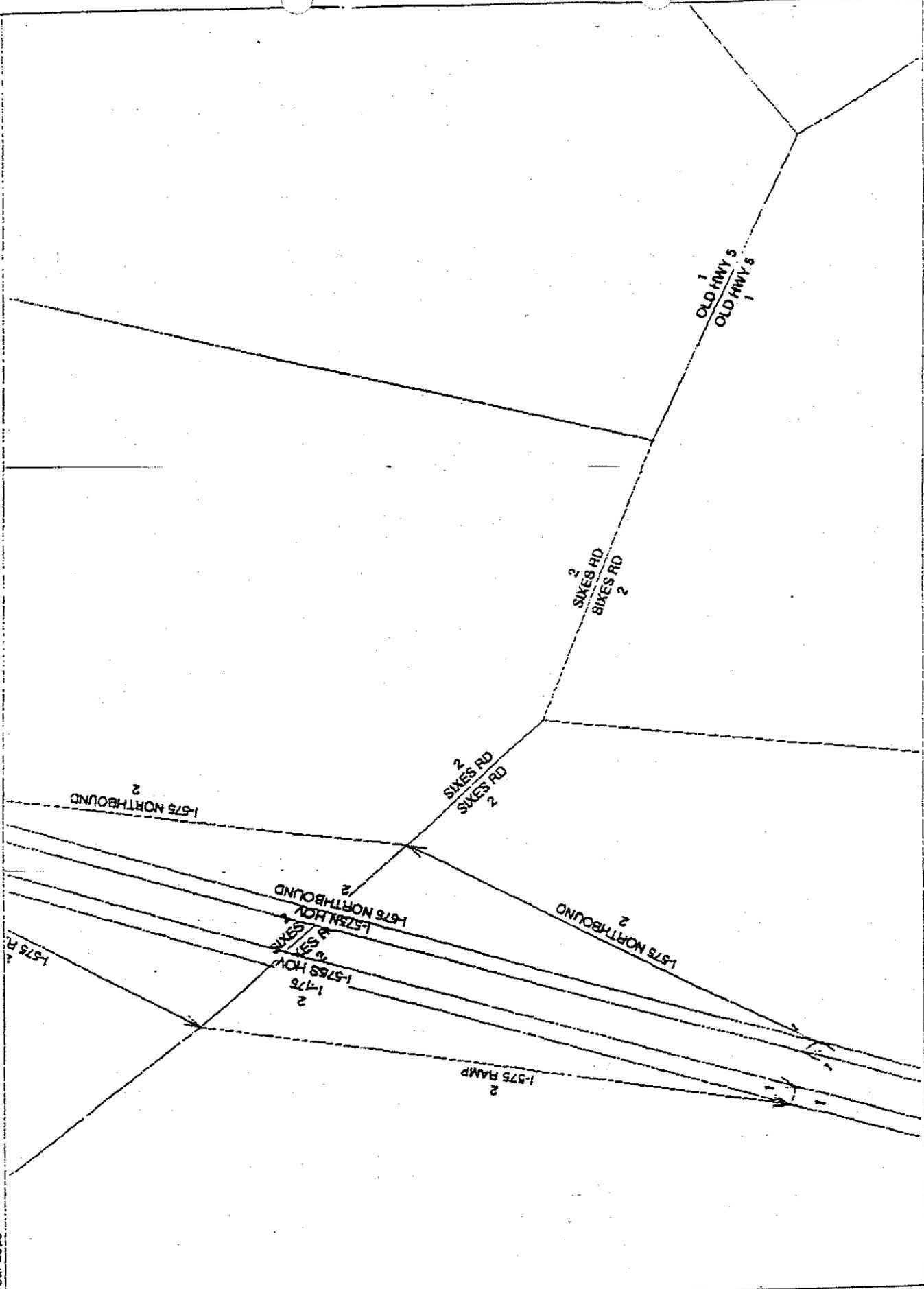


11/1/2002

Viper Software by Citilabs

Licensed to Parson Brinckerhoff Quade & Douglas

CH100: Sixes Road by I-575 and Old 6R5
Year 2025



Licensed to Parson Brinckerhoff Quade & Douglas

11/17/2002
Viper Software by Citilabs

Attachment 6

Concept Team Meeting Minutes

CONCEPT TEAM MEETING MINUTES
PROJECT: STP-0002-00(637) CHEROKEE COUNTY
PI #0002637
SIXES ROAD WIDENING EAST OF I-575 TO OLD SR 5

Location: GDOT District 6 Office
Date: March 6, 2003, 10:00 A.M.

Attendance:

Harlan Conley	DOT Location	(770) 387-3621
Stanley Horton	DOT Utilities	(770) 387-3616
Kathy Spradley	GDOT Environmental	(770) 387-3685
David Moore	GDOT Design	(770) 387-3622
Dennis Thompson	Cherokee County	(770) 345-3386
Geoff Morton	Cherokee County	(770) 345-3386
Kenny Beckworth	DOT – District Const.	(770) 387-3009
Dee Corson	District Traffic Operations	(770) 387-4813
Mike Thomason	DOT Area Engineer	(770) 387-3680
Wilburn DeBord	DOT	(770) 387-3680
Melissa Wesley	DOT	(770) 387-3680
Debra T. Soulis	DOT – Local Government	(770) 387-3620
Alex L. Dobbs	AEI	(770) 421-8422
Jeff Simmons	AEI	(770) 421-8422
DeWayne Comer	District 6	

Discussion:

Item 1: Need and Purpose

Jeff Simmons of American Engineers, Inc. (AEI) discussed the Need and Purpose for this project. There were no comments regarding this portion.

Item 2: Design

David Moore stated the new AASHTO Design Standards recommend using runoff rates that are 80% in tangent 20% in the curves, but added that a 67% / 33% split is still allowed per Design Standards.

David Moore said that revisions to the typical section are necessary. The revisions are to include meeting the clear zone requirements per the new design guide by increasing the shoulders to 14'.

Note: David Moore followed up with a telephone conversation to Jeff Simmons on 3/6/03 stating that a 12' wide shoulder would be acceptable for clear zone requirements with a slope of 4:1 or flatter.

Mike Thomason indicated that the pavement section of the existing roadway needed to be investigated and possibly cored to determine if the existing pavement needed to be replaced.

It was also noted that construction staging would be necessary and maintenance of traffic plans will be required in the plan set.

Item 3: Environmental

David Moore presented e-mail from Gail D'Avino regarding the 4(f) evaluation. The e-mail (attached) states, "The concept report says that a 4(f) evaluation will not be required. According to the project location map, the project is located within the Little River Wildlife Management Area. Section 4(f) protects publicly owned wildlife and waterfowl refuges. The environmental consultant will need to determine if the Little River Wildlife Area is a publicly owned wildlife refuge and if it is protected under Section 4(f)".

Note: This is being evaluated by AEI's environmental department and subconsultants. Upon review, comments will be forwarded to the appropriate agencies.

Item 4: Right of Way

No comments regarding this section.

Item 5: Utilities

No comments regarding this section.

Item 6: Design Responsibilities

It was stated that AEI is under contract with Cherokee County. Cherokee to provide for design costs, R/W acquisition and reimbursable utility costs.

Item 7: Scheduling

It was agreed that the schedule submitted in the Concept Report should be revised to reflect GDOT review time and R/W acquisition time. The schedule will be amended as follows:

- Time to complete the environmental process 4 Months (CE) unchanged
- Time to complete preliminary construction plans 3 Months changed to 6 Months
- Time to complete right of way plans 1 Month changed to 3 Months
- Time to complete Section 404 Permit N/A unchanged
- Time to complete final construction plans 2 Months unchanged
- Time to complete to purchase right of way 4 Months changed to 9 Months

The above notes represent AEI's account of what transpired at the Sixes Road Project Concept Meeting held at 10:00 A.M. on March 6, 2003. Please report any discrepancies to AEI within fourteen (14) days of receipt of these minutes so they may be corrected and distributed as required. If no discrepancies are reported within the fourteen (14) days, these minutes will stand as recorded.

Moore, David

From: Comer, DeWayne
Sent: Monday, March 03, 2003 9:15 AM
To: Moore, David
Subject: FW: STP-0002-00(637), Cherokee County

David make sure this comment is entered into the report.

-----Original Message-----

From: D'Avino, Gail
Sent: Friday, February 28, 2003 3:38 PM
To: Comer, DeWayne
Subject: STP-0002-00(637), Cherokee County

DeWayne -

I will not be able to attend the concept team meeting on Wednesday but I do have one comment:

The concept report says that a 4(f) evaluation will not be required. According to the project location map, the project is located within the Little River Wildlife Management Area. Section 4(f) protects publicly owned wildlife and waterfowl refuges. The environmental consultant will need to determine if the Little River Wildlife Area is a publicly owned wildlife refuge and if it is protected under Section 4(f).

Sorry I can't attend -

Gail A. D'Avino
NEPA Section Chief
404-699-3475

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
PROJECT CONCEPT REPORT**

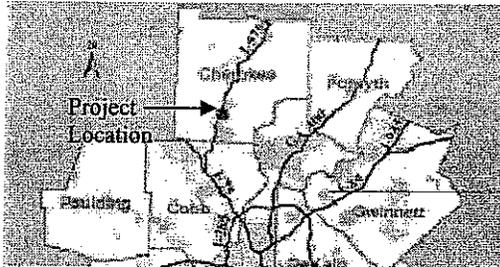
Project Number: STP-0002-00(637)

County: Cherokee

P. I. Number: 0002637

Federal Route Number: None

State Route Number: None



**Sixes Road Widening
East of I-575 to Old SR 5**

Recommendation for approval:

DATE _____

Project Manager

DATE _____

Office Head/District Engineer

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

DATE _____

State Transportation Planning Administrator

DATE _____

State Transportation Programming Engineer

DATE _____

State Environmental/Location Engineer

DATE 2/12/03

Michael D. [Signature]

State Traffic Safety & Design Engineer

DATE _____

DATE _____

Project Review Engineer

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE: P.I. No. 0002637

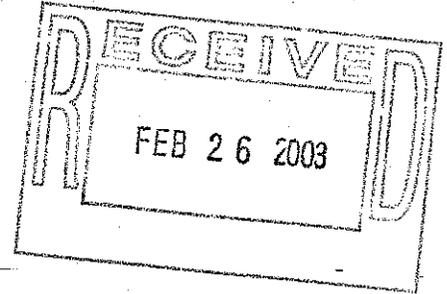
OFFICE: Environment/Location

DATE: February 26, 2003

FROM: 
Harvey D. Keeper, State Environmental/Location Engineer

TO: Meg Pirkle, Assistant Director of Preconstruction

SUBJECT: **PROJECT CONCEPT REPORT**
STP-0002-00(637) - CHEROKEE COUNTY



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/rtt

Attachment

cc: David Mulling, P.E.
Kent Sager

DEPARTMENT OF TRANSPORTATION

STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE: STP-0002-00 (637) Cherokee County
P.I. No. 0002637
Sixes Road Widening

OFFICE: Cartersville

DATE: January 31, 2003

FROM: Kent L. Sager, District Engineer

TO: Meg Pirkle, Asst. 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 please contact David Moore at (770) 387-3622.

KLS:dpm

Cc: Marta Rosen, State Transportation Planning Administrator
Percy Middlebrooks, State Transportation Programming Engineer
Harvey Keeper, State Environment/Location Engineer
Phillip Allen, State Traffic Safety and Design Engineer
David Mulling, Project Review Engineer

RAH/ms

Department of Transportation
State of Georgia

INTERDEPARTMENTAL CORRESPONDENCE

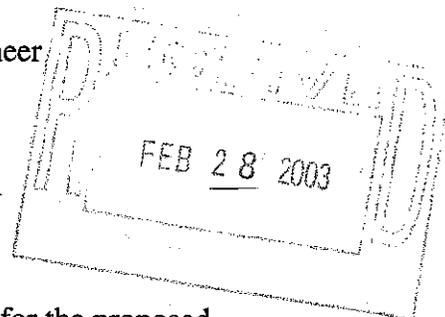
File: STP-24-1(17), Cherokee County
P.I. No. 0002637

Office: Traffic Safety & Design
Atlanta, Georgia
Date: December 18, 2002

From: *PMA/az* Phillip M. Allen, State Traffic Safety and Design Engineer

To: Meg Pirkle, Assistant Director of Preconstruction

Subject: Project Concept Report Review



We have reviewed the above referenced concept report for the proposed widening of Sixes Road (C.R. 779) in Cherokee County.

The Office of Traffic Safety & Design finds this report satisfactory for approval because it will improve safety and traffic operations within this area.

PMA/sz

Attachment (signature page)

Cc: Harvey Kepler, State Environment/Location Engineer
Kent L. Sager, District Engineer
Attention: William M. Darby, District Design Engineer
David Mulling, State Review Engineer, w/ attachment
Marta Rosen, State Transportation Planning Administrator
Paul Liles, State Bridge & Structural Design Engineer
Chuck Hasty, TMC
General Files
Office Files

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
PROJECT CONCEPT REPORT**

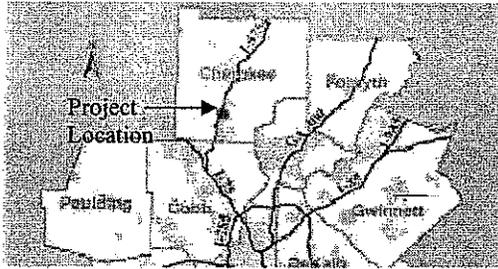
Project Number: STP-0002-00(637)

County: Cherokee

P. I. Number: 0002637

Federal Route Number: None

State Route Number: None



**Sixes Road Widening
East of I-575 to Old SR 5**

Recommendation for approval:

DATE _____

Project Manager

DATE _____

Office Head/District Engineer

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

DATE _____

State Transportation Planning Administrator

DATE _____

State Transportation Programming Engineer

DATE _____

State Environmental/Location Engineer

DATE 2/12/05

Phillip M. Albright

State Traffic Safety & Design Engineer

DATE _____

DATE _____

Project Review Engineer

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

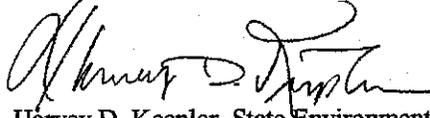
INTERDEPARTMENT CORRESPONDENCE

FILE: P.I. No. 0002637

OFFICE: Environment/Location

DATE: March 28, 2003

FROM:

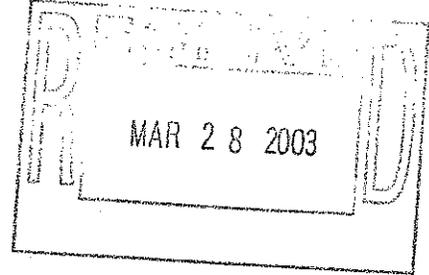

Harvey D. Keeper, State Environmental/Location Engineer

TO:

Meg Pirkle, Assistant Director of Preconstruction

SUBJECT:

PROJECT CONCEPT REPORT
STP-0002-00(637) - CHEROKEE COUNTY



The above subject concept report has been reviewed. Need to address Little River Wildlife Management Area. Is it a refuge and thus 4(f)?

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

HDK/rtt

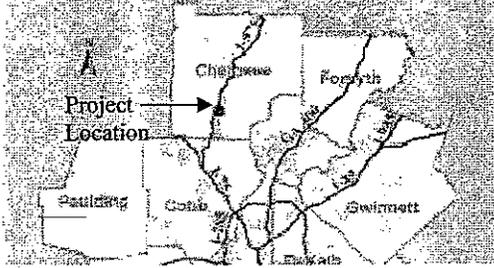
Attachment

cc: David Mulling, P.E.
Kent Sager

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
PROJECT CONCEPT REPORT

Project Number: STP-0002-00(637)
County: Cherokee
P. I. Number: 0002637

Federal Route Number: None
State Route Number: None



Sixes Road Widening
East of I-575 to Old SR 5

Recommendation for approval:

DATE 3-14-03

Curtis D. Corn
Project Manager

DATE 3/14/03

Ken [Signature]
Office Head/District Engineer

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

DATE _____

State Transportation Planning Administrator

DATE _____

State Transportation Programming Engineer

DATE 3/21/03

[Signature]
State Environmental/Location Engineer

DATE _____

State Traffic Safety & Design Engineer

DATE _____

District Engineer

DATE _____

Project Review Engineer

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
PROJECT CONCEPT REPORT**

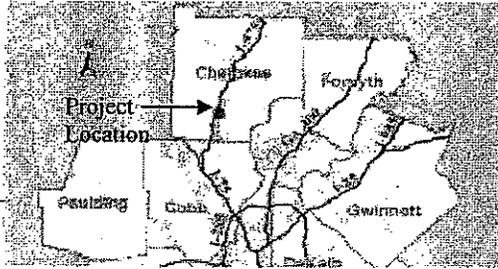
Project Number: STP-0002-00(637)

County: Cherokee

P. I. Number: 0002637

Federal Route Number: None

State Route Number: None



**Sixes Road Widening
East of I-575 to Old SR 5**

Recommendation for approval:

DATE 3-14-03

Curtis D. Corner
Project Manager

DATE 3/14/03

Keith Soyars
Office Head/District Engineer

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

DATE _____

State Transportation Planning Administrator

DATE _____

State Transportation Programming Engineer

DATE _____

State Environmental/Location Engineer

DATE _____

State Traffic Safety & Design Engineer

DATE _____

District Engineer

DATE 3/25/03

David J. Mueller *DCW*
Project Review Engineer