

D.O.T. 66

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

**FILE** P. I. No. 0006436, McDuffie County **OFFICE** Preconstruction  
CSSTP-0006-00-(436)  
Thompson West Bypass North Extension **DATE** July 6, 2006

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

**TO** *for* SEE DISTRIBUTION

**SUBJECT** APPROVED PROJECT CONCEPT REPORT

Attached for your files is the approval for subject project.

MBP/cj

Attachment

**DISTRIBUTION:**

Brian Summers  
Harvey Keeper  
Ken Thompson  
Jamie Simpson  
Michael Henry  
Keith Golden  
Joe Palladi (file copy)  
Paul Liles  
Babs Abubakari  
Mike Thomas  
BOARD MEMBER

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

**FILE:** P. I. No. 0006436, McDuffie County **OFFICE** Preconstruction  
 CSSTP-0006-00(436)  
 Thompson West Bypass North Extension **DATE** June 19, 2006

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

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

**SUBJECT** PROJECT CONCEPT REPORT

This project comprises the Thompson West Bypass North Extension from the northern terminus of the interchange project of the Thompson West Bypass with I-20 and extend on new location to SR 17 north of I-20 for a total of 3.40 miles. This project is being proposed as the last phase of a roadway plan that will ultimately complete a bypass loop around the west side of Thompson. The project will reduce traffic congestion through downtown Thompson and become an alternative for commercial traffic.

At the beginning, the alignment will tie into the northern terminus of the Thompson West Bypass interchange project - NHS-0003-00(621). The alignment will proceed northeast on new location and cross Wrightsboro Road at-grade. The alignment will continue east to SR 17 approximately one mile north of the SR 17/US 78 interchange at I-20. The proposed typical section will consist of one 12' lane in each direction, 12' shoulders with 6.5' paved from Three Points Road to Wrightsboro Road, one, 12' rural lane in each direction with a 14' two-way left turn lane, 12' shoulders with 6.5' paved from Wrightsboro Road to Airport Drive, and two, 12' rural lanes in each direction with a 14' two-way left turn lane, and 12' shoulders with 6.5' paved from Airport Drive to SR 17.

The base year traffic (2009) is 5,200 VPD and the design year traffic (2029) is 8,600 VPD. Access will be by permit and the proposed speed design is 55 MPH. Traffic will be maintained on existing roads during construction.

Environmental concerns include requiring an Environmental Assessment be prepared; a public hearing is required; time saving procedures are not appropriate.

The estimated costs for this project are:

	<u>PROPOSED</u>	<u>APPROVED</u>	<u>FUNDING</u>	<u>PROG DATE</u>
Construction (includes E&C and inflation)	\$11,949,000	\$11,949,000	L200	LR
Right-of-Way	Local	Local	Local	
Utilities*	\$ 350,000	-----		

David Studstill

Page 2

P. I. No. 0006436, McDuffie

June 19, 2006

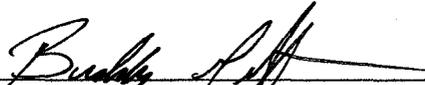
"McDuffie County signed PMA on 2-22-05 for PE and right-of-way.

I recommend this project concept be approved.

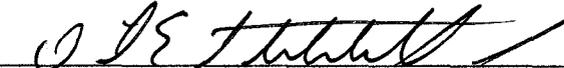
MBP:JDQ/cj

Attachment

CONCUR

  
Buddy Gratton, P.E., Director of Preconstruction

APPROVE

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

6/9/06

WD

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

District Two

PROJECT CONCEPT REPORT

Project Number: CSSTP-0006-00(436)

County: McDuffie

P. I. Number: 0006436

Federal Route Number: N/A

State Route Number: N/A

See Project location sketch on Page 2  
Thomson West Bypass North Extension

Report Date: May 12, 2006

Recommendation for approval:

DATE 6/5/06

Glenn M. Brewer  
Project Manager

DATE 6-8-06

Michael L. Lohr  
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 6-15-06

James T. Sposito  
State Transportation Financial Management Administrator

DATE \_\_\_\_\_

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

DATE \_\_\_\_\_

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

DATE \_\_\_\_\_

\_\_\_\_\_  
District Engineer

DATE \_\_\_\_\_

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

DATE \_\_\_\_\_

\_\_\_\_\_  
State Bridge Design Engineer

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

District Two

PROJECT CONCEPT REPORT

Project Number: CSSTP-0006-00(436)

County: McDuffie

P. I. Number: 0006436

Federal Route Number: N/A

State Route Number: N/A

See Project location sketch on Page 2  
Thomson West Bypass North Extension

Report Date: May 12, 2006

Recommendation for approval:

DATE 6/5/06

George M. Brewer  
Project Manager

DATE 6-8-06

Michael L. Horne  
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 Financial Management Administrator

DATE \_\_\_\_\_

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

DATE \_\_\_\_\_

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

DATE \_\_\_\_\_

\_\_\_\_\_  
District Engineer

DATE \_\_\_\_\_

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

DATE 6/25/06

Paul V. Tiller Jr  
State Bridge Design Engineer

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

District Two

PROJECT CONCEPT REPORT

Project Number: CSSTP-0006-00(436)

County: McDuffie

P. I. Number: 0006436

Federal Route Number: N/A

State Route Number: N/A

See Project location sketch on Page 2  
Thomson West Bypass North Extension

Report Date: May 12, 2006

Recommendation for approval:

DATE 6/5/06

George M. Brewer  
Project Manager

DATE 6-8-06

Michael L. Thomas  
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 Financial Management Administrator

DATE \_\_\_\_\_

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

DATE \_\_\_\_\_

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

DATE \_\_\_\_\_

\_\_\_\_\_  
District Engineer

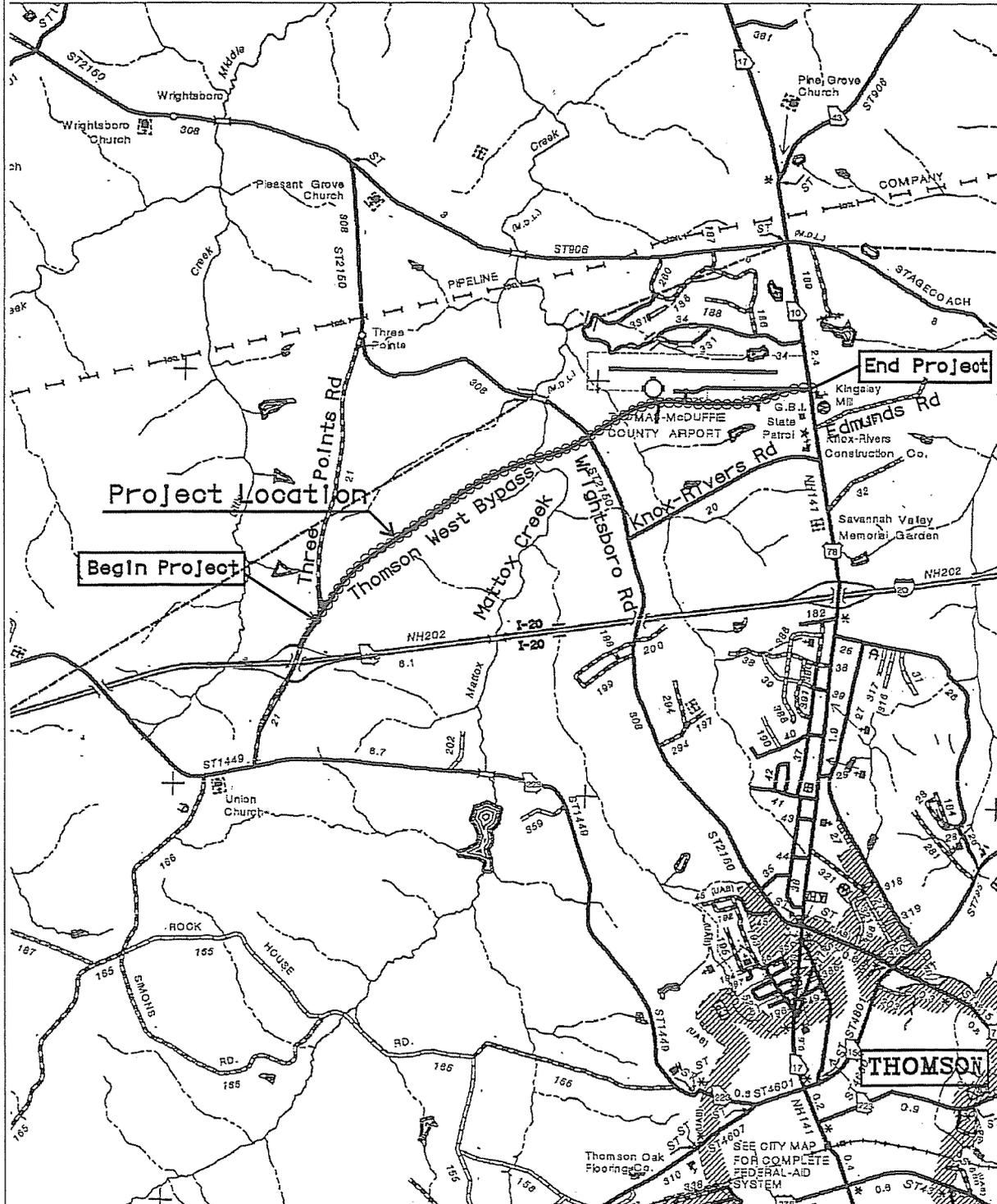
DATE \_\_\_\_\_

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

DATE \_\_\_\_\_

\_\_\_\_\_  
State Bridge Design Engineer

# Location Sketch



### **Need and Purpose:**

The primary purpose for the Thomson West Bypass is to relieve traffic congestion on SR 17/US 78 and other roadways through the City of Thomson. The northern extension would complete this western bypass around the City. The second purpose of the project is to increase connectivity of roadways for commercial and industrial development occurring to the south and west of Thomson, according to the approved land use plan for McDuffie County. Currently, commercial truck traffic to and from the west or south sides of Thomson must use SR 17 and travel through the City to reach northern destinations. This routing brings traffic through the center of Thomson's downtown area, which has a negative impact on that area's residents and businesses. The proposed bypass roadway will provide an alternative route for commercial truck traffic to and from northern destinations, which includes the Thomson-McDuffie County airport. The location of the proposed northern extension of the Bypass is next to the airport. It is anticipated that this project will significantly reduce existing traffic congestion, improve traffic safety and facilitate the county's future plans for increased manufacturing development in the areas west and south of Thomson.

### **Planning Background and Project History**

The presence of I-20 and its location within commuting distance of Augusta have provided Thomson with continued economic growth. Thomson, the county seat, is one of two municipalities in McDuffie County. The study area's transportation infrastructure includes one interstate highway and four arterial roadways. Census data from 1990 reveal a population of 6,682 residents within the City of Thomson. This figure is projected to increase by 50% to 10,000 by 2015. With the majority of the local and county population positioned in a north-south manner along SR 17, it serves as the central transportation facility for both local and regional traffic. Planning studies of the Thomson West Bypass were conducted over the last 10 years. Results of these studies determined that construction of the Thomson West Bypass is the only feasible improvement to reduce the industrial and commercial truck traffic in downtown Thomson.

### **Logical Termini**

The logical southern/western terminus of the proposed northern extension of the Thomson West Bypass would occur at the end of the Thomson West Bypass just north of the I-20 Interchange. This end of the Thomson West Bypass ties into Three Points Road, which curves to the north away from SR 17. The northern extension of the Thomson West Bypass would curve to the east and continue to SR 17. The southern/western terminus currently serves as a point in which the roadway would take a directional turn and then continue easterly to complete the bypass "loop" around the City of Thomson.

The logical northern/eastern terminus of the proposed project would occur at SR 17. This location is next to the Thomson-McDuffie airport and approximately one mile north of the SR 17/US 78 interchange at I-20.

The two termini were chosen primarily because it completes the western half of the bypass around the City of Thomson. However, the length and location of the project serves an independent utility by providing a connection between major travel destinations of commerce.

**Description of the proposed project:**

The proposed project is located in McDuffie County at Three Points Road (CR 21) north of I-20, three miles northwest of the Thomson City limits. (See Project Location Map). This project serves as the northern extension of Projects NHS-003-00 (621) – The Thomson West Bypass Interchange with I-20 and PR-159-1 (189). These projects together complete a north-south bypass on the west side of Thomson, from SR 17 south of the city to SR 17, north of I-20. This project will begin at the northern terminus of the interchange project of the Thomson West Bypass with I-20 and extend the bypass on new location to SR 17 north of I-20. The total project length is approximately 3.4 miles.

**Coordination with Planned Area Transportation Improvements**

Because McDuffie County, including the City of Thomson, is not a member of a Metropolitan Planning Organization (MPO), the Georgia Department of Transportation is charged with the responsibility of developing the prioritization of projects that will be developed and constructed, in cooperation with local officials. In accordance with TEA-21, these projects are programmed in the Department’s six-year Construction Work Program (CWP) and then are prioritized in the Statewide Transportation Improvements Program (STIP). A number of projects in McDuffie County, including Thomson, are included in the current CWP cycle. These projects are listed in the Table below.

Construction Work Program Projects in McDuffie County					
Project Location	Project No. P.I.	Type	Funding Year		
			PE	R/W	CST
1. SR 10/US 78/Thomson East Bypass @ SR 223/White Oak Rd	STP-0001-00 (999) P.I. 0001999	Intersection Improvement	2001	2003	2004
2. I-20 New Interchange at CR 21/ Thomson West Bypass/ Three Points Road	NHS-0003-00 (621) P.I. 0003621	New Construction (Interchange)	2003	N/A	2005
3. SR 17/10/US 78 From SR 43 To CR 6 / Smith Mill Road	EDS-545 (40) P.I. 222250	Widening (2 to 4-lane with 44' median section)	1994	2004	2006
4. SR 17/10/US 78 From Smith Mill Road To Washington Bypass in Wilkes County	EDS-545 (53) P.I. 222255	Widening (2 to 4-lane with 44' median section)	1994	2005	After 2006
5. SR 17/US 1 From north of SR 296/ Warren to Wire Road/CR 311/ McDuffie	EDS-545 (43) P.I. 222590	Widening (2 to 4-lane with 44' median section)	2004	2004	2006
6. Thomson East Bypass From SR 17 at CR 311 NE New Location to SR 17 @ CR 20	EDS-545 (3) P.I. 262400	New Construction (4-lane with 44' median section)	2000	2004	2006

In coordination with other planned area transportation improvements, this project is being proposed as the last phase of a roadway plan that will ultimately complete a bypass loop around the western side of Thomson. This project will reduce traffic congestion through downtown Thomson and become an alternative for commercial traffic

Project Concept Report page 5  
 Project Number: CSSTP-0006-00(436)  
 P. I. Number: 0006436  
 County: McDuffie

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

PDP Classification: Major  Minor \_\_\_\_\_

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

**Functional Classification:**

Thomson West Bypass Road – Rural Major Collector

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

**Traffic (AADT):**

Thomson West Bypass Road Build Year: (2009)   5,200   Design Year: (2029)   8,600  

**Existing design features:**

- Typical Section:

Thomson West Bypass – One 12 foot lane in each direction and with 6-1/2-foot paved shoulders.

Three Points Rd – One 12 foot rural lane in each direction with variable width grass shoulders.

Wrightsboro Rd – One 12 foot rural lane in each direction with variable width grass shoulders.

US 78 – Four 12-foot urban lanes with a 14-foot center turn lane and curb and gutter on both sides.

	Posted Speed (mph)	Max. Degree of Curve	Max Grade (%)
Thomson West Bypass Road (Interchange)	55	4%	2%
Three Points Road	55	8%	4%
Wrightsboro Road	55	4%	3%
US 78	55	Tangent	1%

- Width of right of way:

Roadway	Right of Way Width (ft)
Thomson West Bypass Road (Interchange)	100-120 ft.
Three Points Road	80 ft.
Wrightsboro Road	50 ft.
US 78	80 ft.

**Proposed Design Features:**

- Proposed typical section(s):

Thomson West Bypass – One 12-foot rural lane in each direction, 12-foot shoulders with 6 ½ -foot paved from Three Points Road to Wrightsboro Road. One 12-foot rural lane in each direction with a 14-foot two-way left turn lane, 12-foot shoulders with 6 ½-foot paved from Wrightsboro Road to Airport Drive. Two 12-foot rural lanes in each direction with a 14-foot two-way left turn lane, 12-foot shoulders with 6 ½-foot paved from Airport Drive to SR 17. *W/way*

Three Points Rd - One 12-foot rural lane in each direction, with variable width grass shoulders.

Wrightsboro Rd - One 12-foot rural lane in each direction, with left turn and right turn lanes at its intersection with Thomson West Bypass, variable width grass shoulders.

US 78 – Four 12-foot urban lanes with a 14-foot center turn lane and curb and gutter on both sides. It will also have a right turn lane at its intersection with the Thomson West Bypass.

	Design Speed (mph)	Min Prop. Radius of Curve *	Min Allow. Radius of Curve *	Max Prop. Grade	Max Allow. Grade
Thomson West Bypass Road (North Extension)	55	1065	1065	6 %	6 %
Driveways	N/A	N/A	N/A	11 %	11 %

\*Based on 6.0 max superelevation rate.

- Right of way

Roadway	Right of Way Width (ft)
Thomson West Bypass Road	100-120 ft.

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 Project Number: CSSTP-0006-00(436)  
 P. I. Number: 0006436  
 County: McDuffie

- Easements: Temporary (X), Permanent (X), Utility ( ), Other ( ).
- Type of access control: Full ( ), Partial ( ), By Permit (X), Other ( ).
  
- Number of parcels: 19                      Number of displacements: 1
  - Business: .....
  - Residences: 1
  - Mobile homes: .....
  - Other: .....

Structures:

Box Culverts:

One new culvert at Mattox creek, one new culvert at a tributary of Mattox Creek:

1. Approximately double 10'x 10' Concrete Box Culvert, 150' in length: located approximately 1800' southwest of Wrightsboro Road. (Mattox creek)
2. Approximately single 10'x 10' Concrete Box Culvert, 130' in length: located approximately 1300' northeast of Wrightsboro Road. (Tributary of Mattox creek).

- Major intersections and interchanges: The project corridor includes a major intersection at Whitesboro Road and at US 78.
- Traffic control during construction: The majority of the project will be new Construction, for the rest of the project traffic will be maintained 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)

- Design Variances; None Expected.
- Environmental concerns: There are several small stream crossings and a Nationwide 404 permit is anticipated.
- Level of environmental analysis:  
 Are Time Savings Procedures appropriate? Yes ( ), No (X)  
 Environmental Assessment (X)

- Utility involvements:
  - Gas Company
  - BellSouth
  - McDuffie EMC
  - McDuffie County Water Department
  
- **Project responsibilities:**
  - Design: McDuffie County
  - Right-of-Way Acquisition: McDuffie County
  - Potential Limited Relocation of Utilities: McDuffie County
  - Letting to contract: Georgia Department of Transportation
  - Supervision of construction: Georgia Department of Transportation
  - Providing material pits: Construction Contractor
  - Providing detours: Construction Contractor
  
- **Coordination**
  - Concept Meeting was held on March 23, 2006, see attached minutes.
  - A P. A. R. is not anticipated on this project.
  - FEMA, USCG, and/or TVA involvement not applicable
  - Public involvement: Alternatives to the alignment of this project were presented to the County and displayed at the administration building for public comment. A Public Information Meeting will be held sometime after the concept team meeting.
  - Local government commitments: See attached Government Project Management Agreement.
  
- **Other projects in the area:**
  - Project No. NHS-003-00 (621) Thomson West Bypass New Interchange at I-20.
  
- **Scheduling – Responsible Parties’ Estimate**

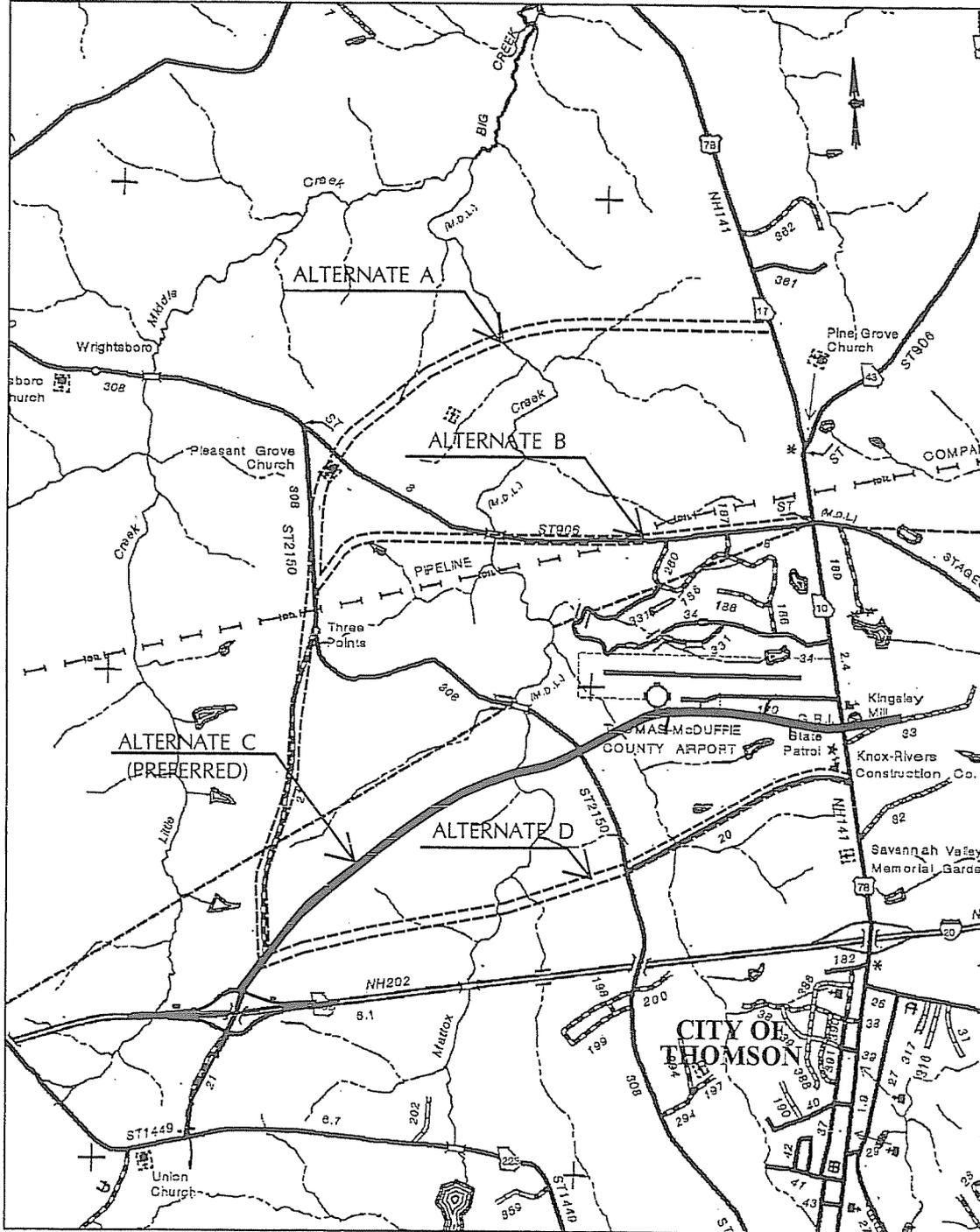
Time to complete the environmental process:	8 Months
Time to complete preliminary construction plans:	12 Months
Time to complete right-of-way plans:	12 Months
Time to complete final construction plans:	10 Months

**Comments:**

**Other alternates considered:**

There were five alternatives considered including a no-build alternative. These alternatives were presented to the Board of Commissioners and were displayed at the County Administration building for comment by property owners, businesses and the general public. The four alternate alignments for the northern extension of the Thomson West Bypass are shown on the map on page 9. Each alternative considered is described on page 10.

## ALTERNATES OF THE THOMSON WEST BYPASS NORTHERN EXTENSION



### No-Build Alternative

The no-build alternative is an alternative in which McDuffie County would take no action to construct the project. Increased projected traffic flows in the area would cause traffic operational problems on Stagecoach Road and Three Points Road as truck and vehicular traffic try to reach the interchange of I-20 and destinations located on the south portion of Thomson West Bypass.

### Alternate A

This alternative follows the northern alignment of Three Points Road and Wrightsboro Road. The alignment would then curve to the east near Stagecoach Road and continue in a northeasterly direction to SR 17, approximately three miles north of the SR 17/US 78 interchange at I-20. This alternative would cross several streams and wetland areas. It is the longest alternative with a length of 4.7 miles and therefore would be the most expensive alternative.

### Alternate B

This alternative follows the northern alignment of Three Points Road and Wrightsboro Road. The alignment would then curve to the east onto Stagecoach Road and continue in a northeasterly direction to SR 17. This alternative would impact a residential community located on the south side of Stagecoach Road. This alternative would also cross one stream and a possible wetland area.

### Alternate C (Preferred)

This alternative would begin on Three Points Road near the Thomson West Bypass/I-20 and then curve away to the east and continue in a northeasterly direction to SR 17. The alignment would then intersect with SR 17. This alternative is next to the Thomson-McDuffie airport and approximately one mile north of the SR 17/US 78 interchange at I-20. This alternative would cross at least two streams and possible wetland areas.

### Alternate D

This alternative would begin on Three Points Road near the Thomson West Bypass/I-20 and then curve away to the east and continue parallel to I-20 and tie into Knox-Rivers Road which ties into SR 17 approximately ½ mile north of the SR 17/US 78 interchange at I-20. This alternative alignment serves primarily as a frontage road to I-20 and not as a bypass. Also, the businesses and industries on Knox-Rivers Road could be adversely impacted. This alternative would cross at least two streams and possible wetland areas.

Project Concept Report page 11  
Project Number: CSSTP-0006-00(436)  
P. I. Number: 0006436  
County: McDuffie

**Attachments:**

1. Cost Estimates:
  - a. Construction including E&C
  - b. Right of Way
  - c. Utilities
2. Typical sections
3. Traffic Analysis and Traffic Flow Diagrams
4. Minutes of Concept Team meeting
5. PMA

McDuffie County

SUMMARY OF PROJECT COSTS

Thomson West Bypass from Three Points Road to SR 17

Non-Construction Costs

A.	Right-of-Way	<b>\$3,128,507</b>
B.	Reimbursable Utilities	<b>\$350,000</b>

Construction Costs

C.	Major Structures	\$627,629
D.	Grading and Earthwork	\$2,285,533
E.	Drainage	\$1,039,097
F..	Base and Paving	\$4,932,573
H.	Signing and Striping	\$185,292
I.	Guardrail	\$61,193
J.	Traffic Control & Mobilization	\$288,000
K.	Landscaping and Erosion Control	\$1,384,351
L.	Miscellaneous Construction Items	\$59,057
	Construction Cost Subtotal	<b>\$10,862,725</b>

Engineering & Construction; 10% \$1,086,272

Total Construction Cost **\$11,948,997**

Total Project Costs **\$15,427,504**

McDuffie County

Detailed Cost Estimate  
Thomson West Bypass from Three Points Road to SR 17

A.	Right-of-Way			\$3,128,507
B.	Reimbursable Utilities			\$350,000
C.	Major Structures			
	1. Box Culverts			
	1) Concrete	902 CY @	\$560.53	\$505,598
	2) Reinforcing Steel	120,758 LB @	\$0.85	\$102,644
	3) Foundation Backfill Material, TP II	419 CY @	\$46.27	\$19,387
			<b>Subtotal</b>	<b>\$627,629</b>
D.	Grading and Earthwork			
	1. Unclassified Excavation & Borrow	238,717 CY @	\$5.69	\$1,358,300
	2. Borrow Excavation	192,772 CY @	\$4.81	\$927,233
			<b>Subtotal</b>	<b>\$2,285,533</b>
E.	Drainage			
	1) 18" Storm Drain Pipe	12500 LF @	\$34.08	\$426,000
	2) 24" Storm Drain Pipe	3700 LF @	\$44.32	\$163,984
	3) 30" Storm Drain Pipe	1950 LF @	\$47.14	\$91,923
	4) 36" Storm Drain Pipe	1050 LF @	\$63.41	\$66,581
	5) Catch Basin	114 LF @	\$1,859.00	\$211,926
	6) Flared End Section	69 LF @	\$345.70	\$23,853
	7) Safety End Section	35 LF @	\$883.41	\$30,919
	8) Manholes	4 LF @	\$1,803.59	\$7,214
	9) Rip Rap	395 LF @	\$42.27	\$16,697
			<b>Subtotal</b>	<b>\$1,039,097</b>
F.	Base & Paving			
	1. Graded Aggregate Base 6"	9,317 TN @	\$22.51	\$209,721
	2. Graded Aggregate Base 12"	63,416 TN @	\$22.51	\$1,427,505
	3. Asphalt Concrete 9.5 mm	8,178 TN @	\$75.00	\$613,383
	4. Asphalt Concrete 19.0 mm	13,984 TN @	\$75.00	\$1,048,778
	5. Asphalt Concrete 25 mm	21,607 TN @	\$75.00	\$1,620,529
	6. Bitum Tack Coat	8,327 GL @	\$1.52	\$12,657
			<b>Subtotal</b>	<b>\$4,932,573</b>
G.	Signing and Striping			
	1. Signs	102 EA @	\$297.78	\$30,374
	2. Striping	159,400 LF @	\$0.47	\$74,918
	3. Signal	1 EA @	\$80,000.00	\$80,000
			<b>Subtotal</b>	<b>\$185,292</b>
H.	Guardrail			
	1. Guardrail, W Beam	2,500 LF @	\$14.59	\$36,475
	2. Anchors TP 12	13 EA @	\$1,470.35	\$19,115
	3. Anchors TP 1	12 EA @	\$466.96	\$5,604
			<b>Subtotal</b>	<b>\$61,193</b>

I.	Traffic Control			
	1. Traffic Control	24 MTS @	\$12,000.00	\$288,000
			<b>Subtotal</b>	<b>\$288,000</b>
J.	Landscaping and Erosion Control			
	1. Clearing & Grubbing	48.1 ac @	\$10,000.00	\$480,716
	2. Grassing	24.5 ac @	\$823.52	\$20,176
	3. Erosion Control			
	a. Temporary Grass	20 ac @	\$562.17	\$11,243
	b. Temporary Mulch	120 TN @	\$262.54	\$31,505
	c. Silt Fence, TP A	37,600 LF @	\$2.02	\$75,952
	d. Silt Fence, TP C	1,700 LF @	\$3.36	\$5,712
	e. Silt Control Gate	120 LF @	\$824.27	\$98,912
	f. Ditches Checks	1,700 LF @	\$144.48	\$245,616
	g. Inlet Sediment Trap	50 LF @	\$228.00	\$11,400
	h. Maint. of Temp. Silt Fence, TP A	37,600 LF @	\$1.23	\$46,248
	i. Maint. of Temp. Silt Fence, TP C	1,700 LF @	\$1.60	\$2,720
	j. Maint. of Temp. Silt Control Gate	120 LF @	\$315.80	\$37,896
	k. Maint. of Temp. Ditches Checks	1,700 LF @	\$57.44	\$97,648
	l. Maint. of Temp. Inlet Sediment Trap	50 LF @	\$80.62	\$4,031
	m. Sediment Basin, TP 1	3 EA @	\$5,780.22	\$17,341
	n. Maint. of Temp. Sediment Basin	3 EA @	\$1,797.28	\$5,392
	o. Permanent Grass Seed	35 ac @	\$940.00	\$32,900
	p. Construction Exit	13 EA @	\$1,173.35	\$15,254
	q. Water Quality Sampling	4 EA @	\$58.24	\$233
	r. Water Quality Monitoring	24 mon.	\$817.56	\$19,621
	s. Erosion Control mats	32,000 SY @	\$1.36	\$43,520
	t. Miscellaneous Items		Lump Sum	\$80,314
			<b>Subtotal</b>	<b>\$1,384,351</b>
K.	Miscellaneous Items			
	1. Field Office TP 3	1 EA @	\$52,503.00	\$52,503
	2. Right of Way Markers	75	\$87.38	\$6,554
			<b>Subtotal</b>	<b>\$59,057</b>

# Conceptual Right-of-Way Cost Estimate

**Howard "Phil" Copeland**  
Right-of-Way Administrator

Date: February 17, 2006  
Project: CSSTP-0006-00(436)  
Existing/Required R/W: varies 100 feet-120 feet  
Project Termini: Three Points Road to US 78  
Project Description: Thomson West Bypass Northern Extension

P.I. Numbers: 0006436  
No. Parcels: 19

Land:  
Rural Industrial/Residential/Agricultural - McDuffie  
1,318,136 SF x \$0.50 / SF= \$659,068

Improvements: \$ 659,068  
Residential Home \$ 150,000

Relocation: \$ 0

Damages:  
Proximity – 3 Parcels = \$ 80,000  
Cost To Cure – 1 Parcel = \$ 12,000  
\$ 92,000

Net Cost of Right-of-Way		\$ 901,068
Scheduling Contingency	55%	\$ 495,587
Adm./Court Cost.	60%	\$ 837,993
Inflation Factor	40%	\$ 893,859

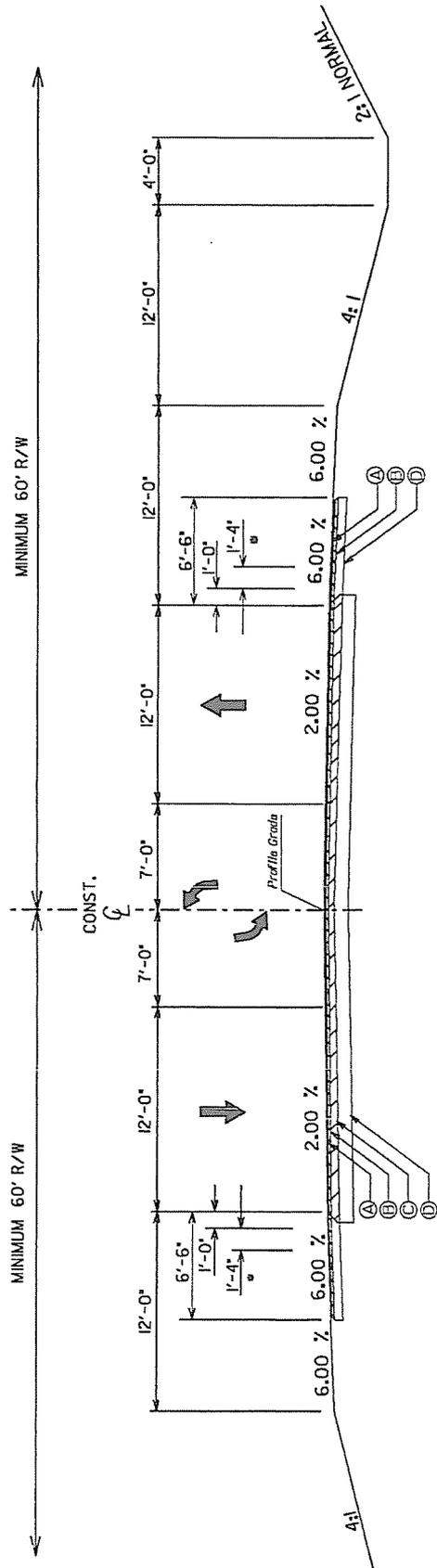
**Total Cost \$ 3,128,507**

Prepared by: Karla Poehedy  
Moreland Altobelli Associates, Inc

Approved: \_\_\_\_\_  
GDOT R/W



DATE	PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS



\* INDENTATION RUMBLE STRIPS REQUIRED

### TANGENT SECTION

THOMSON WEST BYPASS NORTHERN EXTENSION  
FROM WRIGHTSBORO RD TO AIRPORT DRIVE

#### PROPOSED PAVEMENT

- (A) ASPHALTIC CONCRETE, 9.5 mm SUPERPAVE, 135 lbs/sq. yd.
- (B) ASPHALTIC CONCRETE, 19 mm SUPERPAVE, 220 lbs/sq. yd.
- (C) ASPHALTIC CONCRETE, 25 mm SUPERPAVE, 440 lbs/sq. yd.
- (D) GRADED AGGREGATE BASE, 10"

DATE	REVISION	BY	CHK												

**MA** Michael A. Sabelli  
2311 Highway 101, Suite 100  
Wrightsville, NC 28780  
Phone: 704.771.1000

Department of Transportation  
State of Georgia

THOMSON WEST BYPASS - NORTHERN EXTENSION  
TYPICAL SECTION  
FROM WRIGHTSBORO RD TO US 70/SR 10



## TRAFFIC ANALYSIS

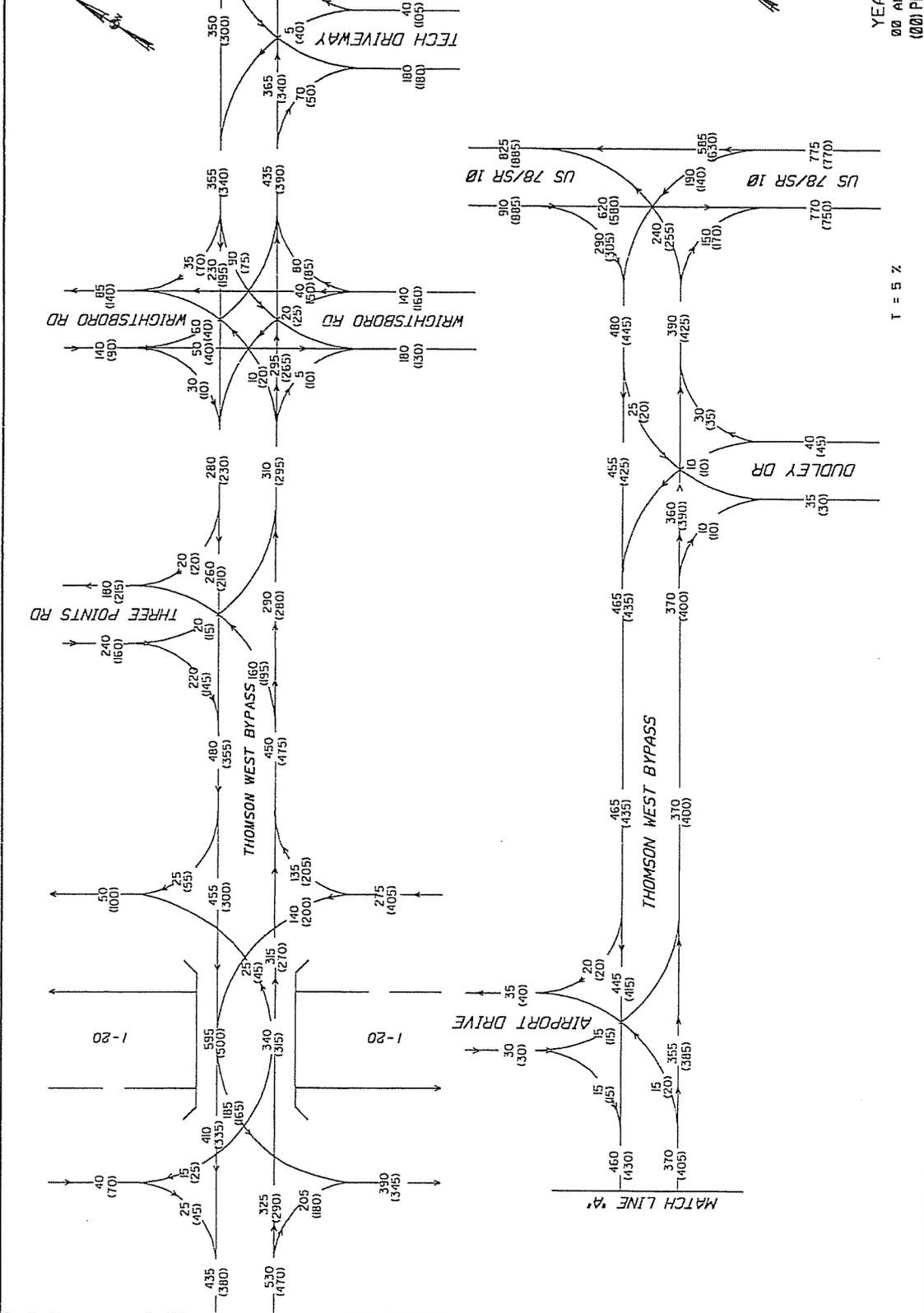
Intersection levels of service were determined at each of the major intersections of the project and are shown in the table below. Projected intersection levels of service range from A to D for the design year (2029). For unsignalized intersections, LOS is given for the minor street approach.

**Summary of HCS Analysis Results**

Thomson West Bypass Intersections	Design - Year 2029	
	AM	PM
Three Points Road	B	B
Wrightsboro Road	D	D
Tech Driveway	B	C
Airport Drive	C	C
Dudley Drive	B	B
US 78/SR 10	B*	B*

\* Proposed Future Signal

DESIGN NO.	PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS

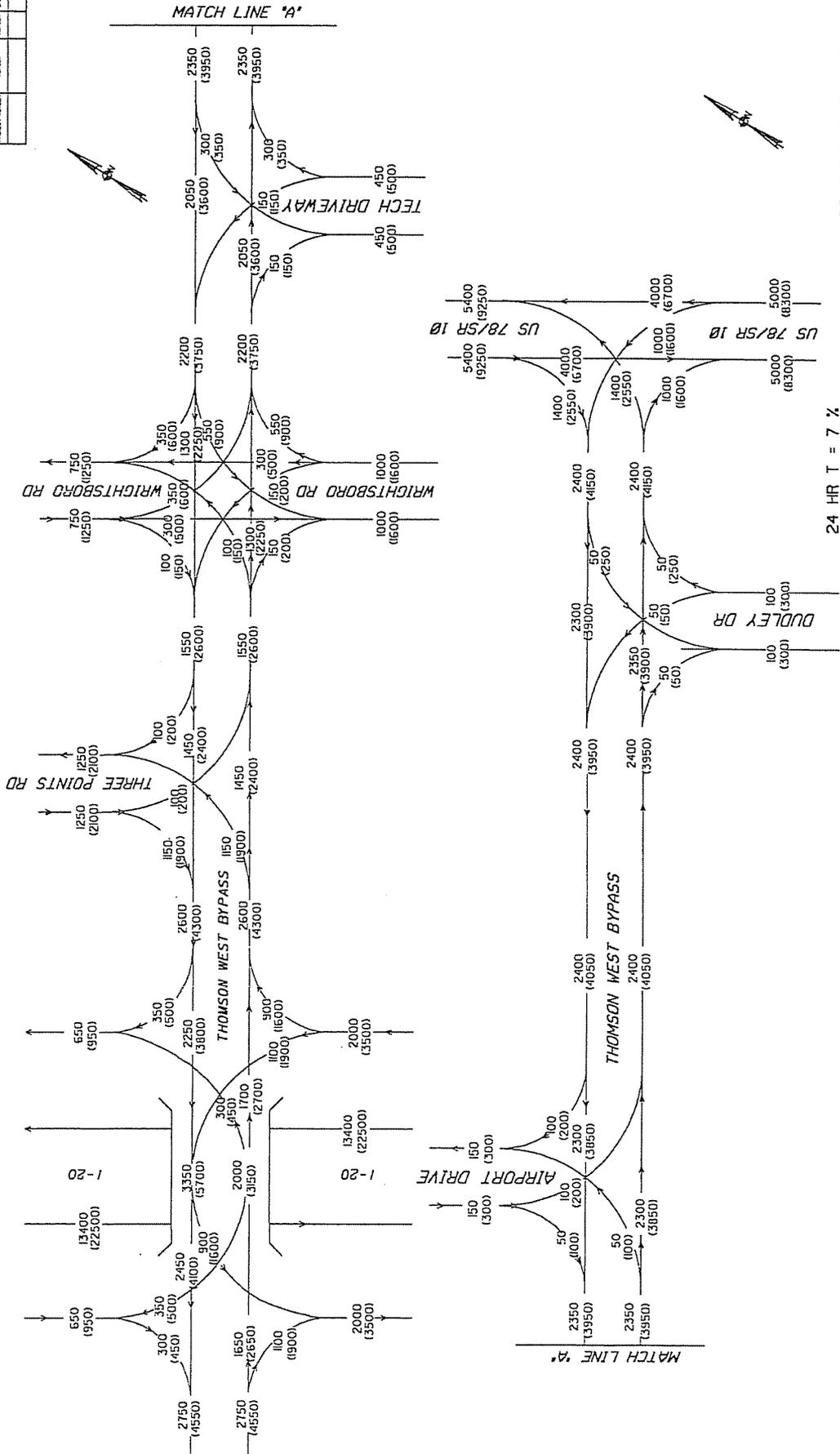


YEAR 2029  
00 AM PEAK HOUR  
00 PM PEAK HOUR

T = 5 %

REVISIONS		DATE		BY		CHECKED BY		DATE		BY		DATE		BY		DATE		BY	
<p>MA M. J. ALLEN, Inc. Traffic Engineers, Inc. 1000 North Main Street Wilmington, DE 19801</p>																			
<p>THOMSON WEST BYPASS NORTH EXTENSION YEAR 2029 PEAK HOUR DESIGN TRAFFIC TRAFFIC FLOW DIAGRAM</p>																			

LOCAL PROJ. NO.	PROJECT NAME	SHEET NO.	TOTAL SHEETS



DATE	BY	REVISIONS	DATE	BY	DATE	BY	DATE	BY
			M. J. ... 2015 ... ...					
THOMSON WEST BYPASS NORTH EXTENSION YEAR 2009/2029 AVERAGE DAILY TRAFFIC TRAFFIC FLOW DIAGRAM								



HCS+: Unsignalized Intersections Release 5.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI  
 Agency/Co.: GDOT  
 Date Performed: 2/17/2006  
 Analysis Time Period: PM Peak Hour  
 Intersection: Thomson West @ Three Points Rd  
 Jurisdiction: McDuffie County  
 Units: U. S. Customary  
 Analysis Year: Year 2029  
 Project ID: Thomson West Bypass Northern Extension  
 East/West Street: Thomson West Bypass  
 North/South Street: Three Points Road  
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound				Westbound		
		1 L	2 T	3 R	4 L	5 T	6 R	
Volume		195	280			210	20	
Peak-Hour Factor, PHF		0.88	0.88			0.88	0.88	
Hourly Flow Rate, HFR		221	318			238	22	
Percent Heavy Vehicles		0	--	--		--	--	
Median Type/Storage		Undivided				/		
RT Channelized?						No		
Lanes		1	1			1	1	
Configuration		L	T			T	R	
Upstream Signal?		No				No		

Minor Street:	Approach Movement	Northbound			Southbound		
		7 L	8 T	9 R	10 L	11 T	12 R
Volume					15		145
Peak Hour Factor, PHF					0.88		0.88
Hourly Flow Rate, HFR					17		164
Percent Heavy Vehicles					0		0
Percent Grade (%)		0				0	
Flared Approach: Exists?/Storage					/		No /
Lanes					0		0
Configuration						LR	

Delay, Queue Length, and Level of Service

Approach Movement	EB 1	WB 4	Northbound			Southbound		
			7	8	9	10	11	12
Lane Config	L						LR	
v (vph)	221						181	
C(m) (vph)	1316						650	
v/c	0.17						0.28	
95% queue length	0.60						1.14	
Control Delay	8.3						12.7	
LOS	A						B	
Approach Delay							12.7	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI  
 Agency/Co.: GDOT  
 Date Performed: 2/17/2006  
 Analysis Time Period: AM Peak Hour  
 Intersection: Thomson West @ Wrightsboro Rd  
 Jurisdiction: McDuffie County  
 Units: U. S. Customary  
 Analysis Year: Year 2029  
 Project ID: Thomson West Bypass Northern Extension  
 East/West Street: Thomson West Bypass  
 North/South Street: Wrightsboro Road  
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach Movement	Eastbound			Westbound		
	L	T	R	L	T	R
Volume	10	295	5	90	230	35
Peak-Hour Factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Hourly Flow Rate, HFR	11	335	5	102	261	39
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?	No			No		
Lanes	1	1	1	1	1	1
Configuration	L	T	R	L	T	R
Upstream Signal?	No			No		

Minor Street: Approach Movement	Northbound			Southbound		
	L	T	R	L	T	R
Volume	20	40	80	60	50	30
Peak Hour Factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Hourly Flow Rate, HFR	22	45	90	68	56	34
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach: Exists?/Storage	/			/		
Lanes	0	1	1	0	1	1
Configuration	LT		R	LT		R

Delay, Queue Length, and Level of Service

Approach Movement Lane Config	EB	WB	Northbound			Southbound		
	1	4	7	8	9	10	11	12
	L	L	LT		R	LT		R
v (vph)	11	102	67		90	124		34
C(m) (vph)	1273	1230	242		712	221		783
v/c	0.01	0.08	0.28		0.13	0.56		0.04
95% queue length	0.03	0.27	1.09		0.43	3.06		0.14
Control Delay	7.9	8.2	25.5		10.8	40.3		9.8
LOS	A	A	D		B	E		A
Approach Delay				17.1			33.7	
Approach LOS				C			D	

HCS+: Unsignalized Intersections Release 5.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI  
 Agency/Co.: GDOT  
 Date Performed: 2/17/2006  
 Analysis Time Period: PM Peak Hour  
 Intersection: Thomson West @ Wrightsboro Rd  
 Jurisdiction: McDuffie County  
 Units: U. S. Customary  
 Analysis Year: Year 2029  
 Project ID: Thomson West Bypass Northern Extension  
 East/West Street: Thomson West Bypass  
 North/South Street: Wrightsboro Road  
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound			Westbound		
		1 L	2 T	3 R	4 L	5 T	6 R
Volume		20	265	10	75	195	70
Peak-Hour Factor, PHF		0.88	0.88	0.88	0.88	0.88	0.88
Hourly Flow Rate, HFR		22	301	11	85	221	79
Percent Heavy Vehicles		0	--	--	0	--	--
Median Type/Storage		Undivided			/		
RT Channelized?		No			No		
Lanes		1	1	1	1	1	1
Configuration		L	T	R	L	T	R
Upstream Signal?		No			No		

Minor Street:	Approach Movement	Northbound			Southbound		
		7 L	8 T	9 R	10 L	11 T	12 R
Volume		25	50	85	40	40	10
Peak Hour Factor, PHF		0.88	0.88	0.88	0.88	0.88	0.88
Hourly Flow Rate, HFR		28	56	96	45	45	11
Percent Heavy Vehicles		0	0	0	0	0	0
Percent Grade (%)		0			0		
Flared Approach: Exists?/Storage		/			/		
Lanes		0	1	1	0	1	1
Configuration		LT		R	LT		R

Delay, Queue Length, and Level of Service

Approach Movement	EB	WB	Northbound		Southbound		
			L	L	LT	R	LT
Lane Config	L	L	LT	R	LT	11	R
v (vph)	22	85	84	96	90		11
C(m) (vph)	1273	1260	274	743	250		824
v/c	0.02	0.07	0.31	0.13	0.36		0.01
95% queue length	0.05	0.22	1.26	0.44	1.57		0.04
Control Delay	7.9	8.1	23.8	10.6	27.3		9.4
LOS	A	A	C	B	D		A
Approach Delay				16.8			25.3
Approach LOS				C			D

HCS+: Unsignalized Intersections Release 5.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI  
 Agency/Co.: GDOT  
 Date Performed: 2/17/2006  
 Analysis Time Period: AM Peak Hour  
 Intersection: Thomson West @ Tech Driveway  
 Jurisdiction: McDuffie County  
 Units: U. S. Customary  
 Analysis Year: Year 2029  
 Project ID: Thomson West Bypass Northern Extension  
 East/West Street: Thomson West Bypass  
 North/South Street: Tech Driveway  
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound			Westbound		
		L	T	R	L	T	R
Volume		365	70		110	350	
Peak-Hour Factor, PHF		0.88	0.88		0.88	0.88	
Hourly Flow Rate, HFR		414	79		125	397	
Percent Heavy Vehicles		--	--		0	--	--
Median Type/Storage		Undivided			/		
RT Channelized?		No					
Lanes		1	1		1	1	
Configuration		T	R		L	T	
Upstream Signal?		No			No		

Minor Street:	Approach Movement	Northbound			Southbound		
		L	T	R	L	T	R
Volume		5		35			
Peak Hour Factor, PHF		0.88		0.88			
Hourly Flow Rate, HFR		5		39			
Percent Heavy Vehicles		0		0			
Percent Grade (%)			0			0	
Flared Approach: Exists?/Storage		No			/		
Lanes		0		0			
Configuration		LR					

Delay, Queue Length, and Level of Service

Approach Movement	EB	WB	Northbound			Southbound		
			7	8	9	10	11	12
Lane Config	1	4	L	LR				
v (vph)		125		44				
C(m) (vph)		1081		528				
v/c		0.12		0.08				
95% queue length		0.39		0.27				
Control Delay		8.8		12.4				
LOS		A		B				
Approach Delay				12.4				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI  
 Agency/Co.: GDOT  
 Date Performed: 2/17/2006  
 Analysis Time Period: PM Peak Hour  
 Intersection: Thomson West @ Tech Driveway  
 Jurisdiction: McDuffie County  
 Units: U. S. Customary  
 Analysis Year: Year 2029  
 Project ID: Thomson West Bypass Northern Extension  
 East/West Street: Thomson West Bypass  
 North/South Street: Tech Driveway  
 Intersection Orientation: EW  
 Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound			Westbound		
		L	T	R	L	T	R
Volume		340	50		130	300	
Peak-Hour Factor, PHF		0.88	0.88		0.88	0.88	
Hourly Flow Rate, HFR		386	56		147	340	
Percent Heavy Vehicles		--	--		0	--	--
Median Type/Storage		Undivided			/		
RT Channelized?		No					
Lanes		1	1		1	1	
Configuration		T	R		L	T	
Upstream Signal?		No			No		

Minor Street:	Approach Movement	Northbound			Southbound		
		L	T	R	L	T	R
Volume		40		65			
Peak Hour Factor, PHF		0.88		0.88			
Hourly Flow Rate, HFR		45		73			
Percent Heavy Vehicles		0		0			
Percent Grade (%)		0			0		
Flared Approach: Exists?/Storage		No			/		
Lanes		0		0			
Configuration		LR					

Delay, Queue Length, and Level of Service

Approach Movement	EB	WB	Northbound			Southbound		
			7	8	9	10	11	12
Lane Config	1	4	L	LR				
v (vph)		147		118				
C(m) (vph)		1129		387				
v/c		0.13		0.30				
95% queue length		0.45		1.27				
Control Delay		8.7		18.3				
LOS		A		C				
Approach Delay				18.3				
Approach LOS				C				





HCS+: Unsignalized Intersections Release 5.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI  
 Agency/Co.: GDOT  
 Date Performed: 5/12/2006  
 Analysis Time Period: AM Peak Hour  
 Intersection: Thomson West @ Dudley Drive  
 Jurisdiction: McDuffie County  
 Units: U. S. Customary  
 Analysis Year: Year 2029  
 Project ID: Thomson West Bypass Northern Extension  
 East/West Street: Thomson West Bypass  
 North/South Street: Dudley Drive  
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound			Westbound		
		1 L	2 T	3 R	4 L	5 T	6 R
Volume		360	10		25	455	
Peak-Hour Factor, PHF		0.88	0.88		0.88	0.88	
Hourly Flow Rate, HFR		409	11		28	517	
Percent Heavy Vehicles		--	--		0	--	--
Median Type/Storage		Undivided			/		
RT Channelized?					No		
Lanes		1	1		1	1	
Configuration		T	R		L	T	
Upstream Signal?		No				No	

Minor Street:	Approach Movement	Northbound			Southbound		
		7 L	8 T	9 R	10 L	11 T	12 R
Volume		10		30			
Peak Hour Factor, PHF		0.88		0.88			
Hourly Flow Rate, HFR		11		34			
Percent Heavy Vehicles		0		0			
Percent Grade (%)			0			0	
Flared Approach: Exists?/Storage		No			/		/
Lanes		0		0			
Configuration		LR					

Delay, Queue Length, and Level of Service

Approach Movement	EB 1	WB 4	Northbound			Southbound		
			7	8	9	10	11	12
Lane Config		L		LR				
v (vph)		28		45				
C(m) (vph)		1150		484				
v/c		0.02		0.09				
95% queue length		0.07		0.31				
Control Delay		8.2		13.2				
LOS		A		B				
Approach Delay				13.2				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI  
 Agency/Co.: GDOT  
 Date Performed: 5/12/2006  
 Analysis Time Period: PM Peak Hour  
 Intersection: Thomson West @ Dudley Drive  
 Jurisdiction: McDuffie County  
 Units: U. S. Customary  
 Analysis Year: Year 2029  
 Project ID: Thomson West Bypass Northern Extension  
 East/West Street: Thomson West Bypass  
 North/South Street: Dudley Drive  
 Intersection Orientation: EW  
 Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound			Westbound		
		1 L	2 T	3 R	4 L	5 T	6 R
Volume		390	10		20	425	
Peak-Hour Factor, PHF		0.88	0.88		0.88	0.88	
Hourly Flow Rate, HFR		443	11		22	482	
Percent Heavy Vehicles		--	--		0	--	--
Median Type/Storage		Undivided			/		
RT Channelized?		No					
Lanes		1	1		1	1	
Configuration		T	R		L	T	
Upstream Signal?		No				No	

Minor Street:	Approach Movement	Northbound			Southbound		
		7 L	8 T	9 R	10 L	11 T	12 R
Volume		10		35			
Peak Hour Factor, PHF		0.88		0.88			
Hourly Flow Rate, HFR		11		39			
Percent Heavy Vehicles		0		0			
Percent Grade (%)			0			0	
Flared Approach: Exists?/Storage		No			/		/
Lanes		0		0			
Configuration		LR					

Delay, Queue Length, and Level of Service

Approach Movement	EB 1	WB 4	Northbound			Southbound		
			7	8	9	10	11	12
Lane Config		L		LR				
v (vph)		22		50				
C(m) (vph)		1117		487				
v/c		0.02		0.10				
95% queue length		0.06		0.34				
Control Delay		8.3		13.2				
LOS		A		B				
Approach Delay				13.2				
Approach LOS				B				

HCS+: Signalized Intersections Release 5.1

Analyst: MA Inter.: Thomson West @ US 78  
 Agency: GDOT Area Type: All other areas  
 Date: 5/12/2006 Jurisd: McDuffie County  
 Period: AM Peak Hour Year : Year 2029  
 Project ID: Thomson West Bypass North Extension  
 E/W St: Thomson West Bypass N/S St: US 78/SR 10

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	1	0	0	0	1	2	0	0	2	1
LGConfig	L R						L T			T R		
Volume	240 150						190 585			620 290		
Lane Width	12.0 12.0						12.0 12.0			12.0 12.0		
RTOR Vol	0									0		

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		P			NB Left	P	P	
Thru					Thru	P	P	
Right		P			Right			
Peds					Peds			
WB Left					SB Left			
Thru					Thru	P		
Right					Right	P		
Peds					Peds			
NB Right					EB Right			
SB Right		P			WB Right			
Green		17.0				10.0	30.0	
Yellow		4.0				4.0	4.0	
All Red		0.0				0.0	1.0	

Cycle Length: 70.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c g/C		Lane Group Delay LOS		Approach Delay LOS	
Eastbound								
L	851	3505	0.31	0.24	22.6	C	23.7	C
R	392	1615	0.42	0.24	25.5	C		
Westbound								
Northbound								
L	518	1805	0.40	0.63	8.7	A		
T	2274	3618	0.28	0.63	6.2	A	6.8	A
Southbound								
T	1551	3618	0.43	0.43	14.9	B	11.3	B
R	1200	1615	0.26	0.74	3.4	A		
Intersection Delay = 11.9 (sec/veh)					Intersection LOS = B			

HCS+: Signalized Intersections Release 5.1

Analyst: MA Inter.: Thomson West @ US 78  
 Agency: GDOT Area Type: All other areas  
 Date: 5/12/2006 Jurisd: McDuffie County  
 Period: PM Peak Hour Year : Year 2029  
 Project ID: Thomson West Bypass North Extension  
 E/W St: Thomson West Bypass N/S St: US 78/SR 10

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	0	1	0	0	0	1	2	0	0	2	1
LGConfig	L		R				L	T		T	R	
Volume	255		170				140	630		580	305	
Lane Width	12.0		12.0				12.0	12.0		12.0	12.0	
RTOR Vol			0								0	

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		P			NB Left	P	P	
Thru					Thru	P	P	
Right		P			Right			
Peds					Peds			
WB Left					SB Left			
Thru					Thru		P	
Right					Right		P	
Peds					Peds			
NB Right					EB Right			
SB Right		P			WB Right			
Green		17.0				10.0	30.0	
Yellow		4.0				4.0	4.0	
All Red		0.0				0.0	1.0	

Cycle Length: 70.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS
Eastbound								
L	851	3505	0.33	0.24	22.8	C	24.4	C
R	392	1615	0.47	0.24	26.7	C		
Westbound								
Northbound								
L	538	1805	0.28	0.63	7.3	A		
T	2274	3618	0.30	0.63	6.3	A	6.5	A
Southbound								
T	1551	3618	0.41	0.43	14.6	B	10.8	B
R	1200	1615	0.28	0.74	3.5	A		
Intersection Delay = 12.0 (sec/veh)					Intersection LOS = B			

## Minutes of Concept Team Meeting

March 23, 2006, 10:00 A.M. Thomson-McDuffie County Airport

### Thomson West Bypass North Extension

Project Number: CSSTP-0006-00 (436)

P.I. Number: 0006436

McDuffie County

Attendees are listed below:

Jerry Brinson	Moreland Altobelli Associates, Inc.
Ron Osterloh	Moreland Altobelli Associates, Inc.
Karia Poshedly	Moreland Altobelli Associates, Inc.
George Brewer	GDOT District 2 Preconstruction Engineer
Don Norton	County Manager – McDuffie County
Charlie Newton	Chairman of the Board of Commissioners – McDuffie County
Chris Pelly	Public Works Director – McDuffie County
Gus Cooper	GDOT District 2 Utilities
Kedrick Collins	GDOT District 2 Traffic Operations
Lynn Bean	GDOT District 2 Area Engineer

Mr. Ron Osterloh began the concept meeting by reviewing the need and purpose of the project, specifically stating that the Thomson West Bypass would relieve traffic congestion through the City of Thomson by completing the west bypass around the City. Ms. Karla Poshedly then stated the traffic projected to use the bypass. Mr. Osterloh then proceeded to describe the typical section, right-of-way requirements and that there was one possible right-of-way displacement at the intersection of Whitesboro Road at the bypass.

Mr. Osterloh then described some of the alternative alignments for the bypass that had been considered. He then opened the meeting to questions on the project.

- Commissioner Charlie Newton asked why the right-of-way estimate was so high. He said that the County has already estimated some of these costs and that they are much lower. *Ms. Poshedly said that the estimate would be redone to reflect the costs that the County has estimated for right-of-way.*

- Mr. George Brewer asked the question as to why the County did not chose the alignment for the bypass at Knox-Rivers Road so that the east bypass could align with the west bypass at SR 17.

*Mr. Don Norton said that the Knox-Rivers Road alignment would be too expensive to construct due to the environmental wetland impacts that would have to be mitigated through the construction of a long bridge. Additionally, the alignment would negatively impact the large plant and grass nursery situated along the south side of Knox-Rivers Road.*

*Mr. Osterloh said that if Mr. Brewer could send to him the electronic files of the east bypass, then he could evaluate as to whether or not the east bypass could be modified to align with the west bypass. GDOT Traffic Operations commented that if it is not possible to economically connect the east and west bypass, then they would prefer if the west bypass intersects with SR 17 at Tech Drive so that the intersections of the east and west bypass at SR 17 would be approximately two thousand feet apart.*

**AGREEMENT**

**BETWEEN**

**DEPARTMENT OF TRANSPORTATION**

**STATE OF GEORGIA**

**AND**

**MCDUFFIE COUNTY**

**FOR**

**The construction of the Thomson West Bypass from Three Points Road to just East of State Route 17**

This AGREEMENT is made and entered into this 22 day of February, 2005, by and between the DEPARTMENT OF TRANSPORTATION, an agency of the State of Georgia, hereinafter called the "DEPARTMENT", and MCDUFFIE COUNTY, GEORGIA acting by and through its Board of Commissioners, hereinafter called the "SPONSOR".

WHEREAS, the SPONSOR has represented to the DEPARTMENT a desire to improve the transportation facility described in Exhibit A, attached and incorporated herein by reference and hereinafter referred to as the "PROJECT"; and

WHEREAS, the SPONSOR has represented to the DEPARTMENT a desire to participate in certain activities of the PROJECT as set forth in this AGREEMENT, and the DEPARTMENT has relied upon such representations; and

WHEREAS, the DEPARTMENT has expressed a willingness to participate in certain activities of the PROJECT as set forth in this AGREEMENT.

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

1. The SPONSOR shall contribute to the PROJECT by funding all or certain portions of the PROJECT costs for the preconstruction engineering (design) activities as per Exhibit "A", utility relocations, right of way acquisitions as per a future Right of Way Agreement and construction as per a future Construction Agreement. Expenditures incurred by the SPONSOR and eligible for reimbursement by the DEPARTMENT shall not be considered reimbursible to the SPONSOR until execution of this agreement and written notice to proceed for each phase.

2. The DEPARTMENT shall contribute to the PROJECT by funding all or certain portions of the PROJECT costs for the preconstruction engineering (design) activities as per Exhibit "A", right of way acquisitions as per a future agreement or construction as per a future construction agreement.

3. It is understood and agreed by the DEPARTMENT and the SPONSOR that the funding portion as identified in Exhibit "A" of this agreement only applies to the Preconstruction Engineering Activities. Additional agreements will be required to be

executed by the DEPARTMENT and the SPONSOR for the funding portion of subsequent phases.

4. The SPONSOR shall be responsible for all costs for the continual maintenance and the continual operations of any and all sidewalks and the grass strip between the curb and gutter and the sidewalk within the PROJECT limits.

5. The SPONSOR shall Certify that they have read and understands the regulations for "CERTIFICATION OF COMPLIANCES WITH FEDERAL PROCUREMENT REQUIREMENTS, STATE AUDIT REQUIREMENTS, AND FEDERAL AUDIT REQUIREMENTS" as stated in attachment A of this Agreement and will comply in full with said provisions.

6. When applicable engineering invoicing can only be submitted following submittal and acceptance of project milestones. Project milestones are defined as approval of the Concept Report, Completion and verification of the Database Preparation, approval of the Environmental Document, submittal of Preliminary Plans for PFPR, approval of Right of Way plans, and submittal of Final Plans for letting.

7. The SPONSOR shall accomplish all of the design activities for the PROJECT. The design 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, hereinafter referred to as "AASHTO", the DEPARTMENT's Standard Specifications Construction of Transportation Systems, the

DEPARTMENT's Plan Presentation Guide, PROJECT schedules, and applicable guidelines of the DEPARTMENT. The SPONSOR'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 for the PROJECT shall be developed to accommodate the future traffic volumes as generated by the SPONSOR as provided for in paragraph 7b and approved by the DEPARTMENT. The concept report shall be approved by the DEPARTMENT prior to the SPONSOR beginning further development of the PROJECT plans. It is recognized by the parties that the approved concept may be modified by the SPONSOR 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. 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.

c. 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.

d. Prepare environmental studies, documentation, and reports for the PROJECT that show the PROJECT is in compliance with the provisions of the

National Environmental Protection Act and Georgia Environmental Protection Act, as appropriate to the PROJECT funding. This shall include any and all archaeological, historical, ecological, air, noise, underground storage tanks (UST), and hazardous waste site studies required as well as any environmental reevaluations required. The SPONSOR shall submit to the DEPARTMENT all environmental documents and reports for review and approval by the DEPARTMENT and the FHWA.

e. Prepare all public hearing and public information displays and conduct all required public hearings and public information meetings in accordance with DEPARTMENT practice.

f. Perform all surveys, mapping, soil investigation studies and pavement evaluations needed for design of the PROJECT.

g. 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.

h. Prepare the PROJECT's drainage design including erosion control plans and the development of the hydraulic studies for the Federal Emergency Management Agency Floodways and acquisition of all necessary permits associated with the drainage design.

i. Prepare traffic studies, preliminary construction plans including a cost estimate for the Preliminary Field Plan Review, preliminary and final utility plans, preliminary and final right of way plans, staking of the required right of way, and final construction plans including a cost estimate for the Final Field Plan Review,

erosion control plans, lighting plans, traffic handling plans, and construction sequence plans and specifications including special provisions for the PROJECT.

j. 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 AASHTO and DEPARTMENT guidelines.

k. Failure of the SPONSOR to follow the DEPARTMENT's Plan Development Process will jeopardize the use of Federal funds in some or all of the categories outlined in this AGREEMENT, and it shall be the responsibility of the SPONSOR to make up the loss of that funding.

8. All Primary Consultant firms hired by the SPONSOR to provide services on the PROJECT shall be prequalified with the DEPARTMENT in the appropriate area-classes. The DEPARTMENT shall, on request, furnish the SPONSOR with a list of prequalified consultant firms in the appropriate area-classes.

9. The PROJECT construction and right of way plans shall be prepared in English units.

10. All drafting and design work performed on the project shall be done utilizing Microstation and CAICE software respectively, and shall be organized as per the Department's guidelines on electronic file management.

11. The DEPARTMENT shall review and has approval authority for all aspects of the PROJECT provided however this review and approval does not relieve the SPONSOR of its responsibilities under the terms of this agreement. The DEPARTMENT will work with the FHWA to obtain all needed approvals with information furnished by the SPONSOR.

12. The SPONSOR shall be responsible for the design of all bridge(s) and preparation of any required hydraulic and hydrological studies within the limits of this PROJECT in accordance with the DEPARTMENT's policies and guidelines. The SPONSOR shall perform all necessary survey efforts in order to complete the design of the bridge(s) and prepare any required hydraulic and hydrological studies. The final bridge plans shall be incorporated into this PROJECT as a part of this AGREEMENT.

13. The SPONSOR shall follow the DEPARTMENT's procedures for identification 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.

14. The SPONSOR shall address all railroad concerns, comments, and requirements to the satisfaction of the DEPARTMENT.

15. Upon the SPONSOR's determination of the rights of way required for the PROJECT and the approval of the right of way plans by the DEPARTMENT, the necessary rights of way for the PROJECT shall be acquired by the SPONSOR. Right

of way acquisition shall be in accordance with the law and the rules and regulations of the FHWA including, but not limited to, Title 23, United States Code; 23 CFR 710, et. seq., and 49 CFR Part 24, and the rules and regulations of the DEPARTMENT and in accordance with the Contract for the Acquisition of Right of Way to be prepared by the DEPARTMENT and executed between the SPONSOR and the DEPARTMENT prior to the commencement of any right of way activities. Failure of the SPONSOR to follow these requirements may result in the loss of Federal funding for the PROJECT and it will be the responsibility of the SPONSOR to make up the loss of that funding. All required right of way shall be obtained and cleared of obstructions, including underground storage tanks, prior to advertising the PROJECT for bids. The SPONSOR shall further be responsible for making all changes to the approved right of way plans, as deemed necessary by the DEPARTMENT, for whatever reason, as needed to purchase the right of way or to match actual conditions encountered.

16. 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 for the PROJECT have been obtained by the SPONSOR, the PROJECT shall be let for construction. The SPONSOR, unless shown otherwise on EXHIBIT A, shall be solely responsible for securing and awarding the construction contract for the PROJECT.

17. The SPONSOR shall review and make recommendations concerning all shop drawings prior to submission to the DEPARTMENT. The DEPARTMENT shall have final authority concerning all shop drawings.

18. The SPONSOR agrees that all reports, plans, drawings, studies, specifications, estimates, maps, computations, computer diskettes and printouts, and any other data prepared under the terms of this AGREEMENT shall become the property of the DEPARTMENT if required. 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 SPONSOR.

19. The SPONSOR shall be responsible for the professional quality, technical accuracy, and the coordination of all designs, drawings, specifications, and other services furnished by or on behalf of the SPONSOR pursuant to this AGREEMENT. The SPONSOR shall correct or revise, or cause to be corrected or revised, any errors or deficiencies in the designs, drawings, specifications, and other services furnished for this PROJECT. Failure by the SPONSOR to address the errors or deficiencies within 30 days shall cause the SPONSOR to assume all responsibility for construction delays caused by the errors and deficiencies. All revisions shall be coordinated with the DEPARTMENT prior to issuance. The SPONSOR shall also be responsible for any claim, damage, loss or expense, to the extent allowed by law, that is attributable to errors, omissions, or negligent acts related to the designs, drawings, specifications, and other services furnished by or on behalf of the SPONSOR pursuant to this AGREEMENT.

20. Both the SPONSOR and the DEPARTMENT hereby acknowledge that time is of the essence and both parties shall adhere to the priorities established in the approved Transportation Improvement Program/State Transportation Improvement Program (TIP/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 SPONSOR does not produce acceptable deliverables at the milestone dates defined in the current TIP/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.

21. 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, the DEPARTMENT and the SPONSOR have caused these presents to be executed under seal by their duly authorized representatives.

RECOMMENDED:

[Signature]

District 2  
District Engineer

[Signature]  
Director, Transportation Planning, Data &  
Intermodal Development Division

[Signature]  
Chief Engineer

DEPARTMENT OF TRANSPORTATION

BY: [Signature]  
Commissioner

[Signature]  
Treasurer

REVIEWED AS TO LEGAL FORM:

[Signature] 5.26.05  
Office of Legal Services

MCDUFFIE COUNTY BOARD OF  
COMMISSIONERS  
McDuffie County, Georgia

BY: [Signature]  
Chairman, Charles G. Newton IV

Signed, sealed and delivered this 22  
day of February, 2004, in the  
presence of:

[Signature]  
Witness

[Signature]  
Notary Public  
Notary Public, McDuffie County, Georgia  
My Commission Expires 3-14-06

This Agreement approved on the  
22 day of February, 2004.

[Signature]  
City/County Clerk (as appropriate)

FEIN: 58-602987

PRE-AWARD EXAMINATION

- () No Pre-Award Examination Performed
- ( ) No Audit Findings Reported

By: [Signature]  
Date: 05/26/05