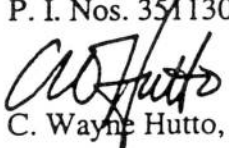


ORIGINAL TO GENERAL FILES

D.O.T. 66

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE STP-3213(3)/BRMLB-3213(5) Bibb County **OFFICE** Preconstruction
P. I. Nos. 351130/351135
DATE December 15, 1998
FROM  C. Wayne Hutto, Assistant Director of Preconstruction
TO SEE DISTRIBUTION

SUBJECT PROJECT CONCEPT REPORT APPROVAL

Attached for your files is the approval for subject project.

CWH/cj

Attachment

DISTRIBUTION:

Walker Scott
Bobby Mustin
David Studstill (ATTN: Harvey Keepler)
Jerry Hobbs
Herman Griffin
Marta Rosen (ATTN: Michael Henry)
Marion Waters
Toni Dunagan
Paul Liles
Don Mills
Joe Street
Joe Palladi

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE STP-3213(3)/BRMLB-3213(5) Bibb County **OFFICE** Preconstruction
 P.I. Nos. 351130/351135
 Walker W. Scott
FROM Walker W. Scott, Jr., P.E., Director of Preconstruction
TO Wayne Shackelford, Commissioner

SUBJECT PROJECT CONCEPT REPORT

Project STP-3213(3) is the widening and reconstruction of Forest Hill Road (CR 723) from just north of the realigned Wimbish Road (CS 977) to Northside Drive (CR 79) for a total of 2.91km. Project BRMLB-3213(5) is the replacement of the culvert at Sabbath Creek. The existing Forest Hill Road is a rural two lane facility with 6.7m pavement and 1.8m shoulders. Forest Hill Road provides a connection from North Macon south to Park Street, which will connect to Mercer University Drive, Eisenhower Parkway, and Macon Mall when the Northwest Parkway is completed. In addition, Forest Hill Road connects to Forsyth Road (US 1/SR 19), which provides a connection into downtown Macon, as well as Wimbish Road and Northside Drive, which provide an east-west connection to Riverside Drive (US 28/SR 87) and I-75. Average accident rates for three years (1994-1996) within the project limits are approximately 1.0 times higher than the average accident rate for urban state highways. The base year traffic (2001) for this project is 12,400 VPD and the design year traffic (2021) is 19,020 VPD. The proposed design speed is 70km/h.

43.5 mi./hr.

Project STP-3213(3) will widen Forest Hill Road to a three lane urban section, two 4.0m through lanes, 4.3m turn lane, and 1.2m sidewalk on the east side. The proposed right-of-way is 21.30m. The existing double 2.1m concrete pipe culvert at Savage Creek will be extended to accommodate the proposed widening. A traffic signal will be installed at the intersection of Forest Hill Road and a realigned Old Lundy Road/Lokchapee Drive.

Project BRMLB-3213(5) will replace the existing triple 3.05m concrete bridge culvert at Sabbath Creek with a new triple 3.05m x 3.05m concrete bridge culvert.

Alternatives considered during concept development included the following: (1) four lane divided section consisting of two, 3.6m lanes in each direction with 6.0m median and sidewalks. (2) two lane divided urban section consisting of one 4.9m lane in each direction with 6.0m median and sidewalks. These alternatives were eliminated because of adverse impacts to residents along Forest Hill Road.

Wayne Shackelford
Page 2

STP-3213(3)/BRMLB-3213(5) Bibb
December 9, 1998

Traffic will be maintained during construction with a stage construction detour required during replacement of the culvert at Sabbath Creek. The south end of this project will match the end point of project STP-3213(1), P.I. 350520---Forest Hill Road from Forsyth Road to Wimbish Road.

Environmental concerns include requiring a COE 404 permit and a FEMA permit; a Categorical Exclusion will be prepared; a public hearing will be held; time saving procedures are not appropriate.

The estimated costs for this project are:

STP-3213(3) Bibb County

	<u>PROPOSED</u>	<u>APPROVED</u>	<u>PROG DATE</u>	<u>LET DATE</u>
Construction (includes E&C and inflation)	\$3,542,000	\$2,715,000	2001	01-04
Right-of-Way & Utilities*	Local	Local		

BRMLB-3213(5) Bibb County

	<u>PROPOSED</u>	<u>APPROVED</u>	<u>PROG DATE</u>	<u>LET DATE</u>
Construction (includes E&C and inflation)	\$250,000	\$158,000	2001	01-04
Right-of-Way & Utilities*	Local	Local		

*Bibb County signed contract on 10-3-96 to be responsible for P.E., right-of-way costs, and utility relocation costs.

The proposed improvements to Forest Hill Road are included in the adopted Macon Area Transportation Study and the current Transportation Improvement Program. This project will be designed in English units. I recommend this project concept be approved.

WWS:JDQ/cj

Will be designed in English.

Attachment

CONCUR

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

APPROVE

Wayne Shackelford
Wayne Shackelford, Commissioner

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

RECEIVED

OCT 14 1998

PRECONSTRUCTION

FILE: STP-3213(3) Bibb, P.I. # 351130
BRMLB-3213(5) Bibb, P.I. # 351135

OFFICE: Atlanta, Georgia

DATE: October 14, 1998

FROM: Bob Mustin, Project Review Engineer *JFM*

TO: Wayne Hutto, Assistant Director of Pre-construction

SUBJECT: CONCEPT REPORT

{ We have reviewed the concept report submitted October 13, 1998 by the letter from Joseph P. Palladi dated October 9, 1998, and have no comments. }

The costs for the projects are:

	<u>STP-3213(3)</u>	<u>BRMLB-3213(5)</u>
Construction	\$2,800,000	\$197,000
Inflation	\$ 420,000	\$ 30,000
E&C	\$ 322,000	\$ 23,000
Preliminary Engineering	\$? (LGPA)	\$? (LGPA)
Reimbursable Utilities	\$? (LGPA)	\$? (LGPA)
Right of Way	\$? (LGPA)	\$? (LGPA)

DTM

c: Joe Palladi – Attention: Genetha Rice-Singleton

Department of Transportation

State of Georgia

PROJECT CONCEPT REPORT

Forest Hill Road (723) Reconstruction
from Wimbish Road (CS 997) to Northside Drive (CR 79)

Project Number: STP-3213(3), BRMLB-3213(5)

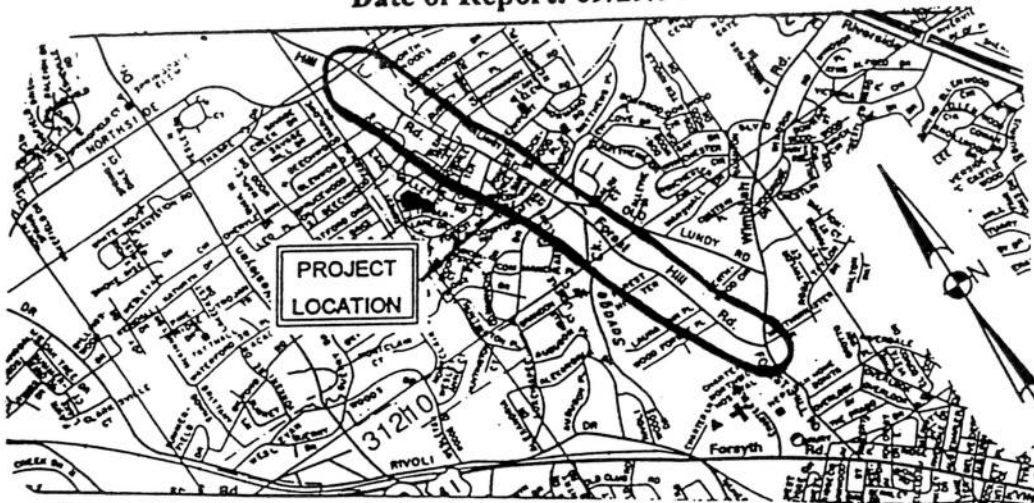
County: Bibb

P.L. Number: 351130, 351135

U.S. Route Number: None

State Route Number: None

Date of Report: 09/29/98



RECOMMENDATION FOR APPROVAL:

10/9/98
DATE

Joseph P. [Signature]
STATE URBAN DESIGN ENGINEER

DATE

STATE ENVIRONMENT/LOCATION ENGINEER

DATE

STATE TRAFFIC OPERATIONS ENGINEER

DATE

DISTRICT ENGINEER

DATE

PROJECT REVIEW ENGINEER

DATE

STATE BRIDGE AND STRUCTURAL DESIGN ENGINEER

This project is contained in the Regional Transportation Plan (RTP) and/or in the Statewide Transportation Improvement Program (STIP). The concept as presented herein and submitted for approval is consistent with that which is included in the RTP and/or the STIP.

DATE

STATE TRANSPORTATION PLANNING ADMINISTRATOR

PROJECT CONCEPT REPORT

DATE: 9/29/98

PROJECT NUMBER: STP-3213(3), BRMLB-3213(5)
COUNTY: Bibb

DESCRIPTION:

Widening of Forest Hill Road (CR 723) from Wimbish Road (CS 997) to Northside Drive (CR 79) from a 2-lane rural section to a 3-lane urban section with sidewalks on the east side. This project includes replacement of the culvert at Sabbath Creek.

LENGTH: 2.91 km

P.L NO.: 351130, 351135

U.S. ROUTE NO.: None

STATE RT. NO.: None

LOCATION: Forest Hill Road (CR 723) from 122 m north of relocated Wimbish Road (CS 997) intersection to 198 m south of Northside Drive (CR 79)

MILE POINT REFERENCE (Forest Hill Road): BEGIN-0.73 END-2.54

TRAFFIC (TWO-WAY AADT):

YEAR-2001 AADT-12400

YEAR-2021 AADT-19020

PDP CLASSIFICATION NON-CA CA EX SF **FUNCTIONAL CLASSIFICATION**

Major

() () (X) ()

Urban Minor Arterial

Forest Hill Road (CR 723)

ACCIDENT HISTORY:

YEAR

OF ACCIDENTS

1994

51

1995

36

1996

28

avg. 38.3 accidents per year.

COMPARABLE ACCIDENT RATES:

Year	Forest Hill Road - Wimbish Rd. To Northside Dr.		Statewide Average for Urban Collector Street		Difference	
	Accident	Injury	Accident	Injury	Accident	Injury
1994	764	344	439	204	1.7x	1.7x
1995	529	323	467	218	1.1x	1.5x
1996	387	111	461	204	-1.2x	-1.8x

EXISTING DESIGN

TYPICAL SECTION: Two-lane rural section with 6.7 m of asphaltic concrete pavement, 1.8 m grassed shoulders, and ditches on both sides of existing section.

RIGHT OF WAY: Varies 18.3 m - 21.3 m (60' - 70')

POSTED SPEED GRADE	MIN. EXISTING RADIUS OF CURVE	MAX. EXISTING
-------------------------------	--------------------------------------	----------------------

45mph (70 km/h)

220 m

5.33%

EXISTING MAJOR STRUCTURES:
FEATURES INTERSECTED:

1. Existing triple 3.05 m x 3.05 m reinforced concrete bridge culvert at Sabbath Creek, structure to be replaced due to structural damage.
2. Existing double 2.1 m concrete pipe culvert with brick head wall at Savage Creek, to be extended on each side and replace head walls.

SUFFICIENCY RATING: N/A

LENGTH: N/A

WIDTH: N/A

PROJECT NEED & PURPOSE: See attached

PROPOSED PROJECT CONCEPT

PROPOSED TYPICAL SECTION:

Three-lane urban section, two 4.0 m through lanes, 4.3 m center turn lane, 0.75 m curb and gutter, 0.60 m grass strip, 1.2 m sidewalk on the east side; proposed shoulder 3.6 m

RIGHT-OF-WAY WIDTH: 21.3 m

DESIGN SPEED: 70 km/h

MIN. RADIUS OF CURVE:	ALLOWABLE: 220 m	PROPOSED: 220 m
MAX. GRADE:	ALLOWABLE: 8.0%	PROPOSED: 5.33%

TYPE ACCESS: Controlled by permit

TRAFFIC CONTROL DURING CONSTRUCTION: Traffic to be maintained during construction, stage construction detour to be required during replacement of bridge culvert at Sabbath Creek

PROPOSED STRUCTURES:

1. Replace the existing triple 3.05 m x 3.05 m reinforced concrete bridge culvert at Sabbath Creek with a 24.4 m triple 3.05 m x 3.05 m reinforced concrete bridge culvert. (BRMLB 3213(5), PI No. 351135)
2. Extend the existing double 2.1 m concrete pipe culvert by 2.4 m on the west side and 3.0 m on the east side, replacement of both head walls.

DESIGN EXCEPTIONS TO BE REQUIRED:

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

NUMBER OF PARCELS: 113

DISPLACEMENTS: 0 Residential

LEVEL OF ENVIRONMENTAL ANALYSIS: Categorical Exclusion

PUBLIC INVOLVEMENT: Public Meeting to be held

PERMITS REQUIRED (COE 404, WATER QUALITY, TVA): COE 404, FEMA

TIME SAVINGS PROCEDURES APPROPRIATE: () YES (X) NO

LOCAL GOVERNMENT COMMITMENTS: County government to fund design, right-of-way acquisition and utility relocation

OTHER PROJECTS IN THE AREA:

1. STP-3213(1), P.L. # 350520-Forest Hill Road (CR 723) from Forsyth Road (US 41, SR 19) to Wimbish Road (CS 997)
2. STP-3214(3), P.L. # 351150-Northside Drive (CR 79) from Wesleyan Drive (CR 73) to Forest Hill Road (CR 723)
3. STP-3214(1), P.L. # 350760-Northside Drive (CR 79) from Riverside Drive (US 23, SR 87) to Forest Hill Road (CR 723)

CONCEPT TEAM MEETING DATE: June 16, 1998

PROBABLE LOCATIONS OF USTS: None known

PROBABLE LOCATIONS OF HAZARDOUS WASTE: None known

OTHER ALTERNATES CONSIDERED:

1. Four lane divided urban section consisting of two 3.6 m lanes in each direction, 6.0 m raised landscaped median, and sidewalks.
2. Two lane divided urban consisting of one 4.9 m lane in each direction, 6.0 m raised landscaped median, and sidewalks.
3. No Build

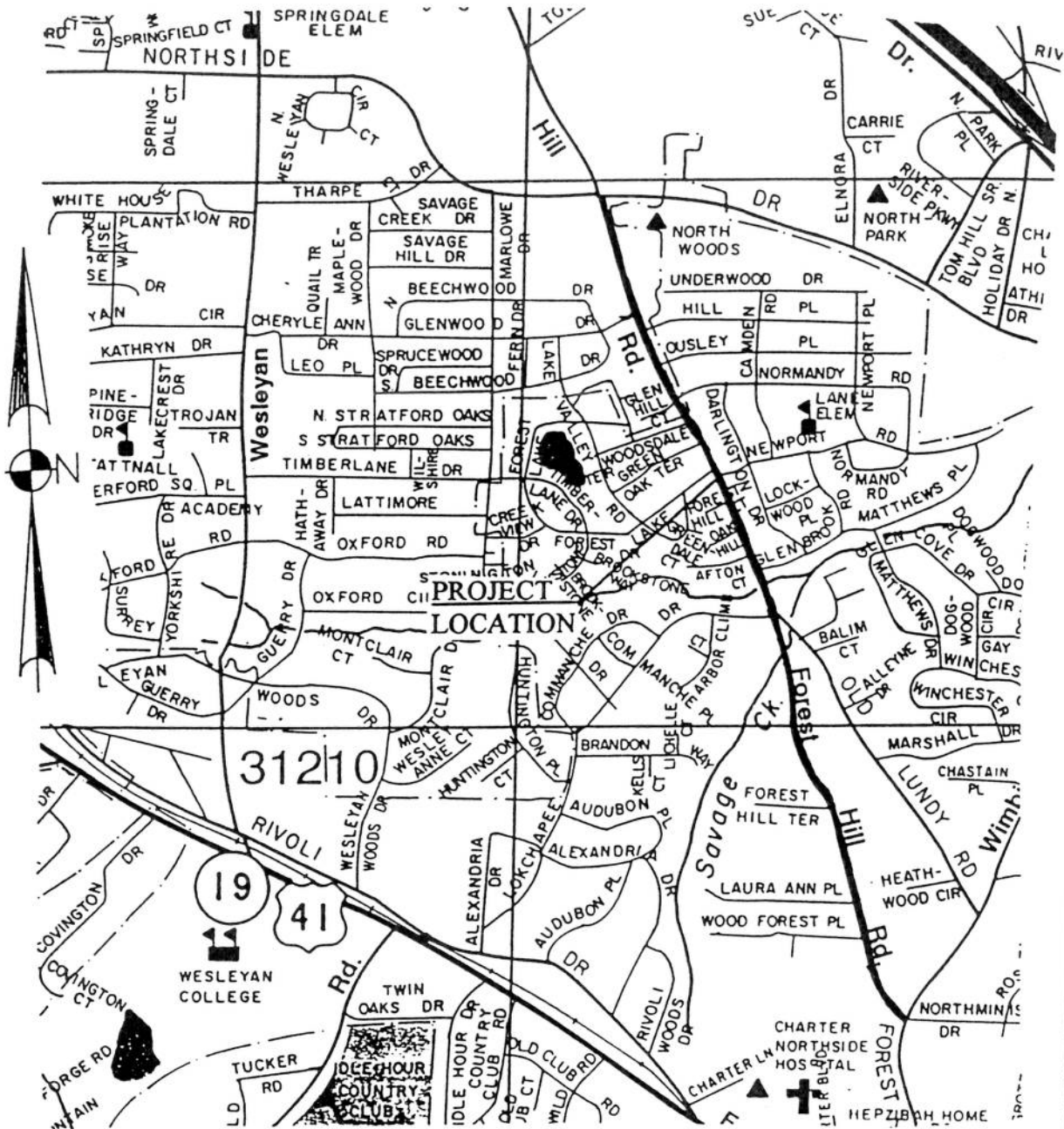
COMMENTS:

1. A traffic signal will be installed at the intersection of Forest Hill Road and a realigned Old Lundy Road/Lokchapee Drive.
2. The dimensions of the typical section will be reviewed during the design stage at the request of the local government.

ATTACHMENTS: PROJECT LOCATION MAP, COST ESTIMATE, NEED & PURPOSE STATEMENT, TYPICAL SECTION, ACCIDENT SUMMARY, TRAFFIC FLOW DIAGRAMS, CONCEPT MEETING MINUTES

PROJECT LOCATION MAP

PROJECT # STP-3213(3), BRMLB-3213(5), P.I. # 351130, 351135 BIBB COUNTY
FOREST HILL RD (CR 723) FROM WIMBISH RD (CS 997) NORTHSIDE DRIVE (CR 79)



PRELIMINARY COST ESTIMATE
 PROJECT # STP-3213(3), P.I. # 351130
 MACON-BIBB COUNTY PROJECT # 8
 Forest Hill Rd (CR 723) Reconstruction
 from Wimbish Rd (CS 997) to Northside Dr (CR 79) Alternate 1: 3-lane section

DATE: 9/29/98

PREPARED BY: Moreland Altobelli Associates Inc

PROJECT DESCRIPTION/CONCEPT: Widen Forest Hill Rd (from Wimbish Rd to Northside Dr) from 2 to 3 lanes urban section with sidewalks on the east side

TRAFFIC (AADT): Year 2001-12400, Design Year 2021-19020

EXISTING ROADWAY: 2 lanes undivided rural section

- () PROGRAMMING PROCESS
- (X) CONCEPT DEVELOPMENT
- () DURING PROJECT DEVELOPMENT

PROJECT COSTS (METRIC UNITS)

A. RIGHT-OF-WAY		BY LOCAL GOVT	
		SUBTOTAL	BY LOCAL GOVT
B. REIMBURSABLE UTILITIES		BY LOCAL GOVT	
		SUBTOTAL	BY LOCAL GOVT
C. CLEARING & GRUBBING			
CL & GRUB LUMP SUM	8.73 ha @	\$20,000.00	\$174,600
		SUBTOTAL	\$174,600
D. EARTHWORK			
BORROW INCL HAUL	43650 m ³ @	\$3.00	\$130,950
UNCL EXCAVATION	43650 m ³ @	\$4.60	\$200,790
		SUBTOTAL	\$331,740

PRELIMINARY COST ESTIMATE
PROJECT # STP-3213(3), P.I. # 351130
MACON-BIBB COUNTY PROJECT # 8
Forest Hill Rd (CR 723) Reconstruction

from Wimbish Rd (CS 997) to Northside Dr (CR 79) Alternate 1: 3-lane section

E. BASE & PAVING

GRADED AGR BASE	15496 Mg @	\$16.50	\$255,684
ASPH CONC 12.5 mm	3371 Mg @	\$35.50	\$119,671
ASPH CONC 19 mm	4280 Mg @	\$35.70	\$152,796
ASPH CONC 25 mm	5081 Mg @	\$34.40	\$174,786
LEVELING	2140 Mg @	\$37.40	\$80,036
TACK COAT	14250 L @	\$0.25	\$3,563
SUBTOTAL			\$786,535

F. DRAINAGE

DRAINAGE LUMP SUM	2.91 km @	\$242,000.00	\$704,220
SUBTOTAL			\$704,220

G. CONCRETE WORK

APPROACH SLABS	0 m ² @	\$100.00	\$0
CURB & GUTTER, TP 7	0 m @	\$30.00	\$0
CURB & GUTTER, TP 2	6430 m @	\$30.00	\$192,900
VALLEY GUTTER	450 m ² @	\$37.40	\$16,830
SIDEWALK	4350 m ² @	\$22.00	\$95,700
MEDIAN PAVING	0 m ² @	\$25.30	\$0
DITCH PAVING	0 m ² @		\$0
SUBTOTAL			\$305,430

H. TRAFFIC CONTROL

TRAF CONT LUMP SUM	2.91 km @	\$41,500.00	\$120,765
SUBTOTAL			\$120,765

I. EROSION CONTROL

EROS CONT LUMP SUM	2.91 km @	\$30,000.00	\$87,300
SUBTOTAL			\$87,300

PRELIMINARY COST ESTIMATE
PROJECT # STP-3213(3), P.I. # 351130
MACON-BIBB COUNTY PROJECT # 8
Forest Hill Rd (CR 723) Reconstruction

from Wimbish Rd (CS 997) to Northside Dr (CR 79) Alternate 1: 3-lane section

J. GUARDRAIL

W-BEAM RAIL	0 m @	\$38.00	\$0
T-BEAM RAIL	0 m @	\$133.00	\$0
TP 1 ANCHORS	0 ea @	\$444.00	\$0
TP 11 ANCHORS	0 ea @	\$1,335.00	\$0
SUBTOTAL			\$0

**K. SIGNING, STRIPING, SIGNALS,
LIGHTING**

SIGNING & MARKING	2.91 km @	\$10,000.00	\$29,100
TRAFFIC SIGNALS	1 ea @	\$50,000.00	\$50,000
LIGHTING LUMP SUM	ea @		\$0
SUBTOTAL			\$79,100

L. GRASSING/LANDSCAPING

GRASSING	2.91 km @	\$15,000.00	\$43,650
SUBTOTAL			\$43,650

M. MISCELLANEOUS

FIELD ENG OFFICE	1 ea @	\$20,000.00	\$20,000
R/W MARKERS	161 ea @	\$56.00	\$9,016
SUBTOTAL			\$29,016

N. MAJOR STRUCTURES

BRIDGES	0 m ² @	\$485.00	\$0
RETAINING WALLS	226 m @	\$500.00	\$113,000
BOX CULV CONC	51.44 m ³ @	\$475.00	\$24,434
BOX CULVERT STEEL	693.59 kg @	\$1.10	\$763
SUBTOTAL			\$138,197

PRELIMINARY COST ESTIMATE
PROJECT # STP-3213(3), P.I. # 351130
MACON-BIBB COUNTY PROJECT # 8
Forest Hill Rd (CR 723) Reconstruction
from Wimbish Rd (CS 997) to Northside Dr (CR 79) Alternate 1: 3-lane section

ESTIMATE SUMMARY

A. RIGHT-OF-WAY	BY LOCAL GOVT
B. REIMBURSABLE UTILITIES	BY LOCAL GOVT

CONSTRUCTION COST SUMMARY

C. CLEARING & GRUBBING	\$174,600
D. EARTHWORK	\$331,740
E. BASE & PAVING	\$786,535
F. DRAINAGE	\$704,220
G. CONCRETE WORK	\$305,430
H. TRAFFIC CONTROL	\$120,765
I. TEMP. EROSION CONTROL	\$87,300
J. GUARDRAIL	\$0
K. SIGNING, STRIPING, SIGNALS, LIGHTING	\$79,100
L. GRASSING/LANDSCAPING	\$43,650
M. MISCELLANEOUS	\$29,016
SUBTOTAL OF ROADWAY ITEMS	\$2,662,356
N. MAJOR STRUCTURES	\$138,197
TOTAL CONSTRUCTION ESTIMATE	\$2,800,553
3 YEARS OF INFLATION AT 5%	\$441,437
10% E & C	\$324,199
TOTAL CONSTRUCTION ESTIMATE	\$3,566,190

PRELIMINARY COST ESTIMATE
PROJECT #BRNLB-3213(5), P.I. # 351135
MACON-BIBB COUNTY PROJECT # 8

Replacement of Existing Triple 3.05 m x 3.05 m Reinforced Concrete Bridge Culvert
Under Forest Hill Road (CR 79) at Sabbath Creek - Alternate 1: 3-lane section

DATE 9/29/98

PREPARED BY: Moreland Altobelli Associates Inc

PROJECT DESCRIPTION/CONCEPT: Widen Forest Hill Rd (from Wimbish Rd
to Northside Dr) from 2 to 3 lanes urban with sidewalks on the east side

TRAFFIC (AADT): Year 2001-12400, Design Year 2021-19020

EXISTING ROADWAY: 2 lanes undivided rural section

- () PROGRAMMING PROCESS
(X) CONCEPT DEVELOPMENT
() DURING PROJECT DEVELOPMENT

PROJECT COSTS (METRIC UNITS)

A. MAJOR STRUCTURES

BOX CULV CONC	342.73	m ³	@	\$475.00	\$162,797
BOX CULVERT STEEL	21735.9	kg	@	\$1.10	\$23,909
REM EXIST CULVERT	1	ea	@	\$10,000.00	\$10,000

TOTAL CONSTRUCTION ESTIMATE \$196,706.24

3 YEARS OF INFLATION AT 5% \$31,006

10% E & C \$22,771

TOTAL CONSTRUCTION ESTIMATE \$250,483.27

NEED AND PURPOSE STATEMENT
PROJECT # STP-3213(3), BRMLB-3213(5), P.L. # 351130, 351135 BIBB COUNTY
FOREST HILL RD (CR 723) RECONSTRUCTION
FROM WIMBISH RD (CS 997) TO NORTHSIDE DR (CR 79)

The proposed project will widen Forest Hill Road (CR 723) from 122 m north of realigned Wimbish Road (CS 997) to 198 m south of Northside Drive. This project includes the realignment of the Old Lundy Road approach to Forest Hill to align it across from Lokchapee Drive and install a traffic signal. The Newport Road, Forest Lake Drive South, Normandy Road and Glenn Hill Court approaches to Forest Hill Road will be realigned to create four-leg intersections with cross streets aligned across from each other. In addition, the existing triple box culvert at Sabbath Creek that was damaged in the flood of 1994 will be replaced with a similar structure. The existing Forest Hill Road is a rural two-lane facility with 6.7 m pavement width, 1.8 m shoulder and drainage ditches. The Proposed improvements consist of upgrading the existing roadway to a three lane urban section with sidewalks on the east side of the roadway. A lane width of 4.0 m is proposed to enhance safety and capacity as well as facilitate right turns.

Forest Hill Road provides a connection from north Macon south to Park Street, which will connect to Mercer University Drive, Eisenhower Parkway and Macon Mall when the Northwest Parkway is completed. In addition, Forest Hill Road connects to Forsyth Road (US 41, SR 19), which provides a connection into downtown Macon, as well as Wimbish Road and Northside Drive, which provide an east-west connection to Riverside Drive (US 23, SR 87) and I-75. Other Macon-Bibb County Road Improvement Program projects will widen Park Street south from the intersection with Forsyth/Forest Hill Road to the intersection of Napier Avenue at Park Street, extend Park Street as a four-lane divided arterial from Napier Avenue to Log Cabin Drive and widen Log Cabin Drive and Bloomfield Road south to Rocky Creek Road. The widening provided by this project will tie into the multi-lane widening of Forest Hill Road from Wimbish Road to Forsyth Road. The sum of these projects will provide a north-south facility in west Macon that will connect north Macon to the shopping and business areas around Eisenhower Parkway. In addition, they will provide a connection from north Macon through Log Cabin Drive, Bloomfield Drive and Rocky Creek Road to Pio Nono Avenue, I-75 and Warner Robins.

Forest Hill Road from Wimbish Road to Northside Drive serves a predominantly residential area. At either end, the project ties to important intersections, namely Northside Drive and Wimbish Road. Both are either already improved or will be as part of adjoining projects. Two lesser intersections with relatively minor cross traffic occur at Old Lundy Road and Newport Road. Both will be realigned and widened to eliminate offsets and allow four-leg intersection layout. Both will operate at level of service "C" without additional widening of Forest Hill Road itself beyond the preferred three-lane section.

A four-lane divided alternate with a raised median was also considered, however the expanded section will not provide significant safety improvements beyond those provided by the three lane proposal.

Rear-end collisions are the predominate type of accident that are currently occurring on Forest Hill

Road. Rear-end collisions usually result in areas with one or both combinations of the following conditions: (1) traffic volumes that exceed capacity coupled with poor horizontal and vertical alignment or (2) traffic volumes that exceed capacity coupled with motorist stopping to turn left into driveways where left turn lanes do not exist. Because this segment of Forest Hill Road has good horizontal and vertical alignment, accidents are attributed to the second cause.

There is clear information from accident analysis that improvements to Forest Hill Road would decrease the frequency of accidents on the route. Adding the center turn lane to the roadway would provide the needed left turn refuge at all intersections and driveways. This would reduce the number of rear-end collisions caused by the no left turn lanes and allow for easier, safer and more convenient access for the residents that live along the roadway. Vertical alignment is such that all have adequate sight distances with the 70 km/h (45 mph) design speed. None will have sight distance impaired by crest vertical curves as is sometimes the case along undivided highways. Through this residential area, a raised median with its travel indirection seems an unnecessary inconvenience. For the most part the proposed three-lane section will fit into the available R/W which varies from 18.3 to 21.3 meters. A 21.3 m R/W is proposed for this project. Given its adequate capacity for design year traffic, the upgrade is suitable for the area served.

The traffic on Forest Hill Road north of Northside Drive drops significantly enough to justify stopping the project at the intersection of Forest Hill Road and Northside Drive. The additional traffic on Forest Hill Road south of Wimbish Road increases enough to allow the portion of Forest Hill south of this intersection to be a separate project.

The south end of the project will match the four-lane divided urban section of Project STP 3213(1), P.I. 350520-Forest Hill Road from Forsyth Road (US 41 SR 19) to Wimbish Road. This project will continue further south with projects STP-3213(4), P.I. 351140-Northwest Parkway from Log Cabin Drive to Forsyth Road on new location and Park Street STP-3201(8), P.I. No. 351105-Log Cabin Drive from Mercer University Drive to Hollingsworth Road, STP-3201(9), P.I. No. 351110-Log Cabin Drive from Eisenhower Parkway to Mercer University Drive and STP-3213(10), P.I. No. 351120-Bloomfield Road/Log Cabin Drive from Rocky Creek Road to Eisenhower Parkway. In addition, this project intersects project STP-3214(3), P.I. No. 361150-Northside Drive from Wesleyan Drive to Forest Hill Road.

The no-build alternative would greatly increase the congested traffic conditions that already exist, resulting in a poor level of service. The proposed improvements to Forest Hill Road are included in the adopted Macon Area Transportation Study and the current Transportation Improvement Program.

The diagram illustrates a cross-section of a 21.3 m wide road. It features two 4.0 m wide through lanes separated by 0.75 m center lines. Each side has a 2.1 m shoulder. The road is flanked by 2:1 side slopes. A 4.2 m wide turn center is indicated on the right side. A 1.2 m sidewalk is shown on the right edge. The total width is labeled as 21.3 m ROAD R/W.

PROJECT STP-3213(3), P.I. NO. 351130
PROJECT BHMLB 3213(5), P.I. NO. 351135 - MACON-BIBB CO. PROJ. NO. 8
FOREST HILL ROAD FROM WIMBISH TO NORTHSIDE DRIVE
INCLUDING BRIDGE OVER SABBATH CREEK

**AFFIC ACCIDENT SUMMARY
MACON - BIBB COUNTY
TRAFFIC ENGINEERING DEPARTMENT**

FOREST HILL ROAD (from Northside Dr. to Wimbish Rd.)

Note: Locations are in order of occurrence from North to South

01-01-1994 Thru 12-31-1994

Street Name	Int Street /Block No	Total Accidents	Time		Accident Type				Fat.	Inj.
			Day	Night	Right Angle	Rear End	Left Turn	Other		
Forest Hill Road	Northside Dr	16	11	5	2	10	1	3	0	9
Forest Hill Road	1500	4	2	2	2	0	1	1	0	1
Forest Hill Road	Glenwood Dr	3	3	0	1	2	0	0	0	0
Forest Hill Road	Hill Pl	1	1	0	1	0	0	0	0	0
Forest Hill Road	Ousley Pl	1	0	1	0	0	0	1	0	1
Forest Hill Road	1300	2	2	0	0	1	0	1	0	2
Forest Hill Road	Normandy Rd	1	1	0	0	0	0	1	0	1
Forest Hill Road	1200	1	1	0	1	0	0	0	0	0
Forest Hill Road	Forest Lake Dr	1	1	0	0	1	0	0	0	0
Forest Hill Road	Newport Rd	1	0	1	0	1	0	0	0	0
Forest Hill Road	1100	2	2	0	0	1	0	1	0	1
Forest Hill Road	Old Lundy Dr	3	1	2	0	3	0	0	0	2
Forest Hill Road	Lokchoppe Dr	3	2	1	0	3	0	0	0	1
Forest Hill Road	700	1	1	0	0	0	0	1	0	2
Forest Hill Road	600	3	2	1	0	3	0	0	0	1
Forest Hill Road	Wimbish Rd	8	4	4	1	6	0	1	0	2
Total		51	34	17	8	31	2	10	0	23

01-01-1995 Thru 12-31-1995

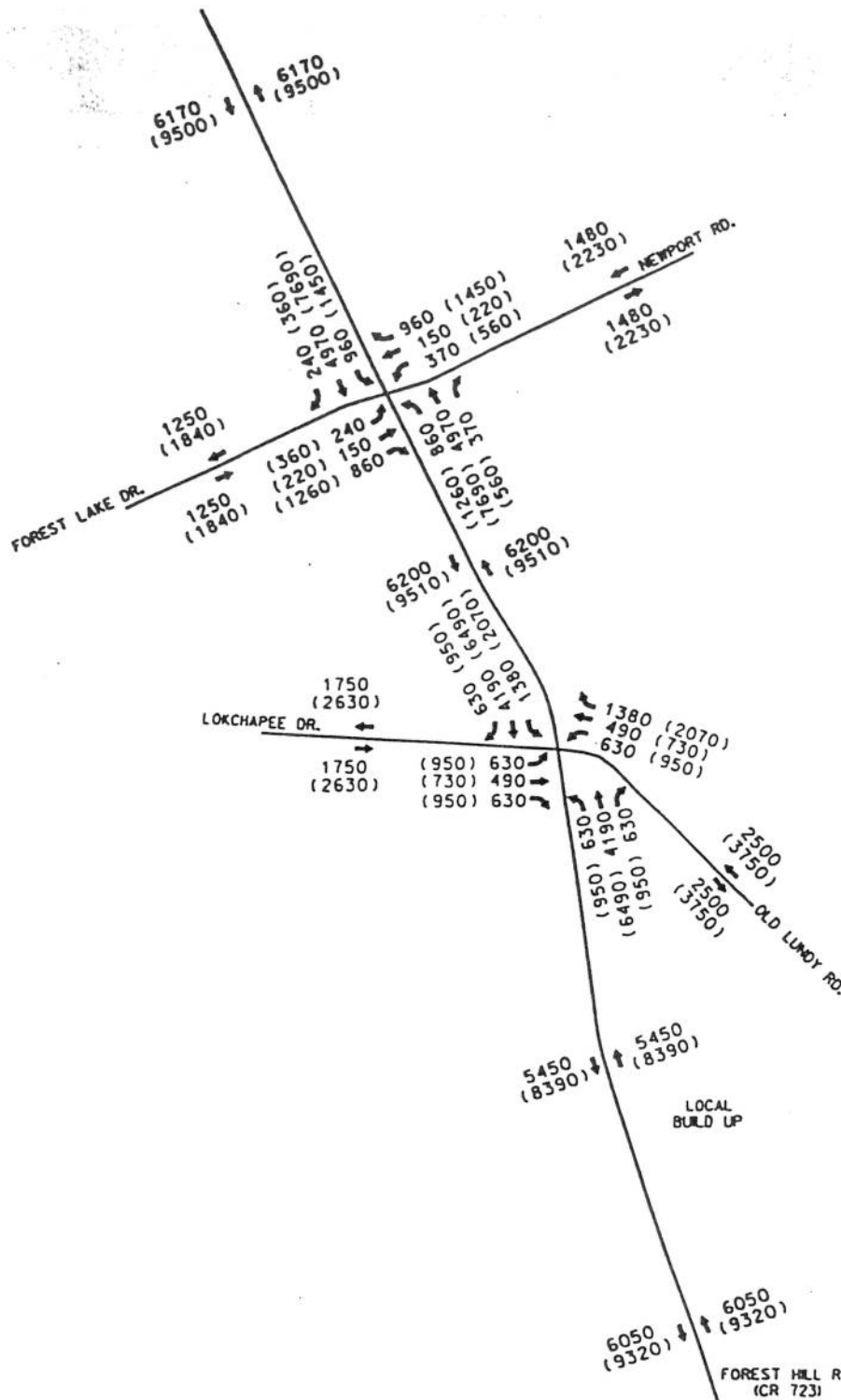
Street Name	Int Street /Block No	Total Accidents	Time		Accident Type				Fat.	Inj.
			Day	Night	Right Angle	Rear End	Left Turn	Other		
Forest Hill Road	Northside Dr	11	7	4	0	8	1	2	0	3
Forest Hill Road	1500	3	2	1	1	0	2	0	0	6
Forest Hill Road	Glenwood Dr	1	1	0	0	0	1	0	0	0
Forest Hill Road	1400	1	1	0	0	1	0	0	0	0
Forest Hill Road	Hill Pl	3	2	1	1	1	0	1	0	3
Forest Hill Road	Normandy Rd	2	1	1	1	1	0	0	0	1
Forest Hill Road	Glenhill Ct	1	0	1	0	0	1	0	0	0
Forest Hill Road	Woodsdale Ter	1	0	1	0	0	0	1	0	0
Forest Hill Road	Forest Lake Dr	2	1	1	0	2	0	0	0	1
Forest Hill Road	Newport Rd	1	1	0	0	1	0	0	0	1
Forest Hill Road	Glenbrook Rd	1	1	0	0	1	0	0	0	1
Forest Hill Road	Old Lundy Rd	1	1	0	0	1	0	0	0	0
Forest Hill Road	Lokchoppe Dr	3	1	2	1	0	1	1	0	1
Forest Hill Road	700	1	1	0	0	0	0	1	0	4
Forest Hill Road	600	2	1	1	0	0	0	2	0	0
Forest Hill Road	500	2	2	0	0	0	0	2	0	1
Forest Hill Road	Wimbish Rd	0	0	0	0	0	0	0	0	0
Total		36	23	13	4	16	6	10	0	22

continue next page...

01-01-1996 Thru 12-31-1996

Street Name	Int Street /Block No	Total Accidents	Time		Accident Type				Fat.	Inj.
			Day	Night	Right Angle	Rear End	Left Turn	Other		
Forest Hill Road	Northside Dr	8	5	3	1	5	2	0	0	2
Forest Hill Road	1500	2	1	1	2	0	0	0	0	0
Forest Hill Road	Normandy Rd	1	0	1	1	0	0	0	0	0
Forest Hill Road	Woodsdale Ter	1	1	0	0	0	1	0	0	0
Forest Hill Road	Newport Rd	1	0	1	1	0	0	0	0	3
Forest Hill Road	1100	1	0	1	1	0	0	0	0	0
Forest Hill Road	Old Lundy Rd	3	2	1	0	3	0	0	0	1
Forest Hill Road	Lokchoppe Dr	1	1	0	0	1	0	0	0	0
Forest Hill Road	700	3	1	2	0	0	1	2	1	1
Forest Hill Road	600	2	2	0	0	1	0	1	0	1
Forest Hill Road	500	2	1	1	0	1	0	1	0	0
Forest Hill Road	Wimbish Rd	3	2	1	0	3	0	0	0	0
Total		28	16	12	6	14	4	4	1	8

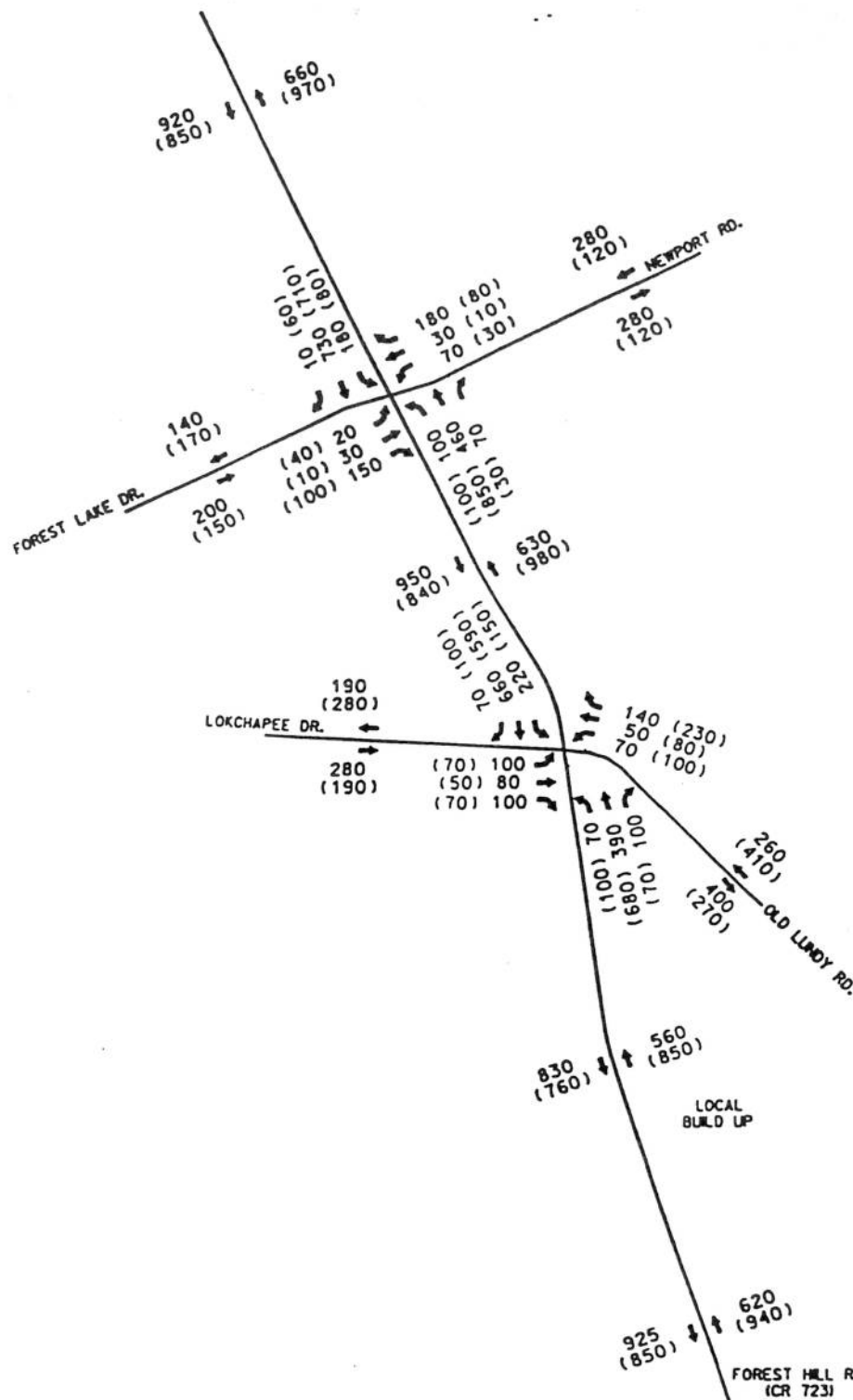
Note: No accident comparison was done because it is not valid to summarize short stretches of roadway



24 HR T=4%
2% S.U., 2% COMB.

OPENING AND DESIGN YEAR AADT

000 OPENING YEAR 2001 AADT
(000) DESIGN YEAR 2021 AADT



T=3%

YEAR 2021 DESIGN HOUR TRAFFIC

000 AM PEAK DESIGN HOUR
(0000) PM PEAK DESIGN HOUR

Streets: (E-W) Old Lundy Road (N-S)
Analyst: Maai File Name:
Area Type: Other 1-28-98 2020
Comment: AM Peak

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	<	1	1	1	1	1	<	1	1	<
Volumes	100	80	100	70	50	140	70	390	100	220	660	70
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination		1	2	3	4	5	6	7	8
EB	Left	*				NB	Left	*	*
	Thru	*					Thru	*	
	Right	*					Right	*	
	Peds						Peds		
WB	Left	*				SB	Left	*	
	Thru	*					Thru	*	*
	Right	*					Right	*	*
	Peds						Peds		
WB	Right					EB	Right		
SB	Right					WB	Right	*	
Green		25.0P				Green		22.0P 43.0P	
Yellow/AR		5.0				Yellow/AR		5.0 5.0	
Cycle Length: 105 secs Phase combination order: #1 #5 #6									

Intersection Performance Summary

	Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	
								Delay	LOS
	Mvmnts	Cap	Flow	Ratio	Ratio				
B	L	384	1492	0.274	0.257	23.8	C	24.7	C
	TR	439	1706	0.431	0.257	25.2	D		
B	L	210	818	0.352	0.257	24.6	C	16.6	C
	T	479	1863	0.111	0.257	22.7	C		
	R	814	1583	0.181	0.514	10.4	B		
B	L	109	159	0.679	0.686	17.7	C	19.5	C
	TR	774	1807	0.666	0.429	19.8	C		
B	L	405	1770	0.573	0.229	28.8	D	12.4	B
	TR	1258	1835	0.611	0.686	7.4	B		

Intersection Delay = 16.5 sec/veh Intersection LOS = C
Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.611

Streets: (E-W) Old Lundy Road (N-S) ;
Analyst: Maai File Name:
Area Type: Other 1-28-98 2020
Comment: PM Peak

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	1	1	1	<	1	1	<
Volumes	70	50	70	100	80	230	100	680	70	150	590	100
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations												
Phase Combination	1	2	3	4		5	6	7	8			
EB Left	*				NB Left	*	*					
Thru	*				Thru		*					
Right	*				Right		*					
Peds					Peds							
WB Left	*				SB Left	*						
Thru	*				Thru		*					
Right	*				Right		*					
Peds					Peds							
EB Right					EB Right	*						
WB Right					WB Right	*						
Green	25.0P				Green	18.0P	60.0P					
Yellow/AR	5.0				Yellow/AR	5.0	5.0					
Cycle Length: 118 secs Phase combination order: #1 #5 #6												

Intersection Performance Summary									
Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
B L	295	1291	0.251	0.229	28.4	D		23.4	C
T	426	1863	0.124	0.229	27.5	D			
R	671	1583	0.110	0.424	15.6	C			
B L	341	1492	0.308	0.229	28.9	D		22.4	C
T	426	1863	0.197	0.229	28.0	D			
R	671	1583	0.361	0.424	17.7	C			
B L	363	1770	0.289	0.364	11.3	B		20.4	C
TR	966	1838	0.818	0.525	21.7	C			
B L	300	1770	0.527	0.169	35.3	D		22.1	C
TR	958	1824	0.758	0.525	19.2	C			

Intersection Delay = 21.7 sec/veh Intersection LOS = C
Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.638

Minutes of Meeting

Date: June 16, 1998

Location: Georgia Department of Transportation, Capitol Avenue

Project: Forest Hill Road from Wimbish Road to Northside Drive
STP-3213(3), BRMLB-3213(5)
P.I. # 351130, 351135

Attendees: see attached record of attendees

The major issues discussed were as follows:

The meeting began with a brief project description by Genetha Rice-Singleton and everyone then introduced themselves.

Description of the proposed project was given by Joe Johnson of Moreland Altobelli Associates. This included the projects location and need. The accident data for Forest Hill Road, 51 accidents in 1994, 36 accidents in 1995, and 28 accidents in 1996 with the majority being rear-end collisions was given. One fatality occurred in 1996. Traffic count for the year 2001 was estimated to be 12,400 VPD and 19,000 VPD for the year 2021.

Mr. Johnson then explained that two alternates were being developed and studied in depth. The two alternates proposed were, a three-lane facility and a four-lane facility. Two alternates were being developed at the request of the local government. It was explained that this section of Forest Hill Road was almost exclusively a residential area and that the impacts of anything larger than a 3-laned roadway would meet stiff opposition from the local neighborhoods.

The three-lane alternate proposes two, 4 m lanes with a center turn lane 4.3 m wide, a 1.5 m sidewalk on the east side and a 21.3 m (70 foot) right-of-way. The cost of construction would be approximately 3.5 million dollars. The four-lane alternate proposes four, 3.6 m lanes with a 6 m raised landscaped median, 1.5 m of sidewalk on both sides of the roadway and a 30 m (98 foot) right-of-way. The cost of construction would be approximately 4.8 million dollars. Culvert cost on a three lane project would be approximately \$250,000, the four lane project would be approximately \$295,000.00.

Mr. Johnson stated that at present one displacement would occur with the four-lane alternate and none with the three-lane alternate. No historical impacts would occur with the three lane or four-lane alternate. Mr. Johnson then asked if there were any questions.

The question was asked as to what level of service each of the alternates would perform. Mr. Johnson responded that the three-lane alternate for design year 2020 would operate at LOS C

and the four-lane alternate for design year 2020 would operate at LOS B.

Bill Causey, representing the City of Macon's Engineering Department stated that the local government's preference is for the three-lane alternate. Reasons given by him and Tony Dowd (MAAI) were that this is a well established and up-scale residential area, the decrease of traffic at Wimbish Road and that the three lane alternate would for the most part stay within the existing ROW.

Ms. Singleton then asked the different Offices for comments.

GDOT Traffic representative:

19,000 VPD seems high and suggests that a four-lane facility is necessary for a count this high. This should be a four-lane project regardless of the residential nature of the area.

GDOT Engineering Services:

Prefers the four-lane alternate but would.

GDOT Environmental:

Asked a question regarding Appleton's Children's Home- Mr. Johnson answered that this property was not to be impacted by this project.

Wetlands - Sabbath Creek box culvert was damaged in the flood of 1994 and will have to be replaced. The Savage Creek pipe culvert will have to be extended.

GDOT Planning:

Indicated that the 3-lane alternate is already in the TIP and that the four-lane alternate would require amending the TIP. Prefers the four lane alternate.

GDOT District Office:

Prefers the four-lane alternate, but will consider the three lane alternate.

GDOT Urban Design:

Macon has already exceed the air quality limits one day this year. Warning is given about not falling out of attainment.

GDOT Right-of-way:

No comment, the local program takes care of purchasing right-of-way.

GDOT Utilities:

Asked about existing utilities and it was answered that existing utilities include water, gas, telephone, and cable lines. There are 66 power poles and 21 Bell South poles. If the three-lane alternate is constructed, the power poles would not have to be moved, the four-lane alternate would require relocating utilities. The utilities representative stated that it is a preference to not locate utilities in the bed of the road. The bed of the road is considered to be from ditch to ditch. He would prefer easements or additional ROW to be purchased to relocate utilities.

Joe Palladi asked about bike lanes. No bike lanes are proposed. Mr Palladi requests that growth patterns be further investigated, historical versus real life patterns. Discussion of the posted speed as 35 mph versus 45 mph is addressed due to this project occurring in a completely residential area. No conclusion is reached.

The Department of Transportation will suggest the alternate.

These notes represent our understanding of the topics discussed. If you have any comments or corrections, please call Joe Johnson at (912) 755-0000.

Department of Transportation

State of Georgia

PROJECT CONCEPT REPORT

Forest Hill Road (723) Reconstruction
from Wimbish Road (CS 997) to Northside Drive (CR 79)

Project Number: STP-3213(3), BRMLB-3213(5)

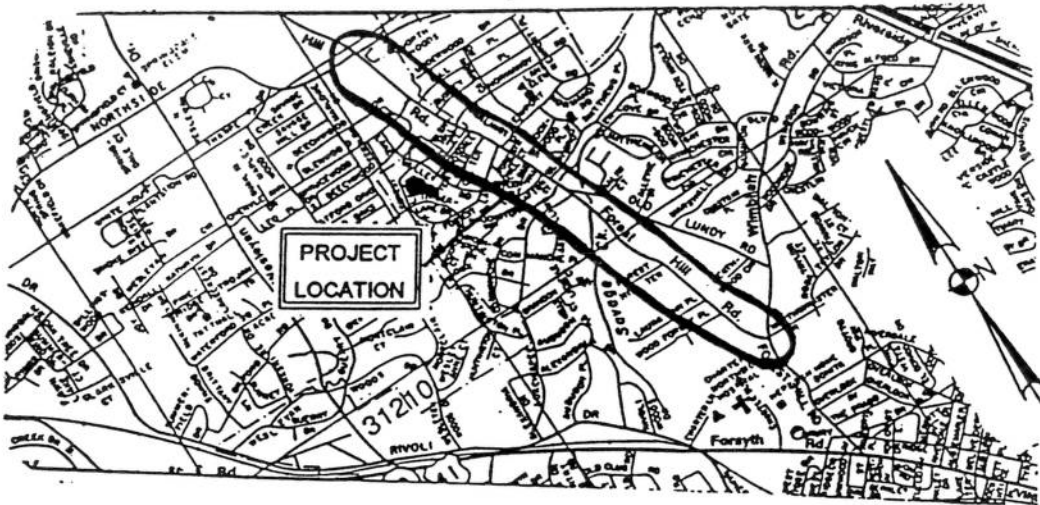
County: Bibb

P.L. Number: 351130, 351135

U.S. Route Number: None

State Route Number: None

Date of Report: 09/29/98



RECOMMENDATION FOR APPROVAL:

10/9/98
DATE

Joseph P. Allen
STATE URBAN DESIGN ENGINEER

DATE

STATE ENVIRONMENT/LOCATION ENGINEER

DATE

STATE TRAFFIC OPERATIONS ENGINEER

DATE

DISTRICT ENGINEER

10/14/98
DATE

B. L. Mustin
for PROJECT REVIEW ENGINEER

DATE

STATE BRIDGE AND STRUCTURAL DESIGN ENGINEER

This project is contained in the Regional Transportation Plan (RTP) and/or in the Statewide Transportation Improvement Program (STIP). The concept as presented herein and submitted for approval is consistent with that which is included in the RTP and/or the STIP.

DATE

STATE TRANSPORTATION PLANNING ADMINISTRATOR

Department of Transportation

State of Georgia

PROJECT CONCEPT REPORT

**Forest Hill Road (723) Reconstruction
from Wimbish Road (CS 997) to Northside Drive (CR 79)**

Project Number: STP-3213(3), BRMLB-3213(5)

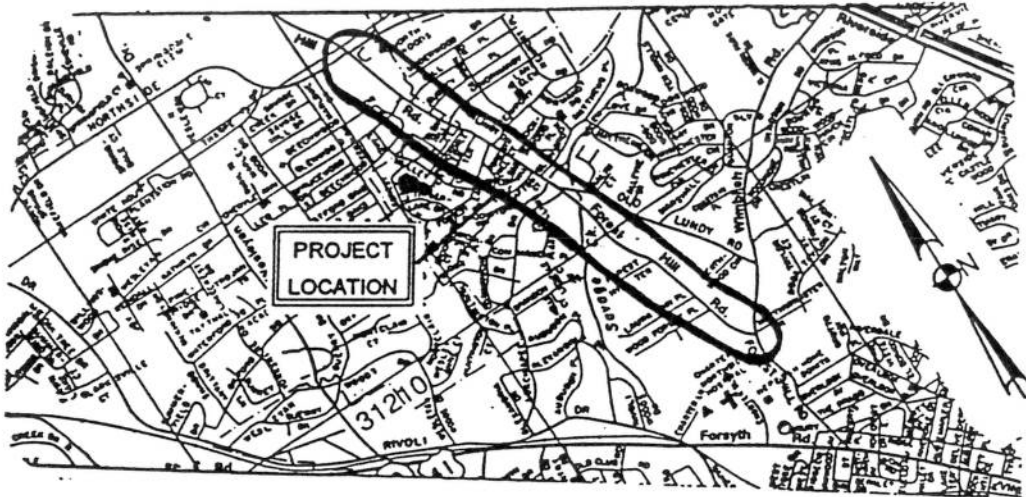
County: Bibb

P.L. Number: 351130, 351135

U.S. Route Number: None

State Route Number: None

Date of Report: 09/29/98



RECOMMENDATION FOR APPROVAL:

10/9/98
DATE

Joseph P. Pineda
STATE URBAN DESIGN ENGINEER

DATE

STATE ENVIRONMENT/LOCATION ENGINEER

DATE

STATE TRAFFIC OPERATIONS ENGINEER

DATE

DISTRICT ENGINEER

DATE

PROJECT REVIEW ENGINEER

DATE

STATE BRIDGE AND STRUCTURAL DESIGN ENGINEER

This project is contained in the Regional Transportation Plan (RTP) and/or in the Statewide Transportation Improvement Program (STIP). The concept as presented herein and submitted for approval is consistent with that which is included in the RTP and/or the STIP.

10/27/98
DATE

Ami Danner
STATE TRANSPORTATION PLANNING ADMINISTRATOR

Department of Transportation

State of Georgia

PROJECT CONCEPT REPORT

Forest Hill Road (723) Reconstruction
from Wimbish Road (CS 997) to Northside Drive (CR 79)

Project Number: STP-3213(3), BRMLB-3213(5)

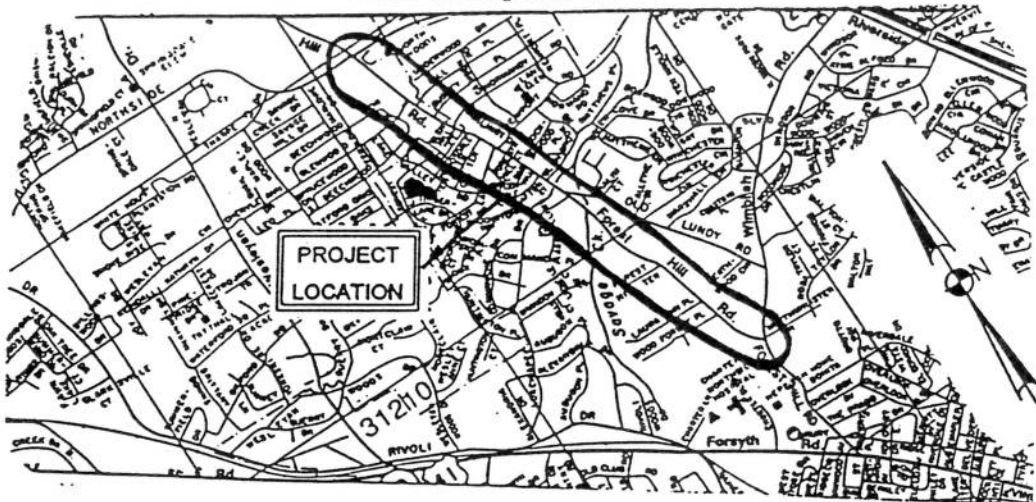
County: Bibb

P.L. Number: 351130, 351135

U.S. Route Number: None

State Route Number: None

Date of Report: 09/29/98



RECOMMENDATION FOR APPROVAL:

10/9/98
DATE

Joseph P. Allen
STATE URBAN DESIGN ENGINEER

DATE

STATE ENVIRONMENT/LOCATION ENGINEER

DATE

STATE TRAFFIC OPERATIONS ENGINEER

10-15-98
DATE

Joe B. Smith
DISTRICT ENGINEER

DATE

PROJECT REVIEW ENGINEER

DATE

STATE BRIDGE AND STRUCTURAL DESIGN ENGINEER

This project is contained in the Regional Transportation Plan (RTP) and/or in the Statewide Transportation Improvement Program (STIP). The concept as presented herein and submitted for approval is consistent with that which is included in the RTP and/or the STIP.

DATE

STATE TRANSPORTATION PLANNING ADMINISTRATOR

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF CHEMISTRY

RESEARCH REPORT

NO. 100

1950

BY

JOHN

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