D.O.T.60

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE: STP-0003-00(662) Columbia County
P.I. No.: 0003662
SR 104/Washington Road @ CR 99/Gibbs Road
Safety/Intersection Improvements

OFFICE: Traffic Operations
Atlanta, Georgia
DATE: December 12, 2001

FROM: Phillip M. Allen, State Traffic Safety & Design Engineer

TO: Mike Thomas, District Engineer, Tennille
Attn: David Griffith

SUBJECT: APPROVED CONCEPT REPORT

Attached is a copy of the approved concept report on the above listed project for your use and further handling.

This project consists of widening SR 104 to provide a westbound left turn lane and eastbound right turn lane and the realignment of CR 99. A stop and go traffic signal is warranted.

By copy of this letter, this office is requesting for this project be assigned to Chuck Hasty as Project Manager. The design of this project will be handled under our Consultant Design Contract, STP-0001-00(853).

Should you have any questions, please contact Ken Werho of this office at 404-635-8144.

PMA:KPW:KMS

Attachments
cc: Frank Danchetz
Tom Turner, w/attach.
David Mulling, w/attach.
Wayne Hutto, w/attach.
Herman Griffin, w/attach.
Harvey Keepler, w/attach.
Roger Price, w/attach.
Norm Cressman, w/attach.
General Files

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

PROJECT CONCEPT REPORT

COLUMBIA COUNTY

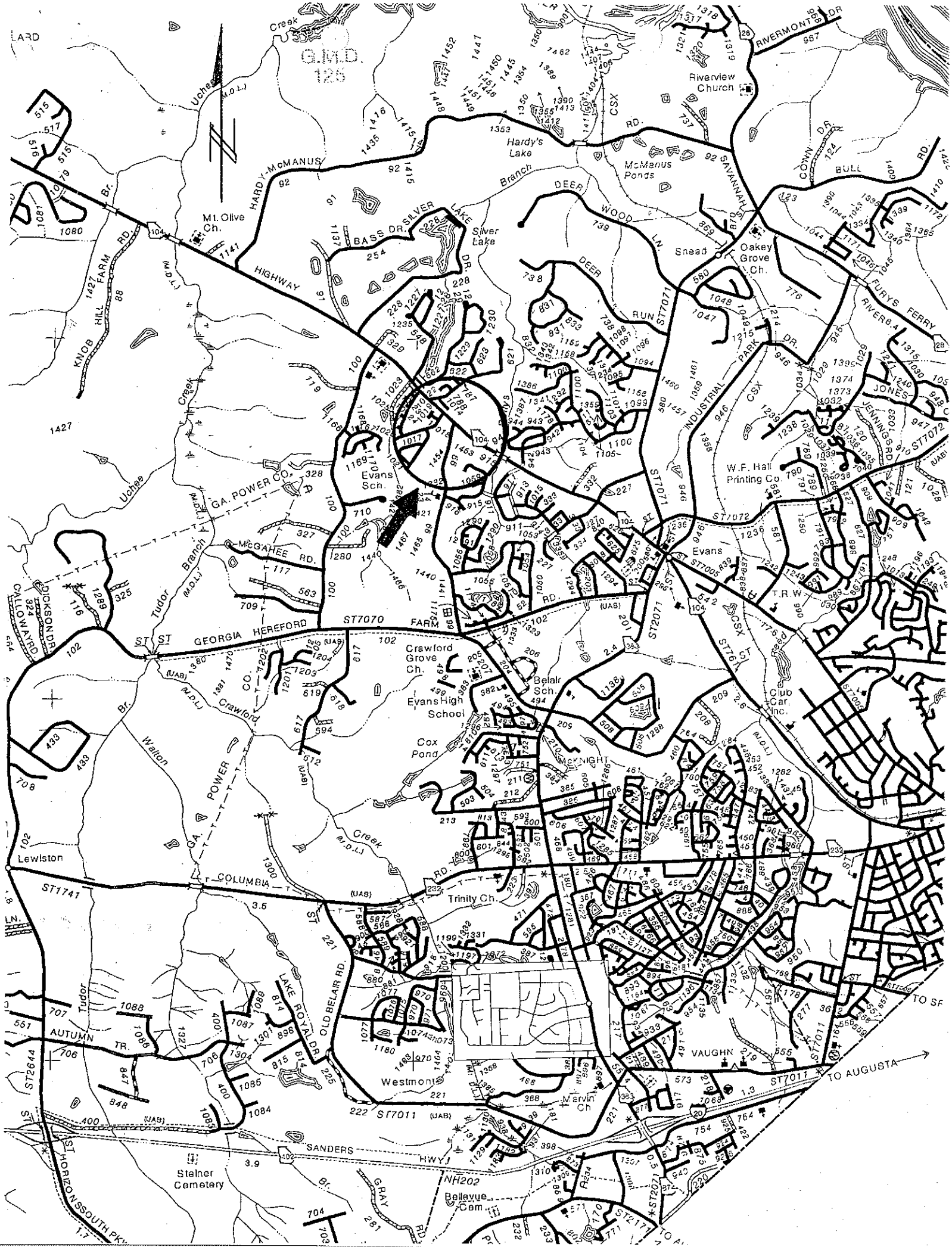
STP-0003-00(662)

FEDERAL ROUTE NO: N/A
STATE ROUTE NO: 104
GADOT P.I. NO: 0003662

SEE ATTACHED
LOCATION SKETCH

Date of Report: Sept. 5, 2001

RECOMMENDED:	9-20-01	Phillip M Allen
	DATE	**STATE TRAFFIC SAFETY AND DESIGN ENGINEER**
RECOMMENDED:	10-2-01	
	DATE	**DISTRICT ENGINEER**
RECOMMENDED:	10/11/01	
	DATE	**CHIEF ENGINEER**
APPROVED:	10/11/01	Tom Coleman
	DATE	**COMMISSIONER**



G.M.D. 125
Riverview Church
Hardy's Lake
McManus Ponds
Mt. Olive Ch.
Silver Lake
Snead
Oakey Grove Ch.
Evans Sch.
W.F. Hall Printing Co.
Evans
Crawford Grove Ch.
Belair Sch.
Evans High School
Cox Pond
Club Car, Inc.
Lewiston
Trinity Ch.
Westmont
Marvin Ch.
Steiner Cemetery
Bellevue Cem.
HARDY-McMANUS
HIGHWAY
BASS DR.
SILVER LAKE DR.
DEER WOOD LN.
DEER RUN
SAVANNAH
RIVERMONT DR
CONN DR.
BULL RD.
FURYS FERRY
INDUSTRIAL PARK DR.
JONES
JENNINGS RD.
KNOB HILL FARM RD.
GA. POWER CO.
McGAHEE RD.
GEORGIA HEREFORD FARM RD.
ST7070
ST7071
ST7072
ST7005
ST2071
ST7011
ST1741
COLUMBIA RD.
LAKE ROYAL DR.
OLD BELAIR RD.
AUTUMN TR.
SANDERS HWY
NH202
GRAY RD.
HORIZON SSOUTH PKY
TO AUGUSTA
Uchee Creek
Tudor Branch
Walton Creek
Crawford Br.
DICKSON DR.
CALLOWAY RD

September 17, 2001

PROJECT CONCEPT REPORT

P.I. No.: 0003662

Project No.: STP-0003-00(662) Columbia County

Route No.: S.R. 104 / Washington Road
C.R. 99 / Gibbs Road

Location: The intersection of S.R. 104 at C.R. 99 is located approximately 2 miles northwest of the City of Evans and 8 miles southeast of Pollards Corner in Columbia County.

Description: The realignment of C.R. 99 and widening of S.R. 104 to provide a westbound left-turn lane and eastbound right-turn lane, along with a stop and go traffic signal, is proposed.

Traffic – Current ADT:

S.R. 104	----------	17,600 (1999 ADT)
C.R. 99	----------	1,200 (1999 ADT)

Existing Typical: SR 104: 4 – 12 ft. travel lanes, two in each direction with 2 ft. paved shoulder and a 6 ft. grassed shoulder.

C.R. 99: 2 – 11.5 ft. travel lanes, one in each direction with a 6 ft. grassed shoulder.

Existing Right of Way:

S.R. 104	--------	100' (Estimated)
C.R. 99	--------	60' (Estimated)

Existing Traffic Control: C.R. 99 is controlled with a stop bar and stop sign at the intersection.

Existing Major Structures: None.

Statement of Need & Purpose: Ten accidents occurred at this intersection in 1999, including three right-angle accidents and two injuries. Warrants 2, 9, and 11 were met in the traffic signal warrant evaluation, while Warrant 1 was nearly met. Accidents should be reduced through realignment of C.R. 99 to provide a 90-degree intersection, widening of S.R. 104 to add turn lanes, and installation of a traffic signal. To improve the safety and orderly progression of traffic through the intersection, these improvements are recommended.

Bicycle & Pedestrian Considerations: A crosswalk will be installed across the east leg of the intersection.

Length: 0.38 mile

Termini:	S.R. 104	C.R. 99
From M.P.	5.84	1.29
To M.P.:	6.12	1.39

PDP Class: Minor Existing

Functional Class: S.R. 104 ---------- Rural Minor Arterial
C.R. 99 ---------- Rural Local Street

Max Degree of Curve: +/-10.0 Degrees **Max Grades:** +/-1.0 %

Design Speed: S.R. 104 ---------- 45 mph
C.R. 99 ---------- 45 mph

Proposed Typical Section: SR 104: 5 – 12 ft. travel lanes, two thru lanes in each direction with a westbound left-turn lane and an eastbound right-turn lane with 6.5 ft. paved shoulders and 4 ft. grassed shoulders.

C.R. 99: 3 – 12 ft. travel lanes, one left-turn lane and one right-turn lane northbound and one lane southbound with 4 ft. paved shoulders and 6 ft. grassed shoulders.

Proposed major structures: None.

Type Access: By Permit.

Traffic Control During Construction: Existing operation shall be maintained during construction.

Right-of-Way Requirement: Columbia County shall be responsible for the acquisition of all required Right of Way for this project.

Utilities: Columbia County shall be responsible for all Utility adjustments.

Estimated Cost:

Item	**Total Amount**	
Right-of-way	$ 0	(By GDOT)
Utilities	$ 0	(By GDOT)
Estimated LGPA Total	$0	
Construction	$ 358,498	
Traffic Signal	$ 75,000	
Railroad Equipment	$ 0	
E & C 10 %	$ 43350	
Total Construction	$ 476,848	

Permits Required: None.

Level of Environmental Analysis: Categorical Exclusion.

Level of Public Involvement: None.

Time Saving Procedures Appropriate: Yes (X) No ( )

Design Variances Required: None.

Alternates Considered: None

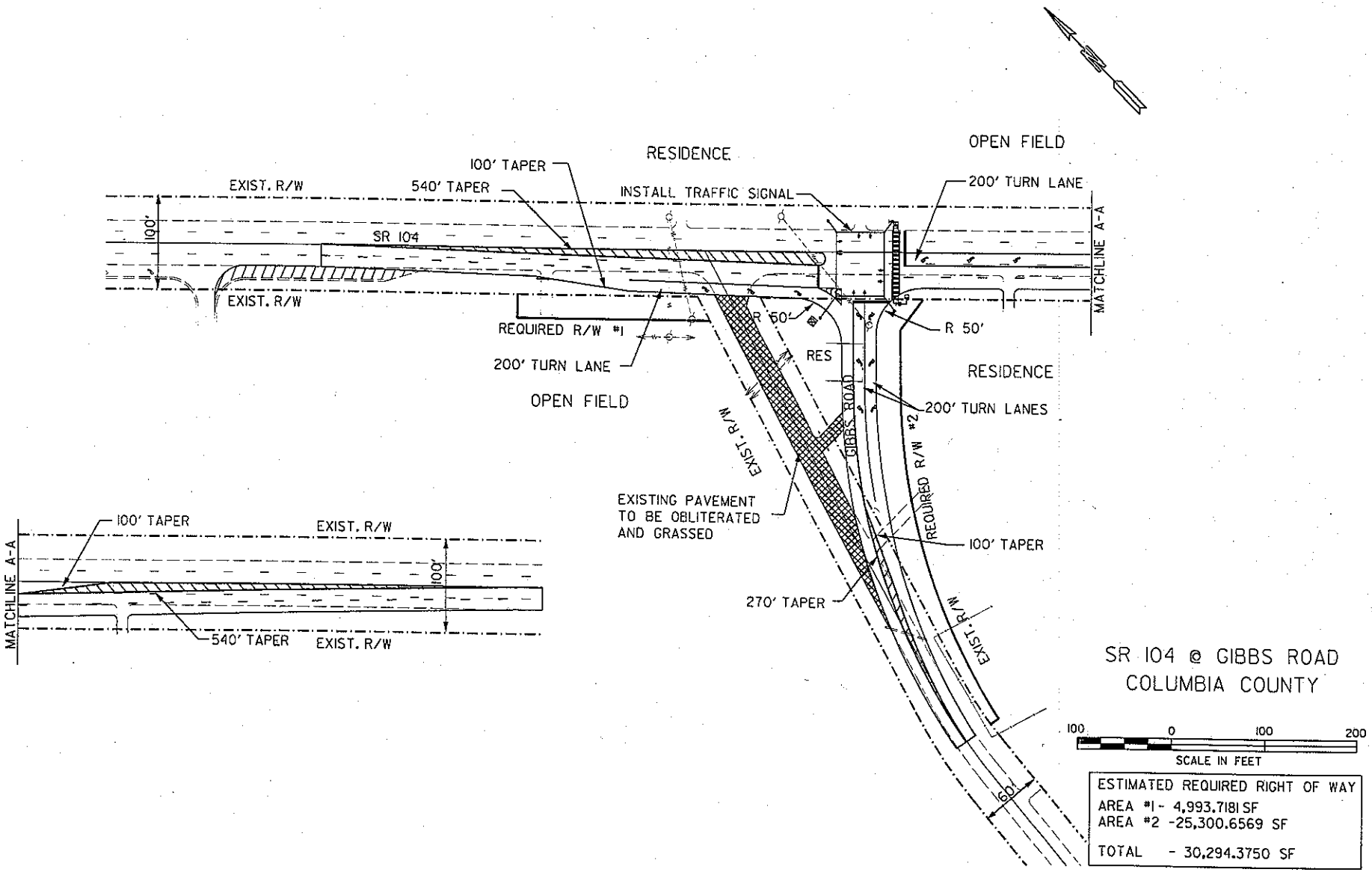
Comments:

Attachments: None

Prepared by Gresham, Smith and Partners on behalf of the Office of Traffic Operations of the Georgia Department of Transportation.

Michael R. Holt

Michael R. Holt, P.E.


RESIDENCE
OPEN FIELD
100' TAPER
EXIST. R/W
540' TAPER
INSTALL TRAFFIC SIGNAL
200' TURN LANE
100'
SR 104
MATCHLINE A-A
EXIST. R/W
REQUIRED R/W #1
R 50'
R 50'
200' TURN LANE
RES
RESIDENCE
OPEN FIELD
200' TURN LANES
EXIST. R/W
GIBBS ROAD
REQUIRED R/W #2
EXISTING PAVEMENT
TO BE OBLITERATED
AND GRASSED
100' TAPER
270' TAPER
EXIST. R/W
60'
100' TAPER
EXIST. R/W
MATCHLINE A-A
100'
540' TAPER
EXIST. R/W
SR 104 @ GIBBS ROAD
COLUMBIA COUNTY
100
0
100
200
SCALE IN FEET
ESTIMATED REQUIRED RIGHT OF WAY
AREA #1 - 4,993.7181 SF
AREA #2 -25,300.6569 SF
TOTAL - 30,294.3750 SF

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE State Route 104 at Gibbs Road (CR 99)
Columbia County

OFFICE Tennille

DATE May 16, 2001

FROM REP Roger E. Price, District Traffic Engineer

TO Marion G. Waters, III, PE, State Operations Engineer
Attn: Ken Werho

SUBJECT **TRAFFIC ENGINEERING REPORT**

Attached is a Traffic Engineering Report with supporting information, a Request for Traffic Signal, and a concept plan for reconstruction of this intersection.

Please advise if you need additional information.

REP:tp

Georgia Department of Transportation

May 14, 2001

LOCATION:	State Route 104 (Washington Road) at County Road 99 (Gibbs Road)
COUNTY:	Columbia County
CITY:	N/A
REQUESTED BY:	Roger E. Price, District Traffic Engineer
REASON FOR INVESTIGATION:	To determine if operational improvements are recommended.
MILEPOST	5.99

FINDINGS

TOPOGRAPHY

The intersection of State Route 104 (Washington Road) and County Road 99 (Gibbs Road) is a typical tee type intersection located in Columbia County. The southwest quadrant of the intersection is vacant. Residences occupy the other three quadrants of the intersection.

State Route 104 consists of a four-lane minor arterial that runs west into Augusta. Both approaches of State Route 104 consist of two 12-foot thru lanes. There are 8 foot shoulders (2 ft.-paved / 6 ft.-grassed) on each side of the roadway. The total width of pavement at the intersection is 52 feet. The intersection is located at the crest of a vertical curve with a westbound approach grade of +1.0 % and an eastbound approach grade of +3.0 %.

Gibbs Road is a two-lane local street. It consist of two 11½ feet lanes and has a total pavement width of 23 feet. There are six foot grassed shoulders on each side of the roadway. The approach grade to the intersection is –2.0 %.

A location map and sketch of the existing intersection is attached.

EXISTING TRAFFIC CONTROL

There are white skip lines seperating the thru lanes for each direction and double yellow center lines that seperate the eastbound from the westbound lanes on State Route 104. There are double yellow center lines on the Gibbs Road approach. All approachs have solid white edge lines. There is a stop bar, R1-1 (STOP) sign, and W3-1a (stop ahead) sign on the Gibbs Road approach.

VEHICULAR VOLUME

APPROACH	PEAK HOUR (5:00-6:00pm)	ONE HOUR (3:00-4:00pm)
NORTHBOUND (Gibbs Road)	139	134
EASTBOUND (State Route 104)	647	878
WESTBOUND (State Route 104)	1014	772
TOTAL	1800	1784

Copies of the 6-hour and the 24-hour vehicular volumes are attached.

VEHICULAR SPEED

The posted speed is 45 mph on all approaches. Through the observing of passing vechicles during the on-site investigation, it seemed likely that the 85th percentile speed around this intersection is about or slightly greater than the 45 MPH posted speed limit.

PEDESTRIAN MOVEMENTS

Pedestrians were not observed at this interection during the on-site investigation. Minimal pedestrain movement around the intersection would be expected, given its rural surroundings.

DELAY

A delay study was not conducted for this study.

PARKING

There wasn't any physical evidence of vehicles parking near the intersection. No vehicles were parked near this intersection during the on-site investigation.

ACCIDENT HISTORY

Accident information has been compiled for this intersection using reports provided by the Columbia County Sherriffs Department and the Georgia State Patrol. The accident information includes any accidents that were between the dates of November 30, 1999 and November 30, 2000. Ten accidents were reported at this intersection for the study period. Two injuries and no fatalities were reported. Three of the accidents were right angle type, three were rear end type, three involved striking deer, and one was a side swipe type accident.

Accident listings were compiled for 1995, 1996, 1997 , and 1998.

Four accidents in 1995 with no injuries or fatalities. Two were rear end type, one was a sideswipe, and one was not a collision with another motor vehicle.

Seven accidents in 1996 with three injuries and no fatalities. Three were rear end type, three were right angle type, and one was not a collision with another motor vehicle.

One accident in 1997 with no injuries or fatalities. This accident was a rear end type.

Six accidents in 1998 with four injuries and no fatalities. All six accidents were right angle types.

Copies of the accident listings and a collision diagram is attached.

ADJACENT SIGNALIZED INTERSECTION

There are no signalized intersections within ½ mile of this intersection.

INTERSECTION HISTORY

This is the first study of this type for this intersection.

OTHER INFORMATION

Sight distances at the intersection are as follows.
Sight distance on the eastbound approach of State Route 104 from Gibbs Road is approximately 800+ feet. Sight distance on the westbound approach of State Route 104 from Gibbs Road is approximately 800+ feet.

This intersection is a major access for Evans Middle School, which is located approximately 0.5 miles from this intersection on Gibbs Road. Gibbs Road is also an access for a large church and several residential areas. Gibbs Road is a local connector for traffic accessing Hereford Farm Road (CR 102), State Route 383 (Belair Road), and State Route 232 (Columbia Road).

WARRANT ANALYSIS

A Traffic Signal Warrant Evaluation was performed for this intersection using the 24 hour traffic volumes taken on February 7-8, 2001. Warrant 2 ((interruption of continuous traffic), Warrant 9 (four hour volume), and Warrant 11 (peak hour volume) as described in part 4C of the Manual on Uniform Traffic Control Devices (1988 edition) were satisfied. None of the other traffic warrants were satisfied.

A copy of the warrant analysis is attached.

CONCLUSION

Based on the information gathered for this report, it is concluded that a stop and go traffic signal is warranted at this time. The reconstruction and widening of the intersection to include a westbound left turn lane for the traffic on State Route 104 along with a signal would help improve the safety and efficiency of the intersection.

A sketch of this proposed intersection is attached.

RECOMMENDATIONS

1.) It is recommended that a reconstruction project be implemented for the widening of State Route 104 to include a westbound approach left turn bay.

2.) It is recommended that a stop and go signal be approved and installed in conjunction with the widening and reconstruction of the intersection.

SIGNATURES

PREPARED BY: Todd Price

RECOMMENDED: _____ DATE: 05/16/01
DISTRICT TRAFFIC ENGINEER

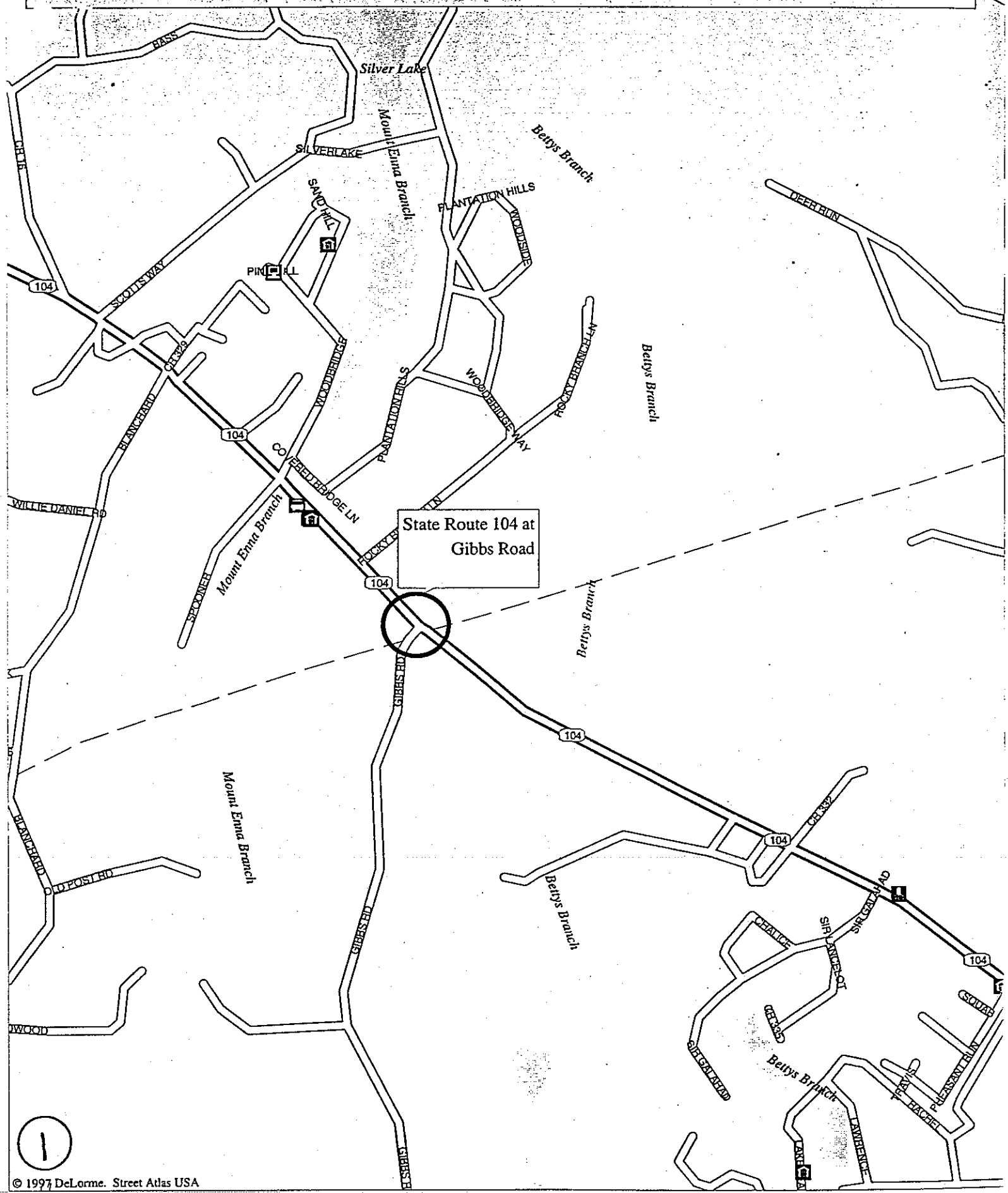
RECOMMENDED: _____ DATE: _____
STATE TRAFFIC ENGINEER

RECOMMENDED: _____ DATE: _____
DIRECTOR OF OPERATIONS

ATTACHMENTS TO TRAFFIC ENGINEERING REPORT

PAGE	INFORMATION
1	LOCATION MAP
2	INTERSECTION SKETCH
3- 8	TRAFFIC SIGNAL WARRANT EVALUATION
9-12	TRAFFIC COUNT DATA
13	MILE POST DATA FOR INTERSECTION
14	COLLISION DIAGRAM
15	ACCIDENT LISTINGS (1995-1998)
16	CONCEPT PLAN
17	COST ESTIMATE

State Route 104 at Gibbs Road



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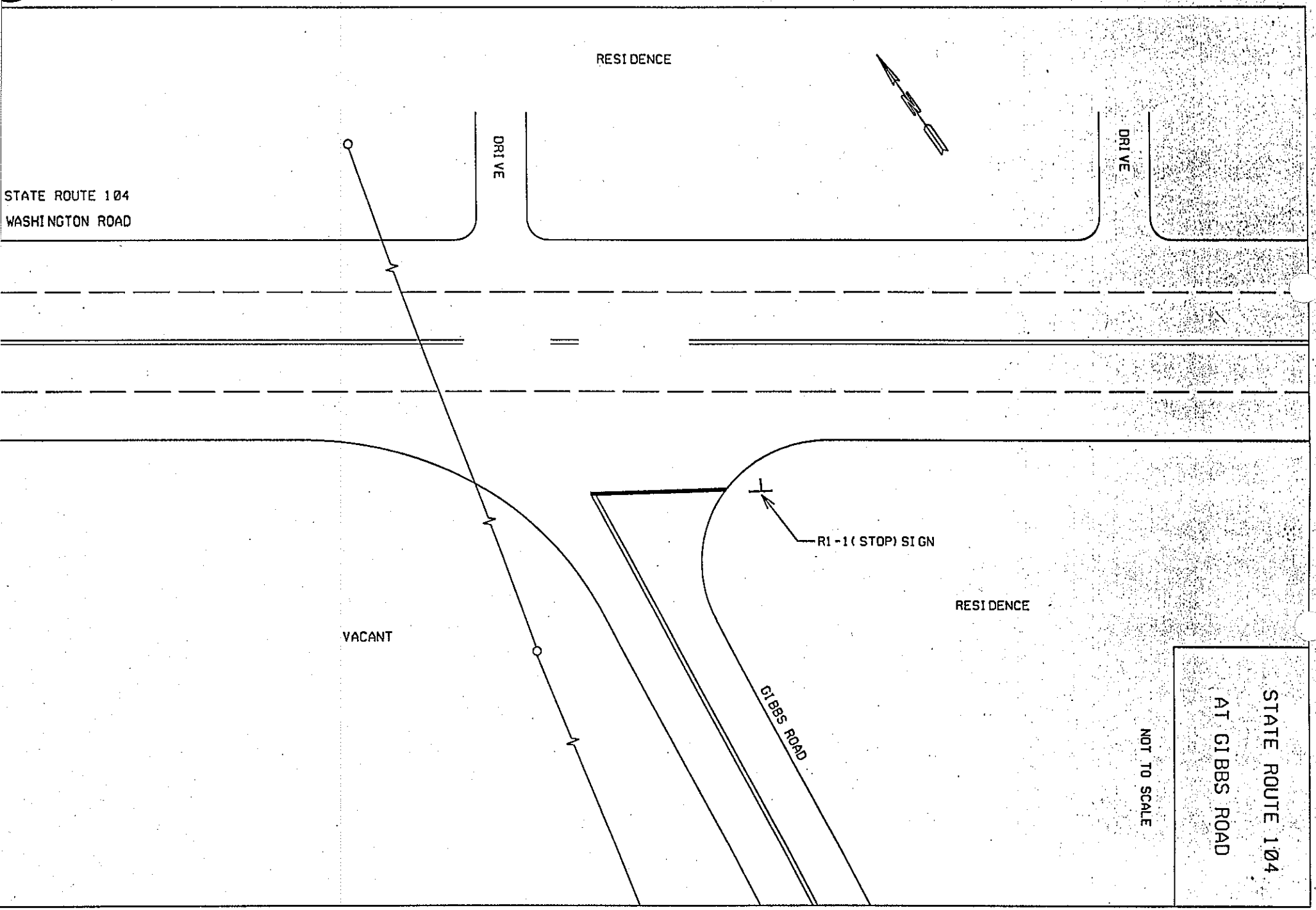

RESIDENCE
DRIVE
DRIVE
STATE ROUTE 104
WASHINGTON ROAD
R1-1 (STOP) SIGN
RESIDENCE
VACANT
GIBBS ROAD
STATE ROUTE 104
AT GIBBS ROAD
NOT TO SCALE

WARRANTS/TEAPAC[Ver 1.23.14] - Summary of Parameter Values

Intersection # 1 State Route 104 at Gibbs Road ADT Factor 0.00
Type of Count REDUCED Trucks INCLUDED

Count Periods:	Start	Stop	Start	Stop	Start	Stop	Start	Stop	Start	Stop
60 min intrvls	0	2300	0	0	0	0	0	0	0	0

Vehicle Counts:

Time				SR 104 WB			Gibbs Road NB			SR 104 EB		
0	0	0	0	0	68	0	0	10	0	0	9	0
100	0	0	0	0	31	0	0	3	0	0	13	0
200	0	0	0	0	23	0	0	1	0	0	18	0
300	0	0	0	0	16	0	0	1	0	0	24	0
400	0	0	0	0	21	0	0	4	0	0	63	0
500	0	0	0	0	35	0	0	21	0	0	270	0
600	0	0	0	0	171	0	0	54	0	0	616	0
700	0	0	0	0	648	0	0	106	0	0	1065	0
800	0	0	0	0	479	0	0	144	0	0	874	0
900	0	0	0	0	415	0	0	76	0	0	697	0
1000	0	0	0	0	399	0	0	78	0	0	518	0
1100	0	0	0	0	465	0	0	140	0	0	570	0
1200	0	0	0	0	568	0	0	90	0	0	468	0
1300	0	0	0	0	612	0	0	93	0	0	471	0
1400	0	0	0	0	590	0	0	94	0	0	549	0
1500	0	0	0	0	772	0	0	134	0	0	878	0
1600	0	0	0	0	889	0	0	120	0	0	647	0
1700	0	0	0	0	1014	0	0	139	0	0	647	0
1800	0	0	0	0	878	0	0	141	0	0	572	0
1900	0	0	0	0	640	0	0	95	0	0	300	0
2000	0	0	0	0	556	0	0	102	0	0	246	0
2100	0	0	0	0	358	0	0	44	0	0	162	0
2200	0	0	0	0	162	0	0	26	0	0	92	0
2300	0	0	0	0	82	0	0	13	0	0	36	0

3

WARRANTS/TEAPAC[Ver 1.23.14] - Midday Peak-Hour Summary

Intersection # 1 State Route 104 at Gibbs Road

Analysis from 1000 to 1200 Hours using 60-Minute Volumes

Parameter	-	-	-	- SR 104 WB	-	- Gibbs Road NB	-	- SR 104 EB	-	Int Total
DHV (vph)	0	0	0	0 465	0	0 140	0	0 570	0	1175
Distr (%)	0	0	0	0 100	0	0 100	0	0 100	0	100
Peak Time	0	0	0	0 1200	0	0 1100	0	0 1100	0	1100
Peak Volm	0	0	0	0 568	0	0 140	0	0 570	0	1175

WARRANTS/TEAPAC[Ver 1.23.14] - PM Peak-Hour Summary

Intersection # 1 State Route 104 at Gibbs Road

Analysis from 1300 to 1700 Hours using 60-Minute Volumes

Parameter	-	-	-	- SR 104 WB	-	- Gibbs Road NB	-	- SR 104 EB	-	Int Total
DHV (vph)	0	0	0	0 1014	0	0 139	0	0 647	0	1800
Distr (%)	0	0	0	0 100	0	0 100	0	0 100	0	100
Peak Time	0	0	0	0 1700	0	0 1700	0	0 1500	0	1700
Peak Volm	0	0	0	0 1014	0	0 139	0	0 878	0	1800

WARRANTS/TEAPAC[Ver 1.23.14] - Composite Peak-Hour Summary

Intersection # 1 State Route 104 at Gibbs Road

Analysis from 0 to 2300 Hours using 60-Minute Volumes

Parameter	-	-	-	- SR 104 WB	-	- Gibbs Road NB	-	- SR 104 EB	-	Int Total
DHV (vph)	0	0	0	0 648	0	0 106	0	0 1065	0	1819
Distr (%)	0	0	0	0 100	0	0 100	0	0 100	0	100
Peak Time	0	0	0	0 1700	0	0 800	0	0 700	0	700
Peak Volm	0	0	0	0 1014	0	0 144	0	0 1065	0	1819

4

04/12/01
13:10:36

WARRANTS/TEAPAC[Ver 1.23.14] - Warrant Analysis for Traffic Signal

Conditions Used for Warrant Analysis

Intersection # 1 State Route 104 at Gibbs Road

Major Street Direction	EastWest
Number of Lanes in North-South direction	1
Number of Lanes in East-West direction	2
Approach speed on major street is greater than 40 mph	Yes
Isolated community has population less than 10,000	No
Signal will not seriously disrupt progressive traffic flow	Yes
Trials of other remedies have failed to improve conditions	No
Number of accidents correctable by a signal	3
STOP sign delay for minor approach (hours)	0

Warrant 1 Analysis - Minimum Vehicular Volume

Start Time	800	1800	1100	1700	1500	1600	700	2000	Req.
Minor Volume	144	141	140	139	134	120	106	102.	105
Major Volume	1353	1450	1035	1661	1650	1536	1713	802	420
Warrant Met?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	8

Very close

Number of 1-hour periods meeting the warrants 7

>> WARRANT 1 IS NOT MET <<

Warrant 2 Analysis - Interruption of Continuous Traffic

Start Time	800	1800	1100	1700	1500	1600	700	2000	Req.
Minor Volume	144	141	140	139	134	120	106	102	52
Major Volume	1353	1450	1035	1661	1650	1536	1713	802	630
Warrant Met?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	8

Number of 1-hour periods meeting the warrants 15

Signal will not seriously disrupt progressive traffic flow Yes

>> WARRANT 2 IS MET <<

Warrant 1 Analysis (80%) - Minimum Vehicular Volume

Start Time	800	1800	1100	1700	1500	1600	700	2000	Req.
Minor Volume	144	141	140	139	134	120	106	102	84
Major Volume	1353	1450	1035	1661	1650	1536	1713	802	336
Warrant Met?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	8

Number of 1-hour periods meeting the warrants 12

04/12/01
13:10:36

WARRANTS/TEAPAC[Ver 1.23.14] - Warrant Analysis for Traffic Signal

Warrant 2 Analysis (80%) - Interruption of Continuous Traffic

Start Time	800	1800	1100	1700	1500	1600	700	2000	Req.
Minor Volume	144	141	140	139	134	120	106	102	42
Major Volume	1353	1450	1035	1661	1650	1536	1713	802	504
Warrant Met?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	8

Number of 1-hour periods meeting the warrants 16

Warrant 6 Analysis - Accident Experience

80% of Warrant 1 or 2 is met	Yes
Signal will not seriously disrupt progressive traffic flow	Yes
Trials of other remedies have failed to reduce accidents	No
Number of accidents correctable by a signal (must exceed 4)	3

>> WARRANT 6 IS NOT MET <<

Warrant 8 Analysis - Combination of Warrants

80% of Warrants 1 and 2 are met	Yes
Trials of other remedies have failed to reduce delays	No

>> WARRANT 8 IS NOT MET <<

Warrant 9 Analysis - Four Hour Volume

Start Time	800	1800	1100	1700	1500	1600	700	2000	Req.
Minor Volume	144	141	140	139	134	120	106	102	-
Minor Reqrmt	60	60	60	60	60	60	60	75	<--
Warrant Met?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	4

Number of 1-hour periods meeting the warrants 14

>> WARRANT 9 IS MET <<

Warrant 10 Analysis - Peak Hour Delay

Start Time	800	1800	1100	1700	1500	1600	700	2000	Req.
Minor Volume	144	141	140	139	134	120	106	102	100
Major Volume	1497	1591	1175	1800	1784	1656	1819	904	650
Warrant Met?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	1

Number of 1-hour periods meeting the warrants	8
STOP sign delay for minor approach (must exceed 4 hours)	0

>> WARRANT 10 IS NOT MET <<

6

04/12/01
13:10:36

WARRANTS/TEAPAC[Ver 1.23.14] - Warrant Analysis for Traffic Signal

Warrant 11 Analysis - Peak Hour Volume

Start Time	800	1800	1100	1700	1500	1600	700	1400	Req.
Minor Volume	144	141	140	139	134	120	106	94	-
Minor Reqrmt	75	75	103	75	75	75	75	84	<--
Warrant Met?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	1

Number of 1-hour periods meeting the warrants 9

>> WARRANT 11 IS MET <<

7

02/22/01
07:10:06

WARRANTS/TEAPAC[Ver 1.23.14] - 60-Minute Volumes: by Movement

Intersection # 1 State Route 104 at Gibbs Road

Begin Time	-	-	-	-	SR 104 WB	-	-	Gibbs Road NB	-	-	SR 104 EB	-	Int Total
0	0	0	0	0	68	0	0	10	0	0	9	0	87*
100	0	0	0	0	31	0	0	3	0	0	13	0	47*
200	0	0	0	0	23	0	0	1	0	0	18	0	42*
300	0	0	0	0	16	0	0	1	0	0	24	0	41*
400	0	0	0	0	21	0	0	4	0	0	63	0	88*
500	0	0	0	0	35	0	0	21	0	0	270	0	326*
600	0	0	0	0	171	0	0	54	0	0	616	0	841*
700	0	0	0	0	648	0	0	106	0	0	1065	0	1819*
800	0	0	0	0	479	0	0	144	0	0	874	0	1497*
900	0	0	0	0	415	0	0	76	0	0	697	0	1188*
1000	0	0	0	0	399	0	0	78	0	0	518	0	995*
1100	0	0	0	0	465	0	0	140	0	0	570	0	1175*
1200	0	0	0	0	568	0	0	90	0	0	468	0	1126*
1300	0	0	0	0	612	0	0	93	0	0	471	0	1176*
1400	0	0	0	0	590	0	0	94	0	0	549	0	1233*
1500	0	0	0	0	772	0	0	134	0	0	878	0	1784*
1600	0	0	0	0	889	0	0	120	0	0	647	0	1656*
1700	0	0	0	0	1014	0	0	139	0	0	647	0	1800*
1800	0	0	0	0	878	0	0	141	0	0	572	0	1591*
1900	0	0	0	0	640	0	0	95	0	0	300	0	1035*
2000	0	0	0	0	556	0	0	102	0	0	246	0	904*
2100	0	0	0	0	358	0	0	44	0	0	162	0	564*
2200	0	0	0	0	162	0	0	26	0	0	92	0	280*
2300	0	0	0	0	82	0	0	13	0	0	36	0	131*

WARRANTS/TEAPAC[Ver 1.23.14] - AM Peak-Hour Summary

Intersection # 1 State Route 104 at Gibbs Road

Analysis from 600 to 900 Hours using 60-Minute Volumes

Parameter	-	-	-	-	SR 104 WB	-	-	Gibbs Road NB	-	-	SR 104 EB	-	Int Total
DHV (vph)	0	0	0	0	648	0	0	106	0	0	1065	0	1819
Distr (%)	0	0	0	0	100	0	0	100	0	0	100	0	100
Peak Time	0	0	0	0	700	0	0	800	0	0	700	0	700
Peak Volm	0	0	0	0	648	0	0	144	0	0	1065	0	1819

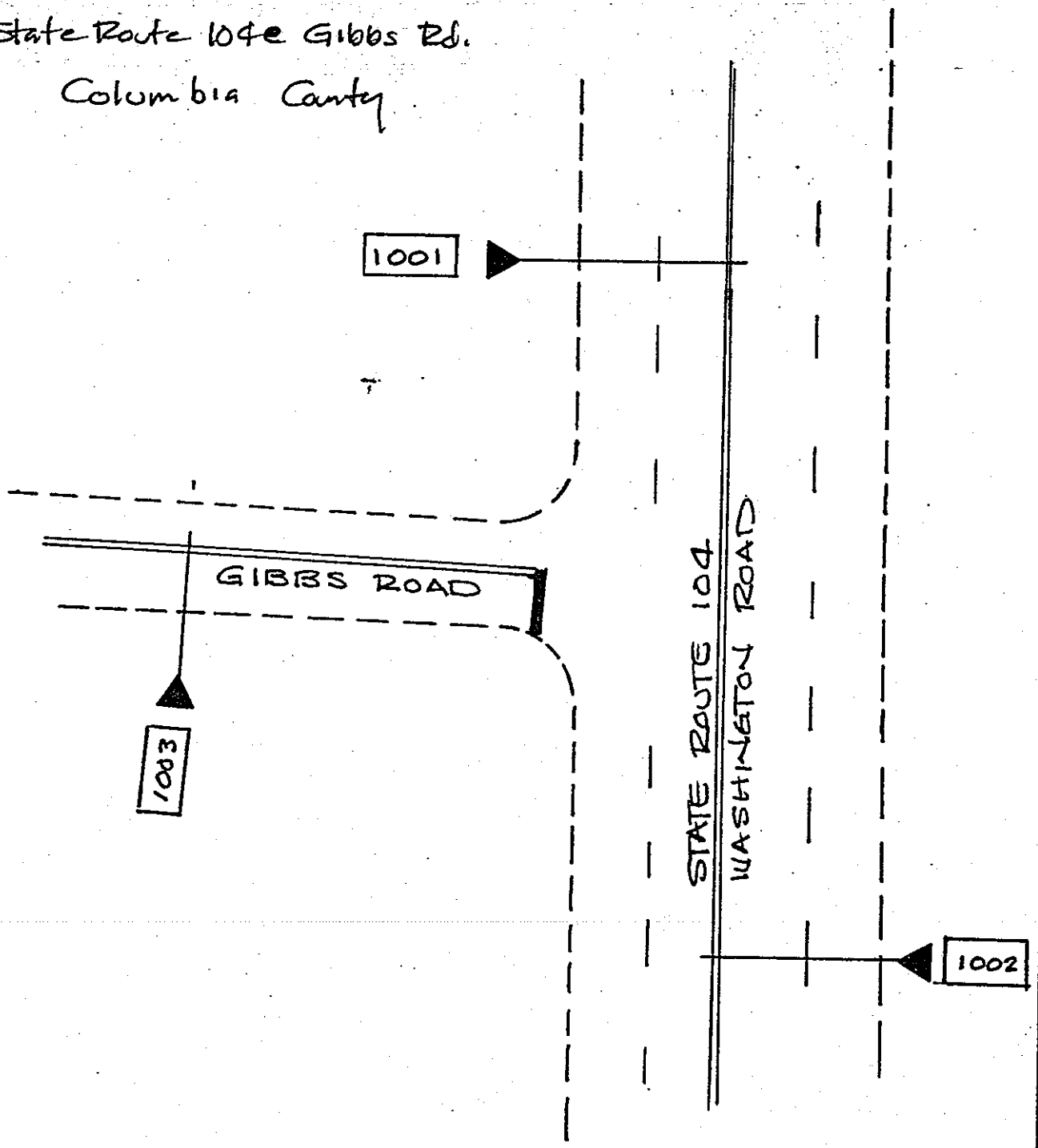
8

01/26/00

SPECIAL COVERAGE
TRAFFIC COUNTS
for

State Route 104 Gibbs Rd.

Columbia County



22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS
AMPAD

Southern Traffic Services Inc.
Event Counts

COLUMBIA COUNTY SO# 27 SITE# 1003 NB GIBBS RD S/O SR 104 / WASHINGTON RD (NORTH BOUND)

DATASETS:

Site:	**[MA.S] STS MA. S**
ChannelA:	0 - Unused or unknown. - Added to totals. (1)
ChannelB:	0 - Unused or unknown. - Excluded from totals. (0)
Survey Duration:	00:07 Wed 07 Feb 2001 to 23:13 Fri 09 Feb 2001
File:	D:\Data\GDOT2001\020401\MA.S10FEB2001.EC0 (Plus)
Identifier:	H734DSTT MC55-2 [MC50] (c)Microcom 6/05/98
Algorithm:	Event count

PROFILE:

Filter time:	**09:00 Wed 07 Feb 2001 to 09:00 Thu 08 Feb 2001**
Name:	Factory default profile
Method:	Count axles divided by two.
Units:	Non-Metric (ft, mi, f/s, mph, lb, ton)
In profile:	1729 Events

Wed 07 Feb 2001 - Total=1385(incomplete) , 15 minute drops,

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
-	-	-	-	-	-	-	-	-	**76**	**78**	**140**	**90**	**93**	**94**	**134**	**120**	**139**	**141**	**95**	**102**	**44**	**26**	**13**	
0	-	-	-	-	-	-	-	-	20	16	16	27	26	23	34	31	21	**37**	24	27	9	6	5	4
-	-	-	-	-	-	-	-	-	23	20	23	19	19	28	23	29	**37**	30	27	43	15	4	4	1
-	-	-	-	-	-	-	-	-	20	24	78	26	29	21	48	33	**36**	35	20	23	14	11	2	2
-	-	-	-	-	-	-	-	-	13	18	23	18	19	22	29	27	**45**	39	24	9	6	5	2	3

PM PkHr 17:15 to 18:15 (n=155), PM PHF=0.86

Thu 08 Feb 2001 - Total=344(incomplete) , 15 minute drops,

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
10	**3**	**1**	**1**	**4**	**21**	**54**	**106**	**144**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4	0	0	1	0	4	10	29	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	0	0	0	0	5	14	28	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	3	0	0	1	3	14	22	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	0	1	0	3	9	16	27	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Southern Traffic Services Inc.
Event Counts

COLUMBIA COUNTY SO# 27 SITE# 1001 EB SR 104 / WASHINGTON RD W/O GIBBS RD (EAST BOUND)

DATASETS:

Site:	[ma. m] STS MA. M
ChannelA:	0 - Unused or unknown. - Added to totals. (1)
ChannelB:	0 - Unused or unknown. - Excluded from totals. (0)
Survey Duration:	00:04 Wed 07 Feb 2001 to 23:12 Fri 09 Feb 2001
File:	D:\Data\GDOT2001\020401\ma. m10FEB2001.EC0 (Plus)
Identifier:	H747WBP6 MC55-2 [MC50] (c)Microcom 6/05/98
Algorithm:	Event count

PROFILE:

Filter time:	**09:00 Wed 07 Feb 2001 to 09:00 Thu 08 Feb 2001**
Name:	Factory default profile
Method:	Count axles divided by two.
Units:	Non-Metric (ft, mi, f/s, mph, lb, ton)
In profile:	9805 Events

Wed 07 Feb 2001 - Total=6853(incomplete) , 15 minute drops,

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
-	-	-	-	-	-	-	-	-	**697**	**518**	**570**	**468**	**471**	**549**	**878**	**647**	**647**	**572**	**300**	**246**	**162**	**92**	**36**	
0	-	-	-	-	-	-	-	-	177	142	134	108	117	108	**250**	168	168	156	102	72	48	25	11	3
-	-	-	-	-	-	-	-	-	174	120	149	108	121	126	**242**	170	148	168	63	82	63	28	10	3
-	-	-	-	-	-	-	-	-	178	145	145	118	89	130	**191**	160	175	138	63	47	27	19	7	1
-	-	-	-	-	-	-	-	-	168	111	142	134	144	185	**195**	149	156	110	72	45	24	20	8	2

PM PkHr 15:00 to 16:00 (n=878), PM PHF=0.88

Thu 08 Feb 2001 - Total=2952(incomplete) , 15 minute drops,

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
9	**13**	**18**	**24**	**63**	**270**	**616**	**1065**	**874**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3	2	3	3	9	39	119	209	256	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	4	4	3	14	47	144	253	241	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	3	3	9	18	87	166	332	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	4	8	9	22	97	197	271	177	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Southern Traffic Services Inc.
Event Counts

COLUMBIA COUNTY SO# 27 SITE# 1002 WB SR 104 / WASHINGTON RD E/O GIBBS RD (WEST BOUND)

DATASETS:

Site:	[MA. AJ] MA. AJ
ChannelA:	0 - Unused or unknown. - Added to totals. (1)
ChannelB:	0 - Unused or unknown. - Excluded from totals. (0)
Survey Duration:	00:01 Wed 07 Feb 2001 to 23:30 Fri 09 Feb 2001
File:	D:\Data\GDOT2001\020401\MA. AJ10FEB2001.EC0 (Plus)
Identifier:	A094V82B MC56-1 [MC55] (c)Microcom 07/06/99
Algorithm:	Event count

PROFILE:

Filter time:	**09:00 Wed 07 Feb 2001 to 09:00 Thu 08 Feb 2001**
Name:	Factory default profile
Method:	Count axles divided by two.
Units:	Non-Metric (ft, mi, f/s, mph, lb, ton)
In profile:	9892 Events

Wed 07 Feb 2001 - Total=8400(incomplete) , 15 minute drops,

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
-	-	-	-	-	-	-	-	-	**415**	**399**	**465**	**568**	**612**	**590**	**772**	**889**	**1014**	**878**	**640**	**556**	**358**	**162**	**82**	
0	-	-	-	-	-	-	-	-	89	90	100	130	169	137	169	218	224	**261**	176	169	101	50	32	34
-	-	-	-	-	-	-	-	-	116	97	115	149	144	132	196	205	**261**	239	133	133	86	39	14	10
-	-	-	-	-	-	-	-	-	111	101	117	140	150	172	209	229	**257**	203	158	135	87	37	14	14
-	-	-	-	-	-	-	-	-	99	111	133	149	149	149	198	237	**272**	175	173	119	84	36	22	10

PM PkHr 17:15 to 18:15 (n=1051), PM PHF=0.97

Thu 08 Feb 2001 - Total=1492(incomplete) , 15 minute drops,

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
68	**31**	**23**	**16**	**21**	**35**	**171**	**648**	**479**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
34	12	6	2	6	3	23	142	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	5	7	4	6	9	20	193	127	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9	3	5	3	13	53	167	114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	5	7	5	6	10	75	146	108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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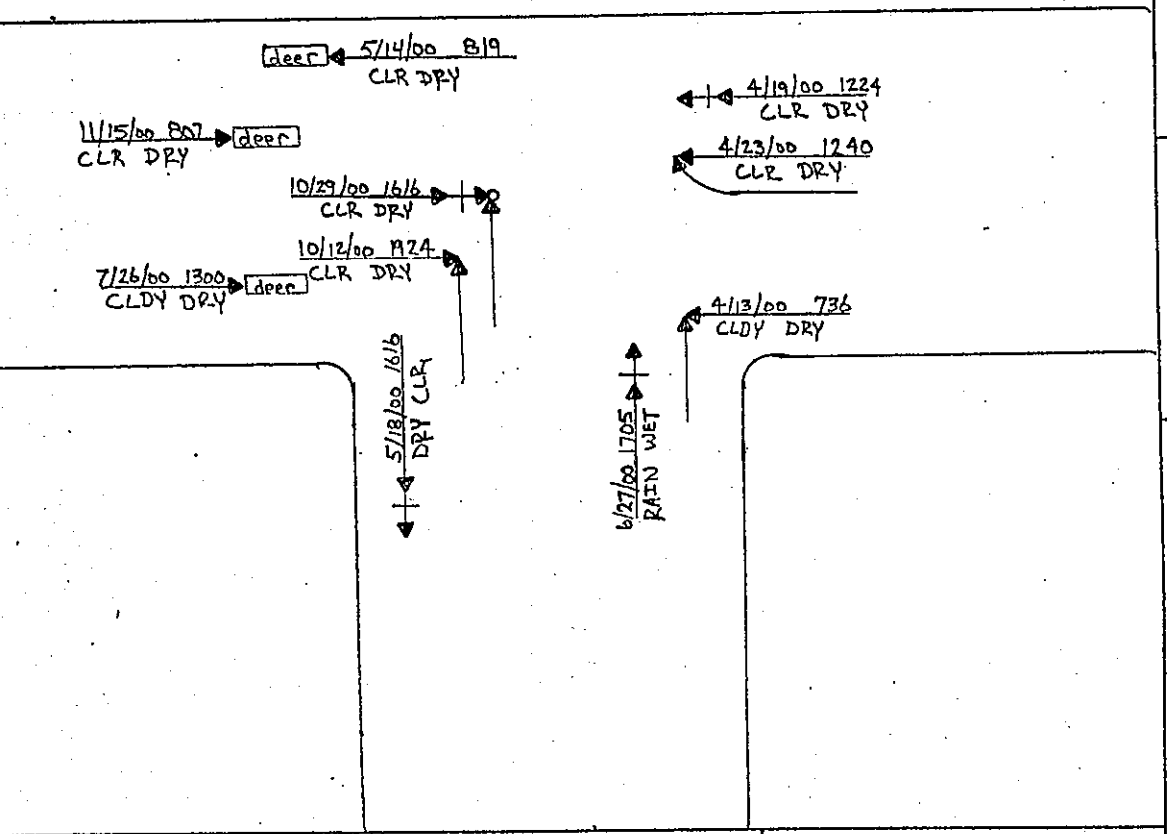
GEORGIA DEPARTMENT OF TRANSPORTATION
PLANNING DATA SERVICES
SPECIAL ACCIDENT MILE PT LISTING OF STATE ROUTES
4/21/99

073 COLUMBIA.....

ROUTE #	MILE	CITY	DESCRIPTION	HPMS	ROAD NAME	TWC	YR	AC	SR Name
010400	0153	0000	CRT 015500 L		OAK ST N	1	97	U	SR 104 NONAME
010400	0158	0000	SRX 023200LCR0176R		BOBBY JONES	1	97	U	SR 104 NONAME
010400	0158	0000	SRX 023200LCR0176R		OLD EVANS RD	1	97	U	SR 104 NONAME
010400	0167	0000	CRT 015700 L		CARIBE DR	1	97	U	SR 104 NONAME
010400	0174	0000	CRT 015800 L		CASA LINDA DR	1	97	U	SR 104 NONAME
010400	0181	0000	SRY 023200 L		COLUMBIA RD	1	97	U	SR 104 NONAME
010400	0182	0000	CRT 018900 R		RUTH ST	1	97	U	SR 104 NONAME
010400	0199	0000	CRT 019000 R	#	HIGHTOWER DR	1	97	U	SR 104 NONAME
010400	0212	0000	ACCLOC L	#	COLUMBIA SQ	1	97	U	SR 104 NONAME
010400	0217	0000	MP 002	#		1	97	U	SR 104 NONAME
010400	0218	0000	CRT 016400 L	#	FLOWING WELLS RD	1	97	U	SR 104 NONAME
010400	0224	0000	ACCLOC L	#	COLUMBIA SQ	1	97	U	SR 104 NONAME
010400	0228	0000	ACCLOC L	#	KROGER RD	1	97	U	SR 104 NONAME
010400	0296	0000	ACCLOC R	#	CLUB CAR DR	1	97	U	SR 104 NONAME
010400	0316	0000	BRS00090 REEDY CR	#		1	97	U	SR 104 NONAME
010400	0317	0000	MP 003	#		1	97	U	SR 104 NONAME
010400	0347	0000	CRT 020900 L	#	OWENS RD	1	97	U	SR 104 NONAME
010400	0382	0000	ACCLOC L	#	BOLHER AVE	1	97	U	SR 104 NONAME
010400	0409	0000	CRT 150000 L	#	TOWNE CENTER DR	1	97	U	SR 104 NONAME
010400	0417	0000	MP 004	#		1	97	U	SR 104 NONAME
010400	0427	0000	CRT 017600 R			1	97	U	SR 104 NONAME
010400	0435	0000			OLD EVANS RD	1	97	U	SR 104 NONAME
010400	0439	0000	SRX 038300LCR0946R		INDUSTRIAL PARK DR	1	97	U	SR 104 NONAME
010400	0439	0000	SRX 038300LCR0946R		BELAIR RD	1	97	U	SR 104 NONAME
010400	0446	0000	CRT 058000 R		N BELAIR RD	1	97	U	SR 104 NONAME
010400	0459	0000	CRT 123600 R		EVANS TO LOCKS RD	1	97	U	SR 104 NONAME
010400	0462	0000	CRT 062500 L		PHEASANT RUN DR	1	97	U	SR 104 NONAME
010400	0495	0000	CRX 022700LCR1106R		SIR GALAHAD DR	1	97	U	SR 104 NONAME
010400	0495	0000	CRX 022700LCR1106R		WASHINGTON WEST DR	1	97	U	SR 104 NONAME
010400	0512	0000	CRT 033200 R		FAIRCLOTH DR	1	97	U	SR 104 NONAME
010400	0517	0000	MP 005			1	97	U	SR 104 NONAME
010400	0550	0000	CRX 091100LCR0942R		FIELDSTONE WAY	1	97	U	SR 104 NONAME
010400	0550	0000	CRX 091100LCR0942R		COUNTRY PLACE LN	1	97	U	SR 104 NONAME
010400	0564	0000	BRS00100 UNKNOWN	#		1	97	U	SR 104 NONAME
010400	0599	0000	CRT 009900 L		GIBBS RD	1	97	U	SR 104 NONAME
010400	0612	0000	CRT 101700 L		WELLINGTON DR	1	97	U	SR 104 NONAME
010400	0617	0000	MP 006			1	97	U	SR 104 NONAME
010400	0620	0000	CRT 062100 R		ROCKY BRANCH LN	1	97	U	SR 104 NONAME
010400	0623	0000	CRT 102200 L		STEEPLECHASE WAY	1	97	U	SR 104 NONAME
010400	0640	0000	CRT 054800 R		WOODBRIDGE DR	1	97	U	SR 104 NONAME
010400	0641	0000	CRT 033000 L		SPOONER DR	1	97	U	SR 104 NONAME
010400	0668	0000	CRT 010000 L		BLANCHARD RD	1	97	U	SR 104 NONAME
010400	0669	0000	CRT 032900 R		CUMMINGS RD	1	97	U	SR 104 NONAME
010400	0683	0000	CRT 022800 R		SILVER LAKE DR	1	97	U	SR 104 NONAME
010400	0691	0000	CRT 001600 R		HALALI FARM RD	1	97	U	SR 104 NONAME
010400	0702	0000	CRT 001600 R		HALILI FARM RD	1	97	U	SR 104 NONAME
010400	0717	0000	MP 007			1	97	U	SR 104 NONAME
010400	0766	0000	CRT 009200 R		HARDY MCMANUS RD	1	97	U	SR 104 NONAME
010400	0776	0000	ACCLOC R		LEVRETT PL	1	97	U	SR 104 NONAME

COLLISION DIAGRAM



RIGHT ANGLE COLL.	LEFT TURN COLLISION	BACKING REAR END
HEAD ON COLLI SION	REAR END COLLISION	FIXED OBJECT
PARKING VEHICLE	PARKED VEHICLE	PEDESTRIAN
MOVING VEHICLE	SIDE SWIPE	OUT OF CONTROL
FATAL ACCIDENT	PERSONAL INJURY	PROPERTY DAMAGE

ATE 2/22/01 INTERSECTION SR 104 (Washington RD) @ Gibbs Road

OUNTY Columbia CITY N/A DISTRICT -TWO

ME PERIOD 3/00 - 3/01

ACCIDENT SUMMARY

TIME OF DAY	NO. ACCS	WEATHER	NO. ACCS.
6 AM - 10 AM	111	CLEAR (Clr)	卌 11
10 AM - 4 PM		CLOUDY (Cly)	11
4 PM - 7 PM	111	RAIN (R)	1
7 PM - 12 MID	1	FOG (F)	
12 MID - 6 AM	111	SNOW (S)	
TOTAL	10	TOTAL	10

TIME OF YR.	NO. ACCS.	DIRECTION	NO. ACCS.
DEC - FEB		NORTHBOUND	卌
MAR - MAY	卌	SOUTHBOUND	
JUNE - AUG	11	EASTBOUND	卌
SEPT - NOV	111	WESTBOUND	卌 111
TOTAL	10	TOTAL	18

PAVEMENT	NO. ACCS.	ACC. SEVERITY	NO. ACCS.
DRY (D)	卌 1111	PROP. DAM. ONLY	卌 卌 卌 1
WET (W)	1	NON-FATAL INJ.	11
ICY (I)		FATAL INJ.	
TOTAL	10	TOTAL	18

TYPE ACCS.	NO. ACCS.	TYPE VEH.	NO. ACCS.
SIDESWIPE	1	AUTOMOBILE	卌 卌 卌 11
REAR END	1111	TRUCK	
RT. ANGLE	111	MOTORCYCLE	
LEFT TURN		OTHER	
OTHER	111		
TOTAL	11	TOTAL	18

DAY OF THE WEEK

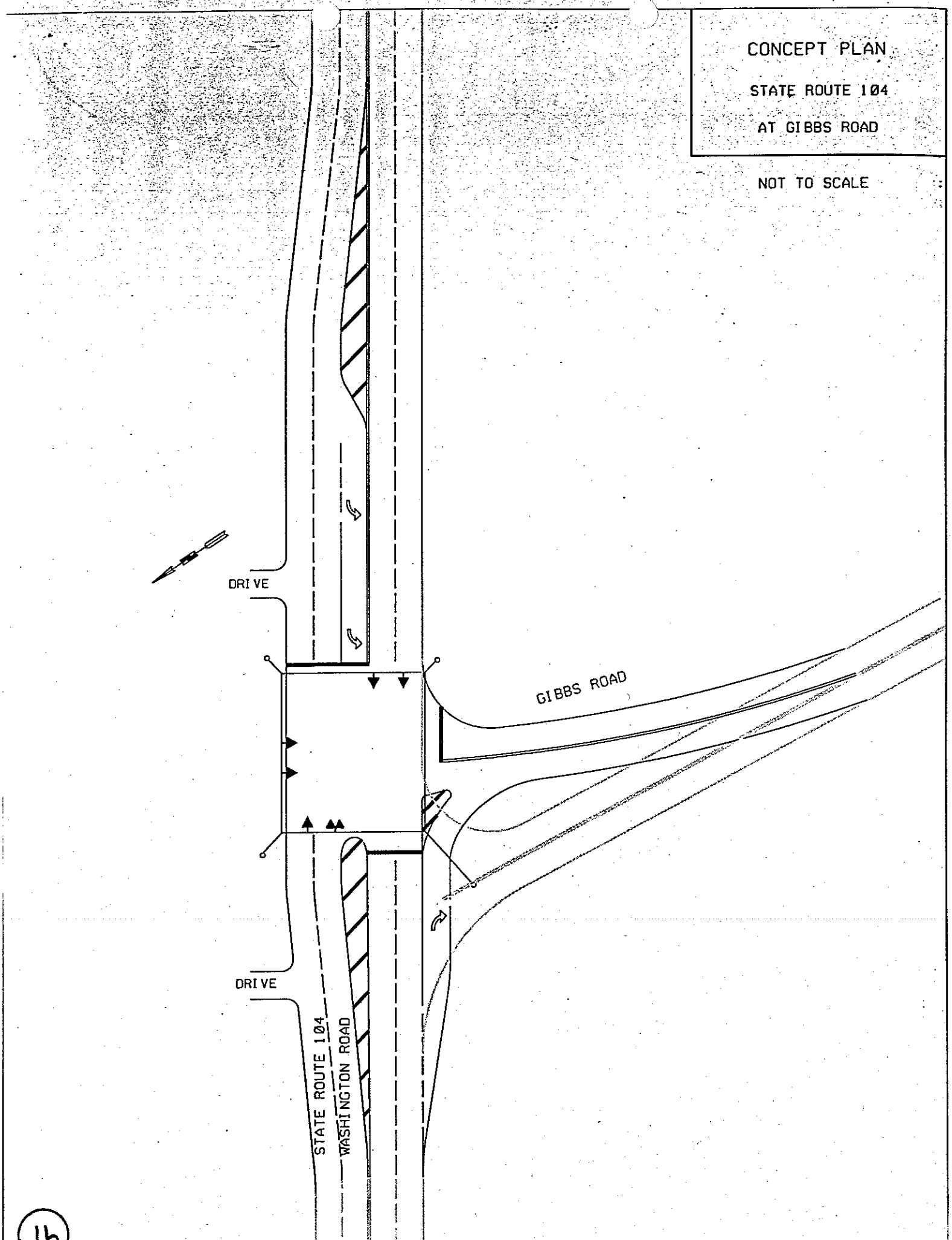
MON.	TUE.	WED.	THUR.	FRI.	SAT.	SUN.
	1	111	111			111

TOTAL 10

Number of Records: 18

Accident #	Date	County	Rt Type	Route	Mile	Int Rt Type	Int Rt	Inj	Fatal	Manner of Collision	LOC	First Harmful Event	Light	Surface	D1	D2	VM1	VM2
999990050360359	1995-02-07 18:00:00	Columbia	State Route	010400	5.99	2	009900	0	0	Sideswipe - Same Direction	On Roadway	Motor Vehicle in Motion	Dusk	Wet	W	W	04	05
999990050360502	1995-02-28 17:25:00	Columbia	State Route	010400	5.99	2	009900	0	0	Rear End	On Roadway	Motor Vehicle in Motion	Dusk	Wet	W	W	05	05
999990051310713	1995-06-04 23:42:00	Columbia	State Route	010400	5.99	2	009900	0	0	Rear End	Off Roadway	Parked Motor Vehicle	Dark-Not Lighted	Dry	N	N	08	05
999990052010727	1995-09-01 23:38:00	Columbia	State Route	010400	5.99	2	009900	0	0	Not A Collision With A Motor Vehicle	On Roadway	Animal	Dark-Not Lighted	Wet	W		05	
999990060160063	1996-01-02 17:11:00	Columbia	State Route	010400	5.99	2	009900	0	0	Rear End	On Roadway	Motor Vehicle in Motion	Daylight	Wet	W	W	01	05
999990060610578	1996-03-25 13:51:00	Columbia	State Route	010400	5.99	2	009900	0	0	Rear End	On Roadway	Motor Vehicle in Motion	Daylight	Wet	W	W	04	05
999990060860274	1996-04-29 16:29:00	Columbia	State Route	010400	5.99	2	009900	1	0	Rear End	On Roadway	Motor Vehicle in Motion	Daylight	Wet	W	W	04	05
999990061050293	1996-05-19 01:23:00	Columbia	State Route	010400	5.99	2	009900	0	0	Not A Collision With A Motor Vehicle	On Roadway	Deer	Dark-Not Lighted	Dry	E		05	
999990061720767	1996-07-31 18:16:00	Columbia	State Route	010400	5.99	2	009900	2	0	Angle	On Roadway	Motor Vehicle in Motion	Daylight	Wet	W	E	04	05
999990062920390	1996-12-05 07:55:00	Columbia	State Route	010400	5.99	2	009900	0	0	Angle	On Roadway	Motor Vehicle in Motion	Dawn	Dry	E	N	05	01
999990062980641	1996-12-23 16:28:00	Columbia	State Route	010400	5.99	2	009900	0	0	Angle	On Roadway	Motor Vehicle in Motion	Daylight	Dry	E	N	05	01
999990073180387	1997-12-05 15:09:00	Columbia	State Route	010400	5.99	2	009900	0	0	Rear End	On Roadway	Motor Vehicle in Motion	Daylight	Dry	N	N	04	05
999990080020854	1998-01-05 09:01:00	Columbia	State Route	010400	5.99	2	009900	2	0	Rear End	On Roadway	Motor Vehicle in Motion	Daylight	Wet	W	W	04	05
999990081180007	1998-05-22 14:20:00	Columbia	State Route	010400	5.99	2	009900	0	0	Rear End	On Roadway	Motor Vehicle in Motion	Daylight	Dry	N	N	04	05
999990081650611	1998-07-15 19:57:00	Columbia	State Route	010400	5.99	2	009900	1	0	Rear End	On Roadway	Motor Vehicle in Motion	Daylight	Dry	W	W	04	05
999990081750658	1998-07-28 12:33:00	Columbia	State Route	010400	5.99	2	009900	0	0	Rear End	On Roadway	Motor Vehicle in Motion	Daylight	Dry	W	W	04	05
999990081820050	1998-07-22 07:42:00	Columbia	State Route	010400	5.99	2	009900	0	0	Rear End	On Roadway	Motor Vehicle in Motion	Daylight	Dry	W	W	05	05
999990080920293	1998-04-24 06:45:00	Columbia	State Route	010400	6.04			1	0	Rear End	On Roadway	Motor Vehicle in Motion	Dawn	Dry	W	W	04	05

Total Accidents: 18 Total Vehicles: 35 Total Injuries: 7 Total Fatalities: 0


CONCEPT PLAN
STATE ROUTE 104
AT GIBBS ROAD
NOT TO SCALE
DRIVE
GIBBS ROAD
DRIVE
STATE ROUTE 104
WASHINGTON ROAD

COST ESTIMATE					
ASPALT CONCRETE					
TYPE	AREA		QUAN.	COST	TOTAL
1 1/2" E	2,250 sq. yd.	x 110 per inch	186 tons		
2" B	2,250 sq. yd	x 110 per inch	248 tons		
6" Base	2,250 sq. yd	x 110 per inch	744 tons		
			1,177 TONS	$40/TON	$47,060
SIGNALS AND EQUIPMENT					
	SIGNAL, CABINET, ETC.			COST	TOTAL
				$50,000	$50,000
EARTH WORK					
		AMOUNT		COST	TOTAL
		1500 cu. yd.		$5/cu. yd.	$7,500
				TOTAL	**$ 104,560**

Additional right away will be required on the north quadrants and southeast quadrant of the intersection. This was not included in the estimate