

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION PROJECT PLANNING DIVISION

SUITE 1000, JAMES K. POLK BUILDING 505 Deaderick Street NASHVILLE, TENNESSEE 37243-0344

John Schroer Commissioner Bill Haslam Governor

MEMORANDUM

To:

Mr. Paul Degges, Chief Engineer

From:

Mr. Steve Allen, Director Project Planning Division

Date:

August 18, 2011

Subject:

Road Safety Audit Review (RSAR), FAU 975 (Dotsonville Rd.) From Gip

Manning Rd. to Clarksville Boundary, Log Mile 9.77 to Log Mile 13.03,

Montgomery County, PIN 115180.00

This project was identified through the Tennessee Department of Transportation (TDOT) safety needs planning process. The section of FAU 975 (Dotsonville Rd.) from Gip Manning Rd. (L.M. 9.77) to the Clarksville Boundary (L.M. 13.03) is a two (2) lane rural roadway, with lane widths that are ten (10) feet and two (2) feet shoulders. FAU 975 (Dotsonville Rd.) appears on the Highway Safety Improvement Program (HSIP) list and qualifies for High Risk Rural Road (HRRR) funds, because FAU 975 (Dotsonville Rd.) has a severe crash rate of 0.245, which exceeds the statewide average severe crash rate of 0.161 for rural two (2) lane minor collector roads.

A contract will be let to implement the recommended improvements. The total estimated cost is \$59,000, and the recommended improvements are eligible for 100% federal funding. No local matching funds are required. No right-of-way is needed to complete these improvements.

If you should need any further information, please contact me at (615) 741-2208 or e-mail at Steve.Allen@tn.gov

SA/br

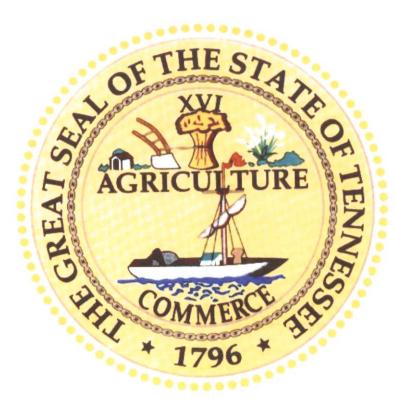
Attachment

CC: Joe Carpenter, Brian Hurst, Mike Tugwell, Winston Gaffron, Mike Frost, Jim Moore, Phil Tramel, file.

ROAD SAFETY AUDIT REPORT

FAU 975 (DOTSONVILLE RD.) FROM GIP MANNING RD. TO CLARKSVILLE BOUNDARY

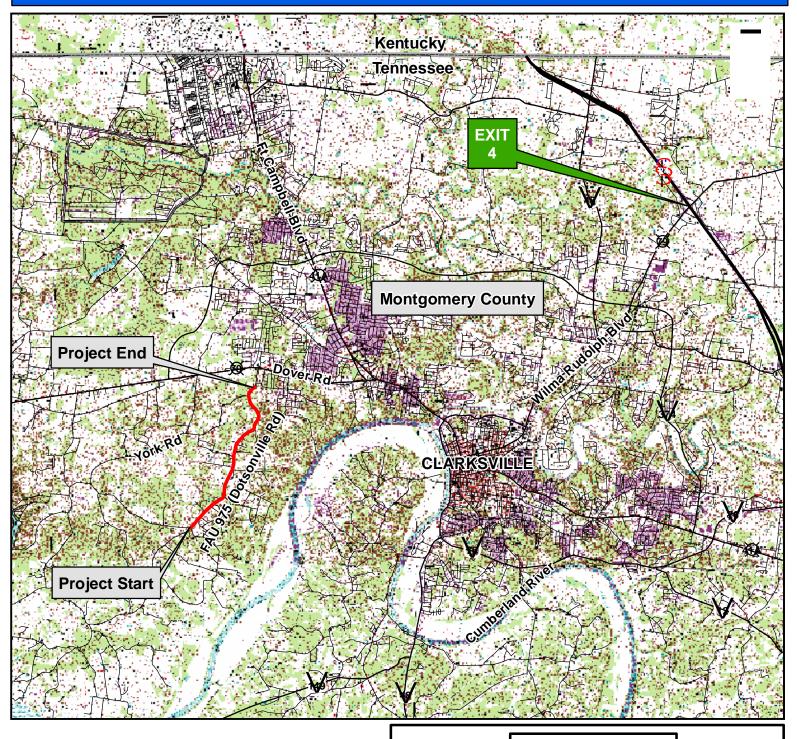
LOG MILE 9.77 TO LOG MILE 13.03 MONTGOMERY COUNTY PIN 115180.00



PREPARED BY
PB AMERICAS, INC.
FOR THE
TENNESSEE DEPARTMENT OF TRANSPORTATION
PROJECT PLANNING DIVISION

Approved by:	Signature	DATE
DIRECTOR Project Planning Division	Stu OD	8-22-11

VICINITY MAP



0 2.5 5 Miles



County: Montgomery

Route: FAU 975 (Dotsonville Rd.) From Gip Manning Rd. to Clarksville Boundary

Location: L.M. 9.77 - L.M. 13.03

PIN: 115180.00

DATE: 1/18/2011

LOCATION MAP



0 0.5 1 Miles



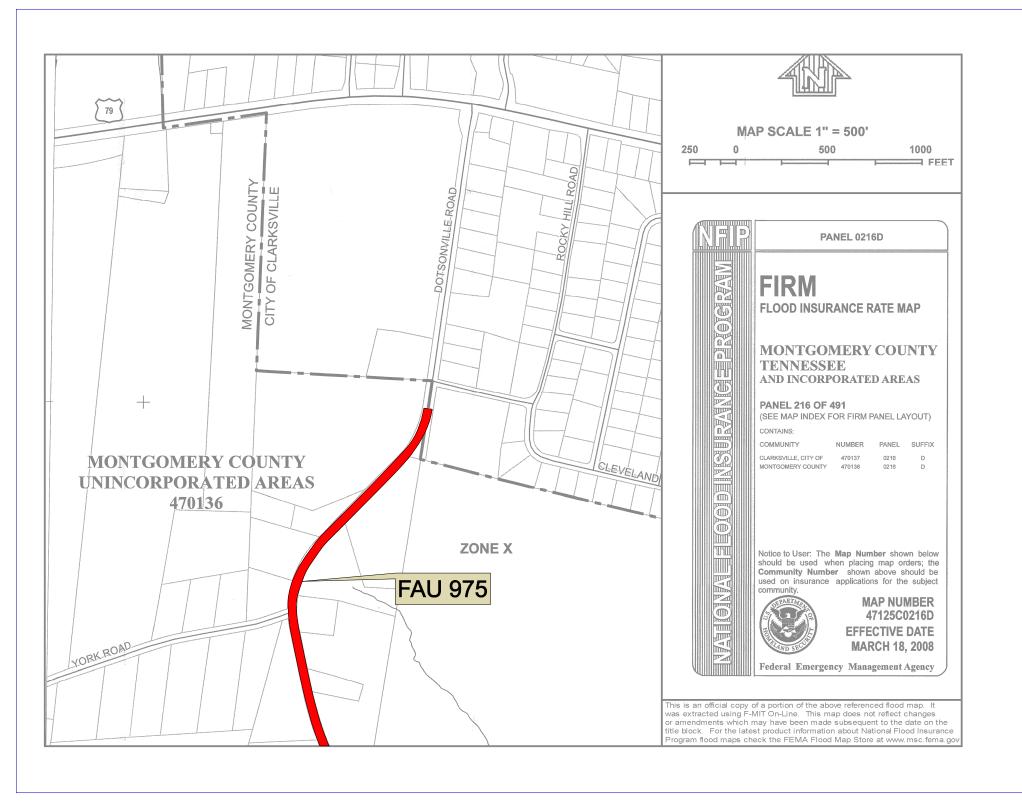
County: Montgomery

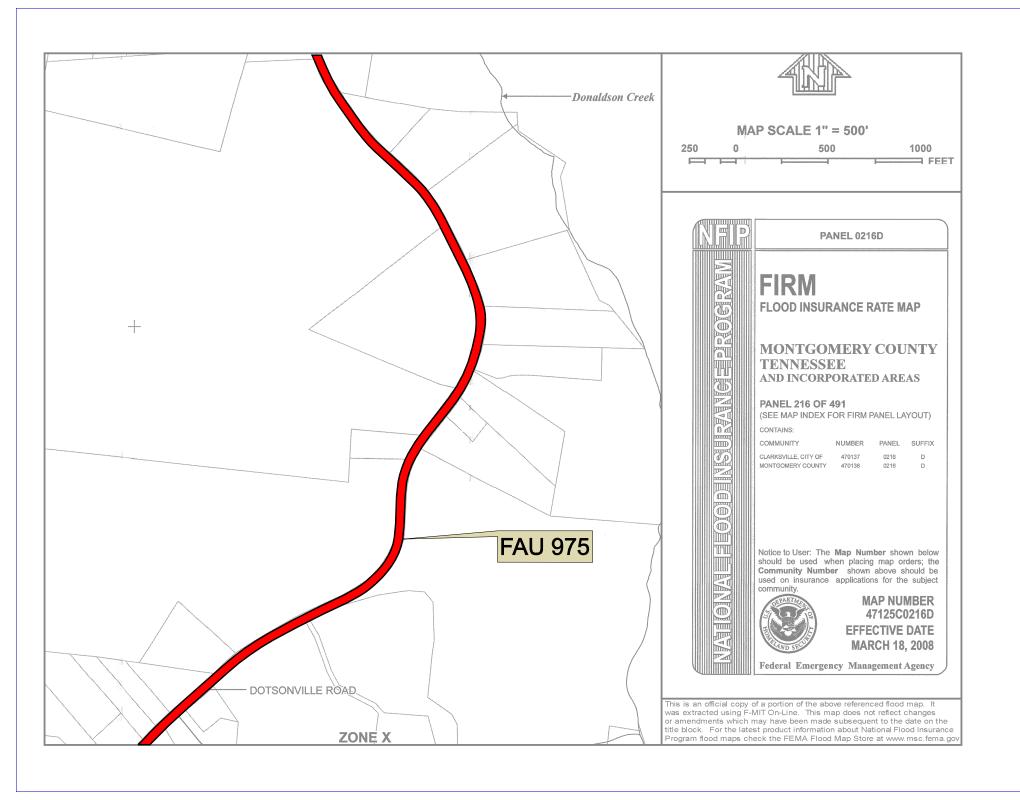
Route: FAU 975 (Dotsonville Rd.) From Gip Manning Rd. to Clarksville Boundary

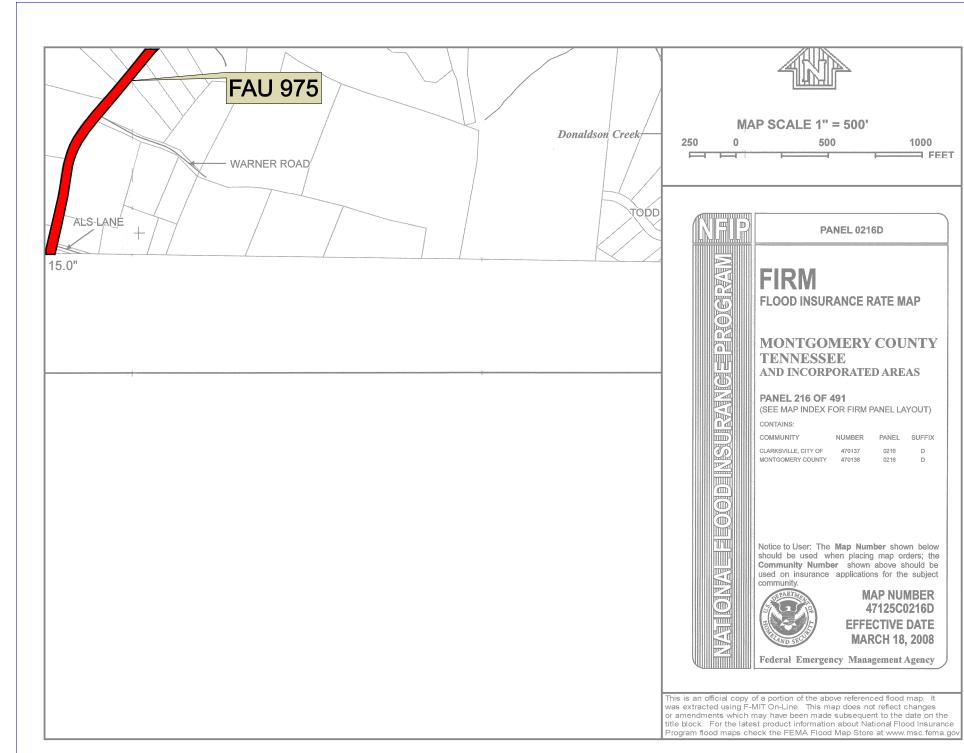
Location: L.M. 9.77 - L.M. 13.03

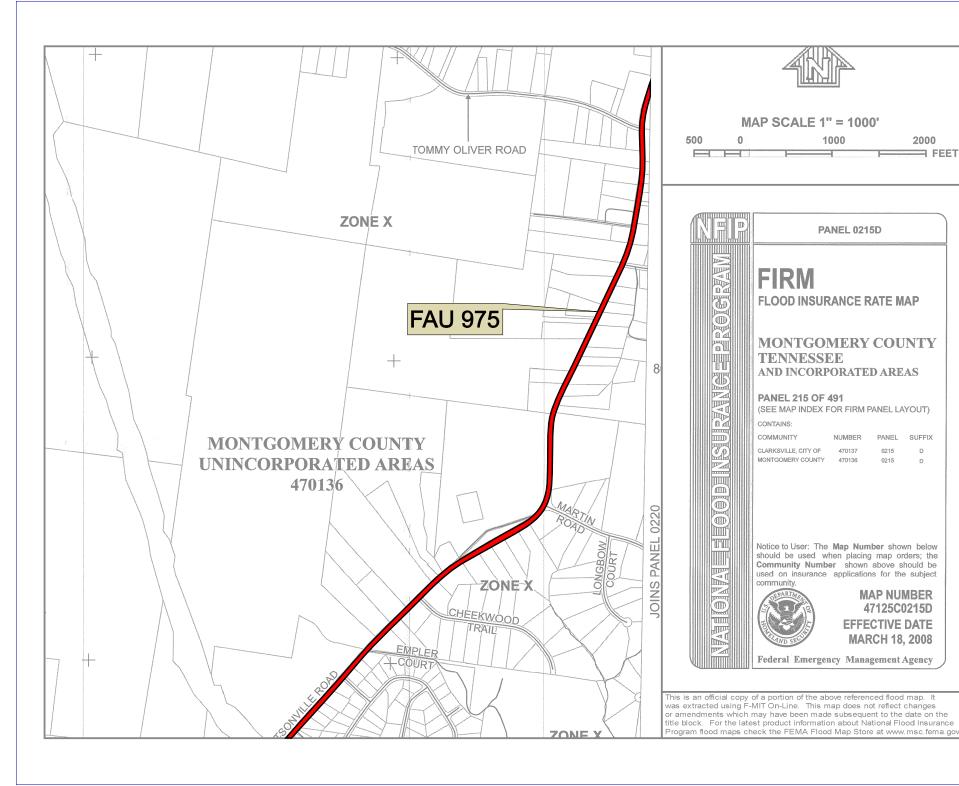
PIN: 115180.00

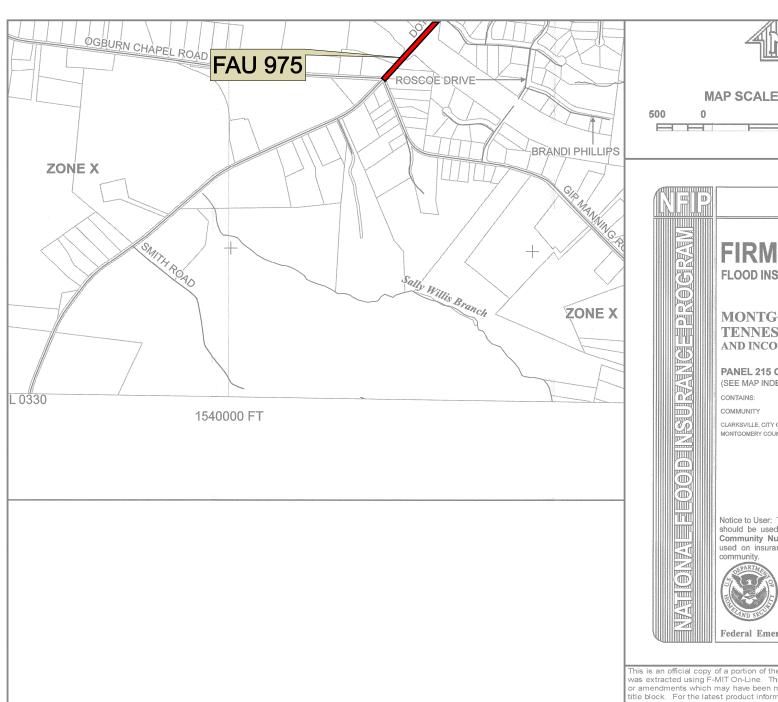
DATE: 1/18/2011













MAP SCALE 1" = 1000'



PANEL 0215D

FLOOD INSURANCE RATE MAP

MONTGOMERY COUNTY TENNESSEE AND INCORPORATED AREAS

PANEL 215 OF 491

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

COMMUNITY	NUMBER	PANEL	SUFFIX
CLARKSVILLE, CITY OF	470137	0215	D
MONTGOMERY COUNTY	470136	0215	D

Notice to User: The **Map Number** shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community



MAP NUMBER 47125C0215D **EFFECTIVE DATE** MARCH 18, 2008

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

Project Description and Background

This project was identified through the Tennessee Department of Transportation (TDOT) safety needs planning process. The section of FAU 975 (Dotsonville Rd.) from Gip Manning Rd. (L.M. 9.77) to the Clarksville Boundary (L.M. 13.031) is a two (2) lane rural roadway, with lane widths that are ten (10) feet and two (2) feet shoulders. FAU 975 (Dotsonville Rd.) appears on the Highway Safety Improvement Program (HSIP) list and qualifies for High Risk Rural Road (HRRR) funds, because FAU 975 (Dotsonville Rd.) has a severe crash rate of 0.245, which exceeds the statewide average severe crash rate of 0.161 for rural two (2) lane minor collector roads.

RSAR Team Members

Name	Organization	Title	Phone	E-Mail
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Terrance Hill	TDOT LR Planning	Spec. Proj. Coord.	615-532-2781	Terrance.Hill@tn.gov
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David Morse	PB	EIT	615-340-9194	Morse@pbworld.com
Brian Reynolds	PB	PM	615-340-9189	Reynoldsb@pbworld.com

Information Used In Review

- Google Earth Aerial Photographs
- TRIMS Geometric Report
- TRIMS Traffic Report
- TRIMS Road Segment Report
- TRIMS Route Feature Description Listings
- TRIMS Crash Data (2003, 2004, 2005, 2006, 2007, 2008)
- TRIMS Crash Rate Report (for crashes occurring from 1/1/03 to 12/31/08)
- Crash Rate Summary Report
- Crash Diagram
- Crash Reports (#9520841, #7722665, #50092902, #50197258, #8936764, #9520862, #9218793)
- MUTCD (2009 Edition)
- Geometric Design of Highways and Streets (2004 Edition)
- Field Review Comments From On-site Visit at 10:30 AM Central Time Thursday, January 20, 2011

Pre-Brief Summary

- The posted speed limit on FAU 975 (Dotsonville Rd.) is 45 MPH from L.M. 9.77 to L.M. 12.78.
- The posted speed limit on FAU 975 (Dotsonville Rd.) is 30 MPH from L.M. 12.78 to L.M. 13.03.
- There have been 65 crashes from 2003-2008; (1 fatal, 6 incapacitating injury, 11 non-incapacitating injury, and 47 property damage).
- The one (1) fatal crash was alcohol related.
- One (1) of the six (6) incapacitating injury crashes was alcohol related.
- 66% (43) involved no collision with a vehicle and of these crashes, 60% (26) were due to a lane departure.
- 17% (11) were rear-end.
- 51% (33) of crashes occurred during the night/dusk.
- 78% (51) occurred during clear conditions.
- 71% (46) occurred along the roadway as opposed to at an intersection.
- For 32% (21) of the crashes, the most harmful event was Vehicle in Transport.

Observations

An onsite field review was held at 10:30 AM Central time on Thursday, January 20, 2011. The following discussions/observations are provided concerning the location:

- Posted speed limit of 45 mph in both directions from L.M. 9.77 to L.M. 12.78. Posted speed limit of 30 mph in both directions from L.M. 12.78 to 13.03.
- The 45 mph speed limit was suspected to be too fast for the route, and for justification to lower the speed limit, Montgomery county officials asked for a speed study to be performed along FAU 975 (Dotsonville Rd.) in the 45 mph zones. It was noted that throughout this route, there were numerous "Curve Ahead" signs with 30-35 mph warning speeds. TDOT provided a speed study report soon after the site visit; however, the 85th percentile speeds did not justify a reduction of the speed limit.
- The shoulder was non-existent for the majority of FAU 975 (Dotsonville Rd.) in both directions.
- The northern portion of the route contained newer and more updated signage.
- TDOT did an RSAR study along FAU 975 (Dotsonville Rd.) from L.M. 6.75 to L.M. 9.76 in March of 2009.
- There were no stop bars on any side streets along the route.
- There were no double arrow signs on the majority of side streets along the route.
- The existing guardrails showed signs of deterioration, and did not seem visible enough to drivers.
- Along FAU 975 (Dotsonville Rd.) in the southbound direction, just south of Ogburn Chapel Road, it was noted that the existing Haynes Chapel Baptist Church sign was too close in proximity to the curve ahead sign.
- Vegetation was not an issue for this section along FAU 975 (Dotsonville Rd.).
- Montgomery County officials stated that FAU 975 (Dotsonville Rd.) does get plowed during the winter.
- The guardrail on the western side of FAU 975 (Dotsonville Rd.) at Tommy Oliver Road was of insufficient length.
- There is a residence opposite the York Road intersection with FAU 975 (Dotsonville Rd.).

Montgomery County FAU 975 (Dotsonville Rd.) L.M. 9.77 – L.M. 13.03

> Montgomery County officials stated that prior to 2003 there was a fatal accident at the intersection of FAU 975 (Dotsonville Rd.) and York Road which prompted the speed limit to be lowered from 45 mph to 30 mph north of L.M. 12.78.

Guidance

The following guidance is provided concerning the recommended improvements:

• Figure 1 (L.M. 9.77 to L.M. 10.25)

- 1. Relocate existing Haynes Chapel Baptist Church sign 150 feet West of location #2.
- 2. Remove and replace existing Right Curve Ahead sign with one (1) new Right Curve Ahead sign (W1-2R) (36"x36") at L.M. 9.76, 40 feet West of the Ogburn Chapel Rd. / Gip Manning Rd. intersection.
- 3. Remove and replace existing Stop sign with one (1) new Stop sign (R1-1) (36"x36") and install thirty two (32) of two (2) feet wide thermoplastic stop bar at the intersection of Ogburn Chapel Rd. and FAU 975 (Dotsonville Rd.). Install two (2) inch red reflective strip on sign support pole.
- 4. Remove and replace existing Stop sign with one (1) new Stop sign (R1-1) (36"x36") and install twenty four (24) feet of two (2) feet wide thermoplastic stop bar at the intersection of Gip Manning Rd. and FAU 975 (Dotsonville Rd.). Install two (2) inch red reflective strip on sign support pole.
- 5. Remove and replace existing Intersection Ahead sign with one (1) new Intersection Ahead sign (W2-1) (36"x36") at L.M. 9.84.
- 6. Install yellow bi-directional raised pavement markers to delineate the centerline at eighty (80) feet spacing in tangent section from L.M. 9.77 to L.M. 10.25.
- 7. Remove and replace existing Stop sign with one (1) new Stop sign (R1-1) (36"x36") and install seventeen (17) feet of two (2) feet wide thermoplastic stop bar at the intersection of Trey Phillips Dr. and FAU 975 (Dotsonville Rd.). Install two (2) inch red reflective strip on sign support pole.
- 8. Remove and replace existing Stop sign with one (1) new Stop sign (R1-1) (36"x36") and install eighteen (18) feet of two (2) feet wide thermoplastic stop bar at the intersection of Foxland Dr. and FAU 975 (Dotsonville Rd.). Install two (2) inch red reflective strip on sign support pole.
- 9. Remove and replace existing Right Curve Ahead sign with one (1) new Right Curve Ahead sign (W1-2R) (36"x36") at L.M. 10.14.

• Figure 2 (L.M. 10.25 to L.M. 10.75)

- 1. Install yellow bi-directional raised pavement markers to delineate the centerline at eighty (80) feet spacing in tangent sections and forty (40) feet spacing in curve sections from L.M. 10.25 to L.M. 10.75.
- 2. Remove and replace existing Left Curve Ahead sign with one (1) new Left Curve Ahead sign (W1-2L) (36"x36") at L.M. 10.27.
- 3. Remove and replace existing Stop sign with one (1) new Stop sign (R1-1) (36"x36") and install fourteen (14) feet of two (2) feet wide thermoplastic stop bar at the intersection of Cheekwood Tr. and FAU 975 (Dotsonville Rd.). Install two (2) inch red reflective strip on sign support pole.
- 4. Remove and replace existing Right Curve Ahead sign with one (1) new Right Curve Ahead sign (W1-2R) (36"x36") at L.M. 10.34.
- 5. Remove and replace existing Left Curve Ahead sign with one (1) new Left Curve Ahead sign (W1-2L) (36"x36") at L.M. 10.48.
- 6. Remove existing Left Curve Ahead sign and thirty five (35) M.P.H. Speed Advisory plaque and install one (1) new Left Curve Ahead / Intersection Ahead combination

- sign (W1-10L) (36"x36") and one (1) new thirty five (35) M.P.H. Speed Advisory plaque (W13-1) (18"x18") at L.M. 10.54.
- 7. Remove existing Right Intersection Ahead sign at L.M. 10.56.
- 8. Install one (1) new Two-Direction Large Arrow sign (W1-7) (48"x24") along FAU 975 (Dotsonville Rd.) directly across from and perpendicular to Martin Rd. Install two (2) inch yellow reflective strip on both sign support poles.
- 9. Remove and replace existing Stop sign with one (1) new Stop sign (R1-1) (36"x36") and install thirty five (35) feet of two (2) feet wide thermoplastic stop bar at the intersection of Martin Rd. and FAU 975 (Dotsonville Rd.). Install two (2) inch red reflective strip on sign support pole.
- 10. Remove and replace existing Stop Ahead sign with one (1) new Stop Ahead sign (W3-1) (36"x36") on Martin Rd. Install two (2) inch yellow reflective strip on sign support pole.
- 11. Remove and replace existing Deer sign with one (1) new Deer sign (W11-3) (36"x36") at L.M. 10.71.
- 12. Remove and replace existing Right Curve Ahead sign with one (1) new Right Curve Ahead sign (W1-2R) (36"x36") at L.M. 10.74.
- 13. Remove existing Left Intersection Ahead sign at L.M. 10.74

• Figure 3 (L.M. 10.75 to L.M. 11.25)

- 1. Install yellow bi-directional raised pavement markers to delineate the centerline at eighty (80) feet spacing in tangent sections and forty (40) feet spacing in curve sections from L.M. 10.75 to L.M. 11.25.
- 2. Remove existing Right Curve Ahead sign and thirty five (35) M.P.H. Speed Advisory plaque and install one (1) new Right Curve Ahead / Intersection Ahead combination sign (W1-10R) (36"x36") and one (1) new thirty five (35) M.P.H. Speed Advisory plaque (W13-1) (18"x18") at L.M. 10.76.
- 3. Remove and replace existing Left Curve Ahead sign with one (1) new Left Curve Ahead sign (W1-2L) (36"x36") at L.M. 10.93.
- 4. Remove and replace existing Deer sign with one (1) new Deer sign (W11-3) (36"x36") at L.M. 10.98.
- 5. Remove existing Right Intersection Ahead sign at L.M. 11.09.
- 6. Remove existing Left Curve Ahead sign and install one (1) new Left Curve Ahead / Intersection Ahead combination sign (W1-10L) at L.M. 11.12
- 7. Remove and replace existing Stop sign with one (1) new Stop sign (R1-1) (36"x36") and install thirty four (34) feet of two (2) feet wide thermoplastic stop bar at the intersection of Wooten Rd. and FAU 975 (Dotsonville Rd.). Install two (2) inch red reflective strip on sign support pole.

• Figure 4 (L.M. 11.25 to L.M. 11.75)

- 1. Install yellow bi-directional raised pavement markers to delineate the centerline at eighty (80) feet spacing in tangent section and forty (40) feet spacing in curved sections from L.M. 11.25 to L.M. 11.75.
- 2. Remove existing Left Intersection Ahead sign at L.M. 11.27.
- 3. Remove existing Right Curve Ahead sign and install one (1) new Right Curve Ahead / Intersection Ahead combination sign (W1-10R) (36"x36") at L.M. 11.30.
- 4. Remove and replace existing Double Left S-Curve Ahead sign with one (1) new Double Left S-Curve Ahead sign (W1-5L) (36"x36") at L.M. 11.33.
- 5. Install one (1) new Left Intersection Ahead sign (W2-2L) (36"x36") at L.M. 11.38.

- 6. Remove and replace existing guardrail on the East side of FAU 975 (Dotsonville Rd.) at the Tommy Oliver Rd. intersection and extend by 100 feet on each end with Type 38 end terminals for a total of 270 feet new guardrail. Install white guardrail delineation enhancement along the 270 feet of guardrail on the East side of FAU 975 (Dotsonville Rd.).
- 7. Remove and replace existing Stop sign with one (1) new Stop sign (R1-1) (36"x36") and install twenty six (26) feet of two (2) feet wide thermoplastic stop bar at the intersection of Tommy Oliver Rd. and FAU 975 (Dotsonville Rd.). Install two (2) inch red reflective strip on sign support pole.
- 8. Remove and replace existing Two-Direction Arrow sign with one (1) new Two-Direction Large Arrow sign (W1-7) (48"x24") along FAU 975 (Dotsonville Rd.) behind the guardrail directly across from and perpendicular to Tommy Oliver Rd. Install two (2) inch yellow reflective strip on both sign support poles.
- 9. Remove and replace existing Stop Ahead sign with one (1) new Stop Ahead sign (W3-1) (36"x36") on Tommy Oliver Rd. Install two (2) inch yellow reflective strip on sign support pole.
- 10. Remove and replace existing Right Intersection Ahead with one (1) new Right Intersection Ahead sign (W2-2R) (36"x36") at L.M. 11.55.
- 11. Install one (1) new Two-Direction Large Arrow sign (W1-7) (48"x24") along FAU 975 (Dotsonville Rd.) directly across from and perpendicular to Al's Ln. Install two (2) inch yellow reflective strip on both sign support poles.
- 12. Remove and replace existing Stop sign with one (1) new Stop sign (R1-1) (36"x36") and install fifteen (15) feet of two (2) feet wide thermoplastic stop bar at the intersection of Al's Ln. and FAU 975 (Dotsonville Rd.). Install two (2) inch red reflective strip on sign support pole.
- 13. Install one (1) new Stop Ahead sign (W3-1) (36"x36") on Al's Ln. Install two (2) inch yellow reflective strip on sign support pole.
- 14. Remove existing Stop sign on left side of Warner Rd. Install one (1) new Stop sign (R1-1) (36"x36") on the right side at the intersection of Warner Rd. and FAU 975 (Dotsonville Rd.) and install twenty (20) feet of two (2) feet wide thermoplastic stop bar. Install two (2) inch red reflective strip on sign support pole.

• Figure 5 (L.M. 11.75 to L.M. 12.25)

- 1. Install bi-directional raised pavement markers to delineate the centerline at eighty (80) feet spacing in tangent section and forty (40) feet spacing in curved sections from L.M. 11.75 to L.M. 12.25.
- 2. Remove and replace existing Double Right S-Curve Ahead sign with one (1) new Double Right S-Curve Ahead sign (W1-5R) (36"x36") at L.M. 10.78.
- 3. Remove and replace existing Double Right S-Curve Ahead sign with one (1) new Double Right S-Curve Ahead sign (W1-5R) (36"x36") at L.M. 11.92.

• Figure 6 (L.M. 12.25 to L.M. 12.80)

- 1. Install bi-directional raised pavement markers to delineate the centerline at forty (40) feet spacing in curved sections from L.M. 12.25 to L.M. 12.80.
- 2. Remove existing Left Intersection Ahead sign at L.M. 12.76.
- 3. Remove existing Right Curve Ahead sign and install one (1) new Right Curve Ahead / Intersection Ahead combination sign (W1-10R) (36"x36") at L.M. 12.78, 160 feet prior to the succeeding driveway located on the East side of FAU 975 (Dotsonville Rd.).

• Figure 7 (L.M. 12.80 to L.M. 12.03)

- 1. Install bi-directional raised pavement markers to delineate the centerline at forty (40) feet spacing in curved sections from L.M. 12.80 to L.M. 13.20.
- 2. Remove and replace existing Double Left S-Curve Ahead sign with one (1) new Double Left S-Curve Ahead sign (W1-5L) (36"x36") at L.M. 12.84.
- 3. Remove and replace existing Stop sign with one (1) new Stop sign (R1-1) (36"x36") and install thirty five (35) feet of two (2) feet wide thermoplastic stop bar at the intersection of York Rd and FAU 975 (Dotsonville Rd.). Install two (2) inch red reflective strip on sign support pole.
- 4. Remove and replace existing Stop Ahead sign with one (1) new Stop Ahead sign (W3-1) (36"x36"). Install two (2) inch yellow reflective strip on sign support pole.
- 5. Remove and replace existing Left Curve Ahead sign with one (1) new Left Curve Ahead sign (W1-2L) (36"x36") at L.M. 13.00.
- 6. Remove existing Right Intersection Ahead sign at L.M. 13.00.
- 7. Remove existing Left Curve Ahead sign and install one (1) new Left Curve Ahead / Intersection Ahead combination sign (W1-10L) (36"x36") at L.M. 13.06.
- 8. Remove and replace existing Right Curve Ahead sign with one (1) new Right Curve Ahead sign (W1-2R) (36"x36") at L.M. 13.20.

A contract will be let to implement the recommended improvements. The total estimated cost is \$59,000, and the recommended improvements are eligible for 100% federal funding. No local matching funds are required. No right-of-way is needed to complete these improvements.

Site Photos

Photo Date: 1/20/2011 FAU 975 (Dotsonville Rd.) @ Ogburn Chapel Road / Gip Manning Road Int., Looking In NB Dir.



Photo Date: 1/20/2011 Signs Along FAU 975 (Dotsonville Rd.) Just South of Ogburn Chapel Rd / Gip Manning Rd Int.



Photo Date: 1/20/2011 FAU 975 (Dotsonville Rd.) Approaching Martin Road Intersection, Looking In NB Dir.



Photo Date: 1/20/2011 Martin Road @ FAU 975 (Dotsonville Rd.) Intersection



Photo Date: 1/20/2011 FAU 975 (Dotsonville Rd.) Approaching Tommy Oliver Road Intersection, Looking In NB Dir.



Photo Date: 1/20/2011
Tommy Oliver Road @ FAU 975 (Dotsonville Rd.) Intersection



Photo Date: 1/20/2011 FAU 975 (Dotsonville Rd.) Approaching Al's Lane Intersection, Looking In NB Dir.



Photo Date: 1/20/2011 Al's Lane @ FAU 975 (Dotsonville Rd.) Intersection



Photo Date: 1/20/2011
FAU 975 Approaching York Road Intersection, Looking In NB Dir.



Photo Date: 1/20/2011 York Road @ FAU 975 Intersection



Photo Date: 1/20/2011 FAU 975 @ Approximately L.M. 12.98, Looking In NB Dir.



Route: FAU 975 (Dotsonville Rd.)

Description: From Gip Manning Rd. to Clarksville Boundary

County: Montgomery

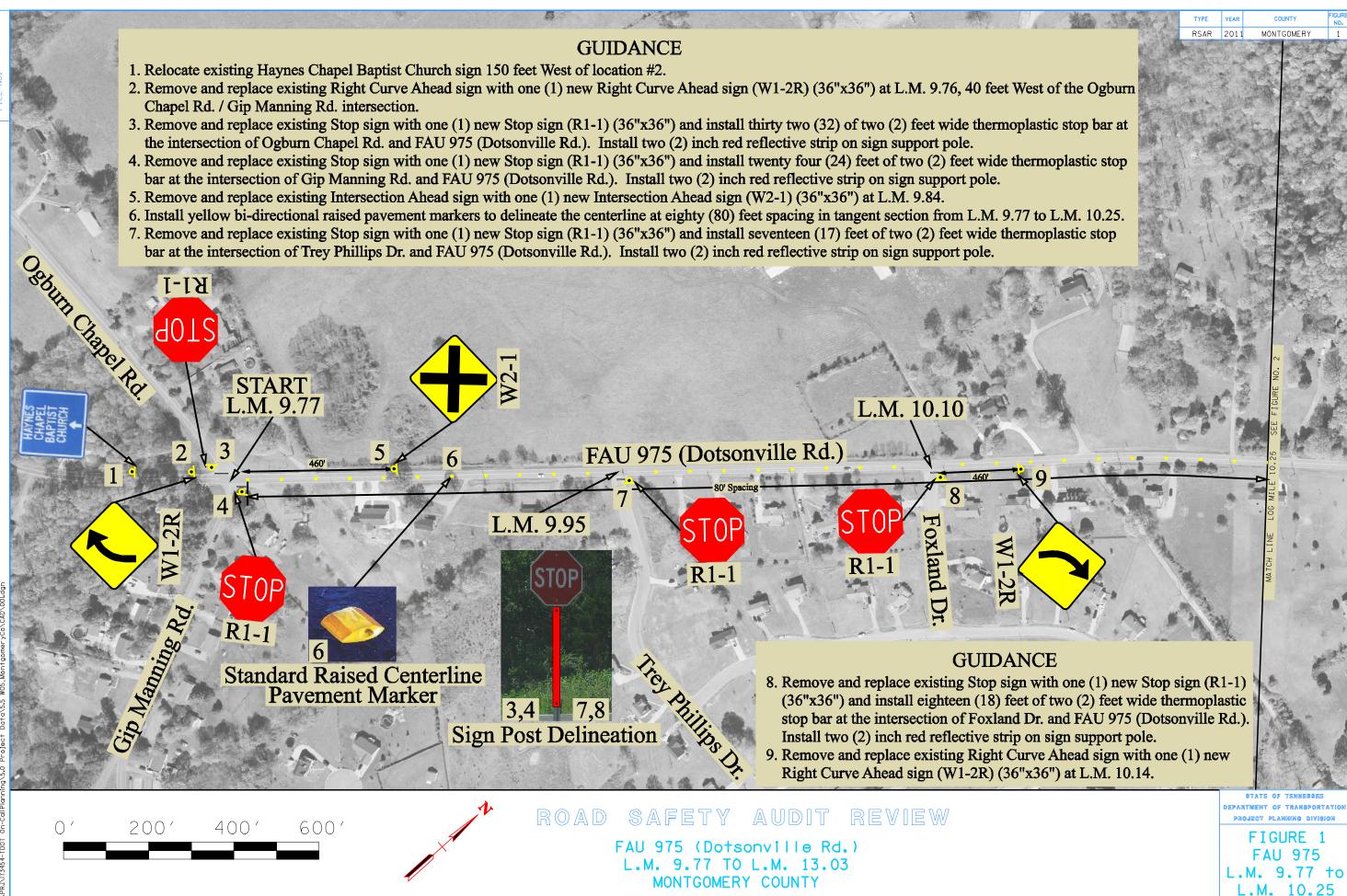
Length: 3.26 miles (L.M. 9.77 - L.M. 13.03)

Date: August 3, 2011

DESCRIPTION	LOCAL	STATE	<u> </u>	FEDERAL	-	TOTAL
Right-of-Way	\$ -	\$	- \$	-	\$	-
Clearing and Grubbing	\$ -	\$	- \$	-	\$	-
Earthwork	\$ -	\$	- \$	-	\$	-
Railroad Crossing or Separation	\$ -	\$	- \$	-	\$	-
Drainage	\$ -	\$	- \$	-	\$	-
Utilities	\$ -	\$	- \$	-	\$	-
Structures	\$ -	\$	- \$	-	\$	-
Pavement Removal	\$ -	\$	- \$	-	\$	-
Paving	\$ -	\$	- \$	-	\$	-
Roadway and Pavement Appurtenances	\$ -	\$	- \$	-	\$	-
Retaining Walls	\$ -	\$	- \$	-	\$	-
Topsoil	\$ -	\$	- \$	-	\$	-
Seeding	\$ -	\$	- \$	-	\$	-
Sodding	\$ -	\$	- \$	-	\$	-
Rip-Rap or Slope Protection	\$ -	\$	- \$	-	\$	-
Fencing	\$ -	\$	- \$	-	\$	-
Signing ¹			\$	12,500	\$	12,500
Pavement Markings ¹			\$	7,500	\$	7,500
Lighting ¹			\$	-	\$	-
Signalization ¹			\$	-	\$	-
Guardrail ¹			\$	13,900	\$	13,900
Other Construction Items (15%)		\$	- \$	5,090	\$	5,090
Maintenance of Traffic		\$ 68	_	6,120	\$	6,800
Mobilization (5%)		•	0 \$	2,260	\$	2,290
CONSTRUCTION COST (rounded)		\$ 71	0 \$	47,370	\$	48,080
Engineering and Contingency (10%)		\$ 7	-	4,740	\$	4,808
TOTAL CONSTRUCTION COST (rounded)		\$ 78		52,110	\$	52,890
Preliminary Engineering (10%)		\$ 8	0 \$	5,210	\$	5,290
PROJECT COST 2(rounded)	\$ -	\$ 90	\$	57,300	\$	59,000

¹ This safety item is 100% eligible and does not require a 10% funding match by the local agency.

² For estimating future project costs, a compounded inflation rate of 10% should be applied from the date of this estimate.



17-AUG-20|| 17:1|

GUIDANCE

1. Install yellow bi-directional raised pavement markers to delineate the centerline at eighty (80) feet spacing in tangent sections and forty (40) feet spacing in curve sections from L.M. 10.25 to L.M. 10.75.

2. Remove and replace existing Left Curve Ahead sign with one (1) new Left Curve Ahead sign (W1-2L) (36"x36") at L.M. 10.27.

- 3. Remove and replace existing Stop sign with one (1) new Stop sign (R1-1) (36"x36") and install fourteen (14) feet of two (2) feet wide thermoplastic stop bar at the intersection of Cheekwood Tr. and FAU 975 (Dotsonville Rd.). Install two (2) inch red reflective strip on sign support pole.
- 4. Remove and replace existing Right Curve Ahead sign with one (1) new Right Curve Ahead sign (W1-2R) (36"x36") at L.M. 10.34.
- 5. Remove and replace existing Left Curve Ahead sign with one (1) new Left Curve Ahead sign (W1-2L) (36"x36") at L.M. 10.48.
- 6. Remove existing Left Curve Ahead sign and thirty five (35) M.P.H. Speed Advisory plaque and install one (1) new Left Curve Ahead / Intersection Ahead combination sign (W1-10L) (36"x36") and one (1) new thirty five (35) M.P.H. Speed Advisory plaque (W13-1) (18"x18") at L.M. 10.54.
- 7. Remove existing Right Intersection Ahead sign at L.M. 10.56.
- 8. Install one (1) new Two-Direction Large Arrow sign (W1-7) (48"x24") along FAU 975 (Dotsonville Rd.) directly across from and perpendicular to Martin Rd. Install two (2) inch yellow reflective strip on both sign support poles.

600

400′

9. Remove and replace existing Stop sign with one (1) new Stop sign (R1-1) (36"x36") and install thirty five (35) feet of two (2) feet wide thermoplastic stop bar at the intersection of Martin Rd. and FAU 975 (Dotsonville Rd.). Install two (2) inch red reflective strip on sign support pole.

GUIDANCE

- 10. Remove and replace existing Stop Ahead sign with one (1) new Stop Ahead sign (W3-1) (36"x36") on Martin Rd. Install two (2) inch yellow reflective strip on sign support pole.
- 11. Remove and replace existing Deer sign with one (1) new Deer sign (W11-3) (36"x36") at L.M. 10.71.
- 12. Remove and replace existing Right Curve Ahead sign with one (1) new Right Curve Ahead sign (W1-2R) (36"x36") at L.M. 10.74.
- 13. Remove existing Left Intersection Ahead sign at L.M. 10.74

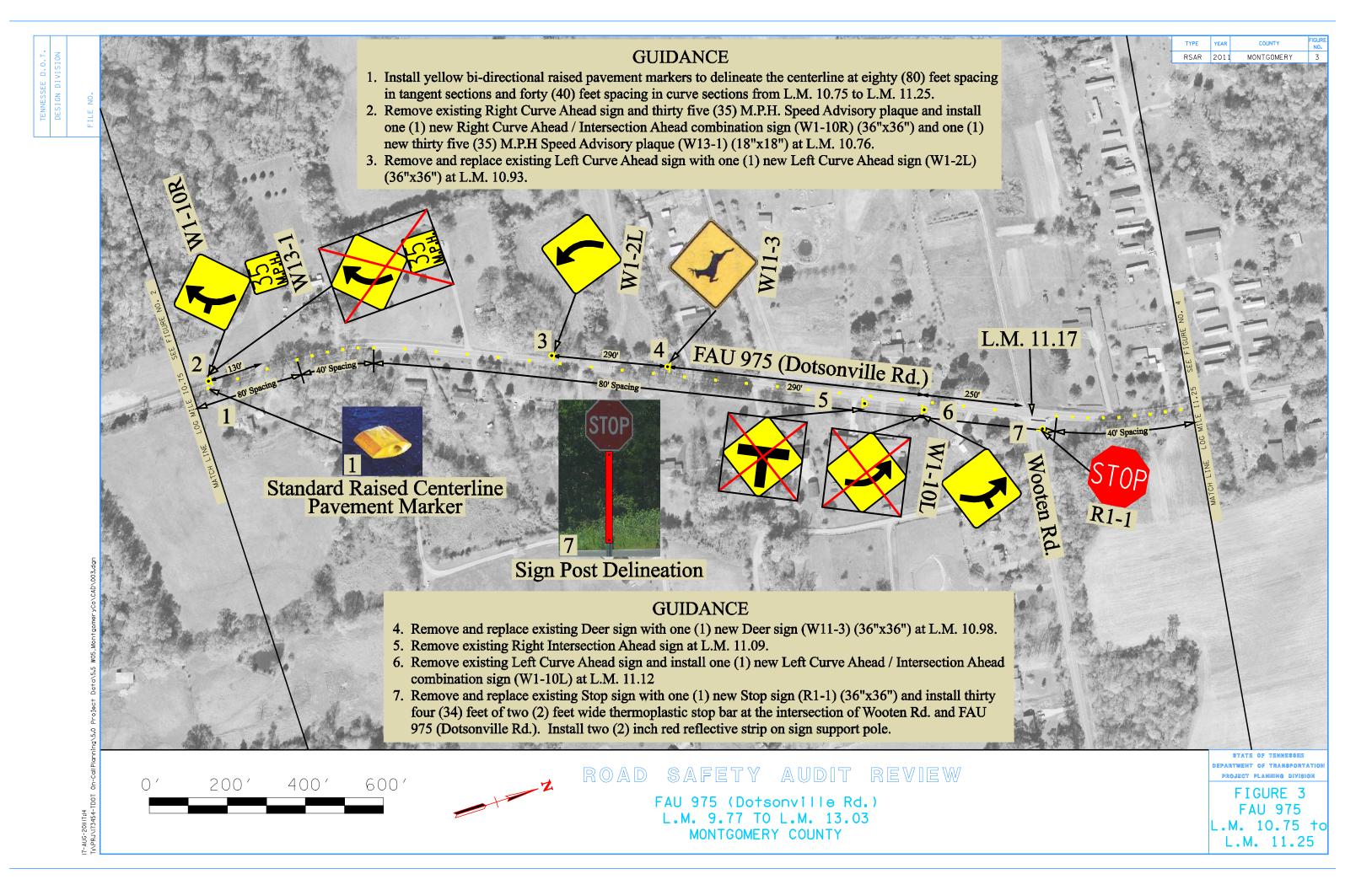


2001

ROAD SAFETY AUDIT REVIEW

FAU 975 (Dotsonville Rd.) L.M. 9.77 TO L.M. 13.03 MONTGOMERY COUNTY STATE OF TERMESSEE
DEPARTMENT OF TRANSPORTAT
PROJECT PLANNING DIVISION

FIGURE 2 FAU 975 ..M. 10.25 to L.M. 10.75



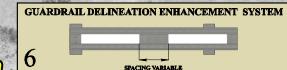
GUIDANCE

- 1. Install yellow bi-directional raised pavement markers to delineate the centerline at eighty (80) feet spacing in tangent section and forty (40) feet spacing in curved sections from L.M. 11.25 to L.M. 11.75.
- 2. Remove existing Left Intersection Ahead sign at L.M. 11.27.
- 3. Remove existing Right Curve Ahead sign and install one (1) new Right Curve Ahead / Intersection Ahead combination sign (W1-10R) (36"x36") at L.M. 11.30.
- 4. Remove and replace existing Double Left S-Curve Ahead sign with one (1) new Double Left S-Curve Ahead sign (W1-5L) (36"x36") at L.M. 11.33.
- 5. Install one (1) new Left Intersection Ahead sign (W2-2L) (36"x36") at L.M. 11.38.

ombination sign (W1-10R) (36"x36") at L.M. 11.30. d sign (W1-5L) (36"x36") at L.M. 11.33. GUIDANCE 6. Remove and replace existing guardrail on the East side of FAU 975 (Dotsonville Rd.) at the Tommy Oliver Rd. intersection and extend by 100 feet on each end with Type 38 end terminals for a total of 270 feet new guardrail. Install white guardrail delineation

6

Guardrail End Treatment (Type 38)



FAU 975 (Dotsonville Rd.)

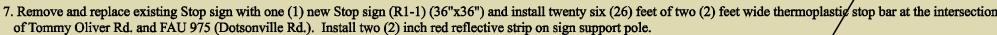
Sign Post

STOP STOP WAR

8 . 11
Delineation

GUIDANCE

L.M. 11.59



enhancement along the 270 feet of guardrail on the

East side of FAU 975 (Dotsonville Rd.).

8. Remove and replace existing Two-Direction Arrow sign with one (1) new Two-Direction Large Arrow sign (W1-7) (48"x24") along FAU 975 (Dorsonville Rd.) behind the guardrail directly across from and perpendicular to Tommy Oliver Rd. Install two (2) inch yellow reflective strip on both sign support poles.

9. Remove and replace existing Stop Ahead sign with one (1) new Stop Ahead sign (W3-1) (36"x36") on Tommy Oliver Rd. Install two (2) inch reflective strip on sign support pole.

10. Remove and replace existing Right Intersection Ahead with one (1) new Right Intersection Ahead sign (W2-2R) (36"x36") at L.M. 11.55.

L.M. 11.46

11. Install one (1) new Two-Direction Large Arrow sign (W1-7) (48"x24") along FAU 975 (Dotsonville Rd.) directly across from and perpendicular to Al's Ln. Install two (2) inch yellow reflective strip on both sign support poles.

12. Remove and replace existing Stop sign with one (1) new Stop sign (R1-1) (36"x36") and install fifteen (15) feet of two (2) feet wide thermoplastic stop bar at the intersection of Al's Ln. and FAU 975 (Dotsonville Rd.). Install two (2) inch red reflective strip on sign support pole.

13. Install one (1) new Stop Ahead sign (W3-1) (36"x36") on Al's Ln. Install two (2) inch yellow reflective strip on sign support pole./

14. Remove existing Stop sign on left side of Warner Rd. Install one (1) new Stop sign (R1-1) (36"x36") on the right side at the intersection of Warner Rd. and FAU 975 (Dotsonville Rd.) and install twenty (20) feet of two (2) feet wide thermoplastic stop bar. Install two (2) inch red reflective strip on sign support pole.

0′ 200′ 400′ 600′

14

Sign Post Delineations

Standard Raised Centerline

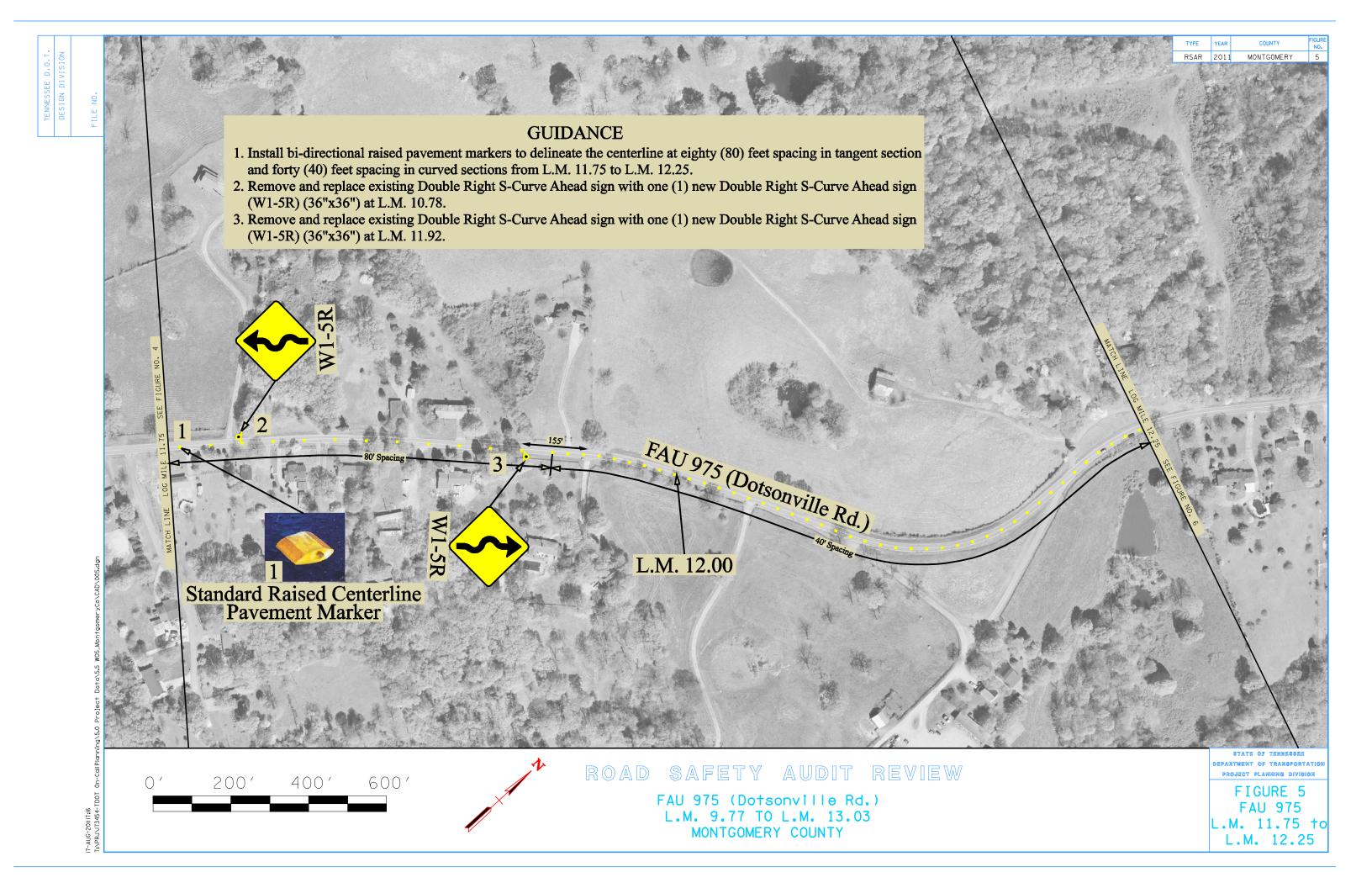
Pavement Marker

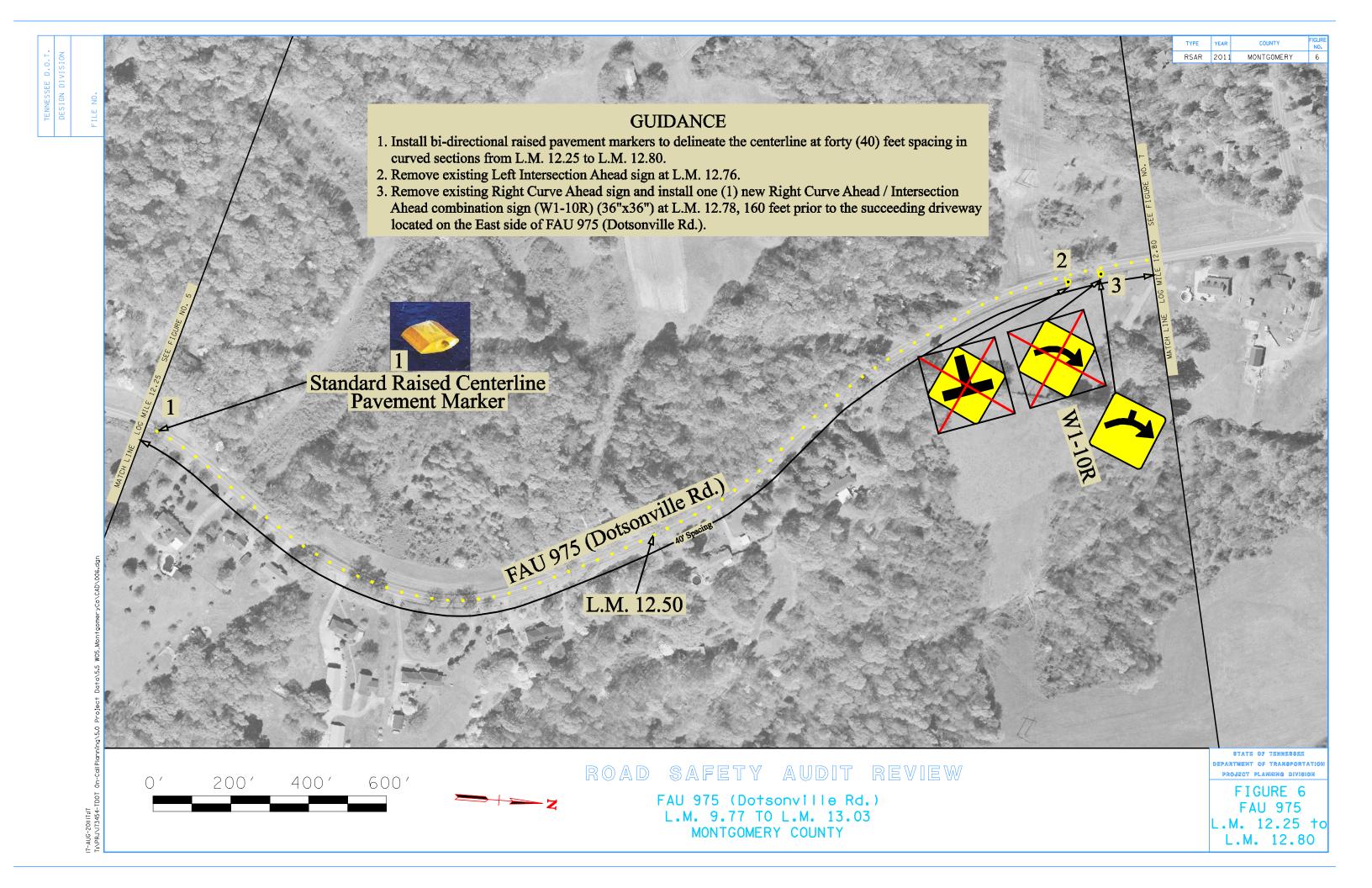
-Z

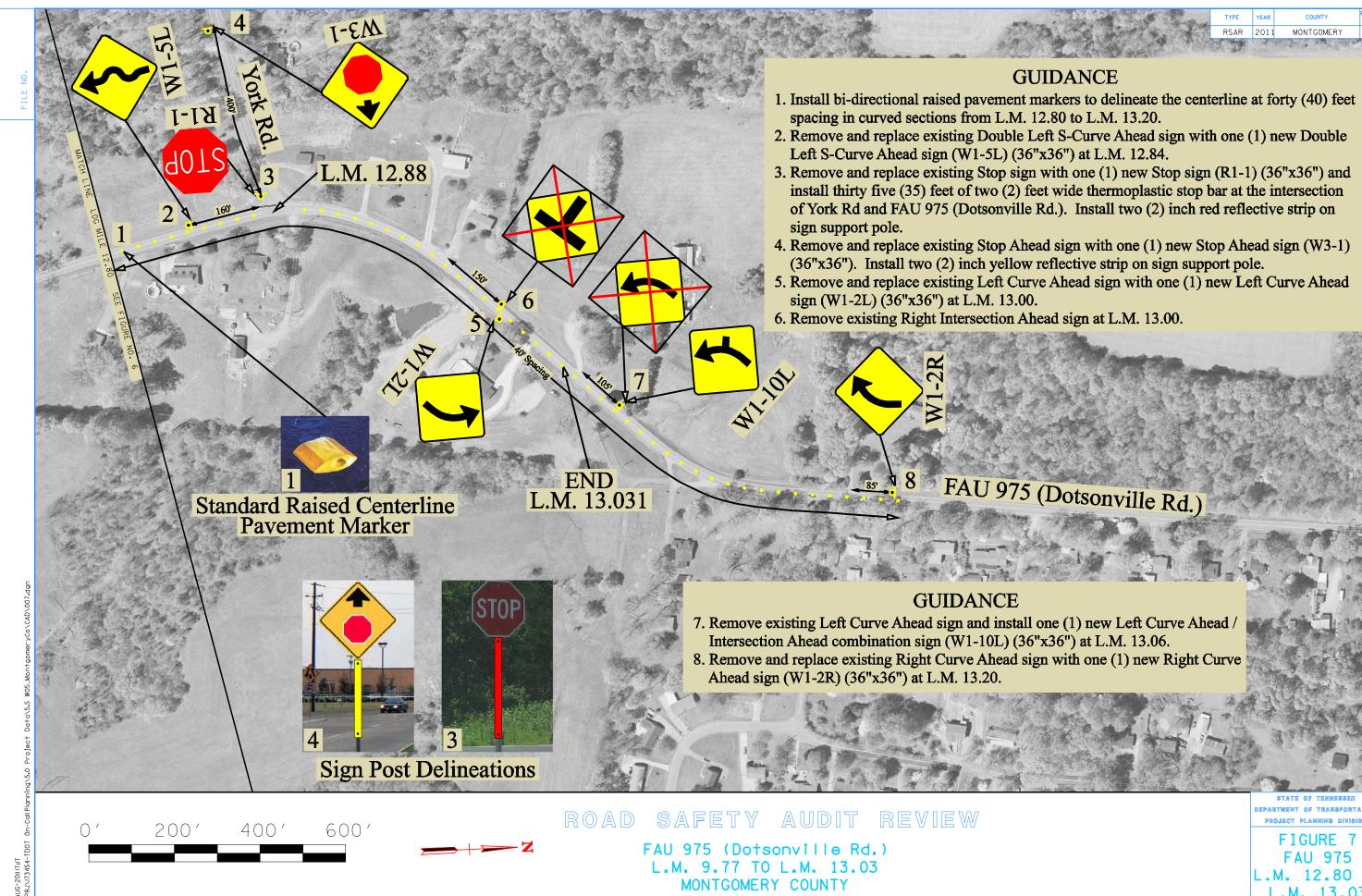
ROAD SAFETY AUDIT REVIEW

FAU 975 (Dotsonville Rd.) L.M. 9.77 TO L.M. 13.03 MONTGOMERY COUNTY STATE OF TERMESSEE
DEPARTMENT OF TRANSPORTAT
PROJECT PLANNING DIVISION

FIGURE 4 FAU 975 .M. 11.25 †o L.M. 11.75







L.M. 12.80 to L.M. 13.03

APPENDIX SUPPORTING DATA

FAU 975 (Dotsonville Rd.) RSAR PIN# 115180.00

TDOT PAY ITEM	TDOT DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTA	L COST
		RIGHT-	-OF-WAY TOTAL	(ROUNDED)	\$	-
				(2011)	\$	-
		CLEAR AND GR	RUBBING TOTAL	(ROUNDED)	\$	-
		EADS		(DOLINDED)	\$	-
		EAR	THWORK TOTAL	- (KOUNDED)	\$	-
		DAVEMENT D	EMOVAL TOTAL	(BOLINDED)	\$	-
		PAVEIVIENT	EWIOVAL TOTAL	(KOUNDED)	\$	-
		DF	RAINAGE TOTAL	(ROUNDED)	\$	_
				(110011020)	Ψ	
		U	TILITIES TOTAL	(ROUNDED)	\$	_
				,	\$	-
		STRU	ICTURES TOTAL	(ROUNDED)	\$	-
				\$ -	\$	-
	RAILROAD CROS	SSING OR SEPA	ARATION TOTAL	(ROUNDED)	\$	-
Asphalt				_		
Ramp				\$ -	\$	-
Kump				\$ -	\$	-
			PAVING TOTAL	(ROUNDED)	\$	-
	ROADWAY AND PAVE	MENT APPURTE	NANCES TOTAL	(ROUNDED)	\$	-
		RETAINING	WALLS TOTAL	(ROUNDED)	\$	-
712-01	Traffic Control	LS	0.2	\$ 6,780.00	\$	6,780
	MAI	NTENANCE OF	TRAFFIC TOTAL	(ROUNDED)	\$	6,800
					\$	-
		1	TOPSOIL TOTAL	(ROUNDED)	\$	-
					\$	-

FAU 975 (Dotsonville Rd.) RSAR PIN# 115180.00

DOT PAY ITEM	TDOT DESCRIPTION	UNIT	QUANTITY	UN	IIT COST	TOT	TAL COST	
			SEEDING TOTAL	. (R	OUNDED)	\$	-	
								I
			SODDING TOTAL	. (R	OUNDED)	\$	-	
713-02.21	Sign Post Delineation Enhancement	LF	126	\$	1.65	\$	208	assumed 6 ft per pole; based on \$9.8
713-11.01	"U" Section Steel Posts	LB	195	\$	2.59	\$	505	thick flat sheet aluminu
713-11.02	Perforated/Knockout Square Tube Post	LB	1100	\$	3.19	\$	3,509	
713-13.03	Flat Sheet Aluminum Signs (0.100" Thick)	SF	375	\$	9.87	\$	3,701	
713-15.36	Remove Sign, Support & Footing	EA	45	\$	100.00	\$	4,500	
			SIGNING TOTAL	. (R	OUNDED)	\$	12,500	
716-01.11	Raised Pavement Markers (Bi-Directional) (1 Color Len	s) EA	350	\$	10.37	\$	3,630	
716-02.05	Plastic Pavement Marking (Stop Line)	ĹF	270	\$	14.01	\$	3,783	
						_		
	P.A	AVEMENT M	IARKINGS TOTAL	. (R(OUNDED)	\$	7.500	
	P.	AVEMENT M	IARKINGS TOTAL	. (R0	OUNDED)	\$	7,500	
	P.A		LIGHTING TOTAL			\$	7,500	<u> </u>
	P.					<u> </u>	7,500	
	PA			. (R	OUNDED)	\$	-	<u> </u>
	P.A.		LIGHTING TOTAL	. (R	OUNDED)	\$	-	
	PA		LIGHTING TOTAL	. (R0	OUNDED)	\$	-	
705-02.02		SIGNA	LIGHTING TOTAL LIZATION TOTAL FENCE TOTAL	. (RC	OUNDED) OUNDED)	\$ \$ \$		
705-02.02 705-04.06	Single Guardrail (Type 2)		LIGHTING TOTAL ALIZATION TOTAL FENCE TOTAL 270	. (RC	OUNDED)	\$ \$ \$	- - - - 4,109	
		SIGNA LF	LIGHTING TOTAL LIZATION TOTAL FENCE TOTAL	. (RC	OUNDED) OUNDED) 15.22	\$ \$ \$		
705-04.06	Single Guardrail (Type 2) Guardrail Terminal (Type 38)	SIGNA LF EA	LIGHTING TOTAL ALIZATION TOTAL FENCE TOTAL 270 2	. (RC . (RC . (RC \$	OUNDED) OUNDED) 15.22 3,350.00	\$ \$ \$ \$	- - - 4,109 6,700	
705-04.06 705-04.09	Single Guardrail (Type 2) Guardrail Terminal (Type 38) Earth Pad For Type 38 GR End Treatment	SIGNA LF EA EA LF	LIGHTING TOTAL ALIZATION TOTAL FENCE TOTAL 270 2 2 2	. (RC . (RC . (RC . (RC	DUNDED) DUNDED) 15.22 3,350.00 1,217.00 2.33	\$ \$ \$ \$	- - - 4,109 6,700 2,434	
705-04.06 705-04.09	Single Guardrail (Type 2) Guardrail Terminal (Type 38) Earth Pad For Type 38 GR End Treatment Guardrail Delineation Enhancement	SIGNA LF EA EA LF	LIGHTING TOTAL LIZATION TOTAL FENCE TOTAL 270 2 2 2 270	. (RC . (RC . (RC . (RC	DUNDED) 15.22 3,350.00 1,217.00 2.33 DUNDED)	\$ \$ \$ \$	- - 4,109 6,700 2,434 629	

COUNTY = N	MONTGOMER	Υ			Date:	1/18/2011
Route = F	AU 975 (From	Gip Manning R	d. to Clarksville E	Boundary)		
Location = F	rom L.M. 9.77	To L.M. 13.031				
Highway Type = F	Rural 2 Lane					
FUNCTIONAL CLASS= F	Rural Minor C	Collector				
DATA YEARS = 2	2003-2008					
ADT YEARS USED= 1	TRIMS 2009					
COMMENTS = 7	severe crash	es (1 fatal, 6 inc	apacitating)	×		
ANALYZED BY = F	PB Americas	, Inc.				
SECTION = MORE TO	The state of the s	/ SPOT = LESS	THAN 0.10 MILE			
BLM	ELM	Length	Average AADT	VMT		
9.77	13.03	3.26	4,000	13,052		
		0.00		0		
0.00	0.00	0.00	0	0		
0.00	0.00	0.00	0	0		
0.00	0.00	0.00	0	0		
0.00	0.00	0.00	0	0		
0.00	0.00	0.00	0	0		
		3.26	4,000	13,052		
INTERSECTION				12.00	Traffic AADT	
Log Mile =	0			North =	0	
				East =	0	
				South =	0	
				West =	0	
				Entering AADT =	0	
			Rural 2 Lane	Trims 2009		
		-				
	9.	-	2003-2008		W-2003-0000	
		Total	Fatal	Incap. Injury	*Severe Crashes	Other Injury
No of Creekse	_					3304-00-24-0
No. of Crashes No. of Years	=	65	1	6	7	1
SW avg. rate	_	2.513	0.034	0.128	0.161	0.70
06-08 S/W Rates	-	2.513	0.034	0.128	0.161	0.70
00-00 S/VV Rates						
Exposure (E)	=	28.5839				
Crash Rate (A)	=	2.274	0.035	0.210	0.245	0.38
Critical Rate (C)	=	3.220	Constant of the		(A)57010.T.2	1.50.5
Severity Index (SI)	=	0.4154				
Actual Rate/SW Avera	ge =	0.91	1.04	1.65	1.52	0.5
Ratio of A/C	=	0.71				
		3.7.1				
Severe Crashes ar	e the sum of	fatal and inca	pacitating injur	y crashes		
The state of the s		and mou		10		
						Revised 4/7/2007
	ANNING DIVIS	SION (SAFETY	PLANNING SEC	TION \		Pb Americas, Inc

	CRASH CHARACTERISTICS SUMMARY SHEET
COUNTY:	MONTGOMERY
PIN #:	115180.00
ROUTE:	FAU 975
SECTION:	L.M. 9.77 - L.M. 13.031
	From Gip Manning Rd. to Clarksville boundary
CITY:	Clarksville
DATA PERIOD:	6 Years (1/1/2003 - 12/31/2008)
PREPARED BY:	PB Americas, Inc.

Number of crashes	65
-------------------	----

Type of Crash	Total	Percentage
Fatal	1	2%
Incap Injury	6	9%
Prop Damage (over)	43	66%
Prop Damage (under)	4	6%
Non-Incap Injury	11	17%
Total	65	100%

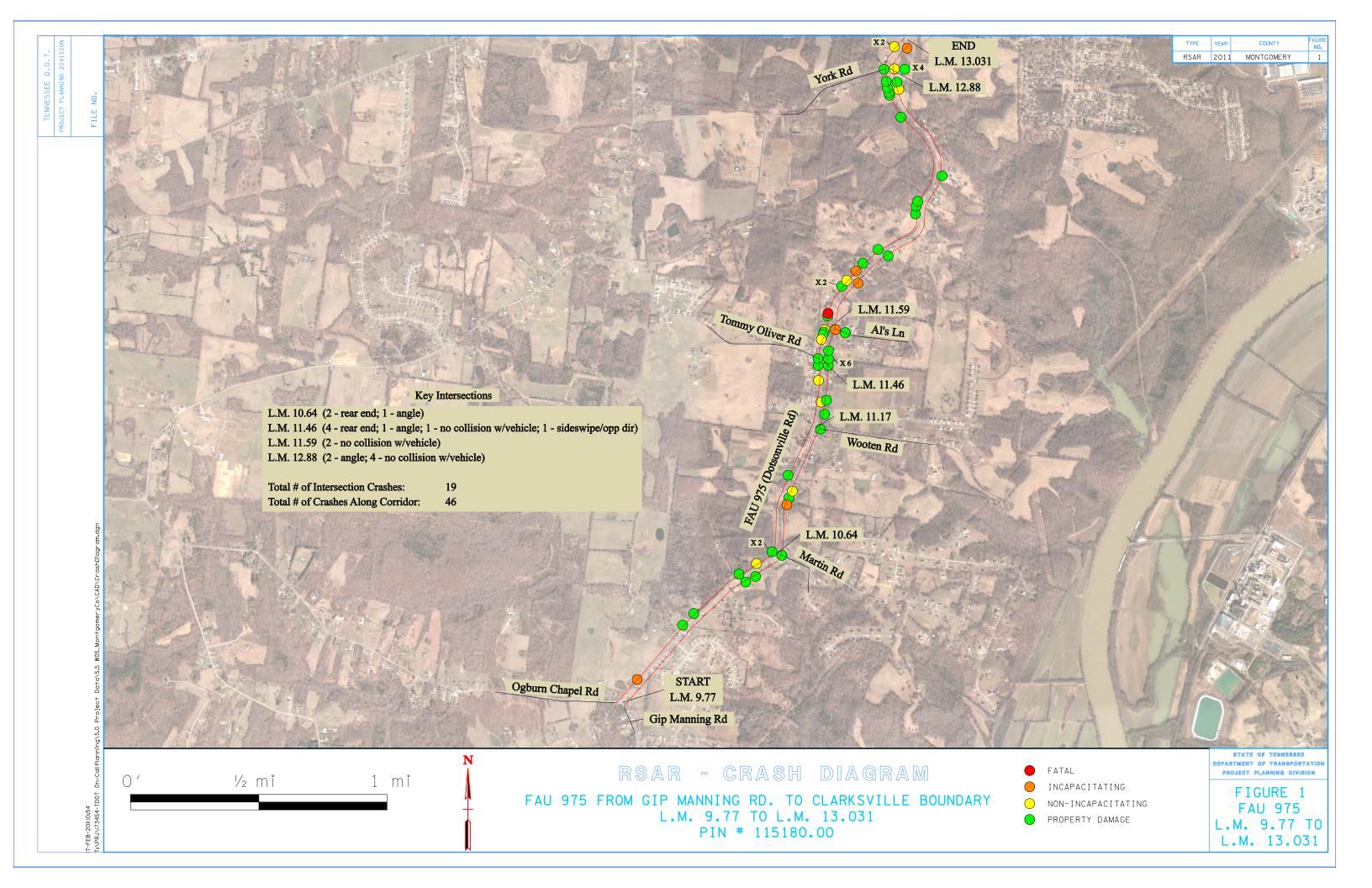
Location	Total	Percentage
At Intersection	19	29%
Along Roadway	46	71%
Total	65	100%

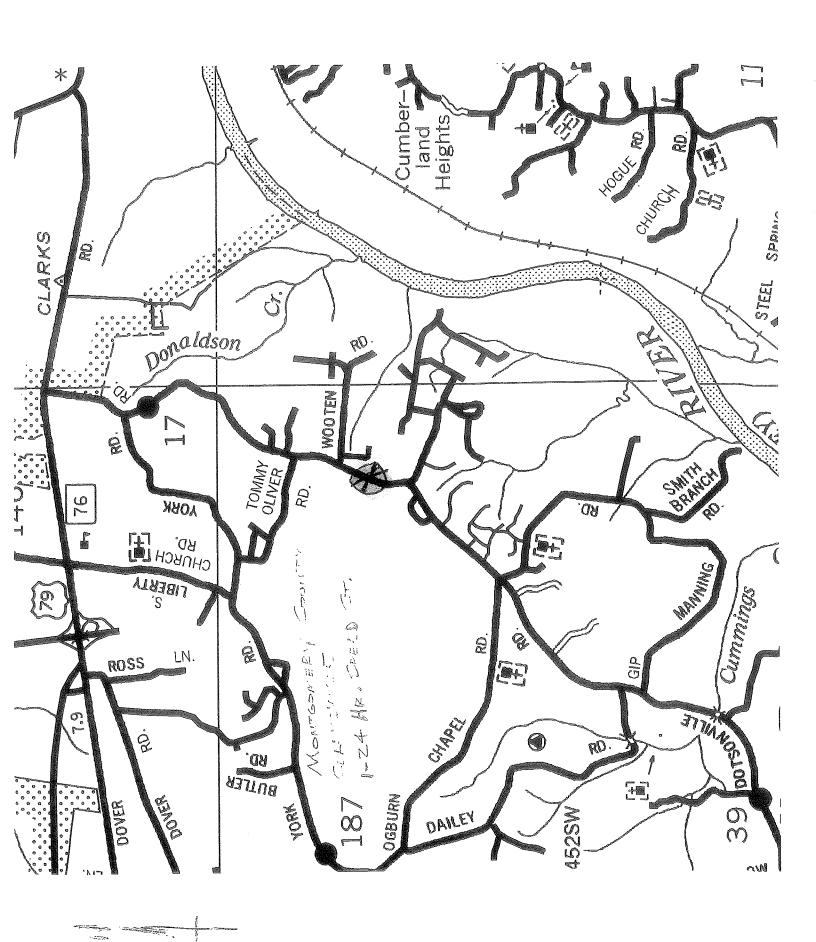
Total Vehicles Involved	Total	Percentage
1	43	66%
2	21	32%
3	1	2%
Total	65	100%

Manner of 1st Collision	Total	Percentage
Rear-End	11	17%
No Collision w\Vehicle	43	66%
Angle	4	6%
Sideswipe, Opp Dir	6	9%
Unknown	1	2%
Total	65	100%

Weather	Total	Percentage
Clear	51	78%
Rain\Sleet\Hail\Snow	12	18%
Cloudy\Fog	2	3%
Total	65	100%
Most Harmful Event	Total	Percentage
Deer (Animal)	10	15%
Overturn	2	3%
Vehicle In Transport	21	32%
Ditch	7	11%
Earth Embankment	3	5%
Fence\Culvert\Bridge Rail\Guardrail End	7	11%
Standing Tree	9	14%
Mailbox	2	3%
Unknown\Other	4	6%
Total	65	100%

Light Conditions	Total	Percentage
Daylight	30	46%
Dark\Dusk	33	51%
Unknown	2	3%
Total	65	100%





Special Speed Study Report: U6300011

Station ID: U6300011

Info Line 1: STA 1 SR

Info Line 2: MONTGOMERY

GPS Lat/Lon:

DB File: U6300011.DB

Last Connected Device Type: Unicorn

Version Number: 1.88

Serial Number:

Number of Lanes: 1 Posted Speed Limit:

Lane #1 Configuration

# Dir.	Informa	ation			Vehic	cle Sen	sors	Sen	sor Spa	acing	Loop	Length	Co	mment					
1.	NORTH	Н				Ax-Ax			10.0 ft		6	3.0 ft							
		Lan	ne #1	Spec	ial Sp	eed S	Study	Data	Fron	n: 10:	00 - 0)2/02/	2011	To:	10:59	- 02	/03/201	1	
		#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16		
		0 -	20 -	25 -	30 -	35 -	40 -	45 -	50 -	55 -	60 -	65 -	70 -	75 -	80 -	85 -			
Date	Time	19.9	24.9	29.9	34.9	39.9	44.9	49.9	54.9	59.9	64.9	69.9	74.9	79.9	84.9	89.9	Other	Total	
02/02/11	10:00	1	1	1	5	11	29	41	8	0	1	0	0	0	0	0	0	98	
Wed	11:00	0	0	3	2	8	25	40	9	0	1	0	0	0	0	0	0	88	
	12:00	0	0	0	2	10	26	35	11	0	0	0	0	0	0	0	0	84	
	13:00	0	0	2	2	15	29	27	9	0	0		0		0	0	0	84	
	14:00	0	0	1	2	9	22	32	10	3	0	0	0	0	0	0	0	79	
	15:00	0	0	3	1	15	39	23	7	1	0	0	0	0	0	0	0	89	
	16:00	0	0	0	2	16	28	26	7	- 1	0	0	0	0	0	0	0	80	

1%

100%

0%

0%

0%

100%

0%

100%

23:00 Daily Total: 0% Percent

Cum Percent

Average:

17:00

18:00

19:00

20:00

21:00

22:00

0%

1%

3%

14%

36%

33%

11%

99%

100% 100% 0% 55% 88% 0% 2% 4% 19% Average Speed: 44.1 mph 50% Speed: 44.4 mph

67% Speed: 46.9 mph 85% Speed: 49.4 mph 10mph Pace: 40.1 - 50.0 (69.3%)

0%

100%

0%

100%

		#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	
		0 -	20 -	25 -	30 -	35 -	40 -	45 -	50 -	55 -	60 -	65 -	70 -	75 -	80 -	85 -	0.11	7.1.1
Date	Time	19.9	24.9	29.9	34.9	39.9	44.9	49.9	54.9	59.9	64.9	69.9	74.9	79.9	84.9	89.9	Other	Total
02/03/11	00:00	0	0	0	0	1	1	3	1	0	0	0	0	0	0	0	0	6
Thu	01:00	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	3
	02:00	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0	5
	03:00	0	0	0	0	1	0	3	1	0	0	0	0	0	0	0	0	5
	04:00	0	0	0	0	5	7	10	1	1	0	0	0	0	0	0	0	24
	05:00	0	0	0	3	10	34	40	8	2	1	0	0	0	0	0	0	98
	06:00	2	0	9	9	21	82	99	18	3	0	0	0	0	0	0	0	243
	07:00	0	0	1	2	21	78	92	28	0	0	0	0	0	0	0	0	222
	08:00	0	0	1	1	15	53	50	13	4	0	0	0	0	0	0	0	137
	09:00	0	0	0	2	14	47	41	13	1	0	0	0	0	0	0	0	118
Daily '	Total:	2	0	11	17	88	305	343	83	11	1	0	0	0	0	0	0	861
	Percent	0%	0%	1%	2%	10%	35%	40%	10%	1%	0%	0%	0%	0%	0%	0%	0%	
Cum. F	Percent:	0%	0%	2%	3%	14%	49%	89%	99%	100%	100%	100%	100%	100%	100%	100%	100%	
Av	erage :	0	0	1	2	9	31	34	8	1	0	0	0	0	0	0	0	86
		Av	erage	Speed	: 44.7	mph	50	0% Sp	eed: 4	5.2 mp	h	67% Speed: 47.3 mph 85% Speed: 49.5 mph 10mph Pace: 40.1 - 50.0 (75.3%)						

Lane #1 Data From: 10:00 - 02/02/2011 To: 10:59 - 02/03/2011

Station: U6300011

#15 #16 #11 #12 #13 #14 #2 #3 #4 #5 #6 #7 #8 #9 #10 0 - 20 - 25 -30 -35 - 40 -45 - 50 -55 - 60 -65 -70 -75 - 80 - 85 -19.9 24.9 29.9 34.9 39.9 44.9 49.9 54.9 59.9 64.9 69.9 74.9 79.9 84.9 89.9 Other Total Date Time

Special Speed Study Summary: U6300011

Description	#1 0 - 19.9	#2 20 - 24.9	#3 25 - 29.9	#4 30 - 34.9	#5 35 - 39.9	#6 40 - 44.9	#7 45 - 49.9	#8 50 - 54.9	#9 55 - 59.9	#10 60 - 64.9	#11 65 - 69.9	#12 70 - 74.9	#13 75 - 79.9	#14 80 - 84.9	#15 85 - 89.9	#16 Other	Total
Grand Total :	3	2	22	42	215	625	640	179	19	3	0	0	0	0	0	1	1751
Percent:	0%	0%	1%	2%	12%	36%	37%	10%	1%	0%	0%	0%	0%	0%	0%	0%	
Curn. Percent.	0%	0%	2%	4%	16%	52%	88%	99%	100%	100%	100%	100%	100%	100%	100%	100%	
Average:	0	0	1	2	9	26	27	7	1	0	0	0	0	0	0	0	73
ADT = 1751	Av	erage	Speed	: 44.4	mph	50	0% Spe	ed: 4	4.7 mp	h		Speed h Pace				•	ed: 49.5 mph

Special Speed Study Report: U6300012

Station ID: U6300012

Info Line 1: STA 1 SR

Info Line 2: MONTGOMERY

GPS Lat/Lon:

DB File: U6300012.DB

S.B.

Last Connected Device Type: Unicorn

Version Number: 1.88

Serial Number:

Number of Lanes: 1 Posted Speed Limit:

Lane #1 Configuration

# Dir.	Informat	ion			Vehic	le Sen	sors	Sen	sor Spa	acing		Lengt	h Co	mment	0				
1.	SOUTH				ě	Ax-Ax			10.0 ft		6	3.0 ft							
		Lar	ie #1	Spec	ial Sp	eed S	Study	Data	Data From: 10:0			:00 - 02/02/2011			To: 10:59 - 02/03/2011				
		#1	#2 20 -	#3 25 -	#4 30 -	#5 35 -	#6 40 -	#7 45 -	#8 50 -	#9 55 -	#10 60 -	#11 65 -	#12 70 -	#13 75 -	#14	#15 85 -	#16		
Date	Time	19.9	24.9	29.9	34.9	39.9	44.9	49.9	54.9	59.9	64.9	69.9	74.9	79.9	84.9	89.9	Other	Total	
02/02/11	10:00	0	2	0	7	10	20	29	11	1	0	0	0	0	0	0	0	80	
Wed	11:00	0	0	0	3	5	19	42	12	1	0	0	0	0	0	0	0	82	
	12:00	0	0	0	0	3	22	36	9	3	0	0	0	0	0	0	0	73	
	13:00	0	0	0	. 1	7	27	37	20	0	0	0	0	0	0	0	0	92	
	14:00	0	0	2	6	7	43	59	13	3	1	0	0	0	0	0	0	134	
	15:00	8	0	5	10	14	42	58	15	1	0	0	0	0	0	0	0	153	
	16:00	0	0	0	10	18	83	116	27	4	0	0	0	0	0	0	0	258	
	17:00	0	0	0	11	22	101	71	10	0	0	0	0	0	0	0	0	215	
	18:00	0	0	3	0	21	55	43	9	0	0	0	0	0	0	0	0	131	
	19:00	0	2	0	2	12	48	39	4	1	0	0	0	0	0	0	0	108	
	20:00	0	0	0	3	13	50	40	6	1	0	0	0	0	0	0	0	113	
	21:00	0	0	0	1	12	16	20	6	2	0	0	0	0	0	0	0	57	
	22:00	0	0	0	0	1	16	13	5	0	0	0	0	0	0	0	0	35	
	23:00	0	0	0	0	2	7	7	1	0	1	0	0	0	0	0	0	18	
Daily 1	otal :	8	4	10	54	147	549	610	148	17		0	0	0	0	0	0	1549	
	ercent :	1%	0%	1%	3%	9%	35%	39%	10%	1%	0%	0%	0%	0%	0%	0%	0%		
Cum, P	ercent :	1%	1%	1%	5%	14%	50%	89%	99%	100%	100%	100%	100%	100%	100%	100%	100%		
Ave	erage :	1	0	1	4	11	39	44	11	1	0	0	0	0	0	0	0	112	

50% Speed: 45.1 mph

67% Speed: 47.2 mph 859 10mph Pace: 40.1 - 50.0 (74.8%)

85% Speed: 49.4 mph

Average Speed: 44.4 mph

		#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	
Date	Time	0 - 19.9	20 - 24.9	25 - 29.9	30 - 34.9	35 - 39.9	40 - 44.9	45 - 49.9	50 - 54.9	55 - 59.9	60 - 64.9	65 - 69.9	70 - 74.9	75 - 79.9	80 - 84.9	85 - 89.9	Other	Total
02/03/11	00:00	0	27.U	٥.0	07.0	1	77.0	5	27.0	00.0	0-7.0	00.0	7 -7 .3	70.5	07.0	00.0	0	11
		_	0	0	0	1	3	3	2	0	0	0	0	0	0	0	•	
Thu	01:00	0	0	0	0	1	1	1	2	0	0	0	0	0	0	0	0	5
	02:00	0	0	0	0	1	5	1	0	0	0	0	0	0	0	0	0	7
	03:00	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	4
	04:00	0	0	0	0	. 2	1	1	2	0	0	0	0	0	0	0	0	6
	05:00	1	1	0	0	0	1	4	3	0	0	0	0	0	0	0	0	10
	06:00	0	1	1	2	0	4	8	2	1	0	0	0	0	0	0	0	19
	07:00	0	0	5	1	4	10	22	2	0	0	0	0	0	0	0	0	44
	08:00	0	0	0	0	7	27	14	2	1	0	0	0	0	0	0	0	51
	09:00	0	0	0	2	6	18	27	9	1	0	0	0	0	0	0	0	63
Daily ¹	Total:	1	2	6	6	23	71	84	24	3	0	0	0	0	0	0	0	220
F	Percent:	0%	1%	3%	3%	10%	32%	38%	11%	1%	0%	0%	0%	0%	0%	0%	0%	
Cum, F	Percent:	0%	1%	4%	7%	17%	50%	88%	99%	100%	100%	100%	100%	100%	100%	100%	100%	
Ave	erage :	0	0	1	1	2	7	8	2	0	0	0	0	0	0	0	0	21
		, Av	erage	Speed	: 44.1	mph	50	0% Sp∈	eed : 4	5.1 mp	h		•	: 47.4 e: 40.3	•		•	ed: 49.6 mph

Printed: 02/07/11

Lane #1 Data From: 10:00 - 02/02/2011 To: 10:59 - 02/03/2011

Station: U6300012

#2 #3 #4 #5 #6 #7 #8 #9 #10 #11 #12 #13 #14 #15 #16 #1 0 - 20 - 25 - 30 -70 -75 - 80 -85 -35 -40 -45 -50 -55 - 60 -65 -19.9 24.9 29.9 34.9 39.9 44.9 Date Time 49.9 54.9 59.9 64.9 69.9 74.9 79.9 84.9 89.9 Other Total

Printed: 02/07/11

Special Speed Study Summary: U6300012

	#1 0 -	#2 20 -	#3 25 -	#4 30 -	#5 35 -	#6 40 -	#7 45 -	#8 50 -	#9 55 -	#10 60 -	#11 65 -	#12 70 -	#13 75 -	#14 80 -	#15 85 -	#16	
Description	19.9	24.9	29.9	34.9	39.9	44.9	49.9	54.9	59.9	64.9	69.9	74.9	79.9	84.9	89.9	Other	Total
Grand Total :	9	6	16	60	170	620	694	172	20	2	0	0	0	0	0	0	1769
Percent :	1%	0%	1%	3%	10%	35%	39%	10%	1%	0%	0%	0%	0%	0%	0%	0%	
Cum, Percent:	1%	1%	2%	5%	15%	50%	89%	99%	100%	100%	100%	100%	100%	100%	100%	100%	
Average:	0	0	1	3	7	26	29	7	1	0	0	0	0	0	0	0	74
ADT = 1769	A	erage	Speed	: 44.4	mph	5	0% Sp	eed : 4	5.1 mp	h		Speed h Pace		mph - 50.0			ed: 49.5 mpł

Printed: 02/07/11