

OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 9

Inter Office Communication

Date: April 4, 2001

To: Jennifer Townley, Safety Program Manager

From: Larry K. Hill, Planning & Programs Administrator

By: Richard Chaffin, District Safety Review Team Chairperson

Subject: HSP Funding Request, HIG-50-2.80 / PID 23177

The enclosed Safety Project Application along with the safety engineering study is being sent to you to request safety funds to relocate the south approach of State Route 134 at the intersection of U.S. 50 & 134 in Highland County.

Please advise us of your consideration for safety funds.



RDC

Enclosure

c: J. Hagen, L. Hill, D. Norris, V. Wilson, G. Baird, file



Safety Project Application

Date: March 15, 2001

District: 09		Name of Contact Person: Richard Chaffin	
Sponsoring Agency: ODOT		Phone/Fax: 740-773-2691 (Ext) 327 740-775-4889	
Estimated Project Cost: \$410,000		Total Safety Funding Requested: \$410,000	
Brief Project Description: Realign South leg of S.R. 134 to the East			
Project PID: 19194 (If assigned)	County: Highland	Route: U.S. 50	Section: U.S. 50 @ S.R. 134 / S.L.M. 2.8

Project Description

<p>Summary of Problem Statement:</p> <p>U.S. 50 has a vertical sag and crest curve to the west of the intersection, which creates an intersection sight distance which does not meet the requirements. This intersection is not currently having unreasonable amounts of accidents; however, there is a new school being built on S.R. 134 near this intersection. The increased traffic volumes with the limited sight distance is the major concern.</p>
<p>Summary of Recommended Countermeasures:</p> <p>1. Relocate South leg of S.R. 134 to intersect U.S. 50 across from North leg of S.R. 134 to improve stopping sight distance for U.S. 50 and intersection sight distance for S.R. 134 northbound and southbound traffic.</p>

Project Route Identification and Alignment. Please identify the limits of the project and approximate length.

U.S. 50 S.L.M. approx. 2.79 - 2.88 - Length approx. 475 ft

S.R. 134 S.L.M. approx. 13.89 - 13.99 - Length approx. 500 ft

Project Priority (HSP Ranking / LPA Prioritized List)

NA

Project Development - Indicate which phases have been initiated, completed or an estimated completion date for each applicable phase.

<i>Phase</i>	<i>Conducted by</i>	<i>Completion Date</i>
<input type="checkbox"/> Safety Engineering Study	R. Chaffin & P. Miller	03/16/01
<input type="checkbox"/> Interchange Justification Study	NA	
<input type="checkbox"/> Environmental	ODOT D09	3rd/2002
<input type="checkbox"/> Right of Way	ODOT D09	1st/2003
<input type="checkbox"/> Design	Woolpert	3rd/2002

Crash Data

Crash Frequency/Density:	3	0 Points
Crash Rate:	0.45	0 Points
Relative Severity Index:	\$1,666	6 Points
Equivalent Property Damage Only Rate:	1.34	0 Points
Percent Trucks:	12.83%	2 Points
Rate of Return:	-9%	0 Points

The following information should be included in submission of the safety project application:

Copy of the Safety Engineering Study (Include DSRT approval signatures) ✓

Traffic Volume Data ✓

Project Location Map ✓

Photographs of the Project Site ✓

Economic Analysis ✓

Estimated Cost	Quarter / Fiscal Year	Local Contribution	Other Sources	Safety Request	Total
Environmental	3rd/2002				
Right of way	1st/2003			\$10,000	\$10,000
Design	3rd/2002				\$50,000
Construction	2nd/2003			\$400,000	\$400,000
Total				\$410,000	\$460,000

RESERVOIR PROJECT YES NO RESERVOIR YEAR

Applicant

Richard Chaffin

740-773-2691 Ext 327

Printed Name/Title

Phone #

Richard D. Chaffin 4-4-01

Signature/Date

Threshold Calculations

				Points															
<i>Frequency</i>	=	total # crashes	= 3	0															
<i>Density</i>	=	Frequency (for intersections)	= 3	0															
<hr/>																			
<i>Crash Rate</i>	=	$\frac{(\# \text{ crashes})(1 \text{ million})}{(365)(3)(\text{ADT})(\text{Length in miles})}$ (sections only)	= $\frac{(3)(1,000,000)}{(365)(3)(6080)}$ = 0.45	0															
<hr/>																			
<i>Rate of Return</i>	⇒	From Economic Analysis Sheet	= -9%	0															
<hr/>																			
<i>EPDO</i>	=	<table style="margin-left: 20px; border-collapse: collapse;"> <tr> <td>PDO</td> <td>(2)(1.0)</td> <td>=</td> <td>2</td> </tr> <tr> <td>Injuries</td> <td>(1)(6.9)</td> <td>=</td> <td>6.9</td> </tr> <tr> <td>Fatalities</td> <td>0</td> <td>=</td> <td>0</td> </tr> <tr> <td colspan="2" style="text-align: center;">Total</td> <td>=</td> <td>8.9</td> </tr> </table>	PDO	(2)(1.0)	=	2	Injuries	(1)(6.9)	=	6.9	Fatalities	0	=	0	Total		=	8.9	
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<i>RSI</i>		<table style="margin-left: 20px; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Rural</th> <th style="text-align: left;">Cost</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>Rear End (02)</td> <td>\$1,094</td> <td>⇒ (1 crash)(\$1,094)</td> <td>= \$1,094</td> </tr> <tr> <td>Angle (06)</td> <td>\$1,952</td> <td>⇒ (2 crashes)(\$1,952)</td> <td>= \$3,904</td> </tr> <tr> <td colspan="2"></td> <td style="text-align: right;">Total</td> <td>= \$4,998</td> </tr> </tbody> </table>	Rural	Cost			Rear End (02)	\$1,094	⇒ (1 crash)(\$1,094)	= \$1,094	Angle (06)	\$1,952	⇒ (2 crashes)(\$1,952)	= \$3,904			Total	= \$4,998	
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<hr/>																			
<i>% Trucks</i>	=	$\frac{780}{6080}$	= 12.83%	2															
				Total 8															

HIGHWAY SAFETY PROGRAM FUNDING REQUEST

LOCATION:

COUNTY/ROUTE/SECTION Highland / U.S. 50 & 134 / S.L.M. 2.80
 JURISDICTION ODOT, Rural

PRIORITIES:

AWP _____, HSP _____, HSP FUNDING CATEGORY (1 THROUGH 6) _____

PROGRAMMING:

PROPOSED COST 410,000 ~~\$342,300~~, RATE OF RETURN (CATEGORIES 1 THROUGH 3) _____
 PROPOSED AWARD DATE (FY AND QUARTER) 2003 / 2nd

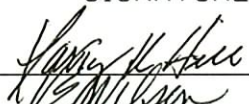
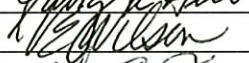
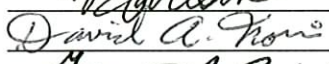
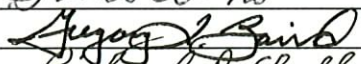
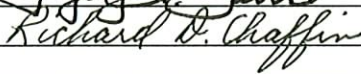
DISTRICT'S PROBLEM STATEMENT:

S.R. 134 intersects U.S. 50 on the back side of a vertical crest on U.S. 50. On the other side of the vertical crest there is a sag in the pavement on U.S. 50. Therefore, when motorists are at the stop condition on S.R. 134 and look to their left the intersection sight distance is restricted by the vertical crest and sag on U.S. 50. There was recently a new school constructed on S.R. 134 just south of this intersection which will increase the traffic at this intersection in peak periods.

DISTRICT'S RECOMMENDATION:

Relocate the S.R. 134 approach of the intersection approximately 500 feet to the east on U.S. 50. This relocation will align both approaches of S.R. 134 to make a cross road intersection instead of the existing offset intersection. The intersection sight distance will also be improved to meet minimum design standards.

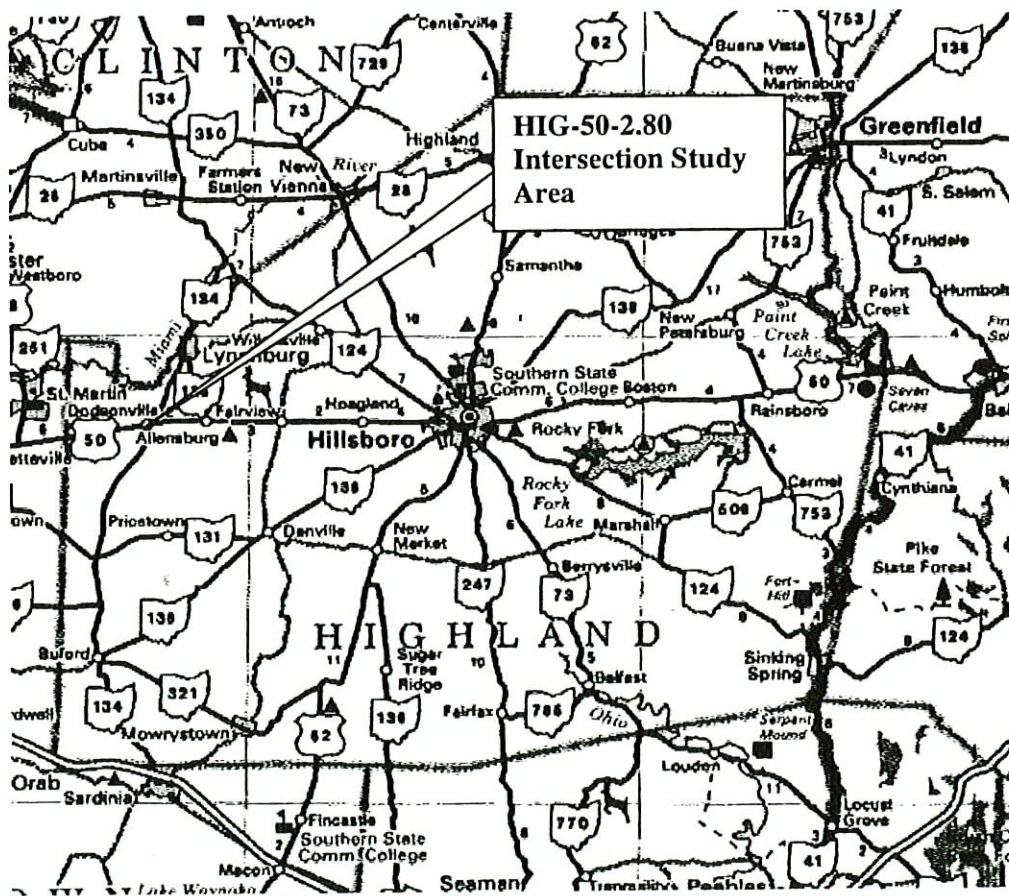
DISTRICT'S SAFETY REVIEW TEAM:

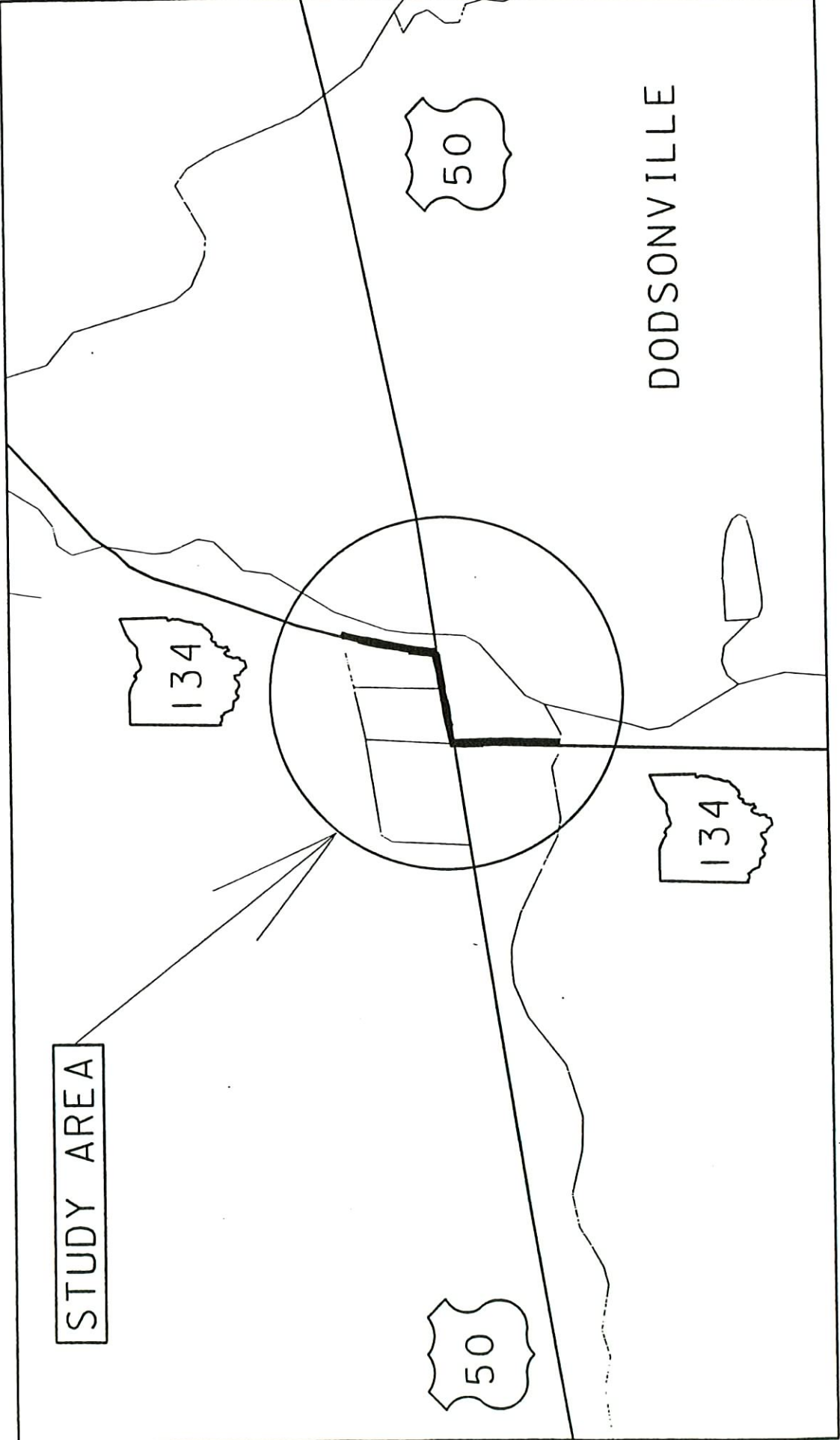
SRT MEMBER (TYPED)	SIGNATURE	DATE	COMMENTS (ATTACHED)
1ST <u>Larry Hill, Planning Adm.</u>		<u>3/28/01</u>	
2ND <u>Vaughn Wilson, Hwy. Mgmt. Adm.</u>		<u>3/28/01</u>	
3RD <u>David Norris, Production Adm.</u>		<u>3/28/01</u>	
4TH <u>Gregory Baird, Studies Engr.</u>		<u>3-28-01</u>	
5TH <u>Richard Chaffin (Chair)</u>		<u>3-28-01</u>	
6TH _____	_____	_____	_____
OPTIONAL MEMBERS:			
ADDITIONAL ODOT, FHWA,	_____	_____	_____
AND/OR OUTSIDE MEMBERS	_____	_____	_____

SAFETY PROGRAM MANAGER'S RECOMMENDATION:

PREAPPROVED FOR PROGRAMMING _____, HSP FUNDING PRIORITY _____
 PROPOSED AWARD DATE _____, COMMENTS _____

STUDY AREA MAP





DODSONVILLE

50

134

134

50

STUDY AREA

RATE OF RETURN - ECONOMIC ANALYSIS WORKSHEET

County Highland Main Roadway U.S. 50 Begin SLM 2.8 End SLM _____
 Intersecting Roadway S.R. 134 (West Intersection)
 Prepared by P. Miller Date March 15, 2001

Ohio Department of Transportation
 Office of Traffic Engineering

Year	TIME OF DAY						ROADWAY CONDITION						CRASH TYPE																				
	DAY		NITE		N. S.		DRY		WET		N. S.		L. T.		R. T.		ANGLE		REAREND		HEAD ON		S. S.		F. O.		L. T.-Minor		RE -Minor		TOTAL		
	PDO	I/F	PDO	I/F	PDO	I/F	PDO	I/F	PDO	I/F	PDO	I/F	PDO	I/F	PDO	I/F	PDO	I/F	PDO	I/F	PDO	I/F	PDO	I/F	PDO	I/F	PDO	I/F	PDO	I/F	PDO	I/F	
97	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
98	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	2	1	0	0	0	0	2	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	2	1	
AVG.	0.67	0.33	0.00	0.00	0.00	0.00	0.67	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.33		

RECOMMENDED IMPROVEMENTS	CRASH TYPE						PDO CRASHES						INJ. - FAT. CRASHES								
	R1	R2	R3	R4	RT	AVG PDO	EST. RED.	R1	R2	R3	R4	RT	AVG INJ.-FAT	EST. RED.	R1	R2	R3	R4	RT	AVG INJ.-FAT	EST. RED.
1. Relocate Intersection	0.25					0.00	0.00	0.25					0.25	0.00	0.25					0.25	0.00
2.	0.25					0.00	0.00	0.25					0.25	0.00	0.25					0.25	0.00
3.	0.25					0.33	0.08	0.25					0.25	0.33	0.25					0.25	0.33
4.	0.25					0.33	0.08	0.25					0.25	0.33	0.25					0.25	0.33
5.	0.25					0.00	0.00	0.25					0.25	0.00	0.25					0.25	0.00
6.	0.25					0.00	0.00	0.25					0.25	0.00	0.25					0.25	0.00
7.	0.25					0.00	0.00	0.25					0.25	0.00	0.25					0.25	0.00
8.	0.00					0.00	0.00	0.00					0.00	0.00	0.00					0.00	0.00
	0.00					0.00	0.00	0.00					0.00	0.00	0.00					0.00	0.00
	ESTIMATED PDO CRASH REDUCTION	0.17						ESTIMATED INJ. - FAT. CRASH REDUCTION	0.08												

ADT Factor

Project Service Life 20 years
 Present ADT (PADT) 6080
 Future ADT (FADT) 8190

$\text{Average ADT} = (\text{PADT} + \text{FADT})/2 = (6080 + 8190) / 2 = 7135$
 $\text{ADT Factor} = \text{Average ADT} / \text{PADT} = 7135 / 6080 = 1.17$

Average Annual Benefits

Annual PDO Benefits = Estimated PDO Crash Reduction * Avg PDO Cost = 0.17 * \$2,500 = \$417
 Annual INJ.-FAT. Benefits = Estimated INJ.-FAT. Crash Reduction * Avg INJ.-FAT. Cost = 0.08 * \$67,900 = \$5,658
 Total Benefits = \$6,075
 Average Annual Benefits = Total Benefits * ADT Factor = 1.17 * \$6,075 = \$7,129

Rate of Return

Project Cost \$410,000
 Maintenance and Energy Costs \$1,000
 Salvage Value _____

Rate of Return -9%

TRAFFIC ACCIDENT ANALYSIS

Division No. 09 Time Period: From 1-1-97 to 12-31-99 Report No. _____
 Location Intersection of U.S. 50 & S.R. 134 (West Intersection) County Highland Page No. 1 of 1

LOCATION OF ACCIDENT				WEATHER		ROAD COND.		TYPE		VEH.		DRIVERS			COLLISION DIAGRAM	
DATE OF ACCIDENT	TIME	LIGHT	X	INJ.	PD.	WEATHER	ROAD COND.	TYPE	DAY	VEH.	DIR.	SPEED	COND.	VIOLATIONS	COLLISION DIAGRAM	
8-12-97	P 12:00	D	0	0		Clear	Dry	Rear End		86 Whit	W	TK 35	N	Following Too Close		
# 1, 68, M, Goshen, OH								Tues		83 aids	W	C 0	N	None		
7-20-98	A 11:10	D	0	1		Clear	Dry	Angle		93 Pym	N	C 35	N	Ran Stop Sign		
# 1, 80, F, Fayetteville, OH								Mon		95 Mack	W	TT 45	N	None		
11-13-98	P 1:35	D	0	0		Clear	Dry	Angle		90 Ant	E	C 35	N	None		
# 2, 54, F, Fayetteville, OH								Fri		94 Ford	N	SUV 10	N	Failure To Yield		

LEGEND

DIRECTIONAL ANALYSIS
 Motor vehicle movement before accident: _____
 Vehicle movement after accident: _____
 Pedestrian movement: _____
 Sliding vehicle: _____
 Vehicle overturning out of control: _____
 Parked vehicle: _____
 Sidewalk: _____
 Head-on collision: _____
 Rear-end collision: _____
 Vehicle struck fixed object: _____

CONDITION OF DRIVER
 N - Normal
 D - Drinking
 I - Intoxicated
 A - Asleep or Fatigued
 PD - Physical defect

SPEED CHECK

RADAR TYPE SPEED METER

Location U.S. 50, S.L.M. 2.85
 Date 3-6-00 Day Monday County Highland
 Observer R. Chaffin, G. Baird
 Type Pavement Bituminous Dry Wet Condition Good Width _____
 Weather Clear & Sunny Temperature 65°

85 Percentile - 50 mph / Pace 40-50 mph

85 Percentile - 49 mph / Pace 40-50 mph

<u>W</u> bound, Time <u>1:00 P M</u> to <u>2:00 P M</u>					M.P.H.	<u>E</u> bound, Time <u>1:00 P M</u> to <u>2:00 P M</u>					
Cum. %	Cum. Total	No.	Vehicles			No.	Cum. Total	Cum. %			
			Passenger Cars	Commercial					Passenger Cars	Commercial	
					Over						
					90.0						
					88.0						
					86.0						
					84.0						
					82.0						
					80.0						
					78.0						
					76.0						
					74.0						
					72.0						
					70.0						
					68.0						
					66.0						
					64.0						
					62.0						
					60.0						
					58.0						
					56.0						
					54.0						
					52.0						
					50.0						
					48.0						
					46.0						
					44.0						
					42.0						
					40.0						
					38.0						
					36.0						
					34.0						
					32.0						
					30.0						
					28.0						
					26.0						
					24.0						
					22.0						
					20.0						
					18.0						
					16.0						
					14.0						
					Below						
					Totals						
100	80	1			60.0						
99	79	4			56.0			1	79	100	
94	75	2			54.0			2	78	99	
91	73	5			52.0			3	76	96	
85	68	11			50.0			1	73	92	
	57	13			48.0			7	72	91	
	44	18			46.0			8	65	82	
	26	8			44.0			10	57		
	18	7			42.0			19	47		
	11	8			40.0			15	28		
					38.0			11	13		
	3	1			36.0			2	2		
	2	1			34.0						
					32.0						
	1	1			30.0						
					28.0						
					26.0						
					24.0						
					22.0						
					20.0						
					18.0						
					16.0						
					14.0						
					Below						
					Totals						

SIGNAL WARRANT DATA SHEET

DATE: 12-22-99

STUDY BY: R. Chaffin

LOCATION: Hig 50 & 134 (S.L.M. 2.80 on U.S. 50)

DATE OF COUNTS: 11-3-99

SEASONAL FACTOR 0.97

Speed Factor	Warrant 6 Accidents
70%	80%
(X Factor)	(X Factor)
Volume	
Major	500
Minor	150
Major	750
Minor	75
350	280
105	84
525	420
53	42

Warrant 1 Minimum Traffic	Major	500
Warrant 2 Cont. Traffic	Minor	150
Major	750	420
Minor	75	42

HOUR	MAJOR STREET		MINOR APPROACH		MINOR APPROACH		WARRANT #1	WARRANT #2	WARRANT #6	
	Volume U.S. 50	(X SF)	Volume south	(X SF) S.R.134	Volume south	(X SF)			#1	#2
AM		0		0		0				
AM		0		0		0				
8-9 AM	277	269	88	85		0	No	No		
9-10 AM	264	256	48	47		0	No	No		
12-1 PM	275	267	39	38		0	No	No		
1-2 PM	323	313	36	35		0	No	No		
2-3 PM	330	320	30	29		0	No	No		
3-4 PM	324	314	40	39		0	No	No		
4-5 PM	368	357	44	43		0	No	No		
5-6 PM	424	411	65	63		0	No	No		

This intersection does not meet the Accident Warrant

Directions for use: fill in all spaces

Weather: Dry 60's
 Counted by: Walt West
 Board #:D4-1489
 Raw Data: Station # 10636

Ohio Department of Transportation
 Distric 9 - Planning
 650 Eastern Ave, Chillicothe, Ohio 45601
 1-888-819-8501

Study Name: H50-134A
 Site Code : 00000000
 Start Date: 10/13/99
 Page : 1

Start Time	SR 134 SB Southbound				US 50 WB Westbound				SR 134 NB Northbound				US 50 EB Eastbound				Ped	Intvl. Total
	Left	Thru	Right	Ped	Left	Thru	Right	Ped	Left	Thru	Right	Ped	Left	Thru	Right	Ped		
				Ped				Ped				Ped						
10/13/99																		
06:00	0	0	0	0	5	46	1	0	3	0	8	0	0	0	7	0	0	70
06:15	0	0	0	0	3	47	0	0	0	0	11	0	0	0	7	1	0	69
06:30	0	0	0	0	2	43	0	0	1	0	6	0	0	0	20	0	0	72
06:45	0	0	0	0	8	33	0	0	3	0	10	0	0	0	19	1	0	74
Hour	0	0	0	0	18	169	243	1	7	0	42	35	0	0	53	2	0	285
07:00	0	0	0	0	5	33	0	0	3	0	16	0	0	0	19	0	0	76
07:15	0	0	0	0	8	41	0	0	6	0	42	0	0	0	21	1	0	119
07:30	0	0	0	0	13	34	0	0	2	0	12	0	0	0	31	4	0	96
07:45	0	0	0	0	7	33	0	0	2	0	5	0	0	0	24	3	0	74
Hour	0	0	0	0	33	141	277	0	13	0	88	75	0	0	95	8	0	365
08:00	0	0	0	0	4	22	0	0	2	0	12	0	0	0	33	1	0	74
08:15	0	0	0	0	14	30	0	0	4	0	5	0	0	1	28	4	0	86
08:30	0	0	0	0	3	35	0	0	2	0	8	0	0	0	26	3	0	77
08:45	0	0	0	0	7	31	0	0	1	0	14	0	0	0	22	0	0	75
Hour	0	0	0	0	28	118	264	0	9	0	48	39	0	1	109	8	0	312
09:00	0	0	0	0	9	30	0	0	0	0	11	0	0	0	36	2	0	88
09:15	0	0	0	0	8	35	0	0	0	0	7	0	0	0	31	3	0	84
09:30	0	0	0	0	3	25	0	0	3	0	8	0	0	0	27	4	0	70
09:45	0	0	0	0	4	28	0	0	1	0	3	0	0	0	28	1	0	65
Hour	0	0	0	0	24	118	274	0	4	0	33	29	0	0	122	10	0	307
10:00	0	0	0	0	5	30	0	0	2	0	9	0	0	0	39	1	0	86
10:15	0	0	0	0	5	26	0	0	3	0	9	0	0	1	26	0	0	70
10:30	0	0	1	0	3	22	0	0	4	0	6	0	0	0	28	4	0	68
10:45	0	1	0	0	9	26	0	0	2	0	7	0	0	0	29	2	0	76
Hour	0	1	1	0	22	104	256	0	11	0	42	31	0	1	122	7	0	300
11:00	0	0	0	0	5	21	0	0	3	0	8	0	0	0	23	3	0	63
11:15	0	0	1	0	3	32	0	0	3	0	9	0	0	0	36	2	0	86
11:30	0	0	0	0	10	31	0	0	1	0	4	0	0	0	39	5	0	90
11:45	0	0	0	0	3	28	0	0	4	0	3	0	0	0	28	0	0	66
Hour	0	0	1	0	21	112	269	0	11	0	35	24	0	0	126	10	0	305
Total	0	1	2	0	146	762	1	0	55	0	233	0	0	2	627	45	0	1874
% Apr.	-	33.3	66.6	-	16.0	83.8	0.1	-	19.0	-	80.9	-	-	0.2	93.0	6.6	-	-
% Int.	-	-	0.1	-	7.7	40.6	-	-	2.9	-	12.4	-	-	0.1	33.4	2.4	-	-

Weather: Dry 44 deg
 Counted by: Walt West
 Board #:D4-1489
 Raw Data: Station 10636

Ohio Department of Transportation
 Distric 9 - Planning
 650 Eastern Ave, Chillicothe, Ohio 45601
 1-888-819-8501

Study Name: H50-134B
 Site Code : 00010636
 Start Date: 11/03/99
 Page : 1

Vehicle group 1, Vehicle group 2, Vehicle group 3

Start Time	SR 134 SB Southbound				US 50 WB Westbound				SR 134 NB Northbound				US 50 EB Eastbound				Ped	Intvl.	Total
	Left	Thru	Right	Ped	Left	Thru	Right	Ped	Left	Thru	Right	Ped	Left	Thru	Right	Ped			
11/03/99																			
13:00	0	0	0	0	8	37	0	0	3	0	8	0	0	42	2	0			100
13:15	0	0	0	0	5	36	1	0	0	0	13	0	0	26	2	0			83
13:30	0	0	0	0	5	27	0	0	1	0	8	0	0	28	1	0			70
13:45	0	0	0	0	7	27	0	0	2	0	4	0	0	20	1	0			61
Hour	0	0	0	0	25	127	275	1 ✓	6	0	39	33	0	116	6	0			314
14:00	0	0	0	0	8	43	0	0	3	0	4	0	0	34	1	0			93
14:15	0	0	0	0	8	34	0	0	2	0	6	0	0	35	1	0			86
14:30	0	0	0	0	7	42	0	0	3	0	10	0	0	32	0	0			94
14:45	0	0	0	0	6	38	0	0	1	0	7	0	0	30	4	0			86
Hour	0	0	0	0	29	157	323	0 ✓	9	0	36	27	0	131	6	0			359
15:00	0	0	0	0	4	35	1	0	2	0	7	0	0	40	1	0			90
15:15	0	0	0	0	9	33	0	0	3	0	6	0	0	26	1	0			78
15:30	0	1	1	0	20	29	0	0	3	0	3	0	0	33	4	0			94
15:45	0	0	0	0	18	43	0	0	1	0	5	0	0	31	2	0			100
Hour	0	1	1	0	51	140	330	1 ✓	9	0	30	21	0	130	8	0			362
16:00	1	0	0	0	9	32	0	0	3	0	7	0	0	33	2	0			87
16:15	0	0	0	0	9	29	0	0	2	1	8	0	0	38	2	0			89
16:30	0	0	0	0	12	43	1	0	2	0	8	0	0	38	4	0			108
16:45	0	0	0	0	7	34	0	0	2	0	7	0	0	27	4	0			81
Hour	1	0	0	0	37	138	324	1 ✓	9	1	40	30	0	136	12	0			365
17:00	0	0	1	0	10	34	0	0	2	0	8	0	0	48	3	0			106
17:15	0	0	1	0	10	31	0	0	1	0	10	0	0	35	5	0			93
17:30	1	0	0	0	24	28	0	0	3	0	5	0	0	41	2	0			104
17:45	0	0	0	0	8	40	0	0	0	0	15	0	0	45	4	0			112
Hour	1	0	2	0	52	133	368	0 ✓	6	0	44	38	0	169	14	0			415
18:00	0	0	0	0	16	37	0	0	1	0	18	0	0	48	4	0			124
18:15	0	0	0	0	18	38	0	0	1	0	14	0	0	54	5	0			130
18:30	0	0	0	0	10	36	1	0	4	0	13	0	0	55	4	0			123
18:45	0	0	0	0	11	33	0	0	0	0	14	0	0	52	2	0			112
Hour	0	0	0	0	55	144	424	1 ✓	6	0	65	59	0	209	15	0			489
Total	2	1	3	0	249	839	4	0	45	1	208	0	0	891	61	0			2304
% Apr.	33.3	16.6	50.0	-	22.8	76.8	0.3	-	17.7	0.3	81.8	-	-	93.5	6.4	-			-
% Int.	-	-	0.1	-	10.8	36.4	0.1	-	1.9	-	9.0	-	-	38.6	2.6	-			-

2000 HIGHLAND CO 2
AVERAGE 24-HR TRAFFIC VOLUME

SECT. BEGINS	TRAFFIC SECTION	SECT. LENGTH	PASS & A COM'L	B & C COM'L	TOTAL VEH.
US-50					
	00.00 BROWN CO. LINE	2.80	3580	740	4320
	02.80 SR 134	.07	5300	780	6080
	02.87 SR 134	2.01	3450	680	4130
	04.88 SR 135	7.81	4770	510	5280
U	12.69 W. CORP. HILLSBORO	.08	7300	660	7960
	12.77 LEAVE HILLSBORO	.03	7300	660	7960
U	12.80 RE-ENTER HILLSBORO	.21	7300	660	7960
U	13.01 GLENN ST.	.37	9160	670	9830
U	13.38 SR 124 (WILLETSVILLE RD.)	.36	11690	690	12380
U	13.74 SR 73 (WEST ST.)	.13	11910	680	12590
U	13.87 US 62 (HIGH ST.)	.43	12410	490	12900
U	14.30 SR 124 ENTER CHILLICOTHE RD.	.31	7420	410	7830
	14.61 LEAVE HILLSBORO	.04	4770	240	5010
U	14.65 RE-ENTER HILLSBORO	.12	4770	240	5010
	14.77 E. CORP. HILLSBORO	4.76	4770	240	5010
	19.53 C-91 (BEECHWOOD RD.)	3.88	2570	300	2870
	23.41 SR 753	.94	3420	330	3750
	24.35 SR 753	4.24	2240	170	2410
	28.59 EQUALS STA. 0.00 IN ROSS CO.	.00			
US-62					
	00.00 BROWN CO. LINE	2.89	1970	260	2230
	02.89 SR 321	4.50	2310	250	2560
	07.39 SR 136	6.54	4780	270	5050
U	14.03 S. CORP. HILLSBORO	.38	6670	370	7040
U	14.61 SR 73 (MUNTZ ST.)	.18	8800	580	9380
U	14.79 SR 138 (SOUTH ST.)	.19	8230	430	8660
U	14.98 US 50 (MAIN ST.)	.76	15320	560	15880
U	15.74 SR 138 (GREENFIELD RD.)	.36	14500	400	14900
	16.10 LEAVE HILLSBORO	.09	14500	400	14900
U	16.19 RE-ENTER HILLSBORO	1.43	14500	400	14900
	17.62 N. CORP. HILLSBORO	.33	6390	310	6700
	17.95 C-79 (SELPH RD.)	3.36	5190	300	5490
	21.31 SR 72	4.12	3350	270	3620
U	25.43 S. CORP. LEESBURG	.19	3350	270	3620
U	25.62 SR 28 (MAIN ST.)	.34	2100	400	2500
	25.96 N. CORP. LEESBURG	2.05	2100	400	2500
	28.01 EQUALS STA. 0.00 IN FAYETTE CO.	.00			

DISTRICT 9 SAFETY REVIEW TEAM MEETING

Wednesday, May 3, 2000
9:30 A.M.

ATTENDEES:

Larry Hill, Planning & Programs Administrator
Vaughn Wilson, Highway Management Administrator
Tom Evans, Production Administrator
Greg Baird, Bridge/Traffic Studies Engineer
Richard Chaffin, Traffic Management Analyst (Chairperson)
Chad Mitten, Planning EIT

MEMBERS NOT IN ATTENDANCE

Federal Highway Administration Representative

AGENDA:

1. Location: Highland - U.S. 50 & Mad River Rd. (Co. Rd. 7) Intersection
2. Location: Jackson - S.R. 327 S.L.M. 5.54 to 5.97
3. Location: Highland - U.S. 50 & 134 Intersection

Location 1: Highland U.S. 50 & Co. Rd. 7, S.L.M. 10.10

Richard Chaffin proposed to drop this location from the Annual Work Plan because of recent improvements made at this location by ODOT crews. The improvements involved moving guardrail and some channel improvement work which improved intersection sight distance. Since the improvements, the accidents were reduced from an average of 5 accidents per year to 2 accidents in the following year after the improvements. The team was in agreement to drop this location from the Annual Work Plan.

Location 2: Jackson S.R. 327 S.L.M. 5.54 to 5.97

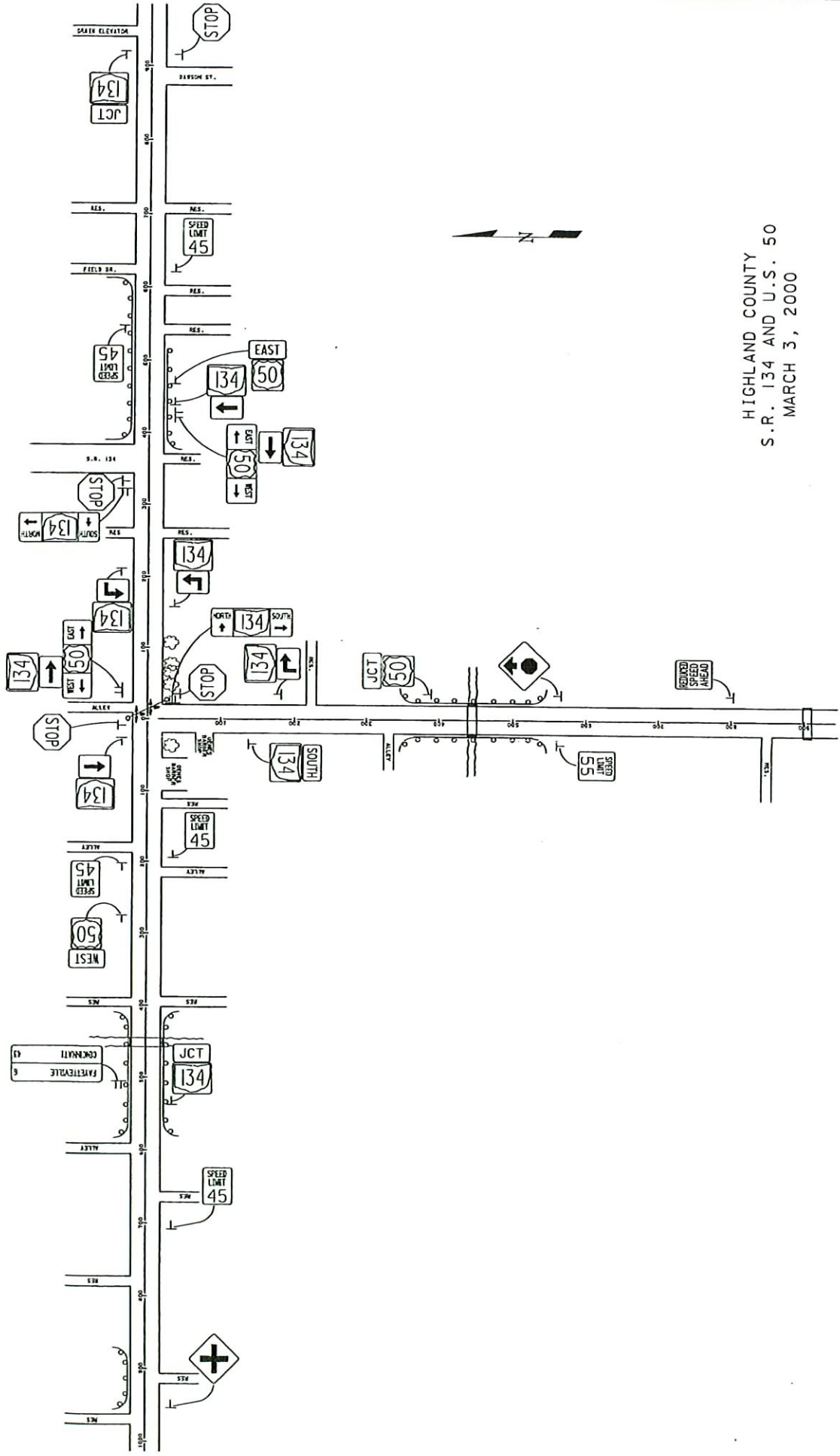
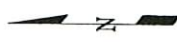
The team discussion concerning this location was that the problem is accidents are occurring because of the poor geometry of the roadway. There is a sharp curve with a 7 percent grade split in the middle of the curve. The roadway changes direction right at the crest of the grade and motorists cannot see the roadway ahead of them. Also it was pointed out in the study that only 36 percent of the accidents occurred on dry pavement. 44 percent of the accidents occurred on wet pavement and 20 percent of the accidents occurred on snow & ice. The team decided to install chevrons around the curve and double stack the night arrow signs. The chevrons and night arrows need to be seen from well in advance of the curve so motorists can realize the road changes direction ahead of them. The team also wants to get skid tests performed to see if the surface of the pavement needs to be improved. Richard will write a work order to Mike Kinnison to install the chevrons and night arrows and prepare a sign-off sheet for the team to sign.

Location 3: Highland U.S. 50 & S.R. 134 Intersection

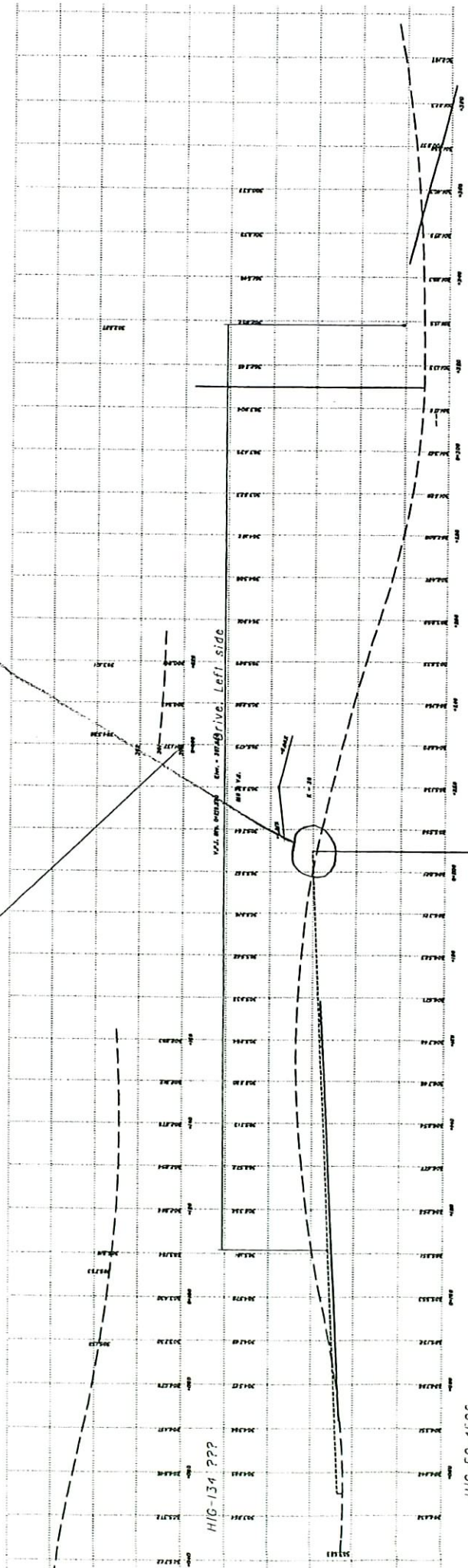
The team discussed the reason this intersection is being studied is not because of an accident problem but because of a school that is being constructed on S.R. 134 close to this intersection. The school is concerned about the sight distance at the intersection and the increase of traffic that will be using this intersection once the new school is built. Our study shows the intersection does not meet intersection sight distance requirements. The profile on U.S. 50 has a vertical sag and crest to the west of the intersection which limits intersection sight distance. There has only been a total of 3 accidents in the last three year period. We have done some survey work and some rough estimates on what it would take to correct the profile on U.S. 50 or relocate S.R. 134 to the vertical crest of U.S. 50. Our estimates are very rough but it would amount to several hundred thousand dollars. And we are concerned about the impact to adjacent properties as well as environmental issues. The team realizes this intersection would not be likely to get funded through the safety program due to lack of funds. However due to limited District funds, we probably will need to request safety funds and hope that eventually it will get funded through the safety program. The team decided to have more extensive survey and preliminary design on all possible corrections that could bring the intersection sight distance to standard. We need to know what our project will be and have a cost estimate before we can request safety funds. It was decided to have this work done by utilizing our general services contract with Woolpert Consultants. We would have them give us the best solution that is cost feasible and also addresses environmental and right of way issues. We will propose this recommendation to John Hagen, Deputy Director for his concurrence before we proceed.

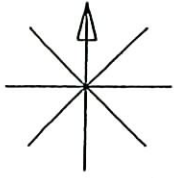

RDC

HIGHLAND COUNTY
 S.R. 134 AND U.S. 50
 MARCH 3, 2000



Intersection





INDICATE NORTH

COLLISION DIAGRAM

TUE-8-12-97-12:00P-DRY-DAY

MON-7-20-98-11:00A-DRY-DAY

FRI-11-13-98-1:30P-DRY-DAY

U.S. 50
(RD. NAME)

ACC SUMMARY

PD	2
INJ	1
TOTAL	3

S.R. 134
(RD. NAME)

SYMBOLS

- MOVING VEHICLE
- BACKING VEHICLE
- NON-INVOLVED VEHICLE
- PEDESTRIAN
- PARKED VEHICLE
- FIXED OBJECT
- FATAL ACCIDENT
- INJURY ACCIDENT

TYPES OF COLLISIONS

- REAR END
- HEAD ON
- SIDE SWIPE
- OUT OF CONTROL
- LEFT TURN
- RIGHT ANGLE

SHOW FOR EACH
ACCIDENT

1. DAY, DATE, AND TIME
2. WEATHER AND ROAD SURFACE - IF UNUSUAL CONDITION EXISTED
3. NITE - IF BETWEEN DUSK AND DAWN

INTERSECTION Hwy U.S. 50 AND S.R. 134
 PERIOD 3 Years : FROM 1-1-97 TO 12-31-99