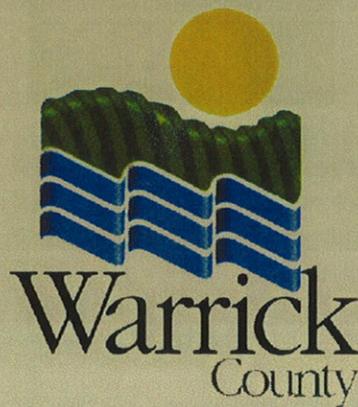


BOONVILLE BYPASS



Prepared For

**City of Boonville, Indiana &
Warrick County Commissioners**



City of Boonville

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JACK PIKE

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February 22, 2001

Ms. Cristine Klika, Commissioner
Indiana Department of Transportation
100 N. Senate Avenue, Room # N755
Indianapolis, IN 46204-2217

Re: *Feasibility Study for a Boonville Bypass (S.R. 61)*

Dear Commissioner Klika:

The Boonville Traffic Study Commission in 1987 prepared a site impact analysis for the portion of Boonville along SR 62 on the westside of the city. Many of the recommendations from that study have been implemented by Indiana Department of Transportation and Boonville including a signal light on SR 62 at the intersection with SR 61, changes to many of the curb cuts and access drives along SR 62, and the SR 62 widening project.

With the continuing growth of vehicular and truck traffic on the westside and in downtown areas of Boonville, the City of Boonville and Warrick County decided to update the 1987 study. Both the westside and downtown areas of Boonville were analyzed with regard to traffic flow heavy-duty truck movements, accidents, and travel delay. Traffic was forecasted to the year 2025.

The analysis shows that traffic will increase from 31% to 37% on SR 62 and between 55% and 61% on SR 61. The SR 62 widening project by the Indiana Department of Transportation will resolve the peak period traffic flow problems on SR 62. However, the current downtown traffic conflicts with the heavy-duty trucks, cars, and pedestrians will continue to worsen over the next 25 years. With the new Judicial Center in downtown Boonville, the pedestrian traffic between the Center and the Court House must cross SR 61 and SR 62. A SR 61 bypass that would route traffic to the north and west sides of Boonville would divert traffic (including heavy-duty trucks) from the downtown improving travel time, reducing vehicle-pedestrian conflicts, and providing better accessibility. These improvements may also be viewed as a selling point in Warrick County's economic development strategy.

Based upon the findings in the Feasibility Study and the community support shown at a January 18, 2001 public meeting, the City of Boonville and Warrick County hope that you and your staff will read this feasibility study and then meet with us to determine the best course of action for all parties. If you have any questions, please contact us. Thank you for your time and attention to this matter.

Sincerely,

Pam Hendrickson, Mayor

Board of County Commissioners

Jack Pike

Carl Conner

Don Williams

FEASIBILITY STUDY FOR SR 61 BOONVILLE BYPASS IN WARRICK COUNTY

prepared for the

Town of Boonville and the Warrick County Commissioners

February 2001

prepared by

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Warrick County
Draft Report

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I. INTRODUCTION

1. Background

In 1987, the Boonville Traffic Study Commission conducted a site impact analysis for the portion of Boonville along SR 62 on the westside of the city. The resulting report entitled the Boonville Westside Commercial Area Traffic Impact Study used traffic counts, turning movements, and accident data to determine the existing traffic conditions and to make recommendations to improve traffic flow.

This 1987 study developed a series of immediate and long-range proposed improvements. The immediate improvements focused on installing a traffic signal to control the SR 61 and SR 62 intersection and controlling the number and size of curb cuts along SR 62. The long-range improvements included the extension of SR 61 to the north around Boonville with connection to SR 61 north of Boonville and the relocation /realignment of SR 62.

Since the study was completed, a traffic signal has been installed at the intersection of SR61 and SR 62. Changes have been made to some of the curb cuts and access drives along SR 62 to improve circulation and safety. The Indiana Department of Transportation is currently in the land acquisition phase to widen SR 62 from Evansville to Boonville and to relocate a portion of SR 62 just west of Boonville. The extension of SR 61 around the westside of Boonville has not received any further attention since the 1987 study.

2. Purpose

The scope of this feasibility study is to re-evaluate the traffic conditions on SR 61 and SR 62 since the 1987 study. Currently, SR 62 is a two-lane facility on the east and west sides of Boonville while through Boonville SR 62 is a one-way pair on either side of the Warrick County Court House. SR 61 is a two-lane facility both north and south of Boonville. Through Boonville SR 61 uses a portion of the SR 62 one-way pair and uses a portion of 3rd Street. The City of Boonville and Warrick County have jointly determined that this feasibility study is needed to address certain objectives including:

1. Determine the existing traffic characteristics of the area and the degree to which these characteristics have changed since the 1987 analysis;
2. Forecast future traffic characteristics for the area; and
3. Determine the need for a SR 61 Bypass to address existing and future transportation needs and any potential social and environmental impacts of the bypass.

II. INVENTORY OF EXISTING CONDITIONS

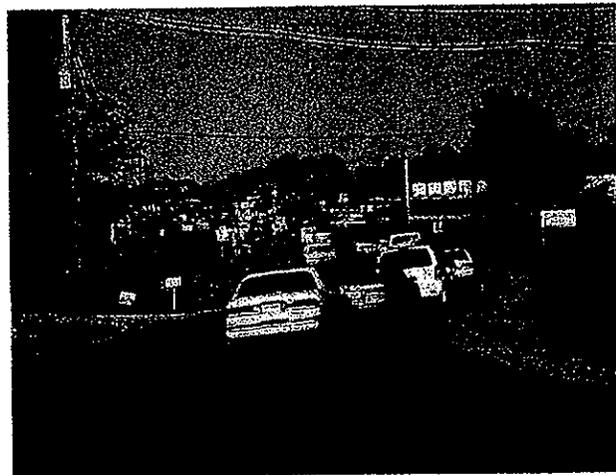
To determine the existing traffic flow characteristics of the area, various transportation data was collected including:

1. Traffic counts
2. Turning movements
3. Heavy-duty truck percentages
4. Accidents
5. Travel delay

This information was collected in the spring and summer of 1999 for a study area encompassing the City of Boonville and the immediate surrounding area in Warrick County. Figure 1 shows this study area.

1. Traffic Counts

A traffic counting program was undertaken in the spring of 1999 to collect counts on various city, county, and state roadways. These 1999 daily traffic counts are shown on Figure 2. Each count was obtained over a 48-hour period and was factored to become an average daily traffic volume. The volumes were not adjusted for day of the week or month of the year. On Figure 3, the traffic counts obtained for the 1987 analysis are shown. Table 1 shows the difference in traffic between 1987 and 1999.



On SR 62 the growth in traffic has varied from 16.20% to 49.49%. The highest volumes on SR 62 are around the intersection with SR 61 on the westside of Boonville. Just east of the SR 61 intersection, the traffic count for 1999 is 28,661 while just west of SR 61 the count for 1999 is 21,582.

On SR 61 north of Boonville the traffic has increased 88.46% from 5,778 vehicles per day to 10,889 vehicles per day. SR 61 south of SR 62 has experienced a traffic increase since 1987 of 61.15%.

For the remaining city and county roads, most of the roads have experienced traffic increases from 1987 to 1999. The largest actual increase has been on Yankeetown Road just south of Oak Street where the traffic has increased by 1,612 vehicles per day.

BOONVILLE BYPASS

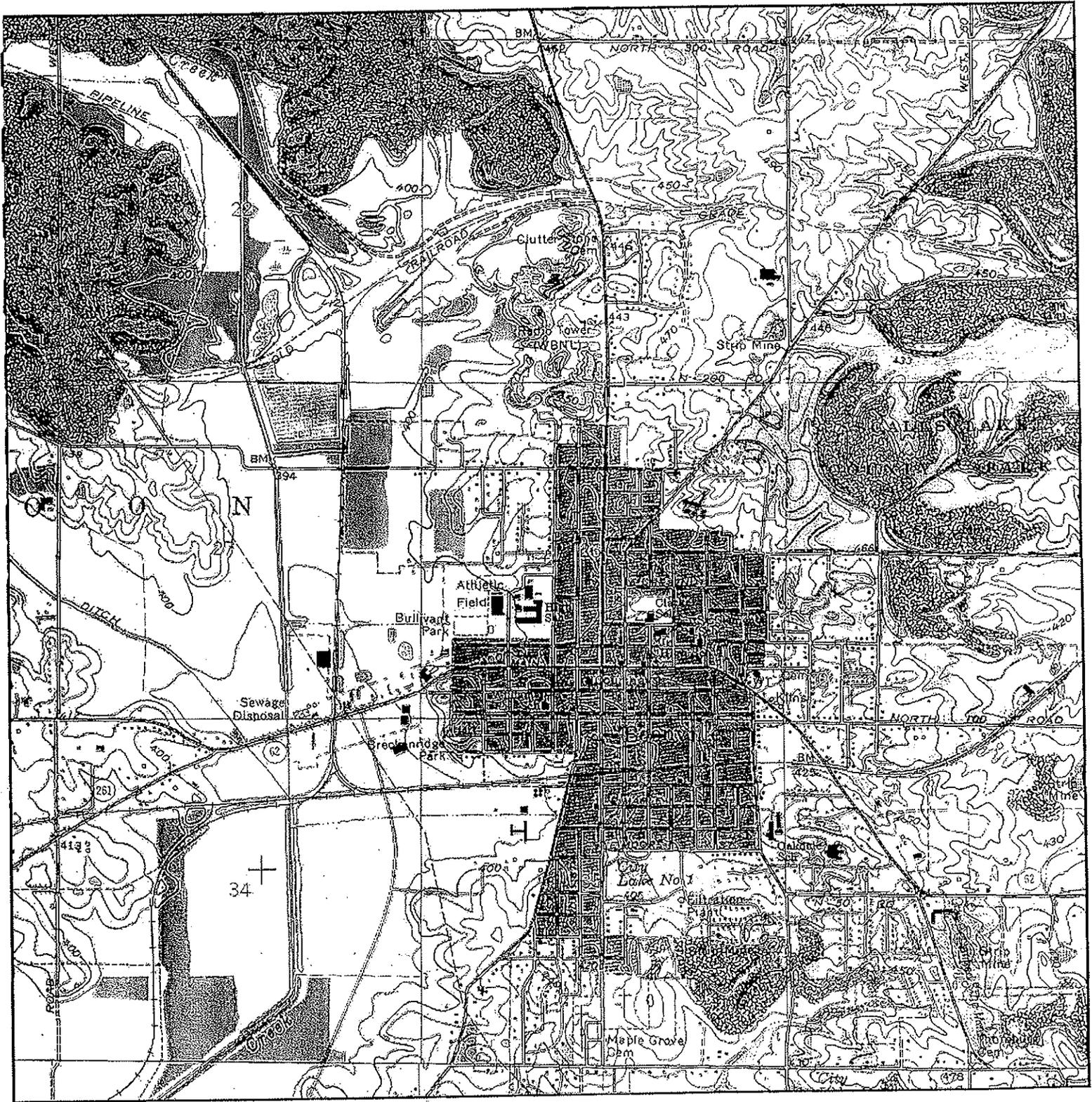


Figure 1

Study Area

BOONVILLE BYPASS

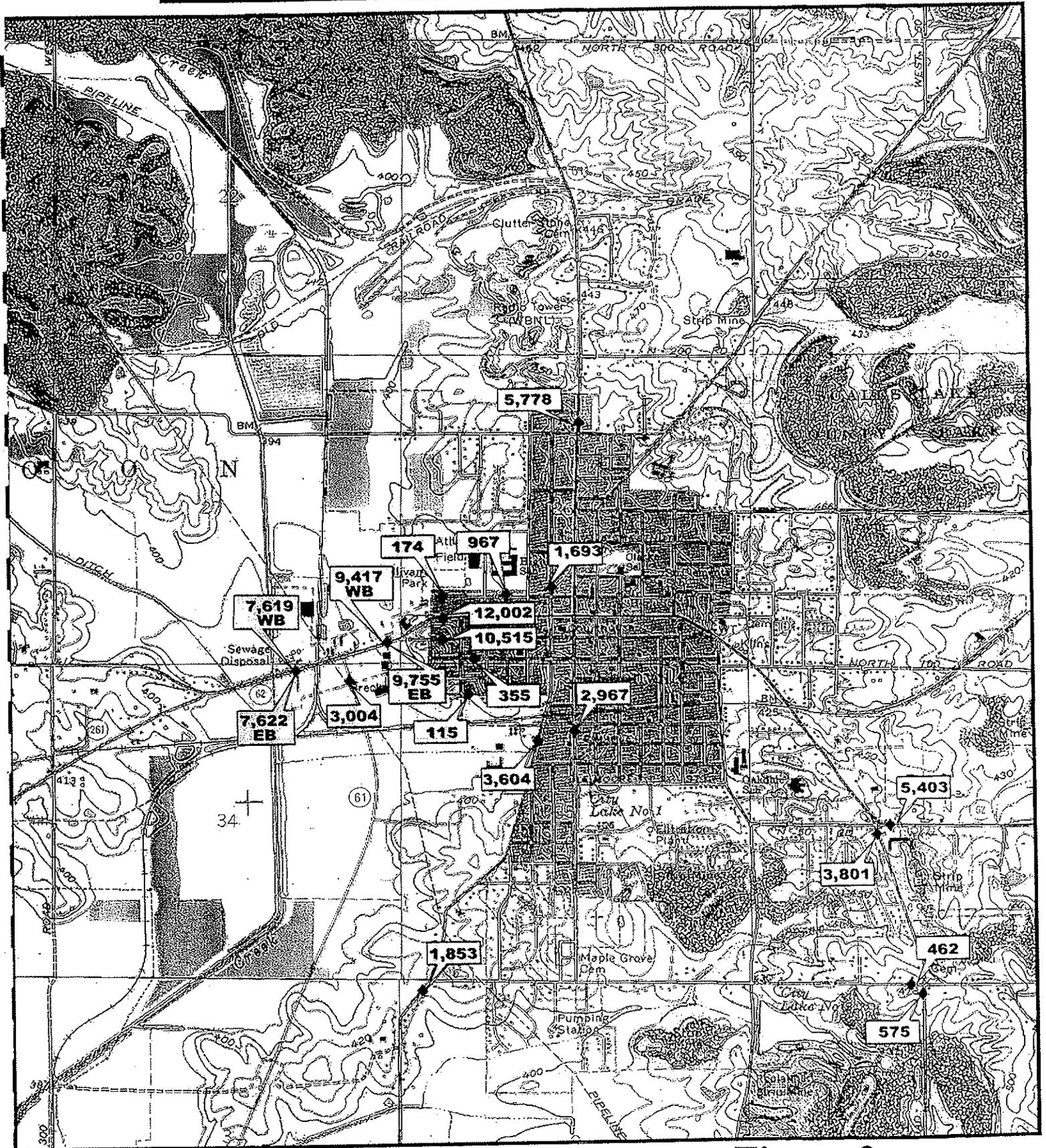


Figure 3

1987

Traffic Counts

FEASIBILITY STUDY FOR A BYPASS

TABLE 1
Comparison of Traffic Counts 1987 to 1999

Location	1987 Count	1999 Count	Difference	% Change 1987 to 1999
SR 61 south of SR 62	3,004	4,841	1,837	61.15%
SR 61 north	5,778	10,889	5,111	88.46%
SR 62 west of SR 61	15,241	21,582	6,341	41.60%
SR 62 east of SR 61	19,172	28,661	9,489	49.49%
SR 62 Eastbound One-way	10,515	13,713	3,198	30.41%
SR 62 Westbound One-way	12,002	13,946	1,944	16.20%
SR 62 east of Boonville	5,403	6,620	1,217	22.52%
Cherry Street	115	126	11	9.57%
Maple Grove east of Rockport Rd	462	977	515	111.47%
Rockport Rd south of SR 62	3,801	3,357	-444	-11.68%
Rockport Rd south of Maple Grove	575	1,125	550	95.65%
Second St in Boonville	1,693	1,481	-212	-12.52%
Sycamore St by the high school	967	827	-140	-14.48%
Sycamore St. by the library	174	276	102	58.62%
Third Street south of Oak St	2,967	3,487	520	17.53%
Yankeetown Rd south of Oak St	3,604	5,216	1,612	44.73%
Yankeetown Rd south of Maple Gro	1,853	2,138	285	15.38%

2. Turning Movements

Vehicle turning movements were taken at the intersections of SR 62 and SR 61 on the westside of Boonville and of SR 62 and SR 61 in the downtown area of Boonville at the northeast corner of Court House and at the southeast corner of the Court House. Data for both the AM and PM peak hours were obtained. Tables 2, 3, and 4 show the AM peak hour for these intersections. Tables 5, 6, and 7 show the PM peak hour for these intersections.

The traffic volumes show a significant amount of vehicles are using these intersections in both the AM and PM peak periods. In addition, there is a high level of heavy-duty trucks that are using these intersections. A heavy-duty truck is defined as a truck with 3 or more axles or a 2-axle truck that has 6 tires. In the AM peak period these heavy-duty trucks account for 13.5% of the northbound vehicles at the intersection of SR 62 and SR 61 at the northeast corner of the Court House in downtown Boonville and 9.5% of the southbound vehicles. The truck percentage for the eastbound vehicles for the intersection at the southeast corner of the Court House is 9.6% heavy-duty trucks in the AM peak period.

FEASIBILITY STUDY FOR A BYPASS

TABLE 2 and 3
Turning Movements on SR 62 – AM Analysis

Table 2 S.R. 62 & S.R. 61 Intersection on the westside of Boonville AM Analysis									
	EB		WB		NB		INTERSECTION		
	15 min cts	Hrly Totl.	15 min cts	Hrly Totl.	15 min cts	Hrly Totl.	15 min cts	Hrly Totl.	
6:00-6:15	33	289	161	829	20	122	214	1240	6:00 TO 7:00
6:15-6:30	66	360	224	882	31	147	321	1389	6:15 TO 7:15
6:30-6:45	77	436	236	885	32	166	345	1487	6:30 TO 7:30
6:45-7:00	113	506	208	877	39	241	360	1624	6:45 TO 7:45
7:00-7:15	104	516	214	885	45	250	363	1651	7:00 TO 8:00
7:15-7:30	142	528	227	842	50	243	419	1613	7:15 TO 8:15
7:30-7:45	147	490	228	736	107	233	482	1194	7:30 TO 8:30
7:45-8:00	123	467	216	652	48	174	387	712	7:45 TO 8:45
8:00-8:15	116	467	171	558	38	155	325	325	8:00 TO 9:00
8:15-8:30	104		121		40				
8:30-8:45	124		144		48				
8:45-9:00	123		122		29				
Max	147	528	236	885	107	250	482	1651	
	PHF= 0.90		PHF= 0.94		0.58		PHF= 0.86		
	% TRUCK= 1.9		% TRUCK= 2.8		% TRUCK= 7.6				
	*PHF represents Peak Hour Factor			From counts taken 3-4-99					
Table 3 S.R. 62 & S.R. 61 Intersection in Boonville at NE Corner of Court House AM Analysis									
	WB		SB		NB		INTERSECTION		
	15 min cts	Hrly Totl.	15 min cts	Hrly Totl.	15 min cts	Hrly Totl.	15 min cts	Hrly Totl.	
6:00-6:15	156	745	31	218	25	116	212	1079	6:00 TO 7:00
6:15-6:30	231	775	60	226	25	131	316	1132	6:15 TO 7:15
6:30-6:45	149	795	66	232	38	154	253	1181	6:30 TO 7:30
6:45-7:00	209	928	61	244	28	164	298	1336	6:45 TO 7:45
7:00-7:15	186	919	39	252	40	182	265	1353	7:00 TO 8:00
7:15-7:30	251	908	66	276	48	181	365	1365	7:15 TO 8:15
7:30-7:45	282	795	78	246	48	167	408	1000	7:30 TO 8:30
7:45-8:00	200	645	69	216	46	162	315	592	7:45 TO 8:45
8:00-8:15	175	611	63	196	39	160	277	277	8:00 TO 9:00
8:15-8:30	138		36		34				
8:30-8:45	132		48		43				
8:45-9:00	166		49		44				
Max	282	928	78	276	48	182	408	1365	
	PHF= 0.82		PHF= 0.88		0.95		PHF= 0.84		
	% TRUCK= 2.4		% TRUCK= 9.5		% TRUCK= 13.5				
	*PHF represents Peak Hour Factor			From counts taken 11-16-99					

FEASIBILITY STUDY FOR A BYPASS

TABLE 4
Turning Movements on SR 62 – AM Analysis

Table 4	Third St. & Locust St.- Intersection in Boonville at SE Corner of Court House AM Analysis								
	EB		SB		NB		INTERSECTION		
	15 min cts	Hrly Totl.	15 min cts	Hrly Totl.	15 min cts	Hrly Totl.	15 min cts	Hrly Totl.	
6:00-6:15	51	324	7	85	6	44	64	453	
6:15-6:30	79	382	18	105	10	51	107	538	6:15 TO 7:15
6:30-6:45	92	443	33	115	19	73	144	631	6:30 TO 7:30
6:45-7:00	102	521	27	115	9	90	138	726	6:45 TO 7:45
7:00-7:15	109	580	27	141	13	110	149	831	7:00 TO 8:00
7:15-7:30	140	599	28	133	32	114	200	846	7:15 TO 8:15
7:30-7:45	170	577	33	120	36	95	239	646	7:30 TO 8:30
7:45-8:00	161	527	53	105	29	78	243	407	7:45 TO 8:45
8:00-8:15	128	499	19	78	17	71	164	164	8:00 TO 9:00
8:15-8:30	118		15		13				
8:30-8:45	120		18		19				
8:45-9:00	133		26		22				
Max	170	599	53	141	36	114	243	846	
	PHF= 0.88		PHF= 0.67		0.79		PHF= 0.87		
	% TRUCK= 9.6		% TRUCK= 2.0		% TRUCK= 0.9				
	*PHF represents Peak Hour Factor			From counts taken 11-16-99					

For downtown Boonville which has a significant amount of pedestrian traffic between the Court House and the Judicial Center that crosses SR 62, these large truck percentages create the potential for vehicular and pedestrian conflicts. For example in the AM peak period of 7:15 to 8:15 AM, approximately 250 heavy-duty trucks go through the SR 62 intersection at the northeast corner of the Court House.

In the PM peak period of 3:45 to 4:45 PM, approximately 150 heavy-duty trucks pass through the SR 62 intersection at the northeast corner of the Court House. The percentages range from 5.6% to 2.4%.

For the SR 62 and SR 61 intersection on the westside of Boonville, the truck percentages in the AM peak period range from 7.6% to 1.9% while in the PM peak period the percentages range from 2.9% to 0.6%.

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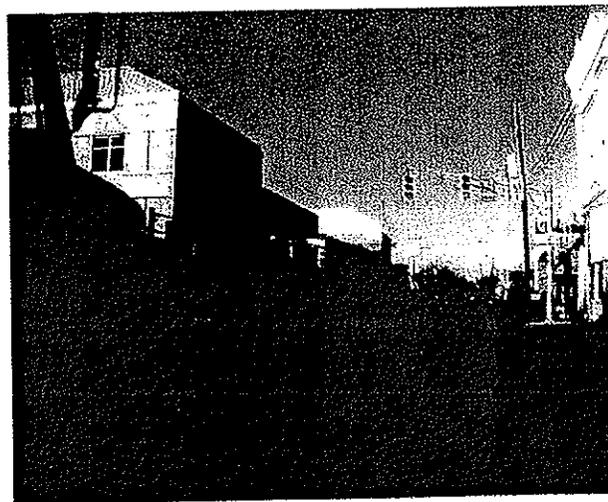
TABLE 5 and 6
Turning Movements on SR 62 – PM Analysis

Table 5 S.R. 62 & S.R. 61 Intersection on the westside of Boonville PM Analysis									
	EB		WB		NB		INTERSECTION		
	15 min cts	Hrly Totl.	15 min cts	Hrly Totl.	15 min cts	Hrly Totl.	15 min cts	Hrly Totl.	
3:30-3:45	189	682	210	841	96	373	495	1896	3:30-4:30
3:45-4:00	208	692	211	858	84	358	503	1908	3:45-4:45
4:00-4:15	192	620	222	877	95	365	509	1862	4:00-5:00
4:15-4:30	93	621	198	881	98	359	389	1861	4:15-5:15
4:30-4:45	199	681	227	950	81	343	507	1974	4:30-5:30
4:45-5:00	136		230		91		457		
5:00-5:15	193		226		89		508		
5:15-5:30	153		267		82		502		
Max	208	692	267	950	98	373	509	1974	
	PHF= 0.83		PHF= 0.89		0.95		PHF= 0.97		
	% TRUCK= 1.9		% TRUCK= 0.6		% TRUCK= 2.9				
	*PHF represents Peak Hour Factor				From counts taken 3-4-99				
Table 6 S.R. 62 & S.R. 61 Intersection in Boonville at NE Corner of Court House PM Analysis									
	WB		SB		NB		INTERSECTION		
	15 min cts	Hrly Totl.	15 min cts	Hrly Totl.	15 min cts	Hrly Totl.	15 min cts	Hrly Totl.	
3:00-3:15	177	748	67	290	65	307	309	621	3:00-4:00
3:15-3:30	182	724	78	297	86	307	0	604	3:15-4:15
3:30-3:45	222	731	79	281	77	288	0	922	3:30-4:30
3:45-4:00	167	702	66	269	79	291	312	1262	3:45-4:45
4:00-4:15	153	694	74	258	65	288	292	1240	4:00-5:00
4:15-4:30	189	684	62	239	67	287	318	1210	4:15-5:15
4:30-4:45	193	654	67	244	80	287	340	892	4:30-5:30
4:45-5:00	159	577	55	240	76	253	290	552	4:45-5:45
5:00-5:15	143	580	55	237	64	247	262	262	5:00-6:00
5:15-5:30	159		67		67				
5:30-5:45	116		63		46				
5:45-6:00	162		52		70				
Max	222	748	79	297	86	307	340	1262	
	PHF= 0.84		PHF= 0.94		PHF= 0.89		PHF= 0.93		
	% TRUCK= 2.4		% TRUCK= 5.6		% TRUCK= 2.6				
	*PHF represents Peak Hour Factor				From counts taken 11-16-99				

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TABLE 7
Turning Movements on SR 62 – PM Analysis

Table 7	Third St. & Locust St. Intersection in Boonville at SE Corner of Court House PM Analysis								
	EB		SB		NB		INTERSECTION		
	15mincts	HHV/roll	15mincts	HHV/roll	15mincts	HHV/roll	15mincts	HHV/roll	
3:00-3:15	269	982	56	183	37	166	362	729	3:00-4:00
3:15-3:30	244	1000	42	184	40	158	0	740	3:15-4:15
3:30-3:45	202	1019	31	180	43	145	0	1068	3:30-4:30
3:45-4:00	267	1115	54	192	46	131	367	1438	3:45-4:45
4:00-4:15	287	1106	57	180	29	120	373	1406	4:00-5:00
4:15-4:30	263	1091	38	165	27	134	328	1390	4:15-5:15
4:30-4:45	298	1059	43	162	29	131	370	1062	4:30-5:30
4:45-5:00	258	1013	42	152	35	124	335	692	4:45-5:45
5:00-5:15	272	1023	42	134	43	119	357	357	5:00-6:00
5:15-5:30	231		35		24				
5:30-5:45	252		33		22				
5:45-6:00	268		24		30				
Max	298	1115	57	192	46	166	373	1438	
	PHF= 0.94		PHF= 0.84		PHF= 0.90		PHF= 0.96		
	% TRUCK= 1.4		% TRUCK= 1.6		% TRUCK= 0.5				
	*PHF represents Peak Hour Factor			From counts taken 11-16-99					



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3. Accidents

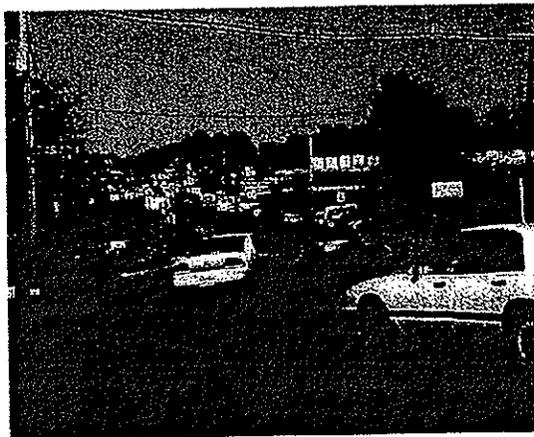
For accidents on SR 62, the analysis looked at the SR 62 and SR 61 intersection on the westside of Boonville. The number and type of accident for 1996 through 1998 were totaled and are shown in Table 8. In 1996, a total of 15 accidents occurred at this intersection. In 1997, a total of 7 accidents occurred at this intersection while in 1998 the number increased to 12 accidents.

TABLE 8
Total Accidents at SR 62 and SR 61 Intersection on the Westside of Boonville
1996-1998

Types of Accidents	1996	1997	1998
Property Damage	12	5	10
Personal Injury	3	2	2
Fatality	0	0	0
Totals	15	7	12

4. Travel Delay

The high traffic volumes on SR 62, as shown in Table 1, result in congestion and vehicle delay. Traffic using the intersection of SR 62 and SR 61 on the westside of Boonville experiences significant delay especially during the peak traffic periods. Table 9 shows the results of the delay study conducted at that intersection. The average delay at that intersection during the PM peak period is 2 minutes and 35 seconds for each vehicle.



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TABLE 9
Traffic Delay at SR 62 and SR 61 Intersection on the Westside of Boonville

Traffic Delay Study S.R. 62 & S.R. 61 Boonville, IN				
Time of Day	Length of Que (ft.)	Delays in Minutes	Observed Details	Type of Vehicle
15:43	2000'	02:30.0	Normal	Pick-up
15:47	2000'	02:10.0	Normal	Semi
15:50	2000'	03:10.0	Gaps	School Bus
15:54	2000'	02:06.0	Normal	Pick-up
15:58	2000'	<i>free flow</i>	<i>34 thru light no stop</i>	
16:01	1500'	02:03.0	Normal	Pick-up
16:05	2000'	02:43.0	Normal	Car
16:09	2000'	02:50.0	Gaps	Car
16:12	2000'	02:23.0	Normal	Truck
16:15	2000'	02:20.0	Normal	Pick-up
16:18	2000'	02:17.3	Normal	Semi
16:21	2000'	02:45.6	Normal	Semi
16:24	2000'	02:34.9	Normal	Car
16:27	2000'	02:47.7	Normal	Van
16:30	2000'	02:15.0	Normal	Van
16:33	3000'	04:26.5	Gaps	Car
16:42	2500'	03:27.3	Normal	Car
16:46	2500'	02:43.1	Normal	Van
16:49	2500'	03:10.0	Normal	Pick-up
16:53	2500'	02:00.4	Normal	Car
Average Delay 2:35 - Minutes				

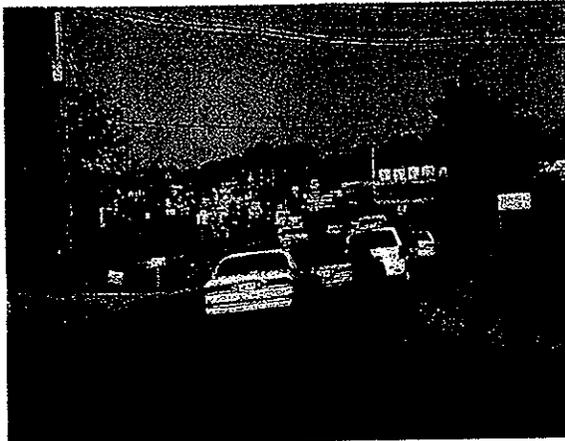
FEASIBILITY STUDY FOR A BYPASS

5. Capacity Analysis

Using existing turning movements, geometrics, truck percentages, and signal timings a capacity analysis was conducted of the SR 62 and SR 61 intersection on the westside of Boonville. Table 10 shows the results of that analysis. The PM peak period was analyzed. The intersection performance summary in Table 10 shows that this intersection currently in the PM peak period has a level of service (LOS) that exceeds D. The northbound approach has a LOS of D, as does the southbound approach, which is the drive access to commercial activity. The west approach has a LOS of B. The eastbound approach has a LOS that exceeds D. So, the intersection LOS exceeds D. This analysis shows that a gridlock situation is created for vehicles traveling eastbound.

6. Land Use

The existing land uses in the area are important to consider in analyzing the existing conditions of a roadway. North of downtown Boonville along SR 61 (North 3rd Street), the land use is predominately residential. While there are a few commercial facilities along SR 61, single family homes line the street.



The east-west one-way pair of SR 62 and SR 61 has a mixture of residential and commercial uses that border the roadway with the library on the north side of the street. Just a block north of the one-way pair is the Boonville High School. Students, faculty, and parents must use residential streets to reach the high school.

At the end of the one-way pair on the west side, the land use is heavily commercial with a shopping center on the south side of the road. The commercial area extends to the railroad tracks to the west on SR 62. On SR 61 south of SR 62 there is Boonville Junior High School. The main access to this junior high school is from SR 61.

Streets: (N-S) SR 61 (E-W) SR 62
 Analyst: DAR File Name: 6261EXPM.HC9
 Area Type: Other 3-4-99 pm hr
 Comment: Existing Evening Peak Hour (4:30-5:30PM)

	Northbound			Southbound			Eastbound			Westbound			
	L	T	R	L	T	R	L	T	R	L	T	R	
No. Lanes	> 1		1	> 1	<		1	1	<		1	1	<
Volumes	103	1	240	1	1	1	1	895	55	131	550	1	
PHF or PK15	0.95	0.95	0.95	0.58	0.58	0.58	0.83	0.83	0.83	0.97	0.97	0.97	
Lane W (ft)		12.0	12.0		12.0		11.0	12.0		16.0	16.0		
Grade		0			0			0			0		
% Heavy Veh	3	0	3	0	0	0	2	2	2	1	1	1	
Parking	(Y/N)	N		(Y/N)	N		(Y/N)	N		(Y/N)	N		
Bus Stops			0			0			0			0	
Con. Peds			0			0			0			0	
Ped Button	(Y/N)	N		(Y/N)	N		(Y/N)	N		(Y/N)	N		
Arr Type		3	3		3		3	3		3	3		
RTOR Vols			0			0			0			0	
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
Prop. Share													
Prop. Prot.			100										

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
NB Left	*							
Thru	*							
Right	*							
Peds								
SB Left	*							
Thru	*							
Right	*							
Peds								
EB Right								
WB Right								
Green	40.0A				25.0A	80.0P		
Yellow/AR	6.8				6.1	6.1		
Cycle Length: 164 secs Phase combination order: #1 #5 #6								

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio			Delay	LOS	
NB	LT	455	1705	0.239	0.267	30.5	D	34.1	D
	R	419	1568	0.604	0.267	35.7	D		
SB	LTR	411	1538	0.015	0.267	28.6	D	28.6	D
EB	L	123	243	0.008	0.507	12.9	B	*	*
	TR	936	1847	1.222	0.507	*	*		
WB	L	399	2025	0.338	0.361	24.4	C	10.1	B
	TR	1484	2131	0.383	0.696	6.7	B		

Intersection Delay = * (sec/veh) Intersection LOS = *
 (g/C) * (V/c) is greater than one. Calculation of D1 is infeasible.

FEASIBILITY STUDY FOR A BYPASS

III. FORECASTED FUTURE NEEDS

The existing conditions show that the SR 62 and SR 61 intersection on the westside of Boonville is operating at a LOS that exceeds D. In downtown Boonville around the Court House there is a significant amount of heavy-duty trucks using SR 61 and SR 62 especially in the AM peak period. With the pedestrian traffic that crosses SR 61 and SR 62 between the Court House and the Judicial Center, the potential exists for pedestrian and vehicular conflicts.

The Indiana Department of Transportation is currently in the land acquisition phase to widen SR 62 from Evansville to Boonville and to relocate a portion of SR 62 just west of Boonville. Using a transportation demand model, future traffic volumes were computed for the year 2025 with the improvement to SR 62 included.

Appendix A has several maps showing existing and future traffic volumes. The maps show the existing 1999 traffic on SR 61 and SR 62 in Boonville, the year 2025 traffic volume forecasts with the improvements made to SR 62 west of Boonville, and the year 2025 traffic volume forecasts with the extension of SR 61 around the westside of Boonville. Table 11 summarizes these traffic volumes. All year 2025 traffic volumes are rounded to the nearest hundred.

TABLE 11
Existing and Future Traffic Volumes

Road Section	1999	2025	2025 with Extension
SR 62 west of SR 61 intersection	21,582	28,300	28,300
SR 62 east of SR 61 intersection	28,661	38,800	32,200
SR 62 EB into downtown	13,739	18,300	14,200
SR 62 WB out of downtown	16,390	22,400	17,500
SR 62 eastside of Boonville	12,916	14,800	14,800
SR 61 north of Boonville	5,808	9,400	9,400
SR 61 into downtown	11,123	17,200	8,300
SR 61 (Extension on westside)	-	-	8,900
SR 61 south of SR 62 intersection	4,841	7,600	7,600

Traffic over the next 25 years will increase from 31% to 37% on SR 62 and between 55% and 61% on SR 61. These increases will make congestion and traffic backups grow worse as time goes by.

Using the information in Table 11 a capacity analysis for future forecasted traffic using the SR 62 and SR 61 intersection on the westside of Boonville was conducted. This analysis is shown in Tables 12, 13 and 14.

SR 62/SR 61 Intersection
Existing Traffic Volumes on Proposed Geometrics

12/20/99
16:59:22

SIGNAL97/TEAPAC[Ver 1.00] - Capacity Analysis Summary

Intersection Averages:

Degree of Saturation (v/c) 0.51 Vehicle Delay 12.6 Level of Service B+

Sq 12 **/**	Phase 1	Phase 2	Phase 3
/ \ North 		^ ++++ <++++ ****	^ ++++ <++++ ^
	^ <* * +> * * + * * +	v +> + +	++++ ****> **** v
	G/C=0.133 G= 8.0" Y+R= 5.0" OFF= 0.0%	G/C=0.150 G= 9.0" Y+R= 5.0" OFF=21.7%	G/C=0.483 G= 29.0" Y+R= 4.0" OFF=45.0%

C= 60 sec G= 46.0 sec = 76.7% Y=14.0 sec = 23.3% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	g/C Reqd Used	Service Rate @C (vph) @E	Adj Volume	v/c	HCM Delay	L S	90% Max Queue
S Approach							18.1	B
RT	12/1	0.204 0.367	517 575	253	0.440	14.9	B+	136 ft
LT+TH	12/1	0.095 0.133	168 231	109	0.466	25.5	*C+	80 ft
E Approach							7.3	A
TH+RT	24/2	0.190 0.717	2561 2561	568	0.222	3.1	A	67 ft
LT	12/1	0.111 0.150	199 268	135	0.504	25.0	*C+	96 ft
W Approach							14.0	B+
TH+RT	24/2	0.344 0.483	1680 1696	1144	0.675	14.0	*B+	249 ft
LT	12/1	0.000 0.483	351 395	1	0.003	8.0	A	25 ft

SIGNAL97/TEAPAC[Ver 1.00] - Capacity Analysis Summary

Intersection Averages:

Degree of Saturation (v/c) 0.70 Vehicle Delay 19.1 Level of Service B

Sq 12 **/**	Phase 1	Phase 2	Phase 3
/ \ North 		^	^
		++++	++++
		<++++	<++++
		****	^
	^	v	++++
	<* * +>	+>	****>
	* * +	+	****
	* * +	+	v
	G/C=0.133	G/C=0.167	G/C=0.467
	G= 8.0"	G= 10.0"	G= 28.0"
	Y+R= 5.0"	Y+R= 5.0"	Y+R= 4.0"
	OFF= 0.0%	OFF=21.7%	OFF=46.7%

C= 60 sec G= 46.0 sec = 76.7% Y=14.0 sec = 23.3% Ped= 0.0 sec = 0.0%

Lane Group	Width/Lanes	g/C Req'd	g/C Used	Service Rate @C (vph)	Adj @E Volume	v/c	HCM Delay	L S	90% Max Queue
------------	-------------	-----------	----------	-----------------------	---------------	-----	-----------	-----	---------------

S Approach

21.7 C+

RT	12/1	0.303	0.383	545	601	411	0.684	18.7	B	215 ft
LT+TH	12/1	0.121	0.133	168	231	148	0.632	30.1	*C	109 ft

E Approach

10.8 B+

TH+RT	24/2	0.233	0.717	2561	2561	733	0.286	3.3	A	87 ft
LT	12/1	0.166	0.167	228	298	227	0.762	34.9	*C	159 ft

W Approach

23.4 C+

TH+RT	24/2	0.432	0.467	1616	1638	1482	0.905	23.5	*C+	333 ft
LT	12/1	0.000	0.467	280	324	1	0.003	8.5	A	25 ft

SIGNAL97/TEAPAC[Ver 1.00] - Capacity Analysis Summary

Intersection Averages:

Degree of Saturation (v/c) 0.61 Vehicle Delay 15.4 Level of Service B

Sq 11	Phase 1	Phase 2
/		
/ \ North 	+ + *	^
	+ + *	++++
	<+ + *>	<++++
	v	^ ++++
	^	**** v
	<+ + +>	++++>
+ + +	++++	
+ + +	v	
G/C=0.350		G/C=0.500
G= 21.0"		G= 30.0"
Y+R= 5.0"		Y+R= 4.0"
OFF= 0.0%		OFF=43.3%

C= 60 sec G= 51.0 sec = 85.0% Y= 9.0 sec = 15.0% Ped= 0.0 sec = 0.0%

Lane Group	Width/Lanes	g/C Req'd	g/C Used	Service Rate @C (vph)	Adj @E Volume	v/c	HCM Delay	L S	90% Max Queue
N Approach									20.1 C+
TH+RT	12/1	0.212	0.350	541	613	278	0.454	B	152 ft
LT	12/1	0.297	0.350	171	234	133	0.568	*C+	73 ft
S Approach									18.6 B
TH+RT	12/1	0.276	0.350	548	608	411	0.676	B	227 ft
LT	12/1	0.206	0.350	288	342	147	0.430	B	81 ft
E Approach									11.0 B+
TH+RT	24/2	0.250	0.500	1726	1737	773	0.445	B+	162 ft
LT	12/1	0.074	0.500	95	120	72	0.576	B	30 ft
W Approach									15.4 B
TH+RT	24/2	0.379	0.500	1742	1752	1277	0.729	B+	269 ft
LT	12/1	0.440	0.500	241	281	205	0.730	*C+	86 ft

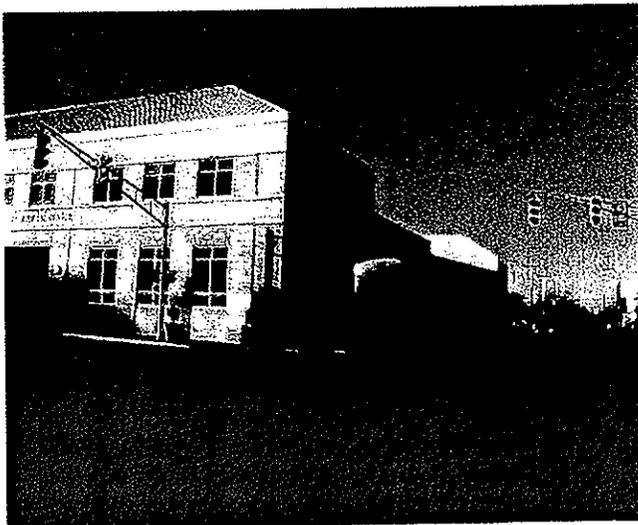
FEASIBILITY STUDY FOR A BYPASS

As previously discussed the capacity analysis for the existing traffic using the SR 62 and SR 61 intersection on the westside of Boonville shows that the intersection in the PM peak period has a level of service that exceeds D. In the PM peak period, a gridlock situation is created for vehicles traveling eastbound. The long delays that the existing traffic experiences at that intersection in the PM peak period confirms that this intersection functions poorly in peak traffic times.

The Indiana Department of Transportation has recognized the traffic problems on SR 62 between Boonville and Evansville and has plans to widen SR 62 to 4 lanes with turn lanes. With this proposed improvement, the capacity analysis in Table 12 shows that the level of service for existing traffic improves from exceeding D to a B+.

While the proposed widening of SR 62 appears to resolve the traffic problems at this intersection for existing traffic, will the proposed widening accommodate the forecasted increases of traffic of 31% to 37% over the next 25 years on SR 62? Table 13 shows the capacity analysis. When the future traffic for the year 2025 is included in the capacity analysis, the level of service changes from a B+ to a B. While several of the traffic movements in the intersection approaches will experience a level of service of C, the overall intersection will function at an acceptable level of service of B.

The proposed widening of SR 62 by the Indiana Department of Transportation will resolve the peak period traffic flow problems that currently plague SR 62 and its intersection with SR 61 on Boonville's westside. However, the downtown traffic conflicts on SR 62 and SR 61 with heavy-duty trucks, cars, and pedestrians will grow worse with the 31% to 37% traffic increases forecasted over the next 25 years.



Currently, heavy-duty trucks account for 13.5% of the northbound vehicles using the intersection of SR 62 and SR 61 at the northeast corner of the Court House in the downtown during the AM peak period. For the entire intersection, approximately 250 trucks in this one hour period or 4 trucks every minute for that hour pass through this intersection. For trucks coming from the north and having to make a right turn in front of the Judicial Center, the turning radius is very sharp and these trucks use both lanes in front of the Center (see truck in the picture).

Although the recent closing of the coal mining operations may reduce the number of heavy-duty trucks using this intersection, future traffic on SR 61 north of the downtown is forecasted to increase between 55% and 61 % over the next 25 years.

If a SR 61 bypass on the westside of Boonville was constructed, Table 11 shows that approximately 8,900 vehicles are forecasted to use the facility in the year 2025. This diversion

FEASIBILITY STUDY FOR A BYPASS

of traffic would further improve the functioning of the SR 62 and SR 61 intersection. This capacity analysis shown in Table 14 would improve the level of service of the west approach from C+ to a B. The overall level of service for the intersection would remain a B but the average vehicle delay would decline from 19.1 to 15.4.

The bypass would add capacity to the SR 62 and SR 61 intersection and help the intersection function at an acceptable level of service well beyond the year 2025.

IV. NEED FOR THE BYPASS

With the widening of SR 62 from Boonville to Evansville resolving the congestion and delay problems on SR 62 on the westside of Boonville, the need for a SR 61 Boonville Bypass focuses on the issues of accessibility, travel time, heavy-duty trucks, and economic development.

1. Accessibility

Helping move people and goods quickly and efficiently is a central goal in every transportation plan. In today's economy of "just-in-time" goods delivery, improving access and reducing travel times means a great deal to existing business and industry and can make a big difference in the location of new business and industry.

Warrick County has several industrial parks and sites that will benefit from a bypass on the westside of Boonville giving improved accessibility. Figure 4 shows Alcoa and the Yankeetown Power plant down off SR 61 by the Ohio River. Traffic using I-64 from the east would save time and money by using a SR 61 Boonville Bypass as an alternative to traveling through the downtown area of Boonville.

The Warrick County Industrial Park located west of SR 61 on SR 62 would also benefit from a SR 61 Boonville Bypass. By providing an alternative that routes vehicles around Boonville instead of through the center of town, the SR 61 Boonville Bypass saves the industries in this park both time and money.

An industrial park is also located south on SR 61 (see Figure 4). Similar to the County Industrial Park, the industries in this park would benefit from a Boonville Bypass. Access from east I-64 would save time and money by using the bypass as an alternative to traveling through Boonville.

For industries that receive supplies and ship goods to the east using I-64, eliminating the need for vehicles to go through the downtown area of Boonville will be a real boost to accessibility. This is especially true for heavy-duty trucks that currently stop and start at several traffic signals and have several sharp turning radiuses to negotiate. This improved accessibility is reflected in the 8,900 vehicles per day that are forecasted to use the bypass in the year 2025.

Besides improving access to industry, the Boonville Bypass would improve access to the high school and junior high school. The roadway would be located just west of the Boonville High School. Local streets connecting to the Boonville Bypass would provide direct access to the high school. Currently, access to the high school is by local streets through residential areas. The Boonville Bypass would allow for access to the high school by means other than through the residential areas.

For the Boonville Junior High School, the SR 61 Boonville Bypass would allow for more direct access for parents and teachers living on the north and northwest sides of Boonville. Instead of driving through the downtown area, parents and teachers could take the bypass.

FEASIBILITY STUDY FOR A BYPASS

Clearly, the improved accessibility as a result of a SR 61 Boonville Bypass would benefit the businesses and industries of the area as well as the residents of Boonville and its surrounding environs.

2. Travel Time

Improving accessibility also will reduce the travel time for motorists and truckers going through Boonville. In traveling through the downtown area, motorists have to deal with traffic signals, pedestrian traffic to the Court House and commercial establishments, on-street parking, and sharp curb radius for turning. On the near west side and on the near north side, motorists go through residential areas where people are walking, jogging, bicycling, mowing, and working. Future traffic volumes for the year 2025 forecast that vehicular traffic on SR 61 in the residential area north of the downtown will increase from 11,123 (in 1999) to 17,200 vehicles per day. That represents a 55% increase in traffic.

As north 3rd Street, SR 61 as a two lane road through a residential area was never designed to carry volumes of 17,200 vehicles per day. Traffic volumes of this magnitude in a residential neighborhood create the potential for many conflicts with walkers, joggers, and bikers. The future traffic will create congestion and traffic backups along SR 61. This leads to longer travel times and frustration for motorists and truck drivers.

The SR 61 Boonville Bypass would reduce the year 2025 traffic on SR 61 north of the downtown from 17,200 to 8,300 vehicles per day which is less traffic than is currently using SR 61 in this area (11,123 vehicles per day). As a result of the Boonville Bypass, the residences in the neighborhood would have a safer environment with less vehicular conflicts.

Travel time would improve for both the vehicles using the Bypass and for the local traffic remaining on the old SR 61 route.

3. Heavy-duty Trucks

Regardless of the status of the coal mine operations, SR 61 experiences a significant amount of use by heavy-duty trucks. As a direct route connecting Boonville with I-64 to the north and Alcoa to the south, SR 61 offers truckers an open highway free of stop signs and traffic signals except in and around Boonville. The traffic signals in and around Boonville of SR 61 can make driving a semi-truck very difficult.

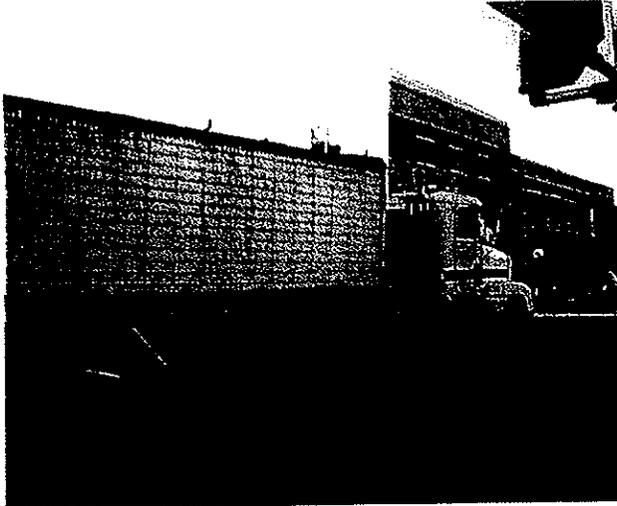
As previously stated, the AM peak traffic period has approximately 250 trucks in that one hour that pass through the SR 61 and SR 62 intersection by the Judicial Center. This heavy truck traffic must contend with pedestrian traffic as well as sharp curb radius.

The ideal situation would be to remove this truck traffic from SR 61 (North 3rd Street) which is a facility that goes through a residential neighborhood. The traffic should be on a highway that has wide shoulders for pulling onto, no pedestrian conflicts, no curbs, and no neighboring residential area. The Boonville Bypass offers this situation.

The nuisances created by the dust, dirt, noise, and exhaust of the heavy-duty trucks would be removed from the residential area. Trucks could maintain a steady speed instead of the stops

FEASIBILITY STUDY FOR A BYPASS

and starts caused by traveling through the downtown area. This would result in improved fuel economy and a reduction in trucking costs. The residential character of North 3rd Street would be enhanced and the neighborhood conflicts between vehicles, pedestrians, and bicycles would be reduced.



Recognizing the importance of trucking and good routes, the Warrick County Comprehensive Plan states that:

“The bypass will provide an excellent truck route to SR 61 North and onto I-64.”

4. Economic Development

Better access, reduced travel times, and better heavy-duty truck movement as a result of the SR 61 Boonville Bypass

also means improved opportunities for economic development. The Warrick County Comprehensive Plan states that

“The improvement in access to the Interstate system (by the SR 61 Boonville Bypass) may viewed as a selling point in Warrick County’s economic development strategy.”

Successful economic development in Warrick County relies upon ease of access to the major highway system. The SR 61 Boonville Bypass is a project that will substantially ease access to the interstate system by removing the need to go through the downtown area of Boonville to reach I-64. The 8,900 vehicles per day that are forecasted in the year 2025 to use the bypass shows that the bypass is a very attractive alternative to going through the downtown area.

V. ENGINEERING AND ENVIRONMENTAL OVERVIEW OF THE BYPASS

Having already discussed the need for the SR 61 Boonville Bypass, the next issue is the location of the proposed facility. While this report is not a corridor location or environmental document, some preliminary information regarding the location of the bypass was developed.

Figure 5 shows one possible corridor that may be considered for the bypass. The southern starting point is the existing intersection of SR 61 and SR 62 on the westside of Boonville. Although this intersection will be reconstructed as part of the widening project of SR 62 by the Indiana Department of Transportation, the SR 61 approach to this intersection will remain in the same location.

The proposed corridor would begin from this intersection and head in a northerly direction around the westside of Boonville. Possible access points are at Millersburg Road and for the Boonville High School. The corridor would end at existing SR 61 north of Boonville.

Preliminary Environmental Overview for Proposed Boonville Bypass

A preliminary environmental overview was completed for the proposed SR 61 Boonville Bypass from the intersection of SR 61 and SR 62 west of Boonville north to SR 61 north of Boonville in Warrick County, Indiana in an effort to identify potential environmental issues. The Boonville Bypass would be approximately 2 miles in length. The location is Indiana: Warrick County, Boon Township, Boonville Quadrangle, T6S R8W Sections 22 (eastern half), 23 (western half), 26 (western half) and 27 (eastern half). The roadway would be two-lane with shoulders and ditches.

A field review of the study area was conducted and supplemented by a record search using the following references:

- 1998 Warrick County Plat Maps;
- U.S. Geological Survey map (Boonville Quadrangle, Photo revised 1988);
- National Wetland Inventory Map (Boonville Quadrangle, 1989);
- Soil Survey of Warrick County, Indiana (1979);
- Well Location Map of Warrick County, Indiana (Carpenter and Lowrance, 1992);
- 1992-93 Indiana 305(b) Report (Indiana Department of Environmental Management);
- Quality of Surface Water in Coal Mining Region, Southwest IN (US Geo. Survey 1980)
- Hydrology Area 33, Eastern Reg., Interior Coal Province IN and KY (US Geo. Survey 1981)
- Distribution, Structure and Mined Areas of Coals in Warrick County, Indiana (Wier, 1958);
- Map of Warrick County Showing Locations of Surface Coal Mines (Irwin and Weber, 1986);
- Map of Warrick County Showing Locations of Underground Coal Mines (Weber, 1984);
- Flood Hazard Maps (1982),
- Flood Insurance Study (FEMA, 1993);





Figure 5
Possible Corridor For
Boonville Bypass

FEASIBILITY STUDY FOR A BYPASS

Drainage Areas of Indiana Streams (1975) and historical aeriels from the Natural Resource Conservation Service from 1940 to 1992 along with plat maps from the Auditor's and Recorder's Office in Boonville.

Environmental considerations in the proposed bypass appear to be as follows:

A. Land Use and Ownership

The bypass would begin on SR 62 where SR 61 (Alcoa Road) enters from the south on the westside of Boonville, Indiana. Land use for the bypass from SR 62 to Millersburg Road is a commercial property with building (hardware store), a pond, a fallow (disturbed) field that appears to have received fill in the last few years, 1 of 3 detention basins, elevated levee-like berm with underground Boonville sewer line, bottomland (wet) field with much *Juncus sp.* immediately west of the baseball fields of Bullivant Park and a year to two-year old agricultural field with much *Rumex sp.*

North of Millersburg Road, the land use is a grassy field immediately west of the Pioneer Two subdivision, a bottomland woods area and intermittent stream, reclaimed mining lands in wetland (principally open water and emergent), reclaimed mining land fields, and bottomland woods with intermittent stream and a long old stripper pit adjacent to the west side of SR 62.

Information from Auditor's Office indicates that the majority of the bypass would cross through Peabody Coal Company property (including Sunlight Development Corporation, i.e., Sunlight Wildlife Management Area) and City of Boonville property (owned and annexed).

B. Farmland Impacts

The study area has limited farmland potential. The only farmland observed was an older agricultural field immediately south of Millersburg Road. The majority of fields in the study area may be described as idle or fallow with limited agricultural use.

C. Archaeological Sites

Construction of a bypass west of Boonville is not expected to uncover significant archaeological sites since the majority of the study area has been disturbed from previous mining and excavation (development) activities along with approximately 1/3 of the study site being located in the a 100-year floodplain.

D. Transportation Impacts

A proposed bypass west of Boonville would cross Millersburg Road to connect with SR 61 to the north. No railroad tracks would be crossed in this project.

FEASIBILITY STUDY FOR A BYPASS

E. Mineral Impacts

The proposed bypass would cross reclaimed coal mining lands of Peabody Coal Company north of Millersburg Road and an open strip mine adjacent to SR 61 near the northern terminus. The former surface coal mining land north of Millersburg Road has been reclaimed into wetland and is owned by the Sunlight Development Corporation (Warrick County Plat Book, 1998). The wetland area is called Sunlight Wildlife Management Area with associated Widgeon Slew.

Historical maps from the Natural Resource Conservation Service during the years of 1940, 1958, 1972, 1987 and 1992 indicate coal mining lands during 1940, 1958 and 1972, while 1987 and 1992 indicate reclaimed coal mining lands of open and emergent wetlands and woods. Using Wier (1958), two abandoned underground mines (Coal V) may be in the project. They are Hillcrest Mine and Stone Mine. Hillcrest Mine was opened in 1949 and closed in 1951, while Stone Mine was opened in 1895 and closed possibly in 1897.

F. Relocations (Residential and Commercial)

Residential structures in the project area appear few and found only along SR 61 at the northern. Two homes may be relocated along with 1 business. The one business is north of the SR 62 and SR 61 intersection. The bypass would pass near two subdivisions.

G. Historic Structures

A field review showed no older homes in the project area. No historical impacts are anticipated from a bypass in the location as shown.

H. Wetland Impacts

The National Wetland Inventory map for Boonville quadrangle showed a number of wetlands in the study area. A field review from the roadways indicate that the proposed bypass may cross 2-3 open ponds, wetland woods and emergent wetlands associated with the Sunlight Wildlife Management Area, a stripper pit and possibly wetlands in a fallow field. Wetland impacts may total 10-25% or more.

I. Cemetery Impacts

No cemeteries are shown near the location of the bypass using the Boonville USGS quadrangle map.

J. Stream Impacts

The project would cross an intermittent tributary of Cypress Creek, an intermittent creek of the Sunlight Wildlife Management Area and an intermittent creek of the strip mined west of SR 61. All of these tributaries are very small and ditch-like in appearance.

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K. Soils

The principal soil types in the study area are the orthents (Org and Osg) and Birds Silt Loam (Bd). Orthents make up approximately 52% of the land crossed (associated with coal mining lands), while Birds Silt Loam makes up approximately 37%. The remaining soil types are Bartle Silt Loam (Ba), Bonnie Silt Loam (Bn), Stendal Silt Loam (Sn) and Hosmer Silt Loam (HoB).

Hydric Soils (e.g., Birds Silt Loam and Bonnie Silt Loam) make up approximately 49% of the land crossed, while potentially hydric soils (e.g., Bartle Silt Loam and Stendal Silt Loam) make up approximately 8% of the land crossed. The proposed roadway would be located for the most part in reclaimed wetland lands and hydric soils. Wetland impacts are anticipated using the present corridor location.

Prime farmland soils are found in the study area; however, farmland impacts are not anticipated since agricultural fields are not an observable use in the field review during June of 1999.

L. Floodplain Impacts

Flood Insurance Rate Map (Community Panel Number 180418 0125 B) shows approximately 1/3 of the route is within a 100-year floodplain.

M. Forest Impacts

Bottomland woods would be the most common woods affected by the proposed Boonville Bypass. Less than 10% of the total length may involve bottomland woods. These woods would be associated with the drainage crossed north of Millersburg Road and near SR 61. Forest fragmentation is not an issue in this corridor study.

N. Threatened, Endangered and Special (TES) Concern Species

Impacts for Threatened, Endangered and Special Concern Species requires coordination with the Indiana Department of Natural Resources, United States Fish and Wildlife Service and possibly other agencies. Species that may be of interest to these agencies are the *Myotis sodalis* (Indiana myotis) and possibly some wetland type of birds species and other. Coordination with the above agencies and the Sunlight Development Corporations is recommended. The reclaimed coal mining lands north of Millersburg Road (Sunlight Wildlife Management Area) showed the potential for a number of different wildlife species and botanical specimens.

O. Air and Noise Impacts

Air and noise impacts that exceed the abatement criteria for residential structures are not anticipated unless development occurs (e.g., subdivisions). No sensitive receivers such as hospitals, schools, nursing homes were observed in the study area.

FEASIBILITY STUDY FOR A BYPASS

P. Underground Storage Tanks and Hazardous Waste Sites

The project corridor did not show any service stations that would have existing or old underground storage tanks. Similarly, a review of a Hazardous Waste Handler and Superfund lists showed no RCRIS (Resource Conservation and Recovery Information System) or CERCLIS (Comprehensive Emergency Recovery Compensation Liability Information System) or Superfund sites.

The Boonville Sewage Treatment Plant has degraded water quality conditions in the nearby Cypress Creek as reported in IDEM 305(b) Report and U.S. Geological Survey (Water Resources Investigations 81-423). The Bypass is proposed to cross an intermittent stream (ditch) of Cypress Creek upstream and close to the Boonville Sewage Treatment Plant. No significant backflow impacts to this ditch are expected.

The above information is provided to generally describe potential impacts from a bypass on the west side of Boonville to connect SR 62 and SR 61. This information is preliminary and does not negate proper coordination with appropriate environmental agencies.

Preliminary Engineering Overview for Proposed Boonville Bypass

A preliminary engineering overview was also conducted for the proposed SR 61 Boonville Bypass. The proposed facility would be approximately 2 miles in length. The roadway would have 2-12' travel lanes with 10' shoulders on each side. In meeting the engineering standards there would be side ditches and clear zones. The estimated right-of-way would vary from 150' to 200'. Access would be provided at Millersburg Road and possibly at the Boonville High School.

The cost of the proposed bypass is shown in Table 15. These costs are in Year 2000 dollars. The costs range from a total of \$4,500,000 to \$5,950,000. This range of costs reflects the uncertainties of right-of-way needs, earth moving requirements, and relocations.

TABLE 15
Preliminary Costs for the SR 61 Boonville Bypass

Cost Breakdown	Low	High
1. Preliminary Engineering	\$300,000	\$350,000
Includes Design		
Surveying and Environmental		
2. Right-of-way Acquisition	\$1,300,000	\$1,800,000
Includes RW Engineering /Services		
3. Construction	\$2,900,000	\$3,800,000
Includes Construction Eng.		
Total Costs	\$4,500,000	\$5,950,000

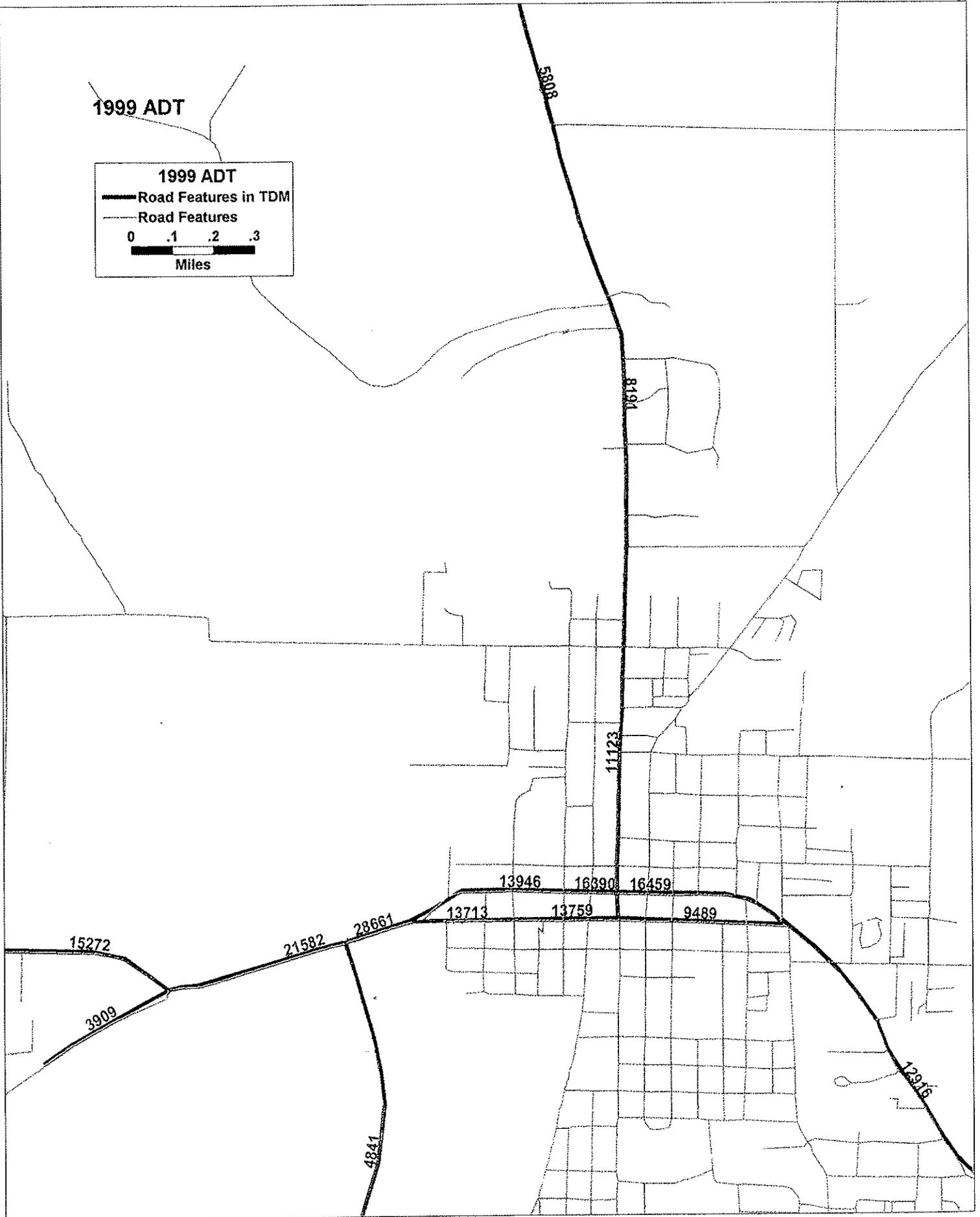
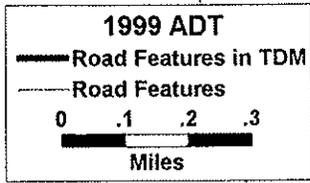
FEASIBILITY STUDY FOR A BYPASS

This purpose of this Feasibility Study for a SR 61 -- Boonville Bypass is to provide preliminary information on the need for a bypass, an estimated cost of the bypass, and possible potential environmental impacts. This Feasibility Study does not identify an exact location for a SR 61 -- Boonville Bypass. That process of selecting an exact location or roadway alignment would be done in the next step which is a corridor location and environmental study.

\\BLA\VOLI\SHARE\Projects\198-0291\report.doc

Appendix A
Travel Model Traffic for 1999 and 2025

1999 ADT

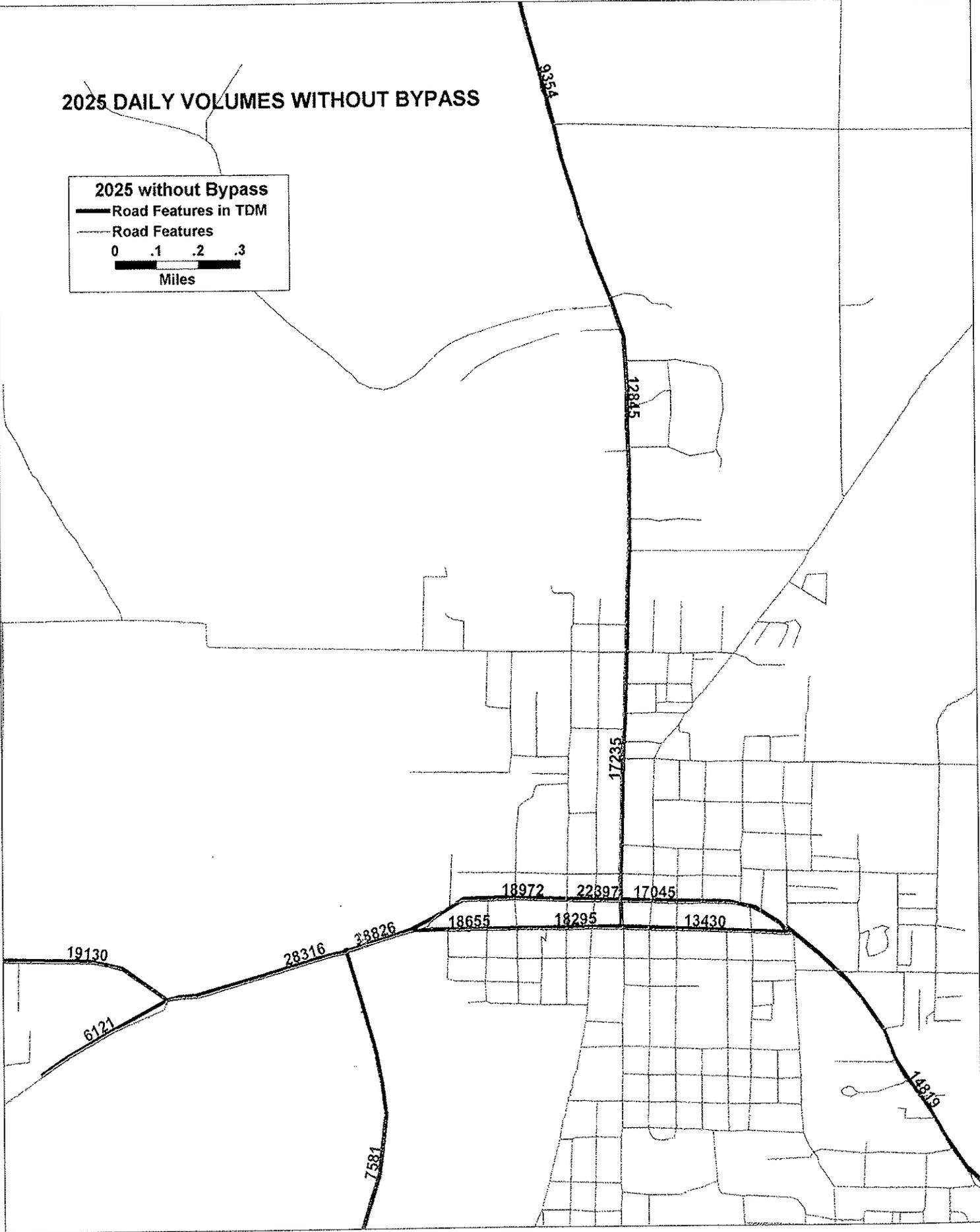


2025 DAILY VOLUMES WITHOUT BYPASS

2025 without Bypass

- Road Features in TDM
- Road Features

0 .1 .2 .3
Miles

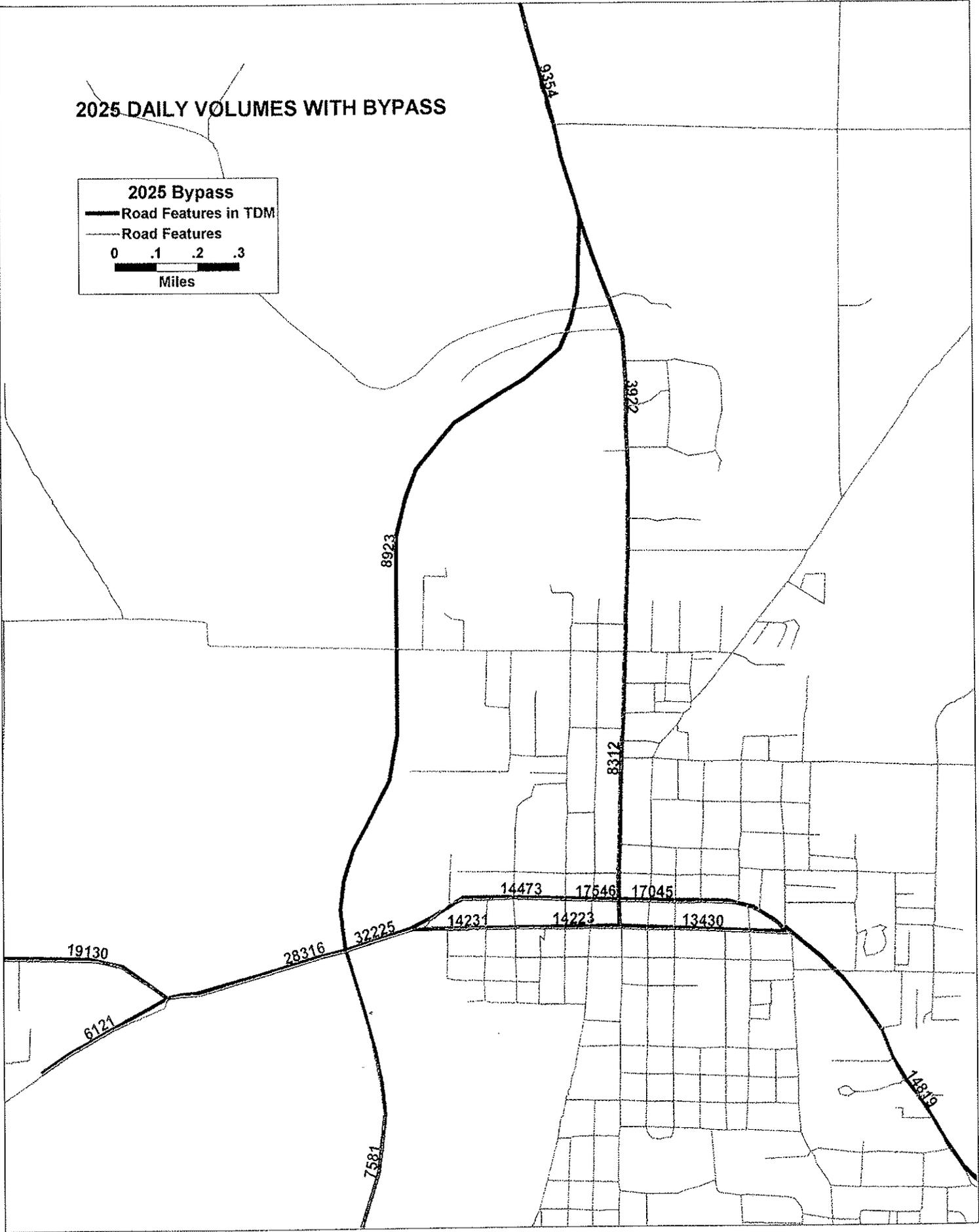


2025 DAILY VOLUMES WITH BYPASS

2025 Bypass

- Road Features in TDM
- Road Features

0 .1 .2 .3
Miles

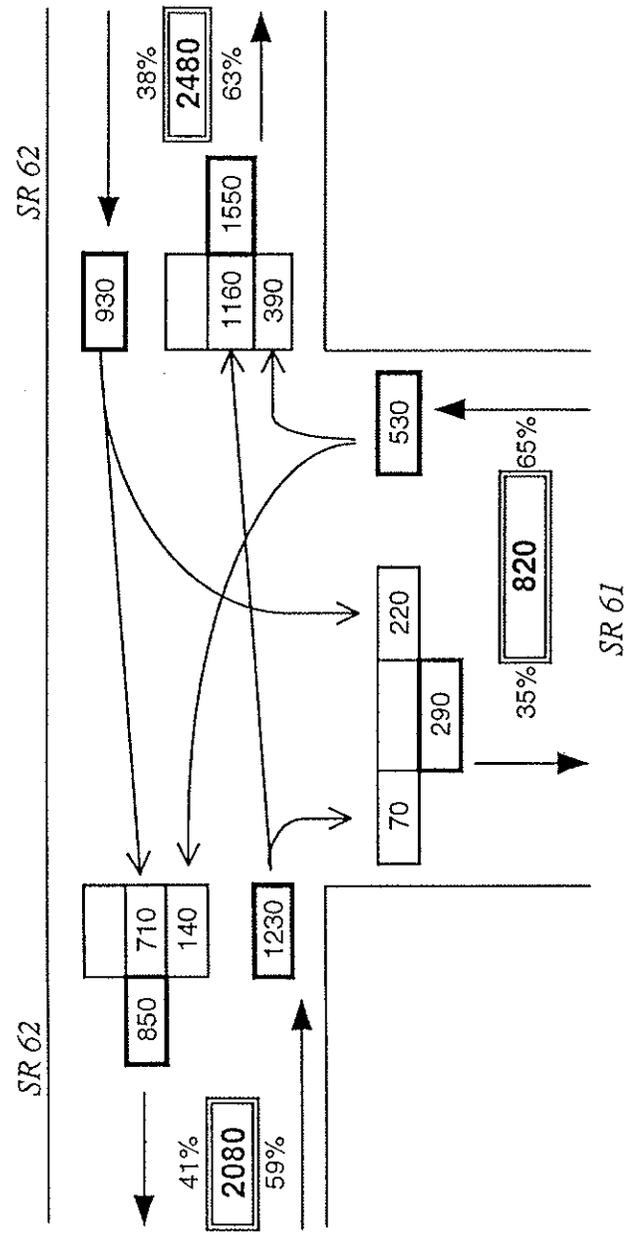


Appendix B
Intersection Traffic for SR 62 and SR 61 for 2025

PROJECT: SR 62/SR 61
 REQUEST DATE: 12/16/99
 ANALYST: SMTG
 SCENARIO: 2025
 INTERSECTION: SR 62/SR 61

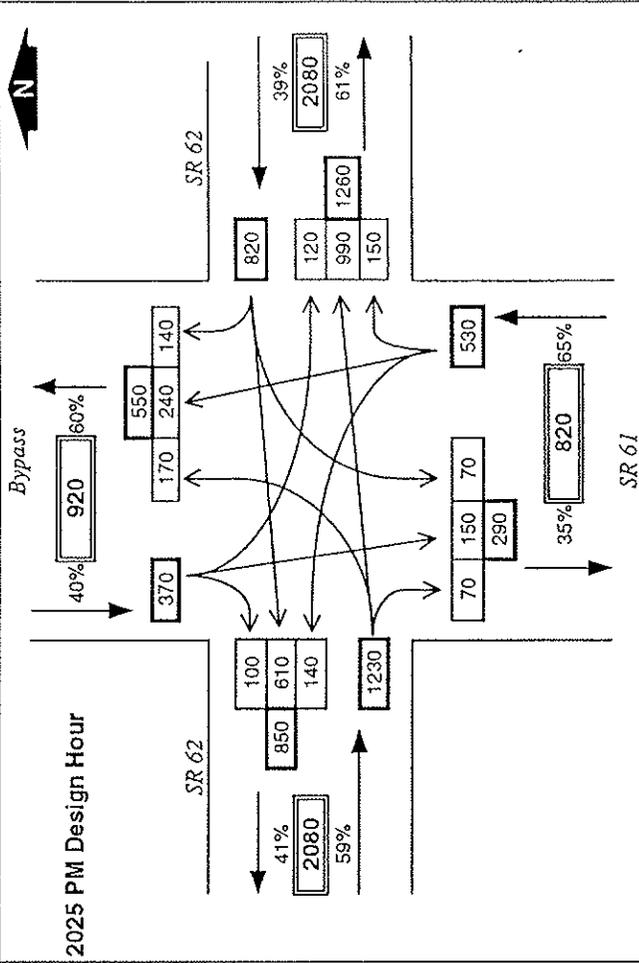
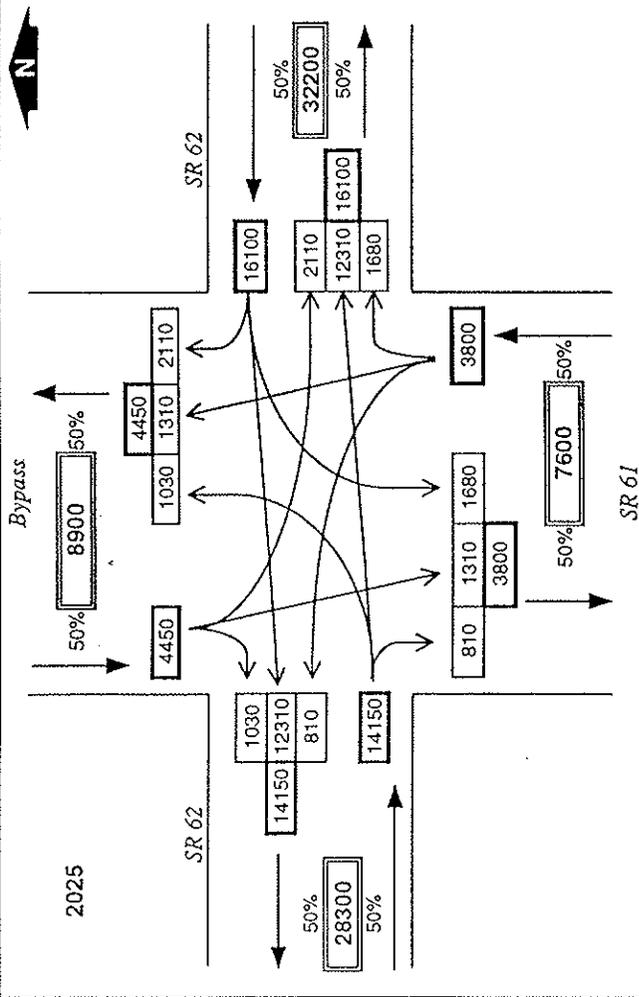


2025 PM Peak Hour



NOTE:

PROJECT: SR 62/SR 61
REQUEST DATE: 12/16/99
ANALYST: Scott Thompson-Graves
SCENARIO: 2025 Volumes with Bypass
INTERSECTION: SR 62/SR 61



Appendix C
Proposed Commitments by Local Governments

PROPOSED COMMITMENT BY LOCAL GOVERNMENTS

The Mayor of Boonville and the County Commissioners of Warrick County propose that the Indiana Department of Transportation (INDOT) construct S.R. 61 bypass from the intersection of S.R. 61 and S.R. 62 on the western edge of Boonville north and northeast approximately two miles to existing S.R. 61 north of Boonville.

The local governments would accept maintenance on S.R. 61 from the intersection of S.R. 62 and S.R. 61 at the Courthouse to the intersection of proposed S.R. 61 and existing S.R. 61. The distance of this section of S.R. 61 is approximately 1.7 miles.

Appendix D

Letters of Support for the Proposed Boonville Bypass from
Local Government Officials, State Legislators, and Others



State of Indiana

Senate

Senator Richard D. Young, Jr.
Minority Floor Leader
10347 East Daugherty Lane
Milltown, Indiana 47145-9720
Residence (812) 633-4946

Committees:
Appointments & Claims
Agriculture & Small Business
Rules & Legislative Procedure, R.M.M.

April 5, 2000

Christine Klika, Commissioner
Indiana Department of Transportation
Indiana Government Center North, N755
100 N. Senate
Indianapolis, IN 46204

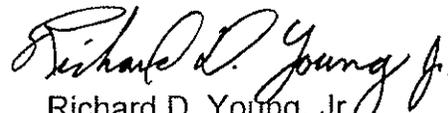
Dear Commissioner Klika:

This letter is written to offer my support to the proposed Boonville bypass that would connect State Road 61 on the north edge of Boonville to State Road 61/State Road 62 on the west side of Boonville. A feasibility study has been conducted that suggests that the proposed bypass is definitely needed for this area.

Some of the reasons for the proposed bypass include reducing traffic counts on existing State Road 62 (there has been a 50% increase in traffic over the past 13 years) and the abnormal amount of heavy truck traffic that intersects in the center of downtown Boonville poses a threat to other traffic and pedestrians in this community.

I urge your serious consideration for this proposed bypass as I consider it to be a worthwhile and necessary project. If I can provide any additional information to help you arrive at an affirmative decision, please do not hesitate to contact me.

Sincerely,


Richard D. Young, Jr.
Minority Floor Leader

RDY:eak



STATE OF INDIANA

SENATE

Senator Larry E. Lutz
2736 W. Virginia St.
Evansville, IN 47712
Residence (812) 424-9605
EMAIL: S49@al.org

Committee
Transportation & Interstate Cooperation, R.M.N
Insurance & Financial Institution
Natural Resource

April 12, 2000

Ms. Cristine Klika, Commissioner
Indiana Department of Transportation
Indiana Government Center North, N755
Indianapolis, Indiana 46204

Dear Commissioner Klika:

I would like to add my support to the proposed Boonville bypass that would connect State Road 61 on the north edge of Boonville to SR 61/SR62 on the west side of Boonville. A feasibility study conducted by Bernardin, Lochmueller & Associates, and paid for by the Warrick County Commissioners and the City of Boonville strongly suggests that the proposed bypass is sorely needed for this area. There are many reasons for the proposal. They include, but are not limited to:

1. Traffic counts on the existing SR62 coming into Boonville, just east of SR 61, has more than 28,000 vehicles per day. That is a 50% increase over the past 13 years.
2. All truck traffic on SR 61 going south into Boonville and north from Boonville must "circle the court house" square, taking two lanes to make the very sharp turns and creating the potential for vehicular and pedestrian conflicts. In fact, one truck has already crashed into the new \$10 million judicial center. According to the study, approximately 150 heavy-duty trucks pass through the SR 62 intersection at the northeast corner of the Court House in a one hour peak period, on a daily basis.
3. There were 12 accidents in 1998 that involved property damage and/or personal injury at the SR 62 and SR 61 intersection due to the high volume of traffic.
4. Traffic Delays: Traffic delays at SR 62 entering into Boonville are an everyday occurrence with traffic jams often extended thousands of feet east of Boonville.

If there ever were a need and justification for a bypass around a community for safety reasons, environmental protection due to traffic delays and reducing long traffic delays, then the proposed Boonville bypass would be a model of consideration. I strongly urge your favorable consideration of this project.

Respectfully,

Larry E. Lutz
State Senator
District 49



Senator Greg Server
5601 Springlake Drive
Evansville, Indiana 47710
Residence (812) 464-5601

Committees:
Natural Resources, Chair
Health & Environmental Affairs, R.M.
Health Subcommittee
Insurance & Financial Institutions
Financial Subcommittee, Chair
Governmental & Regulatory Affairs
Regulatory Affairs Subcommittee

April 10, 2000

Commissioner Christine Klika
INDOT
IGC N-755
Indianapolis, IN 46204

Dear Commissioner Klika:

I would like to take this opportunity to show my support for the proposed two mile Boonville bypass that would connect SR 61 on the north edge of Boonville to SR 61/SR 62 on the west side of Boonville. I definitely feel that the proposed bypass is greatly needed for the area.

The traffic delays are unbelievable as is the volume of automobiles and trucks entering into Boonville on a daily basis. There have also been numerous traffic accidents due to the high volume of traffic.

I urge your favorable consideration of this project. If you have any questions, please do not hesitate to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Greg Server".

Greg Server
State Senator

GS/dm

SPEAKER JOHN R. GREGG
Sandborn, Indiana

INDIANA HOUSE OF REPRESENTATIVES
111TH GENERAL ASSEMBLY

April 13, 2000

Ms. Cristine Klika, Commissioner
Indiana Department of Transportation
Indiana Government Center North, N755
Indianapolis, IN 46204

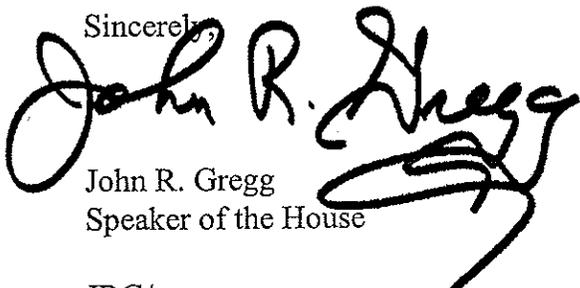
Dear Cris:

The purpose of this correspondence is to express my support for the proposed two-mile Boonville bypass that would connect SR 61 on the north edge of Boonville to SR 61/SR 62 on the west side of Boonville. Area legislators have communicated the dire need for this bypass with me, and it is also my understanding that the feasibility study commissioned by the Warrick County Commissioners and the City Boonville strongly suggests that the proposed bypass is sorely needed.

Please take note of the addition of my support to the support you have already received from area legislators. I urge your favorable consideration of this project, and I would appreciate being notified when a decision is reached.

If my office can provide you with further information or assistance in the decision-making process, please do not hesitate to contact me. I value to relationship the House Democratic Caucus has with INDOT, and I appreciate your ongoing efforts to encourage worthwhile projects such as this.

Sincerely,



John R. Gregg
Speaker of the House

JRG/ac:sas



STATE OF INDIANA
HOUSE OF REPRESENTATIVES
THIRD FLOOR STATE HOUSE
INDIANAPOLIS, INDIANA 46204

RUSSELL STILWELL
ASSISTANT MAJORITY WHIP
266 GENEVA WAY
BOONVILLE, IN 47601

COMMITTEES:
AGRICULTURE, NATURAL RESOURCES AND RURAL DEVELOPMENT
LABOR AND EMPLOYMENT
ROADS AND TRANSPORTATION

RECEIVED

APR 19 2000

BLA

April 17, 2000

Mr. Keith Lochmueller
Bernardin, Lochmueller & Associates
6200 Vogel Road
Evansville, Indiana 47715

Dear Keith:

Enclosed are the original letters I requested for the Boonville Bypass. Please note that it is my understanding that you wanted these letters, and other from Mayor Hendrickson, not later than April 24th so you can have the final Bypass Study Report done for our May 5th meeting in Boonville. If the original letters need to be sent to INDOT, please let me know, but I was of understanding that they were for inclusion in the study.

As you will notice in the enclosed I have letters from Speaker Gregg, Majority Floor Leader Kruzan and many others. To date, I only have three outstanding letters from my original request.

Please contact me if you have any questions.

Sincerely,

Russ Stilwell
State Representative

cc Mayor Pam Hendrickson



STATE OF INDIANA
HOUSE OF REPRESENTATIVES
THIRD FLOOR STATE HOUSE
INDIANAPOLIS, INDIANA 46204

RUSSELL STILWELL
ASSISTANT MAJORITY WHIP
266 GENEVA WAY
BOONVILLE, IN 47601

COMMITTEES:
AGRICULTURE, NATURAL RESOURCES AND RURAL DEVELOPMENT
LABOR AND EMPLOYMENT
ROADS AND TRANSPORTATION

April 4, 2000

Ms. Christine Klika, Commissioner
Indiana Department of Transportation
Indiana Government Center North, N755
Indianapolis, Indiana 46204

Dear Commissioner Klika:

I would like to add my support to the proposed Boonville bypass that would connect State Road 61 on the north edge of Boonville to SR 61/SR 62 on the west side of Boonville. A feasibility study conducted by Bernardin, Lochmueller & Associates and paid for by the Warrick County Commission and the City of Boonville strongly suggest that the proposed bypass is sorely needed for this area. There are many reasons for the proposal. They include, but are not limited to:

1. Traffic counts on existing SR 62 coming into Boonville, just east of SR 61 has over 28,000 vehicles per day, a 50% increase over the past 13 years.
2. All truck traffic on SR 61 going south into Boonville and north from Boonville must "circle the courthouse" square taking two lanes to make very sharp turns creating the potential for vehicular and pedestrian conflicts. In fact, one truck has already crashed into the new \$10 million judicial center. According to the study, approximately 150 heavy-duty trucks pass through the SR 62 intersection at the northeast corner of the Court House in a one-hour peak period on a daily basis.
3. There were 12 accidents in 1998 that involved property damage and/or personal injury at the SR 62 and SR 61 intersection due to the high volume of traffic.
4. Traffic Delays: Traffic delays at SR 62 entering into Boonville are an everyday occurrence with traffic jams often extended thousands of feet east of Boonville.

If there ever were a need and justification for a bypass around a community for safety, environmental protection due to traffic delays and reducing long traffic delays, then the proposed two (2) Boonville bypass would be a model for consideration. I strongly urge your favorable consideration of this project.

Sincerely,

Russ Stilwell
State Representative
District 74



STATE OF INDIANA
HOUSE OF REPRESENTATIVES
THIRD FLOOR STATE HOUSE
INDIANAPOLIS, INDIANA 46204

Vaneta G. Becker
4017 Cobble Field Drive
Evansville, Indiana 47711
COMMITTEES:
Public Health, R.R.M
Elections and Apportionment

April 11, 2000

Ms. Christine Klika, Commissioner
Indiana Department of Transportation
Indiana Government Center North, N755
Indianapolis, Indiana 46204

Dear Commissioner Klika,

I am writing to add my support to the proposed two-mile Boonville bypass that would connect SR 61 on the north edge of Boonville to SR 61/SR 62 on the west side of Boonville. The feasibility study commissioned by the Warrick County Commissioners and the City of Boonville strongly suggests that the proposed bypass is sorely needed for this area.

There are many reasons for the proposal including reducing traffic counts on existing SR 62 coming into Boonville, just east of SR 61, which handles over 28,000 vehicles per day. Additionally, Boonville has an abnormal amount of heavy traffic that intersects in the center of downtown Boonville. This causes a danger to other traffic, pedestrians and creates an unhealthy environment for this community.

If you were to travel into Boonville on SR 62 you would know why a bypass is needed. Traffic is backed up for several hundreds yards at a very slow place. The proposed two-mile Boonville bypass is sorely needed. Please add my name and support to this worthwhile project. I urge your favorable consideration of this project.

Sincerely,

Vaneta G. Becker
State Representative

VGB:DLL



STATE OF INDIANA
HOUSE OF REPRESENTATIVES
THIRD FLOOR STATE HOUSE
INDIANAPOLIS, INDIANA 46204

BRIAN HASLER
P.O. BOX 955
EVANSVILLE, IN 47706
HOUSE (800) 382-9842
DISTRICT (812) 473-3844

COMMITTEES:
PUBLIC HEALTH, VICE CHAIRMAN
COMMERCE AND ECONOMIC DEVELOPMENT
LOCAL GOVERNMENT

May 4, 2000

Ms. Christine Klika, Commissioner
Indiana Department of Transportation
Indiana Government Center North, N755
Indianapolis, IN 46204

Dear Commissioner Klika:

I am writing to express my support for the proposed two mile Boonville by-pass that would connect State Route 61 running from I-64 to Boonville on the north with State Route 61/62 on the western edge of Boonville. A recent feasibility study by Bernardin Lochmueller and Associates suggests that this improvement is greatly needed, and I wish to register my interest in the completion of this project.

Under the current configuration, heavy truck traffic must travel through downtown Boonville past significant Courthouse square pedestrian traffic, with sharp turns and one-way traffic patterns. This antiquated travel pattern poses a serious threat to public safety, contributes to daily traffic jams, and is a detriment environmentally to the quality of life in the community.

Because of these concerns, and the considerable improvement in access, enhanced traffic flow and quality of life that would be derived from this project, I strongly encourage the Department to take all appropriate steps to advance construction of the Boonville by-pass at the earliest possible opportunity.

Sincerely,


Brian Hasler



STATE OF INDIANA
HOUSE OF REPRESENTATIVES
THIRD FLOOR STATE HOUSE
INDIANAPOLIS, INDIANA 46204

JERRY L. DENBO
ASSISTANT MAJORITY CAUCUS CHAIRMAN
R.R. 1 BOX 329
FRENCH LICK, IN 47432
FAX 317-232-9795

1-800-382-9842

April 10, 2000

Ms. Cristine Klika, Commissioner
Indiana Department of Transportation
Indiana Government Center North, N755
Indianapolis, IN 46204

Dear Commissioner Klika:

I am writing to you in order to voice my support of the proposed two-mile Boonville bypass that would connect SR 61 on the north edge of Boonville to SR 61/SR 62 on the west side of Boonville. The results of the feasibility study carried out by the Warrick County Commissioners and the City of Boonville strongly suggests that the proposed bypass is definitely needed for this area.

There are numerous reasons for the proposal including reducing traffic counts on existing SR 62 coming into Boonville, just east of SR 61, which handles over 28,000 vehicles per day. Additionally, Boonville has an abnormal amount of heavy traffic that intersects in the center of downtown Boonville. This causes a danger to other traffic, pedestrians and creates an unhealthy environment for this community.

If you were to travel into Boonville on SR 62 you would know why a bypass is needed. Traffic is backed up for several hundred yards at a very slow pace. The proposed two-mile Boonville bypass is sorely needed. Please add my name and support to this most worthwhile project. I urge your favorable consideration of this project.

Sincerely,

Jerry Denbo
State Representative
House District 62



STATE OF INDIANA
HOUSE OF REPRESENTATIVES
THIRD FLOOR STATE HOUSE
INDIANAPOLIS, INDIANA 46204

JONATHAN WEINZAPFEL
10600 MIDDLE MOUNT VERNON ROAD
MT. VERNON, IN 47620
COMMITTEES:
PUBLIC POLICY, ETHICS AND VETERANS AFFAIRS
ROADS AND TRANSPORTATION

April 14, 2000

Ms. Cristine Klika, Commissioner
Indiana Department of Transportation
IGC North, N755
Indianapolis, IN 46204

Dear Commissioner Klika: *Cristine*

With this letter I would like to add my support to the proposed two-mile Booneville bypass that would connect SR 61 on the north edge of Booneville to SR 61/SR 62 on the west side of Booneville. The feasibility study commissioned by the Warrick County Commissioners and the City of Booneville strongly suggests that the proposed bypass is sorely needed for this area.

Reducing the traffic counts on existing SR 62 coming into Booneville, just east of SR 61, which handles over 28,000 vehicles per day, is a major reason why a bypass is needed. Also, Booneville has an abnormal amount of heavy truck traffic that intersects in the center of downtown Booneville. This causes a danger to other traffic, pedestrians and creates an unhealthy environment for this community.

In Booneville, on SR 62, traffic is often backed up for several hundred yards. The proposed two-mile Booneville bypass is sorely needed. Please add my name and support to this very beneficial project. I urge your favorable consideration of this project.

Sincerely,

Jonathan Weinzapfel
State Representative
House District #76



City of Boonville

Pam Hendrickson, Mayor

P. O. BOX 585 • BOONVILLE, IN 47601
PH: (812) 897-1230 • FAX: (812) 897-6545

April 24, 2000

Ms. Christine Klika, Commissioner
Indiana Department of Transportation
Indiana Government Center North, N755
Indianapolis, IN 46204

Dear Commissioner Klika,

Please give consideration to a much needed project for the City of Boonville. This project was attempted and land acquisition for this project was accomplished in the 80's. This project was shelved which is unfortunate for our community. There have been numerous changes in the affected areas, however our problems continue with the great number of vehicles that travel through our city. In our most recent study the number of vehicles revealed is staggering.

Our problems are numerous with the high volume of truck traffic in our downtown as well as north and west of our city. Please find included a copy of an accident report where one of the semi trucks actually hit our new Judicial Center complex.

A bypass would greatly enhance the safety and quality of life for our residents. I would greatly appreciate your favorable consideration of the proposed bypass.

Respectfully,

Pam Hendrickson
Mayor, City of Boonville

A new approach for a better *Boonville.*



Corporate Office:

**6200 Vogel Road
Evansville, Indiana 47715-4006**

PHONE: (812) 479-6200
TOLL FREE: (800) 423-7411
FAX: (812) 479-6262

Branch Offices:

**1220 Potter Drive, Suite 124
Purdue Research Park
P.O. Box 2821
West Lafayette, Indiana 47906**

PHONE: (765) 463-0502
TOLL FREE: (800) 790-0286
FAX: (765) 463-5602

**975 River Bend Road
Suite Two
Frankfort, Kentucky 40601**

PHONE: (502) 223-5277
TOLL FREE: (888) 699-5277
FAX: (502) 223-5789

**718 West Main Street
Suite 200
Louisville, Kentucky 40202**

PHONE: (502) 540-1100
TOLL FREE: (888) 839-8677
FAX: (502) 540-1101



BERNARDIN LOCHMUELLER & ASSOCIATES, INC.

ENGINEERING . SURVEYING . PLANNING . ENVIRONMENTAL SERVICES