

Highway 112 Corridor Study Preliminary Findings

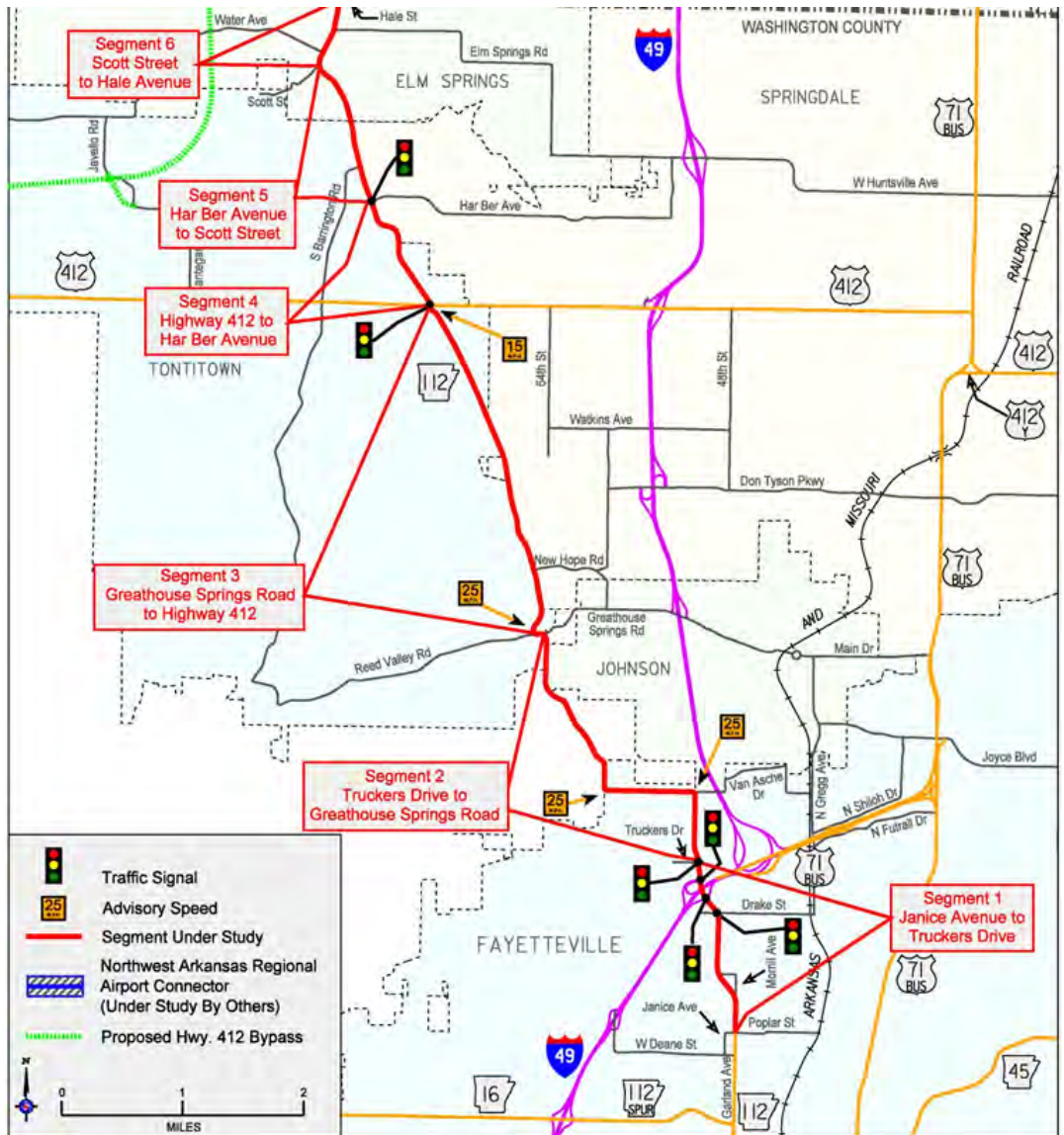
Daniel Byram

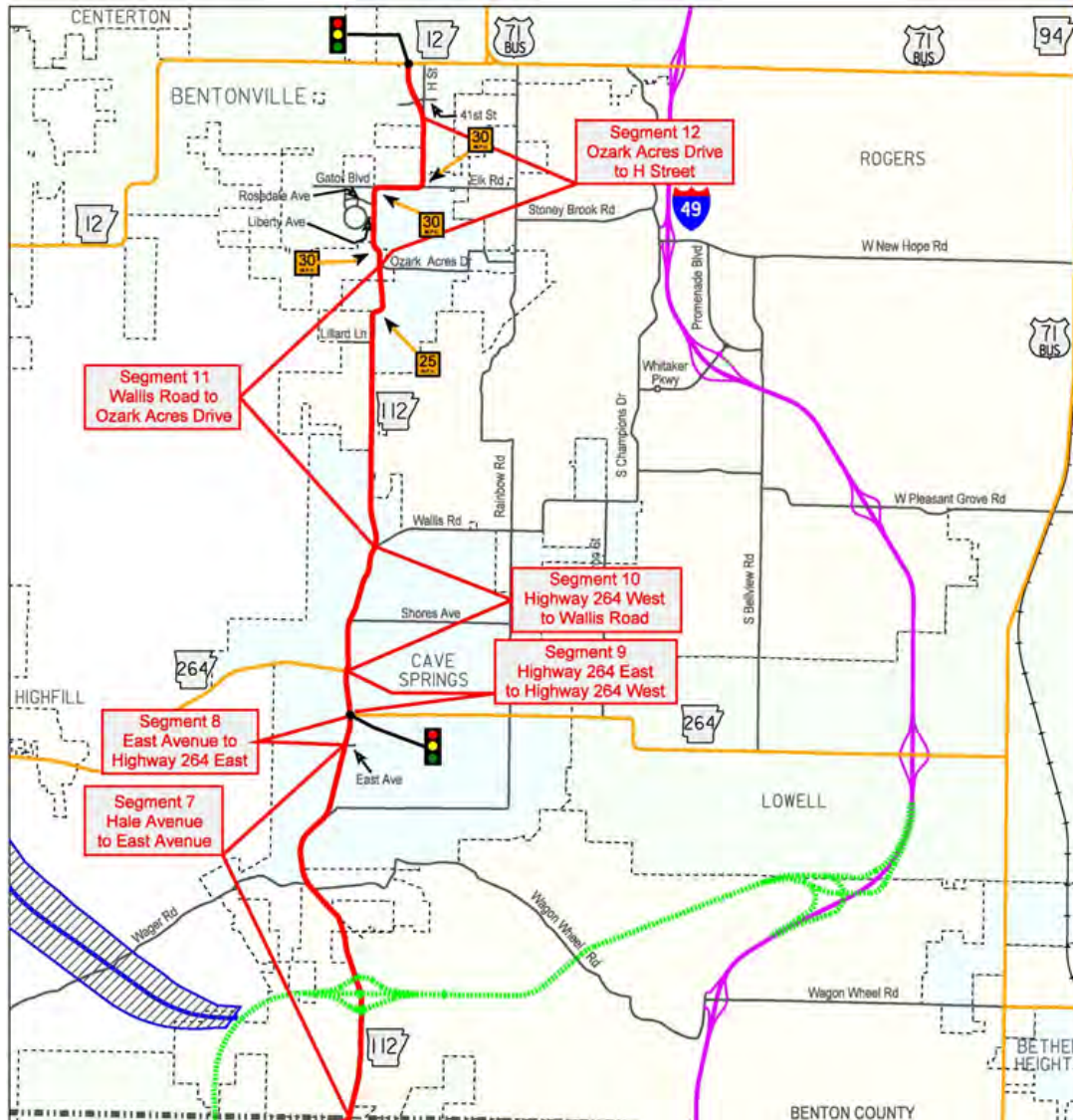


Overview

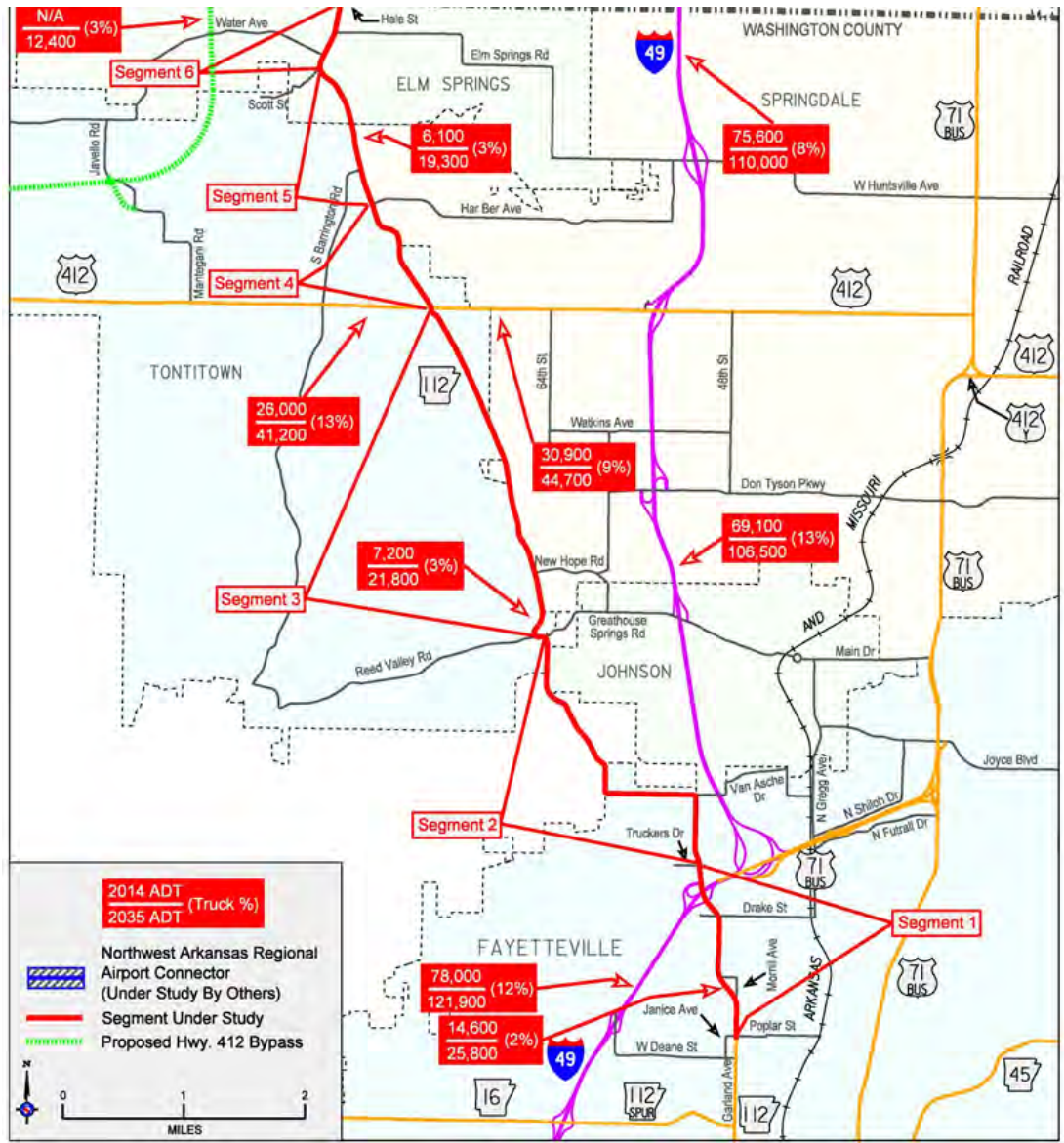
- Existing and Future Conditions
 - Traffic
 - Safety
 - Level of Service (LOS)
- Environmental Constraints
- Potential Solutions

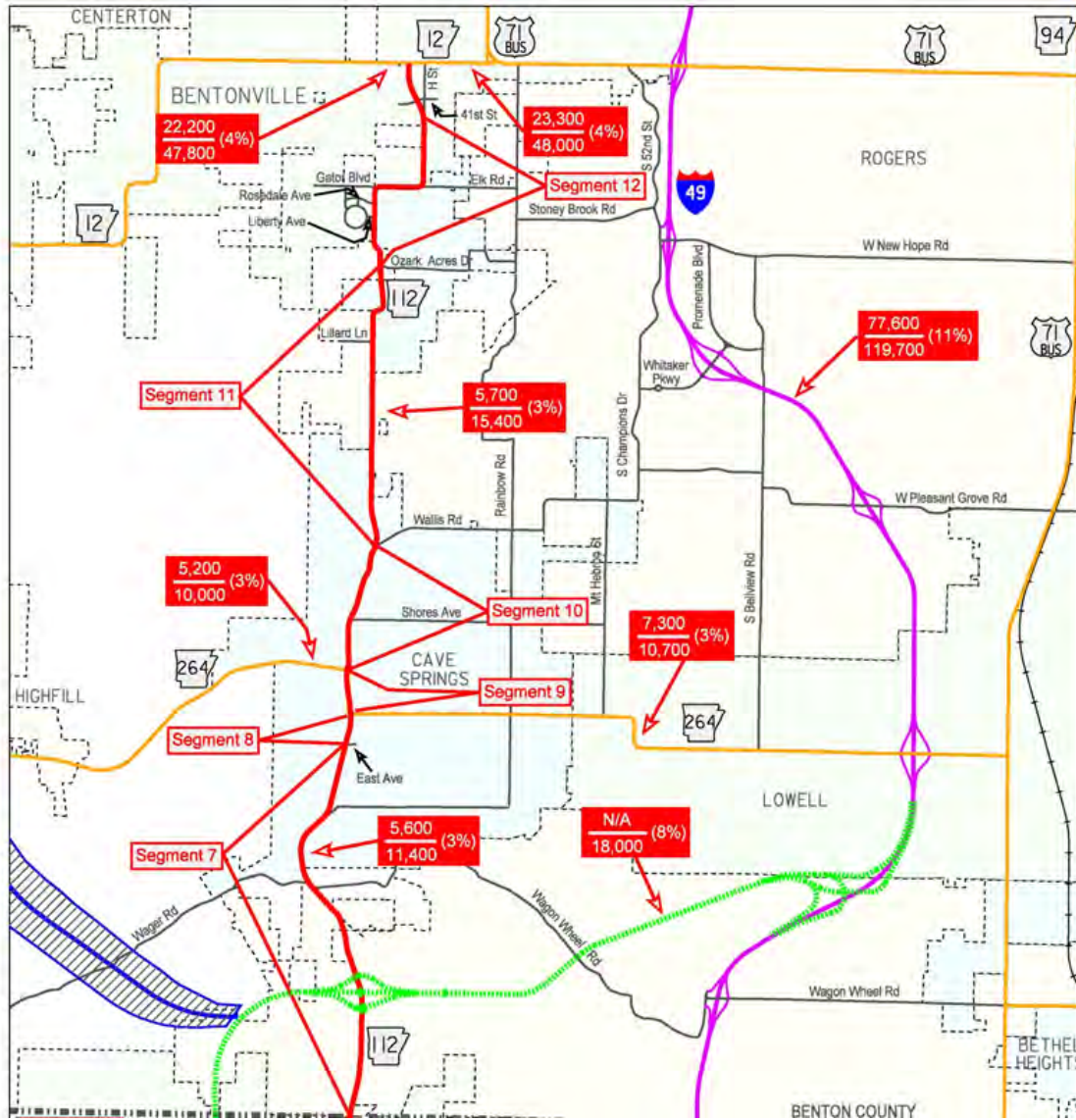
Study Location





Traffic Volumes

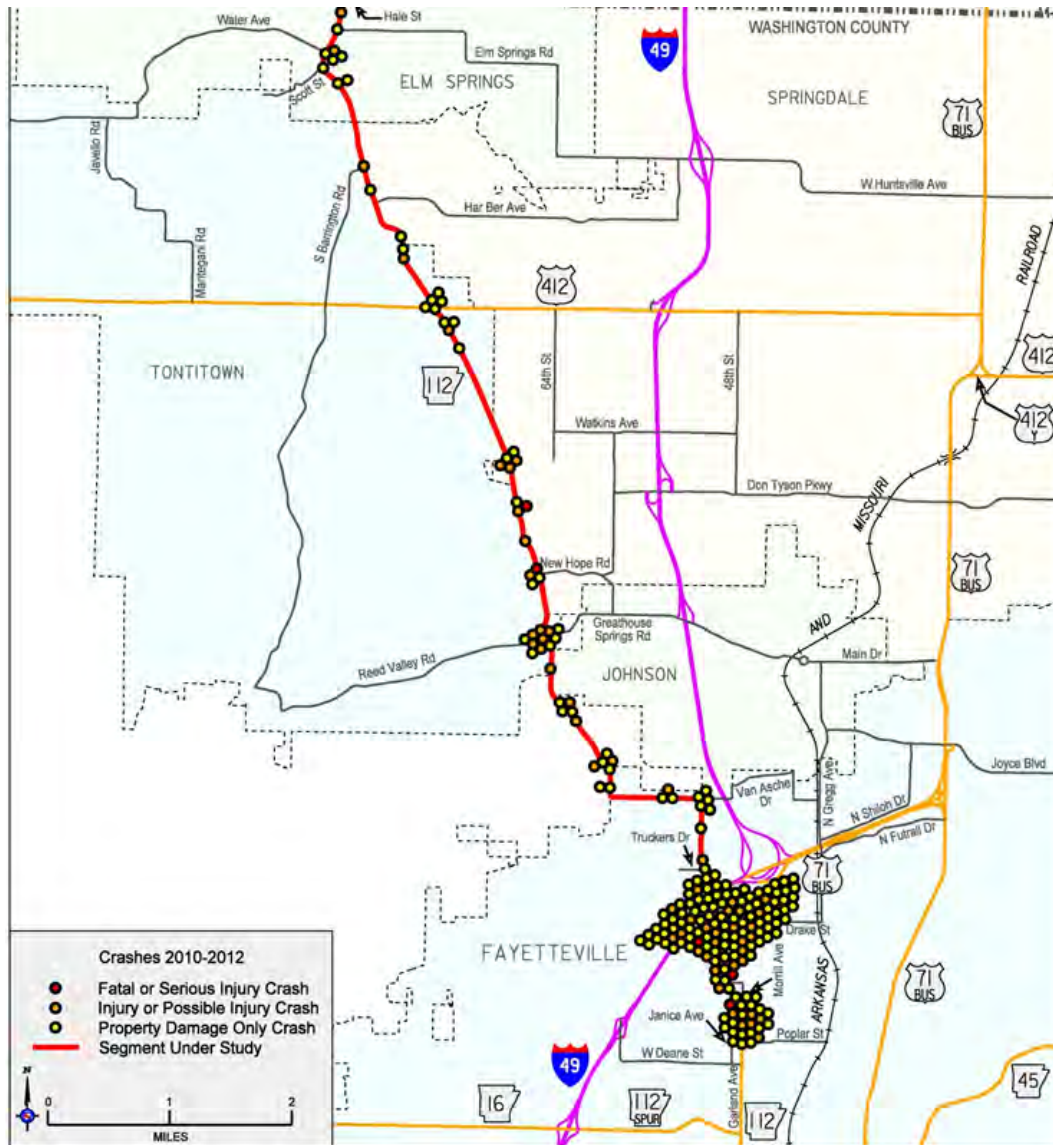


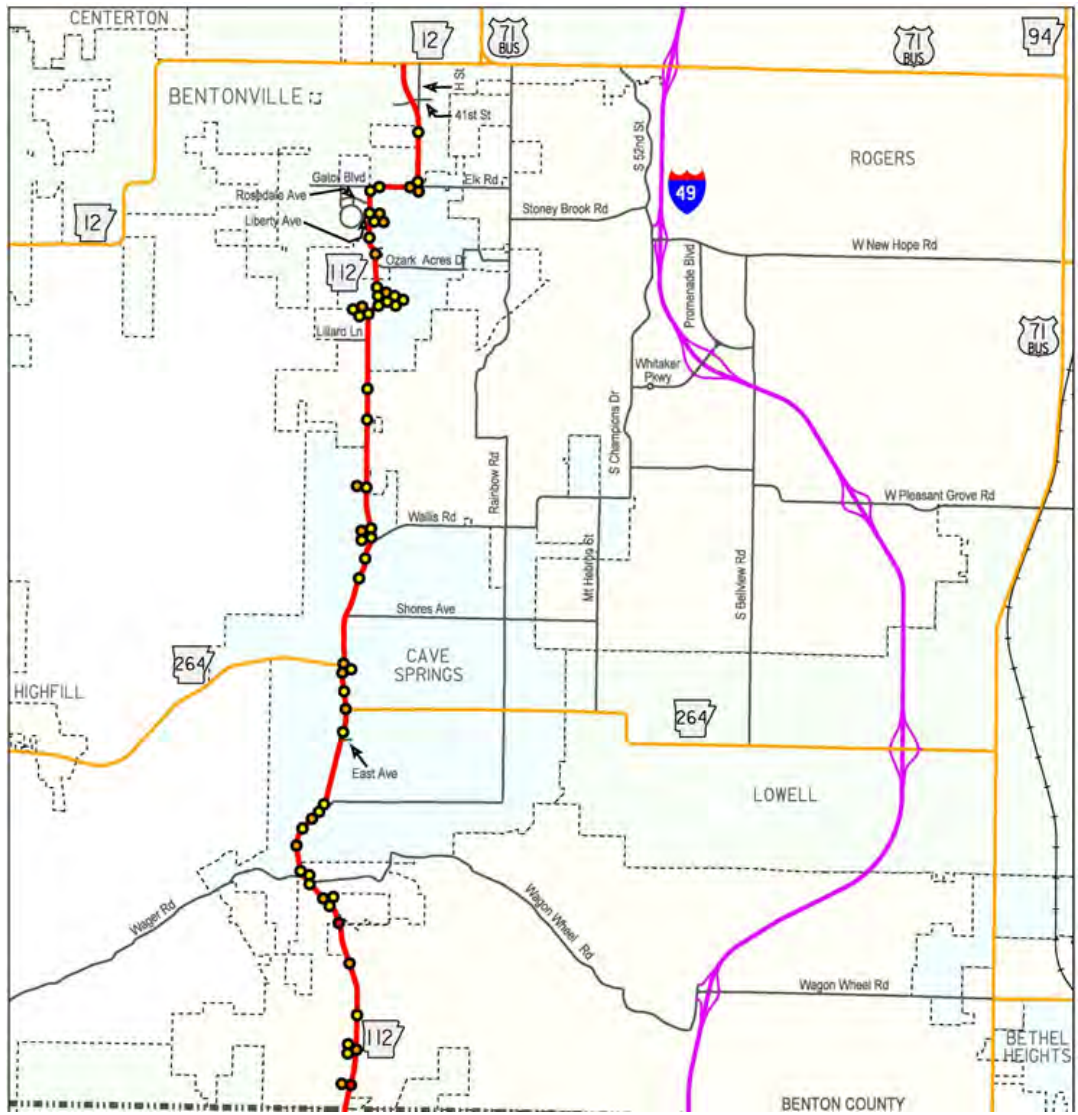


No Build Level of Service

Segment	Description	Facility Type	Rural/Urban	2014 Weighted ADT	2035 Weighted ADT	2014	2035
1	Janice Ave. to Truckers Dr. (LM 0.71 to LM 2.41)	Two 11-foot lanes, no shoulders	Urban	14,600	25,000	F	F
2	Truckers Dr. to Greathouse Springs Rd. (LM 2.41 to LM 5.01)	Two 10-foot lanes, no shoulders	Rural	7,700	25,400	D	F
3	Greathouse Springs Rd. to Hwy. 412 (LM 5.01 to LM 7.97)	Two 10-foot lanes, no shoulders	Rural	6,600	18,800	D	E
4	Hwy. 412 to Har Ber Ave. (LM 7.97 to LM 9.11)	Two 10-foot lanes, no shoulders	Rural	5,000	15,100	C	E
5	Har Ber Ave. to Scott St. (LM 9.11 to LM 10.38)	Two 10-foot lanes, no shoulders	Rural	6,700	19,400	D	E
6	Scott St. to Hale Ave. (LM 10.38 to LM 10.95)	Two 10-foot lanes, no shoulders	Rural	6,900	26,700	E	F
7	Hale Ave. to East Ave. (LM 0.00 to LM 3.26)	Two 10-foot lanes, no shoulders	Rural	5,800	14,000	D	E
8	East Ave. to Hwy. 264 East (LM 3.26 to LM 3.50)	Two 10-foot lanes, no shoulders	Rural	5,600	11,400	D	E
9	Hwy. 264 East to Hwy. 264 West (LM 3.50 to LM 3.85)	Two 10-foot lanes, two-foot shoulders	Urban	9,400	20,300	E	F
10	Hwy. 264 West to Wallis Rd. (LM 3.85 to LM 4.91)	Two 10-foot lanes, no shoulders	Rural	5,900	13,600	D	E
11	Wallis Rd. to Ozark Acres Dr. (LM 4.91 to LM 7.22)	Two 10-foot lanes, no shoulders	Rural	5,800	15,900	D	F
12	Ozark Acres Dr. to H St. (LM 7.22 to LM 8.80)	Two 10-foot lanes, no shoulders	Urban	5,500	16,000	D	F

Crashes





Segment	Description	Year	Weighted ADT	Crashes/ KA Crashes	Crash Rate ¹	Statewide Average Crash Rate	KA Crash Rate ²	Statewide Average KA Crash Rate
1	Janice Ave. to Truckers Dr. (LM 0.71 to LM 2.41)	2010	12,700	38/2	4.82	2.90	25.38	8.39
		2011	12,200	45/1	5.94	2.81	13.21	9.94
		2012	12,300	63/0	8.25	2.78	0.00	11.43
		Avg.	12,400	48.67/1.00	6.34	2.83	12.86	9.92
2	Truckers Dr. to Greathouse Springs Rd. (LM 2.42 to LM 5.01)	2010	6,900	7/0	1.07	2.90	0.00	8.39
		2011	6,700	8/0	1.26	2.81	0.00	9.94
		2012	7,000	9/0	1.36	2.78	0.00	11.43
		Avg.	6,867	8.00/0.00	1.23	2.83	0.00	9.92
3	Greathouse Springs Rd. to Hwy. 412 (LM 5.02 to LM 7.97)	2010	5,700	10/1	1.63	1.01	16.29	14.84
		2011	5,700	5/1	0.81	0.99	16.29	15.19
		2012	6,200	14/0	2.10	1.02	0.00	15.65
		Avg.	5,867	9.67/0.67	1.51	1.01	10.86	15.23
4-7	Hwy. 412 to East Ave. (LM 7.98 to LM 10.95 and LM 0.00 to LM 3.26, Sec. 2)	2010	4,900	11/1	0.99	1.01	8.97	14.84
		2011	5,000	12/1	1.06	0.99	8.80	15.19
		2012	5,700	12/0	0.93	1.02	0.00	15.65
		Avg.	5,200	11.67/0.67	0.99	1.01	5.92	15.23
8-9	East Ave. to Hwy. 264 West (LM 3.27 to LM 3.85)	2010	7,900	2/0	1.20	1.01	0.00	14.84
		2011	7,700	0/0	0.00	0.99	0.00	15.19
		2012	7,900	3/0	1.79	1.02	0.00	15.65
		Avg.	7,833	1.67/0.00	1.00	1.01	0.00	15.23
10	Hwy. 264 West to Wallis Rd. (LM 3.86 to LM 4.91)	2010	4,300	1/0	0.61	1.01	0.00	14.84
		2011	5,000	1/0	0.52	0.99	0.00	15.19
		2012	5,800	1/0	0.45	1.02	0.00	15.65
		Avg.	5,033	1.00/0.00	0.53	1.01	0.00	15.23
11-12	Wallis to H St. (LM 4.92 to LM 8.80)	2010	4,300	12/0	1.97	1.01	0.00	14.84
		2011	4,500	9/0	1.41	0.99	0.00	15.19
		2012	5,200	11/0	1.49	1.02	0.00	15.65
		Avg.	4,667	10.67/0.00	1.62	1.01	0.00	15.23

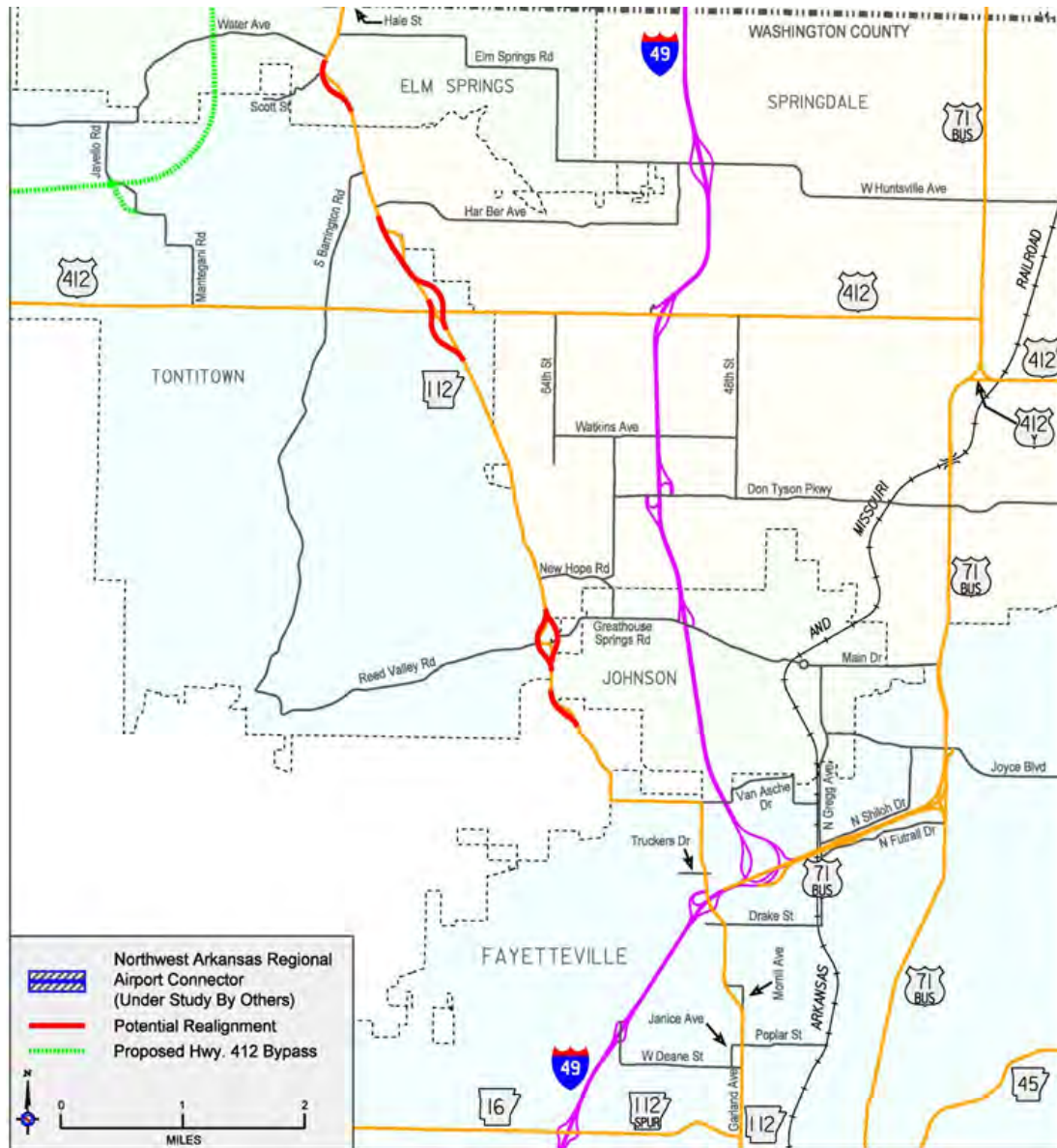
¹Crash rates are expressed in the number of crashes per million vehicle miles (MVM) traveled.

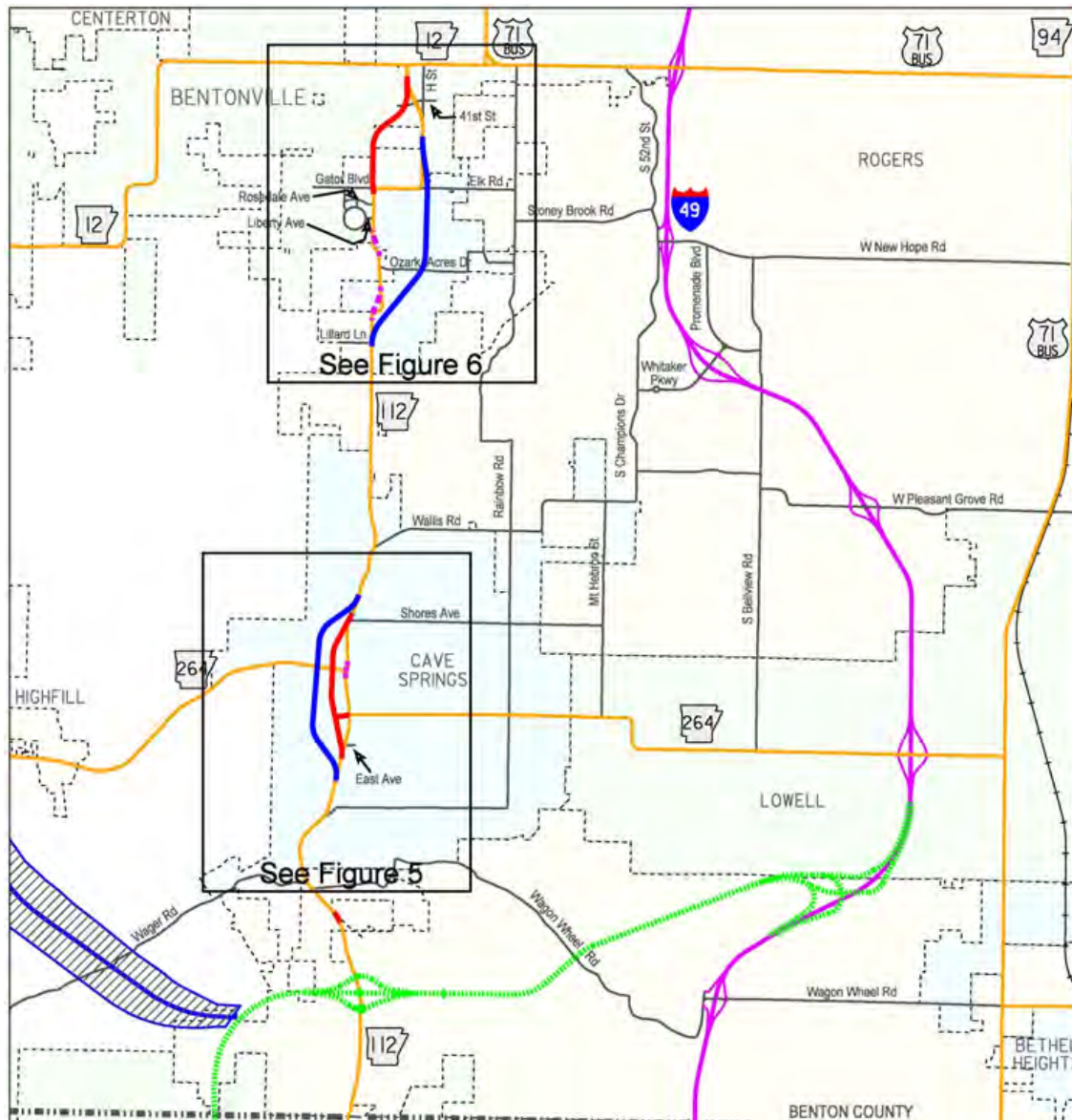
²KA crash rates are expressed in the number of crashes per 100 MVM.

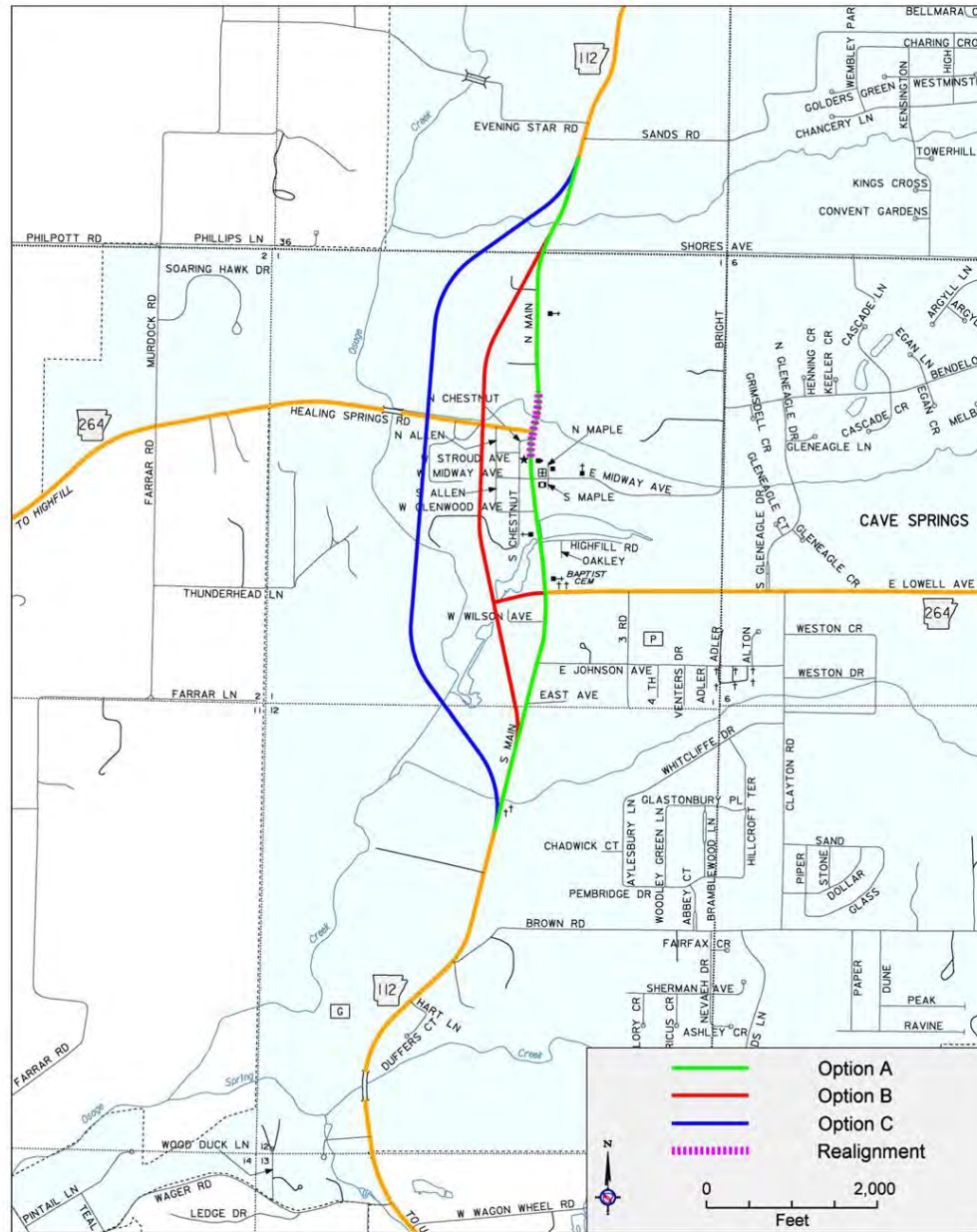
³Statewide average crash rate or KA crash rate for urban facilities.

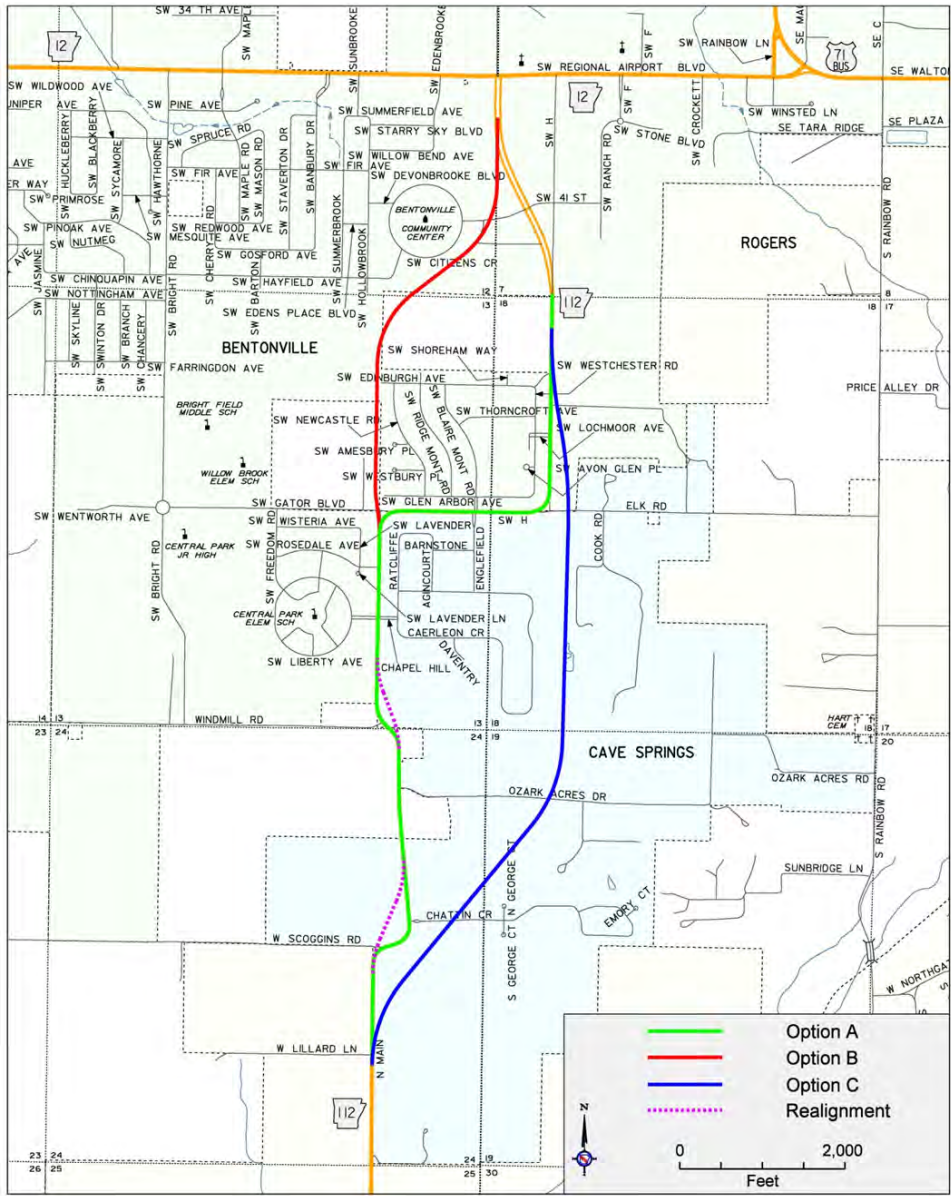
⁴Statewide average crash rate or KA crash rate for rural facilities.

Roadway Alignment Options









Build Level of Service

Segment	Description	No Action		Alternative 1	
		2014	2035	2014	2035
1	Janice Ave. to Truckers Dr. (LM 0.71 to LM 2.41)	F	F	B	C
2	Truckers Dr. to Greathouse Springs Rd. (LM 2.41 to LM 5.01)	D	F	B	C
3	Greathouse Springs Rd. to Hwy. 412 (LM 5.01 to LM 7.97)	D	E	A	B
4	Hwy. 412 to Har Ber Ave. (LM 7.97 to LM 9.11)	C	E	B	C
5	Har Ber Ave. to Scott St. (LM 9.11 to LM 10.38)	D	E	B	C
6	Scott St. to Hale Ave. (LM 10.38 to LM 10.95)	E	F	B	D
7	Hale Ave. to East Ave. (LM 0.00 to LM 3.26)	D	E	A	C
8	East Ave. to Hwy. 264 East (LM 3.26 to LM 3.50)	D	E	See Table 6	
9	Hwy. 264 East to Hwy. 264 West (LM 3.50 to LM 3.85)	E	F		
10	Hwy. 264 West to Wallis Rd. (LM 3.85 to LM 4.91)	D	E		
11	Wallis Rd. to Ozark Acres Dr. (LM 4.91 to LM 7.22)	D	F	A	B
12	Ozark Acres Dr. to H St. (LM 7.22 to LM 8.80)	D	F	A	C

Option A ¹		Option B ² and Option C ²							
2014	2035	2014				2035			
		On Bypass		On Existing Facility		On Bypass		On Existing Facility	
		NE ³	E ⁴	NE	E	NE	E	NE	E
B	D	A	B	C	B	B	B	E	C

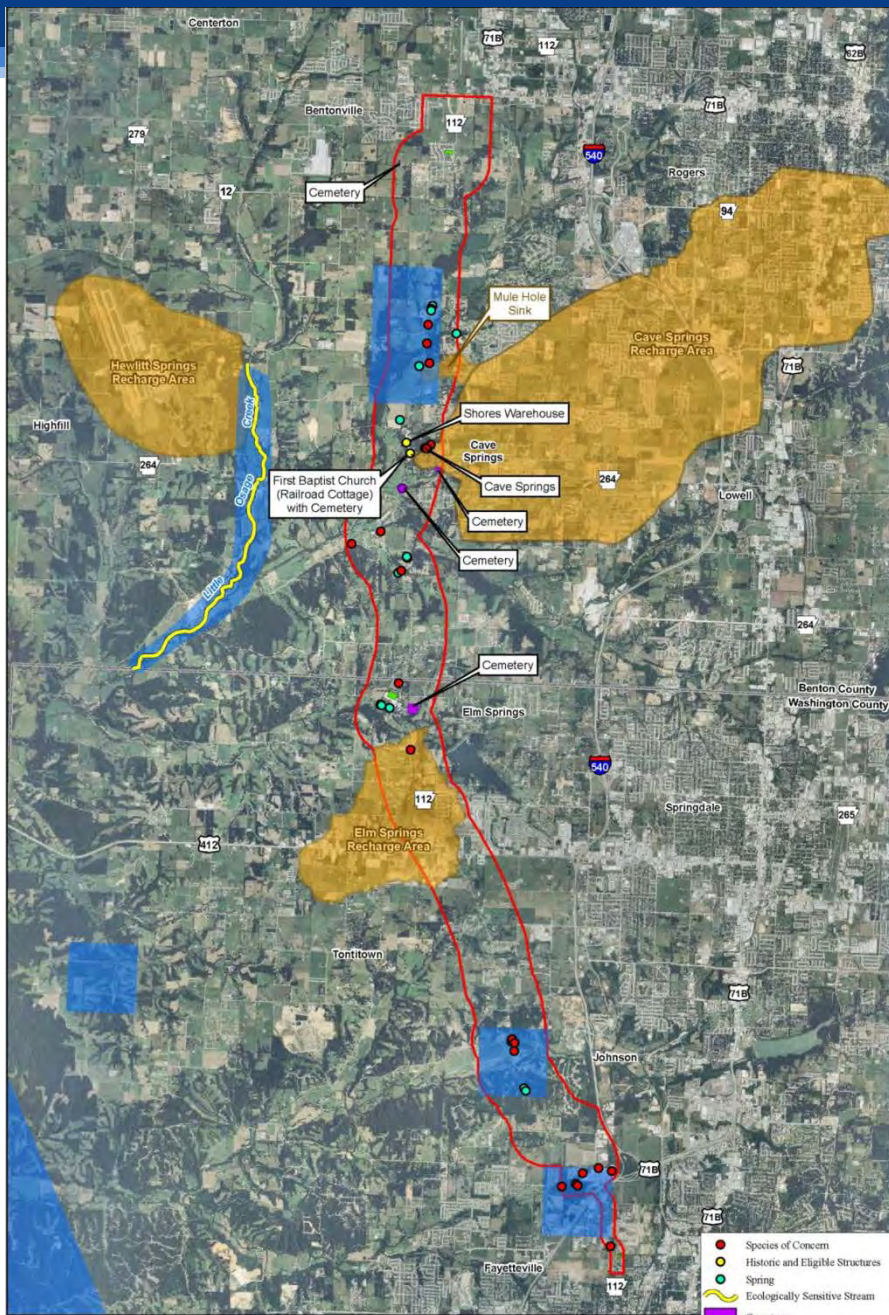
¹Widen existing alignment

²Bypass with or without Highway 264 extension

³No Extension

⁴Extension

Environmental Constraints



0 0.5 1
Mile

Photography Date: Summer 2010

AHTD - Environmental GIS - Reed
June 23, 2012

Highway 112 Corridor
Benton and Washington Counties

- Species of Concern
- Historic and Eligible Structures
- Spring
- Ecologically Sensitive Stream
- Cemetery
- Park
- Ecologically Sensitive Waterbody
- Recharge Area
- Project Area

Costs

Segment	Description	Construction Cost (million dollars)	Total Cost ¹ (million dollars)	
1	Janice Ave. to Truckers Dr. (LM 0.71 to LM 2.41)	\$7.1	\$9.4	
2	Truckers Dr. to Greathouse Springs Rd. (LM 2.41 to LM 5.01)	\$17.3	\$21.2	
3	Greathouse Springs Rd. to Hwy. 412 (LM 5.01 to LM 7.97)	\$8.5	\$11.1	
4-5	Hwy. 412 to Scott St. (LM 7.97 LM 10.38)	\$13.1	\$16.1	
6	Scott St. to Hale St. (LM 10.38 to LM 10.95)	\$4.5	\$5.6	
7-10	Hale St. to Wallis Rd. (LM 0.00 to LM 4.91)	Option A	\$19.2	\$25.0
		Option B	\$25.0	\$31.3
		Option C	\$29.5	\$36.6
11-12	Wallis Rd. to H St. (LM 4.91 to LM 8.80)	Option A	\$16.0	\$20.4
		Option B	\$17.1	\$21.1
		Option C	\$22.1	\$27.1

¹Total Cost includes construction, right-of-way, utility relocation, preliminary and construction engineering (2014 dollars).

Conclusions

- Highway 112 will not provide an acceptable level of service by 2035, regardless of the improvements to north/south travel made on other corridors.
- Widening to four through lanes and bypassing Cave Springs with an extension to Highway 264 would provide adequate level of service throughout the corridor.
- Widening and smoothing out curvature will provide safety benefits.