



**CRASH REDUCTION ANALYSIS**

Project: A Street Road Safety Assessment

Project No.: \_\_\_\_\_

Date: \_\_\_\_\_

Prepared By: \_\_\_\_\_

Orig #	Page #	Location	Location (NWC, west side, etc.)	Recommendation	Associated Crashes (3 years of data)	Countermeasure Description	Source	CMF	CRF	Predicted Crash Reduction	
										Annual	20 Years
2	17	Entire Project	All roadways	Consider conducting a speed study to confirm actual speed at locations such as southbound A Street north of 1st Avenue. Consider installing individual changeable speed warning signs in areas with 85% speed more than 5 mph over speed limit.	56	Install changeable speed warning signs for individual drivers	Handbook of Road Safety Measures, Elvik, R. and Vaa, T., 2004	0.54	46%	8.6	172
12	28	A St. and 1st Ave.	North side of intersection	Keep the channelized right turn lane in the proposed project that has extended the dedicated right turn lane storage towards Frontage Road.	24	Provide a right-turn lane on one major-road approach	Safety Effectiveness of Intersection Left- and Right-Turn Lanes, Harwood et al., 2002	0.86	14%	1.1	22
15	29	A St. and 1st Ave.	North side of intersection	Keep the proposed dedicated right turn lane in the proposed project to address this issue.	24	Provide a right-turn lane on one major-road approach	Safety Effectiveness of Intersection Left- and Right-Turn Lanes, Harwood et al., 2002	0.86	14%	1.1	22
14	31	A St. and 1st Ave.	NW Corner	Evaluate signal timing modifying signal timing change interval.	65	Modify duration of change intervals to conform with proposed recommended practice published by the ITE.	Changes in crash risk following re-timing of traffic signal change intervals., Retting, Chapline and Williams 2002	0.92	8%	1.7	35
19	49	A St. and 2nd Ave.	North and Southbound	Evaluate if permissive lefts should be converted to flashing yellow arrow.	17	Changing left turn phasing from protected-permissive to flashing yellow arrow	Evaluation of Safety Strategies at Signalized Intersections, Srinivasan, et al., 2011	0.922	8%	0.4	9
19	49	A St. and 2nd Ave.	North and Southbound	Evaluate if permissive lefts should be converted to protected phasing. <sup>1</sup>	2	Change from permitted or permitted-protected to protected	Accident Modification Factors for Traffic Engineering and ITS Improvements, Harkey et al., 2008	0.01	99%	0.7	13

<sup>1</sup> CMF applicable to angle crashes only.