WELCOME

MARSHALL AREA

HWY 23

SAFETY ASSESSMENT



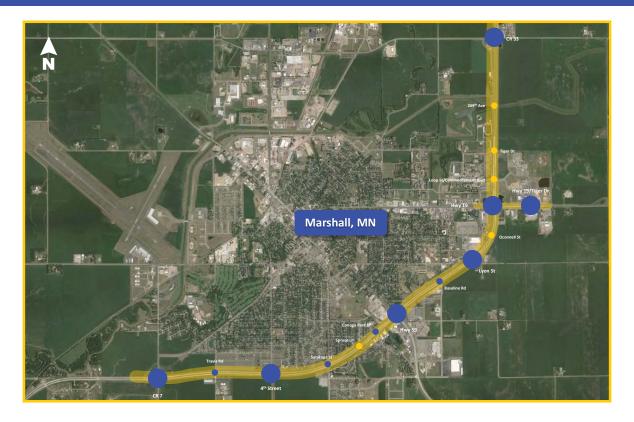








OVERVIEW



Safety Assessment:

- The Minnesota Department of Transportation (MnDOT) and its partners, the City of Marshall, Lyon County, and the Marshall Area Transportation Group, are conducting a safety assessment to evaluate the current and future performance of Highway 23 and develop short- and long-term strategies to manage the corridor now and into the future.
- The proposed strategies will create a joint vision for the corridor between stakeholders and the
 public to help identify and prioritize improvements to take advantage of funding as it becomes
 available.
- Initial activities for the assessment began in January 2016 and the overall assessment will be completed by Late Summer/Early Fall 2016. The assessment will be conducted in three phases:
 - Phase 1: Identify the purpose and need.
 - **Phase 2:** Develop and evaluate alternatives.
 - **Phase 3:** Identify recommended strategies and implementation plan.

Assessment Purpose:

- Evaluate existing conditions.
- Facilitate discussion between local partners, stakeholders, and the public.
- Provide a list of opportunities and recommendations, and establish priorities.
- Develop a common vision to identify, prioritize, and design future safety improvements.













SETTING SPEED LIMITS & REDUCING SPEEDS

Will lowering the speed limit reduce speeds?

No. Studies show there is little change in the speed pattern after the posting of a speed limit. The driver is much more influenced by the roadway conditions.

What are the effects of the posted speed limit?

- ✓ Compliance exists only when expectation is met.
- ✓ Lower posted speed limits do not reduce speeds.
- ✓ Higher posted speed limits do not increase speeds.
- ✓ Read the road, not the sign.

04.10	-	0.01	000000	0000	01
Study Location	Before	(Sign Change	85% Before	Change mph
	SPEED	SPEED	+/- mph	After	
г.Н.65	40	30	-10	34 34	0
Г.Н.65	SPEED LIMIT 50	SPEED LIMIT 40	-10	44 45	+1
Anoka CSAH 1	SPEED LIMIT 45	SPEED LIMIT 40	-5	48 50	+2
Anoka CSAH 24	SPEED LIMIT 30	SPEED LIMIT 45	+15	49 50	+1
Anoka CR 51	SPEED LIMIT 40	SPEED LIMIT 45	+5	45 46	+1
Henn CSAH 4	SPEED LIMIT 50	SPEED LIMIT 40	-10	52 51	-1

Speed Zoning Studies



SPEED LIMIT 30

SPEED LIMIT 35

SPEED LIMIT 30

Nobles

Ave

62nd

Ave N

Miss. St

SPEED LIMIT 35

SPEED LIMIT 30 +5

-5

+5

37 37 +3

0

+1











SETTING SPEED LIMITS & REDUCING SPEEDS



Hwy 169 – St. Peter Posted Speed = 30 mph



Hwy 23 – Spicer Posted Speed = 40 mph



Hwy 371 – Baxter Posted Speed = 50 mph



Hwy 23 – Marshall Posted Speed = 55 mph













HWY 23 STRATEGIES THROUGH MARSHALL

ENGINEERING:

- (ES) Install advanced signing for reduced speed ahead
- (SC) Install trees and landscaping along Hwy 23 to serve as speed calming measures
- (SC) Strategically locate driver feedback signs to assist with speed calming
- (SC) Review posted speed limit in conjunction with highway characteristic changes

Speed Calming = SC Enhanced Signing = ES



Advanced Signing



Driver Feedback Signs

ENFORCEMENT:

• Work with law enforcement to enhance enforcement of posted speed limit



Enforcement Campaign

EDUCATION:

Conduct education campaign regarding speeding and distracted driving



Education Campaign

EVALUATION:

- Evaluate changes in travel speeds following any improvements
- Evaluate for local frontage/backage road connections with future development
- Evaluate potential removal of advanced warning flashers at traffic signals







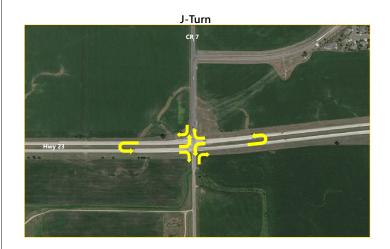


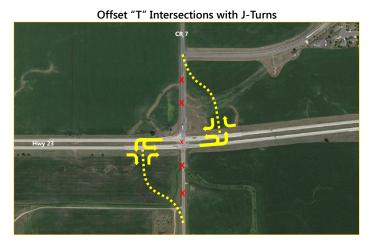




CR 7 / HWY 23 STRATEGIES

Preferred Strategies	Reduces travel speeds along Hwy 23?	Improves safety at intersections?	Improve safety of access to, from and across Hwy 23?	Improves safety for pedestrians and bicyclists?	Potential Reduction in Total Crashes	Cost Comparison
J-Turn		✓	√		++	\$\$
Offset "T" Intersections with J-Turns		✓	✓		++	\$\$\$





Legend

Potential Reduction in Total Crashes:

+ = Good

++ = Better

+++= Best

Cost Comparison:

\$ = Under \$500,000

\$\$ = \$500,000-\$900,000

\$\$\$ = \$900,000-\$1.3M

\$\$\$\$ = \$1.3M-\$5M

\$\$\$\$\$ = Over \$5M

Roundabout	√	√	√	√	++	\$\$\$
Widen Hwy 23 Median		√	√		++	\$\$\$\$
Overpass		\checkmark	√	\checkmark	+++	\$\$\$\$\$













4TH STREET / HWY 23 STRATEGIES

Preferred Strategies	Reduces travel speeds along Hwy 23?	Improves safety at intersections?	Improve safety of access to, from and across Hwy 23?	Improves safety for pedestrians and bicyclists?	Potential Reduction in Total Crashes	Cost Comparison
Close South Leg		✓			+	\$
J-Turn		✓	✓		++	\$\$
Roundabout	\checkmark	✓	√	√	++	\$\$\$

Close South Leg



J-Turn



Legen

Potential Reduction in Total Crashes:

+ = Good

++ = Better

+++= Best

Cost Comparison:

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\$\$\$ = \$900,000-\$1.3M

\$\$\$\$ = \$1.3M-\$5M

\$\$\$\$\$ = Over \$5M

Roundabout















CLARICE AVE / LYON ST / HWY 23 STRATEGIES

Preferred Strategies	Reduces travel speeds along Hwy 23?	Improves safety at intersections?		Improves safety for pedestrians and bicyclists?	Potential Reduction in Total Crashes	Cost Comparison
<u>Lyon St</u> - J-Turn (with no left-turn conflict at Clarice Ave)		√	✓		++	\$\$
<u>Lyon St</u> - Roundabout (with no left-turn conflict at Clarice Ave)	✓	√	✓	√	++	\$\$\$
<u>Lyon St/Clarice Ave</u> - J-Turn (combined with frontage roads)		✓	✓		++	\$\$\$
<u>Lyon St/Clarice Ave</u> - Roundabout (combined with frontage roads)	√	\checkmark	✓	√	++	\$\$\$\$





J-Turn at Lyon St/Clarice Ave



Roundabout at Lyon St



Roundabout at Lyon St/Clarice Ave



Legend

Potential Reduction in Total Crashes:

- + = Good
- ++ = Better
- +++= Best

Cost Comparison:

- \$ = Under \$500,000
- \$\$ = \$500,000-\$900,000
- \$\$\$ = \$900,000-\$1.3M
- \$\$\$\$ = \$1.3M-\$5M
- \$\$\$\$\$ = Over \$5M

<u>Lyon St/Clarice Ave</u> - Traffic Signal (combined with frontage roads)	√	\checkmark	√	+	\$\$\$
<u>Lyon St</u> - Traffic Signal (with no left-turn conflict at Clarice Ave)	/	√	√	+	\$













CANOGA PARK DR / HWY 59 / HWY 23 STRATEGIES

Preferred Strategies	Reduces travel speeds along Hwy 23?	Improves safety at intersections?		Improves safety for pedestrians and bicyclists?	Potential Reduction in Total Crashes	Cost Comparison
<u>Canoga Park Dr</u> - Close Northwest Leg		\checkmark			+	\$
<u>Canoga Park Dr</u> - Remove Left-Turn Conflict		√	✓		++	\$
Hwy 59 - Raised Median with Landscaping	✓	✓		✓	+	\$
<u>Hwy 59</u> - Analyze Signal Timing and/or Phasing (including leading pedestrian interval)		\checkmark	✓	✓	+	\$

Close Northwest Leg at Canoga Park Dr



Remove Left-turn Conflict at Canoga Park Dr



Raised Median with Landscaping at Hwy 59



Legend

Potential Reduction in Total Crashes:

+ = Good

++ = Better

+++=Best

Cost Comparison:

\$ = Under \$500,000

\$\$ = \$500,000-\$900,000

\$\$\$ = \$900,000-\$1.3M

\$\$\$\$ = \$1.3M-\$5M

\$\$\$\$\$ = Over \$5M

























HWY 19 / HWY 23 STRATEGIES

Preferred Strategies	Reduces travel speeds along Hwy 23?	Improves safety at intersections?	Improve safety of access to, from and across Hwy 23?	for podestrians	Potential Reduction in Total Crashes	Cost Comparison
Raised Median with Landscaping	√	✓		√	+	\$
Analyze Signal Timing and/or Phasing (including leading pedestrian interval)		\checkmark	✓	√	+	\$

Raised Median with Landscaping



Legend

Potential Reduction in Total Crashes:

+ = Good

++ = Better

+++= Best

Cost Comparison:

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\$\$\$\$\$ = Over \$5M

Lengthen Acceleration Lanes		√	√		+	\$
Remove Right-turn Channelization		√	√	√	+	\$
Roundabout	√	√	√	√	++	\$\$\$







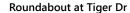




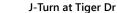


COMMENCEMENT BLVD / TIGER DR / HWY 23 STRATEGIES

Preferred Strategies	Reduces travel speeds along Hwy 23?	Improves safety at intersections?	or access to,	for pedestrians	Potential Reduction in Total Crashes	Cost Comparison
<u>Tiger Dr</u> - Roundabout	✓	✓	√	√	++	\$\$\$
<u>Tiger Dr</u> - J-Turn		\checkmark	√		++	\$\$









Legend

Potential Reduction in Total Crashes:

+ = Good

++ = Better

+++=Best

Cost Comparison:

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\$\$ = \$500,000-\$900,000

\$\$\$ = \$900,000-\$1.3M

\$\$\$\$ = \$1.3M-\$5M

\$\$\$\$\$ = Over \$5M

Offset "T" Intersections		√	√		+	\$\$
<u>Tiger Dr</u> - Traffic Signal	\checkmark		\checkmark	\checkmark	+	\$





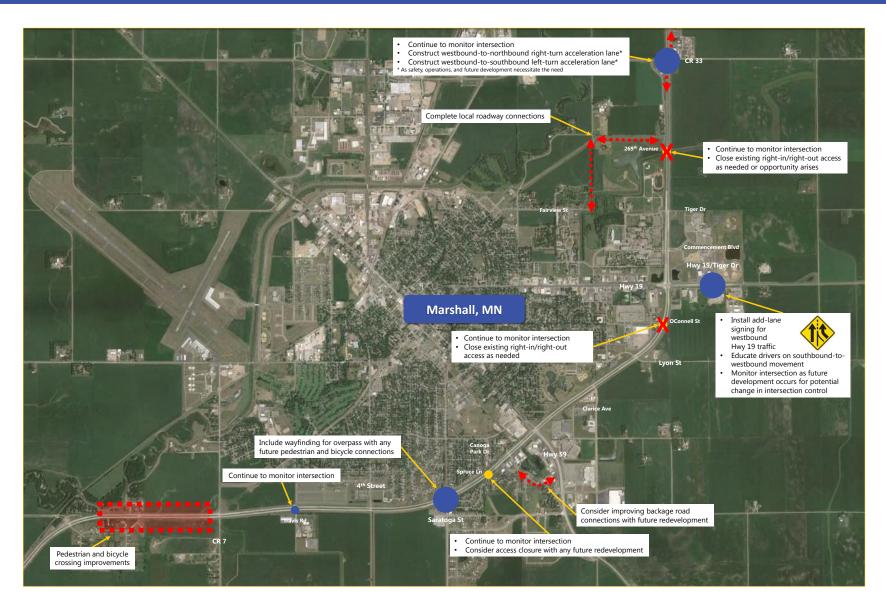








OTHER STRATEGIES UNDER CONSIDERATION















PRIORTIZATION EXERCISE - AREAS OF CONCERN

Please pick your top two priorities for each area:

Red Dot = 1st priority

Green Dot = 2nd priority

Travel speeds along Hwy 23.

Safety at intersections.

Access to, from and across Hwy 23.

Safety for pedestrians and bicyclists.











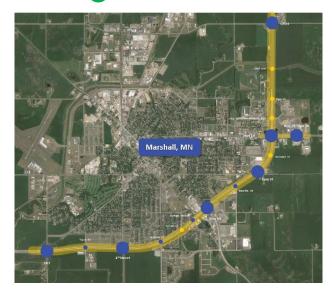


PRIORTIZATION EXERCISE - PRIORITY LOCATIONS

Please pick your top two priorities for each area:

Red Dot = 1st priority

Green Dot $= 2^{nd}$ priority



Hwy 23 / CR 7	
Hwy 23 / 4th Street	
Hwy 23 / Hwy 59 / Canoga Park Dr	
Hwy 23 / Lyon St / Clarice Ave	
Hwy 23 / Hwy 19	
Hwy 23 / Tiger Dr / Commencement Blvd	
Hwy 23 / CR 33	











