



City Council
Meeting
May 23, 2016



1. Background

2. Phase 1 – Alternatives Concept Study

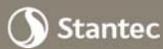
- Developed 4 Concepts
- Performed Traffic Counts
- Conducted Workshop
- Recommendation

Background

The 2013 SRTS Plans were the result of a 2012 grant award

Project aligned with other community planning efforts:

- Comp plan
- Complete Streets
- Bike/ped. Master Plan

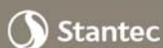


- Safe Routes to School (SRTS)
 - Twin Bluff Middle School
 - Sunnyside Elementary School



Background

2013 SRTS Plan – Twin Bluff Middle School

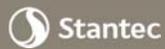


- SRTS Key Issues
 1. Significant skew and multiple turning movements create long crossings for pedestrians and bicyclists. Many possible points of conflict.
 2. High speed on Pioneer Road make pedestrian crossing difficult.
 3. School bus entrance needs to be defined as an entrance.
 4. Mid-block crossing.

Background

2013 SRTS Plan –
Twin Bluff Middle School

- ① Install Rectangular Rapid Flash Beacons (RRFB's)
- ② High Visibility Crosswalks
- ③ Remove Driveway
- ④ Change bus and parent traffic flow



• SRTS Recommendations

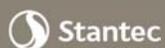


Background

2013 SRTS Plan –
Twin Bluff Middle School

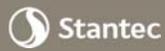
• SRTS Concepts

- Double “T” intersection  Preferred
- Single Roundabout
- Double Roundabout



Background

2014 SRTS
Infrastructure Grant



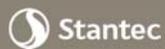
- SRTS Infrastructure Award

Project Funding

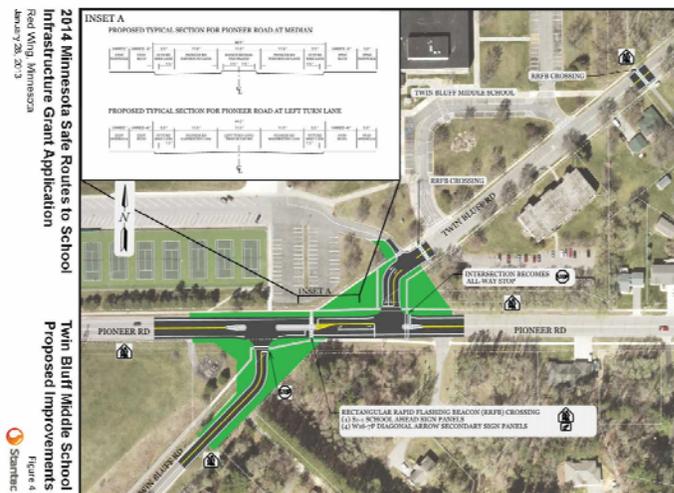
Phase of Work	Local	Federal	Total
Preliminary Engineering	\$17,179	\$31,904	\$49,083
Construction Engineering	\$15,856	\$29,450	\$45,306
Construction Cost	\$151,965	\$282,221	\$434,186
Total	\$185,000	\$343,575	\$528,575

Background

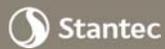
2014 SRTS
Infrastructure Grant



- Based on Double T Alternative



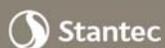
Phase 1 - Intersection Concept Study



- Phase 1 – Intersection Concept Study
 - Developed 4 Concepts
 - Performed Traffic Counts
 - Conducted Workshop
 - Recommendations
- Phase 2 – Preliminary-Final Design
- Phase 3 - Construction

Phase 1 - Intersection Concept Study

- Double T
- Double T - Separated
- Single roundabout
- Double roundabout



• Double T-Intersection



DOUBLE TEE INTERSECTION

CITY OF RED WING
SR15 - INTERSECTION CONCEPT STUDY

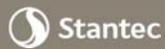
DATE: 03/08/24 PROJ: N21170001

FIGURE 1



Phase 1 - Intersection Concept Study

- Double T
- Double T - Separated
- Single roundabout
- Double roundabout



• Double T-Intersection - Alternate



SEPARATED DOUBLE TEE INTERSECTION

CITY OF RED WING
SR15 - INTERSECTION CONCEPT STUDY

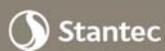
DATE: 2/28/2014 PROJECT NUMBER:

FIGURE 4



Phase 1 - Intersection Concept Study

- Double T
- Double T - Separated
- Single roundabout
- Double roundabout



• Single Roundabout



ROUNDABOUT AND SINGLE TEE

CITY OF RED WING
SR15 - INTERSECTION CONCEPT STUDY

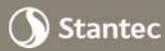
DATE: 2/28/2014 PROJECT NUMBER:

FIGURE 2

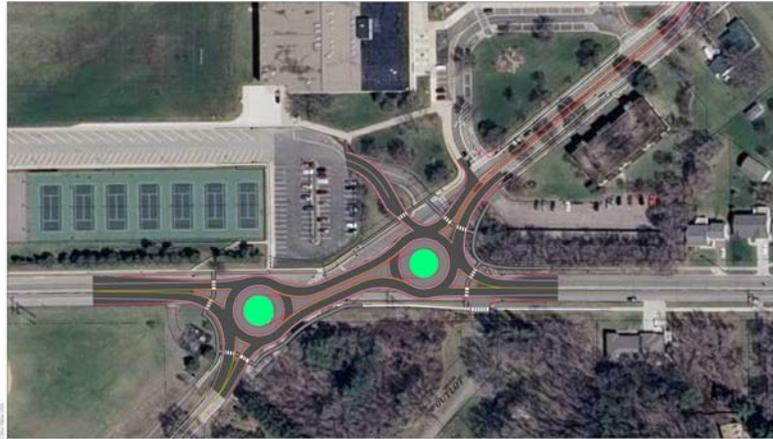


Phase 1 - Intersection Concept Study

- Double T
- Double T - Separated
- Single roundabout
- Double roundabout



• Double Roundabout



ROUNDABOUT / DOUBLE ROUNDABOUT

CITY OF RED WING
SR15 - INTERSECTION CONCEPT STUDY

FIGURE 3

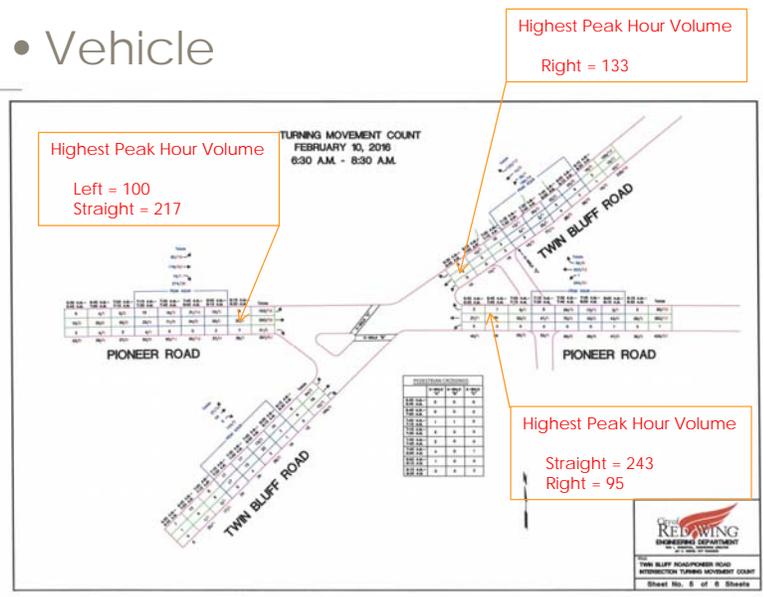


Phase 1 - Intersection Concept Study

- Traffic Counts
- Vehicle

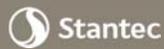


• Vehicle



Phase 1 - Intersection Concept Study

Workshop



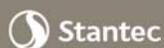
Workshop Participant Response

Intersection Layout	Ranking				Weighted Average Rank
	#1	#2	#3	#4	
Double Tee		2		2	3
Separated Double Tee			1	1	4
Roundabout Single Tee	5	1			1
Double Roundabout	1	2	1		2

- Other Outcomes?
 - Revise bus entrance/exit
 - Shift single roundabout west to reduce private property impact

Phase 1 - Intersection Concept Study

Recommendation



Alternative Evaluation Summary

Criteria	No Build	Double Tee	Separated Double Tee	* Roundabout Single Tee	Double Roundabout
Traffic Operations	Poor	Fair	Fair	Good	Good
Pedestrian Travel	Poor	Fair	Fair	Good	Good
Bus Travel	Poor	Fair	Fair	Good	Good
Vehicular Travel	Poor	Fair	Fair	Good	Good
Right of Way impacts	Good	Good	Poor	Fair	Fair
Cost	Good	Good	Fair	Fair	Poor

Phase 1 -
Intersection
Concept
Study

Recommendation



Cost Estimate Comparison

Intersection Layout	Construction Cost	Soft Costs	Project Cost
Double Tee	\$388,000	\$97,000	\$485,000
Roundabout Single Tee	\$523,000	\$150,000	\$753,000
		Cost difference	\$268,000 or 64%