



# STUDY OVERVIEW

## STUDY DESCRIPTION

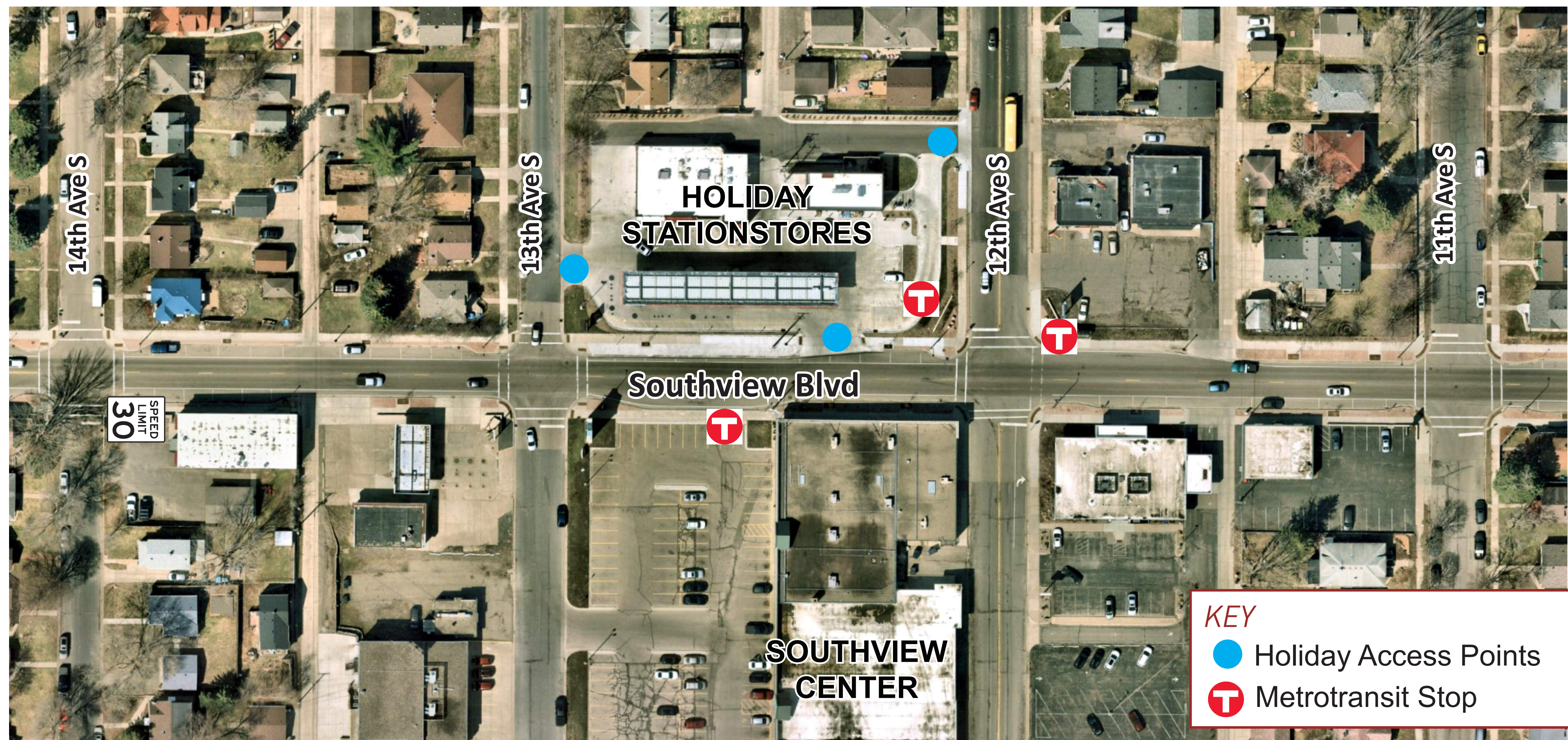
Dakota County and the City of South St. Paul completed a reconstruction project on Southview Boulevard and Third Avenue in 2018 to:

- Address aging infrastructure
- Improve pedestrian, bicycle and transit accommodations.
- Include streetscape elements
- Manage traffic operational and safety needs

The 2018 reconstruction project included several improvements to the area of Southview Boulevard near 12th Avenue and 13th Avenue, including the removal of a traffic signal at 12th Avenue N. Since the completion of these improvements, several redevelopment projects were completed in the area, including the opening of a Holiday Station Store north of Southview Boulevard between 12th and 13th avenues.

A study of existing site conditions, including traffic volumes, area development, crash history and other key factors was performed in 2023. This study evaluated what has changed in the corridor asince completion of the original corridor study, before and after the 2018 reconstruction project, and what is present today.

## STUDY AREA



**KEY**

- Holiday Access Points
- Ⓣ Metrotransit Stop

## CONTACTS

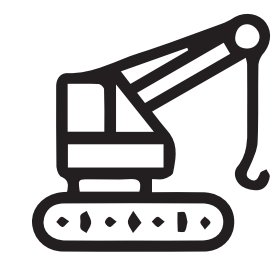


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**Project Website**  
[bit.ly/southview-study](http://bit.ly/southview-study)

## STUDY AREA DETAILS



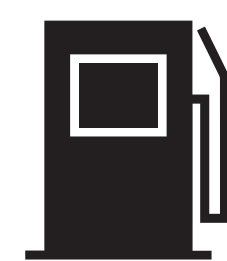
Southview Boulevard & 3rd Avenue Improvement Project completed Fall 2018



Speed Limit on Southview Boulevard is 30 mph



Metro Transit Stops are provided at 3 locations near the 12th Avenue and 13th Avenue intersections



Holiday Stationstore opened in Fall 2022



Side Street Stop Control is provided at both 12th Avenue and 13th Avenue



12th Avenue has highest pedestrian volumes in study area



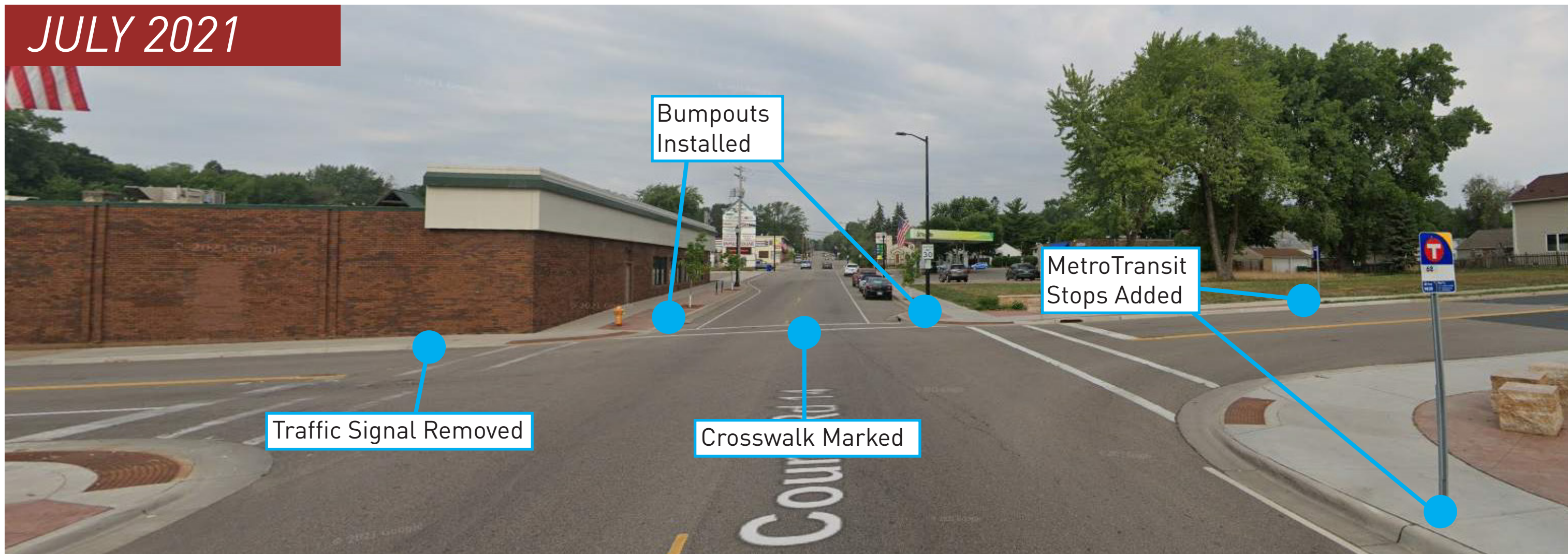
# BEFORE-AFTER STUDY AREA CONDITIONS

## SOUTHVIEW BLVD & 12TH AVE (LOOKING WEST)

AUGUST 2017



JULY 2021



MAY 2023

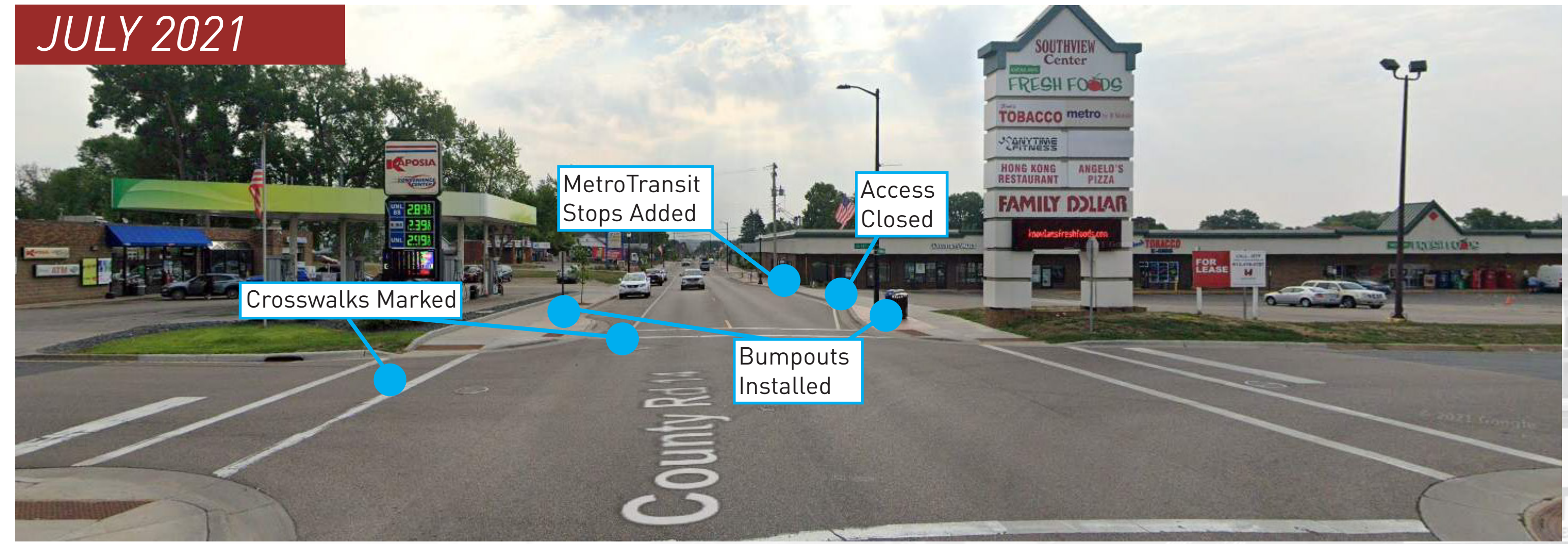


## SOUTHVIEW BLVD & 13TH AVE (LOOKING EAST)

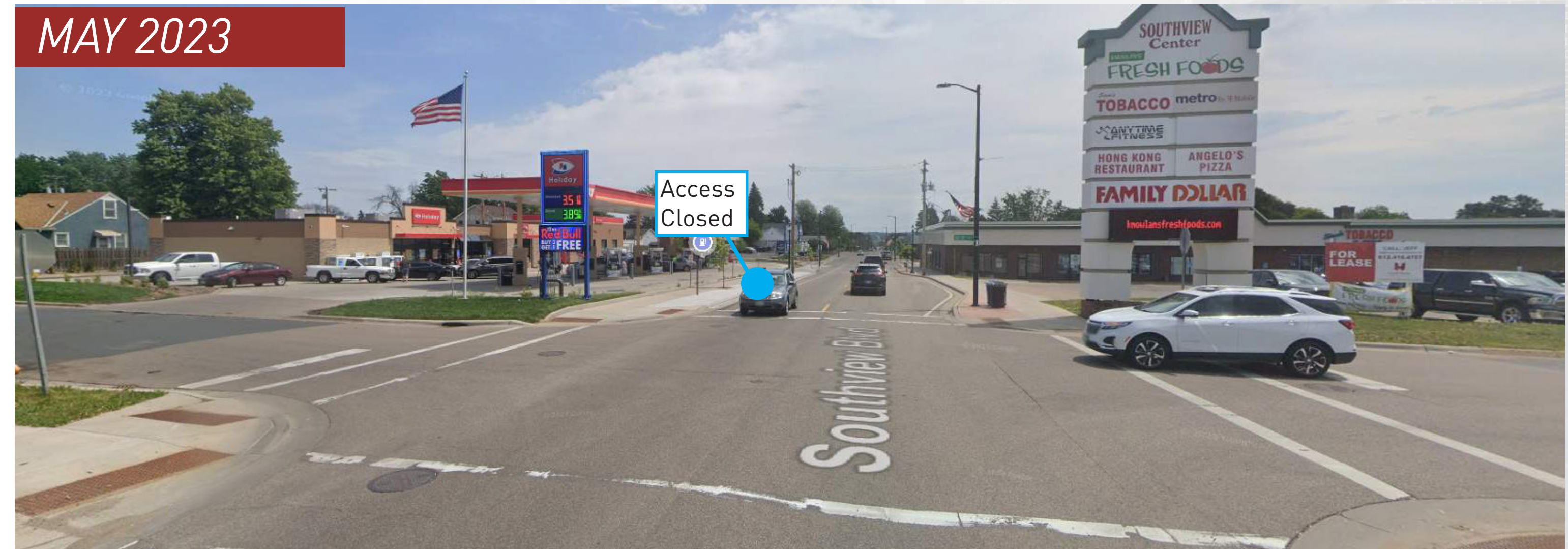
AUGUST 2017



JULY 2021



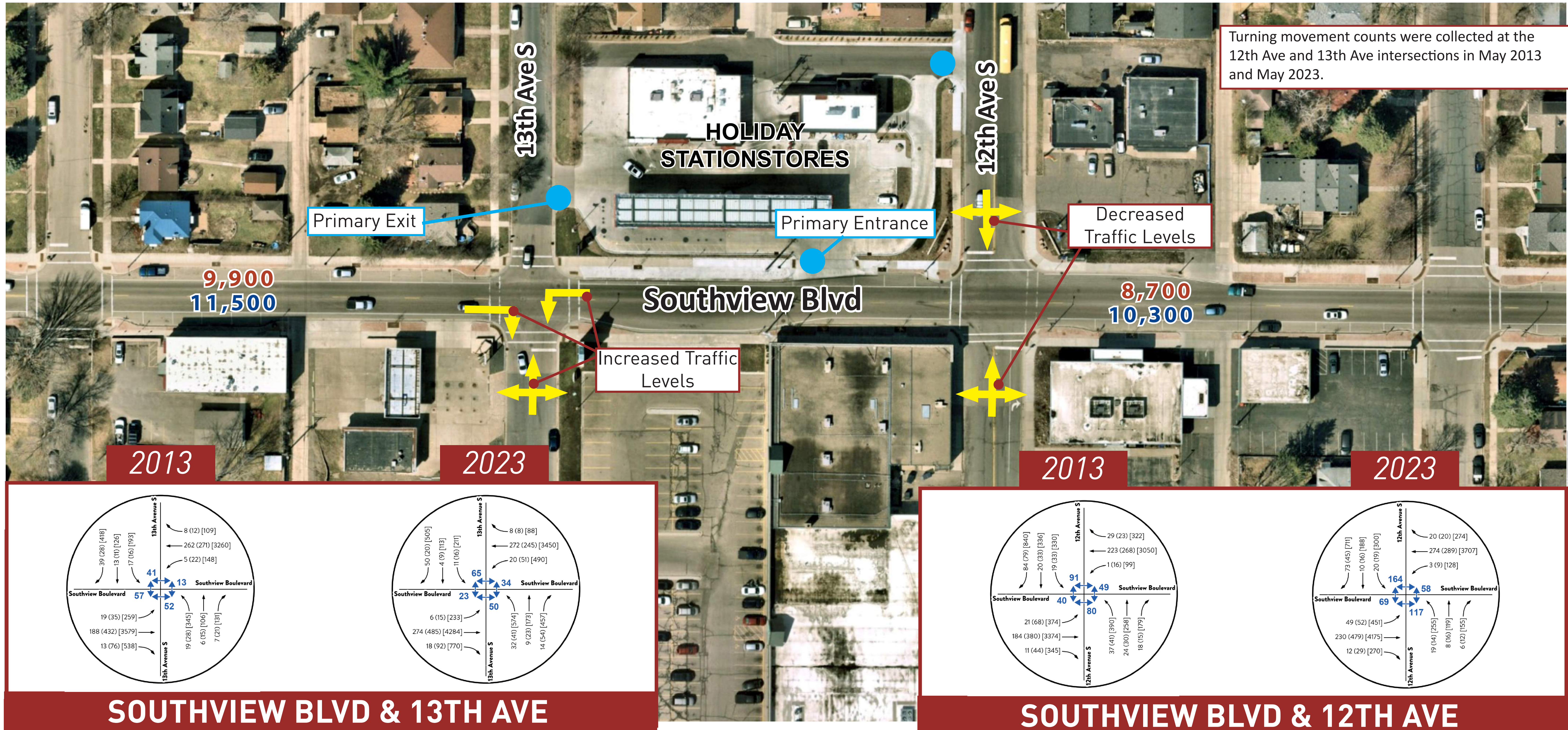
MAY 2023



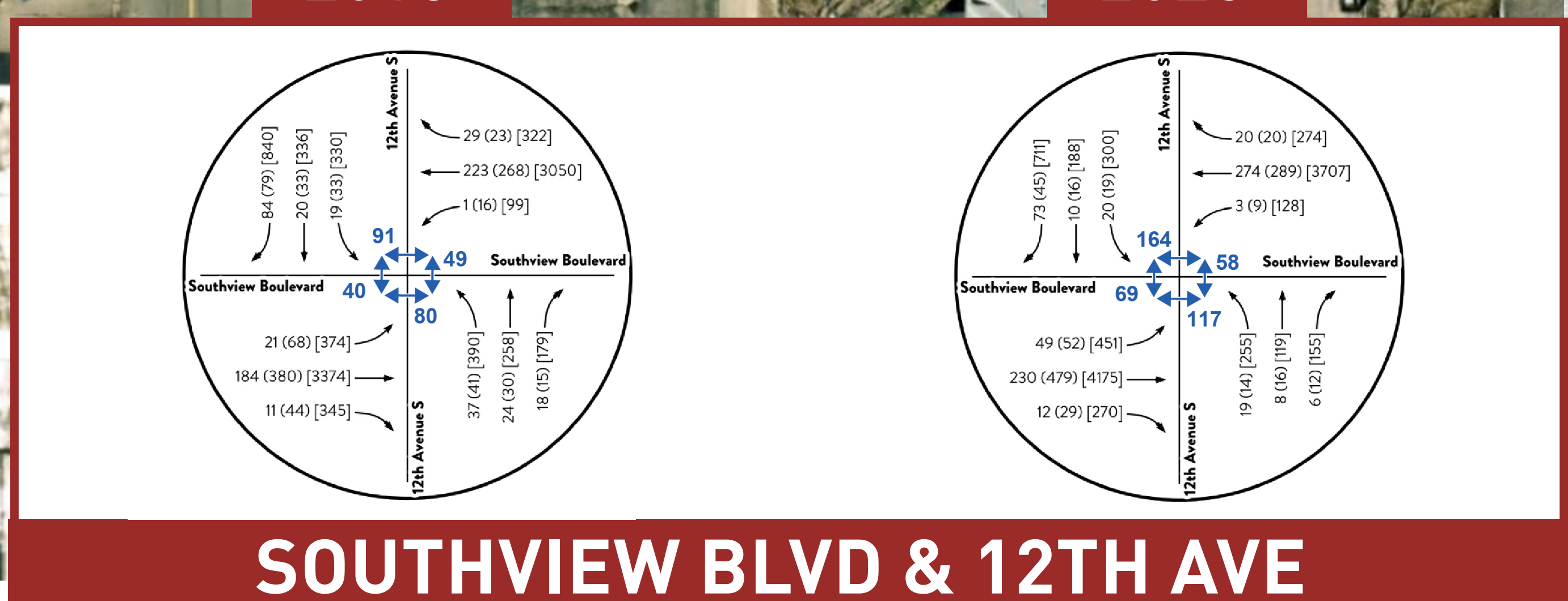
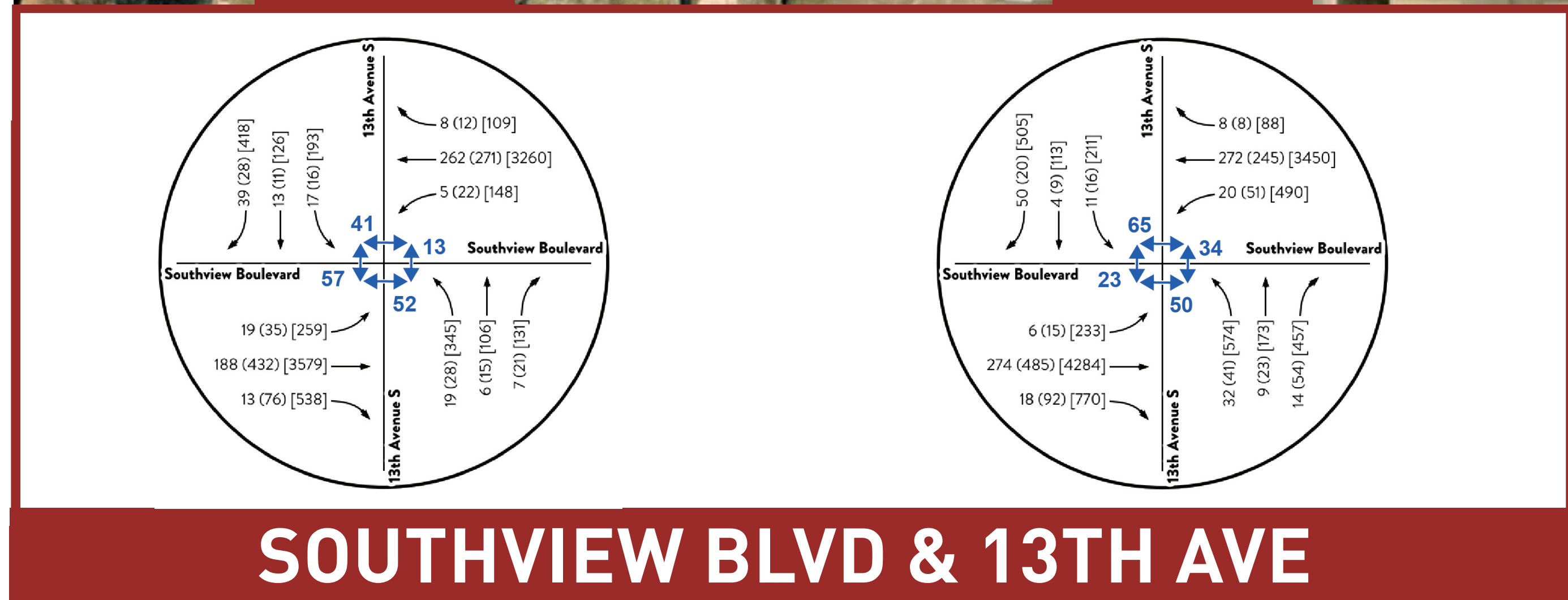


# BEFORE-AFTER STUDY FINDINGS

## TRAFFIC VOLUMES



Turning movement counts were collected at the 12th Ave and 13th Ave intersections in May 2013 and May 2023.



**LEGEND**

AM (PM) 13-Hr Count

← Pedestrian Count

**XXX** 2013 Collected Daily Traffic Volumes

**XXX** 2023 Collected Daily Traffic Volumes

- KEY NOTES**
- Traffic volumes have increased by 15-20% on Southview Blvd over the last 10 years.
  - Traffic volumes have reduced on 12th Ave since 2013
  - Entering and exiting traffic volumes have increased on the south leg of 13th Ave since 2013



# BEFORE-AFTER STUDY FINDINGS

## TRAFFIC CONTROL WARRANTS & VEHICLE SPEEDS



### TRAFFIC SPEEDS



*POSTED  
SPEED LIMIT*

Vehicle speeds were collected in May 2023 at a location between 13th Avenue and 14th Avenue to understand operations in the transition area between the 2-lane and 3-lane section. Findings are provided, below:

SPEED DATA (2023)	
Speed Limit	30 MPH
85th Percentile Speed*	35 MPH
10 MPH Pace Interval	27 MPH to 37 MPH
Max Speed	54 MPH

\* 85th Percentile Speed is the speed at or below which 85 percent of the drivers travel on a road segment. It is the maximum speed that 85% of drivers will not exceed on a given road if there were no stop signs, speed limits, or traffic signals. Posted speed limits are often set based upon the 85th percentile speed.

### TRAFFIC LEVELS

A traffic signal warrant is a set of minimum criteria that define the need for, or appropriateness of, traffic control devices such as traffic signals and all-way stop control. The warrants are used to evaluate the need for installing traffic control treatments at a specific intersection.

#### SOUTHVIEW BLVD & 13TH AVENUE

13th Ave	Required	2023 Hours
Warrant 1A	8	0
Warrant 1B	8	3
Warrant 2	4	0
Warrant 3	1	5
All-Way Stop	8	0

*\*Note: Hours were not recorded on 13th Ave in 2013.*

#### SOUTHVIEW BLVD & 12TH AVENUE

12th Ave	Required	2013 Hours	2023 Hours
Warrant 1A	8	0	0
Warrant 1B	8	0	2
Warrant 2	4	0	0
Warrant 3	1	0	0
All-Way Stop	8	0	5

Traffic volumes collected in May 2023 were evaluated against Traffic Signal and All-Way Stop Warrants for the intersections of 12th Avenue and 13th Avenue. **By the criteria laid out in Chapter 4C of the Mn MUTCD a traffic signal or all-way stop is not warranted at either intersection.**



To review the project FAQs and to sign up for project updates visit:  
[bit.ly/southview-study](https://bit.ly/southview-study)



# BEFORE-AFTER STUDY FINDINGS

## TRAFFIC SAFETY

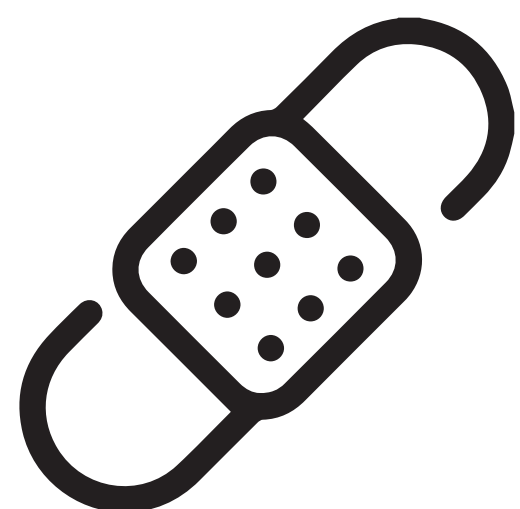
### CRASH HISTORY

	13th Ave S (All Crashes)	12th Ave S (All Crashes)	# of Angle Crashes	
			13th Ave S	12th Ave S
 2020 – 2022 (3 years of data)	5 Crashes	5 Crashes	0 Crashes	2 Crashes
 2013 – 2017 (5 years of data)	6 Crashes	12 Crashes	2 Crashes	1 Crash
 2010 – 2012 (3 years of data)	7 Crashes	9 Crashes	0 Crashes	0 Crashes

### KEY NOTES

In the previous 13 years of available crash data (2019-2022), there have been zero reported injury and pedestrian/bicycle crashes at either the 12th Avenue S or 13th Avenue S Intersections.

### 2009-2022



0  
Injury  
Crashes



0  
Pedestrian/Bicycle  
Crashes

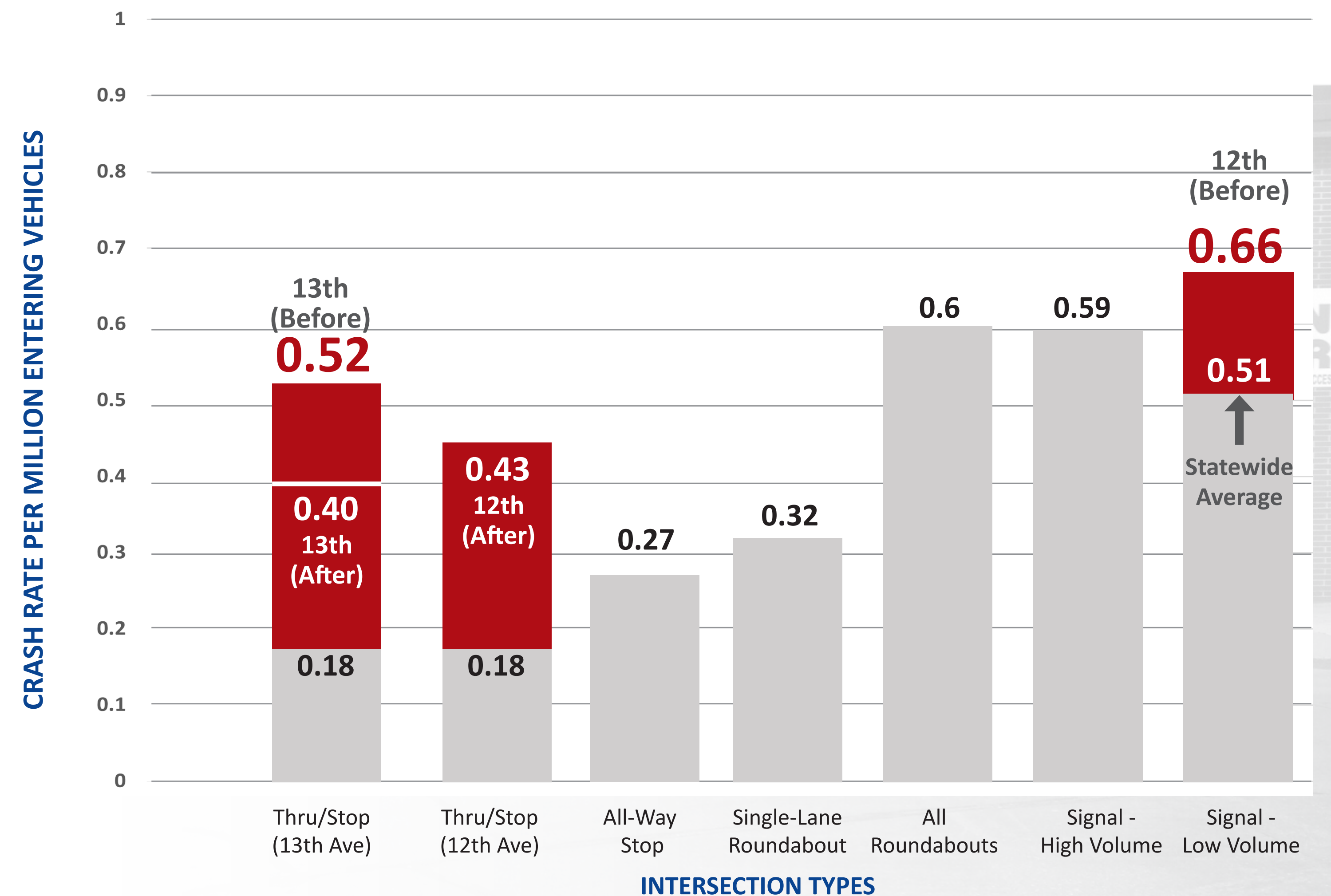
### CORRIDOR OPERATIONS

Intersection crash rates were studied for the 12th Avenue and 13th Avenue intersections before and after the completed 2018 Southview Boulevard Reconstruction Project.

	Before Crash Rate 2010-2012	Before Crash Rate 2013-2017	After Crash Rate 2020-2022	Delta Difference
12th Ave	0.66	0.66	0.43	-35%
13th Ave	0.52	0.36	0.40	-23%

### INTERSECTION CRASH RATE

Crash rate is the number of crashes per million vehicles entering the intersection. At this intersection, the crash rate was above the statewide average of a typical signalized intersection before its removal with the 2018 improvement project.





# BEFORE-AFTER STUDY FINDINGS

## TRAFFIC OPERATIONS

### SIGHT DISTANCE REVIEW



Bump-outs provided at the 12th Avenue and 13th Avenue intersections aid drivers seeing beyond building corners and other obstructions to improve decision-making when assessing gaps in Southview Boulevard traffic movements. Bump-outs also reduce crossing distances and improve sightlines for pedestrian to create a safer environment.

#### 13TH AVENUE



#### 12TH AVENUE



Sight lines were reviewed in conjunction with the 2018 Southview Boulevard Improvement Project. Conditions at both 12th Avenue and 13th Avenue meet sight line requirements for the posted speed of 30mph on Southview Boulevard.

### CORRIDOR OPERATIONS

#### TRAFFIC OPERATIONS

Based upon observed site conditions and completed traffic analysis utilizing the May 2023 traffic data, the sidestreet stop controlled intersections of 12th Avenue and 13th Avenue operate consistent with the findings of the previous corridor study. Minimal delays and queuing were observed (maximum of 5 vehicles for southbound approach in AM peak hour) on sidestreets while Southview Boulevard maintained free flow operations.

A summary of observed and modeled traffic delays with the Before (2013) and After (2023) condition is provided in the table, below:

#### SOUTHVIEW BLVD & 12TH AVE

	Before (2013) Average	After (2023) Average
Intersection Delay*	9 sec (AM) 12 sec (PM)	8 sec (AM) 13 sec (PM)
Sidestreet Delay (worst movement)	NB 15 sec (AM) NB 19 Sec (PM)	NB 8 sec (AM) NB 13 Sec (PM)
Mainline Delay	7 sec (AM) 11 sec (PM)	2 sec (AM) 3 sec (PM)

#### MAX QUEUES

- 2013 Max Queue:**
- 150ft WB (AM)
  - 250ft (PM)
- 2023 Max Queue:**
- 100ft SB (AM)
  - 75ft (PM)

#### SOUTHVIEW BLVD & 13TH AVE

	Before (2013) Average	After (2023) Average
Intersection Delay*	7 sec (AM) 11 sec (PM)	8 sec (AM) 14 sec (PM)
Sidestreet Delay (worst movement)	NB 7 sec (AM) NB 11 Sec (PM)	NB 8 sec (AM) NB 14 Sec (PM)
Mainline Delay	1 sec (AM) 2 sec (PM)	2 sec (AM) 2 sec (PM)

#### MAX QUEUES

- 2013 Max Queue:**
- 75ft SB (AM)
  - 100ft NB (PM)
- 2023 Max Queue:**
- 75ft NB/SB (AM)
  - 150ft NB (PM)

\*The intersection delay for a side-street stop is defined as the delay of the worst approach



# SOUTHVIEW BLVD IMPROVEMENT PROJECT

## 2015 STUDY DOCUMENTATION

### 12<sup>TH</sup> AVENUE

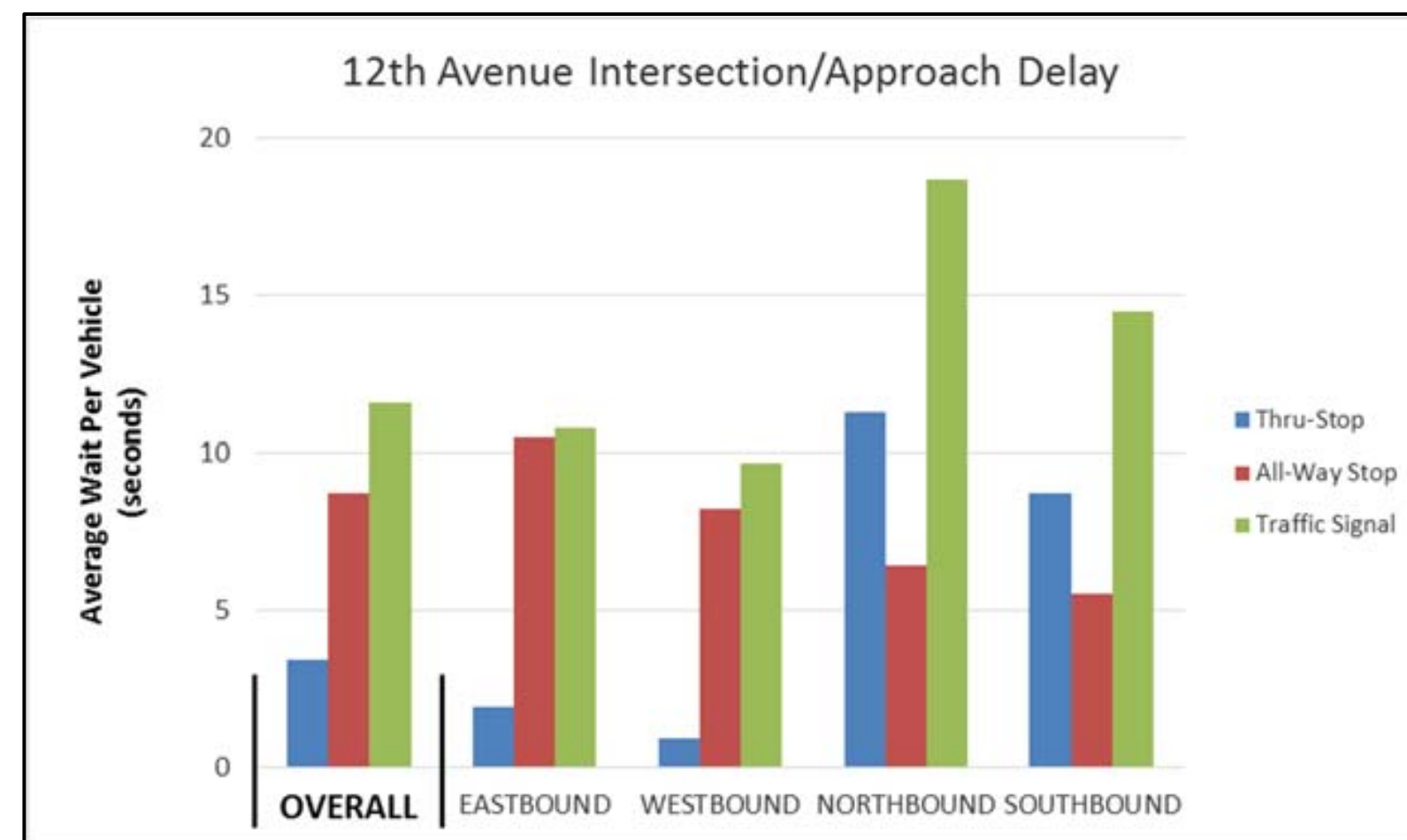
#### INTERSECTION ANALYSIS

##### Background

The intersection of Southview Boulevard and 12<sup>th</sup> Avenue is a key intersection in terms of vehicle operations, transit, pedestrians and business activity.

##### Traffic Operations

- Traffic signal equipment is beyond its useful life and needs major repairs.
- Current traffic volumes indicate installation of new traffic signal system not justified.
- Two traffic control alternatives were evaluated and compared to existing (traffic signal) operations. See graph below.



##### Traffic Control Recommendations

- Delay will be reduced by 70 – 75% overall with change in traffic control from current traffic signal condition.
- By providing stop signs only on 12<sup>th</sup> Avenue with the thru-stop control, average wait times are reduced for the large number of vehicles passing through the intersection on Southview Boulevard.
- Thru-stop is recommended as the best measure to address safety and operations for all users at this location.

##### Safety

- The collision history shows 9 crashes at intersection between 2010 – 2012.
- Types of crashes that occurred are consistent with those typically found at signalized intersections.
- Thru-stop traffic control (recommended) crash rate is approximately 50% less than a signal along the Southview Blvd Corridor.

#### QUICK FACTS

- INSTALLATION OF NEW TRAFFIC SIGNAL NOT JUSTIFIED
- THRU-STOP TRAFFIC CONTROL IS RECOMMENDED
- 70-75% LESS OVERALL INTERSECTION DELAY ANTICIPATED
- CRASH REDUCTION OF 50% WITH A THRU-STOP COMPARED TO A SIGNALIZED INTERSECTION
- PROPOSED THRU-STOP WILL ADDRESS SAFETY AND MOBILITY ISSUES



Thru-stop (side street stop) control is recommended

### BUMP-OUTS

#### SOUTHVIEW BOULEVARD

##### What is a bump out?

A Bump-Out is a type of curb modification used to extend the sidewalk into the roadway area at intersections. This reduces the crossing distance and improves sight lines for both pedestrian and motorists. Bump-outs do not encroach into the travel lane but instead occupy the 20-30 feet within the intersection area where parking is not legally allowed.



##### Benefits

- Reduces pedestrian crossing distance
- Improves motorist visibility of pedestrians
- Improves visibility for cross street traffic
- Maintains and improves delineation of parking spaces
- Provides additional space for curb ramps and landscaping



##### Trade-offs

- Bump-outs occupy space for turn lanes
- Snow removal is more difficult
- Transit stops require separate bus loading zones or may occur within the travel lane

#### QUICK FACTS

##### BUMP-OUTS:

- IMPROVE SAFETY FOR PEDESTRIANS AND MOTORISTS
- SHORTEN DISTANCE FOR PEDESTRIANS TO CROSS SOUTHVIEW BLVD
- IMPROVE VISIBILITY OF PEDESTRIANS
- PROVIDE ADDITIONAL SPACE FOR CURB RAMPS AND STREETScape