



**TROY CITY COUNCIL
COMMITTEE MEETING
COUNCIL CHAMBERS, CITY HALL
100 S. Market Street, Troy, Ohio**

MONDAY, JULY 13, 2026, 6:00 PM

1. Council Committee of the Whole
 - A. Review of June 24 Meeting by City Engineer
 - B. Provide a Recommendation to Council regarding the design of the future improvement of the intersection of West Main Street (SR41) and Experiment Farm Road

Other Committees/items may be added

7-10-2026

cc: Council
Mayor
Mr. Titterington, Mr. Kerber
Mr. Frigge, Departments, Media

West Main Street & Experiment Farm Road / South Stanfield Road Improvements Council Presentation

June 24, 2026

MIA-SR41-11.72; PID 121678



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TROY
OHIO

Project History to Date

2020

Intersection Improvement Study

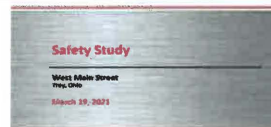
Intersection improvement evaluated for
W Main St & Experiment Farm Rd



2021

Safety Study

Crash patterns & safety concerns
documented for the corridor



2025

Alternative Evaluation

Current traffic counts & crash data
collected & analyzed



June 2026

Council Presentation

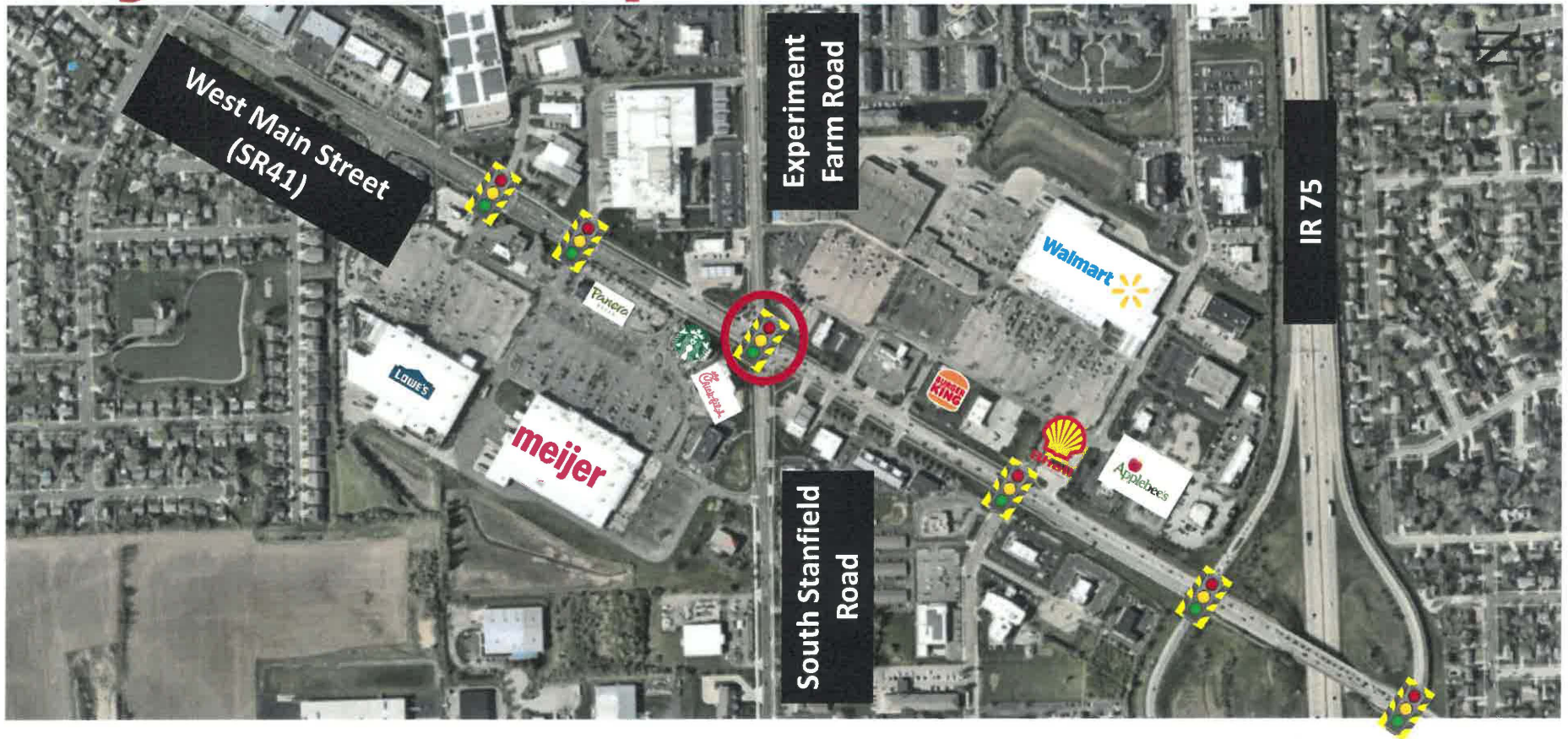
Alternatives developed & presented
for council review & approval

4
years

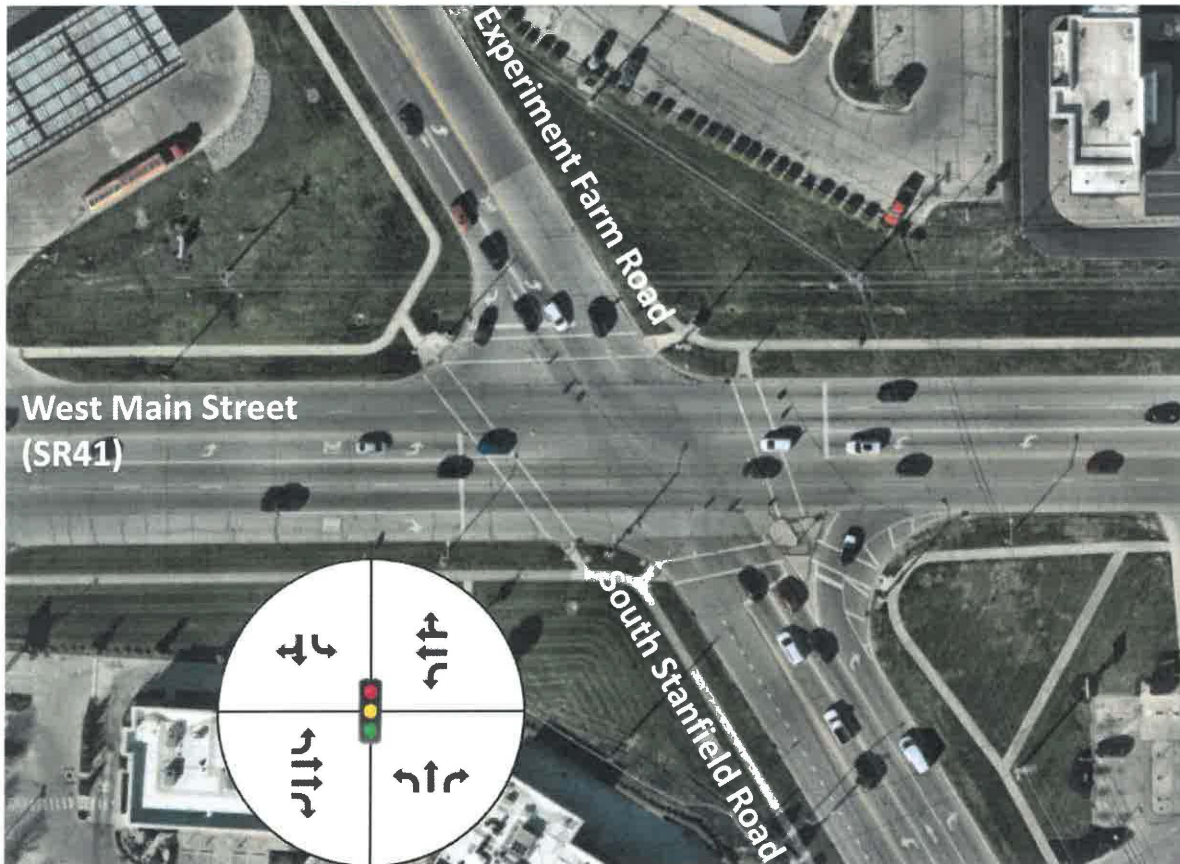
of study & data collection
before bringing this project to council

Studies confirmed: safety issues, crash patterns, and traffic volumes
all justify intersection improvements at W Main St & Experiment Farm Rd

Project Area Map



Existing Conditions



Average Daily Traffic

- **W Main Street: 23,390 vehicles per day**
- **Experiment Farm Road: 7,310 vehicles per day**
- **South Stanfield Road: 9,810 vehicles per day**

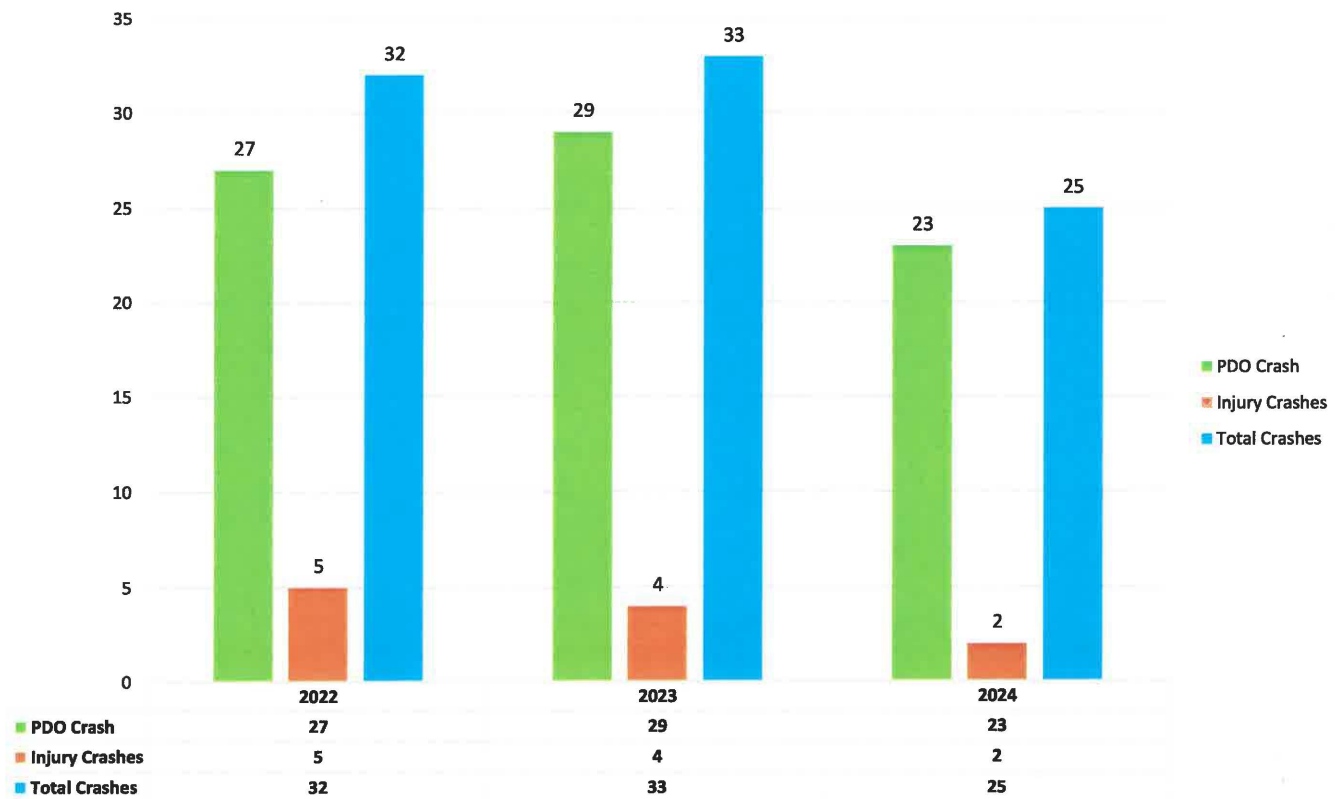
Speed Limit

- **W Main Street: 40 mph**
- **Experiment Farm Road: 35 mph**
- **South Stanfield Road: 35 mph**

Traffic Control

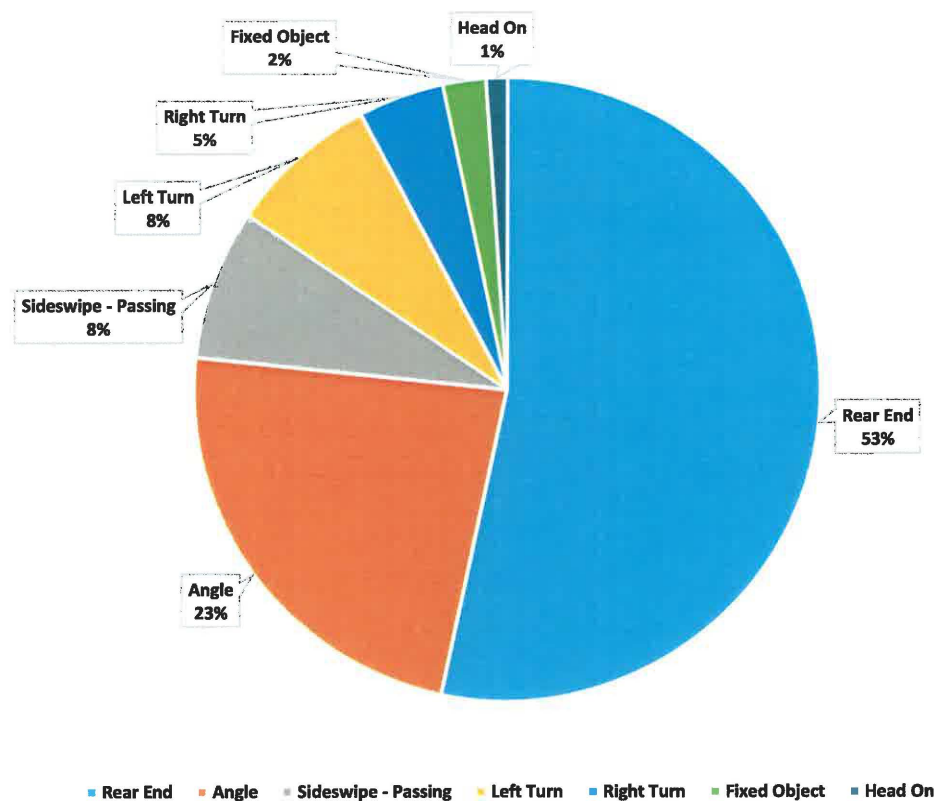
- **Signalized Intersection (Span wire) without backplates**

Existing Crash Data



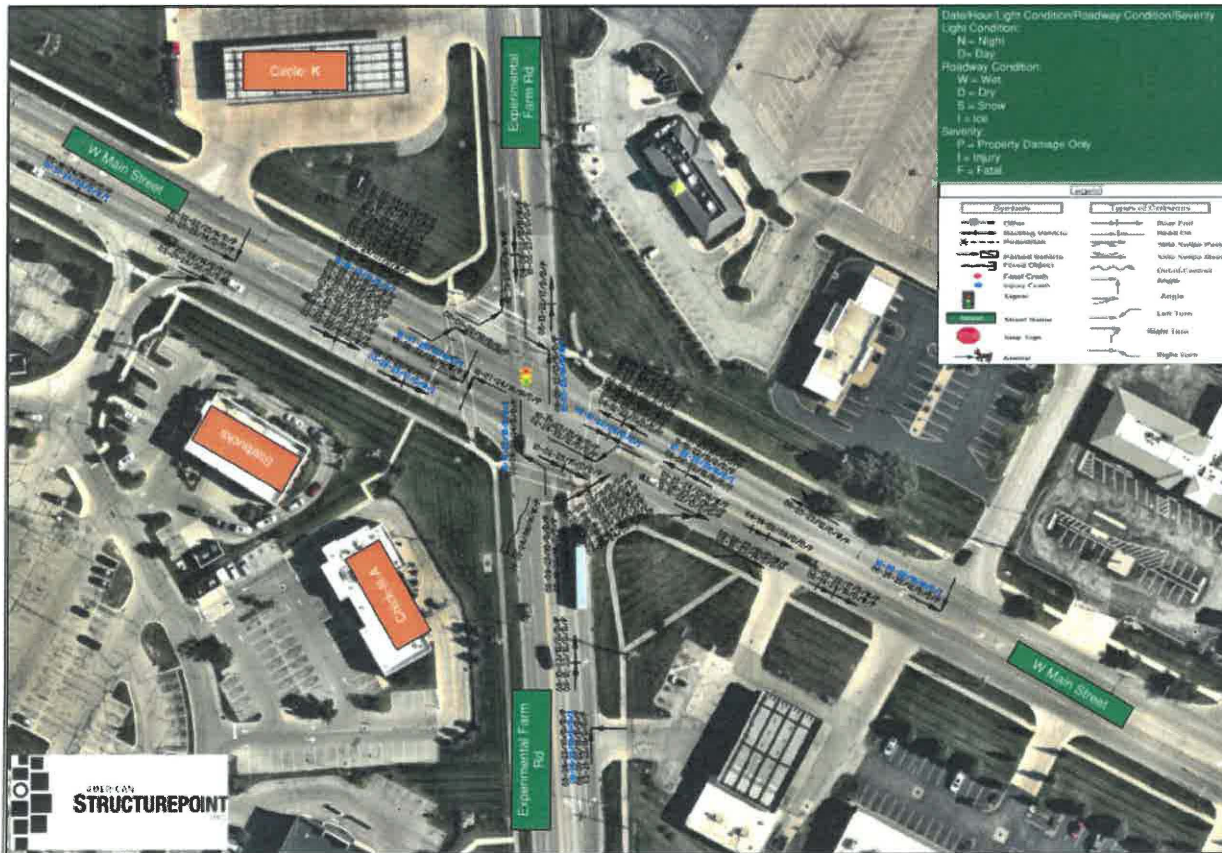
Existing crashes in the project area broken down by Severity per Year

Existing Crash Data



Existing crashes in the project area broken down by Type

Existing Collision Diagram



Ohio statewide

22%

of all crashes are rear-end

Troy citywide

27%

of all crashes are rear-end

W Main St and Experiment Farm Road
Intersection

53%

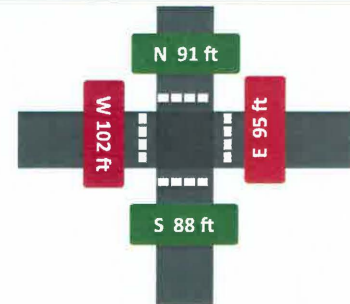
of all crashes are rear-end

2.4x the statewide average

Existing Conditions – Pedestrian Crossing



Crossing lengths by leg



N 91 ft	E 95 ft	W 102 ft	S 88 ft
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Exposure to Pedestrian per leg

25 – 35 seconds

Avg. walking speed: 3 – 4 ft / sec

Congestion

PROJECT BENEFIT: Travel time through the corridor drops from 106 to 81 seconds — saving 25 seconds per trip during peak hours



Purpose and Need

Purpose Statement:

The purpose of this project is to improve safety and reduce congestion for the traveling public at the intersection of West Main Street and Experiment Farm Road/South Stanfield Road in Troy, Miami County, Ohio.

CURRENT CONDITIONS



Safety Concerns



Traffic Delays



Congestion



Public Impacts



PROJECT OUTCOME



Safer Intersection



Improved Traffic Flow



Reduced Travel Delays



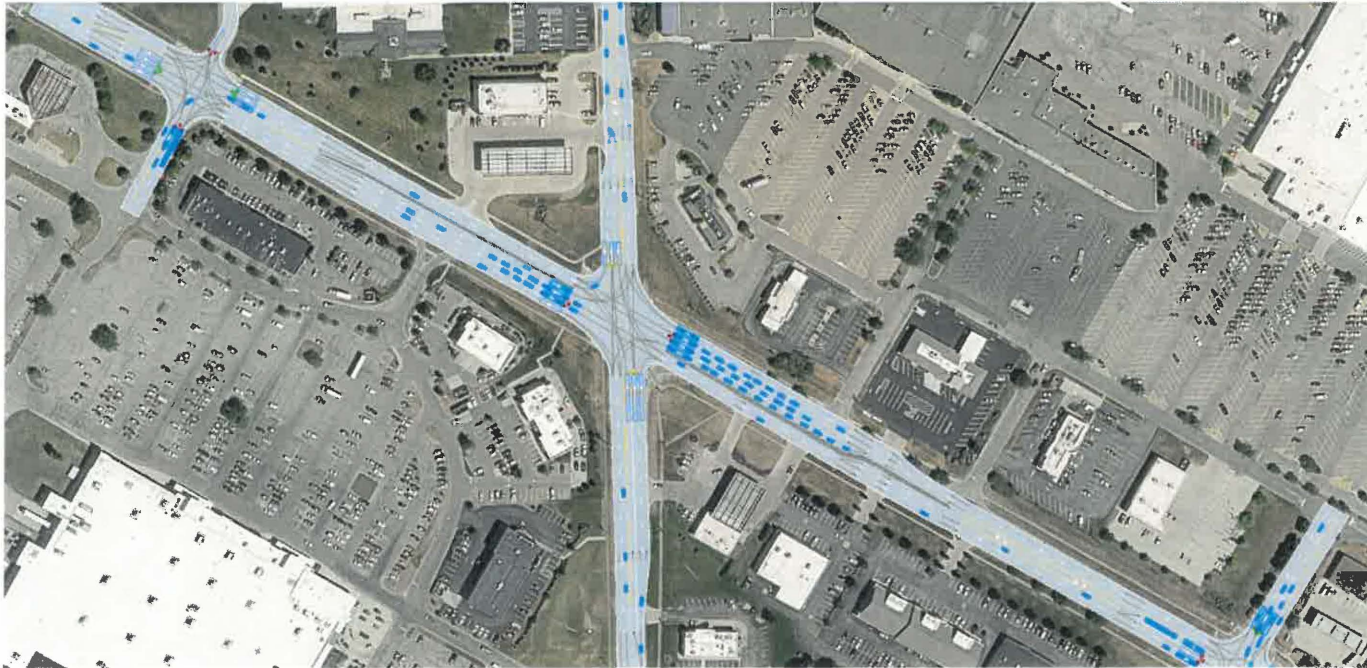
Better User Experience

Proposed Capacity Improvements

Vehicle Delay by Approach — PM Peak Hour (Design Year 2049)					Design Year (2049) PM Peak	
Intersection	Approach	No Build	Improved Signal	Roundabout	Delay Reduction vs No Build (PM)	
		Delay (s/veh)	Delay (s/veh)	Delay (s/veh)	Improved Signal	Roundabout
W Main Street & Experiment Farm Rd / Stanfield Road	EB Approach	18.0 s	24.4 s	36.1 s		
	WB Approach	17.6 s	17.6 s	19.4 s		
	NB Approach	67.4 s	42.5 s	26.5 s	-37%	-61%
	SB Approach	35.6 s	28.1 s	28.2 s	-21%	-21%
	Intersection	28.2 s	25.0 s	27.0 s	-11%	-4%

Roundabout: NB Approach delay reduced by 61%
 from 67.4 s (No Build) to 26.5 s (Roundabout) — PM Peak

Signal Simulation



Design Year (2049) PM Peak

Roundabout Simulation



Design Year (2049) PM Peak

Proposed Safety Improvements

Expected Crash Reduction by Severity — Crashes Per Year							
Severity	Description	Typical Meaning	Crashes Per Year			Expected Crash Reduction vs Existing Signal	
			Existing Signal	Improved Signal	Roundabout	Improved Signal	Roundabout
K + A	Fatal / Serious Injury	Fatal crash or severe injury requiring hospitalization	0.1871	0.1356	0.0631	-27.50%	-66.30%
B	Suspected Minor Injury	Visible injuries such as bruises, cuts, or minor sprains	1.0406	0.7449	0.5302	-28.40%	-49.10%
C	Possible Injury	Complaint of pain or discomfort with no visible injury	1.7021	1.1783	0.6567	-30.80%	-61.40%
O	Property Damage Only	No injuries; vehicle or property damage only	20.1376	5.3302	5.9886	-73.50%	-70.30%
Total			23.0574	7.389	7.2386	-67.90%	-68.60%

68.6% fewer total crashes

Roundabout vs. Existing Signal (all severity levels)

66.3% reduction in fatal/serious injury crashes (K+A severity)

Proposed Improvements:

- Additional WB right turn lane
- Extended EB left turn lane
- Additional SB right turn lane
- Extended SB left turn lane
- Access management via median islands

SIGNAL

Proposed Improvements:

- Shorter pedestrian crossings lengths
- Reduction of turn lanes
- Access management median islands
- Advance signage for lane assignments
- Pedestrian crossing enhancements



ROUNDAABOUT

Project Costs



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SIGNAL ALTERNATIVE

PRELIMINARY COST ESTIMATE

DESCRIPTION	TOTAL \$
ROADWAY SUBTOTAL	\$247,182
EROSION CONTROL SUBTOTAL	\$72,825
DRAINAGE SUBTOTAL	\$861,184
PAVEMENT SUBTOTAL	\$951,480
LIGHTING SUBTOTAL	\$225,000
TRAFFIC CONTROL SUBTOTAL	\$319,986
Subtotal	\$2,677,657
20% Contingency	\$535,531
24.9% Inflation (estimated construction in 2028)	\$800,084
Total Construction Cost	\$4,013,273
INCIDENTAL SUBTOTAL	\$266,698
TOTAL PROJECT COST	\$4,279,970



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ROUNDBOUT ALTERNATIVE

PRELIMINARY COST ESTIMATE

DESCRIPTION	TOTAL \$
ROADWAY SUBTOTAL	\$400,526
EROSION CONTROL SUBTOTAL	\$89,465
DRAINAGE SUBTOTAL	\$998,644
PAVEMENT SUBTOTAL	\$874,182
LIGHTING SUBTOTAL	\$180,000
TRAFFIC CONTROL SUBTOTAL	\$62,237
LANDSCAPING SUBTOTAL	\$30,000
Subtotal	\$2,635,054
20% Contingency	\$527,011
24.9% Inflation (estimated construction in 2028)	\$787,354
Total Construction Cost	\$3,949,420
INCIDENTAL SUBTOTAL	\$348,692
TOTAL PROJECT COST	\$4,298,111

Project Costs

Signal Alternative

Total Construction Cost \$4.279 Million

Annualized Maintenance Cost

- Signal Power
 - Bulb Replacement
 - Regular Timing Updates
 - Lighting
- \$10,000/year

Signal equipment service life 10 years

Roundabout Alternative

Total Construction Cost \$4.298 Million

Annualized Maintenance Cost

- Landscaping
 - Lighting
- \$1,500/year

Roundabout service life 20 years

Recommendation

✓ RECOMMENDED ALTERNATIVE

Traditional Roundabout

68.6%
fewer total crashes

66.3%
fewer fatal/serious injuries

61%
less NB approach delay (PM)

Safety

- ✓ Proven countermeasure — reduces crash severity
- ✓ Mitigates historic rear-end & angle crash patterns
- ✓ 68.6% fewer crashes vs existing signal

Pedestrians

- ✓ Shorter crossing distances on all legs
- ✓ Less exposure time to moving traffic
- ✓ Eliminates right-on-red conflicts

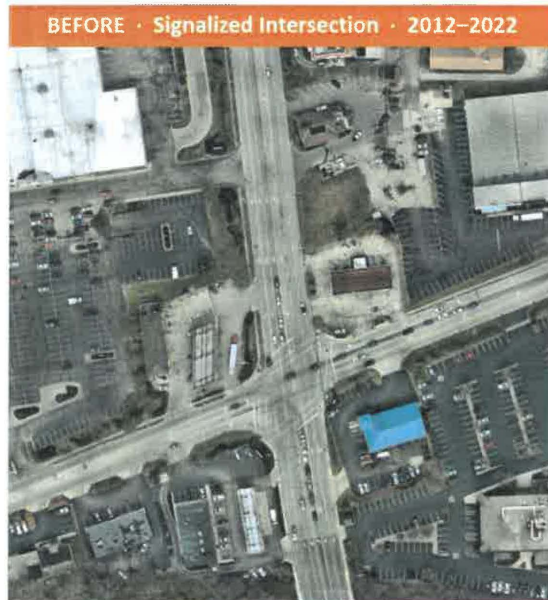
Traffic Flow

- ✓ Roundabout geometry naturally slows vehicles
- ✓ Balances traffic flow across all four legs
- ✓ 61% reduction in NB approach delay (PM Peak)

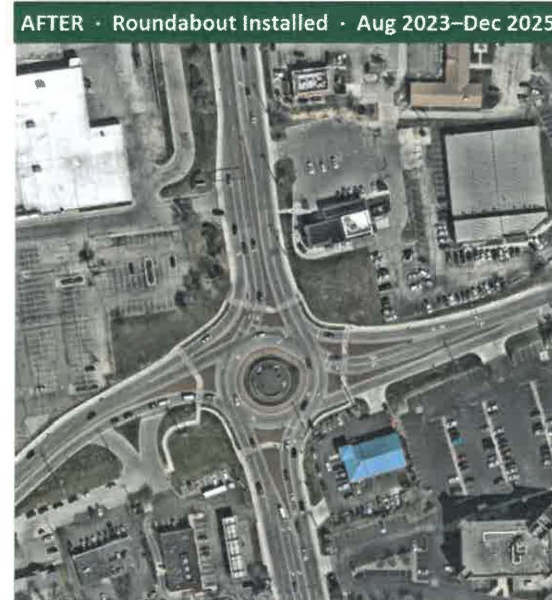
Maintenance

- ✓ Lower long-term costs vs signal equipment
- ✓ No signal hardware or electrical dependency
- ✓ Operates fully during power outages

Comparable Intersection: Plainfield Road & Hunt Road, Blue Ash, Ohio



>>> 75%
Less Injury
Crashes

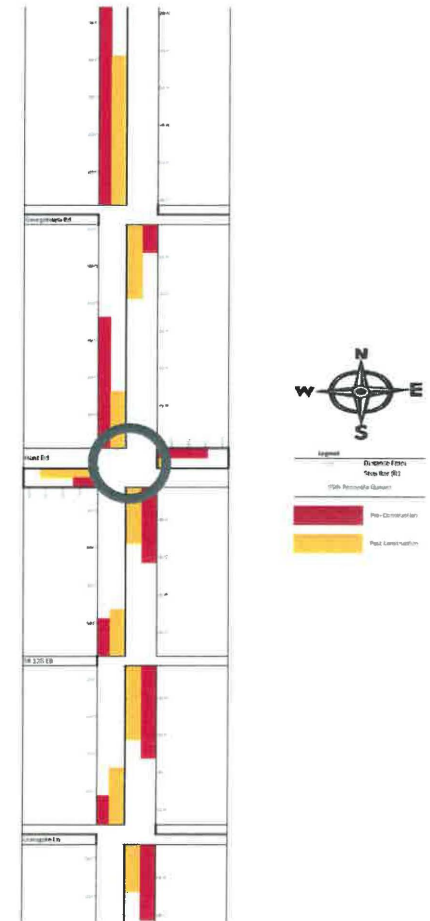


20%
Injury Crashes

80%
Property Damage Only

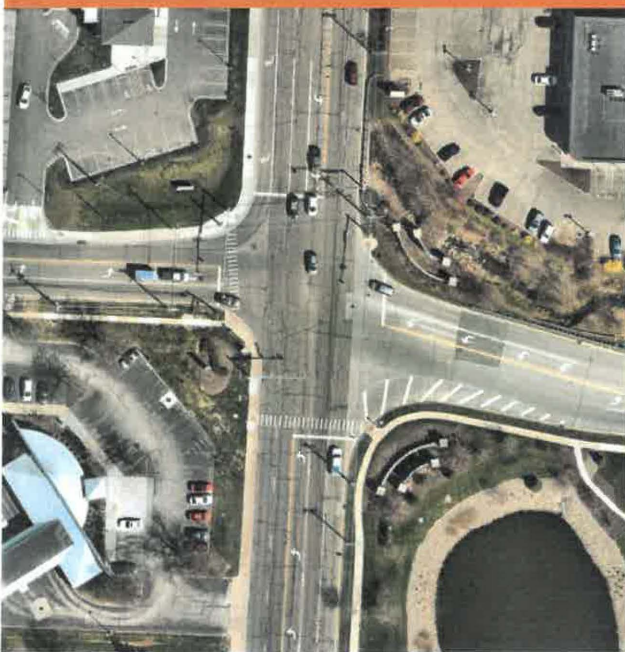
5%
Injury Crashes

95%
Property Damage Only



Comparable Intersection: Boettler Road & Massillon Road, Green, Ohio

Before – Signalized Intersection



After – Roundabout w/ Ped Accommodations



Similar Improvements

- Shorter Pedestrian Crossings
- Balanced Traffic Flow
- Access Management

Comparable Intersection: Corporate Woods Circle & Massillon Road, Green, Ohio

Before – Signalized Intersection



After – Roundabout w/ Ped Accommodations



Similar Improvements

- Shorter Pedestrian Crossings
- Balanced Traffic Flow
- Access Management