SAFE STREETS/ROADS TOMPKINS

TOMPKINS COUNTY JOINT SAFETY ACTION PLAN

July 2025

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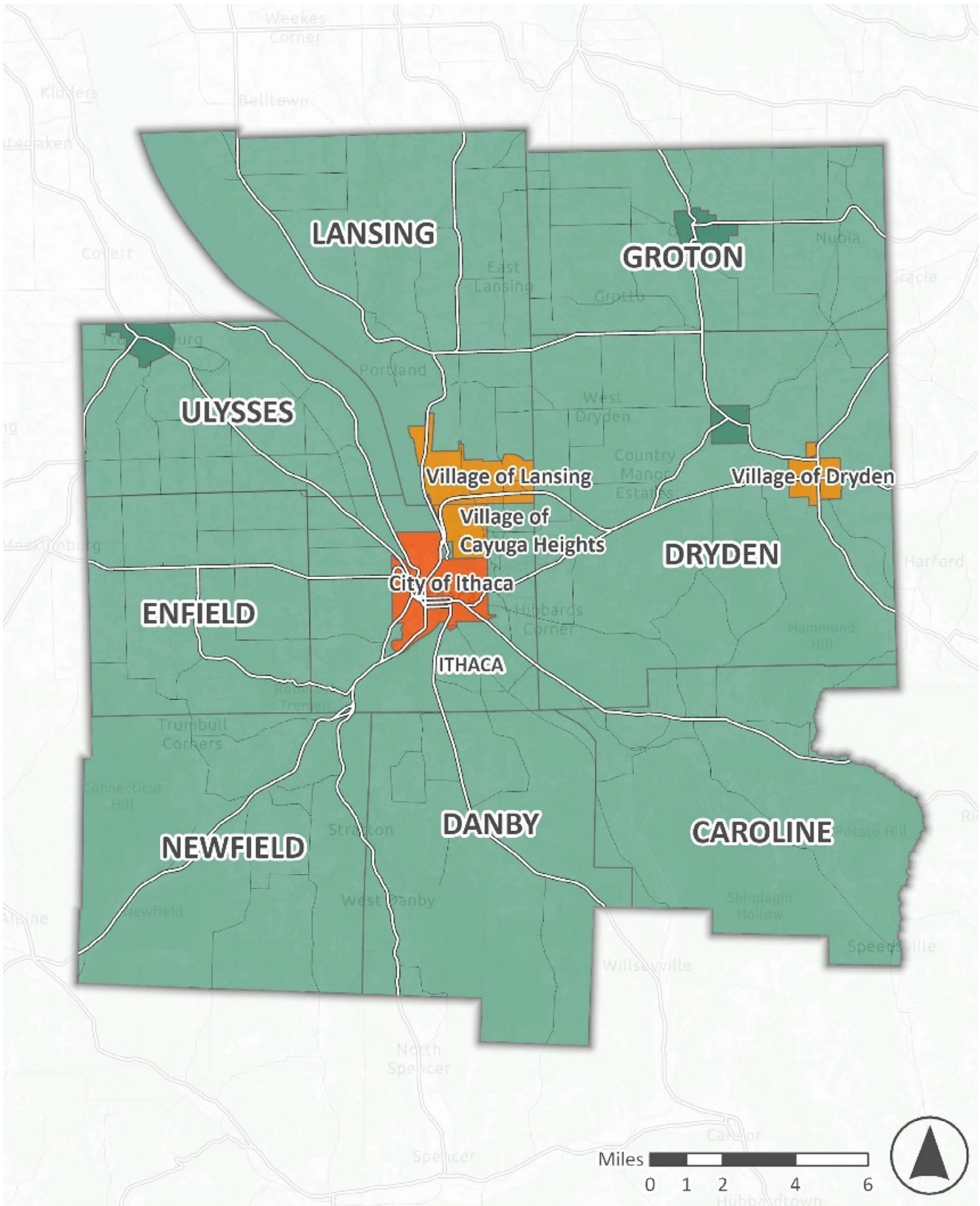
Section One

Introduction

Tompkins County and ten municipalities within Tompkins County, with support from the Ithaca-Tompkins County Transportation Council (ITCTC) and New York State Department of Transportation (NYSDOT), have come together to prepare a comprehensive Safe Streets and Roads For All (SS4A) Joint Safety Action Plan to address costly motor vehicle crashes on the region's transportation network. As the population and traffic volumes in the region continue to increase following the COVID-19 pandemic, the number of crashes resulting in fatal and serious injury have generally plateaued relative to the downward trends observed historically. The members of the Joint Safety Action Plan understand that these deaths and life-altering injuries are preventable, and this Plan provides strategies and policies focused on eliminating deaths and serious injuries on the area's roadways.

- ***Tompkins County***
- ***City of Ithaca***
- ***Town of Ithaca***
- ***Village of Cayuga Heights***
- ***Town of Caroline***
- ***Town of Danby***
- ***Town of Dryden***
- ***Village of Dryden***
- ***Town of Lansing***
- ***Village of Lansing***
- ***Town of Newfield***

Figure 1 – Map of Tompkins County



What Is a Safety Action Plan?

A Safety Action Plan provides recommendations and strategies to improve safety at identified locations and help eliminate deaths and serious injuries throughout the region, utilizing a comprehensive set of actions that address roadway characteristics and user behavior alike. The goal is to help make Tompkins County safer for all road users including people who drive, walk, bike, or ride transit. This Plan analyzes roadway characteristics, traffic volumes, and local crash data to understand the key factors affecting safety outcomes throughout the transportation network. The crash analysis tells a story through data tables and figures about where, when, and why crashes are occurring in the region, as well as supporting decision making by key stakeholders and the Advisory Committee. As a part of this safety analysis, the project team executed a network screening approach to evaluate individual corridors and intersections and prepare a prioritized list of location-specific and systemic network treatments. Public and stakeholder feedback collected throughout the planning process validates the data analyses and ensures recommendations are consistent with the experiences of Tompkins County residents. This Plan is aligned with the New York Strategic Highway Safety Plan (SHSP), as well as regional and local plans. A comprehensive Safety Action Plan is key to integrating a Safe System Approach on regional transportation networks, prioritizing steps to eliminate fatalities and serious injuries as a result of motor vehicle collisions, and meeting eligibility for future implementation grants through the SS4A Grant Program.

Safe Streets and Roads For All Grant (SS4A)

In 2023, the U.S. Department of Transportation (USDOT) awarded The Tompkins County Joint Safety Action Project Team a SS4A Planning Grant to develop a comprehensive roadway Safety Action Plan. This publicly available document is the primary deliverable of that grant and aligns with the Federal requirements for the development of an Action Plan under that federal assistance. Goals for the grant included promoting safety to prevent death and serious injuries on public roadways; employing low-cost, high-impact strategies to improve safety over a wide geographic area; ensuring equitable investment in the safety needs of underserved communities (including urban and rural communities); incorporating evidence-based projects and strategies and adopting innovative technologies and strategies; demonstrating engagement with a variety of public and private stakeholders; and aligning with the Department's mission and strategic goals[1].

The graphic on the next page shows the primary requirements of a SS4A Safety Action Plan and will be noted as these are addressed throughout the Plan.

1 U.S. Department of Transportation Fiscal Year 2023 Safe Streets and Roads for All Notice of Funding Opportunity

Figure 2 – SS4A Safety Action Plan Requirements Checklist

- ***LEADERSHIP COMMITMENT AND GOAL SETTING***
  to eliminate roadway fatalities and serious injuries
- ***PLANNING STRUCTURE AND OVERSIGHT***
  by the project team, including the ten municipalities, Tompkins County, ITCTC, and NYSDOT
- ***SAFETY ANALYSIS***
  to provide a baseline of trends and existing conditions across High-Injury Networks
- ***ENGAGEMENT AND COLLBORATION***
  with a diversity of stakeholders to reflect community representation and insights
- ***EQUITY***
  through inclusive engagement and consideration of inequitable impacts on Transportation Equity and underserved populations
- ***POLICY AND PROCESS CHANGES***
  to prioritize transportation safety and improve implementation through revised or new policies
- ***STRATEGY AND PROJECT SELECTIONS***
  to comprehensively address safety through a data-driven and equitable process
- ***PROGRESS AND TRASPARENCY METHODS***
  including tracking performance throughout implementation.

Safe System Approach

The Safe System Approach aims to address and mitigate the risks inherent in the transportation system by building and reinforcing multiple layers of protection to both prevent crashes from happening in the first place and minimize the harm caused to those involved when crashes do occur. This holistic and comprehensive approach accounts for human error and the human body's vulnerability in collisions involving motor vehicles, while promoting a system designed with many redundancies in place to protect all road users. The Safe System Approach has six Principles:

- Death and Serious Injuries are Unacceptable
- Humans Make Mistakes
- Humans Are Vulnerable
- Responsibility is Shared
- Safety is Proactive
- Redundancy is Crucial

The Safe System Approach also embraces all types of roadway safety countermeasures and acknowledges that a multi-disciplinary approach is required to address the full range of diverse safety risks.

The Safe System Approach involves five Elements:

- Safer People
- Safer Roads
- Safer Vehicles
- Safer Speeds
- Post-Crash Care

The Safe System Approach is incorporated throughout this plan, from guiding the safety analysis and stakeholder selection to determining the emphasis areas and recommended strategies. This is consistent with USDOT's emphasis on the Safe System Approach.

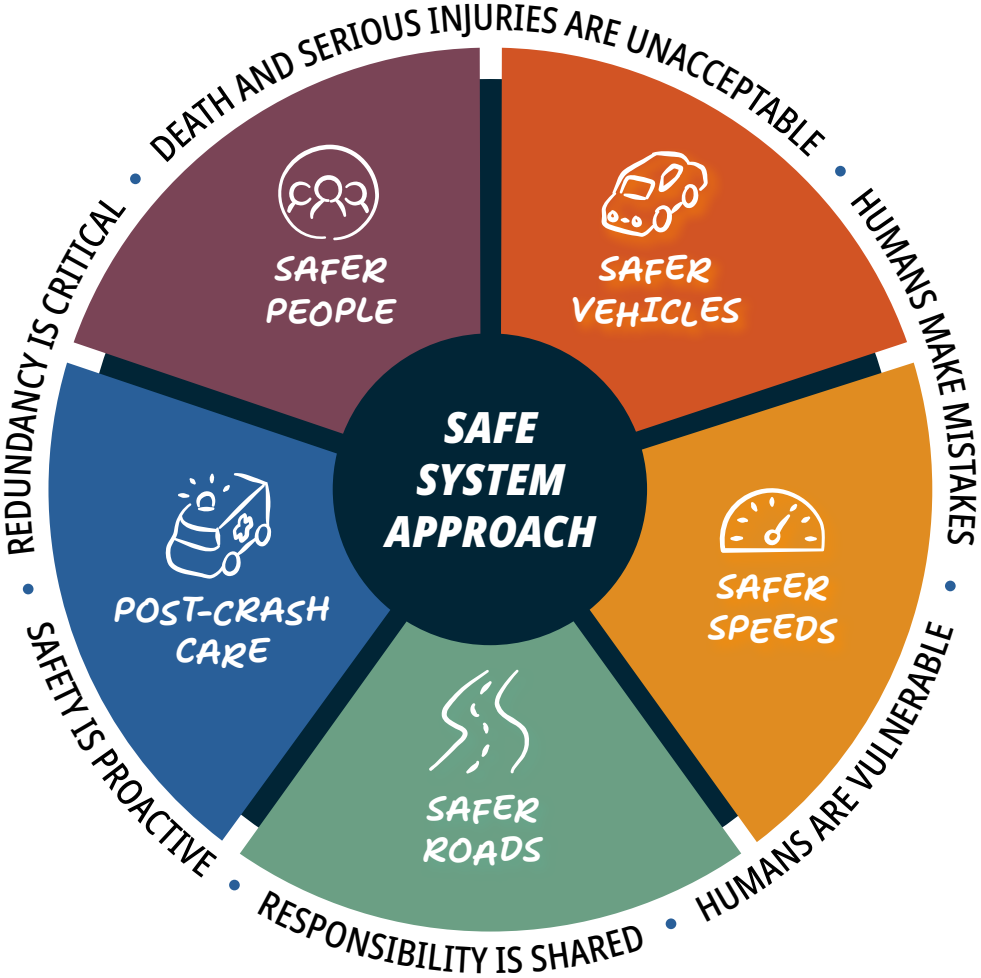


Figure 3 – Safe System Approach

Section Two

Leadership Commitment and Goal Setting

Vision Zero Goal

Utilizing the Safe System Approach and the commitment to eliminating fatalities and serious injuries is a paradigm shift and a key aspect of effective Safety Action Plan development. Tompkins County and the joint members of this plan are setting a goal to eliminate fatal crashes and reduce serious injury crashes 50% by 2040. Achieving this goal will require coordination and prioritizing safety investments as the region works together to improve safety. The project team passed resolutions to adopt Vision Zero and the Plan Goal for 2040, which can be seen in a separate Addendum.

PLAN GOAL

Elimination of fatal crashes and a ***50% reduction*** in serious injury crashes by ***2040***

LEADERSHIP COMMITMENT AND GOAL SETTING

Figure 4 – Participating Municipality Logos

Section Three

Safety Analysis

Historical Trend Analysis

SAFETY ANALYSIS

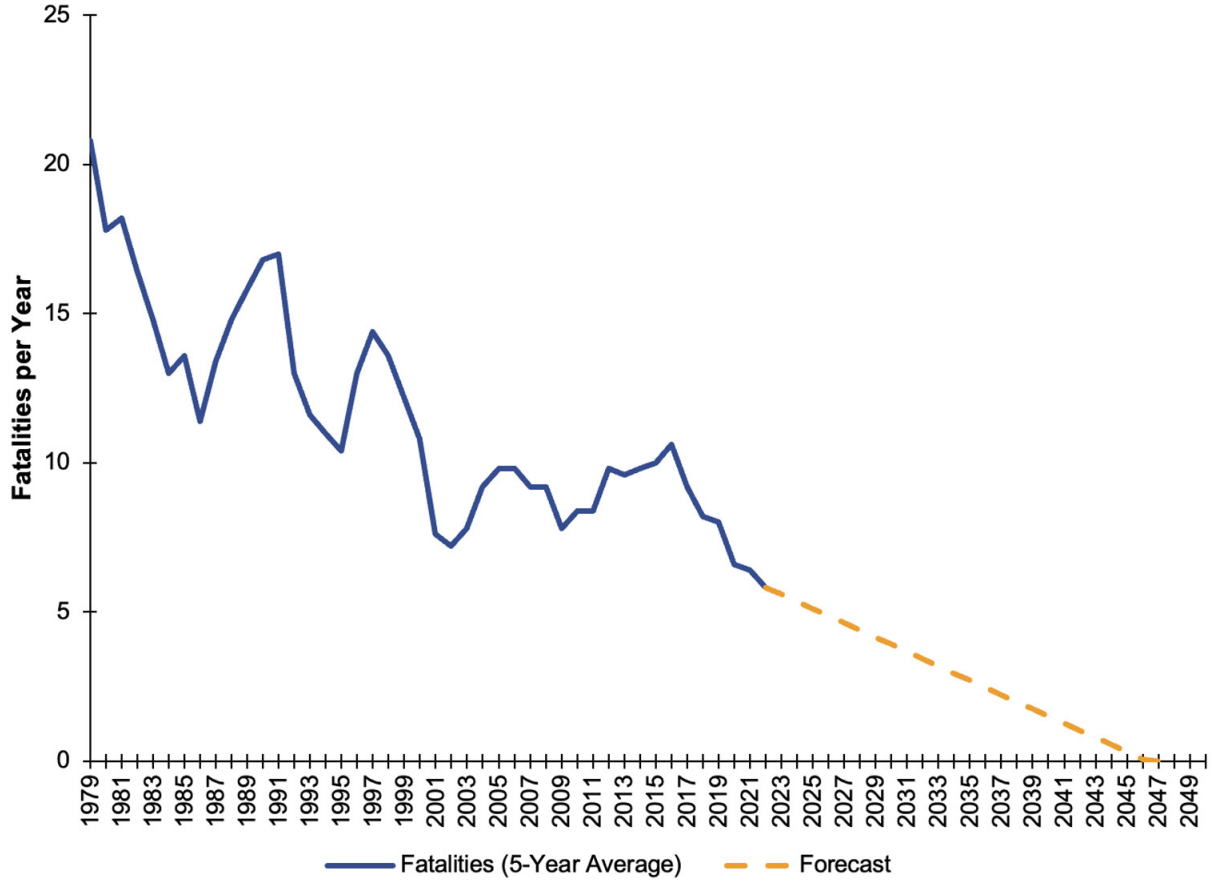
Historically, traffic crashes resulting in fatal injuries have trended downward in Tompkins County. Between 1979 and 2022, traffic fatalities decreased by 71.4 percent, from 21 fatalities in 1979 to six fatalities in 2019. However, this decreasing trend has flattened in recent years, as the population of Tompkins County has increased with an annual average growth rate of 0.6 percent.

An analysis of Tompkins County using traffic safety performance measures, similar to those tracked at the state level, indicates that safety outcomes remained fairly consistent within the county from 2017 to 2023. This consistency was observed across regional crash fatalities, serious injuries, nonmotorized combined fatalities and serious injuries, and serious injury and fatality rate per 100 million vehicle-miles-traveled (the only measure to slightly increase).

With traffic fatalities in the single digits for the entire county, Vision Zero is truly within sight. To continue to build on this remarkable accomplishment, targeted, data-driven investments in traffic safety countermeasures can keep Tompkins County on track to achieve zero fatalities.

As seen in **Figure 5**, from the 1980s to the 2020s, regional crash fatalities showed a gradual decline at an average annual rate of three percent. Significant reductions in crash fatalities were first seen in the early 1980s, and then again in the 1990s, both followed by fluctuations natural for this smaller sample size. To account for these fluctuations, five-year averages for annual crash fatalities were calculated using this historical data to provide a simple forecast of future fatalities. Despite a plateauing in fatal crashes in recent years, the overall historical trend in the county points downward, potentially reaching zero before 2050.

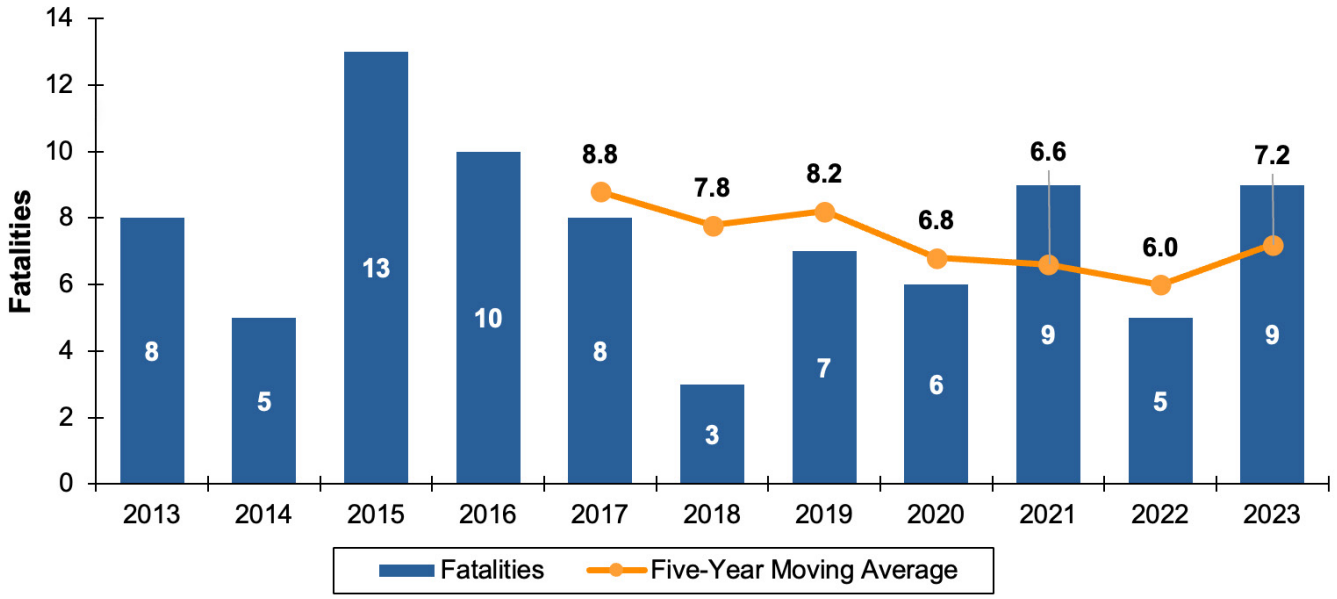
Figure 5 – Tompkins County Long-Term Trend of Fatalities (1979-2050)



Source: Fatality Analysis Reporting System (FARS).

Figure 6 shows annual fatalities in Tompkins County from 2013 to 2023. Because fatal crashes are relatively rare events, it is important to normalize crash data over a longer period than one year to account for annual anomalies that can skew analyses. The five-year analysis period was used to help smooth out year-to-year variation in fatality numbers. The five-year moving average for fatalities decreases in each successive year except for the most recent year, 2023. From 2017 to 2022, the five-year average decreased from 8.8 to 6.0 fatalities per year, a decrease of 32 percent. The trend switches in 2023 though when the five-year moving average increases to 7.2, an increase of 20 percent.

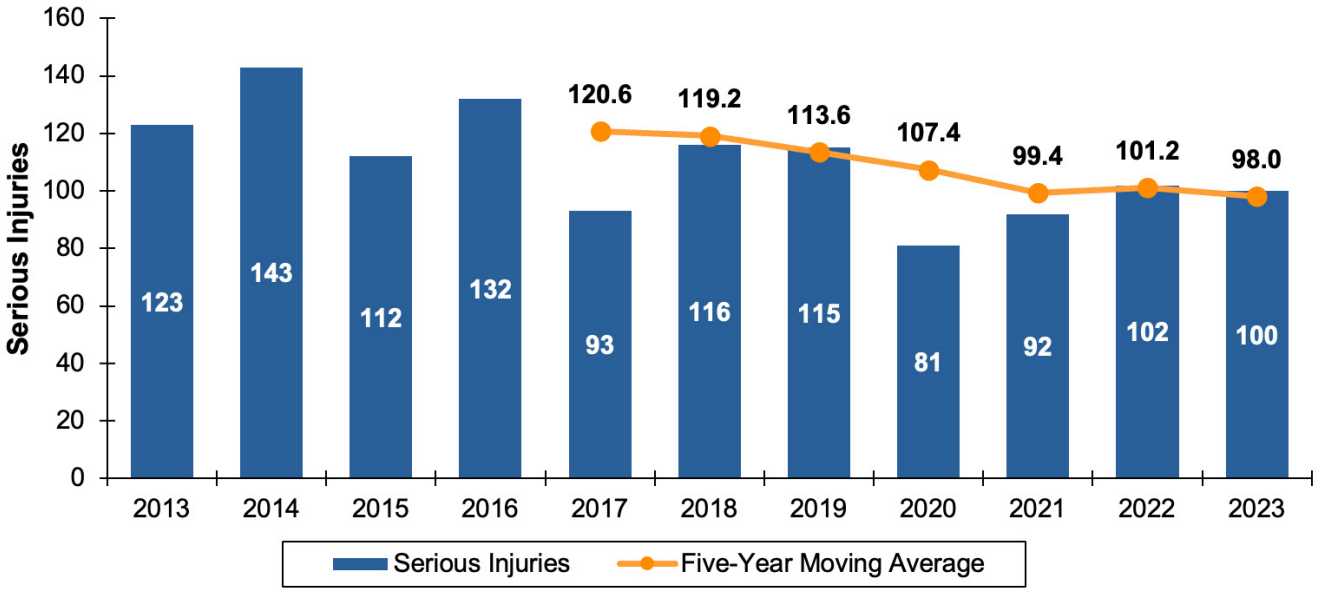
Figure 6 – Tompkins County Fatality Trend (2013-2023)



Source: Traffic Safety Statistical Repository (TSSR).

The highest number of serious injuries in Tompkins County (**Figure 7**) was in 2014 with 143 annual serious injuries, and the lowest number was in 2020 with 81. The five-year moving average shows that the trend of serious injuries consistently decreased until leveling off in the last few years. From 2017 to 2021, the five-year average decreases from 121 to 99, a decrease of 18 percent over those five years. This is the opposite trend seen in the entire state; across New York State, the number of serious injuries were relatively constant until around 2020, and they have been moderately increasing over the past few years.

Figure 7 – Tompkins County Serious Injury Trend (2013-2023)



Source: Traffic Safety Statistical Repository (TSSR).

Table 1 summarizes all fatalities and serious injuries in Tompkins County in the 21 crash categories that make up the seven New York SHSP emphasis areas from 2019 to 2023. Additionally, each crash category is tagged with a red upward arrow or a blue downward arrow if that crash category experiences an increasing trend or decreasing trend, respectively, for the years studied. These New York SHSP Emphasis Areas are the basis for this Plan's Emphasis Areas, which are described further in **Section 6**.

Table 1 - Comparison of Fatalities and Serious Injuries in New York Emphasis Areas (2019-2023)

NYS SHSP Emphasis Area	Crash Category	2019	2020	2021	2022	2023	Tompkins Trend	NYS Trend
Intersections	(All)	7	10	3	11	21	▲	▲
Vulnerable Road Users	Bicyclists	8	2	2	4	3	▼	▲
	Pedestrian	6	7	7	7	5	▼	▼
	Road Workers	0	0	0	0	0	-	▼
Road User Behavior	Alcohol	5	6	5	7	4	▼	▲
	Drugs	3	0	3	0	1	▼	▼
	Cell Phones	2	0	0	0	1	▼	▲
	Distracted	10	12	8	13	15	▲	▼
	Asleep	5	3	5	0	3	▼	▼
Roadway Departures	Roadway Departures	22	20	17	17	16	▼	▲
	Head-On	8	4	6	4	6	▼	▲
	Sideswipe	4	1	4	2	1	▼	▲
Alternate Road Vehicles	Buses	2	0	0	0	0	▼	▼
	Motorcycles	5	6	4	8	6	▲	▲
	Trucks	4	4	3	4	4	-	▼
Age Related	65+	20	15	14	19	13	▼	▲
	< 21	17	10	13	13	8	▼	▲
Aggressive Driving	Aggressive Driving	2	0	1	0	2	-	▲
	Following Closely	12	9	9	8	14	▲	▼
	Traffic Control	7	9	4	8	2	▲	▼
	Unsafe Speed	22	22	12	8	14	▼	▲

Source: Crash Location and Engineering Analysis and Reporting (CLEAR) Safety Tool, extracted June 2024.

Key Findings

- Tompkins County experienced 31 fatal crashes between 2019 and 2023, and thousands more injury and property damage crashes, but these relatively few fatal crashes impose a greater substantial cost - collectively nearly $488 million – more than the cost of all injuries combined. These crash-related costs include both direct and indirect costs to individuals and society from a decline in crash victims' general health, such as costs of emergency services, medical services, market productivity loss, household productivity loss, congestion impacts, etc. Highway safety programs should continue a focus on the impacts of passenger vehicles. Most fatal crashes in Tompkins County involved a car, van, or pickup truck, with fewer fatal crashes involving motorcycles, trucks, or buses.

- Geographic analysis shows the three jurisdictions with the highest number of crashes were City of Ithaca (3,475 crashes, 35.3 percent of geolocated crashes in the region), Town of Dryden (1,514 crashes, 15.4 percent), and Town of Lansing (1,278 crashes, 13.0 percent).

- More crashes (53.9 percent) occur on roads identified as urban rather than rural (46.1 percent), but rural crashes are more severe and account for 60.3 percent of all fatalities and serious injuries. In urban areas, most crashes occur on minor arterials (21.9 percent).

- Crashes occur slightly more frequently on the NYSDOT-owned roads (44.3 percent), rather than locally-owned roads (37.5 percent).

- Compared to the entire State of New York, Tompkins County has fared better from 2021-2023 in crash statistics. The Region's motorcyclist fatalities and bicyclist fatalities have remained constant. Persons injured in alcohol-involved crashes and distracted driving crashes decreased faster than on the state level.

- An analysis of crash trends for the emphasis areas in New York's 2023-2027 SHSP shows areas in which fatalities and serious injuries had long-term increases (2019-2023) in Tompkins County and could be considered for prioritization; this includes intersection crashes, distracted driving, motorcycle crashes, and crashes involving following too closely or disregarding traffic control devices. Roadway departures (the most common crash type in the county), alcohol-impaired driving, nonmotorized road user safety, speeding, crashes involving older drivers, and crashes involving drivers under age 21 also still remain major traffic safety concerns.

Equity Analysis

Calculated equity scores for each 2022 Tompkins County Block Group were created by aggregating scores that corresponded to ten indicators.[2] The calculations used 2018 - 2022 American Community Survey data for the following indicators:

- Minority
- Limited English proficiency
- Disability
- Elderly
- Youth
- Zero car households
- Single mother
- Foreign born
- Poverty[3]
- Educational attainment

The equity assessment map overlaid the following layers to identify communities in the study area with the highest concentration of environmental justice populations:

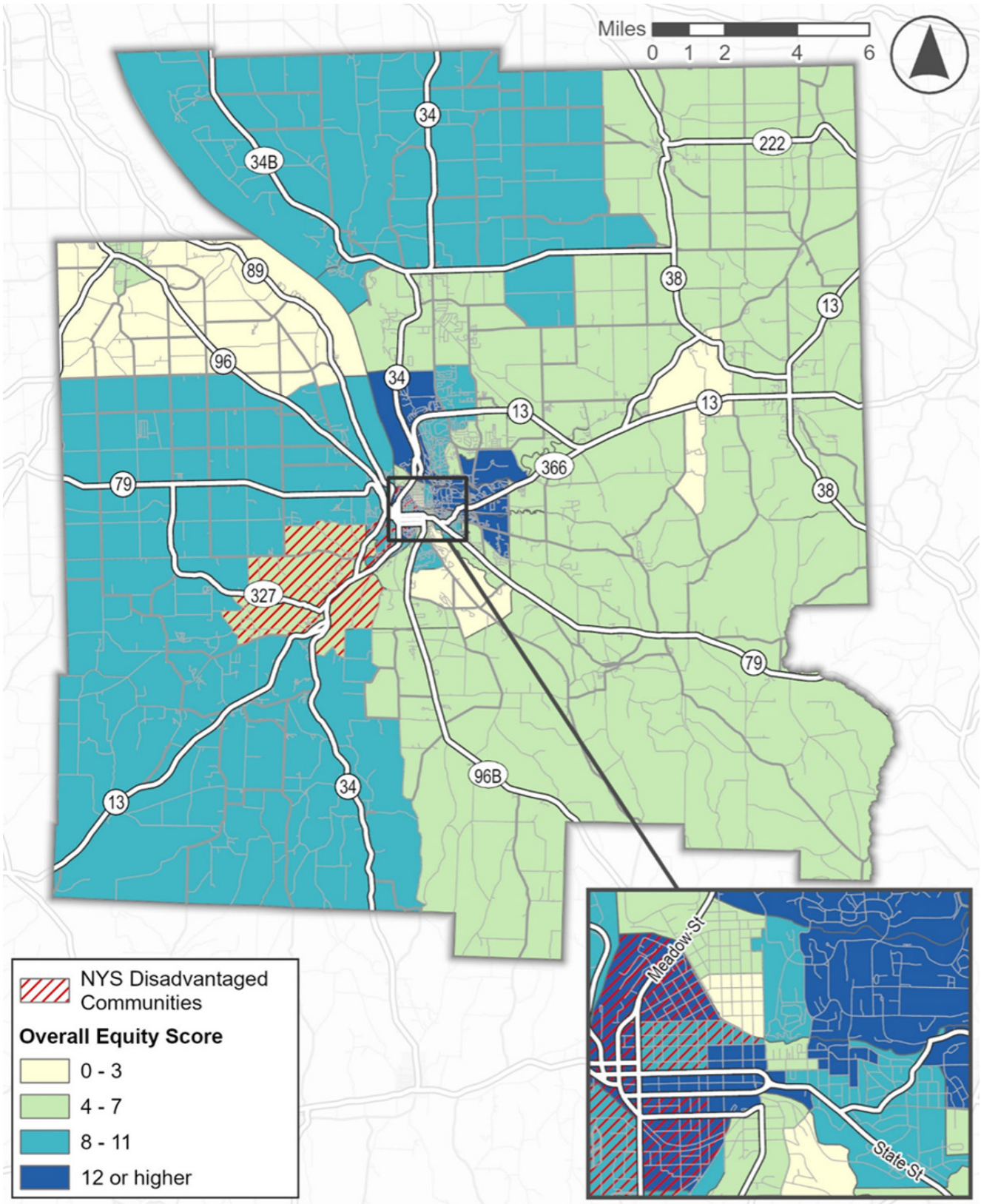
- 2022 Block Groups with calculated equity scores based on ten indicators
- 2010 Census Tracts labelled as disadvantaged by the New York State Energy Research and Development Authority

Figure 8 shows a map of equity areas in Tompkins County. Block Groups with the darkest coloring and hatched lines are the areas with the highest equity considerations, and the Block Groups with light coloring and no hatched lines are the areas with the lowest equity considerations.

2 Disability and foreign born were two indicators that used Census Tract data, as Block group-level data is not available. Block groups were assigned values for disability and foreign born based on the Census Tract they belonged to.

3 Poverty used data from 2017-2021 five-year dataset because more recent data was not available.

Figure 8 – Equity Assessment for Tompkins County, NY



Source: FHI Studio, now IMEG, Equity Assessment Methodology.

Overall, the total crash rate in equity communities was 18,187 per 100,000 residents, significantly higher than the 12,354 crashes per 100,000 residents in non-disadvantaged communities. VRU crashes were also disproportionately concentrated in disadvantaged areas. Over the five-year analysis period, the VRU crash rate in disadvantaged areas was 627 per 100,000 residents, more than four times as high as that of the rest of the region. These findings underscore the need for targeted investments and resources in these disadvantaged communities to improve roadway safety for the region's most vulnerable residents.

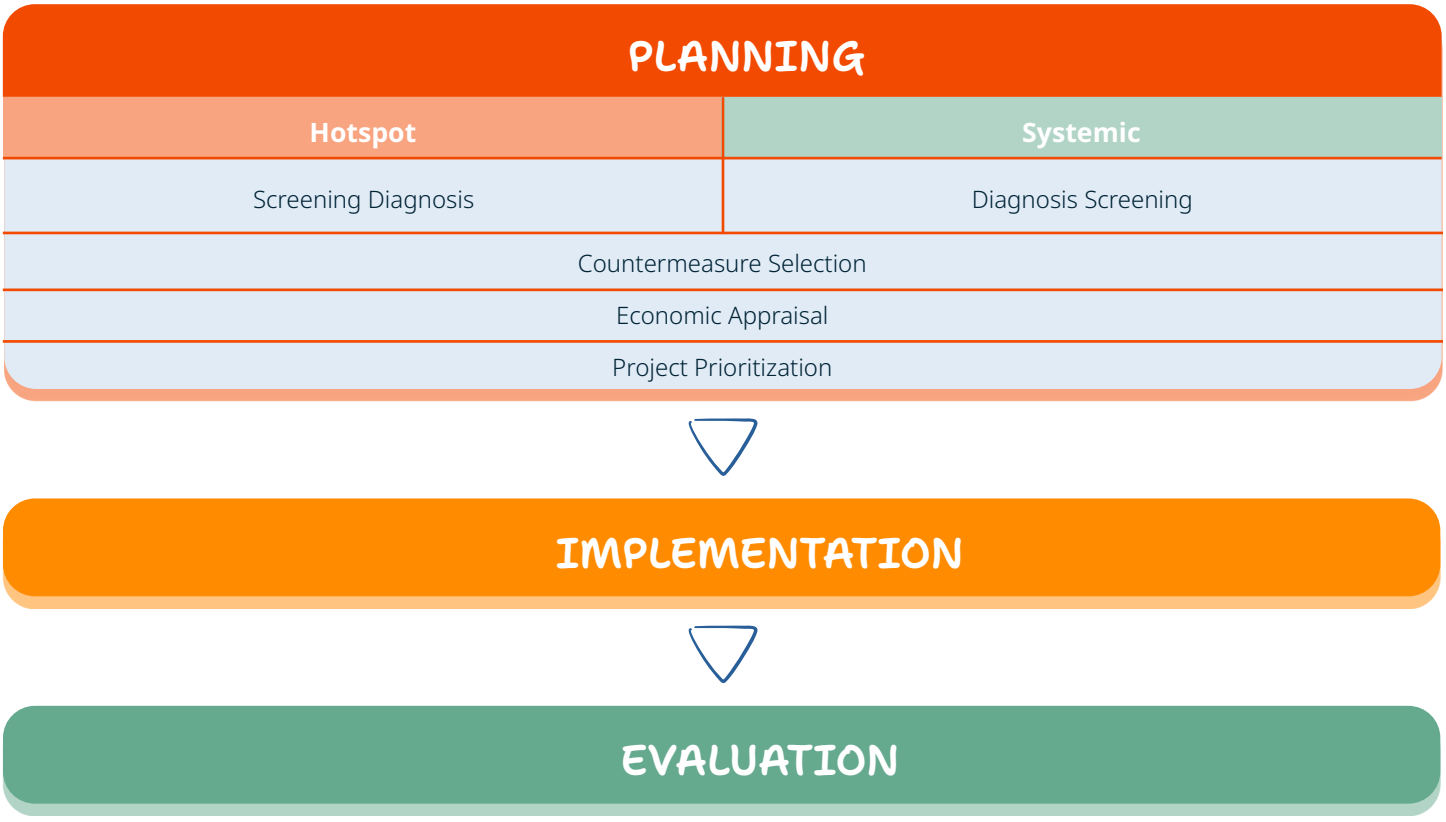
Network Screening

The NYSDOT Highway Safety Improvement Program (HSIP) Procedures and Techniques ("Red Book") has divided the Roadway Safety Management Process into three broad components (**Figure 9**) with respective approaches for Hotspot and Systemic network screening.

- **The Hotspot Approach** focuses on sites with the highest potential for safety improvement and is based on crash history, traffic volumes, site characteristics, and other factors. It first identifies locations with the highest potential for safety improvement and then presents diagnosis and countermeasures. This is also known as a reactive approach to safety.

- **The Systemic Approach** also focuses on sites with the highest potential for safety improvement but does so from a systemwide perspective. Common crash types and contributing factors represented in the data are identified, then locations where those contributing factors may arise are identified. This is also known as a proactive approach to safety.

Figure 9 – NYSDOT HSIP Process



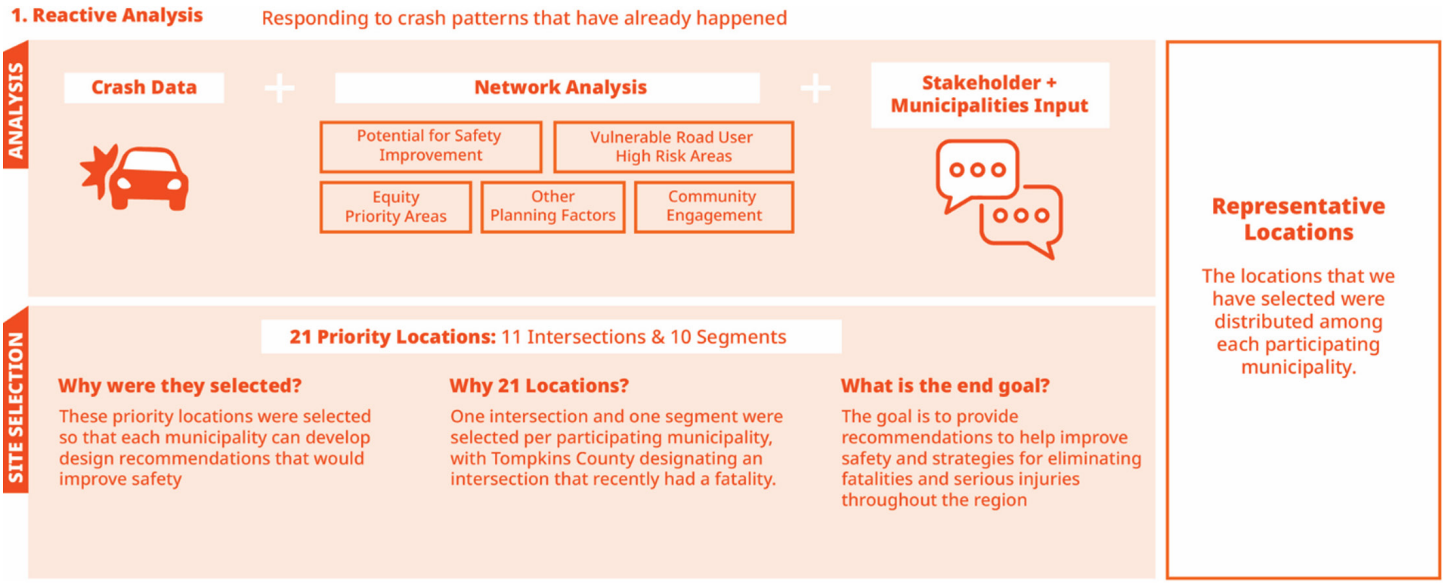
Hotspot Screening: Reactive Analysis

The first step of the network screening analysis was to identify intersections and segments in Tompkins County that are over-represented in terms of crash history from 2019 to 2023, which is the most recent five-year period with complete crash data. This was done in two ways: once using all crashes that resulted in a fatality or a serious injury and again using all crashes that involved a collision with a VRU.

For each intersection and segment, crash over-representation was determined using the Potential for Safety Improvement (PSI) measure from the Crash Location and Engineering Analysis and Reporting (CLEAR) Safety tool. The resulting PSI values were then used to assign each site a Level of Service of Safety (LOSS). Generally, a higher LOSS level on a scale of one to four indicates a greater potential impact from a theoretical safety improvement project at that location.

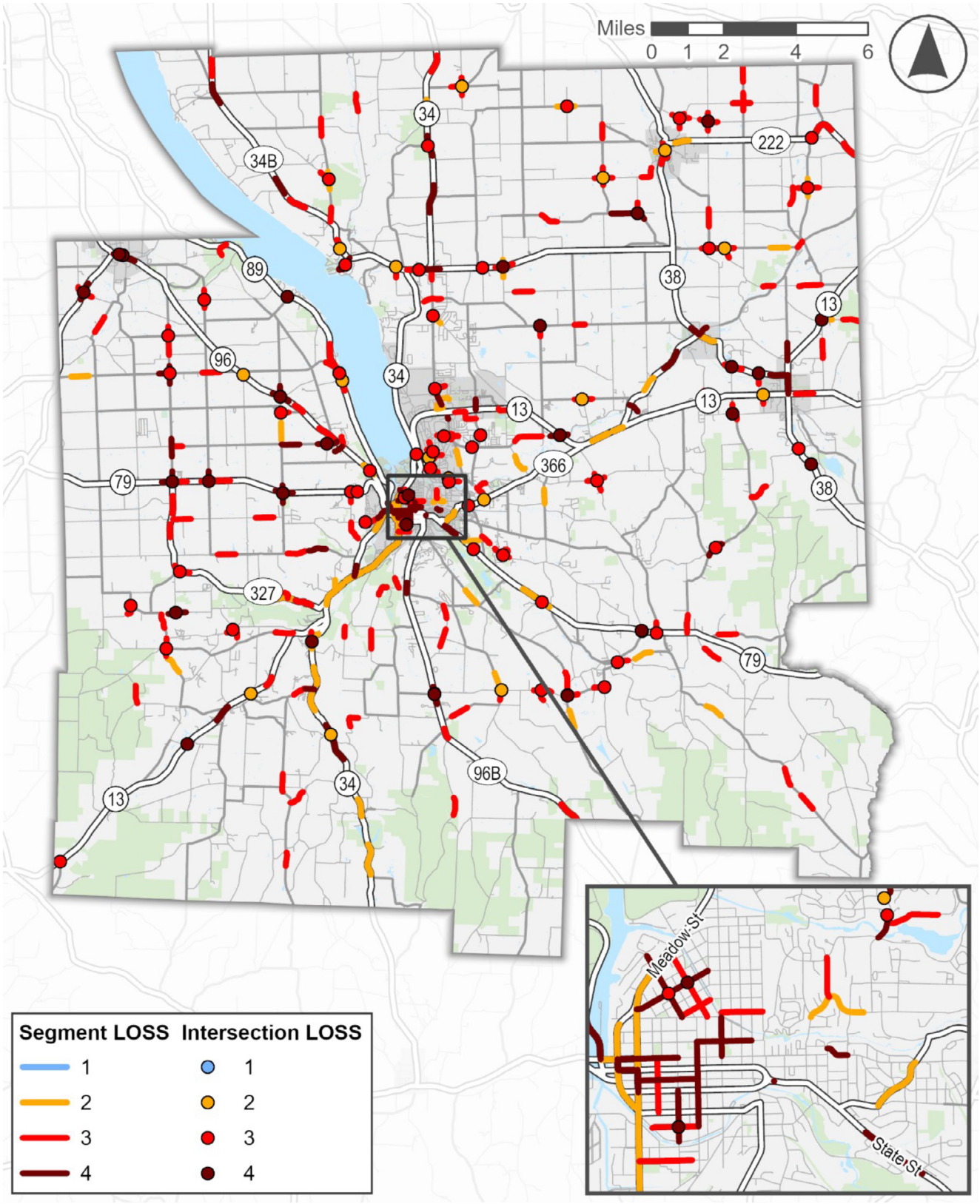
After running the CLEAR Safety tool, manually adjusting the outputs to account for missing data, and going over the results with stakeholders, the final hotspot CLEAR results were selected. This reactive analysis process is visualized in **Figure 10**.

Figure 10 – Reactive Analysis Process



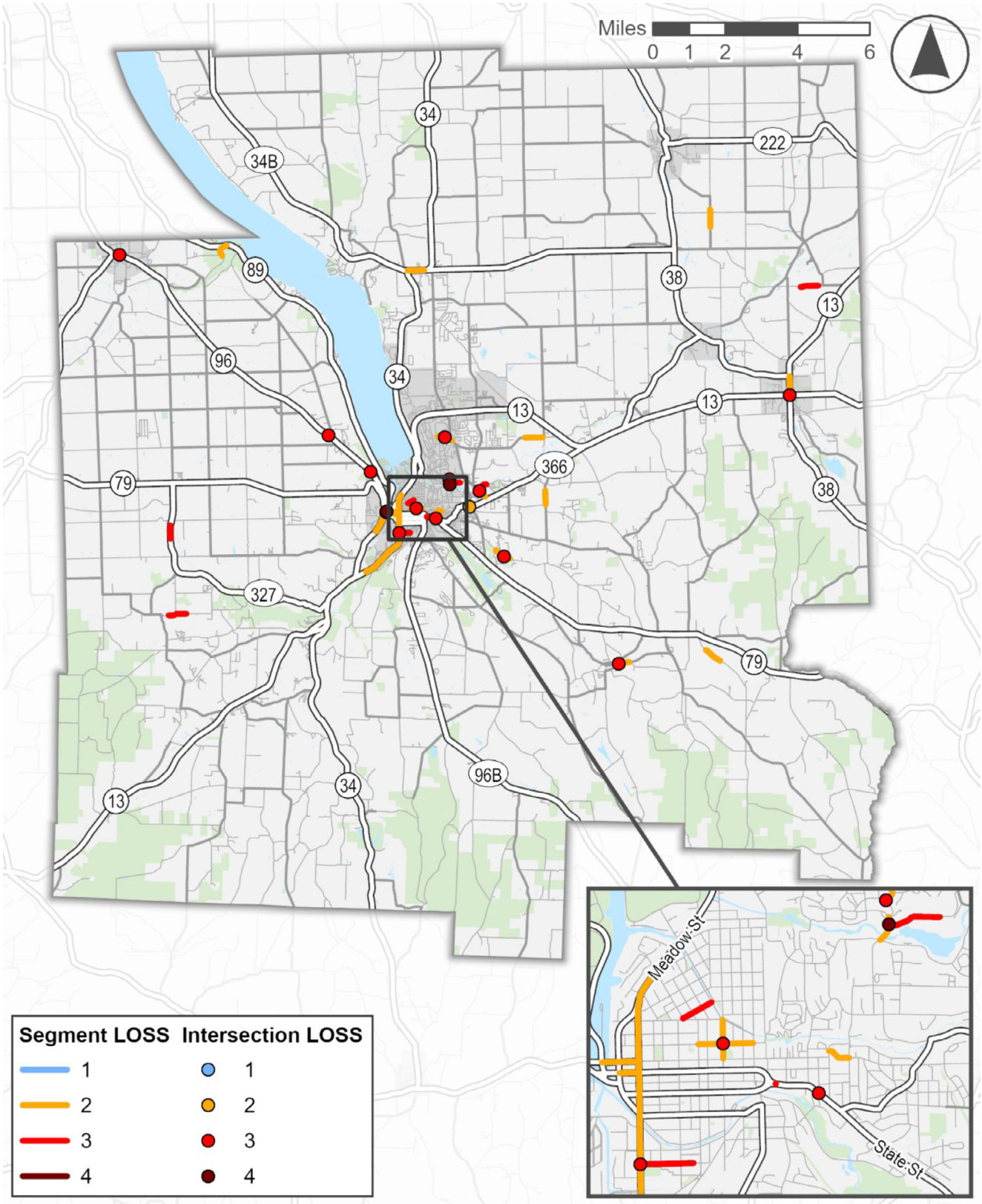
The intersections and segments identified in the CLEAR tool are seen in **Figure 11** for the fatality and serious injury screening and **Figure 12** for the VRU screening.

Figure 11 – Fatality and Serious Injury CLEAR Screening Results



Source: NYSDOT CLEAR, 2019-2023; Analysis by Cambridge Systematics.

Figure 12 – Vulnerable Road User CLEAR Screening Results



Source: NYSDOT CLEAR, 2019-2023; Analysis by Cambridge Systematics.

To address gaps in the CLEAR data availability, an additional crash analysis was conducted that has more consistent coverage, but less precision. This involved looking at trip activity at the block group level and joining these trips with crashes from CLEAR to get an estimate of crash rate for that block group, which provides a measure of the relative risk of crashes occurring in each area. This crash rate was then applied to all the segments and intersections within that block group to achieve an estimate of crashes and exposure. For Tompkins County, the average crash rate across all block groups is 0.15 per 10,000 trips, while the average VRU crash rate is 0.05 per 10,000 VRU trips. Based on the 75th percentile threshold, block groups with crash rates exceeding 0.22 per 10,000 trips or VRU crash rates over 0.03 per 10,000 trips are considered as high-risk areas. These areas are primarily concentrated in the City of Ithaca and the northwest and southwest corners of the County. Notably, two block groups (one in the City of Ithaca and another in the Town of Newfield) were found to have both overall crash rates and VRU crash rates above the region's 90th percentile, marking them as priority areas for safety improvements. Additionally, four block groups, located in the Towns of Ithaca and Dryden, exhibited relatively low overall crash rates but high VRU crash rates, which suggests that future efforts should focus more on VRU roadway safety in these areas.

While most of the higher VRU crash rates are in urban areas within the county such as downtown Ithaca, there are targeted rural areas that display higher VRU crash rates, such as the areas around NY-13, NY-34, NY-89, and NY-96. While the total crash numbers are not high in these areas, the relative lack of infrastructure makes any sort of active transportation inherently riskier.

Priority Safety Networks

A final priority location network for Tompkins County was developed using a three-step process:

- **Step 1**: Mathematically combine and weight each of the elements to calculate a combined safety score for roadway segments and roadway intersections.
- **Step 2:** Identify the top-scoring locations from that mathematical exercise by smoothing out the weighted scores, filling in logical gaps in the network, considering feedback from community engagement efforts, and validating the top locations by ensuring robust crash histories.
- **Step 3**: Refine that list of top locations with the Joint Safety Action Plan team and other relevant stakeholders.

Relevant stakeholders included representatives from Tompkins County and each of the ten municipalities involved in the Tompkins County Joint Safety Action Plan. Each municipality gave feedback on whether the first draft of locations was appropriate, given their knowledge of the area, and gave options for substitute locations that reflect a greater concern from their point of view. Most individual municipalities provided feedback during these meetings, and there was a final confirmation with all municipalities on the priority location network.

Weighted Screening Elements

The screening elements, along with their weights, are shown in **Table 2**. Both intersections and segments were scored in the same manner. The maximum score a location could receive is 100 points.

Table 2 - Network Screening Elements & Weights

Screening Element	Maximum Points	Description	Points
LOSS – Fatal & Serious Injury Screening	45	LOSS (Fatal and Serious Injury Screening) of 4	45
		LOSS (Fatal and Serious Injury Screening) of 3	25
		LOSS (Fatal and Serious Injury Screening) less than 3	0
LOSS – VRU Screening	10	LOSS (VRU Screening) of 4	10
		LOSS (VRU Screening) of 3	5
		LOSS (VRU Screening) less than 3	0
Crashes per Trip	5	Over the 75th percentile of crashes per trip in the County	5
		50th – 75th percentile of crashes per trip in the County	2.5
		0th – 50th percentile of crashes per trip in the County	0
VRU Crashes per Trip	5	Over the 75th percentile of VRU crashes per VRU trip in the County	5
		50th – 75th percentile of VRU crashes per VRU trip in the County	2.5
		0th – 50th percentile of VRU crashes per VRU trip in the County	0
Equity Priority Areas	20	In an Equity Priority Area	20
		Not in an Equity Priority Area	0
Key Equity Destinations	5	Over the 75th percentile of trip destinations by equity populations in the County	5
		50th – 75th percentile of trip destinations by equity populations in the County	2.5
VRU Risk	5	High Risk	5
		Medium Risk	2.5
		Low Risk	1
		No Risk	0
Isolated Transit Stops	5	At least 1 isolated transit stop in the immediate area	5
		0 isolated transit stops in the immediate area	0

Source: NYSDOT Highway Safety Improvement Program Procedures and Techniques.

Final Priority Location Network

After applying the weights above, the final scored network was created. Segments and intersections with high scores in each municipality were selected with feedback from stakeholders within each of Tompkins County's jurisdictions. The final network contains 11 intersections and nine segments for a total of 20 priority safety locations. The locations are listed in **Table 3** and shown in **Figure 14**. The network contains a mix of locally-controlled locations and state-controlled locations spread across the County.

Table 3 - Final Priority Location Network List

#	Location	Municipality	Population Center	Ownership	Type
1	NY-13 NB between Protts Hill Rd & Main Street	Town of Newfield	-	NYSDOT	Segment
2	Mecklenburg Road (NY-79)/Sheffield Road	Town of Ithaca	-	NYSDOT owns Mecklenburg Rd (NY-79); Tompkins County owns Sheffield Rd	Intersection
3	West Danby Road (NY-34/96)/ Decker Road	Town of Newfield	-	NYSDOT owns NY 34/96; Town of Newfield owns Decker Rd	Intersection
4	Station Road/Maple Avenue and Route 34/96	Town of Danby	West Danby CDP		Intersection
5	Floral Avenue/Elm Street/Hector Street	City of Ithaca	-	City of Ithaca	Intersection
6	NY-13 from the Town of Newfield/ Town of Ithaca Line to the City of Ithaca	Town of Ithaca	-	NYSDOT	Segment
7	NY-13 NB between West Seneca Street & West Green Street	City of Ithaca	-	NYSDOT	Segment
8	Route 96B from Miller Road to Michigan Hollow Road	Town of Danby	-	NYSDOT	Segment
9	Cayuga Heights and Wyckoff Street	Village of Cayuga Heights	-	Village of Cayuga Heights	Intersection
10	Cayuga Heights Road & East Shore Drive	Village of Lansing	-	Village of Lansing	Intersection
11	Hanshaw Road	Village of Cayuga Heights	-	Village of Cayuga Heights	Segment
12	NY-34B NB between NY-34 & Van Ostrand Road	Town of Lansing	South Lansing CDP	NYSDOT	Segment

#	Location	Municipality	Population Center	Ownership	Type
13	Peruville Road (NY-34B) & Scofield Road	Town of Lansing	-	NYSDOT owns Peruville Rd (NY-34B); Town of Lansing owns Scofield Rd	Intersection
14	Sheldon Road and West Dryden Road	Town of Dryden	-	Tompkins County	Intersection
15	Valley Road/Lounsberry Road	Town of Caroline	Brooktondale CDP	Tompkins County	Intersection
16	Freeville Road (NY-38) & Springhouse Road	Town of Dryden	-	NYSDOT owns NY-38; Town of Dryden owns Springhouse Rd	Intersection
17	North Road between Fall Creek Road & NY-13	Town of Dryden/ Village of Dryden	-	Tompkins County	Segment
18	NY-13 & W Main Street	Village of Dryden	-	NYSDOT	Intersection
19	NY-13 NB between NY-38 & W Main Street	Village of Dryden	-	NYSDOT	Segment
20	Seventy Six Road between Yaple Road & Smith Road	Town of Caroline	-	Tompkins County	Segment

Systemic Screening: Proactive Analysis

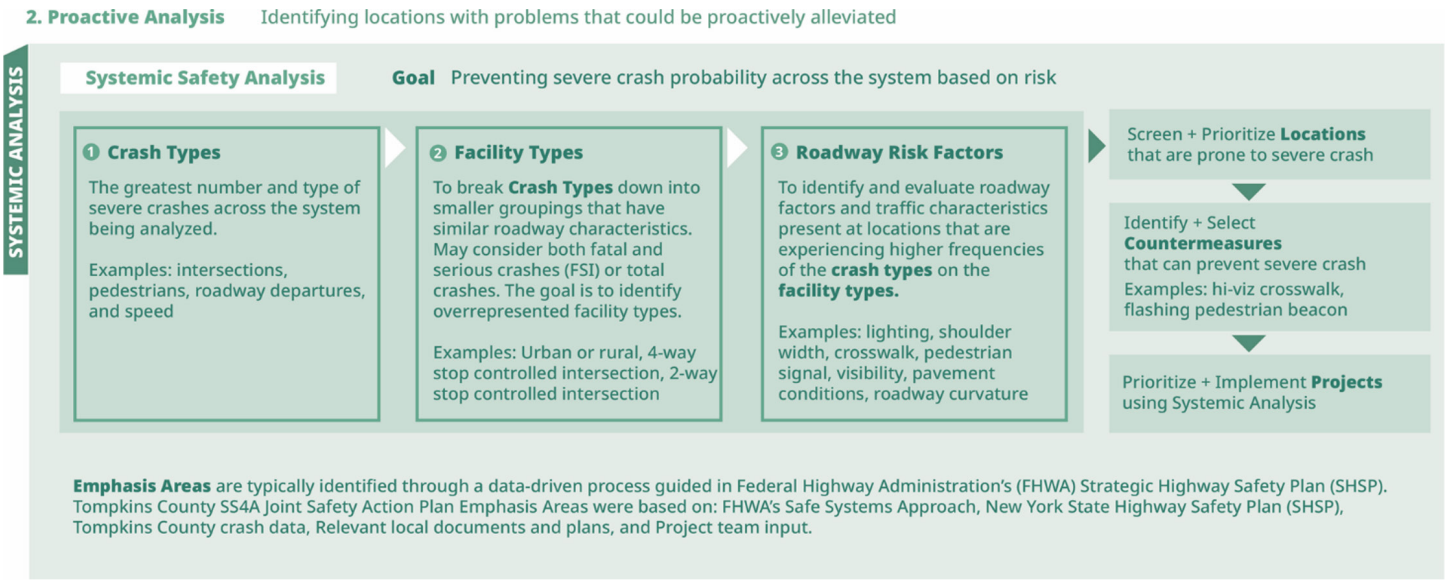
Given the relatively rare and dispersed occurrence of fatal and severe injury crashes in Tompkins County, a systemic analysis was performed to complement the hotspot analysis. Unlike the hotspot analysis, which looks at site-specific historical crash data, the systemic analysis focuses on identifying risk factors commonly associated with severe crashes and then screens the network based on site-specific risk levels. The systemic approach proactively prioritizes high crash risk locations for potential safety improvements, even in areas that may lack significant crash history.

The systemic analysis process, as described by the Federal Highway Administration (FHWA), typically includes six steps:

- Identify focus crash types, focus facility types, and risk factors;
- Screen and prioritize candidate locations for safety improvements;
- Identify and select countermeasures for each prioritized site;
- Prioritize systemic projects for transportation programs;
- Prepare, implement, and track systemic safety improvement projects; and
- Evaluate systemic safety projects, countermeasures, programs, and overall performance.

The systemic analysis process is visualized below in **Figure 13**.

Figure 13 – Systemic Analysis Process



Through the systemic screening analysis process, focus facility types and their associated risk factors were identified for each of the four focus crash types (intersection-related crashes, roadway departure crashes, pedestrian-related crashes, and speed-related crashes). An interactive online map was created to visualize the locations of all segments or intersections within each focus crash and focus facility type, along with the count of identified risk factors present. Each risk factor was weighted equally, and a risk score was calculated for each location based on the total number of factors present.

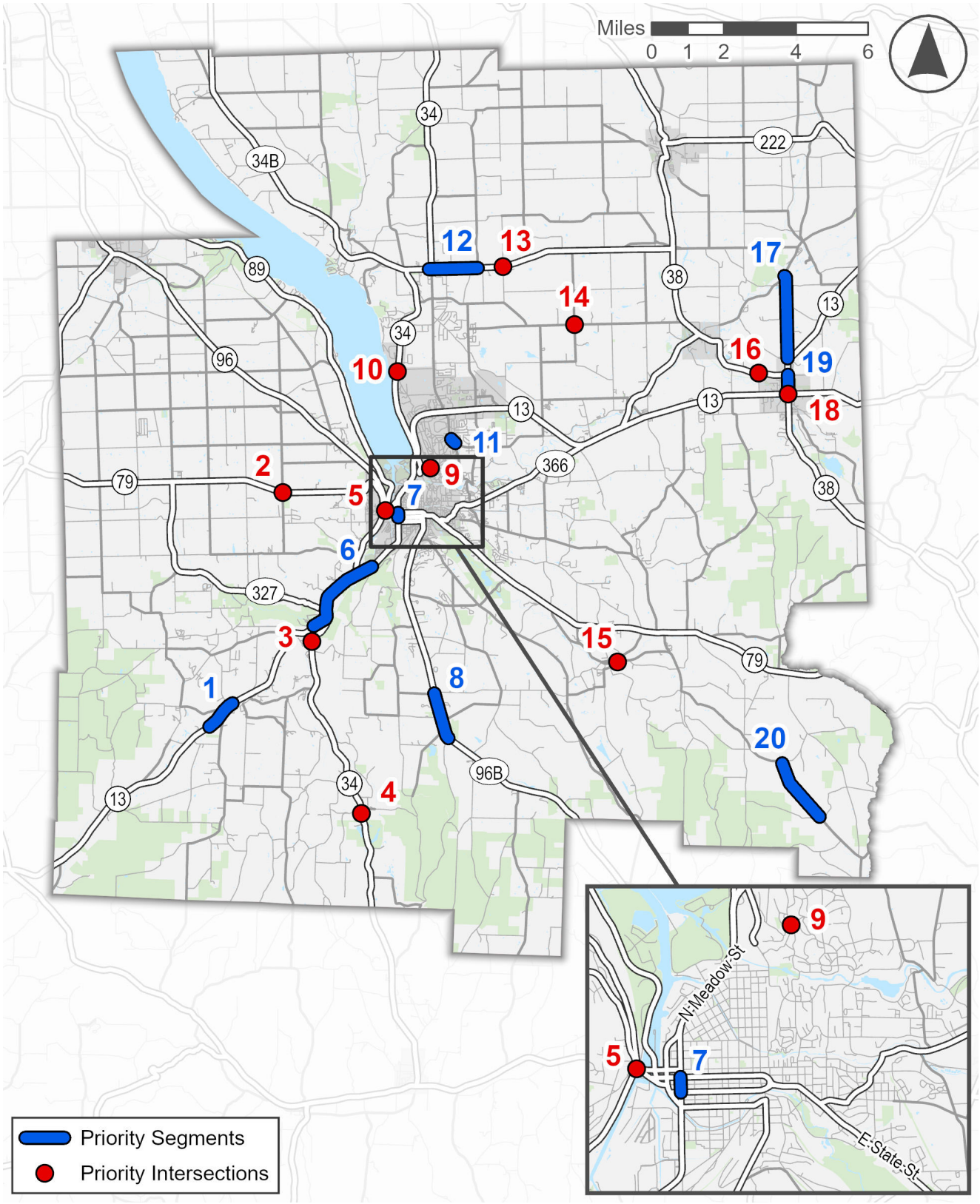
Facility owners can use this online map to visualize sites that are candidates for systemic countermeasures. The countermeasures can be applied in the design of a single corridor project or can be bundled into a single project across many locations systemwide. Project bundling often allows facility owners to address a greater number of locations at a lower unit cost than could be achieved through multiple smaller projects.

Section 6 includes a comprehensive set of systemic countermeasures. NYSDOT has approved an increasing number of systemic treatments that are adopted in the NY SHSP through the further adoption of specific Emphasis Area plans. These include:

- Pedestrian Safety Action Plan (2018);
- Vulnerable Road User Safety Assessment (2023); and
- Roadway Departure Safety Action Plan (2024).

These plans include both individual countermeasures and packages that are tailored to specific focus facilities and other locations demonstrating identified risk factors.

Figure 14 – Final Priority Location Network Map



Section Four

Engagement and Collaboration

Plan Development Overview

ENGAGEMENT AND COLLBORATION

Throughout this process, the project team worked with transportation safety stakeholders, state partners, and Tompkins County residents to gather feedback. The engagement and collaboration process, outlined in **Figure 15**, included one-on-one municipal meetings, multijurisdictional meetings, advisory group meetings, and public meetings and pop-up events. There was also an interactive Feedback Map for public comments on safety issues and concerns. A public-facing online Safety Data Performance Viewer was created to provide the public with detailed crash statistics for the County, which will continue to be available moving forward. The goal was to hear from members of the public and key stakeholders about their issues and ideas related to transportation safety.

Figure 15 – Overview of Plan Engagement Activities

One-on-One Meetings (11)	*One meeting with each municipality (virtual)*	*March & April 2024*
Multijurisdictional Meetings (3)	*Complement one-on-one meetings, provide project updates (virtual)*	*May & October 2024; March 2025*
Advisory Group Meetings (2)	*ITCTC, NYSDOT Region 3, Cornell Univ., Ithaca College, TCAT, etc. (1 in-person, 1 virtual)*	*August 2024 & February 2025*
Public Meetings (7)	*Standalone or coordinated with existing events (4 in-person, 3 virtual)*	*4: July 2024 2: December 2024 1: April 2025*

Project Team and Multijurisdictional Meetings

PLANNING STRUCTURE AND OVERSIGHT

Project Team meetings made up of representatives of the ten municipalities and Tompkins County, ITCTC, and NYSDOT Region 3 were held biweekly. Multijurisdictional meetings, which included the project team as well as other municipality staff, were held three times throughout the planning process in May and October 2024 and in March 2025. Multijurisdictional meetings also served as touch points with municipality representatives that were not able to join all biweekly meetings.

Advisory Committee

Advisory Committee meetings were held in August 2024 and February 2025 to engage key stakeholders outside of the municipal representatives throughout the study. These stakeholders were invited to join and participate in meetings to get updates on the study's status and to provide feedback on concerns and recommendations from their unique perspectives. These included the project team and additional staff, ITCTC, NYSDOT Region 3, Cornell University, Ithaca College, Tompkins Cortland Community College, Tompkins Consolidated Area Transit (TCAT), Bike Walk Tompkins, Downtown Ithaca Alliance, The Center for Community Transportation, Tompkins County Office for the Aging and Health Department, Upstate University Hospital Trauma Injury Prevention, City of Ithaca Vision Zero Partners, and State and local law enforcement agencies.

Public Engagement

Public Meetings

An online meeting to introduce the project was held on Wednesday, July 24, 2024, between 6:00 and 7:30 PM. Two presentations were offered at 6:00 and 6:45 PM. This meeting was designed to hear from community members about their travel choices and safety issues.

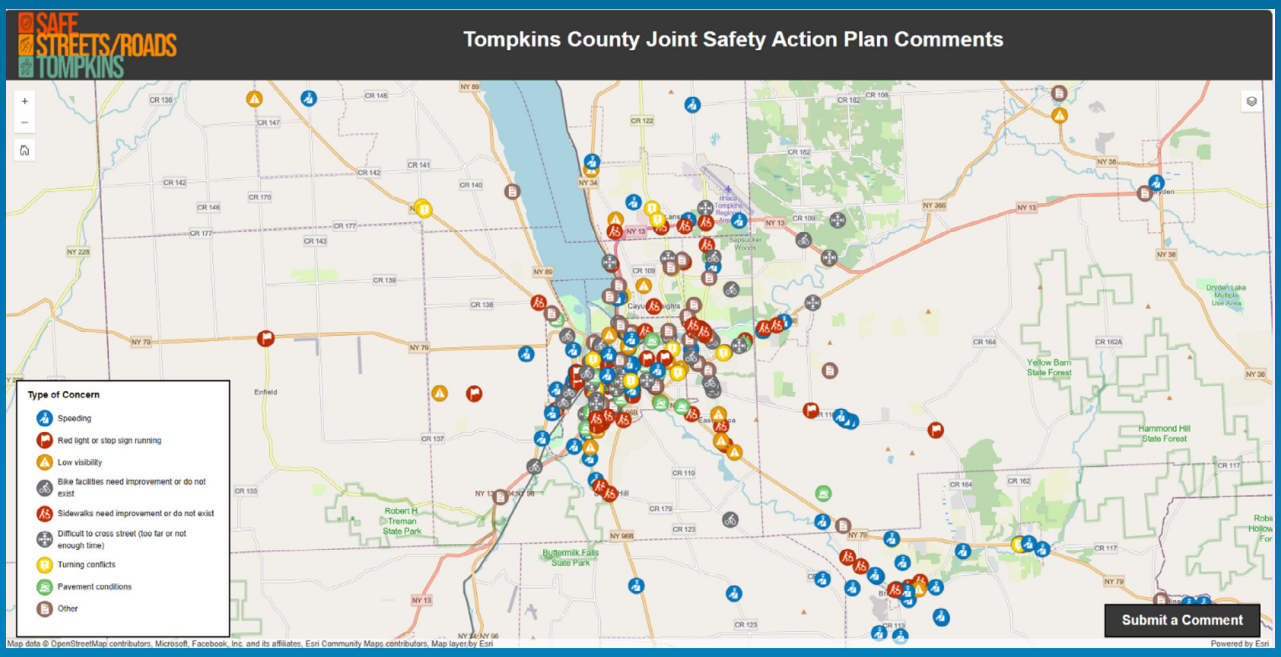
Preliminary recommendations were presented during an online meeting on Monday, December 9, 2024 from 6:00 to 7:30 PM. An in-person open house was held at the Town of Ithaca municipal building on Wednesday, December 11, 2024 from 4:00 to 6:00 PM. This meeting collected feedback through conversation and an online survey of the preliminary recommendations and draft priority locations.

On Wednesday, April 30, 2025 from 6:30 to 7:30 PM, the draft Tompkins Joint Safety Action Plan was presented during an online meeting and kicked off the public review period.

Interactive Public Map and Surveys

An interactive Feedback Map was available on the project website for the public to provide specific roadway safety comments by location within Tompkins County. A screenshot of the map is shown in **Figure 16**. Members of the public added comments about specific experiences and observations about the area's roadways traveled by driving, walking, biking, and taking transit. The Feedback Map was available from May 2024 to October 2024 and received 409 responses. The top three responses were related to "speeding," "too difficult to cross street," and "sidewalks need improvement."

Figure 16 – Screenshot of Online Feedback Map



Event Tabling

The consultant team attended three events throughout Tompkins County to spread the word about the Tompkins Joint Safety Action Plan and gather feedback on safety priorities. People stopping by the event tables could pick up a business card with a QR code and link to the project website and were encouraged to fill out the Feedback Map either on their phone, at home, or they could use sticker dots and comment cards at the table to leave comments about specific intersections or areas in their community where they had safety concerns. Comment cards and locations were then manually entered into the Feedback Map so that all comments were in one place. Kids activities were also available and stress balls in the shape of a traffic cone with the project logo were offered as a giveaway. The team attended the following events:

- Newfield Old Home Days – Friday, July 26, 2024, from 5 PM – 9 PM
- Ithaca Farmers Market – Saturday, July 27, 2024, from 9 AM – 3 PM
- Trumansburg Farmers' Market – Wednesday, July 31, 2024, from 4 PM – 7 PM

Figure 17 – Ithaca Farmers Market Public Engagement

Figure 18 – Newfield Old Home Days Public Engagement

Public Comment Period of Draft Plan

The public review period will last 14 days. A notice of the public review and comment period will be posted to the project website, which will be shared by all project partners to their outreach lists and all Advisory Committee members will be alerted and asked to share with their local networks. Comments received during the public review and comment period will be reviewed and addressed in the final Plan as appropriate.

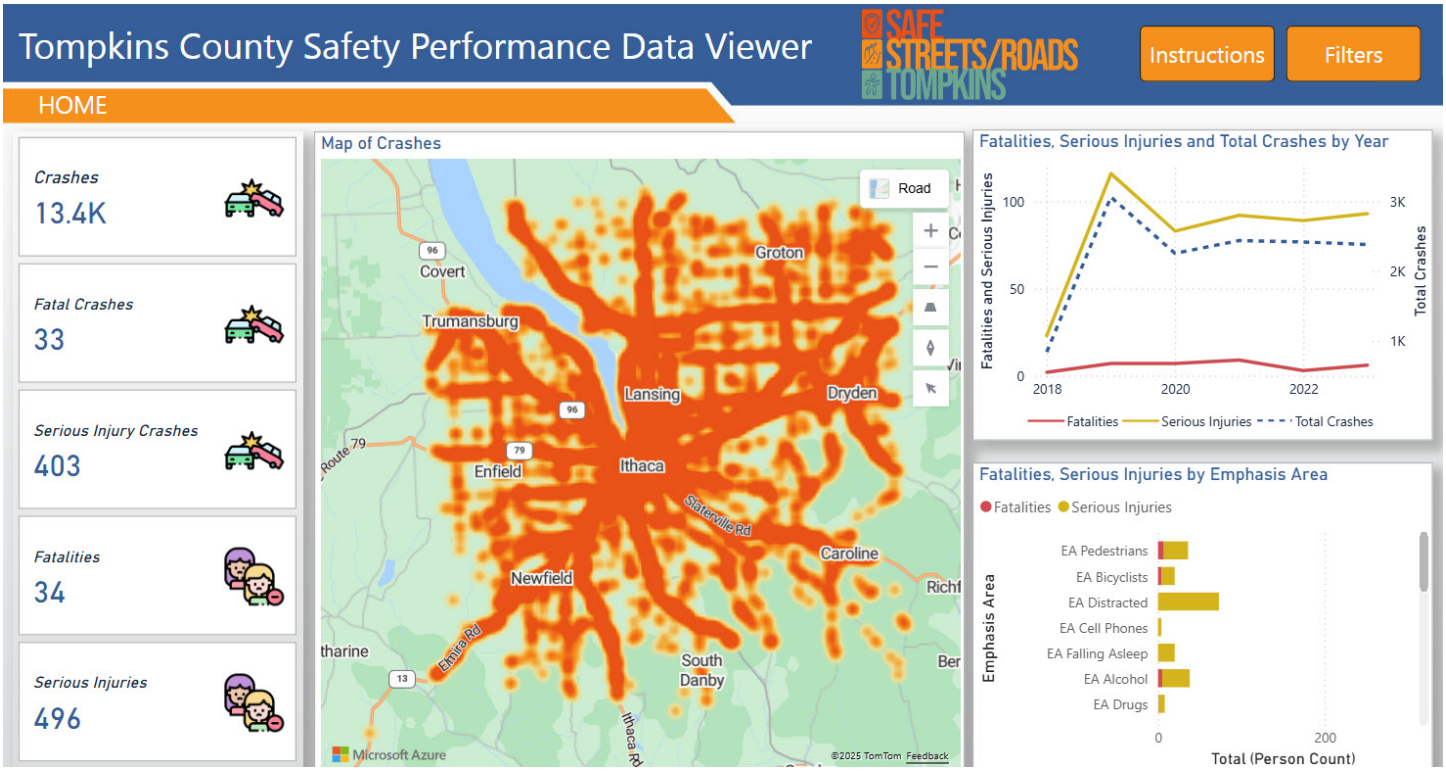
Figure 19 – Trumansburg Farmer's Market Public Engagement

Website and Social Media Marketing

Figure 20 – Screenshot of the Project Website

Digital flyers were distributed by the project team to advertise the public meetings and pop-up events. The project website, https://safestreetstompkins.com provided resources, project materials, the Safety Data Performance Viewer, and a contact page.

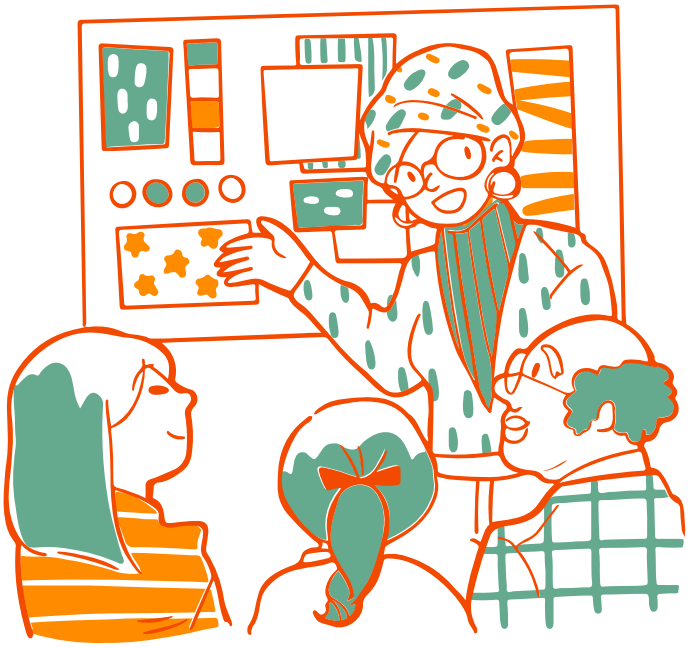
Figure 21 – Screenshot of the Tompkins County Safety Data Performance Viewer



Engagement Key Takeaways

Key themes from the public engagement process included:

- Specific concerns around safety on major state roadways including Route 13 and Route 96, particularly as these roadways bisect downtowns, and contribute to speeding and unsafe conditions for pedestrians;
- Sight distance issues at geometrically abnormal intersections and areas with dramatic topography;
- Speeding concerns; and
- Interest in more pedestrian facilities, including sidewalks, crosswalks, and around crossings for existing and planned trails and at key destinations.



Section Five
Policy and Process Review

This section outlines current transportation safety policies and procedures related to Tompkins County, and recommends new strategies based on national best practices to reduce serious injuries and fatalities. This section includes a review of State, regional, and municipal policies, identifies gaps in these polices, and provides policy recommendations with lead agencies and timelines.

State Policy Review

The New York SHSP uses FHWA's Safe System Approach, which prioritizes safety for all users, accounts for human error, and uses a multidisciplinary approach. More details on the Safe System Approach are available in **Section 1**. Referenced policies and procedures embody elements of the Safe System Approach as a means to achieving Vision Zero in New York, which applies at both county and local levels of government.

Complete Streets

The State of New York Complete Streets Act was signed into law in 2011, and it requires agencies that receive federal funding to consider the mobility and convenience of all users when developing transportation projects, which includes bicyclists, pedestrians, public transportation riders, and motorists of all ages.

The Capital Project Complete Streets Checklist was created by NYSDOT to assist agencies in identifying needs for Complete Streets design features on capital projects. The checklist provides a project-level evaluation of mobility constraints and opportunities and transportation improvements within a defined area. The checklist is required for all federal-aid projects that have NYSDOT oversight. This checklist will be updated as part of NYSDOT's Active Transportation Strategic Plan effort, currently in process.

Speed Management

New York State Assembly Bill A1007A signed by the Governor in August 2022 authorizes cities, villages, and towns to reduce the speed limit to 25 miles per hour on facilities they own from what had been the lowest permitted speed limit of 30 miles per hour (outside of a school zone). This bill did not, however, change the authority to set a speed limit or the process. Currently, cities and villages can make a speed limit change if they follow the Manual on Uniform Traffic Control Devices (MUTCD) guidelines and have it certified by a professional engineer; however, counties and towns still need to petition the NYSDOT.

Posting a speed limit in a school zone is controlled by the Vehicle and Traffic Law and MUTCD criteria, and a summary of the requirements and considerations for posting a

school zone speed limit can be found on the NYSDOT website. These zones, according to the NYSDOT website, are primarily used to enhance safety for children who walk or ride to school or a childcare facility. It further states that the need for a school speed limit is diminished if most or all students are provided transportation; however, it does not preclude them if there are other safety reasons related to students walking or bicycling along or across a road near a school.[4]

Traffic Violation Monitoring Systems include speed cameras, red light cameras, and school bus photo violation monitoring systems. Speed cameras are currently permitted by the New York State Legislature in school and work zones in New York City, Albany, and Syracuse. New York City was first permitted to use the cameras in 1994. In 2013, the state legislature amended the legislation to permit cameras in school zones during certain times related to school hours of operation. Tickets issued are sent to the vehicle owner as the camera captures the license plate and vehicle, not the driver. Red light cameras are currently only permitted in certain jurisdictions, such as New York City, Nassau County, Yonkers, Albany, and a handful of others. Lastly, New York State Legislation (VAT Article 29, Section 1174-A) allows counties, cities, towns, or villages to use school bus photo violation monitoring systems on roads they own in school districts for traffic violations related to drivers passing stopped school buses.

New York State approved the Automated Work Zone Speed Monitoring Program in 2021 to help enforce speed limits in highway construction and maintenance work zones along New York State highways – issuing tickets to vehicles traveling in excess of 10 miles per hour over the work zone speed limit on NYSDOT-maintained roads or on the New York State Thruway. This is a joint initiative between NYSDOT and the New York State Thruway Authority that builds upon ongoing efforts to better protect highway workers. Cameras are in operation in New York City, Albany, Buffalo, along the New York State Thruway, and in other parts of the state. Locations may vary on a rotating basis and are publicly available.

Vulnerable Road Users

Chapter 18 of the NYSDOT Highway Design Manual for Pedestrian Facility Design requires consideration for the accommodation of pedestrians, including pedestrians with disabilities in the planning process. Those considerations should include, at minimum, "a presumption that pedestrians will be accommodated unless pedestrian access is prohibited by law."[5]

The Pedestrian and Bicycle Policy aims to develop a transportation system that offers travel mode choices that are inclusive of, accessible to, convenient, and safe for pedestrians and bicyclists. The objectives of the policies are to promote the development of pedestrian and bicycle networks that support sustainable and livable communities, minimize the impact on natural resources, reduce greenhouse gas emissions, and improve quality of life.

NYSDOT is currently developing an Active Transportation Strategic Plan (ATSP) to improve walking, biking, and using a wheelchair throughout New York State. The ATSP will provide direction and guidance for future active transportation investments. The ATSP will replace the New York State Bicycle and Pedestrian Plan from 1997.

Impaired Driving Policy

Leandra's Law, signed into New York Law in 2009, requires any person sentenced for driving while intoxicated to have an ignition interlock installed on their vehicle for at least six months. Ignition interlocks reduce the likelihood of recidivism, which can result in a reduction in impaired driving crashes.

4 Additional information can be found on the NYSDOT website: https://www.dot.ny.gov/about-nysdot/faq/posting-speed-limit-within-a-school-zone.

5 NYSDOT Highway Design Manual, Chapter 18 Pedestrian Facility Design

Occupant Protection Policy

In 1984, New York passed the nation's first seat belt law. The law allowed for primary enforcement and covered all front-seat passengers and children up to ten years of age riding in the back seat. Since November 2020, New York requires that every occupant inside the vehicle regardless of seat position wear a safety restraint. Additionally, passengers under 16 years old must wear a seat belt or other restraint as determined by height and weight.

Regional Policy Review

Complete Streets

ITCTC has a Draft Complete Streets Network Map but there is no formal Complete Streets Policy for Tompkins County.

Safety Targets

ITCTC passed Resolution 21-04: *Supporting Tompkins Consolidated Area Transit's Transit Safety Targets for Transit Safety Performance Measures*, which sets transit safety targets for fatalities, injuries, safety events, and system failures for fixed-route, deviated fixed-route, and paratransit service. ITCTC also agreed to support NYSDOT statewide targets for Safety Performance Management Measures per Title 23 Part 490.207 of the Code of Federal Regulations.

Municipal Policy Review

Complete Streets

The Town of Ithaca's Complete Streets Policy (2015) aims to create a safe, efficient, and well-connected multimodal transportation system. This policy directs the Town to reconstruct and maintain facilities to allow for safe travel and welcoming environments, which are necessary for accessible and safe travel for all users. Success will be evaluated each year based on new facilities to aid connections for multiple modes of travel (e.g., improvements to bike lanes, crosswalks), roadway related crashes and injuries, number of children walking or biking to school, and satisfaction levels from surveys.

Roadway Speeds

Speed regulations for the Villages of Cayuga Heights, Dryden, and Lansing within Tompkins County mandate maximum speed limits of vehicles on highways within the corporate limits of 30 miles per hour. These regulations commonly include exceptions for school zones with limits of 15 to 20 miles per hour during school hours in the villages of Cayuga Heights and Dryden.

Village of Cayuga Heights: Chapter 242 Article III Sidewalk Districts notes that the Board of Trustees can create plans for new sidewalks in a sidewalk district if 25 property owners request it, provided that no existing plans dictate guidance for sidewalk installation. The Board would also provide a financing plan and have the authority to provide for the cost of construction and maintenance of the sidewalk system.

The Town of Ithaca Comprehensive Plan (2014) states that one of the Town's goals is to control traffic speed through road design standards, traffic calming, and reduction of road widths.

Vulnerable Users

The City of Ithaca Bike Parking Ordinance in 2010 sets standards for bicycle parking at businesses, apartments, schools, offices, etc. as part of the site plan review process. It has resulted in the installation of over 200 hundred new bicycle parking spaces since 2007.

The Village of Lansing adopted Local Law 3 in 2021 which requests that appropriate sidewalks be installed by owners or developers when a special permit or subdivision is filed, as stated in the Village of Lansing Greenway Plan (2022).

Safe Routes to School (SRTS)

ITCTC's 2045 Long Range Transportation Plan documents that within the last ten years, the City of Ithaca, Villages of Trumansburg, Cayuga Heights, and Dryden, and the Town of Ithaca were provided Safe Routes to School (SRTS) funding. ITCTC has and will continue to support pedestrian and bicycle safety in the county through data, technical assistance, and funding opportunities.

Current Policy and Planning Landscape

Following a review of current policies, a number of potential gaps in state, regional, and municipal policies were identified.

Policy Gap Analysis

Potential gaps in state policies include:

- New York does not have a statewide Intersection Safety Action Plan. This plan would offer a systemic approach to reducing crashes at high-risk locations and addressing the concerns of vulnerable road users. This approach helps identify, assess, and address safety issues at intersections through data-driven, targeted strategies.
- According to NYSDOT's Roadway Departure Safety Action Plan (2024), New York does not currently have a law prohibiting aggressive driving. However, some aggressive driving behaviors can be labeled "reckless driving" or otherwise captured in speed limit violations.
- New York State does not have an official policy for incorporating safety early in the transportation planning process. This would be an integral role in implementing traffic safety practices as safety needs to be one of the components to be considered for project prioritization in plans such as SHSPs, Transportation Improvement Programs (TIP), and Metropolitan Transportation Plans.
- New York State's safe passing law does not define "safe passing distance" for cyclists, whereas neighboring states define this as 3' to 4'.

Potential gaps in regional policies include:

- Tompkins County and ITCTC do not have a regional Vision Zero policy. Developing a Vision Zero policy can help eliminate traffic fatalities and serious injuries by prioritizing safety in all transportation planning and design. The Vision Zero policy uses a systemic framework to ensure that no road design, behavior, and enforcement fails to prioritize safety for all.
- Tompkins County and ITCTC do not have a regional Complete Streets policy. ITCTC recommends implementation of Complete Streets features on roadways as part of its 2045 Long Range Transportation Plan. This policy can be a crucial first step to reducing traffic crashes, improving public health, ensuring equity, and rectifying historical inequities of transportation solutions.
- Tompkins County and ITCTC could create committees and coordinate with community engagement groups for roadway safety for all modes, particularly non-motorized modes. By conducting this type of engagement, the needs of users of this roadway system could be directly utilized to help tailor safety improvements for these specific needs.

- ITCTC identified safety education as a priority for investment in the 2045 Long Range Transportation Plan. The Plan suggested programs for elementary schools and seniors and identified community groups for partnerships. Tompkins County and ITCTC do not have regional education campaigns to curtail dangerous driving behavior (e.g., aggressive driving, driving under the influence). These campaigns could help raise awareness of the risk and consequences of dangerous driving behavior.
- Tompkins County could proceed with passing a defined safe passing law (defining safe passing distance as 3' to 4'), following the precedent set by Monroe and Suffolk Counties.

Potential gaps in municipal policies include:

- The City of Ithaca Comprehensive Plan (2015) identified the need to work with community partners on educational campaigns addressing distracted driving. Educational campaigns are needed to raise awareness on safe driving behaviors, change driver attitudes, and improve compliance with traffic safety rules.
- The Town of Ithaca aims to maintain a vehicle crash database on a continuous basis. The data would help identify dangerous locations and mitigate potential issues, as stated in the Town of Ithaca Comprehensive Plan (2014). Data collection is necessary to create tailored strategies to effectively and efficiently meet transportation safety deficiencies. Additionally, the Town of Ithaca strives to continue to petition the County and State for speed limit reductions in certain areas, as outlined in the Town of Ithaca Comprehensive Plan (2014). Speed limit reductions can significantly impact the severity of crashes and improve street safety, especially on roadways frequented by vulnerable road users.
- The Town of Caroline aims to prioritize safe roadways with sensible and enforceable speed limits, as stated in the Town of Caroline Comprehensive Plan (2020).
- The Town of Danby seeks to work with TCAT to expand mobility options for the population, especially for seniors and youth, as stated in the Town of Danby Comprehensive Plan (2011). Increasing mobility options and prioritizing accessible non-motorized connections can significantly raise safety amongst vulnerable road users and decrease the likelihood of serious crashes with these users.
- Municipalities in Tompkins County can develop and embrace Vision Zero and Complete Streets policies to enhance roadway safety and accelerate progress towards this goal. These policies provide multidisciplinary approaches and strategies to eliminate roadway related fatalities and serious injuries.
- Automated enforcement can be used to supplement enforcement strategies, targeting speeding in high-risk locations, such as work zones or school zones. Few cities in New York (e.g., New York City, Buffalo) have implemented automated enforcement strategies. These could be adopted more widely in Tompkins County.
- Municipalities in Tompkins County can also improve their project development processes to advance Complete Streets design principles. These processes can develop a roadway system and design an environment that ensures safety for all road users.
- Local municipalities can consider adoption of local safe passing ordinances, defining required passing distance and requiring motorists to safely pass someone traveling on a bicycle.

Policy and Process Recommendations

The potential gaps and best practice review informed the policy recommendations, which are outlined below. Lead and partner agencies, emphasis areas, safe system approach elements, timelines, and potential funding sources (if applicable) are identified.

POLICY AND PROCESS CHANGES

Project Development

The New York State SHSP (2023) requires the use of the Complete Streets checklist when designing roadway projects to develop safety measures for all road users. Quick-build projects allow municipalities to explore short-term safety solutions as one iteration of design.

Table 4 - Project Development Recommendations

	Lead Agency	Partner Agency	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding (if applicable)
Incorporate Complete Streets measures in project development to consider safety for all roadway users.	Municipalities	Tompkins County, ITCTC	Vulnerable Road Users, Roadway Departures	Safer Speeds, Safer Roads	Ongoing	Not Identified
Consider incorporation of Vision Zero and Complete Streets criteria when selecting new projects for the TIP.	ITCTC	Municipalities	Vulnerable Road Users, Roadway Departures	Safer Speeds, Safer Roads	Ongoing	Not Identified
Create and share educational materials for quick-build demonstrations to local member agencies.	ITCTC	Municipalities	Intersections, Roadway Departures	Safer Roads	1 year	Not Identified

Complete Streets

Complete Streets frameworks are tailored by communities' unique processes and evaluate the street design components to augment quality of life, reduce roadway related fatalities and injuries, and create a welcoming and convenient environment for all. Partnerships and coordination among government agencies, community organizations, and community members are required to establish a system that effectively meets the needs of road users.

Table 5 - Complete Streets Recommendations

	Lead Agency	Partner Agency	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding (if applicable)
Develop Complete Streets policies that reflect community needs, prioritize the safety of vulnerable road users, and are actionable through strong partnerships with stakeholders.	ITCTC	Municipalities	Vulnerable Road Users, Roadway Departures	Safer Vehicles, Safer Speeds, Safer Roads	1-3 years	Municipal
Create a member agency working group to ensure Complete Streets policies are consistent with transportation plans.	ITCTC	Municipalities, Tompkins County	Vulnerable Road Users, Roadway Departures	Safer Roads	1-2 years	Not Identified
Ensure that streets provide seamless connections between different transportation modes, such as safe access to bus stops, bicycle routes, and pedestrian walkways, encouraging more sustainable transportation choices.	Municipalities	ITCTC	Vulnerable Road Users, Alternate Road Vehicles and Commercial Vehicles, Age Related	Safer Vehicles, Safer Roads	1-3 years	Not Identified
Regularly assess street safety through Road Safety Audits and evaluations to identify potential hazards and address safety gaps for all road users.	Municipalities	ITCTC	Intersections, Vulnerable Road Users, Roadway Departures	Safer Vehicles, Safer Roads	1-3 years	Highway Safety Improvement Program

Reduce Speed Limits

Speed limits reflect the use-type of roadways and must be limited to lower the risk and severity of crashes. Factors such as intersections with other roadways, traffic volumes, road environment, and presence of vulnerable users can impact how speed limits are set. Generally, speed limits can play a valuable role in curbing dangerous human behaviors, reducing friction with other transportation modes, and creating a predictable road environment. New York State Legislation (A.1007-A/S.2021-A) allows cities, towns and villages to reduce speed limits to 25 miles per hour on facilities which they own, pursuant to an engineering study in accordance with the MUTCD, to help prevent roadway-related fatalities and serious injuries.

Table 6 - Reduce Speed Limits Recommendations

	Lead Agency	Partner Agency	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
Enforce lower motor vehicle speeds, especially in school zones.	Municipalities	Tompkins County, ITCTC	Vulnerable Road Users, Roadway Departures, Aggressive Driving	Safer Speeds	1-2 years	Police Traffic Services (PTS) grant program
Pursue speed limit reductions in locations with high pedestrian and bicycle volumes.	NYSDOT	Tompkins County, ITCTC, Municipalities	Vulnerable Road Users, Roadway Departures, Aggressive Driving	Safer Speeds	1-2 years	Not Identified
Create a Speed Limit Study template in accordance with the Manual of Uniform Traffic Control Devices and guidance from FHWA and the National Association of City Transportation Officials.	NYSDOT	Tompkins County, municipalities	Intersections, Roadway Departures, Aggressive Driving	Safer Speeds	1-2 years	State

Vision Zero Action Plan & Data Monitoring

Vision Zero action plans allow communities to use a holistic framework to recognize that traffic deaths are preventable. Action plans, however, are the start of an on-going process of infrastructure improvements and data monitoring.

Table 7 - Vision Zero Action & Data Monitoring Recommendations

	Lead Agency	Partner Agency	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
Prioritize infrastructure improvements at locations that see the highest number of severe and fatal crashes (using a Hot Spot screening approach).	Municipalities	ITCTC	Intersections, Vulnerable Road Users, Roadway Departures	Safer Roads	5 years	Not Identified
Adopt a proactive, ongoing data monitoring approach to identify and address high-risk locations and behaviors across the entire transportation system.	ITCTC	Municipalities	Road User Behaviors, Aggressive Driving	Safer Roads	1 year	Municipal
Develop and adopt a Vision Zero Policy.	ITCTC	Municipalities, Tompkins County	Vulnerable Road Users	Safer Roads	1 year	Not Identified

Design Standards

Street Design Standards provide a systematic approach to developing safe, efficient, and welcoming streets for all users. Strong guidance can be developed and implemented with close engagement with community members and strong partners to lead and produce changes.

Table 8 - Design Standards Recommendations

	Lead Agency	Partner Agency	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
Develop Street Design Standards in collaboration with communities and tailor street designs with sensitivity to land use and community context.	Tompkins County	Municipalities, ITCTC	Intersections, Vulnerable Road Users, Roadway Departures	Safer Roads, Safer Speeds	1-3 years	SS4A Implementation
Incorporate Complete Streets strategies into design standards, ensuring that roads are designed to accommodate all users.	Municipalities	Tompkins County	Intersections, Vulnerable Road Users, Roadway Departures	Safer Roads, Safer Speeds	Ongoing	Not Identified
Prioritize safety interventions on the High Injury Network (HIN) to reduce roadway crashes.	Municipalities	Tompkins County	Intersections, Vulnerable Road Users, Roadway Departures	Safer Roads	3-5 years	Not Identified

Safe Routes to School (SRTS)

SRTS aims to provide safer and more comfortable ways for children to walk or bike to school. These programs feature engagement with local communities, parents, and school leadership to develop strategies for robust, consistent, and effective implementation.

Table 9 - SRTS Recommendations

	Lead Agency	Partner Agency	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
Establish Safe Routes to School programs in communities to enhance safety access for children.	Municipalities	School districts	Vulnerable Road Users	Safer People	3 years	NYSDOT Transportation Alternatives Program (TAP)
Develop comprehensive school travel plans in partnership with schools, local transportation agencies, and community stakeholders.	Municipalities	School districts	Vulnerable Road Users	Safer People	1 year	NYSDOT Transportation Alternatives Program (TAP)

Education

Education can be a powerful tool in shifting driver behavior and attitudes to enhance road safety. The New York State SHSP (2023) recommends supporting community traffic safety programs.

Table 10 - Education Recommendations

	Lead Agency	Partner Agency	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
Increase education campaigns to promote safe road behavior and help the public understand risks and consequences of dangerous road behavior.	NYSDOT	ITCTC, Tompkins County, municipalities, Governors Traffic Safety Committee (GTSC)	Road User Behaviors, Agre Related, Aggressive Driving	Safer People	1 year/ ongoing	Section 402 State and Community Highway Safety Grant Program

	Lead Agency	Partner Agency	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
Collect data before and following safety improvements to analyze outcomes.	NYSDOT	ITCTC, Tompkins County, municipalities	Road User Behaviors, Age Related, Aggressive Driving	Safer People	Ongoing	Not Identified–may be eligible through design and engineering funding
Create and sustain a public website that provides information, resources, training, and educational opportunities.	ITCTC, Tompkins County	Municipalities	Vulnerable Road Users, Road User Behaviors, Aggressive Driving	Safer People	1 year	Not Identified

Traffic Violation Monitoring Systems

Traffic violation monitoring systems can help manage driver behavior. Other municipalities in New York have successfully established speed cameras through legislation (see VAT Article 30, Section 1180-F). New York State Legislation (VAT Article 29, Section 1174-A) allows counties, cities, towns, or villages to install and use school bus photo violation monitoring systems on roads they own in school districts for traffic violations related to drivers passing stopped school buses.

Table 11 - Traffic Violation Monitoring Systems

	Lead Agency	Partner Agency	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
Pursue speed violation monitoring systems in school zones with the NY State Legislature.	Tompkins County	ITCTC, Municipalities, NY State Legislature	Road User Behaviors, Aggressive Driving	Safer Speeds	1-2 years	Tompkins County
Establish traffic violation monitoring systems to prevent the passing of school buses to ensure compliance with road safety laws and data collection for identification of road safety improvements.	Municipalities, Tompkins County	NYSDOT, ITCTC, School Districts	Road User Behaviors, Aggressive Driving	Safer Speeds	1-2 years	Municipal

Speed Monitoring Displays

Speed monitoring displays provide real-time feedback to drivers and create immediate opportunities for driver reflection and behavior correction. The display heightens awareness, which can help prevent roadway crashes, encourage safe driving, and reduce speeding.

Table 12 - Speed Monitoring Displays Recommendations

	Lead Agency	Partner Agency	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
Install more speed monitoring displays to correct driver behavior in real-time.	NYSDOT, Tompkins County, municipalities	ITCTC	Road User Behaviors, Aggressive Driving	Safer Speeds	1 year	Municipal
Install speed monitoring displays in neighborhoods with high pedestrian traffic or in school zones.	NYSDOT, Tompkins County, municipalities	ITCTC	Vulnerable Road Users, Road User Behaviors, Aggressive Driving	Safer Speeds	1 year	Municipal

Vulnerable Road Users & Equity

The New York SHSP (2023) recommends continuation of public awareness of vulnerable user safety issues, increased accessibility of education, establishing VRU safety and enforcement training to police officers, and conducting community engagement training for outreach with VRU. Moreover, best practices and SS4A guidance suggest prioritizing projects in environmental justice communities.

Table 13 - VRU & Equity Recommendations

	Lead Agency	Partner Agency	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
Increase promotion of vulnerable user safety through public campaigns, community outreach, and additional safety training.	ITCTC, NYSDOT	Municipalities, Tompkins County	Vulnerable Road Users	Safer People	1 year	Section 402 State and Community Highway Safety Grant Program
Prioritize protected infrastructure on critical gaps in the bicycle and pedestrian networks.	ITCTC, NYSDOT	Municipalities, Tompkins County	Vulnerable Road Users	Safer Roads	1-5 years	Section 402 State and Community Highway Safety Grant Program

	Lead Agency	Partner Agency	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
Evaluate lighting and street conditions for safety improvements.	ITCTC, NYSDOT	Municipalities, Tompkins County	Vulnerable Road Users	Safer Roads	1-3 years	Section 402 State and Community Highway Safety Grant Program
Evaluate how project prioritization processes can incorporate equity as a factor.	ITCTC, NYSDOT	Municipalities, Tompkins County	Vulnerable Road Users	Safer Roads	1 year	Not Identified

Work Zone Safety

Work Zone Safety refers to the strategies and measures implemented to protect workers, drivers, and pedestrians within road construction and maintenance areas. Ensuring safety in work zones is a critical component of the SS4A approach, which focuses on minimizing traffic-related injuries and fatalities. Work zone safety includes the use of appropriate signage, barriers, traffic control devices, and speed reductions to mitigate risks associated with construction zones.

Table 14 - Work Zone Safety Recommendations

	Lead Agency	Partner Agency	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
Employ proper training and use of safety protocols for workers.	NYSDOT, municipalities, Tompkins County	ITCTC	Alternate Road Vehicles and Commercial Vehicles	Safer People	6-9 months	Section 405 National Priority Safety Program
Deploy work zone speed cameras where possible.	NYSDOT, New York State Thruway Authority (NYSTA)		Alternate Road Vehicles and Commercial Vehicles, Safer Speeds	Safer Roads	1-2 years	State

Data

The New York SHSP (2023) recommends expansion of data collection on all public roads, which can include: consolidation of pedestrian count data, use of travel demand models to identify pedestrian and cyclist activity, collection of demographic data on police reports. Additional best practice recommendations include collaboration for vulnerable road user data collection strategies and continuation of CLEAR training for NYSDOT staff, local municipalities, and ITCTC.

Table 15 - Data Recommendations

	Lead Agency	Partner Agency	SHSP Emphasis Area	Safe System Approach Element	Timeline	Funding
Strengthen data collection through consolidation of mode-based data, increased intake of varied data types, and training and collaboration with other entities.	ITCTC, NYSDOT	Municipalities, Tompkins County	Vulnerable Road Users, Alternate Road Vehicles and Commercial Vehicles, Age Related	Safer Roads	Ongoing	Municipal
Regularly collect and analyze detailed crash data to identify trends, hotspots, and areas with serious injuries and fatalities incidents.	ITCTC, NYSDOT	Municipalities, Tompkins County	Intersections, Roadway Departures	Safer Roads	Ongoing	Not Identified

Section Six

Strategy and Project Selections

STRATEGY AND PROJECT SELECTIONS

This section provides a comprehensive set of project and strategies to address the challenges identified in the SS4A Action Plan development process. These elements include:

- Twenty-one profiles of priority locations, including project recommendations and cost estimates
- Systemic Countermeasure Packages
- Emphasis Areas, Strategies, and Actions table

These three sections meet the required SS4A plan element of strategy and project selections. Each section was determined by local data, best practices, stakeholder input, and equity considerations. In combination, these sections seek to address the safety problems described in prior memos and the Action Plan. All three sections align with both the Safe System Approach and the New York SHSP.

Priority Location Profiles & Recommendations

The 20 Priority Location Profiles are located in **Appendix A**. Segments and intersections with high weighted scores in each participating municipality based on several factors, including overrepresentation of crashes, VRU crashes and risks, equity priority areas and destinations, and isolated transit stops, were selected and then discussed with representatives of those jurisdictions. The final network contains 11 intersections and nine segments for a total of 20 priority safety locations.

Each Priority Location Profile is divided into four sections: Existing Conditions, Crash Analysis, Countermeasure Recommendations, and Cost Estimates. There are 20 project sites, numbered one through 20. Sites one through 11 are intersections, while sites 12 through 20 are segments. Throughout the profiles, photos taken during field observations and those provided by municipalities are included.

The Existing Conditions section includes the project site aerial, key characteristics, key findings, and an existing conditions narrative. Both intersections and segments share similar data points, such as functional classification, Average Annual Daily Traffic (AADT), speed limit, roadway ownership, and adjacent land use. The key differences are that intersections include intersection type, while segments include a description and segment length. The Key Findings section provides a summary of the entire profile. The Existing Conditions section describes the surrounding roadway as well as the project site and its vicinity.

The Crash Analysis section presents a summary of crashes that have occurred between 2018 and 2023. The data, derived from NYSDOT CLEAR crash data set, includes both visual and narrative breakdowns of the crash types. This section highlights the total number of fatal and serious injury crashes and includes a map showing specific crash locations for various user groups (e.g., auto, bicycle, pedestrian, deer/animal, and others).

The Countermeasure Recommendations section is divided into two pages: one page features a plan view illustration, followed by a narrative that explains each recommended countermeasure. This approach allows for the communication of information both visually and descriptively.

For intersections, the illustration offers a detailed depiction of the layout and signage, as intersection recommendations are more complex due to the localized nature of the site, allowing for more specific recommendations. For segments, the illustration includes icons representing FHWA Proven Safety Countermeasures, where applicable, as these sites typically cover greater distances and require different countermeasure considerations.

The Cost Estimates section includes a spreadsheet detailing the breakdown of quantities, units, unit costs, and total costs for each countermeasure, along with a subtotal and a ten percent contingency range. This section was prepared in February of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, along with the current state of the construction market in the upstate New York area. The most recent year data available was used for each individual unit cost, and these estimates are to be used for planning purposes only.

Systemic Countermeasure Packages

NYSDOT has approved an increasing number of systemic treatments that are adopted in the NY SHSP through the further adoption of specific Emphasis Area plans.

These include:

- Pedestrian Safety Action Plan (2018)
- Vulnerable Road User Safety Assessment (2023)
- Roadway Departure Safety Action Plan (2024)

These plans include both individual countermeasures and packages that are tailored to specific Focus Facilities and other locations demonstrating identified Risk Factors. The Systemic Treatment Packages for Intersections, Pedestrians, Roadway Departures, and Speed Management bring together the approved countermeasures included in each NYSDOT Emphasis Area plan, Engineering Instruction bulletins, or other national guidance.

A full list of the Systemic Countermeasure Packages are in **Appendix B**. The Packages are grouped with the intent of providing facility owners with broad guidance for multiple, layered countermeasures that together will have a cumulative reduction in the risk of fatal or severe injury crashes. They are arranged by Focus Facility, eligibility, countermeasure type, and compatibility. Those indicated as 'HSIP-eligible' will be eligible for the HSIP without site-specific benefit-cost analyses. Individual countermeasures may be required to have a field evaluation and "Enhanced" packages may require further study.

The countermeasures are intended to be implemented through a number of means:

- "Bundling" in a single contract across multiple focus facilities across one or more jurisdictions;
- Added as safety improvement scope in capital projects; or
- Incorporated into routine pavement, signage, and signal maintenance programs.

Emphasis Areas, Strategies, & Actions

Throughout the SS4A Plan development process, the project team and stakeholders narrowed down Emphasis Areas, strategies, and actions to guide the final plan and provide an actionable list of items for the project team to be able to implement after the plan development is completed. Emphasis Areas, strategies, and actions were created through a combination of the following:

- New York State Highway Safety Plan
- Tompkins County crash data
- Safe Systems Approach guidance
- Themes gathered from public input
- Municipality input
- Review of relevant local documents and plans, including:
- ITCTC's Long-Range Transportation Plan
- Tompkins County and municipal comprehensive plans
- State Route 13 Corridor Study

The Emphasis Areas for this Plan are the following:

- Intersections
- Roadway Departures
- Vulnerable Road Users
- Age-Related
- Road User Behavior

The final, complete table of action items organized by Emphasis Area and strategies, with suggested action leaders, the associated safe system element, level of resources needed, and timeline, is available in **Appendix C**. This list is consistent with the strategies and themes of the New York SHSP but adapted to the local context of Tompkins County and the participating municipalities in this project. The full list of actions can be used as an implementation tool for the participating jurisdictions to determine next action steps in the various areas of safety, from infrastructure, behavior, and enforcement.

A prioritized list of actions, seen in **Table 16**, were determined based on discussions with the project team and stakeholders throughout the process. The full list of recommended action items is in **Appendix C,** which includes Secondary Emphasis Areas. For transparency and to track progress, **Section 7** provides suggested performance measures to track the highlighted strategies and actions.

Table 16 - Highlighted Emphasis Areas, Strategies, & Actions

Emphasis Areas	Strategies	Actions
Intersections	Implement proven safety countermeasures and low-cost solutions at priority intersections to mitigate likelihood and severity of intersection crashes based on location-specific crash data	Implement applicable countermeasures from the Systemic Treatment Package for Intersections.
		Focus on roundabout implementation to reduce speed while improving traffic flows
		Continue to improve signage, signal timing, and enhance pavement markings where needed at intersections
		Increase sight distance (visibility) of intersections on approaches, improve lighting, and maintain/repair nonoperating traffic detectors in signalized intersections
		Develop and adopt an Intersection Control Evaluation (ICE) process that uses the SSA for determining appropriate intersection design to consider roundabouts at all intersections that are being designed or considered for signalization
		Implement permanent curb extensions, roundabouts, or other treatments to slow turning vehicle speeds at high crash intersections
	Implement systemic safety improvement projects at high-risk intersections	Consider widespread implementation of mini and regular roundabouts using quick build design practices
		Target unusual and outdated intersection configurations for modernization, such as dog-legs, 5 or 6 legged intersections, skewed intersections where the legs are not perpendicular and visibility is low
	Support policy initiatives to improve intersection safety	Consider removing permissive left turns during active pedestrian phase, and develop criteria for where a No Turn on Red policy can apply, starting with intersections along the High-Injury Network (HIN). Coordinate with NYSDOT as needed.
		Develop Intersection Street Design Standards in collaboration with communities and tailor street designs with sensitivity to land use and community context
Roadway Departures	Implement proven safety countermeasures and low-cost solutions to reduce roadway departure crashes based on roadway departure crash data on priority segments	Implement applicable countermeasures from the Systemic Treatment Package for Roadway Departures that address roadway departure crashes
		Assess pavement and striping conditions along the HIN roadways or priority segments; identify locations to use repaving and restriping to implement safer road designs; coordinate with resurfacing and restriping programs to prioritize and implement necessary locations
		Pilot pavement friction countermeasures and evaluate their performance in crash reductions
	Implement systemic safety improvements to decrease the severity of roadway departure crashes	Pilot pavement friction countermeasures and evaluate their performance in crash reductions

Performance Metric	Action Leader	Safe System Element	Resources Needed	Timeline
Number of countermeasures implemented	All municipalities	Safer Roads	Medium	Long-Term
Number of roundabouts installed	All municipalities	Safer Roads, Safer Speeds	High	Long-Term
Number of intersection signage, signal timing, and pavement marking improvements	All municipalities	Safer Roads	Medium	Mid-Term
Number of signalized intersections with improvements	All municipalities	Safer Roads	Medium	Mid-Term
Development and adoption of ICE process	All municipalities, ITCTC, County	Safer Roads	High	Long-Term
Number of treatments	All municipalities	Safer Roads, Safer Speeds	Medium	Mid-Term
Number of quick build roundabouts installed	Rural municipalities	Safer Roads	Medium	Long-Term
Number of intersections updated	All municipalities	Safer Roads	High	Mid-Term
Number of left/right turn policies updated	All municipalities, NYSDOT	Safer Roads, Safer People	Low	Short-Term
Develop Standards	ITCTC, County, NYSDOT, All municipalities	Safer Roads, Safer Speeds	Medium	Mid-term
Number of countermeasures implemented	All municipalities	Safer Roads	Medium	Mid-Term
Miles of pavement/striping assessed and improved	All municipalities	Safer Roads	Medium	Short-Term
Pilot and evaluation conducted	All municipalities	Safer Roads, Safer Vehicles	Medium	Mid-Term
Pilot and evaluation conducted	All municipalities	Safer Roads, Safer Vehicles	Medium	Mid-Term

Emphasis Areas	Strategies	Actions
		Pursue a collaborative contract for ball bank studies to develop a county-wide inventory of horizontal curves
		Provide shoulder widening for Focus Facilities identified in the Joint Safety Action Plan's systemic analysis
		Develop low-cost systemic horizontal curve program that includes countermeasures such as clear zone improvements, lighting, etc.
		Upgrade guiderail to current standards and replace existing barriers that are damaged or non-functional, and examine guardrail and other assets' repair policy, including the repair versus replace policy
		Use Motorcycle Protection Systems (MPS) to provide bottom protection to the guiderail systems to prevent or cushion rider interactions with discrete elements of guardrail to enhance motorcycle safety
Vulnerable Road Users	Continue implementing infrastructure programs to enhance vulnerable road user safety on priority segments, at priority intersections, and in High Risk areas	Utilize FHWA STEP, Proven Safety Countermeasures, and the Systemic Treatment Package for Pedestrians to systemically implement countermeasures with known safety benefits at both uncontrolled and signalized crossing locations
		Implement Complete Street Design Guide recommendations for priority intersections, gateway st and Special Focus streets
		Implement pedestrian-friendly signal cycle lengths and leading pedestrian intervals at traffic signa
		Fix or remove surface irregularities, and provide routine maintenance of bicycle and pedestrian accommodation facilities
		Consider installing sidepaths or separated/raised/protected facilities for bike lanes on roadways w speeds above 35 mph
		Provide buffers, such as with paint, greenspace, trees, etc., to provide greater separation between vehicular traffic and sidewalks, bicycle lanes, or sidepaths
		Develop a vulnerable road user safety assessment as outlined in Vulnerable Road User Safety Assessment Guidance
		Provide effective lighting and enhance conspicuity of pedestrians and bicyclists based on FHWA Pedestrian Lighting Primer
		Close gaps in bicycle and pedestrian networks with a focus on safe routes to school, recreation, and transit locations

	Performance Metric	Action Leader	Safe System Element	Resources Needed	Timeline
	Contract and inventory completed	All municipalities, County	Safer Roads	Low	Mid-Term
	Percentage of Focus Facility shoulders widened	Rural municipalities	Safer Roads, Safer Vehicles	Medium	Mid-Term
	Program established	All municipalities	Safer Roads	Low	Short-Term
	Percentage guiderail compliant/updated	All municipalities	Safer Roads, Safer Vehicles	Medium	Mid-Term
	MPS added to guiderail system policy	All municipalities	Safer Roads, Safer Vehicles	Medium	Mid-Term
	Number of countermeasures implemented	All municipalities	Safer Roads, Safer Vehicles	Medium	Long-Term
reets,	Number of recommendations implemented	All municipalities	Safer Roads, Safer People	Medium	Short-Term
als	Number of signal updates implemented	All municipalities	Safer Roads, Safer People	Low	Mid-Term
	Number of facilities improved	Rural municipalities	Safer Roads	Medium	Mid-Term
ith	Number/mileage of facilities installed	Rural municipalities	Safer Roads, Safer People	High	Mid-Term
	Miles of buffers installed	Rural Municipalities	Safer Roads, Safer People	Low	Mid-Term
	Assessment created	County, All municipalities	Safer Roads, Safer People	High	Long-Term
	Number of lighting updates installed	All municipalities	Safer Roads, Safer People	Medium	Short-Term
	Miles of network gap closed	County, Rural municipalities	Safer Roads	Medium	Mid-Term

Emphasis Areas	Strategies	Actions
	Enhance data processes to obtain vulnerable road user volume, crash, and infrastructure data (especially in High-Risk Areas)	Collect additional non-motorized crash, volume, and infrastructure data to improve crash trends and high-risk areas analysis while including equity considerations
	Focus education efforts aimed at safe roadway behavior and awareness of laws regarding vulnerable road users	Work with local advocacy groups to conduct safety campaigns and/or giveaway programs to promote the use of safety equipment like active lights, reflectors, and r etroreflective clothing among pedestrians and bicyclists
		Conduct enforcement and education campaigns (i.e. NYS Department of Health videos) focused on addressing dangerous driving behaviors that threaten non-motorized road users
		Partner with schools to distribute educational brochures and materials with identified Safe Routes to Schools
		Recruit effective partners to ensure the vulnerable road user programs are reaching diverse and underserved communities
Age-Related	Support and implement improved public transportation options and accessibility	Identify and promote programs and activities like driver assessments, public transit, and driver improvement programs that help older road users stay mobile
	Increase awareness of driving risks to younger drivers amongst teens, college age students, parents and community members	Expand and continue to support coalitions for safer teen driving, jurisdiction-wide peer-led education activities, and teen/parent activities
Road User Behavior	Implement engineering improvements to mitigate high risk driver behavior	Implement applicable countermeasures from the Systemic Treatment Package for Speeding that address speeding crashes
		Encourage the use of the FHWA Traffic Calming ePrimer to implement traffic calming measures for all users, such as Speed humps, Raised crosswalks, etc. in coordination with EMS and highway maintenance staff
		Increase usage of speed feedback (SFS) and dynamic warning signs to remind drivers of travel speeds when entering urban areas or other high risk locations such as work zones and continue to research the most effective locations for these signs

Performance Metric	Action Leader	Safe System Element	Resources Needed	Timeline
Crash data collection updated	All municipalities	Safer Roads, Safer People	Low	Mid-Term
Number of campaigns, events, hours, or giveaways	All municipalities	Safer Roads, Safer People	Low	Mid-Term
Number of campaigns or clicks	County, All municipalities	Safer Roads	Low	Mid-Term
Number of schools	All municipalities	Safer People	Low	Short-Term
Number of partners or hours	All municipalities	Safer People	Low	Mid-Term
Number of programs or activities	All municipalities	Safer Roads, Safer People	Low	Mid-Term
Number or hours of activities	County, All municipalities	Safer Roads, Safer People	Low	Mid-Term
Number of countermeasures implemented	All municipalities	Safer Speeds	Medium	Mid-Term
N/A	All municipalities, EMS	Safer Speeds, Safer Roads	Low	Short-Term
Number of SFS and/or dynamic warning signs installed	All municipalities	Safer Speeds	Low	Mid-Term

Emphasis Areas	Strategies	Actions
		Develop a Traffic Calming Master Plan to guide the installation of traffic calming infrastructure with input from EMS. Focus on installing speed reduction infrastructure along high crash segments where excessive speed is a prominent crash factor
	Conduct coordinated targeted enforcement efforts and publicize high-visibility enforcement	Conduct high-visibility cell phone/text messaging enforcement to enforce the distracted driving law
		Continue jurisdiction-wide high-visibility enforcement and saturation enforcement in active school zones, safety corridors, and work zones
	Review the existing speed management standards and update the speed limit setting process	Perform speed studies to analyze impacts of posted speed limit change and potentially lower local road speed limit to 25 mph to reflect safe speed threshold
	Conduct educational and outreach efforts to build awareness of safe driving habits	Implement campaigns and provide education in schools on the dangers of impaired driving
		Coordinate with safety partners to develop consistent speed related safety messaging and distribute materials in local communities related to safe driving behavior
	Improve the collection and quality of data on high-risk driving behavior	Increase training for law enforcement to record driver behavior characteristics and related observations on crash report forms and ensure they can be recorded in crash database
		Increase data sharing between local officers and engineering agencies to identify and develop solutions for problematic areas
	Improve and expand the availability and accessibility of child restraint system inspection stations and increase the correct use of child restraints	Host car seat awareness and instruction classes, and provide support for child seat giveaway programs for populations that have lower than average proper car seat use, especially in diverse and underserved communities

Performance Metric	Action Leader	Safe System Element	Resources Needed	Timeline
Plan developed	All municipalities	Safer Speeds, Safer Roads	Medium	Mid-Term
Number of enforcement activities conducted	All municipalities, Law Enforcement	Safer People	Low	Mid-Term
Number of enforcement activities conducted	All municipalities, Law Enforcement	Safer People	Low	Mid-Term
Speed stud(ies) conducted	Rural municipalities	Safer Speeds	Medium	Mid-Term
Number of campaigns and/or schools	County, All municipalities, School districts	Safer People	Low	Short-term
Materials developed	County, ITCTC, All municipalities	Safer People, Safer Speeds	Low	Short-term
Conducted training	All municipalities, County, Law Enforcement	Safer People	Low	Short-term
Data inventory	All municipalities, County , Law Enforcement	Safer People	Low	Short-term
Number of events and/or giveaways provided	County, All municipalities	Safer People	Low	Short-term

Section Seven

Progress, Transparency, and Next Steps

Performance Measurement & Transparency

The Plan goal to eliminate fatal crashes and reduce serious injury crashes by 50% by 2040 will require a collaborative effort among the project team and stakeholders. To measure progress towards this goal and the implementation of this Plan, both process and outcome measures will be reported publicly.

PLAN GOAL

Elimination of fatal crashes and a **50% reduction** in serious injury crashes by **2040**

PROGRESS AND TRASPARENCY METHODS

Outcome measures will focus on the end goal of this plan, which is to reduce the fatal and serious injuries across all crash types. This will be publicly shown in the online Safety Data Performance Viewer created for this project, hosted on the project website. Examples of these outcome measures include:

- Total crashes
- Fatal crashes
- Serious injury crashes
- Fatalities
- Serious injuries

These statistics can be further broken down on the online Safety Data Performance Viewer by filters such as municipality, year, and Emphasis Area.

Tracking and reporting process measures will provide transparency in how the region will get to the outcome measures. The "performance metric" column of **Table 16** provides information on how to report progress on the Plan's highlighted action items.

This Joint Safety Action Plan is designed to complement the New York SHSP and VRU Safety Assessment, which were last updated in 2023. It is recommended that this Plan coordinates its update with the State-level plan updates in 2028. However, in the meantime, it should be treated as a living document that is continuously referenced and updated as needed.

The project team is committed to promoting transparency about this Plan and as such, intend to the take the following steps:

- Report and track both the outcome measures (fatal and serious injuries from crashes) and progress towards the 2040 goal, as well as pre-determined process measures from **Table 17**, annually through the Implementation Program Annual Report. This Annual Report will be sent to the Advisory Committee members and made publicly accessible on the project website, hosted by Tompkins County.
- Hold public meetings annually to present the findings and results from the Annual Report.
- Annually update the public Safety Data Performance Viewer to monitor trends in traffic fatalities and serious injuries.
- Post the Safety Action Plan on the project website to allow jurisdictions to download and reference the document when implementing safety countermeasures and preparing their grant applications.
- Continue to share safety project updates at the ITCTC's Planning, Policy, and Joint Committee meetings as most of the project members attend these meetings and the results are relevant to everyone attending.

Future Planning & Next Steps

In the coming years, the following steps will be taken:

- Designate a Tompkins County SS4A Joint Safety Action Plan Vision Zero Coordinator and continue meeting as a project team to prepare the Annual Report and update the project website.
- Maintain strong relationships with stakeholders through regular engagement and communication.
- Promote and educate the stakeholders about the Joint Safety Action Plan, its goals, and progress.
- Annually update the public Safety Data Performance Viewer based on new data.
- Pursue additional funding opportunities, including SS4A Implementation Grants.

Acknowledgements

The project team thanks all of the stakeholders involved throughout this project, including members of the public that shared their safety concerns and feedback. The project team would also like to thank USDOT for the opportunity to pursue this Safety Action Plan to make Tompkins County a safer place for all residents and visitors.

Glossary

Key Terms

Fatal or Serious Injury Crash: A fatal or serious injury crash involves a motor vehicle traveling on a trafficway customarily open to the public. A fatal crash must result in the death of at least one person (occupant of a vehicle or a non-motorist) within 30 days of the crash. This definition aligns with the definition of a fatal traffic crash in the Fatality Analysis Reporting System.

High Injury Network: Identifies the highest concentrations of traffic crashes resulting in serious injuries and fatalities within a given roadway network or jurisdiction.

Road User: People who use roads in any way—driving, walking, biking, taking transit, using mobility devices like wheelchairs and canes, or getting around some other way.

Vulnerable Road User: People that are unprotected when traveling and people with limited mobility are considered vulnerable road users. This includes people walking, biking, or using micromobility because they are not in a protective vehicle. It also includes people with disabilities, seniors, and children who may move slower, have difficulty navigating, or are less visible to people in cars.

Acronyms and Abbreviations

CLEAR: Crash Location and Engineering Analysis and Reporting

FHWA: Federal Highway Administration

HIN: High Injury Network

HSIP: Highway Safety Improvement Program

ITCTC: Ithaca-Tompkins County Transportation Council

LOSS: Level of Service of Safety

MUTCD: Manual on Uniform Traffic Control Devices

NYSDOT: New York Department of Transportation

SHSP: Strategic Highway Safety Plan

SRTS: Safe Routes to School

SS4A: Safe Streets and Roads For All

TCAT: Tompkins Consolidated Area Transit

USDOT: United States Department of Transportation

VRU: Vulnerable Road User

TOMPKINS COUNTY
PRIORITY LOCATION PROFILES

JULY 2025

TABLE OF CONTENTS

INTRODUCTION

As described in the previous Network Screening and Systemic Analysis Memo, segments and intersections with high scores in each participating municipality were evaluated based on several factors, including overrepresentation of crashes, vulnerable road user (VRU) crashes and risks, equity priority areas and destinations, and isolated transit stops. Sites were selected and then discussed with representatives of those jurisdictions. The final network contains 11 intersections and 9 segments for a total of 20 priority safety locations.

Each Priority Location Profile is divided into four sections: **Existing Conditions, Crash Analysis, Countermeasure Recommendations, and Cost Estimates.** There are 20 project sites, numbered one through 20. Sites one through 11 are intersections, while sites 12 through 20 are segments. Throughout the profiles, photos taken during field observations and those provided by municipalities are included.

The **Existing Conditions** section includes the project site aerial, key characteristics, key findings, and an existing conditions narrative. Both intersections and segments share similar data points, such as functional classification, Average Annual Daily Traffic (AADT), speed limit, roadway ownership, and adjacent land use. The key differences are that intersections include intersection type, while segments include a description and segment length. The Key Findings section provides a summary of the entire profile. The Existing Conditions section describes the surrounding roadway as well as the project site and its vicinity.

The **Crash Analysis** section presents a summary of crashes that have occurred between 2018 and 2023. The data, derived from New York State Department of Transportation's (NYSDOT) CLEAR crash data set, includes both visual and narrative breakdowns of the crash users. This section highlights the total number of fatal and serious injury crashes and includes a map showing specific crash locations for various user groups (e.g., auto, bicycle, pedestrian, deer/animal, and others). The Crash Data Table includes the segment or intersection Level of Service of Safety (LOSS), a metric which compares the observed crash frequency for a given site to the predicted crash frequency based on traffic volumes. LOSS is represented as a number 1 through 4, with a higher number representing a greater potential for crash reduction.

The **Countermeasure Recommendations** section is divided into two pages: one page featuring a plan view illustration, followed by a narrative that explains each recommended countermeasure. This approach allows for the communication of information both visually and descriptively.

For intersections, the illustration offers a detailed depiction of the layout and signage, as intersection recommendations are more complex due to the localized nature of the site, allowing for more specific recommendations. For segments, the illustration includes icons representing Federal Highway Administration's (FHWA) Proven Safety Countermeasures, where applicable, as these sites typically cover greater distances and require different countermeasure considerations.

The **Cost Estimates** section includes a spreadsheet detailing the breakdown of quantities, units, unit costs, and total costs for each countermeasure, along with assumptions for work zone traffic control, incidentals, inflation, and contingencies, survey, design engineering, and construction management and inspection. The total costs are presented in a range of 20%. These costs were prepared in June of 2025 using NYSDOT Quick Estimator Tool and supported by bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, along with the current state of the construction market in the upstate New York area. These estimates are to be used for planning purposes only.

The following concepts are advisory in nature and are not intended for construction. Further planning, design, engineering, and cost estimation would be required in each case. These conceptual recommendations do not constitute a commitment for any particular improvement at any particular location and Tompkins County, local municipalities, and/or NYSDOT are not responsible for unimplemented recommendations.

INTERSECTIONS

1. FLORAL AVE/ELM ST/HECTOR ST

INTERSECTION CHARACTERISTICS

FUNCTIONAL CLASSIFICATION Floral Ave	Urban Minor Arterial
FUNCTIONAL CLASSIFICATION Hector St	Urban Minor Arterial
FUNCTIONAL CLASSIFICATION Elm St	Urban Local Street
AADT Floral Ave	5,816
AADT Hector St	2,774
INTERSECTION TYPE	Urban 3-Leg Uncontrolled TT
SPEED LIMIT	30 MPH
OWNERSHIP	City of Ithaca
ADJACENT LAND USE	Developed-Commercial

KEY FINDINGS

At the multi-leg intersection of Floral Ave, Elm St, and Hector St in the City of Ithaca, 24 crashes occurred between 2019-2023, including one that caused a serious injury. Recommended countermeasures include the addition of a raised crosswalk across Floral Ave at Elm St to reduce traffic speeds at the expected pedestrian crossing location to the Cayuga Waterfront Trail.

EXISTING CONDITIONS

The intersection is a four-legged junction located adjacent to the Cayuga Inlet on one side and a residential area on the other. Within a 0.5-mile radius, there are multiple apartment complexes and a community school. Elm St is situated at a higher gradient, sloping gradually downward as it connects with Floral Ave, which features access lanes leading toward the waterfront and bike parking facilities. Elm St intersects Floral Ave at an acute angle, which then connects with Hector St, part of NY-79. East of the intersection, Hector St crosses a bridge over the Cayuga Inlet, linking the west and east sections of Ithaca.

Floral Ave, a minor arterial road, is 22-ft wide but expands to 28-ft near the intersection, with a southbound travel lane of 10-ft and a northbound lane of 15-ft. Elm St is local street which is 22-ft wide with two 11-ft travel lanes, one in each direction. Hector St, also a minor arterial road, is 45-ft wide and includes three 10-ft travel lanes, a center turn-only lane and two bike lanes, each 5-ft wide, with bike boxes at the intersection.

As per field visit observation, the intersection features a small median and crosswalks, although they are inconsistently marked. Ladder-style crosswalks are present, but there is no marked crosswalk across Elm St or the east leg of Hector St. Sidewalks with accessible curb ramps are present. Traffic control includes a stop sign at Elm St, traffic signals at Floral Ave and Hector St, and a pedestrian signal on the south leg of the intersection. Bike parking is available on Floral Ave near the waterfront.

West leg (Elm St)

1. FLORAL AVE/ELM ST/HECTOR ST

24
Total Crashes

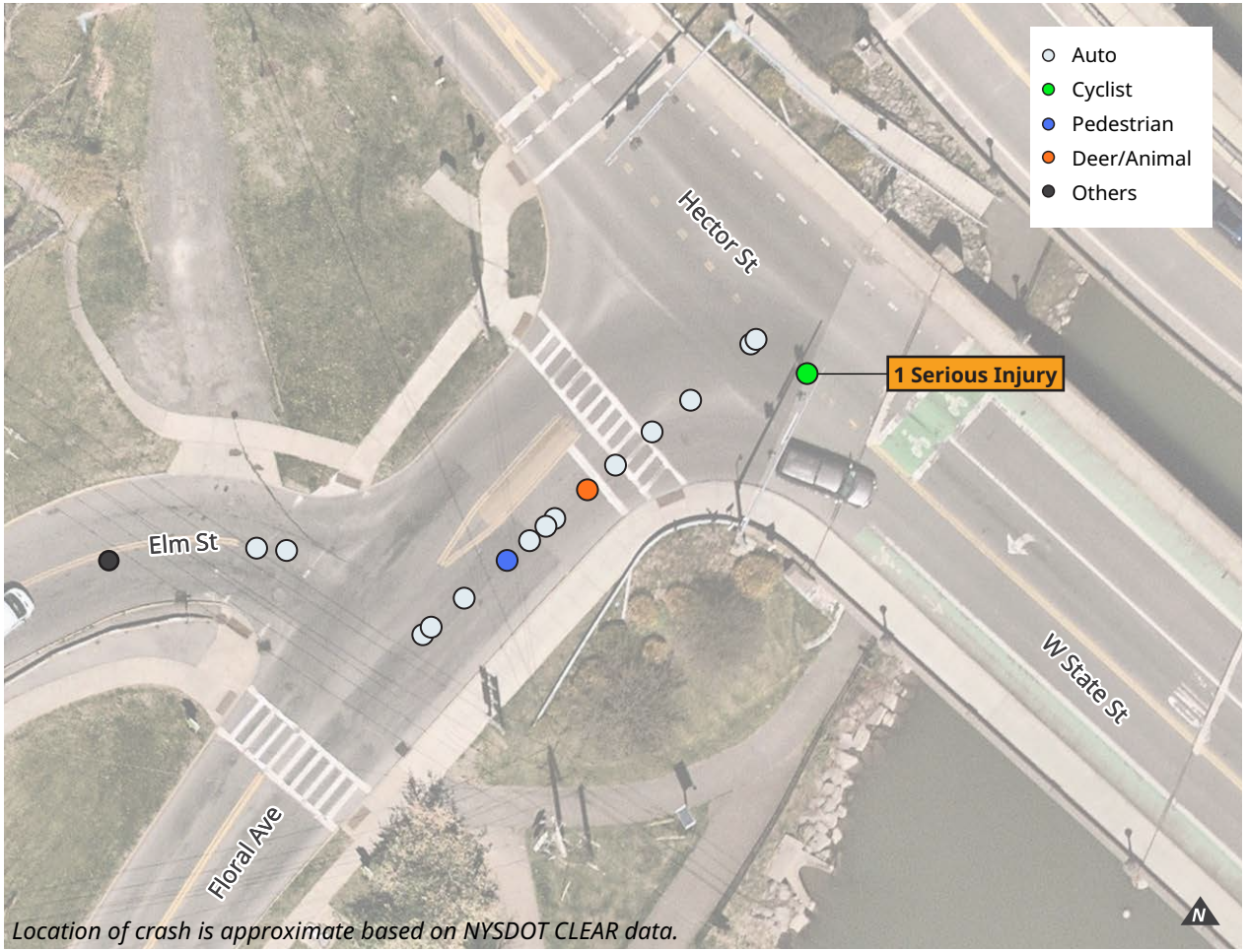
1
Fatal & Serious Injury Crashes

OTHER

Users Involved

Between 2019 and 2023, 24 crashes occurred at the intersection, with an average frequency of 4.8 crashes per year. Of the 24 crashes, one resulted in a serious injury involving a bicyclist. Contributing factors to the crashes include road user behavior like alcohol involvement and disregard of traffic control devices.

A majority of the crashes that occurred were due to collisions with motor vehicles, one of which resulted in pedestrian injury. Two crashes occurred at the turn of Elm St to Floral Ave. The majority of the crashes occurred on the stretch of Floral Ave between Elm St and Hector St.



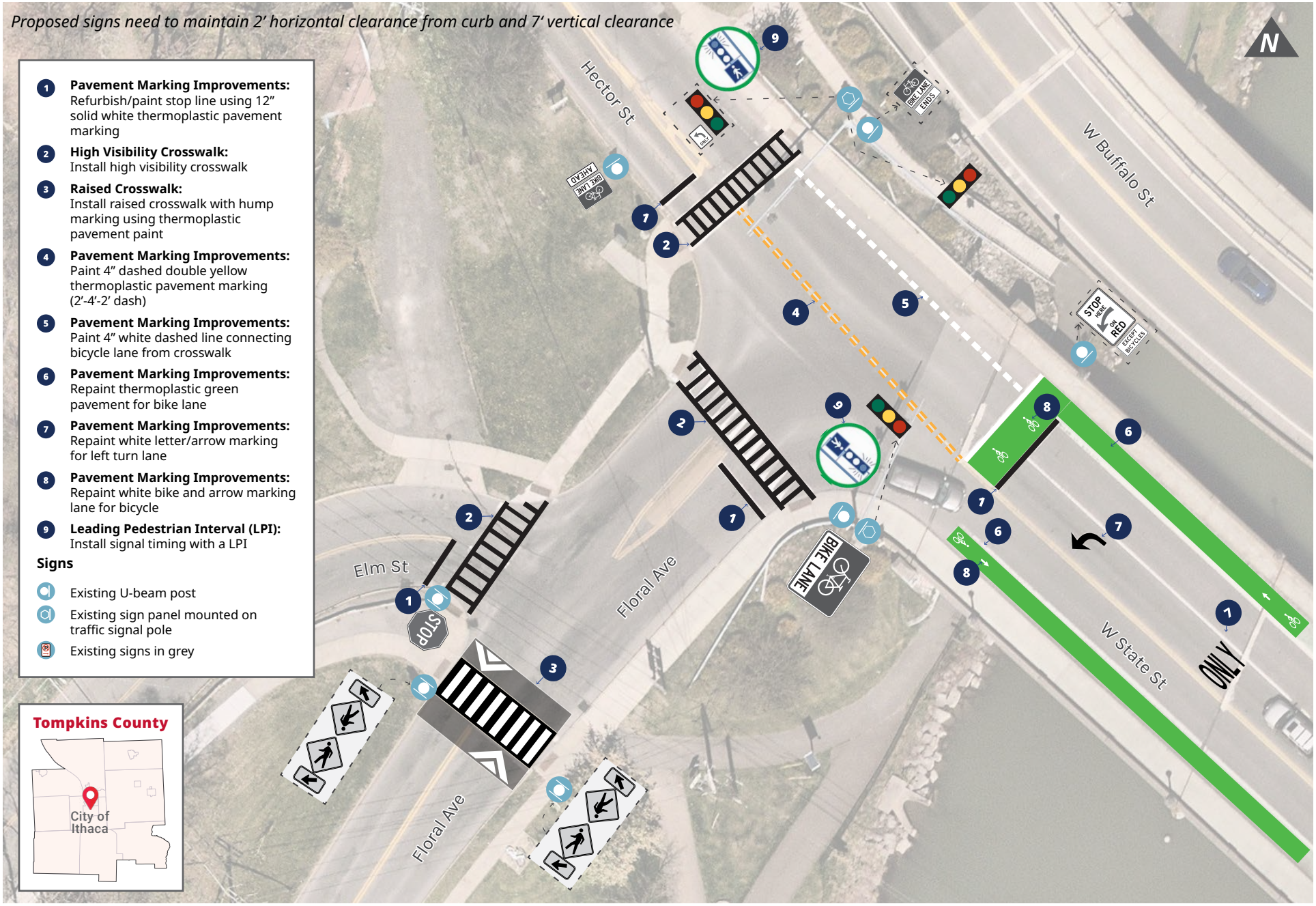
Spatial Distribution of Crashes by User Type

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
24	20	1	1	1	1	2	0	1	1	4

1. FLORAL AVE/ELM ST/HECTOR ST

Proposed signs need to maintain 2' horizontal clearance from curb and 7' vertical clearance



1. FLORAL AVE/ELM ST/HECTOR ST

Considering the contributing factors to crashes at this intersection such as alcohol impairment and failure to obey traffic control devices, we recommend implementing the following countermeasures.

Raised Crosswalk

Raised crosswalks are ramped speed tables that extend across the entire width of the roadway, often installed at midblock crossing locations. They are visually distinguished using paint markings and/or special paving materials. A raised crosswalk is proposed across Floral Ave to prioritize pedestrians and reduce speeds approaching the intersection. High-visibility crosswalks are proposed here crossing Elm St, Floral Ave, and Hector St to improve pedestrian safety at this complex intersection.

Leading Pedestrian Interval

A leading pedestrian interval (LPI) gives pedestrians the opportunity to enter the crosswalk at an intersection 3-7 seconds before vehicles are given a green indication. Pedestrians can better establish their presence in the crosswalk before vehicles have the light to turn right or left. A LPI is proposed here to provide pedestrians a head start in crossing the street to make them more visible to oncoming traffic.

When evaluating the signal for LPI, it should also be evaluated for Manual of Traffic Control Devices/ Public Right-Of-Way Accessibility Guidelines (MUTCD/PROWAG) compliance and upgrades for Accessible Pedestrian Signal (APS) and Application Programming Interface (API).

Enhanced Sign and Pavement Marking Improvements

A painted stop bar at the intersection reinforces the traffic control device, guiding drivers to stop at the appropriate location. Painted stop bars are recommended at eastbound Hector St, eastbound Elm St, and northbound Floral Ave. Painted dashed lines through the intersection help maintain a drivers lane choice, and are recommended on Hector St across Floral Ave.

West leg (Elm St)

1. FLORAL AVE/ELM ST/HECTOR ST

Countermeasure	Quantity	Unit	Unit Cost	Total
LS Type (Ladder) Crosswalk	3	each	$ 2,100.00	$ 6,300.00
Raised Crosswalk - Each	1	each	$ 4,220.00	$ 4,220.00
Raised Crosswalk - Lanes	2	each	$ 2,410.00	$ 4,820.00
Small Single Post-Mounted Signs	6	ft.	$ 622.00	$ 3,732.00
Stop Bar Pavement Markings	99	ft.	$ 3.00	$ 297.00
Pavement Marking Improvements - 4" Dashed Double Yellow Thermoplastic Pavement Marking (2' -4' -2')	46	ft.	$ 4.00	$ 184.00
Repaint Thermoplastic Green Pavement for Bike Lane	1,100	sq. ft.	$ 18.00	$ 19,800.00
Arrow & Only Marking	5	each	$ 250.00	$ 1,250.00
Leading Pedestrian Interval (LPI) signal modifications	2	each	$ 2,000.00	$ 4,000.00

Subtotal	**$ 44,603.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 4,460.30
Incidentals, Inflation and Contingencies Estimate (20%)	$ 8,920.60
Construction Cost	**$ 57,983.90**
Survey (10%)	$ 5,798.39
Design Engineering ($10k + 10%)	$ 15,798.39
Construction Management & Inspection (15%)	$ 8,697.59
Grand Total	**$ 88,278.27**
Less 10%	$ 79,450.44
Plus 10%	$ 97,106.09

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and the NYSDOT Quick Estimator Tool along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

2. VALLEY RD/LOUNSBERRY RD

INTERSECTION CHARACTERISTICS

FUNCTIONAL CLASSIFICATION Lounsberry Road	Rural Major Collector Road
FUNCTIONAL CLASSIFICATION Valley Road	Rural Minor Collector Road
AADT Lounsberry Road	1,222
AADT Valley Road	905
INTERSECTION TYPE	Rural 4-Leg Stop-Controlled Two-Way Stop TT
SPEED LIMIT	35 MPH
OWNERSHIP	Tompkins County
ADJACENT LAND USE	Agricultural/Rural

KEY FINDINGS

The intersection of Valley Rd and Lounsberry Rd in the Town of Caroline is situated just south of Six Mile Creek. Six crashes occurred at the intersection between 2018 and 2023, including one crash that resulted in a serious injury to a bicyclist. In order to calm traffic and reduce speeds at the intersection, advance warning signage and speed feedback signs are recommended, as well as the addition of streetlighting.

EXISTING CONDITIONS

The intersection of Lounsberry Rd and Valley Rd is a four-legged rural junction located in a residential area with hilly terrain. On the north side of the intersection, Six Mile Creek runs under Lounsberry Rd via a small bridge that connects to Valley Rd. Lounsberry Rd, classified as a major collector road, and Valley Rd, a minor collector road, are both 30-ft wide with two 10-ft travel lanes. Valley Rd and Lounsberry Rd includes shoulders on both the side. On the south side of Valley Rd, Lounsberry Rd becomes White Church Rd.

Field observations indicate that the intersection lacks crosswalks and sidewalks, and is controlled by a two-way stop sign across Lounsberry and White Church. A 35-MPH speed limit sign is posted along Valley Rd. The road surface shows minor cracking, and while the pavement markings are somewhat visible, they are faded and lack

Lounsberry Rd Bridge

Historical photo of Lounsberry Rd Bridge

2. VALLEY RD/LOUNSBERRY RD

2
Total Crashes

1
Fatal & Serious Injury Crashes

Users Involved

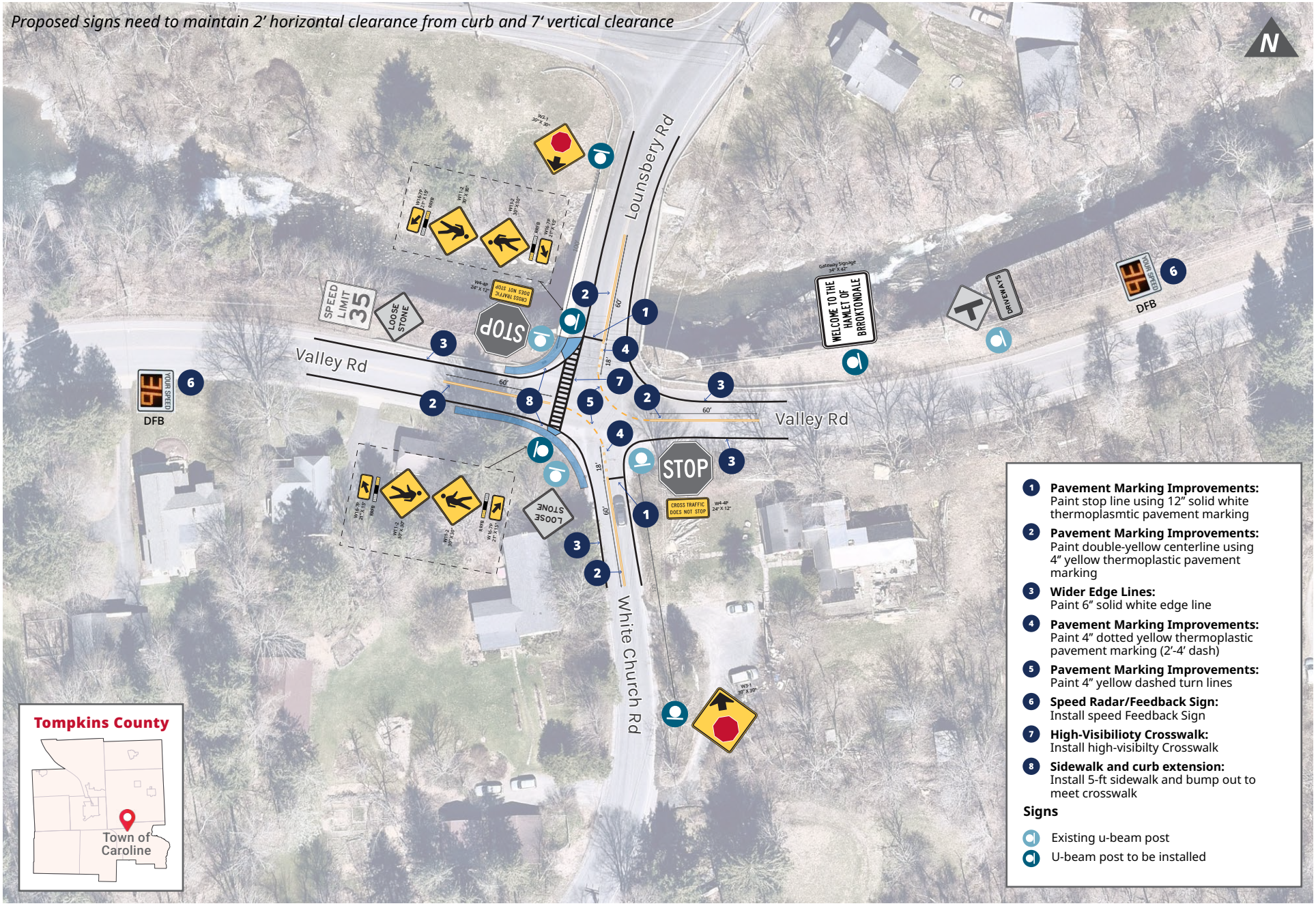
Between 2019 and 2023, two crashes occurred at the intersection. One of them resulted in a serious injury involving a bicyclist. It occurred at the east leg of Valley Rd. The other crash occurred at the south leg of Lounsberry Rd and involved a motor vehicle. Both crashes were noted to have occurred due to failure to yield right-of-way.

Spatial Distribution of Crashes by User Type

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
2	1	1	0	0	0	2	0	1	1	2

2. VALLEY RD/LOUNSBERRY RD



2. VALLEY RD/LOUNSBERRY RD

Given that failure to yield has been a contributing factor to crashes at this intersection, we recommend the following countermeasures.

Advance Warning Signage

Advance warning signage includes any sign that alerts drivers to potential hazards or unexpected conditions on the road.

Advance warning signs are recommended near this intersection to alert drivers of the upcoming stop signs and enhance awareness of roadway conditions. Stop-sign subplates that read "Cross Traffic Does Not Stop" are also recommended at the intersection to alert drivers not to expect traffic on Valley Rd to stop.

Speed Radar/Feedback Sign

Speed radar systems monitor vehicle speeds to help reduce speeding and prevent crashes. Feedback signs display real-time speed to drivers, encouraging compliance with posted limits. An FHWA demonstration project found speed feedback signs effective in lowering vehicle speeds and reducing crashes.

Due to the limited number of stop signs and signals, speed radar/feedback signs are recommended to enhance safety, reduce speeding, and minimize roadway departure crashes.

Wider Edge Lines

Wider edge lines enhance the visibility of travel lane boundaries compared to traditional edge lines. Edge lines are considered "wider" when the marking width is increased from the minimum normal line width of 4 inches to the maximum normal line width of 6 inches. Six inch edge lines on rural roadways with posted speed limit of 45-MPH or more is the standard practice of NYSDOT. For further information see EI 18-008.

Wider edge lines are recommended at this intersection due to the presence of curves and turns. These markings help prevent roadway departure crashes and enhance overall safety by improving lane visibility and driver guidance.

High Visibility Crosswalks

High-visibility crosswalks use patterns (i.e., bar pairs, continental, ladder) that are visible to both the driver and pedestrian from farther away compared to traditional transverse line crosswalks.

Enhancing the visibility of pedestrians and bicyclists at the intersection through the implementation of high-visibility crosswalks will ensure pedestrian safety.

Gateway Sign

A non-commercial, civic-oriented sign placed at or near the entrance to a municipality.

A gateway sign is recommended at the westbound approach of Valley Rd entering the Hamlet of Brooktondale.

Add Sidewalk

Sidewalks are paved walkways that are separated from motor vehicles by a curb and gutter. They are intended for pedestrians or people using a wheelchair. Adding sidewalks at this intersection is recommended to ensure safety for pedestrians and connect with new crosswalks.

Reduce Curb Radius

Reconstructing the turning radius to a tighter turn to reduce turning speeds, shorten the crossing distance for pedestrians, and also improve sight distance between pedestrians and motorists.

Valley Rd

2. VALLEY RD/LOUNSBERRY RD

Countermeasure	Quantity	Unit	Unit Cost	Total
Concrete Sidewalk (4" thick)	605	sq. ft.	$ 32.00	$ 19,360.00
LS Type (Ladder) Crosswalk	1	each	$ 2,100.00	$ 2,100.00
Solar Powered Radar Speed Sign	2	each	$ 10,200.00	$ 20,400.00
Concrete Curb Extensions	60	ft.	$ 95.00	$ 5,700.00
Stop Bar Pavement Markings	99	ft.	$ 3.00	$ 297.00
Double Yellow Centerline	480	ft.	$ 4.00	$ 1,920.00
Wider Edge Lines	1,500	ft.	$ 4.00	$ 6,000.00
Dotted Yellow Thermoplastic Pavement Markings	80	ft.	$ 4.00	$ 320.00
Dashed Double Yellow Lines	60	ft.	$ 4.00	$ 240.00
Small Single Post-Mounted Signs	6	each	$ 622.00	$ 3,732.00
Gateway Signage	1	each	$ 622.00	$ 622.00

Subtotal	**$ 60,691.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 6,069.10
Incidentals, Inflation and Contingencies Estimate (20%)	$ 12,138.20
Construction Cost	**$ 78,898.30**
Survey (10%)	$ 7,889.83
Design Engineering ($10k + 10%)	$ 17,889.83
Construction Management & Inspection (15%)	$ 11,834.75
Grand Total	**$116,512.71**
Less 10%	$104,861.43
Plus 10%	$128,163.98

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

3. STATION RD/MAPLE AVE/SPENCER RD (NY-34/NY-96)

INTERSECTION CHARACTERISTICS

FUNCTIONAL CLASSIFICATION NY-34	Urban Minor Arterial Road
FUNCTIONAL CLASSIFICATION Station Rd	Rural Minor Arterial
FUNCTIONAL CLASSIFICATION Valley View Rd/ Maple Ave	Urban Local Street
AADT Major Street	3,574
AADT Minor Street	201
INTERSECTION TYPE	Rural 4-Leg Stop-Controlled Two-Way Stop TT
SPEED LIMIT	55 MPH
OWNERSHIP	NYSDOT; Tompkins County; Town of Danby
ADJACENT LAND USE	Agricultural/Rural

KEY FINDINGS

The intersection of NY-34/96 (Elmira Rd) with Station Rd, and the adjoining intersection of Station Rd and Maple Ave skew at angles, and three crashes have occurred here between 2019 and 2023. In order to reinforce the two-way stop control of Station Rd, advance warning signs, stop bars, and marked crosswalks are recommended. Wider edge lines along NY-34/96 are recommended to reduce the risk of roadway departure.

EXISTING CONDITIONS

The intersection is located on NY-34/96 (Elmira Rd), where Station Rd connects to NY-34/96 on the eastern end, and Valley View Rd and Maple Ave merge to form a single access lane on the west side of NY-34/96. The intersection is located in a rural residential area where driveways feed into Station Rd, Valley View Rd, and Maple Ave. There is a church located south of the intersection on NY-34/96.

NY-34/96 is classified as a minor arterial road and is 30-ft wide, with two 10-ft travel lanes and shoulders on both sides. Station Rd, classified as a major collector road, is 22-ft wide with two 9-foot travel lanes and shoulders on both sides. Valley View Rd and Maple Ave are local streets, each 18–20 ft wide, merging into a 22-ft-wide unmarked and unpaved access way.

As per field visit observations, the intersection is two-way stop controlled. NY-34/96 has newly paved, clearly visible pavement markings, although they are inconsistent and slightly faded on Station Rd. A portion of Station Rd adjacent to the newly paved NY-34/96 remains unmarked except for stop bars. Station Rd shows minor cracking, while Valley View Rd and Maple Ave are unpaved. The intersection lacks crosswalks, pedestrian or bicycle facilities, and traffic-calming devices. A light post is present, providing illumination.

North leg (NY-34/96)

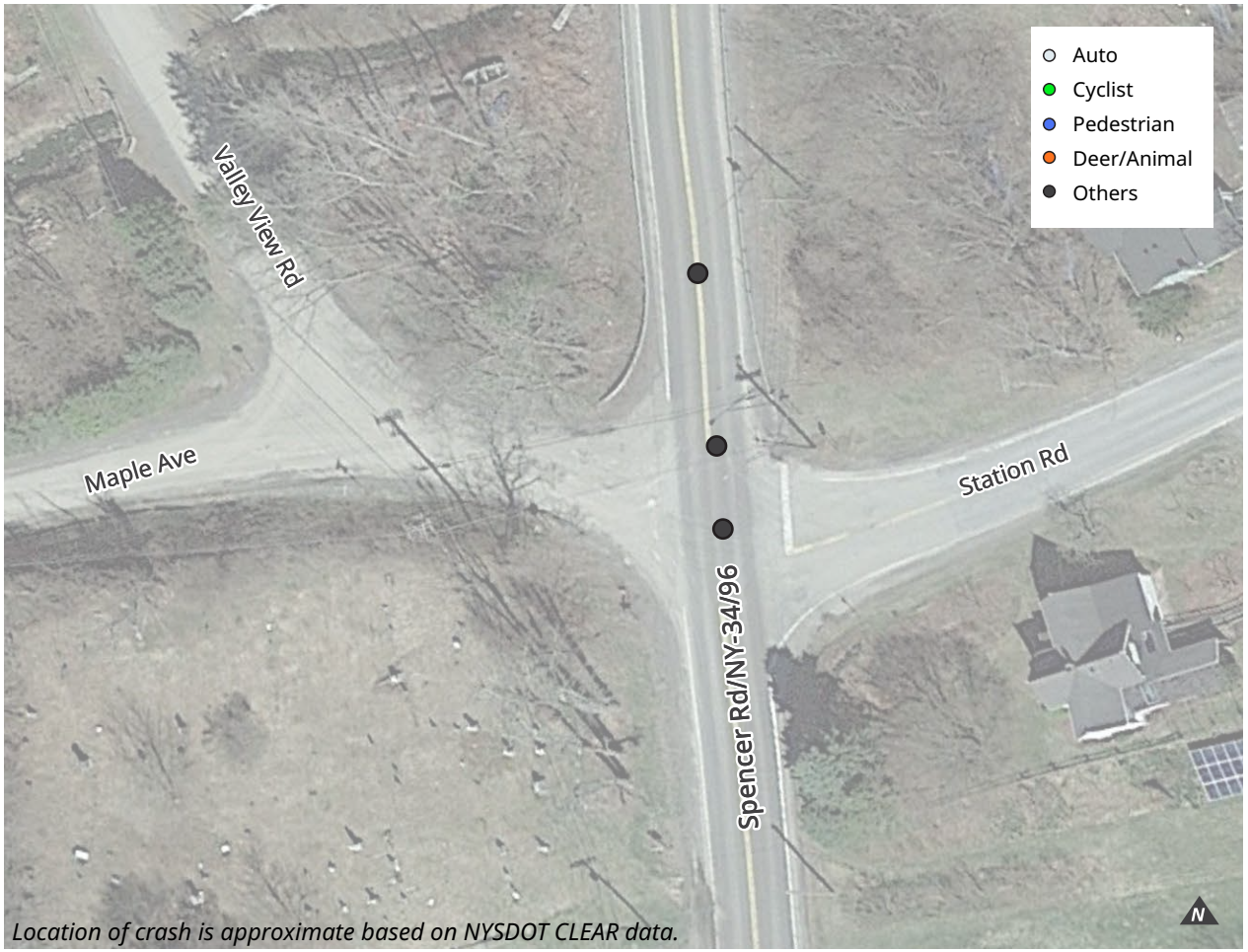
3. STATION RD/MAPLE AVE/SPENCER RD (NY-34/NY-96)

3
Total Crashes

0
Fatal & Serious Injury Crashes

Users Involved

Between 2019 and 2023, three crashes occurred at the intersection. The crashes involved collisions with a signpost and guide rail and were attributed to road user behavior, including alcohol involvement and speeding, as well as wet road conditions.

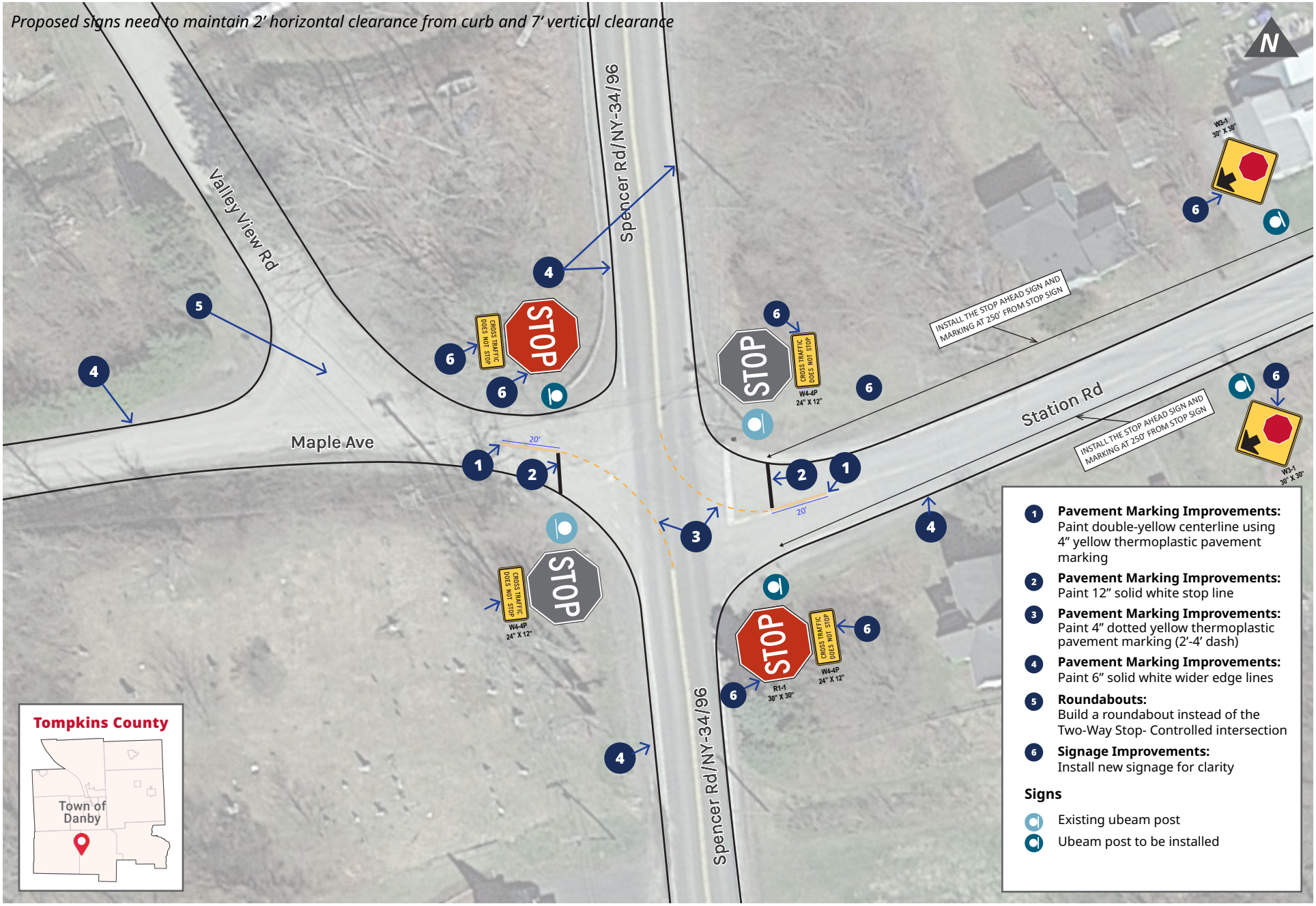


Spatial Distribution of Crashes by User Type

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
3	0	0	0	0	3	1	0	0	1	2

3. STATION RD/MAPLE AVE/SPENCER RD (NY-34/NY-96)



3. STATION RD/MAPLE AVE/SPENCER RD (NY-34/NY-96)

Given the contributing factors to crashes at this intersection, including alcohol impairment and speeding, we recommend implementing the following countermeasures.

Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections

This countermeasure includes deploying a package of multiple low-cost countermeasures at stop-controlled intersections, including improved signage, upgraded pavement markings, and the installation of duplicate stop signs on both sides of the roadway to enhance visibility and compliance. These countermeasures increase driver awareness and recognition of the intersections and potential conflicts.

Implementing multiple low-cost countermeasures, such as enhanced pavement markings, stop lines, and improved lighting, can significantly increase safety at this complex rural intersection.

Wider Edge Lines

Wider edge lines enhance the visibility of travel lane boundaries compared to traditional edge lines. Edge lines are considered "wider" when the marking width is increased from the minimum normal line width of 4 inches to the maximum normal line width of 6 inches.

Six inch edge lines on rural roadways with posted speed limit of 45-MPH or more is the standard practice of NYSDOT. For further information see EI 18-008.

Wider edge lines are recommended at this intersection since the road has multiple intersection crossings. Wider edge lines are useful in preventing roadway departure crashes and improving safety.

Roundabout

Long term, consideration should be given to addition of a roundabout linking Station Rd, Maple Ave, and Valley View Rd to reduce the overall number of conflicts at the intersection and slow speeds along NY-34/96. Further study is needed to determine the suitability of the site for a roundabout. Accordingly, conceptual designs and cost estimates have not been developed.

Speed Limit Management

Further consideration should be given to speed limit reduction on NY-34/96.

Access road to Maple Ave and Valley View Rd

Intersection

3. STATION RD/MAPLE AVE/SPENCER RD (NY-34/NY-96)

Countermeasure	Quantity	Unit	Unit Cost	Total
Small Single Post-Mounted Signs	6	each	$ 622.00	$ 3,732.00
Double Yellow Centerline	80	ft.	$ 4.00	$ 320.00
Stop Bar Pavement Markings	135	ft.	$ 3.00	$ 405.00
Dotted Yellow Thermoplastic Pavement Markings	123	ft.	$ 4.00	$ 492.00
Wider Edge Lines	1,350	ft.	$ 4.00	$ 5,400.00

Subtotal	**$ 10,349.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 1,034.90
Incidentals, Inflation and Contingencies Estimate (20%)	$ 2,069.80
Construction Cost	**$ 13,453.70**
Survey (10%)	$ 1,345.37
Design Engineering ($10k + 10%)	$ 11,345.37
Construction Management & Inspection (15%)	$ 2,018.06
Grand Total	**$ 28,162.50**
Less 10%	$ 25,346.25
Plus 10%	$ 30,978.74

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

4. FREEVILLE RD (NY-38)/SPRINGHOUSE RD

INTERSECTION CHARACTERISTICS

FUNCTIONAL CLASSIFICATION Freeville Rd (NY-38)	Rural Minor Arterial Road
FUNCTIONAL CLASSIFICATION Springhouse Rd	Rural Local Road
AADT Freeville Rd (NY-38)	2,929
AADT Springhouse Rd	1,413
INTERSECTION TYPE	Rural 3-Leg Stop-Controlled Two-Way Stop TT
SPEED LIMIT	35 - 45 MPH
OWNERSHIP	NYSDOT
ADJACENT LAND USE	Developed/ Residential

KEY FINDINGS

The intersection of Freeville Rd and Springhouse Rd (NY-38) has been the site of seven crashes in the five-year period, including one that resulted in a serious injury. Advance warning signage along Springhouse Rd, including the addition of the "Cross-Traffic Does Not Stop" sub-plate are recommended to increase driver awareness. Centerline Audible Roadway Delineators/ Secondary Highway Audible Roadway Delineators (CARDs / SHARDs) along the centerline of Springhouse Rd and along the centerline and edgeline of Freeville Rd are recommended to reduce risk of roadway and lane departure.

EXISTING CONDITIONS

The intersection of Freeville Rd and Springhouse Rd is a rural three-legged junction where Springhouse Rd connects to Freeville Rd from the south, under the jurisdiction of NYSDOT. Freeville Rd, classified as a minor arterial road, is 30-ft wide with two 10-ft travel lanes and shoulders on both sides. Springhouse Rd, a rural local road, is narrower at 20-ft wide with two 10-ft travel lanes and no shoulders. The intersection is situated near Dryden High School, an apartment complex, and commercial buildings, with driveways feeding into Freeville Rd. Springhouse Rd leads to predominantly agricultural areas and is subject to a truck weight limit of 5 tons.

Field visit observations show that the intersection is controlled by two-way stop signs and features "signal ahead" and "school ahead" signage but lacks crosswalks and sidewalks. There was one bicyclist spotted during site observation. There is a trail system to the south of the intersection that is frequently used. There are no traffic calming devices present at the intersection. Pavement markings on both roads are slightly faded but still visible, and the eastern corner of the intersection exhibits minor cracking. Traffic volumes indicate an AADT of 2,929 vehicles for Freeville Rd and 1,413 vehicles for Springhouse Rd.

Limited visibility in snow

4. FREEVILLE RD (NY-38)/SPRINGHOUSE RD

7
Total Crashes

1
Fatal & Serious Injury Crashes

OTHER

Users Involved

Between 2019 and 2023, the intersection recorded seven crashes, resulting in an average crash frequency of 1.4 crashes per year. One crash resulted in a serious injury, with the primary contributing factor being road user behavior, specifically disregard for traffic control devices.

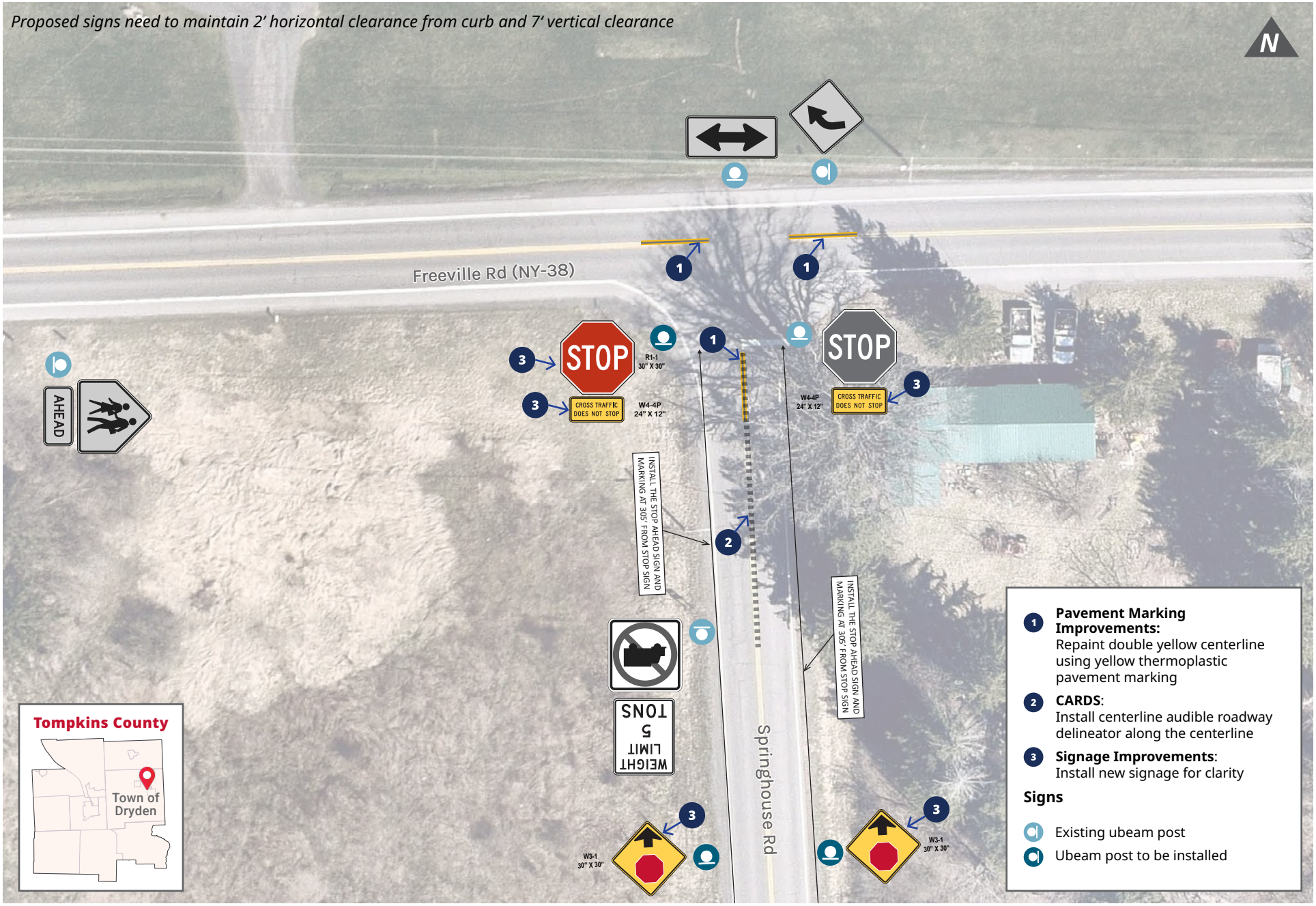
Three of the crashes involved collisions with other motor vehicles, while one crash resulted from a collision with a deer. The primary contributing factors identified were unsafe lane changes, failure to yield the right-of-way, and road user behavior, all of which highlight potential issues related to driver awareness, decision-making, and roadway conditions.

Spatial Distribution of Crashes by User Type

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
7	3	0	0	1	3	1	0	1	0	4

4. FREEVILLE RD (NY-38)/SPRINGHOUSE RD



4. FREEVILLE RD (NY-38)/SPRINGHOUSE RD

Based on the identified contributing factors to crashes at this intersection—unsafe lane changes, failure to yield, and road user behavior, we recommend the following countermeasures.

Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections

This countermeasure includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings at stop-controlled intersections, including the duplication. These countermeasures increase driver awareness and recognition of the intersections and potential conflicts. The addition of the Cross Traffic Does Not Stop subplate reminds drivers on Springhouse Rd that traffic on Freeville Rd has the right-of-way.

Centerline Audible Roadway Delineator/Secondary Highway Audible Roadway Delineator (CARDs/SHARDs)

CARDs and SHARDs are designed to alert drivers through vibration and sound when their vehicle veers from the travel lane. CARDs and SHARDs integrate pavement markings over the textured surface to enhance visibility and driver awareness.

Implementing CARDs on the centerline of Springhouse Rd would improve safety by reducing lane departure crashes and enhancing driver attentiveness.

South leg (Freeville Rd)

Given that this intersection is a T-intersection with two-way stop control, the addition of CARDs would serve as a proactive measure to increase driver alertness and encourage safer turning movements. These enhancements would help ensure that vehicles approach and navigate the intersection at an appropriate angle, reducing the risk of collisions.

4. FREEVILLE RD (NY-38)/SPRINGHOUSE RD

Countermeasure	Quantity	Unit	Unit Cost	Total
Small Single Post-Mounted Signs	2	each	$ 622.00	$ 1,244.00
Double Yellow Centerline	80	ft.	$ 4.00	$ 320.00
Centerline Audible Roadway Delineator (CARD)	107	ft.	$ 5.00	$ 535.00

Subtotal	**$ 2,099.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 209.90
Incidentals, Inflation and Contingencies Estimate (20%)	$ 419.80
Construction Cost	**$ 2,728.70**
Survey (10%)	$ 272.87
Design Engineering ($10k + 10%)	$ 10,272.87
Construction Management & Inspection (15%)	$ 409.31
Grand Total	**$ 13,683.75**
Less 10%	$ 12,315.37
Plus 10%	$ 15,052.12

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

5. SHELDON RD/W DRYDEN RD

INTERSECTION CHARACTERISTICS

FUNCTIONAL CLASSIFICATION W Dryden Road	Rural Major Collector Road
FUNCTIONAL CLASSIFICATION Sheldon Road	Rural Minor Collector Road
AADT W Dryden Road	2,840
AADT Sheldon Road	582
INTERSECTION TYPE	Rural 4-Leg Stop-Controlled Two-Way Stop TT
SPEED LIMIT	45 MPH
OWNERSHIP	Tompkins County
ADJACENT LAND USE	Rural/Agricultural

KEY FINDINGS

The intersection of Sheldon Rd and West Dryden Rd was the site of a fatal crash in 2024. To reduce speeds approaching the intersection, dynamic speed feedback signs are recommended, along with a roundabout and reduced speed limit along W Dryden Rd. Advance stop warning sign along Sheldon Rd are recommended, along with "Cross-Traffic Does Not Stop" sub-plates.

EXISTING CONDITIONS

The intersection is located in a rural residential area, with a church situated on the northwest corner and driveways from nearby residences feeding into both roads. Sheldon Rd, which is 22-feet wide with two 10-ft travel lanes, is classified as a minor collector road north of the intersection and as a rural local road to the south. W Dryden Rd, a 30-ft-wide major collector road, also features two 10-ft travel lanes, one in each direction.

As per field visit observations, the intersection is controlled by a two-way stop sign with a flasher and includes a 45-MPH speed limit sign and a yield-to-pedestrian sign. While lane markings are present, the roads lack shoulders and crosswalks. There are no sidewalks present alongside the roads on the intersection. The roads are in good condition with minor cracks on the corner of the intersection.

North leg (Sheldon Rd)

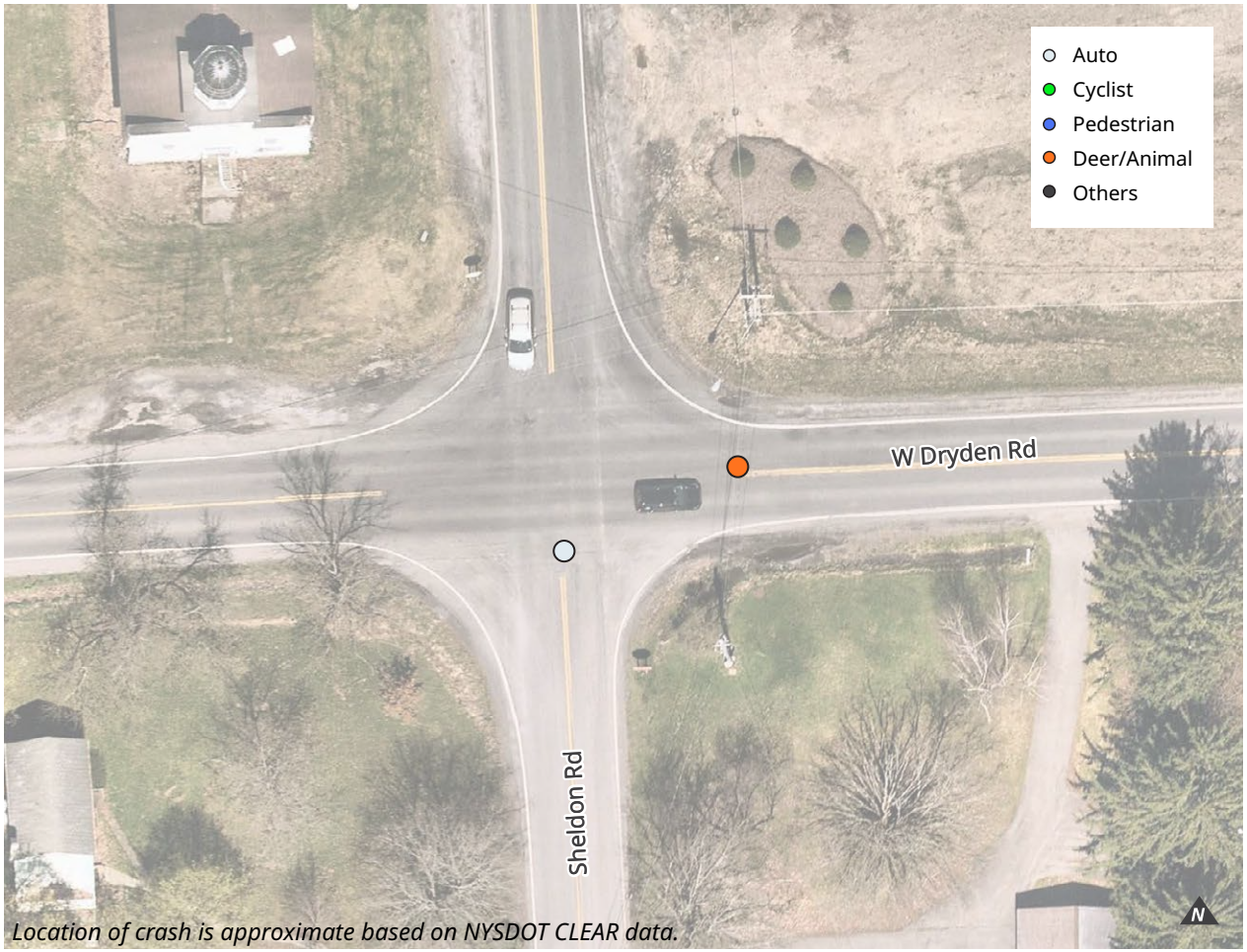
5. SHELDON RD/W DRYDEN RD

2
Total Crashes

1
Fatal & Serious Injury Crashes*

Users Involved

The site was the location of a fatal crash in 2024. Between 2019 and 2023, two crashes were recorded at this intersection. One involved a right-angle collision with a motor vehicle at the center of the intersection due to failure to yield the right-of-way, resulting in a minor injury when a driver failed to stop at the stop sign. The second crash was a collision with a deer, which occurred at dusk on the east leg of W Dryden Rd, leading to property damage.



Location of crash is approximate based on NYSDOT CLEAR data.

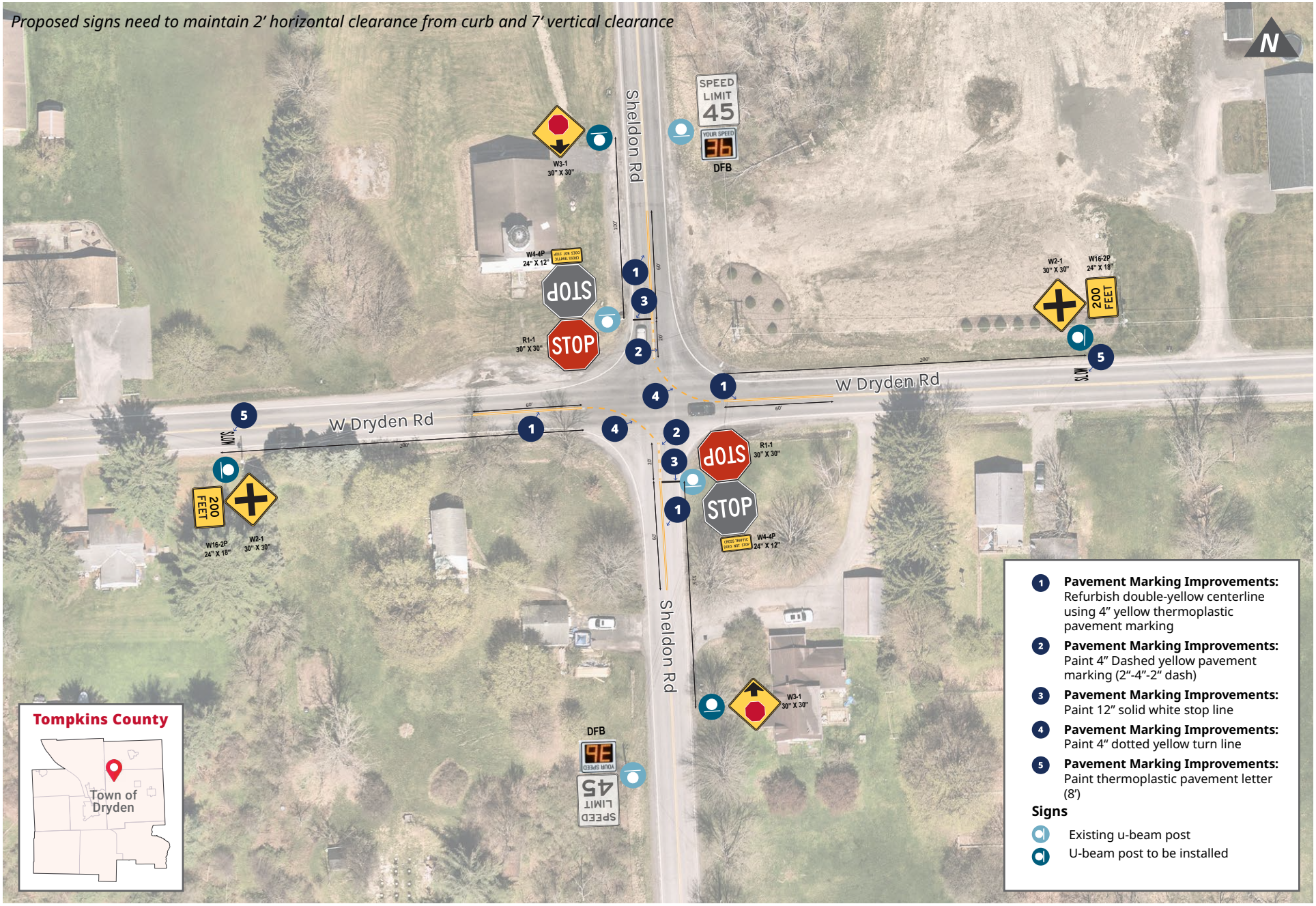
Spatial Distribution of Crashes by User Type

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
2	1	0	0	1	0	2	0	0	2	2

* A fatal crash occured in 2024, outside of the analysis period for this project and is not represented in the crash location drawing or data table.

5. SHELDON RD/W DRYDEN RD



5. SHELDON RD/W DRYDEN RD

Based on the contributing factors to the crashes at this intersection, including failure to yield, we recommend implementing countermeasures such as enhanced signage, improved pavement markings, and increased visibility measures to reinforce right-of-way rules and reduce the risk of future collisions.

Speed Radar/Feedback Sign

Speed radars measure vehicle speed to help reduce speeding and prevent crashes, with feedback signs displaying real-time speed to alert drivers. An FHWA demonstration project found these signs to be effective in lowering vehicle speeds and reducing crash occurrences.

Due to the limited number of stop signs and signals, a speed radar/feedback sign is recommended in order to ensure safety and reduce speeding and therefore reduce roadway departure crashes.

Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections

This countermeasure includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings at stop-controlled intersections and the duplication of stop signs on either side of the approach to the intersection.

These countermeasures increase driver awareness and recognition of the intersections and potential conflicts.

Advance stop warning sign along Sheldon Rd are recommended, along with "Cross-Traffic Does Not Stop" sub-plates, and double-sided stop signs to enhance visibility and reinforce the stop condition, ensuring drivers are more aware of the intersection and right-of-way rules.

Roundabout

Long term, consideration should be given to addition of a roundabout at Sheldon Rd and W Dryden Rd to reduce speeds along both corridors and reduce the number of conflicts at the intersection. Further study is needed to determine the suitability of the site for a roundabout. Accordingly, conceptual designs and cost estimates have not been developed.

South leg (Sheldon Rd)

North leg (Sheldon Rd)

5. SHELDON RD/W DRYDEN RD

Countermeasure	Quantity	Unit	Unit Cost	Total
Small Single Post-Mounted Signs	10	each	$ 622.00	$ 6,220.00
Dashed Double Yellow Line Markings	40	ft.	$ 4.00	$ 160.00
Stop Bar Pavement Markings	99	ft.	$ 3.00	$ 297.00
Double-Yellow Centerline	240	ft.	$ 4.00	$ 960.00
Dotted Yellow Turn Line	120	ft.	$ 4.00	$ 480.00
"SLOW" Pavement Marking	8	each	$ 250.00	$ 2,000.00
Solar Powered Radar Feedback Signs	2	each	$ 10,200.00	$ 20,400.00

Subtotal	**$ 30,517.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 3,051.70
Incidentals, Inflation and Contingencies Estimate (20%)	$ 6,103.40
Construction Cost	**$ 39,672.10**
Survey (10%)	$ 3,967.21
Design Engineering ($10k + 10%)	$ 13,967.21
Construction Management & Inspection (15%)	$ 5,950.82
Grand Total	**$ 63,557.34**
Less 10%	$ 57,201.60
Plus 10%	$ 69,913.07

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

6. MECKLENBURG RD (NY-79)/SHEFFIELD RD

INTERSECTION CHARACTERISTICS

FUNCTIONAL CLASSIFICATION Mecklenburg Road	Rural Minor Arterial Road
FUNCTIONAL CLASSIFICATION Sheffield Road	Rural Minor Collector Road
AADT Mecklenburg Road	4,483
AADT Sheffield Road	678
INTERSECTION TYPE	Rural 4-Leg Stop-Controlled Two-Way Stop TT
SPEED LIMIT	55 MPH (NY-79)
OWNERSHIP	NYSDOT
ADJACENT LAND USE	Developed/ Residential

KEY FINDINGS

At the intersection of Mecklenburg Rd and Sheffield Road, 13 crashes occurred over the five-year period, including two crashes that resulted in serious injuries. In order to reduce speeds along Mecklenburg Rd in advance of the intersection, improvements to the bus stop and a crosswalk across Mecklenburd Rd are recommended. To facilitate safety at the bus stops on the east side of the intersection, the addition of sidewalks, marked crosswalks, and rectangular rapid-flashing beacon are advised.

EXISTING CONDITIONS

The intersection is a rural, four-legged stop-controlled junction under the jurisdiction of NYSDOT. It is located on the western side of the Town of Ithaca in a rural residential neighborhood. Mecklenburg Rd is approximately 30-ft wide with two 10-ft wide travel lanes and shoulders on both sides. It is classified as a minor arterial road. Sheffield Rd is narrower at 22-ft with two 10-ft travel lanes (one in each direction), and features stop bars. It is classified as a minor collector road. There are several houses near the intersection with driveways that open into both roads.

As per field visit observations, the pavement marking is slightly faded and the roads are cracked, especially at the corners of the intersection and sides of the roads. Mecklenburg Rd has a bus stop but there are no sidewalks, bike lanes or crosswalks at the intersection. The intersection is surrounded by vegetation and does not leave space for pedestrians. Also, there are no lamp posts at the intersection for visibility in the dark. There are no traffic calming devices present at this intersection.

South leg (Sheffield Rd)

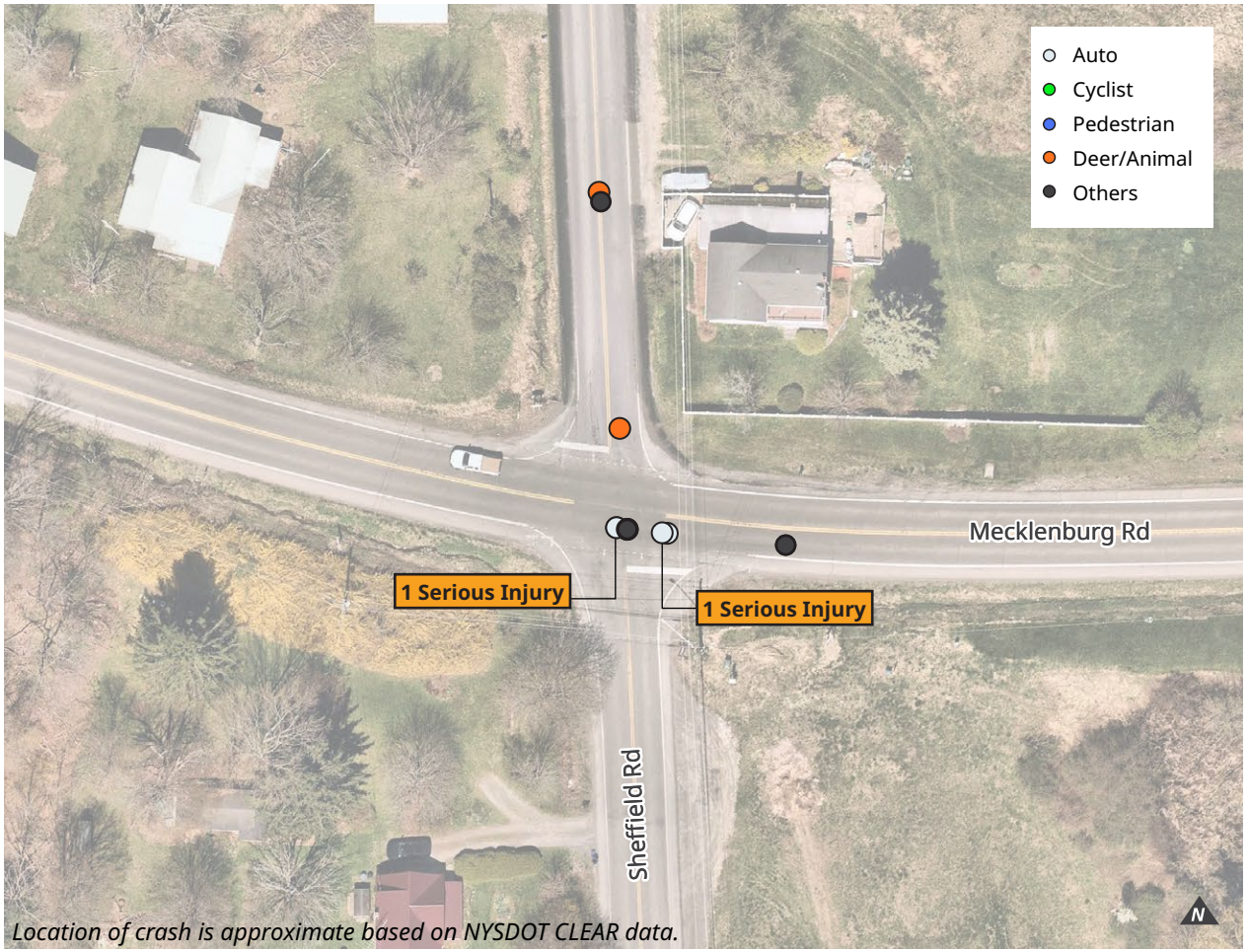
6. MECKLENBURG RD (NY-79)/SHEFFIELD RD

13
Total Crashes

2
Fatal & Serious Injury Crashes

Users Involved

Between 2019 and 2023, 13 crashes were reported, averaging 2.6 crashes per year. Two of these crashes resulted in serious injuries, both of which were right-angle collisions at the center of the intersection caused by failure to yield the right-of-way. Additionally, two crashes involved collisions with deer at the north leg of Sheffield Rd, highlighting potential wildlife-related hazards in the area.

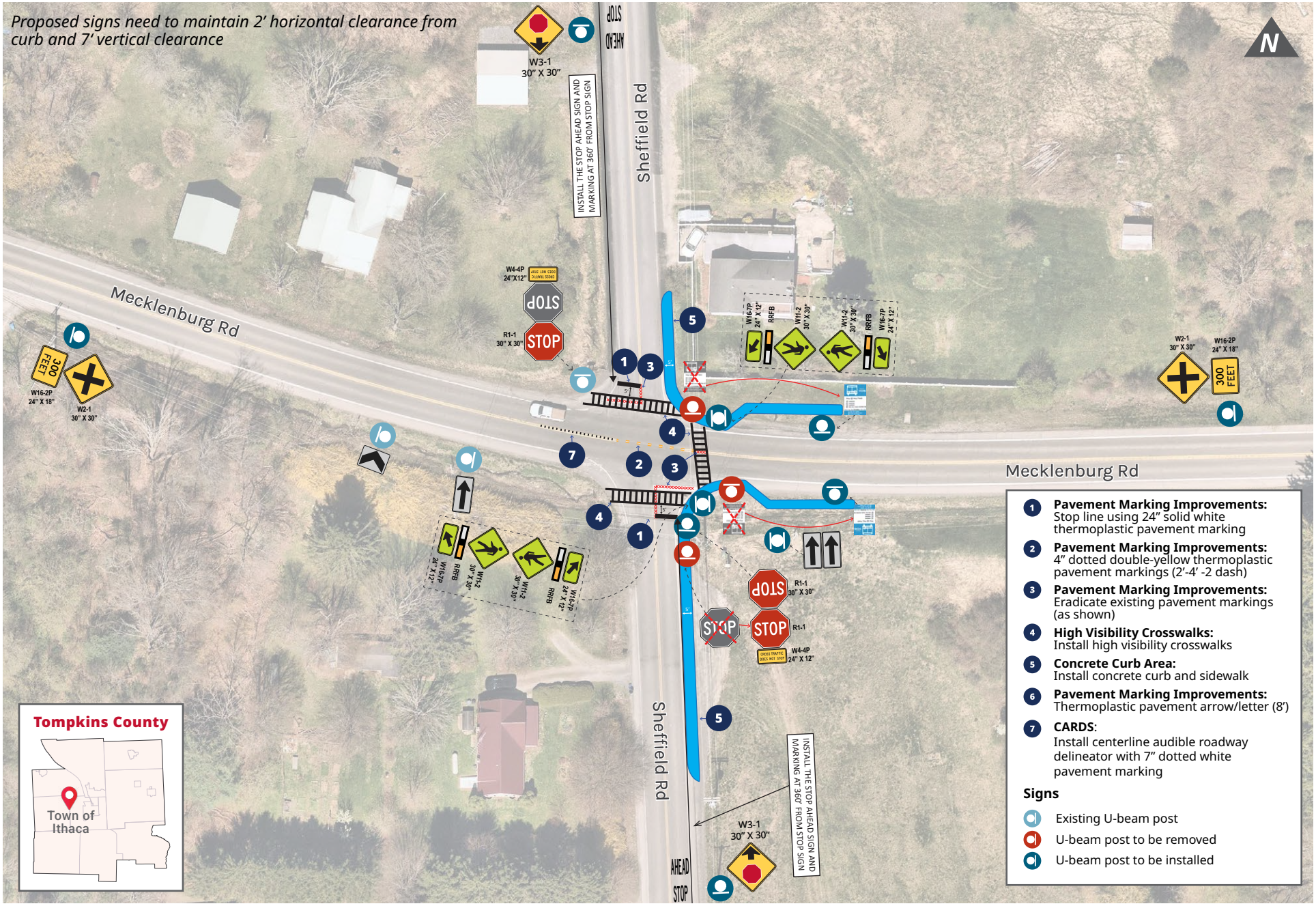


Spatial Distribution of Crashes by User Type

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
13	6	0	0	2	5	5	0	2	3	4

6. MECKLENBURG RD (NY-79)/SHEFFIELD RD



6. MECKLENBURG RD (NY-79)/SHEFFIELD RD

Considering the contributing factors to crashes at this intersection, including right-angle collisions caused by failure to yield, we propose the following countermeasures.

High Visibility Crosswalks

High-visibility crosswalks use patterns (i.e., bar pairs, continental, ladder) that are visible to both the driver and pedestrian from farther away compared to traditional transverse line crosswalks.

Enhancing visibility of pedestrians and bicyclists at the intersection through the implementation of high visibility crosswalks will ensure pedestrian safety, especially with the presence of bus stops on the east side of the intersection, which are currently not served by a sidewalk or crosswalk.

Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections

Includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings. These countermeasures increase driver awareness and recognition of the intersections and potential conflicts.

Multiple low-cost countermeasures, such as adding pavement markings, adding stop lines, as well as lighting can all help in improving the safety at this rural residential intersection.

Add Sidewalk

Sidewalks are paved walkways that are separated from motor vehicles by a curb and gutter. They are intended for pedestrians or people using a wheelchair.

Adding sidewalks at this intersection is recommended to ensure safety for pedestrians, especially given the presence of bus stops on the east side of the intersection that are currently not served by a sidewalk or crosswalk.

Rectangular Rapid Flashing Beacon (RRFB)

Rectangular Rapid Flashing Beacons (RRFB) consist of two, rectangular- shaped yellow indications, each with a light-emitting diode (LED)-array-based light source. RRFBs activate with alternating high-frequency flashes to increase pedestrian visibility and alert drivers to their presence at crossings.

RRFBs are recommended at this location to bring awareness to the presence of pedestrians crossing the intersection, especially given the presence of bus stops on the east side of the intersection.

Roundabout

Long term, consideration should be given to the addition of a roundabout linking Mecklenburg Rd and Sheffield Rd to reduce speeds along both corridors and reduce the number of conflicts at the intersection. Further study is needed to determine the suitability of the site for a roundabout. Accordingly, conceptual designs and cost estimates have not been developed.

East leg (Mecklenburg Rd)

6. MECKLENBURG RD (NY-79)/SHEFFIELD RD

Countermeasure	Quantity	Unit	Unit Cost	Total
Concrete Sidewalk (4" thick)	1,600	sq. ft.	$ 32.00	$ 51,200.00
LS Type (Ladder) Crosswalk	3	each	$ 2,100.00	$ 6,300.00
Pavement Markings Improvements - 4" Dashed Double Yellow Thermoplastic Pavement Marking (2' -4' -2')	22	ft.	$ 4.00	$ 88.00
Eradicate Markings	55	ft.	$ 3.00	$ 165.00
Centerline Audible Roadway Delineator (CARD)	40	ft.	$ 5.00	$ 200.00
Single Post-Mounted Signs	6	each	$ 622.00	$ 3,732.00
Rectangular Rapid Flashing Beacon	2	each	$ 13,700.00	$ 27,400.00

Subtotal	**$ 89,085.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 8,908.50
Incidentals, Inflation and Contingencies Estimate (20%)	$ 17,817.00
Construction Cost	**$115,810.50**
Survey (10%)	$ 11,581.05
Design Engineering ($10k + 10%)	$ 21,581.05
Construction Management & Inspection (15%)	$ 17,371.58
Grand Total	**$166,344.18**
Less 10%	$149,709.76
Plus 10%	$182,978.59

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

7. PERUVILLE RD (NY-34B)/SCOFIELD RD

INTERSECTION CHARACTERISTICS

FUNCTIONAL CLASSIFICATION Peruville Rd	Rural Major Collector Road
FUNCTIONAL CLASSIFICATION Scofield Rd	Rural Local Road
AADT Peruville Rd	4,492
AADT Scofield Rd	N/A
INTERSECTION TYPE	Rural 4-Leg Stop-Controlled Two-Way Stop TT
SPEED LIMIT	55 MPH
OWNERSHIP	NYSDOT
ADJACENT LAND USE	Rural/Agricultural

KEY FINDINGS

At Peruville Rd and Scofield Rd in the Town of Lansing, nine crashes occurred in the five-year period including three that resulted in serious injuries. Improved pavement markings, including a centerline marking and stop bars on Scofield Rd are recommended, along with "Cross Traffic Does Not Stop" sub-plates.

EXISTING CONDITIONS

The intersection is situated on the eastern side of the Town of Lansing, within a rural agricultural area with a few commercial buildings nearby. The intersection is a four-legged stop-controlled junction under the jurisdiction of NYSDOT. The intersection is controlled by two-way stop signs and has a 45-MPH speed limit. It does not have any traffic signals or crosswalks.

Peruville Rd, the primary road, is approximately 30-ft wide, consisting of two 11-ft travel lanes, one in each direction, and shoulders on both sides. It is classified as a major collector road. Scofield Rd, a rural road, is narrower at 22-ft wide and is unmarked, with the exception of stop lines at the intersection. It is classified as a rural local road. There are no bike lanes or sidewalks on either of the roads.

There is minor cracking on the roads and the pavement markings are slightly faded. Scofield Rd is on a slightly lower grade so the visibility from Scofield Rd towards Peruville Rd is difficult.

Scofield Rd

7. PERUVILLE RD (NY-34B)/SCOFIELD RD

9
Total Crashes

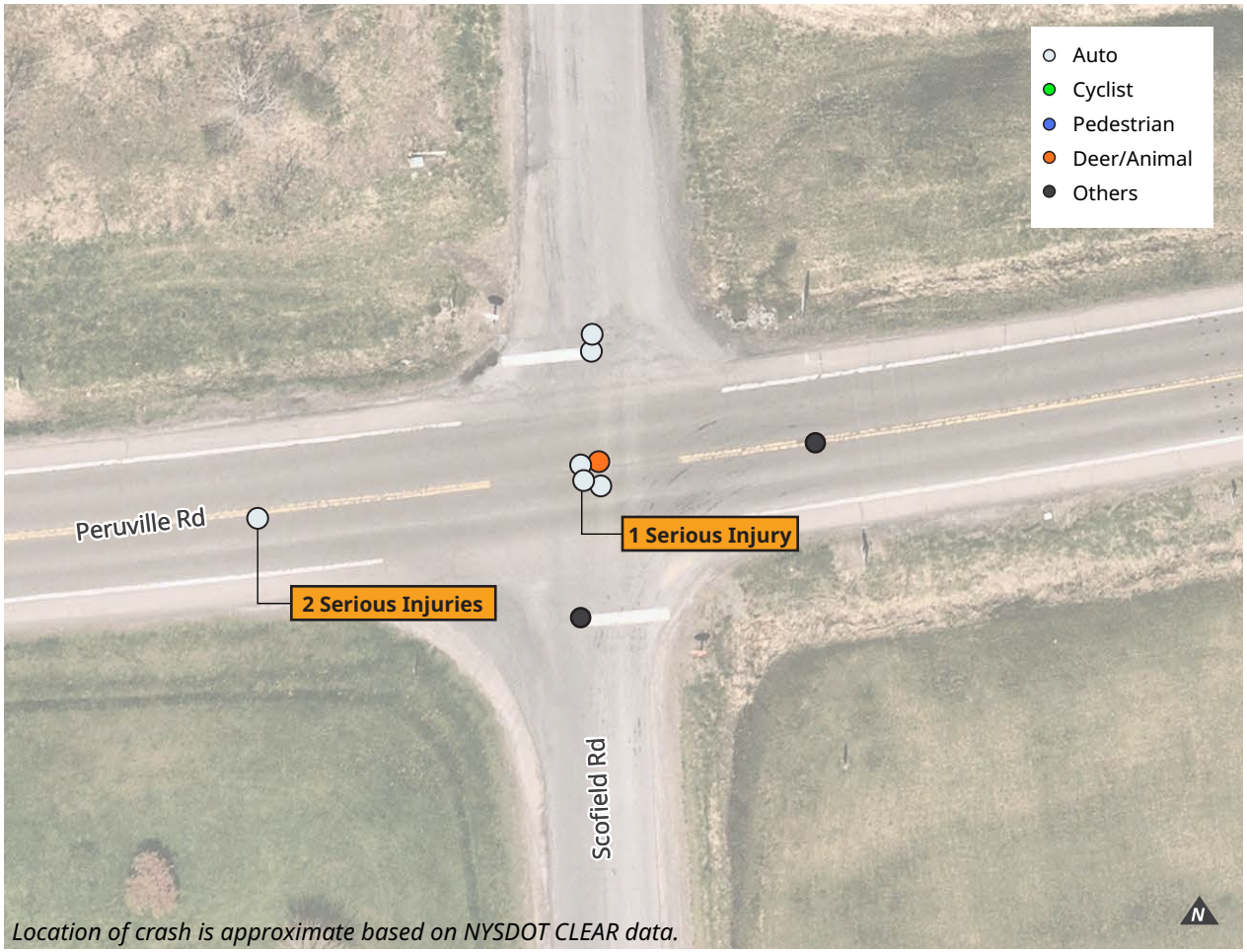
3
Fatal & Serious Injury Crashes

Users Involved

Between 2019 and 2023, the intersection recorded nine crashes, resulting in an average crash frequency of 1.8 crashes per year. Of these incidents, three involved serious injuries—one involving an older driver and the other a younger driver.

One crash resulted in two serious injuries at the west leg of Peruville Rd, while another crash resulted in one serious injury at the center of the intersection. These crashes were motor vehicle collisions.

Four crashes occurred at the center of the intersection and one of them was a collision with a deer. The other two crashes with motor vehicles occurred on the north leg of Scofield Rd.

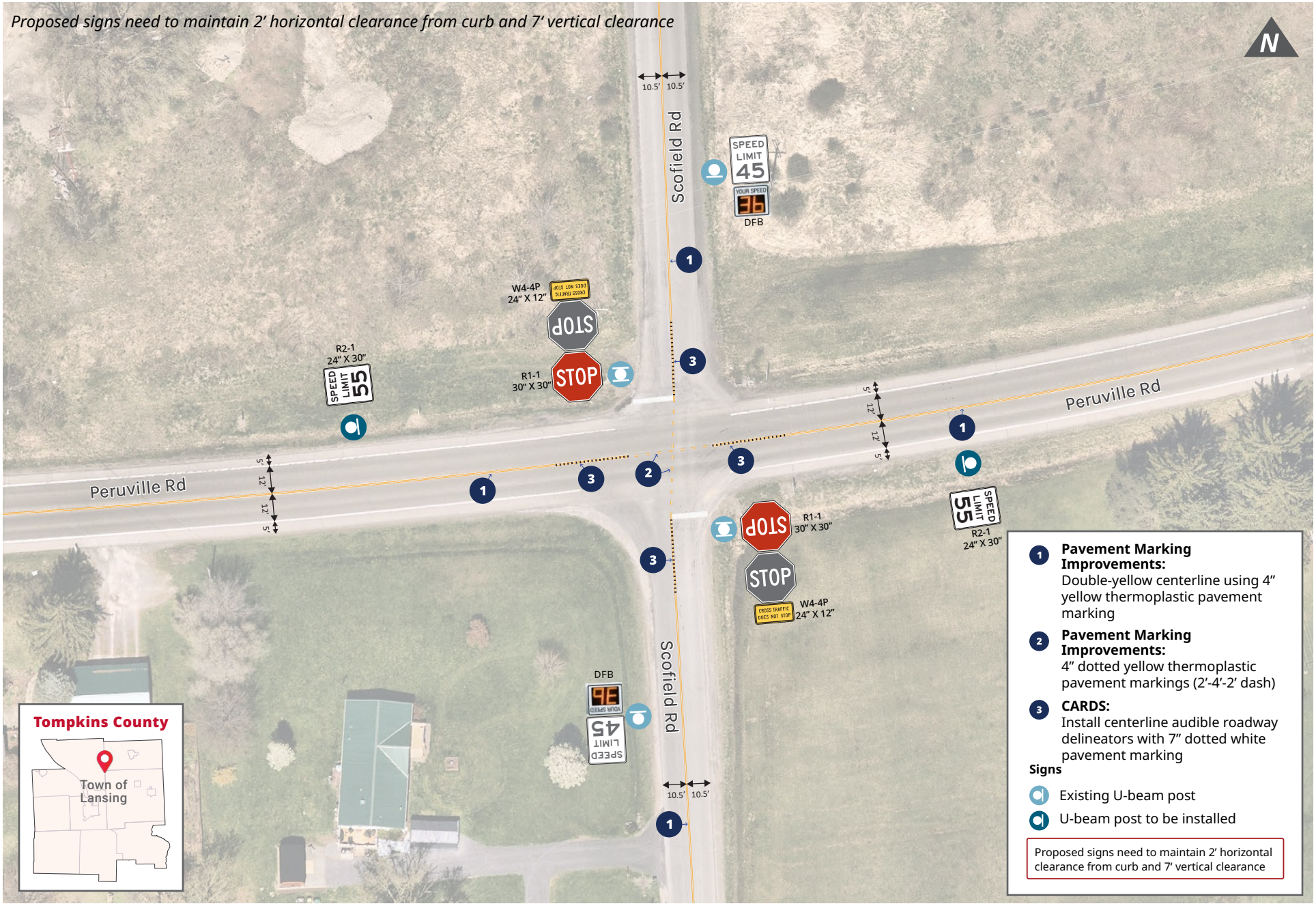


Spatial Distribution of Crashes by User Type

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
9	6	0	0	1	2	7	0	3	4	4

7. PERUVILLE RD (NY-34B)/SCOFIELD RD



7. PERUVILLE RD (NY-34B)/SCOFIELD RD

Based on the contributing factors to the crashes at this intersection, including serious injury motor vehicle crashes and a collision with a deer, we recommend the following countermeasures.

Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections

Includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings. These countermeasures increase driver awareness and recognition of the intersections and potential conflicts.

Multiple low-cost countermeasures, such as adding pavement markings, adding stop lines, as well as lighting can all help in improving safety at this rural residential intersection. The addition of double-sided Stop signs and "Cross Traffic Does Not Stop" sub-plates is recommended to alert drivers on Scofield Rd that traffic on Peruville Rd does not stop.

Centerline Audible Roadway Delineators (CARDs)

Centerline Audible Roadway Delineators (CARDs) are designed to alert drivers through vibration and sound when their vehicle veers from the travel lane. In order to reduce speeds at the intersection, CARDs are recommended on Peruville Rd.

Roundabout

Long term, consideration should be given to the addition of a roundabout at Peruville Rd and Scofield Rd to reduce speeds along both corridors and reduce the number of conflicts at the intersection. Further study is needed to determine the suitability of the site for a roundabout. Accordingly, conceptual designs and cost estimates have not been developed.

Speed Radar/Feedback Sign

Speed radars measure vehicle speed to help reduce speeding and prevent crashes, with feedback sign displaying real-time speed to alert drivers. An FHWA demonstration project found these signs to be effective in lowering vehicle speeds and reducing crash occurences.

Due to the limited number of stop signs and signals, a speed radar/feedback sign is recommended in order to ensure safety and reduce speeding and therefore, reduce departure crashes.

Poor road conditions

Limited visibility in snowy weather

7. PERUVILLE RD (NY-34B)/SCOFIELD RD

Countermeasure	Quantity	Unit	Unit Cost	Total
Small Single Post-Mounted Signs	2	each	$ 622.00	$ 1,244.00
Solar Powered Radar Feedback Signs	2	each	$ 10,200.00	$ 20,400.00
Double Yellow Centerline	1,390	ft.	$ 4.00	$ 5,560.00
Centerline Audible Roadway Delineator (CARD)	136	ft.	$ 5.00	$ 680.00
Dotted Yellow Turn Line	20	ft.	$ 4.00	$ 80.00

Subtotal	**$27,964.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$2,796.40
Incidentals, Inflation and Contingencies Estimate (20%)	$5,592.80
Construction Cost	**$36,353.20**
Survey (10%)	$3,635.32
Design Engineering ($10k + 10%)	$13,635.32
Construction Management & Inspection (15%)	$5,452.98
Grand Total	**$59,076.82**
Less 10%	$53,169.14
Plus 10%	$64,984.50

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

8. W DANBY RD (NY-34/NY-96)/DECKER RD

INTERSECTION CHARACTERISTICS

FUNCTIONAL CLASSIFICATION West Danby Road	Urban Minor Arterial Road
FUNCTIONAL CLASSIFICATION Decker Road	Urban Major Collector Road
AADT West Danby Road	6,831
AADT Decker Road	571
INTERSECTION TYPE	Rural 3-Leg Stop-Controlled
SPEED LIMIT	55 MPH
OWNERSHIP	NYSDOT
ADJACENT LAND USE	Developed/ Commercial

KEY FINDINGS

At the intersection of West Danby Rd and Decker Road, eight crashes occurred in the five-year period including two that resulted in serious injuries. Speed and failure to yield were contributing factors to these crashes. To reduce speeds at the approach to the intersection, speed feedback signs are recommended. In order to facilitate access to the bus stop at the southeast corner of the intersection the addition of a sidewalk, a marked crosswalk, and a rectangular rapid flashing beacon are recommended.

EXISTING CONDITIONS

The intersection of West Danby Rd and Decker Rd is a rural three-legged, stop-controlled junction under NYSDOT jurisdiction. West Danby Rd connects to Decker Rd on the west leg, leading to a rural residential area and on the eastern side there is an access road to commercial space that includes a gas station, U-Haul facility, and a church. West Danby Rd, a minor arterial road, features two 11-ft-wide travel lanes, one in each direction, with approximately 5-ft-wide shoulders on both sides. The pavement markings are clearly visible, and the road is in good condition with minor cracks. Decker Rd, in contrast, is narrower, with two 10-ft-wide travel lanes. It is classified as a major collector road. Driveways feed into Decker Rd, which intersects with West Danby Rd on its eastern side.

The field visit observations show that the intersection has no crosswalks. There is a bus stop sign on West Danby Rd and a “bus stop ahead” sign approaching the intersection. There are no sidewalks or bike lanes on the road. There are streetlights illuminating the adjacent business driveways but not the roadway. The access from the gas station is on a slightly lower elevation and limits visibility for those existing the driveway. During the field visit it was noted that the surface of Decker Rd is cracked and covered with gravel with slightly visible markings.

South leg (W Danby Rd)

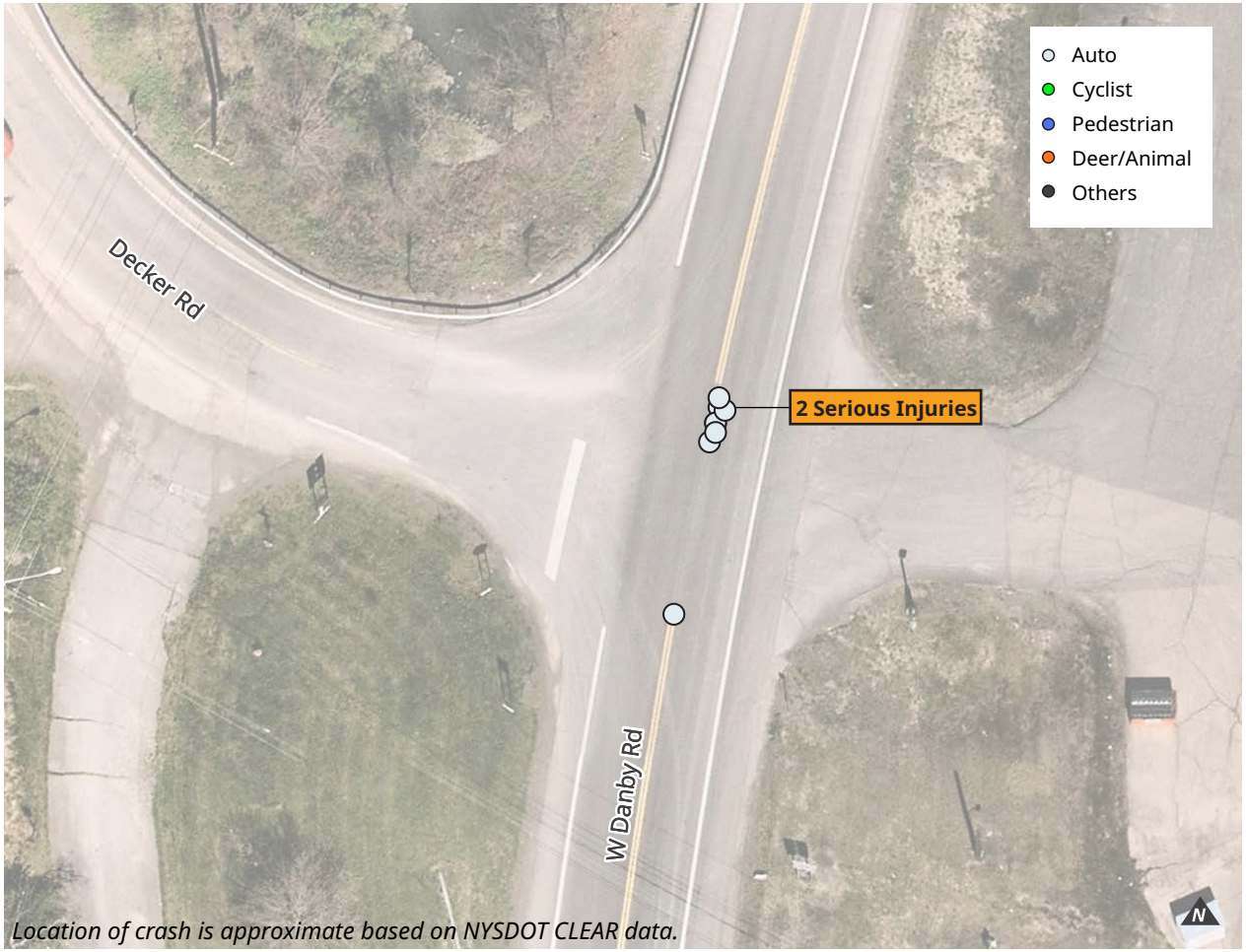
8. W DANBY RD (NY-34/NY-96)/DECKER RD

9
Total Crashes

3
Fatal & Serious Injury Crashes

Users Involved

Between 2019 and 2023, eight crashes were reported with an average crash frequency of 1.6 per year. One of them resulted in two serious injuries. All of the eight crashes were collisions with motor vehicles. The key contributing factors were speed related and failure to yield right-of-way.

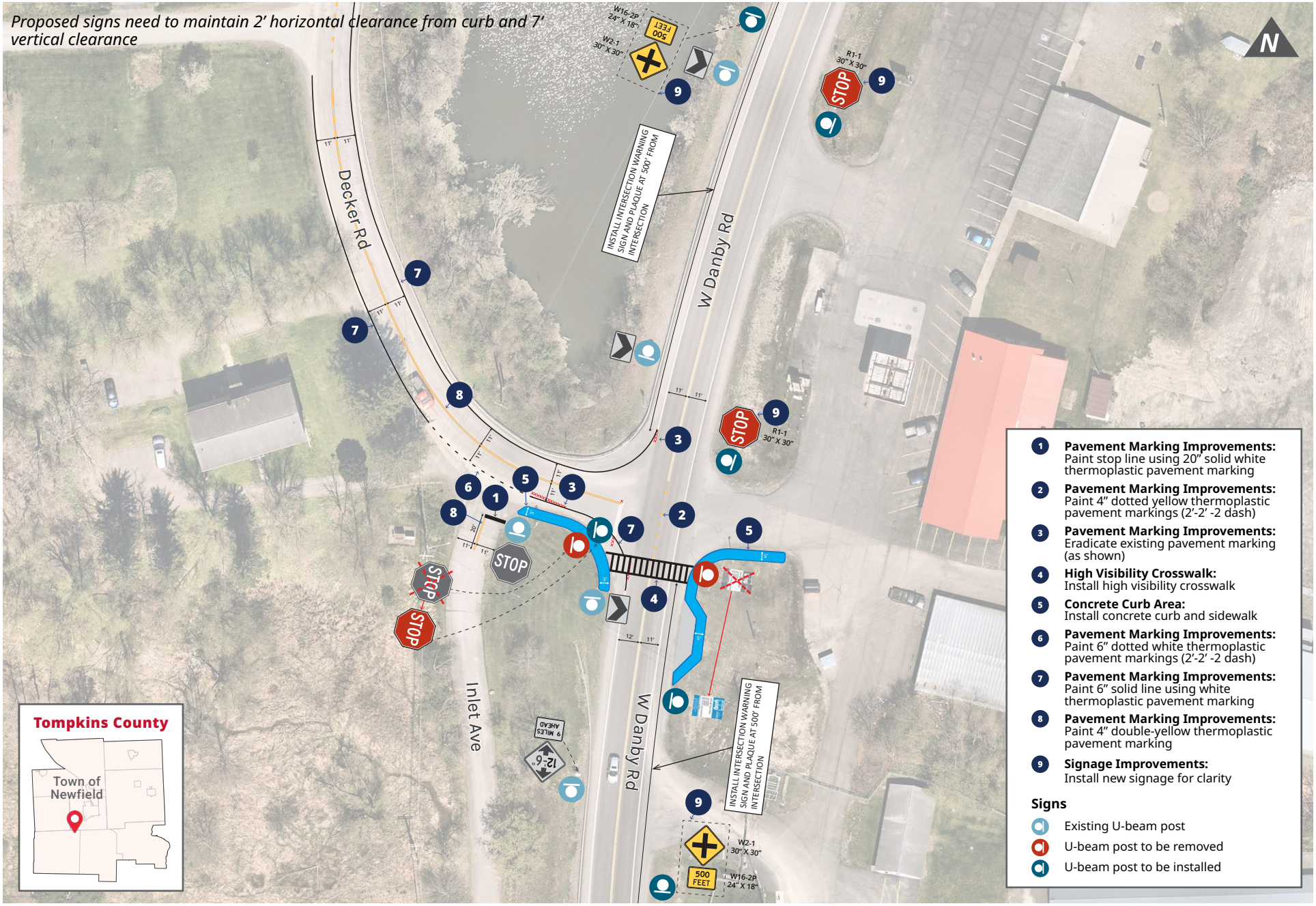


Spatial Distribution of Crashes by User Type

CRASH DATA (2018-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
8	8	0	0	0	0	10	0	2	8	4

8. W DANBY RD (NY-34/NY-96)/DECKER RD



8. W DANBY RD (NY-34/NY-96)/DECKER RD

Based on the contributing factors to the crashes at this intersection, including speeding and failure to yield right-of-way, we recommend the following countermeasures.

Systematic Application of Low-Cost Countermeasures at Stop Controlled Intersections

This includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings. These countermeasures increase driver awareness and recognition of the intersections and potential conflicts.

Pavement marking enhancements are recommended at this location to square up the west leg of the segment and effectively reduce turning radius and speed of turning movements.

High-Visibility Crosswalks

High-visibility crosswalks use patterns (i.e., bar pairs, continental, ladder) that are visible to both the driver and pedestrian from farther away compared to traditional transverse line crosswalks.

A high-visibility marked crosswalk across W Danby Rd is recommended to facilitate access to the bus stop at the southeast corner of the intersection.

Add Sidewalk

Sidewalks are paved walkways that are separated from motor vehicles by a curb and gutter. They are intended for pedestrians or people using a wheelchair. A sidewalk is recommended to facilitate access to and from the bus stop at the southeast corner of the intersection.

North leg (W Danby Rd)

Intersection

8. W DANBY RD (NY-34/NY-96)/DECKER RD

Countermeasure	Quantity	Unit	Unit Cost	Total
Concrete Sidewalk (4" thick)	1,250	sq. ft.	$ 32.00	$ 40,000.00
LS Type (Ladder) Crosswalk	1	each	$ 2,100.00	$ 2,100.00
Small Single Post-Mounted Sign	6	each	$ 622.00	$ 3,732.00
Stop Bar Pavement Marking	50	ft.	$ 3.00	$ 150.00
Dotted Yellow Thermoplastic Pavement Marking	32	ft.	$ 4.00	$ 128.00
Eradicate Existing Pavement Marking	50	ft.	$ 3.00	$ 150.00
Dotted White Line (6")	33	ft.	$ 4.00	$ 132.00
Solid White Line (6")	750	ft.	$ 4.00	$ 3,000.00
Double Yellow Centerline	32	ft.	$ 4.00	$ 128.00

Subtotal	**$ 49,520.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 4,952.00
Incidentals, Inflation and Contingencies Estimate (20%)	$ 9,904.00
Construction Cost	**$ 64,376.00**
Survey (10%)	$ 6,437.60
Design Engineering ($10k + 10%)	$ 16,437.60
Construction Management & Inspection (15%)	$ 9,656.40
Grand Total	**$ 96,907.60**
Less 10%	$ 87,216.84
Plus 10%	$106,598.36

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

9. CAYUGA HEIGHTS RD/WYCKOFF RD

INTERSECTION CHARACTERISTICS

FUNCTIONAL CLASSIFICATION Cayuga Heights Rd	Urban Major Collector Road
FUNCTIONAL CLASSIFICATION Wyckoff Rd	Urban Local Road
FUNCTIONAL CLASSIFICATION Kline Rd	Urban Local Road
AADT Cayuga Heights Rd	1,346
AADT Wyckoff Rd	N/A
INTERSECTION TYPE	Urban 4-Leg Stop-Controlled
SPEED LIMIT	30 MPH
OWNERSHIP	Village of Cayuga Heights
ADJACENT LAND USE	Developed/ Residential

KEY FINDINGS

Wyckoff Rd and Kline Rd intersect Cayuga Heights Rd, forming a triangle in the Village of Cayuga Heights. Ten crashes occurred over the five-year period including two that resulted in serious injuries. In this residential area, the addition of sidewalk along Kline Rd and Wyckoff is recommended, along with high visibility crosswalks and a rapid flashing beacon for pedestrian safety at the intersection. To reduce speeds in advance of the intersection, speed feedback signs are recommended.

EXISTING CONDITIONS

The intersections of Wyckoff Rd and Cayuga Heights Rd and Kline Rd are four-legged, stop-controlled junctions located in an urban residential neighborhood. Cayuga Heights Rd is classified as a major collector road, while Wyckoff Rd is an urban local road. The intersection is under the jurisdiction of the Village of Cayuga Heights. Wyckoff Rd and Kline Rd are 20-ft wide and unmarked roads, whereas Cayuga Heights Rd features two 9-ft-wide travel lanes, one in each direction. Wyckoff Rd is slightly offset, creating a subtly angled alignment at the intersection. Kline Rd intersects with Cayuga Heights Rd 100-ft south of Wyckoff Rd. Multiple residential driveways feed into both streets.

As per field visit observations, the Wyckoff Rd and Cayuga Heights Rd intersection features a two-way stop sign, accompanied by a crosswalk sign and a yield-to-pedestrian sign on the approach. High-visibility crosswalks are present on two legs of the intersection. The Kline Rd and Cayuga Heights Rd intersection is also two-way stop controlled and crosswalks are absent from the intersection. During the field visit, it was noted that the single lamp post at the Wyckoff Rd intersection provided inadequate illumination at night. Both roads have sidewalks, but they are incomplete. Sidewalks are present on only one side of Wyckoff St (north), one side of Cayuga Heights Rd and no sidewalks are present on Klein Rd. The pavement markings are clearly visible on Cayuga Heights Rd but lack consistency. Only stop bars are present on Kline Rd and Wyckoff Rd. The roadway shows minor cracking.

North leg (Cayuga Heights Rd)

9. CAYUGA HEIGHTS RD/WYCKOFF RD

10
Total Crashes

2
Fatal & Serious Injury Crashes

OTHER

Users Involved

Between 2019 and 2023, the two intersections recorded ten crashes, with an average crash frequency of two per year. One crash resulted in two serious injuries. The serious injury crash involved a collision with a guide rail, primarily caused by road user behavior.

Eight crashes were collisions with motor vehicles and one of the crashes was collision with bicyclist. The contributing factors involved unsafe speed, failure to yield right-of-way, and obstructed view. All the crashes are located at the center of the intersections.

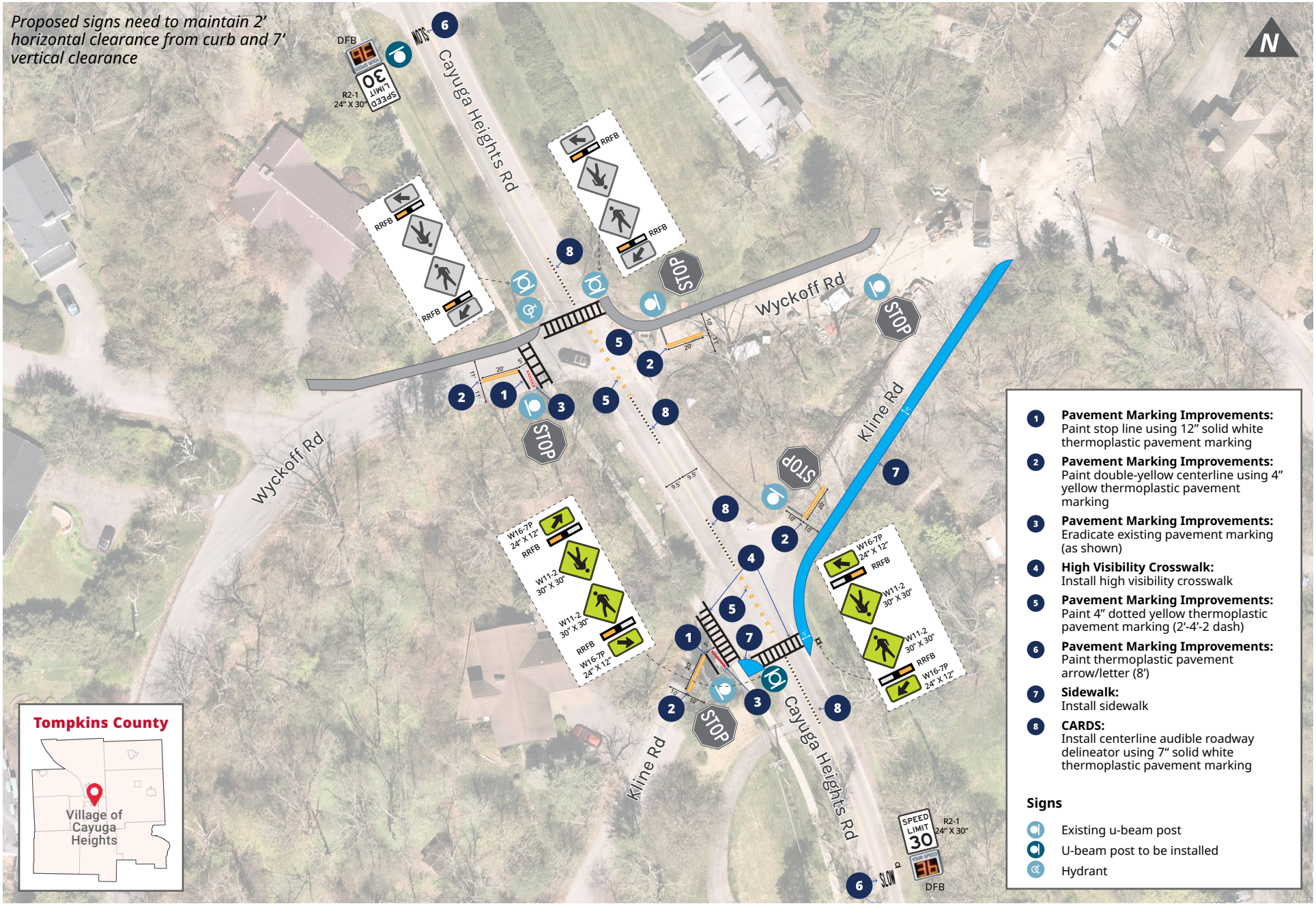
Spatial Distribution of Crashes by User Type

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
10	8	1	0	0	1	6	0	2	4	3

9. CAYUGA HEIGHTS RD/WYCKOFF RD

Countermeasure Recommendations



9. CAYUGA HEIGHTS RD/WYCKOFF RD

Based on the contributing factors to crashes at this intersection, including speeding, failure to yield the right-of-way, and improper lane changes, we recommend the following countermeasures.

Rectangular Rapid Flashing Beacons RRFB

Rectangular Rapid Flashing Beacons (RRFB) consist of two, rectangular- shaped yellow indications, each with a light-emitting diode (LED)-array-based light source. RRFBs flash with an alternating high frequency when activated to enhance the conspicuity of pedestrians at the crossing to drivers.

An RRFB is recommended at the intersection of Cayuga Heights Rd and Kline Rd, supported by marked crosswalks.

High-Visibility Crosswalk

High-visibility crosswalks use patterns (i.e., bar pairs, continental, ladder) that are visible to both the driver and pedestrian from farther away compared to traditional transverse line crosswalks. Adding it would enhance pedestrian safety of residents of the neighborhood.

Add Sidewalk

Sidewalks are paved walkways that are separated from motor vehicles by a curb and gutter. They are intended for pedestrians or people using a wheelchair. Adding sidewalk would help mobility and accessibility of pedestrians of all abilities in the neighborhood.

Speed Feedback Signs

Feedback signs display speeds recorded by speed radar to the driver.

To reduce speeds at the approach of the intersection, speed feedback signs are recommended along Cayuga Heights Rd in advance of Kline Rd and Wyckoff Rd.

East leg (Wyckoff Rd)

North leg (Cayuga Heights Rd)

9. CAYUGA HEIGHTS RD/WYCKOFF RD

Countermeasure	Quantity	Unit	Unit Cost	Total
Concrete Sidewalk (4" thick)	1,300	sq. ft.	$ 32.00	$ 41,600.00
LS Type (Ladder) Crosswalk	4	each	$ 2,100.00	$ 8,400.00
Small Single Post-Mounted Sign	2	each	$ 622.00	$ 1,244.00
Solar Powered Radar Speed Sign	2	each	$ 10,200.00	$ 20,400.00
Rectangular Rapid Flashing Beacon	4	each	$ 13,700.00	$ 54,800.00
Double Yellow Centerline	160	ft.	$ 4.00	$ 640.00
Eradicate Existing Pavement Marking	24	ft.	$ 3.00	$ 72.00
Dotted Yellow Thermoplastic Pavement Markings	56	ft.	$ 4.00	$ 224.00
"SLOW" Pavement Markings	2	each	$ 250.00	$ 500.00
Centerline Audible Roadway Delineator (CARD)	113	ft.	$ 10.00	$ 1,130.00

Subtotal	**$129,010.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 12,901.00
Incidentals, Inflation and Contingencies Estimate (20%)	$ 25,802.00
Construction Cost	**$167,713.00**
Survey (10%)	$ 16,771.30
Design Engineering ($10k + 10%)	$ 26,771.30
Construction Management & Inspection (15%)	$ 25,156.95
Grand Total	**$236,412.55**
Less 10%	$212,771.30
Plus 10%	$260,053.81

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

10. W MAIN ST (NY-13)/NORTH ST

INTERSECTION CHARACTERISTICS

FUNCTIONAL CLASSIFICATION NY-13	Rural Principal Arterials
FUNCTIONAL CLASSIFICATION Main St	Rural Major Collector/ Rural Minor Arterial
AADT NY-13	11,834
AADT Main St	3,896
INTERSECTION TYPE	Rural 4-Leg Signalized
SPEED LIMIT	30 MPH
OWNERSHIP	NYSDOT
ADJACENT LAND USE	Developed/ Commercial

KEY FINDINGS

In the heart of the Village of Dryden, the intersection of Main St and NY-13 serves as the site of commercial activity. This intersection was the site of 27 crashes, including two involving pedestrians, one of which resulted in a serious injury, over the five-year period. To further slow turning vehicle speeds, additional curb extensions are recommended at the northeast, northwest, and southwest corners of the intersection. Additional measures include restricting right turns on red and implementing leading pedestrian intervals to enhance pedestrian safety and reduce conflict points.

EXISTING CONDITIONS

This is a four-legged intersection, situated in a densely populated commercial area, with multiple driveways feeding into all its legs. It is located within 0.5 miles of a school and adjacent to parks like Times Square and Village Green, which are near the north leg of the intersection.

NY-13 is also called North St (north of the intersection) and South St (south of the intersection. Similarly, Main St is W Main St (west of the intersection) and E Main St (east of the intersection). Each leg of the intersection is classified differently: W Main St and North St are principal arterials (other), E Main St is a major collector road, and South St is a minor arterial. W Main St is 45-feet wide, featuring two 11-ft travel lanes, an 8-foot parking lane on the south side, and a gore area on the north. East Main St is 42-ft wide and has three 10-ft-11-ft travel lanes and an 8-ft parking lane, with a curb extension at the intersection on the SE corner. Similarly, North St is 45-ft wide, with two travel lanes (14-ft and 11-ft wide), a gore area extending up to 150-ft, and a dedicated left-turn lane. South St is approximately 45-ft wide but narrows to 35-ft near the intersection due to the curb extension. It features two 14-ft travel lanes, one of which bifurcates into a 10-ft through lane and right-turn lane and a dedicated left-turn lane, along with an 8-ft parking lane.

As per field visit observations, the intersection is controlled by a traffic signal and pedestrian signal and includes a left-turn yield on a flashing yellow sign. There is a two-way stop sign, and a 30-MPH speed limit sign is present. Lane markings and shoulders are visible, but the markings are slightly faded, and the roads exhibit minor cracking. Sidewalks are available, and crosswalks are present on the intersection. The crosswalks feature high-visibility ladder-style markings, which are clearly visible, and accessible curb ramps, though the ramps lack tactile surfaces. Pedestrians were observed crossing the intersection during a field visit, but not always using the crosswalks. The light posts are present on all the legs of the intersection.

10. W MAIN ST (NY-13)/NORTH ST

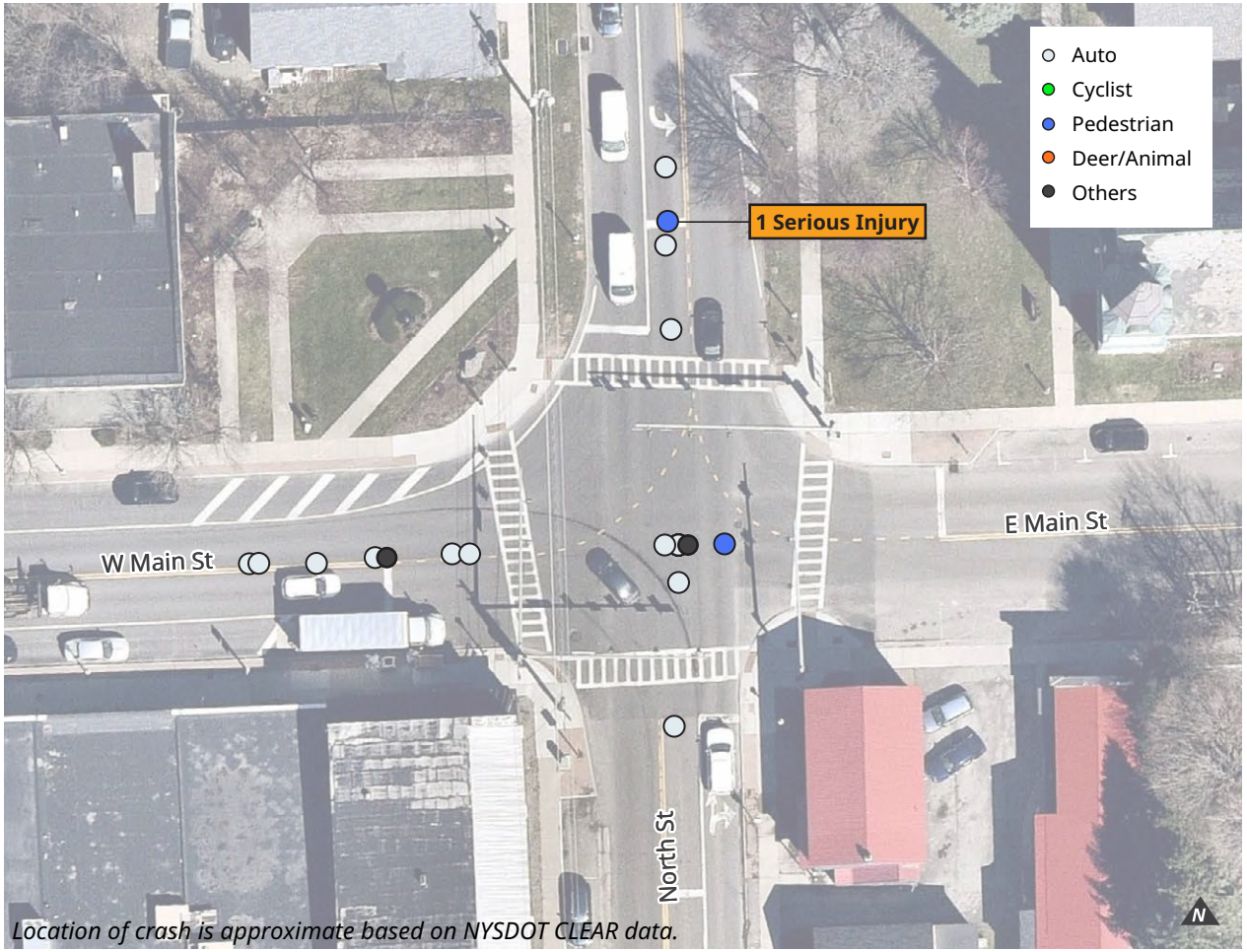
27
Total Crashes

1
Fatal & Serious Injury Crashes

Users Involved

Between 2019 and 2023, the intersection recorded 27 crashes, with an average crash frequency of 5.4 per year. One of the crashes involved a pedestrian collision north of NY-13, resulting in a serious injury. Another pedestrian crash occurred at the center of the intersection.

Motor vehicle crashes have occurred on the west leg of Main St, north leg of NY-13 and center of the intersection. Noted contributing factors are road user behavior and failure to yield right-of-way.



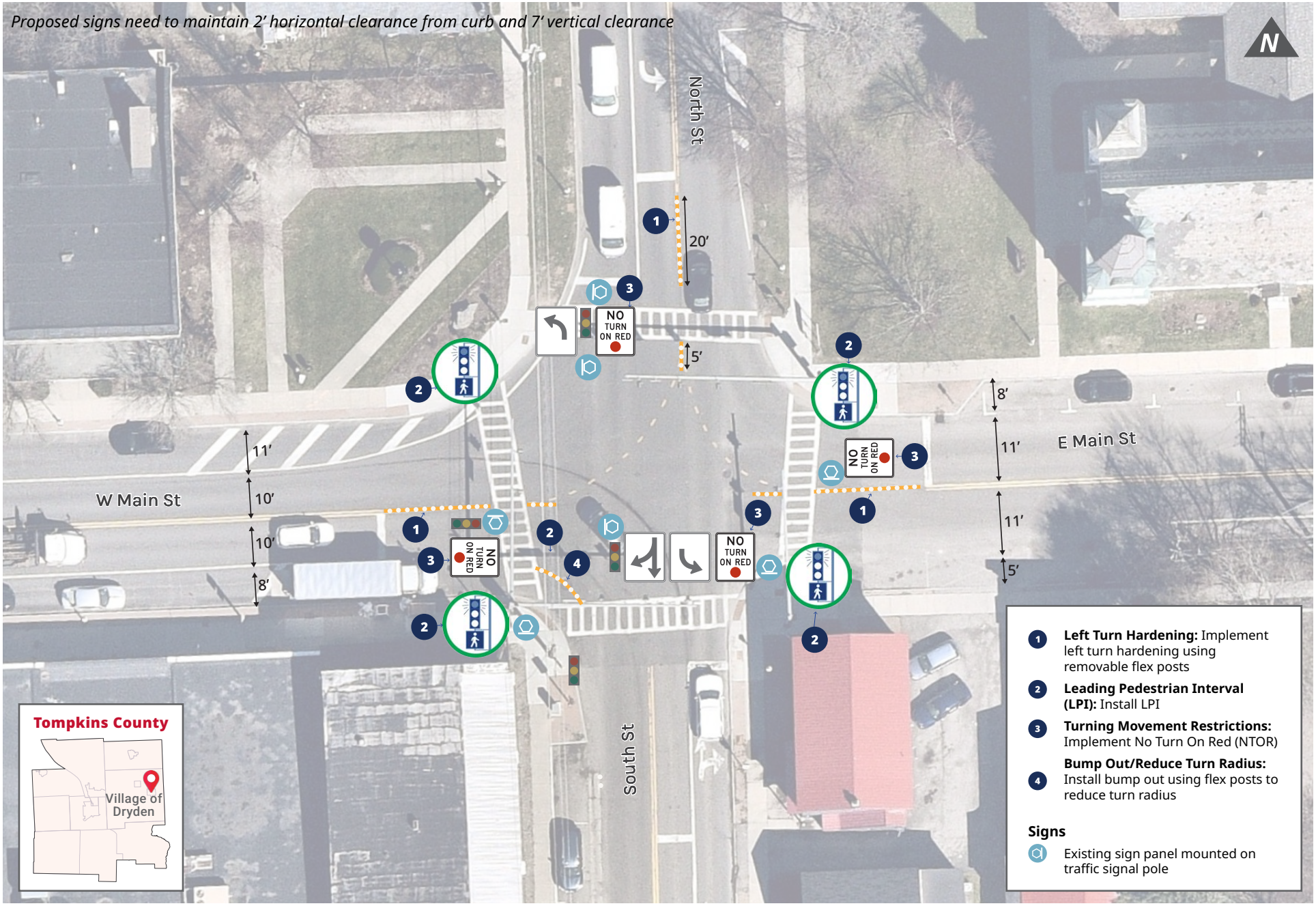
Location of crash is approximate based on NYSDOT CLEAR data.

Spatial Distribution of Crashes by User Type

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
27	23	0	2	0	2	6	0	1	5	2

10. W MAIN ST (NY-13)/NORTH ST



10. W MAIN ST (NY-13)/NORTH ST

Based on the contributing factors to crashes at this intersection, including improper road user behavior and failure to yield the right-of-way, we recommend the following countermeasures.

Left Turn Hardening & Bump Outs

Hardened left turns and centerlines made with removable flexible posts placed along the yellow centerline at an intersection block the diagonal path through the intersection and encourage drivers to turn left at a slower speed. Since the intersection has a high volume of both pedestrians and motor vehicles, hardening the left turn can encourage drivers to lower the speed and reduce potential of conflict with pedestrians while turning left. The removable flex posts must be removed seasonally to allow for winter snow plowing.

Temporary bump outs, made with removable flex posts, can extend the sidewalk or curb line, which reduces the crossing distance for pedestrians and reduce the speed of turning vehicles. The removable flex posts must be removed seasonally to allow for winter snow plowing.

Leading Pedestrian Interval

A leading pedestrian interval (LPI) gives pedestrians the opportunity to enter the crosswalk at an intersection 3-7 seconds before vehicles are given a green indication. Pedestrians can better establish their presence in the crosswalk before vehicles have priority to turn right or left. The intersection is 42-ft to 45-ft wide, which requires a longer walking distance for pedestrians, adding LPI would give priority to pedestrians and additional time to reach the sidewalk.

When evaluating the signal for LPI, it should also be evaluated for Manual of Uniform Traffic Control Devices/ Public Right-Of-Way Accessible Guidelines (MUTCD/PROWAG) compliance and upgrades for Accessible Pedestrian Signal (APS) and Application Programming Interface (API).

West leg (W Main St)

Intersection

10. W MAIN ST (NY-13)/NORTH ST

Countermeasure	Quantity	Unit	Unit Cost	Total
Small Single Post-Mounted Sign	7	each	$ 622.00	$ 4,354.00
Tactical Curb Extensions (removable flexible posts)	6	each	$ 136.00	$ 816.00
Left Turn Hardening (removable flexible posts)	45	each	$ 136.00	$ 6,120.00
Leading Pedestrian Interval (LPI)	4	each	$ 2,000.00	$ 8,000.00

Subtotal	**$ 19,290.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 1,929.00
Incidentals, Inflation and Contingencies Estimate (20%)	$ 3,858.00
Construction Cost	**$ 25,077.00**
Survey (10%)	$ 2,507.70
Design Engineering ($10k + 10%)	$ 12,507.70
Construction Management & Inspection (15%)	$ 3,761.55
Grand Total	**$ 43,853.95**
Less 10%	$ 39,468.56
Plus 10%	$ 48,239.35

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only. Cost estimates for ongoing operations and maintenance are not included.

11. E SHORE DR/CAYUGA HEIGHTS RD

INTERSECTION CHARACTERISTICS

FUNCTIONAL CLASSIFICATION East Shore Dr	Urban Minor Arterial
FUNCTIONAL CLASSIFICATION Cayuga Heights Rd	Urban Major Collector
AADT East Shore Dr	6,999
AADT Cayuga Heights Rd	793
INTERSECTION TYPE	Urban 4-Leg Stop-Controlled
SPEED LIMIT	30 MPH
OWNERSHIP	NYSDOT
ADJACENT LAND USE	Rural/Residential

KEY FINDINGS

East Shore Dr and Cayuga Heights Rd is an acutely angled intersection where seven crashes have occurred between 2019 and 2023. In order to improve limited visibility of the intersection, T-intersection and enhanced signage and pavement markings are recommended.

EXISTING CONDITIONS

The intersection of East Shore Dr and Cayuga Heights Rd is a two-legged stop-controlled intersection, situated in a rural residential area.

Cayuga Heights Rd joins East Shore Dr at an acute angle. East Shore Dr is a two-lane road with two 10-ft lanes and a 6-ft wide shoulder. Cayuga Heights Rd is a two-lane road with 11-ft travel lanes and 4-6-ft shoulders on both sides. Cayuga Heights Rd is slightly elevated before it joins East Shore Dr at its level.

Cayuga Heights Rd and East Shore Dr are stop-controlled at the intersection. There is a curve ahead sign on East Shore Dr in the northbound direction. A residential driveway opens into East Shore Dr 100 feet north of the intersection and has a two-way traffic sign on the East Shore Dr for northbound traffic. There is a stop sign near the intersection for northbound traffic from Cayuga Heights Rd. The lane markings are present but are slightly faded. The shoulder lane markings on Cayuga Heights Rd are not clearly visible. There are no sidewalks or crosswalks present at the intersection. West of the intersection is a gravel lot. There is a streelight present at the intersection.

Intersection (Google Maps)

VILLAGE OF LANSING

11. E SHORE DR/CAYUGA HEIGHTS RD

7
Total Crashes

0
Fatal & Serious Injury Crashes

Users Involved

Between 2019 and 2023, the intersection experienced seven crashes, with an average crash frequency of 1.4 per year. Five crashes out of seven were deer or animal related crashes. One of those resulted in possible injury. The other crashes resulted in vehicle damage. The contributing factors, apart from animal action, involved are alcohol impairment and failure to yield.

Spatial Distribution of Crashes by User Type

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
7	0	0	0	5	2	1	0	0	1	2

11. E SHORE DR/CAYUGA HEIGHTS RD

11. E SHORE DR/CAYUGA HEIGHTS RD

Based on the contributing factors to crashes at this intersection, including crashes related to deer and other animals and failure to yield, we recommend the following countermeasures.

Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections

This countermeasure includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings, at stop-controlled intersections, including the duplication of stop signs on both sides of the sign. These countermeasures increase driver awareness and recognition of the intersections and potential conflicts.

Multiple low-cost countermeasures, such as enhancing pavement markings, adding stop lines and adding deer crossing signs, can all help in improving the safety at this complex, rural intersection.

T - Intersection

Long term, consideration should be given to relocation of the intersection to provide better sightlines for drivers and encourage slower turning speeds at the intersection. Consideration should be given to relocating the intersection further to the south by roughly 150 feet.

While some re-grading of the area and the roadway will be required, keeping the location within roughly 150 feet of the existing intersection reduces the overall impacts while still allowing for adequate turning radius for vehicles. Existing northbound traffic on East Shore Dr faces challenges turning right onto Cayuga Heights Rd, while northbound Cayuga Heights traffic faces limited visibility of traffic on East Shore Dr.

The T-intersection encourages turns to be made at slower speeds and increases visibility for all users. In the existing condition, large vehicles (except for local deliveries) are restricted from Cayuga Heights Rd. The proposed condition keeps those restrictions, but improves the ability of larger vehicles to access Cayuga Heights Rd if needed.

South leg (East Shore Dr) (Google Maps)

Cayuga Heights Rd (Google Maps)

11. E SHORE DR/CAYUGA HEIGHTS RD

Countermeasure	Quantity	Unit		Unit Cost		Total
Small Single Post-Mounted Signs	13	each	$	622.00	$	8,086.00
Stop Bar Pavement Marking	11	ft.	$	3.00	$	33.00
Eradicate Existing Pavement Marking	300	ft.	$	3.00	$	900.00
White Edge Lines	700	ft.	$	4.00	$	2,800.00
Double Yellow Centerline	473	ft.	$	4.00	$	1,892.00
Vegetation Area	1,600	sq. ft.	$	2.00	$	3,200.00
Solid White Line (6")	720	ft.	$	4.00	$	2,880.00
Pavement removal & regrading	9,700	sq. ft.	$	2.00	$	19,400.00
Pavement Reconstruction & Realignment	8,000	sq. ft.	$	20.00	$	160,000.00

Subtotal	**$**	**199,191.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$	19,919.10
Incidentals, Inflation and Contingencies Estimate (20%)	$	39,838.20
Construction Cost	**$**	**258,948.30**
Survey (10%)	$	25,894.83
Design Engineering ($10k + 10%)	$	35,894.83
Construction Management & Inspection (15%)	$	38,842.25
Grand Total	**$**	**359,580.21**
Less 10%	$	323,622.18
Plus 10%	$	395,538.23

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

SEGMENTS

12. MEADOW ST (NY-13 NB) Between W Seneca St & W Green St

SEGMENT CHARACTERISTICS

FUNCTIONAL CLASSIFICATION	Urban Principal Arterial - Other
DESCRIPTION	Urban Multi-Lane Undivided Free Access Two or More Lane One-Way
LENGTH	630 FT
AADT	33,198
SPEED LIMIT	30 MPH
OWNERSHIP	NYSDOT
ADJACENT LAND USE	Commercial

KEY FINDINGS

In downtown Ithaca, the section of NY-13 (Meadow St) between West Seneca St and West Green St was the site of 146 crashes over the five-year period. Five crashes resulted in serious injuries, four of which involved pedestrians, and one which involved a bicyclist. The segment is broken up by numerous wide driveways on both sides of the roadway. Improved high-visibility crosswalks and leading pedestrian intervals are recommended to increase pedestrian safety. Long term, a roadway reconfiguration that removes one general purpose travel lane and allows for the addition of protected bike lanes is recommended.

EXISTING CONDITIONS

The NY-13 NB segment, also called Meadow Street, approximately 630-ft long, runs between West Seneca St and West Green St. It is situated in a commercial area with numerous establishments and parking, with driveways opening directly onto the roadway.

This northbound segment features three signalized intersections: West Seneca St at the northern end, West State St in the center, and West Green St at the southern end. The roadway width varies between 44-ft and 48-ft, with the southern portion comprising three travel lanes ranging from 10-ft to 14-ft, transitioning into four lanes ranging from 11-ft to 14-ft as it approaches West Seneca Street.

As per field visit observations, the lane markings are present but accompanied by severe surface cracking. Pedestrian signals are provided at the West Seneca St and West Green St intersections, but not at West State St. Sidewalks are present but damaged, while crosswalks are inconsistently marked, with some intersection legs lacking crosswalks. During a site visit in December 2024, the segment exhibited moderate congestion.

The West Seneca and NY-13 NB intersection has ladder style crosswalk on east and west legs but has parallel line crosswalk on north and south legs. The crosswalk markings are partially visible. Similar conditions are present on the other two intersections.

Green St and Meadow St intersection

12. MEADOW ST (NY-13 NB) Between W Seneca St & W Green St

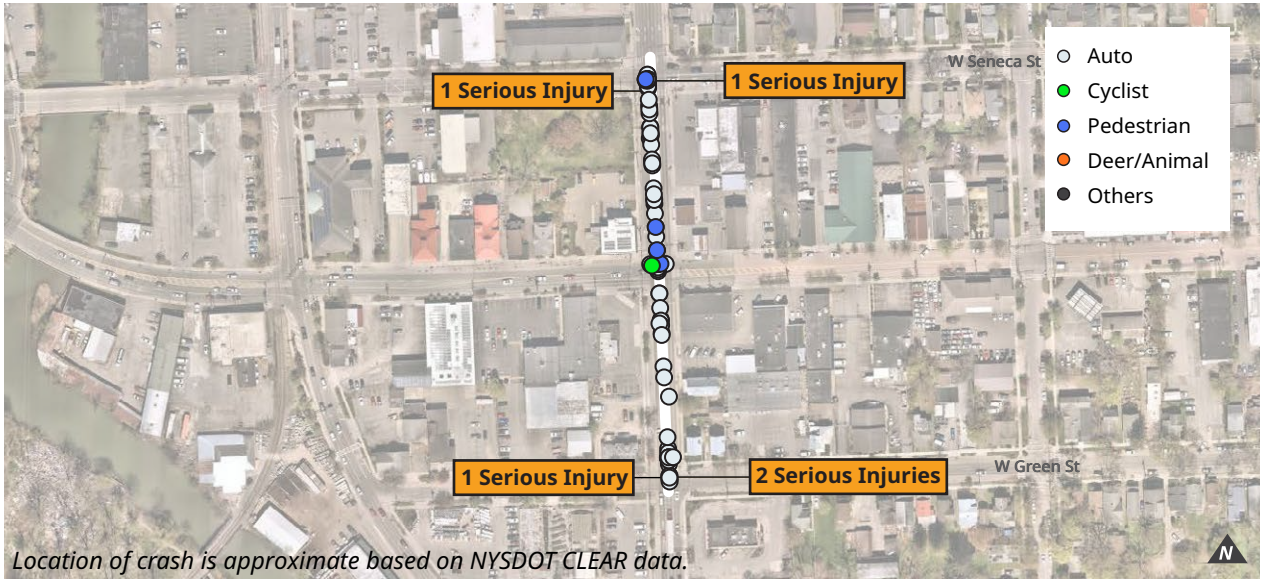
146
Total Crashes

5
Fatal & Serious Injury Crashes

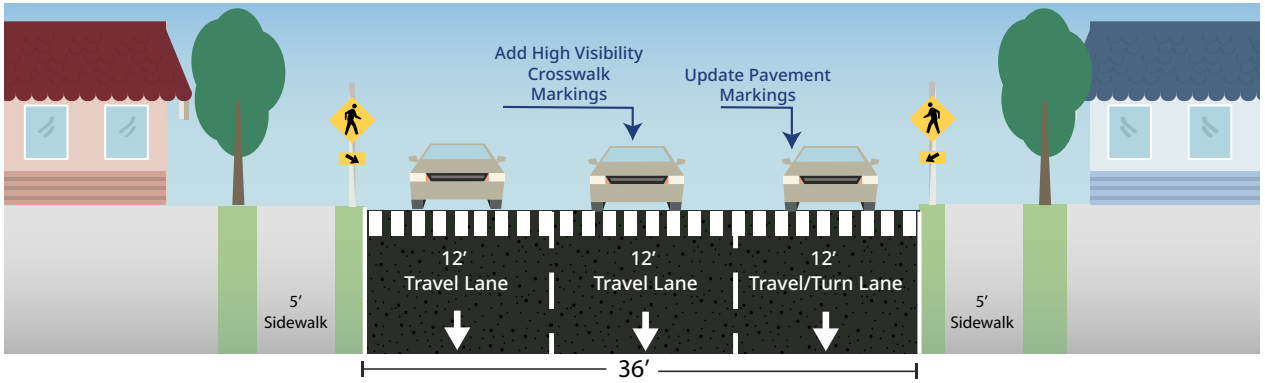
Users Involved

Between 2019 and 2023, 146 crashes occurred, with an average crash frequency of 29.2 per year or slightly over one crash per week. Out of 146 crashes,137 involved motor vehicles and four of these were serious injury crashes: three at the intersection of W Green St, and one W Seneca St. The contributing factors involved obstructed view, disregard of traffic control devices, and failure to yield right-of-way.

One of the serious injuries involved a pedestrian at W Seneca St, caused by a driver's failure to yield at the right-of-way and inattention. Additionally, a crash involving a bicyclist occurred at the intersection of W State St due to failure to yield the right-of-way.



Spatial Distribution of Crashes by User Type



Proposed Typical Section

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
146	137	1	4	0	4	35	0	5	30	4

12. MEADOW ST (NY-13 NB) Between W Seneca St & W Green St

Countermeasure Recommendations

Meadow St (NY-13NB) / W. Seneca St

Meadow St (NY-13NB) / W. Green St

W Seneca St

N Meadow St

W State St

S Meadow St

W Green St

W Green St

N

- **Crosswalk Visibility Enhancements:** Install high-visibility crosswalks, signage, and pavement markings
- **Leading Pedestrian Interval (LPI):** Install LPI
- **Road Safety Audit:** Consider conducting a road safety

12. MEADOW ST (NY-13 NB) Between W Seneca St & W Green St

Based on the contributing factors to the crashes at this segment, including failure to yield the right-of-way, driver inattention, and disregard for traffic control devices, we recommend the following countermeasures.

Crosswalk Visibility Enhancements

These include high-visibility crosswalks and signage and pavement markings. They can help make crosswalks and the pedestrians, bicyclists, wheelchair and other mobility device users, and transit users using them more visible to drivers. These enhancements can also assist users in deciding where to cross.

Leading Pedestrian Interval

A leading pedestrian interval (LPI) gives pedestrians the opportunity to enter the crosswalk at an intersection 3-7 seconds before vehicles are given a green indication. Pedestrians can better establish their presence in the crosswalk before vehicles have priority to turn right or left. One of the pedestrian crashes occurred due to failure to yield right-of-way, LPI can give more time to pedestrian to cross the road and improve safety.

When evaluating the signal for LPI, it should also be evaluated for MUTCD/PROWAG compliance and upgrades for Accessible Pedestrian Signal (APS) and Application Programming Interface (API).

Road Safety Audit

A Road Safety Audit (RSA) examines the performance of a road or intersection by an independent, multidisciplinary team. An RSA can identify potential safety issues and opportunities for improvement for all roadway users and develop a formal report that can be used to implement actions that will improve safety. Cost estimates have not been developed for an RSA.

Bicycle Lanes

A bicycle lane is an exclusive lane designed especially for users on bicycles or other low-speed mobility devices. Separated bicycle lanes are recommended on roadways with higher vehicle volumes and speeds, such as arterials. NY-13 NB segment is included in as a recommended bikeway in the City of Ithaca's Active Transportation Plan and long term, should be evaluated for a bicycle facility. As further conceptual planning and design would be required, a cost estimate has not been developed for the bicycle facility. Close consideration should be given to the presence of driveways on both sides of the street in bicycle facility design.

Green St and Meadow St intersection

South leg (Meadow St)

12. MEADOW ST (NY-13 NB) Between W Seneca St & W Green St

Countermeasure	Quantity	Unit	Unit Cost	Total
LS Type (Ladder) Crosswalk	6	each	$ 2,100.00	$ 12,600.00
Leading Pedestrian Signal (LPI)	3	each	$ 2,000.00	$ 6,000.00

Subtotal	**$ 18,600.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 1,860.00
Incidentals, Inflation and Contingencies Estimate (20%)	$ 3,720.00
Construction Cost	**$ 24,180.00**
Survey (10%)	$ 2,418.00
Design Engineering ($10k + 10%)	$ 12,418.00
Construction Management & Inspection (15%)	$ 3,627.00
Grand Total	**$ 42,643.00**
Less 10%	$ 38,378.70
Plus 10%	$ 46,907.30

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

13. 76 RD Between Yaple Rd & Smith Rd

SEGMENT CHARACTERISTICS

FUNCTIONAL CLASSIFICATION	Rural Minor Arterial
DESCRIPTION	Rural Two-Lane Undivided Free Access Two-Lane Two-Way
LENGTH	2 mi
AADT	N/A
SPEED LIMIT	35 MPH
OWNERSHIP	Tompkins County
ADJACENT LAND USE	Rural/Agricultural

KEY FINDINGS

Seventy Six Rd between Yaple Rd and Smith Rd in the Town of Caroline was the site of four crashes including two that resulted in serious injuries during the five year period. Adding speed feedback signs, wider edge lines, and additional warning signage in advance of the stop-controlled intersections at Yaple Rd and Smith Rd is recommended.

EXISTING CONDITIONS

Seventy-Six Rd is a rural road surrounded by agricultural land. The segment is a two- mile long stretch from Yaple Rd (north) to Smith Rd (south). The segment is classified as minor arterial and the Yaple Rd and Smith Rd are both local roads.

Seventy Six Rd is two lane road of about 20-22-ft width. The travel lanes are approximately 10-11-ft wide.

As per the field visit observation, there is minimal signage along the entire segment. The lanes are marked, and no shoulders are present on the segment. The edge of pavement is in poor condition, with sections partially visible, and the road surface exhibits signs of infrequent and minor cracking. There are no pedestrian facilities or traffic calming features.

North leg (Seventy Six Rd)

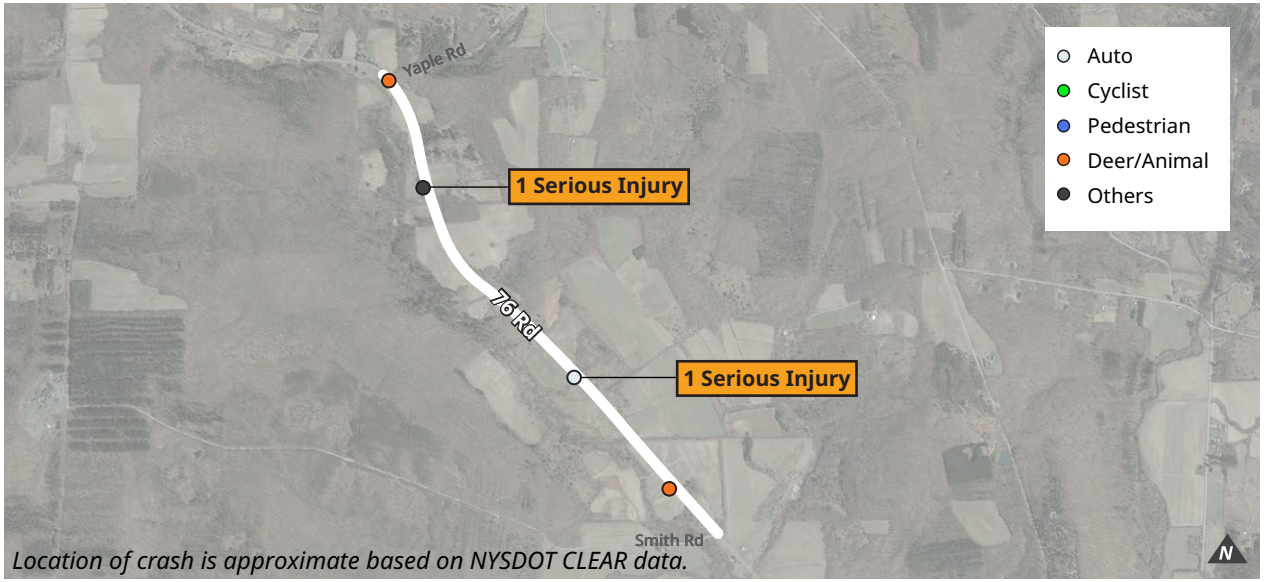
13. 76 RD Between Yaple Rd & Smith Rd

4
Total Crashes

2
Fatal & Serious Injury Crashes

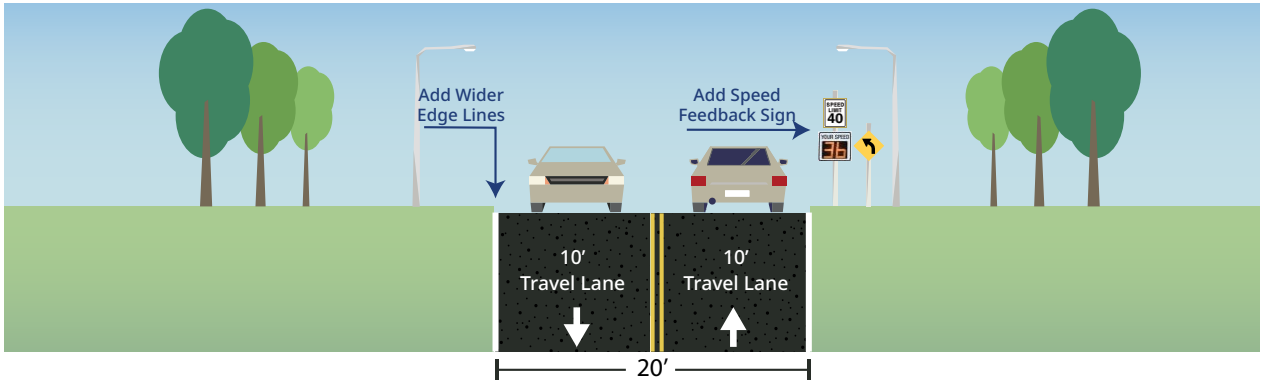
Users Involved

Between 2019 and 2023, four crashes occurred along this segment, with an average crash frequency of 0.8 per year. Two out of four crashes were serious injury crashes. One serious injury crash involved motor vehicle collision, and one involved collision with a tree. The contributing factors for motor vehicle crash were failure to keep right and disregard of traffic control devices.



Location of crash is approximate based on NYSDOT CLEAR data.

Spatial Distribution of Crashes by User Type



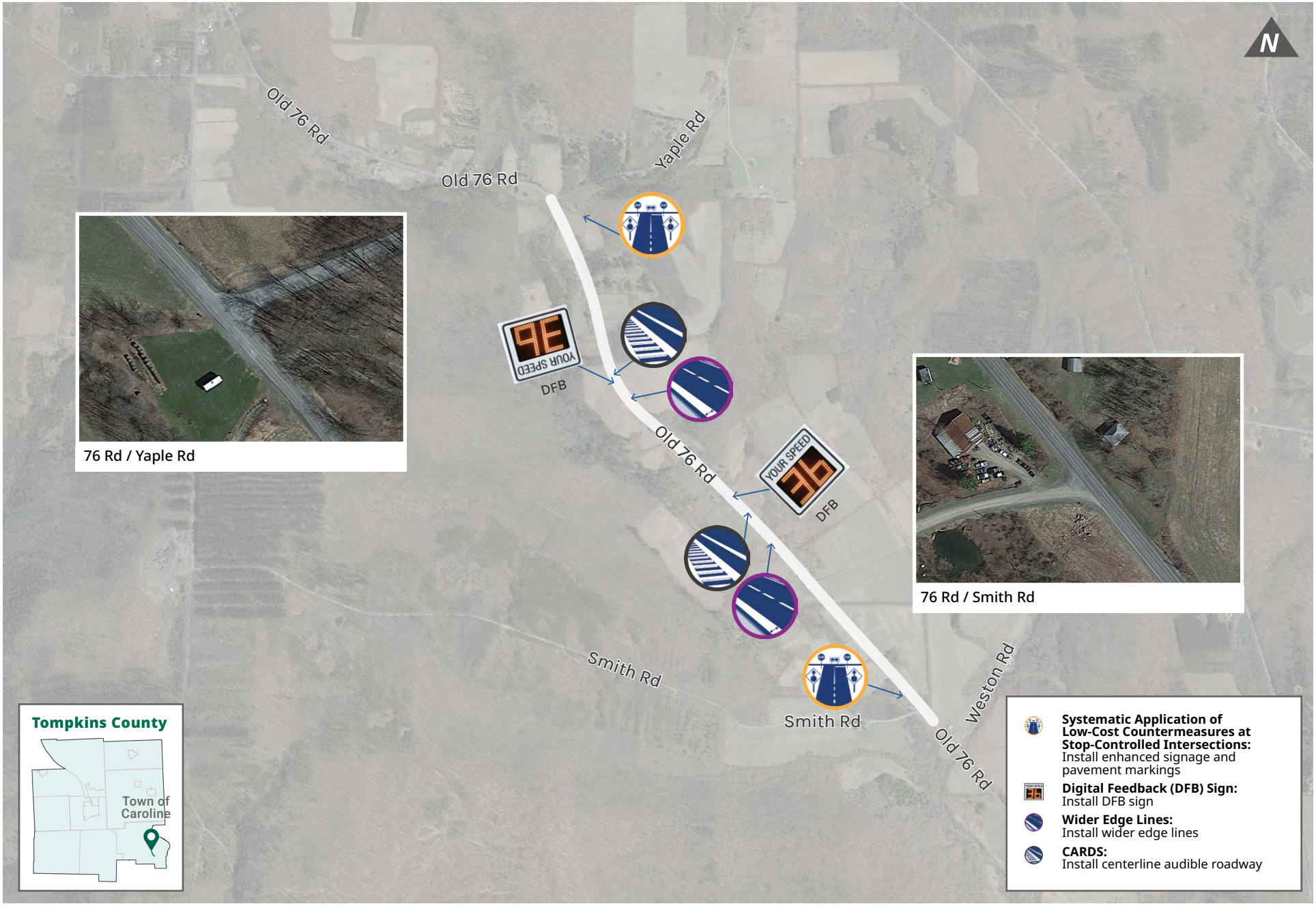
Proposed Typical Section

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
4	1	0	0	2	1	2	0	2	0	2

13. 76 RD Between Yaple Rd & Smith Rd

Countermeasure Recommendations



76 Rd / Yaple Rd

76 Rd / Smith Rd

13. 76 RD Between Yaple Rd & Smith Rd

Based on the contributing factors to the crashes at this segment, including failure to keep right and disregard for traffic control devices, we recommend the following countermeasures.

Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections

Includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings. These countermeasures can help increase driver awareness and recognition of the intersections on Seventy Six Rd and potential conflicts.

Speed Feedback Signs

Feedback signs display speeds recorded by speed radar to the driver.

Seventy Six Rd is a narrow corridor and speed feedback signs would help to reduce vehicle speeds and enhance safety.

Wider Edge Lines

Wider edge lines enhance the visibility of travel lane boundaries compared to traditional edge lines. It is recommended to increase the edge lines are from traditional 4 inches width to width of 6 inches to enhance visibility of travel lanes to the driver.

South leg (Seventy Six Rd)

Six inch edge lines on rural roadways with posted speed limit of 45-MPH or more is the standard practice of NYSDOT. For further information see EI 18-008.

13. 76 RD Between Yaple Rd & Smith Rd

Cost Estimates

Countermeasure	Quantity	Unit	Unit Cost	Total
Small Single Post-Mounted Signs	6	each	$ 622.00	$ 3,732.00
Solar Powered Radar Feedback Signs	2	each	$ 10,200.00	$ 20,400.00
Edge Lines 6"	29,230	ft.	$ 3.00	$ 87,690.00
Centerline Audible Roadway Delineator (CARD)	9,500	ft.	$ 5.00	$ 47,500.00

Subtotal	**$159,322.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 15,932.20
Incidentals, Inflation and Contingencies Estimate (20%)	$ 31,864.40
Construction Cost	**$207,118.60**
Survey (10%)	$ 20,711.86
Design Engineering ($10k + 10%)	$ 30,711.86
Construction Management & Inspection (15%)	$ 31,067.79
Grand Total	**$289,610.11**
Less 10%	$260,649.10
Plus 10%	$318,571.12

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

14. DANBY RD (NY-96B) Between Miller Rd & Michigan Hollow Rd

SEGMENT CHARACTERISTICS

FUNCTIONAL CLASSIFICATION	Rural Major Collector Road
DESCRIPTION	Rural Two-Lane Undivided Free Access Two-Lane Two-Way
LENGTH	1.3 mile
AADT	5,474
SPEED LIMIT	40 MPH
OWNERSHIP	NYSDOT
ADJACENT LAND USE	Rural/Agricultural

KEY FINDINGS

NY-96B (Danby Rd) between Miller Rd and Michigan Hollow Rd in the Town of Danby was the site of 46 crashes, five of which resulted in serious injuries over the five-year period. In order to reduce speeds through the corridor, speed feedback signs are recommended. Additional streetlighting at key intersections is recommended to improve night-time visibility.

EXISTING CONDITIONS

The segment of NY-96B (also known as Danby Rd), approximately 1.3-miles long, is situated in an agricultural area and extends from W Miller Rd to Michigan Hollow Rd. This segment includes seven intersections and features a road width ranging from 40-ft to 50-ft feet, with two travel lanes and shoulders, one in each direction, each approximately 11-ft wide. South of the Hornbrook Rd intersection, NY-96B widens and splits the northbound travel lane into a through lane and an 11-ft-wide right-turn lane, which transitions into a gore area north of the intersection. Similarly, north of the Gunderman Rd intersection, a right-turn lane is present for southbound traffic, transitioning into a gore area beyond the intersection. Similar configurations are observed near the Bald Hill Rd intersection for the southbound travel lane.

Signage along the road includes advance warning signs, deer crossing signs, and an horse and buggy sign crossing sign. A bus stop is located at the intersection of Gunderman Rd and NY-96B. There are no pedestrian facilities along the segment or any traffic calming devices. There are no crosswalks or sidewalks present at any of the intersections. For illumination in dark conditions, light posts are present at some intersections.

As per the field visit, the lane markings and shoulders are present and clearly visible, and the pavement markings are in excellent condition. The road surface was newly paved as of November 2024 and is in excellent condition. During the site observation, a jogger was noted running along the shoulder of NY-96B. There are no sidewalks or crosswalks or other pedestrian facilities at any of the intersections.

North leg (Danby Rd)

14. DANBY RD (NY-96B) Between Miller Rd & Michigan Hollow Rd

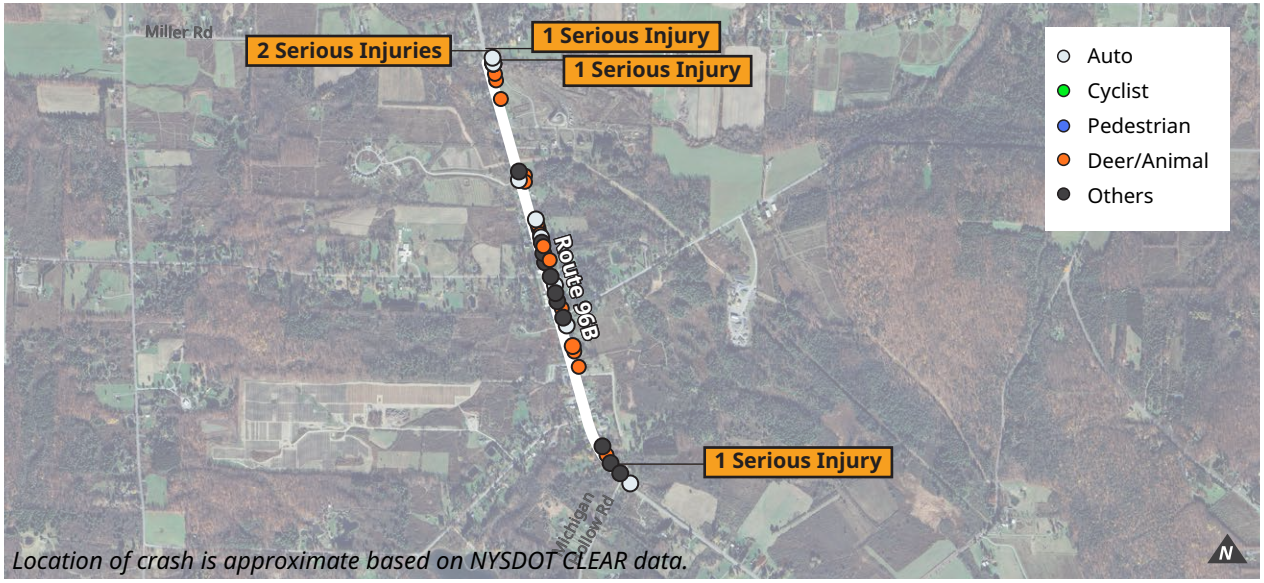
46
Total Crashes

5
Fatal & Serious Injury Crashes

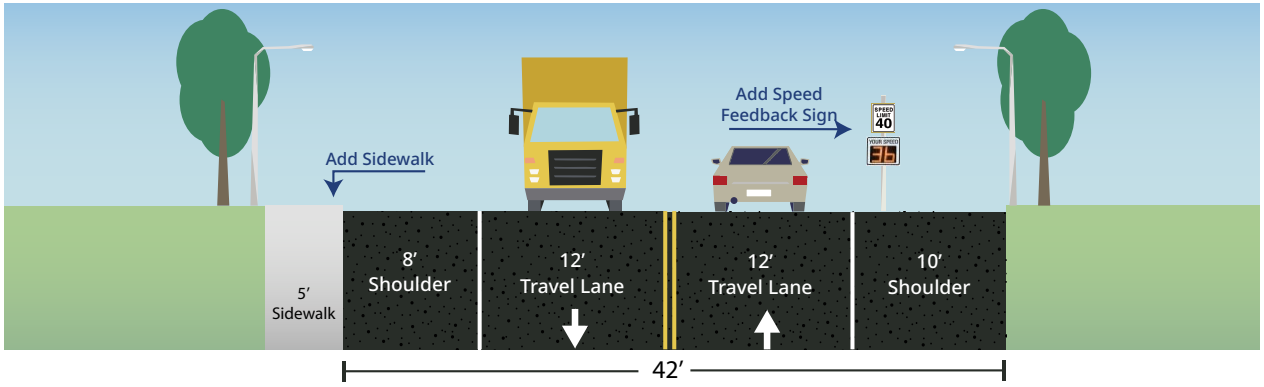
Users Involved

Between 2019 and 2023, 46 crashes occurred at this segment, with an average crash frequency of 9.2 per year.

Out of 46 crashes occurred at the segment, there were five serious injuries. The serious injury crash at Michigan Hollow Rd intersection occurred due to speeding and failure to yield right-of-way. Eleven crashes involved collisions with motor vehicles and three of them resulted in serious injuries. The contributing factors involved unsafe speed, unsafe lane change and road user behavior. Out of 19 animal related crashes, 16 were collisions with a deer. The serious injury crashes were concentrated near the intersections of Miller Rd and Michigan Hollow Rd.



Spatial Distribution of Crashes by User Type

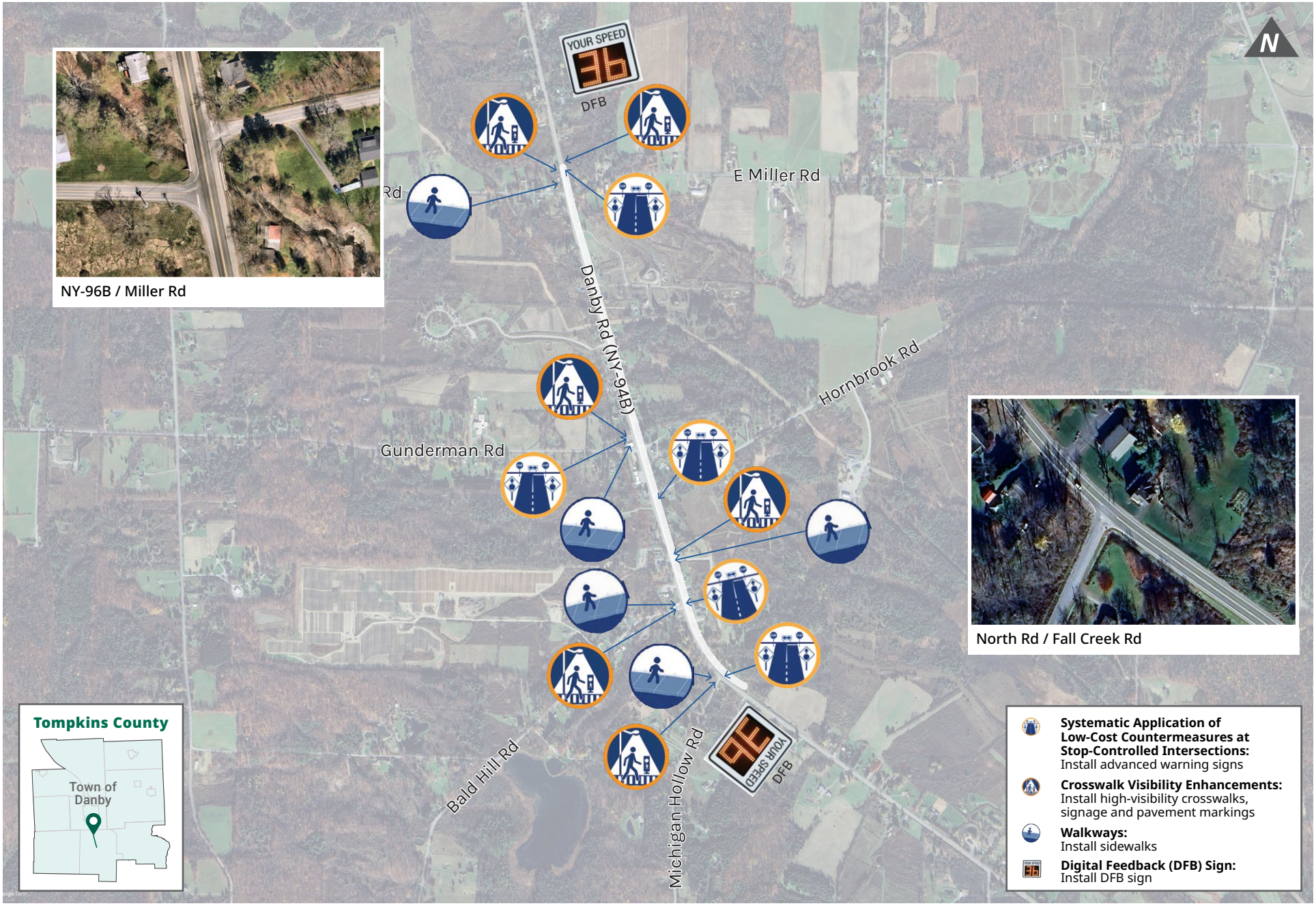


Proposed Typical Section

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
46	11	0	0	19	16	6	0	5	1	3

14. DANBY RD (NY-96B) Between Miller Rd & Michigan Hollow Rd



NY-96B / Miller Rd

North Rd / Fall Creek Rd

14. DANBY RD (NY-96B) Between Miller Rd & Michigan Hollow Rd

Based on the contributing factors to the crashes along this segment, including speeding, unsafe lane changes, and failure to yield the right-of-way, we recommend the following countermeasures.

Systematic Application of Low-Cost Countermeasures at Stop-Controlled Intersections

This includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings. These countermeasures increase driver awareness and recognition of the intersections and potential conflicts. Adding advance warning signs is recommended along this segment in order to better alert drivers of roadway changes.

Crosswalk Visibility Enhancements

These include high-visibility crosswalks, lighting, and signage and pavement markings. They can help make crosswalks and the pedestrians, bicyclists, wheelchair and other mobility device users, and transit users using them more visible to drivers. This recommendation is selected for this segment due to the number of intersections along this route. Crosswalk enhancements improve the safety for pedestrians and reduce the speed of vehicles.

South leg (Danby Rd)

Add Sidewalk

Sidewalks are paved walkways that are separated from motor vehicles by a curb and gutter. They are intended for pedestrians or people using a wheelchair. This recommendation is selected for this segment since no sidewalk currently exists along the roadway. Adding a sidewalk at locations where there are bus stops will improve the pedestrian and transit rider experience.

Speed Feedback Sign

Feedback signs display speeds recorded by speed radars to the driver. This is recommended along this segment in order to slow drivers and improve safety for both pedestrians and vehicles.

Bike Lanes

Long term, consideration should be given to addition of bike lanes along Danby Rd. Further study is needed to determine the suitability of the road for bike lanes. Accordingly, conceptual designs and cost estimates have not been developed.

14. DANBY RD (NY-96B) Between Miller Rd & Michigan Hollow Rd

Countermeasure	Quantity	Unit		Unit Cost	Total
Concrete Sidewalk (4" thick, 5' wide) (assumed at 100 linear feet at 10 bus stops)	1,000	ft.	$	160.00	$160,000.00
LS Type (Ladder) Crosswalk	6	each	$	2,100.00	$ 12,600.00
Small Single Post-Mounted Signs	14	each	$	622.00	$ 8,708.00
Solar Powered Radar Speed Sign	2	each	$	10,200.00	$ 20,400.00

Subtotal	**$201,708.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 20,170.80
Incidentals, Inflation and Contingencies Estimate (20%)	$ 40,341.60
Construction Cost	**$262,220.40**
Survey (10%)	$ 26,222.04
Design Engineering ($10k + 10%)	$ 36,222.04
Construction Management & Inspection (15%)	$ 39,333.06
Grand Total	**$363,997.54**
Less 10%	$327,597.79
Plus 10%	$400,397.29

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

15. NORTH RD Between Fall Creek Rd & Cortland Rd (NY-13)

SEGMENT CHARACTERISTICS

FUNCTIONAL CLASSIFICATION	Rural Minor Collector Road
DESCRIPTION	Rural Two-Lane Undivided Free Access Two-Lane Two-Way
LENGTH	2.4 mile
AADT	1,302
SPEED LIMIT	40 MPH
OWNERSHIP	Tompkins County
ADJACENT LAND USE	Rural/Agricultural

KEY FINDINGS

North Rd between Fall Creek Rd and NY-13 (Cortland Rd) was the site of 31 crashes including three that resulted in serious injuries. In order to reduce speeds along the corridor, speed feedback signs are recommended. At two-way stop-controlled intersections along the corridor, additional warning signs are recommended.

EXISTING CONDITIONS

North Rd is a 2.4-mile-long minor collector road extending from the intersection of Fall Creek Rd to NY-13. The segment is primarily surrounded by agricultural land, with residential and commercial driveways connecting to it. There are six intersections along the segment, including intersections with Dutcher Rd, Annee Ln, and Mott Rd. The road width ranges from 24-ft to 26-ft, with two 10-ft-wide travel lanes, one in each direction.

As per field visit observations, the lane markings are present, but they are slightly faded, and the road surface shows infrequent minor cracking. The intersections lack traffic signals but have various signage, including two-way stop signs at Fall Creek Rd and Malloryville Rd, as well as signal-ahead, turn-ahead, and intersection-ahead signs.

Notably, Dutcher Rd intersects North Rd at an acute angle, lacks pavement markings, and has no crosswalk or sidewalk, though a stop sign is present. Similar conditions are observed at Annee Ln and Mott Rd, where markings are faded or absent. At its southern terminus, North Rd intersects NY-13 at an acute angle and merges directly into it. No pedestrian facilities are present at any intersection.

South leg (North Rd)

15. NORTH RD Between Fall Creek Rd & Cortland Rd (NY-13)

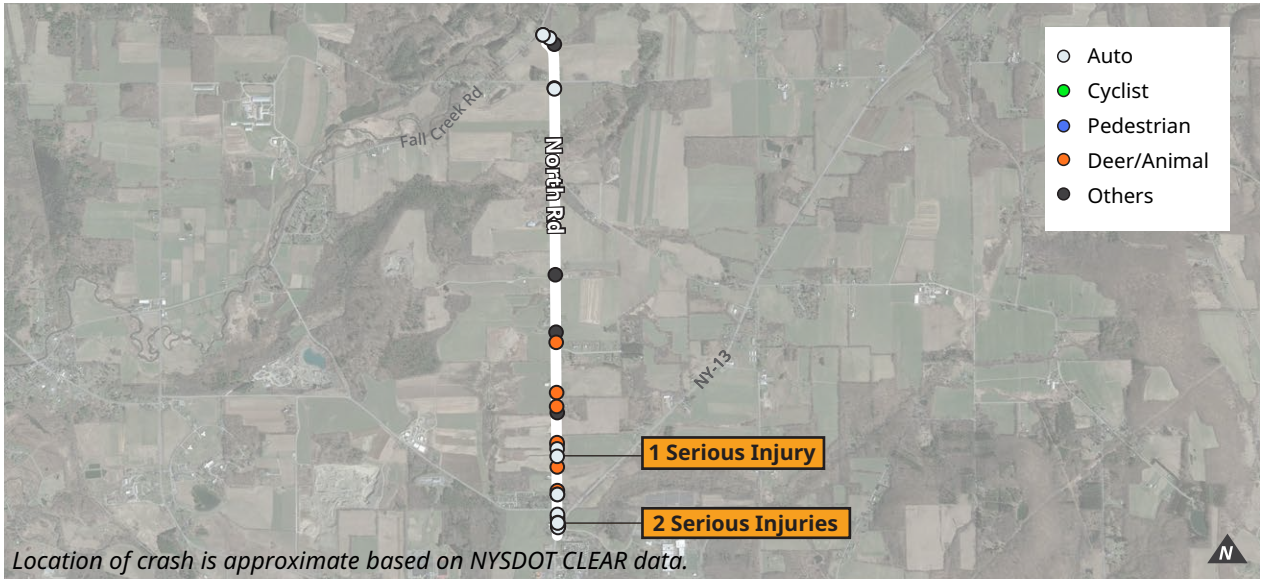
31
Total Crashes

3
Fatal & Serious Injury Crashes

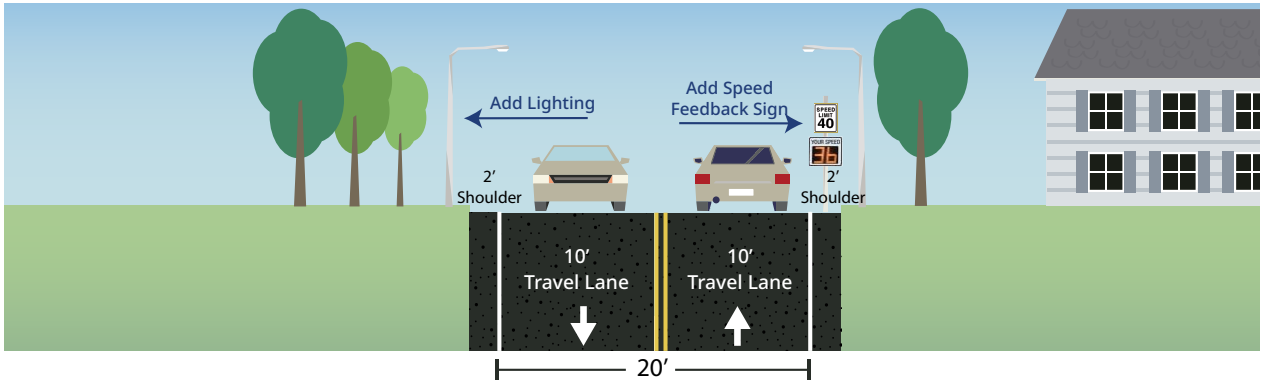
Users Involved

Between 2019 and 2023, 31 crashes occurred at the segment, with an average frequency of 6.2 per year. Three crashes resulted in serious injuries. Two serious injuries occurred at the intersection of North Rd and NY-13. The contributing factors involved obstructed view and unsafe backing and turning movement.

The crashes are mainly concentrated near various intersections on the segment such as Malloryville Rd, Annee Lane, Mott Rd, Fall Creek Rd, and NY-13.



Spatial Distribution of Crashes by User Type



Proposed Typical Section

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
31	16	0	0	9	6	5	0	3	2	4

15. NORTH RD Between Fall Creek Rd & Cortland Rd (NY-13)

Countermeasure Recommendations

North Rd / Fall Creek Rd

North Rd / NY-13

Fall Creek Rd

E Malloryville Rd

DFB

YOUR SPEED

Fall Creek Rd

North Rd

Dutcher Rd

Annee Ln

Mott Rd

Cortland Rd (NY-13)

Tompkins County

Systematic Application of Low-Cost Countermeasures at Stop-Controlled Intersections:
Enhance signage

Lighting:
Improve lighting

Digital Feedback (DFB) Sign:
Install DFB sign

15. NORTH RD Between Fall Creek Rd & Cortland Rd (NY-13)

Based on the contributing factors to the crashes along this segment, including obstructed views, unsafe backing, and improper turning movements, we recommend the following countermeasures.

Systematic Application of Low-Cost Countermeasures at Stop-Controlled Intersections

Includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings. These countermeasures increase driver awareness and recognition of the intersections and potential conflicts. This recommendation is added to enhance signage on the route to reduce distraction and improve alertness of drivers on the segment.

Lighting

The goal of lighting should be to illuminate with the road to make it easier for a driver to visually identify pedestrians and other objects on/alongside the road. This involves carefully placing the luminaires in forward locations to avoid a silhouette effect of the pedestrian. This recommendation is to improve safety for drivers and pedestrians along the segment.

Dutcher Rd and North Rd intersection

In accordance with NYSDOT policies, the local municipality must take on recurring electricity costs for new lighting. Fixtures different from NYSDOT standard fixtures, such as cobra-style lighting, would prequire a betterment from the municipality.

Speed Feedback Sign

Speed radars measure vehicle speed to reduce speeding and crashes. Feedback signs display the recorded speed to the driver. This is recommended to reduce speeding along the corridor.

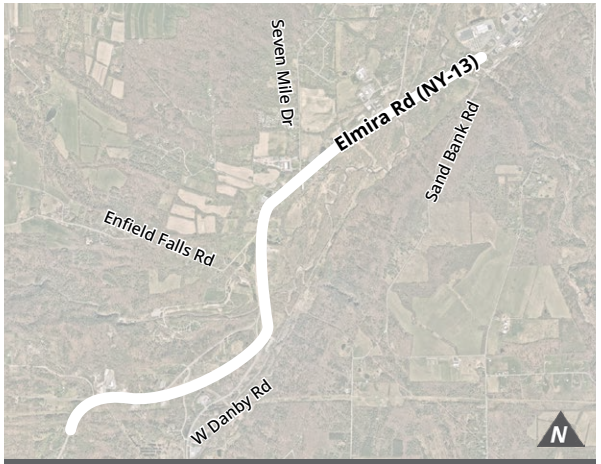
15. NORTH RD Between Fall Creek Rd & Cortland Rd (NY-13)

Countermeasure	Quantity	Unit	Unit Cost	Total
Small Single Post-Mounted Signs	12	each	$ 622.00	$ 7,464.00
Solar Powered Radar Speed Sign	4	each	$ 10,200.00	$ 40,800.00
Streetlighting	4	each	$ 8,220.00	$ 32,880.00

Subtotal	**$ 81,144.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 8,114.40
Incidentals, Inflation and Contingencies Estimate (20%)	$ 16,228.80
Construction Cost	**$105,487.20**
Survey (10%)	$ 10,548.72
Design Engineering ($10k + 10%)	$ 20,548.72
Construction Management & Inspection (15%)	$ 15,823.08
Grand Total	**$152,407.72**
Less 10%	$137,166.95
Plus 10%	$167,648.49

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

16. ELMIRA RD (NY-13) From the Town of Newfield Line to City of Ithaca Line



SEGMENT CHARACTERISTICS

FUNCTIONAL CLASSIFICATION	Urban Principal Arterial/Rural Principal Arterial
DESCRIPTION	Rural Two-Lane Undivided Free Access Two-Lane Two-Way
LENGTH	2.4 mile
AADT	17,437
SPEED LIMIT	45/55 MPH
OWNERSHIP	NYSDOT
ADJACENT LAND USE	Developed/ Commercial

KEY FINDINGS

NY-13 (Elmira Rd) in the Town of Ithaca was the site of 166 crashes, including eight that resulted in serious injury and one that resulted in a fatality over the five-year period. In order to reduce speeds along the corridor, speed feedback signs are recommended. To improve safety for bus riders and pedestrians, bus stop improvements are recommended at stops along the corridor.

EXISTING CONDITIONS

The segment of NY-13 (also known as Elmira Rd) connects City of Ithaca to Town of Newfield via Town of Ithaca. It is lined with commercial establishments like car services and hotels, and proximate to Buttermilk Falls State Park and Robert H. Treman State Park.

The road width varies significantly along the corridor, ranging from 75-ft near the Five Mile Drive intersection to 35-ft to 40-ft further south. At the northern end, the segment features four travel lanes of 11-ft which widens to five travel lanes, including two through lanes, a center turn lane, and shoulders on both sides near the Five Mile Dr intersection. Approximately 700-ft south of the intersection, the road narrows to 50-ft and further reduces to 35-ft to 40-ft as it continues southward until Enfield Falls Rd, transitioning into a two-lane configuration with one travel lane in each direction.

South of Enfield Falls Rd, NY-13 expands to 60-ft to 65-ft with four travel lanes of 11-ft, two in each direction and shoulders on both sides.

NY-13 gets bifurcated into northbound and southbound roads for 0.8-miles before merging again. Both north and southbound roads further bifurcate into NY-13 and West Danby Rd (or NY-34). Decker Rd intersects with both northbound and southbound roads and NY-13 road further connects to more commercial driveways.

There are multiple bus stops along the segment, including at Buttermilk Falls Rd, Brewery Ln, Seven Mile Dr, Enfield Falls Rd, and one bus stop each at the bifurcated northbound and southbound NY-13 road. The bus stops are only marked with signs and lack a shelter or level standing area. The segment lacks sidewalk or other pedestrian facilities and no crosswalks are available for pedestrians to access the bus stop.

As per the field visit observations, the segment includes six intersections, with a traffic signal only at the Five Mile Dr intersection. Signage along the segment includes stop signs, deer crossing, speed limit, state park, driveway, bus stop, and truck signs. Lane markings are present and mostly clearly visible but are slightly faded at some sections. Additionally, the segment lacks sufficient light posts for illumination, posing challenges for visibility in the dark.

16. ELMIRA RD (NY-13) From the Town of Newfield Line to City of Ithaca Line

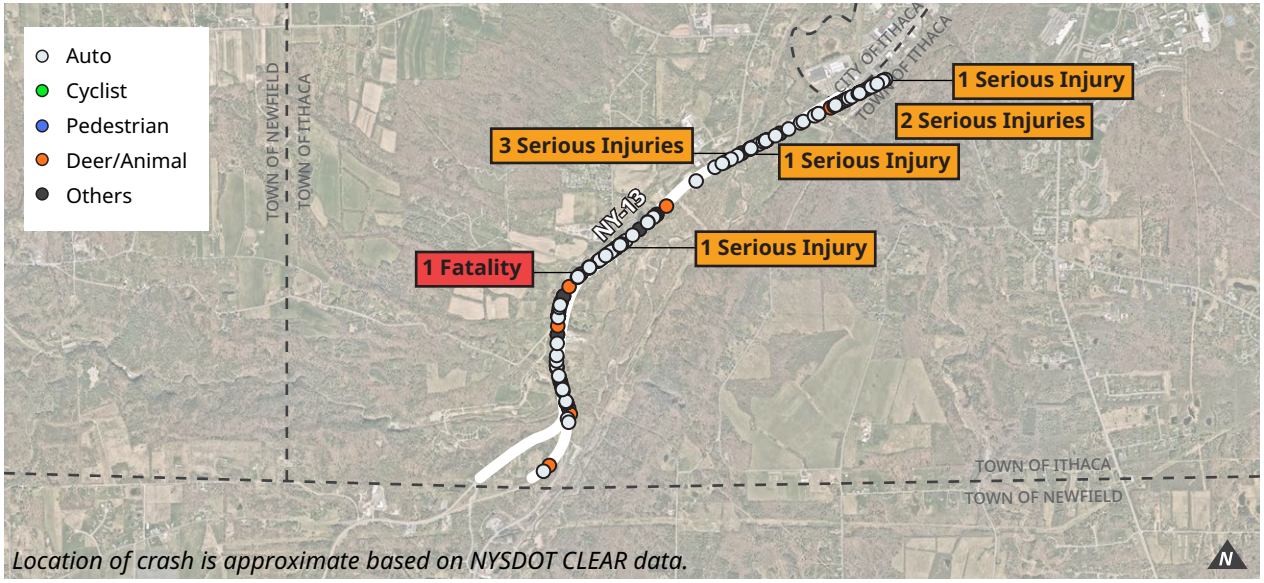
166
Total Crashes

9
Fatal & Serious Injury Crashes

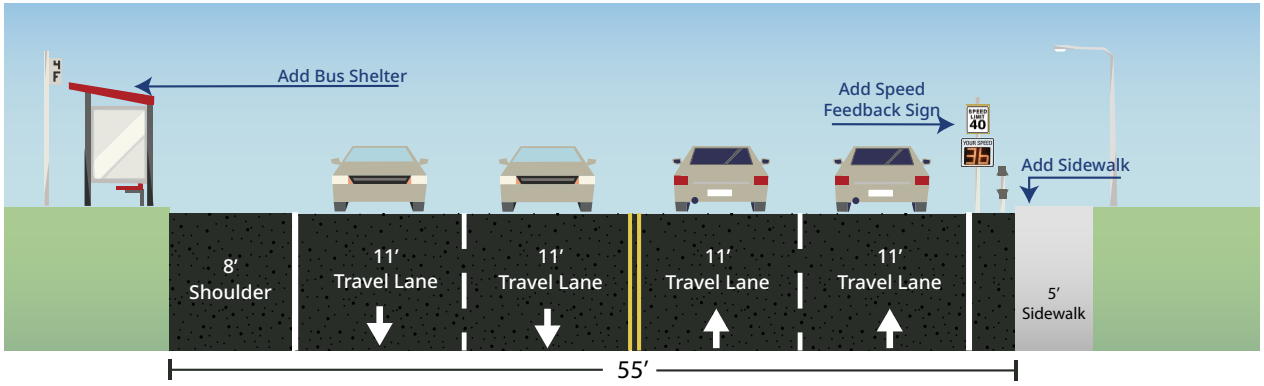
Users Involved

Between 2019 and 2023, 166 crashes occurred at the segment, with an average frequency of 33.2 per year. Out of 116 crashes, eight resulted in serious injuries and one crash resulted in a fatality.

The contributing factors to serious injuries include aggressive driving, unsafe speed and failure to yield right-of-way. In the fatal crash, improper lane usage and failure to yield the right-of-way were identified as contributing factors. All crashes resulting in serious injuries and the fatality exclusively involved motor vehicles, with no deer or other animals cited as contributing factors. One of the serious injury crashes — a collision with a sign post — occurred under dark conditions.



Spatial Distribution of Crashes by User Type



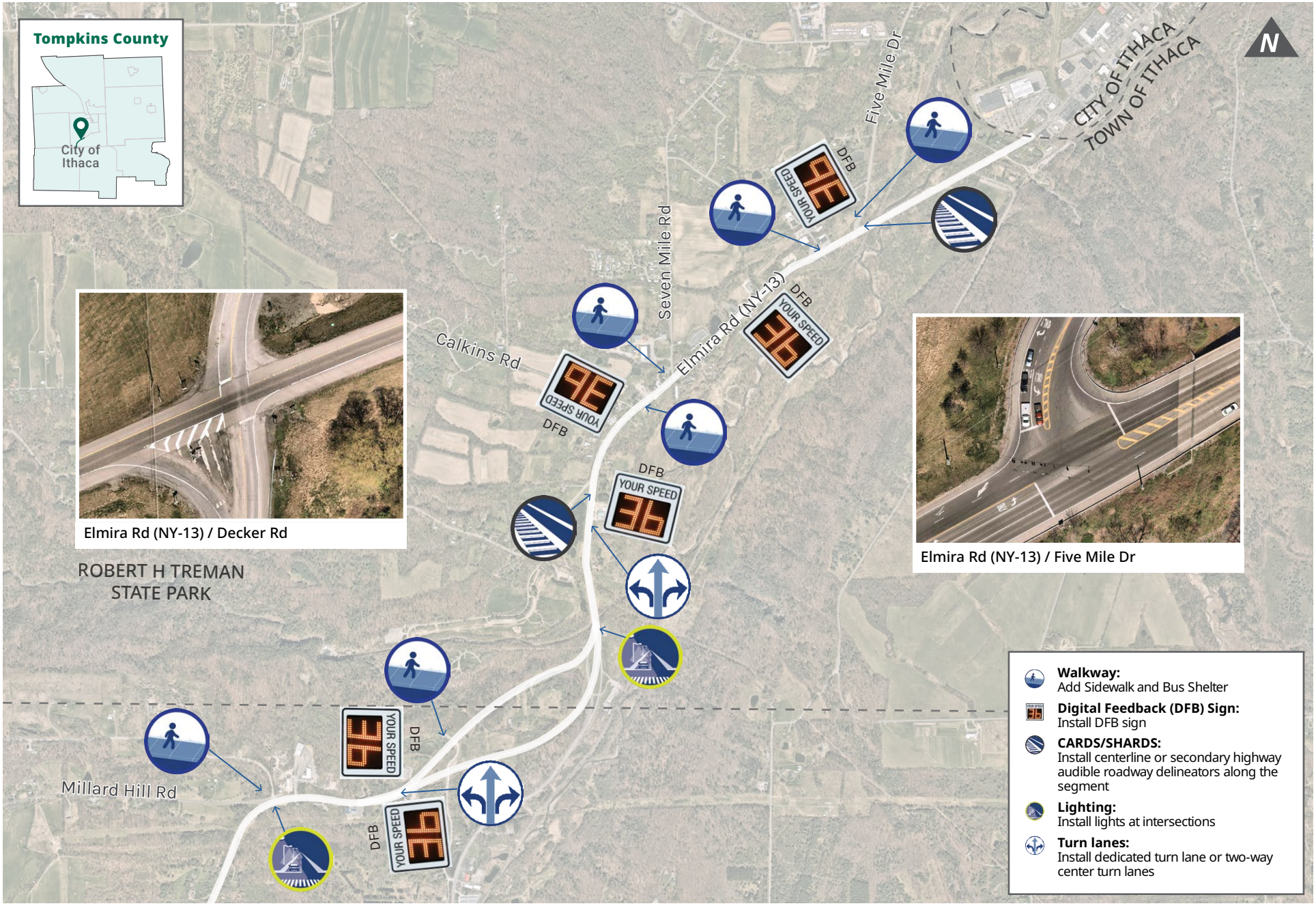
Proposed Typical Section

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
166	116	0	0	32	18	36	1	8	27	3

16. ELMIRA RD (NY-13) From the Town of Newfield Line to City of Ithaca Line

Countermeasure Recommendations



16. ELMIRA RD (NY-13) From the Town of Newfield Line to City of Ithaca Line

Based on the contributing factors to the crashes along this segment, including aggressive driving, speeding, and failure to keep right, we recommend the following countermeasures.

Sidewalk

Sidewalks are paved walkways that are separated from motor vehicles by a curb and gutter. They are intended for pedestrians or people using a wheelchair. There are multiple commercial establishments and bus stops along the corridor. Adding sidewalks along NY-13 will improve the safety of pedestrians along the corridor and accessibility to bus stops. Sidewalks are recommended where bus stops are present to ensure level landing and accessibility to and from the bus.

Speed Feedback Sign

These include portable or permanently installed speed display signs, which are intended to encourage the driver to slow down by showing drivers that they are speeding. Speeding was noted as a contributing factor to many of the crashes within this segment, and speed feedback signs can be helpful in reducing speeding-related crashes.

Centerline Audible Roadway Delineators/Shoulder Highway Audible Roadway Delineators (CARDs/SHARDs)

CARDs and SHARDs are designed to alert drivers through vibration and sound when their vehicle veers from the travel lane. CARDs and SHARDs integrate pavement markings over the textured surface to enhance visibility and driver awareness. SHARDs are recommended at locations where there are currently guardrails to prevent fixed object crashes.

Bus Stop Improvements

A bus pull-off area, located on the far-side of the intersection and equipped with an ADA-compliant landing can improve bus operations and rider experience.

Bus shelters ensure space for pedestrians to wait for the bus sheltered from the elements. They must be accessible to all and have signage and lighting. Multiple bus stops are present along the NY-13 segment without supportive access, seating, or shelter.

North leg (Elmira Rd)

South leg (Elmira Rd)

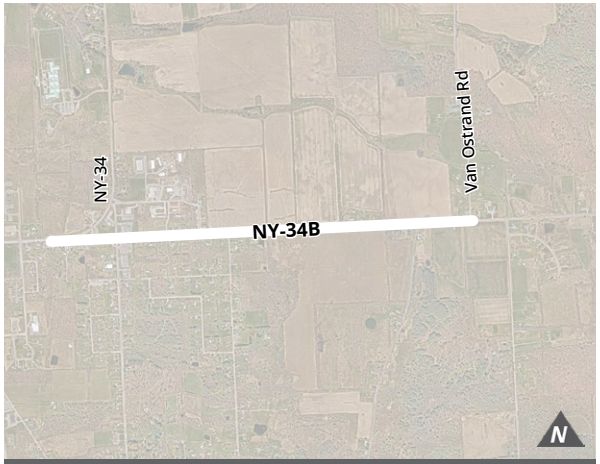
16. ELMIRA RD (NY-13) From the Town of Newfield Line to City of Ithaca Line

Countermeasure	Quantity	Unit		Unit Cost	Total
Concrete Sidewalk (4"thick)	5,250	sq. ft.	$	32.00	$168,000.00
Solar Powered Speed Radar Sign	6	each	$	10,200.00	$ 61,200.00
Centerline/Secondary Highway Audible Roadway Delineator (CARD/SHARD)	4,000	ft.	$	1.00	$ 4,000.00
Streetlighting	2	each	$	8,220.00	$ 16,440.00
Prefabricated Bus Shelter	7	each	$	25,300.00	$177,100.00
Dedicated Turn Lanes or Two-way Center Turn Lanes	2,100	ft.	$	4.00	$ 8,400.00

Subtotal	**$435,140.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 43,514.00
Incidentals, Inflation and Contingencies Estimate (20%)	$ 87,028.00
Construction Cost	**$565,682.00**
Survey (10%)	$ 56,568.20
Design Engineering ($10k + 10%)	$ 66,568.20
Construction Management & Inspection (15%)	$ 84,852.30
Grand Total	**$773,670.70**
Less 10%	$696,303.63
Plus 10%	$851,037.77

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

17. PERUVILLE RD (NY-34B) Between Auburn Rd (NY-34) & Van Ostrand Rd



SEGMENT CHARACTERISTICS

FUNCTIONAL CLASSIFICATION	Urban Major Collector Road
DESCRIPTION	Urban Two-Lane Undivided Free Access Two-Lane Two-Way
LENGTH	1.2 miles
AADT	4,558
SPEED LIMIT	45-55 MPH
OWNERSHIP	NYSDOT
ADJACENT LAND USE	Rural/Agricultural

KEY FINDINGS

NY-34B (Peruville Rd) between NY-34 (N Triphammer Rd) and Van Ostrand Rd was the site of 59 crashes including three that resulted in serious injuries over the five-year period. The addition of streetlights at key intersections, speed feedback signs, and advanced warning signage is recommended to increase visibility and reduce speeds throughout the corridor.

EXISTING CONDITIONS

The segment, approximately 1.2 miles long, is located in a rural area characterized by a mix of commercial and agricultural land uses. It stretches from NY-34 on the east to Van Ostrand Rd on the west, with five intersections and numerous unpaved driveways opening onto the road. The roadway width varies between 34-ft and 32-ft, featuring two 11-ft-wide travel lanes and shoulders on both sides, though the shoulder width is inconsistent throughout the segment.

As per field visit observations, the segment includes a traffic signal at the North Triphammer Rd intersection and a two-way stop sign at Van Ostrand intersection. Signage along the road includes signal-ahead signs, and speed limits set at 45-MPH for westbound traffic and 55-MPH for eastbound traffic.

Lane markings are present but slightly faded, with signs of infrequent minor cracking on the road surface. Sidewalks are present but inconsistent and interrupted by drainage pipe openings along the roadside. There are no crosswalks at any intersection. The segment is a flat, straight roadway with decent sightlines, providing generally good visibility for drivers.

Intersection of Van Ostrand Rd & Peruville Rd

17. PERUVILLE RD (NY-34B) Between Auburn Rd (NY-34) & Van Ostrand Rd

59
Total Crashes

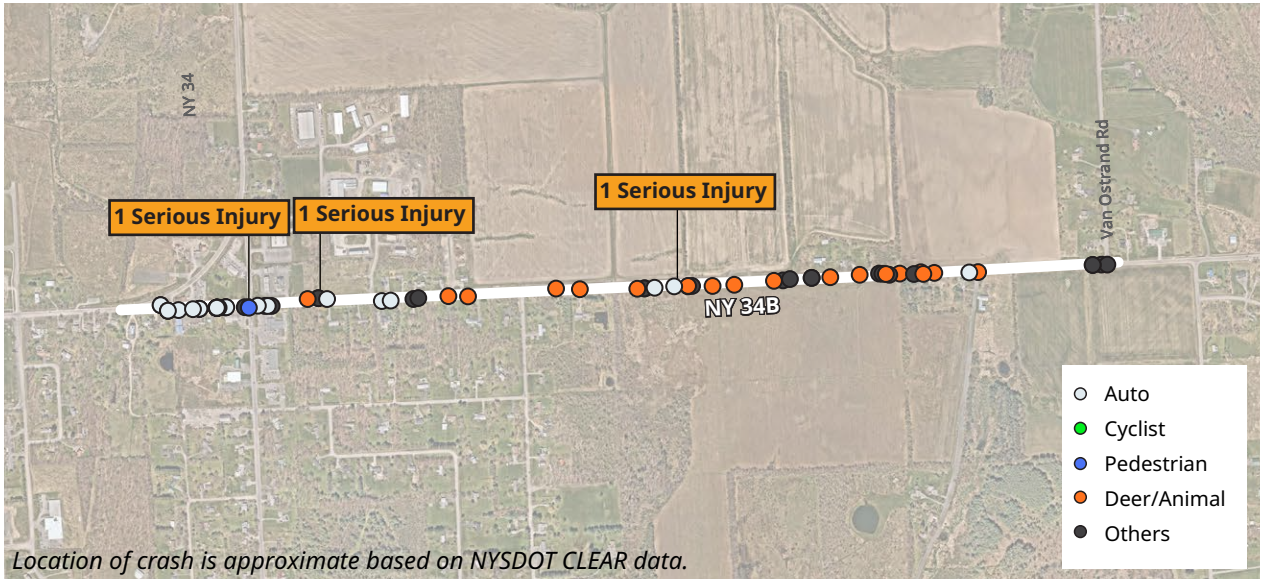
3
Fatal & Serious Injury Crashes

Users Involved

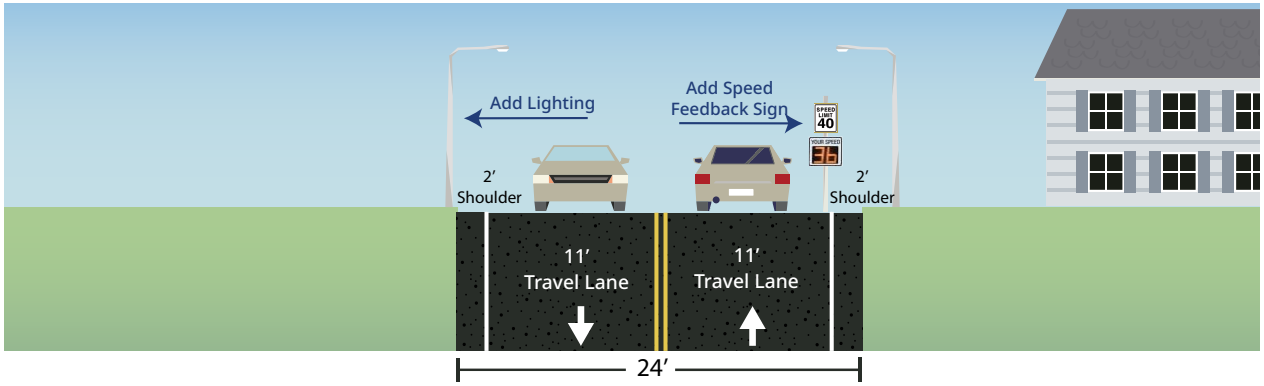
Between 2019 and 2023, 59 crashes occurred along the segment, with an average frequency of 11.8 per year. Three of these crashes resulted in serious injuries.

One of the serious injury crashes involved collision with a pedestrian at the intersection of NY-34B and N Triphammer Rd, and the contributing factor was the lack of pedestrian infrastructure. The other two serious injury crashes occured were collisions between motor vehicles. The contributing factor in these crashes was failure to keep right.

Contributing factors for other crashes include unsafe speed, wet road, failure to yield right-of-way, and road user behavior.



Spatial Distribution of Crashes by User Type



Proposed Typical Section

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
59	27	0	1	18	13	8	0	3	5	4

17. PERUVILLE RD (NY-34B) Between Auburn Rd (NY-34) & Van Ostrand Rd

Countermeasure Recommendations

Peruville Rd (NY-34B) / Auburn Rd (NY-34B)

Peruville Rd (NY-34B) / N Triphammer Rd

Peruville Rd (NY-34B) / Van Ostrand Rd

17. PERUVILLE RD (NY-34B) Between Auburn Rd (NY-34) & Van Ostrand Rd

Based on the contributing factors to the crashes along this segment, including speeding, failure to yield the right-of-way, and failure to keep right, we recommend the following countermeasures.

Systematic Application of Low-Cost Countermeasures at Stop-Controlled Intersections

Includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings. These countermeasures increase driver awareness and recognition of the intersections and potential conflicts. This is recommended since the segment is situated in a commercial area with both motor vehicle and foot traffic, and on the east side, it is surrounded by agricultural land. Additionally, many driveways feed into the segment.

Deer Crossing Signage

Deer crossing signage alerts drivers and raises awareness about potential wildlife encounters, helping to prevent collisions with deer and other animals. The installation of these signs is especially recommended for this segment of NY-34B, which has a history of frequent crashes involving deer and other wildlife.

Road Safety Audit

A Road Safety Audit (RSA) examines the performance of a road or intersection by an idenpendent, multidisciplinary team. An RSA can identify potential safety issues and opportunities for improvement for all roadway users and develop a formal report that can be used to implement actions that will improve safety. A pedestrian-focused RSA can identify issues to improve conditions for pedestrians along Peruville Rd. Cost estimates for an RSA have not been developed.

Speed Feedback Sign

These include portable or permanently installed speed display signs, which are intended to encourage the driver to slow down by showing drivers that they are speeding. Speeding was noted as a contributing factor to many of the crashes within this segment, and speed feedback signs can be helpful in reducing speeding related crashes. Speed Feedback Signs are recommended on the sections of Peruville Rd with a speed limit less than or equal to 45-MPH.

East leg (Peruville Rd)

Lighting

The goal of lighting should be to illuminate with positive contrast to make it easier for a drivers to visually identify obstacles in the roadway and other roadway users. This involves carefully placing the luminaires in forward locations. In accordance with NYSDOT policies, the local municipality must take on recurring electricity costs for new lighting. Fixtures different from NYSDOT standard fixtures, such as cobra-style lighting, would require a betterment from the municipality.

17. PERUVILLE RD (NY-34B) Between Auburn Rd (NY-34) & Van Ostrand Rd

Cost Estimates

Countermeasure	Quantity	Unit	Unit Cost	Total
Small Single Post-Mounted Signs	8	each	$ 622.00	$ 4,976.00
Solar Powered Radar Speed Sign	2	each	$ 10,200.00	$ 20,400.00
Street Lighting	6	each	$ 8,220.00	$ 49,320.00
Enhanced Pavement Marking	600	ft.	$ 4.00	$ 2,400.00

Subtotal	**$ 77,096.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 7,709.60
Incidentals, Inflation and Contingencies Estimate (20%)	$ 15,419.20
Construction Cost	**$100,224.80**
Survey (10%)	$ 10,022.48
Design Engineering ($10k + 10%)	$ 20,022.48
Construction Management & Inspection (15%)	$ 15,033.72
Grand Total	**$145,303.48**
Less 10%	$130,773.13
Plus 10%	$159,833.83

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

18. ELMIRA RD (NY-13) Between Protts Hill Rd & Main St

SEGMENT CHARACTERISTICS

FUNCTIONAL CLASSIFICATION	Rural Principle Arterial (Other)
DESCRIPTION	Rural Two-Lane Undivided Free Access Two-Lane Two-Way
LENGTH	1 mile
AADT	7,928
SPEED LIMIT	55 MPH
OWNERSHIP	NYSDOT
ADJACENT LAND USE	Developed/ Commercial

KEY FINDINGS

This segment of NY-13 (Elmira Rd) was the site of 42 crashes, three of which resulted in serious injuries during the five-year period. Advance warning signage, improved pavement markings, and high-visibility crosswalks are recommended along the corridor.

EXISTING CONDITIONS

The one-mile segment, located in a scattered commercial area, extends from Protts Hill Rd in the north to Main St in the south, connecting to Main St via a roundabout at the intersection of Trumbulls Corner Rd. Multiple unpaved paths and driveways open onto the segment. The road width varies from 40-ft near Protts Hill Rd to 45-ft near Main St, expanding to 60-ft near the roundabout. The segment primarily consists of two travel lanes, each approximately 10-ft to 11-ft wide, with shoulders on both sides.

The roundabout, situated at the intersection of NY-13 Northbound and Trumbulls Corner Rd, has a diameter of 86-ft and features medians on all four approach roads to manage and separate northbound and southbound traffic. The roundabout includes gore areas, yield markings, and through and right-turn markings to guide traffic flow.

Multiple yield signs are present near the roundabout. Outside of the roundabout, side streets approaches are stop-sign controlled.

As per field visit observations, the lane markings are clearly visible, and the road surface is in excellent condition, with no cracking. No sidewalks are present at any intersection, including Bank St, which meets the segment at an acute angle. During the field visit, a significant volume of construction truck traffic was observed.

Roundabout

18. ELMIRA RD (NY-13) Between Protts Hill Rd & Main St

42
Total Crashes

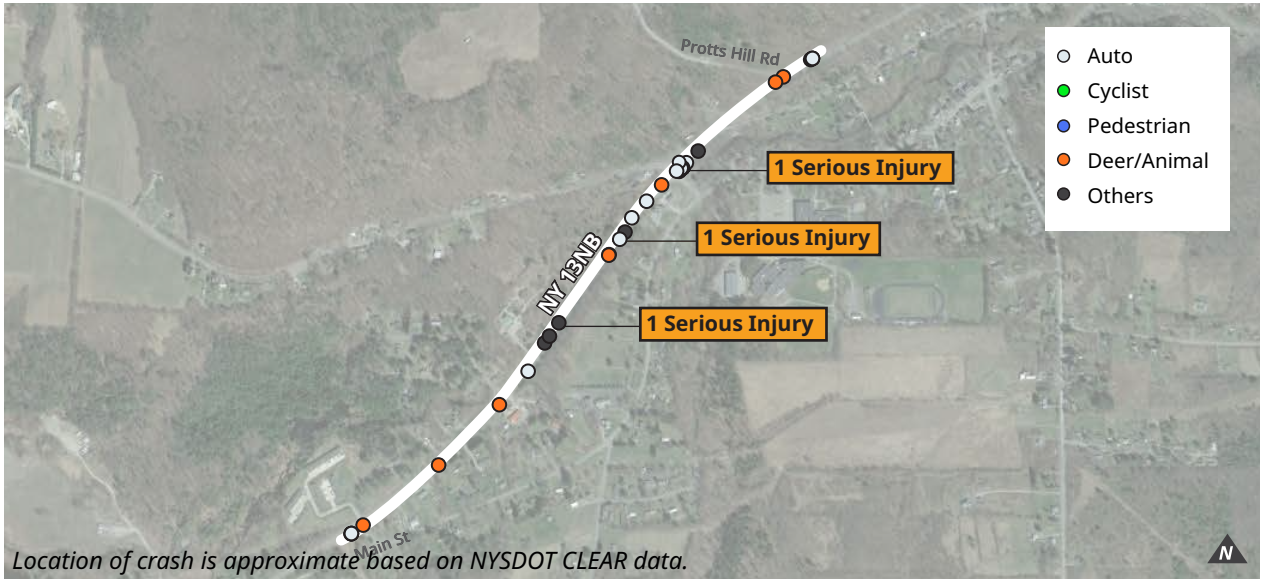
3
Fatal & Serious Injury Crashes

Users Involved

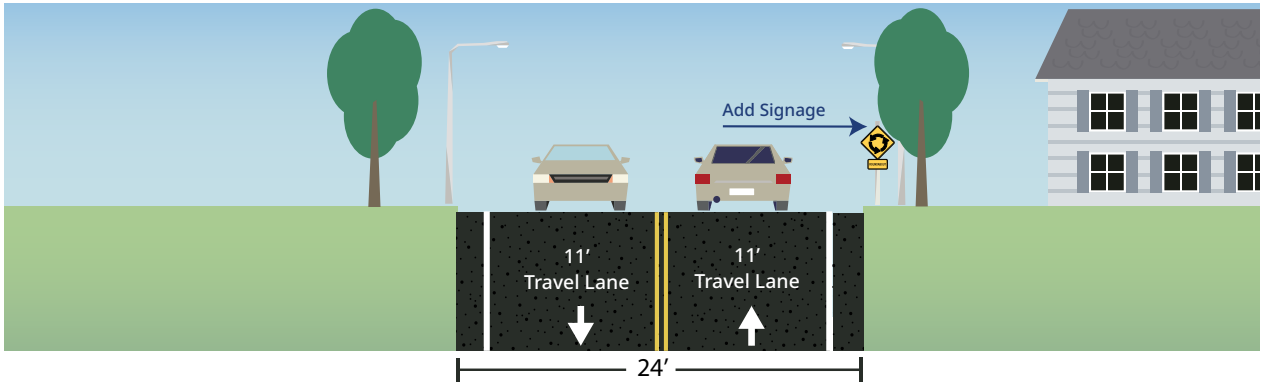
Between 2019 and 2023, 42 crashes occurred at the segment, with an average frequency of 8.4 per year. Out of 42 crashes, three of them resulted in serious injuries.

There were 18 crashes involved collisions with motor vehicles and seven involved collisions with deer/animals.

One of the serious injury crashes occurred near the intersection of Trumbull Corners Rd and NY-13 and other motor vehicle crashes are also concentrated near the intersection. The deer-related crashes are spread out across the segment.



Spatial Distribution of Crashes by User Type



Proposed Typical Section

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
42	18	0	0	7	17	7	0	3	4	4

18. ELMIRA RD (NY-13) Between Protts Hill Rd & Main St

18. ELMIRA RD (NY-13) Between Protts Hill Rd & Main St

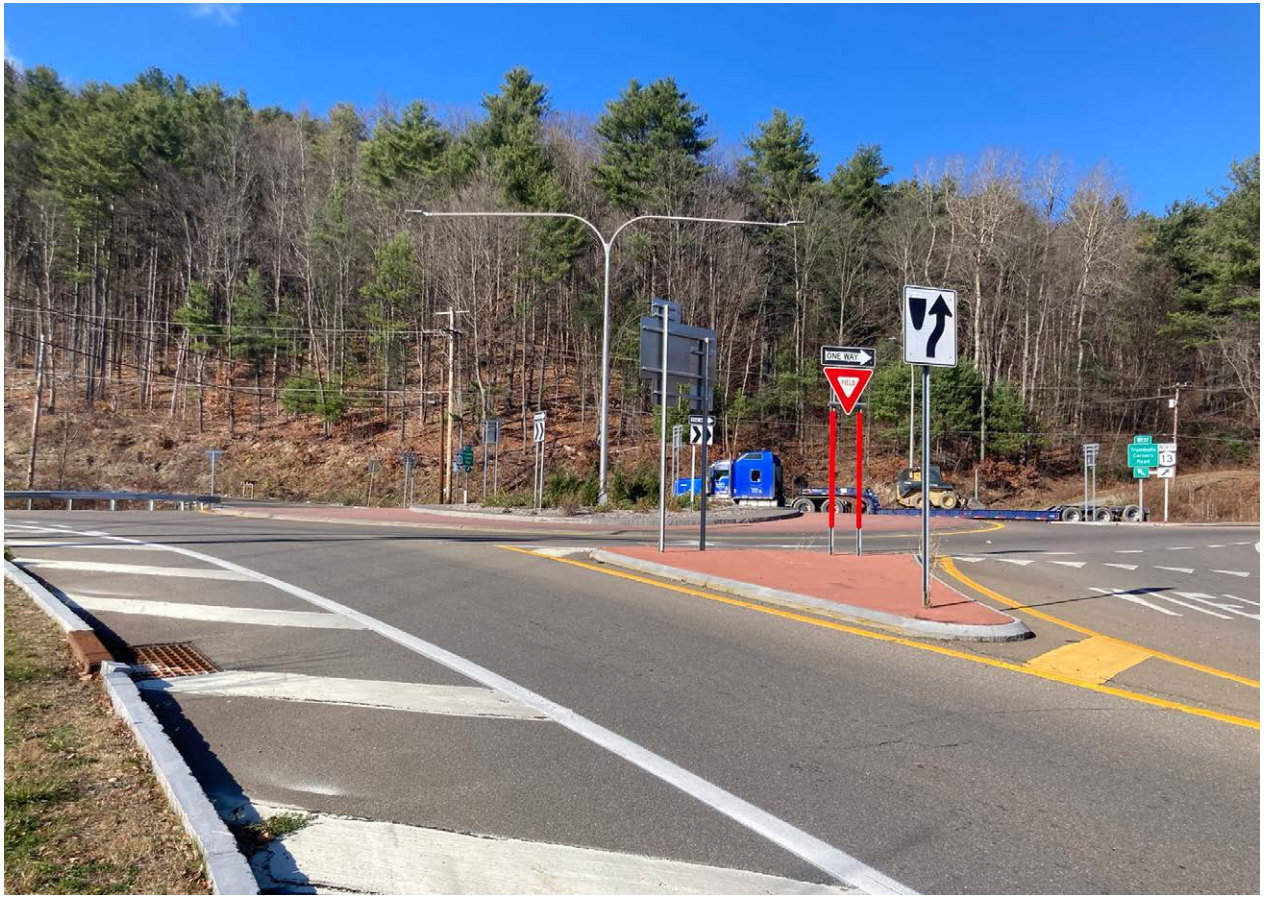
Based on the contributing factors to the crashes along this segment, including improper turning movements, improper lane usage, and disregard for traffic control devices, we recommend the following countermeasures.

Systemic Application of Low-Cost Countermeasures at Stop-Controlled Intersections

Includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings. These countermeasures increase driver awareness and recognition of the intersections and potential conflicts. Advance warning signage is recommended at the intersections of Main St and NY-13, Bank St and NY-13, and Protts Hill St and NY-13.

Deer Crossing Signage

Deer crossing signage alerts drivers and raises awareness about potential wildlife encounters, helping to prevent collisions with deer and other animals. The installation of these signs is especially recommended for the segment of NY-34B, which has a history of frequent crashes involving deer and other wildlife.



Main St & Trumbulls Corner Rd

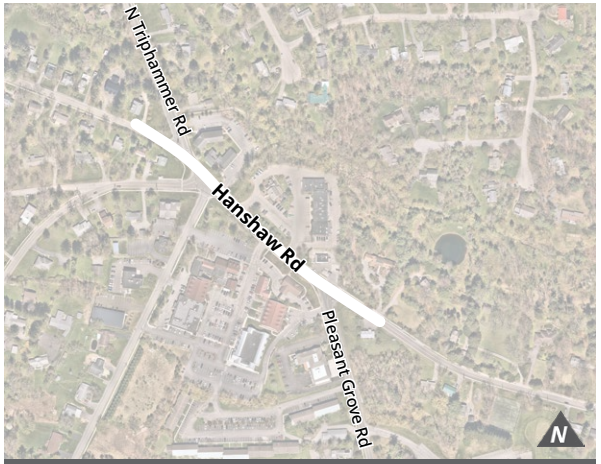
18. ELMIRA RD (NY-13) Between Protts Hill Rd & Main St

Countermeasure	Quantity	Unit	Unit Cost	Total
LS Type (Ladder) Crosswalk	3	each	$ 2,100.00	$ 6,300.00
Small Single Post-Mounted Signs	10	each	$ 622.00	$ 6,220.00

Subtotal	**$ 12,520.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 1,252.00
Incidentals, Inflation and Contingencies Estimate (20%)	$ 2,504.00
Construction Cost	**$ 16,276.00**
Survey (10%)	$ 1,627.60
Design Engineering ($10k + 10%)	$ 11,627.60
Construction Management & Inspection (15%)	$ 2,441.40
Grand Total	**$ 31,972.60**
Less 10%	$ 28,775.34
Plus 10%	$ 35,169.86

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

19. HANSHAW RD Between N Triphammer Rd and Pleasant Grove Rd



SEGMENT CHARACTERISTICS

FUNCTIONAL CLASSIFICATION	Urban Minor Arterial Road
DESCRIPTION	Urban Two-Lane Undivided Free Access Two-Lane Two-Way
LENGTH	0.1 mile
AADT	1,368
SPEED LIMIT	30 MPH
OWNERSHIP	Village of Cayuga Heights
ADJACENT LAND USE	Developed/ Commercial

KEY FINDINGS

Hanshaw Rd is key commercial corridor in the Village of Cayuga Heights. This segment was the site of 143 crashes, five of which resulted in serious injuries, and two of which involved pedestrians over the five-year period. Increased advanced warning signage on the approach streets of Triphammer, Upland, and Pleasant Grove Roads are recommended, along with geometric modifications to slow the speed of turning vehicles.

EXISTING CONDITIONS

The 0.1 mile segment of Hanshaw Rd is located in a dense residential and commercial neighborhood, with a golf course adjacent to the southern side. Multiple commercial driveways open directly onto the segment and intersecting roads, contributing vehicular traffic to Hanshaw Rd. The road width varies from 32-ft on the western end to 30-ft on the eastern end and includes two travel lanes, each 10-ft to 11-ft wide, with shoulders on both sides. At the western end, Hanshaw Rd intersects North Triphammer Rd at an acute angle, approximately 100-ft west of where Triphammer Rd and East Upland Rd form a mirrored K-shaped intersection with Hanshaw Rd. Further east, the road intersects Pleasant Grove Rd.

Traffic signals and pedestrian signals are present but not at all intersections, and no bike signals or bike lanes are provided.

Additional signage includes two-way stop signs at the North Triphammer Rd intersection, speed limit signs, yield-to-pedestrian signs, and signal-ahead signs. Few light posts are present on the segment for illumination in dark.

As per the field visit observations, the lane markings are clearly visible, and the road surface shows infrequent minor cracking, especially on the sides and corners of the intersection. Sidewalks run along the entire segment of Hanshaw Rd, however, at some sections there are drainage pipes openly present along the sidewalk. Additionally, crosswalks are present but at some legs of the Triphammer Rd and East Upland Rd intersection, as well as along Hanshaw Rd between East Upland Rod and Pleasant Grove Rd. These crosswalks are ladder-style with slightly faded markings and accessible curb ramps, though the ramps lack tactile surfaces.

West leg (Hanshaw Rd)

19. HANSHAW RD Between N Triphammer Rd and Pleasant Grove Rd

27
Total Crashes

1
Fatal & Serious Injury Crashes

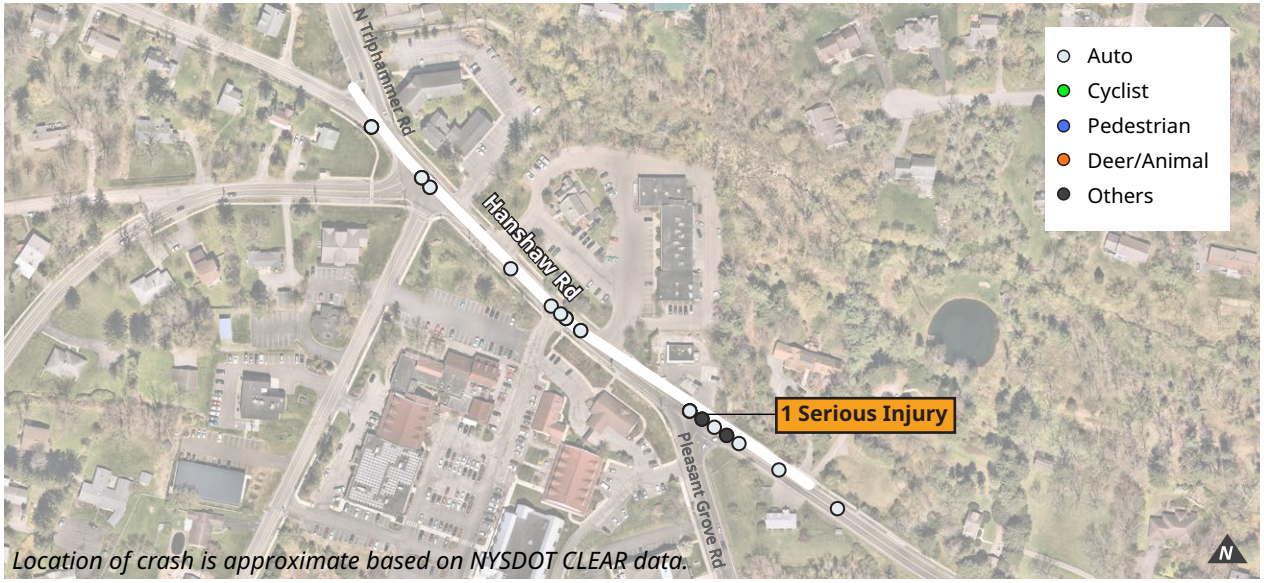
OTHER

Users Involved

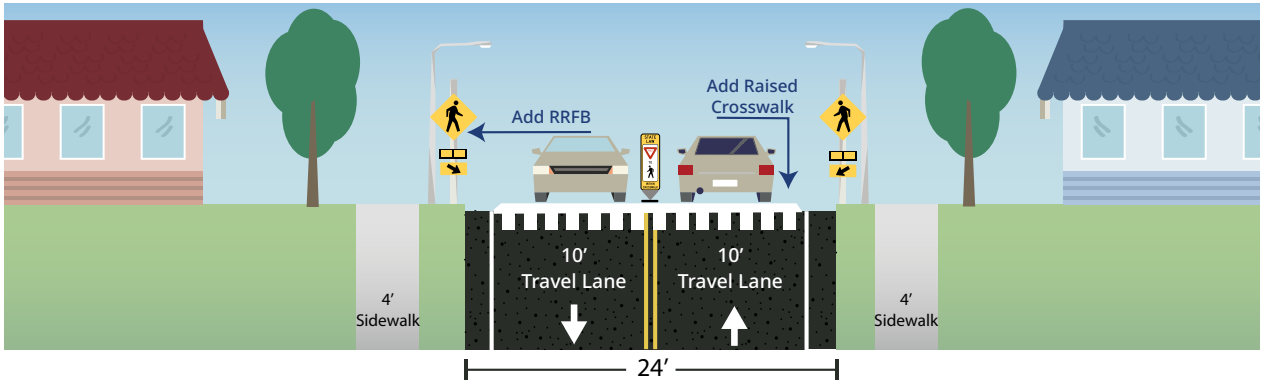
Between 2019 and 2023, 27 crashes occurred at the segment, with an average frequency of 5.4 per year. Twenty-seven crashes occurred on the segment at Hanshaw Rd out of which one resulted in a serious injury.

A serious injury crash occurred at the intersection at Pleasant Grove Dr and Hanshaw Rd. The contributing factor was improper road user behavior. The contributing factors for other crashes include improper turning and backing movement, driver inattention, and failure to yield right-of-way.

Most crashes involved collision with motor vehicles and were concentrated near the intersection or approach of the intersection.



Spatial Distribution of Crashes by User Type



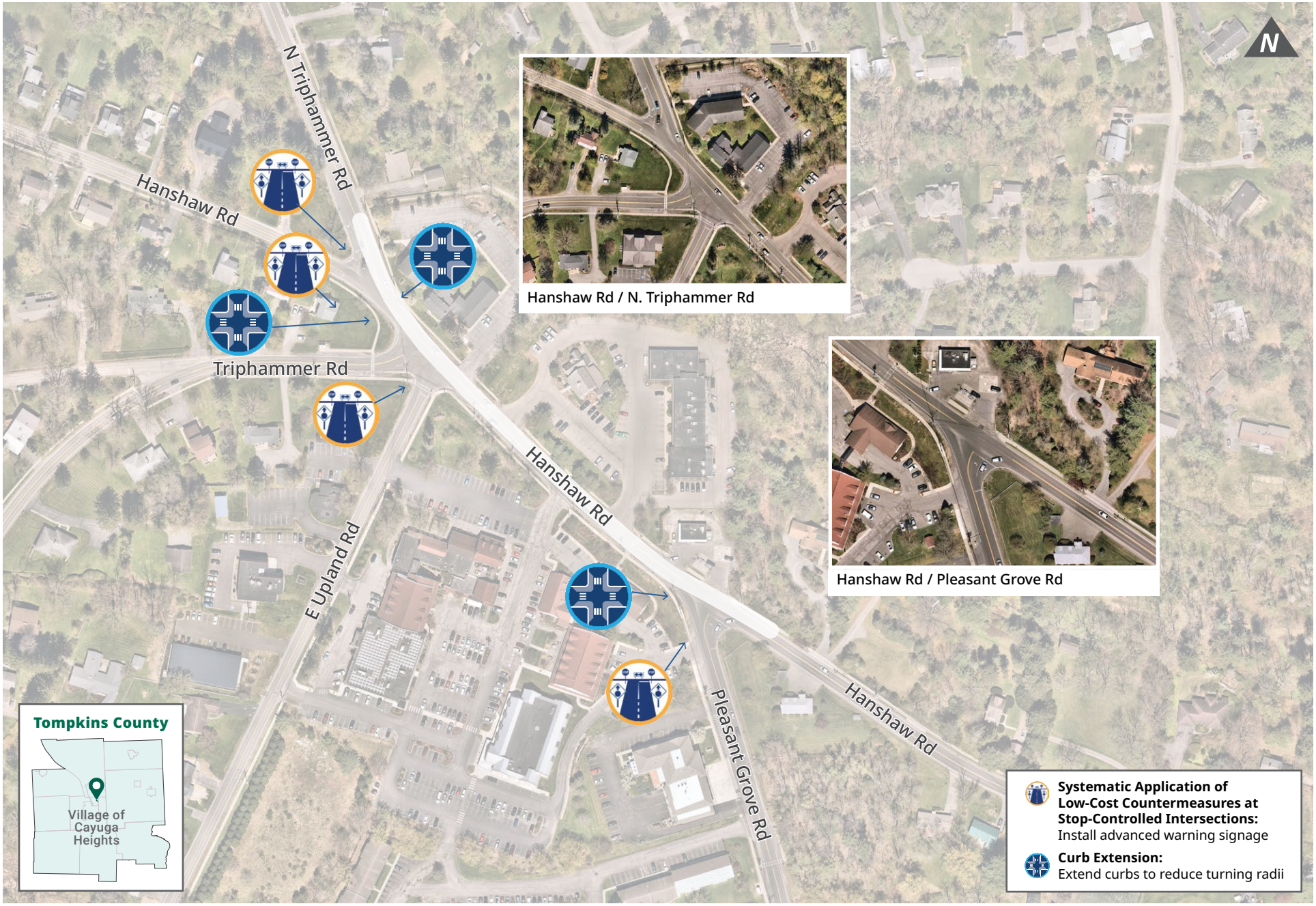
Proposed Typical Section

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
27	24	0	0	0	3	5	0	1	4	3

19. HANSHAW RD Between N Triphammer Rd and Pleasant Grove Rd

Countermeasure Recommendations



19. HANSHAW RD Between N Triphammer Rd and Pleasant Grove Rd

Based on the contributing factors to crashes along this segment, including improper turning movements, driver inattention, and failure to yield the right-of-way, we recommend the following countermeasures.

Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections

Includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings. These countermeasures increase driver awareness and recognition of the intersections and potential conflicts. Increased advance warning signage on the approach streets Triphammer, Upland, and Pleasant Grove Roads is recommended to encourage reduced speeds.

Reduce Curb Radius

Reconstructing the turning radius to a tighter turn can reduce turning speeds, shorten the crossing distance for pedestrians, and improve sight distance between pedestrians and motorists. Geometric modifications are recommended to slow the speed of turning vehicles.

Corridor Access Management

Access management refers to the design, application, and control of entry and exit points along a roadway. Access management along a corridor can simultaneously enhance safety for all modes, facilitate walking and biking, and reduce trip delay and congestion.

Consideration should be given to reducing the number of conflicts between vehicles, pedestrians and bicyclists along Hanshaw Rd by limiting turning movements such as right-in/right-out only or restricting certain left-turn maneuvers. Given that there are multiple commercial plazas whose driveways feed into Hanshaw Rd, access management may decrease potential conflict points. Further consideration may be given to reducing, consolidating, or spacing the driveways along the Hanshaw Rd. Further study is needed to determine an access management strategy. Accordingly conceptual designs and cost estimates have not been developed.

Intersection of Hanshaw Rd & E Upland Rd

19. HANSHAW RD Between N Triphammer Rd and Pleasant Grove Rd

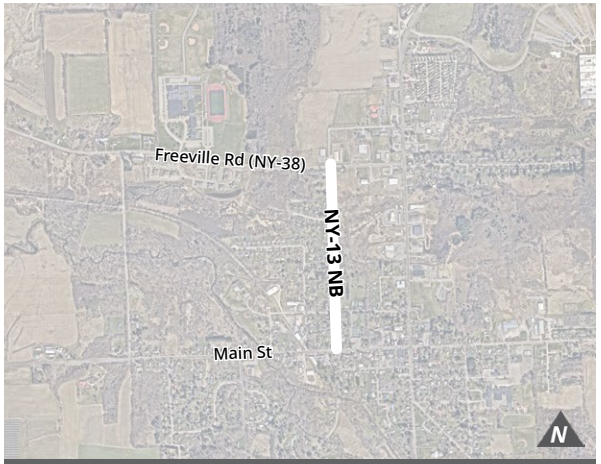
Cost Estimates

Countermeasure	Quantity	Unit	Unit Cost	Total
Small Single Post-Mounted Signs	6	each	$ 622.00	$ 3,732.00
Curb Geometry Modifications at 4 locations	200	ft.	$ 95.00	$ 19,000.00
Concrete Sidewalk (for curb extensions) (4" thick)	1,050	sf.	$ 32.00	$ 33,600.00

Subtotal	**$ 56,332.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 5,633.20
Incidentals, Inflation and Contingencies Estimate (20%)	$ 11,266.40
Construction Cost	**$ 73,231.60**
Survey (10%)	$ 7,323.16
Design Engineering ($10k + 10%)	$ 17,323.16
Construction Management & Inspection (15%)	$ 10,984.74
Grand Total	**$108,862.66**
Less 10%	$ 97,976.39
Plus 10%	$119,748.93

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

20. NORTH ST (NY-13 NB) Between Freeville Rd (NY-38) & W Main St



SEGMENT CHARACTERISTICS

FUNCTIONAL CLASSIFICATION	Rural Principal Arterial (Other)
DESCRIPTION	Rural Two-Lane Undivided Free Access Two-Lane Two-Way
LENGTH	0.5 mile
AADT	11,283
SPEED LIMIT	30 MPH
OWNERSHIP	NYSDOT
ADJACENT LAND USE	Developed/ Commercial

KEY FINDINGS

This segment of NY-13 (North St) in the Village of Dryden was the site of 81 crashes, 11 of which resulted in serious injuries over the five-year period. Two crashes involved pedestrians and two crashes involved bicyclists.

Along the corridor, high visibility marked crosswalks, improved streetlighting at key intersections, and advanced warning signage for two-way stop-controlled side streets are recommended.

EXISTING CONDITIONS

The half-mile segment is located in a rural area with commercial establishments lining the road, many of which have driveways directly feeding into the segment. It extends from the intersection of NY-13 and NY-38 (Freeville Rd) in the north to the intersection of NY-13 and Main St in the south, encompassing at least six intersections. The road width varies from 30-ft to 50-ft, widening near intersections and as it transitions northward.

The segment primarily features two travel lanes with shoulders, though it expands to three lanes in some sections, incorporating a center turn lane and a buffered median. Lane widths range from 11-ft to 14-ft, with buffer areas present at the NY-38/Freeville Rd intersection and between Pratt Rd and the Main St intersection. A gore area is located near the Main St intersection, particularly in front of large driveways, some of which provide spots for on-street parking.

As per field visit observations, traffic signals are present at several intersections, but there is no additional signage apart from speed limit signs. Lane markings are slightly faded, and the road surface exhibits minor, infrequent cracking. Sidewalks are present along both sides of the segment. Curb extensions with pedestrian signals are provided at the Main St and NY-13 intersection. Crosswalks, primarily in zebra or ladder styles, are present at most intersection legs, with markings that are clearly visible. Some intersections also feature parallel line crosswalks, while most curbs have accessible ramps with tactile surfaces. One crosswalk at the NY-38/Freeville Rd intersection spans approximately 80-ft.

A bus stop sign is located near the Dryden Food Market, which lacks a shelter or a crosswalk for pedestrians to safely access buses traveling in either direction. Both drivers and pedestrians were observed using the segment during the site visit.

20. NORTH ST (NY-13 NB) Between Freeville Rd (NY-38) & W Main St

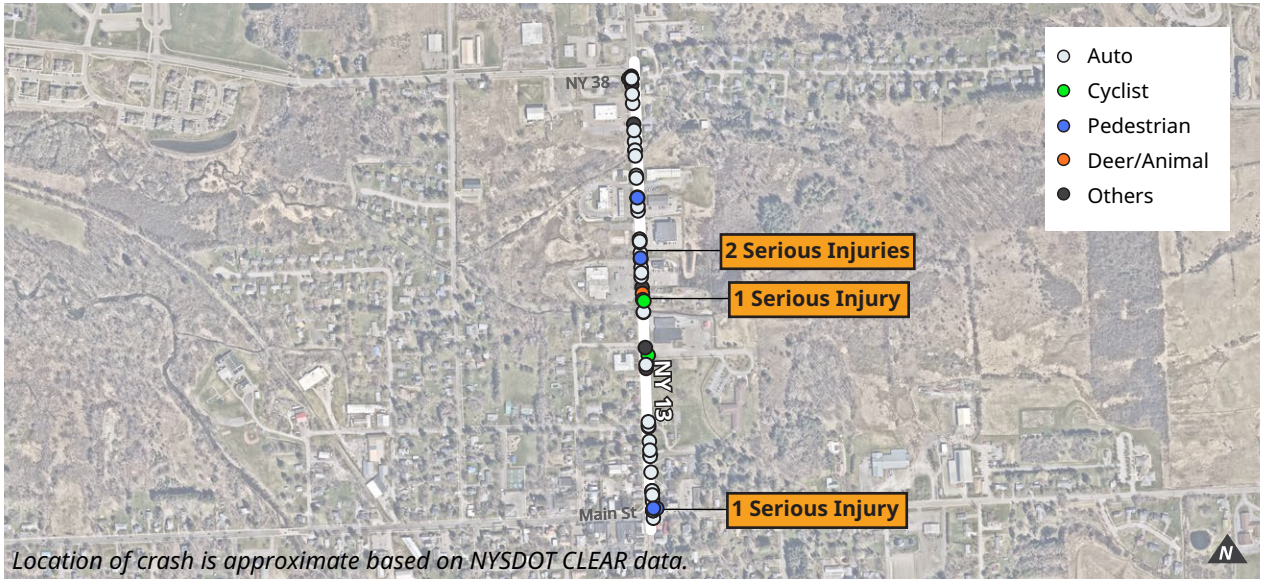
81
Total Crashes

4
Fatal & Serious Injury Crashes

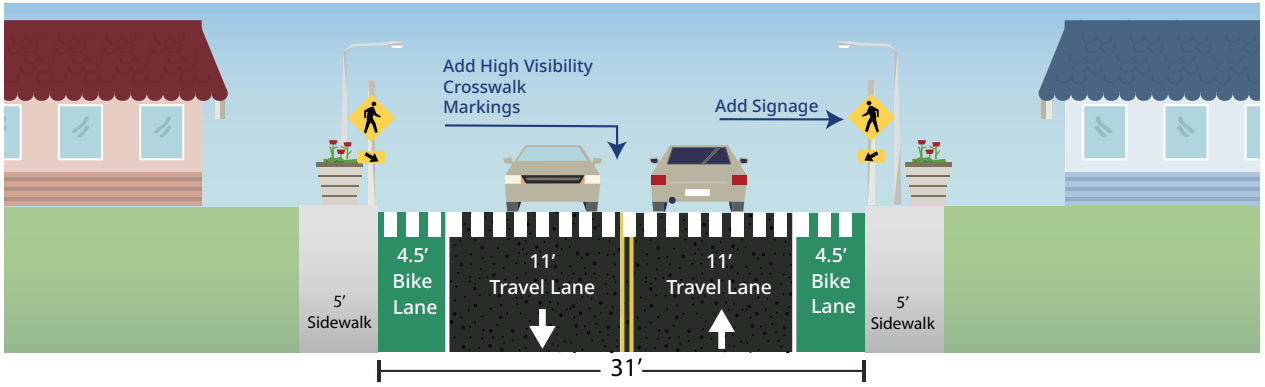
Users Involved

Between 2019 and 2023, 81 crashes occurred on the segment, with an average frequency of 16.2 per year. Eleven of these crashes resulted in serious injuries.

Four crashes involving pedestrians were reported at four separate locations along the segment. A crash at the intersection of Main St resulted in serious injury to a pedestrian due to failure to yield right-of-way. Additionally, one of the two collisions with bicyclists resulted in a serious injury. The bicyclist serious injury occurred due to driver inattention and failure to yield right-of-way. Another serious injury occurred involving a collision with a tree due to improper road user behavior.



Spatial Distribution of Crashes by User Type



East Main St

CRASH DATA (2019-2023)

Crash Counts						Injury Counts				Level of Service of Safety (LOSS)
TOTAL CRASH COUNTS	Auto	Cyclist	Pedestrian	Deer/ Animal	Others	TOTAL INJURY COUNTS	Fatal Injuries	Serious Injuries	Other Injuries	
81	62	2	4	2	11	15	0	4	11	4

20. NORTH ST (NY-13 NB) Between Freeville Rd (NY-38) & W Main St

20. NORTH ST (NY-13 NB) Between Freeville Rd (NY-38) & W Main St

Based on the contributing factors to crashes, including failure to yield the right-of-way, driver inattention, and poor road conditions, we recommend the following countermeasures.

Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections

Includes deploying a package of multiple low-cost countermeasures, including enhanced signage and pavement markings. These countermeasures increase driver awareness and recognition of the intersections and potential conflicts.

Advance warning signage for two-way stop-controlled side streets is recommended to ensure safety, especially given the proximity to a school and local businesses.

High-Visibility Crosswalks

High-visibility crosswalks use patterns (i.e., bar pairs, continental, ladder) that are visible to both the driver and pedestrian from farther away compared to traditional transverse line crosswalks. High-visibility marked crosswalks are recommended at the intersections of Main St and NY-13 and Freeville Rd and NY-13 to increase pedestrian safety.

North leg (North St)

Bike Lanes

Future consideration should be given to provision of bike lanes on both North Street and Main Street. Given that the cross-section of both North St, South Street, West Main, and East Main all vary, further study would be required to determine a suitable bikeway design as well as connectivity beyond the segment and intersection. The addition of bike lanes may require reconfiguration or relocation of parking. Conceptual designs and cost estimates have not been developed for bike lanes at this location.

20. NORTH ST (NY-13 NB) Between Freeville Rd (NY-38) & W Main St

Countermeasure	Quantity	Unit	Unit Cost	Total
LS Type (Ladder) Crosswalk	6	each	$ 2,100.00	$ 12,600.00
Small Single Post-Mounted Signs	4	each	$ 622.00	$ 2,488.00

Subtotal	**$ 15,088.00**
Work Zone Traffic Control (WZTC) Estimate (10%)	$ 1,508.80
Incidentals, Inflation and Contingencies Estimate (20%)	$ 3,017.60
Construction Cost	**$ 19,614.40**
Survey (10%)	$ 1,961.44
Design Engineering ($10k + 10%)	$ 11,961.44
Construction Management & Inspection (15%)	$ 2,942.16
Grand Total	**$ 36,479.44**
Less 10%	$ 32,831.50
Plus 10%	$ 40,127.38

Cost estimates were prepared in June of 2025 utilizing bid tabulation data provided by the NYSDOT Electronic Pay Item Catalog, and NYSDOT Quick Estimator Tool, along with the current state of the construction market in the upstate NY area. The most recent year data available was used for each individual unit cost. These estimates are to be used for planning purposes only.

Appendix B - Systemic Countermeasure Packages

Table 17 - Intersection Systemic Treatment Packages

Package	Project Delivery	Countermeasure(s)
Signalized	Signals, Beacons, Illumination	• Backplates with retroflective borders • Retime signals for Yellow and Red clearance intervals and improved coordination • Signal Ahead sign • Turning vehicle yield to Pedestrian Sign • Advance cross
Signalized *Enhanced*	(Various)	• (Signalized) • Raised Crosswalks • No Turn on Red sign (Overhead Blank-Out) • Restrict parking • Lighting • Dedicated left- and right-turn lanes
Stop-Controlled	Maintenance; Signs, Markings, and Delineators	• Double oversized advance intersection warning signs (on through approach) • Double oversized advance “Stop Ahead” warning signs (on the stop approach). • Doubled (left and right), oversized Stop signs. • Retroreflective sheeting on sign posts. • Enhanced pavement markings • Painted stop bar • Removal of sight distance obstructions
Stop-Controlled *Enhanced*	Signals, Beacons, Illumination	• (Stop Controlled) • Flashing beacons • Lighting
Round-abouts	Construction (2R/3R)	• Mini-Roundabouts • Single-Lane Roundabouts • Mixed Lanes Roundabouts

Applicable Locations	Focus Facility(ies)	Planning Considerations	NYSDOT Reference	HSIP Eligible
Signalized Intersections	Urban 3-leg (T,Y) and Cross Intersections		Pedestrian Safety Action Plan (Appendix B)	✔
Signalized Intersections	Urban 3-leg (T,Y) and Cross Intersections		Pedestrian Safety Action Plan (Appendix B)	✔
Stop-Controlled Intersections	Rural Stop-Controlled Intersections	FHWA Proven Safety Counter Measures: Systemic Application of Multiple Low-Cost Counter-measures at Stop-Controlled Intersections		
Stop-Controlled Intersections	Rural Stop-Controlled Intersections	FHWA Proven Safety County Measures: (Above); Lighting		
All Intersections	(All)	NCHRP Guide for Roundabouts; MassDOT Guidelines for the Planning and Design of Roundabouts		✔

Table 18 - Roadway Departure Systemic Treatment Packages

Package	Project Delivery	Countermeasure(s)
Curve Signage	Maintenance; Signs, Markings, and Delineators	• Horizontal alignment signs* • Advisory speed plaque* • Chevrons and/or One Direction Large Arrow*
Curve Signage *Enhanced*	Maintenance; Signs, Markings, and Delineators	• Oversized horizontal alignments signs • "Recommended" and/or "Optional" horizontal alignment signs (Table 2C-5 of Section 2C-07 (MUTCD, 2009)) • Reflectorized sleeves on signposts • Post-mounted or barrier mounted delineators • Breakaway sign supports
Curve Corridors	(Various)	• Wider edge lines • Curve warning pavement markings • Flashing beacons/driver feedback signs • Shoulder widening (including SafetyEdge) • Clear zone improvements • Fill slopes • Roadside barriers
Friction Treatments	Construction (1R)	• High Friction Surface Treatments
Lighting	Signals, Beacons, Illumination	• Lighting
CARDS	Minor Construction; Construction (1R)	• Centerline audible roadway delineators (CARDs)
SHARDS	Maintenance; Signs, Markings, and Delineators	• Secondary Highway Audible Roadway Delineators (SHARDs)

Applicable Locations	Focus Facility(ies)	Planning Considerations	NYSDOT Reference	HSIP Eligible
Horizontal curves on Expressways, Arterials, and Collectors	Rural Principal and Minor Arterials, Major Collectors, Local	AADT > 1,000;	Roadway Departure Safety Action Plan – Level 1 Counter-measures (Table 19)	✔
Horizontal curves on Expressways, Arterials, and Collectors	Rural Principal and Minor Arterials, Major Collectors	AADT > 1,000; KA Roadway departure crash history, At least 1 Risk Factors (Tables 5-6, RwDSAP)	Roadway Departure Safety Action Plan – Level 2 Counter-measures (Table 19)	✔
Horizontal curves	Rural Principal and Minor Arterials, Major Collectors, Local	At least 2 Risk Factors (Tables 5-6, RwDSAP)	Roadway Departure Safety Action Plan – Corridor Projects (Table 20); NYSDOT EI 10-012	✔
Horizontal curves		Must include a Benefit-Cost Analysis > 1	Roadway Departure Safety Action Plan – Corridor Projects (Table 20)	✔
Curves	Rural Principal Arterials	NYSDOT	Policy on Highway Lighting, Warrant WAC-1	✔
All Functional Classifications	Rural Principal and Minor Arterials	Posted speed > = 45 mph; AADT >= 2,000; No Median or Two-Way Left Turn Lane	NYSDOT Engineering Instruction 13-021	✔
All Functional Classifications	Rural Principal and Minor Arterials	Posted speed > = 50 mph; AADT >= 2,000; Lane and Shoulder wide must be >= 17’	NYSDOT Engineering Instruction 16-014	✔

Table 19 - Pedestrian Systemic Treatment Packages

Package	Project Delivery	Countermeasure(s)
Pedestrian Crossings	Maintenance; Signs, Markings, and Delineators	• High-Visibility crosswalks • Restrict parking at intersections ("Daylighting") • Signal Ahead signs • No Turn on Red Signs • Stop Here for Pedestrians Signs (Section 2B.19, MUTCD, 2024)
Pedestrian Crossings Enhanced	Signals, Beacons, Illumination	• Leading Pedestrian Interval • Pedestrian countdown times • Evaluate left-turn phasing for pedestrian crossings • Accessible Pedestrian Signals • No Turn on Red sign (Overhead Blank-Out)
Crosswalks	Maintenance; Signs, Markings, and Delineators	• High-visibility crosswalks • Pedestrian warning signs • Retroreflective sign posts
Crosswalks Enhanced	Signals, Beacons, Illumination	• Rectangular Rapid Flashing Beacons (RRFB) • Raised pedestrian median refuge and/or corner island and/or curb extension • Pedestrian Hybrid Beacons
VRU Counter-measures	(Multiple)	• Construction of new countermeasures at Signalized Intersections or Uncontrolled marked crosswalks
Transit Stop Lighting	Signs, Markings, and Delineators	• High-visibility crosswalks • Enhanced signing and pavement markings
Transit Stop Lighting	Signals, Beacons, Illumination	• Lighting
Sidewalk Gap Completion	Minor Construction; Construction (1R); Construction (2R/3R)	• Construct new pedestrian facilities

Applicable Locations	Focus Facility(ies)	Planning Considerations	NYSDOT Reference	HSIP Eligible
Signalized Intersections	Urban 3-leg (T,Y) and Cross Intersections	No Turn on Red signs should be prioritized near schools and other pedestrian generators	Pedestrian Safety Action Plan – Signalized Intersection Improvements (Appendix B)	✔
Signalized Intersections	Urban 3-leg (T,Y) and Cross Intersections	AADT > 1,000; KA Roadway departure crash history, At least 1 Risk Factors (Tables 5-6, RwDSAP)	Pedestrian Safety Action Plan – Signalized Intersection Improvements (Appendix B)	✔
Uncontrolled marked crosswalks	Urban Stop-Controlled Intersections	At least 2 Risk Factors (Tables 5-6, RwDSAP)	Pedestrian Safety Action Plan – Crosswalks at Uncontrolled Locations (Appendix A)	✔
Uncontrolled marked crosswalks	Urban Stop-Controlled Intersections	Must include a Benefit-Cost Analysis > 1	Pedestrian Safety Action Plan – Crosswalks at Uncontrolled Locations (Appendix A)	✔
All Functional Class		VRU "High-Risk" Areas only	Vulnerable Road User Safety Assessment (Strategy 1)	✔
All Functional Classifications		Near public transit stops	Vulnerable Road User Safety Assessment (Strategy 1)	✔
All Functional Classifications		Near public transit stops	Vulnerable Road User Safety Assessment (Strategy 1)	✔
All Functional Classifications		VRU "High-Risk" Areas only	Vulnerable Road User Safety Assessment (Strategy 1)	✔

Table 20 - Speeding Systemic Treatment Packages

Package	Project Delivery	Countermeasure(s)
Speed Feedback Signs	Maintenance; Signs, Markings, and Delineators	• Speed Feedback Signs
Lane Space Allocation	Signs, Markings, and Delineators; Construction (1R)	• Reallocation of lane space
Street Width Reduction	Minor Construction; Construction (1R)	• Corner Extension • Choker • Median Island • On-Street Parking
Vertical Deflection	Minor Construction; Construction (1R)	• Speed Hump • Speed Cushion • Speed Table • Offset Speed Table • Raised Crosswalk • Raised Intersection

Applicable Locations	Focus Facility(ies)	Planning Considerations	NYSDOT Reference	HSIP Eligible
Advisory Speed Zones (School, Curve); Transition Zones	Rural Principal and Minor Arterials	Highway Work Permit (PERM 33) is required for signs in NYSDOT right-of-way		
	Rural Principal and Minor Arterials	AADT < 15,000; Considered during Initial Project Proposal	Complete Streets Checklist	
Principal/ MinorArterials, Major/Minor Collectors and Local segments		FHWA Traffic Calming ePrimer (Table 3.1)		
Major/Minor Collectors and Local segments.		FHWA Traffic Calming ePrimer (Table 3.1). The "Applicable Application" for Speed Tables and Raised Crosswalks (Module 3) should be reviewed for Arterials		

Appendix C - Full List of Actions

Table 21 - Primary Emphasis Areas, Strategies, & Actions

Note: Actions bolded in **blue** are considered priority actions and are included in the body of the Plan.

Emphasis Areas	Strategies	Actions
Intersections	Implement proven safety countermeasures and low-cost solutions at priority intersections to mitigate likelihood and severity of intersection crashes based on location-specific crash data	**Implement applicable countermeasures from the Systemic Treatment Package for Intersections.**
		Focus on roundabout implementation to reduce speed while improving traffic flows
		Continue to improve signage, signal timing, and enhance pavement markings where needed at intersections
		Increase sight distance (visibility) of intersections on approaches, improve lighting, and maintain/repair nonoperating traffic detectors in signalized intersections
		Develop and adopt an Intersection Control Evaluation (ICE) process that uses the SSA for determining appropriate intersection design, including coordination with ITCTC to conduct studies to consider roundabouts at all intersections that are being designed or considered for signalization
		Implement permanent curb extensions, roundabouts, or other treatments to slow turning vehicle speeds at high crash intersections
	Implement proven safety countermeasures and low-cost solutions at priority intersections to mitigate likelihood and severity of intersection crashes based on location-specific crash data	**Consider widespread implementation of mini and regular roundabouts using quick build design practices**
		Target unusual and outdated intersection configurations for modernization, such as dog-legs, 5 or 6 legged intersections, skewed intersections where the legs are not perpendicular and visibility is low
		Develop and implement a systemic intersection program that applies the Safe System Approach and low-cost proven safety countermeasures at intersections with characteristics most likely to lead to fatal and serious injury crashes.
		Establish an access management ordinance which applies to new construction and limits curb cuts per block to ensure proper spacing and sight distance and at Planning Board review, consider available lot frontage and possible shared driveway easements when parcels are subdivided to avoid "necessary" clusters of driveways close together.

Action Leader	Safe System Element	Resources Needed	Timeline
All municipalities	Safer Roads	Medium	Long-Term
All municipalities	Safer Roads, Safer Speeds	High	Long-Term
All municipalities	Safer Roads	Medium	Mid-Term
All municipalities	Safer Roads	Medium	Mid-Term
All municipalities, ITCTC, County	Safer Roads	High	Long-Term
All municipalities	Safer Roads, Safer Speeds	Medium	Mid-Term
Rural municipalities	Safer Roads	Medium	Long-Term
All municipalities	Safer Roads	High	Mid-Term
All municipalities	Safer Roads	Low	Mid-Term
All municipalities	Safer Roads	Low	Short-Term

Emphasis Areas	Strategies	Actions
	Improve active warning devices, signing, and pavement markings on grade crossing approaches to reduce crashes at grade crossings	Utilize the latest edition of the Highway-Rail Crossing Handbook to install or improve active warning devices and implement strategies to identify and eliminate hazards at highway-rail grade crossings
	Support policy initiatives to improve intersection safety	Develop policy thresholds to initiate an engineering study for safety with guidance for when to consider specific roadway or intersection modifications
		Consider removing permissive left turns during active pedestrian phase, and develop criteria for where a No Turn on Red policy can apply, starting with intersections along the High-Injury Network (HIN). Coordinate with NYSDOT as needed.
		Develop Intersection Street Design Standards in collaboration with communities and tailor street designs with sensitivity to land use and community context
	Provide educational materials to promote safer travel at intersections	Create and share educational materials for quick-build demonstrations to local member agencies
		Work with local organizations on educational programs, including demonstrations and awareness campaigns related to crash data, statistics, and safe behaviors for roadway users at signalized intersections
Roadway Departures	Implement proven safety countermeasures and low-cost solutions to reduce roadway departure crashes based on roadway departure crash data on priority segments	**Implement applicable countermeasures from the Systemic Treatment Package for Roadway Departures that address roadway departure crashes.**
		Assess pavement and striping conditions along the HIN roadways or priority segments; identify locations to use repaving and restriping to implement safer road designs; coordinate with resurfacing and restriping programs to prioritizwe and implwement necessary locations
		Upgrade roadway signage and pavement markings to meet MUTCD standards
		Pilot pavement friction countermeasures and evaluate their performance in crash reductions

Action Leader	Safe System Element	Resources Needed	Timeline
City of Ithaca	Safer Roads, Safer People	Medium	Short-Term
County	Safer Roads	Low	Short-Term
All municipalities, NYSDOT	Safer Roads, Safer People	Low	Short-Term
ITCTC, County, NYSDOT, All municipalities	Safer Roads, Safer Speeds	Medium	Mid-term
ITCTC, County, NYSDOT	Safer Roads, Safer People	Medium	Mid-Term
All municipalities, County, ITCTC, Non-profits, Universities, etc.	Safer Roads, Safer People	Low	Mid-Term
All municipalities	Safer Roads	Medium	Mid-Term
All municipalities	Safer Roads	Medium	Short-Term
Rural municipalities	Safer Roads, Safer People	Low	Short-Term
All municipalities	Safer Roads, Safer People	Medium	Mid-Term

Emphasis Areas	Strategies	Actions
	Implement systemic safety improvements to decrease the severity of roadway departure crashes	Improve related geometric data collection and safety analysis to promote infrastructure projects enhancing roadside design in the clear zone with context considerations to remove, relocate, shoulder, or delineate fixed objects
		Pursue a collaborative contract for ball bank studies to develop a county-wide inventory of horizontal curves
		Provide shoulder widening for Focus Facilities identified in the Joint Safety Action Plan's systemic analysis
		Develop low-cost systemic horizontal curve program that includes countermeasures such as clear zone improvements, lighting, etc.
		Upgrade guardrail to current standards and replace existing barriers that are damaged or non-functional, and examine guardrail and other assets' repair policy, including the repair versus replace policy
		Use Motorcycle Protection Systems (MPS) to provide bottom protection to the guide rail systems to prevent or cushion rider interactions with discrete elements of guardrail to enhance motorcycle safety
		Create training program for Transportation Managers on how to i dentify and locate objects and encroachments within clear zone and state right-of-way and build a database to track objects
		Increase distance to roadside features on high-speed roadways by removing/ relocating fixed objects, such as trees and utility poles, in the clear zone. Work with NYSDOT and NYSEG to remove or shield fixed objects currently inside state right-of-way /clear zone
	Focus education efforts aimed at roadway departure countermeasures	Disseminate Governor's Traffic Safety Committee-developed public education materials regarding use and purpose of roadway departure countermeasures like shoulder and centerline rumble strips
		Create and share educational materials for quick-build demonstrations tolocal member agencies

Action Leader	Safe System Element	Resources Needed	Timeline
Rural municipalities	Safer Roads	Medium	Mid-Term
All municipalities, County	Safer Roads	Low	Mid-Term
Rural municipalities	Safer Roads, Safe Vehicles	Medium	Mid-Term
All municipalities	Safer Roads	Low	Short-Term
All municipalities	Safer Roads, Safer Vehicles	Medium	Mid-Term
All municipalities	Safer Roads, Safer Vehicles	Medium	Mid-Term
County	Safer Roads, Safer People	Medium	Short-Term
Rural municipalities, NYSDOT	Safer Roads, Safer Vehicles	Medium	Short-Term
County	Safer Roads	Low	Short-Term
ITCTC, County, NYSDOT	Safer Roads	Low	Mid-Term

Emphasis Areas	Strategies	Actions
Vulnerable Road Users	Continue implementing infrastructure programs to enhance vulnerable road user safety on priority segments, at priority intersections, and in High Risk areas	**Utilize FHWA STEP, Proven Safety Countermeasures, and the Systemic Treatment Package for Pedestrians to systemically implement countermeasures with known safety benefits at both uncontrolled and signalized crossing locations**
		Implement Complete Street Design Guide recommendations for priority intersections, gateway streets, and Special Focus streets
		Review crosswalk spacings based on crosswalk design standards and reduce distance of crossings (including pedestrian refuge islands) along arterials with long distances between signalized intersections
		Implement pedestrian-friendly signal cycle lengths and leading pedestrian intervals at traffic signals
		Fix or remove surface irregularities, and provide routine maintenance of bicycle and pedestrian accommodation facilities
		Consider installing sidepaths or separated/raised/protected facilities for bike lanes on roadways with speeds above 35 mph
		Provide buffers, such as paint, greenspace, trees, etc., to provide greater separation between vehicular traffic and sidewalks, bicycle lanes, or sidepaths
		Develop a vulnerable road user safety assessment as outlined in Vulnerable Road User Safety Assessment Guidance
		Provide effective lighting and enhance conspicuity of pedestrians and bicyclists based on FHWA Pedestrian Lighting Primer
		Design and implement pedestrian safety zone program in high pedestrian crash areas
		Engage with community members and seek funding for the planning or construction of improvements in at least two HIN corridors every year
		Improve active warning devices, signing, and pavement markings for trail crossings and remove/move on-street parking to reallocate space to ped/bike infrastructure
		Close gaps in bicycle and pedestrian networks

Action Leader	Safe System Element	Resources Needed	Timeline
All municipalities	Safer Roads, Safer Vehicles	Medium	Long-Term
All municipalities	Safer Roads, Safer People	Medium	Short-Term
Rural municipalities	Safer Roads, Safer People	Low	Short-Term
All municipalities	Safer Roads, Safer People	Low	Mid-Term
Rural municipalities	Safer Roads	Medium	Mid-Term
Rural municipalities	Safer Roads, Safer People	High	Mid-Term
Rural Municipalities	Safer Roads, Safer People	Low	Mid-Term
County, All municipalities	Safer Roads, Safer People	High	Long-Term
municipalities	Safer Roads, Safer People	Medium	Short-Term
All municipalities	Safer People	Medium	Mid-Term
County, All municipalities	Safer Roads	Low	Short-Term
County, All municipalities	Safer People	Low	Short-Term
County, Rural municipalities	Safer Roads	Medium	Mid-Term

Emphasis Areas	Strategies	Actions
	Support policy initiatives and work with vulnerable road user advocates and working groups to increase vulnerable road user safety	**Consider non-motorists and ADA design accommodations in a proportional manner during the planning stages of future projects at different jurisdiction levels**
		Develop and adopt a Vision Zero Policy
		Establish Safe Routes to School programs in communities to enhance safety access for children and develop comprehensive school travel plans in partnership with schools, local transportation agencies, and community stakeholders
		Advocate for a policy that requires that all road resurfacing projects include the addition of protected bike lanes where feasible
		Update policy that considers local-level Complete Streets policies and adopt it by ordinance; incorporate Complete Streets measures in project development
		Create a member agency working group to ensure Complete Streets policies are consistent with transportation plans
		Create dedicated expenditure line within the transportation operating budget for bicycle infrastructure
		Partner with schools, recreation centers, and other community identified priorities for connectivity and to identify walking zones
		Revise existing local-level bicycle/ pedestrian accommodation policy to align with most recent version of relevant federal and accepted industry guidance as referenced
		Evaluate how project prioritization processes can incorporate equity as a factor
		Employ proper training and use of safety protocols for workers
	Enhance data processes to obtain vulnerable road user volume, crash, and infrastructure data (especially in High-Risk Areas)	**Collect additional non-motorized crash, volume, and infrastructure data to improve crash trends and high-risk areas analysis while including equity considerations**
		Provide training to law enforcement on bicycle/pedestrian laws and how to accurately identify non-motorized crashes on the crash report
		Develop a strategic data collection plan to obtain pedestrian and bicycle count data

Action Leader	Safe System Element	Resources Needed	Timeline
County, ITCTC, All municipalities	Safer Roads, Safer People	Medium	Mid-Term
County, ITCTC, All municipalities	Safer Roads	Low	Short-term
Municipalities, School Districts	Safer People	Medium	Mid- term
County	Safer Roads, Safer People	Low	Short-Term
County, ITCTC, All municipalities	Safer Roads, Safer People	Low	Short-Term
County, ITCTC, All municipalities	Safer Roads, Safer People	Low	Short-Term
All municipalities	Safer Roads	Low	Short-Term
All municipalities	Safer Roads, Safer People	Low	Mid-Term
All municipalities	Safer Roads, Safer People	Low	Mid-Term
All municipalities, County	Safer Roads	Low	Mid-Term
NYSDOT, All municipalities, County	Safer People	Low	Mid-Term
All municipalities	Safer Roads, Safer People	Low	Mid-Term
County, ITCTC, Law Enforcement	Safer People	Low	Short-Term
County, All Municipalities, ITCTC	Safer Roads, Safer People	Low	Mid-Term

Emphasis Areas	Strategies	Actions
	Focus education efforts aimed at safe roadway behavior and awareness of laws regarding vulnerable road users	Provide Road Safety Audit (RSA) training and enhance coordination efforts among municipalities to complete audits specific to non-motorists
		Work with local advocacy groups to conduct safety campaigns and/or giveaway programs to promote the use of safety equipment like active lights, reflectors, and retroreflective clothing among pedestrians and bicyclists
		Conduct enforcement and education campaigns (i.e. NYS Department of Health videos) focused on addressing dangerous driving behaviors that threaten non-motorized road users
		Use Dynamic Message Signs to provide public service messages to increase awareness of the dangers to non-motorists traffic on high volume/speed roadways and in school zones, and to remind drivers to follow laws intended to protect non-motorists
		Expand educational campaigns and training programs for children and adults focusing on bicyclists and pedestrian skill education, safety-related training, helmet use, etc.
		Partner with schools to distribute educational brochures and materials with identified Safe Routes to Schools
		Recruit effective partners to ensure the vulnerable road user programs are reaching diverse and underserved communities
Age Related	Support and implement improved public transportation options and accessibility	Work to make pedestrian and transit connected communities so that people are not forced to get a car and/or drive when they feel unsafe due to weather or health issues
		Identify and promote programs and activities like driver assessments, public transit, and driver improvement programs that help older road users stay mobile
		Establish resource centers within local communities to provide guidance and assistance to identify and incentivize safe transportation options
		Identify locations with high older population density and available transit services (all mobility options)
	Implement engineering designs to accommodate users for all ages	Utilize FHWA Handbook for Designing Roadways for the Aging Population to improve roadway design and to better accommodate the special needs of older drivers

Action Leader	Safe System Element	Resources Needed	Timeline
County / Municipalities	Safer Roads, Safer People	Low	Mid-Term
All municipalities	Safer Roads, Safer People	Low	Mid-Term
County, All municipalities	Safer Roads	Low	Mid-Term
County, All municipalities	Safer Roads	Low	Short-Term
County, All municipalities	Safer People	Low	Short-Term
All municipalities	Safer People	Low	Short-Term
All municipalities	Safer People	Low	Mid-Term
County, All municipalities	Safer Roads, Safer People	Medium	Mid-Term
All municipalities	Safer Roads, Safer People	Low	Mid-Term
County, All municipalities	Safer Roads	Low	Mid-Term
County, All municipalities	Safer People	Low	Short-Term
All municipalities	Safer Roads, Safer People	Medium	Long-Term

Emphasis Areas	Strategies	Actions
	Improve enforcement efforts to address age-related driving issues	Educate stakeholders, law enforcement, and the public to understand physical and cognitive deficiencies affecting safe driving in older drivers
		Educate municipalities on best solutions related to Graduated Driver's License (GDL) enforcement and educate judges regarding risks for younger drivers and GDL law
	Increase awareness of driving risks to younger drivers amongst teens, college age students, parents and community members	**Expand and continue to support coalitions for safer teen driving, jurisdiction-wide peer-led education activities, and teen/parent activities**
		Conduct campaigns to increase public awareness of GDL and dangers of texting and driving on social media outlets
		Implement media campaigns and outreach efforts that reach younger drivers with messages about unsafe driving practices
		Develop and implement peer-to-peer programs, evidence-based curricula, and messaging to increase traffic safety knowledge, attitude, and behavior
		Develop and implement guide for teaching teens to drive to include lessons for nighttime, snow/ice, and rainy weather
	Support organizations with driver education for older drivers	Promote partnerships and educate safety professionals at regional and local governments on addressing the special needs of the aging population in their transportation, land use, and housing plans
		Distribute educational materials that provide information and resources for older driver safety to older drivers, caregivers, and family members (include self-assessment tools, driving evaluation programs like CarFit, effects of medications and health conditions on driving, etc.)
		Develop classes and partner with vehicle dealerships to better educate older drivers on the usage of new vehicle technology

Action Leader	Safe System Element	Resources Needed	Timeline
County, Law Enforcement	Safer Roads, Safer People	Low	Mid-Term
County, Law Enforcement	Safer People	Low	Mid-Term
County, All municipalities	Safer Roads, Safer People	Loww	Mid-Term
County, All municipalities	Safer People	Low	Short-Term
County, University stakeholders, School districts	Safer Roads, Safer People	Low	Mid-Term
County, School districts	Safer Roads, Safer People	Medium	Mid-Term
County, School districts	Safer Roads, Safer People	Medium	Mid-Term
County, All municipalities	Safer People	Low	Mid-Term
County, Rural municipalities	Safer People	Low	Mid-Term
County, All municipalities	Safer Roads, Safer People	Low	Mid-Term

Emphasis Areas	Strategies	Actions
Road User Behavior	Implement engineering improvements to mitigate high risk driver behavior	**Implement applicable countermeasures from the Systemic Treatment Package for Speeding that address speeding crashes**
		Implement dynamic message boards when approaching work zones or congested areas
		Develop a horizontal curve safety program that focuses on low cost countermeasures that includes reviewing advisory speed signing and other warning signs
		Encourage the use of the FHWA Traffic Calming ePrimer to implement traffic calming measures for all users, such as Speed humps, Raised crosswalks, etc. in coordination with EMS
		Assist local jurisdictions with implementing timed and coordinated traffic signals to improve traffic flow, reduce red-light running, and manage speeds
		Design residential streets for 25 mph target speeds using traffic-calming measures
		Establish localized slow zones for hospitals, parks/recreation and senior areas with reduced speeds limits and appropriate treatments (signs, markings, speed tables, etc.)
		Increase usage of speed feedback (SFS) and dynamic warning signs to remind drivers of travel speeds when entering urban areas or other high risk locations such as work zones and continue to research the most effective locations for these signs
		Develop a Traffic Calming Master Plan to guide the installation of traffic calming infrastructure with input from EMS. Focus on installing speed reduction infrastructure along high crash segments where excessive speed is a prominent crash factor
		Explore the use of variable speed limits and conduct pilot projects to explore the effectiveness of using electronic variable speed limit signs that change according to conditions such as weather and congestion

Action Leader	Safe System Element	Resources Needed	Timeline
All municipalities	Safer Speeds	Medium	Mid-Term
All municipalities	Safer Speeds	Low	Mid-Term
All municipalities	Safer Speeds	Low	Mid-Term
All municipalities, EMS	Safer Speeds, Safer Roads	Low	Short-Term
County, All municipalities	Safer Speeds, Safer Roads	Low	Short-Term
All municipalities	Safer Speeds	Medium	Long-Term
All municipalities	Safer Speeds	Low	Mid-Term
All municipalities	Safer Speeds	Low	Mid-Term
All municipalities	Safer Speeds, Safer Roads	Medium	Mid-Term
Rural municipalities	Safer Speeds, Safer Roads	Low	Mid-Term

Emphasis Areas	Strategies	Actions
	Conduct coordinated targeted enforcement efforts and publicize high-visibility enforcement	Utilize dedicated resources to publicize the distracted driving law including media campaigns, distribution of education materials, etc.
		Conduct high-visibility cell phone/text messaging enforcement to enforce the distracted driving law
		Develop educational tools for law enforcement on how to identify drivers violating state distracted driving laws and educate all emergency responders about the dangers of distracted driving
		Continue jurisdiction-wide high-visibility enforcement and saturation enforcement in active school zones, safety corridors, and work zones
		Conduct well-publicized compliance checks of alcohol retailers to reduce sales to underage persons and overservice, conduct enforcement aimed at underage drinking penalties
		Conduct short-term, high-visibility seat belt law enforcement campaigns with supporting media to educate the public on the importance of using seat belts
		Prepare regional guidelines on the use of automated speed enforcement, red light cameras and other tools and techniques to reduce speeding, especially in school zones and work zones, including implementation steps and equity considerations
		Collect data and research new techniques, software, and technologies to select enforcement times and locations for most effective speed control
		Provide training on basic and advanced speed measuring devices and high-visibility enforcement best practices to new law enforcement officers and as continuing career education
		Collaboratively pursue local regulation to increase penalties for repeat and excessive speeding offenders when addressing speeding tickets in the justice system
		Establish a diversion program for persons cited for infractions related to walking, bicycling, and distracted driving

Action Leader	Safe System Element	Resources Needed	Timeline
County, Law Enforcement	Safer People	Low	Mid-Term
All municipalities, Law Enforcement	Safer People	Low	Mid-Term
County, Law Enforcement	Safer People	Low	Mid-Term
All municipalities, Law Enforcement	Safer People	Low	Mid-Term
All municipalities, Law Enforcement	Safer Roads, Safer People	Low	Mid-Term
All municipalities, Law Enforcement	Safer People	Low	Mid-Term
All municipalities, Law Enforcement	Safer Roads, Safer People, Safer Speeds	Medium	Mid-Term
All municipalities, County, Law Enforcement	Safer Speeds	Low	Mid-Term
All municipalities, County, Law Enforcement	Safer Speeds	Medium	Mid-Term
All municipalities, County, Law Enforcement	Safer People	Low	Short-Term
County, All municipalities, Law Enforcement	Safer People	Low	Mid-Term

Emphasis Areas	Strategies	Actions
	Review the existing speed management standards and update the speed limit setting process	**Perform speed studies to analyze impacts of posted speed limit change and potentially lower local road speed limit to 25 mph to reflect safe speed threshold**
		Monitor other jurisdiction's practices and review the current local plan for changing speed limit
		Provide guidance materials and training to help traffic engineers understand speed limits and regulations
	Enact, publicize, enforce, and adjudicate laws prohibiting high-risk driving behaviors	Consider the use of Speed Violation Monitoring Systems in school zones and if interested, lobby for approval from the NYS Legislature
		Conduct administrative license revocation or suspension (ALR/ALS)
		Encourage law enforcement to increase sobriety checkpoints
		Enforce open-container law, as applicable, for alcohol and cannabis
		Promote the use of Preliminary Breath Test Devices and purchase testing supplies and equipment, outsource toxicology testing of backlogged cases, validation of equipment, and purchase new toxicology analysis equipment to improve the collection and quality of impaired driving data
		Purchase passive alcohol sensors to detect alcohol presence in the air
		Promote the implementation of expedited search warrant (eWarrants) programs for law enforcement officers to obtain evidences from impaired driving in a timely manner
		Provide support for expanding specialized law enforcement drug recognition training, include Drug Recognition Expert (DRE) and Advanced Roadside Impaired Driving Enforcement (ARIDE) certification
		Implement laws that place limits on diversion and plea agreements
		Monitor DWI offenders closely by implementing alcohol ignition interlocks, vehicle and license plate sanctions, enhanced high-BAC sanctions, increasing fines and lowering BAC limit for repeat offenders, and intense supervision programs
		Work with local EMS to standardize protocols regarding blood draws for fatality testing

Action Leader	Safe System Element	Resources Needed	Timeline
Rural municipalities	Safer Speeds	Medium	Mid-Term
All municipalities	Safer Speeds	Low	Short-Term
County	Safer Roads, Safer Speeds	Low	Mid-Term
ITCTC, County, All municipalities, Law Enforcement	Safer Speeds	Medium	Mid-term
County, All municipalities, Law Enforcement	Safer People	Low	Mid-Term
County, All municipalities, Law Enforcement	Safer People	Low	Short-Term
County, All municipalities, Law Enforcement	Safer People	Low	Short-Term
County, All municipalities, Law Enforcement	Safer People	Low	Mid-Term
County, All municipalities, Law Enforcement	Safer People	Low	Mid-Term
County, Law Enforcement	Safer People	Low	Mid-Term
County, All municipalities, Law Enforcement	Safer People	Low	Long-Term
County, All municipalities	Safer People	Low	Long-Term
County, All municipalities	Safer People	Low	Long-Term
County, All municipalities, EMS	Post-Crash Care	Low	Mid-Term

Emphasis Areas	Strategies	Actions
		Enforce the Minimum Drinking Age 21 laws
		Continue to enforce local primary enforcement seat belt use laws
		Conduct nighttime, high-visibility seat belt enforcement
		Continue to provide funding to equip law enforcement with appropriate equipment for speeding enforcement
	Conduct educational and outreach efforts to build awareness of safe driving habits	Increase jurisdiction-wide public information and education to promote adherence to texting and cell phone laws and distracted driving law
		Educate commercial vehicle and fleet drivers about the dangers of distracted and drowsy driving
		Implement campaigns and provide education in schools on the dangers of impaired driving
		Explore partnerships at the local level to educate drivers of available alternative methods of transportation for impaired persons
		Educate the public on the benefits of using ignition interlocks for those who convicted of DWI
		Conduct jurisdiction-wide media campaigns to prevent underage use of alcohol and/or cannabis and reduce overall misuse/abuse by adult consumers
		Use a combination of earned media and paid advertising to inform the motoring public about the importance of seat belts, proper wear, and car seats, as well as the penalty for non-compliance
		Identify groups with lower than average restraint use rates and implement communications, outreach, and enforcement campaigns directed at those groups
		Utilize social media and educational materials to share information about the dangers of aggressive driving and risks to vulnerable road users
		Educate drivers about the effects of roadway conditions on appropriate motorist speed, such as weather, congestion, daytime/nighttime, and roadway user mix
		Coordinate with safety partners to develop consistent speed related safety messaging and distribute materials in local communities related to safe driving behavior

Action Leader	Safe System Element	Resources Needed	Timeline
All municipalities, Law Enforcement	Safer People	Low	Mid-Term
All municipalities, Law Enforcement	Safer People	Low	Short-Term
All municipalities, Law Enforcement	Safer People	Low	Short-Term
County, All municipalities, Law Enforcement	Safer People	Low	Mid-Term
County, All municipalities	Safer People	Low	Short-term
County	Safer People	Low	Short-term
County, All municipalities, School districts	Safer People	Low	Short-term
County, All municipalities	Safer People	Low	Mid-Term
County, All municipalities	Safer People	Low	Short-term
County, All municipalities	Safer People	Low	Mid-Term
County, All municipalities	Safer People	Low	Mid-Term
County, All municipalities	Safer People	Low	Short-term
County, All municipalities	Safer People	Low	Short-term
County, All municipalities	Safer People	Low	Short-term
County, ITCTC, All municipalities	Safer People, Safer Speeds	Low	Short-term

Emphasis Areas	Strategies	Actions
		Create and sustain a public website that provides information, resources, training, and educational opportunities
	Improve the collection and quality of data on high-risk driving behavior	**Increase training for law enforcement to record driver behavior characteristics and related observations on crash report forms and ensure they can be recorded in crash database**
		Increase data sharing between local officers and engineering agencies to identify and develop solutions for problematic areas
		Collect data before and following high-risk driving behavior safety improvements to analyze outcomes
	Improve and expand the availability and accessibility of child restraint system inspection stations and increase the correct use of child restraints	Host car seat awareness and instruction classes, and provide support for child seat giveaway programs for populations that have lower than average proper car seat use, especially in diverse and underserved communities
		Target child transport agencies, hospitals, childcare centers, schools, etc. and collaborate with child passenger safety technicians

Action Leader	Safe System Element	Resources Needed	Timeline
County, ITCTC, All municipalities	Safer People	Low	Short-term
All municipalities, County, Law Enforcement	Safer People	Low	Short-term
All municipalities, County , Law Enforcement	Safer People	Low	Short-term
ITCTC, County, All municipalities	Safer People, Safer Speeds	Low	Short-term
County, All municipalities	Safer People	Low	Short-term
County, All municipalities	Safer People	Low	Short-term

Table 22 - Secondary Emphasis Areas, Strategies, & Actions

Secondary Emphasis Areas	Strategies	Actions	Action Leader
Safer Vehicles (Alternate Road Vehicles & Commercial Motor Vehicles)	Identify high crash corridors and develop engineering solutions to reduce CMV crashesw	Review and update the Tompkins County Freight Transportation Study (2002). Evaluate if the Recommended Truck Routes need to be updated to reflect new preferred/ safer routes, and whether wayfinding signage is adequate.	County
		Identify and implement countermeasures for high-crash CMV corridors and provide information to safety partners	All municipalities
		Invite trucking industry stakeholders to participate in an annual freight forum to discuss new technologies, policies, and strategies for the CMV Focus Area	County
		Identify and deploy engineering solutions (e.g., interactive truck rollover and curve warning signage) and best practices to improve CMV safety	All municipalities
		Develop e-bike corridors, bike corridors, and pedestrian ways separate from CMV	Rural municipalities
	Increase CMV enforcement of safety violations and provide CMV enforcement training	Investigate local law enforcement officer partnerships at points-of-entry to assist in CMV enforcement efforts	All municipalities, Law Enforcement
		Conduct driver or vehicle inspections to ensure CMVs are in proper working order and drivers are properly credentialed and fit for duty	All municipalities
		Consider developing specific corridors for CMV to provide separation between CMV and other vehicle types when possible and enforce regulation to keep CMV on their designated roads	All municipalities, Law Enforcement
		Collaboratively pursue local regulation to require smaller vehicles for delivery and goods transportation in urban environments	All municipalities
		Utilize data-driven approach to strengthen CMV enforcement on high speed corridor	All municipalities, Law Enforcement
		Provide CMV enforcement training including CMV identification, relevant regulations, and crash reporting based on state and federal definitions for local law enforcement officers	All municipalities, Law Enforcement
		Conduct on- or off-site safety audits with new carriers to ensure they understand roadway safe behaviors and the federal and state regulations	All municipalities

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	Improve bus infrastructure	Ensure that bus stop access is maintained during roadway or site construction; coordinate with developers and construction contractors to provide safe, convenient access to bus stops and around construction	Rural municipalities
		Assess on-street parking near bus stops to ensure visibility for crossings	All municipalities
		Ensure that bus stops are placed near or adjacent to safe crossings; place midblock crossings at bus stop locations	All municipalities
		Use the HIN to inform transit planning and investments - bus route and network organization, bus stop replacements, and transit station access	All municipalities
	Provide education and outreach to the public and industry on safe operations in and around commercial vehicles – braking and speeding	Encourage the inclusion of CMV related topics like how to interact safely with CMVs in driver education	County
	Develop and implement educational initiatives regarding e-bikes and other motorized micromobility options	Require scooter and bike share providers to develop safety and encouragement campaign aimed at their users, with paid promotions via community based organizations	All municipalities
	Encourage helmet and high visibility clothing usage, safe riding behavior, and motorcycle safety training	Conduct check points and testing for impaired motorcycle operators	All municipalities, County, Law Enforcement
		Develop partnerships with local companies selling motorcycle related equipment and insurance companies to incentivize motorcyclists to take training and wear safety equipment	All municipalities

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		Compile information and develop fact sheets to inform public outreach, law enforcement, and legislators about jurisdictional and state requirements for operation of alternate road vehicles on roadways	County, ITCTC
	Develop and implement programs that provide education and awareness to high-risk road users	Conduct law enforcement training in motorcyclist DUI detection, motorcyclist crash investigation, Zero Tolerance, and motorcyclist specific laws	County, Law Enforcement
		Conduct a comprehensive education campaign that provides information for both motorists and motorcycle riders about motorcycle safety needs, protective equipment, visibility, speeding, perception-reaction times, and pertinent laws	County, All municipalities
		Collect and link crash, injury, licensing (endorsement), violation, and registration data for analysis to identify high risk locations and behaviors related to motorcyclist fatal and serious injury crashes	All municipalities
	Implement roadway design improvements and maintenance practices for motorcycle safety	Provide full paved shoulders to accommodate roadside motorcycle recovery and breakdowns	All municipalities, County
Post-Crash Care	Enforce state laws that enhance EMS safety and response (e.g., 'Move Over' law)	Enforce 'Move Over' law jurisdiction-wide	All municipalities, County, Law Enforcement
	Aid managers in developing their local EMS Mutual Aid Plans	Support rural EMS by promoting EMS response as a county service	County, EMS

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	Educate emergency responders and the public on existing laws and best practices to promote EMS safety and quicker response time	Promote public awareness of the state 'Move Over' law through signage, media, and social media campaigns	County, All municipalities
Data	Connect medical injury data with crash data for better data analysis	Derive a clinical classification of injury severity based on medical records to augment the investigating officer's assessment of injury severity	County, Law Enforcement
		Improve data collection (time of event/time of notification/ time of arrival of EMS/Time of hospital arrival)	County, Law Enforcement
	Require all law enforcement to adopt the state crash reporting system	Enhance training for law enforcement and emergency service personnel responsible for crash reporting to address the unique attributes required to accurately report crash circumstances involving people walking and bicycling	County, All municipalities, Law Enforcement
		Set up and help fund training programs to educate law enforcement officers regarding accuracy and detail of crash report information	County, Law Enforcement
		Provide funding for equipment and training associated with adoption of crash reporting system by law enforcement agencies	County, ITCTC, All municipalities, Law Enforcement
		Work with the police department to set a deadline for implementation of crash reporting system by all law enforcement agencies	County, ITCTC, All municipalities, Law Enforcement
	Improve crash data collection tools and analysis techniques to provide more timely and accurate data to help with problem area identification	Increase electronic reporting of crashes and traffic citations	Law Enforcement
		Evaluate effectiveness of completed safety improvement projects, including maintenance costs	County, ITCTC, All municipalities

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	Improve data accessibility, integration, and sharing across agencies	Explore the use of EMS activations data for inclusion with the integrated traffic records program	All municipalities, EMS, Law Enforcement
		Coordinate with safety partners to collect and analyze police crash report forms	County, ITCTC, All municipalities, Law Enforcement
		Provide coordinated safety performance data to other agencies, including local agencies and MPOs to aid in safety studies and projects conducted at local level (require additional CLEAR training)	County, ITCTC, All municipalities
		Collect Model Inventory of Roadway Elements (MIRE) roadway and traffic data elements with consideration of adding other beneficial elements to support the data-driven safety program	Rural municipalities, County, ITCTC
		Increase accuracy and completeness of alcohol, drug, and cannabis-related crash attributes to improve future analysis	County, ITCTC, All municipalities, Law Enforcement
		Create a central repository for integrated, linked data records including crash records, roadway and traffic records, health records, court records, licensing records, and state toxicology records	County (Health Department), ITCTC, All municipalities, Law Enforcement,
		Populate, monitor, and enhance the electronic data transfer to state partners (e.g., NHTSA, FHWA)	County, All municipalities, ITCTC
		Expand data collection and analysis to incorporate emerging mobility options such as micromobility and connected and automated vehicles, as well as real-time data sources	County, All municipalities, ITCTC