BMTS
SAFETY ACTION PLAN

Steering Committee #4
2 / 5 / 2026

BMTS Safety Action Plan – Executive Summary

BMTS safety ACTION plan

PSC #4
Introduction

INTENT

—Orient to the Draft Report

—Clarify Timeline for Comments & Final

Link to Draft Report

AGENDA

—Executive Summary of Each Chapter
  —Introductory context
  —Key visuals, maps, or lists

—Review Timeline & Next Steps

Safety Action Plan Summary

- **What the Plan Does**
  - Diagnoses where and why fatal/serious injuries (KSI) occurred
  - Combines crash history with predictive risk modeling and equity
  - Recommends prioritized, site-specific capital projects plus broader systemic approaches & policy strategies

- **How It Will Be Used**
  - Near-term: Advance priority capital projects for funding and design
  - Ongoing: Deploy systemic countermeasures and monitor outcomes

Chapter 0 – Introduction [FORTHCOMING]

- **Expected Contents**
  - Plan purpose
  - USDOT SS4A overview
  - Safe System discussion
  - Define study area

Source: NYSDOT CLEAR crash data (2019–2023)

Chapter 1 – Stakeholder Involvement

Summarizes Outreach Activities

- **4 Project Steering Committee (PSC) Meetings**
- **3 Focus Groups** –Traffic/Safety/Highway Officials, Vulnerable User and Special Needs advocates, and County/Senior/Rural Health Transit services. Discussions identified unsafe locations and explored contributing.
- **Online Survey** & **Interactive Map**- June 20 to August 25, 2025. The survey collected 76 responses about unsafe behaviors and conditions encountered while driving, walking, biking, or using mobility devices. The online map collected 365 location-specific safety comments, with 126 added directly by participants and 239 captured through other outreach channels.
- **4 Pop-Up Tabling Events**- The team attended four popular events (Owego Strawberry Festival, Car and Bike Show, Windsor & Broome Co Farmers' Markets) to promote the survey and gather direct feedback.
- **Project Website** and **Mailing List** - These tools kept stakeholders informed throughout the planning process.

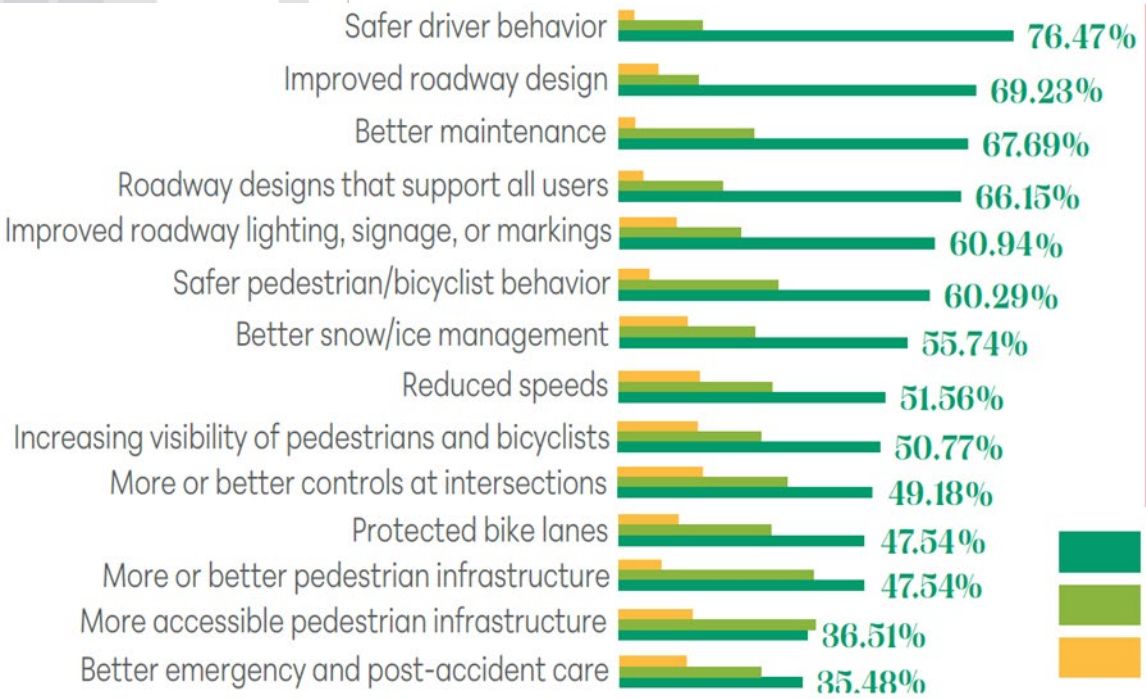
Chapter 1 – Stakeholder Involvement

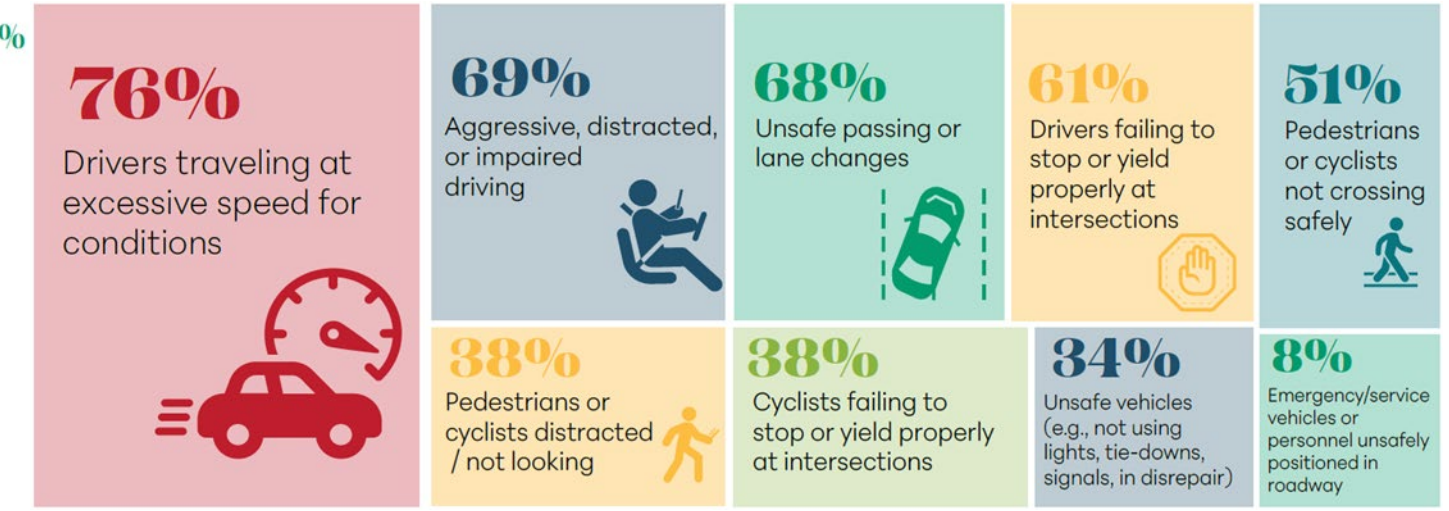
2. Summarizes Key Findings

- **Driving Behaviors -** The most consistent concern was unsafe driving, particularly speeding and aggressive driving. Distracted driving and drivers failing to yield to pedestrians at crosswalks were also common complaints.
- **Road Conditions –** Drivers and users with disabilities reported deteriorating pavement, shoulders, markings, and sidewalks. Poor visibility due to inadequate lighting or obstructed views was a recurring theme affecting drivers, bicyclists, and pedestrians.
- **Multimodal Concerns -** Missing or disconnected sidewalks, insufficient crosswalks, poor pedestrian signalization, and lack of bike lanes were recurring concerns. Participants noted unsafe behaviors by speeding e-bike users and called for more accessible infrastructure for all ages and abilities..

- **Broome County** (302 map comments) – Unsafe driving a key concern. Repeatedly mapped locations: Route 17, Court Street, Upper Front Street roundabouts in Dickinson, Vestal Parkway, and the NY-201 bridge.
- **Tioga County** (63 map comments) - Visibility, roadway designs, and sidewalk conditions frequently mapped. Repeatedly mapped locations: Village of Owego (North Avenue underpass, Front Street railroad crossings, and Main Street sidewalk conditions).
- **Focus Areas -** Three key interventions would address many of the public's concerns:
  (1) promoting safer driver behavior,
  (2) designing roadways that support all users
  (3) investing in maintenance.

Chapter 1 – Stakeholder Involvement: What We Heard

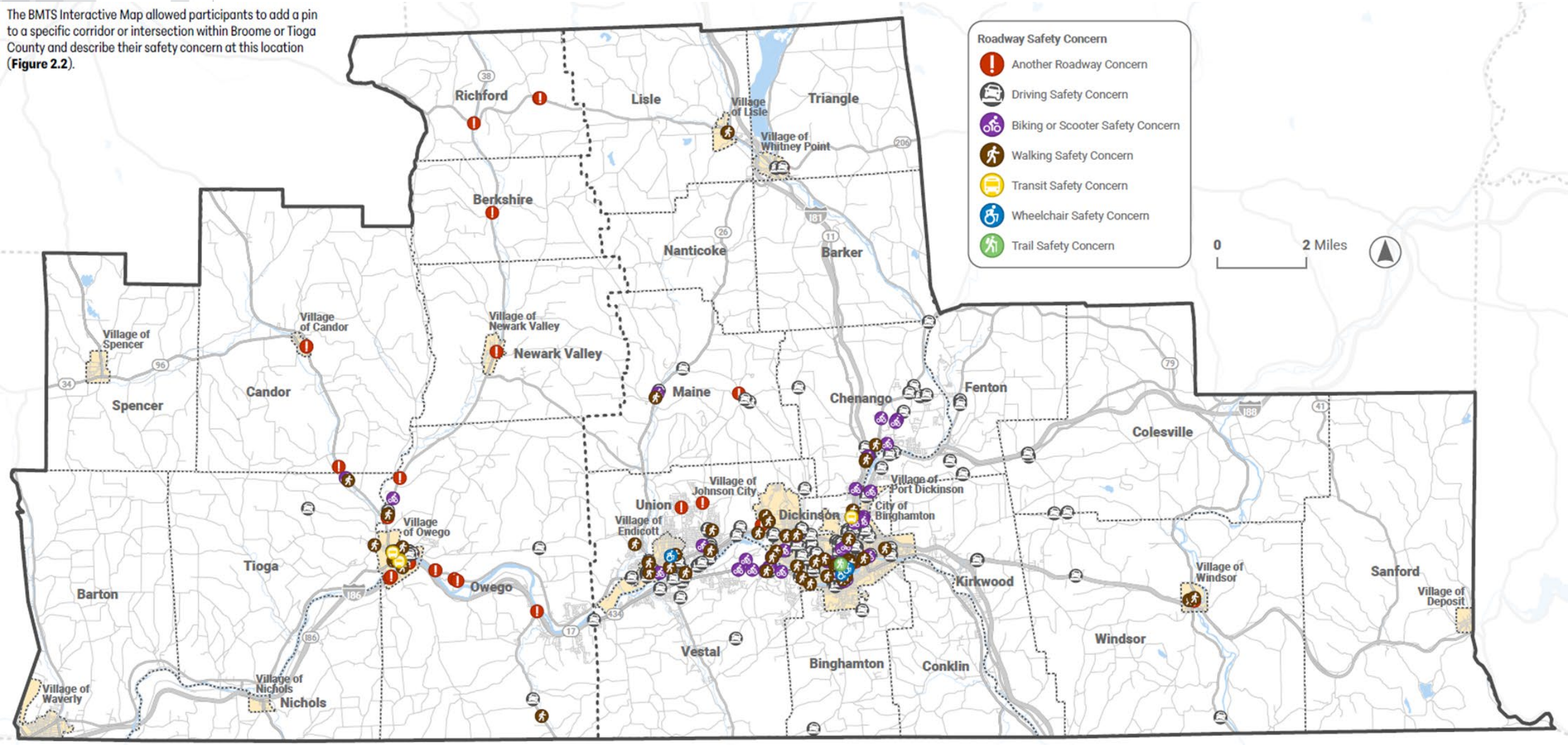




Source: BMTS Draft Report – Chapter 1 (Figure 2 & 3)

Safety Concerns Public Comment Map

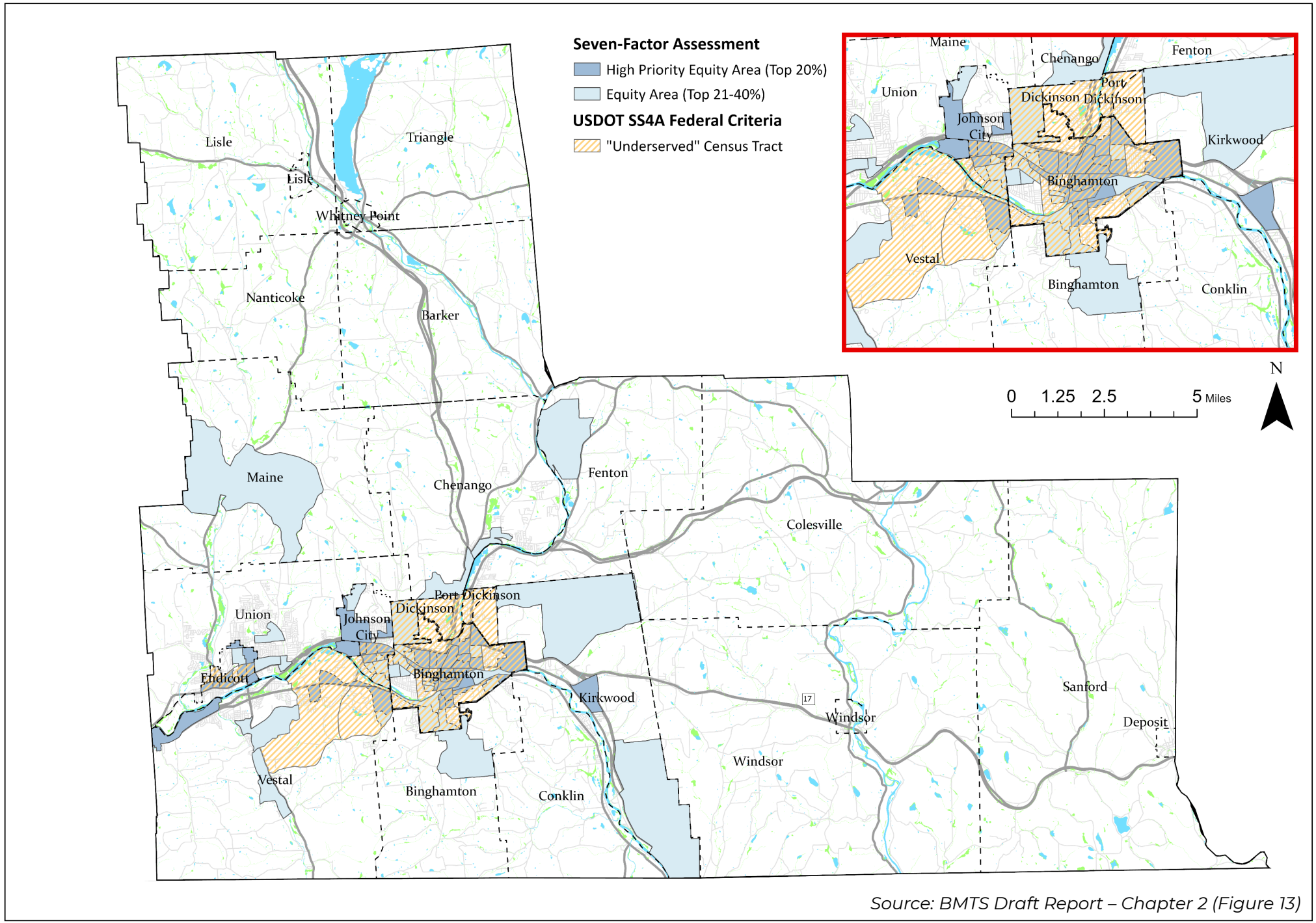
The BMTS Interactive Map allowed participants to add a pin to a specific corridor or intersection within Broome or Tioga County and describe their safety concern at this location (**Figure 2.2**).



Chapter 2 – Equity & Vulnerable Communities

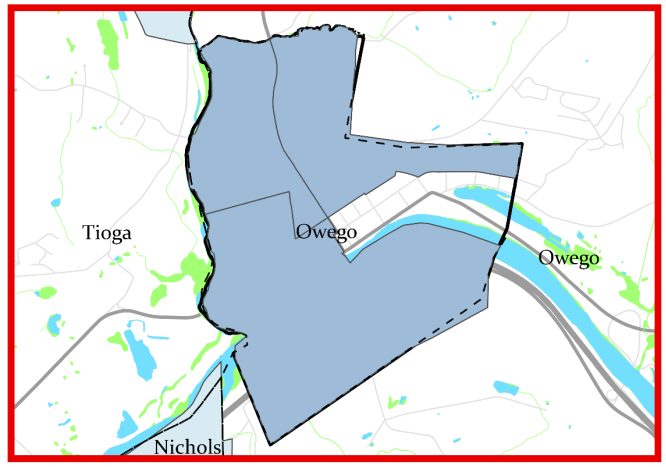
- **Introduction**
  - Assessed extent to which severe crashes disproportionately impacted vulnerable communities
- **Data Analyzed**
  - Seven-factor vulnerability index (block groups) & USDOT Underserved Communities tool
    - Youth (individuals aged 17 or under)
    - Senior (individuals aged 65 or older)
    - Carless Households (household that does not have access to a working vehicle)
    - Disabled
    - Limited English Proficiency
    - Low Income Households (at or below the federal poverty guidelines)
    - Minority Status (individuals identifying as not “White Alone”)
- **Key Trends**
  - Equity areas show elevated KSI risk relative to roadway mileage share
- **Major Conclusions**
  - Study-specific method adds nuance beyond tract-level federal tool
  - Will help guide where investments are focused and how projects are prioritized
- **Tie to Study**
  - Incorporated into project prioritization and systemic risk modeling (HRN)

Equity & Vulnerable Communities – Broome



Source: BMTS Draft Report – Chapter 2 (Figure 13)

Equity & Vulnerable Communities – Tioga



0 1 2 4 Miles

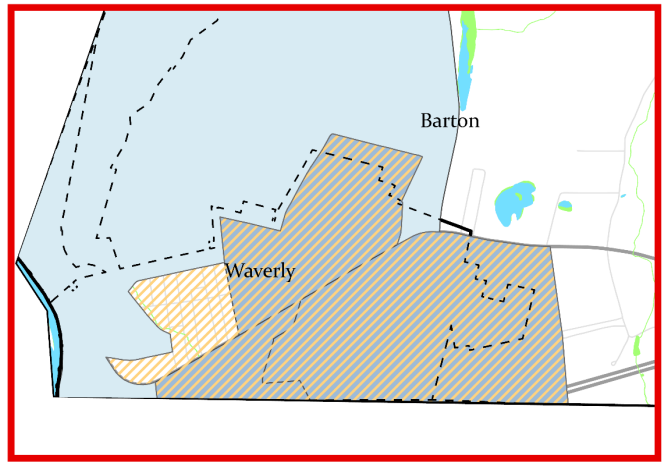
N

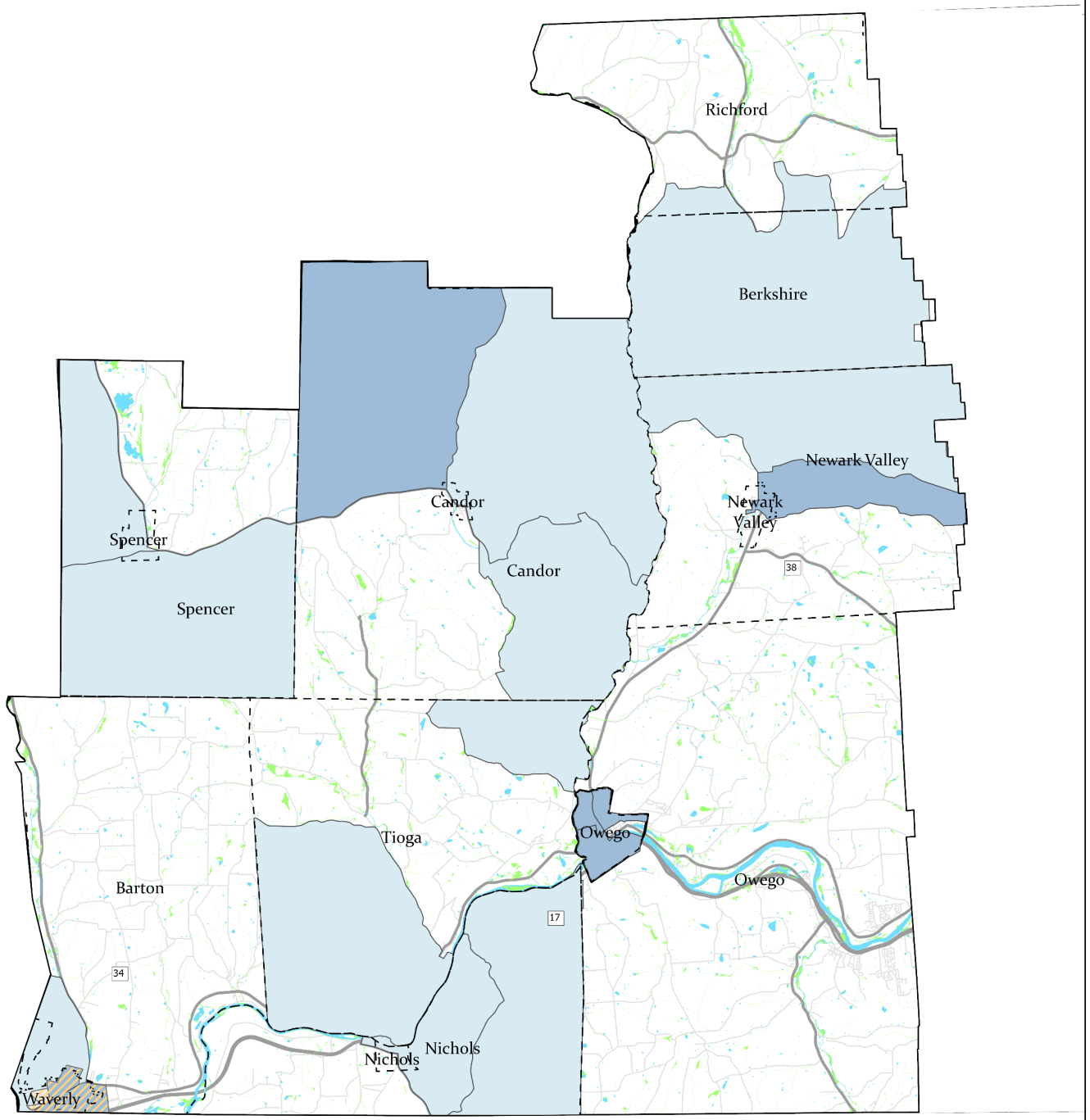
Seven-Factor Assessment

- High Priority Equity Area (Top 20%)
- Equity Area (Top 21-40%)

USDOT SS4A Federal Criteria

- "Underserved" Census Tract





Source: BMTS Draft Report – Chapter 2 (Figure 14)

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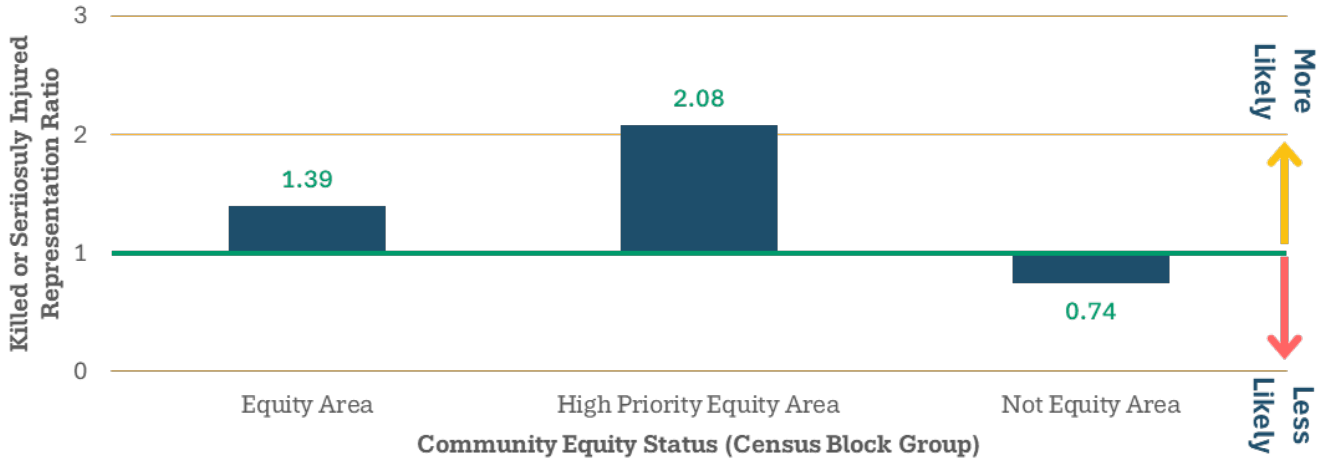
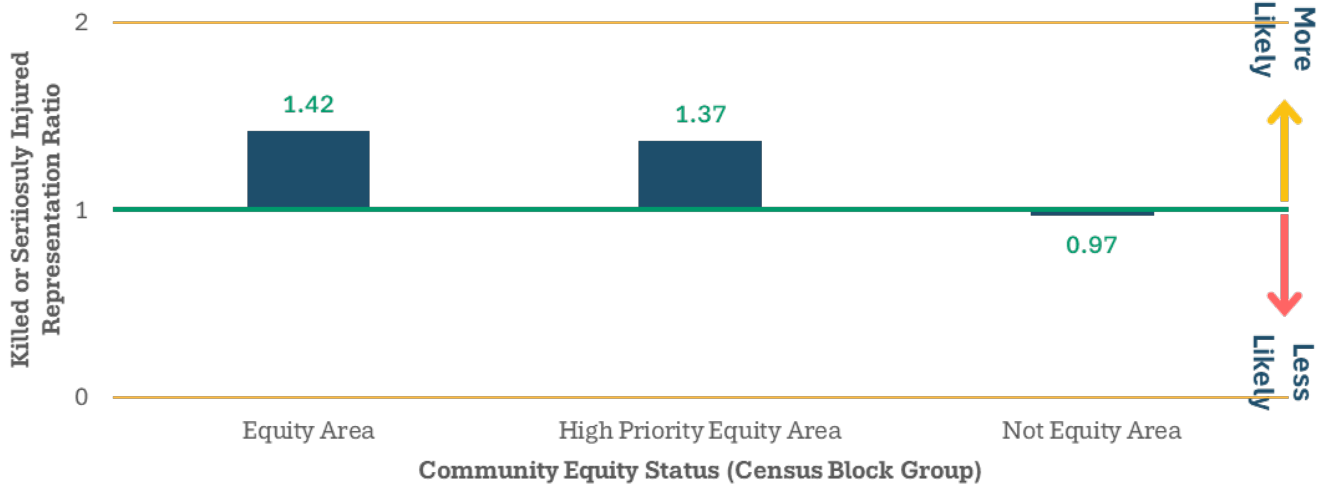
Chapter 2 – Equity & Vulnerable Communities: Disproportionate KSI Risk

BROOME



TIOGA



Source: BMTS Draft Report – Chapter 2 (Figure 15 & 16)

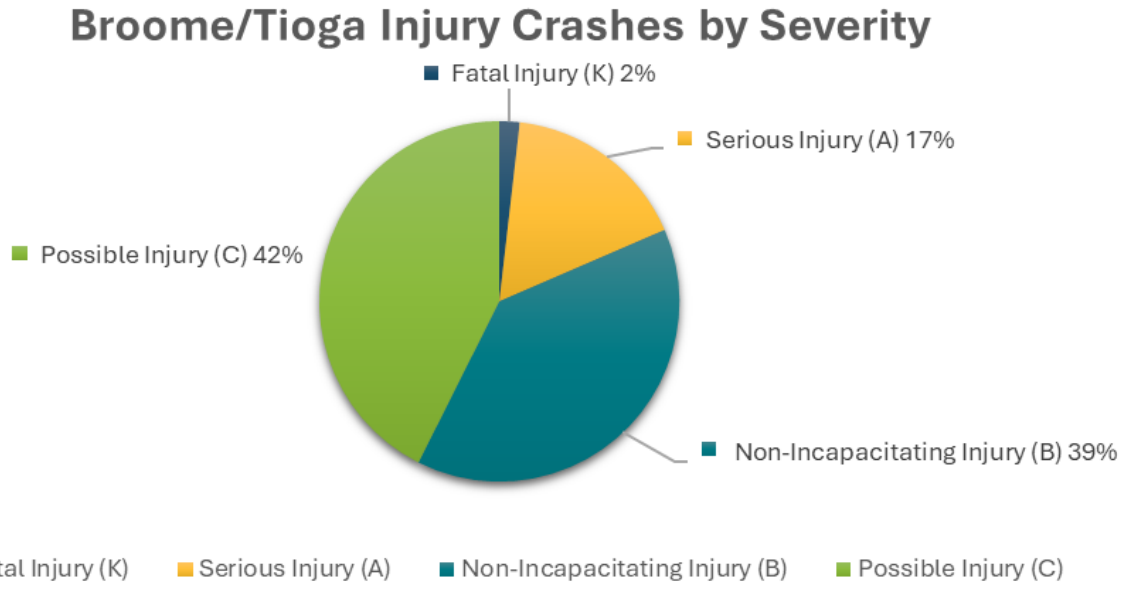
Chapter 3 – Crash Analysis: Scope & Totals

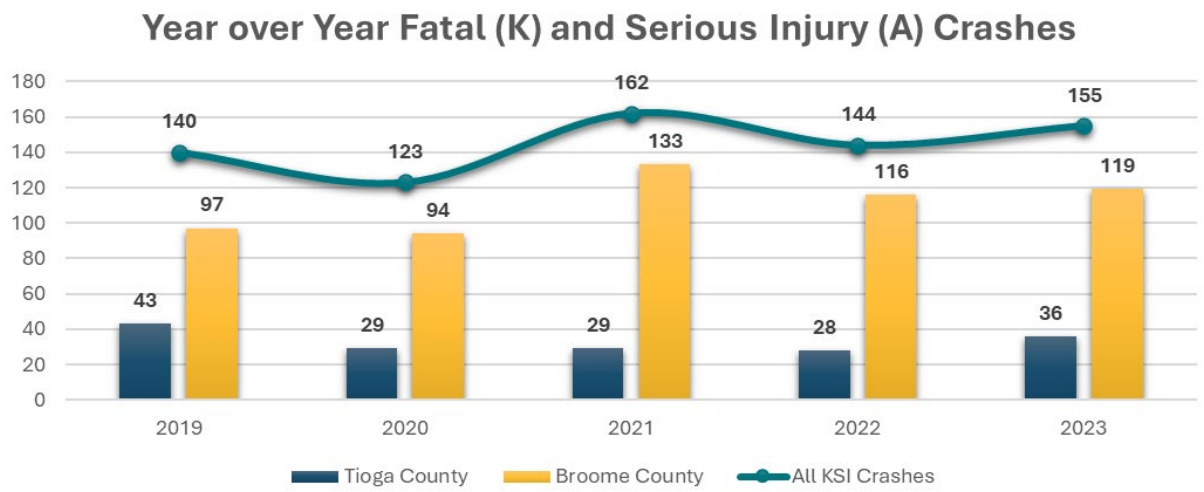
- **Introduction**
  - Vision Zero lens: focus on fatal and serious injury crashes (KSI)
- **Data Analyzed**
  - NYSDOT CLEAR injury crash data (2019–2023)
  - Excludes limited-access facilities and non-injury (PDO) crashes
- **Key Trends**
  - 3,910 injury crashes in the two-county study area
  - 724 KSI crashes (Broome 559; Tioga 165)
    - Broome accounts for 77% of region's KSI (559), with Tioga at 23% (165)
  - KSI counts are relatively steady year-to-year, with a dip in 2020
- **Major Conclusions**
  - The plan prioritizes locations/strategies that address the most severe outcomes
- **Tie to Study**
  - Defines the safety problem statement that drives HIN/HRN and project development

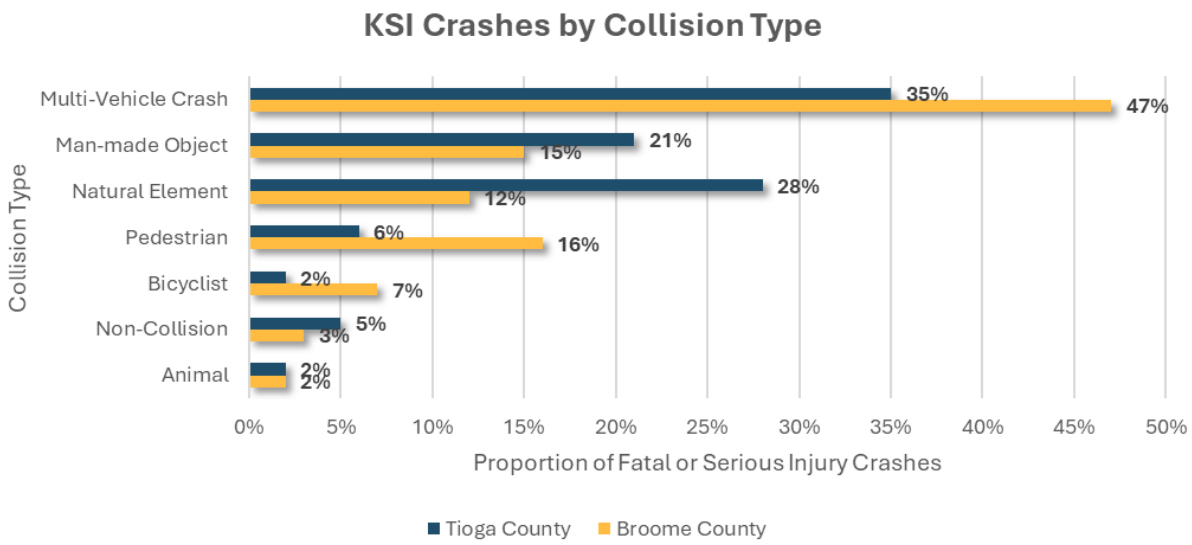
Chapter 3 – Crash Analysis: Where/How Crashes Happen

- **Introduction**
  - Crash characteristics explain where severe outcomes cluster and what contributes
- **Data Analyzed**
  - Municipal severity distributions, crash type/location, and contributing actions
- **Key Trends**
  - Broome County: City of Binghamton (29%), Vestal (11%), Endicott (10%)
    - Together 50% of county KSI crashes
  - Tioga County: Towns of Owego (21%), Candor (15%), Barton (12%)
    - Together 48% of county KSI crashes
- **Major Conclusions**
  - Severe crashes are concentrated in a small set of municipalities → targeted investments + systemic strategies
- **Tie to Study**
  - Directly informs HIN/HRN focus areas, emphasis areas (Ch. 7), and the prioritization of capital projects (Ch. 6)

Chapter 3 – Crash Analysis: Key Charts







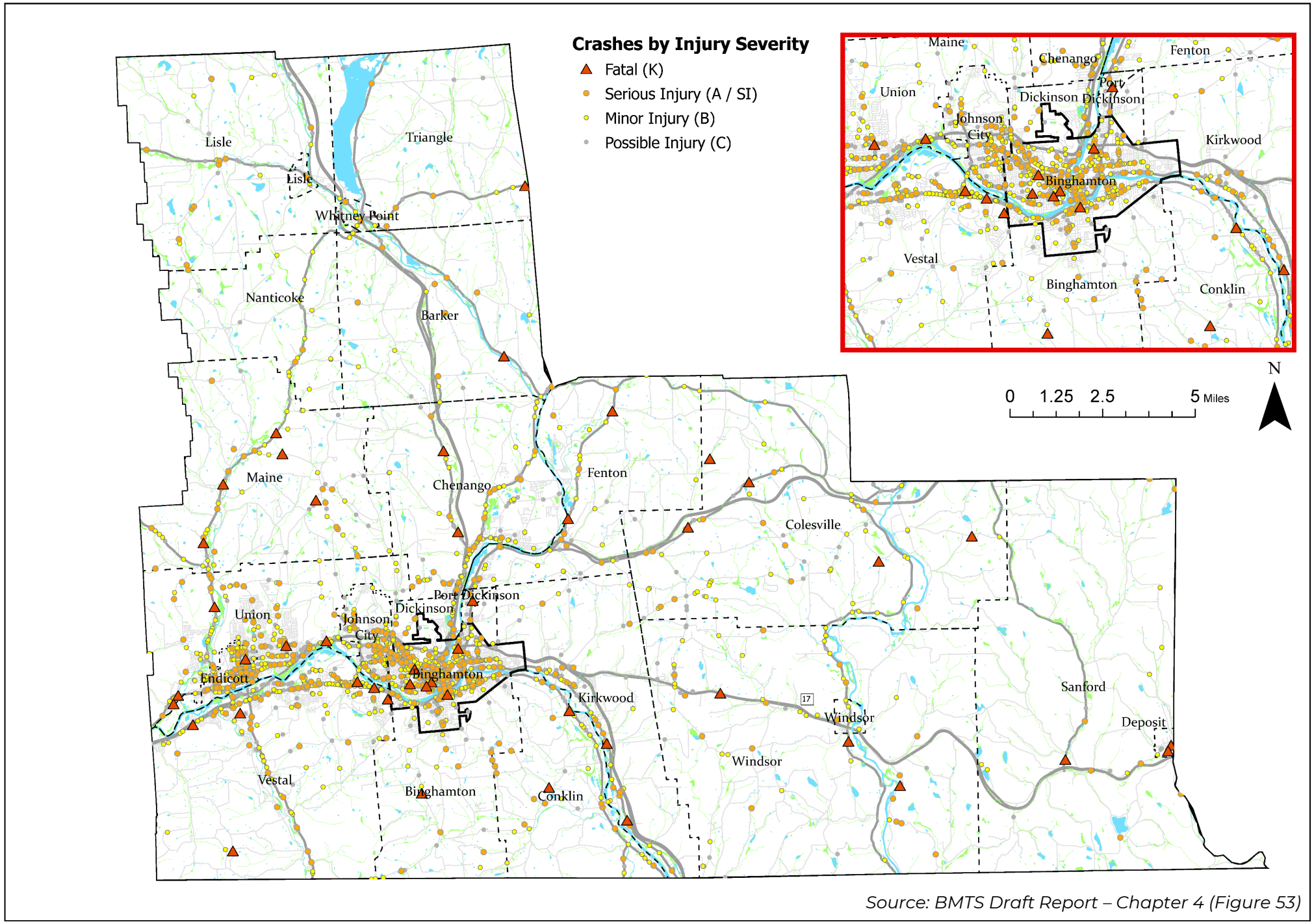
Contributing Action	Total Count	% of All Reported	% of Broome KSI Crashes	% Tioga KSI Crashes
Unsafe Speed	131	12%	15%	28%
Failure to Yield	119	11%	17%	15%
Driver Inattention	117	11%	18%	8%
Unsafe Lane Change	72	7%	9%	14%
Following Too Close	71	6%	9%	7%
Passing / Unsafe Lane Usage	60	5%	7%	12%
Traffic Control Devices Disregarded	59	5%	9%	4%
Alcohol	51	5%	7%	8%
Failure To Keep Right	39	4%	5%	7%
Slippery Pavement	32	3%	4%	6%
Lost Consciousness	31	3%	5%	2%
Turning Improper	25	2%	3%	6%

Source: NYSDOT CLEAR (2019–2023)

Chapter 4 – High Injury Network (HIN)

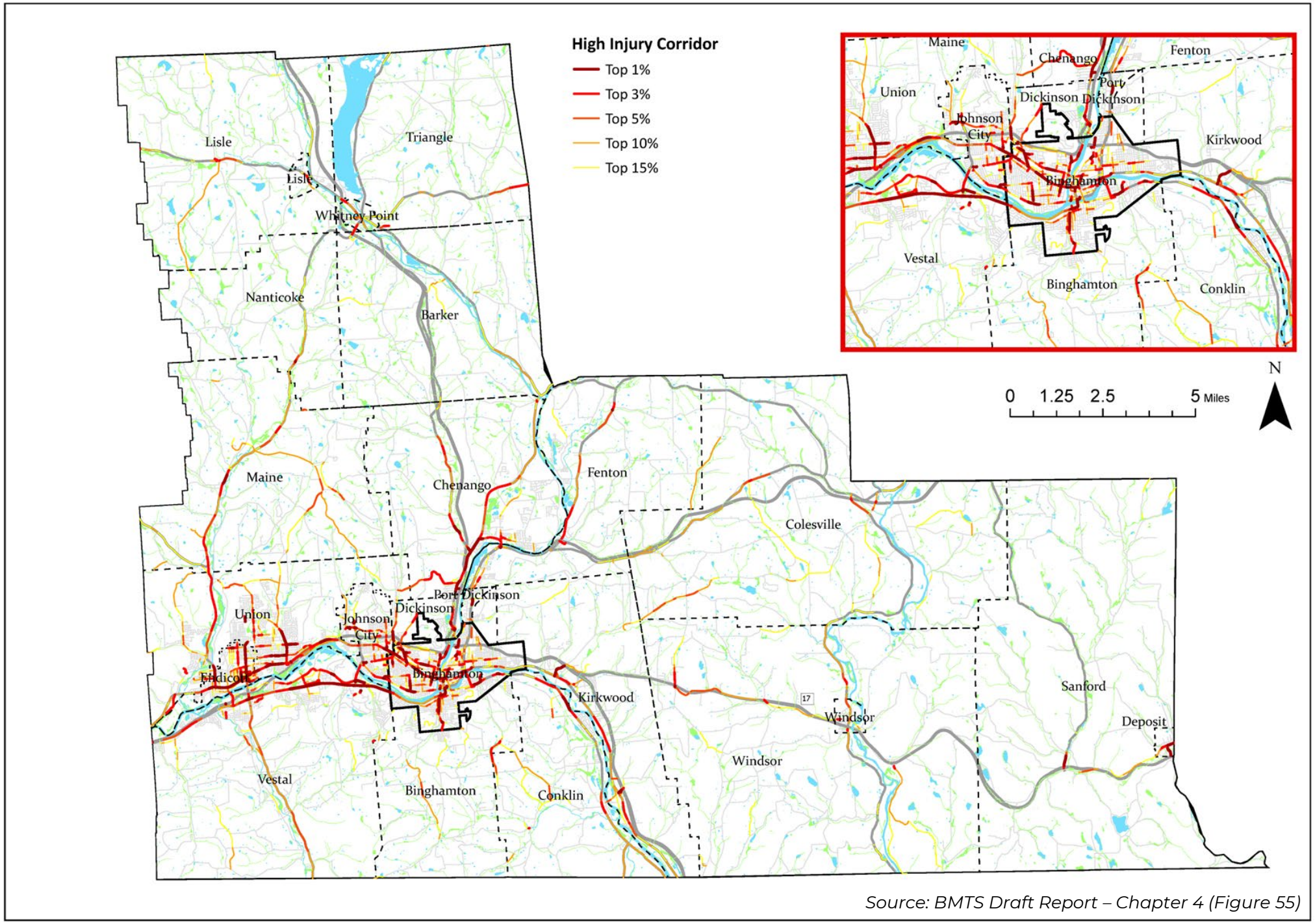
- **Introduction**
  - Identifies corridors and intersections with the greatest history of injury crashes
- **Data Analyzed**
  - Severity-weighted crash scoring and mapped results for Broome and Tioga
- **Key Trends**
  - Outputs include High Injury Corridors (HIC) and High Injury Intersections (HII)
- **Major Conclusions**
  - A small share of the network accounts for a large share of injury and KSI crashes
- **Tie to Study**
  - Provides a defensible, data-driven shortlist for capital project development
  - The primary geography used to develop and prioritize projects in Ch. 6

Crashes by Severity – Broome



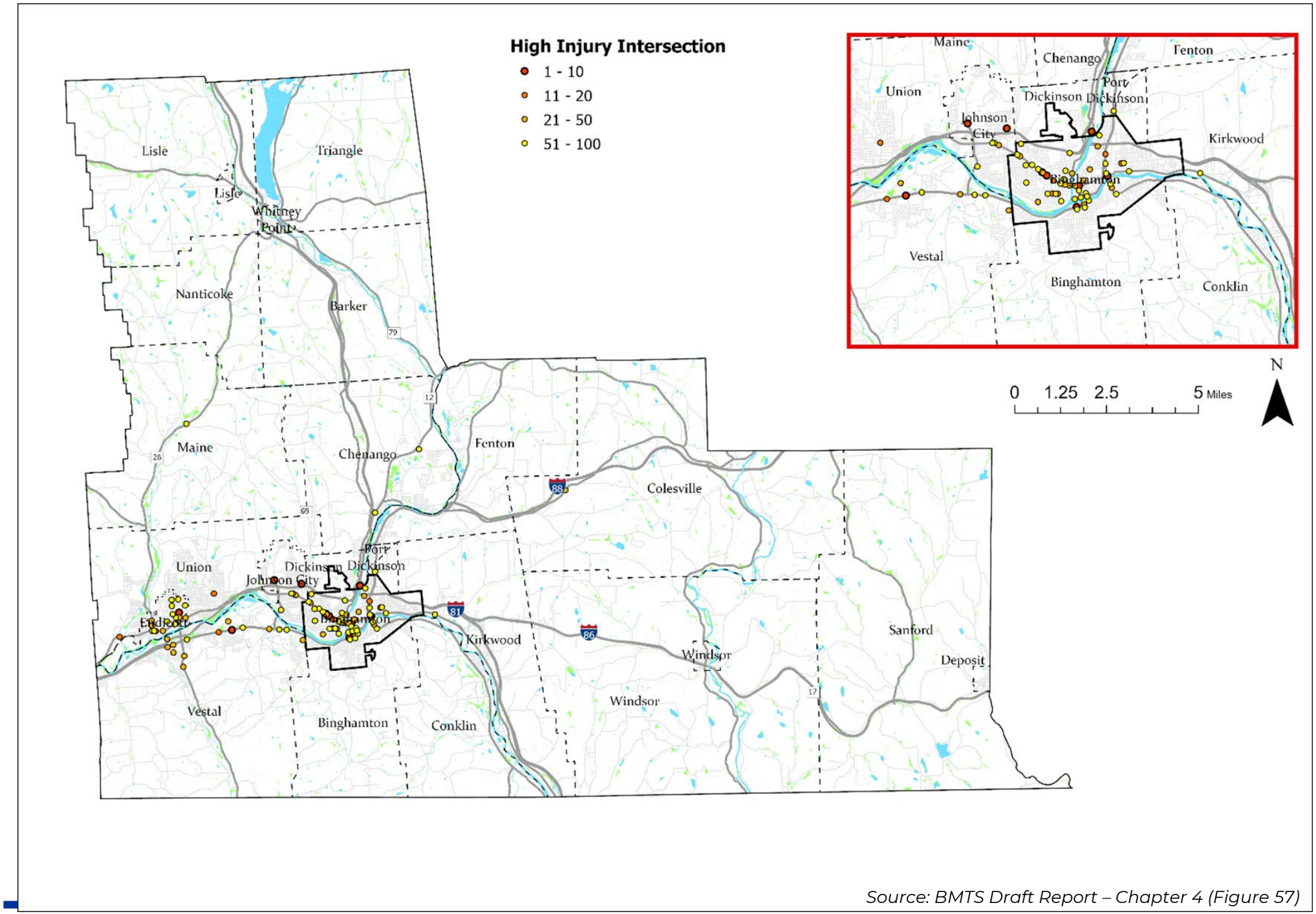
Source: BMTS Draft Report – Chapter 4 (Figure 53)

High Injury Network – Broome



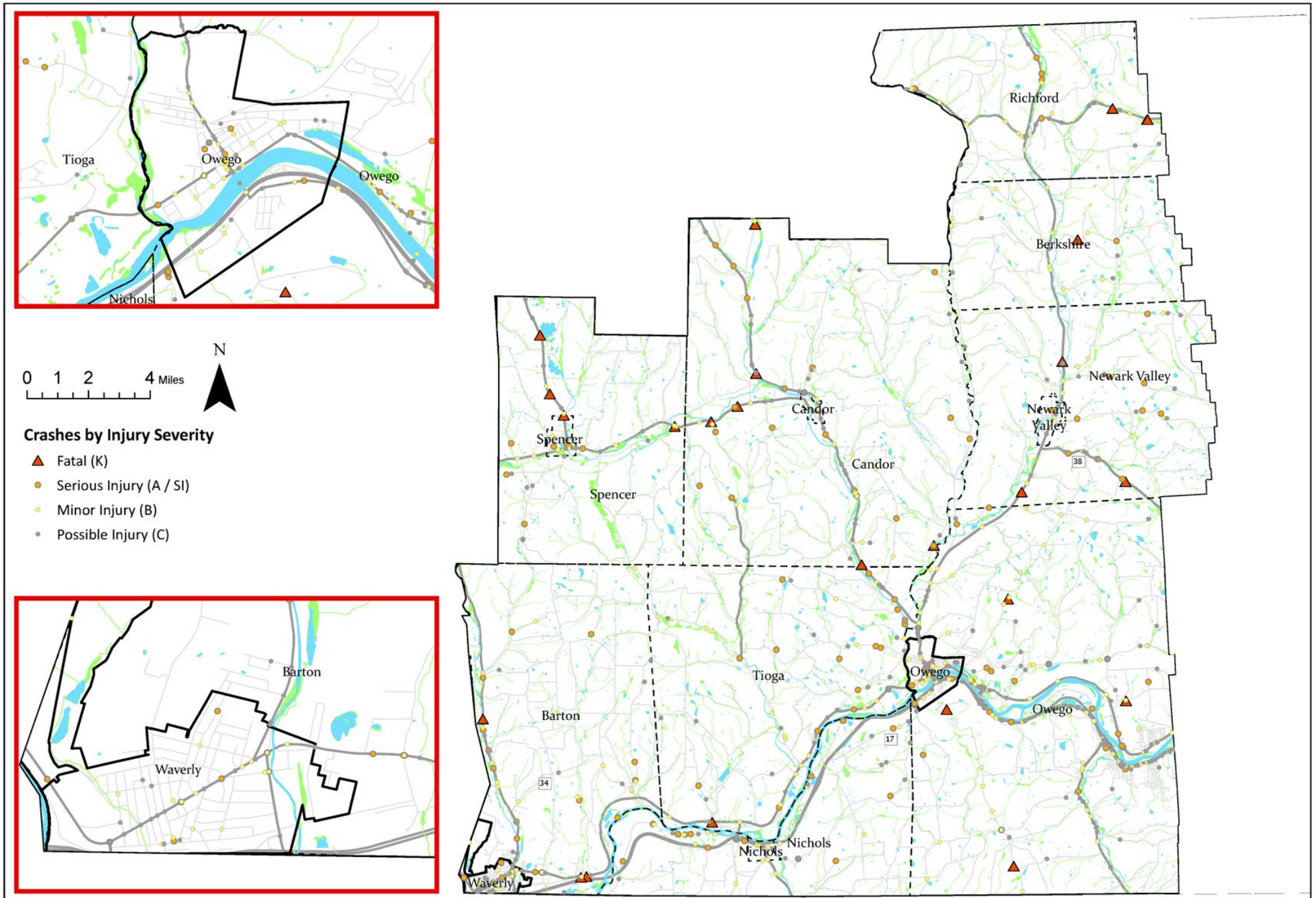
Source: BMTS Draft Report – Chapter 4 (Figure 55)

High Injury Intersections – Broome



Source: BMTS Draft Report – Chapter 4 (Figure 57)

Crashes by Severity – Tioga



Source: BMTS Draft Report – Chapter 4 (Figure 54)

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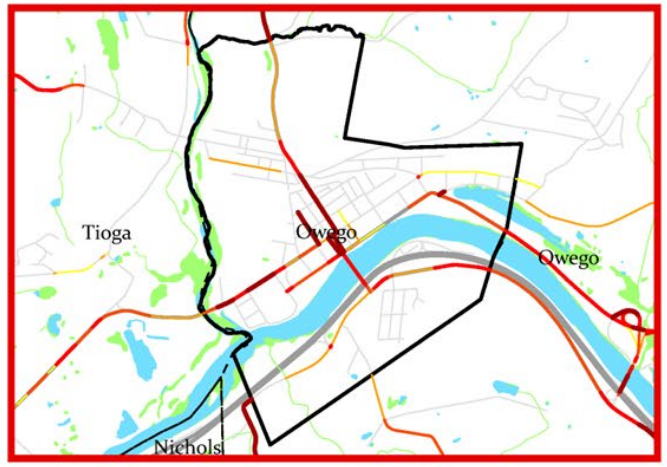
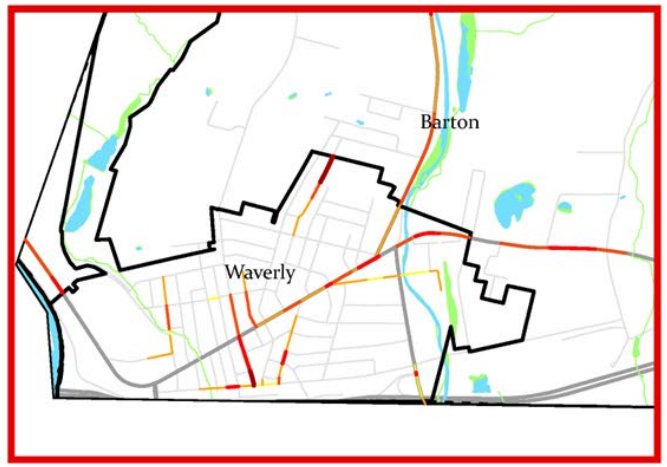
High Injury Network – Tioga





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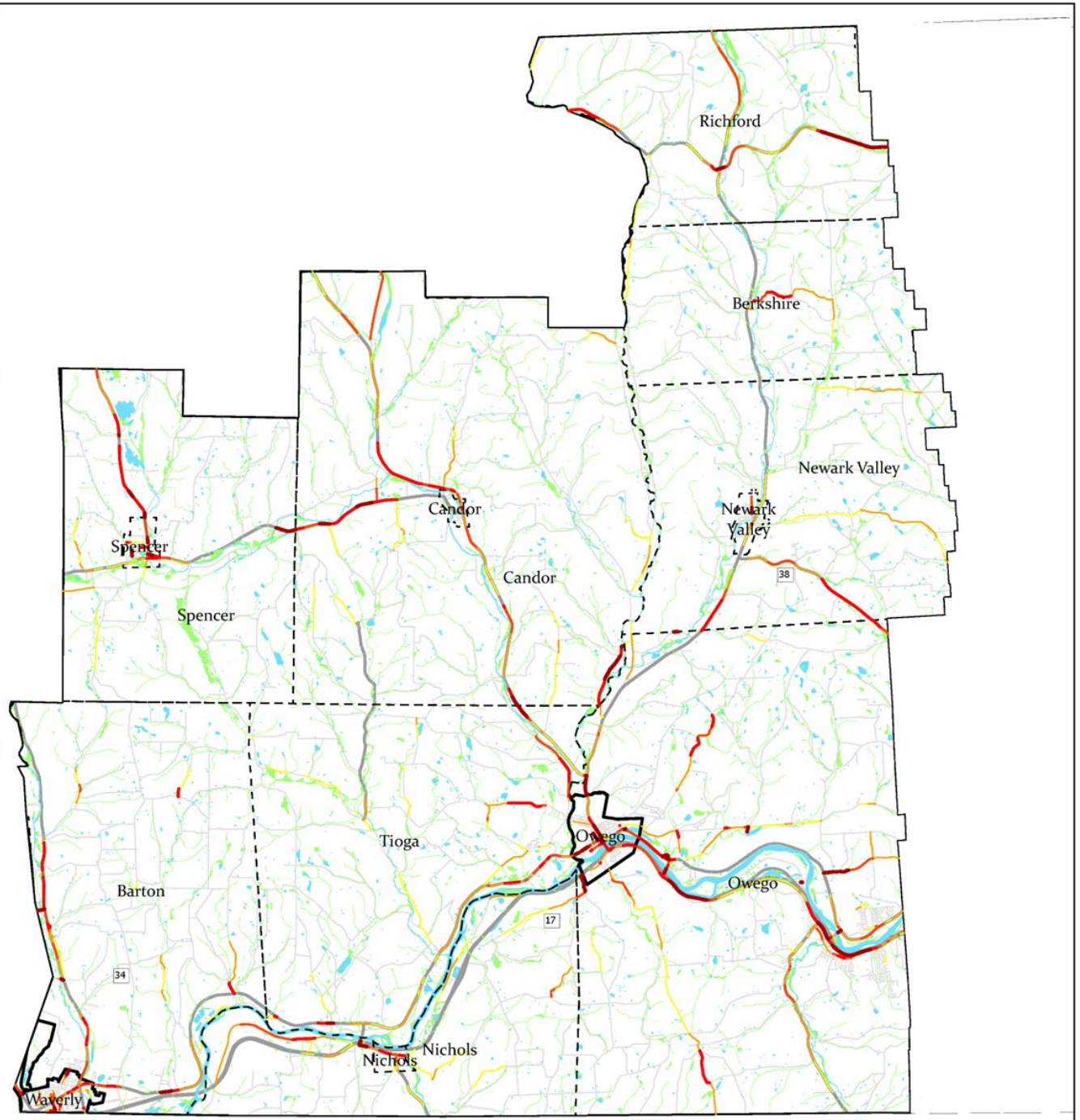
0 1 2 4 Miles

High Injury Corridor

- Top 1%
- Top 3%
- Top 5%
- Top 10%
- Top 15%



Source: BMTS Draft Report – Chapter 4 (Figure 56)

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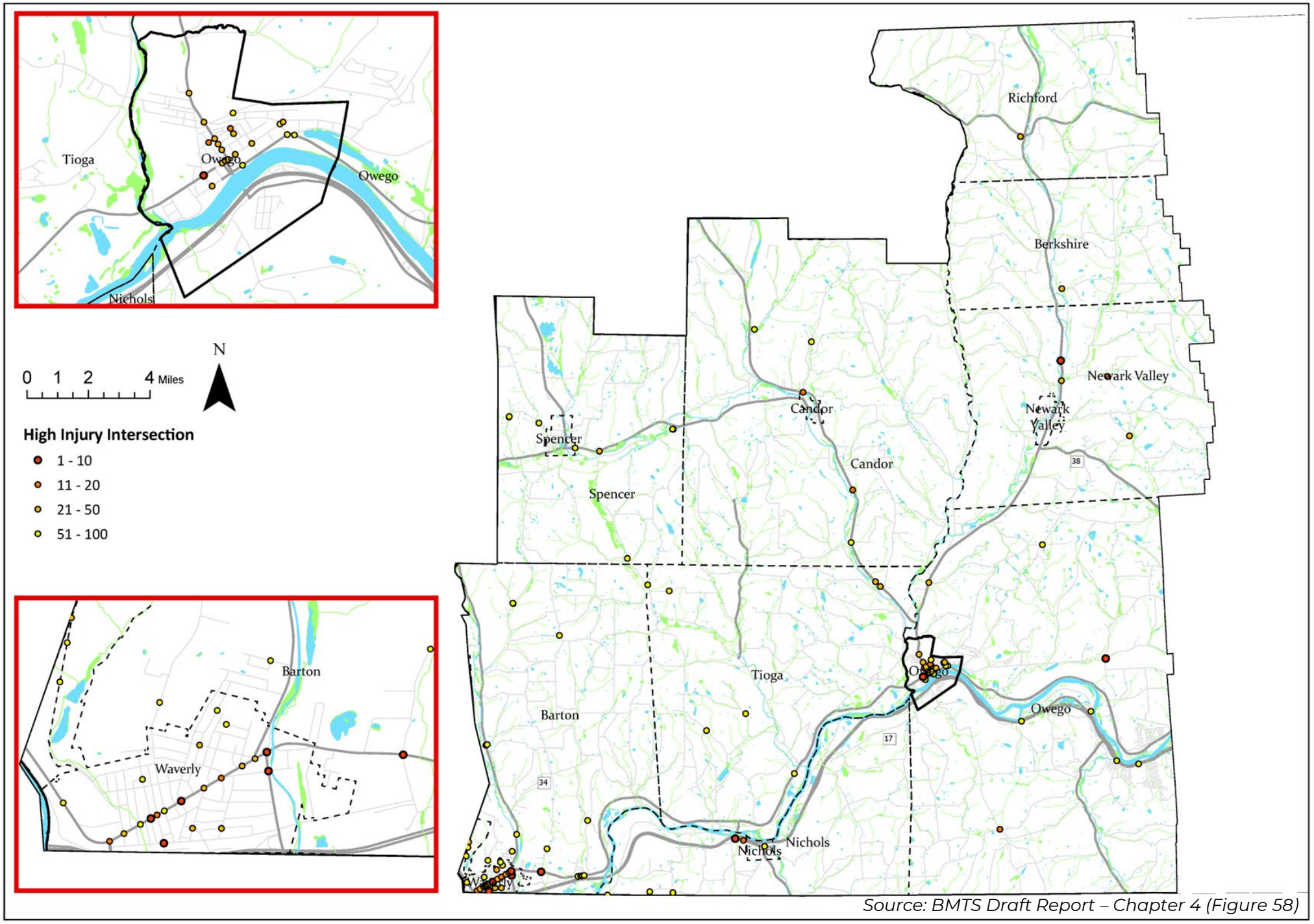
High Injury Intersections – Tioga



Source: BMTS Draft Report – Chapter 4 (Figure 58)

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Chapter 5 – Systemic Analysis & High Risk Network (HRN)

- **Introduction**
  - Predicts where severe crashes are more likely based on roadway and community characteristics compared to overall mileage
- **Data Analyzed**
  - NYSDOT Road Inventory, NYSDOT CLEAR, Replica, Census
- **Key Trends**
  - Higher speeds/volumes and multi-lane contexts correlate with elevated KSI risk
  - HRN highlights risk beyond historic crash hotspots
- **Major Conclusions**
  - Systemic risk screening supports proactive investments and complements HIN
- **Tie to Study**
  - HRN informs prioritization (Ch 6)
  - Systemic analysis underpins t

$$\frac{\text{Fatal or Serious}_{\text{roadway type}}}{\text{Fatal or Serious}_{\text{region}}} \Big/ \frac{\text{Miles}_{\text{roadway type}}}{\text{Miles}_{\text{region}}}$$

Chapter 5 – Systemic Analysis & HRN: HRN Scoring Inputs

— How the HRN Works

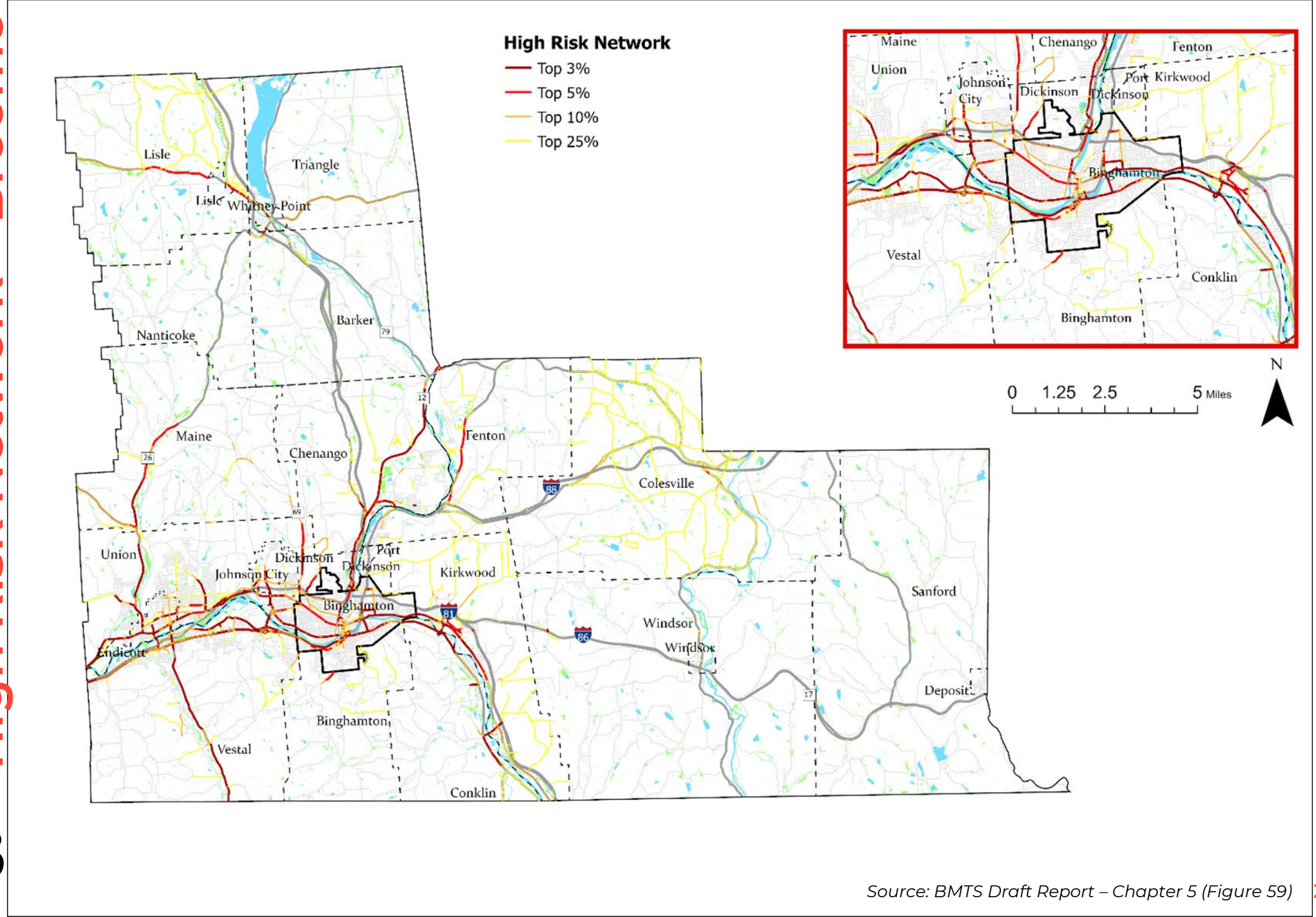
- — Systemic factors combined in a scoring matrix to estimate relative KSI risk
- — Results identify roadway segments with elevated risk now and into the future

HRN Category	Share of Centerline Miles	Scoring Threshold
Highest	Top 3%	**44 +**
Higher	Top 5%	41 – 43
High	Top 10%	34 – 40
Moderate	Top 25%	31 – 33
Low	Top 50%	29 – 30
Not in HRN	Bottom 50%	0 – 28

Category	Variable Assessed	Risk Factor	Share of Center-line Miles	HRN Points Assigned	KSI Crash Risk Ratio	All Injury (KABC) Crash Risk Ratio
Roadway Operations	*Daily Vehicle Volumes (AADT)*	15,000 or More	<1 %	**36**	9.29	30.43
		10,000 - 14,999	1%	24	8.11	15.44
		5,000 - 9,999	3%	18	5.76	6.45
		2,500 - 4,999	5%	12	4.20	3.53
		Less than 2,500	81%	2	0.62	0.49
		No Data	10%	0	0.22	0.16
	Pedestrian – Bicycle Activity Levels	High Activity	3%	**12**	4.76	6.08
		Moderate Activity	7%	6	2.82	3.80
		Low Activity	78%	2	0.84	0.72
		No Data	13%	0	0.18	0.09
Roadway Regulations	*Posted Speed Limit*	65+ mph	0%	**24**	4.00	0.80
		55 – 60 mph	56%	21	0.85	0.63
		45 - 50 mph	5%	18	2.85	3.22
		35 - 40 mph	7%	6	1.18	1.67
		0- 30 mph	29%	0	1.03	1.23
		No Data	4%	0	0.50	0.88
Roadway Capacity	*Total Number of Vehicle Lanes*	4+ Lanes	1%	**12**	4.63	9.93
		3 Lanes	< 1%	4	1.61	4.02
		2 Lanes	93%	2	0.97	0.88
		1 Lane	2%	2	1.38	1.77
		No Data	4%	0	0.41	0.58
Area-Specific Variables	*Area Type*	Cluster	3%	**10**	1.36	1.53
		Urban	27%	6	1.73	2.15
		Rural	70%	3	0.70	0.52
	Community Vulnerability Status	High Priority Equity Area (Top 20%)	13%	**6**	2.24	3.12
		Equity Area (Top 21-40%)	7%	3	1.50	1.63
		Not an Equity Area	80%	0	0.81	0.71

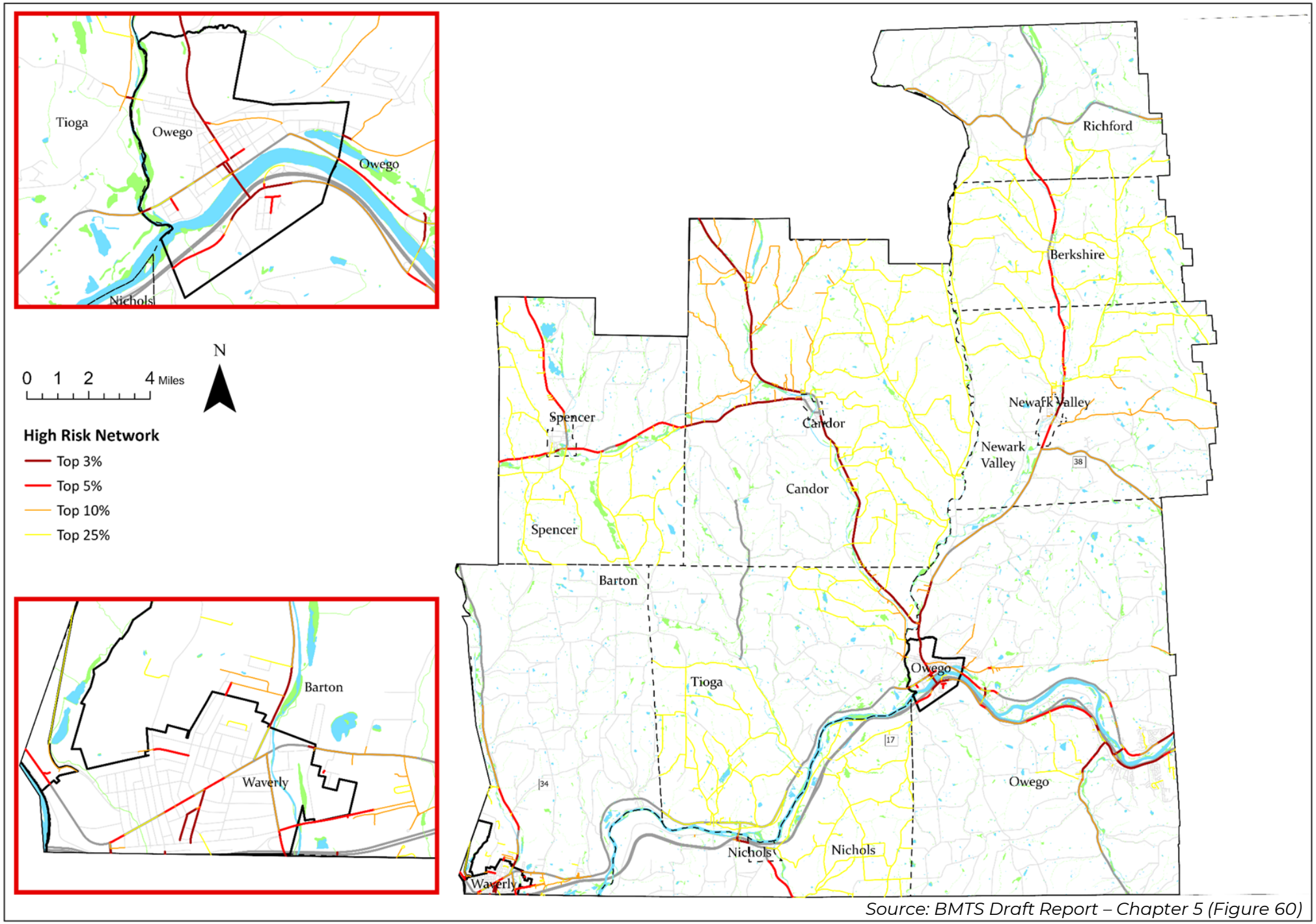
Source: BMTS Draft Report – Chapter 5 (Tables 39 & 40)

High Risk Network – Broome



Source: BMTS Draft Report – Chapter 5 (Figure 59)

High Injury Network – Tioga



Source: BMTS Draft Report – Chapter 5 (Figure 60)

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Chapter 6 – Capital Projects to Address the High Injury Network

- **Introduction**
  - Developed implementable capital projects to address the High Injury Network
- **Data Analyzed**
  - Crash records, stakeholder input, and field observations
  - Developed estimates of capital costs and crash reduction benefits over 20 years
- **Key Trends**
  - 32 projects recommended: 16 corridors + 16 intersections across 11 municipalities
- **Major Conclusions**
  - Prioritization supports an actionable investment program
- **Tie to Study**
  - Translates analytical findings into a fundable set of capital projects
  - Project Profiles (4-page summaries) can be used to advance implementation

Chapter 6 – Capital Projects: Prioritization & Implementation Timeframes

- **Prioritization Scheme**
  - Rubric covers 8 criteria across 4 categories
- **Implementation Timeframes**
  - Defined using thresholds based on capital cost and facility type

PROJECT TIMEFRAME / TYPE	INTERSECTION	CORRIDOR
Short-Term	< $175,000	< $500,000
Mid-Term	< $400,000	< $1,000,000
Long-Term	≥ $400,000	≥ $1,000,000

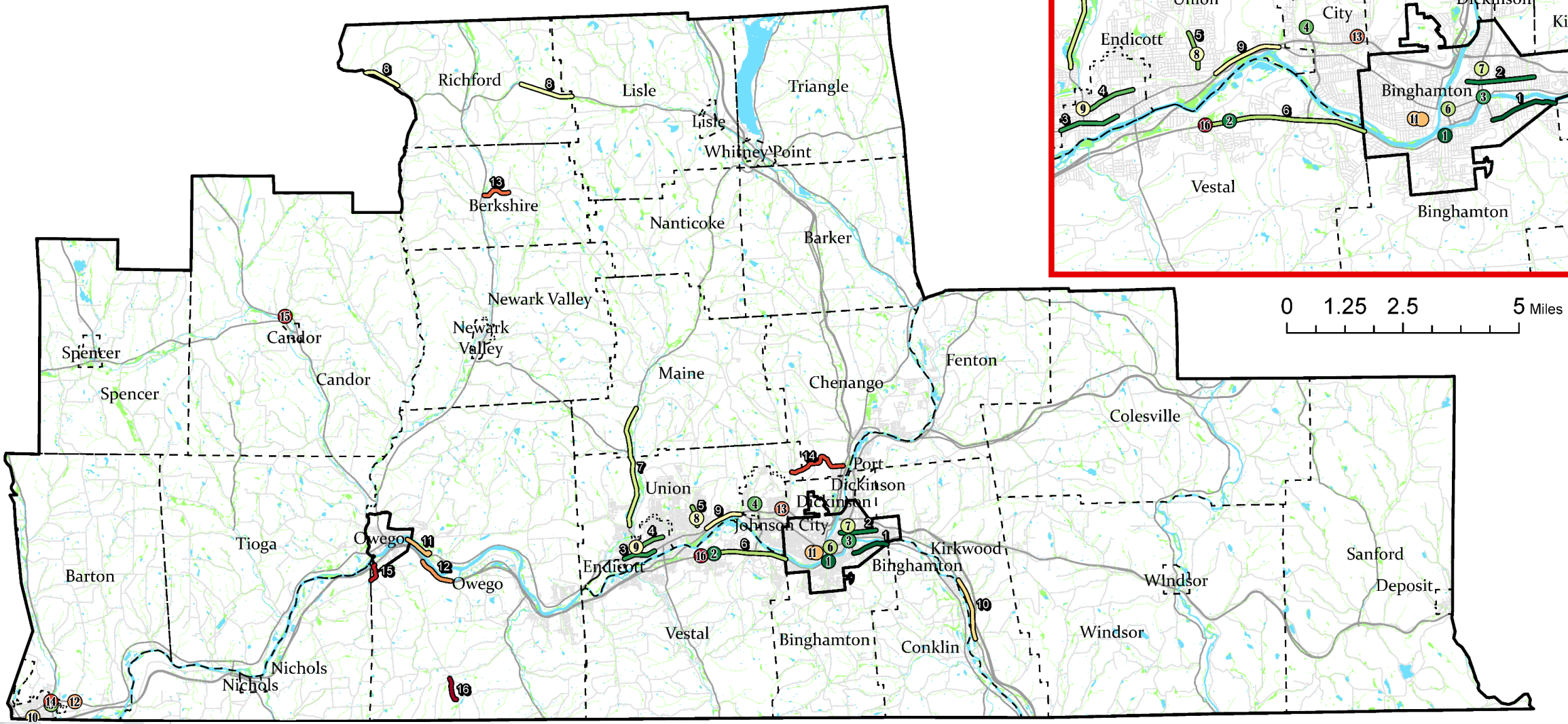
Category / Theme	Category Weight	Prioritization Criteria	Criteria Weight	Rankings / Classifications	Points Awarded
Safety Impact	50%	High Injury Network Ranking (Corridors / Intersection)	30%	Top 1% / Top 3	30 / 30
				Top 3% / Top 5	25 / 24
				Top 5% / Top 10	20 / 18
				Top 10% / Top 15	15 / 12
				Top 15% / Top 20	10 / 6
				Top 25% / Not Top 20	5 / 0
		High Risk Network Score	15%	Highest (Top 3%)	15
				Higher (Top 5%)	12
				High (Top 10%)	9
				Moderate (Top 25%)	6
				Low (Top 50%)	3
		CLEAR Level of Safety Service (LOSS)	5%	Highest (4)	5
				2nd Highest (3)	3
Project Competitiveness	20%	Benefit-Cost Ratio	20%	45	20.0
				15	13.3
				3	6.7
VRU & Community Facilities	15%	Vulnerable Road User Injury Crashes (KABC)	10%	2	10
				1	5
		Proximity to Schools & Parks	5%	Within 1/8 Mile	5
Equity	15%	Vulnerable Community Analysis	10%	High Priority (Top 20%)	10
				Priority (Top 21-40%)	5
		Federal Designation (Underserved)	5%	Meets Federal Criteria	5
4 Categories	100%	8 Evaluation Criteria	100%	MAX SCORE	100

Source: BMTS Draft Report – Chapter 6 (Tables 41 & 73)

Prioritized Capital Projects

Legend

- Intersection Project
- Corridor Project



Source: BMTS Draft Report – Chapter 6 (Figure 61)

Chapter 6 – Priority Projects – Corridors

Source: BMTS Draft Report – Chapter 6 (Table 43)

Project Rank (Corridors)	County	Municipality	Corridor	From	To	Length (mi.)	Project Timeframe (Based on Scale of Capital Cost)	Order-of-Magnitude Capital Cost ($2025)	Total Injury Crashes Reduced (KABC)	Total Crashes Reduced (KABCO)	Benefits from Total Crashes Reduced (KABCO)	Benefit-Cost Ratio (7% Discount Rate)	Prioritization Score (100 Points)
1	Broome	Binghamton	Conklin Ave	Tompkins St	City / Town Line	1.44	Short-Term	$228,300	27	152	$5,756,500	25.2	**93.3**
2	Broome	Binghamton	Robinson St	Chenango St	Fairview Ave	1.45	Mid-Term	$747,900	50	379	$11,399,000	15.2	**88.3**
3	Broome	Union	E. Main St	Bassett Ave	Lincoln Ave	1.28	Long-Term	$1,251,000	60	247	$12,535,500	10.0	**86.7**
4	Broome	Union	North St	S. Nanticoke St	North McKinley St	1.21	Short-Term	$271,800	50	253	$10,647,000	39.2	**78.3**
5	Broome	Union	Hooper Rd	Pheasant Ln	Hoover Ave	0.78	Short-Term	$91,200	29	172	$6,403,500	70.2	**75.0**
6	Broome	Vestal	Vestal Pkwy E.	State Highway 26	Club House Rd	3.48	Long-Term	$6,307,100	71	355	$18,346,500	2.9	**75.0**
7	Broome	Union	Union Center-Maine Highway	Daugherty Rd	Nanticoke Creek	4.95	Mid-Term	$589,400	32	201	$26,522,500	45.0	**73.3**
8	Tioga	Lisle / Richford	State Route 79	MI Hill Rd / West Branch of Owego Creek	Shafer Rd / Brigham Rd	2.13 / 1.46	Short-Term	$71,000	14	62	$36,026,000	507.4	**69.0**
9	Broome	Union	George F. Highway W.	East of Argonne Ave	Main St	1.52	Long-Term	$1,716,000	11	54	$15,238,000	8.9	**61.7**
10	Broome	Kirkwood	Route 11	Meadow Ln	Main St	2.53	Mid-Term	$497,700	8	36	$10,744,000	21.6	**60.3**
11	Tioga	Owego	State Route 17C	State Route 17C On-Ramp	East of Taylor Rd	0.97	Long-Term	$2,375,000	15	118	$3,340,000	1.4	**55.0**
12	Tioga	Owego	State Route 434	South of Route 17	Degroat Rd	1.45	Short-Term	$146,100	8	26	$1,590,500	10.9	**53.7**
13	Tioga	Berkshire	E. Berkshire Rd	East of State Route 38	Eastman Rd	1.15	Short-Term	$281,800	1	8	$10,834,500	38.4	**52.3**
14	Broome	Chenango	Lewis Rd	Middle Stella Ireland Rd	Upper Front St	2.59	Mid-Term	$506,600	13	40	$2,679,500	5.3	**48.7**
15	Tioga	Owego	Sulphur Springs Rd	West of Montrose Ave	Sulphur Springs Rd	0.75	Mid-Term	$819,700	5	18	$1,037,500	1.3	**46.0**
16	Tioga	Owego	Montrose Turnpike	Arbor Glade Rd	South Apalachin Rd	0.93	Short-Term	$280,000	1	3	$9,274,000	33.1	**43.3**

Chapter 6 – Priority Projects – Intersections

Project Rank (Intersec-tions)	County	Municipality	Major Street	Minor Street	Project Timeframe (Based on Scale of Capital Cost)	Order-of-Magnitude Capital Cost ($2025)	Total Injury Crashes Reduced (KABC)	Total Crashes Reduced (KABCO)	Benefits from Total Crashes Reduced (KABCO)	Benefit-Cost Ratio (7% Discount Rate)	Prioritization Score (100 Points)
1	Broome	Binghamton	Vestal Pkwy E.	S. Washington St	Short-Term	$155,700	21	101	$4,432,500	28.5	**93.3**
2	Broome	Vestal	Vestal Pkwy E.	Rano Blvd	Short-Term	$163,200	35	190	$7,515,000	46.0	**93.0**
3	Broome	Binghamton	Court St	Brandywine Ave	Long-Term	$483,100	7	27	$1,461,000	3.0	**79.7**
4	Broome	Union	Harry L. Dr	Reynolds Rd	Mid-Term	$353,000	25	229	$5,971,000	16.9	**72.3**
5	Tioga	Barton	Cayuta Ave	Ithaca St	Short-Term	$157,900	5	6	$884,500	5.6	**70.7**
6	Broome	Binghamton	Court St	State St	Mid-Term	$392,800	19	96	$4,091,500	10.4	**67.7**
7	Broome	Binghamton	S 363	Frederick St	Mid-Term	$205,700	16	98	$3,434,000	16.7	**55.3**
8	Broome	Union	Hooper Rd	Country Club Rd	Short-Term	$31,800	5	30	$13,835,000	435.1	**54.0**
9	Broome	Union	N. Nanticoke Ave	Jennings St	Mid-Term	$190,000	11	33	$2,148,500	11.3	**53.7**
10	Tioga	Barton	Broad St	Fulton St	Long-Term	$492,900	9	43	$1,953,500	4.0	**52.7**
11	Broome	Binghamton	LeRoy St	Chestnut St & Chapin St	Long-Term	$637,900	12	43	$13,063,000	20.5	**50.3**
12	Tioga	Barton	State Rt 17 C	Talmadge Hill Rd	Short-Term	$63,500	3	4	$625,000	9.8	**48.7**
13	Broome	Union	Harry L. Dr	Lester Ave & Zoa Ave	Mid-Term	$274,100	10	23	$1,894,500	6.9	**46.7**
14	Tioga	Barton	Chemung St	Cayuta Ave	Long-Term	$589,100	3	8	$512,500	0.9	**45.0**
15	Tioga	Candor	Ithaca Rd	Honeypot Rd	Short-Term	$15,200	4	11	$815,000	53.6	**45.0**
16	Broome	Vestal	Vestal Pkwy E.	N. African Rd	Mid-Term	$177,500	11	62	$2,460,000	13.9	**37.7**

Source: BMTS Draft Report – Chapter 6 (Table 45)

Chapter 6 – Capital Projects: What's in a Project Profile?

- **Introduction**
  - Document the "case" for each investment and support funding readiness
- **Data Analyzed**
  - Includes safety issues, crash history, contributing factors, users, roadway characteristics, countermeasures, layout, and planning-level cost estimate
- **Key Trends**
  - Profiles standardize how locations are evaluated and how countermeasures are matched to crash patterns
- **Major Conclusions**
  - Profiles enable consistent communication across projects
- **Tie to Study**
  - Supports implementation of Engineering-based countermeasures

Corridor Broome County

PRIORITY 1

Conklin Ave. (NY-7)

City of Binghamton

Existing Conditions

The segment of Conklin Avenue (NY-7) is 1.44 miles long and is located within the City of Binghamton. The corridor spans from the intersection with Tompkins Street to the Binghamton City Line. The surrounding area is both residential and commercial with numerous businesses, residential homes, and an elementary school located along the corridor. A total of 184 crashes occurred during the study period between 2019 and 2023, with 34 of these crashes resulting in injury. Thirteen of the crashes during the study period for this corridor involved a bicyclist or pedestrian, with one of those resulting in serious injury.

The crash types most prevalent for this corridor during the study period were rear end and right-angle crashes. Conklin Avenue maintains one travel lane and bicycle lane in each direction from Tompkins Street to Holmes Place and transitions to one shared use travel lane in each direction to the City Line. This corridor features two intersections with traffic control by span wire traffic signals which are Tompkins Street and Burr Avenue. Two intersections feature traffic control by mast arm traffic signals which are Broome Street and Hayes Street.

This corridor features sixteen streets that meet Conklin Avenue at an intersection where stop control is only on the minor approach while Conklin Avenue is uncontrolled. The Conklin Avenue intersections with Duke Street, Iva Avenue, and the Sandy Beach Park parking lot all feature uncontrolled pedestrian crossings that have pedestrian warning signage present. Curb ramps are present at all intersections throughout the corridor that feature plastic detectable warning units, with the exception of the uncontrolled crossing at the Sandy Beach Park which has no detectable warning unit on the southern curb ramp. Type LS crosswalks are present at all intersections along Conklin Avenue. Sidewalks are present on the south side of Conklin Avenue from Tompkins Street to the Sandy Beach Park crossing and on the north side from Tompkins Street to Iva Avenue. The corridor features street lighting throughout the corridor with most of the lighting on the south side of Conklin Avenue and some supporting lights on the north side of the road.

Highway Characteristics

Owner	City of Binghamton
Description	Two lane undivided urban road with bicycle lanes
Segment Length	1.44 miles
Speed Limit	30 mph
AADT	10,558 VPD
Functional Class	(16) Minor Arterial
LOSS	4
HRN Score	5
Equity Rank	Top 20

Photo 1: Conklin Ave over NYSW Railway looking west

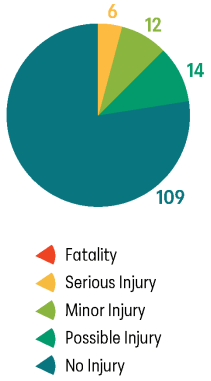
Photo 2: Conklin Ave east of Felters Rd looking east

Crash Data

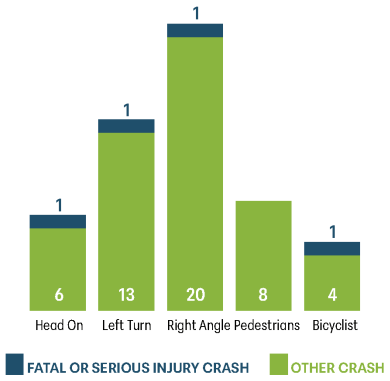
Contributing Factors

- Lack of advanced warning signage
- Lack of bicycle and shared use lane markings
- Lack of audible pedestrian signals at signalized intersections

Crash Severity

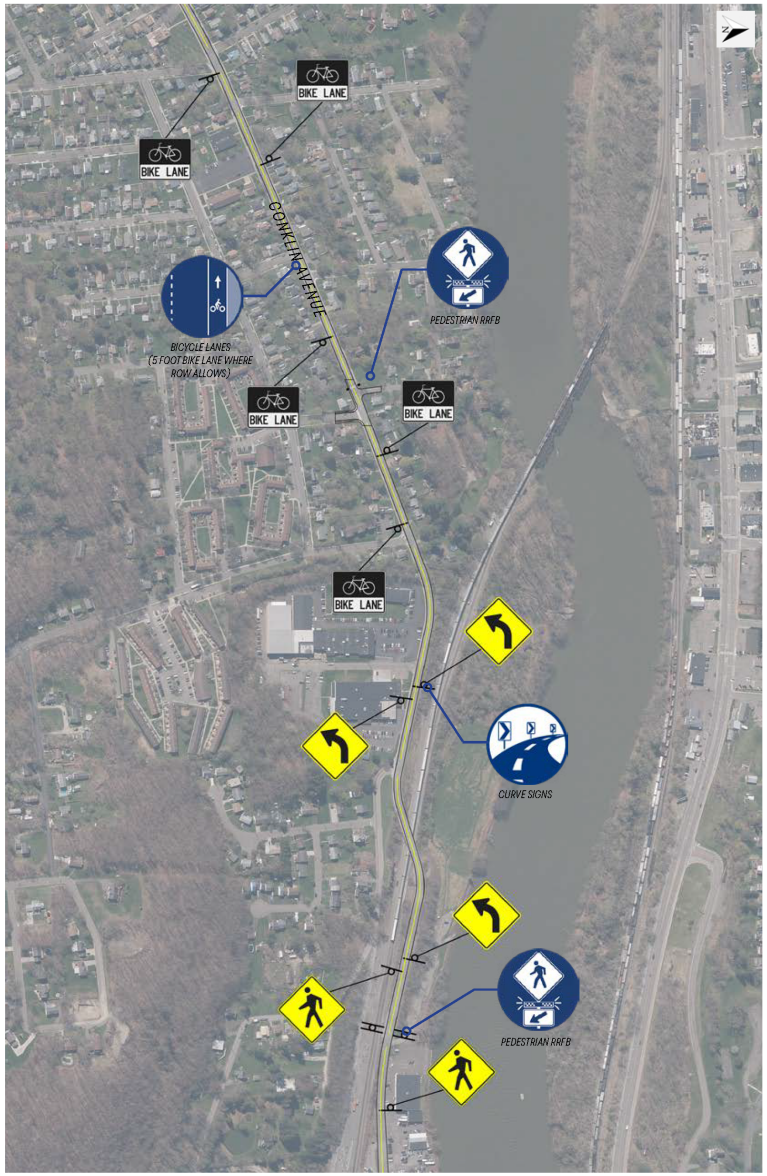


Most Frequent Collision Type



Example Profile – Existing Conditions & Crash Data

Proposed Improvements



Proposed Countermeasures

Contributing factors at Conklin Avenue from the intersection with Tompkins Street to the Binghamton City Line included a lack of advanced warning signage, a lack of bicycle and shared use lane markings, and a lack of audible pedestrian signals at signalized intersections. Potentially relevant safety countermeasures at this location include, installation of rectangular rapid flashing beacons (RRFB) at an uncontrolled crossing with advanced warning signage, installation of audible pedestrian signals, installation of bicycle and shared use lane markings, installation of curve warning signage, and the addition of retroreflective traffic signal backplates. RRFBs will be installed on the existing pedestrian signs present at the uncontrolled crossing of Conklin Ave adjacent to Sandy Beach Park. Additional advanced warning signage accompanied by rapid flashing beacons will be installed for all other uncontrolled crossings along the corridor. This will ensure drivers are aware of potential pedestrians crossing the road and provide them with adequate warning time to stop and yield. Audible pedestrian signal infrastructure will be added at all traffic signal-controlled intersections throughout the corridor. Adding these ADA compliant pedestrian signals will contribute to increasing accessibility along the entire corridor. Compliant pedestrian signals are essential in preventing serious injury crashes involving pedestrians, especially those who are visually impaired. Bicycle lane markings and shared use markings will be added throughout the corridor. Where the shoulders are at least 5 feet in width, bike lane markings will be added to give bicycles a designated travel space. Where there is not adequate space for a bike lane, sharrow markings will be used to emphasize the need for drivers to share the road with bicyclists. The sharrow markings will allow bicycles to navigate the entire corridor and travel between designated bike lanes without needing to use the sidewalk. Advanced warning signage will be added to sharp horizontal curves warning road users of an upcoming bend in the road. This increased curve awareness will reduce the risk of vehicles straying out of their travel lane and decrease the potential for all types of collisions. At all existing traffic signals along the corridor, retroreflective borders will be installed to increase visibility of the signal heads and reduce the frequency of right angle and turning induced collisions at the intersections within the corridor.

Cost Estimate

Item	Quantity	Unit	Unit Cost	Total Cost
Striping Symbols	85.00	EA	$300.00	$25,500.00
Rectangular Rapid Flashing Beacon (RRFB)	2.00	EA	$15,000.00	$30,000.00
Warning Signage	10.00	EA	$1,250.00	$12,500.00
Installation of Audible Pedestrian Signals	20.00	EA	$2,500.00	$50,000.00
Traffic Signal Backplates	28.00	EA	$600.00	$16,800.00
			Construction Total	$134,800.00
			Contingency and Inflation (20%)	$27,000.00
			Subtotal	$161,800.00
			Work Zone Traffic Control (10%)	$16,200.00
			Mobilization (4%)	$6,500.00
			Survey (2%)	$3,300.00
			Engineering Design (10%)	$16,200.00
			Construction Inspection & Administration(15%)	$24,300.00
			Grand Total	**$228,300.00**

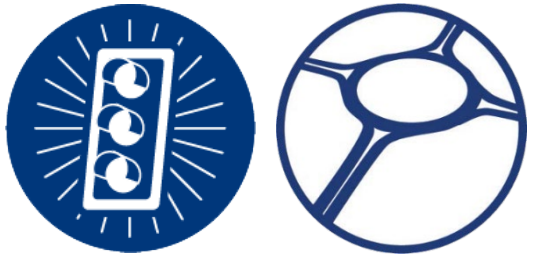
Example Profile – Proposed Countermeasures & Costs

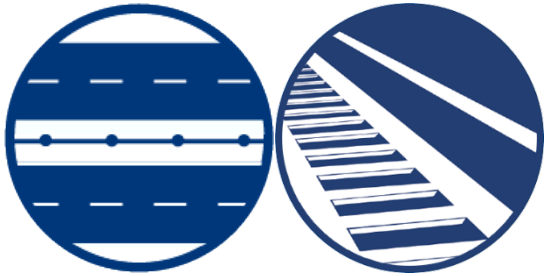
Chapter 7 – Systemic Countermeasures for Emphasis Areas

- **Introduction**
  - Defines systemic engineering approaches for addressing safety issues related to recurring severe crash types and behaviors
- **Data Analyzed**
  - NYSDOT CLEAR, FHWA Proven Safety Countermeasures Initiative
  - Based on notable crash types and contributing actions from the crash analysis
- **6 Emphasis Areas**
  - For each area, report includes typical locations where it clusters, underlying causes, and safety strategies / operational countermeasures
- **Major Conclusions**
  - Deploying countermeasures systemwide can reduce risk efficiently and equitably
  - Countermeasures may appear in more than one Emphasis Area
- **Tie to Study**
  - Can be used to program relevant interventions across a broader area

Chapter 7 – Systemic Countermeasures: Emphasis Areas 1-3

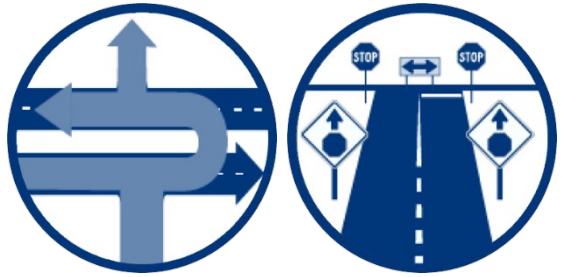
- **Emphasis Area #1 – Intersections**
  - Typically occur at at-grade intersections and are frequently associated with failure to yield, disregarding traffic control devices, excessive approach speeds, and limited sight distance
    - High-visibility signal heads, retroreflective backplates, and signage
    - Conversion of traditional at-grade intersections to roundabouts
- **Emphasis Area #2 – Roadway Departure**
  - Typically occur on two-lane rural highways and undivided multi-lane highways
    - Installation of median barriers on undivided multi-lane facilities
    - Centerline rumble strips to provide tactile and audible warnings
- **Emphasis Area #3 – Vulnerable Road Users**
  - Frequently occur along high-speed arterials, at intersections, in areas with limited pedestrian or bicycle infrastructure, and where roadway design prioritizes motor vehicle throughput over multimodal safety
    - Sidewalk installation or upgrades to meet current standards
    - Raised medians and refuge islands to provide protected crossing opportunities





Chapter 7 – Systemic Countermeasures: Emphasis Areas 4-6

- **Emphasis Area #4 – Unsafe Speed**
  - Often take place along highways and arterial facilities
    - Lane width reductions and road diets
    - Corridor-wide speed studies to set appropriate limits
- **Emphasis Area #5 – Failure to Yield**
  - Commonly found at intersections, driveways, and crossing locations
    - Conversion of high-risk intersections to roundabouts, particularly at locations with a high frequency of right angle collisions
    - Protected-only left turn phasing or split phasing at signalized intersections
- **Emphasis Area #6 – Passing / Unsafe Lane Usage**
  - Most common along two-lane rural highways and undivided multi-lane facilities
    - Review and refinement of passing zones based on sight distance
    - High-visibility pavement markings, including wider centerlines



Chapter 8 – Policies, Programs & Strategies

- **Introduction**
  - Non-Engineering actions to institutionalize safety using a Safe System approach
  - Embed safety into the transportation ecosystem beyond infrastructure
  - Institutional strategies reinforce capital projects and support equitable, data-driven safety action
- **Major Conclusions**
  - Organized by Safe Roads, Post-Crash Care, Safe Users, Safe Vehicles, Safe Speeds
  - BMTS and partners (e.g., municipal and county departments) can operationalize safety through recommended actions that improve planning, operations, education, enforcement, and coordination
- **Tie to Study**
  - Discusses the non-project actions that will be needed to sustain safer outcomes
  - Supports long-term safety culture

Chapter 8 – Sample of Strategies

- **Safe Roads**
  - 1.4. Prioritize Safety in Transportation Improvement Programming (TIP) Project Selection Processes
  - 1.5. Road Safety Audits
  - 1.7. Encourage the Adoption or Update of Local Complete Streets Policies as Best Practices Change
- **Post-Crash Care**
  - 2.1. Convene the Traffic Incident Management (TIM) Committee
  - 2.5. Augment Data on Fatal and Serious Injuries by Incorporating Hospitals, Emergency Responders and Demographic Information
  - 2.8. Map Cell Phone Dead Zones and Coordinate to Improve Response Times
- **Safe Users**
  - 3.1. Communications and Outreach Supporting Enforcement
- **Safe Vehicles**
  - 4.1. Government Fleet Vehicle Improvements
  - 4.2. Vehicle Safety Education and Awareness
- **Safe Speeds**
  - 5.1. Reduce Statutory Speed Limit to 25 mph as permitted by NYS Assembly Bill A1007A
  - 5.2. Establish Safe Speed Limits
  - 5.3. Dynamic Speed Feedback Signs at High-Risk Locations

Chapter 9 – Monitoring Plan Outcomes

- **Introduction**
  - Defines how progress toward Vision Zero goals will be measured and reported
- **Data Analyzed**
  - Performance measures based on 5-year crashes from 2019-2023 (2025 baseline)
- **Key Trends**
  - Crash reduction targets used as basis for monitoring plan progress
    - Reduce KSI crashes by 50% by 2040
    - Reduce to 80% by 2050
- **Major Conclusions**
  - Routine evaluation supports transparency, accountability, and course correction
  - Online dashboard will house digital summary, including networks and projects
- **Tie to Study**
  - Monitoring progress helps realize the ultimate goal (Vision Zero)

Chapter 9 – Monitoring Plan Outcomes: Targets & Metrics

					Absolute Targets (Annual Count)				Population-Adjusted Targets (Annual Rate per 100,000 Residents)			
Jurisdiction	Type of Change to Monitor	User Type(s) / Focus Area	Injury Severity Level	Unit of Analysis	5-Year Total Count	2025 Baseline	2040 (- 50%)	2050 (- 80%)	Base Population	2025 Baseline	2040 (- 50%)	2050 (- 80%)
Broome County	Crash Outcomes	All Users	Fatal	Crashes	46	9	5	2	197,738	4.7	2.3	0.9
Broome County	Crash Outcomes	All Users	Serious Injury	Crashes	513	103	51	21	197,738	51.9	25.9	10.4
Broome County	Crash Outcomes	Pedestrian-Involved or Bicyclist-Involved	Fatal or Serious Injury	Crashes	125	25	13	5	197,738	12.6	6.3	2.5

					Absolute Targets (Annual Count)				Population-Adjusted Targets (Annual Rate per 100,000 Residents)			
Jurisdiction	Type of Change to Monitor	User Type(s) / Focus Area	Injury Severity Level	Unit of Analysis	5-Year Total Count	2025 Baseline	2040 (- 50%)	2050 (- 80%)	Base Population	2025 Baseline	2040 (- 50%)	2050 (- 80%)
Tioga County	Crash Outcomes	All Users	Fatal	Crashes	25	5	3	1	48,106	10.4	5.2	2.1
Tioga County	Crash Outcomes	All Users	Serious Injury	Crashes	140	28	14	6	48,106	58.2	29.1	11.6
Tioga County	Crash Outcomes	Pedestrian-Involved or Bicyclist-Involved	Fatal or Serious Injury	Crashes	14	3	1	1	48,106	5.8	2.9	1.2

Source: BMTS Draft Report – Chapter 9 (Table 46 & 47)

Timeline & Next Steps

- **Upcoming Timeline**
  - PSC to provide feedback on the Draft Report
    - Comments due back to by end-of-day on Wednesday 2/11
    - BMTSMail@broomecountyny.gov
  - Draft Report sent to Planning & Policy Committees (Tuesday 2/17)
  - Public comment period closes on Thursday 3/5
  - Final Draft expected in March

- **Confirm Plan Direction / What Feedback to Provide**
  - Do the key findings and emphasis areas reflect local experience?
  - Are equity considerations appropriately represented?
  - Review and validate the prioritized project list (e.g., locations and countermeasures)
  - Offer feedback on relevant policy, program, and strategy recommendations intended to institutionalize safety

THANK YOU!

BMTS safety ACTION plan