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Northeast Collaboration to Optimize Work Zone Safety Guidelines

U.S. Department of Transportation
Federal Highway Administration
Work Zone Safety Grant

UMassAmherst

June 18, 2026

Traffic Safety Research Program

Housed in …

- University of Massachusetts Amherst
  - College of Engineering
    - Department of Civil & Environmental Engineering
      - UMass Transportation Center

Support highway safety through combined multidisciplinary approach

Scientific data-driven problem identification, program design, and evaluation

+

Traditional highway safety practices (engineering, enforcement & education)

Audience

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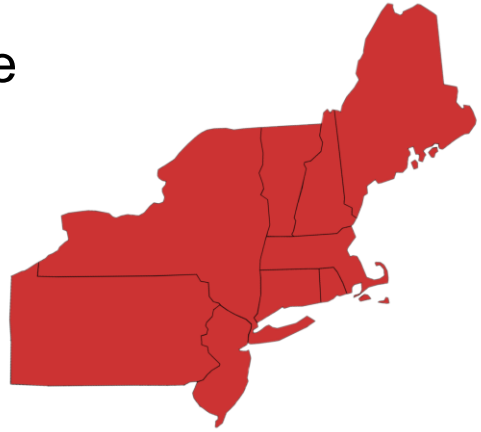
Northeast Geographic Region

Connecticut
Maine
Massachusetts
New Hampshire
New Jersey
New York
Pennsylvania
Rhode Island
Vermont



Stakeholders of Interest

State DOT Traffic Safety Sections

State DOT Traffic Engineers

Law Enforcement

University Researchers

Traffic Control Coordinators

Representatives of Roadway Workers

Project Goals

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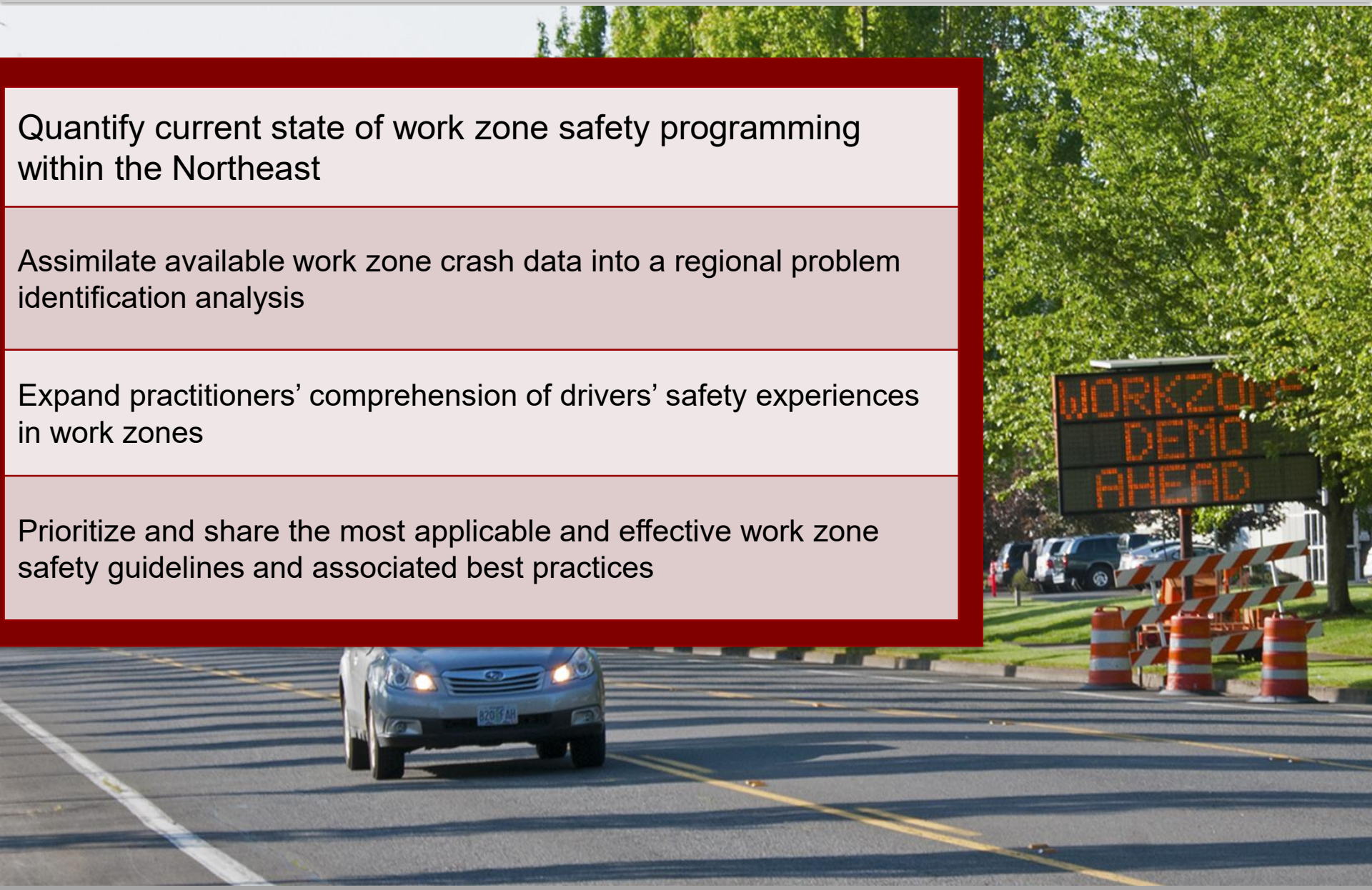
- Quantify current state of work zone safety programming within the Northeast
- Assimilate available work zone crash data into a regional problem identification analysis
- Expand practitioners' comprehension of drivers' safety experiences in work zones
- Prioritize and share the most applicable and effective work zone safety guidelines and associated best practices



Task 1: Northeast Current Practice Synthesis & Crash Data Analysis

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Tasks 1A & 1B	Deliverable
Key informant interviews (traffic engineers, enforcement agencies, etc) • State-specific data driven initiatives • State-specific work zone safety guidelines in use • State-specific work zone safety-risk needs	NEWZSIP "***State of the Practice***" matrix: Itemize the level of programming by state • Safety guidelines: custom developed, national-level, replicated w/specificity • Prevalent safety concerns: gaps, usability of existing resources
Assess problem identification strategies by state. Conduct a regional crash data analysis problem identification.	NEWZSIP "***Data Driven***" section: • Document state-specific existing best practices • UMassSafe developed regional & state-specific problem identification

Task 1: Northeast Current Practice Synthesis & Crash Data Analysis

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Initial Progress

IMPACT

DEPARTMENT OF TRANSPORTATION · THE STATE OF NEW JERSEY

Safety Voyager

NYSDOT CLEAR

pennsylvania
DEPARTMENT OF TRANSPORTATION

VTrans Public Crash Data Query Tool

Welcome to the Maine Crash Public Query Tool!

UCONN Connecticut Crash Data Repository

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NHTSA EDU_AL-23-09/NHTSA 402OP-23-03/NHTSA 402PT-23-07/NHTSA 402DD-23-06: Work Zone Safety Awareness Campaign

Subrecipient: TBD

Funding Source	Funds Granted	Funds Expended	Project Status
Section 164	$30,000.00	$0.00	Incomplete
Section 402OP	$20,000.00	$0.00	
Section 402PT	$100,000.00	$0.00	
Section 402DD	$10,000.00	$0.00	

Description:

This activity is needed to address recent increases in the number of crashes occurring within a work zone. **2017**: 588, **2018**: 527, **2019**: 900, **2020**: 904. Rhode Island also had 5 fatal crashes that occurred in work zones in 2020.

Task 1: Northeast Current Practice Synthesis & Crash Data Analysis

2022: 52 crashes
2023: 62 crashes
2024: 65 crashes

Task 1: Northeast Current Practice Synthesis & Crash Data Analysis

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- Conducted 10 interviews with approximately 16 DOT (and similar) staff members, representing each relevant state.
- Created a matrix summarizing each state's activities related to:
  - Speed Safety Cameras
  - Integration with WZDX
  - Universal Double Fines
  - WZ Guidelines Beyond MUTCD
  - Officer Presence in WZs
  - Flagger Presence in WZs
  - Work Zone Inspection and QA
  - Training Requirements
  - Use of Technology
  - Public Engagement and Communication
  - Crash Data Collection and Analysis
  - State Challenges in WZ Safety

Task 1: Northeast Current Practice Synthesis & Crash Data Analysis

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Topic	Connecticut	Pennsylvania	Maine	Massachusetts	New Hampshire	New Jersey	New York	Rhode Island	Vermont
Speed Safety Cameras	Connecticut has conducted a successful test of speed safety cameras in work zones. The program initially issued warnings for the first offense, letters for the second, and citations for the third infraction. However, there were challenges with issuing citations due to legal issues, and the rollout remains limited to specific long-term work zones.	Pennsylvania has an active speed safety cameras program in work zones. It began as a five-year pilot in 2019, with enforcement starting in 2020. The program issues fines, not citations, for violations and has observed reductions in speeding and crashes. Violations can be contested through an established dispute process.	Maine is exploring the possibility of a pilot program for speed enforcement cameras in interstate work zones. This initiative is still in the legislative review phase and has not yet been implemented.	Massachusetts has not implemented speed safety cameras in work zones. There have been legislative efforts to enable speed safety cameras for areas such as red-light running and school zones, but work zones have not been a primary focus. The state continues to explore possibilities but faces challenges in advancing related bills. However, language for automated enforcement via speed safety cameras in work zones was included in Governor's Budget Bill (H.1) for FY 2025. Additionally, Massachusetts Aggregate and Asphalt Pavers Association have worked with both Senators and Representatives to file a similar bill that focuses on work zone speed enforcment, HD3717 and SD2133, "An act relative to construction zone speed control systems, filed by Representative Mike Finn and Senator John Velis	New Hampshire does not currently utilize speed safety cameras in work zones. They have implemented smart work zones with speed feedback signs, which display drivers' speeds to encourage compliance, but these systems do not issue enforcement actions.	NJDOT does not utilize automated speed safety cameras in work zones. There are currently no active programs permitting their use.	New York is starting the third year of a five-year pilot program for speed safety cameras in work zones. The program collects speed data and is limited to specific work zones, with restrictions on the number of concurrent enforcement units. Early data has revealed surprisingly high speeds, such as vehicles traveling at 120 mph.	Rhode Island has not yet implemented speed safety cameras in work zones. The state has expressed interest in exploring this technology as part of broader enhancements to work zone safety, but no active programs or pilots are currently in place.	Vermont has initiated a two-year pilot program for speed safety cameras in work zones. This program is limited to specific limited-access highways and aims to collect data on speed profiles, warnings issued, violations, and repeat offenders.
Integration with WZDX	Connecticut integrates work zone information with apps like Google Maps and Apple Maps through the HAAS Alert system. This allows drivers to receive real-time notifications about active work zones. The state is also connected to Transcom, which helps distribute work zone alerts.	Pennsylvania integrates work zone information into its 511 system and uses the Work Zone Speed Safety Cameras website for public access to enforcement-related data. Coordination with Google Maps and Waze is ongoing, and the state aims to enhance real-time work zone data sharing.	Maine integrates work zone information into its 511 system, which also shares data with Waze. However, this integration is limited to general updates about work zones and does not involve dynamic or real-time updates tied to specific work zone activity.	Massachusetts is actively working on integrating work zone data with WZDX. They have conducted testing with Waze to ensure accurate information about work zone start points and lane closures is provided directly from MassDOT rather than relying on user-generated data. Recently, MassDOT has deployed connected devices on an active I-95 at 1-295 in Attleboro that is receiving connected device data to validate the planned work going on there. This is a permanent (fixed) work zone, so there is no testing of night-to-night lane closure scenarios; however, that is planned for some projects in the coming construction season.	New Hampshire does not currently integrate work zone data with WZDX. However, the state is exploring ways to link its work zone information to platforms like Waze for active work zone visibility, but these efforts are still in the early stages.	NJDOT actively integrates construction-related data from its Traffic Management Center (TMC) systems into the Work Zone Data Exchange (WZDX) to enhance real-time information sharing and situational awareness.	New York integrates work zone information with navigation apps like Waze and company vehicle systems through technologies that provide real-time alerts about maintenance and emergency activity. These efforts are part of broader initiatives to enhance communication and driver awareness in work zones.	Rhode Island has limited integration with WZDX. Work zone information is shared through its 511 system and apps like Waze and Google Maps, but this is primarily for static project updates rather than real-time dynamic updates.	Vermont has discussed integrating work zone data with WZDX and its 511 system, but these efforts are not yet fully implemented. Current updates focus on static project information for state-maintained roads.
Universal Double Fines	Connecticut does not have universal double fines in work zones. Enforcement and fine structures vary depending on the location and specific project details.	Pennsylvania does not have universal double fines for all violations in work zones. Double fines are limited to certain violations and specific conditions, which some stakeholders believe should be expanded.	Maine has had universal double fines in work zones for many years, applying them broadly to enhance safety.	Massachusetts has universal double fines in work zones, applying them consistently across the state to improve compliance and safety.	New Hampshire has universal double fines in work zones, with enforcement tied to specific traffic control plans and safety measures.	To promote safer driving behavior and deter violations, traffic violations in work zones are subject to double fines	New York implements double fines in work zones but does not apply them universally to all violations. Specific criteria and conditions determine when double fines are enforced.	Rhode Island does not have universal double fines in work zones. Fines and enforcement strategies depend on the specific circumstances of each project . (Please note - RIDOT does have a Std. Detail for "TRAFFIC FINES DOUBLED" Signs, and there is a RI General Law in place (https://webserver.rilegislature.gov/Statutes/TITL E31/31-14/31-14-12.1.htm, see part (b)), but signs need to be posted for the fines to be enforced... if this meets your definition of 'universal double fines in work zones', then the above response for this line should be changed appropriately.)	Vermont applies double fines in work zones but only when the speed limit has been reduced. If the speed limit remains unchanged, double fines do not apply.
Guidelines Beyond MUTCD	Connecticut supplements MUTCD with a Work Zone Safety Guidelines manual for maintenance operations, which includes additional liability signage instructions, a numbering system for signs, and detailed training materials on work zone setups.	Pennsylvania supplements MUTCD with Publication 213, a field reference guide that expands on MUTCD with typical applications, general notes, and specific guidance for work zone construction and maintenance. It also includes state-specific standards outlined in the design manual. Note: The PTC utilizes their own standards, PTS 900s.	Maine does not have additional guidelines beyond MUTCD; the state adheres strictly to MUTCD standards.	Massachusetts supplements MUTCD with its own work zone safety details and drawings tailored to state needs. These include requirements for rumble strips, speed feedback signs, and pedestrian and bicycle accessibility, as well as updated guidance incorporated into the Project Development and Design Guide.	New Hampshire supplements MUTCD with its POSITIVE Protection Guidelines for Work Zones, which include additional requirements for raised pavement markers and other state-specific traffic control details	NJDOT adheres to the Manual on Uniform Traffic Control Devices (MUTCD) guidelines and incorporates additional state-specific best practices where applicable.	New York supplements MUTCD with its own set of standard sheets and guidelines for work zone setups. These include additional requirements, such as using more attenuator trucks and expanded roll-ahead distances for greater safety in work zones. https://www.dot.ny.gov/main/business-center/engineering/cadd-info/drawings/standard-sheets-us/619	Rhode Island does not have additional guidelines beyond MUTCD. The state follows MUTCD standards for work zone setups.	Vermont supplements MUTCD with its Work Zone Safety & Mobility Policy & Guidance, which is focused on capital improvement projects. The state also uses standard drawings related to work zones, with additional traffic engineering instructions (TEI) for detours and maintenance-related work.
Officer Presence	In Connecticut, officer presence is typically required for highway construction projects, where police are present for direction and safety rather than enforcement. For maintenance work zones, officers are often budgeted for active enforcement, though their presence is not always guaranteed.	In Pennsylvania, law enforcement presence is not required, nor typical for work zones. However, law enforcement presence is typically requested in work zones, and can be required in specific instances. Officers are deployed for both enforcement and to provide protection at the back of traffic queues. The need for police presence is determined based on the risk level of the work zone.	In Maine, police presence is not required on interstate and other high-volume projects, but is helpful in many locations. Officers are primarily there for visibility and traffic control but are not usually tasked with enforcement.	In Massachusetts, officer presence is typically required in work zones, particularly for high-volume projects or those with complex traffic patterns. Police officers are usually stationed at work zones to assist with traffic control and ensure safety, though they may not be needed for every project depending on the scale.	In New Hampshire, officer presence is generally required for night work and high-risk projects. Officers are deployed to control traffic when necessary, but their presence is not always required for smaller projects or lower-risk work zones. Police presence is based on traffic volume, project complexity, and safety concerns.	Based on project needs, Law enforcement officers can be requested in work zones to enforce traffic laws, manage incidents, and ensure compliance with regulations.	In New York, a dedicated team fo NYS State Troopers is deployed daily based on the risk level of the work zone. A partnership is in place between NYSDOT and the State Police to prioritize sites and deploy available resources. The scoring system prioritizes work zones requiring higher levels of safety and control.	In Rhode Island, officer presence is required for certain high-risk or complex work zones, especially on interstate projects. Police are often deployed for visibility and safety but are not always required for every work zone.	In Vermont, officer presence is generally required for higher-risk work zones, particularly during night work. However, officers are not always needed for every project. The decision is based on traffic volume, location, and project complexity.
Flagger Details	Flaggers are required for maintenance work zones in Connecticut. The state mandates flagger presence and provides training to ensure proper setup and safety.	Flagger presence is often required for many short-term work zones in Pennsylvania, and flaggers must be certified through PennDOT's flagger training program. The state also has specific guidelines for flagger placement, ensuring that flaggers are appropriately positioned to control traffic safely.	Flagger presence is mandatory for most work zones, especially on high-traffic or high-risk projects. Maine requires flaggers to be trained, and the state enforces this training to ensure that flaggers are qualified and positioned correctly to ensure safe traffic flow.	Flaggers are required for most work zones in Massachusetts, particularly for maintenance and construction projects. Flaggers must undergo specific training, and their presence is critical for controlling traffic during lane closures or diversions. MassDOT ensures that flaggers are appropriately trained and positioned according to work zone needs.	Flaggers are required for most work zones in New Hampshire, particularly for projects with lane closures. Flagger training is required per specification.	NJDOT requires that flaggers are trained, equipped with high-visibility gear, and capable of directing traffic both safely and efficiently in work zones.	Flaggers are required in most work zones, especially when lane closures or complex traffic control are involved. New York requires flaggers to be properly trained, and contractors are responsible for ensuring they meet state standards for safety and proper positioning.	Flaggers are required for many work zones in Rhode Island, particularly when traffic needs to be directed through or around the work zone. Flaggers must be trained to meet state safety standards, and the proper performance of properly trained flaggers is critical for maintaining safe traffic flow.	Flaggers are required for most work zones, particularly for projects with lane closures or where traffic control is needed. Flaggers must undergo training, and the state enforces this to ensure their proper deployment and safety in the work zone.
Work Zone Inspection and QA	In Connecticut, work zone inspections are conducted during setup, with follow-up inspections if necessary. While there is no formal regulation for ongoing inspections, maintenance and construction personnel may conduct additional checks if they observe emerging safety issues. The state also tracks incidents and conducts inspections as needed based on behavior or safety concerns.	In Pennsylvania, work zone inspections are primarily handled by district offices, with each district having a work zone manager. The state also conducts at least two quality assurance (QA) inspections per year for work zones. Additionally, there is a QA unit within the construction department that inspects traffic control on every project. These inspections ensure contractors comply with work zone standards, and any violations are addressed promptly.	In Maine, work zone inspections are conducted by the project's designated inspector, who reviews work zone setups at the beginning of the project and conducts random checks throughout. Resident engineers are responsible for ensuring that the setup complies with standards. Maine also monitors work zones for issues such as missing signs or improper setups, and inspections are done several times per year.	In Massachusetts, work zone inspections are conducted by Resident Engineers and district safety inspectors. The Resident Engineer is responsible for overseeing the work zone setup, while safety inspectors conduct random checks during the project. Additionally, MassDOT performs work zone assessments at least once a year, with FHWA involvement for comprehensive evaluations.	In New Hampshire, work zone inspections are conducted by the Resident Engineer, who is responsible for reviewing traffic control plans and ensuring compliance with safety standards. The state also conducts periodic inspections by the work zone traffic control specialist, who check for any issues during the project. The inspections are supplemented by a work zone report system that documents taper rates, cone spacing, and other relevant factors.	Regular inspections and quality assurance assessments are conducted to ensure compliance with safety standards and project specifications. A Certified Traffic Control Coordinator (TCC) must be available 24/7 for every construction project	In New York, work zones are inspected by a quality assurance (QA) program that involves a team conducting inspections across different regions. These inspections are performed randomly and include a review of maintenance, mowing, construction, and permit work. The state also has a process for identifying violations and addressing them promptly.	In Rhode Island, for RIDOT Projects, work zone inspections are carried out by the Construction Management office at various times during the project, with random checks conducted by the Health and Safety Office under the Division of Traffic Safety. Consultants may also be hired for additional peer inspections . Contractors on RIDOT Projects are required to conduct their own inspections and QA activities per State standard specifications.	In Vermont, work zone inspections are managed by the Resident Engineer, who is responsible for overseeing compliance with traffic control plans. Inspections are done at the start of the project and continue throughout, with additional oversight from the Work Zone Engineer.
Training Requirements for Workers	Connecticut requires flaggers and workers to undergo training in work zone safety, with specific programs developed for maintenance operations. New employees are trained using a Work Zone Safety Guidelines manual, and refresher courses, including "tailgate talks," are provided regularly.	In Pennsylvania, flaggers must undergo certification through PennDOT's flagger training program. The state also provides a temporary traffic control safety program that includes self-paced training modules and in-person courses for field staff, foremen, and engineers. Contractors are required to follow these training standards. Note: All workers involved with temprorary traffic control must complete the field staff course at a minimum	Maine requires flagger training for all workers involved in traffic control. The state is working on enhancing its training programs, including the use of ATSA (American Traffic Safety Services Association) certification for flaggers and ensuring proper training for all workers involved in work zone safety.	Massachusetts mandates that flaggers undergo specific training. MassDOT also has an internal training program that covers temporary traffic control and work zone safety. This includes training for workers involved in both maintenance and construction work zones.	New Hampshire requires flagger training for workers involved in traffic control in work zones. The state also mandates refresher training every four years for flaggers and provides a basic work zone safety training for employees in the Operations division.	NJDOT requires all workers involved in traffic control and safety to complete appropriate training. Flaggers and TCCs must be trained. NJDOT, in collaboration with Rutgers University, conducts regular Traffic Control Coordinator (TCC) training programs.	New York requires flagger training for all workers, particularly those controlling traffic in high-risk zones. Flaggers are trained through a certification program, and workers are also given on-the-job training with experienced personnel to ensure safety.	Rhode Island requires flagger training for workers in work zones, with training programs managed by contractors and state agencies. The state enforces these requirements to ensure safety and compliance during work zone operations.	Vermont mandates flagger training as part of the work zone safety protocols. The state ensures that flaggers are trained and that work zone safety protocols are followed through the Highway Division's training programs.
Use of Technology in Work Zones	Connecticut utilizes technologies such as HAAS Alert for integrating work zone information into navigation apps like Waze and Google Maps, ensuring that drivers receive real-time notifications about active work zones. The state also uses variable message signs (VMS) and traffic cameras for real-time traffic management.	Pennsylvania uses speed safety cameras cameras in certain work zones, showing reductions in speeding and crashes. The state also employs smart arrow boards, smart work zones, and incident management cameras for monitoring work zone activities. PSP TraCS is used for reportable crash data collection, and QLIK dashboards help analyze work zone safety metrics. The TraCS and Qlik dashboards are PTC specific (PennDOT utilizes Power BI), PennDOT utilizes their Crash Reporting System. The PTC	Maine is exploring smart work zones with technologies such as portable rumble strips and attenuator trucks for enhanced safety. They are also looking into speed safety cameras and integrating work zone data with 511 systems.	Massachusetts uses smart work zones with technologies like variable speed limit signs and incident management systems. The state also uses cameras for monitoring work zones and shares data with navigation apps like Waze through 511 systems. They are exploring new technologies for worker protection, including smart vests.	New Hampshire uses smart work zones with speed feedback signs and variable message boards. The state is also experimenting with real-time data collection from work zones, with future plans for integrating data into apps like Waze.	NJDOT utilizes Variable Message Signs (VMS), portable VMS, and portable cameras in work zones where warranted. Deployment of Smart Work Zone technology follows established guidelines.	New York is implementing speed safety cameras and smart work zones, collecting data from sensors and using probe data for real-time guidance. The state also monitors work zones with cameras and explores technologies to communicate work zone information to navigation systems like Waze.	As of March 2025, Rhode Island DOT has had a few smart work zones deployed via Construction Projects with real-time data collection through traffic management systems. The state utilizes 511 systems for updating drivers and is looking into expanding connected work zones and integrating more data into navigation apps.	Vermont is experimenting with smart work zones and automated enforcement in a limited capacity. The state uses portable rumble strips and variable message signs to manage traffic flow, and they are considering more advanced technologies for work zone management.

Task 1: Northeast Current Practice Synthesis & Crash Data Analysis

Northeast Work Zone Safety State of the Practice

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Introduction

Fatalities occurring in work zones remain persistently high, rising to 963 in 2021 and holding near 900 in both 2022 and 2023. To address this persistent issue, stronger safety measures are urgently needed. As part of this broader safety effort, UMassSafe completed a project that gathered and shared effective safety guidelines across Northeast states to enhance consistency, collaboration, and implementation strategies for reducing crashes in work zones. By aggregating effective practices, this initiative can help agencies improve roadway safety outcomes.

UMassSafe began by identifying existing work zone safety programs, guidelines, and effective practices through key informant interviews with Department of Transportation personnel from Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont. This synthesis captured a broader understanding of safety initiatives and challenges each of these states have faced. The collected information was organized in a matrix to outline programming levels, key successes, gaps, and replicable strategies across the region.

To strengthen this effort, UMassSafe conducted a crash data analysis using the most recent three years of available data from state and national sources, including MassDOT Impact, FARS, and the Bureau of Labor Statistics, as well as crash data from the involved Northeast states. This analysis assessed crash trends, variable compatibility, and data limitations to inform targeted countermeasures. Results identified critical infrastructure and driver risk factors, particularly those relevant to the Northeast.

These findings are included in the following State of Practice Report.

Method

To identify current programs, guidelines, effective practices, and challenges related to work zone safety, UMassSafe conducted key informant interviews with Department of Transportation personnel from nine states: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont. These interviews took place virtually and generally lasted 45-60 minutes. When needed, there were follow-up conversations over email to clarify things that were discussed.

General Findings

These interviews revealed a mix of shared and state-specific challenges in advancing work zone safety efforts. While the numerous issues impacting work zone safety were present to some extent in every state, some states expressed particular challenges dealing with specific issues. For example, while distracted, aggressive, and impaired driving were common concerns for all states, Connecticut, Pennsylvania, Massachusetts, and New Hampshire expressed particular concern. Maine and Vermont reported difficulties in providing alternate routes for heavy trucks and managing rural congestion, with Vermont also citing issues related to flagger operations. Rhode Island and New Jersey pointed to contractor compliance and traffic management as persistent challenges; Rhode Island additionally reported problems with real-time tracking of work zone closures. In both New York and Pennsylvania, officials described struggles with speed harmonization, maintaining traffic control devices, and repeated crashes involving work zone vehicles.

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t Northeastern states are at very different stages of adopting and implementing ement in work zones.

ed a 2023 pilot of automated speed-enforcement in work zones, which mailed e warnings and a little over 700 fines, which has become a permanent program ation that will allow cameras in as many as 15 work zones at a time.

egan with a five-year pilot in 2019, with the General Assembly making the peed Enforcement program permanent in December 2023 (Act 38). As a result, ed reductions in speeding and crashes.

hether to implement this form of automated enforcement. LD 1457, heard in a three-year pilot on the Maine Turnpike for vehicles travelling 11 mph or more e limit.

meras in place yet, but the Governor's FY 26 budget (H.1) proposes unlimited nion bills HD 3717 / SD 2133 ("An Act relative to construction zone speed control the legislature.

Jersey still prohibit automated enforcement. New Hampshire's HB 305, which , was ruled "Inexpedient to Legislate" in March 2025, and New Jersey's A 851 f committee.

e third year of its five-year Automated Work-Zone Speed Enforcement at 30 portable units; the 2023 annual report logged peak speeds of monitored zones, underscoring the need for continued enforcement.

ve program, but the 2025 "Automated Safety Zone Speed Enforcement Act" ipalities deploy cameras in designated safety zones, including work areas, and is

) launched a two-year pilot on Interstates 89 and 91, ticketing drivers more than hen workers are present.

e recognizes the danger of speeding in work zones, only a few—Connecticut, and Vermont—currently have authority to issue automated penalties, with the ve or exploratory phases.

ES BEYOND THE MUTCD

r each DOT augments the federal *MUTCD* with its own work-zone guidance. Six rely almost entirely on the national manual. **Connecticut, Pennsylvania, npshire, New York,** and **Vermont** all publish state-specific manuals or standard UTCD, adding items such as numbered sign catalogs, positive-protection criteria,

eed-feedback-sign requirements, extra crash-attenuator trucks with longer roll-ahead ed detour instructions. In contrast, **Maine, New Jersey,** and **Rhode Island** report that with little or no additional state-level material.

were a key area of discussion across the states, with all nine northeastern DOTs nts for flagger training and broader work zone safety instruction. While the specific ry of training vary, most states offer a combination of certification programs, internal g education to maintain a well-prepared workforce.

s both flaggers and other workers involved in maintenance operations to undergo aining. The state uses its *Work Zone Safety Guidelines* manual as the foundation for ning, and it offers regular refresher sessions, including informal "tailgate talks" to es in the field.

ates that all flaggers be certified through PennDOT's official training program. In uns a *Temporary Traffic Control Safety Program*, which includes both self-paced online son courses. These courses are required not only for field staff but also for foremen contractors held to the same standard. Notably, all workers involved with temporary complete at least the field staff course.

any worker involved in traffic control complete flagger training. The state is working ing programs by incorporating American Traffic Safety Services Association (ATSA) ggers and ensuring that all workers involved in work zone operations receive ion.

dates that flaggers complete state-approved training. MassDOT also runs an internal cused on temporary traffic control and work zone safety, with content tailored for and construction environments. This ensures consistent safety knowledge across jects.

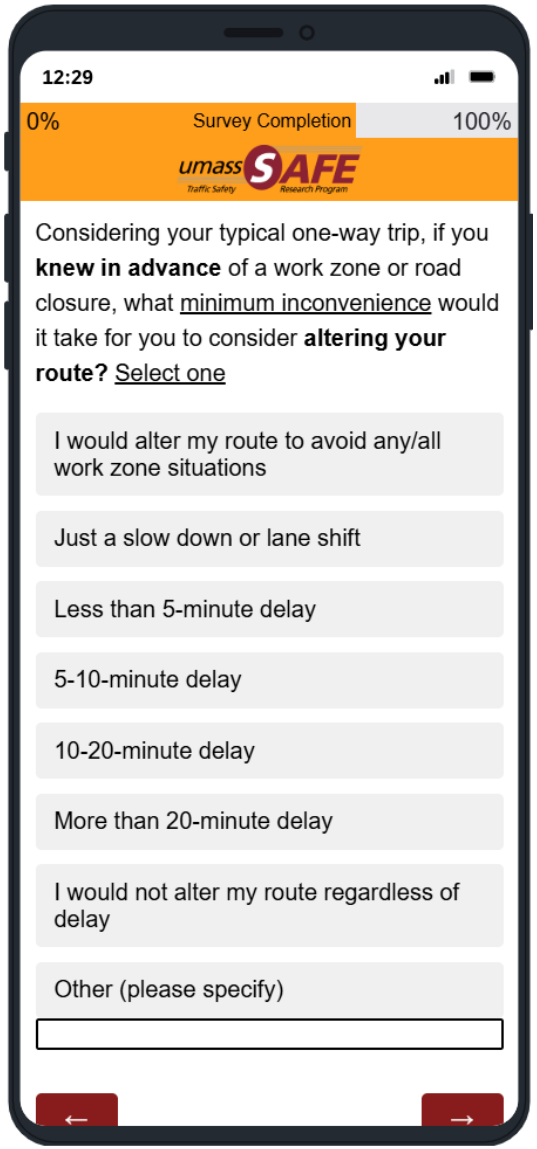
uires flagger certification and mandates that flaggers receive refresher training every ally, the state offers a basic work zone safety training for employees in the Operations best practices beyond flagging.

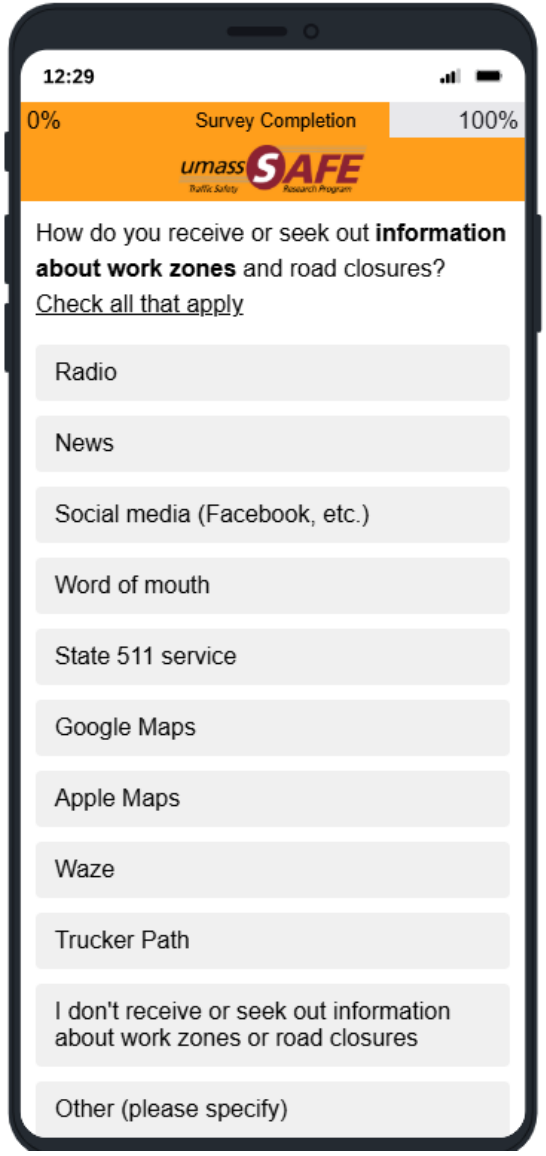
tes training for all workers involved in traffic control and work zone safety. In gers University, NJDOT conducts *Traffic Control Coordinator (TCC)* training programs, laggers and supervisory personnel meet safety and compliance standards.

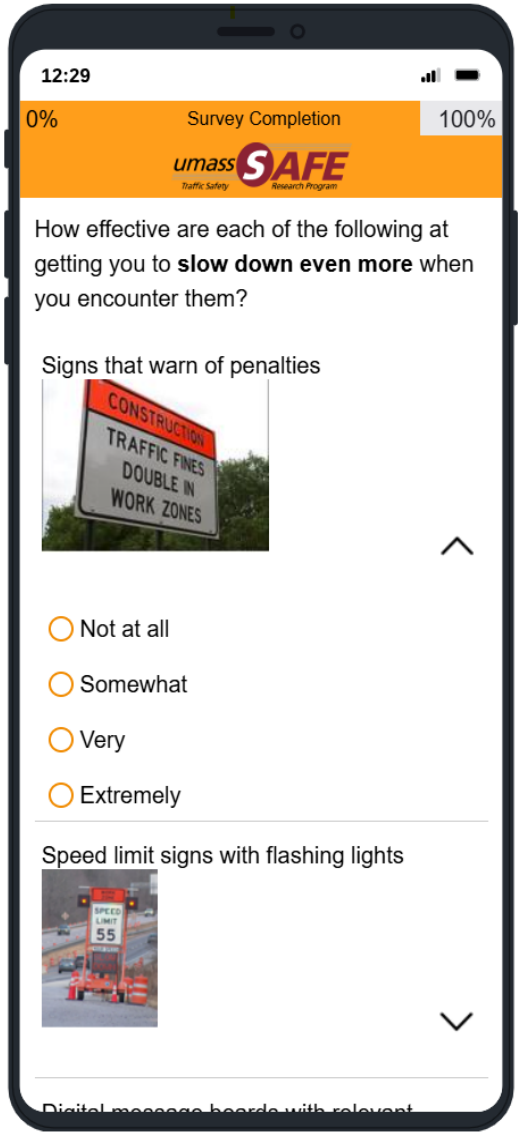
all flaggers to complete a formal certification program, especially those working in s. In addition to classroom instruction, the state emphasizes on-the-job training with nel to build practical skills and maintain safety awareness on site.

Task 2: Driver Experience Survey

Task 2: Driver Experience Survey







Task 2: Driver Experience Survey

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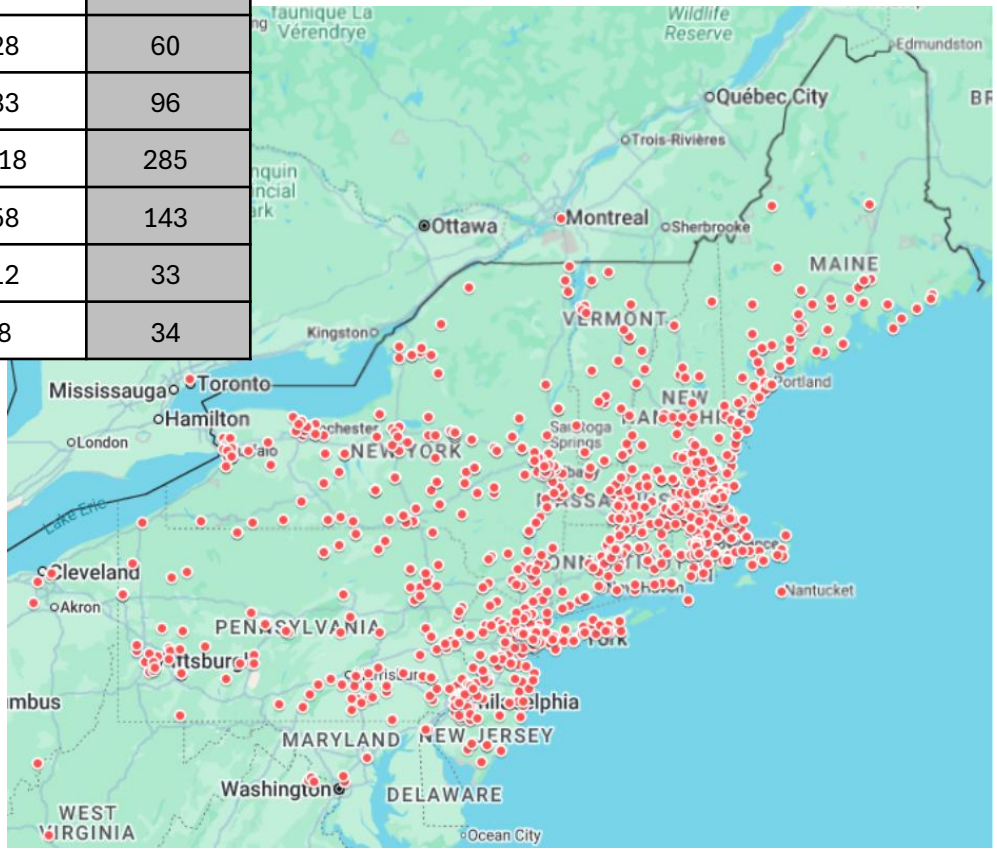
Please indicate how much you agree with the following statements:

	Not at all	Somewhat	Mostly	Completely
Even if I'm already driving more cautiously than others around me, I'm happy to **slow down even more** in a work zone.	○	○	○	○
Most drivers try to reduce their speed and drive more cautiously in work zones.	○	○	○	○
My **friends/family** expect me to reduce my speed and drive more cautiously in work zones.	○	○	○	○
When I receive a **navigation-app alert** of a work zone, I'm more likely to reduce my speed and drive more cautiously.	○	○	○	○
When I **know road work is actively happening -** through a trusted source or with my own eyes - I slow down even more, because I've lost trust in signs, cones or lane shifts that stay up too long.	○	○	○	○
Drivers who speed or drive carelessly in work zones are likely to be **stopped by police**.	○	○	○	○

Task 2: Driver Experience Survey

State	Age Group				Total
	<35	35-50	51-65	65+	
Connecticut	3	13	33	10	59
Maine	3	14	30	33	80
Massachusetts	28	85	171	117	401
New Hampshire	4	9	19	28	60
New Jersey	5	12	46	33	96
New York	19	45	103	118	285
Pennsylvania	7	29	49	58	143
Rhode Island	2	8	11	12	33
Vermont	3	9	14	8	34



Task 2: Driver Experience Survey

Perceived Effectiveness of Work Zone Countermeasures

88%
Workers actively present

85%
Heavy Equipment Operating

85%
Active Flaggers

79%
Police Detail Visible

74%
Cones and Barriers

66%
Lanes Shifted/Narrowed

Task 2: Driver Experience Survey

Perceived Effectiveness of Work Zone Countermeasures

75%
Speed safety camera signs

60%
Digital Message Board

57%
Flashing speed limit signs

61%
Speed Feedback Signs

39%
Signs that warn of penalties

Task 2: Driver Experience Survey

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Perceived Effectiveness of Work Zone Countermeasures

Countermeasure	CT	ME	MA	NH	NJ	NY	PA	RI	VT
Cones/Barriers		🟥	🟩						
Digital Message Boards			🟩			🟩			
Digital Speed Feedback Signs					🟥	🟩			
Active Flaggers			🟥			🟩			
Active Heavy Equipment						🟩			
Lanes Narrowed/Shifted					🟥	🟩			
Police Vehicle Detail			🟥		🟥	🟩			
Penalty Warning Signs						🟩			
Speed Safety Cameras			🟥	🟥		🟩			
Speed Limit Signs with Flashing Lights		🟥			🟥	🟩			
Active workers presence									

Task 2: Driver Experience Survey

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Beliefs

“Drivers who speed or drive carelessly in work zones are likely to be stopped by police.”

NY, NH

CT, MA, VT

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Beliefs

“Most drivers try to reduce their speed and drive more cautiously in work zones.”

51-65, 65+
NY

CT, RI
Pro Drivers

Task 2: Driver Experience Survey

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Beliefs

“Even if I’m already driving more cautiously than others around me, I’m happy to slow down even more in a work zone.”

65+
NY, NJ
Pro Drivers

Task 2: Driver Experience Survey

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Table 4: How Respondents From Each State Receive Work Zone Information

State	Google Maps	Social Media	Radio	Waze	News	Word of mouth	State 511	Apple Maps	Trucker Path	Don't Receive WZ Info
Connecticut	31%	27%	32%	31%	18%	22%	11%	8%	5%	8%
Maine	29%	27%	28%	16%	15%	20%	6%	8%	7%	12%
Massachusetts	36%	31%	25%	29%	18%	18%	6%	7%	4%	10%
New Hampshire	35%	31%	20%	28%	11%	18%	9%	3%	5%	22%
New Jersey	33%	32%	34%	30%	20%	14%	12%	4%	5%	6%
New York	36%	28%	32%	19%	23%	17%	14%	8%	4%	11%
Pennsylvania	36%	34%	28%	19%	25%	20%	31%	4%	4%	9%
Rhode Island	27%	40%	29%	24%	29%	24%	0%	9%	0%	18%
Vermont	36%	46%	13%	21%	21%	18%	31%	8%	5%	15%
Total	**35%**	**31%**	**28%**	**24%**	**20%**	**18%**	**13%**	**6%**	**4%**	**11%**

Task 2: Driver Experience Survey

383 free form responses

- 79 mentioned police/cops/details
- 32 mentioned enforcement

"The details never move from their parking spot. I'm not at all concerned about getting a ticket in a work zone."

"I would like to see more police presence on the roadways. More and more cars and trucks are driving at a high rate speed, and trucks are very often driving in the high speed lanes."

"Flaggers with clearly signed slow/stop flip stick seems to be the most communicative method, many police details officers hand signals can be easily misinterpreted."

Task 2: Driver Experience Survey

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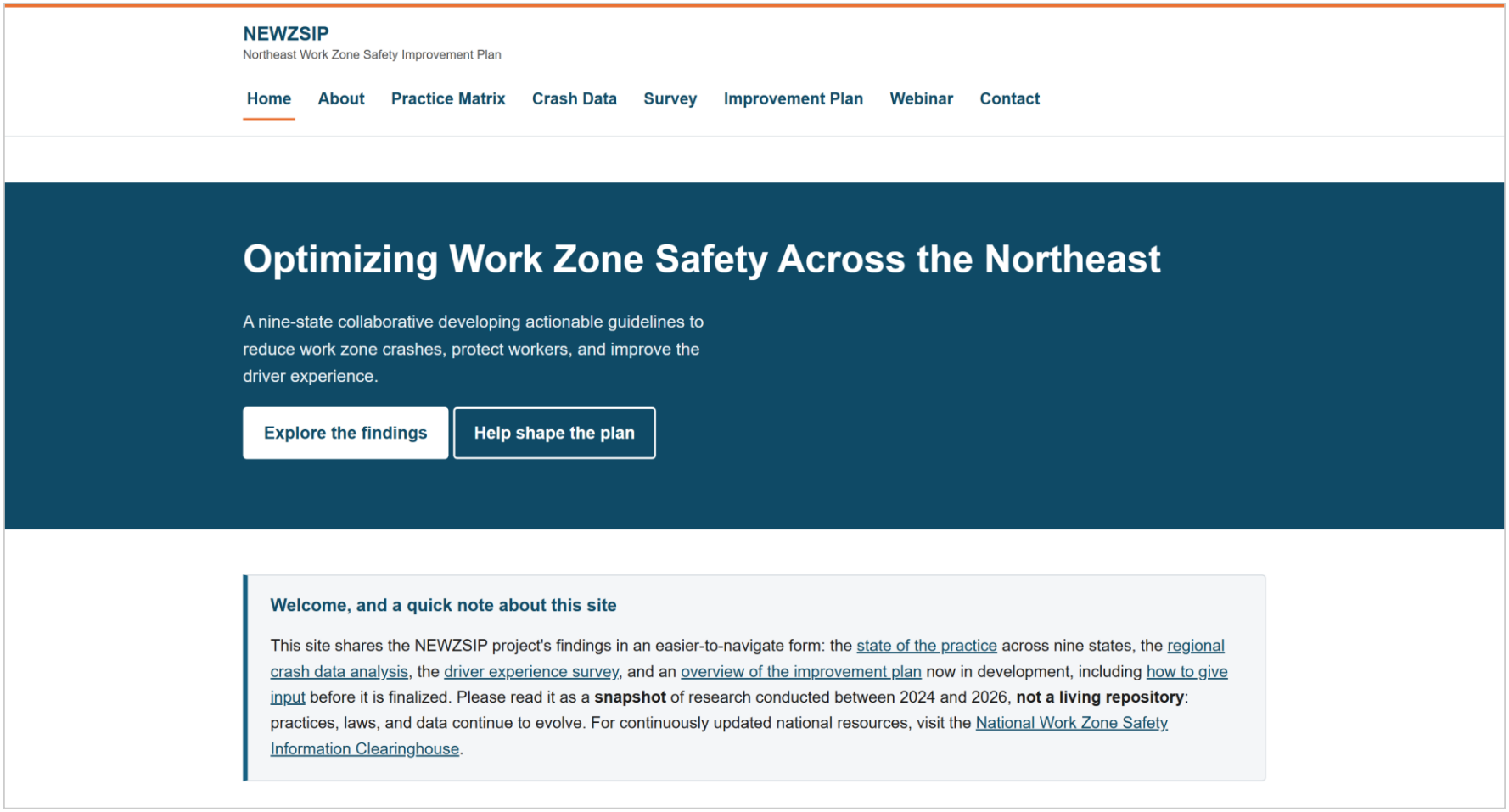
Theme	Response Count	Description
Enforcement failures / no enforcement / ineffective police details	~208	Most common complaint. Drivers say police do not enforce speed limits, are inattentive, or absent. Many report work zones with *zero perceived enforcement*.
Unsafe driver behavior (speeding, distraction, tailgating, aggressive merging, ignoring cones/flaggers)	~164	Respondents widely described drivers speeding excessively, tailgating, merging last-second, using phones, or driving through active work areas.
Stale, misleading, or incorrect signage / inactive work zones	~123	Frequent frustration with stale signage and inactive work zones. As well as misleading information such as inaccurate taper lengths and unclear lane closures.
Blinding or excessive lighting	~74	Complaints focused on poorly aimed nighttime lights, overly bright towers, and daytime glare making work zones hazardous.
Highway worker perspectives describing near misses or unsafe interactions	~40	Roadway workers, flaggers, and DOT staff reported dangerous close calls, lack of driver awareness, and poor protection.
Hazardous lane shifts, narrow lanes, poor design	~42	Issues include tight lanes, poor lane striping, excessive safety-barrier barrels, and lane shifts not aligned with expectations.
Automated enforcement support (speed cameras, camera vans)	~41 supportive, ~6 opposed	Strong interest in speed cameras as a substitute for ineffective police details; small minority opposed.
Concerns about excessive number of simultaneous work zones	~17	Some respondents believe too many concurrent work zones creates confusion, driver frustration, and safety issues.

Project Website: Home



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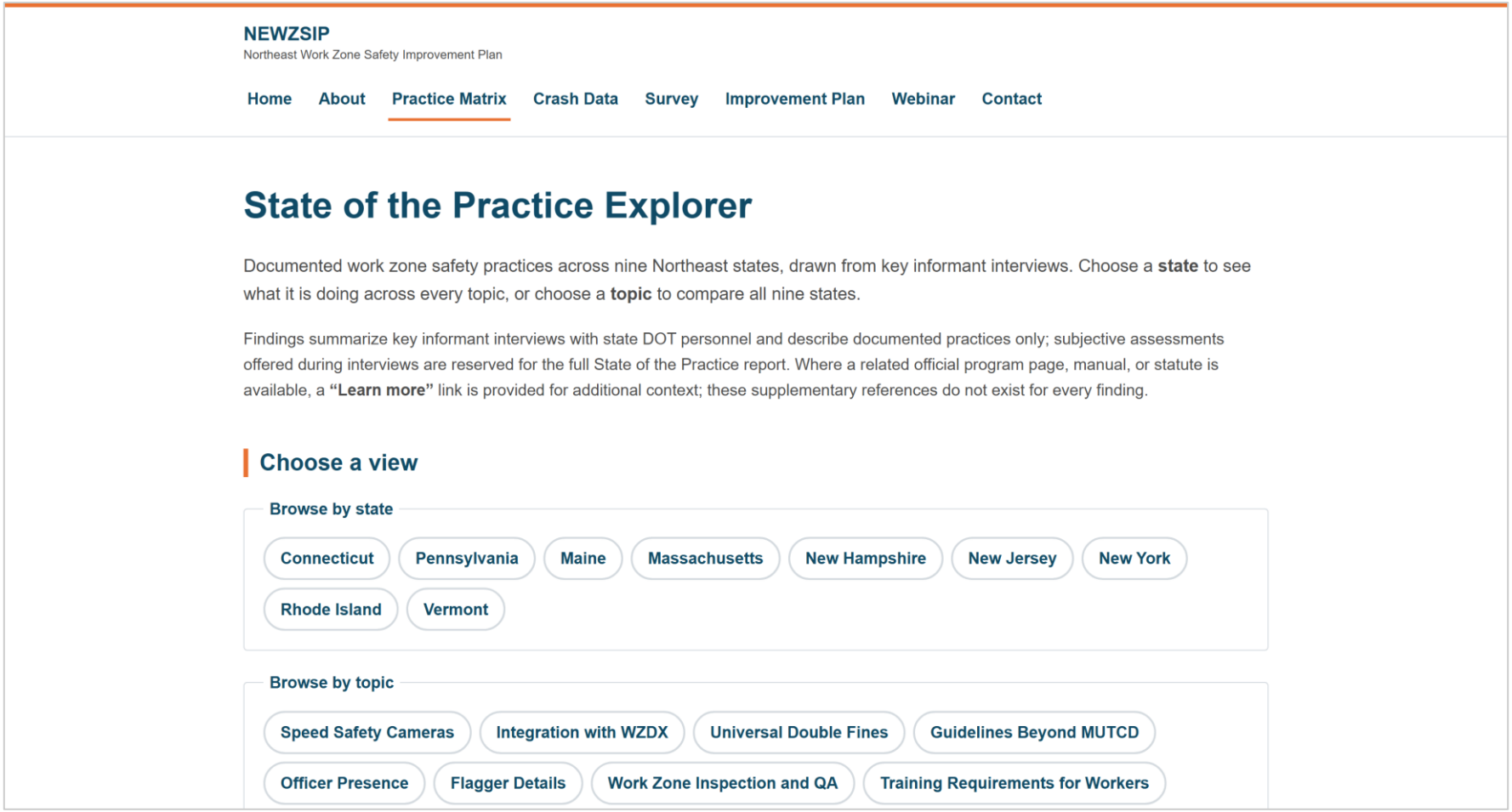
Project Website: State of the Practice Explorer



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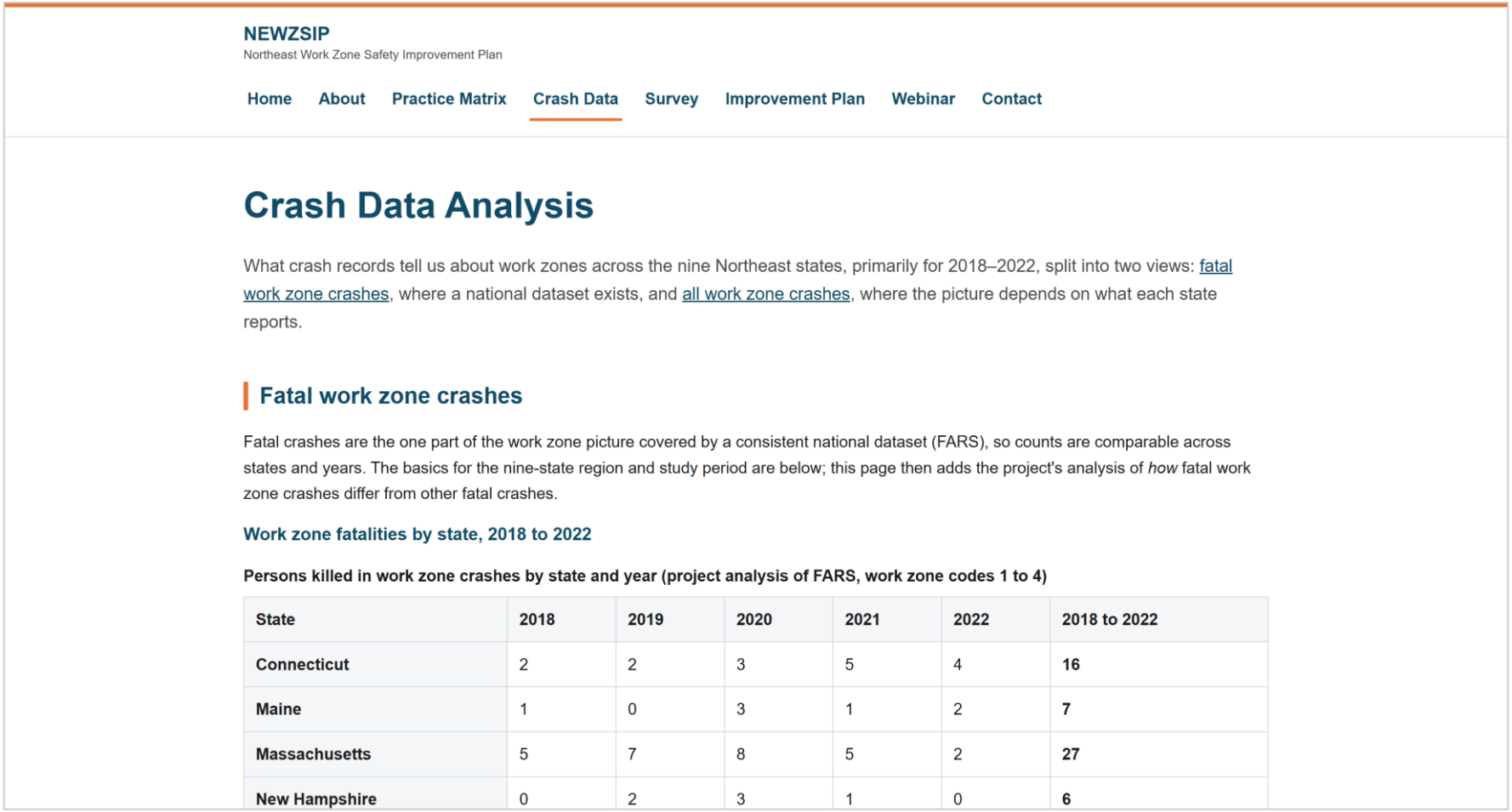
Project Website: Crash Data Analysis



NEWZSIP
Northeast Work Zone Safety Improvement Plan

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Crash Data Analysis

What crash records tell us about work zones across the nine Northeast states, primarily for 2018–2022, split into two views: fatal work zone crashes, where a national dataset exists, and all work zone crashes, where the picture depends on what each state reports.

Fatal work zone crashes

Fatal crashes are the one part of the work zone picture covered by a consistent national dataset (FARS), so counts are comparable across states and years. The basics for the nine-state region and study period are below; this page then adds the project's analysis of *how* fatal work zone crashes differ from other fatal crashes.

Work zone fatalities by state, 2018 to 2022

Persons killed in work zone crashes by state and year (project analysis of FARS, work zone codes 1 to 4)

State	2018	2019	2020	2021	2022	2018 to 2022
Connecticut	2	2	3	5	4	**16**
Maine	1	0	3	1	2	**7**
Massachusetts	5	7	8	5	2	**27**
New Hampshire	0	2	3	1	0	**6**

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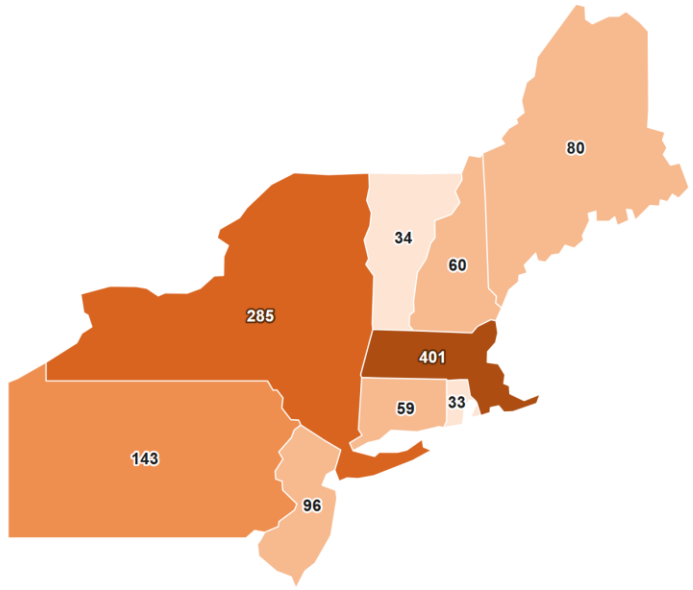
Project Website: Driver Experience Survey

Responses were not evenly distributed. Massachusetts accounted for the largest share, likely because Facebook's ad-serving algorithm showed the survey more often to Massachusetts users given the UMassSafe name. This uneven distribution is a limitation to keep in mind when reading state-level results.



Select or hover a state to see its respondent count, or read the full table below.

Fewer than 50 | 50 to 99 | 100 to 199 | 200 to 299 | 300 or more

Survey respondents by state and age group

State	Under 35	35 to 50	51 to 65	65+	Total	Share
Connecticut	3	13	33	10	**59**	5%

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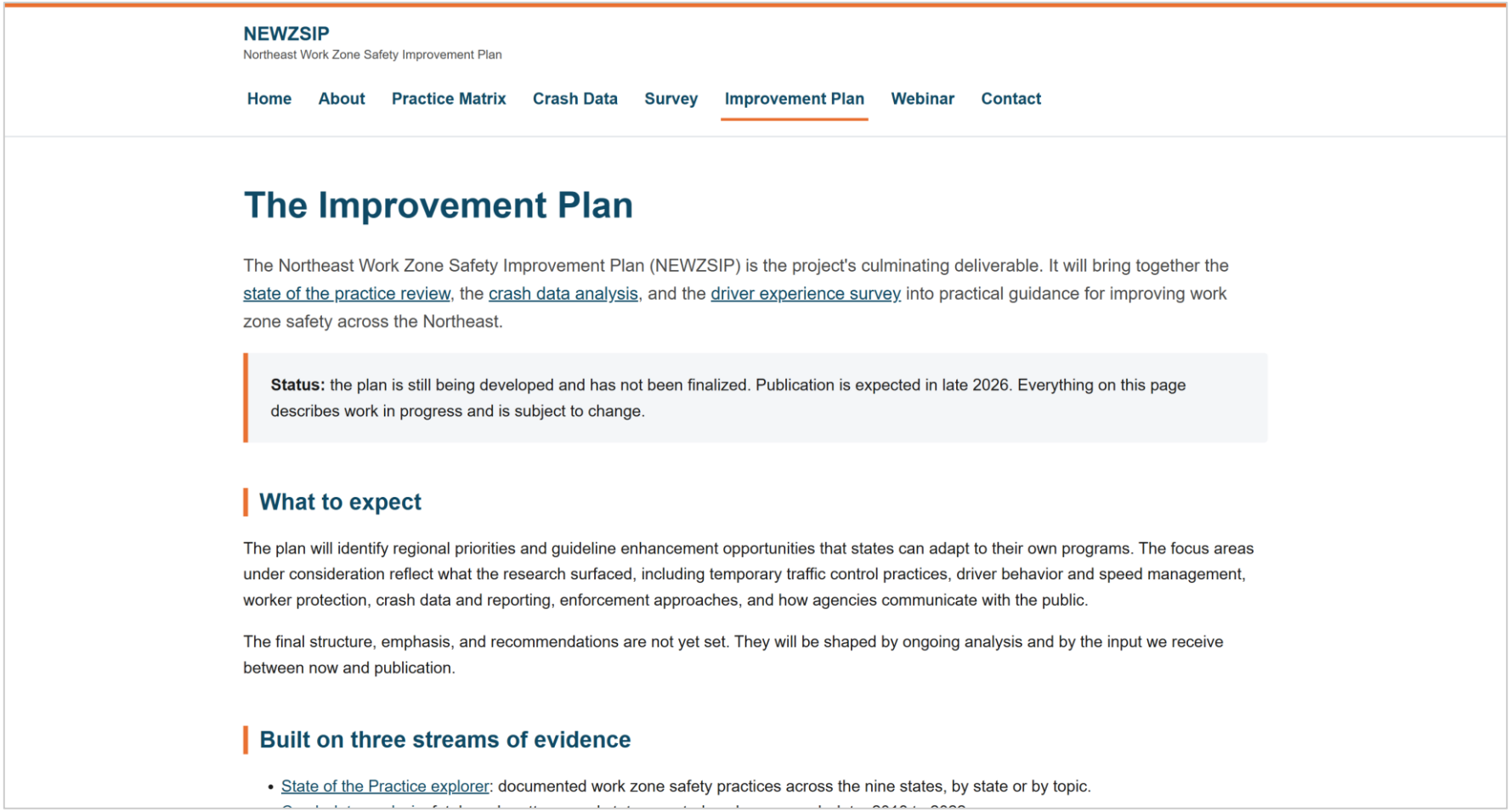
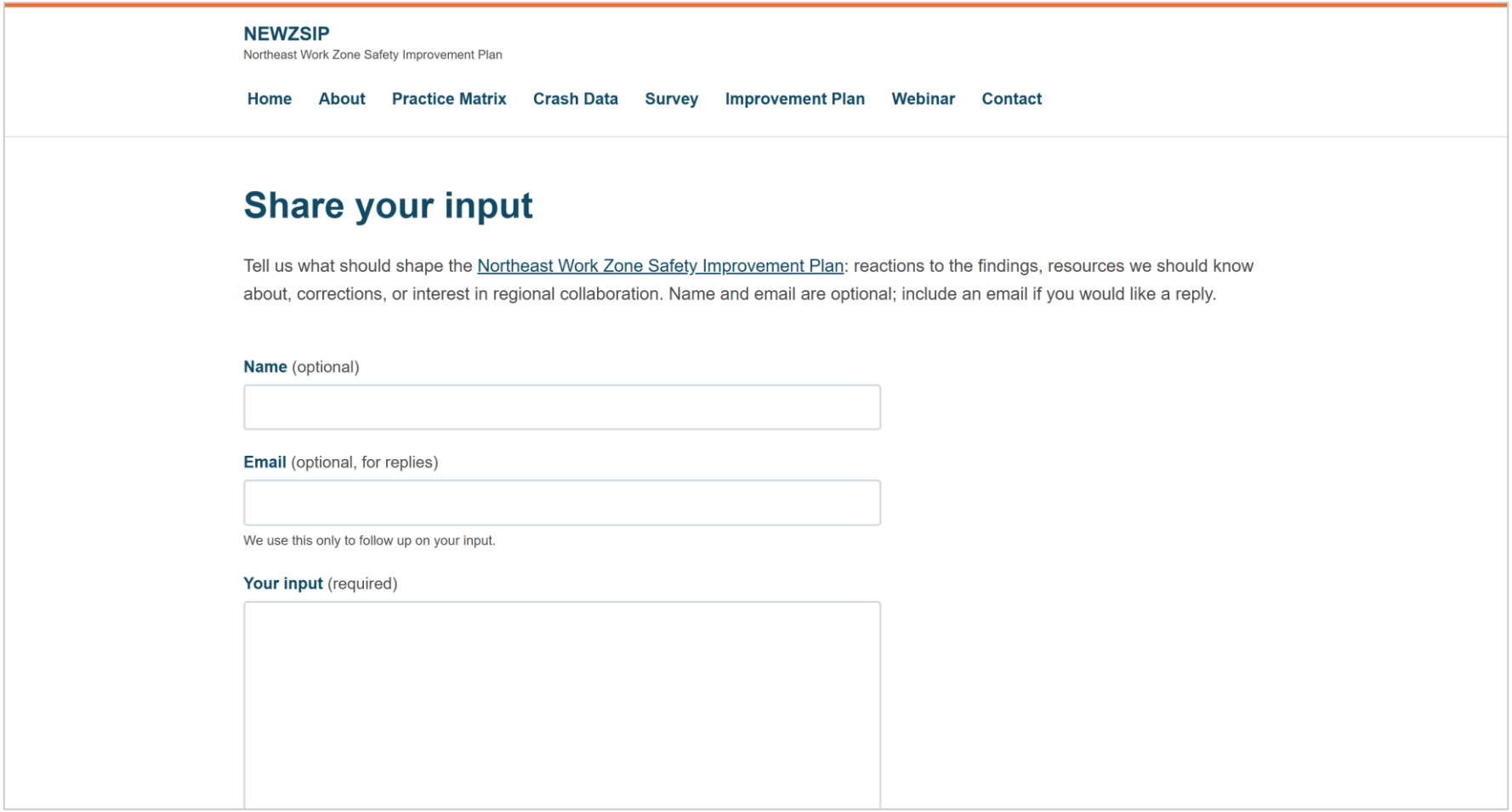
Project Website: Improvement Plan



Project Website: Share Your Input



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Comments or Questions?

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www.newzsip.umasssafe.org

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