MASSACHUSETTS

Commercial Vehicle Safety Plan

Federal Motor Carrier Safety Administration's
Motor Carrier Safety Assistance Program

Fiscal Years 2020 - 2022

Date of Approval: April 16, 2020

FINAL CVSP

U.S. Department of Transportation
Federal Motor Carrier Safety Administration

Part 1 - MCSAP Overview

Part 1 Section 1 - Introduction

The Motor Carrier Safety Assistance Program (MCSAP) is a Federal grant program that provides financial assistance to States to help reduce the number and severity of accidents and hazardous materials incidents involving commercial motor vehicles (CMV). The goal of the MCSAP is to reduce CMV-involved accidents, fatalities, and injuries through consistent, uniform, and effective CMV safety programs.

A State lead MCSAP agency, as designated by its Governor, is eligible to apply for grant funding by submitting a commercial vehicle safety plan (CVSP), in accordance with the provisions of 49 CFR 350.201 and 205. The lead agency must submit the State's CVSP to the FMCSA Division Administrator on or before August 1 of each year. For a State to receive funding, the CVSP needs to be complete and include all required documents. Currently, the State must submit a performance-based plan each year to receive MCSAP funds.

The FAST Act required the Federal Motor Carrier Safety Administration (FMCSA) to “prescribe procedures for a State to submit a multiple-year plan and annual updates thereto, under which the State agrees to assume responsibility for improving motor carrier safety by adopting and enforcing State regulations, standards, and orders that are compatible with the regulations, standards, and orders of the Federal Government on commercial motor vehicle safety and hazardous materials transportation safety.”

The online CVSP tool (eCVSP) outlines the State’s CMV safety objectives, strategies, activities and performance measures and is organized into the following five parts:

- Part 1: MCSAP Overview
- Part 2: Crash Reduction and National Program Elements (FY 2020 - 2022)
- Part 3: National Emphasis Areas and State Specific Objectives (FY 2020 - 2022)
- Part 4: Financial Information (FY 2020)
- Part 5: Certifications and Documents

You will find that each of the five eCVSP parts listed above contains different subsections. Each subsection category will provide you with detailed explanation and instruction on what to do for completing the necessary tables and narratives.

The MCSAP program includes the eCVSP tool to assist States in developing and monitoring their grant applications. The eCVSP provides ease of use and promotes a uniform, consistent process for all States to complete and submit their plans. States and territories will use the eCVSP to complete the CVSP and to submit a 3-year plan or an Annual Update to a 3-year plan. As used within the eCVSP, the term ‘State’ means all the States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, American Samoa, Guam, and the Virgin Islands.

REMINDERS FOR FY 2020:

Multi-Year plans–For FY 2020, all States will be utilizing the multi-year CVSP format. This means that objectives, projected goals, and activities in the plan will cover a full three-year period. The financial information and certifications will be updated each fiscal year.

Annual Updates for Multi-Year plans–Those States in Year 2 or Year 3 of a multi-year plan will be providing an Annual Update only. States will be able to review the project plan submitted in the previous year and indicate whether anything needs to be updated for the upcoming fiscal year via a Yes/No question provided in each Section of Parts 1-3. **NOTE: Answer carefully as there is one opportunity to check Yes/No and then the input is locked**.

- If Yes is indicated, the information provided for previously will be editable and State users can make any necessary changes to their project plan. (Note: Trend information that supports your current activities is not editable.)
- If No is indicated, then no information in this section will be editable and the user can move forward to the next section.
- The financial information and certifications will be updated each fiscal year.

All multi-year and annual update plans have been pre-populated with data and information from their FY 2019 plans. States must carefully review and update this information to reflect FY 2020 activities prior to submission to FMCSA.

States are reminded to **not** include any personally identifiable information (PII) in the CVSP. The final CVSP approved by FMCSA is required to be posted to a public FMCSA website.

Personally Identifiable Information – PII is information which, on its own or matched with other data, would permit identification of that individual. Examples of PII include: name, home address, social security number, driver's license number or State-issued identification number, date and/or place of birth, mother's maiden name, financial, medical, or educational records, non-work telephone numbers, criminal or employment history, etc. PII, if disclosed to or altered by unauthorized individuals, could adversely affect the Agency's mission, personnel, or assets or expose an individual whose information is released to harm, such as identity theft.

Part 1 Section 2 - Mission/Goal Statement

Instructions:

Briefly describe the mission or goal of the lead State commercial motor vehicle safety agency responsible for administering this Commercial Vehicle Safety Plan (CVSP) throughout the State.

***NOTE:** Please do not include information on any other FMCSA grant activities or expenses in the CVSP.*

The Commonwealth of Massachusetts is committed to reducing the number of traffic crashes and associated injuries/fatalities with coordinated enforcement and educational efforts focused on commercial vehicle operators as well as other vehicles and roadway users operating in the vicinity of commercial vehicles.

The Massachusetts State Police (MSP) has been the lead MCSAP agency in Massachusetts since the inception of the MCSAP program. The MSP Commercial Vehicle Enforcement Section (CVES) is responsible for implementing the MCSAP Program within Massachusetts. Under state statute, we have the authority to enforce all state laws and the appropriate FMCSA regulations anywhere in the territorial confines of Massachusetts.

The Department of Public Utilities (DPU) is a non-funded participating member. The DPU addresses the safety of equipment and operation of motorcoach companies and transit authority buses. The DPU also regulates commercial common carriers that perform residential household goods moved within the Commonwealth. The CVES and DPU continue to have an outstanding working relationship and as a result, passenger and household goods enforcement activities are jointly pursued. The FMCSA, MSP CVES, and DPU conduct quarterly meetings. In addition, the MSP CVES coordinates various safety programs with the Massachusetts Highway Safety Division, Department of Transportation and Registry of Motor Vehicles.

The University of Massachusetts Traffic Safety Research Program (UMassSafe) continues to provide state specific data analysis to help direct safety activities including crash causation, high crash regions and corridors as well as training development.

Part 1 Section 3 - MCSAP Structure Explanation

Instructions:

Briefly describe the State's commercial motor vehicle (CMV) enforcement program funded by the MCSAP grant.

***NOTE:** Please do not include activities or expenses associated with any other FMCSA grant program.*

The MSP CVES is commanded by a Lieutenant and currently has a total of 35 personnel: 33 sworn personnel, and 2 civilian personnel assigned to the section. For FFY 2020 we anticipate 2 additional MCSAP personnel to fill retirements and will be assigned to the CVES for a total staffing of 33 sworn officers and 2 civilians. There are six teams deployed on a regional basis. One sergeant and three full time officers are assigned to the New Entrant Program.

Part 1 Section 4 - MCSAP Structure

Instructions:

Complete the following tables for the MCSAP lead agency, each subrecipient and non-funded agency conducting eligible CMV safety activities.

The tables below show the total number of personnel participating in MCSAP activities, including full time and part time personnel. This is the total number of non-duplicated individuals involved in all MCSAP activities within the CVSP. (The agency and subrecipient names entered in these tables will be used in the National Program Elements —Roadside Inspections area.)

The national program elements sub-categories represent the number of personnel involved in that specific area of enforcement. FMCSA recognizes that some staff may be involved in more than one area of activity.

Lead Agency Information	
Agency Name:	MA STATE POLICE (MSP) COMMERCIAL VEHICLE ENFORCEMENT SECTION (CVES)
Enter total number of personnel participating in MCSAP activities	35
National Program Elements	**Enter # personnel below**
Driver and Vehicle Inspections	33
Traffic Enforcement Activities	33
Investigations*	4
Public Education and Awareness	33
Data Collection and Reporting	35
* Formerly Compliance Reviews and Includes New Entrant Safety Audits	

Subrecipient Information	
Agency Name:	RMV
Enter total number of personnel participating in MCSAP activities	0
National Program Elements	**Enter # personnel below**
Driver and Vehicle Inspections	0
Traffic Enforcement Activities	0
Investigations*	0
Public Education and Awareness	0
Data Collection and Reporting	0
* Formerly Compliance Reviews and Includes New Entrant Safety Audits	

Non-funded Agency Information	
Total number of agencies:	1
Total # of MCSAP Participating Personnel:	11

Part 2 - Crash Reduction and National Program Elements

Part 2 Section 1 - Overview

Part 2 allows the State to provide past performance trend analysis and specific goals for FY 2020 - 2022 in the areas of crash reduction, roadside inspections, traffic enforcement, audits and investigations, safety technology and data quality, and public education and outreach.

***Note**: For CVSP planning purposes, the State can access detailed counts of its core MCSAP performance measures. Such measures include roadside inspections, traffic enforcement activity, investigation/review activity, and data quality by quarter for the current and past two fiscal years using the Activity Dashboard and/or the CVSP Toolkit on the A&I Online website. The Activity Dashboard is also a resource designed to assist the State with preparing their MCSAP-related quarterly reports and is located at: http://ai.fmcsa.dot.gov. A user id and password are required to access this system.*

In addition, States can utilize other data sources available on the A&I Online website as well as internal State data sources. It is important to reference the data source used in developing problem statements, baselines and performance goals/ objectives.

Part 2 Section 2 - CMV Crash Reduction

The primary mission of the Federal Motor Carrier Safety Administration (FMCSA) is to reduce crashes, injuries and fatalities involving large trucks and buses. MCSAP partners also share the goal of reducing commercial motor vehicle (CMV) related crashes.

Trend Analysis for 2014 - 2018

***Instructions for all tables in this section**:*

Complete the tables below to document the State's past performance trend analysis over the past five measurement periods. All columns in the table must be completed.

- *Insert the beginning and ending dates of the five most recent State measurement periods used in the Measurement Period column. The measurement period can be calendar year, Federal fiscal year, State fiscal year, or any consistent 12-month period for available data.*
- *In the Fatalities column, enter the total number of fatalities resulting from crashes involving CMVs in the State during each measurement period.*
- *The Goal and Outcome columns allow the State to show its CVSP goal and the actual outcome for each measurement period. The goal and outcome must be expressed in the same format and measurement type (e.g., number, percentage, etc.).*
    - *In the Goal column, enter the goal from the corresponding CVSP for the measurement period.*
    - *In the Outcome column, enter the actual outcome for the measurement period based upon the goal that was set.*
- *Include the data source and capture date in the narrative box provided below the tables.*
- *If challenges were experienced while working toward the goals, provide a brief narrative including details of how the State adjusted the program and if the modifications were successful.*

ALL CMV CRASHES

Select the State's method of measuring the crash reduction goal as expressed in the corresponding CVSP by using the drop-down box options: (e.g. large truck fatal crashes per 100M VMT, actual number of fatal crashes, actual number of fatalities, or other). Other can include injury only or property damage crashes.

Goal measurement as defined by your State: Large Truck Fatal Crashes per 100M VMT

If you select 'Other' as the goal measurement, explain the measurement used in the text box provided:
Fatal Crashes

Measurement Period (Include 5 Periods)		Fatalities	Goal	Outcome
Begin Date	End Date			
01/01/2018	12/31/2018	39	0.0547	0.0614
01/01/2017	12/31/2017	31	0.0547	0.0495
01/31/2016	12/31/2016	34	0.0547	0.0550
01/01/2015	12/31/2015	32	0.0497	0.0540
01/01/2014	12/31/2014	37	0.0643	0.0655

MOTORCOACH/PASSENGER CARRIER CRASHES

Select the State's method of measuring the crash reduction goal as expressed in the corresponding CVSP by using the drop-down box options: (e.g. large truck fatal crashes per 100M VMT, actual number of fatal crashes, actual number of fatalities, other, or N/A).

Goal measurement as defined by your State: N/A

If you select 'Other' or 'N/A' as the goal measurement, explain the measurement used in the text box provided:
fatalities (2-8 per year) too low to measure a goal

Measurement Period (Include 5 Periods)		Fatalities	Goal	Outcome
Begin Date	End Date			
01/01/2018	12/31/2018	1		
01/01/2017	12/31/2017	2		
01/01/2016	12/31/2016	8		
01/01/2015	12/31/2015	3		
01/01/2014	12/31/2014	2		

Hazardous Materials (HM) CRASH INVOLVING HM RELEASE/SPILL

Hazardous material is anything that is listed in the hazardous materials table or that meets the definition of any of the hazard classes as specified by Federal law. The Secretary of Transportation has determined that hazardous materials are those materials capable of posing an unreasonable risk to health, safety, and property when transported in commerce. The term hazardous material includes hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, and all other materials listed in the hazardous materials table.

For the purposes of the table below, HM crashes involve a release/spill of HM that is part of the manifested load. (This does not include fuel spilled from ruptured CMV fuel tanks as a result of the crash).

Select the State's method of measuring the crash reduction goal as expressed in the corresponding CVSP by using the drop-down box options: (e.g., large truck fatal crashes per 100M VMT, actual number of fatal crashes, actual number of fatalities, other, or N/A).

Goal measurement as defined by your State: N/A

If you select 'Other' or 'N/A' as the goal measurement, explain the measurement used in the text box provided:
fatalities (0-1) too low to measure a goal.

Measurement Period (Include 5 Periods)		Fatalities	Goal	Outcome
Begin Date	End Date			
01/01/2018	12/31/2018	1		
01/01/2017	12/31/2017	0		
01/01/2016	12/31/2016	0		
01/01/2015	12/31/2015	0		
01/01/2014	12/31/2014	0		

Enter the data sources and capture dates of the data listed in each of the tables above.
--Fatal Count Source: FMCSA Motor Carrier Management Information System (MCMIS) data snapshot as of 06/28//2019, including crash records through 02/28/2019. MCMIS data are considered preliminary for 22 months to allow for changes - https://ai.fmcsa.dot.gov/CrashStatistics/rptSummary.aspx. VMT Source: FHWA Annual Highway Statistics Table VM-2 as of 8/23/2018; 2018 was projected. --MC: FMCSA Motor Carrier Management Information System (MCMIS) data snapshot as of 06/28//2019, including crash records through 02/28/2019. MCMIS data are considered preliminary for 22 months to allow for changes - https://ai.fmcsa.dot.gov/CrashStatistics/rptSummary.aspx. --HM: FMCSA Motor Carrier Management Information System (MCMIS) data snapshot as of 06/28/2019, including crash records through 02/28/2019. MCMIS data are considered preliminary for 22 months to allow for changes - https://ai.fmcsa.dot.gov/CrashStatistics/rptHazmat.aspx?rpt=HMPL.

Narrative: Describe any difficulties achieving the goal, problems encountered, obstacles overcome, lessons learned, etc.

Compared to the majority of states (as well as the nation as a whole), Massachusetts consistently has a lower CMV fatality rate per 100 million vehicle miles traveled (VMT). In 2018, however, Massachusetts saw a sharp increase in the number of CMV fatalities and rate per 100 VMT. Despite this increase in fatalities, there was a decrease in injury and property damage only (PDO) CMV crashes.

The MSP CVES does not establish a goal specific to the reduction of motorcoach/passenger fatalities because the number of such fatalities is too low to adequately measure change. Instead, there is a goal to reduce all CMV crashes, which includes strategies to reduce motorcoach/passenger fatalities. The MSP CVES does implement motorcoach enforcement and inspection strategies, including a specific passenger transportation safety goal regarding inspections.

Although Massachusetts has only experienced a single HazMat fatality involving a release/spill during the five years reviewed, MA does have a higher OOS rate associated with HazMat inspections than the nation as a whole (FY18 19.08% vs 7.69% and FY19 thus far 12.39% vs. 7.14% nationally). Due to the risk factors associated with the products in transport, it is necessary to preserve vigilant oversight of HazMat transportation by motor carriers. Therefore, MA truck teams will continue conducting HazMat roadside inspections as well as cargo tank task forces in order to maintain safe operating practices.

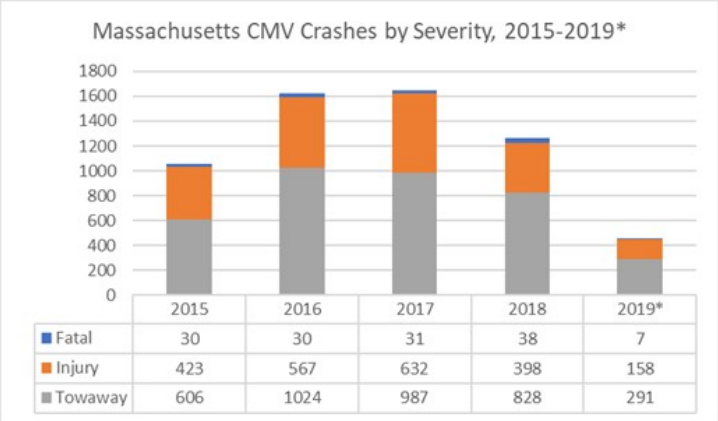
Narrative Overview for FY 2020 - 2022

Instructions*:*

The State must include a reasonable crash reduction goal for their State that supports FMCSA's mission to reduce the national number of crashes, injuries and fatalities involving commercial motor vehicles. The State has flexibility in setting its goal and it can be based on raw numbers (e.g., total number of fatalities or CMV crashes), based on a rate (e.g., fatalities per 100 million VMT), etc.

Problem Statement Narrative: Describe the identified problem, include baseline data and identify the measurement method.

Over the past 10 years there has been an overall decline in the number of commercial motor vehicle crashes. However, 2016 and 2017 saw an increase in CMV crashes, specifically those including fatal and injury crashes. While 2018 saw a notable decrease in injury crashes, along with moderate decrease in towaway crashes, fatal crashes increased. The chart below demonstrates the changes in CMV crashes by severity from 2015 to 2019 with 2019 representing only the first calendar quarter thus far.



To further reduce the number and severity of crashes involving CMVs, UMassSafe conducted an extensive crash data analysis that included a study of crash locations and characteristics. (Data sources were MCMIS crash reports, Mass RMV Crash reports and State Police Records) The findings of this analysis are attached to this E-CVSP and will be utilized by the MSP CVES in planning and conducting crash prevention efforts.

Enter the data source and capture date:
FMCSA Motor Carrier Management Information System (MCMIS) data snapshot as of 06/28/2019, including crash records through 02/28/2019. (https://ai.fmcsa.dot.gov/CrashStatistics/rptSummary.aspx).

Projected Goal for FY 2020 - 2022:

In the table below, state the crash reduction goal for each of the three fiscal years. The method of measurement should be consistent from year to year. For example, if the overall crash reduction goal for the three year period is 12 percent, then each annual goal could be 4 percent.

Fiscal Year	Annual Crash Reduction Goals
2020	2
2021	2
2022	2

Reduce the number of fatal and injury crashes involving CMVs in Massachusetts by 6% from 426 in FY18 to 400 by the end of FY22 (8.5 fewer such crashes per year).

Program Activities for FY 2020 - 2022: States must indicate the activities, and the amount of effort (staff hours, inspections, traffic enforcement stops, etc.) that will be resourced directly for the program activities purpose.

The MSP CVES will implement the following activities toward reducing CMV crashes, and specifically the proportion of injury/fatality resulting CMV crashes.

- Conduct traffic enforcement activities at high-crash locations and HazMat corridors, as well as EPDO barracks with large numbers of truck crashes.
- Conduct driver and vehicle inspections, as well as carrier interventions/investigations.
- Conduct Public Education and Awareness Activities.
- Conduct Effective Data Collection and Reporting.
- Target enforcement by analyzing crash causation data for CMVs and passenger cars, including location, driver behavior, day of week, and time of day, as well as violation types and specific unsafe driving behaviors.
- Provide CMV traffic enforcement training and technical assistance to MSP and local police who conduct traffic enforcement in order to ensure traditional traffic enforcement addresses unsafe CMV driving behaviors.
- Target 30% (at minimum) of roving patrols using crash causation data for CMVs and passenger cars, with the intent to mitigate high crash zones, times, and days of week.

- Target 30% (at minimum) of driver/vehicle inspections in high crash zones, during high crash times and days of week.
- Focus 10% of traffic enforcement on unsafe operating behaviors of non-CMVs around CMVs.
- Targeted I-90 enforcement for following too closely, lane changes and other infractions.
- Conduct a Fatality Round Table similar to the Child Injury Round Table conducted by the DA's office.
- Conduct refresher ARIDE training for CVES troopers.
- Participate in NTC Electronic Logging Device (ELD) training for new officers and refresher training as necessary.
- Maintain current ELD software on all laptops and run when available.

Performance Measurements and Monitoring: The State will monitor the effectiveness of its CMV Crash Reduction Goal quarterly and annually by evaluating the performance measures and reporting results in the required Standard Form - Performance Progress Reports (SF-PPRs).

Describe how the State will conduct ongoing monitoring of progress in addition to quarterly reporting.

UMassSafe will examine quarterly CMV injury and fatality data from both the MassDOT Registry of Motor Vehicles Crash Data System and MCMIS in order to track progress towards CVSP goals. Furthermore, a quarterly and annual review of inspections, citations, and carrier interventions will be conducted. In addition, the INSPECT activity report will be reviewed by the MCSAP Commander, ensuring that necessary enforcement is conducted in relevant crash zones. Finally, a quarterly count and review of enforcement and roadside inspections conducted, POV citations issued (citations with TE notation), and hours spent patrolling high crash areas will be completed, which will then be measured against baseline data from FY18 and FY19.

Part 2 Section 3 - Roadside Inspections

In this section, provide a trend analysis, an overview of the State's roadside inspection program, and projected goals for FY 2020 - 2022.

***Note**: In completing this section, do NOT include border enforcement inspections. Border Enforcement activities will be captured in a separate section if applicable.*

Trend Analysis for 2014 - 2018

Inspection Types	2014	2015	2016	2017	2018
Level 1: Full	3621	2554	2244	2135	1736
Level 2: Walk-Around	7657	7396	10278	14130	17730
Level 3: Driver-Only	8333	3165	4692	5812	8041
Level 4: Special Inspections	1	12	16	6	56
Level 5: Vehicle-Only	1	830	946	853	1063
Level 6: Radioactive Materials	3	2	3	0	3
Total	**19616**	**13959**	**18179**	**22936**	**28629**

Narrative Overview for FY 2020 - 2022

***Overview**:*

Describe components of the State's general Roadside and Fixed-Facility Inspection Program. Include the day-to-day routine for inspections and explain resource allocation decisions (i.e., number of FTE, where inspectors are working and why).

Enter a narrative of the State's overall inspection program, including a description of how the State will monitor its program to ensure effectiveness and consistency.

The CVES operates a mixture of fixed weight station and mobile patrols in crash zones and local community "hot spots". The MSP requires officers to use daily and monthly activity tally sheets. Program monitoring is performed with AI SSDQ measures as well Crystal reports productivity worksheet. The MSP CVES implemented an electronic record management system to track attendance by computer and radio log in. DQ's are processed quickly, reviewed by a supervisor and thoroughly investigated to insure conformity with FMCSA regulations, enforcement guidance and CVSA policies. The DPU conducts level 5 inspections as part of it statutory mandate.

Projected Goals for FY 2020 - 2022

***Instructions for Projected Goals**:*

Complete the following tables in this section indicating the number of inspections that the State anticipates conducting during Fiscal Years 2020 - 2022. For FY 2020, there are separate tabs for the Lead Agency, Subrecipient Agencies, and Non-Funded Agencies—enter inspection goals by agency type. Enter the requested information on the first three tabs (as applicable). The Summary table totals are calculated by the eCVSP system.

To modify the names of the Lead or Subrecipient agencies, or the number of Subrecipient or Non-Funded Agencies, visit Part 1, MCSAP Structure.

***Note**:Per the MCSAP Comprehensive Policy, States are strongly encouraged to conduct at least 25 percent Level 1 inspections and 33 percent Level 3 inspections of the total inspections conducted. If the State opts to do less than these minimums, provide an explanation in space provided on the Summary tab.*

MCSAP Lead Agency

Lead Agency is: MA STATE POLICE (MSP) COMMERCIAL VEHICLE ENFORCEMENT SECTION (CVES)

Enter the total number of certified personnel in the Lead agency: 33

Projected Goals for FY 2020 - Roadside Inspections					
Inspection Level	Non-Hazmat	Hazmat	Passenger	Total	Percentage by Level
Level 1: Full	3300	1255	200	4755	25.77%
Level 2: Walk-Around	6000	500	1200	7700	41.72%
Level 3: Driver-Only	5200	200	600	6000	32.51%
Level 4: Special Inspections	0	0	0	0	0.00%
Level 5: Vehicle-Only	0	0	0	0	0.00%
Level 6: Radioactive Materials	0	0	0	0	0.00%
Sub-Total Lead Agency	**14500**	**1955**	**2000**	**18455**	

MCSAP subrecipient agency

Complete the following information for each MCSAP subrecipient agency. A separate table must be created for each subrecipient.

Subrecipient is: RMV

Enter the total number of certified personnel in this funded agency: 0

Projected Goals for FY 2020 - Subrecipients					
Inspection Level	Non-Hazmat	Hazmat	Passenger	Total	Percentage by Level
Level 1: Full				0	%
Level 2: Walk-Around				0	%
Level 3: Driver-Only				0	%
Level 4: Special Inspections				0	%
Level 5: Vehicle-Only				0	%
Level 6: Radioactive Materials				0	%
Sub-Total Funded Agencies	**0**	**0**	**0**	**0**	

Non-Funded Agencies

Total number of agencies:	1
Enter the total number of non-funded certified officers:	11
Enter the total number of inspections projected for FY 2020:	800

Summary

Projected Goals for FY 2020 - Roadside Inspections Summary

Projected Goals for FY 2020 Summary for All Agencies					
MCSAP Lead Agency: MA STATE POLICE (MSP) COMMERCIAL VEHICLE ENFORCEMENT SECTION (CVES) # certified personnel: 33					
Subrecipient Agencies: RMV # certified personnel: 0					
Number of Non-Funded Agencies: 1 # certified personnel: 11 # projected inspections: 800					
Inspection Level	Non-Hazmat	Hazmat	Passenger	Total	Percentage by Level
Level 1: Full	3300	1255	200	4755	25.77%
Level 2: Walk-Around	6000	500	1200	7700	41.72%
Level 3: Driver-Only	5200	200	600	6000	32.51%
Level 4: Special Inspections	0	0	0	0	0.00%
Level 5: Vehicle-Only	0	0	0	0	0.00%
Level 6: Radioactive Materials	0	0	0	0	0.00%
Total ALL Agencies	**14500**	**1955**	**2000**	**18455**	

Note:If the minimum numbers for Level 1 and Level 3 inspections are less than described in the MCSAP Comprehensive Policy, briefly explain why the minimum(s) will not be met.

Projected Goals for FY 2021 Roadside Inspections	Lead Agency	Subrecipients	Non-Funded	Total
Enter total number of projected inspections	18000	0	800	18800
Enter total number of certified personnel	32	0	11	43
Projected Goals for FY 2022 Roadside Inspections				
Enter total number of projected inspections	18000	0	0	18000
Enter total number of certified personnel	32	0	0	32

Part 2 Section 4 - Investigations

Describe the State's implementation of FMCSA's interventions model for interstate carriers. Also describe any remaining or transitioning compliance review program activities for intrastate motor carriers. Include the number of personnel assigned to this effort. Data provided in this section should reflect interstate and intrastate investigation activities for each year.

☐ **The State does not conduct investigations. If this box is checked, the tables and narrative are not required to be completed and won't be displayed.**

Trend Analysis for 2014 - 2018

Investigative Types - Interstate	2014	2015	2016	2017	2018
Compliance Investigations	0	0	0	0	0
Cargo Tank Facility Reviews	0	0	0	0	0
Non-Rated Reviews (Excludes CSA & SCR)	2	2	0	0	1
CSA Off-Site	0	0	0	0	0
CSA On-Site Focused/Focused CR	10	4	2	0	0
CSA On-Site Comprehensive	6	17	18	18	18
Total Investigations	**18**	**23**	**20**	**18**	**19**
Total Security Contact Reviews	2	4	0	0	1
Total Terminal Investigations	0	0	4	27	5

Investigative Types - Intrastate	2014	2015	2016	2017	2018
Compliance Investigations	0	0	0	0	0
Cargo Tank Facility Reviews	0	0	0	0	0
Non-Rated Reviews (Excludes CSA & SCR)	0	0	0	0	0
CSA Off-Site	0	0	0	0	0
CSA On-Site Focused/Focused CR	0	0	0	0	0
CSA On-Site Comprehensive	0	0	0	0	0
Total Investigations	**0**	**0**	**0**	**0**	**0**
Total Security Contact Reviews	0	0	0	0	0
Total Terminal Investigations	0	0	0	0	0

Narrative Overview for FY 2020 - 2022

Instructions:

Describe the State's implementation of FMCSA's interventions model to the maximum extent possible for interstate carriers and any remaining or transitioning compliance review program activities for intrastate motor carriers. Include the number of personnel assigned to this effort.

Projected Goals for FY 2020 - 2022

Complete the table below indicating the number of investigations that the State anticipates conducting during FY 2020 - 2022.

Projected Goals for FY 2020 - 2022 - Investigations						
	FY 2020		FY 2021		FY 2022	
Investigation Type	Interstate	Intrastate	Interstate	Intrastate	Interstate	Intrastate
Compliance Investigations	0	0	0	0	0	0
Cargo Tank Facility Reviews	0	0	0	0	0	0
Non-Rated Reviews (Excludes CSA & SCR)	0	0	0	0	0	0
CSA Off-Site	0	0	0	0	0	0
CSA On-Site Focused/Focused CR	12	0	12	0	12	0
CSA On-Site Comprehensive	0	0	0	0	0	0
Total Investigations	**12**	**0**	**12**	**0**	**12**	**0**
Total Security Contact Reviews	0	0	0	0	0	0
Total Terminal Investigations	2	0	2	0	2	0

Add additional information as necessary to describe the carrier investigation estimates.
NA

Program Activities: Describe components of the State's carrier investigation activities. Include the number of personnel participating in this activity.

One investigator will conduct an estimated 12 carrier interventions in each fiscal year.

Performance Measurements and Monitoring: Describe all measures the State will use to monitor progress toward the annual goals. Further, describe how the State measures qualitative components of its carrier investigation program, as well as outputs.

The State will review the number of carrier interventions quarterly.

Part 2 Section 5 - Traffic Enforcement

Traffic enforcement means documented enforcement activities of State or local officials. This includes the stopping of vehicles operating on highways, streets, or roads for moving violations of State or local motor vehicle or traffic laws (e.g., speeding, following too closely, reckless driving, and improper lane changes).

Trend Analysis for 2014 - 2018

Instructions:

Please refer to the MCSAP Comprehensive Policy for an explanation of FMCSA's traffic enforcement guidance. Complete the tables below to document the State's safety performance goals and outcomes over the past five measurement periods.

1. *Insert the beginning and end dates of the measurement period being used, (e.g., calendar year, Federal fiscal year, State fiscal year or any consistent 12-month period for which data is available).*
2. *Insert the total number CMV traffic enforcement stops with an inspection, CMV traffic enforcement stops without an inspection, and non-CMV stops in the tables below.*
3. *Insert the total number of written warnings and citations issued during the measurement period. The number of warnings and citations are combined in the last column.*

State/Territory Defined Measurement Period (Include 5 Periods)		Number of Documented CMV Traffic Enforcement Stops with an Inspection	Number of Citations and Warnings Issued
Begin Date	End Date		
01/01/2018	12/31/2018	11122	15234
01/02/2017	12/31/2017	9768	14015
01/01/2016	12/31/2016	7303	10538
01/01/2015	12/31/2015	5262	7444
01/01/2014	12/31/2014	6098	8329

☑ ***The State does not conduct CMV traffic enforcement stops without an inspection. If this box is checked, the "CMV Traffic Enforcement Stops without an Inspection" table is not required to be completed and won't be displayed.***

☐ ***The State does not conduct documented non-CMV traffic enforcement stops and was not reimbursed by the MCSAP grant (or used for State Share or MOE). If this box is checked, the "Non-CMV Traffic Enforcement Stops" table is not required to be completed and won't be displayed.***

State/Territory Defined Measurement Period (Include 5 Periods)		Number of Documented Non-CMV Traffic Enforcement Stops	Number of Citations and Warnings Issued
Begin Date	End Date		
01/01/2018	12/31/2018	1090	1090
01/01/2017	12/31/2017	201	201
01/01/2016	12/31/2016	524	524
01/01/2015	12/31/2015	1244	1244
01/01/2014	12/31/2014	417	417

Enter the source and capture date of the data listed in the tables above.
Number of CMV Traffic Stops with an Inspection and Number of Citations/Warnings Issued: FMCSA's Motor Carrier Management Information System (MCMIS) Traffic Enforcement Activity Summary, data snapshot as of 6/28/19 - https://ai.fmcsa.dot.gov/SafetyProgram/spRptRoadside.aspx?rpt=TEAS. Number of Non-CMV Traffic Enforcement Stops & Number of Citations Issued: MSP Internal Records, June, 2019.

Narrative Overview for FY 2020 - 2022

Instructions:

Describe the State's proposed level of effort (number of personnel) to implement a statewide CMV (in conjunction with and without an inspection) and/or non-CMV traffic enforcement program. If the State conducts CMV and/or non-CMV traffic enforcement activities only in support of the overall crash reduction goal, describe how the State allocates traffic enforcement resources. Please include number of officers, times of day and days of the week, specific corridors or general activity zones, etc. Traffic enforcement activities should include officers who are not assigned to a dedicated commercial vehicle enforcement unit, but who conduct eligible commercial vehicle/driver enforcement activities. If the State conducts non-CMV traffic enforcement activities, the State must conduct these activities in accordance with the MCSAP Comprehensive Policy.

The Statewide CMV traffic enforcement program is a comprehensive program targeting unsafe driver behaviors associated with Massachusetts specific crash causation factors in high crash regions during high crash times of day and days of week as determined by UMassSafe conducted crash data analysis. 33 sworn personnel and 2 civilian personnel will be used for the implementation of the program. Targeting both CMV and non-CMV involvement in crashes, the CVES conducts highly visible enforcement. The goal is to maintain the MSP CVES annual level of effort in traffic enforcement associated with and without inspections. If the federal system is down or the computer network is not functioning, Troopers will conduct CMV moving violation enforcement using Massachusetts Uniform Traffic Citations (Troopers will mark citations with a TE notation for data collection purposes).

Projected Goals for FY 2020 - 2022

Using the radio buttons in the table below, indicate the traffic enforcement activities the State intends to conduct in FY 2020 - 2022. The projected goals are based on the number of traffic stops, not tickets or warnings issued. These goals are NOT intended to set a quota.

			Enter Projected Goals (Number of Stops only)		
Yes	No	Traffic Enforcement Activities	FY 2020	FY 2021	FY 2022
◉	○	CMV with Inspection	8000	8000	8000
◉	○	CMV without Inspection	100	100	100
◉	○	Non-CMV	200	200	200
◉	○	Comprehensive and high visibility in high risk locations and corridors (special enforcement details)	2000	2000	2000

In order to be eligible to utilize Federal funding for Non-CMV traffic enforcement, the FAST Act requires that the State must maintain an average number of safety activities which include the number of roadside inspections, carrier investigations, and new entrant safety audits conducted in the State for Fiscal Years 2004 and 2005.

The table below displays the information you input into this plan from the roadside inspections, investigations, and new entrant safety audit sections. Your planned activities must at least equal the average of your 2004/2005 activities.

FY 2020 Planned Safety Activities				
Inspections	Investigations	New Entrant Safety Audits	Sum of FY 2020 Activities	Average 2004/05 Activities
19255	12	505	19772	19496

Describe how the State will monitor its traffic enforcement efforts to ensure effectiveness, consistency, and correlation to FMCSA's national traffic enforcement priority.

The State will monitor and evaluate the effectiveness of its traffic enforcement activities through a monthly and annual review of the enforcement and inspection data.

Part 2 Section 6 - Safety Technology

The FAST Act made Performance and Registration Information Systems Management (PRISM) a condition for MCSAP eligibility in 49 CFR 350.201 (aa). States must achieve full participation by October 1, 2020. FMCSA defines "fully participating" in PRISM, for the purpose of determining eligibility for MCSAP funding, as when a State's or Territory's International Registration Plan (IRP) or CMV registration agency suspends or revokes and denies registration if the motor carrier responsible for safety of the vehicle is under any Federal OOS order and denies registration if the motor carrier possess an inactive or de-active USDOT number for motor carriers operating CMVs in commerce that have a Gross Vehicle Weight (GVW) of 26,001 pounds or more. Further information regarding full participation in PRISM can be found in the MCP Section 4.3.1.

Under certain conditions, the FAST Act allows MCSAP lead agencies to use MCSAP funds for Operations and Maintenance (O&M) costs associated with Innovative Technology Deployment (ITD) and the PRISM (49 CFR 350.201(aa) (cc)). For PRISM, O&M costs are eligible expenses subject to FMCSA approval. For ITD, if the State agrees to comply with ITD program requirements and has complied with all MCSAP requirements, including achievement of full participation in PRISM, O&M costs are eligible expenses. O&M expenses must be included and described in the Spending Plan section per the method these costs are handled in the State's accounting system (e.g., contractual costs, other costs, etc.).

Safety Technology Compliance Status

Please verify the current level of compliance for your State in the table below using the drop-down menu. If the State plans to include O&M costs in this year's CVSP, please indicate that in the table below. Additionally, details must be in this section and in your Spending Plan.

Technology Program	Current Compliance Level	Include O & M Costs?
ITD	Core CVISN Compliant	Yes
PRISM	Exceeds Full Participation	Yes

Avaliable data sources:

- FMCSA website ITD information
- FMCSA website PRISM information

Enter the agency name responsible for ITD in the State, if other than the Lead MCSAP Agency: MassDOT Registry of Motor Vehicles

Enter the agency name responsible for PRISM in the State, if other than the Lead MCSAP Agency: MassDOT Registry of Motor Vehicles

Narrative Overview for FY 2020 - 2022

Problem Statement Narrative and Projected Goal:
If the State's PRISM compliance is less than full participation, describe activities your State plans to implement to achieve full participation in PRISM.

The Massachusetts Registry of Motor Vehicles leads the PRISM and CVISN projects. Massachusetts is at PRISM Enhanced Level. The Massachusetts RMV needs funding for OM costs related to the CVIEW and MassIRP components necessary to support and maintain PRISM Enhanced certification. The annual cost in $250,000. (Vendors are Explore Information Services LLC and ITERIS). The performance measures are maintenance of PRISM Enhanced Level and the number of carrier registrations revoked.

Program Activities for FY 2020 - 2022: Describe any actions that will be taken to implement full participation in PRISM.

The State will monitor and evaluate the effectiveness of its traffic enforcement activities through a monthly and annual review of the enforcement and inspection data.

Performance Measurements and Monitoring: Describe all performance measures that will be used and include how the State will conduct ongoing monitoring of progress in addition to quarterly SF-PPR reporting.

The MSP CVES reviews quarterly updates from the RMV to determine they are continuing to meet compliance standards.

Part 2 Section 7 - Public Education and Outreach

A public education and outreach program is designed to provide information on a variety of traffic safety issues related to CMVs and non-CMVs that operate around large trucks and buses.

Trend Analysis for 2014 - 2018

In the table below, provide the number of public education and outreach activities conducted in the past 5 years.

Public Education and Outreach Activities	2014	2015	2016	2017	2018
Carrier Safety Talks	10	10	9	4	16
CMV Safety Belt Education and Outreach	0	0	0	0	0
State Trucking Association Meetings	2	0	2	1	2
State-Sponsored Outreach Events	0	0	1	0	0
Local Educational Safety Events	0	0	0	0	1
Teen Safety Events	20	20	20	0	0

Narrative Overview for FY 2020 - 2022

Performance Objective: To increase the safety awareness of the motoring public, motor carriers and drivers through public education and outreach activities such as safety talks, safety demonstrations, etc.

Describe the type of activities the State plans to conduct, including but not limited to passenger transportation, hazardous materials transportation, and share the road safely initiatives. Include the number of personnel that will be participating in this effort.

The MSP CVES will conduct 40 public education and awareness activities centered on passenger transportation, safety belts, hazardous materials, general crash reduction and best safety practices. These will include those for driver's education classes and those at fairs, as well as other target audiences and locations, as deemed necessary.

Projected Goals for FY 2020 - 2022

In the table below, indicate if the State intends to conduct the listed program activities, and the estimated number, based on the descriptions in the narrative above.

			Performance Goals		
Yes	No	Activity Type	FY 2020	FY 2021	FY 2022
◉	○	Carrier Safety Talks	10	10	10
◉	○	CMV Safety Belt Education and Outreach	6	6	6
◉	○	State Trucking Association Meetings	2	2	2
◉	○	State-Sponsored Outreach Events	0	0	0
◉	○	Local Educational Safety Events	2	2	2
◉	○	Teen Safety Events	20	20	20

Performance Measurements and Monitoring: Describe all performance measures and how the State will conduct monitoring of progress. States must report the quantity, duration and number of attendees in their quarterly SF-PPR reports.

Every month, the MSP CVES Commander will review the content, subject matter, and number of presentations to ensure compliance

with goals and objectives. In addition, the Commander will review feedback and comments from motor carriers and driving schools in order to make appropriate adjustments to class content. The MSP CVES will report the quantity, duration and number of attendees in its quarterly Performance Progress Report.

Part 2 Section 8 - State Safety Data Quality (SSDQ)

The FAST Act allows MCSAP lead agencies to use MCSAP funds for Operations and Maintenance (O&M) costs associated with Safety Data Systems (SSDQ) if the State meets accuracy, completeness and timeliness measures regarding motor carrier safety data and participates in the national data correction system (DataQs).

SSDQ Compliance Status

Please verify the current level of compliance for your State in the table below using the drop-down menu. If the State plans to include O&M costs in this year's CVSP, select Yes. These expenses must be included in the Spending Plan section per the method these costs are handled in the State's accounting system (e.g., contractual costs, other costs, etc.).

Technology Program	Current Compliance Level	Include O & M Costs?
SSDQ	Good	No

Available data sources:

- FMCSA website SSDQ information

In the table below, use the drop-down menus to indicate the State's current rating within each of the State Safety Data Quality categories, and the State's goal for FY 2020 - 2022.

SSDQ Category	Current SSDQ Rating	Goal for FY 2020	Goal for FY 2021	Goal for FY 2022
Crash Record Completeness	Good	Good	Good	Good
Crash VIN Accuracy	Good	Good	Good	Good
Fatal Crash Completeness	Good	Good	Good	Good
Crash Timeliness	Fair	Good	Good	Good
Crash Accuracy	Good	Good	Good	Good
Crash Consistency	No Flag	No Flag	No Flag	No Flag
Inspection Record Completeness	Good	Good	Good	Good
Inspection VIN Accuracy	Good	Good	Good	Good
Inspection Timeliness	Good	Good	Good	Good
Inspection Accuracy	Good	Good	Good	Good

Enter the date of the A & I Online data snapshot used for the "Current SSDQ Rating" column.
Data current as of June 28, 2019.

Narrative Overview for FY 2020 - 2022

Problem Statement Narrative: Describe any issues encountered for any SSDQ category not rated as "Good" in the Current SSDQ Rating category column above (i.e., problems encountered, obstacles overcome, lessons learned, etc.). If the State is "Good" in all categories, no further narrative or explanation is necessary.

Massachusetts currently has a 'good' SSDQ ranking in all categories except Crash Timeliness, which is 'fair'. However, there has been a slow increase over the last several months in the percent of timely records from 84% to a current 88%. The MSP CVES and RMV are working diligently to increase this each month.

Program Activities for FY 2020 - 2022: Describe any actions that will be taken to achieve a "Good" rating in any category not currently rated as "Good," including measurable milestones.

The MSP CVES will continue to monitor each SSDQ category rating on a quarterly basis, making any adjustments as needed. In addition, a monthly review of any crash report backlog in the RMV to MSP queue will continue, with personnel being adjusted as deemed necessary. Furthermore, the MSP will continue providing data quality training for law enforcement officers in order to reduce the need for MSP to conduct extensive research when the data received is of poor quality.

Performance Measurements and Monitoring: Describe all performance measures that will be used and include how the State will conduct ongoing monitoring of progress in addition to quarterly SF-PPR reporting.

The quarterly FMCSA SSDQ ratings will be monitored and compared to FY19 baseline data on a quarterly basis.

Part 2 Section 9 - New Entrant Safety Audits

The FAST Act states that conducting interstate New Entrant safety audits is now a requirement to participate in the MCSAP (49 CFR 350.201.) The Act allows a State to conduct intrastate New Entrant safety audits at the State's discretion. States that choose to conduct intrastate safety audits must not negatively impact their interstate new entrant program.

Note: The FAST Act also says that a State or a third party may conduct New Entrant safety audits. If a State authorizes a third party to conduct safety audits on its behalf, the State must verify the quality of the work conducted and remains solely responsible for the management and oversight of the New Entrant activities.

Yes	No	Question
◉	○	Does your State conduct Offsite safety audits in the New Entrant Web System (NEWS)? NEWS is the online system that carriers selected for an Offsite Safety Audit use to submit requested documents to FMCSA. Safety Auditors use this same system to review documents and communicate with the carrier about the Offsite Safety Audit.
◉	○	Does your State conduct Group safety audits at non principal place of business locations?
○	◉	Does your State intend to conduct intrastate safety audits and claim the expenses for reimbursement, state match, and/or Maintenance of Effort on the MCSAP Grant?

Trend Analysis for 2014 - 2018

In the table below, provide the number of New Entrant safety audits conducted in the past 5 years.

New Entrant Safety Audits	2014	2015	2016	2017	2018
Interstate	417	242	536	578	509
Intrastate	0	0	0	0	0
Total Audits	**417**	**242**	**536**	**578**	**509**

Note: Intrastate safety audits will not be reflected in any FMCSA data systems—totals must be derived from State data sources.

Narrative Overview for FY 2020 - 2022

Enter the agency name conducting New Entrant activities, if other than the Lead MCSAP Agency:
Massachusetts State Police

***Program Goal**: Reduce the number and severity of crashes, injuries, and fatalities involving commercial motor vehicles by reviewing interstate new entrant carriers. At the State's discretion, intrastate motor carriers are reviewed to ensure they have effective safety management programs.*

Program Objective: Statutory time limits for processing and completing interstate safety audits are:

- *If entry date into the New Entrant program (as shown in FMCSA data systems) September 30, 2013 or earlier —safety audit must be completed within 18 months.*
- *If entry date into the New Entrant program (as shown in FMCSA data systems) October 1, 2013 or later—safety audit must be completed within 12 months for all motor carriers and 120 days for motor carriers of passengers.*

Projected Goals for FY 2020 - 2022

For the purpose of completing the table below:

- ***Onsite safety audits*** *are conducted at the carrier's principal place of business.*
- ***Offsite safety audit*** *is a desktop review of a single New Entrant motor carrier's basic safety management controls and can be conducted from any location other than a motor carrier's place of business. Offsite audits are conducted by States that have completed the FMCSA New Entrant training for offsite audits.*
- ***Group audits*** *are neither an onsite nor offsite audit. Group audits are conducted on multiple carriers at an alternative location (i.e., hotel, border inspection station, State office, etc.).*

Projected Goals for FY 2020 - 2022 - New Entrant Safety Audits						
	FY 2020		FY 2021		FY 2022	
Number of Safety Audits/Non-Audit Resolutions	Interstate	Intrastate	Interstate	Intrastate	Interstate	Intrastate
# of Safety Audits (Onsite)	65	0	65	0	65	0
# of Safety Audits (Offsite)	440	0	440	0	440	0
# Group Audits	0	0	0	0	0	0
TOTAL Safety Audits	**505**	**0**	**505**	**0**	**505**	**0**
# of Non-Audit Resolutions	300	0	0	0	0	0

Strategies: Describe the strategies that will be utilized to meet the program objective above. Provide any challenges or impediments foreseen that may prevent successful completion of the objective.

The CVES employs four full time officers to conduct New Entrant Investigations. Three investigators are deployed regionally, while one officer is the program administrator.

New Entrant training will be offered to any officer who is interested in performing audits.

The program administrator's responsibilities include vetting the applicant to ensure a review is needed, assigning investigations, and monitoring the queue to ensure the audits are completed in a timely manner. Due to the influx of New Entrant registrations due to the new intrastate number requirement, we are in the process of telephonically vetting each New Entrant application in the queue and adjusting carriers who wrongly selected "interstate" instead of intrastate. We expect this will reduce the size of the overdue list. This should result in 100% on time completion.

It should be noted that the CVSP measures the number of audits completed. However, the actual number of NE applicants who must be vetted by SP personnel is 40% greater than the audits completed.

Activity Plan for FY 2020 - 2022: Include a description of the activities proposed to help achieve the objectives. If group audits are planned, include an estimate of the number of group audits.

The MSP CVES utilizes a combination of off-site and on-site audits. Approximately 85 percent of audits are conducted off-site and 15 percent on-site. If we see an opportunity to improve efficiency by using group audits, we may implement this technique if clusters of carriers located near our working locations are identified.

Performance Measurement Plan: Describe how you will measure progress toward meeting the objective, such as quantifiable and measurable outputs (staffing, work hours, carrier contacts, inspections, etc.). The measure must include specific benchmarks to be reported on in the quarterly progress report, or as annual outputs.

The program administrator monitors the queue, makes assignments, checks audits for completeness and accuracy, assembles monthly activity/performance reports, and provides a monthly and quarterly performance report. Our goal is to reach 100% on-time performance.

Part 3 - National Emphasis Areas and State Specific Objectives

FMCSA establishes annual national priorities (emphasis areas) based on emerging or continuing issues, and will evaluate CVSPs in consideration of these national priorities. Part 3 allows States to address the national emphasis areas/priorities outlined in the MCSAP CVSP Planning Memorandum and any State-specific objectives as necessary. Specific goals and activities must be projected for the three fiscal year period (FYs 2020 - 2022).

Part 3 Section 1 - Enforcement of Federal OOS Orders during Roadside Activities

Instructions:

FMCSA has established an Out-of-Service (OOS) catch rate of 85 percent for carriers operating while under an OOS order. In this part, States will indicate their catch rate is at least 85 percent by using the check box or completing the problem statement portion below.

Check this box if:

☐ **As evidenced by the data provided by FMCSA, the State identifies at least 85 percent of carriers operating under a Federal OOS order during roadside enforcement activities and will not establish a specific reduction goal. However, the State will maintain effective enforcement of Federal OOS orders during roadside inspections and traffic enforcement activities.**

Narrative Overview for FY 2020 - 2022

Enter your State's OOS Catch Rate percentage if below 85 percent: 67%

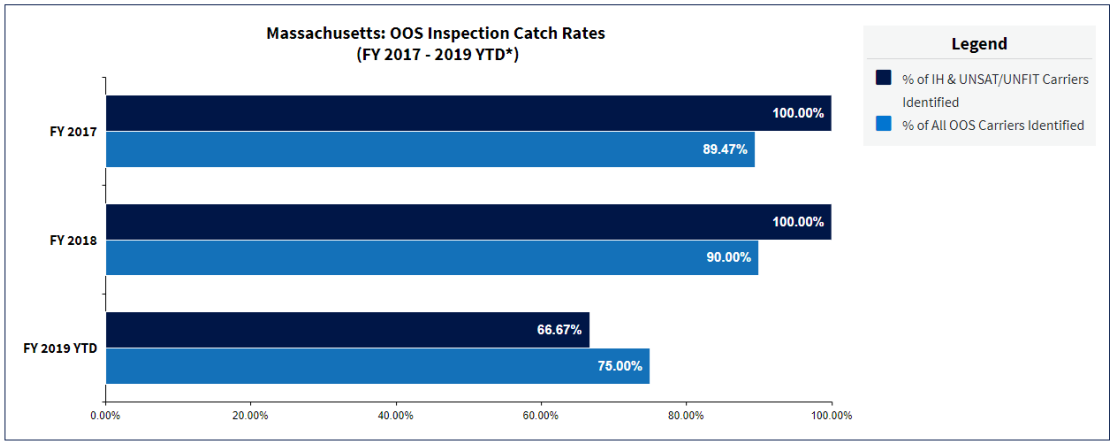
Projected Goals for FY 2020 - 2022: Enter a description of the State's performance goals.

Fiscal Year	Goal (%)
2020	75
2021	80
2022	85

Massachusetts' objective is to increase the identification of Federal out-of-service vehicles to 85%, compliant with the FMCSA's national goals.

Program Activities for FY 2020 - 2022: Describe policies, procedures, and/or technology that will be utilized to identify OOS carriers at roadside. Include how you will conduct quality assurance oversight to ensure that inspectors are effectively identifying OOS carriers and preventing them from operating.

Although the Massachusetts OOS catch rate is 67% thus far in FY19, as shown below, it was almost 90% for the previous two years.



All personnel are currently required to check for Federal out-of-service orders. All Massachusetts carriers who are issued a Federal OOS orders have their vehicle registrations analyzed and suspended as appropriate.

The MSP CVES will further examine the data on the FMCSA Activity Dashboard to determine reasons for the decrease in the catch rate as well as the available tools suggested to identify OOS carriers. Based on these findings, any needed changes in policies and procedures will be implemented.

Performance Measurements and Monitoring: Describe all performance measures and how the State will conduct ongoing monitoring of progress in addition to quarterly SF-PPR reporting.

The MSP CVES will utilize monthly PRISM reports generated within our agency to monitor the performance measures for OOS orders. Furthermore, the Commander will monitor reports and accountability for Troopers in the field. Finally, a review of the OOS catch rate reports on the FMCSA Activity Dashboard will be reviewed.

Part 3 Section 2 - Passenger Carrier Enforcement

Instructions:

FMCSA requests that States conduct enhanced investigations for motor carriers of passengers and other high risk carriers. Additionally, States are asked to allocate resources to participate in the enhanced investigations training being offered by FMCSA. Finally, States are asked to continue partnering with FMCSA in conducting enhanced investigations and inspections at carrier locations.

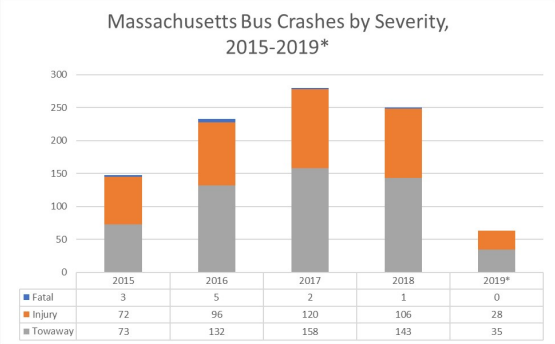
Check this box if:

☐ **As evidenced by the trend analysis data, the State has not identified a significant passenger transportation safety problem. Therefore, the State will not establish a specific passenger transportation goal in the current fiscal year. However, the State will continue to enforce the Federal Motor Carrier Safety Regulations (FMCSRs) pertaining to passenger transportation by CMVs in a manner consistent with the MCSAP Comprehensive Policy as described either below or in the roadside inspection section.**

Narrative Overview for FY 2020 - 2022

Problem Statement Narrative: Describe the problem as identified by performance data and include the baseline data.

The number of Massachusetts crashes involving passenger carriers (all bus types as defined by SafetyNet) declined from 2017 to 2018. As shown in the chart below, all crash types (fatal, injury, and towaway) were marked with reductions, with notably only one fatality in 2018. Preliminarily, the first quarter of 2019 seems to be on a similar trajectory, although it is too soon to make observations.



To further reduce the number of crashes involving passenger carriers, UMassSafe conducted a extensive crash data analysis that included a study of crash locations and characteristics. The findings of this analysis are attached to this E-CVSP and will be utilized by the MSP CVES in planning and conducting all passenger carrier crash prevention efforts.

Projected Goals for FY 2020 - 2022: Enter the performance goal for the three year CVSP period for the State's passenger carrier enforcement initiative. Annual passenger carrier enforcement benchmarks for FY 2020, 2021 and 2022 must also be included.

The MSP CVES does not establish a goal specific to the reduction of motorcoach/passenger fatalities because the number of such fatalities is too low to adequately measure change. Instead, there is a goal to reduce all CMV crashes, which includes strategies to reduce motorcoach/passenger fatalities. In addition, the MSP CVES has a passenger transportation safety goal regarding inspections.The goal is to conduct 2,550 passenger carrier inspections per fiscal year.

Program Activities for FY 2020 - 2022: Provide additional information regarding how these activities will be implemented.

In addition to conducting ongoing inspections, Massachusetts will implement 75 multi-agency task forces annually as well as participate in national and regional strike force activities.

Performance Measurements and Monitoring: Describe all performance measures and how the State will conduct ongoing monitoring of progress in addition to quarterly SF-PPR reporting.

Passenger transportation safety activities will be monitored and evaluated by the State during a monthly and annual evaluation of activities, inspections, enforcement efforts, CSA SMS scores, and presentations. The performance measures and milestones described in this document will be used to measure progress. Passenger Carrier Enforcement goals will be monitored quarterly and annually through evaluation of both the number and percent of passenger carrier inspections.

Part 3 Section 3 - State Specific Objectives – Past

Instructions:

Describe any State-specific CMV problems that were addressed with FY2019 MCSAP funding. Some examples may include hazardous materials objectives, Electronic Logging Device (ELD) implementation, and crash reduction for a specific segment of industry, etc. Report below on year-to-date progress on each State-specific objective identified in the FY 2019 CVSP.

Progress Report on State Specific Objectives(s) from the FY 2019 CVSP

Please enter information to describe the year-to-date progress on any State-specific objective(s) identified in the State's FY 2019 CVSP. Click on "Add New Activity" to enter progress information on each State-specific objective.

Activity #1

Activity: Describe State-specific activity conducted from previous year's CVSP.
Target OOS Carriers at Roadside as well as Re-inspection In order to address the high OOS rates in Massachusetts, which are significantly higher than the nation, the MSP CVES conducted extensive enforcement of OOS at roadside as well as targeted high OOS carriers for re-inspections.

Goal: Insert goal from previous year CVSP (#, %, etc., as appropriate).
Conduct 1,000 inspections/re-inspections

Actual: Insert year to date progress (#, %, etc., as appropriate).
In FY18 and FY19, there were 11,115 and 7,425 driver inspections, 6,874 and 4,705 vehicle inspections as well as 528 and 344 HazMat inspections conducted during traffic enforcement. It is not discernible how many of these were specifically enforcement of OOS at roadside but all of these reviewed conditions impacting OOS rates. Massachusetts OOS rates from driver, vehicle and HazMat inspections are significantly higher than that for the Nation. In FY18, the MA driver OOS rate was 10.57% which was slightly higher than the FY17 rate of 10.46% and compares to the FY18 national rate of 8.30%. The vehicle OOS rate was 30.77% in FY18 a decline since the FY17 rate of 34.79% but compared to 26.53% nationally. The FY18 HazMat OOS rate was 26.33% compared to 23.48% in FY17. The national HazMat OOS rate was 10.25% in FY18. OOS rates in FY19 thus far were also higher than the national rates.

Narrative: Describe any difficulties achieving the goal, problems encountered, obstacles overcome, lessons learned, etc.

Part 3 Section 4 - State Specific Objectives – Future

Instructions:

The State may include additional objectives from the national priorities or emphasis areas identified in the MCSAP CVSP Planning Memorandum as applicable. In addition, the State may include any State-specific CMV problems identified in the State that will be addressed with MCSAP funding. Some examples may include hazardous materials objectives, Electronic Logging Device (ELD) implementation, and crash reduction for a specific segment of industry, etc.

Describe any State-specific objective(s) identified for FY 2020 - 2022. Click on "Add New Activity" to enter information on each State-specific objective. This is an optional section and only required if a State has identified a specific State problem planned to be addressed with grant funding.

State Objective #1

Enter the title of your State-Identified Objective.
Safety of Workers on Roadways - Work Zone Crash Reduction

Narrative Overview for FY 2020 - 2022

Problem Statement Narrative: Describe problem identified by performance data including baseline data.
In Massachusetts, commercial motor vehicles (CMVs) have more than twice as many crashes in work zones as other motor vehicles. Of all 2018 crashes involving CMVs, 4.1% occurred in work zones compared to a work zone crash rate of 1.8% for all vehicle types. A similar trend exists for 2019 crashes thus far, where CMV involved crashes are overrepresented in work zone crashes at 3.8% compared to 2.7% of crashes with any vehicle type. Considering summer months have yet to be accounted for, this is too preliminary to draw conclusions. To further reduce the number of CMV crashes in work zones, UMassSafe conducted a extensive crash data analysis. The findings of this analysis are attached to this E-CVSP and will be utilized by the MSP CVES in planning and conducting all work zone crash prevention efforts.

Projected Goals for FY 2020 - 2022:
Enter performance goal.
Conduct 2,000 truck inspections in or near work zones per year.

Program Activities for FY 2020 - 2022: Describe the activities that will be implemented including level of effort.
The activities which will be implemented to address work zone crashes include enforcement of Move Over Law, driver and vehicle inspections, and extensive traffic enforcement utilizing CMV crash causation analysis to target enforcement.

Performance Measurements and Monitoring: Describe all performance measures and how the State will conduct ongoing monitoring of progress in addition to quarterly SF-PPR reporting.
The MSP CVES will examine quarterly CMV injury and fatality data in order to track progress towards work zone goals. Furthermore, the MSP CVES Commander will conduct a quarterly and annual review of inspections and citations.

Part 4 - Financial Information

Part 4 Section 1 - Overview

The Spending Plan is an explanation of each budget component, and should support the cost estimates for the proposed work. The Spending Plan should focus on how each item will achieve the proposed project goals and objectives, and explain how costs are calculated. The Spending Plan must be clear, specific, detailed, and mathematically correct. Sources for assistance in developing the Spending Plan include 2 CFR part 200, 2 CFR part 1201, 49 CFR part 350 and the MCSAP Comprehensive Policy.

Before any cost is billed to or recovered from a Federal award, it must be allowable (2 CFR §200.403, 2 CFR §200 Subpart E – Cost Principles), reasonable and necessary (2 CFR §200.403 and 2 CFR §200.404), and allocable (2 CFR §200.405).

- ***Allowable*** *costs are permissible under the OMB Uniform Guidance, DOT and FMCSA regulations and directives, MCSAP policy, and all other relevant legal and regulatory authority.*
- ***Reasonable and Necessary*** *costs are those which a prudent person would deem to be judicious under the circumstances.*
- ***Allocable*** *costs are those that are charged to a funding source (e.g., a Federal award) based upon the benefit received by the funding source. Benefit received must be tangible and measurable.*
    - *For example, a Federal project that uses 5,000 square feet of a rented 20,000 square foot facility may charge 25 percent of the total rental cost.*

Instructions

The Spending Plan should include costs for FY 2020 only. This applies to States completing a multi-year CVSP or an Annual Update to their multi-year CVSP.

The Spending Plan data tables are displayed by budget category (Personnel, Fringe Benefits, Travel, Equipment, Supplies, Contractual and Subaward, and Other Costs). You may add additional lines to each table, as necessary. Please include clear, concise explanations in the narrative boxes regarding the reason for each cost, how costs are calculated, why they are necessary, and specific information on how prorated costs were determined.

The following definitions describe Spending Plan terminology.

- ***Federal Share*** *means the portion of the total project costs paid by Federal funds. Federal share is 85 percent of the total project costs for this FMCSA grant program.*
- ***State Share*** *means the portion of the total project costs paid by State funds. State share is 15 percent of the total project costs for this FMCSA grant program. A State is only required to contribute up to 15 percent of the total project costs of all budget categories combined as State share. A State is NOT required to include a 15 percent State share for each line item in a budget category. The State has the flexibility to select the budget categories and line items where State match will be shown.*
- ***Total Project Costs*** *means total allowable costs incurred under a Federal award and all required cost sharing (sum of the Federal share plus State share), including third party contributions.*
- ***Maintenance of Effort (MOE)*** *means the level of effort Lead State Agencies are required to maintain each fiscal year in accordance with 49 CFR § 350.301. The State has the flexibility to select the budget categories and line items where MOE will be shown. Additional information regarding MOE can be found in the MCSAP Comprehensive Policy (MCP) in section 3.6.*

On Screen Messages

The system performs a number of edit checks on Spending Plan data inputs to ensure calculations are correct, and values are as expected. When anomalies are detected, alerts will be displayed on screen.

- *Calculation of Federal and State Shares*

  Total Project Costs are determined for each line based upon user-entered data and a specific budget category formula. Federal and State shares are then calculated by the system based upon the Total Project Costs and are added to each line item.

The system calculates an 85 percent Federal share and 15 percent State share automatically and populates these values in each line. Federal share is the product of Total Project Costs x .85. State share equals Total Project Costs minus Federal share. If Total Project Costs are updated based upon user edits to the input values, the 85 and 15 percent values will not be recalculated by the system and should be reviewed and updated by users as necessary.

States may edit the system-calculated Federal and State share values at any time to reflect actual allocation for any line item. For example, States may allocate a different percentage to Federal and State shares. States must ensure that the sum of the Federal and State shares equals the Total Project Costs for each line before proceeding to the next budget category.

An error is shown on line items where Total Project Costs does not equal the sum of the Federal and State shares. Errors must be resolved before the system will allow users to 'save' or 'add' new line items.

Territories must insure that Total Project Costs equal Federal share for each line in order to proceed.

- *MOE Expenditures*

States may enter MOE on individual line items in the Spending Plan tables. The Personnel, Fringe Benefits, Equipment, Supplies, and Other Costs budget activity areas include edit checks on each line item preventing MOE costs from exceeding allowable amounts.

  - *If "Percentage of Time on MCSAP grant" equals 100%, then MOE must equal $0.00.*
  - *If "Percentage of Time on MCSAP grant" equals 0%, then MOE may equal up to Total Project Costs as expected at 100%.*
  - *If "Percentage of Time on MCSAP grant" > 0% AND < 100%, then the MOE maximum value cannot exceed "100% Total Project Costs" minus "system-calculated Total Project Costs".*

An error is shown on line items where MOE expenditures are too high. Errors must be resolved before the system will allow users to 'save' or 'add' new line items.

The Travel and Contractual budget activity areas do not include edit checks for MOE costs on each line item. States should review all entries to ensure costs reflect estimated expenditures.

- *Financial Summary*

The Financial Summary is a summary of all budget categories. The system provides warnings to the States on this page if the projected State Spending Plan totals are outside FMCSA's estimated funding amounts. States should review any warning messages that appear on this page and address them prior to submitting the eCVSP for FMCSA review.

The system will confirm that:

  - *Overtime value does not exceed the FMCSA limit.*
  - *Planned MOE Costs equal or exceed FMCSA limit.*
  - *States' proposed Federal and State share totals are each within $5 of FMCSA's Federal and State share estimated amounts.*
  - *Territories' proposed Total Project Costs are within $5 of $350,000.*

ESTIMATED Fiscal Year Funding Amounts for MCSAP			
	85% Federal Share	15% State Share	Total Estimated Funding
Total	$4,484,007.00	$791,294.00	$5,275,301.00

Summary of MCSAP Funding Limitations	
Allowable amount for Overtime without written justification (15% of MCSAP Award Amount):	$791,294.00
MOE Baseline:	$335,450.37

Part 4 Section 2 - Personnel

Personnel costs are salaries for employees working directly on a project.

***Note: Do not include any personally identifiable information (PII) in the CVSP. The final CVSP approved by FMCSA is required to be posted to a public FMCSA website**.*

List grant-funded staff who will complete the tasks discussed in the narrative descriptive sections of the CVSP. Positions may be listed by title or function. It is not necessary to list all individual personnel separately by line. The State may use average or actual salary and wages by personnel category (e.g., Trooper, Civilian Inspector, Admin Support, etc.). Additional lines may be added as necessary to capture all your personnel costs.

The percent of each person's time must be allocated to this project based on the amount of time/effort applied to the project. For budgeting purposes, historical data is an acceptable basis.

***Note**: Reimbursement requests must be based upon documented time and effort reports. Those same time and effort reports may be used to estimate salary expenses for a future period. For example, a MCSAP officer's time and effort reports for the previous year show that he/she spent 35 percent of his/her time on approved grant activities. Consequently, it is reasonable to budget 35 percent of the officer's salary to this project. For more information on this item see 2 CFR §200.430.*

In the salary column, enter the salary for each position.

Total Project Costs equal the Number of Staff x Percentage of Time on MCSAP grant x Salary for both Personnel and Overtime (OT).

If OT will be charged to the grant, only OT amounts for the Lead MCSAP Agency should be included in the table below. If the OT amount requested is greater than the 15 percent limitation in the MCSAP Comprehensive Policy (MCP), then justification must be provided in the CVSP for review and approval by FMCSA headquarters.

Activities conducted on OT by subrecipients under subawards from the Lead MCSAP Agency must comply with the 15 percent limitation as provided in the MCP. Any deviation from the 15 percent limitation must be approved by the Lead MCSAP Agency for the subrecipients.

Summary of MCSAP Funding Limitations	
Allowable amount for Lead MCSAP Agency Overtime without written justification (15% of MCSAP Award Amount):	$791,294.00

Personnel: Salary and Overtime Project Costs							
Salary Project Costs							
Position(s)	# of Staff	% of Time on MCSAP Grant	Salary	Total Project Costs (Federal + State)	Federal Share	State Share	MOE
Administrative	2	85.0000	$206,900.00	$351,730.00	$298,970.50	$52,759.50	$0.00
lieutenant	1	35.0000	$207,000.00	$72,450.00	$61,582.50	$10,867.50	$0.00
clerical	1	50.0000	$206,800.00	$103,400.00	$87,890.00	$15,510.00	$0.00
sergeant	1	85.0000	$206,900.00	$175,865.00	$149,485.25	$26,379.75	$0.00
Troopers	5	85.0000	$206,800.00	$878,900.00	$747,065.00	$131,835.00	$0.00
Trooper	5	35.0000	$206,800.00	$361,900.00	$307,615.00	$54,285.00	$0.00
Sergeant	5	35.0000	$206,900.00	$362,075.00	$307,763.75	$54,311.25	$0.00
Trooper	16	0.0000	$206,800.00	$0.00	$0.00	$0.00	$335,450.37
Subtotal: Salary				**$2,306,320.00**	**$1,960,372.00**	**$345,948.00**	**$335,450.37**
Overtime Project Costs							
ADMINISTRATIVE	3	100.0000	$1,533.00	$4,599.00	$3,909.15	$689.85	$0.00
LT	1	100.0000	$18,645.33	$18,645.33	$15,848.53	$2,796.80	$0.00
Sgt	6	100.0000	$17,300.00	$103,800.00	$88,230.00	$15,570.00	$0.00
Trooper	26	100.0000	$15,500.00	$403,000.00	$342,550.00	$60,450.00	$0.00
Subtotal: Overtime				**$530,044.33**	**$450,537.68**	**$79,506.65**	**$0.00**
TOTAL: Personnel				**$2,836,364.33**	**$2,410,909.68**	**$425,454.65**	**$335,450.37**
Accounting Method:	**Cash**						

Enter a detailed explanation of how the personnel costs were derived and allocated to the MCSAP project.
Costs are based upon FMCSA policies and guidance, the FMCSA grants manuals, and OMB circulars. MCSAP activities delineated in this eCVSP are funded by MCSAP funds. Without MCSAP funding, these activities would not be conducted. The State Police has adequate policies and monitoring to ensure compliance with federal grant rules.There are 2 civilian and 33 sworn personnel presently assigned to the Commercial Vehicle Enforcement Section. Two additional sworn personnel will be hired. MCSAP funds only support MCSAP activities.

Funding for staffing is provided in the following manner:
1 Full-time civilian administrative personnel assigned to MCSAP and funded by MCSAP grant 85 % / 15% state match.
1 Full-time civilian administrative personnel assigned to MCSAP part-time and funded by MCSAP 50% / 50% state match.
1 Lieutenant, 8 Troopers are assigned to MCSAP duties. MCSAP funds are utilized to fund 29.75% of these positions.Their daily activities are 1/3 MCSAP eligible activities.The MCSAP hours are verified by daily activity sheets.
6 Sergeants and 3 Troopers are assigned to MCSAP duties. All sworn personnel (33) perform off-hour MCSAP inspections as part of the MCSAP program. This time is tracked by a separate activity sheet and operational activity reports are maintained and verified by administrative staff. Since the overtime rate is equal to the regular hourly rate plus one-half of regular hourly rate, only 1/3 of the overtime rate is assessed against the Overtime line in the budget. The other 2/3 of the overtime pay (regular hourly rate) is assessed against the Regular Salary line in the budget. So, the regular salary amount above represents 1/3 regular time plus 2/3 of the overtime. The calculation fields above make this difficult to represent.

*Please see attached excel spreadsheet with detailed breakdown of salary calculation.

Part 4 Section 3 - Fringe Benefits

*Fringe costs are benefits paid to employees, including the cost of employer's share of FICA, health insurance, worker's compensation, and paid leave. Only non-Federal grantees that use the **accrual basis** of accounting may have a separate line item for leave, and is entered as the projected leave expected to be accrued by the personnel listed within Part 4.2 – Personnel. Reference 2 CFR §200.431(b).*

Show the fringe benefit costs associated with the staff listed in the Personnel section. Fringe costs may be estimates, or based on a fringe benefit rate approved by the applicant's Federal cognizant agency for indirect costs. If using an approved rate, a copy of the indirect cost rate agreement must be provided through grants.gov. For more information on this item see 2 CFR §200.431.

Show how the fringe benefit amount is calculated (i.e., actual fringe benefits, rate approved by HHS Statewide Cost Allocation or cognizant agency). Include a description of the specific benefits that are charged to a project and the benefit percentage or total benefit cost.

The cost of fringe benefits are allowable if:

- *Costs are provided under established written policies.*
- *Costs are equitably allocated to all related activities, including Federal awards.*
- *Accounting basis (cash or accrual) selected for each type of leave is consistently followed by the non-Federal entity or specified grouping of employees.*

Depending on the State, there are fixed employer taxes that are paid as a percentage of the salary, such as Social Security, Medicare, State Unemployment Tax, etc.

- *For each of these standard employer taxes, under Position you may list "All Positions," the benefits would be the respective standard employer taxes, followed by the respective rate with a base being the total salaries for Personnel in Part 4.2.*
- *The base multiplied by the respective rate would give the total for each standard employer tax. Workers' Compensation is rated by risk area. It is permissible to enter this as an average, usually between sworn and unsworn—any grouping that is reasonable and clearly explained in the narrative is allowable.*
- *Health Insurance and Pensions can vary greatly and can be averaged; and like Workers' Compensation, can sometimes be broken into sworn and unsworn.*

In the Position column include a brief position description that is associated with the fringe benefits.

*The **Fringe Benefit Rate** is:*

- *The rate that has been approved by the State's cognizant agency for indirect costs; or a rate that has been calculated based on the aggregate rates and/or costs of the individual items that your agency classifies as fringe benefits.*
- *For example, your agency pays 7.65 percent for FICA, 42.05 percent for health/life/dental insurance, and 15.1 percent for retirement. The aggregate rate of 64.8 percent (sum of the three rates) may be applied to the salaries/wages of personnel listed in the table.*

*The **Base Amount** is:*

- *The salary/wage costs within the proposed budget to which the fringe benefit rate will be applied.*
- *For example, if the total wages for all grant-funded staff is $150,000 and the percentage of time on the grant is 50 percent, then that is the amount the fringe rate of 64.8 (from the example above) will be applied. The calculation is: $150,000 x 64.8 x 50% / 100 = $48,600 Total Project Costs.*

Total Project Costs equal the Fringe Benefit Rate x Percentage of Time on MCSAP grant x Base Amount divided by 100.

Fringe Benefits Project Costs							
Position(s)	Fringe Benefit Rate	% of Time on MCSAP Grant	Base Amount	Total Project Costs (Federal + State)	Federal Share	State Share	MOE
Administrative, Troopers, Sergeants, Lieutenant	47.2100	100.0000	$1,327,835.22	$626,871.00	$532,840.35	$94,030.65	$0.00
TOTAL: Fringe Benefits				**$626,871.00**	**$532,840.35**	**$94,030.65**	**$0.00**

Enter a detailed explanation of how the fringe benefit costs were derived and allocated to the MCSAP project.
These rates are established by the Commonwealth of Massachusetts and the cognizant federal agency – The US Department of Justice.
The Fringe rate effective 7/1/2019 is 44.78 %. Fringe benefit is only assessed against regular salary.
The Payroll Tax rate effective 7/1/2019 is 2.43%. Payroll tax is assessed against both regular salary and overtime.
*Please see attached excel spreadsheet with detailed breakdown of fringe and payroll tax calculation.
The agreement is pending negotiation with DOJ.

Part 4 Section 4 - Travel

Itemize the positions/functions of the people who will travel. Show the estimated cost of items including but not limited to, lodging, meals, transportation, registration, etc. Explain in detail how the MCSAP program will directly benefit from the travel.

Travel costs are funds for field work or for travel to professional meetings.

List the purpose, number of persons traveling, number of days, percentage of time on MCSAP Grant, and total project costs for each trip. If details of each trip are not known at the time of application submission, provide the basis for estimating the amount requested. For more information on this item see 2 CFR §200.474.

Total Project Costs should be determined by State users, and manually input in the table below. There is no system calculation for this budget category.

Travel Project Costs

Purpose	# of Staff	# of Days	% of Time on MCSAP Grant	Total Project Costs (Federal + State)	Federal Share	State Share	MOE
Training Travel	10	6	100.0000	$25,000.00	$21,250.00	$3,750.00	$0.00
Routine MCSAP Travel	3	3	100.0000	$9,500.00	$8,075.00	$1,425.00	$0.00
Conference Travel	3	3	100.0000	$5,200.00	$4,420.00	$780.00	$0.00
TOTAL: Travel				**$39,700.00**	**$33,745.00**	**$5,955.00**	**$0.00**

Enter a detailed explanation of how the travel costs were derived and allocated to the MCSAP project.
Training travel is for NTC approved and required courses for Troopers who are NTC Instructors, in addition to other MCSAP eligible training funded by FMCSA grant policy and eligibility. (DIAP, out of state New Entrant Certification Training, etc) Travel includes CVSA conferences, Level 6 recertification, and the FMCSA Annual Grants conference. MCSAP funds are only used for FMCSA approved travel and MCSAP eligible travel.

Part 4 Section 5 - Equipment

Equipment is tangible or intangible personal property. It includes information technology systems having a useful life of more than one year, and a per-unit acquisition cost that equals or exceeds the lesser of the capitalization level established by the non-Federal entity (i.e., the State) for financial statement purposes, or $5,000.

- *If your State's equipment capitalization threshold is below $5,000, check the box below and provide the threshold amount. See §200.12 Capital assets, §200.20 Computing devices, §200.48 General purpose equipment, §200.58 Information technology systems, §200.89 Special purpose equipment, and §200.94 Supplies.*

Show the total cost of equipment and the percentage of time dedicated for MCSAP related activities that the equipment will be billed to MCSAP. For example, you intend to purchase a server for $5,000 to be shared equally among five programs, including MCSAP. The MCSAP portion of the total cost is $1,000. If the equipment you are purchasing will be capitalized (depreciated), you may only show the depreciable amount, and not the total cost (2 CFR §200.436 and 2 CFR §200.439). If vehicles or large IT purchases are listed here, the applicant must disclose their agency's capitalization policy.

Provide a description of the equipment requested. Include the quantity, the full cost of each item, and the percentage of time this item will be dedicated to MCSAP grant.

Total Project Costs equal the Number of Items x Full Cost per Item x Percentage of Time on MCSAP grant.

Equipment Project Costs

Item Name	# of Items	Full Cost per Item	% of Time on MCSAP Grant	Total Project Costs (Federal + State)	Federal Share	State Share	MOE
Lidars	6	$2,000.00	100	$12,000.00	$10,200.00	$1,800.00	$0.00
Four Tahoes	4	$48,000.00	100	$192,000.00	$163,200.00	$28,800.00	$0.00
Racks	6	$3,500.00	100	$21,000.00	$17,850.00	$3,150.00	$0.00
Vehicle Equipment	1	$54,579.54	100	$54,579.54	$46,392.61	$8,186.93	$0.00
TOTAL: Equipment				**$279,579.54**	**$237,642.61**	**$41,936.93**	**$0.00**
Equipment threshold is $1,000							

Enter a detailed explanation of how the equipment costs were derived and allocated to the MCSAP project.
The equipment is necessary to conduct speed enforcement under the CMV traffic enforcement program. The equipment racks are necesary to store the MCSAP equipment. Vehicles are pro rated given the level of MCSAP participation of the officer. LIDARS are replaced due to age on a 5 year cycle.

Part 4 Section 6 - Supplies

Supplies means all tangible property other than that described in §200.33 Equipment. A computing device is a supply if the acquisition cost is less than the lesser of the capitalization level established by the non-Federal entity for financial statement purposes or $5,000, regardless of the length of its useful life. See also §200.20 Computing devices and §200.33 Equipment.

Estimates for supply costs may be based on the same allocation as personnel. For example, if 35 percent of officers' salaries are allocated to this project, you may allocate 35 percent of your total supply costs to this project. A different allocation basis is acceptable, so long as it is reasonable, repeatable and logical, and a description is provided in the narrative.

Provide a description of each unit/item requested, including the quantity of each unit/item, the unit of measurement for the unit/item, the cost of each unit/item, and the percentage of time on MCSAP grant.

Total Project Costs equal the Number of Units x Cost per Unit x Percentage of Time on MCSAP grant.

Supplies Project Costs							
Item Name	# of Units/ Unit of Measurement	Cost per Unit	% of Time on MCSAP Grant	Total Project Costs (Federal + State)	Federal Share	State Share	MOE
Office Supplies	1 ea	$7,140.00	100.0000	$7,140.00	$6,069.00	$1,071.00	$0.00
Uniforms	51 each	$1,000.00	100.0000	$51,000.00	$43,350.00	$7,650.00	$0.00
SUPPLIES - Computers	10 each	$1,000.00	100.0000	$10,000.00	$8,500.00	$1,500.00	$0.00
Printers	20 each	$500.00	100.0000	$10,000.00	$8,500.00	$1,500.00	$0.00
Supplies- Vehicle Equipment	37 ea	$500.00	100.0000	$18,500.00	$15,725.00	$2,775.00	$0.00
TOTAL: Supplies				**$96,640.00**	**$82,144.00**	**$14,496.00**	**$0.00**

Enter a detailed explanation of how the supply costs were derived and allocated to the MCSAP project.

Uniform expense is for replacement uniform parts for inspectors to include inspection coats, boots, gloves, etc.
Office supplies are for general office supplies, paper, toner, etc.
Individuals assigned to this unit are 100% dedicated to CMV activities. However only 35-53% of their time is paid for with federal funding, which explains the difference between the personnel dollars and fact that the equipment is 100% allocated to the program.

Vehicle Equipment expense is to provide floot/spot lights, push bumpers, bumper covers, police lights, tools, and CB radios for CVES vehicles.

Part 4 Section 7 - Contractual and Subaward

This section includes contractual costs and subawards to subrecipients. Use the table below to capture the information needed for both contractual agreements and subawards. The definitions of these terms are provided so the instrument type can be entered into the table below.

***Contractual** – A contract is a legal instrument by which a non-Federal entity purchases property or services needed to carry out the project or program under a Federal award (2 CFR §200.22). All contracts issued under a Federal award must comply with the standards described in 2 CFR §200 Procurement Standards.*

***Note**: Contracts are separate and distinct from subawards; see 2 CFR §200.330 for details.*

***Subaward** – A subaward is an award provided by a pass-through entity to a subrecipient for the subrecipient to carry out part of a Federal award received by the pass-through entity. It does not include payments to a contractor or payments to an individual that is a beneficiary of a Federal program. A subaward may be provided through any form of legal agreement, including an agreement that the pass-through entity considers a contract (2 CFR §200.92 and 2 CFR §200.330).*

***Subrecipient** - Subrecipient means a non-Federal entity that receives a subaward from a pass-through entity to carry out part of a Federal program, but does not include an individual who is a beneficiary of such program. A subrecipient may also be a recipient of other Federal awards directly from a Federal awarding agency (2 CFR §200.93).*

Enter the legal name of the vendor or subrecipient if known. If unknown at this time, please indicate 'unknown' in the legal name field. Include a description of services for each contract or subaward listed in the table. Entering a statement such as "contractual services" with no description will not be considered meeting the requirement for completing this section.

Enter the DUNS or EIN number of each entity. There is a drop-down option to choose either DUNS or EIN, and then the State must enter the corresponding identification number.

Select the Instrument Type by choosing either Contract or Subaward for each entity.

Total Project Costs should be determined by State users and input in the table below. The tool does not automatically calculate the total project costs for this budget category.

***Operations and Maintenance**-If the State plans to include O&M costs that meet the definition of a contractual or subaward cost, details must be provided in the table and narrative below.*

Please describe the activities these costs will be using to support (i.e., ITD, PRISM, SSDQ or other services.)

Contractual and Subaward Project Costs

Legal Name	DUNS/EIN Number	Instrument Type	% of Time on MCSAP Grant	Total Project Costs (Federal + State)	Federal Share	State Share	MOE
shi	DUNS 611429481	Contract	100.0000	$35,236.00	$29,950.60	$5,285.40	$0.00
Description of Services: ITERIS INSPECT CLOUD APPLICATION							
UMASS	DUNS 153926712	Contract	100.0000	$99,510.00	$84,583.50	$14,926.50	$0.00
Description of Services: Data Analysis							
RMV	DUNS 877222257	Subrecipient	100.0000	$250,000.00	$212,500.00	$37,500.00	$0.00
Description of Services: prism OM							
intelligent imaging systems	DUNS 240387154	Contract	100.0000	$22,500.00	$19,125.00	$3,375.00	$0.00
Description of Services: alpr trailer support and Maintenance							
TOTAL: Contractual and Subaward				**$407,246.00**	**$346,159.10**	**$61,086.90**	**$0.00**

Enter a detailed explanation of how the contractual and subaward costs were derived and allocated to the MCSAP project.

The Massachusetts RMV funding is to maintain the IRP and CVIEW databases adminstered by the Registry of Motor Vehicles at the current PRISM Level 8, which are eligible under the current MCSAP Comprehensive Policy under the current FAST Act MCSAP structure.

UMassSafe develops a data based CVSP, crash data analysis and enforcement planning as well as developing quarterly performance metrics and monitoring the data stream for possible issues that might affect the SSDQ rating. UMassSafe was selected following a statewide RFP solicitation.

An annual subscription to "INSPECT" will be purchased so that real-time inspection data is available road-side to the inspectors. This software is necessary to insure we are able to maintain our 100% Out of Service Match rate. This purchase is approved by FMCSA policy.

Intelligent imaging systems will provide support and maintenance to ALPR trailers through the state approved vendor IT vendor SHI. The ALPR trailer was purchased with PRISM funding and is used to find out of service or high ISS score carriers roadside. Our use of INSPECT has been approved by FMCSA IT and the Division.

Part 4 Section 8 - Other Costs

Other Costs are those not classified elsewhere and are allocable to the Federal award. These costs must be specifically itemized and described. The total costs and allocation bases must be explained in the narrative. Examples of Other Costs may include utilities and/or leased equipment, employee training tuition, meeting registration costs, etc. The quantity, unit of measurement (e.g., monthly, annually, each, etc.), unit cost, and percentage of time on MCSAP grant must be included.

***Operations and Maintenance**-If the State plans to include O&M costs that do not meet the definition of a contractual or subaward cost, details must be provided in the table and narrative below. Please identify these costs as ITD O&M, PRISM O&M, or SSDQ O&M. Sufficient detail must be provided in the narrative that explains what components of the specific program are being addressed by the O&M costs.*

Enter a description of each requested Other Cost.

Enter the number of items/units, the unit of measurement, the cost per unit/item, and the percentage of time dedicated to the MCSAP grant for each Other Cost listed. Show the cost of the Other Costs and the portion of the total cost that will be billed to MCSAP. For example, you intend to purchase air cards for $2,000 to be shared equally among five programs, including MCSAP. The MCSAP portion of the total cost is $400.

Total Project Costs equal the Number of Units x Cost per Item x Percentage of Time on MCSAP grant.

Indirect Costs

Information on Indirect Costs (2 CFR §200.56) is captured in this section. This cost is allowable only when an approved indirect cost rate agreement has been provided. Applicants may charge up to the total amount of the approved indirect cost rate multiplied by the eligible cost base. Applicants with a cost basis of salaries/wages and fringe benefits may only apply the indirect rate to those expenses. Applicants with an expense base of modified total direct costs (MTDC) may only apply the rate to those costs that are included in the MTDC base (2 CFR §200.68).

- ***Cost Basis** — is the accumulated direct costs (normally either total direct salaries and wages or total direct costs exclusive of any extraordinary or distorting expenditures) used to distribute indirect costs to individual Federal awards. The direct cost base selected should result in each Federal award bearing a fair share of the indirect costs in reasonable relation to the benefits received from the costs.*
- ***Approved Rate** — is the rate in the approved Indirect Cost Rate Agreement.*
- ***Eligible Indirect Expenses** — means after direct costs have been determined and assigned directly to Federal awards and other activities as appropriate. Indirect costs are those remaining to be allocated to benefitted cost objectives. A cost may not be allocated to a Federal award as an indirect cost if any other cost incurred for the same purpose, in like circumstances, has been assigned to a Federal award as a direct cost.*
- ***Total Indirect Costs** equal Approved Rate x Eligible Indirect Expenses divided by 100.*

Your State will claim reimbursement for Indirect Costs.

Indirect Costs					
Cost Basis	Approved Rate	Eligible Indirect Expenses	Total Indirect Costs	Federal Share	State Share
Salaries and Wages (SW)	30.70	$2,956,682.39	$907,701.49	$771,546.27	$136,155.22
TOTAL: Indirect Costs			**$907,701.49**	**$771,546.27**	**$136,155.22**

Other Costs Project Costs							
Item Name	# of Units/ Unit of Measurement	Cost per Unit	% of Time on MCSAP Grant	Total Project Costs (Federal + State)	Federal Share	State Share	MOE
Mail Machine Postage	10 Each	$300.00	100.0000	$3,000.00	$2,550.00	$450.00	$0.00
CVSA DUES	1 EACH	$12,900.00	100.0000	$12,900.00	$10,965.00	$1,935.00	$0.00
CVES air cards and phones	15 months	$1,000.00	100.0000	$15,000.00	$12,750.00	$2,250.00	$0.00
Training Fees Crash Investigations	1 annual	$14,000.00	100.0000	$14,000.00	$11,900.00	$2,100.00	$0.00
Conference Costs CVSA	1 each	$5,000.00	100.0000	$5,000.00	$4,250.00	$750.00	$0.00
CVSA Decals	3200 each	$0.25	100.0000	$800.00	$680.00	$120.00	$0.00
Training Costs CMVE Crash Reconstruction	1 each	$25,500.00	100.0000	$25,500.00	$21,675.00	$3,825.00	$0.00
Training Costs - Hazwoper	1 each	$5,000.00	100.0000	$5,000.00	$4,250.00	$750.00	$0.00
TOTAL: Other Costs				**$81,200.00**	**$69,020.00**	**$12,180.00**	**$0.00**

Enter a detailed explanation of how the 'other' costs were derived and allocated to the MCSAP project.
CVES air cards, phones, data plans are for communications necessary to upload to FMCSA systems. This covers the cost of air cards and data plans for cell phones and iPads as well as the internet services for the CVES unit in Concord.
Equipment - Non-Vehicle is for replacement of PBTs, LIDARS, Radars, etc.
Equipment - Other Vehicle Equipment expense is to provide floot/spot lights, push bumpers, bumper covers, police lights, tools, and CB radios for CVES vehicles.
Training Fees - Crash Investigation: For fees associated with commercial motor vehicle crash investigation training for CVES personnel. The fee is the class instructor cost to provide the class at the Massachusetts State Police Academy.
Training Fees - Hazwoper: HazMat training provided for troopers in order to stay in compliance with state worker safety laws.
Training Fees - CMVE Reconstruction: For fees associated with commercial motor vehicle crash reconstruction training for MCSAP personnel as allowed by the FMCSA grant manual and FMCSA policy. Cost is per class.
CVSA Dues- Dues for Level 3-State/Provincial / Territorial Member dues for the Massachusetts State Police

Part 4 Section 9 - Comprehensive Spending Plan

The Comprehensive Spending Plan is auto-populated from all line items in the tables and is in read-only format. Changes to the Comprehensive Spending Plan will only be reflected by updating the individual budget category table(s).

ESTIMATED Fiscal Year Funding Amounts for MCSAP			
	85% Federal Share	15% State Share	Total Estimated Funding
Total	$4,484,007.00	$791,294.00	$5,275,301.00

Summary of MCSAP Funding Limitations	
Allowable amount for Overtime without written justification (15% of Basic Award Amount):	$791,294.00
MOE Baseline:	$335,450.37

Estimated Expenditures

Personnel

	Federal Share	State Share	Total Project Costs (Federal + Share)	MOE
Administrative	$298,970.50	$52,759.50	$351,730.00	$0.00
lieutenant	$61,582.50	$10,867.50	$72,450.00	$0.00
clerical	$87,890.00	$15,510.00	$103,400.00	$0.00
sergeant	$149,485.25	$26,379.75	$175,865.00	$0.00
Troopers	$747,065.00	$131,835.00	$878,900.00	$0.00
Trooper	$307,615.00	$54,285.00	$361,900.00	$0.00
Sergeant	$307,763.75	$54,311.25	$362,075.00	$0.00
Trooper	$0.00	$0.00	$0.00	$335,450.37
Salary Subtotal	**$1,960,372.00**	**$345,948.00**	**$2,306,320.00**	**$335,450.37**
ADMINISTRATIVE	$3,909.15	$689.85	$4,599.00	$0.00
LT	$15,848.53	$2,796.80	$18,645.33	$0.00
Sgt	$88,230.00	$15,570.00	$103,800.00	$0.00
Trooper	$342,550.00	$60,450.00	$403,000.00	$0.00
Overtime subtotal	**$450,537.68**	**$79,506.65**	**$530,044.33**	**$0.00**
Personnel total	**$2,410,909.68**	**$425,454.65**	**$2,836,364.33**	**$335,450.37**

Fringe Benefits

	Federal Share	State Share	Total Project Costs (Federal + State)	MOE
Administrative, Troopers, Sergeants, Lieutenant	$532,840.35	$94,030.65	$626,871.00	$0.00
Fringe Benefits total	**$532,840.35**	**$94,030.65**	**$626,871.00**	**$0.00**

Travel				
	Federal Share	State Share	Total Project Costs (Federal + State)	MOE
Training Travel	$21,250.00	$3,750.00	$25,000.00	$0.00
Routine MCSAP Travel	$8,075.00	$1,425.00	$9,500.00	$0.00
Conference Travel	$4,420.00	$780.00	$5,200.00	$0.00
Travel total	**$33,745.00**	**$5,955.00**	**$39,700.00**	**$0.00**

Equipment				
	Federal Share	State Share	Total Project Costs (Federal + State)	MOE
Lidars	$10,200.00	$1,800.00	$12,000.00	$0.00
Four Tahoes	$163,200.00	$28,800.00	$192,000.00	$0.00
Racks	$17,850.00	$3,150.00	$21,000.00	$0.00
Vehicle Equipment	$46,392.61	$8,186.93	$54,579.54	$0.00
Equipment total	**$237,642.61**	**$41,936.93**	**$279,579.54**	**$0.00**

Supplies				
	Federal Share	State Share	Total Project Costs (Federal + State)	MOE
Office Supplies	$6,069.00	$1,071.00	$7,140.00	$0.00
Uniforms	$43,350.00	$7,650.00	$51,000.00	$0.00
SUPPLIES - Computers	$8,500.00	$1,500.00	$10,000.00	$0.00
Printers	$8,500.00	$1,500.00	$10,000.00	$0.00
Supplies- Vehicle Equipment	$15,725.00	$2,775.00	$18,500.00	$0.00
Supplies total	**$82,144.00**	**$14,496.00**	**$96,640.00**	**$0.00**

Contractual and Subaward				
	Federal Share	State Share	Total Project Costs (Federal + State)	MOE
shi	$29,950.60	$5,285.40	$35,236.00	$0.00
UMASS	$84,583.50	$14,926.50	$99,510.00	$0.00
RMV	$212,500.00	$37,500.00	$250,000.00	$0.00
intelligent imaging systems	$19,125.00	$3,375.00	$22,500.00	$0.00
Contractual and Subaward total	**$346,159.10**	**$61,086.90**	**$407,246.00**	**$0.00**

Other Costs				
	Federal Share	State Share	Total Project Costs (Federal + State)	MOE
Mail Machine Postage	$2,550.00	$450.00	$3,000.00	$0.00
CVSA DUES	$10,965.00	$1,935.00	$12,900.00	$0.00
CVES air cards and phones	$12,750.00	$2,250.00	$15,000.00	$0.00
Training Fees Crash Investigations	$11,900.00	$2,100.00	$14,000.00	$0.00
Conference Costs CVSA	$4,250.00	$750.00	$5,000.00	$0.00
CVSA Decals	$680.00	$120.00	$800.00	$0.00
Training Costs CMVE Crash Reconstruction	$21,675.00	$3,825.00	$25,500.00	$0.00
Training Costs - Hazwoper	$4,250.00	$750.00	$5,000.00	$0.00
Other Costs total	**$69,020.00**	**$12,180.00**	**$81,200.00**	**$0.00**

Total Costs				
	Federal Share	State Share	Total Project Costs (Federal + State)	MOE
Subtotal for Direct Costs	**$3,712,460.74**	**$655,140.13**	**$4,367,600.87**	**$335,450.37**
Indirect Costs	$771,546.27	$136,155.22	$907,701.49	NA
Total Costs Budgeted	**$4,484,007.01**	**$791,295.35**	**$5,275,302.36**	**$335,450.37**

Part 4 Section 10 - Financial Summary

The Financial Summary is auto-populated by the system by budget category. It is a read-only document and can be used to complete the SF-424A in Grants.gov. Changes to the Financial Summary will only be reflected by updating the individual budget category table(s).

- *The system will confirm that percentages for Federal and State shares are correct for Total Project Costs. The edit check is performed on the "**Total Costs Budgeted**" line only.*
- *The system will confirm that Planned MOE Costs equal or exceed FMCSA funding limitation. The edit check is performed on the "**Total Costs Budgeted**" line only.*
- *The system will confirm that the Overtime value does not exceed the FMCSA funding limitation. The edit check is performed on the "**Overtime subtotal**" line.*

ESTIMATED Fiscal Year Funding Amounts for MCSAP			
	85% Federal Share	15% State Share	Total Estimated Funding
Total	$4,484,007.00	$791,294.00	$5,275,301.00

Summary of MCSAP Funding Limitations	
Allowable amount for Overtime without written justification (15% of Basic Award Amount):	$791,294.00
MOE Baseline:	$335,450.37

Estimated Expenditures				
	Federal Share	State Share	Total Project Costs (Federal + State)	Planned MOE Costs
Salary Subtotal	$1,960,372.00	$345,948.00	$2,306,320.00	$335,450.37
Overtime Subtotal	$450,537.68	$79,506.65	$530,044.33	$0.00
Personnel Total	$2,410,909.68	$425,454.65	$2,836,364.33	$335,450.37
Fringe Benefits Total	$532,840.35	$94,030.65	$626,871.00	$0.00
Travel Total	$33,745.00	$5,955.00	$39,700.00	$0.00
Equipment Total	$237,642.61	$41,936.93	$279,579.54	$0.00
Supplies Total	$82,144.00	$14,496.00	$96,640.00	$0.00
Contractual and Subaward Total	$346,159.10	$61,086.90	$407,246.00	$0.00
Other Costs Total	$69,020.00	$12,180.00	$81,200.00	$0.00
	85% Federal Share	15% State Share	Total Project Costs (Federal + State)	Planned MOE Costs
Subtotal for Direct Costs	$3,712,460.74	$655,140.13	$4,367,600.87	$335,450.37
Indirect Costs	$771,546.27	$136,155.22	$907,701.49	NA
Total Costs Budgeted	**$4,484,007.01**	**$791,295.35**	**$5,275,302.36**	**$335,450.37**

Part 5 - Certifications and Documents

Part 5 includes electronic versions of specific requirements, certifications and documents that a State must agree to as a condition of participation in MCSAP. The submission of the CVSP serves as official notice and certification of compliance with these requirements. State or States means all of the States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, American Samoa, Guam, and the Virgin Islands.

If the person submitting the CVSP does not have authority to certify these documents electronically, then the State must continue to upload the signed/certified form(s) through the "My Documents" area on the State's Dashboard page.

Part 5 Section 1 - State Certification

The State Certification will not be considered complete until the four questions and certification declaration are answered. Selecting 'no' in the declaration may impact your State's eligibility for MCSAP funding.

1. What is the name of the person certifying the declaration for your State? Colonel Christopher Mason
2. What is this person's title? Colonel / Superintendent
3. Who is your Governor's highway safety representative? Jeff Larason
4. What is this person's title? Director of Highway Safety

The State affirmatively accepts the State certification declaration written below by selecting 'yes'.

- (●) Yes
- ( ) Yes, uploaded certification document
- ( ) No

State Certification declaration:

I, Colonel Christopher Mason, Colonel / Superintendent , on behalf of the Commonwealth of MASSACHUSETTS, as requested by the Administrator as a condition of approval of a grant under the authority of 49 U.S.C. § 31102, as amended, certify that the Commonwealth satisfies all the conditions required for MCSAP funding, as specifically detailed in 49 C.F.R. § 350.211.

If there are any exceptions that should be noted to the above certification, include an explanation in the text box below.

Part 5 Section 2 - Annual Review of Laws, Regulations, Policies and Compatibility Certification

You must answer all three questions and indicate your acceptance of the certification declaration. Selecting 'no' in the declaration may impact your State's eligibility for MCSAP funding.

1. What is the name of your certifying State official? Colonel Christopher Mason
2. What is the title of your certifying State offical? Colonel / Superintendent
3. What are the phone # and email address of your State official? (508)820-3300 Christopher.Mason@pol.state.ma.us

The State affirmatively accepts the compatibility certification declaration written below by selecting 'yes'.

- (●) Yes
- ( ) Yes, uploaded certification document
- ( ) No

I, Colonel Christopher Mason, certify that the Commonwealth has conducted the annual review of its laws and regulations for compatibility regarding commercial motor vehicle safety and that the Commonwealth's safety laws remain compatible with the Federal Motor Carrier Safety Regulations (49 CFR parts 390-397) and the Hazardous Materials Regulations (49 CFR parts 107 (subparts F and G only), 171-173, 177, 178, and 180) and standards and orders of the Federal government, except as may be determined by the Administrator to be inapplicable to a State enforcement program. For the purpose of this certification, Compatible means Commonwealth laws or regulations pertaining to interstate commerce that are identical to the FMCSRs and HMRs or have the same effect as the FMCSRs and identical to the HMRs and for intrastate commerce rules identical to or within the tolerance guidelines for the FMCSRs and identical to the HMRs.

If there are any exceptions that should be noted to the above certification, include an explanation in the text box below.

Part 5 Section 3 - New Laws/Legislation/Policy Impacting CMV Safety

Has the State adopted/enacted any new or updated laws (i.e., statutes) impacting CMV safety since the last CVSP or annual update was submitted?

○ Yes ◉ No

Has the State adopted/enacted any new administrative actions or policies impacting CMV safety since the last CVSP?

○ Yes ◉ No

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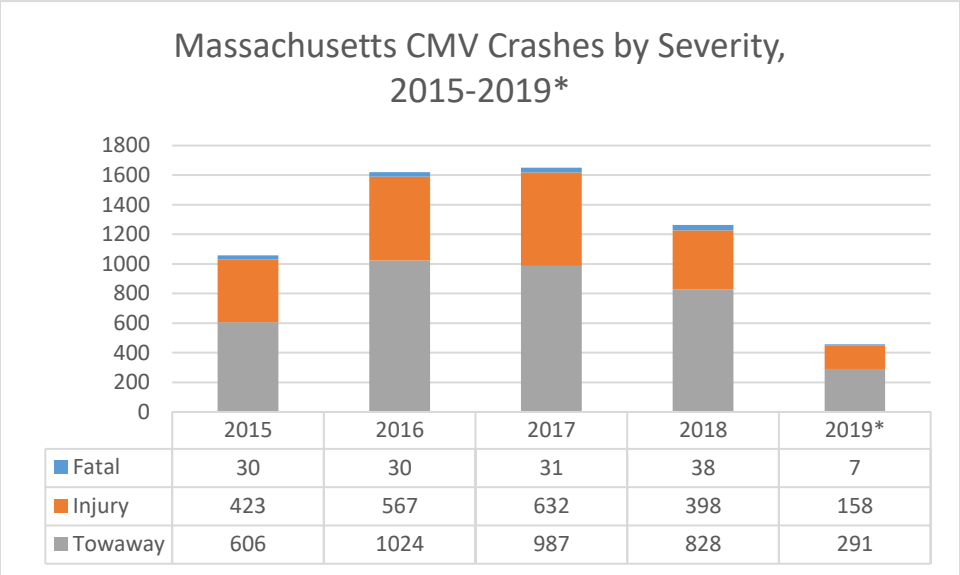
MA FY 2020 CVSP CMV Crash Reduction Problem Statement

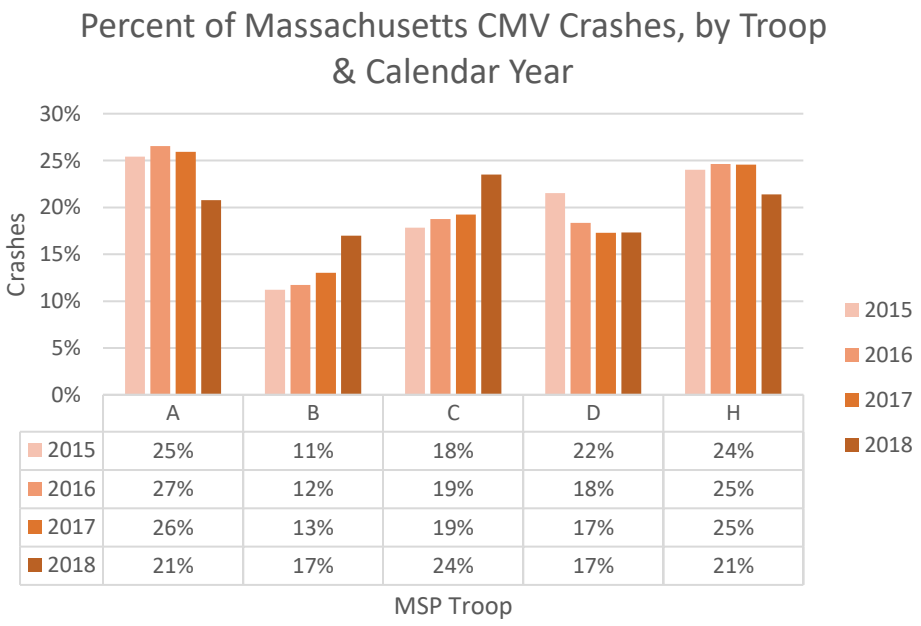
Over the past 10 years there has been an overall decline in the number of commercial motor vehicle (CMV) crashes. However, as shown in the chart below, 2016 and 2017 saw an increase in CMV crashes, specifically those resulting in a fatality and/or injury. While 2018 saw a notable decrease in injury crashes, along with moderate decrease in towaway crashes, fatal crashes have increased. Below, 2019 represents only the first calendar quarter thus far.



	2015	2016	2017	2018	2019*
Fatal	30	30	31	38	7
Injury	423	567	632	398	158
Towaway	606	1024	987	828	291

*Data Source: FMCSA Motor Carrier Management Information System (MCMIS) data snapshot as of 06/28/2019, including crash records through 02/28/2019. MCMIS data are considered preliminary for 22 months to allow for changes. *2019 is currently depicted with 3 months of data.*

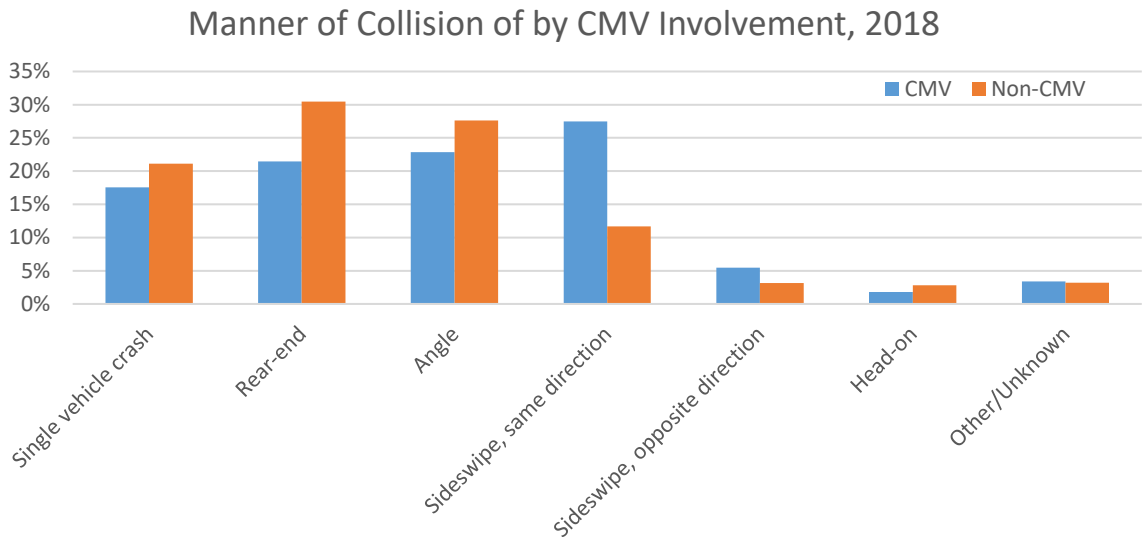
In an effort to identify trends occurring at the Massachusetts State Police troop level, analysis was conducted with data from 2015 to 2018. As shown in the chart below, Troops A and H had the largest number of CMV crashes each year with the exception of 2018, where Troop C experienced an increased proportion. Troop B, typically representing the smallest portion of crashes, experienced a notable increase in 2018 as well.



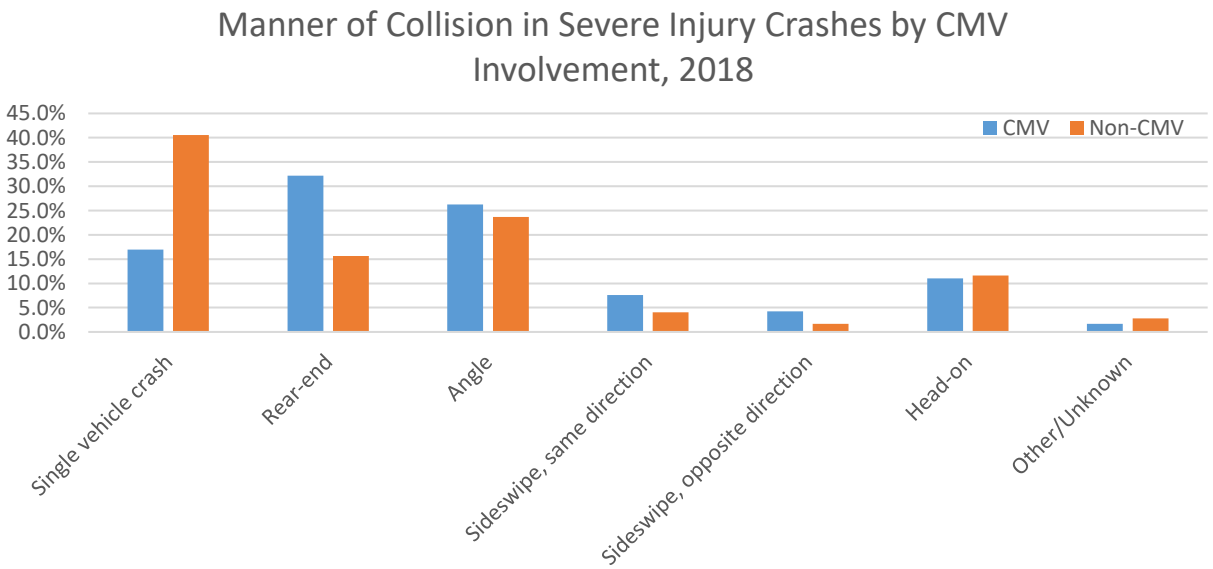
	A	B	C	D	H
2015	25%	11%	18%	22%	24%
2016	27%	12%	19%	18%	25%
2017	26%	13%	19%	17%	25%
2018	21%	17%	24%	17%	21%

Crash Attribute Examination

With a statewide safety goal of reducing the number of fatal and injury crashes already in place, implementing a specialized strategy to address fatalities and injuries resulting from CMV crashes is not much different. Knowing that crashes involving large trucks or buses increases the potential for injury exponentially, a collaborative approach from both State and commercial motor vehicle specialists is needed. The chart below highlights some of the differences in manner of collision between CMV and Non-CMV (passenger car) crashes.

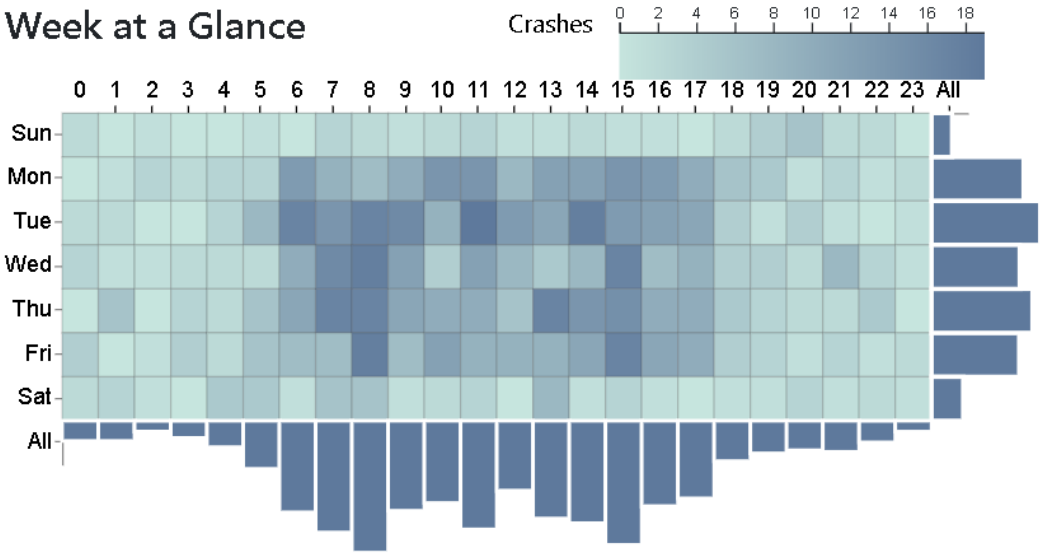


As illustrated in the chart above, CMV involved crashes are over-represented in sideswipe manner of collisions, whereas there is a significantly smaller portion of single vehicle crashes involving CMV vehicles. Specifically examining higher injury severity crashes, CMV involved crashes are more likely to include a rear-end manner of collision, as seen below. Comparatively different than above, this indicates that rear-end crashes involving CMVs result in worse injuries than typical non-CMV crashes of the same manner of collision.



Utilizing a newly developed data tool, crashes were examined by time of day and day of week for 2018. Using data visualization, peak CMV crash periods were identified, consisting of 6:00-8:59am and 1:00-4:59pm. Tuesdays and Thursdays were days when a CMV crash most frequently occurred. Through a cross comparison, the specific day and time combination of Tuesday 11:00-11:59am was the highest represented.

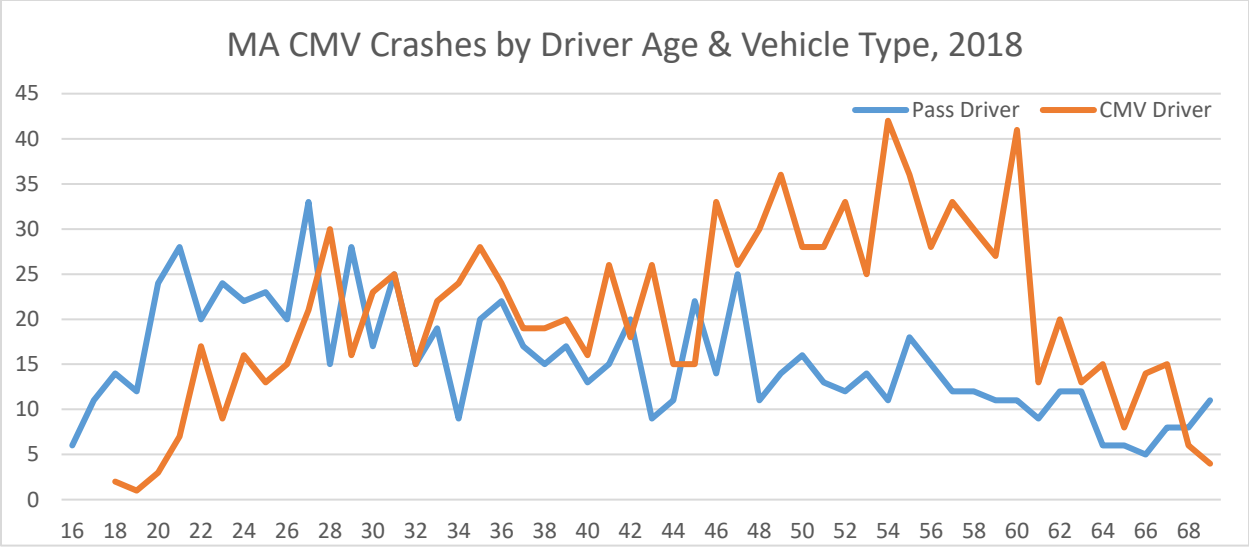
Massachusetts CMV Crashes by Day of Week and Hour of Day, 2018



Driver Attribute Examination

Efforts to reduce CMV crashes by driver training goes far beyond the driver of the CMV. Often, it is the driver of the non-CMV vehicle who is at fault due to their lack of experience or awareness of larger vehicles on the roadway. Attention must be paid to both CMV and non-CMV drivers, as each group's contributing factors differ significantly. In order to account for these disparities in behavior, the tactics to address each driver group will likely differ as well.

Confirming the age disparity of drivers in crashes, CMV drivers in crashes are more likely to be in the age range of 36-64. As expected, drivers of passenger vehicles involved in CMV crashes under 28 years of age experience a higher occurrence of crashes than those of older drivers, mirroring trends in non-CMV crashes as well.



As expected, when examining the contributing codes associated with drivers in CMV-involved crashes, the rate of those 'at fault' is significantly higher (at 41%) for drivers of passenger cars involved. In contrast, only 31% of CMV drivers involved in a crash were indicated as being 'at fault.' It is particularly interesting to note the over-representation of passenger car drivers with 'failed to yield right of way' indicated in CMV crash scenarios.

Contributing Code of Drivers in CMV Crashes by Vehicle Type, 2018

Driver Contributing Code	Pass Driver	CMV Driver
No improper driving	45.5%	55.1%
Unknown	13.3%	13.5%
Inattention	7.2%	5.6%
Failed to yield right of way	6.4%	3.4%
Followed too closely	4.6%	5.1%
Failure to keep in proper lane or running off road	4.6%	2.7%
Other improper action	3.8%	3.9%
Driving too fast for conditions	2.9%	2.1%
Operating vehicle in erratic manner	2.2%	1.0%
Disregarded traffic signs, signals, road markings	2.1%	2.1%
Made an improper turn	1.5%	1.1%
Distracted	1.1%	0.6%
Fatigued/asleep	0.9%	0.7%
Glare	0.9%	0.2%
Swerving or avoiding	0.7%	0.7%
Exceeded authorized speed limit	0.7%	0.6%
Over-correcting/over-steering	0.5%	0.5%
Visibility obstructed	0.4%	0.9%
Wrong side or wrong way	0.4%	0.2%
Physical impairment	0.4%	0.1%

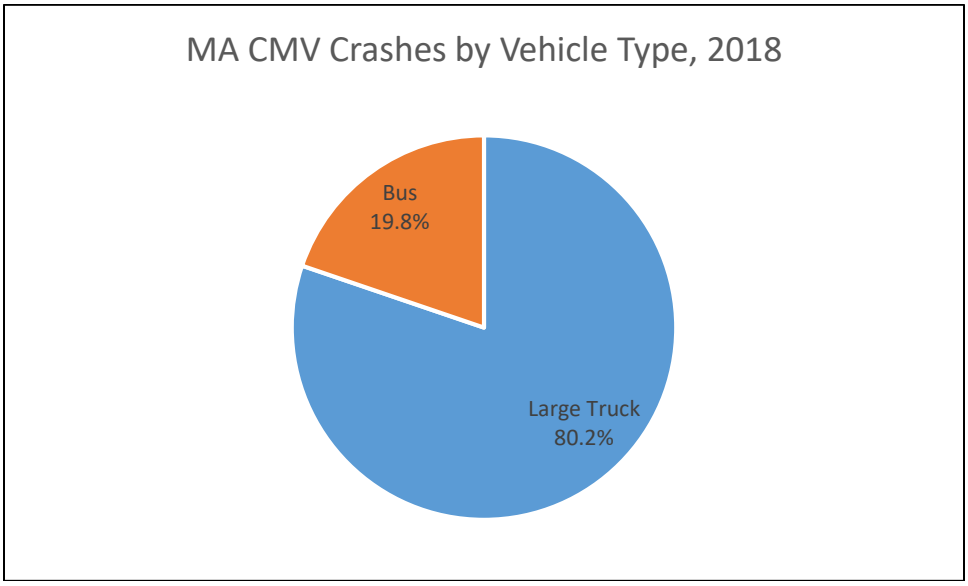
In Massachusetts CMV crashes, violations and associated citations issued to drivers in 2017 and 2018 were examined to find the highest occurring offenses. As seen in the table below, lane violations were the highest occurring offense with 124 issued.

Massachusetts CMV Driver Moving Violations in Crashes, 2017-2018

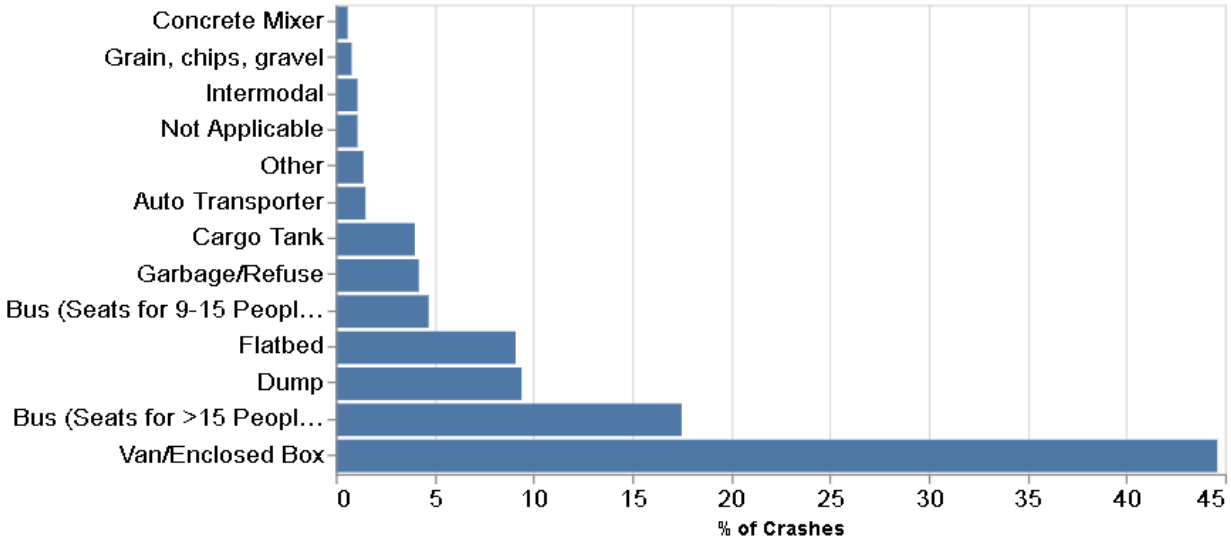
Rank	Description of Offense
1	LANE VIOLATION
2	ST HWAY TRAFFIC VIOL
3	LEAVE SCENE PROP DAM
4	DRIVING TO ENDANGER
5	MINOR TRAFFIC
6	OPERATOR UNLICENSED
7	SPEEDING
8	LICENSE SUSPENDED
9	FAILURE TO STOP
10	RT OF WAY INTERSECTN

Vehicle Attribute Examination

Using the SafetyNet definition of a CMV, the distribution of CMV crashes by vehicle type was 80.2% large trucks and 19.8% buses. Furthermore, the cargo body type was included to indicate that van and enclosed box types were the CMVs most frequently involved in Massachusetts crashes.



MA CMV Crashes by Cargo Body Type, 2018



Crash Location Examination

Utilizing linked roadway inventory data, all SafetyNet reportable crashes were quantified for 2018 to determine the Massachusetts roadways with the highest number of crashes. Although these occurrences can also likely be attributed to typical traffic volume, enforcement efforts can be made accordingly.

Table: Massachusetts Top 5 CMV Crash Count Roadways, 2018

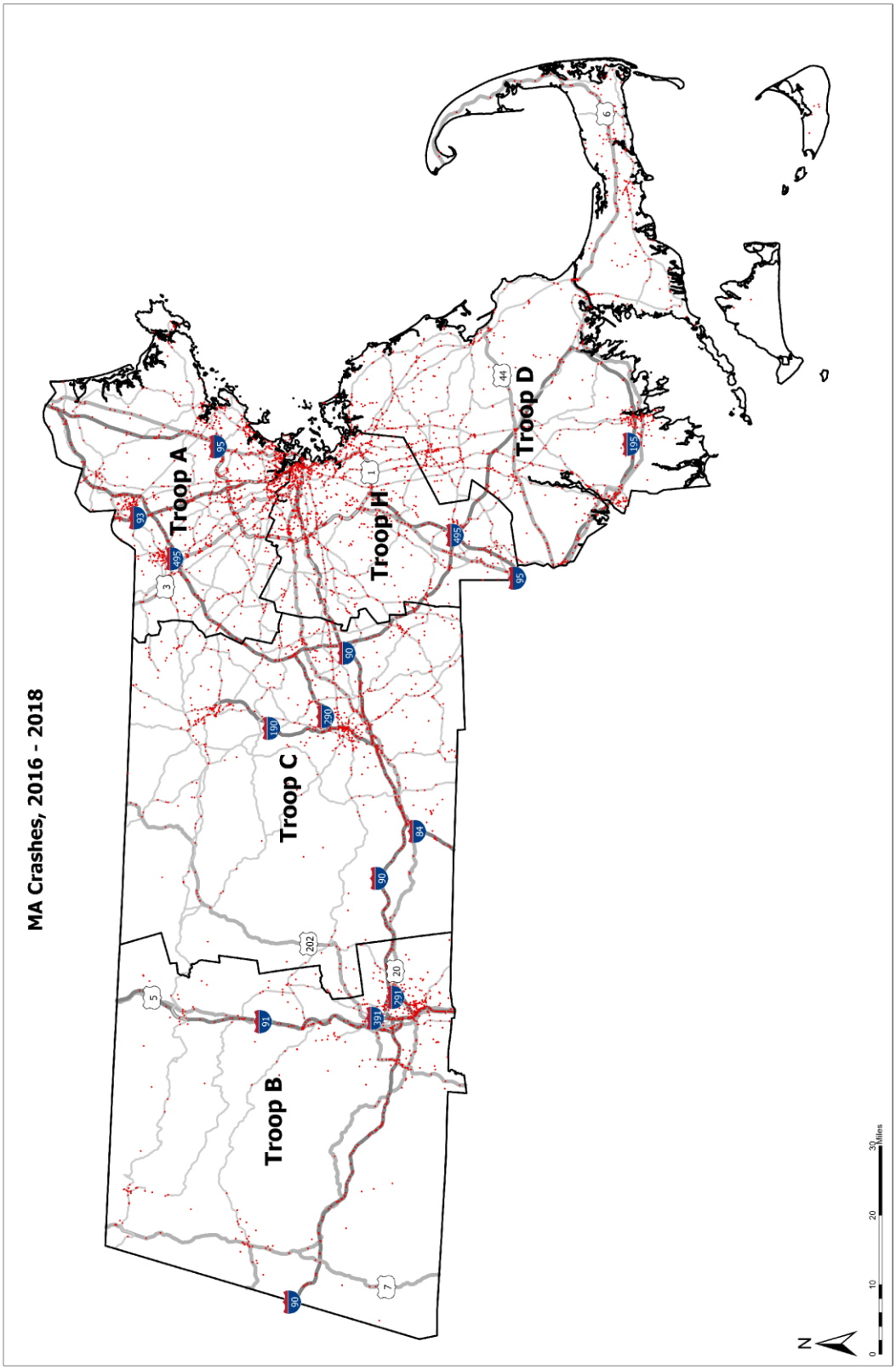
Route	Count
I-495	70
I-95	39
SR-24	22
I-290	13
SR-3	12

High crash corridors were studied in order to identify and target specific locations for specialized enforcement efforts. This analysis was only conducted on major roadways, including interstates, U.S. highways and numbered State routes. A custom tool was developed to identify the most significant crash corridors at varying levels of comparison. Crash corridors at both the Troop and State level are identified. Tables accompany each map to provide an enforcement target list identifying the corridors by mile marker, along with the number of crashes that occurred in the most recent three-year time period.

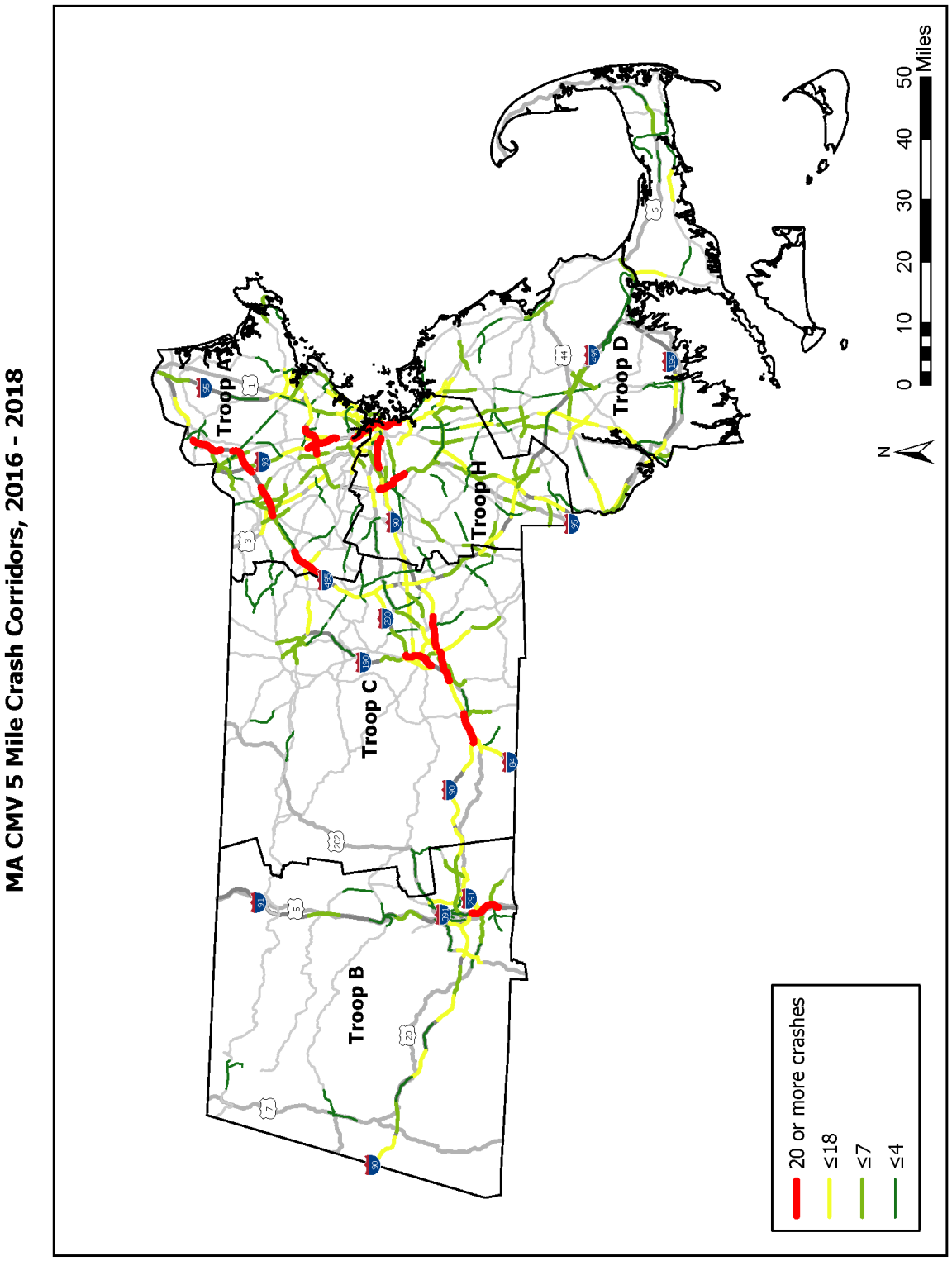
Massachusetts Ranked 5-Mile CMV Crash Corridors, 2016-2018

Crashes	Route	Between Mileposts	Troop	Barrack
42	I-495	88 - 93	Troop A	A-3/A-1
34	I-91	3 - 8	Troop B	B-6/B-3
32	I-90	89 - 94	Troop C	C-5
30	I-93	17 - 22	Troop H	H-4
28	I-90	78 - 83	Troop C	C-5
25	I-93	25 - 30	Troop A	A-4
25	SR-128	8 - 13	Troop H	H-2/H-5
24	US-1	42 - 47	Troop H	H-4
23	I-495	96 - 101	Troop A	A-1
23	I-90	95 - 100	Troop C	C-2
22	I-495	76 - 81	Troop A	A-3
22	I-495	103 - 108	Troop A	A-1/A-2
21	I-290	3 - 8	Troop C	C-6
21	I-90	127 - 132	Troop H	H-5/H-4
19	I-90	106 - 111	Troop C	C-2
19	SR-128	14 - 19	Troop H	H-5/A-3
15	I-90	40 - 45	Troop B	B-3
14	SR-24	15 - 20	Troop D	D-4
12	US-20	67 - 72	Troop B	B-3
12	I-90	28 - 33	Troop B	B-5
12	SR-3	36 - 41	Troop D	D-1
11	I-90	17 - 22	Troop B	B-1
11	I-195	10 - 15	Troop D	D-3
10	I-195	21 - 26	Troop D	D-3
9	I-195	0 - 5	Troop D	D-4
9	SR-53	17 - 22	Troop D	D-1
9	SR-28	58 - 63	Troop D	D-7

Massachusetts CMV Crash Locations, 2016-2018



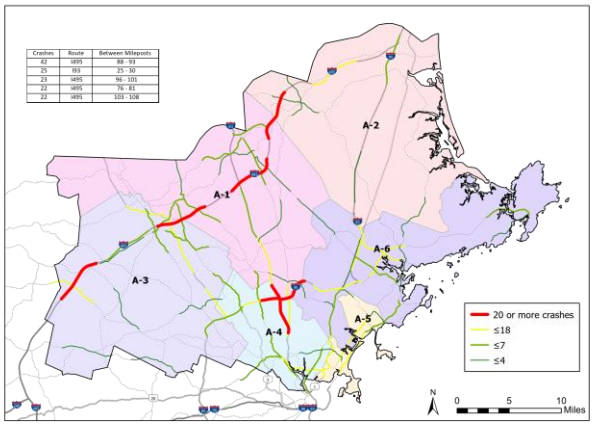
Massachusetts CMV 5-Mile Crash Corridors, 2016-2018



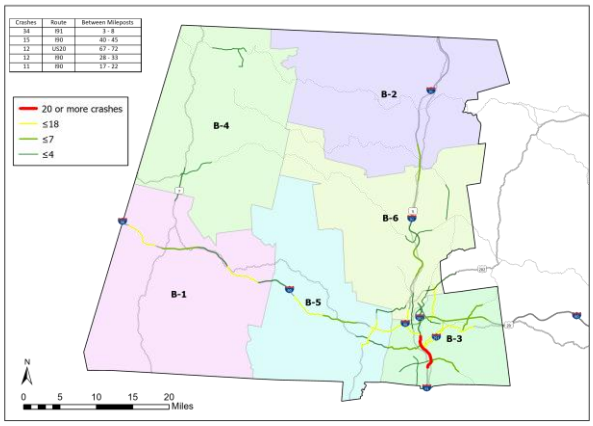
CMV Crash Corridors by Troop

In addition to examining the top statewide crash corridors, Massachusetts State Police (MSP) Troops were each analyzed by count of CMV crashes. The top five crash corridors were determined within each troop in order to effectively target enforcement efforts in each region. Additionally, problem areas which aren't included on the tables due to a smaller crash count can still be visually identified in order to develop patrol routes and direct other programing initiatives.

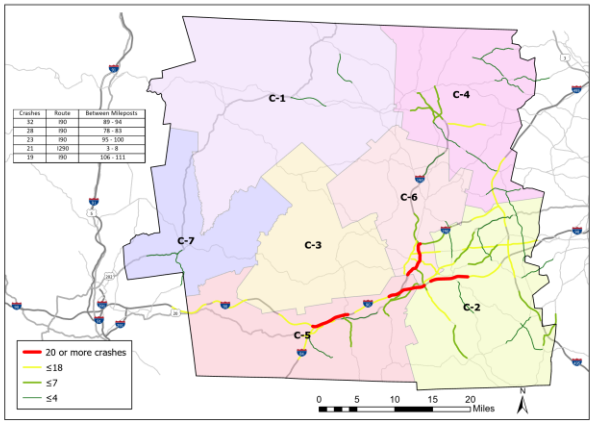
MA Troop A CMV Crash Corridors, 2016 - 2018



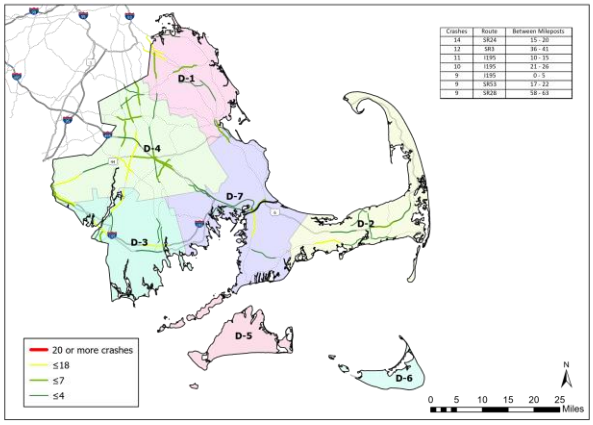
MA Troop B CMV Crash Corridors, 2016 - 2018



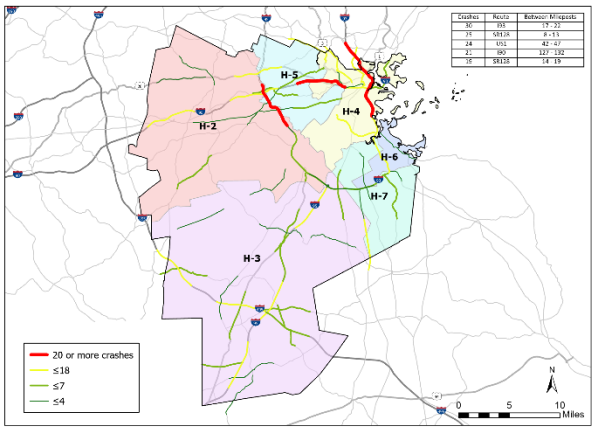
MA Troop C CMV Crash Corridors, 2016 - 2018



MA Troop D CMV Crash Corridors, 2016 - 2018



MA Troop H CMV Crash Corridors, 2016 - 2018



These maps and identified corridors are based on data collected from the location section of the Commonwealth of Massachusetts Motor Vehicle Crash Police Report. Only crashes that were able to be located by the Massachusetts Department of Transportation (MassDOT) are presented on this map. Caution should be used when reviewing crash location data as many crash locations (especially those located at or near an exit, highway interchange, rotary, etc.) are only approximate, depending on the quality of the source crash location data, and dependent on the quality of the source crash location data.

Troop A Rank	Barrack	Roadway	Mile Marker	Crash Count
1	A-3/A-1	I-495	88 - 93	42
2	A-4	I-93	25 - 30	25
3	A-1	I-495	96 - 101	23
4	A-3	I-495	76 - 81	22
5	A-1/A-2	I-495	103 - 108	22

Troop B Rank	Barrack	Roadway	Mile Marker	Crash Count
1	B-6/B-3	I-91	3 - 8	34
2	B-3	I-90	40 - 45	15
3	B-3	US-20	67 - 72	12
4	B-5	I-90	28 - 33	12
5	B-1	I-90	17 - 22	11

Troop C Rank	Barrack	Roadway	Mile Marker	Crash Count
1	C-5	I-90	89 - 94	32
2	C-5	I-90	78 - 83	28
3	C-2	I-90	95 - 100	23
4	C-6	I-290	3 - 8	21
5	C-2	I-90	106 - 111	19

Troop D Rank	Barrack	Roadway	Mile Marker	Crash Count
1	D-4	SR-24	15 - 20	14
2	D-1	SR-3	36 - 41	12
3	D-3	I-195	10 - 15	11
4	D-3	I-195	21 - 26	10
5	D-4	I-195	0 - 5	9
6	D-1	SR-53	17 - 22	9
7	D-7	SR-28	58 - 63	9

Troop H Rank	Barrack	Roadway	Mile Marker	Crash Count
1	H-4	I-93	17 - 22	30
2	H-2/H-5	SR-128	8 - 13	25
3	H-4	US-1	42 - 47	24
4	H-5/H-4	I-90	127 - 132	21
5	H-5/A-3	SR-128	14 - 19	19

Massachusetts Turnpike Crash Data Analysis

When examining the I-90 Massachusetts Turnpike, CMV crashes were significantly over-represented compared to the state as a whole, at 9.4% and 3.7% respectively. Additionally, the fatality rate was 6 times higher for CMV crashes than CMV crashes elsewhere in the state. Additionally the rate of incapacitating and non-incapacitating injuries in CMV I-90 crashes were more than 2.5 times higher than statewide CMV crashes. This problem may be worsening due to the elimination of tollbooths and the increase of average traveling speed on this roadway.

CMV Crashes by Severity, I-90 vs Statewide, 2016-2018

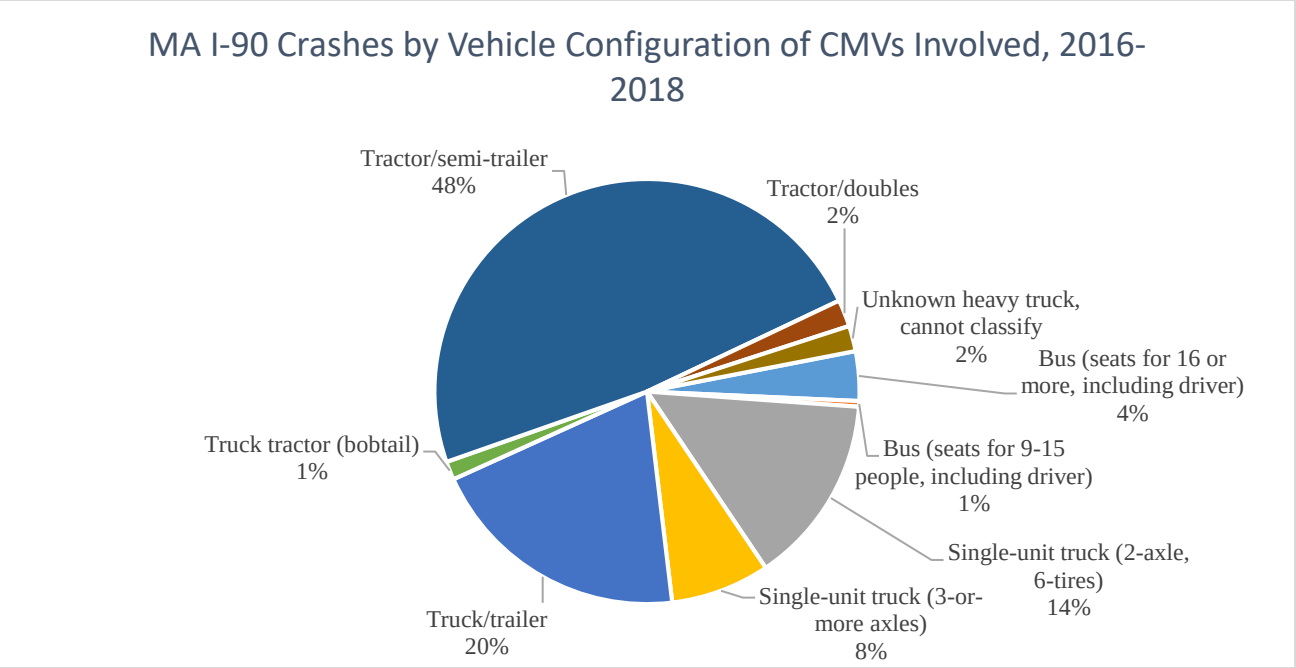
CMV Crash Severity	**I-90**	**Statewide**
Fatality	0.6%	0.1%
Incapacitating Injury	1.7%	0.5%
Non-Incapacitating Injury	9.6%	3.5%
Possible Injury	4.4%	4.0%
Towaway	68.1%	74.2%
Unknown	15.6%	17.7%

CMV crashes occurring on I-90 involved more than one CMV vehicle 11% of the time, which is nearly double the statewide rate of 6%. In this crash corridor, which has been determined to have an increased risk for CMV to CMV conflict, the risk of resulting injuries and damage are exponentially more significant. Interestingly, passenger carriers are less likely to be involved in I-90 crashes.

Vehicle Type in All MA Crashes compared to I-90 Crashes, 2016-2018

Vehicle Type	I-90	Statewide
Passenger Vehicles	90.2%	95.6%
Passenger Carrier Vehicles	0.4%	0.7%
Large Trucks	9.4%	3.7%
Other/Unknown	1.2%	2.0%

It is worth noting that, when examining the vehicle configuration of those CMVs involved in I-90 crashes, 48% of these vehicles involved a tractor/semi-trailer, which is more than double the frequency of this vehicle type statewide. The vehicle configurations which are most underrepresented are both bus types including ‘seats for 16 or more, including driver’ and ‘seats for 9-15 people, including driver’, consistent with the findings reflected in the above table.

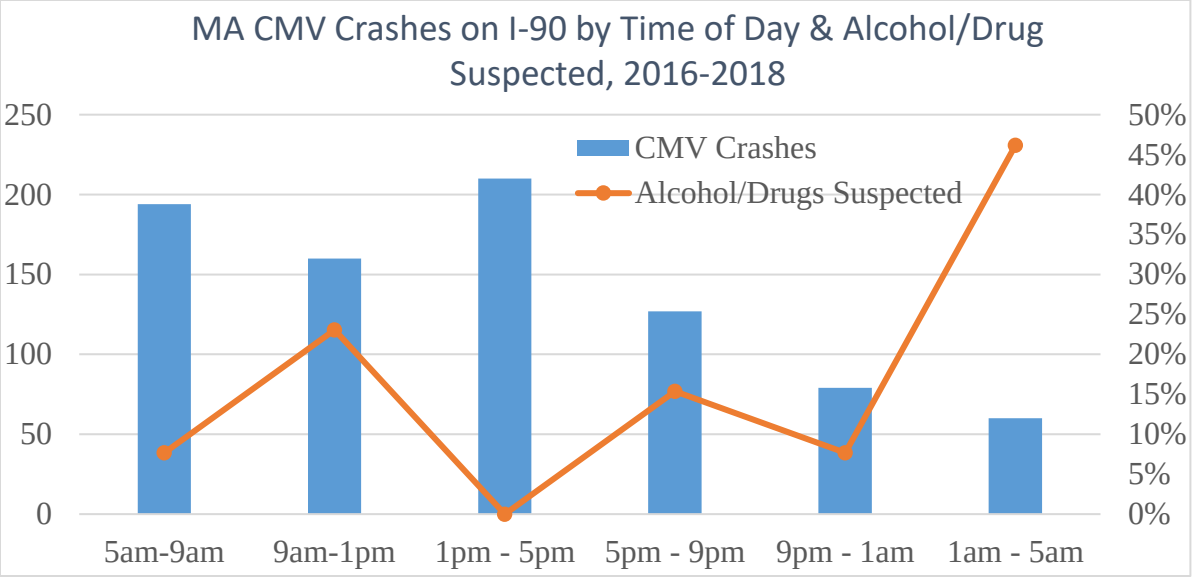


CMVs are involved in a significant number of reported work zone crashes. On I-90 specifically, the frequency for CMVs involved in work zone crashes was more than double that of non-CMVs, at 7% and 3% respectively. See additional problem statement for statewide analysis on work zone crashes.

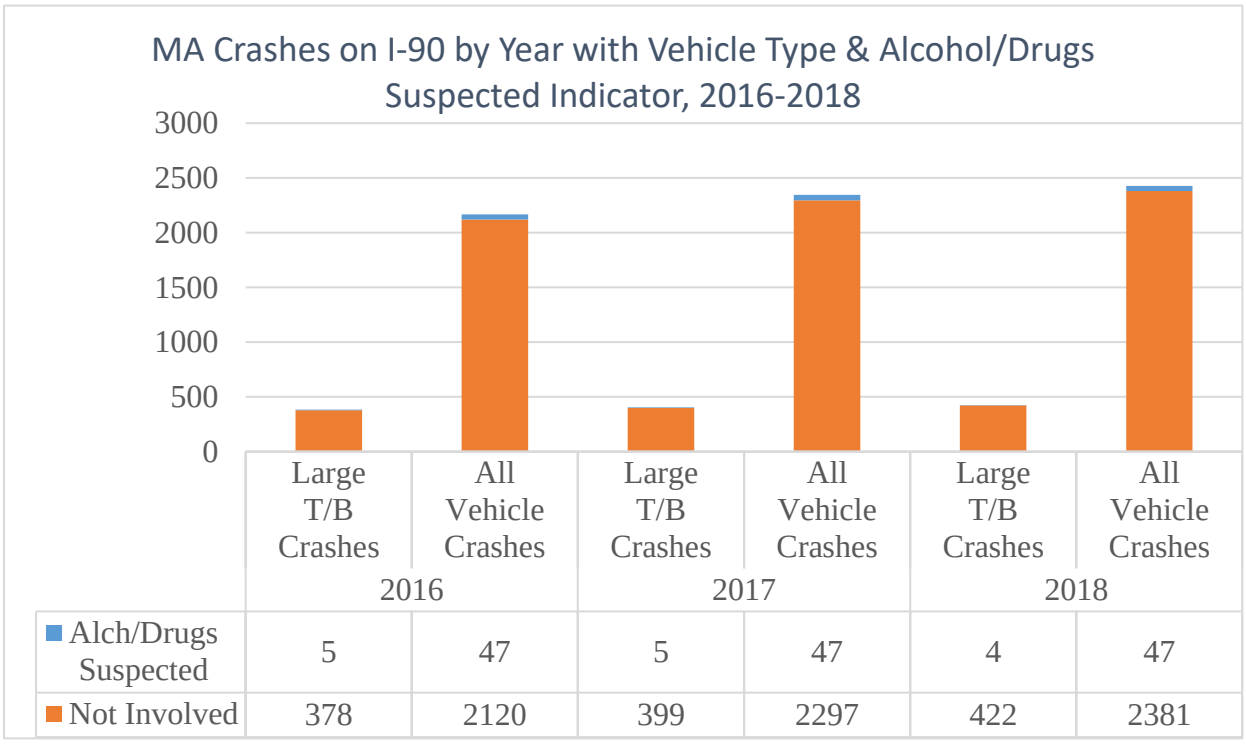
I-90 Reported Work Zone Crashes by CMV Involvement (2015-2018)

	Work Zone		Non-Work Zone	
CMV	98	7%	1452	93%
Non-CMV	225	3%	7725	97%

The time period with the highest rate of occurrence for crashes involving CMVs on I-90 was from 1pm to 5pm, followed closely by 5am to 9am. Additionally, there were times when CMV crashes were underrepresented, most significantly between 1am to 5am, as well as 9pm to 1am. A plausible explanation for this is that CMV travel is more likely during traditional business hours. Interestingly, although the percent of CMV crashes with reported alcohol/drug involvement is low (due to reporting issues), it is appreciably higher during the period with the lowest CMV overall crash rate, the 1am to 5am period.



The presence of drugs/alcohol are a widespread issue for both CMV and passenger vehicle travel on I-90. The specific instances of crash indicators acknowledging suspected alcohol or drug use are shown below. It is, however, worth noting that these numbers are extremely underrepresented due to being sourced from new fields on the crash report form, as well as a known hesitancy to indicate the suspicion while reporting.



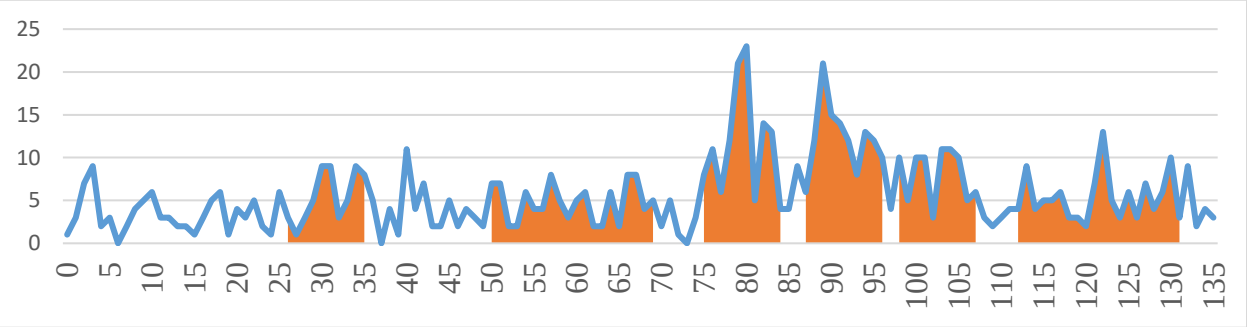
I-90 Crash Location Analysis

The table and chart below illustrate the top CMV crash corridors on I-90 by mile marker for 2015 through 2018. The areas of mile marker 87.00 to 96.00 and mile marker 75.00 to 84.99 have the largest number of crashes involving CMVs.

Top CMV Crash Corridors on I-90 by Mile marker (2015-2018)

Rank	Begin	End	Crash Count
1	87.00	96.99	123
2	75.00	84.99	117
3	98.00	107.99	81
4	122.00	131.99	60
5	26.00	35.99	55
6	50.00	59.99	48
6	60.00	69.99	48
6	112.00	121.99	48

CMV Crashes on I-90 by Mile marker, 2015-2018



The top CMV crash corridors on I-90 are identified in the highlighted orange sections above.

MA FY 2020 CVSP CMV Crash Reduction Problem Statement – Data Source

Unless otherwise noted, data was sourced for this document using the UMassSafe Highway Safety Data Warehouse in June of 2019. Data is created with a linkage analysis between the Registry of Motor Vehicles Crash Data System and SafetyNet export from the Massachusetts State Police. All data shown in figures/tables are representative of crashes reported by State and local police in SafetyNet as of June 1, 2019. It should be noted that crash data for 2018 & 2019 is not yet closed and therefore preliminary.

Additionally, when utilizing location information for troop/barrack or roadway specific, it should be noted that not all crashes are geolocated or have the associated location-specific data available and therefore any inferences made are based on the limited selection sample.

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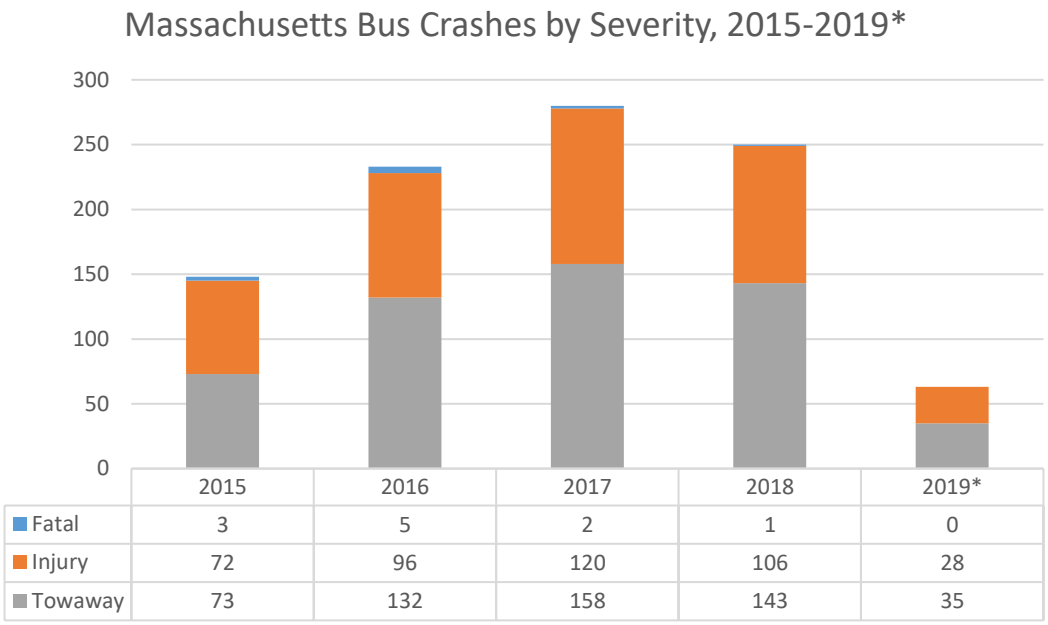
MA FY 2020 CVSP Passenger Carrier Problem Statement

The number of Massachusetts crashes involving passenger carriers (all bus types as defined by SafetyNet) declined from 2017 to 2018. As shown in the chart below, all crash types (fatal, injury, and towaway) were marked with reductions, with notably only one fatality in 2018. Preliminarily, the first quarter of 2019 seems to be on a similar trajectory, although it is too soon to make observations.



*Data Source: FMCSA Motor Carrier Management Information System (MCMIS) data snapshot as of 06/28/2019, including crash records through 02/28/2019. MCMIS data are considered preliminary for 22 months to allow for changes. *2019 is currently depicted with 3 months of data.*

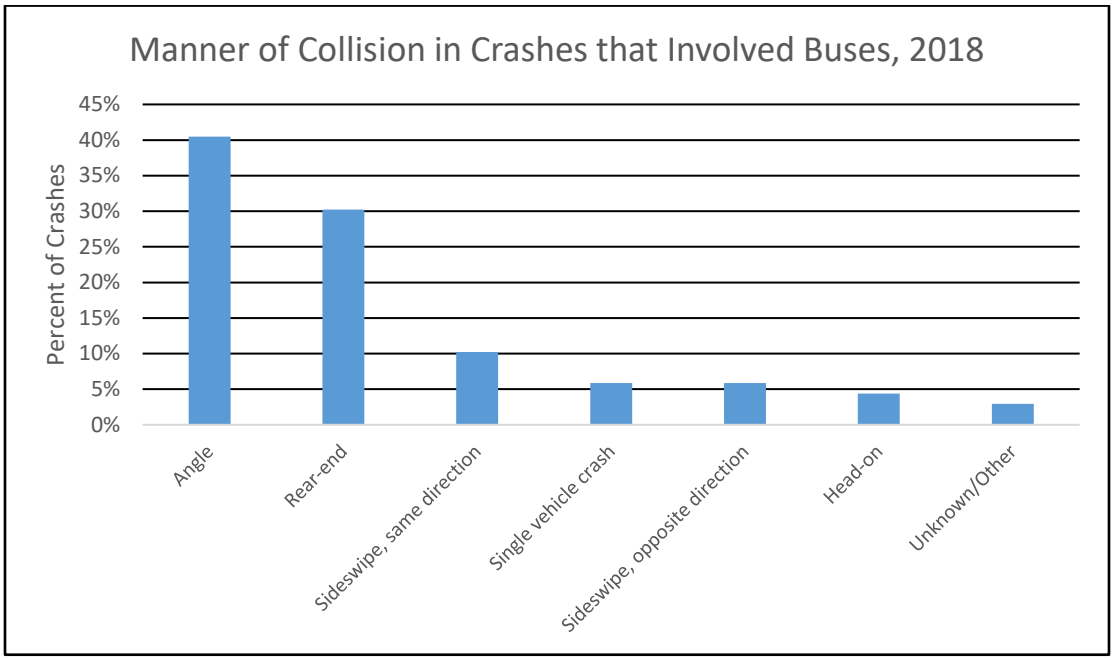
To further reduce the number of crashes involving passenger carriers, UMassSafe examined those crashes by MSP Troop. As outlined below, in 2018 Troops D and H had the largest number of crashes involving buses, followed by Troops A and C with the same percent of crashes involving buses.

Percent of Massachusetts Crashes Involving a Bus, by Troop & Calendar Year, 2015-2018

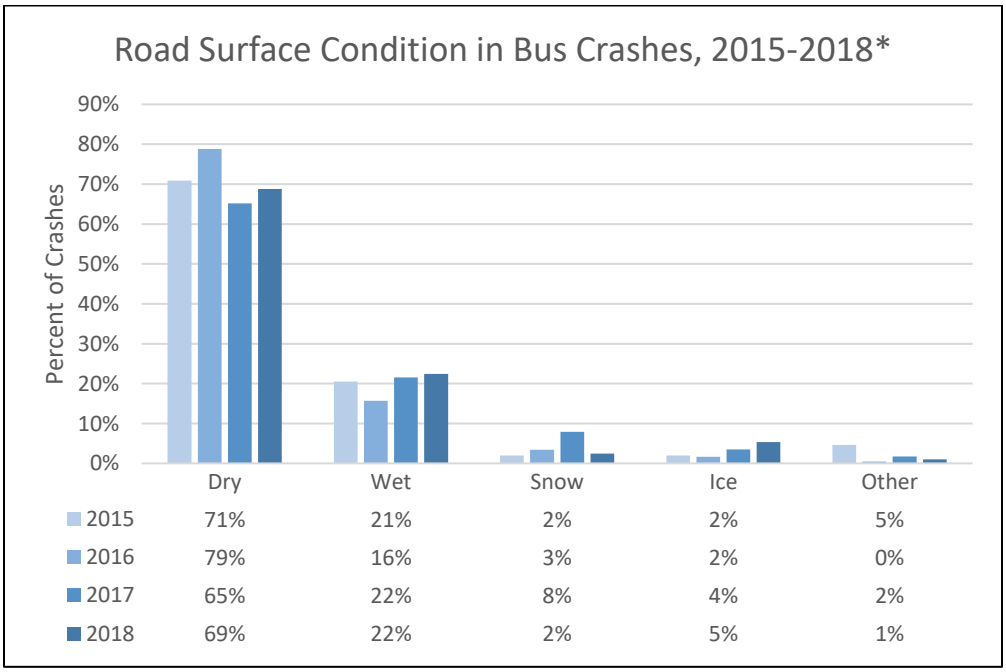
MSP Troop	2015	2016	2017	2018
A	21%	28%	24%	20%
B	11%	17%	17%	15%
C	11%	14%	15%	20%
D	23%	18%	26%	24%
H	33%	24%	19%	21%

Crash Attribute Examination

The manner of collision in all 2018 crashes that involved passenger carriers was examined. As seen in the chart below, the highest percentage of bus crashes were angle crashes at 40%, followed by rear-end crashes at 30%.

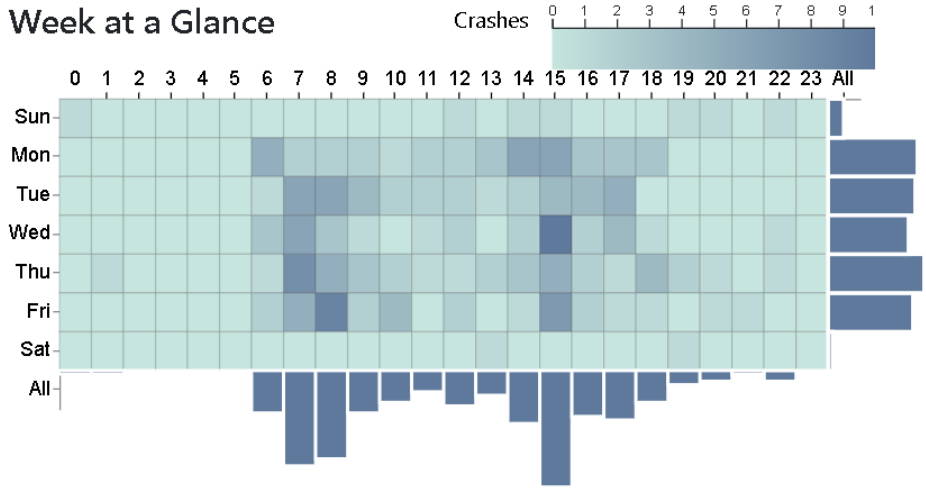


In an effort to identify crash trends relative to weather, the proportion of road surface conditions (including dry, wet, snow, ice, and other) were graphed over time. In 2018, bus crashes during inclement weather were marginally reduced. However, specific incidences reported in snow conditions dropped from 8% in 2017 to 2% in 2018.



Utilizing a newly developed data tool, passenger carrier crashes were examined by time of day and day of week for 2018. Using data visualization, peak periods were identified, consisting of 7:00-8:59am and 3:00-3:59pm. As expected, all weekdays had a similar number of crashes.

Massachusetts Passenger Carrier Crashes by Day of Week and Hour of Day, 2018



Driver/Carrier Attribute Examination

The driver contributing code (DCC) indicated by police completing bus-involved crash reports were examined for both the bus driver and passenger vehicle driver (when applicable). As shown in the table below, no contributing code was noted for the bus driver in two-thirds of bus crashes, whereas this was the case for 44% of passenger vehicle drivers. In the instances where a DCC was noted for the bus driver, failure to yield right of way was noted 7% of the time, while following too closely was noted in 6% of the crashes and inattention was noted 3% of the time. However, for passenger vehicle drivers, failure to yield right of way and inattention were each noted in 8% of cases, and following too closely was noted 5% of the time.

Contributing Code of Drivers Involved in Bus Crashes by Vehicle Type, 2018

Driver Contributing Code	Bus Driver	Pass Driver
No improper driving	66%	44%
Inattention	3%	8%
Failed to yield right of way	7%	8%
Not reported	2%	8%
Followed too closely	6%	5%
Other improper action	1%	4%
Failure to keep in proper lane or running off road	1%	4%
Driving too fast for conditions	0%	3%
Disregarded traffic signs, signals, road markings	1%	3%
Operating vehicle in erratic, reckless, careless, negligent or aggressive manner	0%	1%
Made an improper turn	2%	1%
Fatigued/asleep	0%	1%
Distracted	1%	1%

Visibility obstructed	1%	1%
Exceeded authorized speed limit	0%	1%
Glare	0%	1%
Over-correcting/over-steering	0%	1%
Physical impairment	0%	1%
Swerving or avoiding due to wind, slippery surface, vehicle, object, non-motorist in roadway, etc.	1%	1%
Operating defective equipment	0%	0%
Wrong side or wrong way	0%	0%
Illness	0%	0%
Reported but invalid	0%	0%
Unknown	8%	4%

When examining characteristics of crashes where the bus driver had contributing codes indicated, it was interesting to note the most common Carriers, as shown below. Most notably, NRT BUS INC comprised a significantly high count of crashes in 2018. Additionally, the type of offenses cited when a violation was issued to the bus driver was ranked by most common, with lane violations occurring most often.

Top Carriers with Contributing Factors

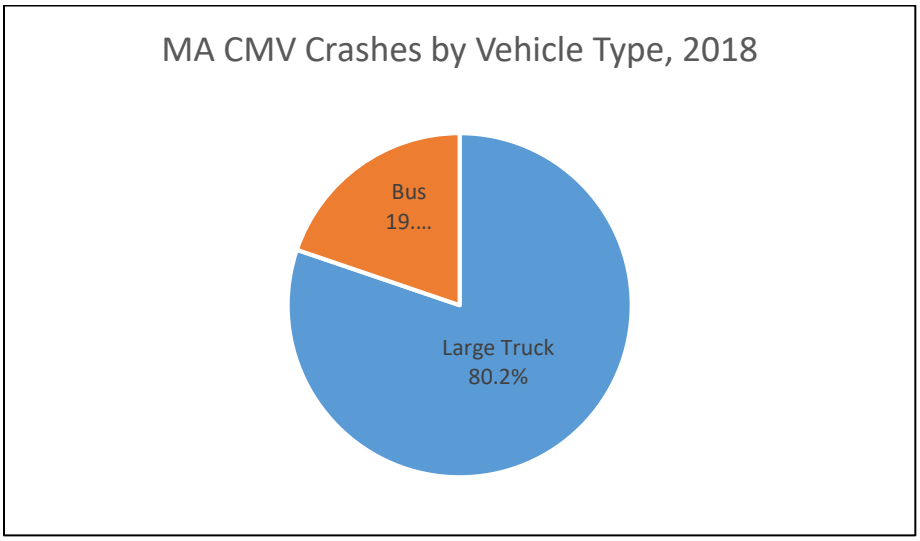
Carrier	Count
NRT BUS INC	9
M B T A	5
FIRST STUDENT INC	4
PIONEER VALLEY TRANSIT AUTHORITY	3
CITY OF BOSTON MVMB	3

Massachusetts CMV Driver Moving Violations in Crashes, 2017-2018

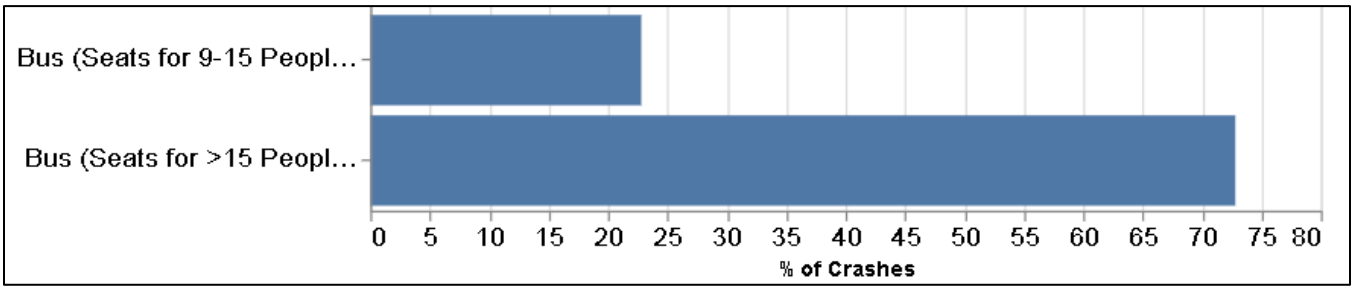
Rank	Description of Offense
1	LANE VIOLATION
2	ST HWAY TRAFFIC VIOL
3	LEAVE SCENE PROP DAM
4	DRIVING TO ENDANGER
5	MINOR TRAFFIC
6	OPERATOR UNLICENSED
7	SPEEDING
8	LICENSE SUSPENDED
9	FAILURE TO STOP
10	RT OF WAY INTERSECTN

Vehicle Attribute Examination

Using the SafetyNet definition of a CMV, the distribution of CMV crashes by vehicle type was 80.2% large trucks and 19.8% buses. Of these buses, 73% were designed with capacity greater than 15 seats, as opposed to a smaller portion of 7-14 seat style buses, as shown below.



MA Passenger Carrier Crashes by Cargo Body Type, 2018



Crash Location Examination

Utilizing linked roadway inventory data, all SafetyNet reportable passenger carrier crashes were quantified for 2018 to determine the Massachusetts roadways with the highest number of crashes. Although these occurrences can also likely be attributed to typical traffic volume, enforcement efforts can be planned accordingly.

Massachusetts Top 5 Passenger Carrier Crash Count Roadways, 2018

Route	Crash Count
I 93	5
I 90	5
SR 28	4
SR 2A	4
SR 31	3
SR 1A	3

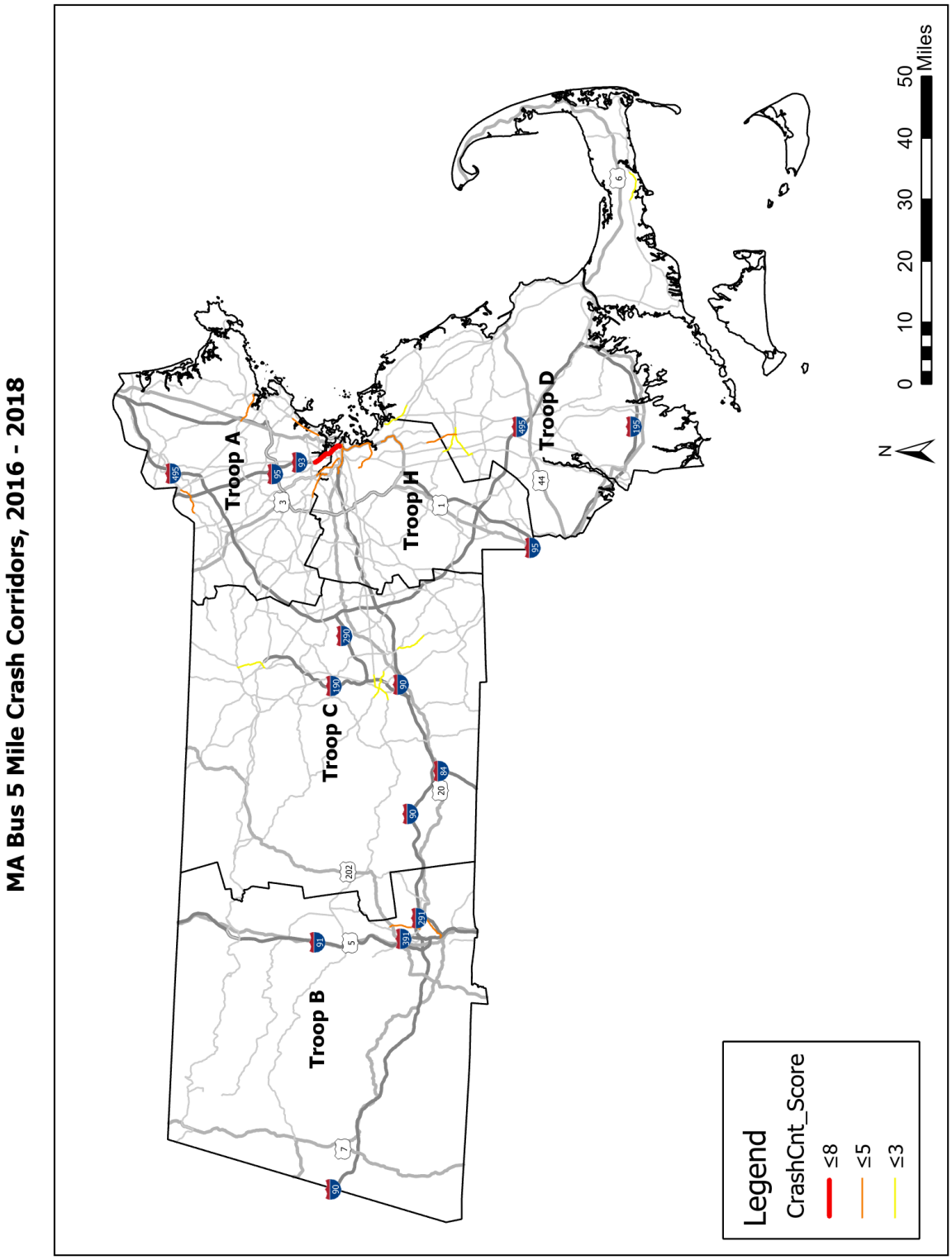
High crash corridors were studied in order to identify and target specific locations for specialized enforcement efforts. This analysis was only conducted on major roadways, including interstates, U.S. highways and numbered State routes. A custom tool was developed to identify the most significant crash corridors at varying levels of comparison. Crash corridors at the State level are identified in the table on the table below.

Massachusetts Ranked 5-Mile Passenger Carrier Crash Corridors, 2016-2018

Crashes	Route	Begin Milepost	End Milepost
8	I-93	17	22
5	I-90	130	135
5	SR-2A	103	108
4	SR-107	0	5
4	SR-113	24	29
4	SR-2	131	136
4	SR-203	0	5
4	SR-20A	0	5
4	SR-28	101	106
4	SR-33	0	5
4	SR-62	76	81
4	US-1	33	38
4	US-1	40	45
3	SR-122	14	19
3	SR-122	24	29
3	SR-123	20	25
3	SR-13	0	5
3	SR-27	17	22
3	SR-28	23	28
3	SR-53	17	22
3	SR-9	93	98

These maps and identified corridors are based on data collected from the location section of the Commonwealth of Massachusetts Motor Vehicle Crash Police Report. Only crashes that were able to be located by the Massachusetts Department of Transportation (MassDOT) are presented on this map. Caution should be used when reviewing crash location data as many crash locations (especially those located at or near an exit, highway interchange, rotary, etc.) are only approximate, depending on the quality of the source crash location data, and dependent on the quality of the source crash location data.

Massachusetts Passenger Carrier 5-Mile Crash Corridors, 2016-2018



Massachusetts Turnpike Passenger Carrier Crash Data Analysis

In this crash corridor, which has been determined to have an increased risk for injuries, it was determined that passenger carriers are less likely to be involved in I-90 crashes.

Vehicle Type in All MA Crashes compared to I-90 Crashes, 2016-2018

Vehicle Type	I-90	Statewide
Passenger Vehicles	90.2%	95.6%
Passenger Carrier Vehicles	0.4%	0.7%
Large Trucks	9.4%	3.7%
Other/Unknown	1.2%	2.0%

It is worth noting that, when examining the vehicle configuration of those CMVs involved in I-90 crashes, the vehicle configurations that were most underrepresented were both bus types, including 'seats for 16 or more, including driver' and 'seats for 9-15 people, including driver', consistent with the findings reflected in the above table.

MA FY 2020 CVSP CMV Passenger Carrier Problem Statement – Data Source

Unless otherwise noted, data was sourced for this document using the UMassSafe Highway Safety Data Warehouse in June of 2019. Data is created with a linkage analysis between the Registry of Motor Vehicles Crash Data System and SafetyNet export from the Massachusetts State Police. All data shown in figures/tables are representative of crashes reported by State and local police in SafetyNet as of June 1, 2019. It should be noted that crash data for 2018 & 2019 is not yet closed and therefore preliminary.

Additionally, when utilizing location information for troop/barrack or roadway specific, it should be noted that not all crashes are geolocated or have the associated location-specific data available and therefore any inferences made are based on the limited selection sample.

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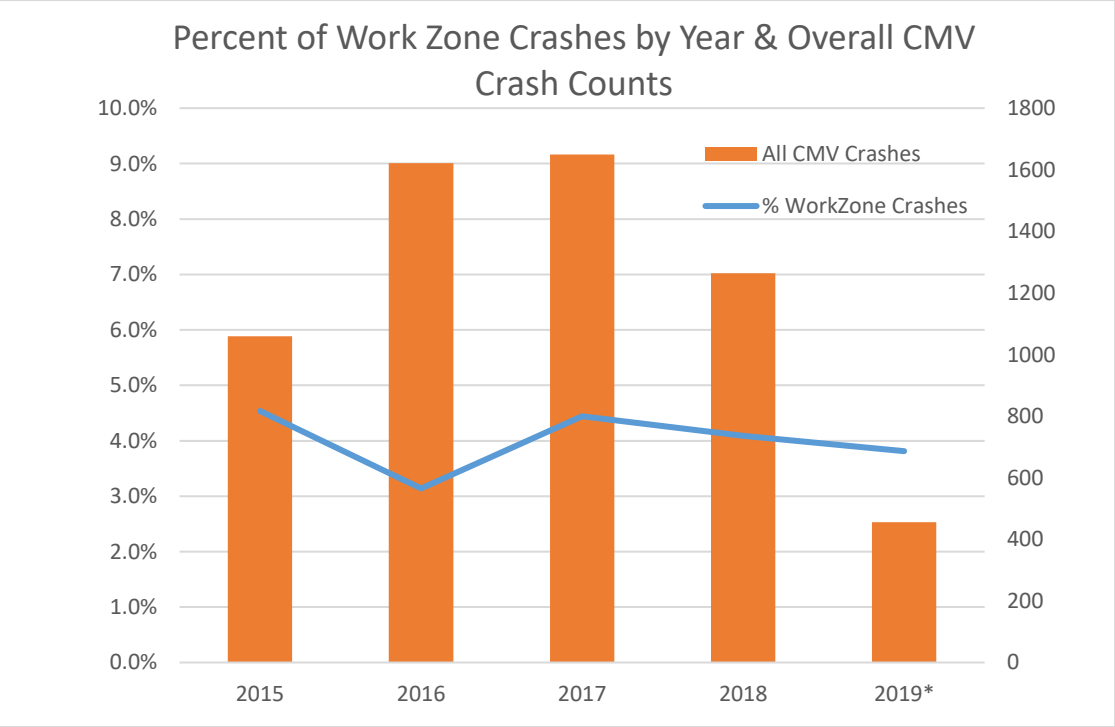
MA FY 2020 Work Zone Problem Statement

In Massachusetts, commercial motor vehicles (CMVs) have more than twice as many crashes in work zones as other motor vehicles. Of all 2018 crashes involving CMVs, 4.1% occurred in work zones, compared to the work zone crash rate of 1.8% for all vehicle types. A similar trend exists for 2019 crashes thus far, where CMV involved crashes are overrepresented in work zone crashes at 3.8%, compared to 2.7% of crashes with any vehicle type. Considering summer months have yet to be accounted for, this is too preliminary to draw conclusions.

Crashes involving CMVs and their relation to work zones were also examined over time. As seen in the chart below, the highest rate of CMV crashes related to work zones was 4.5% in 2015, with a secondary spike in 2017 at 4.4%. The rate and overall number of CMV crashes in Massachusetts seems to have declined in 2018. However, in 2019, the rate increased but only represents three months of data.



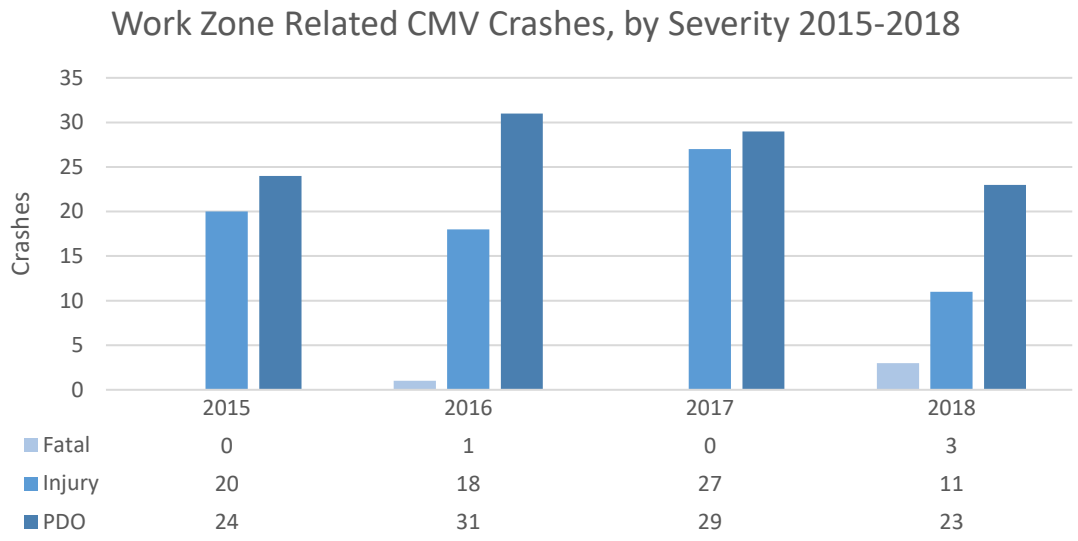
*Data Sources: Crash counts - FMCSA Motor Carrier Management Information System (MCMIS) data snapshot as of 06/28/2019, including crash records through 02/28/2019. MCMIS data are considered preliminary for 22 months to allow for changes. *2019 is currently depicted with 3 months of data. Work zone crash counts - UMassSafe Highway Safety Data Warehouse Snapshot as of 6/1/19.*

Work zone related CMV crashes were examined by Massachusetts State Police (MSP) Troop from 2015-2018. As outlined in the table below, Troops C and B had the largest percent of work zone related CMV crashes in 2018, followed by Troops H and D. Troop A had the smallest percent of work zone related crashes in 2018*.

Percent of Work Zone Related CMV Crashes, by Troop & Calendar Year 2015-2018

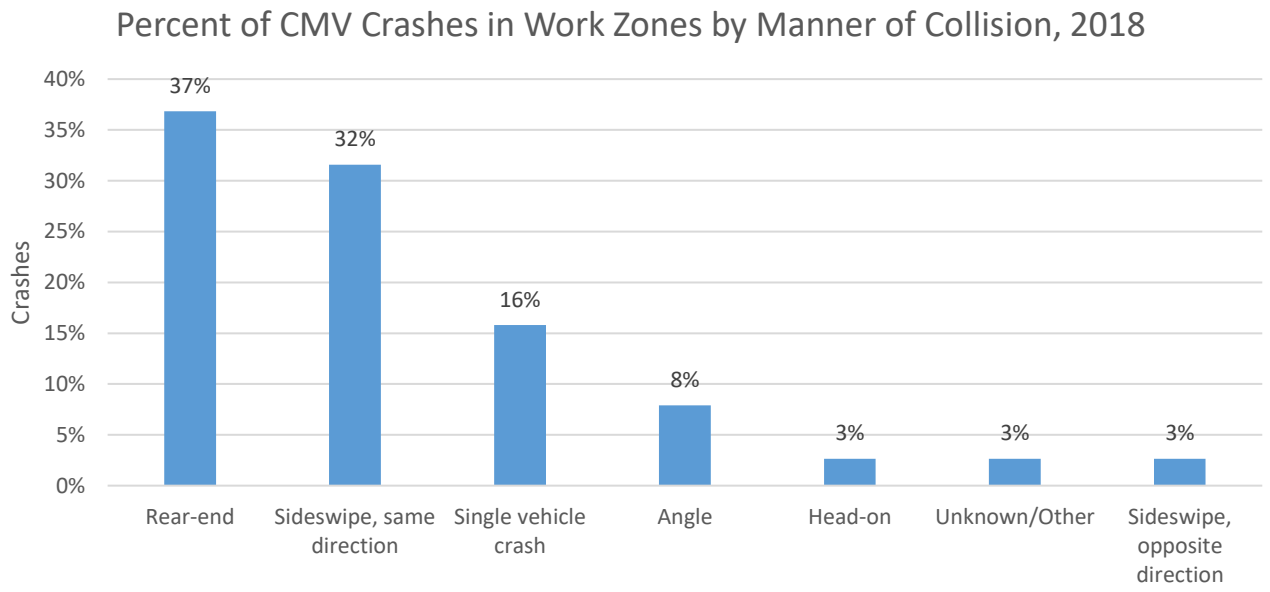
MSP Troop	2015	2016	2017	2018
A	37%	28%	25%	8%
B	13%	20%	25%	26%
C	9%	8%	17%	32%
D	24%	16%	10%	13%
H	17%	28%	22%	21%

The severity of Massachusetts CMV crashes in work zones was examined from 2015-2018. Both injury and towaway crash severity types declined in 2018, while fatal crashes increased with three total fatal crashes.

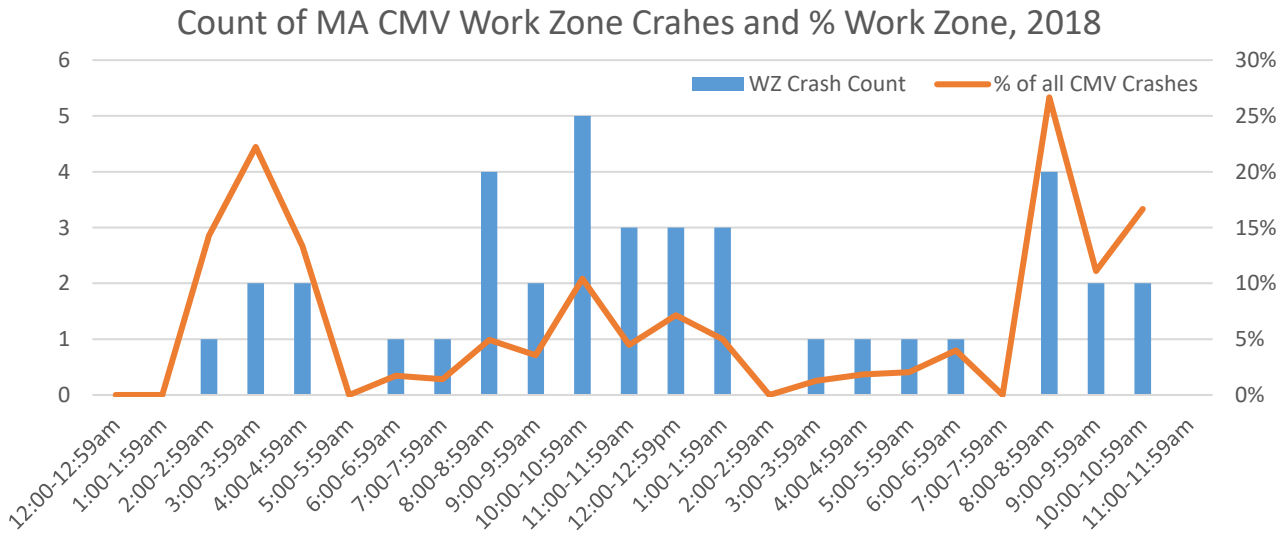


Crash Attribute Examination

The manner of collision for CMV crashes in work zones was examined for 2018. As shown in the chart below, most work zone related CMV crashes were rear-end crashes at 37%. Sideswipe, same direction crashes followed with 32% of crashes.

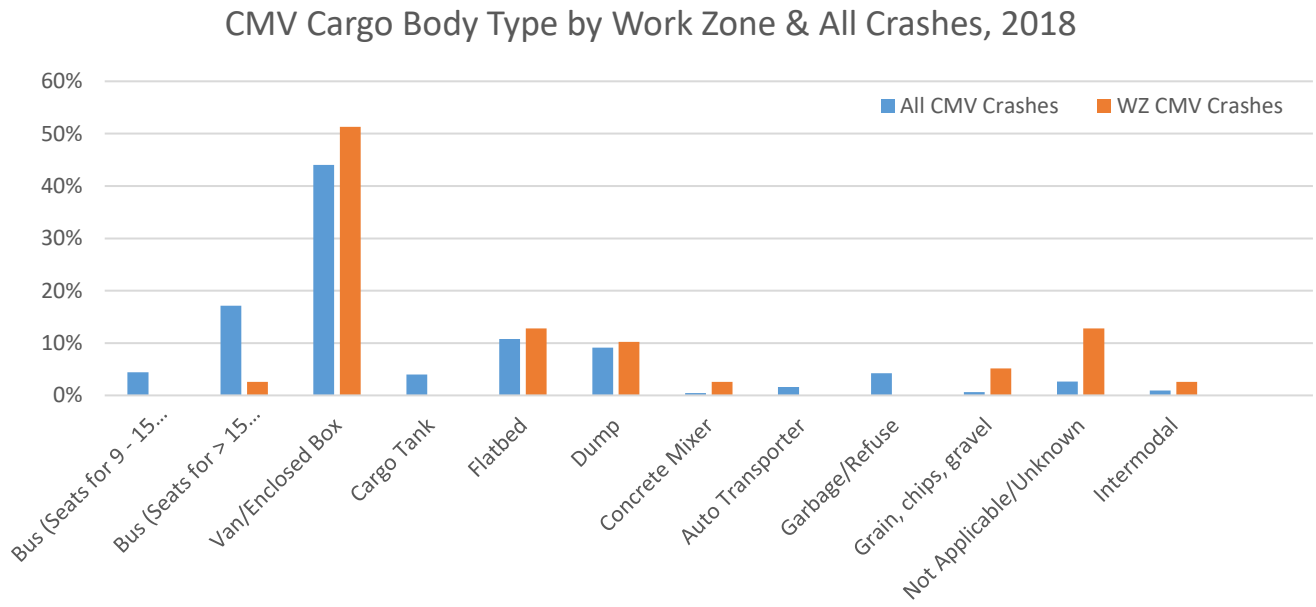


Examining CMV crashes occurring in work zones by time of day, the most frequent hour of crashes was revealed to be 10:00-10:59am. However, when normalizing based on the overall number of CMV crashes occurring at that hour, work zone crashes were specifically overrepresented in the evening (8pm-11pm) and early morning (2am-5am) hours, as indicated by the orange line below.



Vehicle Attribute Examination

Using the SafetyNet definition of a CMV, the distribution of CMV crashes in work zones by vehicle type was 97% large trucks and only 3% buses, compared to typical CMV involved crashes being comprised of more than 20% buses. Of these large trucks, there was a significantly higher proportion of concrete and gravel cargo body types as illustrated in the chart below.



Utilizing a deterministic linkage between Registry of Motor Vehicles citations and crash data, 30% of CMV work zone crashes were found to have an associated moving violation. Listed in the table below are the violations issued to any driver involved in a CMV involved work zone crash. Most notably, lane violation and speeding occurred the most.

CMV Driver Moving Violations in Work Zone Crashes, 2017-2018

Description of Offense	Chap Sec Sub	Num Crashes
LANE VIOLATION	89 4A	3
SPEEDING	90 17	3
ST HWAY TRAFFIC VIOL	720900 TV	2
FAIL TO KEEP RIGHT	89 1	1
LICENSE SUSPENDED	90 23 SU	1
NO CHILD RESTRAINT	90 7AA	1
OBSTRUCT EMERG VEH	89 7C	1
OPERATOR UNLICENSED	90 10	1
RT OF WAY INTERSECTN	89 8	1
SPEED-CONSTR ZONE	90 17 CZ	1
TPK-FL SIGNL STP-TRN	700709 FS	1
TPK-NEGL OPERATION	700709 NE	1
USING W/O AUTHORITY	90 24 WA	1

MA FY 2020 CVSP CMV Work Zone Problem Statement – Data Source

Unless otherwise noted, data was sourced for this document using the UMassSafe Highway Safety Data Warehouse in June of 2019. Data is created with a linkage analysis between the Registry of Motor Vehicles Crash Data System and SafetyNet export from the Massachusetts State Police. All data shown in figures/tables are representative of crashes reported by State and local police in SafetyNet as of June 1, 2019. It should be noted that crash data for 2018 & 2019 is not yet closed and therefore preliminary.

Additionally, when utilizing location information for troop/barrack or roadway specific, it should be noted that not all crashes are geolocated or have the associated location-specific data available and therefore any inferences made are based on the limited selection sample.