

Community Traffic Safety and Data Exchange Program Initiative

June 9, 2025



Community Traffic Safety and Data Exchange Program Initiative

Central Massachusetts Law Enforcement Council's (CEMLEC) Crash

Reconstruction Unit

- The CEMLEC Crash Reconstruction Unit is comprised of 18 Fully Certified Members, with 6 other members in the certification process, representing 20 departments.
- This team includes a Control Chief, Chief Nathan Hagglund, West Brookfield Police Department, along with Sergeants, a Corporal, and patrol officers.
- The fully certified officers each have approximately 375 hours or more of specialized training in the field of Crash Reconstruction.
- Our unit provides Crash Reconstruction services to 77 cities and towns in Worcester, Franklin, Hampton, Middlesex, and Norfolk counties, serving an approximate population of 1,022,500 residents.
- 91.38% of our 58 crashes in 2024 were severe bodily injury or fatal crashes, with 43.5% of the crashes being single vehicle crashes.

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CEMLEC's Crash Reconstruction Unit - Grant's and Services

- Our unit has a multifaceted approach utilizing grant funding such as the FFY 2025 Municipal Road Safety Grant to better protect our residents in the cities and towns where they live. The cities and town that we serve also pay a small fee to receive the services that CEMLEC provides. Our unit is able to utilize a small portion of this funding from CEMLEC to purchase equipment, software and training.
- The equipment, software and training that our unit utilizes on a regular basis is incredibly expensive and prohibitive for most communities to purchase, CEMLEC included.
- Expanding on our units training of Crash Reconstructionist. The initial training cost to be a certified Crash Reconstructionist is provided through the Massachusetts Municipal Police Training Committee (MPTC), but additional training must come from an officers department budget or out of the officer's own pocket.

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CEMLEC Crash Reconstruction Unit's Goal

- Our goal is to improve and capture crash data, specifically related to crashes involving serious bodily injuries and/ or fatal injury in motor vehicles and motorcycles.
- We are also interested in collecting such data for vulnerable roadway users such as pedestrians and bicyclist.
- Increase capturing data of near real-time crash data.
- Utilize this crash data to assist affected families bringing them closure, police department's bring charges against those responsible for a tragedy, and support the District Attorney's Office with a solid case.
- The increased crash data will enhance the ability of the Commonwealth to analyze trends in crash occurrences, rates, outcomes, and circumstances

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CEMLEC Crash Reconstruction Unit's Goal

- Increase our unit's ability to capture crash data by utilizing advanced technologies in capturing new and emerging technologies from vehicles that travel our roadways.
- Increase the accessibility, accuracy, completeness, integration timeliness and uniformity of the following six core traffic record data systems.
 - Crash Data System
 - Roadway Data System
 - Vehicle Registration Data System
 - Driver License/ History Data System
 - Injury Surveillance/ EMS Data System
 - Citation/ Adjudications Data System

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OGR/ NHTSA's 2018 Traffic Records Program Assessment Advisory **Overview - Goal #1**

Goal #1: Software and applications to identify, collect and report data to State and Local government agencies, and enter data into State core highway safety databases, including crash, citation or adjudication, driver, emergency medical services or injury surveillance systems, roadway, and vehicle data;

Our program initiative aims to utilize a multifaceted approach with the requested software and specialized equipments allowing our Crash Reconstruction Unit to greatly increase our ability to provide vital crash data for future analysis to help the Commonwealth meet, or exceed unmet, or unexpected recommendations.

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OGR/ NHTSA's 2018 Traffic Records Program Assessment Advisory Overview - Goal #2

Goal #2: Purchasing equipment to improve a process by which crash data is collected, identified, and reported to the state and local government agencies, including technology for use by law enforcement for near real-time, electronic reporting of crash data;

In line with Goal #1, The requested equipment and software goes hand in hand with the software being requested to improve our unit, and the department's that we serves ability to collect vital crash data specifically with crashes involving motor vehicles, motorcycles, pedestrians and bicycle crash investigations.

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OGR/ NHTSA's 2018 Traffic Records Program Assessment Advisory Overview - Goal #4

Goal #4: Enhance the ability of the state and the secretary to observe and analyze local, state, and national trends in crash occurrences, rates, outcomes, and circumstances, helping to make our roads safer for everyone;

The requested equipment and software would allow our Crash Reconstruction Unit to collect, analyze, and process crash data at a significantly better rate, therefore allowing for better traffic safety analysis. This analysis would lead to safer roadways for all roadway users; especially vulnerable roadway users such as pedestrians and bicyclists.

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OGR/ NHTSA's 2018 Traffic Records Program Assessment Advisory Overview - Goal #8

Goal #8: Supporting reporting criteria relating to emerging topics, including 1. Impaired driving as a result of alcohol, drugs, or polysubstance consumption; and 2. Advanced technologies present on motor vehicles;

Our Community Traffic Safety and Data Exchange Program Initiative utilizes advanced technologies present in motor vehicles as early as 2008. To capitalize of this technology, the requested equipment and software will assist us with better crash investigations and crash data collection in order to assist the Commonwealth and the local governments of the 77 cities and town that we serve Analyze crash data and trends.

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OGR/ NHTSA's 2018 Traffic Records Program Assessment Advisory Overview - Goal #9

Goal #9: Conducting research relating to Commonwealth or State traffic safety information systems, including developing programs to improve core highway safety databases and processes by which crash or roadway data is identified, collected, reported to Commonwealth/ State or local governmental agencies, and entered into Commonwealth/ State core safety databases.

The requested equipment and software not only assist our unit's Community Traffic Safety and Data Exchange Program Initiative, but it also enhances the process and quality of crash data collection allowing for greatly enhanced information that is capable of being entered into the Commonwealth's core safety databases. Analyze crash data and trends.

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FFY 2024 Strategic Plan FFY2024 Strategic Plan for Traffic Records Improvements Unmet Recommendations

1. Strategic Planning Recommendations - National Highway Traffic Safety Association (NHTSA) plan for adoption and integration of new technologies, this requested equipment and software will assist in timely, accurate and complete traffic safety data collection, that will allow for more impactful data analysis.
2. Crash Data System Recommendations - The requested equipment and software will greatly improve the quality of crash data to reflect the best practices in NHTSA's advisory by collecting data electronically. Whereas, in the absence of this equipment a lot of vital information is lost and either not gathered or properly reported.

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FFY 2024 Strategic Plan FFY2024 Strategic Plan for Traffic Records

Improvements Unmet Recommendations

5. Roadway Recommendations - The requested equipment and software will increase the amount and quality of data that is collected in a serious bodily injury or fatal car crashes, greatly increasing the identification of faulty roadway engineering versus an operators inappropriate actions causing a serious crash.

6. Citation and Adjudication Recommendations - The requested equipment and software will allow our unit members to complete a more thorough investigations, allowing us to gather impactful evidence faster, while also allowing for more transparent and stronger cases for better outcomes during court proceedings, providing a generalized deterrence leading to safer roadways in the 77 cities and towns that we serve.

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FFY 2024 Strategic Plan FFY2024 Strategic Plan for Traffic Records Improvements Unmet Recommendations

7. Injury Surveillance/ EMS Recommendations - The requested equipment and software will allow our unit members to collect crash data in near real-time allowing our unit members to potentially pass along impactful information regarding crash and occupant kinematics, safety belt use, braking/ acceleration rates, and many other factors that would allow for better treatment, involving internal trauma, increasing their likelihood of survival.

8. Data Use and Integration Recommendations - The requested equipment and software is capable of collecting crash data allowing for better integration of data for traffic safety and roadway analysis.

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Requested Equipment and Software

Bosch CDR900 DLC Tool Kit and Software (\$4,400) -

- This equipment and software is considered the gold standard within the crash reconstruction industry for 'black box' or Event Data Recorder (EDR) downloads of over 30 motor vehicle manufacturers since its inception in 2000.
- The 'black box' or EDR refers to a module within a vehicle that captures several seconds worth of pre-crash data such as speed, braking, acceleration, steering wheel input, and many more data points.
- CDRD2M Cable Bundle (\$26,500) - This premium bundle includes all of the Bosch direct-to-module cables and adaptors that are currently available in this product line. These cable connect the Bosch tool kit to specific vehicles allowing this impactful crash data to be collected.

Hyundai EDR 2.0 Tool Kit and Software (\$6,700) -

- This equipment and software is similar to the Bosch CDR900 DLC tool kit, allowing our unit members to capture EDR data from Hyundai and Genesis, model year 2012 or newer.

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Requested Equipment and Software

Kia EDR 2.0 DLC Tool Kit and Software (\$6,700) -

- This equipment and software is similar to the other requested tool kits, allowing our unit members to capture EDR data from Kia, model year 2012 or newer.

Tesla EDR Retrieval CDR900 DLC Tool Kit and Software (\$1,600) -

- This equipment and software is similar to the other requested tool kits, allowing our unit members to capture EDR data from Tesla, model year 2008 or newer.

Dell Pro Rugged 14 Laptop (\$3,000) -

- This laptop would store and process the required software for each of the above listed tool kits.

CDR Technician and Analyst Training (\$10,000) -

- The use of this equipment involves a great deal of training. The first course is the CDR Technician course training users how to use this equipment. The second training is the CDR Analyst course teaches users how to read the output data that the software captures from a vehicle.

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Program Initiatives Measurable Goals

- Utilize the Bosch CDR900 DLC Tool Kit, and premium cable bundle in 95% of all crashes where a “download” is applicable
- Utilize the Hyundai EDR 2.0 Tool Kit and Software in 95% of all crashes where a “download” is applicable.
- Utilize the Kia EDR 2.0 DLC Tool Kit and Software in 95% of all crashes where a “download” is applicable.

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Program Initiatives Measurable Goals

- Utilize the Tesla EDR Retrieval CDR900 DLC Tool Kit and Software in 95% of all crashes where a “download” is applicable.
- Utilize the Dell Pro Rugged 14 laptop in 100% of the crashes where a “download” is conducted on a crashed vehicle with one of the above kits and software.
- Raising our units Technician and Analysis training capability and knowledge from approximately 30% to 95%.

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Conclusion

- This equipment and software would be vital in the overall goal of providing the most accurate, timely, and detailed crash data for our Community Traffic Safety and Data Exchange Program Initiative.
- The Auburn Police Department's Traffic Unit has this equipment and software. With our unit not having this equipment it burdens the Auburn Police Department, and delays our unit from collecting this data in a timely manner. Having this equipment would greatly increase our data collection and lesson the burden on the Auburn Police Department.

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Conclusion

- Having this equipment and software readily available would reduce significant delays in our investigations. Also, if given consent by operators, at the time of a crash, would allow for greater data collection for all crashes.
- Being awarded this equipment and software would also help us clear scenes faster, reducing the possibility of secondary crashes, and it would allow us to open the roadway faster increasing overall safety of first responders and motorist alike.

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Conclusion

- Increases our ability to gather crash data inline with the Commonwealth's FFY2024 Strategic Plan for Traffic Records Improvements and the NHTSA's 2018 Traffic Records Program Assessment Advisory Board Recommendations
 - Data collected from the requested equipment and software meets six of the eight unmet recommendations in the FFY2024 Strategic Plan for Traffic Records Improvements document.
 - The requested equipment and software also meets five of the nine overview goals in the NHTSA's 2018 Traffic Records Program Assessment Advisory Board Recommendations

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Conclusion

- Our overall goal of increasing our Crash Reconstruction Team's ability to quickly and more accurately collect crash data, specifically crashes where the crash resulted in serious bodily injury or fatality were involved. Through the requested, and highly advanced, equipment and software, this technology would allow our unit members to expedite, gather more evidence, and complete more thorough investigations. Once these detailed reports are completed we are able to report this timely data through the Commonwealth's core databases.

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COMMONWEALTH OF MASSACHUSETTS

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May 29, 2025

John Fabiano
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Dear Mr. Fabiano,

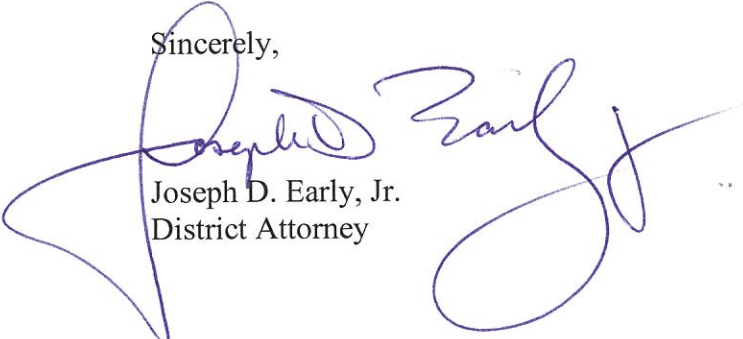
The Worcester County District Attorney's Office strongly supports the Central Massachusetts Law Enforcement Council (CEMLEC) and the West Brookfield Police Department's application for the Section 405(c) Grant, titled "Enhancing Crash Data Retrieval for Safer Roads in Central Massachusetts."

This project will equip CEMLEC's Accident Reconstruction Team with advanced Event Data Recorder (EDR) tools, including Bosch CDR Tool D2M Cable Packages, Tesla EDR Kits, Hyundai/Kia EDR 2.0 Tool Kits, a dedicated laptop, and associated training and software, at a cost of \$58,000 (\$49,000 for equipment, \$6,000 for training, \$3,000 for software). These tools will enhance crash data collection across 77 communities serving 1,022,500 residents.

In 2024, CEMLEC's Accident Reconstruction Team analyzed 58 crashes, with 91.38% involving serious injuries or fatalities and 43.5% being single-car incidents, highlighting the need for precise data to identify crash causes. The Worcester County District Attorney's Office, which has jurisdiction over the majority of CEMLEC's crash reconstructions, relies on accurate and timely crash data to prosecute criminal cases, including motor vehicle homicides and serious injury incidents. The proposed EDR tools will provide critical data, such as vehicle speed and system status, enabling our office to build stronger, evidence-based cases and achieve just outcomes.

Our office works closely with CEMLEC to leverage this enhanced data, strengthening our prosecution efforts and contributing to safer roads. We commend CEMLEC's commitment to providing the required 20% match and fully endorse this application. If I can be of any further assistance, please contact my office at (508) 755-8601.

Sincerely,


Joseph D. Early, Jr.
District Attorney