STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

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January 20, 2022

Ms. Amy Jackson-Grove
Division Administrator
Federal Highway Administration
Connecticut Division
450 Main Street, Suite 612
Hartford, CT 06103
Connecticut.FHWA@dot.gov

Dear Ms. Jackson-Grove:

Subject: Work Zone Safety and Mobility Process Review 2021 Final Report

The Work Zone Safety and Mobility Process Review 2021 Final Report is attached to this letter for your use.

Should you have any questions, please contact me at (860) 594-2669.

Very truly yours,

Christopher G. Angelotti
Digitally signed by Christopher G. Angelotti
Date: 2022.01.20 10:50:10-05'00'

Christopher G. Angelotti, P.E.
Division Chief
Bureau of Engineering and Construction

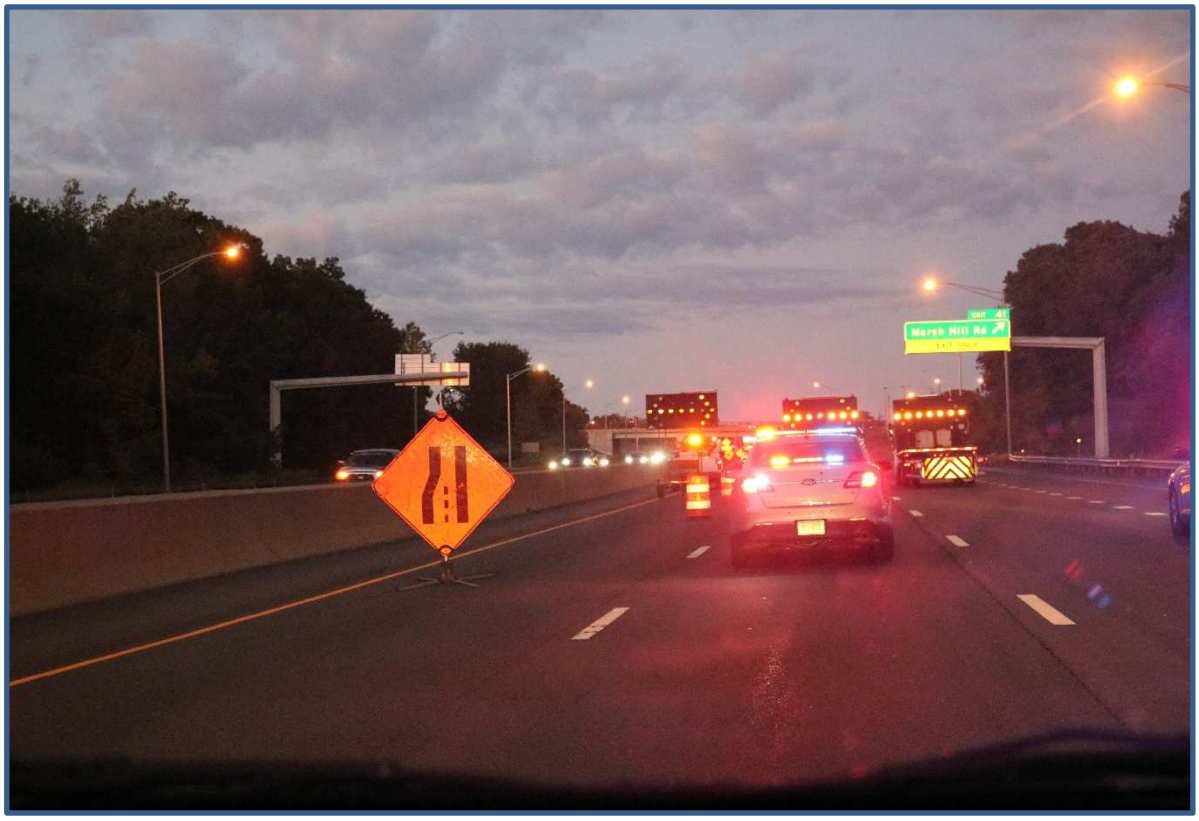
Attachment:
Work Zone Safety and Mobility Process Review 2021 Final Report

cc: David W. Nardone - Andrea Merejo (FHWA)

Work Zone Safety and Mobility

PROCESS REVIEW

2021 FINAL REPORT



WORK ZONE SAFETY and MOBILITY
PROCESS REVIEW FINAL REPORT

December 2021

This Work Zone Safety and Mobility Process Review Report was prepared by the Connecticut Department of Transportation and is evidence of Connecticut's compliance with 23 CFR 630.1008(e).

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU of ENGINEERING and CONSTRUCTION

By: Christopher G. Angelotti Digitally signed by Christopher G. Angelotti Date: 2022.01.19 14:56:05-05'00' Date: 01/19/2022

Christopher A. Angelotti, P.E.
Transportation Division Chief

Copy sent to:

FEDERAL HIGHWAY ADMINISTRATION
Attn: Amy D. Jackson-Grove
Division Administrator

TABLE OF CONTENTS

PROCESS REVIEW TEAM MEMBERS

The members of the Process Review team that conducted and analyzed the 2019-2020 work zone field reviews and/or contributed to the final bi-annual process review report include:

Mary K. Baier - *Transportation Principal Engineer* (**CTDOT Construction**)
Seth A. Burgess - *Transportation Supervising Engineer* (**CTDOT Construction**)
Dean S. Dickinson - *Transportation Engineer 3* (**CTDOT Construction**)
Kiah A. Patten - *Transportation Engineer 2* (**CTDOT Construction**)
Fausto E. Rodriguez - *Transportation Engineer 1* (**CTDOT Construction**)
Tracy L. Fogarty - *Transp. Principal Engineer* (**CTDOT Traffic Engineering**)
Michael A. Chachakis - *Transportation Engineer 3* (**CTDOT Traffic Engineering**)
Joshua A. Torres - *Transportation Engineer 2* (**CTDOT Traffic Engineering**)
Andrew T. Esposito - *Transportation Engineer 3* (**CTDOT Highway Design**)
Frederick DiNardi - *Maintenance Planner* (**CTDOT Highway Operations**)
Edgardo D. Block -*Transportation Supervising Engineer* (**CTDOT Policy & Planning**)
Alexander T. Finch - *Transportation Planner 2* (**CTDOT Policy & Planning**)
Andrea Merejo - *Safety/Area Engineer* (**Federal Highway Administration**)

EXECUTIVE SUMMARY

This Process Review was conducted by the Connecticut Department of Transportation (CTDOT or Department) to comply with the requirements of 23 CFR Part 630, Subpart J – *Work Zone Safety and Mobility*. This is the sixth biannual process review conducted since the regulation became effective on October 12, 2007.

Based on this evaluation, five (5) general topics were identified to be focused upon. Those topics include:

- **Program Management –** Emphasized effort to have all applicable units contribute to analyzing and improving the Work Zone Review Process
- **Work Zone Field Reviews –** Minimum of ten (10) formal project reviews along with four (4) in-depth project reviews per year continue to benefit field staff and design.
- **Contract Delivery –** Conduct periodic review of contract special provisions and guidance documents to ensure relevancy
- **Work Zone Technology –** Continued research of new technologies is required to enhance safety and mobility through specific work zones as well as collecting data used to set performance metrics
- **Work Zone Performance Measures –** Establish and implement proper performance tracking for work zone congestion, delays, and crashes

The ongoing efforts to improve CTDOT's Work Zone program are noted in this Work Zone Safety and Mobility Process Review Report. Developments that are identified after the submission of this report will be noted in the next report scheduled for December 31, 2023.

Work Zone field reviews of active construction projects are coordinated by the Office of Construction. Findings and recommendations from these field reviews are provided by the Work Zone Review (WZR) Team directly to the project personnel for remediation and in many cases, additional training opportunities. Non-compliance issues are not the only items noted during the field reviews. Innovative practices to increase safety and mobility in and around the work zone are also noted. Past best practices which have been found are shared through training to develop state-wide practices.

Work Zone Technology can be considered a broad topic. The main form of Work Zone Technology being employed by the CTDOT is using Smart Work Zone Systems (SWZS). The Department identifies projects with significant traffic impacts as candidates for use of SWZS to aid in reducing congestion and delays through means of displaying real-time traffic information.

CTDOT intends to continue to use the technologies available for collection of useful and accurate data. The data sets considered for analysis help in the development of Work Zone Performance Metrics.

BACKGROUND

Federal Regulations

23 CFR Part 630, Subpart J – *Work Zone Safety and Mobility*, contains the requirements and guidance for systematically addressing and managing work zone safety and mobility impacts on Federal-aid highway projects. This Process Review was prepared to comply with 23 CFR Part 630.1008, paragraph (e), *State-level processes and procedures*, that requires States to perform a process review every two years in order to assess the effectiveness of work zone safety and mobility procedures.

To help States evaluate their work zone practices Federal Highway Administration (FHWA) developed the Work Zone Safety and Mobility Self-Assessment (WZ SA) tool. The WZ SA tool consists of 46 questions designed to assist those with work zone management responsibilities in assessing their programs, policies, and procedures against many of the good work zone practices in use today. The policies, strategies, processes, and tools identified in the WZ SA were gathered from the best practices currently in place in State departments of transportation (DOTs), metropolitan planning organizations (MPOs), and local municipalities. Many of the items can be found in the *Work Zone Best Practices Guidebook*.

Moving Ahead for Progress in the 21st Century Act (MAP-21)

MAP-21, as amended, became effective on October 1, 2012. Section 1405 *Highway Worker Safety* requires the Secretary of Transportation to modify 23 CFR Part 630.1108, paragraph (a) *Work zone safety management measures and strategies,* concerning the use of positive protective measures to separate workers on highway construction projects from motorized traffic.

Fixing America's Surface Transportation Act (FAST Act)

The FAST Act directs FHWA to move rapidly to finalize regulations as directed in MAP-21 for highway work zones to protect workers.

PURPOSE and OBJECTIVE

The purpose of the bi-annual Process Review is to comply with the requirements contained in 23 CFR Part 630.1008, paragraph (e). Doing so will provide information on whether CTDOT is adequately as well as programmatically identifying, addressing, and managing its work zone safety and mobility impacts.

The objective of the bi-annual Process Review is to identify potential action items targeted at continuous improvement of CTDOT's processes and procedures to ultimately improve work zone design and execution.

SCOPE and METHODOLOGY

The scope of CTDOT's Work Zone Safety and Mobility Process Review includes all policies, practices, directives, specifications, plans, technology, and data acquisition and analysis for work zone safety and mobility. The CTDOT lead unit attempted to engage all units that influence the development, design, and execution of work zones.

Units were requested to review and recommend updates to existing work zone practices or propose new methods to improve overall effectiveness. For this bi-annual review, individual units were asked to review FHWA Work Zone Review documents and conduct a self-assessment based on recent and upcoming changes within the Department.

This report is a compilation of potential action items proposed by participating units to identify, address, and manage work zone safety and mobility impacts. The following section details different Observations and Recommendations posed by each unit which were categorized into the emphases previously stated.

OBSERVATIONS and RECOMMENDATIONS

There were five (5) general topics determined which units found potential issues or concerns. Within these focuses, the observations and recommendations are broken down by the CTDOT unit which contributed, including potential action items to increase CTDOT's Work Zone Process.

WORK ZONE SAFETY PROGRAM MANAGEMENT

DIVISION OF CONSTRUCTION OPERATIONS

1.1 Observation: Work Zone Safety and Mobility Process Review Facilitation

In November 2020, FHWA hosted a Work Zone Capability Maturity Framework (WZCMF) Workshop with CTDOT which was championed by the Division of Construction Operations (DCO) – Quality Assurance Unit (previously known as the Office of Construction (OOC)). This workshop conducted a self-assessment of the Department's Work Zone program. From the workshop, FHWA assisted the Department and compiled a Summary Report which detailed certain action items developed by the participants. It was found impacts due to COVID and recent changes in staff, resulted in reduced communication between units.

Recommendation:

Communication between designated unit champions to discuss the need for consistent improvement of the Department's Work Zone Safety Program should be coordinated. Through thorough analysis, identification of feasible improvements and which Department unit is best suited to lead the tasks involved could be determined. With a well thought out plan for improvement, the Work Zone Review (WZR) Team believes that continual measurable improvement is feasible. Components from the Work Zone Capability Maturity Framework Workshop could be incorporated to assist with any potential development.

DIVISION OF TRAFFIC ENGINEERING

1.2 Observation: Subject Matter Expert Needed

Division of Traffic Engineering (Traffic Engineering) has identified that it does not have a single, designated champion, subject matter expert, or working group dedicated for reviewing and updating Maintenance & Protection of Traffic (M&PT) or Work Zone Safety procedures.

Recommendation:

Appoint a M&PT/Work Zone Safety Champion/Subject Matter Expert within Traffic Engineering to be the main contact for work zone related questions; to coordinate with other offices/divisions for using new technologies; to develop new practices; and update standards, special provisions, and guide sheets. This will foster consistency in how the Department responds to Work Zone Safety inquiries in the design and construction phases, as well as general questions from the Industry.

WORK ZONE FIELD REVIEWS

DIVISION OF CONSTRUCTION OPERATIONS

2.1 Observation: Completed Field Reviews

The DCO's WZR Team coordinates the Work Zone field reviews for randomly selected active construction projects. It was determined to include the work zone safety reviews (1) that occurred after the last bi-annual Work Zone Safety and Mobility Process Review report, and (2) from years where the CTDOT Annual Work Zone Review Reports were completed. Therefore, the field reviews referenced in this report are from the 2019 and 2020 construction seasons.

For the two construction seasons covered, a total of 39 formal field reviews and eight (8) in-depth reviews were conducted. Each review consisted of multiple focus areas from a predetermined list. The following are the six (6) standard focus areas of a review:

- Detours
- Night Work
- Pedestrian/Bicycle Access
- Stage Construction
- Temporary Lane Closures
- Temporary Signalization

Recommendation:

Continue scheduling and conducting field reviews to assist with improving Work Zone Safety practices throughout the year. In addition, direct involvement of applicable units will assist in addressing issues in a timelier manner.

2.2 Observation: COVID Quarantine Restrictions

During 2020, the COVID quarantine posed the need to change how the Work Zone Reviews were conducted. To abide by social distancing requirements, the way in which field review were completed had to be altered. Previously, the DCO, Traffic Engineering, FHWA, and the inspection staff would meet in person to complete a work zone review questionnaire and then collectively proceed through the project limits to observe real-time work zone practices. Due to implemented protocols, all participants never met in person and reviewed field conditions separately, noted and/or photograph findings, then meet via Microsoft Teams at later date to discuss findings. Dash cameras were utilized to allow multiple individual reviews to be safely conducted providing references to support direct observations.

Recommendation:

The necessary change in methods has inspired opportunities and ways to improve review methods. Discussions with Traffic Engineering to obtain additional cameras for designs use may be beneficial. Due to uniqueness of every project and extenuating circumstances encountered, it is necessary to remain flexible within the field review process to accommodate field practices.

DIVISION OF TRAFFIC ENGINEERING

2.3 Observation: Participation in Field Reviews

Traffic Engineering representatives attended field reviews to provide input on work zone devices, practices, and implementation of the M&PT scheme per the Contract documents.

Recommendation:

Traffic Engineering representatives should continue to assign participants for work zone safety field reviews when scheduled.

2.4 Observation: Field Review Prep

Project inspection staff does not always seem prepared to discuss the items included on the Work Zone Review Form preventing them from being fully engaged in the process. Reviews are a prime opportunity for Construction field staff to weigh in on what practices and devices, provide a safer work zone and increase positive responses from the general motorists.

Recommendation:

Provide report ahead of the scheduled field visit for project staff to familiarize with content. In addition, DCO should emphasize that the review is being performed for the benefit of the Project.

DIVISION OF HIGHWAY DESIGN

2.5 Observation: Field Review Participation

Division of Highway Design (Highway Design) has not typically been invited to participate in the work zone field reviews.

Recommendation:

Include the appropriate Highway Design unit on scheduled field review especially for in-house, state designed projects. Doing so, will allow all associated designers

the opportunity to attend and witness established practices, provide decision insight, and increase opportunities to learn how and why some work zone changes may be necessary.

BUREAU OF HIGHWAY OPERATIONS

2.6 Observation: Internal Work Zone Review Team Development

Bureau of Highway Operations – Office of Maintenance (Maintenance) does not have a dedicated Work Zone Safety working group to review and give recommendation for improvement on its work zone practices.

Recommendation:

Maintenance management should assess if staff could be dedicated to creating an internal Work Zone Review Team. Maintenance could utilize a separate WZ Review Team (than that of DCO) due to the overall number of roadway impacts, differences in work zones implemented, and typical project durations.

CONTRACT DELIVERY

DIVISION OF TRAFFIC ENGINEERING

3.1 Observation: Review of Special Provisions

Traffic Engineering develops the special provisions for Section 1.08.03: Prosecution and Progress – Limitations of Operations (P&P) and Item No. 0971001A: Maintenance and Protection of Traffic (M&PT). These special provisions determine when and how the Contractor is to construct a project. However, they have not been recently reviewed on a consistent basis.

Recommendation:

Establish an internal process, including a cyclical schedule, using field reviews to analyze the need for potential revisions to associated special provisions.

3.2 Observation: Special Provision Consistency

P&P and M&PT special provisions for similar styled projects have been inconsistent in their content across different designers. Traffic been trying to address and assist by uploading standard samples to the CTDOT website.

Recommendation:

Continue to upload samples and expectations to the website to ensure Consultants and newer engineers create consistent special provisions for construction projects.

3.3 Observation: Transportation Management Plan Consistency

Policy Statement No. E&C-46 requires the Department to systematically consider and manage work zone impacts for significant projects. The Department determined to do so using Transportation Management Plans (TMP). TMPs require multiple components which CTDOT incorporates throughout typical contract documents. From recent observations, there seems to be minimal consistency for inclusion and content of Transportation Management Plans (TMPs) for significant projects.

Recommendation:

Develop an acceptable procedure that defines which projects are to receive TMPs, review processes, and how TMPs are to be managed. Standardization of TMP format and/or creating a template for certain types of projects may assist and save the Department time and money. If a significant project is determined to not receive a TMP, consultation should be had with FHWA to confirm the requirements of the CFR's are still met.

DIVISION OF HIGHWAY DESIGN

3.4 Observation: Transportation Management Plan Evaluation

Highway Design follows Policy Statement No. E&C-46 outlined in the Highway Design Manual which require a TMP on any of the highways defined within the Policy. Once a project reaches the construction phase, staff may update the TMPs with effective methods and modifications based on field conditions. Highway Design does not currently evaluate the potentially modified TMPs following construction.

Recommendation:

Establish and implement an evaluation process to manage TMPs including retainage of updates to assist the design of future projects as TMPs are intended to be living documents.

BUREAU OF HIGHWAY OPERATIONS

3.5 Observation: Traffic Control Plans for Maintenance Operations

The Work Zone Safety Guidelines for Maintenance Operations (traffic plan standards) was last updated in 2013.

Recommendation:

Maintenance should coordinate a review of the current standards against the standard Traffic Control Plans utilized and make appropriate updates with the assistance of Traffic Engineering.

WORK ZONE TECHNOLOGIES

DIVISION OF CONSTRUCTION OPERATIONS

4.1 Observation: Smart Work Zone (SWZ) Feasibility Determination Committee

The Bureau of Highway Operations, Traffic Engineering, and DCO previously comprised the SWZ Feasibility Determination Committee. Due to changes in staff in multiple units, communication lagged within the committee. Therefore, the successors worked to re-vamp the committee mid-summer of 2020 by coordinating monthly conference calls, via TEAMs, to meet the Roles and Responsibilities noted in the 2017 CTDOT Smart Work Zone Guide.

Recommendation:

The SWZ Feasibility Determination Committee should continue to meet monthly (intermittently as needed) to review any potential submissions from Design units to include SWZs as well as discuss proposals for potential projects that may benefit from use of a SWZ system.

4.2 Observation: Smart Work Zone Data Management

Data being collected by the SWZs at the project level is extensive, cumbersome, and difficult to analyze without specifically tasked traffic engineers. However, this data is useful to substantiate changes to Limitations of Operations proposed by the Contractors, as well as, assist Traffic Engineering with contract development. The means to standardize the data for analysis before, during, and after a construction project would be beneficial.

Recommendation:

The SWZ Feasibility Committee should continue conversations with CTDOT's Architectural, Engineering, and Construction Applications Unit (AEC) to assist in developing a data storage system with a user-friendly query tool. This can aid in retrieving average queues, volumes, speeds, etc. for construction projects. The committee is researching revising current specifications to include FHWA's Work Zone Data Exchange (WZDx) standardized specifications to assist in formatting of SWZ data.

4.3 Observation: Work Zone Transponders

CTDOT was approached by various vendors that supply work zone technologies (including HAAS and ICone). The provide devices that relay real time traffic impacts to third-party mapping companies such as Google and WAZE. Both DCO and Maintenance - decided to each pilot one of the two devices (ICone and HAAS

respectively) to determine potential functionality and benefits along with current processes.

Construction determined the transponders provide minimal value for limited-access highways since its current practice is for project staff to inform the Highway Operations Control Center of roadway activity before work commences. The roadway activity is mapped through CT Travel Smart, ultimately updating the same third-party programs. However, CTDOT does not currently have a process for mapping traffic impacts on secondary roadways.

Maintenance continues to pilot the HAAS product on Service Patrol and State-owned Maintenance vehicles. The product may prove to be beneficial as it assists with automating their fleet management tactics.

Recommendation:

The Department should determine if an additional pilot of these transponders on secondary roadways would prove useful. Maintenance will need to complete and evaluate pilot results to determine the use of similar products.

4.4 Observation: Work Zone Speed Camera Pilot Program

Effective October 1, 2021 through Public Act 21-2, Section 296-305, the June Special Session, the Work Zone Speed Camera Pilot was approved. It is a two-year (2-year) pilot program, beginning January 1, 2022, that allows CTDOT to use speed cameras in up to three (3) highway work zones, whether construction, maintenance, or utility; and establish criteria for camera operation, violation enforcement, and data collection and retention. A report of the pilot results is required to be submitted to the Transportation and Appropriations Committee by January 1, 2024. The pilot will delineate practices for the future of a potential program to increase driver awareness while driving through work zones.

DCO was assigned the lead by the Deputy Commissioner to establish and implement the pilot program as soon as possible. DCO is assessing alternatives to expedite the program's initiation.

Recommendation:

CTDOT is to proceed in maximizing the short duration of the pilot. CTDOT will need to incorporate current procedures from DMV, DESPP, and the Judicial branch to expedite the pilot's functionality. Depending on pilot outcomes, the Department alongside other Agencies could pursue establishing a program utilizing these additional traffic calming technologies.

DIVISION OF TRAFFIC ENGINEERING

4.5 Observation: Smart Work Zone (SWZ) Proposal Criteria

The applicability of SWZ technology in projects is determined by the SWZ Feasibility Committee. Traffic would like a simplified list of criteria for project qualification.

Recommendation:

Create a SWZ checklist to review during the project's design, including language referencing ECD-2017-2. The checklist can be included in the Traffic Engineering Guidelines for internal traffic design review.

WORK ZONE PERFORMANCE MEASURES

DIVISION OF CONSTRUCTION OPERATIONS

5.1 Observation: Law Enforcement Performance

Due to extenuating circumstances beyond the control of CTDOT, the availability of State Police to meet the high demand for presence on roadway projects is an ongoing challenge. DESPP's liaison staffing changed almost half a dozen times over the 2020 and 2021 seasons which required constant coordination reestablishment.

The DCO initiated use of the State Police – Other Project Assignments (OPA) Traffic Enforcement Pilot MOU (between DESPP and their Union) on two (2) projects per District. DCO coordinated the tracking of pilot assignments through the Districts, collecting the infraction information provided by DESPP, and used the information to analyze the performance of the pilot OPA Speed Enforcement assignments. The Pilot MOU expired September 2021 and the future will be determined through DESPP and the respective Union MOU's.

Recommendation:

CTDOT to continue working with DESPP on meeting the Department's needs and filling police requests. The pilot MOU for traffic enforcement through DESPP (OPA) is awaiting determination by DESPP. If officially implemented, DCO should revise the State Police Services Procedures Guide to reflect this alternative tool with the State Police.

5.2 Observation: Incident, Motorist Claims, and Case I/II Contract Revisions Tracking

As of April 2020, DCO began compiling data obtained from project incident reports, motorist claims, and Case I (Revisions to Maintenance & Protection Traffic) and Case II (Revision to Limitation of Operations) Change Orders to determine trends within projects of similar character throughout the state.

Incident reports provide detail of the type and cause of an incident and if they are work zone related. Motorist claims can highlight possible hazards in and around a construction project (i.e., vehicle damage due to potholes, construction debris striking vehicles, or becoming coated in Ultra-thin emulsions) that need to be addressed. Case I/II revisions can provide reasons to reduce contract time (i.e., low traffic volumes due to the COVID-19 pandemic).

Recommendation:

DCO should continue tracking and analyzing the data to depict possible trends. This analysis could eliminate costly hazards as well as providing advantageous opportunities based on what's experienced at the project level. Data can be collected state-wide, not just at the District level on a project-by-project basis, which would depict trends between vendors throughout the state.

DIVISION OF TRAFFIC ENGINEERING

5.3 Observation: Traffic Speed and Volume Analysis

Traffic Engineering can benefit from comparing real-time traffic speeds to actual traffic volumes in and around work zones to determine appropriate accuracy of the estimated capacity of a travel lane during construction.

Recommendation:

Traffic Engineering could obtain data from projects with SWZs and determine an analysis process to confirm travel lane capacities during construction. In turn, updating current procedures for lane use impacts.

OFFICE OF POLICY AND PLANNING

5.4 Observation: Establishing Performance Measures

CTDOT roadway projects have a large effect on highway system performance (PM3) measures that we must report to the Federal Highway Administration (FHWA). If travel time through work zones can be reliably tracked, the Office of Policy and Planning will be able to better forecast system reliability measures in the future.

The Performance Management and Research Unit (within the Office of Policy and Planning) provides congestion analysis using speed probe data from various sources and CTDOT volume and vehicle classification counts. To conduct a before-and-after congestion analysis, the Performance Management and Research Unit needs to obtain when a work zone is in place and the work zone boundaries using GIS polygons or route-and-mile location on the Linear Referencing System (LRS).

Recommendation:

Use these datasets to track how speeds and travel time are affected by work zones. The congestion analysis can be used to measure the performance of different staging techniques or to find the best times to schedule road work.

Certain congestion performance indices can be used to show how driver behavior and/or roadway capacity may be influenced. This may eventually enable the establishment of a mobility performance measure for work zones and determine the constraints preventing adequate flow through a work zone.

CONCLUSION

Since the last Work Zone Safety and Mobility Process Review submitted in 2019, CTDOT, like other DOTs, has encountered unforeseen challenges requiring shifts in our priorities. Despite the hurdles, the Department has utilized the circumstance to reevaluate the program and identify potential action items. The recommendations suggested within this report have been summarized as:

- Improving unit communication
- Assign or include dedicated staff within units to further efforts towards Work Zone Safety
- Pursue the next phase for review and analysis of work zone related documents, reviews, and/or data
- Execute technology pilot programs that can enhance Work Zone Safety
- Continue incident and performance tracking to identify trends within work zones

CTDOT believes this review was successful in identifying areas where the Work Zone program could be improved and determining the next steps to further progress. Existing successful methods that have proven beneficial (including work zone field reviews and Transportation Management Plans) will continue. The Department will evaluate innovative technology and data use (e.g., Smart Work Zone data and Work Zone Speed Cameras) to enhance Work Zone Safety.

The Process Review participants have been actively involved in preparing this report and in turn identifying potential action items. If the CTDOT is successful in implementing a portion or all the recommendations of this report, the Department should advance the Work Zone Safety program.

APPENDIX 1: 2019 & 2020 WORK ZONE SAFETY REVIEW ANNUAL REPORTS LIST

Individual Review Reports can be obtained by sending a request to the Division of Construction Operations – Quality Assurance Unit – Work Zone Safety Team

2019 Regular Field Reviews

1. 0004-0116-R1, Old Farms Road, Avon
2. 0014-0185, I-95 & U.S. 1, Branford
3. 0063-0708, I-84 & Sisson Avenue, Hartford
4. 0118-0169, Route 160 & I-91, Rocky Hill
5. 0135-0301, Atlantic Street, Stamford
6. 0135-0325, Route 1 & I-95, Stamford
7. 0140-0172, Route 8, Thomaston
8. 0152-0158, I-395 & Route 85, Waterford
9. 0156-0180, I-95, West Haven
10. 0172-0446, I-395 & I-95, Norwich, Bozrah, Stonington

2019 In-Depth Field Reviews

1. 0063-0703/0159-0191, I-91, Hartford, Wethersfield
2. 0096-0200, I-84, Newton
3. 0102-0348, I-95, Norwalk
4. 0151-0326/0312/0313, Route 8, Waterbury

2019 Pavement Preservation Reviews

1. 0170-3546, I-91, Windsor, Windsor Locks, East Windsor
2. 0172-0482, Route 349, Essex, Deep River, Chester, Colchester, Waterford, Montville
3. 0174-0428, Route 8, Torrington, Woodbury

2019 Vendor-In-Place Reviews

1. 0172-0487, Route 80, Killingworth
2. 0173-0498, Route 1, Milford
3. 0174-0430, Route 10, Avon

2020 Regular Reviews

1. 0015-0365, Washington Avenue, Bridgeport
2. 0018-0134, Route 133, Bridgewater, Brookfield
3. 0073-0177, Route 202, Litchfield
4. 0079-0229, Route 71, Meriden
5. 0083-0264, Wheelers Farm Road & SR 796, Milford
6. 0092-0672, Route 69, New Haven
7. 0092-0675, I-91, New Haven
8. 0103-0272, I-395, Norwich
9. 0155-0171, I-84 & Route 71, West Hartford
10. 0163-0203, Route 66, Windham
11. 0173-0441, Route 8, Various

2020 In-Depth Reviews

1. 0063-0703, I-91, Route 15, & Route 2, Hartford, Wethersfield
2. 0120-0093, Route 85, Salem
3. 0130-0180, Route 67, Southbury
4. 0156-0180, I-95, West Haven

2020 Vendor-In-Place Reviews

1. 0171-0456 D, Route 83, Ellington
2. 0171-0457 E&F, Route 72, Plainville
3. 0172-0497 D, Route 66, Windham
4. 0174-0439 G, Route 183, Winchester
5. 0174-0440 I, SR 911, Danbury

2020 Informal Reviews

1. 0015-0248, Route 1, Bridgeport
2. 0044-0154, Route 156, East Lyme
3. 0095-0254, Routes 202 & 67, New Milford
4. 0102-0285, Route 1, Norwalk
5. 0160-0150, Turnpike Road, Willington
6. 0171-0414, I-691, Various
7. 0172-0483, Route 203, Various

APPENDIX 2: WORK ZONE SAFETY REFERENCE DOCUMENTS

Division of Construction Operations:

1. CTDOT & DESPP Memorandum of Understanding
2. State Police Services Procedure Guide
3. CTDOT Smart Work Zones Guide
4. Traffic Detour Checklist

Division of Traffic Engineering:

1. FHWA Manual on Uniform Traffic Control Devices (MUTCD)
2. CTDOT Traffic Guidelines (internal document)
3. CTDOT Standard Specifications for Roads, Bridges, Facilities, and Incidental Construction Form 818
4. Item No. 0971001A: Maintenance and Protection of Traffic Special Provision
5. Section 1.08.03: Prosecution and Progress – Limitations of Operations Special Provision
6. Sample detour plans & List of Items to Check for a Proposed Detour Route

Division of Highway Design:

1. CTDOT Policy No. E&C-46: Systematic Consideration and Management of Work Zone Impacts

Bureau of Highway Operations:

1. Work Zone Safety Guidelines for Maintenance Operations