

Connecticut Work Zone Reviews

Annual Report

2016



State of Connecticut
Department of Transportation
Office of Construction

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Introduction

The Connecticut Department of Transportation (CTDOT) Office of Construction (OOC) conducts work zone safety field reviews to evaluate the effectiveness of practices and procedures relative to work zone safety and mobility in compliance with 23 CFR 630 Subpart J. The reviews were conducted on randomly selected active highway construction projects administered by CTDOT.

The reviews include an inspection of traffic control devices, traffic sign installation and removal, sign recognition and visibility, and the conduction of a personnel questionnaire to determine strengths and opportunities for improvement in work zone procedures. The focus areas for work zones are temporary lane closure, temporary signalization, pedestrian/bicycle access, stage construction, detour, and night work. There is also an overarching focus to determine if findings are potential systemic issues.

During a regular field review, personnel from the OOC and the Division of Traffic Engineering (Traffic) are accompanied by the project staff from the Construction District to tour the project's work zone. The review team evaluates what is implemented and uses what is found as teaching tools to the project staff as well as other Construction inspection staff in training sessions. The OOC has set a goal to conduct a minimum of ten regular field reviews a year.

For in-depth reviews, the review team may include personnel from the OOC, Traffic, and Federal Highway Administration (FHWA). This team, along with FHWA, will tour the work zone with the project personnel to review what is implemented and evaluate the work zone against the federal standard. The OOC has set a goal to conduct four in-depth field reviews a year.

For both types of review, reports of findings with photographs of current field conditions and recommendations for improvements and/or best practices are compiled and distributed to all participants. Those reports either help identify issues that need immediate action, identify systemic issues that need addressing on a statewide level, or find best practices that could be implemented on other projects.

For the 2016 construction season, the OOC was successful in meeting the goal of completing sixteen regular reviews and four in-depth reviews. The findings from these reviews were compiled and sorted by similarities. These findings were categorized by the following:

- Accommodation of stakeholder needs
- Best practices
- Conduct more thorough plan reviews
- Coordination of traffic signs
- Enforcement of contract plans
- Inadequate signage

- Managing speeds within work zones
- Managing work zone traffic
- Message confusion
- Need for better work zone devices
- Opportunities to enhance safety
- Pavement marking issues
- Pedestrian issues
- Project constraints and pattern installation
- Proper protection of work zones
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- Reevaluate contract items
- Rolling Road Block
- Selective clearing
- Sign visibility
- TMP Maintenance
- Unit communication

Findings of work zone field reviews will be added to the action item list of the Work Zone Safety and Mobility Process Review for resolution by the appropriate Department unit. The Process Review is an evaluation tool used for the Department's work zone program. With a Process Review team comprised of personnel from the OOC, Traffic, Office of Highway Operations, Bureau of Policy and Planning, and the FHWA; opportunities for improvement, successful practices, and implementation of new technologies can be efficiently addressed and managed between units to develop a holistic work zone safety program the Department can benefit from.

Findings and Recommendations by Category

Project No.	Finding	Recommendation
Accommodation of Stakeholder Needs		
0042-0315	The special provisions did not include direction on how to handle parking while replacing residential driveway aprons. The right lane of the road had to be closed to allow residents to park on the street.	For cases where parking is limited for residents, a special provision should be included for temporary lane closures for resident parking or other arrangements parking at nearby locations.
Best Practices		
0044-0152	The intermittent traffic stops for ten minutes was not feasible to splice and set steel to a level of stability before having to open lanes on the roadway.	The project implemented a two-hour detour for the I-95 closure during times when traffic was the lowest is a good practice.
0087-0142	The project felt there weren't enough advisory signs for the detour overall.	The project added eight additional signs for the detour of local traffic, which is a good practice.
0092-0531	The project had multiple traffic coordination meetings regularly in preparation of the I-91 NB Exits 3 and 5 shifts.	Regular traffic coordination meetings were successful in mitigation of traffic impacts during shifts.
0152-0149	The project installed CAUTION BLIND DRIVEWAY signs on U.S. Route 1 for more awareness of driveways adjacent to the work zone.	The initiative to install additional signs to bring more awareness to motorists is a good practice that all projects should consider.
0152-0149	The barrier curb along the west side of the road was modified to allow EMS access into the driveway of a multi-unit complex.	Coordination between all the stakeholders especially EMS should always be considered for mobility in work zones.
0152-0157	The project placed additional signs on I-95 mainline to inform motorists that the local road near the highway commonly taken as a "cut-through" was closed.	Placing additional signs to provide clarity to motorists due to closures is a good practice to be considered.

<u>Project No.</u>	<u>Finding</u>	<u>Recommendation</u>
0152-0157	The traffic control devices are stored within the median behind guiderail.	If given enough clearance to store devices in a protected area on the road, it can facilitate a timely traffic pattern deployment each night.
0155-0169	The bridge on Mayflower Street has an alternating one-way traffic pattern. Also, temporary crosswalks with ADA-compliant ramps and pedestrian pedestals to enhance pedestrian safety around the work zone were installed mid-block.	Installation of temporary crosswalks is a good practice for pedestrian access within work zones.
Conduct More Thorough Plan Reviews		
0034-0313	The inspection staff discovered in the field that the barrier curb did not extend enough for the lane drop-off on I-84 during stage construction.	A field revision to the M&PT plan was made to extend the barrier curb and impact attenuation system.
0034-0313	The M&PT plan did not identify all business driveways and pedestrian access throughout the project.	Field adjustments were made to accommodate local businesses and pedestrians.
0034-0313	Although the plans called for existing sidewalks to be closed, no temporary sidewalks were designated or installed in the field.	The project added temporary sidewalks to the plans.
0034-0313	No pedestrian accommodations were noted on the plans for Tamarack Avenue although there is significant pedestrian traffic due to a hospital and a high school located nearby.	Preliminary studies need to account for all road users within a work zone and provide a protected travel way.
0042-00315	There was no contract items included for hot-applied temporary pavement markings. The items were added by construction change order.	Plan reviews need to be thorough and ensure standard items are included in contracts.

<u>Project No.</u>	<u>Finding</u>	<u>Recommendation</u>
0109-0172	The project staff indicated that half-section barriers weren't included in the list of contract items but were called for on the plans. However, the half-section barriers were going to be an expensive item if added in because of their limited quantity.	The units conducting plan reviews should ensure that work called for in the plans should have associated contract items. Half-section barriers should be included where aptly needed to allow for limited travel width (i.e. tight ramps). All structure barriers are required to be pinned.
0152-0157	The contract plans called for the use of a Type A Impact Attenuation System but there was no contract item included.	All devices called for on the plans need to have a corresponding contract item unless the specification includes it in the general costs for the work.
Coordination of Traffic Signs		
0032-0130	Construction signs from an adjacent project overlapped with this project.	Projects adjacent to each other need to coordinate their construction signage to reduce possible confusion for motorists traveling from one work zone into the next.
0158-0201	On Route 57 (Main Street) when traveling westbound there is a "Road Work Ahead" sign for an adjacent project and 20 feet ahead an "End Road Work" sign for this project.	Overlapping signs from adjacent projects should be coordinated to ensure that signs do not give conflicting messages to the motorists.
Enforcement of Contract Plans		
0042-0315	Sign anchors on post-mounted signs exceeded the height than what was called for on the plans.	As stated in typical sign mounting plan TR-1208_02, sign anchors should be a maximum of 4 inches above ground. Taller anchors could cause significant damage to the underside of an errant vehicle.
0042-0315	Traffic pattern tapers were not established with traffic drums as shown on the plans.	Traffic patterns are typically comprised of traffic drums along the taper and traffic cones on the tangent for the closed lane. Traffic drums are more visible for delineating the pattern to motorists.
0051-0260	Traffic cones were used on the taper of the closed lane at Waterville Road instead of traffic drums.	Traffic drums should be used on traffic pattern tapers to increase the visual awareness to the motorists in a closed lane.

<u>Project No.</u>	<u>Finding</u>	<u>Recommendation</u>
0051-0260	The advance warning before the Parsons Drive lot entrance had signs placed out of sequence. Motorists were informed of a lane closure before being informed of construction trucks entering/exiting Route 4. However, they would approach the construction trucks before they would encounter the lane closure.	Advance warning signs should be placed in the order of occurrence so motorists can be properly informed of the action they need to take while traveling through a work zone with sufficient time to transition beforehand.
0073-0182	The DE-7C delineators at the trailing end of the crossover back onto the northbound side were yellow on the right side of traffic.	DE-7C delineators should match with the shoulder pavement markings by having the yellow side on the left side of traffic and the white side on the right.
0076-0217	The temporary double yellow centerline skip pavement markings shown on Drawing MPT-02 were not installed.	Temporary pavement markings should be installed according to the plans to help delineate lanes for proper guidance to motorists.
0076-0217	The temporary "bicycle" construction sign shown on Drawing MPT-02 were not installed.	The bicycle construction signs should be installed to bring awareness to cyclists of the route they should take through the work zone.
0076-0217	Some of the TPCBC delineators were not attached to the barrier.	The missing TPCBC delineator should be reinstalled. Delineators help define the travel way to motorists especially at night and during inclement weather.
0076-0217	Barricade warning lights were missing from all post-mounted diamond-shaped construction signs.	Within the M&PT special provisions, barricade warning lights are to be installed on the post-mounted diamond-shaped construction signs.
0106-0121	A couple of the construction signs were mounted directly in front of or mounted on top of regulatory signs.	Signs should be mounted on their own posts and with enough distance from regulatory signs to prevent obstruction from viewing them.
0109-0172	DE-9 delineators were used at the nose of the Type A Impact Attenuation Systems.	The correct delineator to be used is Sign No. 50-5032 as noted on plan sheet TR_1205_01.

<u>Project No.</u>	<u>Finding</u>	<u>Recommendation</u>
0158-0201	The detour plan was missing a Sign Assembly 'I' (Detour South 136 Turn Left).	Proper signage should be placed on the west side of Clinton Avenue so drivers headed southbound can be directed to the detour.
Inadequate Signage		
0034-0313	Sidewalks around work zones were closed but no SIDEWALK CLOSED, CROSS HERE signs were installed directing pedestrians where to access an open pathway.	When existing pathways are disturbed, an alternate pathway should be provided.
0087-0142	There are currently insufficient advance warning signs on Route 63 southbound prior to the intersection with Route 68.	Traffic Engineering should address inadequate signage for the detour to better indicate where routes are to avoid confusion.
Managing Work Zone Traffic		
0032-0130	Traffic on the northbound side will be shifted to a new configuration and will have a conflict when merging from the new lane back onto the existing roadway as planned.	Traffic Engineering was requested to review the possibility of putting a temporary signal to facilitate transition from the new northbound lane back onto the existing roadway.
0034-0313	Temporary traffic shifts to accommodate the work area in the road were not properly delineated with traffic devices.	When travel lanes are shifted, clear delineation to motorists is needed to ensure the safety and mobility of the motorists.
0034-0313	Traffic approaching an intersection in two lanes and then merged into one lane just past the intersection creating a bottleneck condition in the intersection.	Motorists should be channeled into one lane before the intersection to prevent any backups within the intersection.
0051-0260	Traffic shift was done with inadequate devices thereby improperly channeling traffic into a closed lane.	The Review Team identified the conflict and advised the project team to address the issue.
0087-0142	Item No. 113000 - High Mounted Internally Illuminated Flashing Arrow was requested to be added to the project. The flashing arrow would be used in advance of the work zone on Route 8.	High Mounted Internally Illuminated Flashing Arrows are typically used to notify drivers in advance of a lane closure. The work on Route 8 involves a slight lane shift with a shoulder closure, so a flashing arrow is not required.

<u>Project No.</u>	<u>Finding</u>	<u>Recommendation</u>
0152-0149	Motorists speed up to 10 mph over the posted speed limit when traveling through the work zone.	The use of a radar speed display can help reduce speeds through the work zone.
Message Confusion		
0044-0152	Some of the blasting zone signs were not covered even though blasting was not currently taking place.	Signs that are not in use should be covered to prevent conflicting messaging to the motorists.
0051-0260	An arrow sign with a DETOUR legend was used instead of a directional arrow to indicate the lane was closed and motorists to proceed to the left of the work area.	Displaying a confusing message like DETOUR when a detour is not in place will misleading to motorists traveling through a work zone.
0092-0669	The CMS for the project is located directly under the I-91 VMS.	CMS need to be placed at least 1000 feet from a VMS to prevent any confusion to the motorists reading too many signs at once.
0106-0121	Detour arrow signs were left uncovered.	All detour signs should be covered when the detour is not in use.
Need for Better Work Zone Devices		
0044-0152	The Type A Impact Attenuation System was hit multiple times on the project. The main angle of impact was side impact by passing motorists because the array extended too closely to the shoulder line.	A more compact or durable impact attenuation system should be considered for roadways with limited space in lieu of sand barrel arrays. Alternate consideration would be to use the Trinity Quad-Guard system that attaches to the end of a metal beam rail.
Opportunities to Enhance Safety		
0032-0130	Exposed traffic signal foundations adjacent to the roadway were lacking proper delineation from errant motorists.	More traffic drums can be used around the foundations to better delineate traffic away from them.
0032-0130	The edge of roadway near the rock cut location has a significant drop off.	The project will install TPCBC along the edge of the roadway.
0032-0130	Some material was stored within the clear zone of the roadway.	Materials and equipment need to be stored outside of the roadway's clear zone. If there is not enough clearance, then they need to be positively protected.

<u>Project No.</u>	<u>Finding</u>	<u>Recommendation</u>
0044-0147	A vehicle was parked in front of the impact attenuation system.	Vehicles should be parked outside the clear zone or in a positively protected area.
0051-0260	The CMS at the west end of the project was placed within the clear zone.	Blunt objects stored within the clear zone need to be positively protected.
0073-0182	A couple of the CMS were placed within the clear zone or within the deflection zone of the metal beam rail. Although CMS are to warn motorists of upcoming work zone activities, they are still a hazard to errant motorists.	The placement of CMS needs to be outside of the clear zone or deflection zone of metal beam rail or need to be positively protected.
0106-0121	Catch basins were stored within the clear zone adjacent to the closed lane.	Objects need to be stored outside of the clear zone or positively protected.
0151-0273	Material and equipment stored off local roads were too close to the roadway without positive protection.	Although speed limits on local roads are lower than that of interstates, still material and equipment which expose blunt ends to motorists should be stored outside of the clear zone or positively protected.
0152-0149	The project requested the Contractor to relocate utility poles and fire hydrants.	Objects within the clear zone of the roadway are a hazard to motorists and more so within a work zone. Objects either need to be positively protected or moved outside of the clear zone.
0152-0149	A storage container is placed by the edge of the road without positive protection.	The storage container should be positively protected to eliminate the hazard of a blunt object adjacent to the edge of the road.
0158-0201	Materials and equipment stored within the clear zone of the roadway were not positively protected. Also materials were stored behind metal beam rail within the deflection zone.	Materials and equipment stored alongside the roadway should be positively protected or stored outside the deflection zone of the metal beam rail.
Pavement Marking Issues		
0044-0152	Temporary tape for pavement markings would not have lasted through the winter due to snow plowing and was replaced by Change Order with epoxy paint.	Projects extending through the winter should not use temporary tape for pavement markings. It creates more work for the Contractor to have to replace it in winter.

<u>Project No.</u>	<u>Finding</u>	<u>Recommendation</u>
0109-0172	The black cover-up resin pavement markings are too shiny for motorists traveling towards the sun and often misrepresent where the lane markings are.	Division of Material Testing should research a material that can be used to cover up pavement markings adequately for all conditions.
0158-0201	The pavement marking tape was torn and missing pieces.	Temporary pavement marking tape that has been damaged should be repaired or replaced.
0044-0152	Cold-applied membrane took too long to cure prior to paving within the same night; it wasn't practical.	Design selection of the appropriate membrane to allow paving within the same night is a good practice.
0034-0313	Sidewalks were closed using only traffic cones and caution tape which is not ADA compliant.	Type III barricades that can be detected at ground level should help disabled people navigate around a closed sidewalk.
Pedestrian Issues		
0042-0315	Work areas on the sidewalk were not closed with proper devices and signs and there was no clear path for pedestrians to travel around them.	Work areas on an existing travel way for pedestrians should be properly protected and have advance warning. A new defined travel way for the pedestrians needs to be provided while the existing one is under construction.
0051-0260	The temporary driveway aprons were too steep for wheelchairs to navigate and the HMA material was deteriorating at the crown.	Temporary driveway aprons need to be ADA compliant.
0087-0142	The detour route is currently having pedestrians cross Int. No. 87-204 at North Main St. The pedestrian pedestal at the northeast corner of the intersection was destroyed and removed. The absence of this pedestal is currently negatively affecting the operation of the pedestrian facilities at the intersection, as well as the pedestrian detour route for the project.	The installation of the permanent pedestrian signal should be considered at the northeast corner of the intersection under this project.

<u>Project No.</u>	<u>Finding</u>	<u>Recommendation</u>
0092-0522	The sidewalk on Ella Grasso Boulevard underneath the bridge was in very poor condition especially for disabled pedestrians to use.	Temporary sidewalks need to be safe and ADA compliant. The conditions need to be repaired for the pedestrians' safety.
0109-0172	There is a safety concern with pedestrians walking through the work zone on the secondary road where there is no existing sidewalk or provision to protect pedestrian traffic included in the contract.	Although there is no provision to address pedestrians on this type of project, the safety of the pedestrians within the work zone should be a concern. The safety of pedestrians should be addressed in design phase.
0158-0201	Currently, there are no pedestrian accommodations. The existing sidewalk on the north side of the street was inoperable. On Route 57 (Main Street) work vehicles were parked on the sidewalk making it unusable.	Pedestrian access should be maintained along Route 57 (Main Street) at all times according to Item # 0971001A – Maintenance and Protection of Traffic under Pedestrian Access.
Project Constraints and Pattern Installation		
0092-0669	The project finds it difficult to install the traffic pattern around Exit 3 on ramp and Exit 5 off ramp with them being 100 feet apart.	Traffic Engineering reviewed and approved their request to close both Exit 3 and Exit 5 while placing a continuous pattern.
Proper Protection of Work Zones		
0106-0121	The stability of the TPCBC being pinned on top of concrete blocks and temporary pavement is questionable in consideration of the crashworthiness.	There should be working drawings and crash testing reports made available to the Engineer for pinned barriers on top of the roadway retention systems.
Quality Standards of Traffic Devices		
0032-0130	A number of the traffic cones and traffic drums were bent or distorted.	Devices in marginal or unacceptable quality should be removed and replaced with those of acceptable quality. Refer to the ATSSA Quality Guidelines for Temporary Traffic Control Devices and Features.
0032-0130	Some of the construction signs are backed with waffle board.	The Office of Construction issued a memo dated October 15, 2011 eliminating the use of waffle boards as a substrate for construction signs.

<u>Project No.</u>	<u>Finding</u>	<u>Recommendation</u>
0034-0313	Some “Business Access” signs had dull sheeting.	Signs need to have their condition and reflectivity maintained to remain clear and visible to motorists.
0042-0315	Some of the construction signs were mounted on waffle board.	Item No. 1220013A – Construction Signs – Bright Fluorescent Sheeting states that corrugated or waffle board type substrates shall not be used. The signs need to comply with the special provisions.
0042-0315	Some traffic control devices were marginal to unacceptable in condition; either by being deformed or missing reflective tape. Devices in poor condition can hinder a motorist’s awareness of the limits of a work zone especially in poor weather or at night.	The ATSSA Quality Guidelines for Temporary Traffic Control Devices and Features should be referenced for acceptable quality of devices.
0044-0147	A number of the delineators atop of the barrier curb were in poor condition or the wrong color for the side of the road the curb was on.	Any devices in poor condition should be removed from the site. Yellow delineators should only be on the left side and white delineators only on the right side of traffic.
0051-0260	Some of the traffic cones were bent or scuffed or missing reflective tape.	Traffic devices that are marginal or unacceptable in condition should be removed from the site.
0076-0217	The temporary construction signs on tripods were made of waffle board.	Waffle boards are no longer permitted to be used for construction signs.
0092-0522	The signs placed on I-95 SB appeared to be smudged and/or streaked.	Signs need to be cleaned before placement to enhance their visibility to motorists.
0106-0121	A post-mounted sign was loose from its anchor.	Post-mounted signs needed to be securely anchored to prevent them from falling and becoming a potential hazard if impacted.
0106-0121	Some traffic control devices were badly distorted, scuffed, and missing reflective tape which is unacceptable in quality.	Devices unacceptable in quality should be removed from the project and replaced with those that are acceptable.

<u>Project No.</u>	<u>Finding</u>	<u>Recommendation</u>
0158-0201	The quality of the traffic control devices was marginal to unacceptable. Devices in poor quality will hinder delineation through the work zone.	Unacceptable traffic control devices should be removed from the project.
Reevaluate Contract Items		
0042-00315	The Chief Inspector suggested combining both the Temporary Detection and the Temporary Signalization special provisions since the work is closely related to one another.	The Office of Traffic Engineering can consider the possible cost savings of combining related items.
0044-0147	The municipal police are considered expensive and the estimated amount will be exceeded.	Traffic Engineering should reevaluate the cost estimating for municipal police per Town.
0044-0147	Some items are routinely added based on field conditions and results in adjustments through change orders.	Adequate contingency allowance should be made to adjust traffic items as needed, including, square footage for signs, anti-tracking pads, temporary paint, and black-out paint.
Rolling Road Blocks		
0015-0363	The Contractor used a Rolling Road Block (RRB) to close a three-lane section of Route 8 Southbound that turned into a four-lane section when installing the advance warning signs and taper. The RRB took 18 minutes before traffic was let through. (NOTE: The RRB was deemed necessary in this case to use to keep the project's ABC schedule on track to accomplish the bridge's milestone date.)	All projects are required to comply with the Construction Directive: Work Zone Safety Rolling Road Block (CB-2016-2).

<u>Project No.</u>	<u>Finding</u>	<u>Recommendation</u>
0092-0522	The Rolling Road Block (RRB) used to install the traffic pattern, took place from 9:51 pm to 10:17 pm (26 minutes) on the southbound side; and then from 10:21 pm to 10:44 pm (23 minutes) on the northbound side. It was witnessed that RRB was used for the installation of the advance warning signs and the entire pattern. The Inspector spoke with the Sargent on duty before the traffic pattern installation about adhering to the RRB policy. On the contrary, the Sargent decided it is safer to keep all lanes closed until the pattern is completed.	Construction Directive CD-2016-2 on Rolling Road Blocks allows a maximum time of 15 minutes. The Review Team said they would discuss the need for compliance about the DOT policy with State Police Liaison since this has been an ongoing issue.
0092-0531	The Rolling Road Block was excessive in time. In total it took 57 minutes which is much longer than the allowed 15 minutes. (NOTE: This was a major traffic shift for the I-95/I-91/Route 34 Interchange.)	Other options to mitigate significant impacts to traffic should have been explored. The residual back up will take even longer to dissipate.
0155-0169	The traffic stop to allow the structural steel to be set over I-84 took 23 minutes which is considerably longer than the 10 minutes allowed in the contract provisions.	The suggested method of operation to set the steel should be analyzed in design phase to closely match the allowable time for an intermittent closure.
Selective Clearing		
0034-0313	Some construction signs and devices were obstructed by shrubs, tall grass, and fences.	Selective clearing should be done to improve visibility to signs and access to devices.
0044-0147	A construction sign had overgrown tree branches with leaves in front.	Selective clearing is needed when the sign messages are obstructed from any angle.
0044-0152	Some signs were blocked by overgrowth of bushes which can occur from one season to the next.	Selective clearing should be conducted throughout the construction season.
0106-0121	Some signs along the detour and a signal head on Route 114 are obstructed from view by low hanging tree branches.	Selective clearing can be used to ensure construction signs and signals heads are visible to motorists.

<u>Project No.</u>	<u>Finding</u>	<u>Recommendation</u>
0152-0149	Post-mounted signs were slightly obstructed by trees.	Selective clearing is recommended.
0158-0201	Some signs were covered by overgrown plants.	Selective clearing is recommended for signs in place for long periods of time.
Sign Visibility		
0151-0273	Some signs on the interstate are mounted too low when placed behind barrier.	Signs need to be raised if obstructed by barrier so their full messages are visible to motorists.
0152-0157	Parked vehicles were blocking construction signs and devices for the road closure in the work zone.	Vehicles need to be parked where construction devices and signs are not visually impeded by oncoming traffic.
TMP Maintenance		
0151-0273	Project staff indicated that the Transportation Management Plan for the project isn't currently being maintained. However, the project intends to start updating it once future projects adjacent to it become active.	The TMP is a guidance document required by 23 CFR 630 Subpart J to be maintained for significant projects.
Unit Communication		
0109-0172	The project didn't know to contact the Overweight/Oversized Permit Unit to notify them of lane closures or lane width reductions on the bridges.	Field staff contacting Overweight/Oversized Permits Unit should become a standard practice for bridge projects. Notifying them ahead of time can help detour oversized/overweight loads to an unimpeded travel route.

Summary

The successful practices and areas that require improvement found during the reviews will be addressed through the Work Zone Process Review. The Process Review will coordinate among the Department units to ensure that any systemic issues are mitigated and best practices are implemented statewide. The recommendations associated with the findings may be addressed as follows:

- Good practices can be implemented through specification changes, creation of new policies or procedures, and inspector training.
- Discrepancies found in the plans and specifications can be addressed through Lessons Learned presentations to the working level engineers.
- Clarity of the plans and specifications can reduce time spent mitigating issues during the construction phase. Proposed specification changes can be brought to the Specifications Committee or the Division of Traffic Engineering.
- Modifications to existing policies and procedures for work zone field activities and common practices that pose a potential safety hazard to the traveling public must be implemented.
- New policies can be created to address potential unsafe practices in the field. A new policy on the use of the Rolling Road Block has been issued by the Department.
- Training is the most effective tool to address systemic issues found in the field, such as specification enforcement and the proper use of safety devices. Inspectors can be made aware of deficiencies through verbal communication, review reports, and during the annual winter inspectors' training. Another training resource is the use of the Inspectors' Pocket Guide Checklists.
- New technologies are being researched and piloted to improve Work Zone Safety and Mobility.
- Timely communication between the Construction field staff and other Department units will yield effective project coordination in getting issues resolved.

The Work Zone Safety Field Reviews are instrumental in identifying how successful safety practices are within the field and receiving feedback from personnel who use them on a daily basis.

Appendix:

2016 Work Zone Safety Field Review Reports

Regular Field Reviews

In-Depth Field Reviews