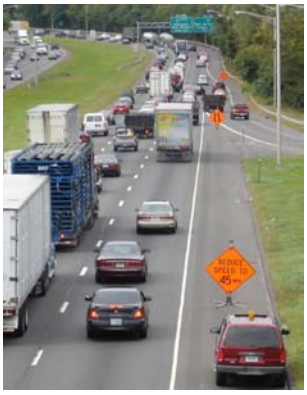

WORK ZONE SAFETY

CONNECTICUT DEPARTMENT OF TRANSPORTATION

AN IN-DEPTH LOOK

AT POLICY AND PRACTICE

2010 Report

State of Connecticut

2010

Work Zone Safety Reviews

Prepared By:

Connecticut Department of Transportation

Office of Construction

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2800 Berlin Turnpike

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Work Zone Review 2010

Table of Contents

Introduction

The FHWA's 2010 Work Zone Mobility and Safety Self Assessment document contains a section titled program evaluation. Under the program evaluation section, field reviews are conducted to help evaluate varying aspects of work zones paying particular attention to the current practices and designs being used in the Connecticut Department of Transportation's (CTDOT) work zones. In-depth field reviews included key personnel from the project, Office of Construction, Division of Traffic, Division of Safety and the Federal Highway Administration (FHWA). Reports were created to document both successes and needed areas of improvement, not only within the project limits but also within Department policies or procedures. The reviews include an overview of traffic control devices, sign installation and removal methods, sign recognition and visibility, and survey of project personnel to determine strengths and weaknesses in work zone procedures. The goal is to take the "Lessons Learned" and improve upon the various disciplines that are involved in work zone design and implementation.

Projects are chosen from each of the four districts in the state: District 1- Central Connecticut; District 2- Eastern Connecticut; District 3- Southwestern Connecticut and District 4- Western Connecticut. There was an attempt to find projects that had some unique features to address in the plans and specifications. Once a project was selected, the review team was notified and a date for the field review was determined. The field review team meets with project personnel at the field office for an initial meeting then follows up with a field review to observe all aspects of the work zone, again with key project personnel. Upon completion of the review a report is generated detailing findings. The report was sent out to the review team and project personnel for comments.

Over the course of four months, ten reviews were conducted. The main focus areas for the reviews were: 1) Night reviews 2) Pedestrian issues 3) Temporary Signalization 4) Stage construction 5) Interstate construction. The following report contains an executive summary, copies of work zone reviews, a table of action items, an additional white paper from one project and an overview of the database created. It should be noted that this is an evolving process. Currently the review form has undergone three revisions or refinements. The database was created so that issues can be better categorized and gleaned from the reports more easily. Another outcome has been the discussion of reviewing work zone operations conducted by different offices. While this has not been implemented it is a topic for future discussion. It is the intent that these reviews will continue every construction season, in order to continually improve work zone safety for construction crews and the traveling public.

WORK ZONE SAFETY REVIEW EXECUTIVE SUMMARY

The Department of Transportation (CTDOT) and the Federal Highway Administration (FHWA) recently completed the 2010 Work Zone Mobility and Safety Self Assessment and one area of the assessment, *Program Evaluation,* states that evaluations are "necessary to identify successes and analyze failures… At the local level, performance monitoring and reporting provides an agency with valuable information on the effectiveness of congestion mitigation strategies, contractor performance, and work zone safety." Work zone safety reviews or audits are one of the many strategies that have been identified as important tool in better understanding the operational and design characteristics of a work zone. Reviews with the Districts, Traffic and FHWA had been done in the past and were beneficial in developing improvements in the area of design, construction and operations.

Work zone safety reviews were conducted by CTDOT and FHWA towards the end of 2010 and included some in-depth field reviews with the Offices of Construction, Traffic, and Safety. The field reviews included an overview of traffic control devices, sign installation and removal methods, sign recognition and visibility, survey of workers on what is working and not working, as well as use of innovative materials and practices. A work zone review form was developed to capture different aspects of a work zone and includes questions and check off sections pertaining to work zone management, operational characteristics, and equipment and materials being used. Field interviews and project discussions were also conducted when possible.

The intent is to be able to input information into a database that can be used to analyze and identify possible design issues, material defects, specification problems, training needs for inspectors, policy and procedural issues, and best practices. Some of the issues/ideas gleaned from the reviews and action items are as follows:

1. Sign reflectivity issue –illegibility of signs at night and proper use of sheeting -bright fluorescent vs. Type III.
    a. Review specifications – DOT's and Manufacturers
    b. Review material submittals to see if more information required.
    c. Review sheeting and substrate compatibility.

2. Portable light plants- position of lights causing glare and distraction to the traveling public, inadequate lighting maintained throughout work area
    a. Review specification requirements
    b. Add as a review task during work zone project level reviews

3. Pedestrian Access- obstructions, unclear guidance, unsuitable pathways, inaccessibility to crosswalks, pedestrian button devices.
    a. Review plan details and specifications
    b. Review guidance documents and standards
    c. Expand reviews to more projects to see if prevalent issue

4. Movable Barrier application- positive protection for traffic and workers, limited area for use.
    a. Review different barrier systems
    b. Review potential constraints
    c. Cost Benefit Analysis

5. Warning Lights on signs for secondary roadways - Photocell type do not work very well in areas with trees.

6. Traffic control in work zones – experience and understanding of work zone safety training, levels of effectiveness (presence versus enforcement).
    a. Appropriate Use of law enforcement and flaggers
    b. Training- local and state level. Addition to curriculum- moving road blocks
    c. Requirement and Responsibilities in work zone.
    d. Review policies and procedures- local and state
    e. Defining an accident in the work zone. Is it considered a workzone accident if it occurs within the queue?

7. Variable Message signs- proper placement (distance from anticipated queue), legibility, ineffective messaging
    a. Review traffic sign pattern plates for notations
    b. Research types of portable sign systems and capabilities
    c. Post mounted versus portable message board- what is best approach

8. Environmental conditions- pavement marking visibility during rain and fog, poor lighting conditions limiting retro-reflectivity, VMS solar backups, sightline restrictions due to trees, construction equipment, work area.
    a. Work zone checklists for use by projects to identify deficiencies
    b. Review Pavement markings requirements and specifications. Plastic and paint.
    c. Review proper sign placement and positioning criteria for visibility and legibility

<u>General Observations/comments</u>

- Reviews need to include more photographs.
- Need to expand number of field visits to get a better understanding of how pervasive an issue may be. Is it a localized concern based on road type, material type, project type?
- Accessibility of tools and checklists such as MUTCD for personnel
- Temporary signalization on secondary roads need to consider emergency services, school busses/stops, mail delivery services, and also farm equipment.
- For night projects include additional separate lighting for use by inspection staff provided by contractor.
- Trooper suggestion to include training on how to perform a moving road block.

2010 WORK ZONE ACTION ITEMS

Issue:	Problem	Actions Taken:	Actions to be Taken:
Construction Sign Retroreflective Issues	Plastic Substrate does not appear to be rigid enough to utilize the reflective properties of the sheeting so that the sign can be read properly by the traveling public during night time hours. Condensation found to reduce retroreflectivity of construction signs.	1) Ongoing discussion with the Office with Traffic Engineering concerning issue. Inquired to other states if they encountered same issue. 2) Email sent to Districts asking for review and be ready for discussion at next managers meeting. 3) Additional in-depth review conducted by project 44-151 personnel regarding condensation.	Based on In-depth review by Districts: A) Send Memo requesting removal of signs using plastic substrate. B) Revise specification to exclude plastic substrates. C) Discuss with other Offices about the use plastic substrates for construction signs. D) Review and, if necessary, revise specification so that condensation is removed from construction signs.
Pedestrian /Bicycle Access issues:	Incomplete Sidewalks, Pedestrian Buttons hard to get to or inaccessible, crosswalk designations at intersections.	1) Notified and discussed with chief inspector the review teams concerns. 2) Reviewed contract documents for specific language, or lack thereof, regarding this type of access. 3) See if utility delays are reason why sidewalks are incomplete.	Include more of these types of reviews to see if these issues are more widespread. Review plans and specifications and revise if necessary. Send out memos reminding districts of specifications. Conduct training if necessary.
Project Lighting for Night Construction:	Glare from portable light plants affecting motorists traveling through the work zone.	None to date.	Send memo requesting inspectors to conduct drive through and report findings on report. Review specification requirements. Possibly create work zone review checklist and include this as an item.
Lighting for night time Inspection:	Inspectors working on night projects do not have sufficient lighting to inspect work. This could be previously completed work or areas requested by contractor prior to placement of material.	Reviewed specification requirements and found that contractor not required to supply any lighting either hand held or portable light plants.	Place request to specification committee to include wording that for any night work, portable and hand held lighting to be supplied by contractor for inspection staff.

2010 WORK ZONE ACTION ITEMS

Issue:	Problem	Actions Taken:	Actions to be Taken:
Barricade warning lights High intensity:	Solar powered warning lights, High intensity, are not effective in rural areas with significant canopy surroundings.	Reviewed specification.	Discuss with the Office of Traffic about this issue for possible change to plans or revision of specification.
Traffic Control in Work Zones:	Experience and understanding of work zone safety training, levels of effectiveness (presence versus enforcement).	Safe and Effective Use of Connecticut Law Enforcement Personnel in Work Zones Training Curriculum Now Available Online. Visit University of Connecticut Technology Transfer (T2) Center at http://www.t2center.uconn.edu/	Continue training at the local and state level. Addition to curriculum – moving road blocks. Review policies and procedures – local and state. Defining an accident in the work zone. Is it considered a work zone accident if it occurs in the queue?
Variable Message Signs:	Defining proper placement (distance from the anticipated queue), proper messaging, ensure message is legible.	Continue to verify proper messaging during reviews	Investigate different types of portable/variable message signs and capabilities to find best approach.
Movable Barrier systems:	Currently only 1 system available for use – proprietary - therefore difficult to use on federal participating projects.	None to date.	Investigate if other systems have been developed. If other systems are in use compare the systems.
Environmental Conditions:	Visibility of Work Zone warning equipment during inclement weather. Rain affecting retroreflective properties of construction signs and pavement markings.	Continued investigation in construction signs and their lack of reflective properties.	Possibly create checklist to be signed off by contractor at beginning of work night. Review proper sign placement and positioning for visibility and legibility.
Safety Review Self Assessment:	Improve and enhance the work zone safety review inspection process.	Improved questionnaire form and created a database to store information.	Include more photographs/video of projects. Expand the number of field visits. Are issues based on road, material, or project type? Inform project staff of internet sites and pamphlets / documents.

NIGHT REVIEWS

50-204, Rt. 15 Fairfield and Trumbull, CT

44-151, I-95 East Lyme and Waterford, CT

83-255, I-95 Milford and Orange, CT

WORK ZONE REVIEW FORM

Project Number: 50-204/206 **District No.** 3
Date & Time: 8/3/2010 8pm to Midnight **Weather:** 80° Clear

Project Type: ☒ Construction ☐ Maintenance ☐ Bridge Safety
Road Type: ☒ Limited Access ☐ Secondary ☐ Local / Town
Inspection Forces: ☐ State ☐ Maintenance ☒ Consultant

Location (Route & Town): Route 15 Fairfield/Trumbull

Focus of Review: Lane Closure: ☒ Temporary ☐ Permanent; ☐ Stage Construction ☐ Detour; ☐ Pedestrian/ Bike issues; ☐ Temporary Signalization; ☒ Night Work

Prime Contractor: O&G Industries

Project Engineer: Anil Seghal **Chief Inspector:** John O'Dierna (STV)

Project Amount: 67,186,345 **Percent Complete:** 46%

Calendar Days completed: 242 **Calendar Days Allotted:** 772

Review Participants

Name	Representing
Robert Ramirez	Federal Highway Administration
Robert Turner	Federal Highway Administration
Mary Baier	DOT District 3 Construction
Terri Thompson	DOT Office of Construction
Philip Cohen	DOT Traffic Engineering
Terri Thompson	DOT Office of Construction
Jeff Hunter	DOT Office of Construction
Michael VanNess	DOT Safety
Tim Osika	CT State Police
Sam Scozzari	STV
Frank Morelli	STV
Dan Waida	STV

Q&A:

1) Is there clear, positive, understandable guidance through the work zone? Yes however there are some issues with signs. See Notes.

2) What is the overall condition of traffic flow through the work zone? (include queue length and speed limit, roadway condition). Slight queue and low speeds when entering the work zone around 2100; none by 2300. Have been told it varies depending on night.

3) Are there any hazards to the traveling public or construction personnel? (Blunt ends, Drop-offs). Project night lighting needs to be reviewed, but no other hazards seen.

4) Are there any horizontal/vertical clearance issues? None created by the construction work.

5) Are there any permitted load issues? N/A not allowed on highway.

6) Are all signs being used for Maintenance and Protection of Traffic acceptable in accordance with applicable requirements? See additional comments on attached sheet Substrate is corrugated board.

7) Are all cones, drums, barricades, or other channelization devices acceptable? Yes.

8) Are warning lights and devices used for Maintenance and Protection of Traffic? Yes.

9) Clear Zone issues: (Y/N) Respond to questions below.

   a. What is the clear zone for this project? 30' or outside of the clear zone of rail.
   b. Where are materials stored for the project? In gore areas or behind TPCBC.
   c. Where is equipment stored when construction is not in progress? Same as b.

10) Have accommodations been made to account for
   a. Emergency Services – Design did not account for emergency issues within staged work zone.
   b. Pedestrian/ Bike/ ADA issues? N/A

11) Do you have a hard time ensuring Traffic Control Devices are in functioning condition and installed according to plan? If yes, explain. Not usually, but the response time could be faster.

12) Pavement Markings- Temporary
   a. Is there an item for removal of pavement markings, if yes, indicate removal method being used? Yes, Grinding.
   b. Are there conflicting markings? No.
   c. Are the temporary markings legible? If night review, comment on visibility. Yes good visibility.
   d. Type of marking material being used. ☐ Tape ☒ Paint (non-epoxy) ☐ Epoxy

13) Personnel Protective Equipment- Are all members of the work force wearing the proper reflective equipment? If no, explain. Yes all workers appeared to be.

14) Type of Traffic Control Personnel being used on project? Indicate type of training or certification for each and position within the work zone area.

   ☒State Police Also being hired for enforcement.

   ☐Local Police Minimum Hourly Requirement:

   ☐Uniformed Flagger

   Comments from Traffic Control Personnel (indicate type of traffic person): not asked.

15) Chief Inspector Comments:

16) Project Engineer Comments: See General Comments

Traffic Control Device Inspection- PART II

Table A – Signs

Requirement	Comment
Type: Construction/Regulatory	
Location	Both sides when able
Mounting Height	Height vs. site line issues.
Clean, Visible, Legible (rate using quality standards guide ATSSA 3rd edition)	
Reflectorized/Sheeting Type	Bright fluorescent/ Substrate issues.
Project Consistency	
Need to be covered	
Temp./Permanent	

Table B – Traffic control Devices

Requirement	Comment
Type & Placement	42” cones and barrels
Quantity	
Clean, Visible, Functioning (rate using quality standards guide ATSSA 3rd edition)	Mostly
Reflectorized	yes
Anchored	
Consistent throughout project	Yes. Exit tapers need more & tighter definition.

Table C - Barricades and other channelization devices

Requirement	Comment
Type & Placement	N/A
Quantity	
Clean, Visible, Functioning (rate using quality standards guide ATSSA 3rd edition)	
Reflectorized	Delineator Integrity questioned
Anchored	
Consistent throughout project	
Crash Trucks (TMA) in use? If yes how many and type	N/A

Table D- Warning lights and devices

Requirement	Comment
Warning lights being used? Indicate type and location. Are all lights functioning? High or low intensity?	N/A Staff to investigate if warning lights are called for on advanced warning signs.
Advance Flashing Warning arrows Portable or Truck-mounted Lights functioning and in correct mode?	Yes.
Location of portable devices – Indicate if in clear zone and how protected.	Permanent VMS not used for project.
Changeable Message Signs – indicate if Permanent or Portable, Message understandable, Number of frames displayed, Timing between screens acceptable?	

Work Zone Traffic Control Review
Plans and Specifications Section – PART III

Is there a Transportation Management Plan? If yes, explain. No.

What special provisions are there in contract related to work zone (list item no, description and date of provision)? M&P of Traffic and Limitation of Operations.

Is the project being completed in stage construction? If yes, explain. No.

Is there temporary signalization? If yes, explain. No.

Is a detour required or being used? If yes, explain. No.

What guides, tools including manuals, pocket guides,books etc. do you reference?
Not asked.
What work zone traffic plans are included in the project? Stage Construction.

General Discussion Comments:

Speed reduction of legal limit considered during design phase considered but the Design decided against the proposal.

Visual open areas, where traffic cones are still present but no work is active, automobile speeds increase.

More than one "End Road Work" sign located within the sign pattern.

Taper at Exit ramps need to be more defined.

Temporary impact attenuation system damage predominant.

Property damage: How would this be administered if we get the information (GPS Coordinates).

One officer should be located at the start of the traffic queue.

CONNECTICUT DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING AND HIGHWAY OPERATIONS
DISTRICT 3
REPORT OF MEETING

Date of Meeting: August 3, 2010
Project: 50-204/206 & 144-178/180, Safety and Bridge Improvements on the Merritt Parkway (CT Route 15) in the Towns of Fairfield and Trumbull

Location of Meeting: CT DOT Field Office, Jefferson Street Park and Ride lot at Exit 46
Subject of Meeting: **Overnight MPT Review, Inspection, and Brainstorming w/CT DOT & FHWA** (8:30 p.m.)

Attendance:

Bob Ramirez	FHWA	860-659-6703 x3004
Robert Turner	FHWA	860-659-6703 x3011
Mary Baier	CT DOT District 3 Construction	203-389-3156
Terri Thompson	CT DOT Pavement Management	860-594-2667
Michael Van Ness	CT DOT Office of Construction	860-594-3118
Philip Cohen	CT DOT Traffic	860-594-2782
Jeff Hunter	CT DOT Safety	860-594-3122
Tim Osika	CT State Police	203-696-2500
Sam Scozzari	STV	646-354-9632
Frank Morelli	STV	203-371-1151
Dan Waida	STV	203-371-1151

Overview:

This meeting was conducted as an effort to brainstorm for areas of improvement regarding MPT through construction zones on limited access highways having high traffic volumes and incident rates. An inspection was conducted prior to the meeting as well as a follow up after the meeting. The following is a summary of ideas discussed and areas of note identified by the FHWA/CT DOT inspection party.

Crash Data:
Crash data for the Project area was discussed with SGT. Osika. He will query the State Police data for information from six months before the Project's commencement date (June 2009) and six months into the Project. SGT. Osika also offered to look into accidents that occurred during off hours. He will report back to Supervising Engineer, Mary Baier.

MPT Devices:

- Terri Thompson questioned if warning lights were specified for permanent mounted advanced warning signs; STV replied that the plans did not indicate warning lights. High intensity lights will be installed.

- Differential sign height of redundant signs on each side of the travelway was noticed during the 7pm inspection and discussed. The concern is that the signs behind barrier are higher than matching signs in the shoulder of the opposite and open lane and not visible when traffic starts to queue. STV responded that the signs could be raised for both sides to match and be better visible through direction to the Contractor. It was cautioned that signs extended in height area subject to wind shear, thus limiting visibility.

- FHWA and CT DOT advised that signs instructing motorist to merge with on-ramp traffic could be beneficial as the patterns are long and there are many entrance ramps on the Project.

- Parties acknowledged and discussed the inconsistency of the retro-reflectivity of the construction signs that are manufactured to the latest CT DOT specification; specifically, a “blotchy” appearance at night, which results in difficulty with read-ability at a distance. Parties brainstormed that it could be resulting from several defects:
    - Moisture being picked up by the sign materials and being trapped between the sign face and the backing.
    - Ultra-violet degradation causing a warp of the backing, which separates and allows water to infiltrate.
    - Some unknown material defect (a hand-held-sized sample of the corrugated sign material was provided to FHWA for further investigation).

- The specification deviation with spacing and color specifications of delineators mounted on Temporary Precast Concrete Barrier Curb (TPCBC) was identified by the FHWA/CT DOT inspection team. STV advised of some problems with longevity of delineators to last through most snow plowing operations (they bend or break off). STV also advised that it is an ongoing issue.

Safety:

- Complacency of the workers is a concern as witnessed during the 7pm inspection, where an employee of the Contractor was observed talking on a cell phone while standing close to the open lane of traffic (standing on the cone line). O&G will be notified.

- Treatment for the area of an existing median berm was discussed with regard to two cross-over accidents wherein vehicles crossed over from one roadway to the other in the past few weeks/months (this occurred in the area between Exit Nos. 42 and 44). SGT. Osika explained that one of the accidents involved a northbound vehicle that left the highway, entered the median, and climbed the existing berm. He explained that the berm acted as a “launch”, in which the errant vehicle was airborne and landed in the southbound lanes of live traffic, causing an accident on the southbound side. CT DOT personnel agreed to investigate the treatment and evaluate the need for an immediate temporary treatment until the final treatment is constructed in Spring-Summer 2011, and if the permanent treatment needs to be modified in any way.

- Parties also discussed the pros and cons of median openings as they pertain to emergency responders versus use by unauthorized motorists.

- Parties discussed the value of modifying the specification of sign pattern retrieval (back-to-front picking up devices in reverse versus front -to-back with a forward rolling block and State Police assistance) for special cases such as the Merritt Parkway, which has extensive areas of vertical and horizontal geometry that poses safety challenges for workers and the public.

- CT DOT District 3 advised of the value of State Police for enforcement in addition to visibility at the sign patterns. Parties discussed positioning of State Police vehicles in the pattern versus the danger and safety of the vehicles before the pattern. Parties also discussed the effectiveness of the vehicle before the pattern versus within the pattern, speculating that motorists rationalized that there will be no enforcement if the Trooper is inside the sign pattern. No final recommendation or conclusion was made regarding this matter.

- It was discussed that when an additional trooper is added per DPS requirements, the additional trooper be utilized to frequently drive through the patterns as well as relieve other troopers.

General Comments:

- Within lane closures that extend for some distance where active construction is not visible to a motorist, I suggest the use of an occasional portable barricade mounted orange arrow sign or 3 drums/cones across the closed lane to reinforce the message to through traffic, about which side of the drum/cone line is the closed lane. I call this treatment a "fire stop", just like studs in a wall. This action is intended to address and hopefully eliminate intrusion into the work zone pattern, which was mentioned as an issue on this project.

- Proper permanent "Wrong Way" and "Authorized Vehicles Only" regulatory signing is needed at all median breaks. It was mentioned during the meeting that vehicles have been observed using the median breaks on the Parkway to avoid backups and delays (not always construction related). It is particularly concerning that some median breaks are not even wide enough the harbor a vehicle without intrusion into an adjacent travel lane. Providing signing to preclude a potential wrong way vehicle must be provided and maintained at

all median breaks. This item is relevant especially during construction where signs may be removed temporarily due to work zone conflicts. It was observed that a median break somewhere near the project did not appear to have any Wrong Way signing.

- Although Traffic Engineering is interested in reviewing the median area where the crossover accident occurred, please be specific on which Department Office or Unit is to take the lead in reviewing potential changes to the median treatment as mentioned in the report.

- On all major projects the Transportation Management Plan (TMP) should look closely at access through the work zone by emergency services. The ability to remove disabled Vehicles should also be looked at in the TMP.

- Also on all major projects the item "Work Site Traffic Safety Supervisor" should be utilized.

- It was suggested that when crash barrels are damaged and Police are called to the accident, the same stickers placed on guide rail for maintenance that identify the case number are also placed on the damaged crash barrels.

Subsequent to the meeting, between 22:00 and 23:00, parties again inspected the full project limited access travelways (parkway, only), and the following comments were made:

- Existing merge signs are missing and need to be reinstalled.

- Illumination for some operations is too bright and must be adjusted.

- Added cones to channel traffic at gores should be implemented.

Submitted By:_____
Samuel Scozzari PE, Project Manager

Approved By:_____
Mary Baier PE, Transportation Supervising Engineer

From: Thompson, Terri L
To: Hunter, Jeffery H
Subject: FW: Photos
Date: Friday, May 06, 2011 1:52:00 PM
Attachments: Road Work Sign at Night.jpg
Left Lane at Night.jpg
Cones staged at X46.jpg
Mill River Unprotected.jpg

Thanks

Terri 860-594-2667

From: Sehgal, Anil
Sent: Thursday, May 06, 2010 9:59 AM
To: Thompson, Terri L
Cc: Obey, Robert E; Baier, Mary
Subject: FW: Photos

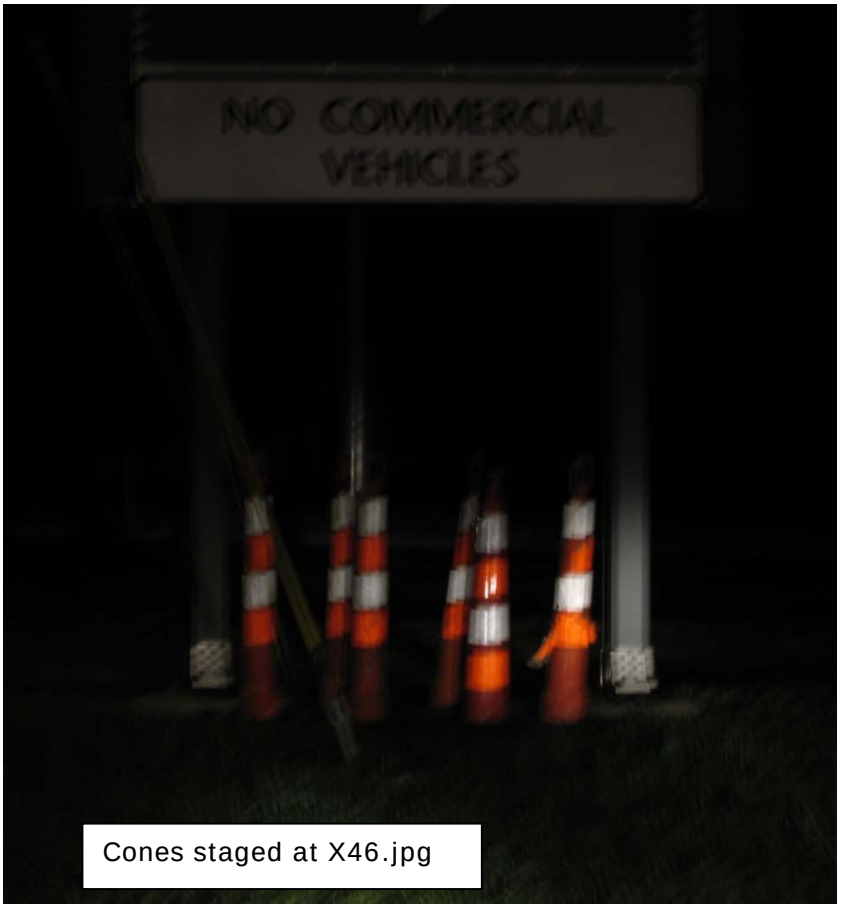
Hi Terri----Attached are some pictures. The problem with these pictures is that when camera flash hits them, they come out decent but when car light hits them shaded areas almost get as dark as the letters and are very hard to read. I think you get the point. We have started to transition into newer signs on our project.

Project 50-204 photos from e-mail Seghal to Thompson 050610

Mill River Unprotected.jpg

Road Work Sign at Night.jpg

Project 50-204 photos from e-mail Seghal to Thompson 050610



Cones staged at X46.jpg

Left Lane at Night.jpg

WORK ZONE REVIEW FORM

Project Number: 44-151 **District No.** 2
Date: 10/06/2010 **Weather:** Partly Cloudy 52°

Project Type: ☒ Construction ☐ Maintenance ☐ Bridge Safety
Road Type: ☒ Limited Access ☐ Secondary ☐ Local / Town
Inspection Forces: ☒ State ☐ Maintenance ☐ Consultant

Location (Route & Town): Interstate 95 Exits 72 to 83 in East Lyme / Waterford

Focus of Review: Lane Closure: ☒ Temporary ☐ Permanent; ☐ Stage Construction ☐ Detour; ☐ Pedestrian/ Bike issues; ☐ Temporary Signalization; ☒ Night Work

Prime Contractor: Tilcon CT

Project Engineer: Michael Wilson **Chief Inspector:** James Parsons

Project Amount: 17,068,239 **Percent Complete:** 13%

Calendar Days completed: 114 **Calendar Days Allotted:** 525

Review Participants

Name	Representing
Robert Rameriz	Federal Highway Administration
Robert Turner	Federal Highway Administration
JoAnn Devine	Assistant District Engineer Dist 2
Terri Thompson	TSE DOT Office of Construction
Michael Wilson	DOT District 2 Construction
Stephen Curley	DOT Office of Traffic Engineering
James Parsons	DOT District 2 Construction
Jeffery Hunter	DOT Office of Construction

Q&A:

1) Is there clear, positive, understandable guidance through the work zone? Yes.

2) What is the overall condition of traffic flow through the work zone? (Include queue length and speed limit, roadway condition). Minimal queue, 1-2 miles during setup. A more significant queue occurred prior to Labor Day.

3) Are there any hazards to the traveling public or construction personnel? (Blunt ends, Drop-offs). Grass median area unprotected by barrier and also shoulder – consider safety edge application.

4) Are there any horizontal/vertical clearance issues? None noted.

5) Are there any permitted load issues? None noted.

6) Are all signs being used for Maintenance and Protection of Traffic acceptable in accordance with applicable requirements? Yes, however similar issue as noted on previous night reviews concerning use of semi-rigid substrate that causes illegibility of sign message.

7) Are all cones, drums, barricades, or other channelization devices acceptable? Yes, also using movable barrier.

8) Are warning lights and devices used for Maintenance and Protection of Traffic? Yes.

9) Clear Zone issues: (Y/N) Respond to questions below.
   a. What is the clear zone for this project? 30' or behind the deflection zone of rail system.
   b. Where are materials stored for the project? Behind barrier and in gore areas of ramps.
   c. Where is equipment stored when construction is not in progress? See b above.

10) Have accommodations been made to account for
   a. Emergency Services – No issues for emergency services to negotiate the work zone.
   b. Pedestrian/ Bike/ ADA issues? Since Interstate project does not apply.

11) Do you have a hard time ensuring Traffic Control Devices are in functioning condition and installed according to plan? If yes, explain. No.

12) Pavement Markings- Temporary
   a. Is there an item for removal of pavement markings, If yes, indicate removal method being used? Yes, grinding.
   b. Are there conflicting markings? None noted.
   c. Are the temporary markings legible? If night review, comment on visibility Yes, visible.
   d. Type of marking material being used. ☐ Tape ☒ Paint (non-epoxy) ☐ Epoxy

13) Personnel Protective Equipment- Are all members of the work force wearing the proper reflective equipment? If no, explain. Yes.

14) Type of Traffic Control Personnel being used on project? Indicate type of training or certification for each and position within the work zone area.

   ☒ State Police

   ☐ Local Police Minimum Hourly Requirement:

   ☐ Uniformed Flagger

   Comments from Traffic Control Personnel (indicate type of traffic person): not asked.

15) Chief Inspector Comments: Calling Highway operations prior to pattern set up and at completion. Safety barrier is a good option to provide adequate work area especially with limited shoulder width. State Police positioned at taper transition or work site. It was mentioned that there should be advanced warning areas at back of queue.

16) Project Engineer Comments: See Appendix for follow up investigation on reflective sheeting by Project Engineer and Project staff.

Traffic Control Device Inspection- PART II

Table A – Signs

Requirement	Comment
Type: Construction/Regulatory	
Location	Both sides when able
Mounting Height	OK Height vs Reflectorization
Clean, Visible, Legible (rate using quality standards guide ATSSA 3rd edition)	Same issues as with previous projects. Visibility.
Reflectorized/Sheeting Type	Yes/Bright Fluorescent
Project Consistency	Yes
Need to be covered	No
Temp./Permanent	Both

Table B – Traffic control Devices

Requirement	Comment
Type & Placement	42" Cones & Drums per plan 80' spacing on cones.
Quantity	Adequate
Clean, Visible, Functioning (rate using quality standards guide ATSSA 3rd edition)	Yes
Reflectorized	Yes
Anchored	No
Consistent throughout project	Yes

Table C - Barricades and other channelization devices

Requirement	Comment
Type & Placement	N/A
Quantity	
Clean, Visible, Functioning (rate using quality standards guide ATSSA 3rd edition)	
Reflectorized	
Anchored	
Consistent throughout project	
Crash Trucks (TMA) in use? If yes how many and type	N/A

Table D- Warning lights and devices

Requirement	Comment
Warning lights being used? Indicate type and location. Are all lights functioning? High or low intensity?	N/A
Advance Flashing Warning arrows Portable or Truck-mounted Lights functioning and in correct mode?	
Location of portable devices – Indicate if in clear zone and how protected.	
Changeable Message Signs – indicate if Permanent or Portable, Message understandable, Number of frames displayed, Timing between screens acceptable?	

Work Zone Traffic Control Review
Plans and Specifications Section – PART III

Is there a Transportation Management Plan? If yes, explain. No

What special provisions are there in contract related to work zone (list item no, description and date of provision)? Not addressed in old form.

Is the project being completed in stage construction? If yes, explain. Not addressed in old form.

Is there temporary signalization? If yes, explain. No.

Is a detour required or being used? If yes, explain. No.

What guides, tools including manuals, pocket guides,books etc. do you reference?
Not addressed in old form.

What work zone traffic plans are included in the project? Not addressed in old form.

Additional Comments from meeting:

No wrecker service, and no work site supervisor required from contractor. Pavement marking eradication is good. Picking up pattern in reverse per DOT requirement, however, cone truck allowed to drive in opposite direction with no lights on for pickup. No issues to date. Experiencing traffic queues. Rocky Neck Connector to the Baldwin Bridge. No work zone accidents that are project related. Not sure about within traffic queue. Discussed with FHWA the use of the safety edge as part of paving for median grass area.

Discussion on incorporating a gate in median upon completion of median barrier for accessibility to opposing direction for incident management. Suggestion was result of an on board meeting with District, Design, and State Police during design phase.

Project personnel suggested that for night work, the illumination requirement should include a statement about supplying inspection staff with sufficient lighting to perform their work. Lighting for project personnel outside of the immediate work area should also be included in the item. It was also stated that contract should have used 5,000 linear feet of movable barrier; however the contract limits length to ½ mile. Contractor needs to better position portable light plants to prevent glare. Noted during SB travel passing work area located NB Exit 73 vicinity. Construction Sign substrate (semi-rigid plastic) causing distortion or illegibility of messages. Possible condensation issue.

WORK ZONE REVIEW FORM

Project Number: 83-255 **District No.** 3
Date & Time: November 3, 2010 **Weather:** Clear, 40 degrees

Project Type: ☒ Construction ☐ Maintenance ☐ Bridge Safety
Road Type: ☒ Limited Access ☐ Secondary ☐ Local / Town
Inspection Forces: ☐ State ☐ Maintenance ☒ Consultant

Location (Route & Town): Interstate 95 North and Southbound in Milford and Orange

Prime Contractor: Manafort Brothers

Project Engineer: Jeff Mordino **Chief Inspector:** Giovanni Castro

Project Amount: $30,998,979 **Percent Complete:** Work 81%, Time 106%

Calendar Days completed: 508 **Calendar Days Allotted:** 477

Review Participants

Name	Representing
Jeff Hunter	Office of Construction
Nick Ambrosino	Office of Construction
Dave Harrison	District 3 Construction - Tectonic

Q&A:

1) Is there clear, positive, understandable guidance through the work zone? Yes

2) What is the overall condition of traffic flow through the work zone? (include queue length and speed limit, roadway condition)
There is a queue for about an hour during and after pattern is set up. After about an hour traffic flow is somewhat normal through work zone.

3) Are there any hazards to the traveling public or construction personnel? (Blunt ends, Drop-offs) No

4) Are there any horizontal/vertical clearance issues?
No

5) Are there any permitted load issues? No

6) Are all signs being used for Maintenance and Protection of Traffic acceptable in accordance with applicable requirements? Yes

7) Are all cones, drums, barricades, or other channelization devices acceptable?
The inspector marks all cones/drums that are unacceptable and issues a field memo to the contractor if they are not replaced.

8) Are warning lights and devices used for Maintenance and Protection of Traffic?
Yes

9) Clear Zone issues: (Y / N) Respond to questions below.
   a. What is the clear zone for this project?
   Usually behind barrier, 30' inside
   b. Where are materials stored for the project?
   Off ramp near 95
   c. Where is equipment stored when construction is not in progress?
   Off ramp near 95

10) Have accommodations been made to account for
   a. Emergency Services – One accident so far and there were no issues
   b. Pedestrian/ Bike/ ADA issues? N/A

11) Do you have a hard time ensuring Traffic Control Devices are in functioning condition and installed according to plan? If yes, explain
No

12) Pavement Markings- Temporary
   a. Is there an item for removal of pavement markings, If yes, indicate removal method being used? No
   b. Are there conflicting permanent markings? No
   c. Are the temporary markings legible? If night review, comment on visibility Yes
   d. Type of marking material being used. ☐ Tape ☒ Paint (non-epoxy) ☐ Epoxy

13) Personnel Protective Equipment- Are all members of the work force wearing the proper reflective equipment? If no, explain.
Inspectors were not issued type 3 vests or pants. Contractor does wear proper equipment.

14) Type of Traffic Control Personnel being used on project? Indicate type of training or certification for each and position within the work zone area.

☒ State Police

☐ Local Police Minimum Hourly Requirement:

☐ Uniformed Flagger

Comments from Traffic Control Personnel (indicate type of traffic person): None

15) Chief Inspector Comments: None

16) Project Engineer Comments: None

Traffic Control Device Inspection- PART II

Table A – Signs

Requirement	Comment
Size	Good
Location	Good
Mounting Height	Good
Clean, Visible, Legible (rate using quality standards guide ATSSA 3rd edition)	Some signs were not as visible as they should be, difficult to read, scratchy look to them
Reflectorized	Some did not have great reflectivity, scratchy look
Project Consistency	Inconsistent
Need to be covered	No
Temp./Permanent	Temp.

Table B – Traffic control Devices

Requirement	Comment
Type & Placement	VMS
Quantity	2
Clean, Visible, Functioning (rate using quality standards guide ATSSA 3rd edition)	Very clean and visible
Reflectorized	No
Anchored	No
Consistent throughout project	Yes

Table C - Barricades and other channelization devices

Requirement	Comment
Type & Placement	Barrels, Cones and TPCBC
Quantity	
Clean, Visible, Functioning (rate using quality standards guide ATSSA 3rd edition)	Barrels were much more vibrant than cones. Some cones were difficult to see
Reflectorized	Yes, some poorly
Anchored	Yes
Consistent throughout project	No
Crash Trucks (TMA) in use? If yes how many and type	4- Type D

Table D- Warning lights and devices

Requirement	Comment
Warning lights being used? Indicate type and location. Are all lights functioning? High or low intensity?	No
Advance Flashing Warning arrows Portable or Truck-mounted Lights functioning and in correct mode?	Yes
Location of portable devices – Indicate if in clear zone and how protected.	Yes
Changeable Message Signs – indicate if Permanent or Portable, Message understandable, Number of frames displayed, Timing between screens acceptable?	Portable message signs were very readable and the timing between screens was acceptable.

Work Zone Traffic Control Review
Plans and Specifications Section – PART III

Is there a Transportation Management Plan? If yes, explain
No

What special provisions are there in contract related to work zone (list item no, description and date of provision)?
No

Is the project being completed in stage construction? If yes, explain
No

Is there temporary signalization? If yes, explain
No

Is a detour required or being used? If yes, explain
Exit ramp detours when paving exit ramps

What guides, tools including manuals, pocket guides,books etc. do you reference?
Chief inspector uses pocket guide for reflectivity of cones

What work zone traffic plans are included in the project?
Typical Detour, Limitations of Operations

PEDESTRIAN REVIEWS

76-205, Intersection of Routes 6 & 44 in Manchester, CT

42-297, Intersection of Silver Lane & Forbes St; East Hartford, CT

WORK ZONE REVIEW FORM

Project Number: 76-205 **District No.** 1
Date: 08/25/2010 8:30 – 12:30 **Weather:** Fair 75

Project Type: ☒ Construction ☐ Maintenance ☐ Bridge Safety
Road Type: ☐ Limited Access ☒ Secondary ☐ Local / Town
Inspection Forces: ☒ State ☐ Maintenance ☐ Consultant

Location (Route & Town): Intersection of Routes 6 & 44 in the Town of Manchester

Focus of Review: Lane Closure: ☒ Temporary ☐ Permanent; ☒ Stage Construction ☐ Detour; ☒ Pedestrian/ Bike issues; ☐ Temporary Signalization; ☐ Night Work

Prime Contractor: Spazzarini Construction Company

Project Engineer: Jaspal Jutla **Chief Inspector:** Jeff Benoit

Project Amount: 5,395,377 **Percent Complete:** 19%

Calendar Days completed: 183 **Calendar Days Allotted:** 450

Review Participants

Name	Representing
Robert Ramirez	Federal Highway Administration
Barry Shilling	Traffic Engineering
Jeff Hunter	Office of Construction
Steve Sartirana	DOT Safety
Jaspal Jutla	District 1 Construction
Jeff Benoit	District 1 Construction

Q&A:

1) Is there clear, positive, understandable guidance through the work zone? Yes, project has sufficient guidance through the work zone.

2) What is the overall condition of traffic flow through the work zone? (include queue length and speed limit, roadway condition). No queue present.

3) Are there any hazards to the traveling public or construction personnel? (Blunt ends, Drop-offs). The project has a few drop offs however they are protected properly.

4) Are there any horizontal/vertical clearance issues? None created by the construction work.

5) Are there any permitted load issues? None created by the construction project.

6) Are all signs being used for Maintenance and Protection of Traffic acceptable in accordance with applicable requirements? Yes, construction signs appear acceptable.

7) Are all cones, drums, barricades, or other channelization devices acceptable? Yes, however the impact attenuation system barrel height obscures the siteline for motorists leaving Cheney Tech high school. The Office of Traffic is reviewing this issue and will resolve it by the time this document is finished.

8) Are warning lights and devices used for Maintenance and Protection of Traffic? No.

9) Clear Zone issues: (Y / N) Respond to questions below.
   a. What is the clear zone for this project? 30 feet from roadway.

   b. Where are materials stored for the project? On project well outside the clear zone.

   c. Where is equipment stored when construction is not in progress? Same as b) above.

10) Have accommodations been made to account for
   a. Emergency Services – Yes.
   b. Pedestrian/ Bike/ ADA issues? Yes. Continuing adjustment to crosswalk locations, due to stage construction were discussed between the Office of Traffic and District 1 Construction Personnel.

11) Do you have a hard time ensuring Traffic Control Devices are in functioning condition and installed according to plan? If yes, explain. Not usually on this project.

12) Pavement Markings- Temporary
   a. Is there an item for removal of pavement markings, If yes, indicate removal method being used? Yes, Grinding.
   b. Are there conflicting markings? No.
   c. Are the temporary markings legible? If night review, comment on visibility Yes
   d. Type of marking material being used. ☐ Tape ☒ Paint (non-epoxy) ☐ Epoxy

13) Personnel Protective Equipment- Are all members of the work force wearing the proper reflective equipment? If no, explain. Appeared to be.

14) Type of Traffic Control Personnel being used on project? Indicate type of training or certification for each and position within the work zone area.

   ☐ State Police

   ☒ Local Police Minimum Hourly Requirement: 4 hours.

   ☐ Uniformed Flagger

   Comments from Traffic Control Personnel (indicate type of traffic person): not asked.

15) Chief Inspector Comments: See attached report.
16) Project Engineer Comments: See attached report.

Traffic Control Device Inspection- PART II

Table A – Signs

Requirement	Comment
Size	
Location	
Mounting Height	Break away mount height should be reviewed.
Clean, Visible, Legible (rate using quality standards guide ATSSA 3rd edition)	Yes.
Reflectorized	Yes.
Project Consistency	
Need to be covered	No.
Temp./Permanent	Reviewed permanent construction signs.

Table B – Traffic control Devices

Requirement	Comment
Type & Placement	Inertial barrels used to protect TPCBC
Quantity	2 sets
Clean, Visible, Functioning (rate using quality standards guide ATSSA 3rd edition)	Yes however see note about inertial barrels. Delineators used on barrels.
Reflectorized	Delineators are. Type III barricades are as well.
Anchored	No.
Consistent throughout project	Yes

Table C - Barricades and other channelization devices

Requirement	Comment
Type & Placement	Type III barricades used.
Quantity	At least 2.
Clean, Visible, Functioning (rate using quality standards guide ATSSA 3rd edition)	Yes, however striping is reversed on one of the barricades.
Reflectorized	Yes
Anchored	No
Consistent throughout project	Yes
Crash Trucks (TMA) in use? If yes how many and type	N/A

Table D- Warning lights and devices

Requirement	Comment
Warning lights being used? Indicate type and location. Are all lights functioning? High or low intensity?	N/A
Advance Flashing Warning arrows Portable or Truck-mounted Lights functioning and in correct mode?	N/A
Location of portable devices – Indicate if in clear zone and how protected.	N/A
Changeable Message Signs – indicate if Permanent or Portable, Message understandable, Number of frames displayed, Timing between screens acceptable?	N/A

Work Zone Traffic Control Review
Plans and Specifications Section – PART III

Is there a Transportation Management Plan? If yes, explain. No.

What special provisions are there in contract related to work zone (list item no, description and date of provision)? Limitation of Operations and M&P of Traffic.

Is the project being completed in stage construction? If yes, explain. Yes all off line work is being done first. Then mainline will be completed.

Is there temporary signalization? If yes, explain. No.

Is a detour required or being used? If yes, explain. No.

What guides, tools including manuals, pocket guides,books etc. do you reference? Construction Manual.

What work zone traffic plans are included in the project? Staging plans and M&P of Traffic plans.

WORK ZONE REVIEW FORM

Project Number: 42-297 **District No.** 1
Date: 08/25/2010 **Weather:** Fair

Project Type: ☒ Construction ☐ Maintenance ☐ Bridge Safety
Road Type: ☐ Limited Access ☒ Secondary ☐ Local / Town
Inspection Forces: ☒ State ☐ Maintenance ☐ Consultant

Location (Route & Town): Intersection of Silver Lane & Forbes St; East Hartford

Focus of Review: Lane Closure: ☒ Temporary ☐ Permanent; ☐ Stage Construction ☐ Detour; ☒ Pedestrian/ Bike issues; ☐ Temporary Signalization; ☐ Night Work

Prime Contractor: Spazzarini Construction Company

Project Engineer: Jaspal Jutla **Chief Inspector:** Richard Balzarini

Project Amount: 1,708,593 **Percent Complete:** 45%

Calendar Days completed: 133 **Calendar Days Allotted:** 276

Review Participants

Name	Representing
Robert Ramirez	Federal Highway Administration
Barry Schilling	Traffic Engineering
Yevgeniy Saykin	Traffic Engineering
Jeff Hunter	Office of Construction
Steve Sartirana	Safety
Richard Balzarini	District 1 Construction

Q&A:

1) Is there clear, positive, understandable guidance through the work zone? Yes, project has sufficient guidance through the work zone.

2) What is the overall condition of traffic flow through the work zone? (include queue length and speed limit, roadway condition). No queue present.

3) Are there any hazards to the traveling public or construction personnel? (Blunt ends, Drop-offs). Utility pole issues caused by utility company.

4) Are there any horizontal/vertical clearance issues? None created by the construction work.

5) Are there any permitted load issues? No.

6) Are all signs being used for Maintenance and Protection of Traffic acceptable in accordance with applicable requirements? Yes. Construction Signs appear acceptable.

7) Are all cones, drums, barricades, or other channelization devices acceptable? Yes. All devices appear acceptable at this time.
8) Are warning lights and devices used for Maintenance and Protection of Traffic? No.

9) Clear Zone issues: (Y / N) Respond to questions below.

   a. What is the clear zone for this project? 30 feet or behind deflection of rail.

   b. Where are materials stored for the project? Outside of the clear zone.

   c. Where is equipment stored when construction is not in progress? Same as b.

10) Have accommodations been made to account for
   a. Emergency Services – Yes.
   b. Pedestrian/ Bike/ ADA issues? Yes, however due to utility delays additional attention may be necessary.

11) Do you have a hard time ensuring Traffic Control Devices are in functioning condition and installed according to plan? If yes, explain. Not usually, but the response time could be faster.
12) Pavement Markings- Temporary
   a. Is there an item for removal of pavement markings, If yes, indicate removal method being used? Yes.
   b. Are there conflicting markings? No.
   c. Are the temporary markings legible? If night review, comment on visibility
   d. Type of marking material being used. ☐ Tape ☒ Paint (non-epoxy) ☐ Epoxy

13) Personnel Protective Equipment- Are all members of the work force wearing the proper reflective equipment? If no, explain. Yes at this time.

14) Type of Traffic Control Personnel being used on project? Indicate type of training or certification for each and position within the work zone area.

   ☐ State Police

   ☒ Local Police Minimum Hourly Requirement: **8 hours**

   ☐ Uniformed Flagger

   Comments from Traffic Control Personnel (indicate type of traffic person): not asked.

15) Chief Inspector Comments: Should look at one lane closures early and then taking a second lane later on for Interstate work. Taking one lane early puts workers more at risk than taking both lanes at once.

16) Project Engineer Comments: None.

Traffic Control Device Inspection- PART II

Table A – Signs

Requirement	Comment
Type: Construction / Regulatory	No issues.
Location	
Mounting Height	
Clean, Visible, Legible (rate using quality standards guide ATSSA 3rd edition)	
Reflectorized/ Sheeting Type	
Project Consistency	
Need to be covered	
Temp./Permanent	

Table B – Traffic control Devices

Requirement	Comment
Type & Placement	
Quantity	
Clean, Visible, Functioning (rate using quality standards guide ATSSA 3rd edition)	
Reflectorized	
Anchored	
Consistent throughout project	

Table C - Barricades and other channelization devices

Requirement	Comment
Type & Placement	N/A
Quantity	
Clean, Visible, Functioning (rate using quality standards guide ATSSA 3rd edition)	
Reflectorized	
Anchored	
Consistent throughout project	
Crash Trucks (TMA) in use? If yes how many and type	N/A

Table D- Warning lights and devices

Requirement	Comment
Warning lights being used? Indicate type and location. Are all lights functioning? High or low intensity?	N/A
Advance Flashing Warning arrows Portable or Truck-mounted Lights functioning and in correct mode?	
Location of portable devices – Indicate if in clear zone and how protected.	
Changeable Message Signs – indicate if Permanent or Portable, Message understandable, Number of frames displayed, Timing between screens acceptable?	

Work Zone Traffic Control Review
Plans and Specifications Section – PART III

Is there a Transportation Management Plan? If yes, explain. No.

What special provisions are there in contract related to work zone (list item no, description and date of provision)? Just the normal M&P, nothing special in the contract.

Is the project being completed in stage construction? If yes, explain. No.

Is there temporary signalization? If yes, explain. No.

Is a detour required or being used? If yes, explain. No.

What guides, tools including manuals, pocket guides,books etc. do you reference?
Construction Manual.

What work zone traffic plans are included in the project? None.

CONNECTICUT DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING AND HIGHWAY OPERATIONS
DISTRICT 1
REPORT OF MEETING

Date of Meeting: August 25, 2010

Project: 76-205 & 42-297, Intersection Safety Improvements Route 6 & 44 and New State Road, and Route 502 (Silver Lane) and Forbes Street in the Towns of Manchester and East Hartford.

Location of Meeting: CT DOT Field Offices

Subject of Meeting: **Daytime MPT Review, Inspection, and Brainstorming w/CT DOT & FHWA** (9:00 a.m.)

Attendance:

Bob Ramirez	FHWA	860-659-6703 x3004
Jaspal S. Jutla	CT DOT District 1 Construction	860-258-4626
Yevgeniy Saykin	CT DOT Traffic	860-594-2592
Barry Schilling	CT DOT Traffic	860-594-2769
Steven Sartirana	CT DOT Safety	860-594-3118
Jeffrey L. Benoit	CT DOT District 1 Construction	860-533-0321
Richard Balzarini	CT DOT District 1 Construction	860-895-9079
Jeff Hunter	CT DOT OOC	860-594-3122

Overview:

This meeting was conducted as an effort to brainstorm for areas of improvement regarding MPT through construction zones on intersections having high traffic volumes and/or high incidents. A meeting was held as well as a field inspection of both construction sites. The following is a summary of ideas discussed and areas of note identified by the FHWA/CT DOT inspection party.

MPT Devices:

- Robert Ramirez noted that the chevrons on one of the type 3 construction barricades needed to be switched in order to direct traffic towards the travel lane.

- It was noted that the majority of traffic cones and drums are in good shape and have been maintained fairly well.

- Excellent coordination between the District 1 Construction personnel, Office of Traffic, and the Town of Manchester has allowed for changes to be made to construction staging. Reinstalling existing Pedestrian buttons for crosswalks, revising construction sidewalk locations and installation of louvers on signals are needs that have been addressed due to coordination of the above parties.

- Continued discussion of the inconsistency of the retro-reflectivity of the construction signs that are manufactured to the latest CT DOT specification; specifically, a "blotchy" appearance at night, which results in difficulty with read-ability at a distance. Temporary Regulatory signs using the same substraight are on project 76-205. Parties continued discussion that it could be resulting from several defects:
    - Moisture being picked up by the sign materials and being trapped between the sign face and the backing.
    - Ultra-violet degradation causing a warp of the backing, which separates and allows water to infiltrate.
    - Some unknown material defect (a hand-held-sized sample of the corrugated sign material was provided to FHWA for further investigation).
    - A night review was discussed to see if same issue occurs with the regulatory signs on waffle board.
- Some delineators are mounted on Temporary Precast Concrete Barrier Curb (TPCBC), however, discussion with field personnel indicated that they were not a pay item on the project.

Safety:

- Ability of emergency services to travel through both projects in an efficient manner was discussed. Both Chief Inspectors confirmed that there have been no problems with emergency vehicles traveling through the work zone in an efficient manner.

- Both projects have at least one school located within the project limits. For this reason, it was discussed that crosswalks and sidewalks, even "temporary", should be reviewed on the respective projects for conformance to MP&T specifications. Old Crosswalk markings should be removed and temporary markings installed as necessary.

  Project Response to above:

  Our thinking is that the Traffic and Design must look at each situation separately and not just incorporate boiler plate specs. In the contract. In case of 42-297 where do you install X-walk when you are constantly digging for drainage/side walk .. We understand the spes. But sometimes it does not work.

- Special considerations were noted regarding project 76-205. On this project, two high schools are located next to each other. Concerns were raised about the amount of new young drivers traveling through a construction zone for the first time. For this reason, excellent coordination between the administration at Cheney Tech and the Construction field office is ongoing. Officials at Cheney Tech are sending out notices to advise families of students regarding the construction. This type of coordination should continue throughout the duration of the project.

- Parties also discussed the problem encountered on project 76-205 with the business located at the corner of New State road and Route 44. The business owner complained that existing traffic uses the parking lot as a cut through to one of the high schools. Currently traffic drums have been installed to prevent this.

- Both projects have two contract items for traffic person; municipal police officer and uniformed flagger; however the municipal police officer contract item is being used almost exclusively on both projects.

  Project Response to above:

- *1. Lot of traffic to handle 2. Liability issue 3. City area 4. Price wise flagger is not cheap $ 46.20/hr to $55.00/hr. 5. Police $58/hr*
  6. School zone 7. Not enough hrs for flaggers (56 days out of 450 days contract time on one job. And 75 days out of 276 days on another)
  7. we have used flaggers on rural area project

- Since Towns are starting to implement an 8 hour daily charge for the use of Municipal Police officers, the use of the contract item traffic person (uniformed flagger) should be given more consideration as a means of traffic control, providing conditions warrant consideration.

- It was observed that AT&T utility poles are still located in the original location on project 42-297. New pavement has already been placed around poles. While no fault by project personnel, this poses a safety hazard for the traveling public in two ways. It is obviously a fixed object in the roadway and the poles provide a false sense of security for bikes and pedestrians who use the area. An open discussion between the necessary offices should continue in order to find ways to avoid this issue.

  Project Response to above:

  This a big problem on every job. We cannot resolve at the project level. This has to be resolved at upper management level. We can Show you the e-mails/calls made by project personnel to get the utility moving. It appears they want to move at their on pace. If Somebody has a better idea we like to hear. Well, the poles are still there. Any suggestion???

General Comments:

- Break away sign installation should be reviewed.

DETOUR REVIEWS

143-177, Pinewoods Road, Torrington, CT

WORK ZONE REVIEW FORM

Project Number: 143-177 **District No.** 4
Date & Time: November 10, 2010 **Weather:** Clear, 50 degrees

Project Type: ☒ Construction ☐ Maintenance ☐ Bridge Safety
Road Type: ☐ Limited Access ☒ Secondary ☐ Local / Town
Inspection Forces: ☒ State ☐ Maintenance ☐ Consultant

Location (Route & Town): Pinewoods Road, Torrington , CT

Focus of Review: Lane Closure: ☐ Temporary ☒ Permanent; ☐ Stage Construction
☒ Detour; ☐ Pedestrian/ Bike issues; ☐ Temporary Signalization; ☐ Night Work

Prime Contractor: Spazzarini Construction

Project Engineer: Dave Ferraro **Chief Inspector:** William Caicedo

Project Amount: $1,808,108.00 (100% State) **Percent Complete:** 80%

Calendar Days completed: 215 **Calendar Days Allotted:** 230

Review Participants

Name	Representing
Jeff Hunter	Office of Construction
Nick Ambrosino	Office of Construction
William Caicedo	District 4 Construction

Q&A:

1) Is there clear, positive, understandable guidance through the work zone? Yes

2) What is the overall condition of traffic flow through the work zone? (include queue length and speed limit, roadway condition)
Good, One accident on Route 8 during construction which backed up traffic into work zone.

3) Are there any hazards to the traveling public or construction personnel? (Blunt ends, Drop-offs) No

4) Are there any horizontal/vertical clearance issues? No

5) Are there any permitted load issues? No

6) Are all signs being used for Maintenance and Protection of Traffic acceptable in accordance with applicable requirements? Yes

7) Are all cones, drums, barricades, or other channelization devices acceptable? Acceptable, contractor has been good at replacing unacceptable.

8) Are warning lights and devices used for Maintenance and Protection of Traffic? Yes

9) Clear Zone issues: (Y/N) Respond to questions below.
   a. What is the clear zone for this project? 30'
   b. Where are materials stored for the project? Near work zone (detour)
   c. Where is equipment stored when construction is not in progress? Near work zone (detour)

10) Have accommodations been made to account for
   a. Emergency Services – Yes, they are aware of the detour. No accidents on project.
   b. Pedestrian/ Bike/ ADA issues? Bike path, no problems

11) Do you have a hard time ensuring Traffic Control Devices are in functioning condition and installed according to plan? If yes, explain No

12) Pavement Markings- Temporary
   a. Is there an item for removal of pavement markings, If yes, indicate removal method being used? No
   b. Are there conflicting permanent markings? No
   c. Are the temporary markings legible? If night review, comment on visibility
   d. Type of marking material being used. ☐ Tape ☒ Paint (non-epoxy) ☐ Epoxy

13) Personnel Protective Equipment- Are all members of the work force wearing the proper reflective equipment? If no, explain. Yes, both contractor and inspectors are using proper safety equipment

14) Type of Traffic Control Personnel being used on project? Indicate type of training or certification for each and position within the work zone area.

   ☐ State Police

   ☒ Local Police (used when paving, get 4 hour min)

   ☒ Uniformed Flagger

Comments from Traffic Control Personnel (indicate type of traffic person): None

15) Chief Inspector Comments: None

16) Project Engineer Comments: None

Traffic Control Device Inspection- PART II

Table A – Signs

Requirement	Comment
Size	Good
Location	Legal and construction ahead were close off ramp, as designed
Mounting Height	Good
Clean, Visible, Legible (rate using quality standards guide ATSSA 3rd edition)	Good
Reflectorized	N/A (Day review)
Project Consistency	Consistent
Need to be covered	No
Temp./Permanent	Temp.

Table B – Traffic control Devices

Requirement	Comment
Type & Placement	VMS
Quantity	4
Clean, Visible, Functioning (rate using quality standards guide ATSSA 3rd edition)	All were visible except one which was in direct sunlight
Reflectorized	N/A
Anchored	No
Consistent throughout project	Mostly

Table C - Barricades and other channelization devices

Requirement	Comment
Type & Placement	Barricade near wok zone
Quantity	
Clean, Visible, Functioning (rate using quality standards guide ATSSA 3rd edition)	Visible
Reflectorized	N/A
Anchored	No
Consistent throughout project	Yes
Crash Trucks (TMA) in use? If yes how many and type	No

Table D- Warning lights and devices

Requirement	Comment
Warning lights being used? Indicate type and location. Are all lights functioning? High or low intensity?	Flashing lights on signs
Advance Flashing Warning arrows Portable or Truck-mounted Lights functioning and in correct mode?	No
Location of portable devices – Indicate if in clear zone and how protected.	Yes, some located on secondary roadways with limited space.
Changeable Message Signs – indicate if Permanent or Portable, Message understandable, Number of frames displayed, Timing between screens acceptable?	Portable message signs were very readable and the timing between screens was acceptable. There were two screens displayed at each VMS.

Work Zone Traffic Control Review
Plans and Specifications Section – PART III

Is there a Transportation Management Plan? If yes, explain
No

What special provisions are there in contract related to work zone (list item no, description and date of provision)?
No

Is the project being completed in stage construction? If yes, explain
2 stages for placing box culverts but no traffic staging

Is there temporary signalization? If yes, explain
No

Is a detour required or being used? If yes, explain
Yes, detour is in place for project duration.

What guides, tools including manuals, pocket guides, books etc. do you reference?
Construction manual and utilities pocket manual

What work zone traffic plans are included in the project?
Detour, Sign for businesses (added through town)

TEMPORARY SIGNALIZATION REVIEWS

142-144, Route 74 west of I-84, Tolland, CT

111-118, Route 97 Pomfret, CT

WORK ZONE REVIEW FORM

Project Number: 142-144 **District No.** 1
Date & Time: December 8, 2010 **Weather:** Clear/Cold

Project Type: ☒ Construction ☐ Maintenance ☐ Bridge Safety
Road Type: ☐ Limited Access ☒ Secondary ☐ Local / Town
Inspection Forces: ☒ State ☐ Maintenance ☐ Consultant

Location (Route & Town): Route 74 west of I-84 Bridge, Tolland

Focus of Review: Lane Closure: ☐ Temporary ☒ Permanent; ☒ Stage Construction
☐ Detour; ☐ Pedestrian/ Bike issues; ☒ Temporary Signalization; ☐ Night Work

Prime Contractor: Northern Construction Services

Project Engineer: Dilraj Josen **Chief Inspector:** Shawn Mangan

Project Amount: $2,325,182 **Percent Complete:** 7%

Calendar Days completed: 132 **Calendar Days Allotted:** 295

Review Participants

Name	Representing
Jeff Hunter	Office of Construction
Nick Ambrosino	Office of Construction
Shawn Mangan	District 1 Construction
Dave Hoyt	District 1 Construction

Q&A:

1) Is there clear, positive, understandable guidance through the work zone? Yes

2) What is the overall condition of traffic flow through the work zone? (include queue length and speed limit, roadway condition) Very light traffic

3) Are there any hazards to the traveling public or construction personnel? (Blunt ends, Drop-offs) 20' drop off next to bridge. TPCBC protects work zone and metal beam rail protects traffic on other side.

4) Are there any horizontal/vertical clearance issues? 10' lanes

5) Are there any permitted load issues? Unsure – Bridge not posted for weight limit however wide load issues, Permits notified.

6) Are all signs being used for Maintenance and Protection of Traffic acceptable in accordance with applicable requirements? Yes

7) Are all cones, drums, barricades, or other channelization devices acceptable? Yes

8) Are warning lights and devices used for Maintenance and Protection of Traffic? Yes

9) Clear Zone issues: (Y / N) Respond to questions below.

   a. What is the clear zone for this project? 0' or 30' from barrier
   b. Where are materials stored for the project? Behind barrier
   c. Where is equipment stored when construction is not in progress? Near field offices or behind barrier near bridge

10) Have accommodations been made to account for
   a. Emergency Services – Pre-emption for troopers and fire trucks
   b. Pedestrian/ Bike/ ADA issues? No

11) Do you have a hard time ensuring Traffic Control Devices are in functioning condition and installed according to plan? If yes, explain KTM – very good w/ changing after power outage

12) Pavement Markings- Temporary
   a. Is there an item for removal of pavement markings, If yes, indicate removal method being used? Yes, grinding
   b. Are there conflicting permanent markings?
   c. Are the temporary markings legible? If night review, comment on visibility N/A
   d. Type of marking material being used. ☐ Tape ☒ Paint (non-epoxy) ☐ Epoxy

13) Personnel Protective Equipment- Are all members of the work force wearing the proper reflective equipment? If no, explain. Yes

14) Type of Traffic Control Personnel being used on project? Indicate type of training or certification for each and position within the work zone area.

   ☐ State Police

   ☐ Local Police Minimum Hourly Requirement

   ☒ Uniformed Flagger

Comments from Traffic Control Personnel (indicate type of traffic person): No

15) Chief Inspector Comments:

- School bus stops @ house within temp. signalization.
- Why are inspectors responsible for getting police?
- Pre-emption should be in one direction only (from Troopers barracks)
- More thorough investigation of which pre emption system works best for site.
- More detours should be entertained to reduce time and costs of construction.
- Plowing during winter is difficult with only 10' lanes
- Plastic tape does not last through winter consider use of Epoxy for winter shut downs.
- Utilities – having trouble getting them moved.
- Less signs, more lines.

16) Project Engineer Comments: None

Traffic Control Device Inspection- PART II

Table A – Signs

Requirement	Comment
Size	Various
Location	Various
Mounting Height	Various
Clean, Visible, Legible (rate using quality standards guide ATSSA 3rd edition)	All very clean, visible.
Reflectorized	Very good.
Project Consistency	Very good.
Need to be covered	No
Temp./Permanent	Temp.

Table B – Traffic control Devices

Requirement	Comment
Type & Placement	Alternating one way Traffic Signals
Quantity	2
Clean, Visible, Functioning (rate using quality standards guide ATSSA 3rd edition)	Clean and visible
Reflectorized	N/A
Anchored	Yes
Consistent throughout project	Yes

Table C - Barricades and other channelization devices

Requirement	Comment
Type & Placement	Barricade near work zone
Quantity	
Clean, Visible, Functioning (rate using quality standards guide ATSSA 3rd edition)	Visible
Reflectorized	Yes
Anchored	Yes
Consistent throughout project	Yes
Crash Trucks (TMA) in use? If yes how many and type	No

Table D- Warning lights and devices

Requirement	Comment
Warning lights being used? Indicate type and location. Are all lights functioning? High or low intensity?	Yes, alternating One way traffic signals. Lights functioning.
Advance Flashing Warning arrows Portable or Truck-mounted Lights functioning and in correct mode?	No
Location of portable devices – Indicate if in clear zone and how protected.	Yes
Changeable Message Signs – indicate if Permanent or Portable, Message understandable, Number of frames displayed, Timing between screens acceptable?	

Work Zone Traffic Control Review

Plans and Specifications Section – PART III

Is there a Transportation Management Plan? If yes, explain
No

What special provisions are there in contract related to work zone (list item no, description and date of provision)?
No

Is the project being completed in stage construction? If yes, explain
2 stages for construction of bridge.

Is there temporary signalization? If yes, explain
Yes, alternating one way traffic signals

Is a detour required or being used? If yes, explain
No

What guides, tools including manuals, pocket guides,books etc. do you reference?
MUTCD guide is used.

What work zone traffic plans are included in the project?
M&PT plans

WORK ZONE REVIEW FORM

Project Number: 111-118 **District No.** 2
Date & Time: December 8, 2010 **Weather:** Clear/Cold

Project Type: ☒ Construction ☐ Maintenance ☐ Bridge Safety
Road Type: ☐ Limited Access ☒ Secondary ☐ Local / Town
Inspection Forces: ☒ State ☐ Maintenance ☐ Consultant

Location (Route & Town): Route 97 Pomfret

Focus of Review: Lane Closure: ☐ Temporary ☒ Permanent; ☒ Stage Construction
☐ Detour; ☐ Pedestrian/ Bike issues; ☒ Temporary Signalization; ☐ Night Work

Prime Contractor: New England Infrastructure

Project Engineer: Mark Elliott **Chief Inspector:** Andrew Millovitsch

Project Amount: $2,200,527.00 **Percent Complete:** 20%

Calendar Days completed: 144 **Calendar Days Allotted:** 353

Review Participants

Name	Representing
Jeff Hunter	Office of Construction
Nick Ambrosino	Office of Construction
Andrew Millovitsch	District 2 Construction

Q&A:

1) Is there clear, positive, understandable guidance through the work zone? Yes

2) What is the overall condition of traffic flow through the work zone? (include queue length and speed limit, roadway condition) Smooth

3) Are there any hazards to the traveling public or construction personnel? (Blunt ends, Drop-offs) No

4) Are there any horizontal/vertical clearance issues?
No. 11 foot lanes no shoulders. Wide load issues and issues with Farm Equipment.

5) Are there any permitted load issues? Notified Permitting

6) Are all signs being used for Maintenance and Protection of Traffic acceptable in accordance with applicable requirements? New

7) Are all cones, drums, barricades, or other channelization devices acceptable? New
8) Are warning lights and devices used for Maintenance and Protection of Traffic? Yes, battery operated.

9) Clear Zone issues: (Y / N) Respond to questions below.

   a. What is the clear zone for this project? 30 feet
   b. Where are materials stored for the project? In lot behind deflection zone
   c. Where is equipment stored when construction is not in progress? Same as above

10) Have accommodations been made to account for
   a. Emergency Services – No Pre-emption
   b. Pedestrian/ Bike/ ADA issues? No room, school buses ok. Rural setting.

11) Do you have a hard time ensuring Traffic Control Devices are in functioning condition and installed according to plan? If yes, explain No, contractor responsive.

12) Pavement Markings- Temporary
   a. Is there an item for removal of pavement markings, If yes, indicate removal method being used? Yes, grinding
   b. Are there conflicting permanent markings? No
   c. Are the temporary markings legible? If night review, comment on visibility
   d. Type of marking material being used. ☐ Tape ☒ Paint (non-epoxy) ☐ Epoxy

13) Personnel Protective Equipment- Are all members of the work force wearing the proper reflective equipment? If no, explain. Yes

14) Type of Traffic Control Personnel being used on project? Indicate type of training or certification for each and position within the work zone area.

   ☒ State Police (Not often, alternating one-way. Dangerous curve, before temp signal)

   ☐ Local Police Minimum Hourly Requirement:

   ☐ Uniformed Flagger

Comments from Traffic Control Personnel (indicate type of traffic person): None

15) Chief Inspector Comments: New devices, used 42” cones do not work well.
Hard to get contractor to change out 42” cones.

16) Project Engineer Comments: None

Traffic Control Device Inspection- PART II

Table A – Signs

Requirement	Comment
Size	Various
Location	Various
Mounting Height	Various
Clean, Visible, Legible (rate using quality standards guide ATSSA 3rd edition)	All very clean, visible. New.
Reflectorized	Very good.
Project Consistency	Very good.
Need to be covered	No
Temp./Permanent	Temp.

Table B – Traffic control Devices

Requirement	Comment
Type & Placement	Alternating one way Traffic Signals
Quantity	2
Clean, Visible, Functioning (rate using quality standards guide ATSSA 3rd edition)	Clean and visible
Reflectorized	N/A
Anchored	Yes
Consistent throughout project	Yes

Table C - Barricades and other channelization devices

Requirement	Comment
Type & Placement	Barricade near wok zone
Quantity	
Clean, Visible, Functioning (rate using quality standards guide ATSSA 3rd edition)	Visible
Reflectorized	N/A
Anchored	Yes
Consistent throughout project	Yes
Crash Trucks (TMA) in use? If yes how many and type	No

Table D- Warning lights and devices

Requirement	Comment
Warning lights being used? Indicate type and location. Are all lights functioning? High or low intensity?	Yes, alternating One way traffic signals. Lights functioning.
Advance Flashing Warning arrows Portable or Truck-mounted Lights functioning and in correct mode?	No
Location of portable devices – Indicate if in clear zone and how protected.	Yes
Changeable Message Signs – indicate if Permanent or Portable, Message understandable, Number of frames displayed, Timing between screens acceptable?	Portable message signs were very readable and the timing between screens was acceptable. There were two screens displayed at each VMS.

Work Zone Traffic Control Review
Plans and Specifications Section – PART III

Is there a Transportation Management Plan? If yes, explain
No

What special provisions are there in contract related to work zone (list item no, description and date of provision)?
No

Is the project being completed in stage construction? If yes, explain
2 stages for construction of bridge.

Is there temporary signalization? If yes, explain
Yes, alternating one way traffic signals

Is a detour required or being used? If yes, explain
No

What guides, tools including manuals, pocket guides,books etc. do you reference?
No pocket guide. MUTCD download available online which is used.

What work zone traffic plans are included in the project?
Stage construction plans and temporary pavement plans.

STAGE CONSTRUCTION REVIEWS

15-296/301-0070, Various RR Bridges in the towns of Fairfield, Bridgeport, Westport CT

140-164, Rehab Br # 00604 Rte 8 NB, Thomaston, CT

WORK ZONE REVIEW FORM

Project Number: 15 – 296 & 301 – 0070A,B,C **District No.** 1A
Date & Time: 11/02/2010 10:00 AM **Weather:** Clear 62°

Project Type: ☒ Construction ☐ Maintenance ☐ Bridge Safety
Road Type: ☐ Limited Access ☒ Secondary ☒ Local / Town
Inspection Forces: ☐ State ☐ Maintenance ☒ Consultant

Location (Route & Town): Various RR Bridges, Fairfield, Bridgeport, Westport

Focus of Review: Lane Closure: ☐ Temporary ☐ Permanent; ☒ Stage Construction ☐ Detour; ☒ Pedestrian/ Bike issues**;** ☐ Temporary Signalization; ☐ Night Work

Prime Contractor: Ducci Electrical Contractors

Project Engineer: Basel Hashem **Chief Inspector:** Robert Mosback

Project Amount: 83,049,904 **Percent Complete:** 55%

Calendar Days completed: 1271 **Calendar Days Allotted:** 1534

Review Participants

Name	Representing
Basel Hashem	CT DOT District 1A
Robert Mosback	HAKS Engnieering
Rich Unkel	CT DOT District 1A
Jeff Hunter	CT DOT
Nick Ambrosino	CT DOT

Q&A:

1) Is there clear, positive, understandable guidance through the work zone? Yes

2) What is the overall condition of traffic flow through the work zone? (include queue length and speed limit, roadway condition) N/A Local roads for RR Bridges and minimal in Bridgeport.
3) Are there any hazards to the traveling public or construction personnel? (Blunt ends, Drop-offs) Not at the time of Interview

4) Are there any horizontal/vertical clearance issues? Yes, however nothing created due to construction, existing vertical restrictions for RR bridges.
5) Are there any permitted load issues? No

6) Are all signs being used for Maintenance and Protection of Traffic acceptable in accordance with applicable requirements? Yes

7) Are all cones, drums, barricades, or other channelization devices acceptable? Good

8) Are warning lights and devices used for Maintenance and Protection of Traffic? Yes on Type 3 Barricades.

9) Clear Zone issues: (Y / N) Respond to questions below.

   a. What is the clear zone for this project? Mostly Local Roads, aware of requirements.

   b. Where are materials stored for the project? Off road, Amtrak areas.

   c. Where is equipment stored when construction is not in progress? Same as above.

10) Have accommodations been made to account for
   a. Emergency Services – Yes. Coordination is ongoing.
   b. Pedestrian/ Bike/ ADA issues? Yes, areas have been designated for Pedestrians/ Bike.

11) Do you have a hard time ensuring Traffic Control Devices are in functioning condition and installed according to plan? If yes, explain No, contractor is fairly responsive.

12) Pavement Markings- Temporary
   a. Is there an item for removal of pavement markings, If yes, indicate removal method being used? Yes, grinding.
   b. Are there conflicting permanent markings? No.
   c. Are the temporary markings legible? If night review, comment on visibility Yes.
   d. Type of marking material being used. ☐ Tape ☒ Paint (non-epoxy) ☐ Epoxy

13) Personnel Protective Equipment- Are all members of the work force wearing the proper reflective equipment? If no, explain. Yes

14) Type of Traffic Control Personnel being used on project? Indicate type of training or certification for each and position within the work zone area.

   ☐ State Police

   ☒ Local Police Minimum Hourly Requirement: 4 Hours

   ☐ Uniformed Flagger

   Comments from Traffic Control Personnel (indicate type of traffic person):

15) Chief Inspector Comments: Need to verify that there is 2 feet for the shoulder for TPCBC.

   Insure Table for Inertial Array barriers for various speed limits is incorporated in plans. Should be included in a typical.

16) Project Engineer Comments:

Traffic Control Device Inspection- PART II

Table A – Signs

Requirement	Comment
Type: Construction / Regulatory	
Location	Town roads
Mounting Height	Rural
Clean, Visible, Legible (rate using quality standards guide ATSSA 3rd edition)	Yes most are new.
Reflectorized/ Type Sheeting	Yes
Project Consistency	Very Good
Need to be covered	No.
Temp./Permanent	Reviewed Permanent Construction Signs

Table B – Traffic control Devices

Requirement	Comment
Type & Placement	
Quantity	
Clean, Visible, Functioning (rate using quality standards guide ATSSA 3rd edition)	
Reflectorized	
Anchored	
Consistent throughout project	

Table C - Barricades and other channelization devices

Requirement	Comment
Type & Placement	Type 3 for lane closure
Quantity	2 at reviewed site
Clean, Visible, Functioning (rate using quality standards guide ATSSA 3rd edition)	New
Reflectorized	Yes
Anchored	No, used when construction not in progress
Consistent throughout project	Yes
Crash Trucks (TMA) in use? If yes how many and type	Not at the site reviewed.

Table D- Warning lights and devices

Requirement	Comment
Warning lights being used? Indicate type and location. Are all lights functioning? High or low intensity?	Yes on signs and on Barricades Yes High
Advance Flashing Warning arrows Portable or Truck-mounted Lights functioning and in correct mode?	N/A
Location of portable devices – Indicate if in clear zone and how protected.	N/A
Changeable Message Signs – indicate if Permanent or Portable, Message understandable, Number of frames displayed, Timing between screens acceptable?	N/A

Work Zone Traffic Control Review
Plans and Specifications Section – PART III

Is there a Transportation Management Plan? If yes, explain
No

What special provisions are there in the contract related to work zone (list item no, description and date of provision)?

Is the project being completed in stage construction? If yes, explain Amtrak RR Bridge and Catenary Wire improvements.

Is there temporary signalization? If yes, explain No

Is a detour required or being used? If yes, explain Not at the time of Review. Some detours may be required when new girders are erected for the bridge improvements.

What guides, tools including manuals, pocket guides,books etc. do you reference?
MUTCD

What work zone traffic plans are included in the project? Just the staging and traffic control plans.

WORK ZONE REVIEW FORM

Project Number: 140-164 **District No.** 4
Date & Time: November 9, 2010 **Weather:** Clear, 50 degrees

Project Type: ☒ Construction ☐ Maintenance ☐ Bridge Safety
Road Type: ☒ Limited Access ☐ Secondary ☐ Local / Town
Inspection Forces: ☒ State ☐ Maintenance ☐ Consultant

Location (Route & Town): Rehab Br # 00604 Rte 8 NB, Thomaston, CT

Focus of Review: Lane Closure: ☐ Temporary ☒ Permanent; ☒ Stage Construction
☐ Detour; ☐ Pedestrian/ Bike issues; ☐ Temporary Signalization; ☐ Night Work

Prime Contractor: NJR Construction

Project Engineer: Dave Ferraro **Chief Inspector:** Ryan Wodjenski

Project Amount: $1,691,158.00 (100% State) **Percent Complete:** 84%

Calendar Days completed: 273 **Calendar Days Allotted:** 265

Review Participants

Name	Representing
Jeff Hunter	Office of Construction
Nick Ambrosino	Office of Construction
Ryan Wodjenski	District 4 Construction

Q&A:

1) Is there clear, positive, understandable guidance through the work zone? Yes

2) What is the overall condition of traffic flow through the work zone? (include queue length and speed limit, roadway condition) Good, indications of possible incidents at night.

3) Are there any hazards to the traveling public or construction personnel? (Blunt ends, Drop-offs) No

4) Are there any horizontal/vertical clearance issues? No

5) Are there any permitted load issues? No

6) Are all signs being used for Maintenance and Protection of Traffic acceptable in accordance with applicable requirements? Yes

7) Are all cones, drums, barricades, or other channelization devices acceptable? Yes.

8) Are warning lights and devices used for Maintenance and Protection of Traffic? Yes

9) Clear Zone issues: (Y / N) Respond to questions below.
   a. What is the clear zone for this project? Varies depending on metal beam rail or not.
   b. Where are materials stored for the project?
      Near work zone: Behind barrier, in gore areas and behind metal beam rail
   c. Where is equipment stored when construction is not in progress?
      Near work zone see b.

10) Have accommodations been made to account for
   a. Emergency Services – No accidents on project
   b. Pedestrian/ Bike/ ADA issues? N/A Limited access highway. Work Under Bridge is all Stop

11) Do you have a hard time ensuring Traffic Control Devices are in functioning condition and installed according to plan? If yes, explain No

12) Pavement Markings- Temporary
   a. Is there an item for removal of pavement markings, If yes, indicate removal method being used? Grinding
   b. Are there conflicting permanent markings? No
   c. Are the temporary markings legible? If night review, comment on visibility
   d. Type of marking material being used. ☐ Tape ☒ Paint (non-epoxy) ☐ Epoxy

13) Personnel Protective Equipment- Are all members of the work force wearing the proper reflective equipment? If no, explain. Yes, both contractor and inspectors are using proper safety equipment

14) Type of Traffic Control Personnel being used on project? Indicate type of training or certification for each and position within the work zone area.

   ☒ State Police (Used for Shifting Traffic for Stage Change)

   ☐ Local Police Minimum Hourly Requirement:

   ☐ Uniformed Flagger

Comments from Traffic Control Personnel (indicate type of traffic person): None

15) Chief Inspector Comments: Solid Line Versus Skips for On – Ramp during stage Construction.

16) Project Engineer Comments: None

Traffic Control Device Inspection- PART II

Table A – Signs

Requirement	Comment
Type: Construction / Regulatory	
Location	All Signs appeared to be in good condition
Mounting Height	Good
Clean, Visible, Legible (rate using quality standards guide ATSSA 3rd edition)	Good
Reflectorized/ Sheeting Type	N/A (Day review)
Project Consistency	Consistent
Need to be covered	No
Temp./Permanent	Temp.

Table B – Traffic control Devices

Requirement	Comment
Type & Placement	VMS
Quantity	2
Clean, Visible, Functioning (rate using quality standards guide ATSSA 3rd edition)	Both were functioning with proper messaging
Reflectorized	N/A
Anchored	No
Consistent throughout project	Yes

Table C - Barricades and other channelization devices

Requirement	Comment
Type & Placement	Barricade for roadway below bridge.
Quantity	
Clean, Visible, Functioning (rate using quality standards guide ATSSA 3rd edition)	Visible
Reflectorized	N/A
Anchored	No
Consistent throughout project	Yes
Crash Trucks (TMA) in use? If yes how many and type	Yes, however on a limited basis, stage changes.

Table D- Warning lights and devices

Requirement	Comment
Warning lights being used? Indicate type and location. Are all lights functioning? High or low intensity?	Flashing lights on signs Yes
Advance Flashing Warning arrows Portable or Truck-mounted Lights functioning and in correct mode?	No
Location of portable devices – Indicate if in clear zone and how protected.	Outside of clear zone therefore no protection necessary.
Changeable Message Signs – indicate if Permanent or Portable, Message understandable, Number of frames displayed, Timing between screens acceptable?	Portable message signs were very readable and the timing between screens was acceptable. There were two screens displayed at each VMS.

Work Zone Traffic Control Review
Plans and Specifications Section – PART III

Is there a Transportation Management Plan? If yes, explain
No

What special provisions are there in contract related to work zone (list item no, description and date of provision)?
Nothing out of the ordinary.

Is the project being completed in stage construction? If yes, explain
2 stages for work on bridge structure.

Is there temporary signalization? If yes, explain
No

Is a detour required or being used? If yes, explain
No.

What guides, tools including manuals, pocket guides,books etc. do you reference?
ATTSA Barrel / Cone and MUTCD, Construction Manual.

What work zone traffic plans are included in the project?
Staging plans for work on, and roadway under, bridge.

2010 workzone safety review participants

District 1

Project 76-205

Robert Ramirez – FHWA, Traffic and Safety Engineer

Jaspal Jutla – Project Engineer

Barry Schilling – Office of Traffic, Design Unit

Steve Sartirana – Office of Safety

Jeff Benoit – Project Manager

Jeff Hunter – Office of Construction

Project 42-297

Robert Ramirez – FHWA, Traffic and Safety Engineer

Steve Sartirana – Office of Safety

Richard Balzarini – Project Manager

Yevgeniy Saykin – Office of Traffic, Design Unit

Jeff Hunter – Office of Construction

Project 142-144

Shawn Mangan – Project Manager

Dave Hoyt – Inspector

Jeff Hunter – Office of Construction

Nick Ambrosino – Office of Construction

District 1A

Project 15-296 & 301-0070A, B, C

Rich Unkel – Supervising Engineer

Basel Hashem – Project Engineer

Robert Mosback – HAKS (Consultant Inspection)

Jeff Hunter – Office of Construction

Nick Ambrosino – Office of Construction

2010 workzone safety review participants

District 2

Project 44-151

Robert Ramirez – FHWA, Traffic and Safety Engineer

Robert Turner – FHWA, Safety Engineer

Jo Ann Devine – Asst. District Engineer

Terri Thompson – Office of Construction

Michael Wilson – Project Engineer

Stephen Curley – Office of Traffic, Design Unit

James Parsons – Project Manager

Jeff Hunter – Office of Construction

Project 111-118

Andrew Millovitsch – Project Manager

Jeff Hunter – Office of Construction

Nick Ambrosino – Office of Construction

District 3

Project 50-204/206 Fairfield -Trumbull

Robert Ramirez – FHWA, Traffic and Safety Engineer

Robert Turner – FHWA, Safety Engineer

Mary Baier – Supervising Engineer

Philip Cohen – Office of Traffic, Design Unit

Terri Thompson – Office of Construction

Mike VanNess – Office of Safety

Jeff Hunter – Office of Construction

Tim Osika – CT State Police

Sam Scozzari – STV (Consultant Inspection)

Frank Morelli – STV (Consultant Inspection)

Dan Waida – STV (Consultant Inspection)

2010 workzone safety review participants

Project 83-255

David Harrison – Tectonics (Consultant Inspection)

Jeff Hunter – Office of Construction

Nick Ambrosino – Office of Construction

District 4

Project 143-177

William Caicedo – Project Manager

Jeff Hunter – Office of Construction

Nick Ambrosino – Office of Construction

Project 140-164

Ryan Wodjenski – Project Manager

Jeff Hunter – Office of Construction

Nick Ambrosino – Office of Construction

2010 workzone safety review participants

Additional Distribution List (outside of participants)

Office of Construction

Lewis Cannon – Const. Administrator

James Connery – Division Chief

Donald Ward – Principal Engineer

Anthony Kwentoh – Supervising Engineer

District 1/1A- Rocky Hill

Dave Lavado – District Engineer, Dist. 1

Ken Fargnoli – Asst. Dist. Engineer, Dist. 1&4

Lynn Cichowski – Asst. Dist. Engineer, Dist. 1A

Michael Mendick – Supervising Engineer

Mark St. Germain – Supervising Engineer

Dilraj Josen – Project Engineer

District 2, Norwich

Carl Nelson – District Engineer, Dist. 2

Eileen Ego – Supervising Engineer

Mike Washington – Supervising Engineer

Mark Elliott – Project Engineer

District 3, New Haven

Mark Rolfe – District Engineer District 3

Robert Obey – Asst. Dist. Engineer, Dist. 3

Steven DiGiovanna – Supervising Engineer

Jeff Mordino – Project Engineer

2010 workzone safety review participants

District 4, Thomaston

Dan Foley – District Engineer, Dist. 4

Cliff Jones – Supervising Engineer

Dean Cerasoli – Supervising Engineer

Dave Ferraro – Project Engineer

Office of Traffic, Design Unit

Charles Harlow – Principal Engineer Office of Traffic

Mike Lalone – Supervising Engineer Traffic

Office of Human Resources, Safety Division

James Ritter – ConnDOT Safety Director

Federal Highway Administration

Amy Jackson-Grove, Division Administrator

Michelle Hilary – Assistant Division Administrator

David Nardone – Project Manager Team Leader

Kurt Salmoiraghi – Pavement and Materials Engineer

Timothy Snyder – Design Engineer

Ted Aldieri – Bridge Engineer

Appendices

Appendix A

Thompson, Terri L

From: Thompson, Terri L
Sent: Wednesday, July 28, 2010 7:16 PM
To: Foley, Daniel P; Lavado, David C; Nelson, Carl E; Rolfe, Mark D
Cc: Devine, Jo Ann; Fargnoli, Kenneth E; Hamilton, James E; Mercure, Brian; Obey, Robert E; Baier, Mary; Cerasoli, Dean; DiGiovanna, Steve; Dunham, John S.; Ego, Eileen; Jones, Clifford G; LaRosa, Domenic; St Germain, Mark; Wagoner, Russell L; Washington, Michael A; Ward, Donald L; Connery, James P; Hunter, Jeffery H; Cannon, Lewis S; Kwentoh, Anthony
Subject: Work Zone Safety Reviews

As you know, work zone safety is an integral part of what we do and there is no greater priority for the Department than the safety of the public that we serve, and the safety of our employees. . The Department and the FHWA recently completed the 2010 Work Zone Mobility and Safety Self Assessment and one area of the assessment, *Program Evaluation,* states that evaluations are "necessary to identify successes and analyze failures… At the local level, performance monitoring and reporting provides an agency with valuable information on the effectiveness of congestion mitigation strategies, contractor performance, and work zone safety." Work zone safety reviews or audits are one of the many strategies that have been identified as important tool in better understanding the operational and design characteristics of a work zone. Reviews with the Districts, Traffic and FHWA had been done in the past and were beneficial in developing improvements in the area of design, construction and operations.

These work zone safety reviews are going to be put into practice again and are being scheduled for projects in your districts. Myself and Jeff Hunter are the leads for these reviews. The reviews will include a overview of traffic control devices, sign installation and removal methods, sign recognition and visibility, survey of workers on what is working and not working. A copy of the draft review forms that have been developed are attached.

Work Zone Review Form_final_no...

The review team will include at a minimum a person from the offices of Construction, Traffic, Safety, and the FHWA. Additional personnel may participate if space allows.

Prior to any review, the District will be contacted as to what project or projects are being scheduled. The team will report in to the project field office prior to starting the review. Upon completion of the review, the notes and comments will be compiled and a meeting with the project staff will be coordinated through the district to go over the findings.

We plan on conducting these reviews over the next 8 weeks and will select two projects per District; 1 daytime operation and 1 nighttime operation, weather permitting.

The first review location scheduled is a night time review in District 3 and will be done on Tuesday, August 3 between the hours of 7 p.m. and 11 p.m.
The projects will be DOT Project No. 50-204/206, 144-178/180 RESURFACING AND SAFETY IMPROVEMENTS, Route 15 Fairfield/Trumbull. Depending on time the team may also go to Project 83-255 RESURFACING AND SAFETY IMPROVEMENTS on I-95 in Milford/Orange.

Thanks for your support in this effort

Terri Thompson
Transportation Supervising Engineer
Office of Construction
ConnDOT, Newington
860-594-2667, FAX 860-594-2678
www.ct.gov/dot/construction

Appendix B

Here is the question: Currently our State requires construction signs for non access/ limited access highways to be Bright Fluorescent Sheeting which is a fluorescent orange prismatic retro-reflective sheeting meeting ASTM 4956 Type VIII. Most of our contractors are using a corrugated polyethylene substrate such as Coraplast. Is anyone encountering reflectivity or sign legibility issues in nighttime work zone sign patterns?

Appendix C

PROJECT NO: 44-151 DATE: 4-7-11 / 4-8-11 TIME: 2 AM

SITE/LOCATION: I-95 East Lyme REVIEWER: Michael Wilson

WEATHER CONDITIONS: Clear Temp 35% CHIEF INSPECTOR: Jim Parsons

SATISF ?	REMARKS	CORRECTIVE ACTION
✓	[redacted] & MESSAGE BOARDS:	None
✓	PAVEMENT MARKINGS:	None
✓	DRUMS: ALIGNMENT: CLEANLINESS:	None
	GUIDERAIL:	
✓	DELINEATORS:	None
	ILLUMINATION - SIGNALIZATION:	
✓	CONCRETE BARRIER:	None
	ROADWAY SURFACE:	
	OTHER: See Next Page.	

CC: ~~Charles Pantelakos~~ JoAnn Devine
Michael A. Washington

See Attached

Construction Signs for Project No. 44-151.

A thorough review was performed on the Plastic Waffle board Construction Signs being utilized on project no. 44-151. These signs are not new signs for the 2011 construction season. But rather they are used signs from previous projects or last season. The signs which were inspected are placed nightly when the contractor is actively working. The condition of the signs vary from fair to good.

Since these signs are installed on mounting devices nightly, they are showing damage on the edges and show fatigue on the surface.

The signs showed some slight deformation when installed as the slightly warp sometimes. The signs were inspected during the night operations to see if they have the desired reflectivity and I found them to have fair reflectivity. Angle to the roadway, location, roadway curves, condition (as mentioned above), weather and CONDENSATION play roles in reflectivity. The major impact that can be seen on the attached photos is condensation.

Photo 1 is a Waffle board sign within our pattern which was wiped free of condensation. A flash picture was taken and shows the difference between dry and wet conditions.

Photo 2 is a wooden sign approx. 2 years old and the photo was taken with flash. First in its natural condition for the evening, and second after it was wiped with a rag.

In conclusion, I think further review is necessary. I do not know if there is a way to reduce the condensation film from affecting the reflectivity. The signs need to be brighter for worker safety. If you need anymore review, let me know. I hope this helps Terri and Jeff.

Mike

OPEN
CLOSED


CONSTRUCTION
AHEAD
ROAD USE RESTRICTED
STATE LIABILITY LIMITED
GENERAL STATUTES SEC 13a-115, 13a-145
COMMISSIONER OF TRANSPORTATION


CONSTRUCTION
AHEAD
ROAD USE RESTRICTED
STATE LIABILITY LIMITED
GENERAL STATUTES SEC 13a-115, 13a-145
COMMISSIONER OF TRANSPORTATION

Appendix D

All Access Objects

Tables
- Participants
- Question Set 1
- Question Set 2A- Signs
- Question Set 2B-Traffic Control Devices
- Question Set 2C-Barricades and other Chann...
- Question Set 2D- Warning Lights and Devices
- Question Set 3- Plans and Specifications
- Review Form General

Queries
- Detour Query
- Night Work Query
- Pedestrian Query
- Permanent Lane Closure Query
- Stage Construction Query
- Temporary Lane Closure Query
- Temporary Signalization Query

Forms
- Find a Review by Project Number
- Project with Detour Focus
- Projects with Night Work Focus
- Projects with Pedestrian and Bicycle Access
- Projects with Permanent Lane Closures
- Projects with Stage Construction Focus
- Projects with Temporary Lane Closures
- Projects with Temporary Signalization
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- Question Set 2C-Barricades and other Chann...
- Question Set 2D- Warning Lights and Devices
- Question Set 3
- Work Zone Review Form
- WZR Welcome

Reports
- Reviews with Detour Focus
- WZR Report

Macros
- Add/Edite Macro
- Bike Macro
- Close

Welcome

Work Zone Safety Database

Add/Edit Form

Find a Review by Project Number

Find Reviews that Focus on:

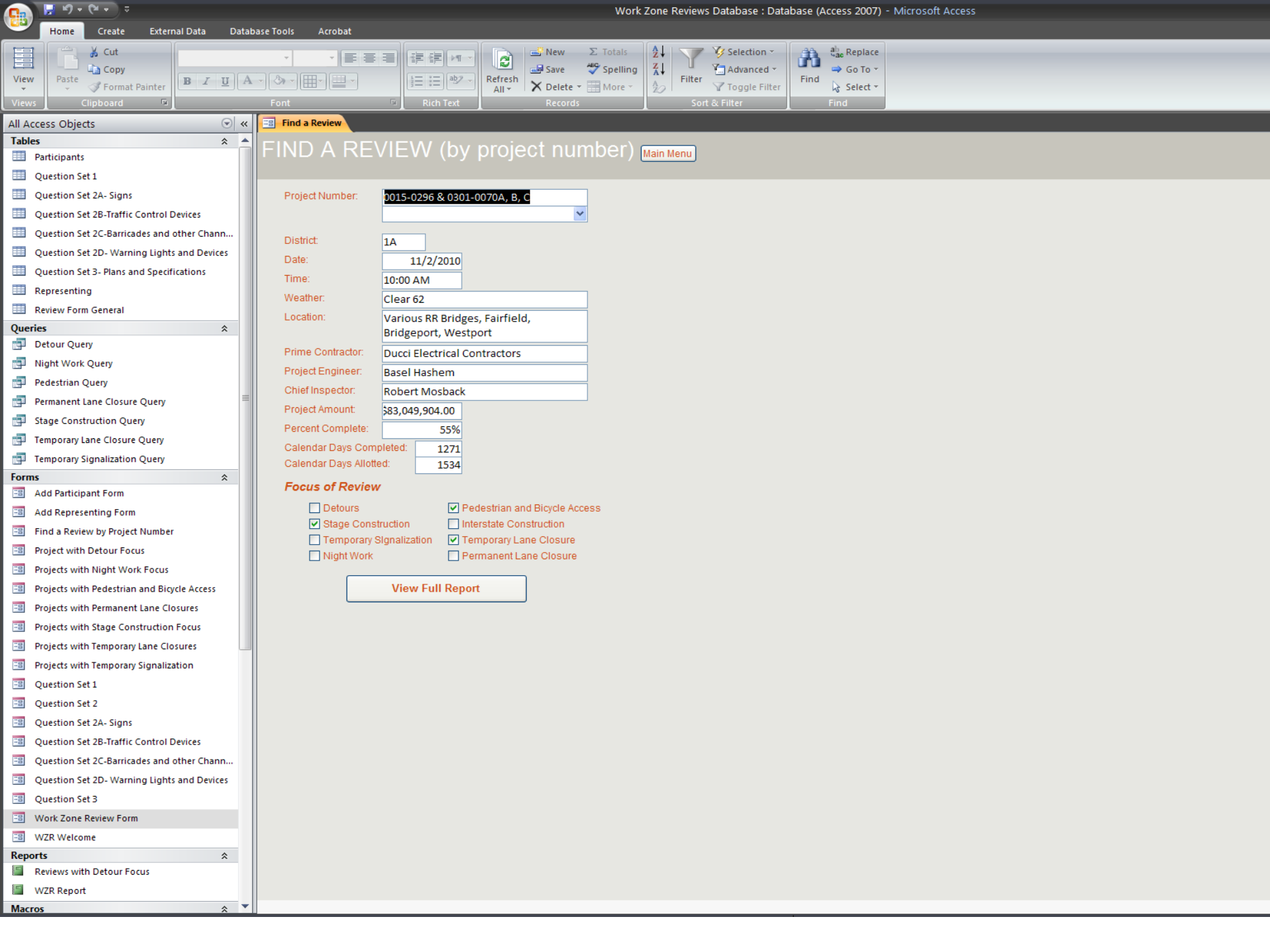
Stage Construction | Permanent Lane Closures

Night Work | Temporary Lane Closures

Detours | Temporary Signalization

Pedestrian and Bicycle Access

Exit


Work Zone Reviews Database : Database (Access 2007) - Microsoft Access
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Add Representing Form
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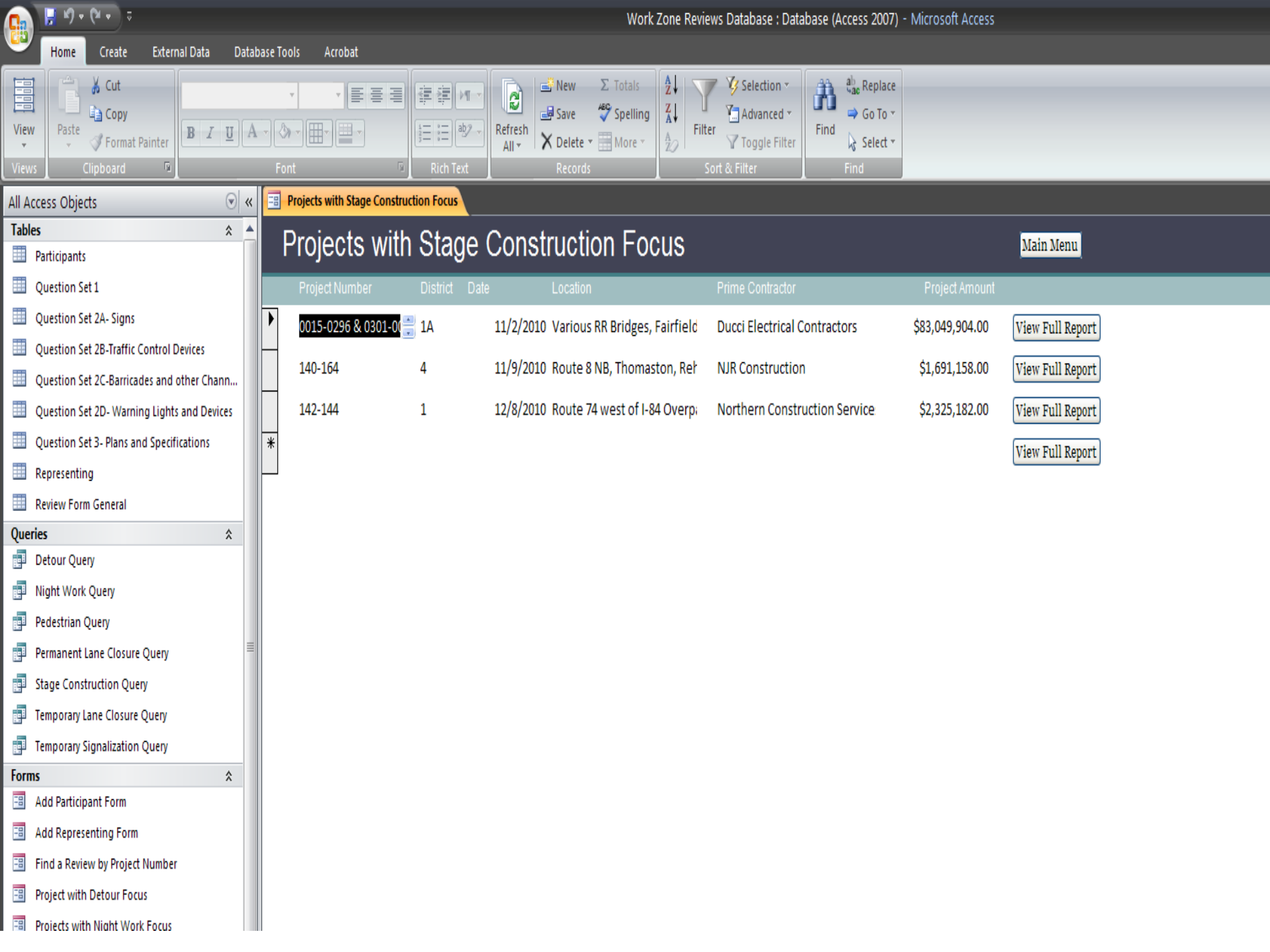
WZR Report
Macros
Find a Review
FIND A REVIEW (by project number)
Main Menu
Project Number:
0015-0296 & 0301-0070A, B, C
District:
1A
Date:
11/2/2010
Time:
10:00 AM
Weather:
Clear 62
Location:
Various RR Bridges, Fairfield, Bridgeport, Westport
Prime Contractor:
Ducci Electrical Contractors
Project Engineer:
Basel Hashem
Chief Inspector:
Robert Mosback
Project Amount:
$83,049,904.00
Percent Complete:
55%
Calendar Days Completed:
1271
Calendar Days Allotted:
1534
Focus of Review
Detours
Stage Construction
Temporary Signalization
Night Work
Pedestrian and Bicycle Access
Interstate Construction
Temporary Lane Closure
Permanent Lane Closure
View Full Report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Add Representing Form
Find a Review by Project Number
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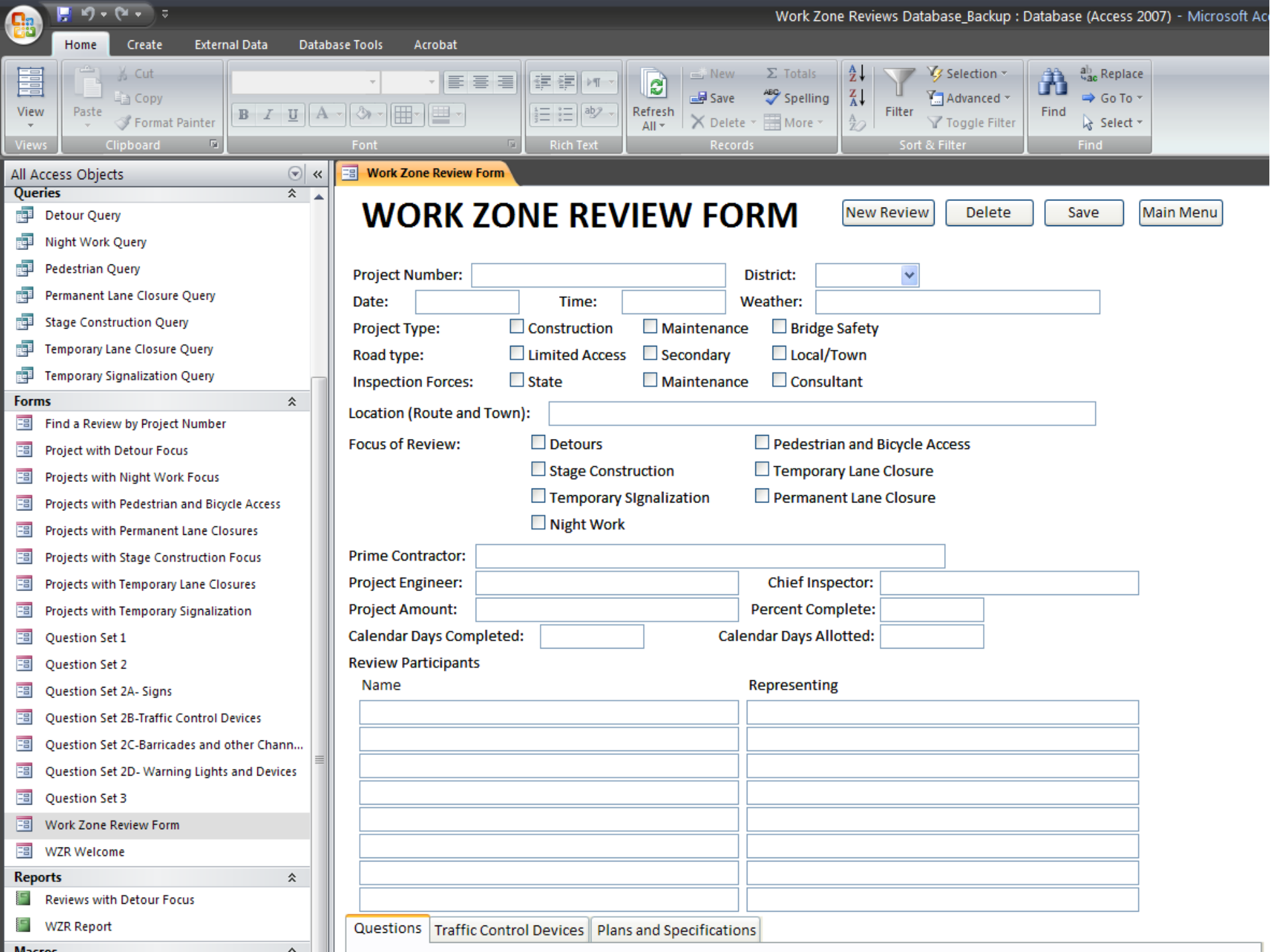
Projects with Night Work Focus
Projects with Stage Construction Focus
Projects with Stage Construction Focus
Main Menu
Project Number
District
Date
Location
Prime Contractor
Project Amount
0015-0296 & 0301-0
1A
11/2/2010
Various RR Bridges, Fairfield
Ducci Electrical Contractors
$83,049,904.00
View Full Report
140-164
4
11/9/2010
Route 8 NB, Thomaston, Rel
NJR Construction
$1,691,158.00
View Full Report
142-144
1
12/8/2010
Route 74 west of I-84 Overp
Northern Construction Service
$2,325,182.00
View Full Report
View Full Report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Question Set 2D- Warning Lights and Devices
Question Set 3
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WZR Welcome
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WZR Report
Work Zone Review Form
WORK ZONE REVIEW FORM
New Review
Delete
Save
Main Menu
Project Number:
District:
Date:
Time:
Weather:
Project Type:
Construction
Maintenance
Bridge Safety
Road type:
Limited Access
Secondary
Local/Town
Inspection Forces:
State
Maintenance
Consultant
Location (Route and Town):
Focus of Review:
Detours
Pedestrian and Bicycle Access
Stage Construction
Temporary Lane Closure
Temporary SIgnalization
Permanent Lane Closure
Night Work
Prime Contractor:
Project Engineer:
Chief Inspector:
Project Amount:
Percent Complete:
Calendar Days Completed:
Calendar Days Allotted:
Review Participants
Name
Representing
Questions
Traffic Control Devices
Plans and Specifications

All Access Objects

Tables
- Participants
- Question Set 1
- Question Set 2A- Signs
- Question Set 2B-Traffic Control Devices
- Question Set 2C-Barricades and other Chann...
- Question Set 2D- Warning Lights and Devices
- Question Set 3- Plans and Specifications
- Review Form General

Queries
- Detour Query
- Night Work Query
- Pedestrian Query
- Permanent Lane Closure Query
- Stage Construction Query
- Temporary Lane Closure Query
- Temporary Signalization Query

Forms
- Find a Review by Project Number
- Project with Detour Focus
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- Projects with Pedestrian and Bicycle Access
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- Question Set 3
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Reports
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- WZR Report

Macros
- Add/Edite Macro

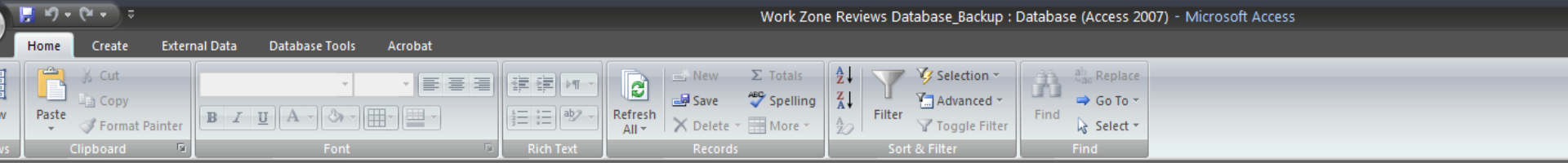
Work Zone Review Form

WORK ZONE REVIEW FORM

New Review | Delete | Save | Main Menu

Questions | Traffic Control Devices | Plans and Specifications

1. Is there a clear, positive, understandable guidance through the work zone?
2. What is the overall condition of traffic flow through the work zone? (include queue length and speed limit, conditions
3. Are there any hazards to the traveling public or construction personnel? (Blunt ends, dropoffs etc.)
4. Are there any horizontal/vertical clearance issues?
5. Are there any permitted load issues?
6. Are all signs being used for Maintenance and protection of Traffic acceptable in accordance with applicable requirements?
7. Are all cones, drums, barricades or otehr channelization devices acceptable?
8. Are warning lights and devices used for Maintenance and Protection of Traffic?
9. Are there any Clear Zone issues? ☐
   a. What is the clear zone for this project?:
   b. Where are materials stored for the project?
   c. Where is equipment stores when construction is not in progress?
10. Have accommodations beend made to account for:
    a. Emergency Services -
    b. Pedestrian/Bike/ADA issues?
11. Do you have a hard time ensuring traffic control devised are in functioning condition and installed according to plan? If yes, explain.
12. Pavement Markings- Temporary
    a. Is there an item for removal of pavement markings? if yes, indicate removal method being used



Access Objects

Participants
Question Set 1
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Question Set 2C-Barricades and other Chann...
Question Set 2D- Warning Lights and Devices
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Stage Construction Query
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Find a Review by Project Number
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Work Zone Review Form
WZR Welcome

Reviews with Detour Focus

Work Zone Review Form

WORK ZONE REVIEW FORM

New Review | Delete | Save | Main Menu

Signs

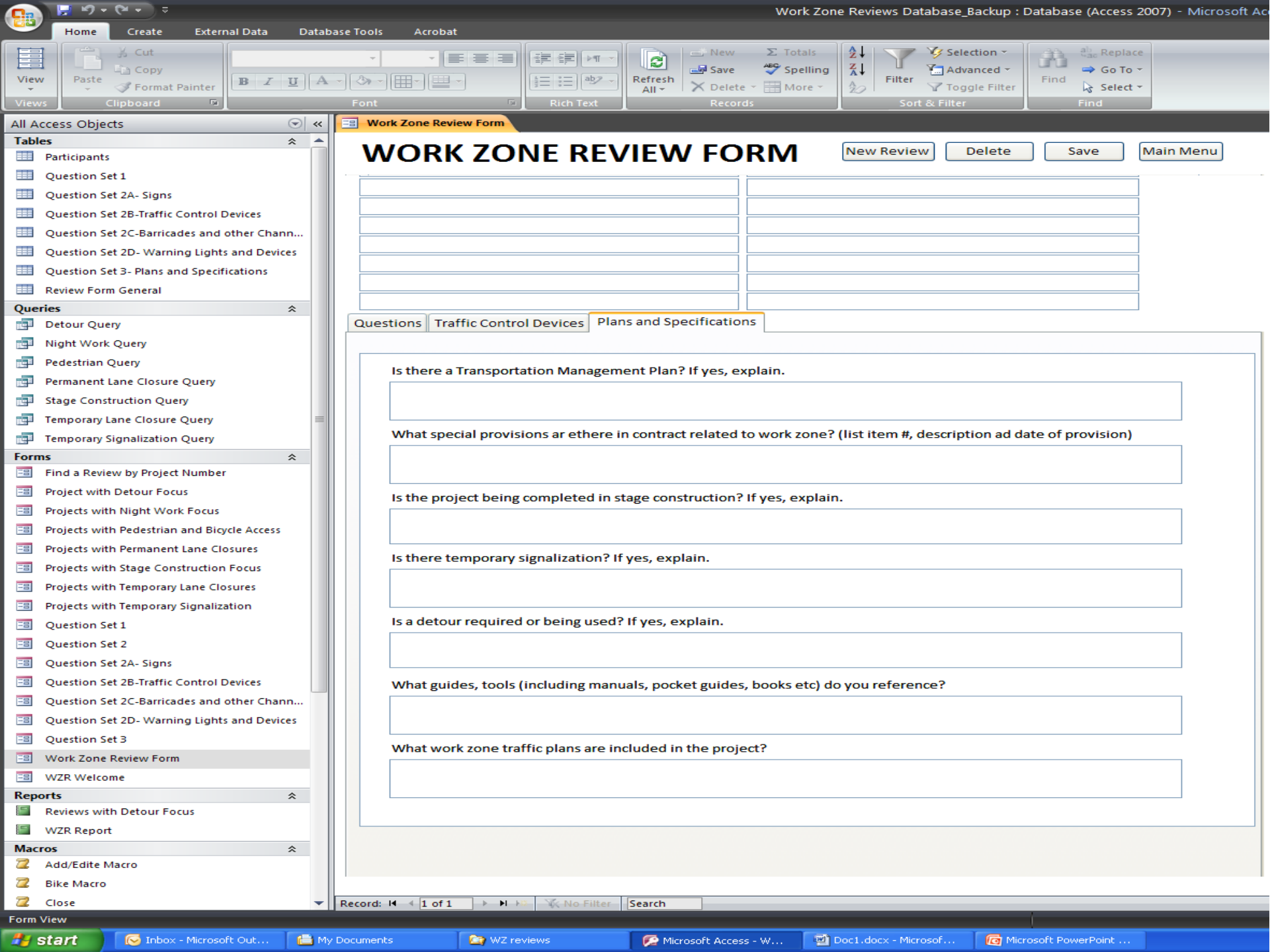
Requirement	Comment
Size:	
Location:	
Mounting Height:	
Clean, Visible, Legible (rate using quality standards guide ATSS:	
Reflectorized sign:	
Project Consistency:	
Need to be Covered:	
Temporary/Permanent:	

Traffic Control Devices

Requirement	Comment
Type and Placement (	
Quantity (	
Clean, Visible, Functioning:	
Reflectorized:	
Anchored (	
Consistent throughout project (	

Barricades and other Channelization Devices

Requirement	Comment
Type and Placement:	
Quantity:	
Clean, Visible, Functioning:	
Reflectorized:	
Anchored	
Consistent throughout Project:	
Crash Trucks (TMA) in use? If yes how many and type:	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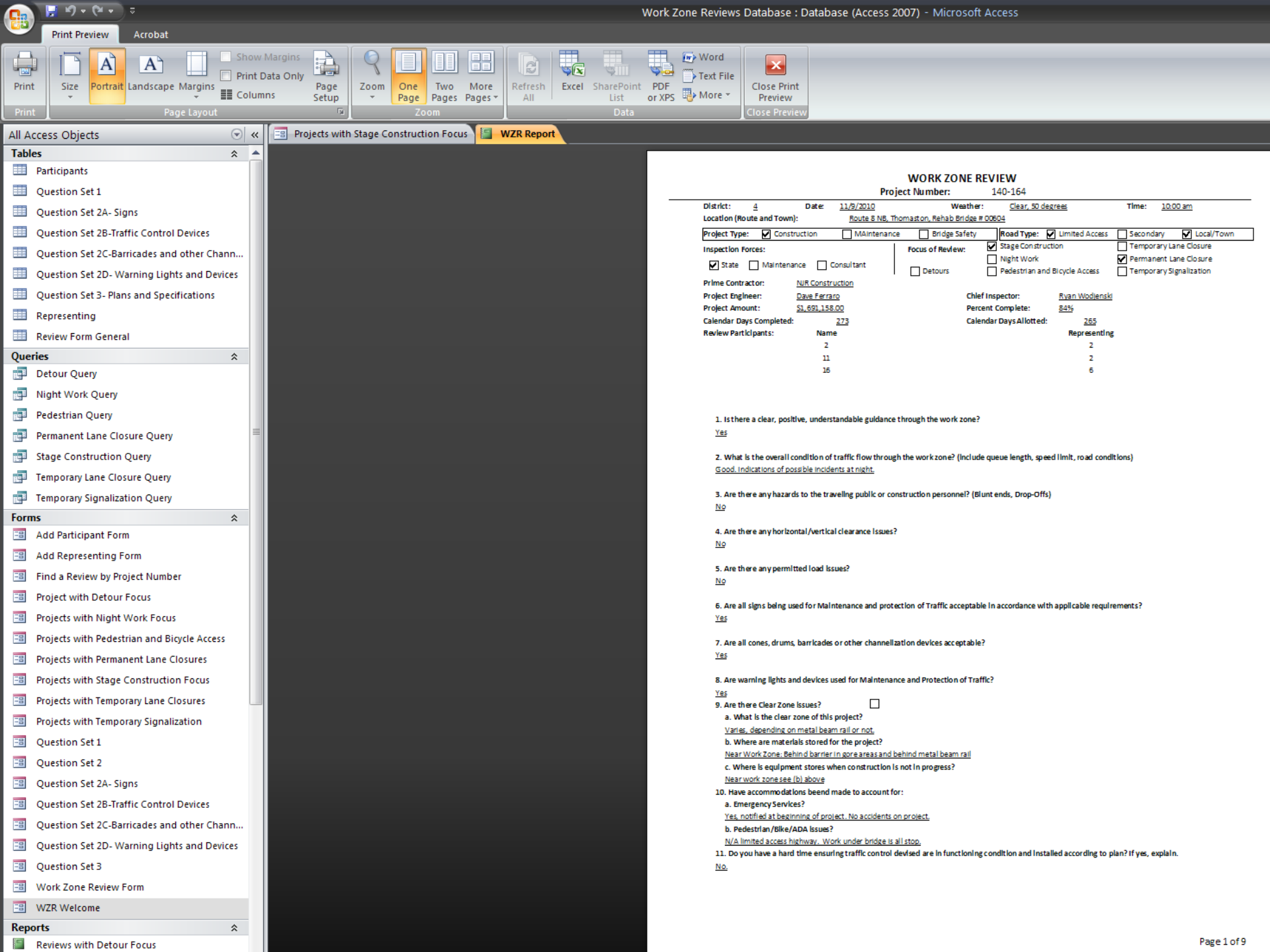
Add/Edite Macro
Bike Macro
Close
Work Zone Review Form
WORK ZONE REVIEW FORM
New Review
Delete
Save
Main Menu
Questions
Traffic Control Devices
Plans and Specifications
Is there a Transportation Management Plan? If yes, explain.
What special provisions ar ethere in contract related to work zone? (list item #, description ad date of provision)
Is the project being completed in stage construction? If yes, explain.
Is there temporary signalization? If yes, explain.
Is a detour required or being used? If yes, explain.
What guides, tools (including manuals, pocket guides, books etc) do you reference?
What work zone traffic plans are included in the project?
Record: 1 of 1
No Filter
Search
Form View
start
Inbox - Microsoft Out...
My Documents
WZ reviews
Microsoft Access - W...
Doc1.docx - Microsof...
Microsoft PowerPoint ...



WORK ZONE REVIEW

Project Number: 140-164

District: 4 **Date:** 11/9/2010 **Weather:** Clear, 50 degrees **Time:** 10:00 am

Location (Route and Town): Route 8 NB, Thomaston, Rehab Bridge # 00604

Project Type: ☑ Construction ☐ MAintenance ☐ Bridge Safety

Road Type: ☑ Limited Access ☐ Secondary ☑ Local/Town

Inspection Forces: ☑ State ☐ Maintenance ☐ Consultant

Focus of Review: ☐ Detours ☑ Stage Construction ☐ Night Work ☐ Pedestrian and Bicycle Access ☐ Temporary Lane Closure ☑ Permanent Lane Closure ☐ Temporary Signalization

Prime Contractor: NJR Construction

Project Engineer: Dave Ferraro

Project Amount: $1,691,158.00

Calendar Days Completed: 273

Chief Inspector: Ryan Wodjenski

Percent Complete: 84%

Calendar Days Allotted: 265

Review Participants:

Name	Representing
2	2
11	2
16	6

1. Is there a clear, positive, understandable guidance through the work zone?
Yes

2. What is the overall condition of traffic flow through the work zone? (Include queue length, speed limit, road conditions)
Good. Indications of possible incidents at night.

3. Are there any hazards to the traveling public or construction personnel? (Blunt ends, Drop-Offs)
No

4. Are there any horizontal/vertical clearance issues?
No

5. Are there any permitted load issues?
No

6. Are all signs being used for Maintenance and protection of Traffic acceptable in accordance with applicable requirements?
Yes

7. Are all cones, drums, barricades or other channelization devices acceptable?
Yes

8. Are warning lights and devices used for Maintenance and Protection of Traffic?
Yes

9. Are there Clear Zone Issues? ☐

a. What is the clear zone of this project?
Varies, depending on metal beam rail or not.

b. Where are materials stored for the project?
Near Work Zone: Behind barrier in gore areas and behind metal beam rail

c. Where is equipment stores when construction is not in progress?
Near work zone see (b) above

10. Have accommodations beend made to account for:

a. Emergency Services?
Yes, notified at beginning of project. No accidents on project.

b. Pedestrian/Bike/ADA Issues?
N/A limited access highway. Work under bridge is all stop.

11. Do you have a hard time ensuring traffic control devised are in functioning condition and installed according to plan? If yes, explain.
No.