RidOT's Wrong-Way Driving Mitigation Program

Submitted By: Rachel Dooley, PE
Peter Pavio, PE, PTOE
Robert Rocchio, PE
Daniel Waugh
A Message from the New England Section President

ALAN T. CLOUTIER, PE, PTOE
Senior Transportation Engineer
Stantec

Dear NEITE Members:

I hope everyone is enjoying their summer. NEITE has had a fairly quiet summer following a very busy spring.

The last time I saw many of you was at the District 1 Annual Meeting in Portsmouth back in May. The meeting was a tremendous success with a record number of attendees. I want to thank everyone who helped out to make the meeting so successful, including the meeting chairs, the local arrangement committee and all of the moderators and presenters.

Those that made it to the Tom Desjardins golf tournament had a great time, with warm weather. Maybe next year will be the year my team wins it!

In case anyone missed it, I also wanted to point out that one of our own has been named as an ITE Rising Star in the latest ITE Journal. Congratulations Michelle Danila PE PTOE!

With fall approaching, our schedule will start heating up, with the MAITE/NEITE meeting in Waltham on Thursday September 22, the RIITE/NEITE meeting on November 7th and the annual meeting on Monday, December 5th.

I look forward to seeing you all at the upcoming meetings. If you have any question or suggestions, please contact me at alan.cloutier@stantec.com or 781-221-1245.

Sincerely,
Alan T. Cloutier, PE, PTOE
New England Section President

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New England Section Directory

Executive Board:

President — Alan T. Cloutier, PE, PTOE
Stantec
5 Burlington Woods Drive, Suite 210 | Burlington, MA 01803
P: (781) 221.1000 | alan.cloutier@stantec.com

Vice-President — Rebecca L. Brown, PE, PTOE
Greenman-Pedersen, Inc.
181 Ballardvale Street, Suite 202 | Wilmington, MA 01887
P: (978) 570.2946 | rebeccabrown@gpinet.com

Secretary — Samuel W. Gregorio, PE, PTOE
Tec, Inc.
65 Glenn Street | Lawrence, MA 01843
P: (978) 794.1792 | sggregorio@theengineeringcorp.com

Treasurer — Jason M. DeGray, PE, PTOE
Toole Design Group
33 Broad Street, Suite 405 | Boston, MA 02109
P: (617) 619.9910 | jdegray@tooledesign.com

Senior Director — John Q. Adams, PE, PTOE
Milone & MacBroom, Inc.
121 Middle Street, Suite 201 | Portland, ME 04101
P: (207) 541.9544 | johna@miloneandmacbroom.com

Junior Director — David J. DeBaie, PE, PTOE
Stantec Consulting Services, Inc.
5 Dartmouth Drive, Suite 101 | Auburn, NH 03032
P: (603) 669.8672 | dave.debaie@stantec.com

Junior Director — Ian A. Mckinnon, E.I.T.
Tetra Tech, Inc.
100 Nickerson Road | Marlborough, MA 01752
P: (508) 786.2252 | i.mckinnon@tetratech.com

Immediate Past President — Joseph A. Hallisey, PE, PTOE
VHB
101 Walnut Street | Watertown, MA 02472
P: (617) 924.1770 | johna@miloneandmacbroom.com

Junior Director — Matthew J. Kealey, PE, PTOE
VHB
101 Walnut Street | Watertown, MA 02472
P: (617) 924.1770 | mkealey@vhb.com

Junior Director — Ian A. Mckinnon, E.I.T.
Tetra Tech, Inc.
100 Nickerson Road | Marlborough, MA 01752
P: (508) 786.2252 | i.mckinnon@tetratech.com

Immediate Past President — Joseph A. Hallisey, PE, PTOE
VHB
101 Walnut Street | Watertown, MA 02472
P: (617) 924.1770 | johna@miloneandmacbroom.com

State Chapter Presidents:

Connecticut — Kwesi Brown, PE, PTOE
P: (203) 271.1773 | kwesib@miloneandmacbroom.com

Maine — Jennifer Williams, PE
P: (207) 783.9186 | jenniferw@avcog.org

Massachusetts — Kenneth J. Cram, PE, PTOE
P: (781) 932.3201 | kcram@baysideengineering.com

New Hampshire — Jeffrey W. Santacruce, PE
P: (603) 225.2978 | jsantacruce@mjmnc.com

Rhode Island — Derek L. Hug, PE, PTOE
P: (401) 861.3070 | dhug@fando.com

Vermont — Jennifer Conley, PE, PTOE
P: (802) 345.2321 | jconley@conleyassociates.com

Standing Committee Chairs:

Awards — Kim E. Hazarvartian, Ph.D., PE, PTOE
P: (603) 226.4013 | keh@teppllc.com

Charter/Bylaws — Kim E. Hazarvartian, Ph.D., PE, PTOE
P: (603) 226.4013 | keh@teppllc.com

Chronicle Action — Samuel W. Gregorio, PE, PTOE
P: (978) 794.1792 | sggregorio@theengineeringcorp.com

Chronicle Editor — Rachel A. Dooley, PE
P: (401) 457.2035 | rdooley@vhb.com

Continuing Education — Douglas S. Halpert, E.I.T.
P: (978) 794.1792 | dhalpert@theengineeringcorp.com

Desjardins Scholarship — Faysal J. Hussein, PE, PTOE
P: (857) 206.8756 | fhussinei@nitscheng.com

Emerging Professionals — Christina Dube, E.I.T.
P: (781) 641.8332 | cdube@vhb.com

Goals/Objectives — Michelle Langone Danila, PE, PTOE
P: (617) 619.9910 | mddanila@tooledesign.com

Legislative Liaison — Jeffery R. Parenti
P: (857) 206.8695 | jparenti@nitscheng.com

Membership — Justin M. Curewitz, PE
P: (781) 255.1982 | jcurwitz@beta-inc.com

Nominating — Kenneth J. Petragna, PE, PTOE
P: (781) 255.1982 | kpetragna@beta-inc.com

Past Presidents Council — William F. Lyons, PE, PTOE
P: (877) 305.4163 | wlyons@fhisllc.com

Program — Keith E. Weners, E.I.T.
P: (413) 241.5872 | kweners@vhb.com

Public Relations — Jeffrey Gomes, MCPPO
P: (508) 529.3914 | jgomes@state.ma.us

Strategic Plan — Joseph C. Balskus, PE, PTOE
P: (860) 808.2299 | balbusk@cdmsmith.com

Student Chapter Liaison — Steven M. Tupper, E.I.T.
P: (508) 362.3828 | jptupper@capecodcommission.org

Technical — Thomas A. Errico, PE
P: (207) 347.4354 | thomas.errico@tylin.com

Technical — Steven C. Findlen
P: (508) 823.2245 | sfindlen@mcmahonassociates.com

Website — Colin T. White, PE
P: (978) 570.2979 | cwhite@gpinet.com

Useful Links:

Institute of Transportation Engineers:
http://www.ite.org

ITE Northeastern District:
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ITE Upstate New York Section:
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APA Connecticut Chapter:
http://www.ccpa.org

APA Rhode Island Chapter:
http://www.rhodeislandapa.org

On the Cover: I-295 Southbound Off-Ramp
at Hartford Avenue, Johnston, Rhode Island.

On the Back Cover: Sand dunes along Succotash Road, Narragansett, Rhode Island.

Photo Source: Kayla Cabral

Photo Source: Rick Rhodes, PE
Hello New England Section!

I hope everyone has been enjoying the warm weather and long days of summer. I am pleased to be releasing the third issue of the New England Chronicle for the year.

Articles
The feature article in this issue is a collaboration between myself, Peter Pavao of VHB, and Robert Rocchio and Daniel Waugh of the Rhode Island Department of Transportation regarding their Wrong-Way Driving Mitigation program. As you will read, this dangerous type of crash is a national problem that Rhode Island has been experiencing in the last few years. Through their Highway Safety Improvement Program, RIDOT has implemented new signage, striping, and intelligent transportation systems at highway ramps throughout the state. They are currently monitoring the results in order to determine additional locations where countermeasures may be implemented. It is a project that I am proud to have been a part of.

Quarterly Recap
During this past quarter, the Massachusetts chapter held their Bicycle Infrastructure tour and the Rhode Island chapter hosted their Complete Streets Roundtable lunch. Photos from these events can be found in the Committee, Chapter, and Student Chapter Updates section beginning on page 10. The Northeastern District Annual Meeting was held in Portsmouth, New Hampshire this past May. Some great photos from this meeting can be seen on page 12.

Looking Ahead
As summer is concluding and we enter the fall season, there are several great upcoming events throughout the New England section. I hope everyone will be able to attend a social outing or meeting held by their local chapter.

Final Thank You
I would like to thank all of our sponsors for their continued support of the New England Chronicle. If you need to renew your sponsorship, it can be done at any point throughout the year. Please contact Lisa Rutherford of Ocean State Signal (lrutherford@oceanstatesignal.com) or myself if you are interested in becoming a sponsor of the award-winning New England Chronicle. I would also like to thank all of the contributors to this issue. I hope you enjoy the Summer Issue!

Rachel A. Dooley, PE
Chronicle Editor
rdooley@vhb.com

Please remember to receive all your updates, news, and Section information at the New England Section website:

http://www.neite.org

For those members of the New England Section that would like to be included on the Google Group Section email list, please contact Samuel W. Gregorio, PE, PTOE at sgregorio@theengineeringcorp.com.

Please remember to visit the New England Section website at http://www.neite.org and our updated Section Directory for information on the New England Section.
RIDOT’s Wrong Way Driving Mitigation Program

RACHEL DOOOLEY, PE
Transportation Engineer, VHB

PETER PAVAO, PE, PTOE
Director of Transportation Systems, VHB

ROBERT ROCCHIO, PE
Chief Safety Officer, RIDOT

DANIEL WAUGH
Project Manager, RIDOT

One of the most alarming contributors to motorist fatalities and injuries in the United States is wrong-way driving. In 2012, the National Transportation Safety Board (NTSB) released a special investigative report titled “Wrong -Way Driving”. Data analyzed between 2004 and 2009 revealed 1,566 fatal wrong-way crashes, resulting in a total of 2,139 fatalities. Nationally, an average of 360 fatalities occurs each year in approximately 260 fatal wrong-way crashes. Other findings of the report can be found to the right.

States and localities have conducted similar studies, recognizing the overwhelming occurrence and safety implications of wrong-way driving.

History

In the State of Rhode Island, the occurrence of wrong-way driving on limited access highways is a major concern. The Rhode Island State Police (RISP) brought to the attention of the Rhode Island Department of Transportation (RIDOT) the increase in wrong-way driving incidents on Rhode Island’s interstates and freeways over the past few years. Wrong-way driving has led to at least 23 crashes, including 8 fatal crashes, resulting in 12 deaths over the past three and a half years (2013 through May 2016), and numerous incidents that did not involve a crash. Based on the RISP input and what has been learned from other states, the reported crashes that involve wrong-way driving is only a fraction of the total number of wrong-way driving incidents realized. Some of these incidents are corrected by the driver upon realizing their error. Numerous other incidents have not resulted in a crash; however, the RISP have pulled over drivers and arrests have been made for driving under the influence.

With the concern of the RISP on the increase of wrong-way incidents in Rhode Island, in addition to the number of fatal and serious injury crashes that have been attributed to wrong-way driving, the RIDOT contracted a project to inventory and diagnose all limited access highway off-ramps for wrong-way mitigation measures as mentioned previously. The findings from previous data drove a statewide safety improvement project to ensure that all off-ramps have sufficient measures to deter wrong-way driving and at a minimum adhere to the Manual of Uniform Traffic Control Devices (MUTCD) wrong-way driving standards.

The RISP began tracking incidents of wrong-way driving that did not result in a crash (citation only) and wrong way driving crashes since 2010. A total of 100 incidents have been reported during January 2010 through May 2016. Of those 100 incidents, 37 percent (37 crashes) of the incidents resulted in a crash with 73 percent (27 crashes) of crashes resulting in an injury and 11 percent (11 crashes) of the crashes resulting in a fatality. One of the eleven fatal crashes was a vehicle making an illegal U-turn on the freeway before colliding into another vehicle head on causing 2 fatalities. From the 27 crashes that resulted in injury, 67 people were reported injured and 15 fatalities.

Consistent with the findings of other studies, the majority of the crashes (approximately 62 percent) occurred between 12:00 a.m. and 5:00 a.m. and more specifically, approximately 45 percent of all the crashes occurred between 1:00 a.m. and 3:00 a.m. (See Figure 1). In regards to the fatal crashes, 9 of the 11 fatal crashes (82 percent) occurred between 12:00 a.m. and 5:00 a.m. and the other two crashes occurred between 4:00 p.m. and 6:00 p.m.

Of the 11 fatal crashes, driver age and impairment were contributing factors. The fatal crashes occurring between the hours of 1:00 a.m. and 5:00 a.m. all involved drivers aged 21-38 years old and the wrong-way driver had a Blood Alcohol Content (BAC) of 0.08 or above. The one fatal accident at midnight, both drivers were aged 21-25 years old, however the toxicology test have not been released yet. The two fatal crashes between the hours of 4:00 p.m. and 6:00 p.m. were drivers over the age of 65 years old and had a Blood Alcohol Content of 0.08 or above. Driver impairment was involved in 10 of the 11 fatal crashes, with the 1 additional crash not having the toxicology test released to date.

While the locations (ramp type/configuration) of wrong-way driving incidents are generally random in nature, the majority of wrong-way incidents that

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have led to a crash in the past five years occurred at isolated off-ramps (40%), partial cloverleaf (29%) and diamond (14%) intersections.

Field Review

In response to the reoccurring nature of wrong-way driving throughout the state, the RIDOT inventoried and diagnosed all limited access highway off-ramps throughout the state except limited access highway ramps to another limited access highway. In January 2015, a total of 140 locations (223 off-ramps) were field inventoried. All ramps were reviewed to meet the minimum MUTCD requirements.

During the field inventory, Section 2B.41 of the MUTCD was used to provide guidance for appropriate wrong-way traffic control at all interchange ramps. Below is the minimum requirements listed in the MUTCD. Per MUTCD guidance, interchange exit terminals where wrong-way entry is possible shall use the following signs:

- At least one ONE WAY
- At least one DO NOT ENTER
- At least one WRONG WAY

In addition to these mandatory signs, the following pavement markings are recommended, but not required:

- Double solid yellow center line on two-lane paved crossroads at interchanges
- Lane use arrow for each lane of an exit ramp near the crossroad terminal

As a supplement to the required and recommended signs and pavement markings, the following treatments may also be considered:

- Additional ONE WAY signs
- Additional WRONG WAY signs
- Wrong-way arrows consisting of pavement markings and/or bi-directional red-and-white reflectors
- Lane use arrow for each lane on the crossroad
- Freeway entrance signs

The majority of the off-ramps inventoried met or exceeded minimum regulatory and warning signing requirements set forth in the MUTCD. At some locations, however, signs were either missing, faded, or contributed to driver confusion.

The majority of the off-ramps inventoried had STOP and/or YIELD pavement markings that met minimum requirements set forth in the MUTCD. However, lane use arrows on both the off-ramp approach and the mainline approaches to the intersection with the off-ramp were generally not present. Also, there was no striping along the mainline roadways to deters vehicles from entering the off-ramp.

Enhanced delineation such as in-pavement markers or post reflectors were not present at any of the off-ramps inventoried. Raised reflective pavement markers are included in the Bi-Directional Control Device arrows installed at the majority of off-ramps (RI standard at all off-ramps); however, most of these pavement markers were either covered with white pavement markings, reducing the reflectivity and intended purpose of these markers, or missing completely.

There were some confusing lane markings and signage identified through the evaluation that may have the potential to cause wrong-way driving. At locations of off-ramps where the mainline has a two-way left-turn lane as a cross section, the pavement markings arrows may mislead drivers to the off-ramp.

Countermeasures/Mitigations

To improve safety on roadways across the nation, implementation can be categorized to one of four “E”s: engineering, education, enforcement, or emergency response. Typically, transportation professionals tend to the use of physical engineering implementations. However, education, enforcement, and emergency response may also be used as a standalone or used in combination with a physical treatment.

The treatments proposed for use in the State of Rhode Island to prevent wrong-way entry on limited access highways are summarized in the following sections. The treatments are guided by the MUTCD. In addition, a number of states and localities have adopted a recommended practice or are performing pilot studies to address wrong-way freeway entry. These state practices were also considered as countermeasures were developed.

Signing and Marking/Delineation

The signing and marking/delineation treatments are intended to bring all inventoried off-ramps up to compliance with the MUTCD and to incorporate best practices identified from other states.

Additional treatments, as listed below, were needed at locations throughout Rhode Island that possess similarities to the trends at those high-risk-off-ramp locations. These low-cost improvements include:

- Lowering DO NOT ENTER and WRONG WAY signs mounting height
- Adding additional or updating DO NOT ENTER and WRONG WAY signs
- Increasing the size of the guidance signs
- Updating intersections with the latest RIDOT state recommended signage and striping
- Updating sign posts with red retroreflective strips on sign supports
- Adjusting sign orientation so signs are oriented directly in the view of the intended road user
- Restriping or create stop lines at off-ramp locations
- Adding or restriping exit ramp right-way arrows
- Extending pavement markings for guidance
- Adding enhanced pavement markings
- Considering painted islands to tighten large lane widths
- Updating wrong-way delineation such as raised pavement markers (white and red), bidirectional pavement markers, and post delineators
- Adding ENTER HERE signs on median islands separating on and off-ramps

Figure 1—Wrong-Way Driving Incident by Time of Day – January 2010 - May 2016

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Section Calendar

August 2016

ITE 2016 Annual Meeting and Exhibit
August 14th - 17th, 2016
Anaheim Marriott
Anaheim, California

MAITE Red Sox Social
August 30th, 2016
Yard House/Fenway Park
Boston, Massachusetts

September 2016

Scott M. Herr Memorial Golf Tournament
September 14, 2016
Brookmeadow Country Club
Canton, Massachusetts

NEITE/MA Chapter Meeting
September 22, 2016
Hilton Garden Inn
Waltham, Massachusetts

November 2016

NEITE/RI Chapter Meeting
November 7, 2016
Providence Marriott Downtown
Providence, Rhode Island

December 2016

NEITE Annual Meeting
December 5, 2016
Crowne Plaza
Warwick, Rhode Island

Please send all calendar announcements, including the name of event, the contact person, event location, and date to New England Section webmaster Colin T. White, PE and Chronicle Editor Rachel A. Dooley, PE at cwhite@gpinet.com and rdooley@vhb.com.

Would You Like to Contribute to the New England Chronicle?

Would you like to contribute to an award winning New England Chronicle newsletter? The New England Chronicle’s Action Committee is seeking members (both professionals and students) who are interested to write both short and feature articles for publication in the upcoming New England Chronicle issues. Both short and feature articles should be about technical topics, professional matters, innovative projects, and cutting-edge solutions that affect transportation engineering and planning.

Typically short article would consist of 1,000 to 2,500 words and feature articles would consist of 2,000 to 4,000 words. Each article should include a head shot and bio of all participating authors. Further details for each article submission can be given upon request.

For more information on how you can become a New England Chronicle contributor contact the New England Chronicle Editor: Rachel A. Dooley, PE at rdooley@vhb.com.
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- Adding any additional signage that would assist the driver in maneuvering the intersection better

Intelligent Technology Treatments

Beyond traditional signing and pavement marking treatments, the use of ITS applications is becoming increasingly more common. By using radar or in-pavement detectors, ITS applications include:

- Actuated supplemental flashing beacons or LED-illuminated signs
- Actuated in-pavement lights
- Actuated audible warning message
- Actuated traffic management center and/or law enforcement alert
- Variable Message Sign (VMS) alert

The detection systems senses if a driver has entered a highway off-ramp, and activates a series of flashing signs. The system will then notify the state police that someone is driving the wrong way on the road, take a picture of the vehicle, and display a message on overhead signs to warn drivers heading in the opposite direction.

Geometrics

As signing and marking/delineations deter wrong-way drivers, another option is controlling access management at off-ramp locations. By making off-ramps uninviting through changes to the geometrics, barriers are created (e.g. raised medians and channelizing islands) or vehicle access more challenging (e.g. control radius) therefore minimizing the chances of the driver feeling that the off-ramp location is the correct turning location. Below are a few suggestions of access management:

- Installing raised median, anywhere a left-turn wrong-way maneuvers from a crossroad onto an exit ramp, decreases access and creating an obstacle to access the freeway off-ramp.
- Median Barrier (e.g. concrete or guardrails) should be considered when the proximity of an exit and entrance ramps can cause confusion to drivers, such as trumpet interchanges. Careful consideration would be taken into account as median barriers can cause sight distance problem for drivers on the crossroad if used to separate adjacent entrance and exit ramps at partial cloverleaf interchanges.
- Control radius at intersections on the left edge of an exit ramp and the right edge of a crossroad by creating a short-radius curve or angular break can make the right-turn wrong-way movements harder or more awkward, and therefore less likely.
- Use a channelizing island to reduce wrong-way movements, especially among older drivers by reducing the width of the exit ramp throat and creating an obstacle for wrong-way drivers.
- Install raised/vertical longitudinal channelizing devices along striping (e.g. double yellow centerlines) where raised geometry isn’t an option due to roadway width constraints but an obstacle is needed to deter wrong-way driving from entering an exit ramp.
- Re-design of intersection (e.g. roundabout) to create geometry that guides drivers away from the off-ramp locations and creates tight geometry deterring drivers from completing incorrect maneuvers.
- Convert existing two-way roadways to a one-way roadway to direct traffic away from an isolated off-ramp to eliminate confusion to drivers.

Implementation

Phase 1a—Statewide Wrong-Way Driving Update

Many of the proposed treatments were implemented under a single statewide construction contract directed by the RIDOT. The 2014 Highway Safety Improvement Project – Wrong Way Driving Mitigation (HSIP Funds) included construction activities to implement the identified signing, marking/delineation, and signalization treatments at each location to meet the minimum MUTCD guidelines. In 2015, all 223 plus ramps in Rhode Island, excluding freeway to freeway interchanges, were field inventoried and low-cost countermeasures were implemented to ensure all ramps met minimum MUTCD requirements.

In addition to implementing the proposed treatments through the infrastructure contract, the RIDOT is revising its standard details to include these treatments to ensure that future reconstruction/enhancement projects consider the wrong-way driving mitigation techniques. The four details address the two main interchange configurations that Rhode Island struggles with: the isolated off-ramp and the partial cloverleaf.
Phase 2—Addressing Spot Locations Using Data

During the first year of implementation (May 2015-May 2016), the Wrong-Way Driving Detection System detected over 45 wrong-way drivers. None of these incidents resulted in a crash. Using this information, along with RISP citations, and wrong-way driving crashes at other locations, twenty three intersections were determined as intersections which need to be reviewed for conceptual geometric design improvements. The geometric design improvement are intended to reduce wrong-way driving on selected limited access facilities statewide.

One ramp, in particular, received 21 wrong-way alerts in the first year of implementation. This resulted in immediate mitigation via the RIDOT Maintenance staff. Additional ENTER HERE signage was installed at the ramp and the stop bar for entering vehicles was relocated closer to the intersection. This ramp will have geometric improvements considered due to its high incident rate.

The RIDOT is also a participant in the Low Cost Safety Improvement Pooled Fund Study conducted by the FHWA. As part of this study, the effectiveness of the wrong-way driving treatments implemented by the RIDOT will be part of a nationwide

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Committee, Chapter, and Student Chapter Updates

Welcome to the Newest ITE New England Section Members (as of August 11, 2016)

Christopher G. Clow, P.E. (Vermont Agency of Transportation)
Todd C. Law, P.E. (Vermont Agency of Transportation)
Nicholas Meltzer, P.E. (Vermont Agency of Transportation)
Briana Weisgerber (Stantec)
John D. Dixson (University of Massachusetts Amherst)
Bhavana Gongalla (University of Massachusetts Amherst)
Katherine Lynn Hedberg (Tighe & Bond)
Chelsea E. Bouchard (University of Massachusetts Amherst)

As always, the Continuing Education Committee needs your feedback and fresh ideas for technical sessions and training opportunities that are innovative and that would draw significant interest to the Section membership. Most importantly, training opportunities that would serve you, the New England Section membership in the upcoming meetings and gatherings.

If you have ideas for training sessions that would benefit the membership the most and have a high interest level, whether a half-day or full-day or training, please contact:

Douglas S. Halpert, EIT
dhalpert@theengineeringcorp.com

Join us for our summer social on Tuesday, August 30, 2016 to watch the Boston Red Sox take on the Tampa Bay Rays at Fenway Park. Game time is 7:05 PM. Meet at 5:00 PM on the patio of Yard House for drinks before the game. Head in early for Xander Bogaerts bobble head for the first 15,000 fans.

For more information and to sign up visit:
https://goo.gl/forms/AXOzdngRhG2vx1qP2

Continuing Education Opportunities

Welcome to the Newest ITE New England Section Members (as of August 11, 2016)

Christopher G. Clow, P.E. (Vermont Agency of Transportation)
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Bhavana Gongalla (University of Massachusetts Amherst)
Katherine Lynn Hedberg (Tighe & Bond)
Chelsea E. Bouchard (University of Massachusetts Amherst)

Photos from the Bicycle Infrastructure Tour held on June 16th.
The ITE 2016 Annual Meeting & Exhibit, taking place August 14-17 at the Anaheim Marriott in Anaheim, CA, will feature sessions focusing on embracing the rapid change taking place in the transportation profession. Plenary sessions bookend the conference, taking a big picture look at the impact and implications of the explosive evolution of technologies on transportation from both the private and public sector, featuring executives from HYPERLOOP, Uber, the Federal Highway Administration, and the Seattle Department of Transportation.

The 26-plus technical sessions highlight thought leadership and success stories overall as well as featuring the wealth of transportation innovation taking place in California. Subject matter in these sessions cover safety considerations such as Vision Zero, traffic engineering and operations, and signal and signal systems among other transportation concerns. In addition, non-technical sessions concentrate on developing leadership capabilities and personal branding.

In addition to these sessions, the ITE 2016 Annual Meeting & Exhibit features several new and returning activities, including:

- **Transportation Camp:** Taking place on Sunday, August 14, this conference will connect all types of transportation professionals and give everyone an opportunity to voice their outlook, ideas, and opinions on how we can work together to create better communities and positively affect the quality of life for millions of people. Registration for TransportationCamp is only $35 and is separate from overall event registration.

- **Technical Tours:** This year’s meeting offers three tremendous “get out and experience” opportunities to see what is happening in the local community first-hand.

- **Post-Conference Workshops:** Four four-hour workshops delve deeper in to subject matter that doesn’t fit into 60- or 90-minute sessions.

- **Exhibit Hall:** A popular and traditional part of ITE’s annual meetings, more than 50 exhibitors will demonstrate their products, services, and software. The list of current exhibitors can be found at [http://bit.ly/AM16Exhibitors](http://bit.ly/AM16Exhibitors).

- **ITE Collegiate Traffic Bowl Grand Championship:** An annual favorite, this Jeopardy-style competition among ITE student chapters will crown the championing team.

- **ITE Awards Lunch:** A not-to-be-missed celebration of transportation excellence. Attendees will recognize the accomplishments and achievements of their fellow professionals.

Networking opportunities also are a centerpiece of this meeting providing attendees with the chance solidify current relationships and make new contacts during the event. Two receptions (one on Sunday and one on Tuesday) plus multiple networking breaks provide ample time for attendees to share insight and expertise.

Prospective attendees are strongly encouraged to register for the ITE 2016 Annual Meeting & Exhibit by June 30 to take advantage of best pricing and to make their accommodation reservations by July 28, the deadline for the ITE group rate at the Anaheim Marriott. For more information on the ITE 2016 Annual Meeting & Exhibit, please visit [http://www.ite.org/annualmeeting](http://www.ite.org/annualmeeting).
The Rhode Island ITE Chapter hosted a lively roundtable discussion on complete streets on May 31st. The panel (photographed below) included:

- Steven Pare, Commissioner, Providence Department of Public Safety
- Alex Krough-Grabbe, Executive Director, Rhode Island Bicycle Coalition
- Donna Personeus, Executive Director, Thayer Street District Management Authority
- Robert Rocchio, PE, Managing Engineer for Traffic Design, Rhode Island Department of Transportation
- Doug Hausladen, Director of Transportation, Traffic & Parking, City of New Haven, CT

RIITE would like to thank our excellent panelists for participating in our Complete Street Roundtable event! We only wish we had more time, as the discussion probably could have gone on for at least another hour.

Looking forward, the chapter will be hosting it’s annual RIITE/NEITE joint meeting on November 7, 2016 at the Providence Marriott Downtown in Providence, Rhode Island. If you have any questions you can contact us at RhodyITE@gmail.com.

Applications for the future February 1st - 28th, 2017 computer-based exams of Professional Traffic Operations Engineer (PTOE) and Professional Transportation Planner (PTP) are due December 9th, 2016.

Please note that applications received after the deadline will require an additional $75 late fee to process the application in addition to the application and examination fee that must accompany the application. TPCB will try to accommodate late applications, but there is no guarantee they will be able to do so.

For a list of available exam cities, please visit: http://castleworldwide.com/mainsite/ibtsites/default.aspx
effort to develop crash modifications factors (CMFs) to be included in the Highway Safety Manual (HSM) and the CMF Clearinghouse.

Lessons Learned

Following implementation, an immediate problem that was faced was receiving false calls from the ITS locations. Two causes for these false calls were determined. Large trucks exiting the highway in the correct direction were being captured by the dual radar and sending a false call. To alleviate this, the ITS systems were placed farther from the roadway than first designed. Implementing a 2’ to 8’ offset, depending on right-of-way, has deterred these false calls.

False calls were also being received on parallel ramps where traffic traveling in the correct direction was being perceived as a wrong-way vehicle. To prevent this, shields and attenuators were installed on the radar to focus it to the individual lane where a wrong-way driver may be entering the highway.

Finally, the oversized signs were found to be confusing drivers on parallel ramps that were travelling in the correct direction. All median mounted signs at side-by-side ramps were rotated to face any wrong-way oncoming traffic.

Continued Efforts

All locations will continue to be monitored and evaluated for effectiveness to determine if the treatments installed are beneficial to deterring wrong-way driving activity and reducing associated crash occurrences. Depending on the effectiveness of the “Wrong Way Driving Detection” intelligent technology treatment, additional limited access highway locations may be chosen for subsequent installations of the detection system as well as geometric improvements to further deter wrong-way maneuvers.

The RIDOT continues to work closely with the RISP to mitigate wrong-way driving. All ITS data is shared with state and local police to implement strategically targeted enforcement at high risk times and locations. The RISP shares citations that are given for wrong-way driving so that additional locations are evaluated for ITS installation or geometric improvements.

RIDOT Director Peter Alviti, Jr. was quoted saying, “We are extremely pleased with the results of this system. Improving highway safety and saving lives is integral to the mission of our Department. Even if the systems only prevented one wrong-way crash and the serious injuries or deaths that could have resulted, this program has proven to be a wise investment.”
Employment Opportunities

For Detailed Employment Opportunity Information, please visit: http://neite.org/job-opportunities/

Howard Stein Hudson

Now in our 29th year, Howard Stein Hudson is an expanding, dynamic firm or civil engineering and planning experts based in Massachusetts and working throughout the Northeast. Our culture is warm, close-knit, and fully engaged with both colleagues and clients. Our work on some of the most high-profile, exciting, and complex projects in Massachusetts is driving our growth.

We are an established firm of over 50 professionals, located in Boston and Chelmsford. We are well-known in the region and enjoy close working relationships with our clients. Our aim is to offer rewarding professional experiences with opportunities for professional development.

Resident Engineer
Southeastern Massachusetts

We have an excellent opportunity for a Resident Engineer on our Construction Services team. The successful candidate will be responsible for overall field management of a roadway projects based onsite in Southeastern MA. Responsibilities include, but are not limited to:

- Monitor Contractor progress and compare with project
- Inspect and accept installed work
- Prepare Summary Inspection Reports of Daily Activities
- Provide technical leadership for complex and unique assignments
- Review drawings, specifications, contracts, and requisitions
- Coordinate on-site materials testing, interpret results and provide direction

DESIRE SKILLS AND EXPERIENCE:
- Bachelor’s Degree Civil Engineering or similar discipline
- 10+ years’ field experience with 5+ of that as a Resident Engineer required
- Experience with civil roadway construction, public works construction, and land development projects
- Obtain, verify, and document daily quantities of work and work activities
- Ability to interpret engineering sketches, notes, calculations and verbal instructions, to create multi-disciplined engineering drawings
- Experience with AutoCAD, Primavera P6, and Microsoft Project, and MS Office Suite
- Ability to work well with contractors and within an office setting
- Ability to work in team environment as an individual contributor
- Strong written and verbal communication skills
- Ability to utilize critical thinking, judgment and experience to define, analyze and solve problems
- CMAA, NICET, APWA certifications a plus

Senior Civil Engineer
Boston, Massachusetts

We have an excellent opportunity for a Senior Civil Engineer. The successful candidate will be responsible for the development of design plans, technical specifications, and estimates for public bidding; feasibility reports; construction administration; utility design and relocation; cost estimating; sub-consultation management and coordination; and basic knowledge of survey data collection, land rights, and regulatory permitting. The candidate is also responsible for management and development of junior staff and co-ops. Client management and business development are an integral part of the responsibilities.

DESIRE SKILLS AND EXPERIENCE:
- Bachelor’s Degree Civil Engineering
- P.E. license required
- Project management experience required
- Experience with the City of Boston and MassDOT standards and deliverables a must
- Staff management and training
- Ability to work in team environment as an individual contributor
- Strong written and verbal communication skills
- Ability to utilize critical thinking, judgment and experience to define, analyze and resolve problems and issues

Cape Cod Planner
Cape Cod, Massachusetts

Work collaboratively on a variety of transportation related projects. Determine data collection requirements and methodology, conduct field work, collect and analyze data utilizing GIS, AutoCAD and transportation modeling software, and prepare reports and presentations.

Requires superior communication, analytical, quantitative and organizational skills; knowledge of transportation planning principles and practices, relevant land use planning, economic, sociological and environmental impacts of traffic and transportation projects.

Bachelor’s Degree from an accredited college or university in transportation planning, engineering, land use planning or related and one year of experience, including experience in analytical techniques; Master’s Degree preferred; or an equivalent combination of education and experience.

For complete job description go to: http://www.barnstablecounty.org/barnstable-county/employment-opportunities/
Let’s face it: Traffic Engineers are under-rated. For as much as we all despise sitting in traffic, little thanks go to those who devote their careers to safely and efficiently getting pedestrians, bikes and cars moving on the street.

Maybe you realized this as you were listening to your guidance counselor in high school, and decided you wanted to make a positive difference in the future of commuting. Maybe a professor encouraged you to look into Traffic Engineering because of your proclivity for math. Or maybe you stumbled into the field, unsure of how you got here – but loving it nonetheless. Regardless of your path, if you are a go-getter who wants to learn more about the field and contribute in a team-based environment, we want to talk to you.

The main responsibilities:
Basic tasks include assessing traffic conditions, conducting safety studies, and performing traffic analyses. But more than that, we’re looking for creative thinkers who come up with fresh solutions. This role will be expected to apply traffic calming and complete street principles in collaboration with other BETA team members. Traffic signal and system designs, traffic reports and design presentations to clients will be a critical part of this position’s responsibilities. Expect to work on a variety of projects from municipalities, regional commissions, and state agencies – and get ready to grow with a fast-paced, dynamic team.

The fine print:
- Bachelor of Science in Civil Engineering and EIT are required
- 3-6 years of experience is required
- MassDOT experience is preferred

Senior Traffic Engineer
Norwood, Massachusetts
You understand that filling the pipeline is as important as perfecting the crash reduction safety measures. You know that managing staff is as critical as optimizing signal timing. You believe that knowledge of complete streets is only as good as the design of implementable mobility solutions. If this sounds like you, we want to meet.

BETA is looking to hire a Senior Traffic Engineer who will be responsible for variety of tasks from business development to leading traffic assignments.

The main responsibilities:
This role is for someone who doesn’t mind rolling up their sleeves to dig into a signal design, mingling with a client, and determining quarterly business development projections – all in one day. BETA is a dynamic company with the need for a senior-level Traffic Engineer who is as confident in public presentations as they are in their working knowledge of MUTCD. We have a growing client-base of municipalities, regional commissions and state agencies who rely on us for our smart solutions and quick turnaround. The right candidate will be highly skilled in written and verbal communication, proficient in all forms of traffic analysis and cutting edge technology applications, and ready to wear many hats.

The fine print:
- Bachelor of Science in Civil Engineering is required
- PE and PTOE are required
- Master’s Degree is preferred
- 15+ years of experience is preferred
- MassDOT experience is preferred

Will you be in Anaheim next week?
The New England Chronicle is interested in short articles on innovative projects and cutting-edge solutions.

Please send articles, listings (ITE and other relevant), graphics and photographs to the Editor: Rachel A. Dooley, PE at rdooley@vhb.com

The New England Section Chronicle staff thanks you and we hope you enjoy the issue.

REMINDERS

Those members of the New England Section that have not updated your personal and/or business contact information recently should visit the ITE website and do so. An updated contact directory allows the Section to properly send information emails, election information, and other details such as the NEITE calendar.

http://www.ite.org

For those members of the New England Section that would like to be included on the Section email list for Google Groups, please contact Samuel W. Gregorio, PE, PTOE at TEC, Inc.

sgregorio@theengineeringcorp.com