ITE TRIP GENERATION 10TH EDITION
HITS THE STREETS
Submitted By: JEFFREY R. PARENTI, PE, PTOE, ENV SP
Dear NEITE Members:

It’s hard to believe that we are already more than halfway through the year. It has been an exciting year so far that has brought the New England Section of ITE some new programming, including the introduction of networking events. On June 8, the New England Section hosted its first in a series of networking events at the Pawtucket Pawsox game in Rhode Island, which was followed by a Fisher Cats game in New Hampshire on June 22. Both events had approximately 25 people in attendance and were a lot of fun for all those involved. We even began recruitment of some future ITE members with six children attending the Fisher Cats game, where ITE’s own Sam Gregorio threw out the first pitch. Nearly all of us stuck around after the game to enjoy the pre-Independence Day fireworks show. The Section will continue to explore additional options for future networking events. In the meantime, I encourage everyone to join the Massachusetts Chapter for a Red Sox game on August 16, including a pre-event social gathering at the Yard House sponsored by the Emerging Professionals Group.

On June 21, nine foursomes hit the golf course at Sandy Burr Country Club in Wayland, MA for the Annual Desjardins Golf Tournament. This event continues to be successful in providing valuable scholarships to students pursuing careers in engineering in memory of Thomas E. Desjardins.

The New England Section Executive Board convened twice this summer with a conference call on June 28 and a formal meeting on July 25. The July 25 Board meeting was held in conjunction with the Joint ITE Maine/New Hampshire Chapter meeting at the Roundabout Diner in Portsmouth, New Hampshire. The meeting featured a day-long workshop by Bastian Schroeder, PE, PhD of Kittelson & Associates on the new HCM 6. This event was a huge success and received rave reviews from those attending. The division of topics into “uninterrupted” and “interrupted” flow allowed several members of the Board to participate in the morning half of the workshop, enjoy some networking time at lunch, and then join the Board meeting in the afternoon. Due to the input the Board received regarding the workshop, a similar topic is being considered for the training workshop at the Annual Meeting in Warwick, Rhode Island this December.

Back in May, several New England Section members traveled to Vernon, NJ for the 2017 Northeast District meeting hosted by the MET Section at the relaxing and secluded Crystal Springs Resort. In place of the standard Traffic Bowl, the meeting featured a Section-vs-Section competition that included multiple mini-matches in basketball, corn hole, and horse shoes at social events throughout the three-day event. Of course, we still stimulated our intellect with traffic trivia and visiting all of the vendor booths. I would like to thank the MET Section and the LAC for hosting us all at such a beautiful location. My personal favorite gathering was the Oktoberfest-style dinner followed by fire pits and s'mores bar.

The 2019 Northeast District meeting will be hosted by the New England Section and is scheduled to occur in Connecticut. During the Board’s June 28 conference call, we identified Joe Balskus and Joe Hallisey as co-chairs for the event. Joe and Joe are underway identifying potential venues and organizing a Local Arrangements Committee (LAC) to assist in planning the many aspects of the event. The Joe and Joe team plan to present the selected venue options and announce other members of the LAC at the October 12th Board meeting. If you are interested in being part of the LAC, I encourage you to reach out to one of the Joes as soon as possible.

Over 1,100 ITE members attended the ITE/CITE Annual Meeting in Toronto, CA on July 30 to August 2. The New England Section’s own John Kennedy was presented with the Burton W. Marsh Award for distinguished service to ITE. I want to extend my congratulations to John and thank him for his continued dedication to ITE.

While the summer has been busy, the fall will prove to be equally so with additional events coming up, including the Scott Herr Golf Tournament on September 13, the NE/MA ITE Annual Meeting on October 12 in Waltham, MA, and the Annual Meeting in Warwick, RI on December 4.

I look forward to seeing you all at the upcoming meetings. If you have any questions or suggestions, please contact me at rebeccabrown@gpinet.com or (978) 570-2946.

Sincerely,
Rebecca L. Brown, PE, PTOE
New England Section President
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- ITE Northeastern District: [http://www.northeasternite.org](http://www.northeasternite.org)
- ITE New England Section: [http://www.neite.org](http://www.neite.org)
- ITE Upstate New York Section: [http://www.itenyupstate.org](http://www.itenyupstate.org)
- ITE New York Metro Section: [http://ite-metsection.org](http://ite-metsection.org)
- Young Professionals in Transportation - Boston Chapter: [http://www.yptboston.org](http://www.yptboston.org)
- Boston Society of Civil Engineers: [http://www.bsces.org](http://www.bsces.org)
- American Society of Civil Engineers: [http://www.asce.org](http://www.asce.org)
- ASCE New Hampshire Chapter: [http://www.ascenh.org](http://www.ascenh.org)
- ASCE Vermont Chapter: [http://sections.asce.org/vermont](http://sections.asce.org/vermont)
- ASCE Maine Chapter: [http://www.maineasce.org/maine](http://www.maineasce.org/maine)
- ASCE Connecticut Chapter: [http://www.cscce.org](http://www.cscce.org)
- ASCE Rhode Island Chapter: [http://riasce.org](http://riasce.org)
- Urban Land Institute: [http://www.uli.org](http://www.uli.org)
- MA Association of Consultant Planners: [http://www.macponline.org](http://www.macponline.org)
- APA Massachusetts Chapter: [http://www.massapa.org](http://www.massapa.org)
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- Logan International Airport in Boston, Massachusetts  
  Photo Source: VHB ©
- Moors Road Bike Path in Providence, Massachusetts  
  Photo Source: VHB ©
Hello New England Section!

I feel like we say it every year, but this summer is flying by. As Rebecca mentioned on the previous page, NEITE has had several events in the past few months. Some photos from these different events are to the left. Thank you to everyone who attended the baseball outings back in June. Hopefully we can plan similar events next summer at a couple different minor league stadiums around New England.

Our Northeastern District International Director, Mike Salatti just returned from the International ITE Annual Meeting in Toronto. Be sure to read his message on page 10 for his thoughts on the conference as well as some of the exciting initiatives ITE is taking.

The feature article in this issue was written by Jeffrey Parenti of Nitsch Engineering. This article is a summary of the interview Jeff had with Lisa Fontana, a Senior Director of ITE Traffic Engineering, regarding the latest issue of the Trip Generation Manual. Whether you are familiar with the Trip Generation Manual or not, this article provides a great summary of how the Manual is used and the changes we can expect with the release of the 10th Edition.

There is also a lot of information for students in this issue. NEITE is hosting a contest for students to submit potential articles for publication in the next issue of the New England Chronicle. The winner also receives a cash prize and recognition at the Annual Meeting. See page 7 for more information. There are also calls for applications for two different scholarships being offered within the New England section. See page 11 for more information regarding those opportunities. Please pass on this information to any students you may know as they get back to school this semester.

You may also notice that there are several more job postings than normal in this issue. Many companies are seeking candidates for a variety of positions right now all throughout New England. If you, or someone you know, is interested in any of these positions, please visit the NEITE website for the full job postings and how to apply.

As summer is winding down, many of the fall ITE meetings are coming up including the joint meetings with the Massachusetts and Rhode Island chapters in October and November respectively. See the Section Calendar for more information about upcoming events.

Finally, I would like to thank all of our sponsors for their continued support of the New England Chronicle. We had several companies renew their sponsorship in the last few months alone. If you are interested in becoming a sponsor of the award-winning New England Chronicle please contact Lisa Rutherford of Ocean State Signal (lrutherford@oceanstatesignal.com) or myself. I would also like to thank all of the contributors to this issue. I hope you enjoy the summer issue of 2017!

Rachel A. Dooley, PE
Chronicle Editor
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Find The New England Section Online

The New England Section of the Institute of Transportation Engineers is now on Facebook, Twitter, and LinkedIn.

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.

Photos from the Pawsox and NH Fisher Cats Baseball Summer Outings held this past June

Photos from the ITE Northeastern District Annual Meeting at the Crystal Springs—Minerals Resort in Vernon, NJ this past May
Traffic Engineers and Transportation Planners around the world have the awesome responsibility of predicting how much traffic a development will generate many years in the future—usually before it is anything more than an architect’s concept plan. For over 40 years, the Institute of Traffic Engineers has helped us with this daunting task by providing an instrumental, but well-worn reference: Trip Generation. This publication has recently made a giant leap forward and will give ITE members many new ways to complete the first step of the four-step modeling process: trip generation, the foundation on which all Traffic Impact Studies are built.

The 10th Edition was rolled out at the Joint ITE/CITE 2017 Annual Meeting and Exhibit in Toronto last month, where review copies were made available. You can pre-order the new manual now at www.ite.org/marketplace. It will ship this month.

For this article I interviewed ITE Traffic Engineering Senior Director, Lisa M. Fontana Tierney, PE, from Washington, who generously provided detailed answers to the Chronicle’s questions.

**About Trip Generation**

If you don’t have *Trip Generation* on the shelf in your cubicle, here is a little background on one of our most-used references. *Trip Generation*, now in its 9th Edition, is a compilation of thousands of land development traffic studies condensed to a single source. At 2,017 pages (and 11 pounds), TG splits each traffic study into land use codes. General Office (Land Use Code 710), Hotel (LUC 310), and Single-Family Detached Housing (LUC 210) are some of the more common ones, but there are more specialized codes as well.

Each LUC is further subdivided by at least one, and often two or more, independent variable(s) (such as square footage, rooms, or units) and time period (for example weekday or AM peak hour). A sample page in TG provides a graph with all the data points for that time period, independent variable, and LUC showing each data point and best fit lines. All have an average trip rate and many also have a fitted curve.

Most provide a coefficient of determination (more commonly known as “R-Squared” or $r^2$) so the analyst has an idea for how predictive the independent variable is for the data set.

For nearly any development the client can imagine, we can estimate the number of vehicle trips the project will likely generate in a single hour or entire day using this manual.

But the first nine editions of TG did have limitations. Many of the data points were taken in suburban or even rural areas with no access to transit, places that bear little resemblance to some of the denser areas in many parts of New England. In those cases the analysts must convert the ITE estimate to person trips (by assuming an average vehicle occupancy) and then converting them back to vehicle trips after estimating the mode split.

Second, most ITE data points came from parcels with a single land use. As mixed-use developments became more popular in our region, we were left trying to estimate the level of “internal capture” for the development as a whole. From a mathematical standpoint we argued the project was not the sum of its generating parts. This theory is sometimes met with a skeptical eye from local zoning or planning boards.

Third, the estimating process is rather cumbersome. Well into the digital age, we thumb through a tome searching for the land use that best closely represents our project, and flip to the page with the right combination of independent variable and time period. Finally, we type the numbers into our computer, often using a spreadsheet we created ourselves. After we are done, the book takes up valuable real estate on our cluttered desk.

How will the new edition answer the above and other concerns shared by the ITE community? Before we get to the features of the 10th Edition, let’s take a look at how far TG has come in four decades.

**A Little History**

ITE published the first edition of Trip Generation in 1976 and had less than 200 pages. Below is a summary of some selected versions since then.

### Table 1—Summary of Previous Versions of the Trip Generation Manual

<table>
<thead>
<tr>
<th>Edition</th>
<th>Pages</th>
<th>Land Uses</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>First (1976)</td>
<td>&lt;200</td>
<td>~50</td>
<td>Average trip rate only</td>
</tr>
<tr>
<td>Second and Third</td>
<td>80</td>
<td></td>
<td>125 references</td>
</tr>
<tr>
<td>Fourth (1987)</td>
<td></td>
<td></td>
<td>Added linear regression analysis and plotted curves</td>
</tr>
<tr>
<td>Eighth (2008)</td>
<td>1,922</td>
<td>162</td>
<td>Three volumes</td>
</tr>
<tr>
<td>Ninth (2012)</td>
<td>2,017</td>
<td>170</td>
<td></td>
</tr>
<tr>
<td>Tenth (2017)</td>
<td>3,000</td>
<td>176</td>
<td>Includes on-line tool and resources; about 5,700 references</td>
</tr>
</tbody>
</table>
In preparation for the newest edition, the Institute asked its members for help. ITE solicited engineers and planners to submit studies for review to be included. The effort was a great success. ITE’s trip generation database increased by 1,700 sites, or more than a 30 percent increase since the 9th Edition.

At the same time, some data was removed. The original version of the database included data as far back as the 1960s. ITE reviewed the data set and elected to exclude all data prior to 1980 from the new data set. And as we will see later, users can now choose the age range of their own study.

**What’s in the Box**

The 10th Edition of TG will still be available as a three-volume set of bound books similar to the 9th Edition:

- Trip Generation 10th Edition, Volume 1 — Desk Reference (available as hard copy or in pdf format): Provides a detailed description of new urban and person-based trip data, key instructional information, sample plots, and identifies significant changes from the previous edition.
- Trip Generation 10th Edition, Volume 2 — Data Plots in PDF Format: Includes a complete set of searchable electronic files including land use descriptions and plots for all land use/time period/independent variable/setting combinations. This material was previously published only in hard-copy format.
- Trip Generation Handbook, 3rd Edition (available as hard copy or in pdf format): Provides new guidance on proper techniques for estimating person and vehicular trip generation rates; updates guidance for the evaluation of mixed use developments and the establishment of local trip generation rates; and expands pass-by trip and truck trip generation data.

But in addition to the books, the 10th Edition will have an exciting new feature: a Web app called ITETripGen.

**In addition to the books, the 10th Edition will have an exciting new feature: a Web app called ITETripGen.**

No matter the combination of land use code, setting type, data age, and independent variable, the result will still be presented as a plot with an average generation rate along with fitted curves, similar to the previous editions.

**Data Parsed by Setting Type**

Recognizing that estimating trips in a dense city setting is difficult using data collected in a suburban setting, ITE for the first time has identified the setting type for each data point in its set. This will allow the analyst to craft a study using only data that is analogous to the proposed project.

The Institute has defined four setting types: Center City Core, Dense Multi-Use Urban, General Urban/Suburban and Rural. ITE defines each of them as follows:

- The **Center City Core** is the downtown area for a major metropolitan region that is the focal point of a regional light- or heavy-rail transit system. This area type is typified by multi-storied buildings, a wide range of land uses, an extensive pedestrian sidewalk network, and shared and priced parking both on-street and in structured garages or surface lots.

- An area designated as **Dense Multi-Use Urban** in the Trip Generation Manual is a fully developed area (or nearly so), with diverse and interacting complementary land uses, good pedestrian connectivity, and convenient and frequent transit. This area type can be a well-developed urban area outside a major metropolitan downtown or a moderate size urban area downtown.

- An area designated as **General Urban/Suburban** in the Trip Generation Manual is an area associated with almost homogeneous vehicle-centered access. Nearly all person trips that enter or exit a development site are by personal passenger or commercial vehicle.

- **Rural**—agricultural or undeveloped except for scattered parcels and at very low densities.

**Land Use Code Changes**

Aside from eliminating older data points and designating new setting type for each study in the data set, ITE has made a number of changes to Land Use categories. ITE often does this between editions, but for the 10th edition there are more adjustments than usual in keeping up with the rapidly changing times and direction of brick-and-mortar development and redevelopment. In all there are 22 brand new Land Use categories.

- The High-Cube Warehouse/Distribution Center-related land uses, residential apartment land uses and Gasoline/Service Stations/Convenience Markets land use groupings were all re-examined and revised.
- Other comings and goings for specific land use categories are listed in Table 2 on Page 8.

**Mixed Use Guidance**

Estimating trips for mixed use developments has been challenging using previous editions. But the Trip Generation Handbook, 3rd Edition, which is included as part of the Trip Generation Manual bundle includes an entire chapter on estimating trip generation for mixed used developments. The recommended methodology included is based on the recommended procedure presented in NCHRP Report 684: Enhancing Internal Trip Capture Estimation for Mixed-Use Developments.

**Direct Calculation of Person Trips**

While generation rates in all previous editions have been vehicle trips, the 10th Edition includes person trips, too. Person trip data allows analysts, especially those working on projects that will generate non-automobile trips, to more accurately pass through the mode split step and directly estimate vehicle, walking, bicycle, transit, and rideshare trips.

ITE compiled this data by using studies that observed people traveling to and from the subject land use. Although person trip rates are not available for all land uses, the Trip Generation Handbook, 3rd Edition includes guidance for the purpose of adapting vehicle count data to person trip estimates.

**What the Future Holds**

Although the 10th Edition is complete, ITE will continue to accept data for consideration for
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How Do I Advertise?

- The cost of a one year business card size advertisement in the New England Chronicle's Professional Services Directory is $150 per year (recently changed), payable to the New England Section of ITE. Notice to be given in early November to past sponsors.
- Business Card Size Advertisements should preferably be in PDF format.
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ATTENTION STUDENTS
Would You Like to Contribute to the New England Chronicle?

Would you like to contribute to the award winning New England Chronicle newsletter? NEITE is hosting a contest to publish a feature article from a student in the upcoming New England Chronicle issue.

Articles can be about technical topics, professional matters, innovative projects, or cutting-edge solutions that affect transportation engineering and planning.

Submissions will be reviewed by the Chronicle Action Committee and the winning author will receive a $100 prize, publication in the next issue of the New England Chronicle, and recognition at the NEITE Annual Meeting in December.

Feature articles should consist of 2,000 to 4,000 words. Each submission should include a head shot and bio of all participating authors.

Please submit articles for consideration by Friday, October 20, 2017 to the New England Chronicle Editor: Rachel A. Dooley, PE at rdooley@vhb.com.
Continued from Page 6

the next one. Members can submit their studies at ite.org/tripgeneration or to tripgen@ite.org.

And don’t forget about TG’s little sibling: Parking Generation will also get an upgrade, too. ITE recently convened a small group of professionals to provide high-level input as we explore options for the future of ITE parking generation resources. In addition to the significant modernization process occurring with Trip Generation resources, ITE recognizes the need to upgrade parking generation tools to better meet the needs of its members, particularly with regards to the strong connection between parking and urban development. ITE anticipates that an update to the Parking Generation report will be available in 2018.

In 2018 and beyond, the transportation landscape will continue to change at a rapid clip. Ridesharing services such as Uber and Lyft have already changed the way people travel and bicycling is quickly gaining mode share in urban areas. And if the tech and automobile industries deliver on their promises, we may see driverless cars on streets in a few short years.

Table 2—Changes to Land Use Categories

<table>
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<th>In</th>
<th>Out</th>
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<tr>
<td>Specialty Trade Contractor (180)</td>
<td>Waterport/Marine Terminal (010)</td>
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<tr>
<td>Off-Campus Student Apartment (225)</td>
<td>General Heavy Industrial (120)</td>
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<tr>
<td>Mid-Rise Residential with 1st-Floor Commercial (231)</td>
<td>National Monument (418)</td>
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<tr>
<td>High-Rise Residential with 1st-Floor Commercial (232)</td>
<td>Zoo (481)</td>
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<tr>
<td>Rock Climbing Gym (434)</td>
<td>Lodge/Fraternal Organization (591)</td>
</tr>
<tr>
<td>Trampoline Park (436)</td>
<td>Specialty Retail Center (826)</td>
</tr>
<tr>
<td>Professional Baseball Stadium (462)</td>
<td>DVD/Video Rental Store (896)</td>
</tr>
<tr>
<td>Bingo Hall (470)</td>
<td>Gasoline/Service Station and Car Wash (946)</td>
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<td>Charter Elementary School (537)</td>
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<tr>
<td>School District Office (538)</td>
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<tr>
<td>Fire and Rescue Station (575)</td>
<td></td>
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<td>Free-Standing Emergency Room (650)</td>
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<td>Small Office Building (712)</td>
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<td>Marijuana Dispensary (882)</td>
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<td>Beverage Container Recycling Depot (895)</td>
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<td>Liquor Store (899)</td>
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<td>Food Cart Pod (926)</td>
<td></td>
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<tr>
<td>Fast Casual Restaurant (930)</td>
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The 10th Edition of the ITE Trip Generation Manual represents the most significant innovation in the history of the 41-year-old reference. It will change the way we do business.

Is ITE ready? “To date, we have not studied this issue in enough detail to quantify those impacts,” Tierney said. “Impacts of these new transportation services along with other transportation advancements such as connected/automated vehicles will be considered as part of future updates to ITE’s trip and parking generation resources.”

Conclusion

The 10th Edition of the ITE Trip Generation Manual represents the most significant innovation in the history of the 41-year-old reference. It will change the way we do business. Since each study can be customized by the analyst using the ITETripGen tool, it is effectively no longer a single reference we all use. How will engineers and planners adjust their trip estimating methodologies? Will standard practice of estimating trips change? How will the peer review process change?

These and many other questions will be discussed over the next several months, but one thing is for certain: we won’t need to lug three heavy volumes around the office anymore.

Jeffrey R. Parenti, PE, PTOE, ENV SP is a Project Manager for Nitsch Engineering in Boston, Massachusetts. He also served the City of Cambridge as Principal Traffic Engineer and Engineering Manager of its Traffic, Parking, and Transportation Department and the Town of Brookline DPW as its Transportation Engineer. Reach him at jparenti@nitscheng.com.
Trip Generation Manual, 10th Edition
Now Available for Pre-order!

The 10th Edition of the ITE Trip Generation Manual will be available for review and pre-order at the Joint ITE/CITE 2017 Annual Meeting and Exhibit (or online at www.ite.org/marketplace). This expanded and updated resource will begin shipping in September.

New to this edition, members can now access trip generation data in the form that works best for them: hard copy, electronic, or cloud-based, including through a new web-based app.

Purchase as a bundle or as individual products.

**BEST VALUE!** Buy the complete trip generation tool kit by purchasing one of the ITE Trip Generation Manual bundles.

The complete 10th Edition bundle includes:

- **Trip Generation 10th Edition, Volume 1—Desk Reference (available as hard copy or in pdf format):** Provides a detailed description of new urban and person-based trip data, key instructional information, sample plots, and identifies significant changes from the previous edition.

- **Trip Generation 10th Edition, Volume 2—Data Plots in PDF Format:** Includes a complete set of searchable electronic files including land use descriptions and plots for all land use/land use/land use combinations. This material was previously published only in hard-copy format.

- **Trip Generation Handbook (available as hard copy or in pdf format):** Provides new guidance on proper techniques for estimating person and vehicular trip generation rates; updates guidance for the evaluation of mixed-use developments and the establishment of local trip generation rates; and expands pass-by trip and truck trip generation data.

- **Trip Generation Web-based App (only available as part of a bundle purchase):** Desktop application that allows electronic access to the entire trip generation dataset with numerous filtering capabilities including site setting (i.e., rural, suburban, urban), geography, age of data, development size, and trip type (person or vehicular trips).

The desk reference, Trip Generation Handbook, and specific land use sets are available for individual purchase (see table). The ITE TripGen App is only available as part of a bundle purchase and cannot be purchased individually.

| Trip Generation Manual, 10th Edition Bundles | | | | | | | | Price |
|---|---|---|---|---|---|---|
| Standard Bundle (TG 10-A) | Hard Copy | Hard Copy | Complete Set of Land Use Packages | Included | $695 | $695 |
| All Electronic Bundle (TG 10-D) | PDF | PDF | Complete Set of Land Use Packages | Included | $595 | $675 |

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Substantial discounts available for multiple copies! Call 202-785-0060 ext. 149 for more information.
Dear Transportation Professionals,

Just returned last week from Toronto. If you were unable to attend you missed out on an awesome event. Nearly 1,400 professionals attending a thoroughly well planned out event across our northern border. Hats off to a great LAC working diligently with HQ to put together a truly integrated International and District Annual Meeting. This has been the recent goal of ITE to combine the international annual meeting with a local district meeting to make it easier for locals to attend and not have to choose between one or the other, but ensure the international meeting includes all the programs and elements the local district meeting has traditionally offered its members. The technical program was exciting and varied with so many meetings and activity opportunities I couldn’t get to all I may have wanted, aside from the sightseeing I tried to do around this cosmopolitan city. I have not been to too many international meetings as I just preferred the local Northeast district ones that we host as being more relevant, fun with far more value. This meeting, while more costly between registration and hotel fees, still had the feel of a local meeting with the social activities and reception opportunities that I didn’t seem to see much in the past. I think our attendees found it had refreshingly good value. So mark your calendars for next year as we will be in Minneapolis in 2018 and Austin in 2019.

ITE has been an enormous concerted effort to position ourselves to be not only “at the table” but in the lead of the many programs and initiatives that our industry has been facing. The historic change is unprecedented and ITE is intending to be “Out Front” of a dynamic transportation landscape as we work to improve mobility and safety and do our part to build smart, sustainable, and livable communities.

ITE “Out Front” of Smart Communities

Smart Communities apply data-driven thinking to the business of planning, designing, building, operating, and maintaining public assets. ITE is undertaking a number of activities to educate our members. A series of podcasts focused on Smart Communities has now kicked off with the June 2017 episode. Five more episodes focused on Smart Communities are in development through November 2017, with several tie-ins to ITE Journal articles. ITE featured a strong Smart Communities pathway at the Joint ITE/CITE 2017 Annual Meeting in Toronto.

ITE “Out Front” on Transportation and Health

Transportation plays an important role in health, well-being, and quality of life. Healthy choices are ultimately an individual responsibility, but we all play a role in providing access to healthy transportation options. An ITE Transportation and Health Task Force was formed to investigate the connection between transportation and health and recommend additional activities that ITE should undertake. ITE has begun undertaking activities to educate our members in this area, such as the November 2016 podcast featuring speakers from Transport for London and the City of Vancouver, who discussed implementing health and transportation initiatives. Two transportation and health webinars have been held to date and more are planned.

ITE “Out Front” on Vision Zero

ITE’s efforts toward zero roadway deaths continue to be led through the ITE Vision Zero Task Force led by a team which includes our own Andrew Kaplan (Technical Working Group Chair). This group released the Vision Zero Website and Safety Resources Toolbox in April—an online, searchable database containing nearly 700 best practices, analytical techniques, policy guidance, and communication and educational tools.

ITE Constitution Updates

A major initiative undertaken by the IBOD in 2017 is an update of the ITE International Officer Nomination and Election Process and membership updates to the Constitution.

- The first goal is to make ITE more inclusive to the broader transportation community. You will note the elimination of the “Institute Affiliate” membership grade and transition from references of “transportation engineer” to “transportation professional.” These changes will help grow the Institute and position ITE to have a stronger voice on the important transportation issues facing our profession and communities.

- The second goal is to change the election process for International Vice President to remove barriers that are keeping highly qualified candidates from volunteering for this position. The recommended changes will shorten the election cycle, lessening the burden on the candidates and allowing the successful candidate to attend District Meetings in the spring.

ITE members eligible to vote on these amendments can expect to receive the ballots within 30 days following the August ITE Annual Business Meeting. So stay tuned for an email notifying you of the election process.

Yes, we are indeed “Out in Front”!
### Scholarship Opportunities

#### 2017 Thomas E. Desjardins Memorial Scholarship

Tom Desjardins was an active member of the section and was well-liked by his peers. He loved his family, his friends, and the engineering profession. His passing at such an early age left our members and families with a void that was hard to fill.

The idea of coupling Tom’s love of sports with support for engineering students led to the establishment of the Thomas E. Desjardins Memorial Scholarship Fund. The primary source of support for the Desjardins scholarships derives from the annual summer golf tournament, which has become a New England Section tradition. It is followed in September by the awarding of two scholarships (one for undergraduate student and one for graduate student) to qualified transportation engineering students from the region.

The Thomas E. Desjardins Memorial Scholarship Fund was established by the New England Section of the Institute of Transportation Engineers, and to date, over $87,000 has been raised to honor Tom’s memory and support this scholarship program. Over the past 17 years, 29 scholarships have been presented to dedicated and deserving engineering students. Each year, we award a scholarship to one undergraduate and one graduate student in the field of transportation engineering. Full details and application can be found at:

http://neite.org/desjardins-scholarship/

#### 2017 RIITE Scholarship

Rhode Island ITE is happy to announce the opening of the 2017 application period for our Scholarship. With the intent to encourage education in Transportation Engineering, we are looking for candidates with a strong commitment to Transportation Engineering enrolled in an accredited Civil Engineering school in Rhode Island or enrolled in an accredited Civil Engineering school outside of Rhode Island and a legal Rhode Island Resident.

The submission deadline is Friday, September 29, 2017. The recipients will be announced at the RIITE Annual Meeting on November 9th. Full details and application can be found at:

http://www.ri-ite.org/scholarship/

### Employment Opportunities

#### TEC/The Engineering Corp

**Transportation/Traffic Engineer**  
*Massachusetts and New Hampshire*

TEC, Inc. is seeking entry level to experienced Transportation/Traffic Engineers to deliver quality products for our clients. These opportunities require significant and progressive aptitudes in the following areas:
- Preliminary and final design of various roadway, pedestrian and bicycle improvement projects
- Preparation of highway construction documents including plans, specifications, and estimates
- Assistance in project and client management duties
- Participation in business development opportunities for the firm

Interested candidates should possess skills in transportation planning, highway design, 3-D modeling and analysis, construction engineering, cost estimating, specification writing, and bid document preparation. A firm understanding of current design standards for highway design and construction, and familiarity with the DOT design development processes is desired. AutoCAD Civil 3D experience, BSCE degree is required. Synchro and VISSIM experience is preferred.

**Roadway Design Engineer**  
*Massachusetts and New Hampshire*

TEC, Inc. is seeking entry level to experienced Highway Design Engineers to deliver quality products for our clients. These opportunities require significant and progressive experience in the following areas:
- Preliminary and final design of traffic signals and coordinated signal systems, including preparation of construction documents with specifications and estimates
- Preliminary and final design of various pedestrian and bicycle improvement projects
- Assistance in preparation of environmental permitting documents
- Field inspection of work and implementation of construction documents

Interested candidates should have a demonstrated interest in transportation planning, analysis, and design, construction engineering, and cost estimating. AutoCAD experience and BSCE degree is required. Synchro and VISSIM experience is preferred.

To be successful in these full-time positions, candidates should be fully dedicated to the tasks, hardworking, a self-starter, and responsive to project schedule demands. This opportunity requires demonstrated experience in both private development and public transportation improvement projects. TEC provides creative, multi-modal design services to private developers, municipalities, and state DOTs; and provides competitive compensation packages and perks to its valued employees.
Another HCM 6 training for the annual meeting in December. The annual meeting will be held in-engineers at all levels throughout the region, the New England Executive Board looks to secure the guides in Chapter 4 is available for free online. Understanding that the new manual will affect ties including multi-modal and reliability. The manual is broken up into four categories: Concepts, Uninterrupted Flow, Interrupted Flow, and a new online chapter for Applications Guides. Many of the guides in Chapter 4 is available for free online. Understanding that the new manual will affect engineers at all levels throughout the region, the New England Executive Board looks to secure another HCM 6 training for the annual meeting in December. The annual meeting will be held in Warwick, RI on December 4, 2017.

MAINE AND NEW HAMPSHIRE CHAPTER
Submitted by: Douglas Halpert, EIT

The New Hampshire and Maine Chapters co-hosted a training session for the new Highway Capacity Manual (HCM 6) on Tuesday, July 25, 2017 at the Roundabout Diner and Lounge in Portsmouth, NH. The training was provided by Bastian Schroder of Kittelson Engineering who has performed research directly tied to the creation of the new manual. The new manual features a broader range of analysis capabilities including multi-modal and reliability. The manual is broken up into four categories: Concepts, Uninterrupted Flow, Interrupted Flow, and a new online chapter for Applications Guides. Many of the guides in Chapter 4 is available for free online. Understanding that the new manual will affect engineers at all levels throughout the region, the New England Executive Board looks to secure another HCM 6 training for the annual meeting in December. The annual meeting will be held in Warwick, RI on December 4, 2017.

RHODE ISLAND STATE CHAPTER
Chapter President: Peter Pavao, PE, PTOE

The Rhode Island ITE Chapter hosted two separate webinars during the summer including the ITE webinar “Keeping Pedestrians and Bicycles Safe: New MUTCD Provisions” and the TRB webinar “Accessibility Guidance for Roundabouts and Channelized Turn Lanes.” RIITE also co-sponsored a luncheon with WTS-Rhode Island featuring Julie Oakley of the Rhode Island Department of Transportation, Amy Pettine of the Rhode Island Public Transit Authority, and Martina Haggerty of the City of Providence. Discussions focused on major ongoing projects in downtown Providence that will transform the transit system and provide a highly reliable and efficient system between Providence Station and the hospital district. The three projects include the Providence Intermodal Transportation Center, the Downtown Transit Connector, and Kennedy Plaza. The interaction of pedestrians, bicyclists, transit and vehicles creates challenges to providing efficient, safe and balanced service for all modes. Combined, these projects hope to provide this balance while spurring economic growth.

Employment Opportunities

VHB
Traffic Engineer
Bedford, New Hampshire

VHB’s Bedford, NH office is looking for a mid-level Traffic Engineer to join our growing traffic engineering team. Our fast-paced environment is uniquely poised to offer a traffic engineering professional the opportunity to take the next step up in their career and join a firm that invests in creating its next generation of leaders. This position offers opportunity to work on a wide-array of public and private development projects and in a collaborative multi-discipline environment.

VHB’s passionate professionals include engineers, scientists, planners, and designers who partner with public and private clients in the transportation, real estate, institutional, and energy industries, as well as federal, state, and local governments.

Together, we work to improve mobility, enhance communities and economic vitality, and balance development and infrastructure needs with environmental stewardship.

Responsibilities include: Preparing traffic impact and access studies, preparing intersection, corridor, and multimodal transportation feasibility studies, providing traffic peer review services, conducting intersection, corridor, and/or freeway traffic capacity analyses, conducting traffic safety studies including field audits and crash data assessments, working collaboratively on multidiscipline projects to provide transportation planning and traffic engineering services, working and meeting with clients, presenting at project and public meetings.

Skills and Abilities

- Traffic capacity analysis software such as Synchro, HCS, Sidra, and VISSIM
- Proficiency with Microsoft Office
- Excellent verbal, written and interpersonal communication skills
- Self-motivated and attention to detail

Qualifications

- BS in Civil Engineering, Master’s degree a plus
- 5+ years of traffic engineering experience, including multimodal planning, traffic safety studies, and statistical analysis
- Engineer-in-Training certification required, PE preferred
Employment Opportunities

WSP
Senior Traffic Engineer
Boston, Massachusetts
Glastonbury, Connecticut
Warwick, Rhode Island

We have an immediate opening for a full-time mid to senior level Traffic Engineer with a strong background in traffic systems operation and engineering, signal design, developing construction documents and managing traffic projects in a growing practice in Boston, MA, Glastonbury, CT, or Warwick, RI. The position will also support the WSP Sports & Entertainment Group on developing transportation management and operations plans for sports facilities and special events throughout the United States. The successful candidate will work as part of a dynamic team on the delivery of projects and expanding our practice.

Responsibilities include:

• Function as the senior project engineer and/or traffic engineering task manager
• Provide technical analysis for a wide range of transportation infrastructure projects
• Perform and provide technical review of Synchro, VISSIM, and other traffic engineering analysis software
• Interface with staff from other disciplines (civil, structural, planning, transit & rail, geotechnical, buildings, power, etc.) to support a diverse range of projects
• Perform a range of marketing and business development activities, including gathering client intelligence, leading pursuits and proposals, and interfacing through professional organizations
• Work cooperatively with clients and existing staff to expand the traffic engineering team

Required Skills:

• Proficiency in AutoCAD and Microstation for traffic design projects
• Develop traffic signal and MOT construction documents from concept to final PS&E
• Proficiency in Traffic software/simulation modeling applications, such as VISSIM and SimTraffic
• Proficiency in preparing traffic impact reports
• Knowledge of traffic control design, including developing plans, specifications and estimates
• Working knowledge of appropriate Federal Highway Administration, AASHTO, state DOT, and other relevant guidelines, including the Manual on Uniform Traffic Control Devices, the AASHTO Green Book, and the NACTO Urban Street Design Guide
• Positive attitude and people skills that constitute a team player
• Ability to manage staff to effectively deliver projects on deadlines, including managing multiple staff working on multiple projects
• Ability to mentor younger staff in the profession of traffic engineering
• Ability to work in a corporate environment, communicating with a wide range of professional skill sets

Experience and Education Required:

• B.S. degree in Civil/Traffic Engineering (M.S. degree desirable)
• 5+ years of experience in traffic systems operation and engineering projects
• Excellent verbal and written communication skills
• A strong background in traffic engineering and signal design

Continuing Education Opportunities

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. 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@gpinet.com
Employment Opportunities

HNTB

Project Manager II—Engineering/Traffic Practice Lead
Boston/Chelmsford, Massachusetts

The time is right to join HNTB Corporation! We are looking for a Project Manager II/Traffic Practice Lead in either our Boston or Chelmsford, MA office. The successful candidate will serve in a leadership role, directing and mentoring junior engineers and coordinating with multiple disciplines. This individual will lead all aspects of traffic analysis and design for planning, design and construction phases of projects as well as participate in project marketing, work planning, scope development and fee estimating. We are seeking a candidate with strong understanding of MassDOT design process and proven experience leading a variety of MassDOT projects. Traffic simulation experience using SYNCHRO and HCS is required and experience using VISSIM is preferred. Proficiency with AutoCAD is required.

Essential Responsibility:

Responsible for the leadership and management of team in support of the project’s profitable operation. The project manager is responsible for proactively managing the projects technical budget (direct labor and expenses, including technical sub-consultants), schedule, technical requirements, contractual obligations, project communications and HNTB’s 4 for 4 performance: delivery of quality work, on time, on budget and to the client’s satisfaction. Staffing, mentoring junior engineers and supporting client delivery of projects are performed by project team. Supervises and mentors team to overall project objectives.

Preferred Qualifications/skills:

- Professional Engineer (PE)
- Strong understanding of MassDOT design process and proven experience leading a variety of MassDOT projects
- Traffic simulation experience using SYNCHRO and HCS is required
- Proficiency with AutoCAD is required
- Experience using VISSIM is preferred

Basic Qualifications:

- Actively manages project scope, schedule and budget. Serves as the primary client liaison to bring the schedule, budgets and scope of work to completion and to the client’s satisfaction.
- Performs technical discipline tasks including research, reports, design, specification and plan preparation to ensure the most efficient and cost-effective execution of assigned projects.
- Implements the firm’s project delivery plan using HNTB’s Sophisticated Delivery Approach (SDA) on each project.
- Develops project scope and fee quotation, and assists in the preparation of proposals and contracts.
- Coordinates work efforts and reviews of work performed by project team. Supervises and mentors team to overall project objectives.
- Oversees project staffing with departments, offices and divisions.
- Performs other duties as assigned.

Nitsch Engineering, Inc.

Transportation Designer/Engineer
Worcester, Massachusetts

Nitsch Engineering is looking for a dynamic Transportation Engineer with 4-10 years of hands on practical transportation engineering experience to join our team in the Worcester Office. With over 27-year history, we are an established mid-sized engineering firm that provides survey, civil/site, transportation, structural, GIS, and planning services to a wide variety of clients including developers, architects, universities, state and municipal government agencies. As we continue to grow our market share, we strive to position ourselves and build on our successful model of client delivery by expanding our transportation engineering capabilities. To achieve this goal, we are in immediate need for Highway/Transportation Engineer with hands-on design experience and knowledge with Massachusetts Department of Transportation process and standards.

If you are experienced in performing roadway and highway design, drainage and utility design, preparation of constructions documents, including plans, specifications, and estimates, then this position is for you. If you are self-motivated, have strong computer skills, pay attention to details, and take pride in your work, we encourage you to apply. If you are proficient in AutoCAD Civil 3D, we would like to speak to you.

This position has great potential for growth and establishing client contacts. If you are ready for your next career adventure where you can make a difference, come and talk to us.

A bachelor’s degree in Civil Engineering and an EIT are required. A master’s degree in Civil or Transportation engineering, and certification in the Institute for Sustainable Infrastructure ENV SP will be a plus.
Milone & MacBroom

Milone & MacBroom, Inc. is a growing multidisciplinary engineering, landscape architecture, and environmental science consulting firm. Our corporate office is located in Cheshire, Connecticut, with regional office locations in Maine, Massachusetts, New Hampshire, New York, and Vermont.

Milone & MacBroom, Inc. offers creative solutions and a collaborative team that provides traffic and transportation engineering, civil engineering, water resources engineering, landscape architecture, planning, and construction administration with a diverse client base including state, federal, and municipal government agencies and private clients.

Civil Engineer
Portland, Maine

Milone & MacBroom, Inc. has an opening for a civil engineer to join our office located in downtown Portland, Maine.

The civil engineer will be responsible for design, analysis, and preparation of specifications and technical reports for private, municipal and public clients throughout Maine.

The civil engineer should possess the following qualifications:

- Bachelor’s Degree in Civil Engineering
- Engineer in Training (EIT) certification required
- One to five years’ experience in traffic, transportation or roadway engineering required
- Knowledge of Maine DOT standards
- Demonstrated working knowledge of AutoCAD Civil 3D
- Experience with MicroStation and InRoads preferred
- Strong written and verbal communication skills, including ability to produce well-written reports

Responsibilities:

- Manage and design roadway projects including all aspects of stormwater/drainage design, cost estimating, and coordination for right-of-way and utility impacts
- Prepare engineering documents and reports
- Interact with clients and attend regulatory agency and board meetings
- Assist and mentor supporting staff
- Public presentations

Qualifications:

- Bachelor’s Degree in Civil Engineering
- Eight to twelve years of relevant professional experience, including experience working on public projects
- Demonstrated experience working on MaineDOT, NHDOT and/or VTrans highway design projects
- Experience with MicroStation and InRoads required
- Excellent written and verbal communication skills, including ability to produce well-written reports

The ideal candidate will have a professional engineer's license with ability to travel within Northern New England.

Senior Highway Design Engineer
Northern New England

Milone & MacBroom, Inc. is looking to hire a senior highway design engineer to support the Northern New England offices. The qualified candidate will be based in one of the following offices; Portland, Maine; Manchester, New Hampshire or Waterbury, Vermont.

Responsibilities:

- Manage and design roadway projects including all aspects of stormwater/drainage design, cost estimating, and coordination for right-of-way and utility impacts
- Prepare engineering documents and reports
- Interact with clients and attend regulatory agency and board meetings
- Assist and mentor supporting staff
- Public presentations

Qualifications:

- Bachelor’s Degree in Civil Engineering
- Eight to twelve years of relevant professional experience, including experience working on public projects
- Demonstrated experience working on MaineDOT, NHDOT and/or VTrans highway design projects
- Experience with MicroStation and InRoads required
- Excellent written and verbal communication skills, including ability to produce well-written reports

The ideal candidate will have a professional engineer’s license with ability to travel within Northern New England.

Applications for the future February 1 - 29, 2018 computer-based exams of Professional Traffic Operations Engineer (PTOE) and Professional Transportation Planner (PTP) are due December 7, 2017.

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
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.

REMININDERS

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.