

GRANITE CHIPS

NEWSLETTER OF THE NEW HAMPSHIRE CHAPTER OF THE INSTITUTE OF TRANSPORTATION ENGINEERS

NOVEMBER 2003



CHAPTER NEWS

MANCHESTER AIRPORT IMPROVEMENTS

(by Kevin Dandrade, PE - NHITE Vice-President)

On October 2, 2003, at the Fall NHITE Chapter meeting, Rich Fixler of Manchester Airport presented some fascinating facts and figures surrounding the recent improvements at Manchester Airport. As many of us have seen over the past two years, the Manchester Airport Authority (MAA) has significantly lengthened the north-south runway, known as Runway 17-35, to 9,250 feet in order to provide additional landing room and the accommodation of larger aircraft. However, prior to reconstructing this main runway, they needed the secondary runway, known as 02-24, to be brought up to greater operational standards with other taxiway related improvements. They worked with several contractors, including Park, Barletta, and RS Audley, under several different contracts, to abbreviate the original construction schedule and minimize the temporary closures of each runway. These contracts totaled more than \$60 million.

Manchester Airport currently has approximately 196 commercial flights per day and another 150 general aviation flights per day. The success of the airport since its opening in 1993 has necessitated to expansion of the terminal facilities and parking, not to mention certain offsite roadway improvements.

The airport is currently the home for thirteen commercial airlines. In this past year, they were able to serve 3.5 million passengers and handle 185 million pounds of cargo, with major carriers such as FedEx and UPS.

This City-operated airport has seen growth that has well exceeded its original projections with 200% growth just in the past handful of years. Over this same time period, the Airport has seen more of its passenger base coming from areas other than New Hampshire, due to its regional accessibility and competitive pricing by its airlines. While other airports, like Logan Airport in Boston, have seen decreases in passenger activity in the several months following 9/11, Manchester Airport has continued its growth.



In the near future, the airport plans to build a new 160-foot air traffic control tower, which is currently under design. The airport will also have the benefit

of the Manchester Airport Access Road, which will provide a new limited access highway from the F.E. Everett Turnpike in Bedford, over the Merrimack River, to the airport property. This new roadway will alleviate other congested routes that access the airport and provide secondary benefits in the economic development of other areas surrounding the airport. The airport staff can foresee the need to accommodate 23 jet gates, with approximately 70-80 jet departures per day in order to service the projected 5-7 million passengers per year within a ten-year horizon.

This is an exciting time for Manchester Airport. They have managed the various major construction projects in such a manner that it appears seamless to the average traveler. I am thankful to have such a great airport so close to home with multiple carriers that continue to provide better services and reach more cities with direct flights.

ITS SEMINAR NOTES

(by Kevin Dandrade, PE - NHITE Vice-President)

At the June 11, 2003 joint NH/ME Chapter and New England Section ITE Meeting, Daniel Krechmer and Jennifer Strasser of Cambridge Systematics, Inc. presented a four hour long introduction to some of the recent Intelligent Transportation Systems (ITS) projects from their portfolio. Many of us know the key elements of ITS, like coordinated signal systems, variable message signs, highway monitoring cameras, and weather indicators. However, Cambridge Systematics has been involved with many studies to determine the effectiveness of these ITS elements prior to or during their utilization on highways in a number of different states.

They have studied the potential improvements in driver expectancy for an elaborate emergency vehicle preemption warning system at many intersections in

California, where they implemented a custom illuminated sign that indicated upon which approach an emergency vehicle was entering the intersection.

They reviewed the first three years of operations for the Ohio ARTEMIS (Advanced Regional Traffic Interactive Management & Information System). This system utilizes various ITS elements to detect incidents, monitor traffic conditions, deploy response personnel, and distribute information in a real-time format in order to alleviate congestion. They were able to demonstrate the effectiveness of the ITS elements in providing a safer freeway with less congestion, which reduces vehicle emissions and also saves motorists time and money.

Through their IDAS (Intelligent Transportation System Deployment Analysis System) software, they also studied the demographics of the users on Detroit and Lansing, Michigan freeways to determine the effectiveness of various amounts and types of traveler information, in advance of its implementation, in order to project a level of cost effectiveness. They found that roadway users on these different sections of freeway rely on different sources of information (i.e. radio, tv, internet, variable message signs) in differing amounts. Also, motorists in these areas have different characteristics pertaining to their willingness or ability to alter their travel paths or departure times depending on weather conditions or roadway incidents. In general, these studies seem to point to the importance of knowing the characteristics of the motoring public in the area in which ITS elements are proposed.

It appears that they have been very helpful to a number of state DOTs in implementing *wise* intelligent transportation systems.

For more information, please contact Daniel Krechmer by e-mail at dkrechmer@camsys.com

INTERSTATE TRUCK TRAVEL IN THE URBAN ENVIRONMENT

(by Todd Landry, PE - NHITE Secretary-Treasurer)

At the June 11, 2003 technical meeting in Portsmouth, John Burke from the City of Portsmouth and Dave Walker from Rockingham Planning Commission, presented on the topic of "Interstate Truck Travel in the Urban Environment". Their presentation was based on a case study on Ocean Road in Portsmouth, NH.

The goals and objectives of their study were to:

- Quantify truck movements between Ocean Road and NH 33;
- Construct traffic model of travel patterns in area between US Route 1 and NH 33;
- Analyze potential effects of traffic control options; and
- Develop recommendations for City Council to consider in addressing traffic concerns on Ocean Road.

Truck volumes were counted on Ocean Road and a truck following origin-destination summary was created. This allowed the presenters to develop a traffic model. The traffic model was calibrated for 4 time periods - AM & PM peak hours, midday, and off-peak. It could independently predict car & truck traffic and used census and economic data that was calibrated to 2001 traffic counts. Trucks accounted for 14% of trips in the model area.

Alternatives testing was completed for the following:

- 1) Truck restrictions on Ocean Road
- 2) Truck restrictions on Ocean Road and Breakfast Hill Road
- 3) Turning movement restrictions at the Truck Stop

on Ocean Road

- 4) Route 1 corridor improvements and traffic signals on Ocean Road and Peverly Hill Road
- 5) Nighttime restrictions of truck traffic on Ocean Road
- 6) Limit access to Ocean Road and Route one direction of travel via Heritage and Banfield.

Their analysis resulted in five major conclusions: 1) There was an unusually high percentage of truck traffic on Ocean Road (9.6%); 2) The Travel America Truck Stop has a significant impact on the truck traffic on Ocean Road; 3) Most trucks utilizing Ocean Road appear to be traveling between the I-95 and US Route 1 corridors; 4) Several factors contributed to the 35% increase in traffic on Ocean Road between 1996-2001 (emergence of the Pease employment center, improvements at the I-95/NH 33 interchange, and the success of Portsmouth Transportation Center); and 5) Restricting truck traffic on Ocean Road would likely increase the number of trucks using other parallel routes such as Breakfast Hill and/or Peverly Hill Roads.

Recommendations of the study include a wide variety of options. These include improvements to US1 (physical and signage), improvements to Ocean Road (traffic calming), working with businesses to discourage use of Ocean Road as a route, explore the option of nighttime truck traffic restrictions, and State level efforts - Office of Freight Transportation in NHDOT, study of additional I-95 interchange and truck facilities on Interstate highways.

The City of Portsmouth is now in the implementation phase. On the Local level they are requesting a nighttime truck ban from the NHDOT and are discussing with City Council the possibility of City ownership of Ocean Road for the purpose of regulating trucks. They have been working with the

MPO on the Regional level to incorporate freight movement into the Long Range Plan and coordinate issues with other municipalities in the Region. State legislation requiring the NHDOT to examine the need for truck services on Interstate highways to reduce trucking impacts on local streets failed to pass the Transportation Committee. Projects in the NHDOT's 10-year plan that could benefit Ocean Road include:

- The widening of the last 3-lane portion of US 1 in Portsmouth to a 5-lane cross-section;
- Signal coordination on US 1;
- US 1 Bypass and Portsmouth traffic circle improvements; and
- ETC and other ITS initiatives.

To show our thanks and appreciation, NHITE Secretary/Treasurer Todd Landry presented John and David with a complimentary "Granite Chip" at the conclusion of their presentation.

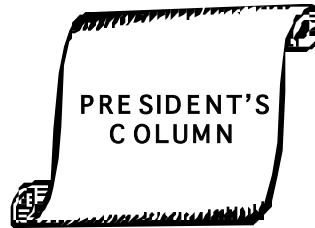
CITY OF NASHUA'S BROAD STREET MODERN ROUNDABOUT

(by Todd Landry, PE - NHITE Secretary-Treasurer)

On March 26, 2003, the New Hampshire ITE Chapter hosted its Spring technical meeting. This meeting was held at the Sheraton in Nashua and was worth one (1) PDH.

The technical presentation was titled "*City of Nashua's Broad Street Modern Roundabout*" and was presented by City Engineer, Eric Teitelman, PE and Traffic Superintendent, Todd Landry, PE.

(Please visit www.NHITE.org for a comprehensive write-up on this meeting.)



MOVING ON

It has been three years for me as President of the New Hampshire Chapter, and it's time for some new leadership. I have enjoyed the opportunity to give back to an organization that I have been participating in for many years. I intend to stay involved with both the NH Chapter and the New England Section.

THANKS

I would like to extend a note of thanks to all of the NHITE officers and others who have provided service to the organization over the past year and who have volunteered to serve for the upcoming year.

First, to Kevin Dandrade, last year's Vice-President, who has agreed to run for the President position. Kevin continued to be vital to the operations of the NH Chapter, helping with the organization of the meetings.

Todd Landry served as Secretary/Treasurer this past year. However, Todd has decided to follow the lead of other recent Secretaries (Russ Webb and Wes Kindt) and transfer out of the New England area. Good luck to Todd in his new adventure.

Bob Bollinger has volunteered to serve as Vice-President. Bob helped this past year as Membership Chairman, and has offered to increase his involvement. Other Board members continuing to assist the organization include Steve Pernaw as the Nominating Chairman, Louise Casseres as Program Chairman, and Dan Hudson as both the

newsletter editor and Web Master.

The organization is always looking to bringing in new ideas and assistance. With the core of active board members, the effort is spread out and the time commitment is manageable. Please see any board member if you are interested in helping.

NHITE MEETINGS 2003

The NH Chapter held three informative meetings in 2003. In March, Eric Titleman and our very own Todd Landry from the City of Nashua presented us with a great program on the Broad Street roundabout.

In June, at our annual meeting with the Maine Chapter and the NE Section, we were presented with a half-day technical seminar on ITS and Highway Operations by Dan Krechmer from Cambridge Systematics. John Burke from the City of Portsmouth and Dave Walker from Rockingham Planning Commission assisted with the evening program, presenting "Interstate Truck Travel in the Urban Environment".

In the fall, we had a meeting in Manchester and listened to Rich Fixler speak to us about the recent and future expansion plans for the Manchester Airport.

ANNUAL MEETING – DECEMBER 10, 2003

Plans have been finalized for our annual meeting at the Cat ‘N Fiddle in Concord. The presenters will be Amy Sheridan, Executive Director of Concord 2020 and Greg Bakos of VHB, Inc.

McTRANS SEMINAR

The NH Chapter is assisting the McTrans Center in the organization of a Highway Capacity Seminar in Manchester November 18-20. The course provides instruction using McTrans’ HCM 2000 software.

For information, contact Mitch Davis at 1-800-226-1013 or visit McTrans’ web site.

NHITE MEETINGS FOR 2004

In January, plans will be initiated for our meetings for the upcoming year. If any members have thoughts on subjects for this session, please contact any of the board members.

On May 19 to 21, 2004, ITE District 1 will conduct their Annual Meeting in Burlington, Vermont. This is a good opportunity for New Hampshire members to attend this informative session close to home. Details can be found on the VT Chapter’s website (www.neite.org/vt/).

NEWSLETTER DISTRIBUTION

At our recent organizational meeting, it was noted that the most difficult part of getting out newsletters to the chapter members is the time and expense associated with the mailing process. Therefore, the board has decided to provide distribution of the newsletter electronically. In order for this to be successful, we need to maintain current email addresses for all members. Your cooperation and understanding will be appreciated.

PARTICIPATION IN NHITE

In order to get the NHITE Chapter to grow and prosper, new members and ideas are always needed. I encourage all current members to consider what programs and events would be most effective and meaningful. Please contact any of the board members with your thoughts. In addition, if you know of anyone involved in transportation issues, please encourage them to attend our meetings and become a member of NHITE.

Respectfully Submitted,
Joe Lowry
NHITE President