

Newington-Dover Expansion Project



From 2003 to 2008 a NHDOT project team and interested Seacoast stakeholders evaluated a range of reasonable alternatives to identify a preferred alternative to improve long-term mobility and safety along the Spaulding Turnpike between Exit 1 and the Dover toll plaza, just north of Exit 6.



above-Epoxy coated steel reinforcement has been installed over the entire bridge deck in preparation for the 5" concrete overlay which will be completed by the end of June.

The 3.5-mile stretch of the Turnpike in this area is characterized by closely-spaced interchanges, substandard geometry and shoulder areas, and capacity constrained conditions during the weekday morning and evening commuter periods. Currently, the Turnpike carries in excess of 70,000 vehicles per day. Future travel projections are estimated at approximately 94,000 vehicles per day by 2025. This important project will significantly free up congestion and make travel safer along this short stretch of highway.

The total cost for the Newington-Dover project is \$260M and has a projected completion date of 2018. The first contract—building the southbound bridge over Little Bay has a construction cost of \$54.1M (including engineering). The second of the five construction contracts will rebuild I-95 Exits 3 and 4 to the south of the new Little Bay Bridge and has an anticipated cost of \$47.7M. Bids for this project will be received June 28, 2012.

Additional future projects include rehabilitation of the existing Little Bay Bridge, reconstruction of Exit 6 interchange and Dover mainline and rehabilitation of the General Sullivan Bridge.

Major project elements include:

- 4 lanes in each direction (3 general purpose and 1 auxiliary lane) between Exit 3 (Woodbury Avenue) and Exit 6 (U.S. Route 4/Dover Point Road)
- 3 lanes in each direction south of Exit 3 and north of Exit 6
- 5 interchanges consolidated or reconfigured – Exit 2 and 5 will be eliminated with Exits 3, 4 and 6 providing full access in all directions
- Rehabilitation and widening of Little Bay Bridges to accommodate 4 lanes in each direction
- Future planning for an elevated rail connection from the Newington Branch Line into Pease Tradeport
- Rehabilitation of General Sullivan Bridge for recreational uses



above and below right-On April 17, Cianbro Corporation used an innovative technique to erect the middle span of the structural steel from a barge connecting the Newington and Dover halves of the bridge.

- Park and ride facilities at Exit 9 in Dover, Exit 13 in Rochester, and along U.S. 4 in Lee

Benefits of the Project include:

- Interchange reconstruction and consolidation will improve spacing, safety and air quality as well as reduce traffic congestion.
- Connections to the Turnpike System will

be improved at Exits 3 and 6, which will improve safety as well as reduce circuitous local travel.

- Travel time during the peak hours of the day on this section of the Turnpike will be reduced from 10 minutes to approximately 4 minutes upon completion. In the future (2025), travel times will be reduced from the projected 25 minutes (because of increased congestion) to approximately 4 minutes.
- Improved connections to local roadways
- Improved pedestrian access and connections

The first of five construction contracts is underway with the construction of a new Little Bay Bridge (LBB) between the existing LBB and General Sullivan Bridge. The \$50M contract is expected to be completed in the fall of 2013.

A second contract (\$48M) will begin later this year and reconstruct the entire Turnpike in Newington from Exit 1 to the new bridge.

For more information on the project, visit www.newington-dover.com.

below-Artist rendering of project section



The Road Ahead

2012 Summer/Fall

NH Department of Transportation, Bureau of Turnpikes



Hooksett ORT Construction Under Way

Open Road Tolling (ORT) construction began in April 2012 and is moving at a rapid pace at the Hooksett Toll Plaza on Interstate 93 (Everett Turnpike). The project will convert the Hooksett Toll Plaza, a traditional barrier plaza, to an ORT facility by adding two northbound and two southbound highway speed electronic tolling lanes.

The conversion will be very similar to what occurred at the Hampton Toll Plaza on I-95 (Blue Star Turnpike) and will involve the removal of six conventional toll lanes in the center of the plaza to create the four ORT lanes. In addition, two toll lanes will be added for northbound and southbound cash traffic on each side of the plaza. The Hooksett ORT project is expected to improve traffic flow and time through the plaza, as well as safety and air quality. The new ORT lanes are scheduled to open in June of 2013.

In the first year of operation, analysis projects the Hooksett ORT lanes will provide the following benefits: a savings of approximately 465,640 gallons of fuel; a reduction of 268,695 hours of travel time; a combined annual benefit of fuel savings and travel time savings of approximately



above-Aerial photo of site work progress at the Hooksett Open Road Tolling (ORT) project taken in late June 2012.



above-H. L. Patten crews build 2 new outside toll lanes on the southbound side. Below Right-widening the southbound off ramp at the Hooksett Tolls

\$4.5 million; a reduction in emissions of approximately 7,000 pounds of particulate matter during summer weekdays and weekends; and a reduction in crash frequency of roughly 60% based on similar infrastructure elsewhere.

As with the Hampton Tolls, it is anticipated the Hooksett ORT will help alleviate congestion heading into and out of the Concord area. The Hooksett Toll facility has approximately 24.5 million transactions per year and on summer weekends, the daily numbers routinely top 90,000 vehicles per day. While cash collection lanes can handle approximately 400 vehicles per hour (VPH), ORT lanes can handle 1,800 to 2,000 VPH, or four to five times the capacity of conventional lanes.

The Hooksett ORT project also includes rehabilitation of the existing toll plaza and bridges over Cross Road, Hackett Hill Road and Ramp A-B.

The projected costs for the Hooksett ORT project is approximately \$23.9M for the civil work (professional engineering, site construction, rehab work, etc.) and \$1.35M for the ORT equipment and construction.

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The project also includes improvements to drainage, rehabilitation of pavements on roadway approaches and the addition of a fourth lane south of the toll plaza along I-93 southbound.

Because of the greater incentive for travelers to shift to use of E-ZPass to pay their tolls, ORT provides for lower operational and toll collection costs.



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Summer Maintenance & New Service Patrol

Summer highway maintenance tasks are varied and constant all season long. The Turnpikes Highway Maintenance crews, spread over the three NH Turnpikes and based in five locations (Hooksett, Merrimack, Nashua, Hampton and Dover) keep busy on items of safety (traffic control for construction projects and guardrail repairs), infrastructure maintenance (culvert cleaning and bridge work) and aesthetics (mowing and debris removal).



above-A Turnpikes moving crew member tackles the growth along side the Everett Turnpike near the I-93, I-293 split in Hooksett.

One important operation this summer is the shoulder leveling project taking place along the I-95 stretch from the Massachusetts border in Seabrook to the Maine border in Portsmouth. Using a special shoulder leveling apparatus, crews work to level the gravel 2 feet from the road's edge. This is important to allow for a consistent, level surface in case a vehicle's tires leave the pavement. Over time, paving projects and natural compaction of the gravel cause a differentiation in grade between the pavement and the gravel. Eliminating any drop off assists in the overall safety of the roadway, helping to protect motorists.

The summer also affords the opportunity to work on facilities needed for the overall operation of Turnpikes highway maintenance. For instance, Turnpikes crews have recently applied their skills to construct a spreader hanger structure at the Hooksett

Maintenance facility that will be essential for safe, fast switch out of equipment needed when plowing/sanding efforts turn to snow removal within the new Hooksett ORT lanes. As with the Hampton ORT lanes, because of the lengthy stretch of barrier separating cash lanes from the highway-speed ORT lanes, the snow that builds up along the barrier must be removed. Structures such as the spreader hanger help to carefully remove the expensive equipment and temporarily store it allowing for longer life cycle, less downtime and faster switch out of the stainless steel salt spreaders.

Motorists stranded with minor vehicle problems on I-95 from Portsmouth to Seabrook will have a friendly, helping hand. On May 18, Turnpikes began their Service

Patrols on I-95. The goal is to reduce the potential for significant traffic tie-ups by clearing minor incidents, such as flat tires, charging a battery or vehicle overheating, as quickly as possible.

The Service Patrol's three-month pilot project last year during I-95 peak summer traffic season was a success. Turnpikes is continuing the service this summer and has a new truck set up for improved motorist assistance with a built-in air compressor, jumper cables, and push bar and various storage boxes to hold miscellaneous tools and accessories, i.e. gas cans.

Turnpikes' personnel will make continuous loops between Exit 60 in Salisbury, Massachusetts and Exit 7 in Portsmouth, stopping for all incidents encountered. The



Service Patrols will primarily operate during early morning and late afternoon hours Monday through Friday and 9:00 AM to 5:00 PM on Saturdays and 10:00 AM to 6:00 PM on Sundays. Extra coverage may be added on holidays and for special events.

Minor incidents like flat tires and running out of fuel on a congested highway have the potential to cause secondary incidents which are typically more serious in nature. Service Patrols can help reduce the potentially significant impacts of otherwise minor incidents by lending assistance to stranded motorists. This service is expected to continue to improve safety along the corridor.

The Service Patrols will communicate with the NHDOT's Traffic Management Center (TMC) in Concord, which has direct contact with State Police and other emergency responders.



left-Front view of the newly-constructed spreader hanger building that will enable Hooksett Maintenance crews to do a rapid, safe turnaround from using trucks to plow and spread brine/sand to snow removal operations within the new ORT lanes at the Hooksett Tolls.



right-Inside view of the spreader hanger building as well as a glimpse at NHDOT pavement striping crews readying equipment for early summer pavement marking action.



Spaulding Turnpike Expansion: Rochester

The Spaulding Turnpike expansion project began in spring of 2008 and stretches from Exit 11 to Exit 16 in Rochester. This six-phase project involves the reconstruction and widening from two lanes to a four-lane divided highway at an approximate construction cost of \$122.5M.



above-Spaulding Turnpike expansion work

The expansion will help alleviate existing and projected levels of congestion, improve safety on this two-lane section of the Spaulding Turnpike, and relieve resulting traffic problems at interchanges and intersections with city streets. Existing average daily traffic

for 2007 was 31,000 between Exit 12 and Exit 13 and is anticipated to increase to 40,000 by 2017.

The project also replaces, rehabilitates, or constructs 16 bridges, including replacement of 4 "Red Listed" bridges.

The project begins just north of the Rochester tollbooth, 2,000 feet south of Exit 12 and continues approximately 5.6 miles north to a point approximately 1 mile north of the Exit 16 interchange.

Full or partial reconstruction of each interchange and connecting roadways between Exits 11 and 16 are included as part of this project.

NH Turnpikes Credit Rating Among the Best

Of the 42 government-owned toll roads in the U.S., representing \$77.5B in outstanding debt, New Hampshire Turnpikes is the sole tolling entity that warranted a positive outlook by Moody's in the January 18, 2012 Moody's *Industry Outlook*. All other tolling agencies were classified as either stable (32 agencies) or negative (8 agencies). One agency had no outlook due to default.¹

Moody's Investors Service has assigned a provisional (P) A1 rating to New Hampshire Turnpike System 2012 Series B delayed

delivery bonds. The refunded bonds will provide savings totaling nearly \$9.5M.

Moody's also affirmed the A1 rating on approximately \$345 million of outstanding Turnpike debt. This rating from Moody's reflects NH Turnpikes' stable revenue and strong levels of planning for infrastructure construction and maintenance. This is the second refunding that the Turnpike Bureau executed. The refunding of 2002 series bonds late last year produced savings of \$5.4M without increasing the term of the bonds.

The strong credit rating provides significantly reduced cost borrowing costs for the State which goes directly to reinvesting in the Turnpikes infrastructure. Turnpikes stands to save nearly \$15M over the next 8 to 12 years because of bond refinancing.

Source: ¹ Moody's *Industry Outlook: US Toll Roads-Rising Leverage, Toll Rates Keep Outlook Negative Despite Signs of Economic Recovery, January 18, 2012.*

E-ZPass Save Time. Save Money. Help the Environment. Get your E-ZPass today!

E-ZPass Now Even Better-Transponder Price Drop

Due to a recently-signed contract with E-ZPass equipment manufacturer, Kapsch, NHDOT now provides E-ZPass interior transponders for only \$8.90 each. This is a significant price drop from the previous \$20.95.

This is great news for customers who previously needed to switch transponders between their vehicles to save cost. At this price, account holders can place a transponder in each family vehicle and enjoy the 30% discount available to NH account

holders while traveling on NH Turnpikes (10% discount for businesses). In addition, the lower price makes it more affordable for cash-paying customers to open an E-ZPass account and share in the benefits of E-ZPass: convenience, travel time savings, reduced tolls and environmental benefits.

There are three easy ways to open an E-ZPass account or acquire additional transponders for your account: Call the Customer Service Center at 1-877-643-9727, click on www.ezpassnh.com, or visit one of our three

E-ZPass Walk-in-Centers located in Nashua, Hooksett and Portsmouth. See our website for locations of the Walk-in-Centers.

E-ZPass On-the-Go (OTG) transponders, available currently at participating AAA stores throughout Maine, Vermont and New Hampshire and NH Liquor outlets in Hooksett and Hampton, have also dropped in price to \$25. These transponders are pre-programmed with \$9.05 in pre-paid tolls so they are ready for immediate use.