

A resident asked a final question as to where project mitigation will be focused. Tom again referred to the aforementioned areas – Nos. 1, 4 and 5 in Newington and 7, 8, 9, 11 and 13 in Dover – as depicted on the plan of noise-impacted areas. Chris Waszczuk concluded the discussion of the preliminary noise impact analysis by stating that the final results of the noise impact analysis and recommendations for mitigation will be presented at the next round of Public Informational Meetings in the fall of this year.

Frank O'Callaghan then summarized and reviewed the status of 8 and 6-lane combination options. He noted that only two (2) 8-lane options remain, both of which entail rehabilitation and widening of the Little Bay Bridges (LBB) combined with expanded transit service and employer-based TDM actions. The only difference between these two options is whether or not the General Sullivan Bridge (GSB) is rehabilitated (Option 3) or removed (Option 2). The other three (3) 8-lane options were eliminated from further consideration by the ATF for a number of factors: lack of transit alternatives, and TDM actions (Options 1 and 4); and higher cost, the issue of prudence concerning adversely impacting historic resources, greater property and environmental impact, and lack of need to improve the profile of the bridge (Option 5).

Of the 6-lane options, only Option 6 remains which entails the rehabilitation/widening of the LBB, rehabilitation of the GSB, expanded transit service and employer-based TDM actions. Frank noted, unfortunately, that this 6-lane option will not meet the 2025 travel demand, with system breakdown projected to occur around 2017. Of the other four (4) 6-lane options, Options 7 and 8 were HOV-lane alternatives which were not supported by the ATF, and were characterized by insufficient ridership to justify the HOV lane, and cross sections that were wider than the standard 8-lane options. In an effort to increase capacity and minimize impacts, a borrow lane or zipper lane (Option 9) and peak hour shoulder use (Option 10) options were developed. Similar to Option 6, both the LBB and GSB would be rehabilitated and combined with expanded transit service and employer-based TDM actions. In contrast to Option 6, both Options 9 and 10 provide four (4) travel lanes in the peak direction during the peak hour of traffic. Peak shoulder use (Option 10) has the advantage over the borrow lane concept of having lower operating and maintenance cost. However, Frank noted that FHWA has reservations about both options from a safety perspective and will not support either option as a long-term solution. As such, there are only three options remaining under consideration: the two (2) 8-lane options both of which entail rehabilitation and widening of the LBB combined with expanded transit service and employer-based TDM actions. One of these options (Option 3) rehabilitates the GSB, the other (Option 2) removes the GSB and provides a multi-use pathway on the rehabilitated LBB. The third of the remaining options is the standard 6-lane option (Option 6) of rehabilitating/widening of the LBB and rehabilitation of the GSB combined with expanded transit service and employer-based TDM actions.

Frank compared the cross-section widths of 6-lane and 8-lane typical roadway sections noting that the 6-lane cross section was approximately 118'-122' in width, in comparison to the 142'-146' width of the 8-lane cross section – the difference being approximately 24'. He observed that the existing cross section of the Turnpike varied, and noted that the existing width of the Turnpike in the vicinity of Exit 5 at Hilton Park is approximately 100'. To assist in visualizing the relative scale of both 6 and 8-lane options, Frank referred to an aerial rendering of the Little Bay Bridges and General Sullivan Bridge. The first rendering depicted a 6-lane LBB widened to the west side, followed by a depiction of an 8-lane bridge widened also to the west side. Under the 6-lane widening, the distance between LBB and GSB is approximately 39'; the 8-lane option reduces the separation between bridges to approximately 15'; the 24' difference being the width of the two additional lanes. As a further comparison between 6-lane and 8-lane options, Frank referred to a table summarizing the preliminary wetland impacts associated with 6 and 8-lane options under different roadway alternatives. It was apparent from the summary table that there is not a substantial difference in wetland impacts when comparing 6-lane and 8-lane options. For example, assuming Alternatives 10A in Newington and 3 in Dover, the total difference in wetland

impacts between 6-lane and 8-lanes ranged from approximately 0.10 Ac (Alternative 10A) to 0.38 Ac (Alternative 3). Frank noted that similar comparative impact analysis for other resources is currently underway.

Frank concluded the presentation with a couple of brief computer model simulations of 2025 peak hour traffic flow conditions along the Turnpike between Exits 3 and 6 under both 6 and 8-lane options. This comparison clearly demonstrated the need for an auxiliary lane in each direction, in addition to three through lanes in each direction, to be carried between Exits 3 and 6 to manage the volume of traffic that enters and exits the Turnpike and changes lanes between these exits. These operations are critical southbound in the 2025 AM peak hour, and northbound in the 2025 PM peak hour. Under the 6-lane option, the auxiliary/traffic management lanes are provided only at the interchanges for decelerating (exiting) and accelerating (entering) traffic. Under the 8-lane option, the auxiliary/traffic management lanes at each interchange are extended across the bridges to connect with each other. The difference in traffic flow and congestion is dramatic and dependent on whether or not the auxiliary/traffic management lane is extended across the bridge. Frank also referred to a simulation that compared the northbound Exit 6 off-ramp 2025 PM peak hour operations under both the proposed signalized – diamond configuration and the 2-lane loop ramp alternative. As he had described previously, the diamond interchange off-ramp operations will be satisfactory and the queuing of off-ramp vehicles will be contained to the off-ramp. The 2-lane loop ramp raises safety issues and involves additional bridge related costs (\$2M). Frank concluded the review of traffic simulations by focusing on 2025 northbound PM peak hour operations at the Dover Toll plaza. Assuming implementation of the EZ Pass system, he compared operations under both the diamond and 2-lane loop ramp alternatives. Operations under the signalized diamond interchange alternative are satisfactory. However, due to the shorter distance of 4-lane storage between the Toll Plaza and the northbound on-ramp under the 2-lane loop ramp alternative in comparison to the signalized diamond alternative, vehicle queuing under the 2-lane loop ramp is significantly greater and will block the northbound entrance ramp to the Turnpike.

At this point, a third question and comment period commenced. Jack Pare noted the strong currents which currently flow through the channel affecting navigation and causing scour on the bridge piers. Assuming the widening of the bridges and piers, he inquired as to the potential effect on currents and the current's effect on the new piers. Chris Waszczuk replied that the new piers of the Little Bay Bridges might be connected to the rehabilitated piers of the General Sullivan Bridge – assuming that the GSB is rehabilitated – and that the existing level of turbulence within the bridge channel may be reduced. Chris noted that UNH is currently completing a hydrodynamic analysis modeling these potential surface and subsurface impacts. In response to a question on traffic management during construction, Chris responded that construction would be phased, and that two lanes of traffic in each direction would be maintained at all times. Ray Bardwell stated that he liked the Hilton Park Connector, as proposed, but still favored the 2-lane loop ramp at Exit 6 over the proposed signalized diamond interchange as proposed. Frank O'Callaghan responded that traffic operations, safety, and cost favored the signalized-diamond interchange.

David Walker, Rockingham Planning Commission, asked if the River Road northbound interchange could be eliminated. Frank responded that the northbound off-ramp and on-ramp at River Road function in tandem with the northbound off and on-ramps at Exit 3 (Woodbury Avenue). The distribution of traffic between these two interchanges, combined with the spacing of interchanges and addition of the 4<sup>th</sup> northbound lane as an extension of the Woodbury Avenue on-ramp, combine to provide satisfactory traffic operations at each interchange, and allow the cross section of Woodbury Avenue to be minimized. This avoids a substantial impact on both the Isaac Dow House and the Beane Farm.

Sarah Salisbury, 430 Dover Point Road, Dover, noted that the garage at 430 Dover Point Road, which abuts the Turnpike, as indicated on the conceptual improvement plans, represents her business, K9 Kaos, a dog day and extended stay care center. Frank O'Callaghan noted and thanked Sarah for the updated information; he suggested that the oversight resulted from the base mapping being completed prior to the start-up of the business. Sarah concurred.

A Newington resident, in reference to the previous question about the feasibility of closing the northbound River Road off and on-ramps, stated that such action would be a waste of money in light of the imminent construction of the Interim Safety Improvements in Newington. Ray Bardwell asked if the demolition material from the construction of the Turnpike would be suitable material for either constructing a jetty or expanding the parking area at Hilton Park. Chris Waszczuk replied that NHDOT will continue to coordinate with NHF&GD to improve the park. The feasibility of reusing rubble from the reconstruction of the Turnpike will be explored. Gale Pare inquired as to the degree of pavement removal, e.g. base and/or subbase materials, where sections of existing highway are planned to be discontinued once the project is constructed. Chris responded that, at a minimum, the pavement would be removed, and that plans for removing the base or subbase material would be developed within the context of the need for wetland mitigation and creation. David Walker, Rockingham Planning Commission, noting the FHWA's reservation concerning the zipper lane concept, asked whether or not there was a practical 6-lane alternative that met forecast travel demands. Frank responded that there were no practical 6-lane alternatives which, combined with expanded transit service and employer-based TDM actions, met the 2025 travel demands. The HOV alternatives, both contra-flow and concurrent flow concepts, resulted in wider cross sections than the 8-lane cross section and did not generate enough ridership potential to justify their use. As stated previously, FHWA will not support a zipper lane or peak hour shoulder use as a long-term solution.

There being no further questions or comments, Chris Waszczuk thanked all for attending the meeting and providing input.

The meeting ended at 9:45 PM.

NEWINGTON-DOVER  
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)  
PUBLIC INFORMATIONAL MEETING (PIM) MEETING  
DOVER CITY HALL  
MAY 18, 2005

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DOVER CITY HALL  
MAY 18, 2005

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**NEWINGTON-DOVER**  
**NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)**  
**PUBLIC INFORMATIONAL MEETING (PIM) MEETING**  
**DOVER CITY HALL**  
**MAY 18, 2005**

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**MAY 18, 2005**

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## Meeting Notes

Attendees: Chris Waszczuk, NHDOT  
Mike Dugas, NHDOT  
Marc Laurin, NHDOT  
Steve Ireland, NHDOT  
Ed Woolford, FHWA  
Bill O'Donnell, FHWA  
Pete Walker, VHB  
Tom Wholley, VHB  
Frank O'Callaghan, VHB

Date/Time: May 19, 2005

Project No.: 51425

Place: Newington Town Hall

Re: Public Information Meeting  
Newington-Dover, 11238

Notes taken by: Frank O'Callaghan

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Chris Waszczuk, NHDOT Project Manager, called the meeting to order at 7:06 PM. He welcomed those in attendance, requested those in attendance to sign in, and introduced the project team: Mike Dugas, Marc Laurin, Steve Ireland from the NHDOT, Bill O'Donnell and Ed Woolford from FHWA, and Frank O'Callaghan, Pete Walker and Tom Wholley from VHB. He reviewed the meeting agenda, noting that the project team was looking for input, and that there were three (3) scheduled breaks in the presentation of material for public comment and questions. He added that there were currently several alternatives under consideration in both Dover and Newington, and that public input is important to the decision-making process.

Chris reviewed the project's purpose which is to reduce safety problems and improve transportation efficiency for an approximately 3.5 mile long section of the Spaulding Turnpike beginning at the Gosling Road Interchange in Newington and extending across the Little Bay Bridges to a point just south of the toll plaza in Dover. Chris then reviewed the project need citing the importance of the Spaulding Turnpike from commuter, commerce, and tourist perspectives; its designation as part of the National Highway System (NHS); and its function as a limited access highway linking the seacoast region with I-95, Concord, the Lakes Region and the White Mountains. He cited the historic growth of traffic and future projections, the poor levels of traffic service, existing geometric constraints and deficiencies and the history of traffic accident experience. He noted that the compactness of the 3.5 mile study area and short spacing between the six (6) interchanges within this section of the Turnpike constrain traffic operations, and exacerbate the impacts of a traffic accident, given the lack of suitable alternate routes to the Turnpike. Chris also noted that the Turnpike bisects local residential, recreational and commercial areas, and that there exists a need for local connectivity of motorists, pedestrians and bicyclists between the east and west sides of the Turnpike in both Newington and Dover. He stated that the Little Bay Bridges are major structures located on an important highway in a moderate seismic area and were not designed to meet the current seismic criteria for this region. He noted that the Newington-Dover Spaulding Turnpike project was included in the State's Ten-Year Transportation Improvement Program and was the highest long-

term transportation priority of the Seacoast Metropolitan Planning Organization. He stated that as the area continues to develop and traffic volumes increase, traffic operations and safety conditions would worsen. If nothing is done to improve the Turnpike, it is estimated that 2025 weekday periods of traffic congestion will lengthen to more than three times existing congested periods.

Chris then reviewed the five (5) phases of an Environmental Impact Statement (EIS) noting that the EIS is the highest order of study required by the National Environmental Policy Act (NEPA). The project Scoping Report, published in March 2004, summarizes the Phase 1 activities, which included the project's purpose and need statement, inventories of environmental resources, analysis of existing traffic conditions and projections of future travel demands, and the identification of the range of typical alternatives that would be considered. The Rationale Report, published in January 2005, and available on the project website, summarizes the development, screening and range of reasonable alternatives to be carried forward into Phase 3 of the study. Current Phase 3 activities include the detailed evaluation and impact analysis of alternatives, and the identification of a preferred alternative. He noted that there would be Public Information Meetings scheduled for the fall (2005) to discuss the preferred alternative. At the conclusion of Phase 3 in January 2006, a draft Environmental Impact Statement (DEIS) will be published. A joint FHWA/ACOE/NHDES/NHDOT Public Hearing (Phase 4) on the Preferred Alternative is targeted for April 2006. Phase 5, which is scheduled for September 2006 – June 2007, will focus on finalizing the EIS by responding to comments on the Draft EIS and comments from the Public Hearing. Assuming the availability of funding and procurement of the necessary approvals and permits, construction could begin as early as 2008.

Chris concluded his introductory remarks by noting the importance of public participation, and the openness of the process. He explained that a project Advisory Task Force – comprised of representatives of the municipalities of Newington, Dover, Portsmouth and Durham, the Rockingham and Strafford Regional Planning Commissions, COAST, the Pease Development Authority, the Great Bay Estuarine Research Reserve, and the Greater Dover and Portsmouth Chambers of Commerce, FHWA and NHDOT – has met 12 times during the course of the study and acts as a forum for communication, providing early and continuous input to the project team and feedback to their respective constituencies. In addition, Public Information Meetings are planned during each phase of the project in both Dover and Newington locations, and a project website, [www.newington-dover.com](http://www.newington-dover.com), is maintained that provides a wealth of project related information such as reports, plans, meeting minutes, and frequently asked questions. The website is also another means of public input to the project team.

At this point, Chris paused and asked for questions or comments. There being none, he introduced Frank O'Callaghan to review the project background, Frank began by describing the project study area as extending north from Exit 1 (Gosling Road/Pease Boulevard) of the Turnpike on the south, traversing the Little Bay Bridges to a point just south of the Dover Toll Plaza, and bounded by the Piscataqua River on the east and Little Bay on the west. He noted many study area resources and issues such as marine habitat, navigation, water quality, tidal and surface wetlands, floodplains, ground water, hazardous materials, visual resources, park and recreational activities, historic and cultural resources and potential residential and commercial property impacts. He stated that air quality and noise were also relevant issues, and each is being currently analyzed in detail during Phase 3 (DEIS) of the study. He noted that his colleague, Tom Wholley, would present some preliminary findings on noise impacts later in the presentation. He also noted that direct and indirect and cumulative socio-economic impacts are also being currently identified and analyzed during the current phase (DEIS) of the study. He stated that the March 2004 Scoping Report summarized many of the inventories of environmental resources.

In summarizing safety conditions, Frank noted that study area traffic accidents during the 1997-2001 period (908 total) increased by approximately 58 percent in comparison to the previous 5-year, 1992-1996, period (575 total). During the 1997-2001 period, accidents increased at approximately 11 percent per year in comparison to the average annual traffic volume growth of 3 percent per year. He also reviewed traffic volume growth where average daily traffic (ADT) volume has increased from approximately 30,000 vehicles in 1980, to over 70,000 in 2003, and is projected to grow to over 94,000 vehicles per day by the year 2025. He noted that current weekday peak hour capacity constraints extended from Exit 6 southbound to Exit 3 (Woodbury Avenue) in the morning, and from Exit 3 northbound through Exit 6 in the evening. These capacity conditions are compounded by a number of geometric deficiencies including substandard shoulder width on the Little Bay Bridges, substandard turning radii at many of the interchange on and off ramps, and inadequate weaving distances in both the northbound (River Road) and southbound (Nimble Hill Road) Exit 4N - Exit 4 area. As traffic volumes grow, the safety and traffic operational conditions, which are currently constrained, will worsen. For example, if the Turnpike is not improved, current weekday peak hour periods of congestion will double in the morning and more than triple in the evening by 2025.

Frank O'Callaghan then presented some general bridge information for both the Little Bay Bridges and the General Sullivan Bridge. He noted the length, width, main navigation span and vertical clearance of each bridge. The Little Bay Bridges are characterized by substandard shoulder widths and a 3.5 percent grade which restricts driver sight distance to a 60 mph design speed (design speed being the maximum safe operating speed governed by the vertical alignment or profile). The 2-lane bridges have minor deterioration and the substructure for both bridges – composed of reinforced concrete – was designed and constructed in 1966 prior to the current, more stringent seismic resistance requirements. Frank then enumerated several factors which would affect the rehabilitation alternatives for the General Sullivan Bridge. A 4 percent grade limits driver sight distance to a 45 mph design speed. The cross-section is limited to 24' of pavement and 2'-11" sidewalks on each side. In addition, the deck, girders and truss members exhibit major deterioration, and there is extensive substructure deterioration. The General Sullivan Bridge is also historic – being the second highest-ranking historic bridge in the state -- and subject to costly lead paint removal and re-painting.

At this point Frank paused for questions and comments. An attendee asked, with respect to the General Sullivan Bridge (GSB), the definition of historic structure. Chris Waszczuk replied that all structures, 50 years of age or older, are evaluated as to their historic significance. He stated that the state Division of Historic Resources has noted the significance of the structure and has recommended preservation in place. Chris noted that the NHDOT is obligated to take DHR's findings and recommendations into consideration, and stated that rehabilitation and widening alternatives for the Little Bay Bridges have been developed both with the rehabilitation of the GSB and with the GSB removed. Bill O'Donnell, FHWA, added that to remove the GSB, it must be demonstrated that there is no practical and prudent alternative to the removal. Another attendee stated that it was ridiculous to preserve the GSB, stating that the bridge is an eyesore and should be removed. Gail Pare, 188 Little Bay Road, Newington, asked if any thought had been given to using the GSB for local traffic. Chris Waszczuk responded that a proposal to use the bridge for transit vehicles only during the construction of the Little Bay Bridges has been discussed. Frank O'Callaghan added that Dover ATF representatives are opposed to local traffic use fearing the impact of local traffic on the Dover Point Road/Boston Harbor Road area.

Dave Sweet asked if the state was tracking the falling of debris from the GSB given the high level of boating activity in the channel below. Chris replied that there is no such tracking; he noted, however, that if rehabilitated, the bridge would not be an eyesore. He added that the cost of rehabilitation ranged from \$19M to \$22M depending on the design load. Given the cost to remove the bridge (\$5M) and the added cost to provide a substitute multi-use path as part of the LBB rehabilitation/widening (\$6M), the net cost of the GSB rehabilitation would be approximately \$10M. Chris added that the prudence of spending this additional \$10M has yet to

be determined. Edna Mosher, 97 Nimble Hill Road, Newington, stated that she loves the GSB, and walks over it several times a week. She noted that the bridge is used regularly by bicyclists and for recreation. Chris acknowledged that a 16' wide multi-use path adjacent to the Little Bay Bridges would not be as pleasurable a crossing for bicyclists and pedestrians who currently traverse the GSB. He added that the NHDOT has rehabilitated and repaired several truss structures to be visually appealing bridges. Chris Nash, 382 Blackwater Road, Dover asked how much traffic on the Turnpike is the result of the Tradeport. Frank O'Callaghan estimated that current traffic contribution is approximately 15 percent and that future traffic volumes may be approximately 20% related to the Tradeport. Gail Pare asked if peak traffic generating events at UNH are reflected in future traffic projections. Frank responded that the seacoast regional travel demand model is a daily model with weekday peak hour volume estimates. UNH related traffic that occurs during the morning and evening commuter periods is reflected in the peak hour volume estimates. Mr. Nash asked what impact the potential closing of the Portsmouth Naval Shipyard might have on traffic volumes. Frank replied that approximately 60 to 65 percent of shipyard traffic is from Maine along the I-95 corridor and as such, does not impact the Turnpike. He also noted that the shipyard work shifts tend to not coincide with the peak commuter periods along the Turnpike. As such, the shipyard traffic probably has a very minor impact on the Turnpike traffic operations. A final comment pertained to Alternative 3 in Dover; a resident questioned the proposed elimination of the traffic signal at the Spur Road/US 4 intersection, suggesting that accidents at the intersection may increase if the signal is removed. Frank replied that the nature of the accidents would have to be reviewed. For example, if the accidents are of a rear end nature, elimination of the signal may reduce that type of accident. The elimination of left turns will also reduce accidents related to those maneuvers.

At this point, there being no further questions or comments, Frank next proceeded to review the alternatives that have been carried forward for further study. In addition to the No-Build, Transportation System Management (TSM), Transportation Demand Management (TDM), Bridge Alternatives, Roadway Alternatives and combinations thereof have been progressed. With respect to TSM improvements, Frank noted that these improvements are generally low cost in nature and usually implemented within the existing right-of-way, or require minor right-of-way, to improve safety and/or increase traffic operating efficiency. Examples of TSM-type actions are adding turning lanes and/or increasing traffic control at intersections, or changing pavement markings or increasing regulatory or directional signage.

Within the study area, Frank noted that signage on the bridge approaches that reminds drivers to stay in their lane has already been upgraded, and directional signage for NB travelers connecting to US4 at Exit 6W are being upgraded as part of a current construction project. He then referred to conceptual graphics and described several TSM alternatives.

#### **Dover TSM 1**

This action involves the extension of the NB deceleration lane to the loop ramp leading to US 4 at Exit 6W. Restriping of the shoulder area under the overpass will extend the deceleration lane by approximately 400' without impacting the bridge abutment. This measure will prevent peak hour exiting traffic from backing up on the loop ramp onto the Turnpike and blocking NB through traffic on the Turnpike. *[Note: This was implemented in 6/2005.]*

#### **Dover TSM 2**

This action involves merging the 2-lane SB on-ramp at Exit 6 to a single lane prior to the merge with the main line, coupled with carrying two (2) through lanes on the Turnpike through the Exit 6 interchange to merge with the single SB on-ramp. Currently, the two (2) Turnpike through lanes merge to a single lane. The proposed changes will make it safer and easier for drivers to be in the

proper lanes (either inside or outside) when planning to exit at Nimble Hill Road or Woodbury Avenue.

#### **Interim Safety Plan (Newington)**

The Interim Safety Plan will address the current safety and traffic operational problems at Nimble Hill Road and at River Road due to inadequate weaving distances between these roadways and the median SB to NB turnaround on the Turnpike (Exit 4N). By providing a two-way, grade-separated connection under the Turnpike, between Nimble Hill Road and River Road, the median turnaround will be eliminated, thus eliminating the current weaving conditions. The existing SB on-ramp from the grade-separated turnaround from River Road will also be eliminated which will remove another safety and traffic operational problem. This project is designed and construction will be initiated by next month (June 2005).

#### **Other Newington TSM Actions**

Upon completion of the Interim Safety Plan, the SB deceleration lane to Woodbury Avenue can be extended to provide improved operations. In addition, a NB auxiliary lane can be developed between Woodbury Avenue and River Road to provide a better merging and weaving condition for traffic entering the Turnpike from Woodbury Avenue and for traffic exiting at River Road. In addition, access from Woodbury Avenue to Shattuck Way/River Road via the River Road/Patterson Lane connection could be restricted to emergency vehicles only to preclude NB traffic from diverting to River Road in an attempt to bypass Turnpike traffic and rejoin the Turnpike at Exit 4. The NB auxiliary lane will be included as part of the Interim Safety Project

While reducing the level of traffic turbulence and improving the safety of current traffic operations on both sides of the bridges, Frank reminded all that the basic capacity constraints of the bridges and Turnpike would remain.

Frank then reviewed the Transportation Demand Management (TDM) strategies that have been considered to reduce the overall travel demand within the corridor including rail, bus, park and ride facilities, high occupancy vehicle (HOV) lanes and employer-based measures. He noted that the project team had met with transit operators and regional planning staff in developing these alternatives.

From a rail perspective, expansion of the Downeaster service by adding a fifth round trip to run southbound during the AM peak period and northbound during the PM peak period is being considered. [Current daily service includes four (4) round trips between Portland and Boston, with stops at Dover, Exeter and Durham. However, current service does not stop in Dover, Exeter and Durham during weekday peak commuter periods.] This additional peak period train set would run either between Boston and Dover, or Boston through Dover to Rochester, and include a new layover facility in Dover. A second rail alternative involves the inactive Pease Spur rail right-of-way (R.O.W.) in Newington which runs from the industrial area (the Newington Branch Line), across the Turnpike to the Pease Tradeport. The rail R.O.W. is at-grade and was active in the late 1950's and 1960's when Pease was a military base. Frank noted that all of the Newington roadway alternatives maintain a grade-separated R.O.W. corridor for possible future restoration of this rail service.

Frank then discussed three (3) bus alternatives that are under consideration. C & J Trailways currently operates a coach service between Dover and Boston via Portsmouth. This service could be expanded by adding coaches and extending the service area to Rochester. COAST plans to operate new express service between Rochester and Portsmouth along the Turnpike. This service is being

funded through a CMAQ grant and is scheduled to begin in 2006. He noted that the express service could be further enhanced by adding buses to reduce headways and by adding Park and Ride facilities at Exit 9 in Dover and at Exit 12 in Rochester. The park and ride facilities would allow commuters a place to transfer between their private vehicles and the bus service, as well as support ride sharing and van-pooling.

Wildcat Transit and COAST [specifically COAST Route #2 (Rochester-Portsmouth), Wildcat Route #4 (Dover-Portsmouth) and COAST's Tradeport Trolley] operate local bus routes in the study area. These services could be enhanced by adding buses to reduce headways and by providing an interconnection/transfer point at Exit 1 which would allow riders to transfer among the local bus operators. In addition, a new Park and Ride facility could be constructed at the intersection of Route 108 and US 4 in Durham, which would support the Wildcat #4 route, encourage ride sharing and van-pooling and allow the capture of some traffic that would otherwise go to or from the UNH campus. Since there is some overlap among the three bus alternatives, consideration is being given to bundling the three alternatives together which would reduce overall costs, improve system efficiency and maximize ridership.

Frank next referred to 6-lane, 7-lane, and 8-lane HOV (high occupancy vehicle) alternatives that were evaluated, in comparison to the standard 8-lane (4 NB and 4 SB) roadway and bridge cross section, to potentially reduce the scale and impact of future roadway and bridge infrastructure improvements. He noted that four lanes of travel in each direction, combined with expanded transit service and employer-based actions – such as ride sharing and flexible work hours – are required to meet future 2025 travel demands. Given the need for a minimum of three lanes in each direction during summer weekends, the 6-lane concept – with two lanes northbound and southbound and two (2) reversible center lanes – is infeasible. Given the compactness of the study area (relatively short distance between Exits 3 and 6), HOV ridership estimates of barely 50 percent of the minimum volume necessary to justify an HOV lane, and cross-section widths that are greater than the standard 8-lane roadway section, both the 7-lane (single HOV contra-flow lane) and 8-lane concurrent HOV lane alternatives were also deemed infeasible and dropped from further consideration.

Frank reviewed employer-based TDM strategies which could include transit subsidies, ride-sharing, vanpools, alternative work schedules, bicycle and pedestrian facilities, on-site amenities (day care, showers, bicycle storage racks, etc.) and a guaranteed ride home program. He noted that these programs are usually promoted and coordinated with employers through a Transportation Management Association (TMA).

He then described the Little Bay Bridge alternatives which include rehabilitation and widening of the Little Bay Bridges (LBB) with the General Sullivan Bridge (GSB) rehabilitated, rehabilitation and widening of the LBB with the GSB removed, and replacement of the LBB with the GSB removed. All of the alternatives (either 6 or 8 lanes) would build to the west of the existing bridges to minimize the impacts on Hilton Park and the shoreline at Bloody Point. Frank then proceeded to discuss the profile of the Little Bay Bridges in the context of design criteria. He referred to a graphic depicting the existing profile of the LBB which corresponds to a 60 MPH design speed, and a 70 MPH design speed profile overlayed on the existing (60 MPH) profile. He noted that the 70 MPH profile provided slightly more stopping sight distance for the driver, and that the grades on the bridge would be approximately 3.3 percent in comparison to the 3.5 percent grades on the existing profile. He stressed that the driver's sight distance associated with 60 MPH is not a safety deficiency, in comparison to the narrow shoulders (2'-0" to 2'-3") on the existing bridges which are safety deficiencies. He noted that the 60 MPH design speed is 10 MPH greater than the 50 MPH posted speed for the bridges and study area, and that the 50 MPH posted speed was appropriate for the study area. The Turnpike study area is in a zone of transition where abutting land use is developed, interchange spacing is close, and there



are relatively high volumes of traffic entering and exiting the Turnpike and changing lanes. Under these conditions, drivers expect reduced speeds, similar to comparable sections of urban roadways such as I-93 through Manchester and Concord, I-293 in Manchester and I-95 in Portsmouth and Kittery, Maine. The Little Bay Bridge rehabilitation/widening alternatives maintain the 60 MPH design speed profile, address the substandard shoulder deficiencies, improve the traffic weaving conditions which are prevalent on the existing approaches to the bridges, increase capacity on the Turnpike and bridges and have significantly less impacts to Hilton Park and property owners than the Little Bay Bridge replacement and GSB removal alternative to the west of the existing LBB that provide a 70 MPH design speed. Frank noted that under current PM peak hour conditions, traffic flows freely northbound across the bridge, which is constrained by the narrow shoulders and density of traffic, yet, at the same time, traffic congestion and long delays are prevalent from Exit 1 north to the bridge approach. This congestion and delay are due, not to the profile of the bridge, but to the lack of auxiliary lanes to accommodate traffic entering, exiting and changing lanes.

Frank then proceeded to describe the roadway alternatives. In Dover, Alternatives 2 and 3 were very similar – both eliminated Exit 5, converted the overpass at Exit 6 to 2-way operation, reconfigured the Exit 6W off-ramp from a loop to a signalized diamond-type design, added the missing northbound on-ramp, and provided a grade-separated Hilton Park connector (under the Turnpike). Alternative 3 differed in that a grade-separated local connector is provided under US 4 connecting Spur Road with Boston Harbor Road, thus eliminating the need for a traffic signal at the Spur Road/US 4/Boston Harbor Road intersection. [With the local connector, turning movements at this intersection can be restricted to right turns.] In Newington, Alternatives 10, 11 and 12 combine Exits 3 and 4 in the southbound direction via a local traffic connector from Nimble Hill Road to a reconfigured Exit 3 at Woodbury Avenue, industrial traffic access to Exit 3 and the Turnpike is improved, a secondary access connection to the Tradeport is provided to Exit 3, and the existing rail spur right-of-way connecting the Newington Branch to the Tradeport is preserved, in grade-separated fashion, in the event that future rail operations become viable following Turnpike reconstruction. Alternative 10 locates the industrial traffic connector and the rail right-of-way along the existing rail R.O.W. Alternatives 11 and 12 locate the grade-separated industrial traffic connector and rail R.O.W. paralleling Patterson Lane at Exit 3. Both Alternatives 10 and 11 provide a diamond-type interchange at Woodbury Avenue (Exit 3). Alternative 12 is very similar to Alternative 11 except that the southbound on-ramp from Woodbury Avenue is reconfigured from a diamond-type layout (Alternative 11) to a loop ramp (Alternative 12). Frank noted that the cross-section of Woodbury Avenue under any of the alternatives would be limited to two lanes in each direction, separated by a median, with shoulders and sidewalk panels on each side, and would not substantially impact the Isaac Dow House or the Beane Farm building, both historic resources.

Frank then explained that feedback from the ATF and others, coupled with further engineering study, have resulted in recent modifications to Alternatives 10 and 12 in Newington and Alternatives 2 and 3 in Dover. He proceeded to describe the most recent modifications to Alternative 10, noting that the mainline of the Turnpike had been shifted approximately 80' to the west in order to simplify the construction of the Woodbury Avenue overpass and improve traffic management during construction; the Exit 3 SB on-ramp had been converted from a diamond-type configuration to a loop ramp in order to maximize traffic weaving distance between the Exit 3 on-ramp and the Exit 1 off-ramp; the elevation of the grade-separated railroad R.O.W. and industrial traffic connector to Exit 3 had been lowered by approximately 8 feet which lowered the mainline profile of the Turnpike; and that the limits of slope impacts had been calculated and depicted on the plan. He referred to these revisions as Alternative 10A. Frank then reviewed the lowered profile of Alternative 10A.

Frank then described refinements to Alternative 12 noting similarities to Alternative 10A such as the slight horizontal shift in alignment to the west to improve constructability and traffic management at

Exit 3, and the depiction of the limits of slope impacts due to construction. He also noted that the grade-separated railroad R.O.W. and industrial traffic connector to Exit 3 had been shifted approximately 900 feet to the north to improve the constructability of the Exit 3 interchange and to avoid an existing utility corridor paralleling Patterson Lane, and that the roadway connector to the Tradeport had been realigned to avoid the potential prime wetland area located west of Railway Brook. Frank referred to these modifications as Alternative 12A, and reviewed the mainline Turnpike profile of Alternative 12A, noting that the elevation of the grade-separated railroad R.O.W. and industrial traffic connector had been lowered in Alternative 12A, in similar fashion to Alternative 10A. He noted that the Turnpike, under Alternative 12A, would be approximately 18'-20' above the elevation of the existing NB barrel of the Turnpike at the point where the railroad R.O.W. and industrial traffic connector passed under the Turnpike.

With respect to Alternatives 2 and 3 in Dover, Frank stated that the only refinements pertain to the identification of the limits of potential slope impacts due to construction, and that the Boston Harbor Road/Spur Road intersection had been relocated approximately 150' to the east to increase vehicle storage lanes (Alternative 2) and transition areas for the westbound lane drop on US 4, prior to the Scammell Bridge. He also reviewed the Turnpike's profile between the Little Bay Bridges and Exit 6. He noted that the Hilton Park Connector was located approximately 1,200' north of the bridges, where the Turnpike would be approximately 18' above the existing elevation of the Turnpike to provide clearance for the Hilton Park Connector below. An alternative location for the connector had been considered adjacent to the channel, but Frank explained that potential impacts to parkland, flood plain issues, and additional cost (\$5.5 M) deemed this location infeasible in comparison to the northerly alternative.

At this point, Frank paused for questions and comments. An attendee asked the height of the Turnpike above the Hilton Park connector as proposed. Frank replied that the Turnpike would be approximately 18' above the connector road, and that the Turnpike would be elevated for approximately 1500' to the north of the bridges. Vincent Frank, 19 Fox Point Road, Newington, asked how traffic would access the Exxon/Mobil service station located on Nimble Hill Road under Alternatives 10A and 12A. Frank described the traffic routing via the local connector road between Exit 3 and Nimble Hill Road under Alternatives 10A and 12A. Vincent responded that the routing was circuitous and inconvenient in comparison to the existing condition, and he felt that the business would be adversely impacted to a substantial degree. Chris Waszczuk replied that providing an off-ramp at Nimble Hill Road may be possible and will be explored if the community so desires; providing an on-ramp from Nimble Hill Road will be more difficult and presents additional right-of-way impacts and traffic operational constraints than the off-ramp. Gail Pare, 188 Little Bay Road, Newington, also spoke in favor of providing an off-ramp to Nimble Hill Road, if possible. Such a ramp would be very convenient to all residents. She added that local access to the Exxon/Mobil convenience store is also a plus. Gail then asked if it would be possible to retain Exit 5, northbound access to Hilton Park. Chris Waszczuk responded that, given the compactness of the study area, and the growth of the study area over time, maintaining such access would compromise safety. Access to the park will be provided via Exit 6 and the Hilton Park connector road. Chris noted that the Turnpike, in response to historic traffic growth and land development, has evolved from a 2-lane roadway with direct access to abutting properties to a multi-lane facility with limited access. The function of providing local access to abutting properties conflicts with the mobility requirements and expectations of through traffic traveling on a limited access facility.

Noreen McCosker, 16 Old Mill Road, Lee, inquired as to the travel route from Dover to Woodbury Avenue. Frank referred to Alternative 10A and described the southbound route from the Turnpike through Exit 3 to Woodbury Avenue, and the return path from Woodbury Avenue, northbound through the Exit 3 on-ramp to the Turnpike. Noreen asked if the Beane Farm would be impacted. Frank referred to a photograph of Woodbury Avenue in the vicinity of the Beane

Farm, and to a cross section of Woodbury Avenue at the Beane Farm assuming construction of either Alternative 10A or 12A. He noted that the 7' panel to accommodate utilities and a sidewalk would likely impact one or two trees. Chris Waszczuk confirmed that grading of the panel area could impact the trees, but the building will not be impacted. He added that the Department will work with the property owner and community to minimize impacts. Barbara McDonald, 415 Newington Road, Newington, suggested that rail be extended parallel to the Turnpike as a means to reduce travel demand on the Turnpike. Chris Waszczuk replied that the rail right-of-way has been abandoned or encroached upon in several locations or occupied by the Turnpike in others. Such a service was conceptually considered, and would cost approximately \$150M. Construction would be very challenging. The ridership potential is low, and does not justify the cost. Barbara responded that the idea of future rail service deserves reconsideration. Frank O'Callaghan noted that preliminary studies determined that less than 200 vehicles would be diverted from the Turnpike under the parallel Turnpike route; in light of the capital cost (\$150M) – which doesn't include right-of-way costs – the project team believes expansion of existing service, such as the Downeaster, or expansion of existing transit services is a better use of limited resources. Such expansion of the Downeaster service is an alternative that is being carried forward for further study. Barbara concurred in favor of expanding the Downeaster service. Frank took a moment to review all of the rail alternatives that were initially developed and assessed, and explained that expanding the Downeaster service surfaced as the most practical rail alternative for the study area. He noted that the USEPA, USACOE, SRPC, RPC and the ATF all concurred with the reasonableness of the range of alternatives being carried forward in the DEIS, which includes the expanded Downeaster service as opposed to new rail service down the Turnpike. John Frink, Newington resident, questioned the location of the Nimble Hill Road connector to Exit 3, suggesting a realignment paralleling the Turnpike and using the abandoned section of the Turnpike, as opposed to the proposed location under Alternatives 10A and 12A that parallels Railway Brook. Discussion ensued over various connector road alignments and connections to Woodbury Avenue at Exit 3. Frank noted that such ideas would be considered and tested from a traffic operations and engineering design feasibility perspective. Mr. Frink inquired as to the maintenance responsibility of local roads. Chris Waszczuk replied that while no decision has been made at this early stage of development, local connections are customarily the responsibility of the municipality.

There being no further questions at this point, Frank introduced Tom Wholley to present a brief summary of the preliminary noise analysis that is currently under way. Tom began by reviewing the elements of noise – loudness, frequency and duration – noting that noise travels in a straight line, noise measurements in decibels are logarithmic in nature, and noise is subject to individual perceptions. He reviewed the NEPA process which includes determining existing noise levels, calculating future sound levels, determining noise impacts and evaluating noise mitigation where required. Tom also described FHWA's noise model and the factors – roadway geometry, traffic volumes and traffic speeds – calibration and calculations associated with the model. He noted noise abatement criteria, e.g. 67 dBA for residences, and stated that an increase of 15 dBA or more is considered a substantial noise increase. Tom also reviewed the criteria to evaluate noise mitigation measures; such criteria include: engineering, safety, acoustic performance, cost-effectiveness, development vs. highway timing, land use and views of impacted receptors (i.e. residents' opinions of the proposed mitigation). Tom then referred to a graphic which depicted noise impact areas within the study area. He identified three (3) areas in Newington and five (5) areas in Dover where existing sound levels exceed the noise abatement criteria. Construction of the Turnpike improvements – assuming 8-lanes under Alternatives 10A (Newington) and 3 (Dover), noise levels in the aforementioned areas would increase, at 2025 traffic volume levels, in the range of 1 to 4 dBA, depending on location. He explained that the project related impacts are considerably less than the NHDOT 15 dBA threshold for identifying a substantial noise increase, and that no new areas are created where sound levels exceed the noise criteria. In other words, the areas where existing sound levels exceed the noise criteria are the same areas in 2025 after the

Turnpike is improved where sound levels exceed noise criteria. The increase in noise in these areas, due to the improvement project, ranges between 1 and 4 dBA. Tom concluded his presentation by stating that the NHDOT has no responsibility to mitigate existing noise conditions, but since the project is impacting the existing areas, these areas will be evaluated for mitigation.

A number of questions and comments followed Tom's presentation. Jim Noseworthy had a question concerning the limits of potential mitigation, e.g., how far removed from the Turnpike, or distance down Nimble Hill Road, will mitigation be required? Tom replied that mitigation is usually within 500' of the source. Gail Pare, 188 Little Bay Road, Newington, suggested that Newington Village should be considered a land of extraordinary quiet and serenity and as such, should fall within the noise abatement criteria of 57 dBA, as opposed to the 67 dBA criteria for residential, recreation areas, schools, churches and libraries. An attendee asked for a definition of mitigation. Tom responded that noise barriers serve as mitigation, the design details and location of which would be determined later in design. He offered that NHDOT currently uses concrete and wood. An attendee asked if noise mitigation was incorporated into the Exit 4 Interim Safety Improvements in Newington. Chris Waszczuk replied that study conducted during the design development demonstrated that there was no significant increase in noise level due to the project. Michael Marconi, 19 Coleman Drive, Newington, asked if the noise analysis considered a raised profile of the Turnpike. Tom responded in the affirmative, stating that Alternative 10A was assumed. A number of questions were voiced pertaining to the design of noise barriers. Tom noted that standard design is concrete post and wood beam, and that public input on design and appearance will be sought during design and prior to construction. Economic considerations, e.g., impact/appearance of barrier on waterfront property, will not be considered. Natural vegetation must be 300' deep with dense undergrowth to be an effective noise barrier. Gail Pare inquired as to the effectiveness of a 3'-4' barrier along the side of the Little Bay Bridges. Tom stated that to be effective, the walls would need to be full height (i.e. the height of a tractor-trailer's exhaust stack). Gail then asked if removing the existing median buffer in Newington due to the widening of the Turnpike would create a safety problem for drivers who will in the future only be separated by a narrow median. Frank replied that since narrow medians are commonplace in most metropolitan areas, drivers are generally familiar with them. Design of vertical and horizontal alignment and median treatment will ensure that drivers are not subject to the oncoming headlights of other drivers.

There being no further questions or comments, Frank O'Callaghan then summarized and reviewed the status of 8 and 6-lane combination options. He noted that only two (2) 8-lane options remain, both of which entail rehabilitation and widening of the Little Bay Bridges (LBB) combined with expanded transit service and employer-based TDM actions. The only difference between these two options is whether or not the General Sullivan Bridge (GSB) is rehabilitated (Option 3) or removed (Option 2). The other three (3) 8-lane options were eliminated from further consideration by the ATF for a number of factors: lack of transit alternatives and TDM actions (Options 1 and 4); and higher cost, the issue of prudence concerning adversely impacting historic resources, greater property and environmental impact, and lack of need to improve the profile of the bridge (Option 5).

Of the 6-lane options, only Option 6 remains which entails the rehabilitation/widening of the LBB, rehabilitation of the GSB, expanded transit service and employer-based TDM actions. Frank noted, unfortunately, that this 6-lane option will not meet the 2025 travel demand, with system breakdown projected to occur around 2017. Of the other four (4) 6-lane options, Options 7 and 8 were HOV-lane alternatives which were not supported by the ATF, and were characterized by insufficient ridership to justify the HOV lane, and cross sections that were wider than the standard 8-lane options. In an effort to increase capacity and minimize impacts, a borrow lane or zipper lane (Option 9) and peak hour shoulder use (Option 10) options were developed. Similar to Option 6, both the LBB and GSB would be rehabilitated and combined with expanded transit

service and employer-based TDM actions. In contrast to Option 6, both Options 9 and 10 provide four (4) travel lanes in the peak direction during the peak hour of traffic. Peak shoulder use (Option 10) has the advantage over the borrow lane concept of having lower operating and maintenance cost. However, Frank noted that FHWA has reservations about both options from a safety perspective and will not support either option as a long-term solution. As such, there are only three options remaining under consideration: the two (2) 8-lane options both of which entail rehabilitation and widening of the LBB combined with expanded transit service and employer-based TDM actions. One of these options (Option 3) rehabilitates the GSB, the other (Option 2) removes the GSB and provides a multi-use pathway on the rehabilitated LBB. The third of the remaining options is the standard 6-lane option (Option 6) of rehabilitating/widening of the LBB and rehabilitation of the GSB combined with expanded transit service and employer-based TDM actions.

Frank compared the cross-section widths of 6-lane and 8-lane typical roadway sections noting that the 6-lane cross section was approximately 118'-122' in width, in comparison to the 142'-146' width of the 8-lane cross section – the difference being approximately 24'. He observed that the existing cross section of the Turnpike varied, and noted that the existing width of the Turnpike in the vicinity of Exit 5 at Hilton Park is approximately 100'. To assist in visualizing the relative scale of both 6 and 8-lane options, Frank referred to an aerial rendering of the Little Bay Bridges and General Sullivan Bridge. The first rendering depicted a 6-lane LBB widened to the west side, followed by a depiction of an 8-lane bridge widened also to the west side. Under the 6-lane widening, the distance between LBB and GSB is approximately 39'; the 8-lane option reduces the separation between bridges to approximately 15'; the 24' difference being the width of the two additional lanes. As a further comparison between 6-lane and 8-lane options, Frank referred to a table summarizing the preliminary wetland impacts associated with 6 and 8-lane options under different roadway alternatives. It was apparent from the summary table that there is not a substantial difference in wetland impacts when comparing 6-lane and 8-lane options. For example, assuming Alternatives 10A in Newington and 3 in Dover, the total difference in wetland impacts between 6-lane and 8-lanes ranged from approximately 0.10 Ac (Alternative 10A) to 0.38 Ac (Alternative 3). Frank noted that similar comparative impact analysis for other resources is currently underway.

Frank concluded the presentation with a couple of brief computer model simulations of 2025 peak hour traffic flow conditions along the Turnpike between Exits 3 and 6 under both 6 and 8-lane options. This comparison clearly demonstrated the need for an auxiliary lane in each direction, in addition to three through lanes in each direction, to be carried between Exits 3 and 6 to manage the volume of traffic that enters and exits the Turnpike and changes lanes between these exits. These operations are critical southbound in the 2025 AM peak hour, and northbound in the 2025 PM peak hour. Under the 6-lane option, the auxiliary/traffic management lanes are provided only at the interchanges for decelerating (exiting) and accelerating (entering) traffic. Under the 8-lane option, the auxiliary/traffic management lanes at each interchange are extended across the bridges to connect with each other. The difference in traffic flow and congestion is dramatic and dependent on whether or not the auxiliary/traffic management lane is extended across the bridge. Frank also referred to a simulation that compared the northbound Exit 6 off-ramp 2025 PM peak hour operations under both the proposed signalized – diamond configuration and the 2-lane loop ramp alternative. As he had described previously, the diamond interchange off-ramp operations will be satisfactory and the queuing of off-ramp vehicles will be contained to the off-ramp. The 2-lane loop ramp raises safety issues and involves additional bridge related costs (\$2M). Frank concluded the review of traffic simulations by focusing on 2025 northbound PM peak hour operations at the Dover Toll plaza. Assuming implementation of the EZ Pass system, he compared operations under both the diamond and 2-lane loop ramp alternatives. Operations under the signalized diamond interchange alternative are satisfactory. However, due to the shorter distance of 4-lane storage between the Toll Plaza and the northbound on-ramp under the 2-lane loop ramp alternative in comparison to the signalized diamond alternative, vehicle

queuing under the 2-lane loop ramp is significantly greater and will block the northbound entrance ramp to the Turnpike.

At this point, Frank paused for final questions and comments. Jim Noseworthy, 120 Nimble Hill Road, Newington, stated his preference for a southbound off-ramp to Nimble Hill Road. He also suggested the need for simpler connections to Exit 3 and Woodbury Avenue. Chris Waszczuk replied that the project team would be evaluating his suggestions and other ideas discussed at the meeting and will report back at the next ATF meeting. Gail Pare inquired as to the "voice of Newington" and how best to provide input to the process. Chris responded that the process is one of consensus building, an incremental, step-by-step process of input and feedback from the ATF which has several representatives from Newington. The Newington area is complex with many issues to be resolved. He noted that letters of position from the various town boards and town Officials would also help to identify issues and build consensus. Roger Groux, 278½ Dover Point Road, Dover, asked if thought had been given to increasing video surveillance on the Little Bay Bridges, vis-à-vis incident management, and whether it was possible to improve deicing on the bridges. Chris responded that NHDOT has been working with state and local public safety officials in developing and deploying incident management technology, noting the difficulty of the study area vis-à-vis lack of adequate shoulders on the bridges for example. He added that cameras have been installed on the bridge and will be connected to the state traffic management center in the near future. Pavement sensors have been installed on the bridges and bridge approaches to give real time feedback to maintenance staff. Variable message signs have also been installed to advise travelers of incidents and/or changing travel patterns. An attendee asked if the sight lines at the River Road/off-ramp intersection at Exit 4 had been improved as a result of the Newington Interim Safety Plan. Frank O'Callaghan replied in the affirmative. There being no further questions or comments, Chris Waszczuk thanked all for their attendance and their input.

The meeting ended at 10:05 PM.

NEWINGTON-DOVER  
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)  
PUBLIC INFORMATIONAL MEETING (PIM) MEETING  
NEWINGTON TOWN HALL  
MAY 19, 2005

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NEWINGTON-DOVER  
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)  
PUBLIC INFORMATIONAL MEETING (PIM) MEETING  
NEWINGTON TOWN HALL  
MAY 19, 2005

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NEWINGTON TOWN HALL  
MAY 19, 2005

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**NEWINGTON-DOVER**  
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**NEWINGTON TOWN HALL**  
**MAY 19, 2005**

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**NEWINGTON TOWN HALL**  
**MAY 19, 2005**

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## Meeting Notes

Attendees: Mayor Scott Myers  
Councilor Otis Perry  
Councilor Matt Mayberry  
Councilor Robert Keays  
Councilor Doug DeDe  
Councilor Dean Trefethen  
Councilor Bob Lewis  
City Manager Michael Joyal  
Valery French, Deputy City Clerk  
Bruce Woodruff, Dover, Transportation Planner  
Steve Stancil, Dover, Director of Planning  
Ray Bardwell, Resident  
Jack Newick, ATF Representative, Businessman  
Tom Fargo, ATF, Dover Conservation  
Commission  
Chris Waszczuk, NHDOT  
Frank O'Callaghan, VHB

Date/Time: October 5, 2005

Project No.: 5142500

Place: Dover City Council

Re: Newington-Dover 11238  
Workshop Session –  
Dover City Council

Notes taken by: Frank O'Callaghan

The workshop began with City Manager Mike Joyal introducing Chris Waszczuk, NHDOT and Frank O'Callaghan, VHB, to brief the City Council on the status of the Newington-Dover, Little Bay Bridges project, and to answer any questions that the Council may have. He noted that an Advisory Task Force (ATF) representing numerous stakeholders has been working with NHDOT and the design team. Several ATF members were in attendance, including Jack Newick, representing the Dover Point neighborhood, Bruce Woodruff from the City's staff, and Tom Fargo representing both the Dover Conservation Commission and the Strafford Regional Planning Commission. Rick Card, representing the Greater Dover Chamber of Commerce, was noted as not being able to attend due to a conflict.

Chris Waszczuk then briefed the Council on project status. He stated that the study is currently in the middle of the third phase of a five-phase Environmental Impact Statement process. During this current phase, NHDOT is conducting engineering and environmental studies of alternatives that were recommended for further study at the conclusion of phase two of the study. Two alternatives – Alternatives 2 and 3 – have been progressed in Dover. The project's Advisory Task Force has offered input and insight in the development and refinement of the alternatives. Chris noted that to date, 14 ATF meetings have been held either in Dover or Newington which provide a forum for input and feedback vis-à-vis the development and refinement of alternatives. At the most recent ATF meeting

held in Dover on August 25, 2005, the Dover alternatives were reviewed with the intent to solicit additional input prior to formulation of a preferred alternative. Issues such as the need for three versus four lanes in each direction, and whether the General Sullivan Bridge (GSB) would be rehabilitated or removed were discussed. Chris concluded by noting that three Newington alternatives remain under consideration, and that public informational meetings are being scheduled for the first week in November at both Dover City Hall and Newington Town Hall. These meetings would be followed by a Public Hearing, which is targeted for the spring of 2006.

Frank O'Callaghan then briefly described Alternatives 2 and 3 which were developed to improve safety conditions, increase transportation efficiency while minimizing environmental and property impacts. He noted common elements of both alternatives including a grade-separated local connector under the Turnpike to link both E-W Dover Point neighborhoods and both sides of Hilton Park, the closure of Exit 5, reconfiguration of the Exit 6 northbound interchange to a signalized diamond-type interchange, closure of the Cote Drive access to the Turnpike, two-way traffic flow on the overpass of the Turnpike, a new northbound on-ramp to the Turnpike at Exit 6 and closure of the Boston Harbor Road ramp to the Exit 6 southbound on-ramp. Frank noted that there were two business property impacts – K-9 Kaos and Adaptations, both located on Dover Point Road. He also reviewed changes in local traffic patterns resulting from the closure of Exit 5.

Frank stated that the difference between Alternatives 2 and 3 was that Alternative 3 includes a connector road between Spur Road and Boston Harbor Road under US 4 for local traffic. This would allow the elimination of the traffic signal at the Spur Road/Boston Harbor Road intersection by limiting the turning movements to right-turns only. He also compared the proposed northbound signalized-diamond interchange configuration to a two-lane loop ramp option, noting that the proposed diamond configuration would be safer, cost approximately \$2 million less to construct, and would avoid the potential for vehicles queuing back from the Dover toll facility and blocking the northbound on-ramp which would occur under the two-lane loop ramp concept. He also noted the potential for a traffic signal required in the future at the Dover Point Road intersection located to the east of the Exit 6 northbound off-ramp.

Frank next discussed the local Dover Point connector option. The current proposal locates the connector approximately 1200 feet north of the channel and results in an elevated Turnpike profile. In this proposal, the GSB is retained, and the existing pedestrian/bicycle connection between both sides of the project would be maintained abutting the channel. An alternative recommended by Bruce Woodruff and Tom Fargo, which is currently under study, is to locate the local connector adjacent to the channel, and retain the GSB for pedestrian, bicycle and recreational use. This requires the existing roadway approach to the GSB to be reconstructed as the descending approach for the connector road. This local connector is envisioned to be 30' wide (11' travel lanes with 4' shoulder areas) beneath the Little Bay Bridges and have a 14'5" vertical clearance. This option would also retain the pedestrian/bicycle connection between both sides of the park. Frank noted that preliminary study indicates the feasibility of this option, which would lower the Turnpike profile (in comparison to the current proposal) and would be approximately \$4 million less to construct. The lower profile would minimize noise and aesthetic impacts. Frank noted that by widening the Little Bay Bridges (LBB) to the west, between the existing LBB and GSB, there would be no impact to Hilton Park, whether the widening was to 6 or 8 lanes, or whether or not the GSB was rehabilitated or removed. If the GSB were removed, a multi-use (pedestrian/bicycle/recreation) path would be attached to the widened LBB.

Frank concluded his presentation by reviewing the EIS process and the project schedule, and noting that TDM alternatives (such as transit and employer-based programs) were also being considered to complement the bridge and roadway infrastructure improvements.

Councilor Mayberry, who resides in the study area, complimented the NHDOT and thanked them for an extensive public outreach program. He asked if sound barriers had been located and designed to mitigate noise impacts. Chris responded that the noise impact analysis and potential noise mitigation plans were currently under development and would be presented at the next ATF meeting scheduled for October 26, 2005. Councilor Mayberry then inquired if there would be property takings as a result of the project. Chris replied that both K-9 Kaos and Adaptations would be impacted, and that right-of-way acquisitions, based on fair market value, would occur following the public hearing process, likely in a 2008 timeframe. In response to an inquiry, Chris added that an early acquisition of the properties is a possibility in response to a property owner request. Councilor Mayberry noted that changes in local traffic patterns would result in an increase of traffic along Dover Point Road. Frank O'Callaghan concurred and replied the capacity of Dover Point Road was more than adequate for the additional volume, that measures to calm traffic along Dover Point Road could be considered. With respect to the proposed Boston Harbor ramp closure, Frank stated that the ramp closure would allow a single lane merge with the Turnpike which will be safer and more efficient than the current two-lane ramp merge, particularly during the weekday AM peak hour.

Councilor Mayberry stated that he supports the location of the local connector adjacent to the channel, retaining the GSB for pedestrian/bicycle/recreational use, and widening the LBB and Turnpike to four lanes in each direction. Frank noted that the fourth lane is a traffic management lane for vehicles entering and exiting the Turnpike between Exits 3 and 6. Councilor Mayberry inquired whether or not the fourth lane could be used as a breakdown lane in the short turn, and then restriped when future travel demands warrant. Frank replied that the Federal Highway Administration (FHWA) would not support use of the shoulder areas as a long term transportation solution for the study area. Councilor Mayberry inquired as to the status and schedule for completion of the interim safety improvements currently under construction in Newington. Chris Waszczuk replied that the project would be completed next year.

Councilor Trefethen congratulated the NHDOT and everyone involved in the project for the work accomplished to date, and for the high level of public input sought. His first question pertained to the pros and cons of retaining the GSB. Frank responded that the bridge is the second highest rated historic structure in New Hampshire, and in potentially impacting the bridge (as in removing it), it must be demonstrated to federal officials that there is no feasible and prudent alternative that avoids or minimizes impact to the bridge. Since rehabilitating the bridge is feasible, it remains a question of prudence vis-à-vis the project cost of rehabilitation and future maintenance costs. At this point, both the options of bridge rehabilitation and bridge removal remain on the table. Chris Waszczuk added that both the FHWA and NH Division of Historic Resources (DHR) have deemed the GSB a significant historic resource. He noted that the net project cost of rehabilitating the bridge would be approximately \$9-10 million. Retaining the GSB would also provide a measure of redundancy and flexibility in the future.

With respect to the Exit 6 interchange, Councilor Trefethen noted the high volume of truck traffic which exits northbound to travel west on US 4, and questioned the stopping, queuing, and starting of truck traffic at the proposed signalized ramp terminal. Frank replied that traffic operations would be satisfactory at the traffic signal, and off-ramp traffic would not queue back onto the Turnpike. He noted that, in contrast to a two-lane loop ramp alternative, the proposed signalized-diamond interchange configuration will be safer and very efficient with respect to processing traffic. Councilor Trefethen stated the need for simple and straight-forward designs; he suggested that the profile of the existing LBB was problematic, causing traffic to slow which results in congestion and back-ups. The proposed bridge options appear not to address this situation. Frank responded that the existing profile is adequate for 60 mph stopping sight distance and is more than adequate for the posted 50

mph study area. He explained that the cause of traffic delay and congestion between Exits 1 and 6 results from the volume of traffic that enters and exits the Turnpike between Exits 3 and 6 and the lack of adequate traffic management lanes to facilitate the acceleration, deceleration and lane changing that results when vehicles enter and exit the Turnpike. This condition is exacerbated by the number of interchanges and their relative proximity to one another.

Councilor Trefethen noted the resultant traffic congestion when there is an accident on the bridge and vehicles are not removed until police arrive and conduct preliminary investigations. Frank responded that the lack of adequate shoulders compounds the response to such accidents and the duration of related traffic congestion and delay. He added that variable message signs have been deployed in the region as part of the state's incident management system to give drivers advance warning of such an incident and allow them to alter their route and avoid or minimize the travel delay related to the incident.

Councilor Lewis presented the Hilton Park Master Plan developed in 2001 and stated his concern that planned improvements to the boat launch, dock and parking area had yet to be implemented, and the need for these improvements is immediate. He suggested that the park should be enhanced as part of the Newington-Dover project. Chris Waszczuk responded that NHDOT is coordinating and communicating with NH Fish & Game Department; he noted that the mitigation to enhance the park is difficult to justify since the project has no physical impacts on the park. However, NHDOT will continue to coordinate with NHF&GD.

Councilor Mayberry noted that it is his understanding that Executive Councilor Ruth Griffin will be coordinating a meeting between NHDOT and NHF&GD to discuss Hilton Park.

Councilor Lewis also stated that he hoped public transit alternatives were also examined as part of the Newington-Dover project. Frank O'Callaghan replied that indeed a number of bus transit, park-and-ride facilities, rail, and employer-based travel demand management (TDM) strategies have been analyzed. While ridership estimates do not preclude the need to widen the Turnpike, a number of TDM alternatives are also recommended to complement the Turnpike widening including new park-and-ride facilities in Dover, Rochester and Lee, expanding intercity and local bus transit, increasing the Downeaster rail service, and supporting employer-based TDM strategies.

Mayor Myers expressed reservation with respect to traffic operations at the proposed Exit 6 diamond interchange. He suggested that more traffic would be encouraged to use the new northbound on-ramp if it was toll-free. Chris Waszczuk acknowledged the attractiveness of a toll-free ramp, but also pointed out that US 4 traffic and Dover Point traffic will find the new on-ramp to be more convenient than traveling north on Dover Point Road to access the Turnpike at Exit 7. The mayor inquired if the on-ramp from Exit 5 could be preserved. Chris responded that the compactness of the study area coupled with the number of interchanges and their proximity to each other precludes the possibility of retaining an Exit 5 on-ramp based on safety and traffic operations. Mayor Myers also expressed his support for the proposed short-term transportation systems management (TSM) action which would close the Boston Harbor Road on-ramp to the Exit 6 southbound ramp and improve the merge of southbound entering traffic with through traffic on the Turnpike. The mayor then opened the workshop to public comment.

Bruce Woodruff stated that he is the City staff representative on the project Advisory Task Force, and has been charged with minimizing the potential impacts of the project on Dover Point and Hilton Park. He noted that one has to balance the impacts while protecting the neighborhoods and improving the transportation system. He cited Alternative 1 – the two lane loop ramp concept –



which was not advanced for reasons that included impacts to many residential properties. He stated that he and others were successful in working with the NHDOT to lower the Turnpike profile which reduces noise levels and improves the visual aesthetics of the area, and that they were instrumental in assuring that expanded transit service would also be part of the overall transportation system improvement. He noted that he has been an advocate for preserving the GSB for transportation and recreational use. Bruce closed by stating his support for Alternative 3 with the local connector roadway located adjacent to the channel, and the preservation and rehabilitation of the GSB.

Tom Fargo, who represents the Strafford Regional Planning Commission on the project Advisory Task Force, and who also serves on the Dover Conservation Commission, stated his pleasure and support for the location of the local connector road adjacent to the channel and noted that he is convinced of the merits of the signalized diamond interchange at Exit 6. He supports Alternative 3 as proposed.

Jack Newick, also representing the City of Dover on the project's Advisory Task Force, congratulated the project team on a job well done. He expressed hope that NHF&GD would consult him and other fishermen as they advance plans to rebuild the pier and boat launch area. He also noted that he would favor retaining the Exit 5 off-ramp and/or on-ramp, if it was feasible with respect to safety and traffic operations.

Ray Bardwell also congratulated the project team, but stated his preference for a two-lane loop ramp at Exit 6 for northbound to westbound exiting traffic, as opposed to the proposed signalized diamond interchange. He noted that if Alternative 3 was endorsed as proposed, he favors the retention of the traffic signal at the Spur Road/Boston Harbor Road intersection. Ray also favors retention of the Exit 5 on-ramp, if possible, and supports the need to improve the boat ramp at Hilton Park. He asked, assuming that the GSB is rehabilitated as part of the preferred alternative, if the piers of the LBB and GSB would be connected to reduce or eliminate the whirlpool of currents between the bridge piers. Chris Waszczuk replied in the affirmative.

The City Council workshop adjourned at 8:55 PM.





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## Meeting Notes

Attendees: Chris Waszczuk, NHDOT  
Mike Dugas, NHDOT  
Marc Laurin, NHDOT  
Bill O'Donnell, FHWA  
Pete Walker, VHB  
Tom Wholley, VHB  
Frank O'Callaghan, VHB

Date/Time: November 7, 2005

Project No.: 51425.00

Place: Dover City Hall

Re: Newington-Dover, 11238  
Public Informational Meeting

Notes taken by: Frank O'Callaghan

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Chris Waszczuk, NHDOT Project Manager, called the meeting to order at 7:05 PM. He welcomed those in attendance and requested those in attendance to sign-in. He noted that this evening's public information meeting was part of a substantial public outreach program; over the course of study there have been 15 Advisory Task Force meetings, 5 Public Information Meetings and 12 Resource Agency meetings to date. The project team, with input from the public, local, state and federal officials, has attempted to identify a preferred transportation improvement alternative for the Newington-Dover study area. Chris then introduced project team members Frank O'Callaghan, Pete Walker and Tom Wholley from VHB. He reviewed the meeting agenda noting that the project team was looking for input, and that there were three (3) scheduled breaks in the approximately 90 minute presentation for public comment and question. The presentation would include a description of a suggested preferred alternative.

Chris reviewed the project's purpose which is to reduce safety problems and improve transportation efficiency for an approximately 3.5 mile long section of the Spaulding Turnpike beginning at the Gosling Road Interchange in Newington and extending across the Little Bay Bridges to a point just south of the toll plaza in Dover. Chris then reviewed the project need citing the importance of the Spaulding Turnpike from commuter, commerce, and tourist perspectives; its designation as part of the National Highway System (NHS); and its function as a limited access highway linking the seacoast region with I-95, Concord, the Lakes Region and the White Mountains. He cited the historic growth of traffic and future travel projections, the poor levels of traffic service, existing geometric constraints and deficiencies and the history of traffic accident experience. He noted that the compactness of the 3.5 mile study area and short spacing between the six (6) interchanges within this section of the Turnpike constrain traffic operations, and exacerbate the impacts of a traffic accident, given the lack of suitable alternate routes to the Turnpike. Chris also noted that the Turnpike bisects local residential, recreational and commercial areas, and that there exists a need for local connectivity of motorists, pedestrians and bicyclists between the east and west sides of the Turnpike in both Newington and Dover. He stated that the Little Bay Bridges are major structures located on an important highway in a moderate seismic area and were not designed to meet the current seismic criteria for this region. He noted that the Newington-Dover Spaulding Turnpike project was