Transportation
Land Development
Environmental
Services

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Meeting Notes

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

Date/Time: May 18, 2005

Project No.: 51425

Place: Dover City Hall

Re: Public Information Meeting
Newington-Dover, 11238

Notes taken by: Frank O'Callaghan

Chris Waszczuk, NHDOT Project Manager, called the meeting to order at 7:10 PM. He welcomed those in attendance and introduced the project team: Mike Dugas, Marc Laurin, Bill Cass and Doug DePorter 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.

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 the 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, is maintained that provides a wealth of project related information, and is 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 1997-2001period, 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. There being none, Frank 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 to introduce Tom Wholley from VHB who is directing the noise impact analysis. Prior to Tom's summary of the preliminary noise impact analysis, there were several questions and comments pertaining to the roadway alternatives that had just been described. Matt Mayberry, Dover City Councilor, stated that it appeared to him that the Newington alternatives were being driven by economic development. Frank responded that, to the contrary, the local roadway connections, as proposed, would improve transportation efficiency and safety within the study area, the access to the Tradeport from Exit 3 would extend the service life of Exit 1 and improve area traffic operations, and planning to accommodate the future movement of goods into the Tradeport could potentially reduce the volume of heavy commercial vehicles on the Turnpike in the future. All of these concepts are directly related to the project's purpose and need. Frank did, however, acknowledge that the local roadway connectors could also provide access to future land development. Ray Bardwell, 199 Spur Road, Dover, questioned the operation of the proposed northbound signalized diamond-type interchange at Exit 6, in comparison to the existing loop ramp configuration for westbound exiting traffic bound for US 4. Frank responded that the signalized diamond interchange, which provides double left turn lanes, would operate at a satisfactory level of service, and that the queuing of off-ramp vehicles would be contained on the off-ramp and not spill back onto the Turnpike. Future traffic volumes require a 2-lane loop ramp [under the loop ramp alternative] which raises safety and operational issues. Frank added that the 2-lane loop ramp alternative would also add approximately $2M in bridge costs. Given the traffic operations adequacy of the signalized diamond proposal, and in light of the safety concerns and additional cost associated with the 2-lane loop ramp alternative, the project team believes that the signalized diamond interchange is the better alternative. Frank also mentioned that the signal operations at the northbound ramps

would provide gaps in the traffic stream along the overpass which would make it easier to exit Spur Road and enter and exit Dover Point Road in the absence of traffic signals at these locations. A final question was asked by Jack Pare, Newington Planning Board, as to the elevation of the Turnpike as it traverses over the proposed industrial traffic connector/railroad R.O.W. as depicted in Alternatives 10A and 12A. Would the elevation of the Turnpike be similar to the Turnpike as it passes over Exit 1 at Pease Boulevard/Gosling Road? Frank suggested that it would be similar – approximately 20' to 21' – and stated that he would check on the actual elevation/profile at Exit 1.

Frank next requested that further questions be held until after Tom Wholly presented 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 followed Tom's presentation. Gale Pare, 188 Little Bay Road, Newington, asked if the noise modeling and analysis of future conditions took into account the elimination of trees currently located in the median of the Turnpike. Tom responded in the affirmative, stating that the analysis is a worst-case condition. Matt Mayberry, Dover City Council, asked if the noise analysis extended beyond the Dover toll plaza. Tom referred to the plan depicting the noise impact areas and stated that the analysis included Area 13 located to the west of the toll plaza, and Area 14 located to the east of the toll plaza. Ray Bardwell, 199 Spur Road, asked if Tom was aware of any legislation that would prohibit truckers from applying jake brakes under certain circumstances. Tom replied that he was unaware of such legislation. Ray asked if the noise analysis was conducted during a noisy time of day as opposed to a quiet time of day. Tom stated that the analysis reflects the noisiest hour. He noted that noisy automobiles and motorcycles were considered as trucks as part of developing a worst-case analysis condition.

Jack Pare inquired about FAA noise models. Tom responded that the FAA utilizes specialized models to measure noise. These models include tree zones, and Tom pointed out that for tree zones to be effective at mitigating noise, wooded areas need to be at least 300' deep and full grown.

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 prudency 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 4th 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.