financial resources to return to the Seacoast region in the future, if the current project was viewed as the initial phase of a multi-stage improvement program. Chris Waszczuk concluded the visioning discussion by noting the State's need and responsibility to be prudent with its investments. NHDOT will look closely at preserving the current investment in study area infrastructure (e.g. bridge rehabilitation versus bridge replacement). The recommended improvement plan and program based on 2025 travel demands will not be obsolete on opening day. Such design may accommodate future needs, through right-of-way acquisition and support of TDM alternatives.

Before adjourning the meeting, Frank O'Callaghan very briefly described the long term improvement concepts developed as part of the 2000 Feasibility Study of Spaulding Turnpike Improvements. He briefly described the advantages and disadvantages of each of the nine (9) alternatives, and advised that the purpose of reviewing these preliminary concepts was to stimulate thinking about concepts in general and the manner in which we will evaluate the concepts. Frank also noted that the summary table of alternatives in the Feasibility Report which contained 11 characteristics of alternatives for comparison purposes, has been expanded to approximately 30 characteristics ranging from cost and wetland impacts to property impacts, bridge characteristics, and transportation system efficiency. Following Frank's presentation, Tom Fargo suggested three (3) themes: separate through Turnpike traffic from local traffic; the need and importance of E-W cross Turnpike connectivity for local motorized and non-motorized traffic; and keep concepts and traffic movements as simple as possible. Specific comments included the need for E-W connectivity in Dover by either raising the Turnpike or flying over the Turnpike with a local connector, and maintaining the limited access to the Turnpike. In Newington, Tom noted that local traffic should be served by collector/distributor roadways, and that there should be different expectations for different types of traffic, i.e. local traffic should be expected to operate at slower speeds, and encounter traffic signals or other traffic controls as opposed to through traffic on the Turnpike.

Bruce Woodruff asked if VHB had modeled the feasibility concepts from a traffic and operations perspective. Frank replied that the concepts had been analyzed from a capacity perspective under future 2020 traffic volume conditions, but had not been modeled. Bruce offered that less efficient traffic operation might be an acceptable trade-off with respect to comparing the potential property impacts of the two Dover alternatives. After some discussion on the nature and feasibility of the conceptual improvement alternatives, it was agreed that VHB would model Alternatives 1 and 2 in Dover, and Alternatives 6 and 7 in Newington. These alternatives and modifications to these alternatives would be the subject of an ATF working session scheduled for 6:30 PM, Wednesday, March 31, 2004, at Newington Town Hall.

Before adjourning the meeting, it was also decided to re-invite Gary Kassof, from the USCG to the April 28, 2004 ATF meeting to review the channel navigation and permitting issues.

The meeting adjourned at 10:00 PM.

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Meeting Notes

Attendees: Chris Cross, ATF Chairman, RPC
Marlon Frink, ATF Vice Chairman, Newington
Dave Allen, Portsmouth
Bruce Woodruff, Dover
Jack Newick, Dover
Rick Card, Dover Chamber of Commerce
Maria Stowell, PDA
Tom Fargo, SRPC
Cynthia Copeland, SRPC
Sandy Hislop, Newington
Butch Wadleigh, FHWA
Mel Jenkins, Lee
Chris Waszczuk, NHDOT
Mike Dugas, NHDOT
Frank O'Callaghan, VHB
Bruce Tasker, VHB
Greg Bakos, VHB
Members of the Public

Date/Time: March 31, 2004 / 6:30 PM

Project No.: 5142500

Place: Newington Town Hall

Re: Newington-Dover (11238)
ATF Meeting No. 5
(Work Session)

Notes taken by: Frank O'Callaghan

Chris Cross, ATF Chairman, called the meeting to order at 6:35 PM. He reviewed the agenda and reminded all present that this evening's meeting was a work session for the ATF and that public input is welcome. Following a project overview by Chris Waszczuk and Frank O'Callaghan, there would be a discussion of concepts developed to date, refinements to those concepts based on input received tonight, and a wrap-up.

Chris then asked if there were any comments on the draft minutes of the January 28, 2004 ATF meeting held at Dover City Hall. Chris Waszczuk noted under the list of attendees that Brian Mazerski represented the Coastal Program of the Office of State Planning, and that Peter Wellenberger represented the NH Department of Fish and Game. He also noted a typographical error on page 6; Frank O'Callaghan noted a similar typographical error on page 2. With these corrections noted, the meeting minutes were unanimously accepted by the ATF, with the abstention of Marlon Frink who was not in attendance at the January 28th meeting.

Prior to initiating the presentation and discussion on conceptual alternatives, Chris Cross asked if there were any questions or comments from the ATF and public. Chris Waszczuk noted that e-mail

correspondence to both Jack Newick and Fred Pearson (ATF alternate) had been undeliverable. Jack noted that he will check out his computer and internet service and will follow-up with Chris Waszczuk. Tom Fargo stated that he would contact Fred Pearson and follow-up with him to resolve the problem. At Marlon's suggestion, Chris Waszczuk reminded those in attendance of the project's website, www.newington-dover.com.

There being no further comments, Frank O'Callaghan initiated the presentation of conceptual alternatives by briefly reviewing the design constraints and requirements that form the context of the study area that extends from north of Exit 1 (Gosling Road) to a point just south of the Dover toll plaza. He noted environmental resources such as coastal and surface wetlands, floodplains, cultural resources, recreational resources such as Hilton Park, marine habitat and wildlife; he also identified issues such as navigational requirements, local connectivity, property impacts, noise, future land development, cost and affordability. These resources and issues frame the context within which conceptual improvement alternatives are being developed to address the safety and mobility needs of both motorized and non-motorized study area travelers. Frank also reviewed roadway design criteria such as design speed, lane and shoulder widths, grades and access control. He noted with respect to the Turnpike that 4 lanes in each direction would be required to serve future (2025) peak hour travel demands and provide a level-of-service 'D' vis-à-vis the quality of traffic flow and traffic operations. As a quality measure of traffic flow, levels-of-service range from 'A' at best to 'F' at worst, with LOS 'C' usually used for design purposes, and LOS 'D' usually deemed acceptable by federal and state agencies when providing for LOS 'C' would result in unacceptable environmental, community, or property impacts and/or would be too costly or unaffordable.

In light of the study area resources and design related issues and criteria, Chris Waszczuk mentioned that the goal of tonight's meeting was to discuss the various conceptual alternatives developed for the bridges and the Turnpike, and to eliminate some of the alternatives that are not practical in order to ultimately have a manageable number of alternatives to study and progress further. He then initiated a presentation on the bridge alternatives by first discussing the general characteristics, condition, issues and reuse alternatives associated with the General Sullivan Bridge (GSB). He noted the nine span steel truss nature of the bridge, its length, width, navigational span and vertical clearance, and the fact that the bridge, which was constructed in 1935, has been closed to vehicular traffic since 1984. Chris summarized a number of issues and constraints which affect the reuse potential of the bridge including: bridge geometry, structural capacity and poor physical condition, seismic considerations, historic value, navigation requirements and permitting, and the cost of rehabilitation/reuse alternatives, and long term maintenance cost. Chris noted that the bridge is the second highest rated historical bridge in the state, that the state's Architectural Historian spoke to the history and significance of the structure at the January 28, 2004 ATF meeting, and that SHPO is recommending *in-situ* preservation. He also noted that the USCG, as a matter of policy and as stipulated in the 1982 amended bridge permit for the Little Bay Bridges, requires structures no longer used for transportation purposes to be removed. Should a use for the General Sullivan Bridge be identified, the structure rehabilitated, and maintained in the future, the USCG would re-visit the permitting process for that structure.

Chris then summarized the GSB Reuse Alternatives and associated costs:

- Multi-Use Path $19M
- Pedestrians, Bicyclists and Vehicles (6 ton limit) $20M
- Pedestrians, Bicyclists and Local Traffic (no weight restrictions) $22M
- Replacement Bridge (including removal costs) $36M
- Removal of General Sullivan Bridge $ 5M

(cost of replacing pedestrian/bicycle connection not included)

Tom Fargo asked if the replacement cost ($36M) was reflective of a similar type bridge. Chris confirmed that it was. Bruce Woodruff commented that he had hoped to see an alternative for an exclusive bus way or transit use. He expressed concern that a General Sullivan Bridge proposal for local traffic use may result in local neighborhood opposition, whereas similar local objection may not occur with an exclusive bus way or transit use combined with a recreational use for the bridge. Chris responded that the cost of such an alternative would be akin to the local traffic reuse alternative and would cost approximately $22M. Chris mentioned that the exclusive bus way/transit/recreational use alternative will be specifically noted in future presentations. Chris also mentioned that reuse alternatives would also require future maintenance costs – repainting and structural repairs every 25 years at a cost (2004 dollars) of $4.3M; and deck replacement every 35 years at a cost (2004 dollars) of $1.4M. Tom Fargo suggested that deck deterioration due to deicing and salt should decrease due to the non-motorized nature of the current use and possibly future use. Chris concurred that the affect of salt/de-icing on deterioration would be less, but deterioration would not be eliminated due to the marine environment.

Chris Waszczuk then summarized the characteristics of the existing Little Bay Bridges with respect to year of construction, length, width, navigation and vertical clearance, geometry and cross-section of several widening alternatives which provide – based on the future travel demand projections – 4 lanes of travel in each direction. In the comparison of alternatives – widening to the west, widening to the east, widening to both sides, and a new bridge with a multi-use path – Chris noted the following: all the cost estimates are based on similar length structures; widening to the west will reduce impacts to the bay and Hilton Park, but constructability issues due to the proximity of the General Sullivan Bridge (15'±) may increase costs slightly; widening to the east may require lengthening of the bridge to minimize impacts to the bay and Hilton Park which will add cost, yet be easier to construct; widening to both sides, while increasing the separation distance from the GSB (58'±) introduces some construction inefficiencies which will increase cost, create maintenance of traffic issues, and may still impact the bay and Hilton Park; a new bridge with a multi-use path would entail the removal of the GSB, construction of the new bridge off location while the existing bridges maintain traffic, and removal of the existing Little Bay Bridges following construction of the new bridge. He noted that the new bridge may need to be extended on the Newington approach to allow restoration of some coastal wetlands as suggested by the ACOE. Hilton Park would also be impacted by a new bridge off location.

With respect to rehabilitation and widening alternatives, Chris noted that there were two (2) levels of rehabilitation, and depending upon the potential to replace the existing superstructure with weathering steel (which would save on future maintenance costs), the cost of rehabilitation and widening could range from $46M to $50M.

Bruce Woodruff asked if the rehabilitation and widening cost estimates included seismic retrofitting and if the existing bridge profile would be held. Chris responded that the costs reflect seismic retrofitting, and that the existing profile would be maintained with any of the rehabilitation alternatives. Tom Card asked if the cost estimates were in 2004 dollars. Chris responded that they were 2004 dollars, and noted that there would be an approximate 12% additional cost -on if a multi-use path was incorporated into the design for the Little Bay Bridges.

Chris next described a double-decker concept that would place the northbound travel lanes above the southbound lanes in an attempt to minimize the footprint and subsequent impacts of the bridge and

roadway approaches to the bridge. Double-decking requires a new substructure, a 30-foot vertical separation between roadway surfaces on the bridge, extension of the elevated bridge approaches by approximately 900' in Newington and 1200' in Dover with approximately 650'(±) of retaining wall. The cost of double-decking is approximately $75M, entails a number of constructability and maintenance of traffic issues (i.e. erecting girders and transverse members would not be permitted above traffic on the existing bridge) and may not ultimately reduce the potential impacts on the Dover side of the bridge.

Replacement bridge alternatives include conventional bridges – without a multi-use path – ranging in cost from $55M (steel girder) to $63M (segmental precast concrete box girder), and signature bridges which include a multi-use path. Chris displayed conceptual cross-section and elevation plans for both an open spandrel concrete arch bridge ($87M) and a single cable-stayed bridge ($90M). He noted that the 305 foot elevation above mean sea level at the top of the main pier would be an issue for the FAA vis-à-vis the aviation approach and clearance zone for the runway at the Pease Tradeport.

Chris then referred to a construction cost summary table for all of the combined General Sullivan and Little Bay Bridges alternatives. These combined alternatives were categorized into two (2) major groups: Little Bay Bridge alternatives with the GSB rehabilitated, and Little Bay Bridge (LBB) alternatives with the GSB removed. Assuming that the GSB is rehabilitated, the total estimated bridge costs – for both GSB rehabilitation ($19M) and the rehabilitation or replacement of the LBB – ranged from $65M to $87M; assuming that the GSB is removed, the total estimated bridge costs – for GSB removal ($5M) and the rehabilitation or replacement of the LBB and inclusion of a 16' multi-use path – ranged from $57M to $100M. Chris noted that the Department considers cost to be an important factor in light of the current financial environment, and at this time, desires the alternative that rehabilitates and widens the Little Bay Bridges, which includes a multi-use path and the removal of the General Sullivan Bridge, be included in the further study. This alternative will cost $57M (excluding road construction) and is the lowest cost combined alternative. He stated that while this alternative reflects funding realities, he is seeking comments from the ATF and others. Bruce Woodruff asked if the $100M cost of the cable-stayed bridge could be reduced by relative cost reduction on the roadway approaches. Chris responded that differences in roadway approach costs may or may not be affected by the bridge alternatives, and will be determined as the overall alternatives are further developed. However, the savings or additional cost, as the case may be, is not at this time considered to be significant, given the order-of-magnitude cost difference ($57M - $100M) in range of alternatives. Bruce continued that he believes that one needs to take into account other considerations, such as the future vision of the area, aesthetics, social impacts, and projected capacity needs, in addition to cost, in choosing a preferred alternative for the future. Chris responded that, vision aside, the $57M alternative provides the same general level of safety and capacity improvement that $100M bridge alternative provides. Jack Newick asked if the life span of the $57M and $100M alternatives was the same. Chris responded that they had similar life spans. Frank O'Callaghan suggested that perhaps comparing total costs of alternatives – bridge and roadway – would help in focusing the contrast or difference in scale of cost among some of the alternatives, and that roadway costs would be further refined following input from this evening's meeting. At this point, Chris identified three corrections to the summary cost table: the column heading "General Sullivan Removal/Cost" should read "Little Bay Bridge Removal Cost"; the Replacement – Steel Girder Cost for the Little Bay Bridge Cost (assuming General Sullivan Rehabilitation) should be $55M (instead of $46M), resulting in total cost of $79M (instead of $70M).

Tom Fargo stated he was having a difficult time visualizing/relating to level-of-service 'D' traffic operations and flow, and questioned the need for 4 lanes in each direction... Discussion ensued on density of traffic and traffic speed along similar urbanized freeway type facilities, such as I-95 and I-

93/Central Artery in Boston. Frank O'Callaghan will provide a visualization guide on level-of-service at the next ATF meeting. Tom also questioned how the reported $30M cost estimate for dedicated federal funding for the project affected the bridge alternatives and cost estimates presented tonight. Chris responded that the $30M estimate could provide a comparable "sister-like" structure to the existing Little Bay Bridges. The $30M in dedicated funding would allow the bridge construction to possibly start earlier than the current funding programmed for the project (current draft 10-Year Plan shows construction funding beginning in 2010). The basic rehabilitation and widening alternative cost estimate of $46M accounts for $30M for a sister structure and an additional $16M to rehabilitate, paint, and seismically retrofit the existing Little Bay Bridges.

Marlin Frink asked if construction of any of the alternatives would require shutting down or reducing traffic flows on the existing bridges. Chris responded that maintenance of traffic would be more difficult for some alternatives (i.e. rehabilitation/widening to both sides would necessitate further constriction of the existing narrow width of the Little Bay bridges during the rehabilitation), and that the double-decking alternative would be particularly problematic to maintain traffic on the bridges while erecting members overhead. A critical component for any of the bridge alternatives will be the need to maintain two lanes of traffic in each direction during construction. Traffic flow along the Turnpike would not be able to be shut down. Jack Newick observed that the $57M alternative makes considerable sense. It has the same life span as other alternatives, widening to the west side seemed to present less impact on the bay and Hilton Park, traffic would be maintained during construction, and that one needs to consider the impact of inflation on the cost of alternatives, i.e., costs will only increase and that it may be imprudent to think that the $100M alternative will not escalate over time. Bruce Woodruff noted that the rehabilitation/widening alternatives do not address the current profile of the bridges which limit drivers sight distance and design speed to 60 mph. Chris Waszczuk acknowledged the 60 mph design speed profile, but indicated that the area is posted for 50 mph and there were a number of other factors in addition to profile that affect driver safety on the bridges and bridge approaches including substandard shoulder widths, traffic movements (merging, weaving, entering and exiting, and changing lanes) and driver decision– making in proximity to the bridge approaches that are compounded by the spacing of interchanges, and the volume and speed of vehicles. The rehabilitation and widening alternatives, in conjunction with the roadway improvement alternatives, will improve all of these additional conditions within the context of a 60 mph design speed.

Chris Cross stated that the cost summary of bridge alternatives was useful in identifying the range of alternatives and costs which provide the same level of traffic capacity. Tom Fargo inquired as to the availability of technology to reduce the number of bridge piers and spans. Chris Waszczuk responded that any of the new bridge replacement alternatives including the cable-stayed and concrete arch alternatives could reduce the number of piers in the bay. With respect to the grade-separated, east-west connector in Dover, Tom suggested moving it as close to the water as possible by adding an additional span to the bridge. In this way, Hilton Park could be connected and the park area enhanced due to the opening and proximity to the water. While the waterfront location of the connector will add cost to the bridge alternative, the enhancement to the park is worth considering. Frank O'Callaghan indicated that relocating the east-west connector, as suggested, would be explored.

At this point in the meeting, Chris Waszczuk asked if the ATF would consider dropping one or more of the bridge alternatives. There was no consensus at this time to drop any alternative.

Frank O'Callaghan then described a number of Transportation System Management (TSM) alternatives to improve safety and traffic operations in the short term. These ideas had been briefly identified at the January 28, 2004, ATF meeting:

- Extending the NB Exit 6W deceleration lane to the US4 westbound loop ramp by approximately 400' to prevent PM peak hour exiting traffic from backing up into the NB through lane traffic. This modification can be implemented within the existing shoulder area without affecting the bridge abutment and will improve 2005 LOS from 'D' to 'C'.
- 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 through lanes on the Turnpike through the Exit 6 interchange to merge with the single SB on-ramp. Currently the two through lanes merge to a single lane. Frank discussed how current traffic volumes on the mainline (2,500, AM peak hour) warrant the two-lanes; and that the 1,500 vehicles entering on the SB on-ramp could be accommodated in a single lane, and that the single lane merge operation would be an improvement in comparison to existing conditions. He also pointed out that the proposed changes would make it safer and easier for drivers to be in the proper lanes (either outside or inside) when planning to exit at Nimble Hill Road (Exit 4) or Woodbury Avenue (Exit 3). Frank presented a micro-simulation of both the existing and proposed merge conditions. He also pointed out that, while improving the merge condition (2005 LOS 'D'), the TSM action would not eliminate the capacity condition on the Little Bay Bridges.
- Assuming implementation of the Newington Interim Safety Plan (2005 scheduled construction) which eliminates the SB to NB turnaround in the median, the existing SB deceleration lane to Woodbury Avenue could be extended by 600', improving 2005 LOS from 'E' to 'D'.
- Assuming implementation of the Newington Interim Safety Plan, development of a NB auxiliary lane between Exit 3 and Exit 4. Under this concept, the NB on-ramp from Woodbury Avenue would be carried with the two through lanes from Exit 2 to form three lanes, and carried northbound to Exit 4 (River Road) where the auxiliary lane would form a deceleration lane to Exit 4. The on-ramp from River Road would merge with the two through lanes prior to the bridge. Currently, the merge from Woodbury Avenue, coupled with the merge from the SB to NB median U-Turn on the high speed/inside through lane and the weaving of traffic from this median on-ramp to the River Road off-ramp, create congestion during the PM peak hour which causes NB traffic to queue back through the Exit 2 interchange area, and results in some Woodbury Avenue traffic diverting to Shattuck Way/River Road via Patterson Lane in an effort to bypass the queued Turnpike traffic and rejoin the Turnpike via the Exit 4 on-ramp. With the elimination of the merging traffic reversing direction and entering the NB traffic flow from the median, coupled with the elimination of a weaving maneuver, and the extension of the 3rd NB lane from Woodbury Avenue to River Road, the Woodbury Avenue merge of traffic and the exit of traffic at River Road will be significantly improved and delays on queuing of NB through traffic reduced. Frank presented a micro-simulation of traffic operations under both current and proposed conditions. He suggested that in conjunction with development of the auxiliary lane, the access from Woodbury Avenue to Shattuck Way/River Road via the River Road/Patterson Lane connection should be closed to prevent Turnpike traffic from spilling over to River Road only to rejoin the Turnpike at Exit 4. If Woodbury Avenue-to-Spaulding Turnpike traffic continues to divert to Shattuck Way/River Road, following implementation of the proposed TSM improvement, then ramp-metering via a new traffic signal operation at the River Road/Exit 4 on-ramp could be considered to meter on-ramp traffic and discourage non-industrial area generated traffic from diverting to River Road to access the Turnpike.

Frank mentioned that "Stay in Lane" signs on both NB and SB approaches to the bridge should also be maintained and possibly enhanced by the addition of flashing beacons to

reinforce drivers the safety importance of not abruptly changing lanes either on the bridge approaches or on the bridge. The feasibility of using rumble strips vis-à-vis lane lines on the bridge was raised as further reinforcement to stay in one's lane. Chris Waszczuk replied that rumble strips on the bridges were not feasible due to the existing thin pavement depth and would not be considered by the Department.

Frank also stated that ideas suggested by others to close or restrict NB access to the Turnpike at Exit 2, 3, and 4 during the PM peak hour, and to reroute that traffic via Woodbury Avenue and Gosling Road would be problematic and impractical; however, these ideas underscored the level and urgency of the congestion problem, and stimulated the thinking behind the recommended TSM actions in Newington.

Tom Fargo and Jack Newick reminded Frank and the ATF of the need to improve NB signage at Exit 6 to better inform drivers of the 6E and 6W ramps; some drivers wishing to go west on US 4 or connect to Boston Harbor Road and Dover Point Road mistakenly take the first exit ramp (6E) and then reverse direction in proximity to the ramp terminal area on Dover Point Road. The NB signage approaching Exit 6 will be reviewed.

Following discussion of the proposed TSM actions, the ATF unanimously endorsed the implementation of the TSM measures.

Frank then presented a number of long term improvement concepts in both Dover and Newington. In Dover, common to the three alternatives was implementing two-way traffic flow on the Exit 6 overpass and constructing a new NB on-ramp to the Turnpike. Frank compared Alternative 2 with Alternative 1, and noted that Alternative 2 eliminated the double loop ramp operation (NB to WB traffic) by substituting a traffic signal/diamond interchange operation; Alternative 2 had a smaller footprint resulting in less property impacts than Alternative 1; Alternative 2 provided a grade separated connection between east and west side of Hilton Park; traffic signal operations would operate at LOS 'C' or better in the design year (2025); and Alternative 2 ($23M) would cost approximately $2M less than Alternative 1 ($25M). Alternative 2 seemed to address Dover's main concerns, that being the minimizing of property impacts and the maximizing of east-west connectivity. Frank also presented a third concept (Alternative 3), which is similar to Alternative 2, except that it provides a grade separated local connector between Spur Road and Boston Harbor Road; it eliminates the traffic signal at Spur Road/US 4/Boston Harbor Road, restricting all turns to right in/right out; allows free flow of US 4 traffic SB onto the Turnpike in a single lane; and costs approximately $25M. Discussion ensued about the benefits of removing local traffic from the interchange operation, and assuring that all local traffic connections were accounted for. Frank assured Tom Fargo that there was adequate storage for NB exiting ramp traffic given the volume of traffic and traffic signal operation, and Jack Newick raised the need for adequate signage given the changes in local traffic circulation. Following this discussion, the ATF unanimously agreed that Alternative 3 was appealing and more desirable for Exit 6. It was agreed that Alternative 3 should be refined further to minimize impacts to wetlands, and progressed in the EIS. Also, some sentiment existed to evaluate a possible roundabout at Dover Point Road in order to eliminate the eastern most signal and limit impacts further north on Dover Point Road.

Frank next presented three alternatives in Newington. Alternative 6 maintains interchanges at Exit 4 and Exit 3; provides access to the Tradeport; relocates the Pease Railroad spur right-of-way south to run parallel to Patterson Lane; discontinues Exit 2 due to its proximity to the new Exit 3 off and on ramp; provides satisfactory traffic operations; provides a convenient at-grade cross-over location for

incident management; and costs approximately $27M. In comparison to Alternative 7 (single point diamond interchange), Alternative 6 has less visual impact, less property impact/smaller footprints and is less costly (approximately $14M).

Alternative 7 is a single point diamond interchange that combines interchanges at Exit 3 and Exit 4. Similar to Alternative 6, Alternative 7 provides a connection to the Tradeport; discontinues access to the Turnpike from Exit 2 and relocates the Pease spur railroad right-of-way south to run parallel to Patterson Lane. In addition, Alternative 7 provides improved access to Newington's industrial area. The interchange has greater property impacts than Alternative 6, and also presents a significant visual impact due to the nature of the intersection design and the extent of necessary retaining walls. The cost of Alternative 7 is approximately $41M or $14M more than Alternative 6. From a traffic operations perspective, the 2-lane NB on-ramp merge with the mainline may be problematic given the proximity of the bridge and the need to merge the 2-lane on-ramp with three through lanes and then drop a lane prior to the bridge.

Frank next presented Alternative 9, which consolidates both Exit 4 and Exit 3 in the vicinity of Woodbury Avenue. Alternative 9 provides access to the Tradeport, improves access to the industrial area, provides local access to Nimble Hill Road and potential access to future development at the old drive-in site; and discourages the SB free flow access to Woodbury Avenue. Alternative 9 would cost approximately $26M, would not relocate the railroad right-of-way, and would have less visual impact than Alternative 7. Traffic operations would be satisfactory.

Discussion ensued in a comparative manner on all three alternatives. There was consensus by the ATF to drop Alternative 7 from further consideration due to the visual/barrier impact, relative cost and traffic operational concerns. There was also consensus to fashion a melding of Alternative 6 and Alternative 9 into another Alternative. Tom Fargo raised the issue of access to future development land (e.g. the drive-in site) which was evident under Alternative 9 and would require access from the PDA connector roadway (and right-of-way) under Alternative 6. The layout of the SB loop ramp to Woodbury Avenue under Alternative 6 would affect access to the City of Portsmouth's water tank, and as such, would need to be revised. With respect to Alternative 6, Sandy Hislop noted the lack of an industrial area connection perpetuates the presence of truck traffic and noise into Nimble Hill Road and Newington's residential area. While acceptable to the Town of Newington as a temporary condition under the Interim Safety Improvement Plan, the Town of Newington will would not support the industrial connection between River Road and Nimble Hill Road as a permanent solution. Marlin Frink and Chris Cross concurred. Tom Fargo suggested investigating the possibility of relocating the industrial access connector, depicted in Alternative 9, south to either the Exit 2 or the Woodbury Avenue interchange area. This would allow lowering the profile of the Turnpike, as in Alternative 6, but would also provide an industrial connection to Shattuck Way. VHB will investigate/refine Alternative 6 and Alternative 9 based on the feedback from the ATF.

Following discussion on the long term conceptual improvement alternatives, Cynthia Copeland asked if signage on I-95, NB could be reviewed by the NHDOT with the intent of directing drivers destined for Concord to use NH101 to I-93 versus utilizing the Turnpike and US 4. The signage will be reviewed. Cynthia also wanted clarification that under the rehabilitation/widening bridge alternatives, the current profile of the Little Bay Bridges remains. Chris Waszczuk confirmed that she was correct – the existing bridge profile would be maintained under the bridge rehabilitation/ widening alternatives.

The next meeting of the ATF is scheduled for April 28, 2004 in Newington, and a follow-up ATF meeting was scheduled for June 23, 2004 in Dover.

The meeting adjourned at 9:30 PM.

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Meeting Notes

Attendees: Chris Cross, ATF Chairman, RPC
Bruce Woodruff, Dover
Sandy Hislop, Newington
Maria Stowell, PDA
Tim Roache, SRPC
Steve Wells, COAST
Peter Wellenberger, NHF&GD
Bill O'Donnell, FHWA
Chris Waszczuk, NHDOT
Jack Newick, Dover
John Burke, Portsmouth
Mike Dugas, NHDOT
Marc Laurin, NHDOT
Gary Kassoff, USCG
Jim Garvin, SHPO
Cynthia Copeland, SRPC
Frank O'Callaghan, VHB
Members of the Public

Date/Time: April 28, 2004

Project No.: 51425

Place: Newington Town Hall

Re: Newington-Dover (11238)
ATF Meeting No. 6

Notes taken by: Frank O'Callaghan

Chris Cross, ATF Chairman, called the meeting to order at 6:40 PM and welcomed all attendees. He explained that the purpose of the Advisory Task Force (ATF) and ATF meetings was to facilitate input from respective ATF constituencies to the project team, and to disseminate information from the project team back to their constituencies. He noted that the study to develop long term improvements to the Spaulding Turnpike was approximately one year old, and that Phase 1, an inventory of existing study area transportation and environmental conditions, was complete and summarized in a Scoping Report. He suggested that, aside from offering input at the ATF meeting, the public was encouraged to contact their respective community groups and to bring ideas or issues of concern to any member of the ATF.

Chris Cross then explained the meeting protocol – following presentation of information, ATF members will be asked for comment or questions, followed by questions and comments from the public. At his request, the ATF members introduced themselves. Following the introductions, the draft meeting minutes of the March 31, 2004 ATF meeting were reviewed. Chris Waszczuk noted two (2) typographical corrections; the draft meeting minutes were then approved, as amended.

Chris noted that Gary Kassoff from the USCG was in attendance and would speak to navigation and bridge permitting issues. Chris stated that Chris Waszczuk and Frank O'Callaghan would discuss bridge and roadway alternatives, respectively. He thanked the public for coming out to the meeting, encouraged them to stay with the project, and emphasized that their input was needed. Chris reviewed the project schedule, noting that construction could begin in 2008 or sooner pending the availability of funding.

Chris Waszczuk then reviewed the meeting's agenda and noted that he hoped that the ATF, following the presentation on bridge and roadway alternatives, could narrow the range of reasonable infrastructure alternatives to carry forward in the study for detailed evaluation. He then introduced Gary Kassoff, Bridge Program Coordinator, for the USCG. Gary noted that the USCG is responsible for permitting the bridges and is a cooperating agency with the FHWA and others in the study of bridge improvements. He reviewed the permitting history of the bridges noting that the original 1930's permit was first modified in 1964 when the first Little Bay Bridge was constructed. The permit modifications incorporated in 1982 when the second barrel of the Little Bay Bridges was constructed, should have required the removal of the General Sullivan Bridge (GSB) since its transportation use had been terminated. The fact that the GSB had not been removed was a violation of federal law. Gary stated that the USCG has a responsibility to ensure that adequate vertical clearance under both the GSB and Little Bay Bridges (LBB) is maintained for navigational purposes. As the project advances, the USCG concerns will focus on addressing navigational needs, and the disposition of the GSB. If the GSB is not reused, the USCG will advocate for its removal due to its potential hazard to navigation. Gary noted that the LBB permit was last amended in 1982.

Peter Wellenberger asked if bicycle use is a viable reuse of the GSB from the USCG perspective. Gary replied that bicycle use is a viable transportation use of the GSB. Tim Roache, SRPC, and Peggy Lamson, Newington Selectwoman, noted that the GSB is designated as part of the state's bicycle route system; Gary stressed that the current permit for the General Sullivan bridge does not sanction its present use as solely a pedestrian and bicycle facility. With regard to navigational needs in the area, Sandy Hislop noted that some boaters from the Great Bay Marina have voiced concern about lowering the existing vertical clearance (VC). Gary responded that the USCG would not allow the existing VC to be reduced unless strong sentiment from the navigational community existed. He also stated that he/the USCG is looking for input on navigational needs, and that he will be reaching out to Sandy and others for their input. Chris Cross asked if the public had any concerns about navigation. There were none.

Chris Cross introduced Jim Garvin from the NH Division of Historical Resources who gave a brief history of the GSB. Jim noted that the GSB is the second highest ranked historic bridge in the state; its unique design is a testament to state-of-the-art design and construction in 1935, and construction of the bridge had a major impact on commerce and use of the Turnpike system. He stated that SHPO would advocate strongly for its preservation. Chris Cross noted that the significance of historic preservation would be taken into consideration with other issues, and suggested that if the bridge cannot be preserved in its current location, perhaps part of the structure could be preserved and relocated as a historic monument. Kate Mallon, a Portsmouth resident, expressed hope that the GSB could be preserved in its current location, noting her emotional attachment to the bridge. A Dover resident noted NHF&GD's proposal to reconstruct a boat ramp (in Hilton Park) in proximity to the GSB, and that the boat ramp project had been suspended pending the recommendations from the Newington-Dover Turnpike Improvement Study. He suggested that perhaps the NHF&GD project could be appended to the bridge project. Chris Waszczuk responded that NHDOT was aware of the boat ramp project and would coordinate with NHF&GD. Project mitigation may include constructing improvements to the boat ramp project. Discussion of the boat ramp project concluded with public comments identifying the need to improve boat launching capabilities, the need for

increased parking, the need for increasing the allowed boat speed in the channel due to the strength of the currents, and the idea of using boat registration fees to fund such projects.

Chris Waszczuk then prefaced his discussion of bridge alternatives by stating his hope that the ATF would be able to narrow the number of alternatives to carry forward for further evaluation based on the preliminary assessment of the conceptual alternatives to date. He reviewed the five (5) phases of the study process: phase 1 – scoping; phase 2 – development and screening of conceptual alternatives, and identification of a reasonable range of alternatives to carry forward for further evaluation; phase 3 – detailed evaluation of alternatives and recommendation of a preferred alternative and mitigation program; phase 4 – a public hearing to discuss the preferred alternative and mitigation program; and phase 5 – responding to comments on the evaluation of alternatives, the preferred alternative and the proposed mitigation program. He noted that the public hearing is tentatively scheduled for October 2005; he also mentioned that there was a project website, www.newington-dover.com, that hosts a wealth of project related information.

Chris then recalled that the ATF provided valuable feedback on the preliminary bridge alternatives at the March 31, 2004 ATF workshop which would be helpful in narrowing down the number of alternatives to carry forward. With respect to the General Sullivan Bridge (GSB), he reviewed general data – such as type of structure (steel truss), length (1,528'), width (24' curb-to-curb), width (275') of main navigation span, vertical clearance (48'-9", within center 100') – and the fact that the bridge was closed to vehicular traffic in 1984. He noted that the bridge is currently used by pedestrians and bicyclists. Chris then reviewed a number of factors which would affect rehabilitating the bridge such as bridge geometry and profile that limited driver sight distance to 45 mph; narrow cross-section; structural deterioration of deck, girders, truss members and joints; substructure deterioration below the water line; lead paint removal, and seismic vulnerability. He noted that the GSB could not be used as part of the traffic management plan for when the Little Bay Bridges are rehabilitated or replaced. Chris summarized the potential reuse and rehabilitation alternatives and associated costs, which ranged from a multi-use path for pedestrians and bicyclists ($19 M) to a pedestrian, bicyclist and transit vehicle only alternative ($22 M). A replacement bridge alternative (including the cost to remove the existing bridge) would cost approximately $36 M. Chris noted that removing the GSB under any alternative would cost approximately $5 M, and would not include the cost of replacing the pedestrian/bicycle connection. He also stated that future maintenance costs would approximate $4.3 M (2004 dollars) every 25 years to repaint and repair the structure, and $1.4 M (2004 dollars) every 35 years for deck replacement.

Chris followed his discussion of the GSB alternatives with a presentation on the Little Bay Bridge alternatives. He reviewed general data, such as length (1,589'), width (28' curb-to-curb, SB and 28'-6" curb-to-curb, NB), width (275') of main navigation span, and vertical clearance (46'-8", within center 100'). He then reviewed the existing bridge cross-section of two 12' lanes in each direction with two 2½' shoulders, and noted that future 2025 travel demand projections require four travel lanes in each direction. Rehabilitation and widening on the west side presents some construction challenges given the proximity of the GSB (approximately 15' between the GSB and widened LBB), but would minimize potential impacts on Hilton Park and the Bay (vicinity of Bloody Point) in comparison to the other alternatives. Widening on the east side would maintain the current distance between bridges, but would have a greater impact to the bay (vicinity of Bloody Point) and Hilton Park. Widening to both sides of the bridge would provide approximately 58' of separation between bridges, would still impact Hilton Park and the Bay shoreline area near Bloody Point, and would result in an inefficient construction method, working in the channel on both sides of the bridge. Traffic management during construction would also be more difficult.

Chris noted that constructing a new bridge, to replace both the LBB and GSB, would permit the current bridge profile to be improved. The existing profile provides a 60 mph design speed, while the posted speed on the bridge is 50 mph. Some have commented that the bridge profile contributes to the occurrence of accidents on the bridge. While the profile may be a contributing factor to accident potential, Chris noted other factors such as narrow/substandard shoulders, the many decision-points and traffic maneuvers on the bridge approaches and traffic congestion due to capacity constraints are prominent in the high accident potential in the area.

New bridge alternatives include double-decking and signature structures, in addition to steel girder and segmental concrete construction. The intent of double-decking was to reduce the footprint of the structure and thus reduce the impacts, particularly to Hilton Park. Chris noted the massive substructure required, the 30' in elevation between lower and upper decks, the necessity to close the lower level to traffic when constructing overhead, the elevated approaches to the bridge and the fact that impacts were similar to other less expensive bridge alternatives. With respect to the signature structures, he stated that both cable stayed and concrete arch bridges could reduce the number of piers in the channel, but both are costly. There is also a potential issue with the elevation of the main tower of the cable-stayed alternative extending into the controlled airspace of the Pease Tradeport.

Chris then reviewed the cost summary matrix of General Sullivan Bridge and Little Bay Bridges Combined Alternatives. The LBB alternatives, which included rehabilitation of the GSB ranged in cost from $68 M to $90 M. The LBB alternatives, which entailed removal of the GSB ranged in cost from $57 M to $100 M. Chris stated that he was hoping that the ATF could narrow down the number of alternatives to possibly three.

Chris Waszczuk then asked the ATF members if they had any questions. Hearing none, Chris Cross opened the questions to the public. A Newington resident asked if the $22 M cost of GSB rehabilitation included total loading for all vehicles. Chris Waszczuk responded that it did, and that reuse of the GSB to bicycles and pedestrians only would cost approximately $19 M.

There being no further questions on the bridge alternatives, Chris Waszczuk turned to Frank O'Callaghan to review the roadway alternatives. Frank began by describing the concept of level of service, noting the qualitative nature of the index of traffic operating conditions as measured by speed, delay and driver freedom to maneuver, comfort and convenience. Levels-of-service (LOS) range from "A" at best to "F" at worst, with LOS "B", "C", "D", and "E" representing the spectrum of conditions between "A" and "F". He noted that LOS "C" is usually used for design purposes, but that federal and state agencies generally accept LOS "D" for design when providing for LOS "C" would result in unacceptable impacts and/or costs. Frank stated the LOS "D" was the design criteria for the Newington-Dover improvement project, and that VHB had prepared a video and simulation of the varying levels-of-service along the Spaulding Turnpike to help ATF members and the public visualize the differences between levels-of-service.

Frank then played a video of traffic flow along the Turnpike at the Exit 6 interchange and the Newington approach to the bridge that depicted the increasing density of NB traffic flow as one progresses from LOS "A" to "E". He noted how traffic flow simulations can be calibrated based on actual traffic volume counts and observations, and then displayed a comparative simulation of traffic flows under LOS "C", "D", and "E" conditions for the Turnpike.

Following the level-of-service presentation, Frank reviewed the three (3) Dover roadway alternatives noting that two-way flow on the Turnpike overpass and the provision of a new NB on-ramp were common to all alternatives. He noted that Alternative 1 provided a two-lane loop ramp for the NB

Turnpike connection to WB US4, and that the at-grade circuitous E-W connection of Hilton Park via Boston Harbor Road, the overpass, and a new roadway on the east side of the Turnpike resulted in a relatively high number of property impacts in comparison to the other alternatives. Frank stated that the E-W connection of Hilton Park for local motorized and non-motorized traffic is important to the City of Dover, and that the City is willing to accept less efficient traffic operation at Exit 6 if property impacts can be reduced. Frank then described Alternative 2, which provides a grade-separated E-W connection of Hilton Park, and provides the NB Turnpike connection to WB US4 via a diamond-type signal controlled intersection – as opposed to the double loop ramp. In comparison to Alternative 1, property impacts are substantially reduced and traffic operation at the four (4) signalized intersections are satisfactory – LOS "C" or better. Alternative 3 modifies Alternative 2 by providing a grade separated connection between Spur Road and Boston Harbor Road. This connection – under the overpass and the SB on-ramp – enables local traffic to connect with Boston Harbor Road and Hilton Park without traversing the interchange area, and allows elimination of the Spur Road traffic signal by restricting turning movements to right-turns only. Previous ATF comments have favored Alternative 3, and suggested moving the Hilton Park grade-separated connection further south, as close to the channel as possible. Frank stated that the preliminary engineering study indicates the feasibility of relocating the connection closer to the channel as suggested, and presented a conceptual plan that modified Alternative 3 to that effect. In this way, an additional span could be added to the bridge – at additional cost – which would provide an opportunity to open the area under the span as additional park area.

Frank then reviewed the Newington roadway alternatives reminding all that Newington representatives had initially indicated community support for Alternatives 6 and 7 of the 2000 Spaulding Turnpike Feasibility Study. Alternative 6 maintains interchanges at both Exits 3 and 4, provides a roadway connector and a right-of-way for a future railroad connection (paralleling Patterson Lane) to the Tradeport at Exit 3, and would provide an ideal at-grade location for a crossover between the NB and SB barrels of the Turnpike for incident management. He noted that Alternative 6 lacked a connection between the Turnpike and the industrial area located between Shattuck Way and the riverfront, and that local traffic from Nimble Hill Road to Woodbury Avenue is required to use the Turnpike (assuming that drivers decline to use the circuitous back route of River Road and Shattuck Way). Frank also noted that the SB off-ramp to Woodbury Avenue at Exit 3 could be relocated slightly to the north (Alternative 6 Revised) to avoid impacting access to the City of Portsmouth's water tower. Alternative 7 combines Exits 3 and 4 at a new single point diamond interchange. This alternative provides roadway connectors to both the Tradeport and the River Road-Shattuck Way industrial area, free-flow connections between the Turnpike and Woodbury Avenue, right-of-way for a future rail connection to the Tradeport that parallels Patterson Lane, and a local connector between Nimble Hill Road and Woodbury Avenue. Local access to future development at the former drive-in site could also be provided. Projected traffic volumes require a double NB on-ramp, which is problematic given the limited distance to merge prior to the bridge. The elevated structure of the Turnpike will present a major visual impact, and the cost of the interchange (based on the 2000 Feasibility Study) will be approximately 50 percent higher than Alternative 6.

Alternative 9 combines Exits 3 and 4 at Exit 3 via a SB two lane loop off ramp and a NB diamond type interchange. The local roadway connection to the Tradeport and the River Road – Shattuck Way industrial area is provided adjacent to the existing railroad right-of-way, which is preserved for a future connection to the Tradeport. A local roadway connects Nimble Hill Road to Exit 3 and Woodbury Avenue. The distance between the two-lane NB on-ramp at Exit 3 and the Little Bay Bridges is adequate for traffic merging prior to the bridge. Access to the former drive-in site could be provided from the local connector. Frank noted that the ATF reviewed Alternatives 6, 7, and 9 at the March 31 workshop meeting, and advised VHB to drop Alternative 7, and to focus on combining the

best elements of Alternatives 6 and 9 into a new concept. To that end, he then described Alternatives 10 and 11.

Alternative 10 is similar to Alternative 9 in that it combines Exits 3 and 4 at Exit 3 for SB traffic, and maintains the local roadway connection to the Tradeport and the River Road – Shattuck Way industrial area adjacent to the existing railroad right-of-way, which is preserved for a future connection to the Tradeport. The local roadway connection from Nimble Hill Road to Exit 3 and Woodbury Avenue is also maintained. However, the SB off-ramp at Exit 3 has been converted from a loop ramp – under Alternative 9, to a diamond configuration, and Alternative 10 also provides NB off- and on-ramps at Exit 4 (River Road). Alternative 11 is similar to Alternative 10, with the exception that the local connector to the industrial area and the preservation of a future rail right-of-way connection to the Tradeport have been relocated south to the Exit 3 interchange/Patterson Lane area. This results in a tri-level interchange area with the rail corridor and industrial access road running under Woodbury Avenue and the Turnpike, and the Woodbury Avenue extension traversing above the Turnpike to intersect the new connecting roadway to Nimble Hill Road.

Following Frank's presentation, discussion ensued. Tim Roache asked if there was adequate NB traffic weaving distance between the Exit 3 on-ramp and the Exit 4 off-ramp under Alternatives 10 and 11. Frank stated that there was sufficient weaving distance of approximately 2,000'. A Homestead Lane resident in Dover, referred to Dover Alternatives 2 and 3 and asked if the traffic signal operations at the Dover Point Road intersection located to the east of the NB off-ramp would result in queuing of WB vehicles and blockage of the Homestead Lane intersection. Frank responded that delays to WB vehicles would be minimal due to the low volume of Dover Point Road traffic entering the traffic stream. As such, potential blockage of Homestead Lane by WB queuing of vehicles is unlikely. A Newington resident asked if the SB to NB median turnaround between Exits 4 and 3 would be eliminated. Yes – as part of the Interim Safety Improvements, scheduled for 2005 construction. A Dover resident raised concern over noise attributed to proximity to the Dover toll plaza. Chris Waszczuk responded that noise mitigation is part of the study and, based on design criteria, monitoring of existing conditions and modeling of future conditions, mitigation may be appropriate. As concept alternatives are developed, mitigation plans will be refined, as required. Another resident stated that existing noise laws, *vis-à-vis* motorcycles and trucks, need to be enforced.

Chris Cross reminded the ATF and public that the Dover toll facility was not part of the study and there is no plan to relocate the toll facility. Comments or questions regarding tolls in general or the Dover toll plaza in particular should be addressed to one's state representatives in Concord. A resident expressed frustration with the lack of enforcement to reduce SB speeding and traffic weaving during the AM peak period; Chris Waszczuk responded that public safety and incident management is a priority for NHDOT, and that NHDOT has conveyed such information to local and state public safety officials. He noted, however, that public safety officials have limited resources, and that the Newington-Dover study area is very compact and creates challenging conditions for traffic enforcement. Kate Mallon, Portsmouth resident, inquired as to the difference between solid double white versus solid double yellow pavement markings. Chris responded that both solid, double lines (either yellow or white) have the same meaning – do not cross. Solid double yellow markings are used between opposing traffic flows; solid double white markings are used between same directional traffic flows. He noted that pavement markings and signage on the Little Bay Bridges and approaches have been improved and conform to the Manual on Uniform Traffic Control Devices. A resident inquired as to the potential noise and air quality issues if the profile of the Turnpike is raised. Chris responded that potential air quality and noise related impacts of alternatives that included raising the profile of the Turnpike would be assessed as part of the study.

Discussion ensued on bridge alternatives. A resident asked, assuming the rehabilitation of the GSB, any thought of utilizing the GSB and Boston Harbor Road for through traffic emanating from US4? Chris Waszczuk responded that the limited width of the GSB, and the need to accommodate pedestrians and bicyclists, would likely prohibit through traffic use. Frank O'Callaghan added it was preferable to separate local traffic from through traffic and avoid the impact of through traffic on the residents of Boston Harbor Road and Dover Point Road. A resident then questioned the expenditure of $22 M for rehabilitation of GSB assuming limited reuse of the bridge. Bruce Woodruff responded that a potential transit reuse would be compatible with pedestrians and bicyclists, and might justify the $22 M rehabilitation cost. Kate Mallon expressed a desire to save the GSB, and suggested incident management as a potential reuse. Cynthia Copeland asked Steve Well's opinion *vis-à-vis* transit use of the GSB if there was an incident on the LBB. Steve responded that COAST would normally use the Turnpike. Bruce Woodruff added that his proposal for transit use is for the future, not as incident management for current conditions. A resident followed up asking if the GSB could be reused as part of a short term traffic solution. Chris Waszczuk responded that the GSB would not be suitable for such use or for traffic control during reconstruction of the LBB primarily due to its narrowness and profile. Chris Cross confirmed that the narrowness of the GSB is problematic for two-way traffic. Related to the Dover side of the channel, a resident asked if the proposed grade separated E-W connection running under the Turnpike connecting Hilton Park would have adequate vertical clearance and turning radii for trucks, noting that large trucks are sometimes used to transport boats to and from the boat ramp. Frank responded in the affirmative.

At this point, Chris Waszczuk noted that the project was approximately at the mid-point of Phase 2 of the study, and that he would propose that the ATF consider the following range of reasonable infrastructure alternatives to carry forward:

- Rehabilitation and widening of Little Bay Bridges with the General Sullivan Bridge rehabilitated.
- Rehabilitation and widening of the Little Bay Bridges with the General Sullivan Bridge removed.
- Replacement of the Little Bay Bridges with the General Sullivan Bridge removed.

With respect to these three (3) bridge alternatives, Chris proposed that the rehabilitation/widening or bridge replacement should occur on the west side of the existing LBB to minimize impacts on the bay/shoreline and on Hilton Park. As a side note, Chris stated that TDM alternatives were also being developed and would be discussed at the next ATF meeting. He further noted that despite the most optimistic projection of TDM impacts, 4-lanes of travel would likely be required per peak direction of flow on a daily basis, i.e. four lanes SB in the morning peak hour, and four lanes NB in the evening peak hour. With respect to roadway alternatives, Chris proposed carrying forward Alternatives 2 and 3 in Dover and Alternatives 10 and 11 in Newington. A resident asked if Alternatives 2 and 3 would require a new bridge over the Turnpike at Exit 6. Chris responded in the affirmative.

Chris Cross suggested that the ATF first discuss the bridge alternatives. With respect to the bridge replacement alternative, style of new bridge is still an open question. Chris Waszczuk noted that a new bridge would afford the opportunity to improve the roadway profile. He reminded all that the existing profile – which would be maintained under the rehabilitation/widening alternatives – meets 60 mph design speed criteria and that the bridge is posted for 50 mph speed limit. The NHDOT is satisfied that the current profile is acceptable, and that other roadway features – such as narrow shoulders and proximity of traffic maneuvers (e.g. traffic weaving and merging) on the bridge approaches will be improved under all alternatives. Chris also noted that the relatively high cost of some of the alternatives could delay construction as adequate funding is procured. Bruce Woodruff observed that a new bridge would convey a more open feeling towards Hilton Park. Chris Waszczuk

concurred, but noted the greater cost. Chris Cross asked if a new bridge would meet current seismic standards. Chris Waszczuk responded in the affirmative, and noted that rehabilitation alternatives would also include seismic retrofits of the existing structure to meet current standards. A resident suggested that the new bridge alternative might allow future rail use of the existing bridge. Jack Newick asked if the life spans were equal for both the rehabilitation alternatives and the new bridge alternative. Chris Waszczuk responded that the life spans were indeed equal. Gary Kassoff, USCG, stated that the GSB must have a current reuse, i.e., it cannot be preserved for a "probable future" use such as rail. A resident opined that if spending a lot of money is a given, then the new bridge is preferable.

Chris Waszczuk stated that cost is a major consideration. He noted that $100 M is currently programmed in the 10-year Transportation Plan for the total project. If $100 M is spent on the bridges, there will be no funds remaining for the roadway improvements. Chris reviewed the Summary Cost matrix of combined bridge alternatives noting the cost implications of the cable-stayed replacement bridge. Bill O'Donnell noted the range of rehabilitation alternative costs and the relatively high cost and minimum additional benefit of replacement bridge alternatives in comparison to the rehabilitation cost alternatives. In response to a question, Chris Waszczuk noted that the length of bridge was assumed to be the same as the existing structure for all cost estimates. In actuality, if the existing bridge were to be lengthened or a proposed replacement structure extended to improve the cross connection between the halves of Hilton Park, the bridge cost would increase accordingly. Bruce Woodruff added that cross connectivity at Hilton Park is important, as is no net loss of parkland. In response to a question, Frank O'Callaghan stated that costs of roadway alternatives are currently being updated and/or developed as the case may be. Steve Wells inquired as to what alternatives would be eliminated by endorsing the three bridge alternatives as proposed. Chris Waszczuk responded that the double decker rehabilitation, and the segmental concrete and steel girder replacement alternatives would be dropped. Steve Wells then moved that the ATF endorse the three (3) bridge alternatives as proposed. Without further discussion, the ATF unanimously endorsed advancing the three bridge alternatives, as proposed.

Chris Cross then initiated discussion of the roadway alternatives. With respect to Dover, Chris proposed advancing Alternatives 2 and 3. There was no further discussion, and the ATF unanimously endorsed Alternatives 2 and 3 to be advanced. Chris then noted the drawbacks to Alternative 6 in Newington – local connectivity and industrial area access. With respect to Alternatives 10 and 11, Steve Wells questioned whether there was adequate merge distance between the NB Exit 4 on-ramp and the LBB. Both Frank O'Callaghan and Mike Dugas responded that design of the on-ramp would allow sufficient distance for the on-ramp traffic to merge with the through traffic. John Burke inquired as to the benefit of the Tradeport connection to Exit 3. Frank responded that as the Tradeport is built out, over 500 peak hour trips from the north might enter and exit the Tradeport via Exit 3. He added that this access will serve to extend the service life of Exit 1, particularly during the weekday PM peak hour, by reducing the heavy volume of left-turns from Pease Boulevard headed NB onto the Turnpike. Maria Stowell requested that the location of the Tradeport connector be realigned to reduce potential impact on developable land abutting Aboretum Drive. Frank O'Callaghan will follow up. The owner of the Exxon service station located at the Nimble Hill Road intersection with the Turnpike expressed his concern that his business will be adversely affected due to the lack of access to the Turnpike under Alternatives 10 and 11. As proposed, site access would be restricted to the local roadway connecting Nimble Hill Road to Woodbury Avenue and Exit 3. Chris Waszczuk responded that provision of an off-ramp from the Turnpike to Nimble Hill Road – and access to the Exxon site – may be difficult to provide, but will be explored. With no further discussion, the ATF unanimously endorsed advancing Alternatives 10 and 11 with consideration of the Nimble Hill Road off-ramp, and the realignment of the Tradeport connector as discussed.

The next meeting of the ATF was tentatively scheduled for June 23, 2004 at Dover City Hall. Chris Cross thanked all in attendance for their interest and participation. He reminded all of the project website, www.newington-dover.com, as a means of staying in touch with the project.

The meeting was adjourned at 9:45 PM.

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Meeting Notes

Attendees: Marlon Frink, Newington
Chris Waszczuk, NHDOT
Bruce Woodruff, Dover
Tom Fargo, SRPC
Jack Newick, Newington
Bill Oldenberg, NHDOT
Bill O'Donnell, FHWA
Steven Wells, COAST
Peter Wellenberger, NHF&G
Marc Laurin, NHDOT
Tim Roache, SRPC
Frank O'Callaghan, VHB
Howard Muise, VHB
Dave Wilcock, VHB
Peter Walker, VHB
Members of the Public

Date/Time: June 23, 2004

Project No.: 51425

Place: Dover City Hall

Re: Newington/Dover (11238)
ATF Meeting No. 7

Notes taken by: Peter Walker

The seventh meeting of the Newington Dover EIS project Advisory Task Force was held on June 23, 2004. The vice chair, Marlon Frink called the meeting to order at 6:30 PM. The chairman of the ATF, Chris Cross had been detained and was not able to attend the beginning of the meeting.

Marlon reviewed the purpose and role of the Advisory Task Force (ATF). The ATF then reviewed the draft minutes from the previous ATF meeting. Marlon called for a motion and vote to accept the meeting minutes and they were accepted unanimously as submitted, with the abstention of Tom Fargo, who was not in attendance at the previous meeting. Marlon then turned the meeting over to Chris Waszczuk to provide an overview of the evening's agenda.

Chris provided an overview of the topics to be discussed, including a review of transportation demand management strategies (TDM) such as rail, bus, high occupancy vehicle (HOV) options, reversible lane options, and park and ride facilities. The meeting will include a review of the project team's recommendations for which alternatives should be carried forward into the DEIS. Finally, preliminary results from the environmental screening phase of the project would be discussed in the form of an "environmental constraints matrix." Chris emphasized the value of input from the ATF and public to the project team.

Frank O'Callaghan listed TDM strategies that are being considered by the project team. The alternatives were developed in coordination with the rail and bus operators in the region and regional planning staff. The project team had met with these agencies to understand the existing public transit infrastructure in the area and to discuss ideas for enhancing and improving transit. The goal of all the TDM alternatives is to reduce the volume of traffic on the Spaulding Turnpike in the project's study area. Once a preliminary list of transit options had been developed, the consulting team met again with representatives of the transit providers and the regional planning staffs to review the analysis of those options. Frank then described the alternatives.

RAIL ALTERNATIVES

Expansion of the Downeaster Service

The first rail alternative examined would involve expanding the Downeaster service by one train set. Currently, the Downeaster makes four round trips per day through the study area. However, only one of these trips coincides with the morning peak hour commuter time. Thus, the existing service is really not providing commuter service. By adding an additional train, it is expected that the service would be more convenient to commuters in the study area. The additional train set would run from Dover station to Boston during the weekday AM peak hour, and return from Boston during the PM peak hour. This alternative would require construction of a new layover facility in Dover in addition to the purchase of a new train set.

Based on a conceptual design, the infrastructure investment for this option is expected to cost between $11.5 and $17 million. The higher figure would allow the service to serve Rochester, rather than terminating in Dover. It was assumed that there will not be a need to double track the existing rail corridor to the Massachusetts state line. If double tracking is required, then the capital investment would increase to about $110-$115 million. Frank noted that these estimates (for all rail and transit alternatives) did not include operational costs.

Regional Commuter Rail Service

A second rail alternative would involve development of a new commuter rail line to carry passengers between Rochester and Portsmouth. This alternative would utilize the existing Conway Branch line south from Rochester and then run along the Main Line West to Dover. From Dover there are two (2) options: continuing along the MLW to Rockingham Junction, and then running east to Portsmouth along the Portsmouth Branch line; or running south from Dover on new right-of-way paralleling the Turnpike and crossing the channel to meet the Newington Branch Line.

Capital cost estimates for these options range from approximately $145 to $170 million. This would involve upgrading the existing rail lines, purchase of new train sets and construction of new train stations in Rochester, Somersworth, Newmarket and Portsmouth. The cost estimate does not include operational costs. Preliminary ridership estimates would result in less than 100 peak hour vehicles being removed from the Turnpike for the Rockingham Junction option, and less than 150 vehicles being removed from the more direct route paralleling the Turnpike.

Commuter/Tourist Service to Conway

A third rail option would involve extension/upgrade of rail service from Dover along the Conway Branch to Rochester and then north to Conway. This option assumes that the NHDOT may restore the 22-mile of missing track in Ossipee, and could be developed to handle freight service and also serve as a connection for tourists visiting the North Country or Boston. A preliminary cost estimate is approximately $40 million.

Frank explained that ridership numbers are very preliminary and that these rail options appear to remove approximately 50 to 150 peak hour vehicle trips from the Turnpike, a relatively low number in relation to the total traffic volume along the Turnpike.

Pease's Spur
A now inactive rail connection exists in Newington which runs from the industrial area on the south and east portion of the study area (the Newington Branch Line), across the Turnpike and then into the Pease Tradeport. The rail right-of-way is at-grade and was active when Pease was used as a military base. Frank pointed out that all of the Newington alternatives maintain a right-of-way corridor for future restoration of this rail service.

Marlon Frink asked Frank to put the estimated rail ridership numbers in the context of the total traffic in the corridor. Frank replied that, based on preliminary estimates, the rail alternatives would remove less than 150 peak hour vehicles from the Turnpike. Currently there's between 3,000 and 4,000 vehicles in the peak direction during the peak hours. That number is expected to increase to 5,000 - 6,000 per hour in the 2025 design year.

BUS ALTERNATIVES

Frank O'Callaghan then described the three (3) bus alternatives that had been developed and preliminarily assessed:

Expand Intercity Service (Rochester-Boston)
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. The cost of this alternative would be approximately $11.5 million in capital investment.

COAST Express Service
Frank explained that 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. Frank explained that the express service could be further enhanced by adding Park and Ride facilities at Exit 9 in Dover and at Exit 12 in Rochester. The cost estimate for these Park and Rides is approximately $5 million. The Park and Rides would allow commuters a place to transfer between their private vehicles and the bus service, as well as support ride sharing and van-pooling.

Enhance Local Bus Service
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 additional 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 Route 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. Capital cost for this enhancement is expected to be about $6.5 million.

There is some overlap among these bus alternatives. Therefore, if they were all bundled and implemented together, the capital cost of the entire package would be about $16 million. Preliminary analysis indicates that ridership for these bus alternatives would be approximately equal to the rail alternatives - at a fraction of the cost. Frank noted that analysis of ridership is on-going.

Peter Wellenberger commented that the newspaper has noted that the Downeaster ridership is down. This prompted Bruce Woodruff to reply that the ridership from Portland to Boston is down, but overall ridership on the Downeaster is up. It would therefore be a mis-statement to generalize that ridership is down. He also noted that COAST is expanding its local service in Dover.

Bruce encouraged the project team to look closely at local transit services. He noted that bus service will be ineffective if buses cannot get through congestion on the bridge. He recommended that consideration be given to utilizing the General Sullivan Bridge as an exclusive bus lane. He noted that moving traffic would be particularly important during construction. Marlon Frink commented that perhaps an exclusive bus lane could be used in combination with an HOV lane. Bruce reiterated that it would be particularly important to allow for an exclusive bus lane during construction. He felt that this could provide strong incentive for a shift in commuting behaviors in the area. Frank O'Callaghan replied that overall maintenance of traffic will be a challenge and that provision of an express bus lane would be an advantage if feasible.

Bruce believes that the issue is directly related to the fate of the General Sullivan Bridge. His understanding is that there is only a $5 million incremental cost to allow the General Sullivan to accommodate bus traffic. Chris Waszczuk explained that the rehabilitation of the General Sullivan Bridge would take at least one year and questioned whether the ATF would recommend that the General Sullivan Bridge be the first element of construction, or whether it is advisable to begin construction on the roadway first. Tom Fargo stated that the fate of the General Sullivan Bridge needs to be determined at the outset. Chris Waszczuk stated that the General Sullivan Bridge requires major rehabilitation, and there is, in fact, an $8 to 10 million incremental cost to accommodate buses.

Steve Wells asked Frank O'Callaghan how the consulting team had arrived at the cost estimates presented for TDM strategies. He pointed out that he believes that the express bus service can be implemented for far less than the $5 million figure quoted earlier by Frank. Frank clarified that the $5 million is actually the cost to design and construct Park and Rides at Exits 9 and 12. It does not include the capital cost and operation of the bus service. The express bus service is already funded and programmed for 2006.

Tom Fargo inquired as to the origin and destination used to predict ridership for the rail options, in particular the Downeaster alternative. Do the ridership figures assume a Dover to Boston trip? Frank confirmed that assumption. Tom stated that he was not surprised by the relatively low ridership estimates for the rail alternatives.

Marlon asked if it would be possible to summarize the alternative analysis in a table format. Chris Waszczuk replied that a matrix is being developed for that purpose and that information would be presented later in the discussion. Marlon asked if the DOT was looking to the ATF to make a recommendation on the alternatives. Chris replied that it was the Department's hope that the ATF would reach consensus this evening on the alternatives to be carried forward.

At this point in the discussion Marlon provided an opportunity for members of the public to ask questions or provide comment. There were no comments from the public attendees at this point.

HIGH OCCUPANCY/ REVERSIBLE LANES

Frank O'Callaghan explained that members of the public and the ATF had inquired about whether High Occupancy Vehicle (HOV) lanes could potentially reduce the scale of the future roadway and bridge infrastructure improvements. Frank explained that two main options for HOV lanes were examined in comparison to a standard 8-lane section. He used a graphic to illustrate the cross-section of each of the options. The first option would be a 2+2+2 lane cross section, with the center two lanes intended as HOV or reversible lanes. The total cross-section of this alternative would be approximately 132 feet. However, the results of the traffic modeling completed to date indicate that a minimum of three lanes in the off-peak direction during summer and fall peak hours would be needed to meet future travel demands. Therefore, this option is not being pursued.

A second HOV concept would involve a 3+1+3 lane cross-section. The center lane would be an HOV or a reversible lane. Frank explained that in order for HOV lanes to be efficient, they must be used by approximately 800 vehicles or more per peak hour. However, the traffic model predicts approximately 300 vehicles per hour would use the HOV lane assuming it would start at the Dover toll plaza and extend to I-95 in Portsmouth. Since potential traffic volumes would not justify this alternative, a second option was explored running from just south of Exit 6 to just north of Exit 1. This alternative would potentially maximize HOV ridership by extending HOV access to traffic from US 4, Dover Point Road, and the Tradeport. Unfortunately, given the compactness of the study area, the relatively short distance between Exits 6 and 1, and the relatively long lengths of roadway necessary to safely accommodate the merging and weaving of traffic to access and egress the HOV lane, this alternative was infeasible from a traffic safety and operation perspective. A third alternative was considered which assumed an HOV lane running from the Dover Toll Plaza to Exit 1. Similar to Alternative 1, the potential ridership estimate falls approximately 40% below the necessary threshold to justify its use.

In light of the infeasibility of HOV use, the 3+1+3 lane concept was tested from a reversible lane use perspective. Under this concept, the reversible lane would be utilized by the peak flow in the peak hour (i.e., southbound in the AM and northbound in the PM) and open to all vehicles. If this reversible lane extended from the Toll Plaza to Exit 1, approximately 1,500 vehicles per peak hour would use the lane, which is enough ridership to justify its use. Frank O'Callaghan explained that this 3+1+3 cross-section would be approximately 152 feet in cross-section due to the shoulders and barriers that would need to be constructed between the reversible lane and the other north and southbound lanes. He noted that this cross-section would actually be wider than the approximately 146 foot cross-section required for a typical 8-lane (4 NB and 4 SB) cross-section. As such, VHB concluded that the 3+1+3 reversible lane concept failed to offer a significant advantage over the traditional 8-lane cross-section -- the 3+1+3 cross section was greater in width, and the 3+1+3 presented additional operational and maintenance costs.

In response to the information presented by Frank, Marlon Frink commented that the larger cross-section associated with a 3+1+3 alternative would also likely increase the cost of the project. Frank pointed out that the 3+1+3 cross-section or any contra-flow option would also have additional operational costs related to plowing, policing and operating the HOV or reversible lane. Frank also pointed out that, because of the number and close spacing of interchanges in the 3.5 mile study area, one of the lanes is primarily functioning as an auxiliary lane for traffic merging from an on-ramp and diverging to an off-ramp, or for weaving traffic between interchanges.

At 7:45 PM, ATF Chair Chris Cross arrived.

Tom Fargo commented that the HOV/Reversible lane concepts do not make sense from a "Yankee thrift" perspective. He questioned why one would put jersey barriers where cars could otherwise travel. Marlon wondered whether it would be possible to operate an HOV/Reversible lane by putting the Jersey barrier on a rail such that it could be moved from one side to the other automatically. Bill O'Donnell pointed out that the HOV lane would require a break down lane, which would be used for disabled motorists and possible police enforcement. Marlon asked whether the bridge design would allow for the future conversion of the planned breakdown lanes to a travel lane. Frank O'Callaghan responded that some flexibility could be designed into the bridge layout.

Bruce Woodruff expressed the opinion that the 8-lane cross-section should be designed so that it could allow creation of an exclusive bus lane at some point in the future. Tom Fargo mentioned that he understood that several HOV lanes elsewhere in the country had recently been discontinued, since they were not adequately used.

Jack Newick had recently traveled in the Washington DC area and mentioned that HOV lanes are used extensively in that urbanized area. Bill O'Donnell suggested that HOV lanes can be controversial since they often are underutilized. He noted that many states investigate HOV use and subsequently drop the idea for any number of traffic operational and safety reasons. Chris Cross asked whether it would be possible to use the center median area of the 8-lane section as a Bus/HOV/Reversible lane at some point in the future. Frank O'Callaghan replied that this would certainly be possible. Bill O'Donnell pointed out that Federal Highway has standards for the design of roadway shoulders, but that some design exceptions are allowed under certain circumstances. Chris Cross suggested that the median cross-section should be designed wide enough to accommodate a future transit or HOV use.

Tim Roache, SRPC, requested that any new bridge allow a 10 to 12-foot lane for bike and pedestrian traffic if the General Sullivan Bridge is removed. Chris Waszczuk and Frank O'Callaghan replied that all bridge alternatives would accommodate pedestrian and bike traffic.

EMPLOYER-BASED TDM

Frank O'Callaghan reviewed employer-based TDM strategies that are possible and which would be assessed including: transit subsidies, ride sharing, vanpools, variable work hours, bike and pedestrian facilities, on-site amenities (daycare, cafeteria) and other measures.

ENVIRONMENTAL CONSTRAINTS MATRIX

Frank O'Callaghan distributed a preliminary environmental constraints matrix to the ATF. He explained that the matrix attempts to summarize the major environmental, construction cost, and traffic related issues associated with each alternative. Bearing in mind that the current project phase is intended to provide an initial screening of alternatives and not a full impacts analysis, the matrix will help interested parties better understand the decision making process and the relative merits of each infrastructure alternative.

Frank reviewed some of the data from the draft matrix. For example, he pointed to the contrast between Dover roadway Alternatives 1 and 2, highlighting that Alternative 1 has greater wetland impact, as well as far greater property impacts and costs. He explained that some of the parameters that will be used and described in an environmental screening in the rationale report are qualitative. The data in the table should be regarded as preliminary and NHDOT and the consulting team are soliciting ATF comments on the contents and format of the matrix.

A general discussion of TDM feasibility followed.

Tom Fargo observed that it is often quite difficult for employees to vary their work hours, given that a working family's schedule is often set by daycare opportunities - that can preclude carpooling. He also pointed out employers typically do not provide lunch service on site and that forces many workers to bring a car to work. Frank O'Callaghan offered that there is some peak spreading at the Pease Tradeport due to the mix of land use -- office, R & D, light industry- and varying work schedules, and that some employers/tenants are now providing on-site cafeterias for employees.

Steve Wells stated that people will use a bus as an option if it runs frequently enough. Often the decision to use public transit is dictated by the type of job that a person holds. He noted that management and sales positions, which frequently need to travel, have a difficult time using public transportation. However, positions with set hours and a set location will typically have a much easier time using public transit. Jack Newick pointed out that there was excellent bus service in the seacoast

area when he was a young man and that over time service has declined. Marlon Frink observed that Americans are in love with their cars. Carpooling is underutilized and is not likely to be more fully utilized until there is a strong economic incentive to do so.

Tim Roache, SRPC, inquired whether the TDM ridership estimates had been analyzed in light of the operational improvements resulting from a wider highway. He suggested that TDM strategies should be analyzed under a constrained traffic-flow condition. Howard Muise, VHB, explained that the TDM alternatives had in fact been analyzed under a 3-lane (LOS E) constrained traffic flow condition. He suggested that if further analysis indicates that a 3-lane cross-section plus a combination of TDM strategies result in a Level-of-Service D traffic operation, then that may be a feasible strategy for the project. Bruce Woodruff stated that the bridge and Turnpike widening to address the 2025 needs should reflect planning for mobility needs beyond 2025. Chris Waszczuk stated that the EPA has requested an analysis of a 3-lane cross-section with TDM strategies. It was the consensus of the ATF that an 8-lane cross-section provides the flexibility to respond to safety and mobility needs beyond 2025 without further widening of the bridges and Turnpike.

ALTERNATIVES TO CARRY FORWARD

Bridge Alternatives
Bridge alternatives have been discussed during previous ATF meetings. However, the project team has concluded that all of the bridge options should limit bridge widening or replacement to the west of the existing Little Bay Bridges (LBB) to reduce impacts to Hilton Park and Bloody Point Cove.

Frank summarized the three main options which are recommended for further consideration:

1.) Westerly widening of the LBB with retention of the General Sullivan. Under this alternative, the General Sullivan Bridge would be rehabilitated to serve pedestrian and bike traffic.
2.) Westerly widening of the LBB with a new multi-use path (16' wide) on the widened bridge. This would involve removal of the General Sullivan Bridge.
3.) Construction of a new bridge to the west of the current Little Bay Bridge. This option could involve construction of a signature structure such as a cable-stayed or a concrete arch bridge. This alternative would also require removal of the General Sullivan Bridge, and provision of a multi-use path (16' wide) on the new bridge.

Roadway Alternatives
Frank O'Callaghan reviewed the roadway alternative that the project team is recommending be carried forward for further analysis in the draft EIS.

Alternatives 2 and 3 in Dover at Exit 6 are similar in many respects – both are characterized by 2-way traffic flow on the Turnpike overpass; a new diamond type interchange in the northbound direction which eliminates the westbound loop ramp to US 4 and includes a new northbound on-ramp; a grade- separated connection under the Turnpike linking the eastside and the westside of Hilton Park; and less property impacts, less wetland impact, and less construction cost than Alternative 1. The only significant difference between Alternatives 2 and 3 is the grade-separated connection under the Turnpike overpass and SB on-ramp from US 4 between Spur Road and Boston Harbor Road that is provided under Alternative 3.

Newington Alternatives 10, 11, and 12 have several common features – a major interchange at Exit 3 to consolidate the majority of the movements presently occurring at Exits 4, 3, and 2(NB); Tradeport roadway connection to Exit 3 and a future grade-separated rail right-of-way connection between the

Tradeport and the Newington Branch line; an industrial roadway connection between Shattuck Way and Exit 3; local roadway connection between Woodbury Avenue and Nimble Hill Road; elimination of the existing SB off-and on-ramps to Nimble Hill Road; and provision of NB off-and on-ramps to River Road. The major difference between Alternatives 10 and 11 is the location of the connector to Shattuck Way and the location of the railroad right-of-way for the future connection to the Tradeport. In Alternative 10, these parallel connections are provided between Exits 3 and 4. Under Alternatives 11, these two grade-separated connections are provided at Exit 3, paralleling Patterson Lane. Alternative 12 modifies Alternative 11 by simplifying the roadway connection from Woodbury Avenue and Exit 3 to the Tradeport, and by modifying the SB on-ramp from Exit 3 to reduce wetland impacts and increase weaving distance between the SB Exit 3 on-ramp and the SB Exit 1 off-ramp. Frank noted that Alternatives 10, 11, and 12 could be modified to provide a SB off-ramp to Nimble Hill Road.

Bill O'Donnell pointed out that Alternative 11 and 12 involve the reconstruction and grade-separated extension of Patterson Lane under the Turnpike. He asked if an at-grade connection to Woodbury Avenue had been considered? Chris Cross replied that Newington feels that the grade-separated connection is an important feature to segregate industrial and truck traffic from the Shattuck Way industrial area without using Woodbury Avenue.

Tom Fargo asked why the connection from Woodbury Avenue to Arboretum Drive under Alternative 12 was placed so far to the west. He suggested that the horizontal curve in that roadway section be tightened to bring the intersection to the south and east. Marlon initiated a discussion of using Fox Run Road as a connection into Pease as an alternative. Chris Cross confirmed that the Newington Planning Board strongly desires a grade separated industrial traffic connection in the general area. Tom Fargo asked whether some of the large radius curves in Alternative 11 and 12 might be tightened up to decrease the footprint of these alternatives. Frank O' Callaghan suggested that the topography, grades and spacing required between ramps and the local roadway intersections determine the curvature and alignment of the connections. He indicated that VHB would review the alignment and design requirements

TSM ALTERNATIVES

TRANSPORTATION SYSTEMS MANAGEMENT (TSM)

Frank O'Callaghan then reviewed four TSM projects that had been previously discussed and endorsed by the ATF. Each of the following is recommended to be carried forward in the DEIS.

Dover TSM 1
Extension of the NB deceleration lane to the loop ramp leading to US 4 at Exit 6. 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 backing up from the loop ramp onto the Turnpike from blocking NB through traffic on the Turnpike.

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 2-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. By providing a two-way, grade-separated connection under the Turnpike, between Nimble Hill Road and River Road, the median turnaround can be eliminated, thus making the current weaving conditions unnecessary. The existing SB on-ramp from the grade-separated turnaround from River Road is also eliminated which removes another safety and traffic operational problem. This project is under final design and scheduled for construction in 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 exiting the Turnpike from Woodbury Avenue and for traffic exiting at River Road. The NB project 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 remain, resulting in peak hour congestion and vehicular delay.

SUMMARY

Frank summarized the TDM alternatives which are recommended for further study as follows:

- Expansion of the Downeaster Rail service between Dover and Boston assuming double tracking to the MA line is unnecessary.
- Preservation of the Pease rail spur connection.
- Expansion of intercity bus service between Rochester, Portsmouth and Boston.
- Enhancement of express bus between Rochester and Portsmouth.
- Enhancement of the local bus service, specifically COAST Route 2, Wildcat Transit Route 4, and the Tradeport Trolley Service.
- All employer-based measures.

Tim Roache, SRPC, commented that he assumed that a bike/pedestrian connection would be carried forward as part of the TDM package. Frank O'Callaghan confirmed that bike and pedestrian connections would be incorporated into bridge and roadway alternatives.

Chris Waszczuk solicited input on the list of recommend alternatives. The consensus of ATF was that the list of recommended alternatives to carry forward was appropriate. Jack Newick commented that the list seems "on the mark." Marlon Frink concurred.

SCHEDULE

Frank O'Callaghan reviewed some upcoming dates. He pointed out that there will be public information meetings on June 30th in Dover and on July 1st in Newington. The next ATF meeting is scheduled for August 25, 2004 in Newington.

Marlon solicited any further discussion from the ATF or public. There being none, the meeting was adjourned at 9:25 PM.

Transportation
Land Development
Environmental
Services

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Meeting Notes

Attendees: Chris Cross, ATF Chairman, RPC
Marlon Frink, Newington
Sandy Hislop, Newington
Rick Card, GDCC
Maria Stowell, PDA
Bruce Woodruff, Dover
Tom Fargo, SRPC
Scott Bogle, RPC
Cliff Sinnott, RPC
Dave Holden, Portsmouth
Bill O'Donnell, FHWA
Ed Woolford, FHWA
Chris Waszczuk, NHDOT
Mike Dugas, NHDOT
Marc Laurin, NHDOT
Tim Roache, SRPC
Frank O'Callaghan, VHB
Members of the Public

Date/Time: 8/25/04

Project No.: 5142500

Place: Newington Town Hall

Re: Newington-Dover (11238)
ATF Meeting No. 8

Notes taken by: Frank O'Callaghan

Chris Cross called the meeting to order at 6:35 PM by welcoming all and introducing the members of the Advisory Task Force. He noted that Chris Waszczuk and Frank O'Callaghan would update the ATF on the project status, and that ATF meetings are an excellent opportunity for all in attendance to provide input and feedback to the project team. Chris advised the attendees to feel free to contact NHDOT staff or any member of the ATF to offer comments or to raise a question. He reminded everyone of the project's website – www.newington-dover.com – which hosts a wealth of project related information including conceptual improvement plans, reports, and meeting minutes.

Chris then asked ATF members if there were any comments on the draft meeting minutes of June 23, 2004. There being no comments or revisions, the draft meeting minutes were unanimously approved by the ATF. Chris Cross then reiterated his request of meeting attendees to raise questions or offer suggestions by speaking up at the meeting, contacting the NHDOT or ATF representatives, or by logging onto the project website.

Chris Waszczuk then reviewed the meeting agenda, noting recent feedback from the public information meetings and meetings with the federal and state resource agencies. He stated that preliminary ridership estimates associated with various Transportation Demand Management (TDM) alternatives had been further developed. Chris noted that Frank O'Callaghan would address the

impact of these various TDM alternatives on future travel demand and level-of-service requirements for the Turnpike.

Frank began his presentation by referring to a number of questions and issues that were raised at the public information meetings held in June and July. He noted that, assuming current travel characteristics of Seacoast residents, future 2025 travel demands would require the equivalent of four travel lanes in each direction on the Little Bay Bridges (LBB) and mainline Turnpike. He stated that in addition to a basic 8-lane (four lanes in each direction) mainline alternative, the NHDOT has decided to also carry forward a 6-lane (three lanes in each direction) plus Reversible HOV/Transit center lane mainline alternative. Frank then referred to a number of specific questions and issues, which were raised at the Informational meetings:

- If 8-lanes (4-NB; 4-SB) were provided on the LBB and along the Turnpike, the Turnpike would begin to reach capacity (LOS D/E) in 2032.
- South of Exit 1 (Gosling Road), the 2025 Turnpike level-of-service (LOS) is 'C' in the weekday AM peak hour, and 'D' in the weekday PM peak hour.
- The 2025 LOS at the Woodbury Avenue/Gosling Road intersection will be 'C' under both weekday AM and PM peak hours.
- Conceptual Alternatives 10, 11 and 12 in Newington which entail reconstruction of the Woodbury Avenue (Exit 3) interchange impact the historic Isaac Dow House located on Woodbury Avenue. Frank noted that refinements of the concepts pertaining to the cross-section of Woodbury Avenue suggest that the potential impact on the Isaac Dow House property (and on the Beane Farm on the opposite side of Woodbury Avenue) can be minimized. Plan refinement and reviews is on-going.
- The consultant team has reconsidered the development of a 2-lane loop ramp to service westbound US4 drivers exiting the Turnpike northbound at Exit 6. It has been suggested that Alternatives 2 and 3 in Dover be modified to reflect the2-lane loop ramp. The consultant team remains unconvinced of the merits of this 2-lane loop ramp.
    - 2-lane loop ramps are uncommon; in light of the relatively high volume of traffic, and high volume of heavy commercial vehicles, operations will not be comfortable for the average driver;
    - The necessary modifications to the existing ramp geometry will, in conjunction with provisions for the new NB on-ramp, result in ROW/property impacts on the Homestead Lane properties;
    - The free-flow of vehicles from the ramp will be impacted by the limited capacity of US4; i.e., traffic flows could be better managed by signalized traffic operations at the ramp terminals;
    - The signalized/diamond interchange alternative provides a good level-of-service (LOS 'C') and better management of traffic flows without impacting the Homestead Lane property owners.

Frank then referred to the cross-section alternatives for the LBB and Turnpike. He noted that the 8-lane typical would be approximately 146' in width and suggested that the center 50' comprised of the median, inside shoulder areas and inside travel lanes could be reconfigured to provide either a center contra-flow reversible HOV/Transit lane, or concurrent HOV/Transit lanes in each direction. These alternatives would range in width from 146' to 154'. He offered these alternatives as demonstration of the potential flexibility of the 8-lane alternative, should reconfiguration in the future be warranted or desired.

Bob Landman noted that he had previously suggested development of a "Zipper" lane to NHDOT officials as a means of providing a center lane contra-flow HOV/Transit lane. The "Zipper" lane concept is a moveable barrier system that allows one to borrow a lane from the off-peak direction and utilize the borrowed lane for HOV's and transit vehicles traveling in the peak direction. In this way, the overall width of the cross-section is minimized. Frank responded that the "Zipper" lane would fall within the contra-flow center lane cross-section that he had previously described. Bruce Woodruff offered that he was concerned with the overall cross-section width, which he feels should be no wider than the eight lane cross-section (146'). He voiced skepticism about the potential utilization of HOV lanes, and suggested that a dedicated transit lane would be more effective. He stressed that Dover Point is a tightly constrained peninsula and the final pavement width should be utilized effectively.

Frank then proceeded to review a summary of ridership projections developed for a number of transit, rail and TDM alternatives. For each alternative, he noted the potential ridership, single occupancy vehicle diversion, and level-of-service assuming a 6-lane plus one HOV/Transit lane cross-section. He noted that the maximum number of HOVs (539) was approximately 250 vehicles less than the generally accepted viability threshold of 800 vehicles per hour for an HOV lane. Individual bus and rail alternatives ranged in diverted SOVs from approximately 30 to 95 vehicles resulting in Turnpike levels-of-service E-F. Employer-based TDM programs could potentially reduce peak hour SOVs by approximately 200 to 360 vehicles depending on the aggressiveness of the programs. Frank also noted that a combination of an aggressive employer-based TDM program with the three bus alternatives and the enhanced Downeaster rail service could potentially provide LOS 'D' in the AM peak hour, but would still fall short of providing LOS 'D' in the PM peak hour. He stated that this level of potential SOV diversion was part of the rationale for NHDOT's decision to carry the 6-lane plus HOV/Transit lane forward for further study.

Bill O'Donnell pointed out a typographical error on the Summary Table of Ridership, Vehicle Diversion and LOS by TDM Alternative. Under Rail Alternative 2B, the remaining PM peak hour NB traffic volume should be 5,977 versus the 5,496 volume shown. The resultant LOS 'F' does not change. Bill also questioned why the HOV Lane Alternative running between the Dover Toll Plaza and Exit 1 diverted a higher volume of SOV's than the HOV Lane Alternative running between the Dover Toll Plaza and I-95. Frank responded that the Exit 1 alternative provided access to the major employers at the Pease Tradeport. Bill Landman noted that enforcement of HOV lane utilization by multiple passenger vehicles could be by photography, and suggested that NHDOT investigate photo enforcement. Chris Waszczuk noted that legislation would be required to permit photo enforcement.

Dave Holden inquired as to the schedule and decision-making in moving forward to recommend a preferred alternative. Frank responded that the next phase of the project (the draft EIS) would begin in six to eight weeks, and take approximately 12 months to complete. This process would entail detailed analysis of the alternatives being carried forward. Chris Waszczuk added that the decision-making process would be a collective process, involving the Department and FHWA with input from the ATF, resource agencies, and general public through additional public information meetings. Dave asked if it would be feasible to design an 8-lane alternative with staged construction; he admitted to be struggling with envisioning an 8-lane alternative. Chris responded that, operationally speaking, two of the eight lanes (one in each direction) would function as auxiliary lanes allowing traffic to access and egress the Turnpike at the major interchanges at Woodbury Avenue (Exit 3) in Newington and US 4 and Dover Point Road (Exit 6) in Dover. Chris added that he envisioned a preferred alternative that would be comprehensive in nature and include TDM alternatives in addition to infrastructure improvements.

Chris Waszczuk then asked attendees if the project team had missed considering any type of viable alternative. Bob Landman suggested that employer cafeterias at the Pease Tradeport would support reducing daily vehicle trips generated by area employees. Maria Stowell responded that there are several employer-related cafeterias currently in use at the Tradeport and opportunity to increase that number as the Tradeport builds out. Tim Roache suggested that the total long- term transportation solution falls beyond NHDOT – it lies with the land use decisions that municipalities such as Newington, Dover, Portsmouth and others will make over time. Bill Burtis commented on the level of congestion during the current weekday commuting periods along the Turnpike, stating that there was a 20 to 30 minute period during the AM peak hour when traffic flow was significantly stalled. Frank O'Callaghan responded that the weekday evening period of congestion was longer than the AM period, given that there was a higher volume of traffic in the PM peak hour. He noted that both weekday AM and PM periods or windows of congestion would increase as future traffic volumes are projected to increase. Bill noted the 1.2 average vehicle occupancy as an assumption in converting rail and transit ridership estimates to estimates of SOV diversions. Frank responded that the travel characteristics of the Seacoast area were identified from the results of the June 2003 Seacoast Area Travel Survey.

Cliff Sinnott, acknowledging that enhancing or expanding the existing Downeaster rail service offered the advantage of building on an existing service, suggested that potential ridership might be increased if peak hour service could be increased from 1 run to 2. Frank responded that the project team would investigate the operational impacts and cost of an additional peak hour run. Jennifer Schroeder raised the issue of whether infrastructure improvements would in and of themselves generate additional travel demand. Chris Waszczuk responded that the potential for secondary growth and resultant traffic due to increasing the capacity of the Turnpike within the study area would be analyzed during the next phase of study. The project team will utilize a regional econometric model to assess such growth potential.

At this point in the meeting, Frank concluded his presentation by reviewing the summary tables comparing the resource impacts and estimated construction costs of the various interchange and bridge alternatives. One table summarized these impacts and costs assuming eight lanes on the bridge and mainline Turnpike. A second table compared these impacts and construction costs to an alternative that assumed six lanes on the LBB and Turnpike. As Frank reviewed this table, it was apparent that the differences in resource impacts and construction costs were relatively minor. Frank noted that, if one assumed a center, reversible HOV lane in addition to the six lanes, the cross-section width would be similar to the eight-lane alternative, and the corresponding differences in resource impacts and construction costs would be negligible.

Rick Fernald, representing the Newington Exxon Station and the owner of the convenience store located at the intersection of Nimble Hill Road and the Turnpike, asked if the Newington Alternatives (10, 11 and 12) could be modified to include an off-ramp from the Turnpike to Nimble Hill Road. Chris Waszczuk responded that such a modification is possible, and is indicated on the conceptual plans by dashed lines.

Cliff Sinnott asked if an 8-lane infrastructure alternative without TDM alternatives is realistic. Chris Waszczuk responded that a combination of infrastructure improvements with TDM is probably more realistic. Chris then stated that the Seacoast MPO had recently stated their concern of maximizing potential transit ridership through consideration of the dedication of an exclusive transit lane, and that the NHDOT had addressed that issue by carrying forward the 6 plus 1 alternative. He noted that the resource agencies had expressed similar comments vis-à-vis their support for consideration of the 6 plus 1 plus TDM alternative. Chris added that FAA representatives attended the August 5, 2004 resource agency meeting and have been invited to be a cooperating agency. With respect to the recent Seacoast MPO/TAC meeting, Tim Roache stated that the MPO has not reached a decision on

whether to conduct an additional traffic study to assess 2035 study area traffic conditions. Tim then confirmed with Frank O'Callaghan that an 8-lane alternative would not begin to reach capacity (LOS D/E) until 2032. Bill Burtis, noting that LOS 'D' would extend to 2032 and that construction could extend from 2008-2013, suggested that traffic conditions during construction would be an excellent opportunity to begin efforts to change attitudes and increase interest in transit.

Dave Holden complimented the NHDOT in the approach of casting a wide net on identifying and evaluating alternatives to meet the project's purpose and need.

As the meeting approached adjournment, Chris Cross reminded all that Phase 2 of the 5-phase study was concluding, and the time was at hand to speak up and raise any issue or question if one felt that any of the Alternatives being recommended for further study seemed infeasible, or if there are other alternatives or ideas that should be pursued. He stated that the project team is a year away from recommending a preferred alternative based on criteria discussed earlier under the summary table of resource impacts and construction costs associated with infrastructure alternatives. He noted that alternatives for the bridges, interchanges and various TDM actions have been recommended for further study, and he acknowledged that there are other alternatives that fall outside of this project that may contribute to improving regional mobility. The opportunity is at hand to state one's priorities. Bob Landman stated his preference for development of a "Zipper" lane. Chris Cross responded that the "Zipper" lane could be considered within the 3/1/3 alternative. Chris went on to add that toll-related issues are not part of this project; anyone wishing to pursue such statewide issues should take them up with the state legislature in Concord.

Bill Burtis stated that he wanted as few lanes on the bridge and Turnpike as possible. He felt construction of eight lanes for the bridge and highway was unimaginable. He added that the study process would be a catalyst for wider discussion, including regional issues. Chris Waszczuk acknowledged that the Newington-Dover project has initiated discussion of MPO issues beyond the scope and limits of the project.

Bill Landman acknowledged the historic nature of the General Sullivan Bridge (GSB) and stated, in his opinion, public sentiment is evenly split on whether to preserve or remove the bridge. Chris Waszczuk responded that there has been much discussion on the GSB, that the GSB is the second highest rated historic bridge in the state, and that the federal 4(f) process requires the project team to demonstrate that there is no feasible and prudent alternative to removing the bridge, if the recommended preferred alternative includes removal of the GSB.

Tom Fargo asked if the estimated 2032, LOS 'D/E' for an assumed 8-lane bridge alternative reflected the regional travel demand model. Frank responded that the 2025 PM peak hour regional travel demand model projection of traffic volume on the bridge had been increased by an average annual traffic growth rate of approximately 1.8%, the same annual average growth rate determined by the model in projecting 2003 volumes to 2025 volumes. However, a regional travel demand model for 2032 conditions does not exist.

There being no further questions or comments, Chris Cross adjourned the meeting at 8:35 PM, noting that the next meeting of the ATF has been tentatively scheduled for 6:30 PM, November 17, 2004 at Dover City Hall. *[Note: This ATF meeting was rescheduled for January 12, 2005]*

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Meeting Notes

Attendees: Chris Cross, ATF Chairman, RPC
Bruce Woodruff, Dover
Tom Fargo, SRPC
Bill O'Donnell, FHWA
Leon Kenison, PDA
Jack Newick, Dover
Mike Dugas, NHDOT
Marc Laurin, NHDOT
Chris Waszczuk, NHDOT
Tim Roache, SRPC
Dave Walker, RPC
Howard Muise, VHB
Frank O'Callaghan, VHB
Members of the Public

Date/Time: January 12, 2005

Project No.: 51425.00

Place: Dover City Hall

Re: Newington-Dover 11238
ATF Meeting No. 9

Notes taken by: Frank O'Callaghan

In the absence of Chris Cross (who arrived after the beginning of the meeting), Bruce Woodruff called the meeting to order at 6:45 PM and welcomed all. He noted that Chris Waszczuk and Frank O'Callaghan would update the ATF on the project status, and asked that the public hold their comments or questions until the end of the presentation.

Chris Waszczuk then explained the role of the ATF in providing guidance to the project team, and that the ATF meetings are an excellent opportunity for all in attendance to provide input and feedback to the project team. He noted that there had been eight ATF meetings to date, and that ATF meets on a regular basis, usually every two or three months. Chris then asked ATF members if there were any comments on the draft meeting minutes of August 25, 2004. Hearing none, he offered two comments: on page 2, he suggested substituting "a two-lane loop ramp" for the "double loop ramp" reference to the Exit 6 westbound off-ramp; he also suggested that reference be made and noted on page 5 that the November 17, 2004 tentatively scheduled ATF meeting at Dover City Hall had been rescheduled to this evening's meeting (January 12, 2005). The draft minutes, as revised, were approved.

Chris Waszczuk then thanked all for braving the snow and freezing rain and attending the meeting. He noted that the project team had lost momentum and that the Rationale Report had been delayed due to the updating of the travel demand model, and he had been hesitant to reschedule the November 2004 ATF meeting until the Rationale Report had been completed. In the context of reviewing the meeting agenda, he stated that the Rationale Report had been published last week, and

that copies had been distributed to ATF members, federal and state agencies requested to be cooperating agencies to the project, other interested resource agencies, the regional planning commissions (RPC and SRPC) and the municipalities of Dover, Newington and Portsmouth. The report culminates the completion of Phase 2 of the study, and documents the rationale for eliminating alternatives and recommending those alternatives to be carried forward for more detailed evaluation in Phase 3 of the study. Chris noted that the Rationale Report had been posted on the project website, www.newington-dover.com, and that NHDOT was requesting comments by February 11, 2005 to continue to progress the project. He stated that some new information would be presented at this evening's meeting, such as updated ridership numbers associated with the various transit alternatives, and roadway and bridge cross section alternatives. There would also be a brief summary of the alternatives recommended to be carried forward. Chris also noted that the project team had reassessed cross section requirements on Woodbury Avenue in the vicinity of the Isaac Dow House, and that a revised cross section would be presented that minimizes potential impacts to the potentially historic property. He further noted that the project team had taken a first cut at identifying and assessing a number of potential infrastructure upgrades and TDM/Transit combinations in meeting the project purpose and need. This preliminary analysis would be presented to initiate comments and discussion. Chris concluded suggesting that three main or core issues have surfaced to date and are pertinent when considering the various options of combining infrastructure upgrades with transit/TDM alternatives:

1. the level of infrastructure upgrade, vis-à-vis 8 vs. 6 basic lanes between Exits 3 and 6;
2. the function, cost, and 4(f) issues related to the potential reuse of the General Sullivan Bridge (GSB); and
3. the level of TDM/transit that is appropriate and cost-effective to complement the infrastructure upgrade.

Frank O'Callaghan then began his presentation; he reviewed the contents of the Rationale Report and the limits of the study area. He noted that following the initial travel demand forecast prepared for the Newington-Dover project, travel demand forecasts were estimated for the Route 1 Bypass study. Review of these forecasts by Portsmouth planning officials and regional planning staff suggested the need to re-examine the nature of the land use changes assumed for downtown Portsmouth, and the schedule of development assumed for the Pease Tradeport. The growth rates for traffic external to the seacoast region were also re-examined. Based on model revisions (which reflected more reasonable downtown redevelopment assumptions, a somewhat slower build-out of the Tradeport, and slightly lower traffic growth rates for traffic bordering the north and south of the Seacoast region), revised travel demand projections were estimated for the Newington-Dover study area. The revised projections are approximately seven percent less than the original 2025 projections documented in the Scoping Report (March 2004). In the absence of non-SOV (single occupancy vehicle) alternatives, four lanes of travel in each direction would still be required to meet the 2025 projected study area travel demand. Frank noted that the 2025 peak hour demand would exceed the 2-lane northbound and southbound capacity of the Little Bay Bridges (LBB) by approximately 900 vehicles per hour during the weekday PM peak hour. As a result, the current (5:00 – 6:00 PM) peak hour of traffic congestion is expected to increase to approximately four hours (3:00 – 7:00 PM). The current PM peak hour delay of approximately eight minutes between Exits 1 and 6 is expected to more than double by 2025 under existing bridge and roadway conditions. He stated that such congestion on the Turnpike takes into consideration the capacity constraints on other area roadways (such as ME 236, NH 108, NH 125), which limit the ability of study area drivers to seek alternate routes. Frank noted that the weekday AM peak hour condition is less intense than the PM peak hour, but that the current single hour of congestion is expected to double by 2025. He also noted that as one increases capacity on the Turnpike from two lanes to three or four lanes, the peak hour travel demand increases, reflecting the diversion of some traffic from area local roadways to the Turnpike.

Frank then reviewed the revised ridership numbers for the various non-SOV alternatives which include employer-based TDM programs, bus, rail, HOV and combinations thereof. He noted the ridership estimates were generated for four alternatives: the 4-lane no-build, 4-lane with the General Sullivan Bridge (GSB) rehabilitated and used as a busway; a 6-lane build condition and an 8-lane build condition. He also presented various cross section alternatives that could be utilized under the 4, 6 and 8-lane infrastructure alternatives. He summarized by stating that no combination of TDM and transit alternatives in conjunction with either the 4-lane no-build or 4-lane with the GSB busway was adequate in meeting the projected 2025 peak hour travel demand. The 6-lane build condition in combination with aggressive TDM, transit and use of an additional HOV lane could meet the 2025 travel demand under certain conditions, and the 8-lane build condition, with or without complementary TDM and transit alternatives, would meet the travel demand of 2025 and beyond.

Frank then reviewed the Alternatives that were recommended to be carried forward. He noted that the range of recommended alternatives was the same as previously recommended at the June and July 2004 Public Informational Meetings and the August ATF meeting with a couple of additions. The No-Build alternative is a requirement of the federal NEPA process, and is a benchmark to measure other alternatives against. A number of Transportation System Management (TSM) alternatives are recommended to improve current safety and traffic operational conditions at Exit 6 in Dover, and at Exits 3 and 4 in Newington. The Newington alternatives are planned to complement the Interim Safety Plan which is currently programmed for construction in 2005. With respect to the proposed improvements to the southbound on-ramp at Exit 6, a resident inquired as to whether or not the Boston Harbor Road on-ramp to the southbound on-ramp from US 4 would be closed. Frank responded in the affirmative subject to emergency access only.

In addition to employer-based TDM programs, Frank noted that three bus alternatives – expanded intercity bus service from Rochester through Portsmouth to Boston, expanded express bus service between Rochester and Portsmouth and expanded local service between Durham and Portsmouth and between Rochester and Portsmouth – and one rail alternative -- expanded peak hour Downeaster service either between Dover and Boston or between Rochester and Boston -- had also been recommended for further study. Three (3) new park and ride facilities [Rochester (Exit 12), Dover (Exit 9) and Durham (US 4 /NH 108)] to support these transit alternatives were also recommended for further study. He noted that provision for a future rail spur into the Pease Tradeport was included into the planning and reflected in Roadway Alternatives 10, 11 and 12 in Newington which are being recommended for further study. He then stated that three bridge alternatives were recommended for further study – rehabilitation and widening of LBB with GSB rehabilitated, rehabilitation and widening of LBB with GSB removed, and replacement of the LBB with GSB removed. Frank noted that each of the bridge alternatives was located to the west of the existing LBB to minimize impacts to Hilton Park and the shoreline near Bloody Point, each bridge alternative would be assessed for either six or eight lanes, and that only the new bridge alternative would improve the existing LBB profile to a 70 mph design (the rehabilitation alternatives would maintain the existing 60 mph design criteria).

Frank then summarized the roadway alternatives that were recommended for further study: Alternatives 2 and 3 in Dover, and Alternatives 10, 11 and 12 in Newington. The Dover alternatives are similar in several respects – the overpass at Exit 6 is converted to 2-way traffic flow; the northbound exiting loop ramp to US 4 is replaced by a diamond-type, traffic signal controlled off-ramp; the missing northbound on-ramp is provided; a grade-separated connection is provided under the Turnpike at Hilton Park; and both alternatives minimize residential and wetland impacts in comparison to Alternative 1. Alternative 3 includes a grade-separated connection for local motorized and non-motorized traffic between Spur Road and Boston Harbor Road which also allows for the

elimination of the traffic signal control at the US 4/Spur Road intersection. Bill O'Donnell inquired as to the reason why the southbound right turn on-ramp depicted in Alternative 2 had been realigned closer towards the center of the interchange. Frank responded that the spacing of the ramp locations afforded better vehicle queue management along the overpass without increasing wetland impacts. Bruce Woodruff added that the realignment would also increase the buffer area between Boston Harbor Road residents and on-ramp traffic.

In summarizing Alternatives 10, 11 and 12 in Newington, Frank noted that common elements include the combining of Exits 3 and 4 at Exit 3; better Turnpike connections to the industrial area located along River Road and Shattuck Way; local connection between Woodbury Avenue and Nimble Hill Road; a local interchange connection to the Tradeport; and the preservation of a future rail right-of-way connection to the Tradeport. Alternatives 11 and 12 relocate the industrial roadway connector and the future rail right-of-way south from the existing right-of-way location to the Exit 3 area. Alternative 12 refines Alternative 11 by simplifying the roadway connection from Woodbury Avenue and Exit 3 to the Tradeport and by modifying the southbound on-ramp at Exit 3 to reduce wetland impacts and to increase traffic weaving distance between Exits 3 and 1. He also noted that Alternatives 10, 11 and 12 could be modified to provide a southbound off-ramp to Nimble Hill Road for the convenience of Newington residents and businesses.

Roy Josselyn, Dover Point Road, inquired if there had been a cost/benefit analysis associated with providing the future rail connection to the Tradeport. Frank responded that no cost/benefit analysis had been conducted; he noted that planning for a future rail connection was consistent with the Tradeport's master plan and could conceivably divert some truck traffic from the Turnpike. Chris Waszczuk added that it was sound planning to consider the future connection and that state legislation required such consideration. He noted that the intent to perpetuate a right-of-way for a future connection did not involve the construction of such a connection as part of the Newington-Dover project.

At this point Chris Waszczuk asked if there were any more questions on the Rationale Report. Tom Fargo inquired as to the public distribution of the report. Chris noted that copies had been distributed, in addition to the ATF members and regional planning officials, to the public libraries and municipal offices in Dover, Newington and Portsmouth. He reminded all that the report was also posted on the project web site (www.newington-dover.com).

Frank then reviewed a modified 4-lane cross section of Woodbury Avenue; recent revisions reflected efforts to minimize the impact of the proposed roadway widening on the historic Isaac Dow House and Beane Farm, which abut Woodbury Avenue. The modified cross section provides two travel lanes, shoulder and sidewalk/utility panel areas in each direction separated by a raised median. Impacts to the Isaac Dow House have been substantially reduced in comparison to initial roadway concepts, and neither the Isaac Dow House nor the Beane Farm buildings are impacted. Chris Cross noted that Alternatives 10, 11 and 12 include the closing of Exit 2, and the rerouting of traffic to Exit 3 and Woodbury Avenue. Frank responded that the traffic analysis of Exit 3 and Woodbury Avenue reflected the increase in traffic and that the interchange would be able to handle the additional traffic. He further noted that further traffic analysis would be conducted during Phase 3 (DEIS) of the study.

Frank then summarized several 8-lane and 6-lane mainline options that combined different levels of infrastructure upgrade with various levels of transit and employer-based TDM programs. The purpose of this preliminary analysis was to initiate discussion on the feasibility, effectiveness and acceptability of various improvement options to meet the project purpose and need. Characteristics were noted for each option such as design year (2025) level of traffic service, extended level of service

(LOS) life (i.e. number of years beyond 2025 that LOS D is provided), degree of flexibility for future management of travel lanes to provide greater traffic flow efficiency, mainline cross section width, construction and other costs, environmental, property and park land impacts, Section 4(f) issues and traffic management during construction. Frank cautioned that the identification and assessment of these options were a preliminary, first-cut to stimulate discussion and to identify common and primary issues that will affect the development of the preferred transportation solution. He also noted that more substantial environmental impacts would potentially be located within the interchange areas, which would be addressed in Phase 3 (DEIS) of the study. Before opening up the discussion and comments on the preliminary assessment of options, Frank stated that the analysis underscored the importance of focusing on the three issues that Chris Waszczuk had mentioned earlier in the meeting – the level of infrastructure upgrade (6-lane vs. 8-lane), the function, cost and 4(f) issues related to the potential reuse of the GSB, and the level of TDM and transit that is appropriate and cost-effective to complement the infrastructure upgrade.

Following Frank's summary, a brief discussion ensued. Tom Fargo noted that Option 3, 8-lanes with the GSB rehabilitated was in fact a 9-lane option. Jack Newick noted that constructing a new bridge to replace the LBB and GSB results in greater property impacts (including building takings) at Dover Point than either of the LBB rehabilitation and widening to the west alternatives, which do not result in the taking of buildings. Bruce Woodruff noted that the new bridge alternative assumed a cable-stayed/signature design. He asked if the bridge tower was a potential issue for aircraft landings and take-offs at Pease. Frank acknowledged that the bridge tower could be an issue. Bruce then noted that the alternative signature design concept – the concrete arch bridge – would eliminate the aircraft related issue and cost less to construct. Bill O'Donnell asked if the multi-use path included on the rehabilitated LBB options with the GSB removed was restricted to non-motorized traffic, or open to local vehicular traffic as well. Frank confirmed that the multi-use path included as part of the LBB rehabilitate/widened options (or new bridge options) was restricted to pedestrians and bicyclists.

Both Tom Fargo and Bruce Woodruff expressed collective opinion that options without TDM and transit programs would receive little community support and were on the surface infeasible. Both questioned the value of HOV or "zipper lanes". Tom Fargo suggested that the cost difference between the "Zipper" Lane Alternative (Option 8) and the 8-Lane Alternative (Option 2) is minor with Option 3 providing a good extended level of service without the capital, operational, and maintenance costs of a zipper lane. Bruce Woodruff emphasized that the City would not support a cross-section wider than 150'. He noted that Dover Point is very narrow, that the pavement width must be used effectively, and that narrower cross sections were far more desirable vis-à-vis minimizing impacts to Dover Point residents. Richard Doucette (FAA) noted that the 8-lane options include either no TDM or moderate TDM, whereas all of the 6-lane options included an aggressive TDM program. Mr. Doucette suggested that the employer TDM program effects are often exaggerated, implying that the service lives of the 6-lane options may be overstated to some degree. Frank responded that capacity constrained conditions tend to encourage more TDM activity than unconstrained conditions. As such, 6-lane options were combined with the higher level of TDM, as opposed to the 8-lane options which provide more capacity. He then added that both aggressive and moderate TDM could be combined with the 6-lane options to provide a range of service life. Another resident questioned the volume of traffic which might utilize the proposed grade-separated connection (under the Turnpike) linking both sides of Hilton Park. Frank noted that the volume on the connector road would be discussed during Phase 3 of the study.

Nora Kelley, Dover Point Road, noted that the Pease Tenants Association had recently conducted a survey of its tenants which touched upon TDM and transit activities. Frank responded that he would follow up with the PDA. In response to a question on service life of improvements, Frank noted that it is desirable, from a planning and design perspective, to build in future flexibility to the preferred

alternative so that travel demands beyond the 2025 design year can be met in the most cost-effective and least impacting manner.

Leon Kenison, PDA, inquired as to the project construction schedule. Chris Waszczuk responded $100 million is currently programmed for the 2010 - 2012 period, and that construction could extend for an approximate 5-year period. However, Chris noted that the project's engineering and environmental work is being progressed to allow construction to begin sooner (as easily as 2008), in the event that additional funding becomes available and all the permits and approvals are secured. Nora Kelley, unfamiliar with the "HOT-Lane" terminology requested the definition. Chris responded that HOT lanes are high occupancy toll lanes. HOT lanes are HOV (high occupancy vehicle) lanes that can be used by single occupant vehicles, provided they pay a fee. Tom Fargo questioned the feasibility of special lanes such as an HOV lane. He questioned the cost-effectiveness of such a facility and inquired as to the access points and limits of such a facility. Frank responded that given the compact nature of the study area, and the spacing between interchanges, it was feasible to run the HOV facility between the Dover Toll Plaza and Exit 1 (Gosling Road) with access/egress at only these two locations. Traffic from US4 and Dover Point Road would not be able to utilize the facility. In light of the roadway widening associated with the 8-lane options which would result in a reduction of the buffer zones currently existing between residential areas and the Turnpike, Cody Cartnick, Boston Harbor Road, inquired as to the potential for noise barriers as part of a noise abatement program. Frank responded that a noise analysis would be conducted as part of the Phase 3 study, and where federal noise criteria were met, noise mitigation would be proposed.

The meeting adjourned at 8:40 PM.

Next meeting of the ATF is scheduled for February 23, 2005 at 6:30 PM in Newington Town Hall.