



MINUTES-Draft

NRPC TRANSPORTATION TECHNICAL ADVISORY COMMITTEE MEETING 1/15/03

Members Present:

Steve Williams, NRPC
Jay Minkarah, Town of Merrimack
Sean Sullivan, Town of Hudson
John Cashell, Town of Hudson
Art LeBlanc, Town of Hollis
Paul Newman, City of Nashua, Urban Programs
Eric Teitelman, City of Nashua, Engineering
Bob Lyford, NH DOT
Subramanian Sharma, NH DOT
Becky Ohler, NH DES
Mark Archambault (Hollis/Brookline), NRPC Senior Planner
Steve Wagner (Litchfield/Wilton), NRPC Regional Planner

Others Present:

Ray Guarino, NRPC Transportation Planner
Betsy Hahn, NRPC Regional Planner
Matt Waitkins, NRPC Transportation Planner
Camille Pattison, NRPC Transit Planner

Call to Order and Minutes

The meeting was called to order by Steve Williams at 3:04 pm. Williams then asked the Committee if there were any corrections to the minutes from the 12/04/02 meeting. Becky Ohler moved to accept the minutes and Paul Newman seconded. All were in favor and the motion passed.

Federally Funded Project Application Packets

Williams distributed a letter from Jeff Brillhart, Director of Project Development for the New Hampshire DOT, concerning the FY 2005 to FY 2014 Ten Year Transportation Program. The NH DOT will carry through with the process for seeking regional priorities for transportation improvements and set a deadline of May 1, 2003 for submittal of regional priorities to the NH DOT. The NH DOT will put together a technical team that will provide assistance to the TTAC through the entire process. Williams stressed that this will be for federally funded projects only. Projects listed in the Ten Year Plan have already been prioritized and this process would only apply to new projects. A table showing the status of NRPC region projects will be developed and available at the next meeting.

Williams referred the Committee to the four page handout in the packet and went through the information necessary for proposals. NRPC will provide maps of federally eligible roads in each community. After receiving all required information for the project proposals, NRPC staff will rank projects based on the four criteria identified in NRPC's adopted Long Range Transportation Plan: efficiency, safety, pavement condition, and air quality benefit. Each criteria will have equal weight in the overall ranking. Each project will be given an ordinal rank on the basis of its placement for each criteria in the list of all projects. For example, if there are eight projects submitted, each project will be ranked between 8 and 1 for each of the four criteria. So, the project that makes the greatest contribution to transportation system efficiency will receive a rank of 8, and the project that provides the least contribution to transportation system efficiency will receive a rank of 1. The same approach will be used for the other three criteria: safety, pavement condition and air quality benefit. The total ranking for all four criteria will be determined for each project. Returning to the example above, if there were eight projects submitted and one project was ranked highest for all four criteria, that project would end up with a total ranking of 32. If the same project were ranked lowest for all four criteria, that project would end up with a total ranking of 4. Two bonus points will be awarded to projects recommended in a traffic



study or transportation plan prepared by NH DOT, NRPC or a licensed engineer, the project is recommended in the NRPC adopted Long Range Transportation Plan and the project is recommended in an adopted local plan such as a master plan, area plan or capital improvements program.

The following describes the method that NRPC staff will use to rank the project for the four criteria.

1. Efficiency – Projects will be evaluated on improvement in transportation system efficiency that will result from implementation of the proposed project. Efficiency will be measured as the decrease in total vehicle hours traveled by vehicles in the NRPC region in 2022. The project that provides the greatest decrease in vehicle hours traveled will receive the highest ranking, the project that provides the second greatest decrease in vehicle hours traveled will receive the second highest ranking, etc. The change in vehicle hours traveled will be measured by modeling each project. Vehicle hours of travel is a statistic calculated at the end of each model run by NRPC's travel demand model. This statistic will be compared with the total vehicle hours of travel calculated for NRPC's regional no build model for 2022 without any projects included. Projects, which do not improve system operation in any fashion, such as repaving projects, will not be modeled and will receive a ranking of zero for efficiency.
2. Safety – Projects will be evaluated for safety using accident history data from 1998, 1999 and 2000 provided to NRPC by the NH DOT. NRPC staff will identify the total number of accidents on the segment proposed for improvement as part of the project and determine the weighted accidents per million vehicle miles traveled per year. The following formula will be used to determine weighted accidents per million vehicle miles traveled per year:

Weighted Accidents = total property damage accidents + (3 x personal injury accidents) + (3 x fatality accidents)

Million Vehicle Miles Traveled = Vehicles per day x 365days per year x length of segment in miles

Weighted accidents per million vehicle miles traveled per year = Weighted accidents / million vehicle miles traveled on the roadway segment per year

The project that has the largest weighted accidents per million miles traveled statistic will receive the highest ranking.

3. Pavement Condition – NRPC staff will use its road surface management process to rank pavement condition for ranking purposes. The NRPC uses Road Surface Management Software (RSMS, developed by the University of New Hampshire) to document existing road surface conditions and to develop maintenance priorities. The condition of the road surface of each road is evaluated by windshield survey, based on the severity and extent of surface distresses of paved roads. RSMS distresses include longitudinal and transverse cracking, alligator cracking, edge cracking, patching and potholes, drainage conditions, roughness, and rutting. The software utilizes a prioritization formula that sets a priority value for each road. The formula takes into account the type and severity of the distresses. The formula weighs the priority value in favor of roads with drainage problems, roughness problems, and higher traffic volumes because they are considered the most important elements in the degradation of a road. The project with the highest priority value from the RSMS analysis will receive the highest ranking. Under the RSMS process projects may rank in a tie. Ties will be ranked the same. NRPC will utilize the same staff for ranking consistency. New roads will not be evaluated for pavement conditions or safety.
4. Air Quality Benefit – NRPC staff will analyze air quality benefit by directly analyzing the change in regional production of pollutants. The project will be added into the NRPC regional travel



demand model. The ozone precursor pollutants (NO_x and hydrocarbons) will be calculated using the Mobile 5B pollutant factors provided to NRPC by the NH DOT and NH DES. NRPC staff will then compare the amount of pollutants produced by the network with the project included (build scenario) to the amount of pollutants produced by the network without the project included (no-build scenario). Projects that result in the greatest decrease in ozone precursors will receive the highest ranking. Projects that provide no air quality benefit will not be analyzed and will receive an air quality benefit rank of zero. Ohler recommended that when comparing projects that NO_x reductions be ranked higher than the reduction of CO.

NRPC will provide copies of all Proposals for Federal Funding and any attachments that were submitted and a table showing the ranking for each project by each criteria, any bonus ranking points that were applied, and the total ranking of each project prior to the March 19, 2003 meeting. The Transportation Technical Advisory Committee will then make a recommendation to the NRPC Commission for consideration at their March meeting.

Williams stated that the Circumferential Highway, Broad Street Parkway, 101A and Commuter Rail Projects are as scheduled in the 2003/2012 Plan. All other project timelines have changed. NRPC will provide a table of the projects and the new construction schedule.

Regional Transit Plan

Camille Pattison presented a PowerPoint presentation of the results of the on demographic analysis in the Regional Transit Plan. The PowerPoint printout was distributed at the meeting. The analysis shows the area identified as having the highest need for transit service in the region. The analysis was conducted using 2000 Census data for block group geography. Factors that were analyzed included youth population, elderly population, household income, vehicle availability, population density, disabled status and poverty status.

Each block group in the region was ranked into 6 classes for each of the criteria with a rank of six indicating the highest transit need and a rank of one indicating the lowest potential transit need. The rankings for all criteria for each block group were then totaled. A map was displayed showing the block groups that showed the highest potential transit need. Most of these block groups were in Nashua with the greatest concentration in the downtown Nashua area. In addition, some areas in downtown Hudson, downtown Milford and Merrimack between DW Highway and the Merrimack River also showed a high potential level of transit need. Pattison indicated that the plan would identify methods for initiating transit service into the areas with the highest potential transit need.

Next Meeting, February 19, 2003 at 3 pm.

Meeting was adjourned at 4:05 pm.