Commuter Rail Service to Coastal New Hampshire: A Feasibility Study for the Hampton Branch

prepared for the

Seacoast Metropolitan Planning Organization

by the

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EXECUTIVE SUMMARY

Introduction

Through its representation on the Seacoast Metropolitan Planning Organization (Seacoast MPO), the City of Portsmouth requested an update to a 1988 study that examined the feasibility of reinstating passenger rail on the Hampton Branch line of New Hampshire. On September 2, 1998, the Rockingham Planning Commission (RPC) met with the Greater Portsmouth Chamber of Commerce, the Portsmouth City Manager, the Portsmouth Director of Planning, and a representative from the New Hampshire Department of Transportation. The group affirmed that the RPC would conduct a "first-level" study of the feasibility of implementing commuter rail along the Hampton Branch to Portsmouth. The Greater Portsmouth Chamber of Commerce agreed to take on a role of providing public outreach associated with the study.

The Rockingham Planning Commission has conducted this study for the Seacoast MPO utilizing Federal Transit Administration Planning Funds, including extra FTA funds provided by the New Hampshire Department of Transportation for the purposes of this study.

An inspection, report, and cost estimate for the Merrimack River Rail Bridge in Newburyport and other major bridges and crossings was provided by Reid H. Potter Associates, of Freeport, Maine under contract to the RPC.

The Rockingham Planning staff received guidance and input from an advisory committee to the study that was formed at its outset. Membership consisted of MPO Technical Advisory Committee representatives from communities within the corridor, other individuals appointed by those communities, and other interested parties. A complete list is available upon request.

Proposed Service Restoration

At the outset of the study, the following features of a proposed service were established and reviewed with the study advisory committee: A) the geographic extent of the corridor being studied, B) the communities which will be directly served by having a train station within their boundaries, C) the service areas defined as all communities with reasonable access to stations, D) a general service arrangement relating to the existing MBTA service further south on the corridor, and E) the proposed frequency and hours of operation of service.

The study corridor runs north from Newburyport to Portsmouth, through the communities of Newburyport, MA, Salisbury, MA, Seabrook, Hampton Falls, Hampton, North Hampton, Greenland, Rye and Portsmouth. This corridor was chosen for study because it offers a continuous right of way with an existing rail bed, and in the northern section, a currently active rail track.

This study posits four rail stations in New Hampshire: Seabrook, Hampton, North Hampton, and Portsmouth. These communities are selected based upon the fact that they each appear to have a significant base of commuter ridership from which to draw within town and/or the surrounding communities. In addition, the Advisory Committee recommended including Salisbury, Massachusetts as one of the station communities. All communities within which a station would be located and those directly bordering on such towns were included in the service area. In addition, towns within a 15-mile radius from one of these communities that had more than 10 Boston commuters in 1990 were included in the service area.

Due to the existing MBTA service to the south of the Hampton Branch, it makes most sense that the service discussed here be an extension of that commuter rail line operated by the MBTA. Although the operator of a Hampton Branch service is yet to be determined, this study will assume a continuous service to from Portsmouth integrated into the existing Newburyport schedule. That will provide the most attractive type of service to Seacoast residents and has proven to be feasible in other parts of the MBTA service area.

Four round trips per day would seem to be a minimum requirement to serve a commuter ridership. That would allow for four peak hour trips. Such a schedule does not allow for other sorts of travel outside the traditional inbound commute, such as reverse commuting, tourism-based travel, commuters with untraditional hours, and late night runs. To allow for those sorts of trips, frequency would need to be at least doubled to allow for any sort of consistency on off-peak service. Based on the potential and desire for other sorts of trips beyond commuter-based ones, the study proposes initiating service with 8-12 round trips a day on weekdays and about 6 round trips on Saturdays and Sundays. However, a reduced commuter-only alternative was also developed to provide for a lower cost option.

Ridership Potential

The aim of the ridership portion of the feasibility study is to make the best estimation of the passenger utilization of a Hampton Branch service in 2010 and 2020, utilizing existing data and accepted methodologies. The methodology employed was based upon that employed by the Central Transportation Planning Staff (CTPS), the organization that does much of the ridership estimation for the MBTA.

The total number of passengers for 2010 is estimated to be 472 for four stations. This translates to 944 one-way trips. For 2020, the average weekday passenger count is projected to be 555, which would result in 1110 one-way trips. In comparison, 410-485 passengers per day (820-970 one-way trips) were projected for the two Newburyport extension stations in that feasibility study. More recently, the Nashua Regional Planning Commission updated ridership projections for Nashua and Merrimack. It was estimated that 1025 passengers per day would board at two stations (2,050 one way trips).

Although there are no explicit plans in place, it is possible that by the time Hampton Branch service is up and running, rail service on the Main Line West will be offered that is competitive in terms of fares and frequency. Another set of projections was made taking this possibility into account. In 2010, it was estimated that 164 fewer one-way trips would be made on Hampton Branch service as a result of the Main Line West service. In 2020, 200 fewer one-way trips would be made as a result.

An attempt to take tourism into account in ridership has been made by using ridership data from tourist oriented communities in Massachusetts as the basis for estimating weekend ridership. According to this estimate, one could expect 262 passenger trips Saturday and 252 trips in Sunday in 2010, and 307 Saturday trips and 295 Sunday trips in 2020. There is reason to believe that the Hampton Branch stations have a potential to increase their ridership levels beyond those estimated if a concerted effort to attract tourists to the service is made. This will depend on working with the service operator on a coordinated marketing effort, frequent weekend service, and convenient access to attractions.

Capital and Operating Costs

With information about the existing corridor conditions that was gained, and by using unit costs based upon other reconstruction projects, reasonable cost estimates were developed. It is assumed that the rail line reconstruction will be with 132# rail.

Three estimates were developed utilizing different unit costs for elements of the reconstruction. Estimate #1 utilizes various sources and in some cases, general unit cost guidelines to. Estimates #2 and #3 rely on low end and high-end unit costs developed by KKO and Associates of Andover, Massachusetts for the Bethlehem-Lansdale Rail Restoration Project. Estimates include equipment and station (platform and parking) costs as well as the cost of reconstructing the right of way. The following estimates were the result:

Estimate #1 = $95 Million
Estimate #2 = $104 Million
Estimate #3 = $77 Million

Bridge repairs and grade crossings are based upon individual cost estimates from Reid H. Potter Associates, and are the same for all three estimates. A major bridge over the Merrimack River in Newburyport came to a total of $8,415,000. This is based upon the consultant's recommendation of replacing the swing span with a bascule span. Given the amount of the total cost estimates, it appears that reconstruction of this bridge will not present a major barrier to feasibility. Taken together, reconstruction of all other bridges and crossings were estimated at $6,029,420.00.

Operating costs will vary depending upon the type of schedule that is implemented. A schedule with 12 weekday round trips including 2 express round trips would cost $2.0 Million per year, taking farebox revenue into account. A schedule with 8 round trips including 6 express runs in each direction would cost close to $7.1 Million per year. A reduced schedule with four round trips in each direction would require a subsidy of $1.5 per year. The 12-trip schedule is the preferred one, because it offers the most frequency with lower operating costs than the 8-trip schedule.

Other Issues

Other areas examined in the study included station site alternatives, funding issues, benefits and costs of the service, and institutional issues. In each community, potential sites for stations were identified with the help of those communities and evaluated based upon established criteria. The result was a list of potential sites with descriptions that may serve as a resource. Identifying feasible funding arrangements is a very important issue if the service is ever to be initiated. This study provides a list of potential funding

sources and proposes several potential funding arrangements utilizing combinations of federal, state, and other sources. Potential benefits include congestion mitigation, increased mobility and quality of life, and improved opportunities for freight. Potential costs include the financial burden of the service, safety and noise issues, and the effect on competing users of the corridor and competing transit services. Institutional issues refer to those issues that may help or hinder the successful implementation of the service. They include community opposition or support, political support, interstate agreements that may be necessary in this case, track usage rights, and competition with intercity bus services.

Conclusions

The following steps are suggested based upon the study's findings.

- Continue to preserve the corridor for commuter rail use; support NHDOT purchase of abandoned New Hampshire portions of the line; ensure stabilization of the Newburyport Merrimack River Bridge condition, and encourage any rail-trail to be constructed to allow for shared use.

- Work with congressional delegation to develop a New Starts demonstration project proposal for 2004.

- Develop state/local funding plan for capital match and operating subsidies, looking to funding efforts in Nashua for a precedent.

- Lend support and guidance to legislative proposal for continued study of the line, and encourage an emphasis on addressing funding and other institutional issues.

- Encourage communities to discuss and plan for station sites identified in the study.

- Ensure participation of all potentially competing services, including rail-trails group, private bus providers, and NNEPRA in the planning process.

- Make bordering communities and planning agencies in Massachusetts and Maine aware of study results and explore potential coordination efforts.