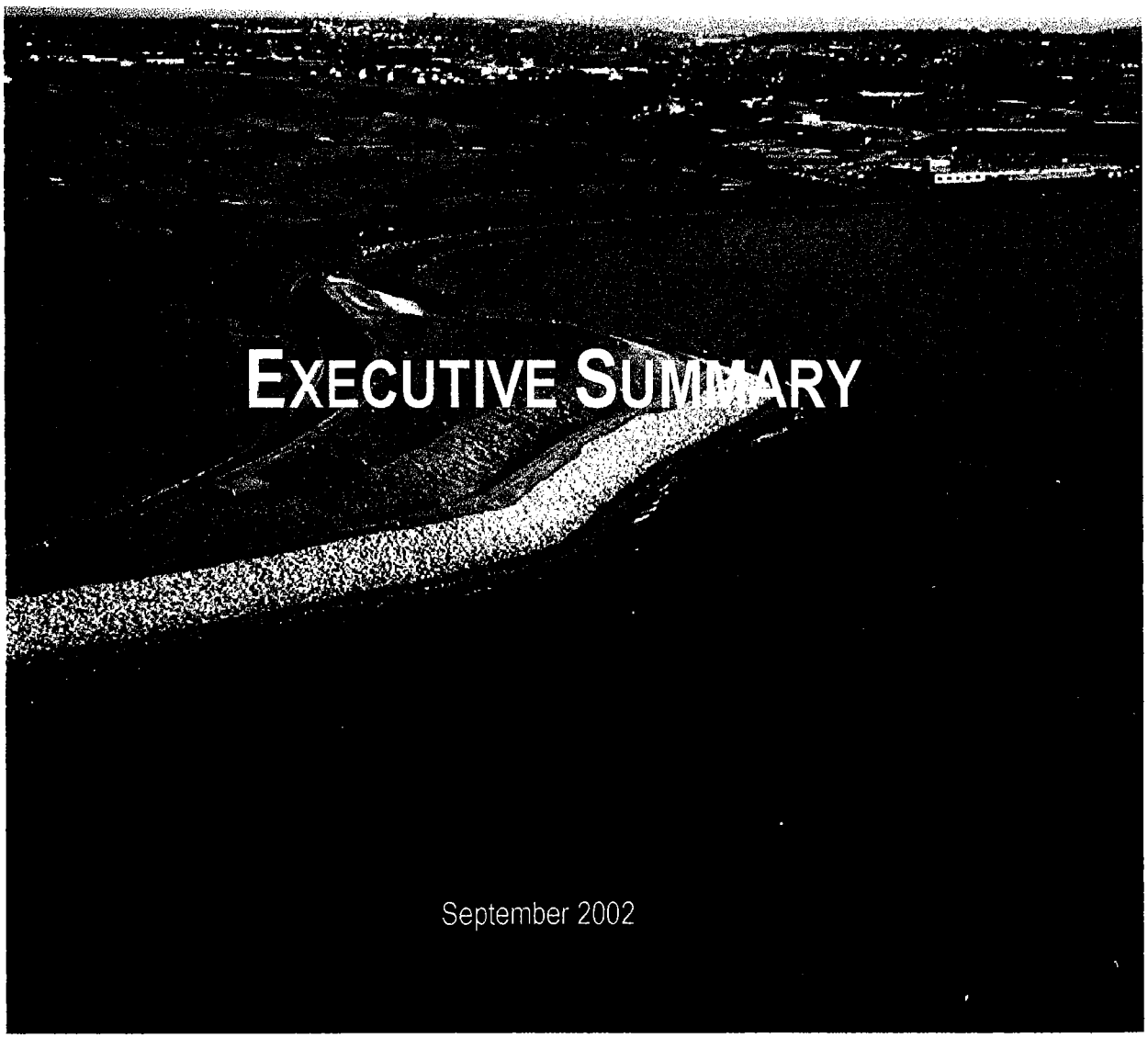
Aquidneck Island Passenger Rail/Bicycle Path Project (Executive Summary Only)

AQUIDNECK ISLAND PASSENGER RAIL/ BICYCLE PATH PROJECT

Towns of Tiverton, Middletown, and Portsmouth and
City of Newport, Rhode Island



EXECUTIVE SUMMARY

September 2002

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INTRODUCTION

Project Purpose
Aquidneck Island experiences high levels of roadway congestion during commuting hours and peak tourist season weekends. This project explores ways to preserve and use the underutilized rail corridor to reduce congestion on the Island's roadways in both the near term and the more distant future.

This project was undertaken as a follow-up to the Rhode Island Rail Corridor Feasibility study (RIDOT, 1994) to explore ways in which the underutilized Newport Secondary Rail right-of-way can be used to serve the transportation needs of Aquidneck Island and Tiverton. It explores the range of public transportation alternatives, which can use this corridor to help relieve traffic congestion on the Island's roadways, particularly during peak commuting hours and the peak tourist season.

Project Goals
This report describes the process and technical requirements for proceeding with the transportation alternatives that were studied. It is not intended to initiate environmental permitting, design, or construction. The report presents conceptual designs for each alternative and estimates their potential ridership, costs, benefits, and environmental permitting requirements. It is a resource designed to give local decision makers the technical transportation information needed to help make land use planning and permitting decisions on the west side of the island and in Tiverton.

Project Findings
Passenger rail service can be restored within the existing rail corridor. In the same right-of-way or on abutting public land a bicycle path can be built. A single set of rail infrastructure improvements can satisfy the requirements for simultaneous operation of existing Dinner/Tourist Service trains, an On-island visitor shuttle, and a commuter shuttle to Fall River, MA. The bicycle path and rail service can be added incrementally. Operation of passenger service would lead to a small but positive effect on roadway congestion and open the future possibility of much larger reductions in traffic. The bicycle path can be built independently without requiring changes to accommodate rail improvements.

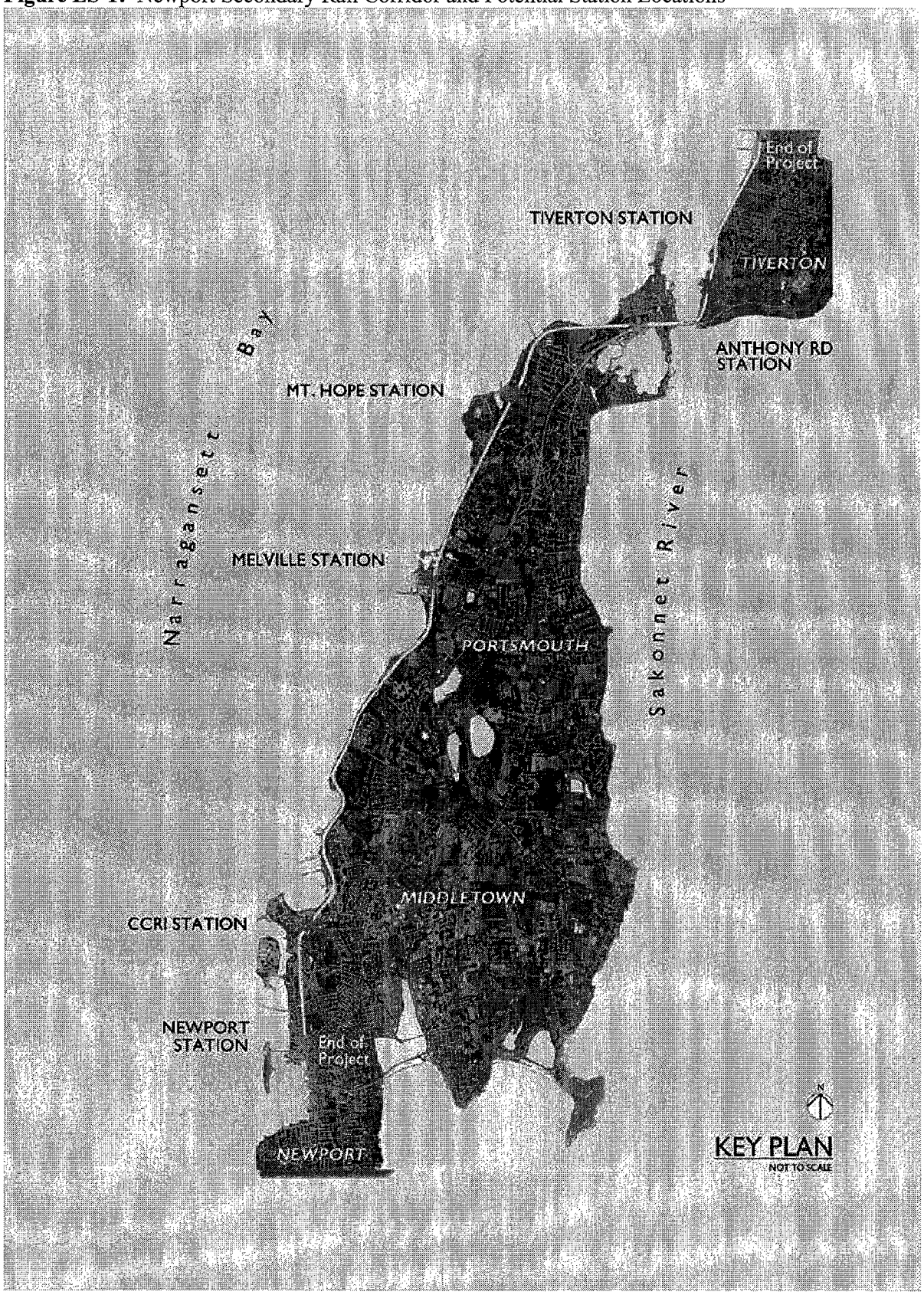
1.0 BACKGROUND

The project area extends for 16.3 miles along the Newport Secondary Rail corridor from the Gateway Visitor Center in Newport to the Rhode Island-Massachusetts state line in Tiverton (see Figure ES – 1). The line was first used in 1863 and operated for over a century. Regular passenger service was discontinued in 1938. Freight service was discontinued in 1975 when the Sakonnet River Bridge was determined to be unsafe for continued use. The State of Rhode Island acquired the Aquidneck Island right of way in 1977 and the Tiverton section in 1982. The Providence and Worcester Railroad Company continues to hold operating rights for freight use of the line. There are 37 recognized grade crossings, including 6 private crossings, and 11 bridges in the corridor. The rail bridge across the Sakonnet River was further damaged in 1988 and the US Coast Guard has requested its demolition.

Currently, the On-island rail corridor is used during the spring, summer, and fall season for excursion service by the Dinner Train and National Foundation/Old Colony trains. In return for use of the corridor, the railroad operators maintain the track to Class I standards (up to 15 mph). The corridor in Tiverton has been inactive for many years. As a result, tracks and drainage have deteriorated, and many sections have become overgrown with vegetation.

Where the rail corridor passes through the Newport Naval Station, security is currently provided by manual operation of gates across the track. As a result of the events of September 11, 2001, security improvements are needed to isolate railroad and Navy operations from each other.

Figure ES-1: Newport Secondary Rail Corridor and Potential Station Locations



1.1 Related Studies and Projects

This project is one of several related studies being conducted by RIDOT and interested communities to plan the transportation and land use future of the area. In addition to the planning activities undertaken by the State, the Aquidneck Island Planning Commission (AIPC) is taking a leading role integrating the findings from studies by/for individual municipalities. At the time of printing, the following major studies were underway:

- RIDOT is conducting an Environmental Impact Statement (EIS) for replacement of the Sakonnet River Highway Bridge. The proposed structure would provide vehicular, pedestrian and bicycle access across the river. A hearing was held on the Draft EIS in June 2001. A Final EIS and FHWA Record of Decision have been delayed until further funding becomes available.

- At the request of the City of Newport, RIDOT has begun to study realignment of the Pell Bridge on/off ramps. A public meeting was held in April 2002. Completion of this study is expected in Spring 2003. Its findings will be reflected in future updates of the passenger rail/bicycle path project.

- The AIPC published the *West Side Transportation Guide Plan* in September 2000. It describes options for expanded use of the corridor for transportation. The Commission is currently sponsoring development of a traffic and transit model for the whole island at the census block level; completion is expected in December 2002.

- The City of Newport is sponsoring a project to modify and/or relocate the Gateway Visitor Center. The proposed station improvements are compatible with the City's intention to relocate the Visitor Center to the north and place its entrance on Bridge Street immediately opposite the rail station.

- A variety of major land use proposals and developments are underway in Newport, Portsmouth, and Tiverton. The rail corridor traverses many parcels being proposed for future development. In addition, the Island towns, AIPC, and the Newport County Chamber of Commerce are working with the US Navy on land which it could surplus and make available for future development.

2.0 CORRIDOR USE ALTERNATIVES

2.1 Potential Uses of the Corridor

Five different alternatives were developed to explore the range of public transportation uses of the rail corridor:

Table ES-1: Corridor Use Alternatives

CORRIDOR ALTERNATIVES	Bicycle Path	Dinner/Tourist Trains	On-island Shuttle	Fall River Shuttle
1 No-Build				
2 Excursion (Dinner/Tourist Train)				
3 On-island Rail Shuttle				
4 Fall River Commuter Shuttle				
5 Busway				

Alternative 1: Dinner/Tourist Train excursion services as they are today.

Alternative 2: Existing Excursion Services plus a bicycle path within the rail corridor.

Alternative 3: Scheduled passenger rail service would be extended from Newport to stations at either Mt. Hope or Anthony Road and a bicycle path is built within the rail corridor.

Alternative 4: Scheduled passenger rail service would be extended from Newport to the Fall River, MA, MBTA station to provide commuter service to Boston. It includes a bicycle path within the rail corridor.

Alternative 5: An On-island busway and bicycle path would be built between Newport and Anthony Road. The two lanes required for safety would widen the transportation corridor, impact a much larger area, and cost over 40% more than other alternatives. As a result, the busway was dropped from further analysis.

2.2 Bicycle Path

Each of the build alternatives includes a 12'-wide bicycle path. A boardwalk is proposed in wetland areas within the corridor. Boardwalks, signage, fencing, entrance treatments at crossings, screening and view management, and related amenities are included in the design and cost estimates. Although they would vary slightly with each alternative, the bicycle path generally consists of the following sections:

- 7.4 miles of new paved path and 1.2 miles of boardwalk in the rail corridor, or on abutting public lands;
- 4.7 miles of improved bike lanes on existing roadway, including Burma Road or local streets;
- In Tiverton, 2.0 miles of new paved path, 0.1 miles of boardwalk, and 0.5 miles of new bike lanes on existing roadway

Construction of the bicycle path as part of the railroad improvements would cost approximately $6.9 million. The landscape and bicycle path improvements associated with the station areas and parking would cost $0.8 million. If the path were built independently of the railroad facilities, its cost would be approximately $8.2 million to reflect its construction as well as that of required improvements to drainage and bridges. The bicycle path can be built as individual segments in order to facilitate a phased construction approach, as summarized in the table below.

Table ES-2: Bicycle Path Summary

Section	Bicycle path miles	Cost with Rail project	Cost without Rail project *
Tiverton section	2.6	$1,136,200	$1,317,500
Anthony Road to Melville Station	5.8	$4,310,900	$5,214,100
Burma Road (4.4 existing miles and 0.3shared roads)	4.7	$24,900	$24,900
Gate 17 to Newport Station	2.8	$1,395,700	$1,647,000
Total	**15.9**	**$6,867,700**	**$8,203,500**

* Cost of bicycle path if built independently of the railroad facilities.

Annual maintenance cost for the 15.9-mile bicycle path would be $206,000, an average of $13,000 per mile. Bicycle path segments can be built independently of the railroad improvements provided that they follow the alignment described in this report. This would allow construction of the rail facilities at a later time without changes to the bicycle path.

3.0 PASSENGER DEMAND FORECASTS

Passenger forecasts were prepared to establish equipment requirements and operating characteristics for the various rail services in 2020.

3.1 Methodology

Forecasts of demand for commuter rail service were prepared using the Rhode Island Statewide Model (RISM) developed by RIDOT to respond to federal air quality and congestion management requirements. The RISM methodology provides a "trends extended" forecast, which reflects how current commuting patterns, would be affected by an additional service. It assumes average annual growth of less than 1% per year in general traffic. Since the model

does not address visitors in detail, the visitor forecast relies on national data about the percentage of tourists who use rail on similar routes. Forecasts are presented as weekday, weekend and annual boardings, i.e. the total number of riders.

Passenger demand varies with service frequency, travel time, fares, parking cost, etc. The analysis assumes train speeds of up to 60 mph to be competitive with driving time. Two scenarios were studied: 1) Year round "half-hour" for On-island and commuter service, and 2) Seasonal "hourly" service On-island from mid-April-to mid-October. Forecast demand, including both commuters and visitors, is as follows for 2020:

Table ES-3: Forecast Boardings in 2020: On-island Shuttle/Commuter Shuttle services *

SERVICE TYPE	Weekday	Weekend	Annual
Year Round	170-510	120-890	84,300-164,600
Seasonal (On-island only)	260	580	47,700

* Figures are rounded to nearest ten. Newport-Boston commuters account for up to 150 boardings/day.

Single car trains seating 100 passengers would provide adequate capacity for forecast demand. For reliable service, the On-island services would require a fleet of three self-powered rail cars.. A fleet compatible with excursion service would cost $7.5 million. Lighter weight equipment could be used without excursion service trains at a saving of $2.1 million. Overlaying On-island and commuter shuttle service as well as existing Dinner and Tourist train services would require a fleet of four cars.

The year round, high frequency service scenario was studied with fares of $1.25 per ride and parking set at $1.00 per day. Under this scenario, weekday boardings would range from a little above 100 for On-island shuttles to a little over 500 for commuter shuttles to Fall River. Weekend ridership would range from a little over 100 to near 900. The seasonal scenario was studied as an On-island shuttle with fares of up to $3.00 per ride and parking rates adjusted to encourage visitors to use rail. With these assumptions, total ridership would be approximately 60% of year round service.

Overall, demand is not expected to justify the service financially under either scenario. However, the seasonal scenario has significantly better financial performance (see section 4.4 below). These findings are consistent with previous studies conducted using different methodologies (Barton-Aschman, 1994). The project would preserve the rail corridor for public transportation so that roadway congestion on island roadways could be reduced when the need arises.

3.2 Potential Transportation Benefits of Passenger Rail Service

During high season weekends, forecast demand for single car train service would offer weekend reductions in roadway traffic of 1+/-% on the Mt. Hope and Sakonnet River highway bridges, depending on ridership, persons/car, and how much of the new transit capacity is used.

Typically, new passenger rail services, especially those catering to visitors, gradually become accepted and performance often exceeds forecast demand. During the past decade, Rhode Island tourist demand has grown approximately 5% per year. If visitor demand grows faster than forecast, the proposed rail cars have significant reserve capacity. The 5,200 seat daily capacity of the minimum equipment needed to operate passenger rail service is equivalent to approximately 2,100 weekday vehicle trips. Full use of the available capacity would represent up to a 4%+/- reduction in vehicle traffic across the bridges. Since the proposed facilities allow the operation of two-car trains, these reductions could reach 8% before additional infrastructure is needed.

Forecasts of bicycle ridership were not made as sufficient background data is not available. The history of other bicycle paths suggests gradually increasing usage for recreation and seasonal commuting.

4.0 PASSENGER RAIL SERVICE ALTERNATIVES

4.1 Service Structure Alternatives

Preliminary schedules were used to analyze passenger rail service alternatives. Different kinds of services were analyzed as standalone operations as well as in combination. The three basic passenger services used as building blocks for different alternatives are as follows:

- Excursion services provide low speed, low frequency service using historic or vintage rail equipment. During the tourist season, two such operators: the Dinner and the Tourist trains offer up to three scenic trips along the coast each day.

- On-island rail shuttles would provide fast frequent rail passenger service between park and ride lots on the north end of the island and Newport's Gateway Center. Each one-way trip on self-propelled cars would take 17 to 20 minutes. Summer service would operate nearly every half-hour over a 13-hour service day.

- Fall River commuter shuttles provide fast rail passenger service between Newport and Fall River for the primary purpose of connecting with MBTA trains to and from Boston. The service would also serve other stations in the corridor. Each one way trip on self-propelled cars would take approximately 31 minutes.

Potential station locations were derived from the 8-11 potential sites identified in *the West Side Transportation Guide Plan* (AIPC, 2000). They were refined as analysis progressed (See Figure ES-1 for proposed station locations). The major passenger service alternatives and the stations they serve are as follows.

Table ES-4: Passenger Rail Service Alternatives and Stations served

SERVICE ALTERNATIVES *	Dinner/Tourist Trains	On-island Shuttle	Fall River Shuttle
Dinner/Tourist train excursion services (Seasonal) (Newport, Melville)	■		
Mount Hope Shuttle (Year round and Seasonal) (Newport, CCRI/Ranger Road, Melville, Mt. Hope)	■	■	
Anthony Road Shuttle (Year round) (Newport, CCRI/Ranger Road, Melville, Anthony Road)	■	■	
Fall River/Anthony Road Shuttle (Year round) (Newport, CCRI, Melville, Mt. Hope, Anthony Road, Tiverton, Fall River)	■	■	■

* See Table ES-6 for a description of all alternatives studied including schedules, infrastructure, and costs.

4.2 Rail Infrastructure Requirements

Each of the proposed service structures requires replacement of track and structures to Class III standards to allow trains to travel at up to 60 mph. Demolition of existing facilities and construction of the improvements would take approximately two years.

Analysis established that a single set of stations, tracks, passing sidings, and related facilities would allow simultaneous operation of the On-island rail shuttles, commuter shuttles to meet MBTA trains in Fall River, as well as the existing Dinner and Tourist trains. Adding service incrementally, e.g. overlaying the Fall River commuter shuttle on the On-island shuttle and excursion trains, would not require additional infrastructure except reconstruction of the Sakonnet River Rail Bridge. Simultaneous operation of excursion and scheduled passenger services is possible if the following facilities are built:

- *Newport:* A three-track, two-platform station in the same location as the existing facility. It conforms with the City of Newport's plan to move the Gateway Visitor Center one block north. The Center's garage and parking lot would provide parking. Access would be from America's Cup Avenue and Bridge Street.

- ***CCRI/Ranger Road:*** To serve both the Navy and CCRI, a one-track, one-platform station could be located either immediately north or south of a relocated Gate 4. Its final location would have to be determined in the future. Only 20-30 parking spaces would be provided as a convenience for pick-up/drop off. Access would be from Coddington Highway.

- ***Melville Marina:*** In addition to a two-track, offset two-platform station, a maintenance facility and storage tracks would be provided within the rail r.o.w. south of Stringham Road. Another stub end storage track would be located just north of the Bradford Road overpass. Only 20-30 parking spaces would be needed. Access would be from Stringham Road.

- ***Mt. Hope Terminal:*** A one-track, one-platform station would be built north of Terminal Road. If this station were the terminus of the On-island service, parking would be needed for 100 cars. Access to Bristol Ferry road would be via Terminal Road/Weyerhauser Lane and/or a separate access via an existing curb cut.

- ***Anthony Road:*** A two-track, offset two-platform station would be provided immediately south of Anthony Road. Parking for up to 100 cars with access from Anthony Road would be needed. Parking could be expanded if the Sakonnet River Highway Bridge were rebuilt in a southern alignment.

- ***Sakonnet River Rail Bridge:*** It would have to be rebuilt to operate commuter shuttle service to Fall River.

- ***Tiverton:*** A one-track, one-platform station would be built at the Village at Mt. Hope Bay commercial area on the south side of the tracks. Parking would be shared with the commercial development. Access would be via Osbourne Road.

- ***Fall River:*** The commuter shuttle train would connect with MBTA service to Boston with across-the-platform transfer at the Battleship Cove station. This station is part of the MBTA facilities currently expected to be in operation in 2007.

- ***Additional Facilities:*** Fencing, an overpass, and electronically controlled gates would be needed to provide security through the Newport Naval Station. In addition, a centrally controlled signal system, grade crossing protection and other facilities would be required to operate the line. Simultaneous operation of the excursion trains with scheduled passenger service requires 400' passing sidings at Coddington Cove and McAllister Point.

4.3 Construction, Operating and Maintenance Costs

Estimated costs for the major rail service alternatives are summarized below in Table ES-5 and presented in detail in Table ES-6. They include all track and related infrastructure replacement, passing sidings, grade crossings, drainage improvements, maintenance facility, station and parking areas and related landscaping, naval station security fencing and overpass, etc. In the case of commuter service to Fall River, replacement of the railroad swing bridge across the Sakonnet River is also included. A fleet of up to four car self-propelled cars would be required for combined service.

Table ES-5: Railroad Infrastructure Costs including excursion service requirements (Millions of 2002 dollars)

ALTERNATIVES	Rail Facilities	Navy Base Security	Sakonnet Rail Bridge	Total Construction	Equipment	Annual O&M
Mt Hope Shuttle (year round)	$ 25.6	$ 3.0	$ -	$ 28.6	$ 7.5	$ 2.1
Mt. Hope Shuttle (seasonal)	$ 25.6	$ 3.0	$ -	$ 28.6	$ 7.5	$ 1.0
Anthony Road Shuttle (year round)	$ 32.9	$ 3.0	$ -	$ 35.9	$ 7.5	$ 2.4
Fall River/Anthony Road Commuter Shuttle (year round)	$ 43.2	$ 3.0	$ 27.4	$ 73.6	$ 10.0	$ 3.7

These estimates reflect the costs of infrastructure and equipment required to overlay passenger rail the Dinner and

Tourist trains. If the excursion services are not included overall capital costs are reduced by $1.5 million to $3.6 million, depending on the alternative.

4.4 Financial Feasibility of Passenger Rail Service Alternatives

On the basis of these costs and forecast ridership, the fare box recovery ratio is approximately 4% for year-round service. The initial ratio for the seasonal alternative is 12%, within the range of operating costs and revenues for other rail passenger services operated in New England.

4.5 Economic Benefits of Project

Preliminary estimates indicate that the project could generate between $14.6 and $27.7 million in direct economic impacts associated with construction of the project, and between $1.0 million and $1.8 million in direct annual benefits due to operations, maintenance and new, induced tourism activity.

Between 320 and 750 Rhode Island workers would be expected to be employed during the construction period, earning between $9.2 million and $21.6 million, depending on the alternative.

After construction is completed, between 18 and 56 in-state workers will be required to operate and maintain the rail shuttle and bikeway systems. Their earnings would range from just under $450,000 for the seasonal shuttle up to $1.4 million for year-round service to/from Fall River.

5.0 ENVIRONMENTAL REVIEW REQUIREMENTS

Detailed environmental impact assessment and permitting would be required for any of the alternatives studied. The level of environmental review likely to be required will vary with the amount and location of facilities because each extension of rail or bicycle path facilities involves more construction in coastal areas, wetlands, or in close proximity to residential areas.

5.1 Potential Environmental Impacts

While the rail infrastructure and bicycle path have been designed to stay within the existing right-of-way or abutting public land, improvements to bridges, passing sidings and crossings are likely to have impacts subject to review. Categories of potential impact include air quality, water quality, noise, wetlands, hazardous waste, cultural resources, coastal resources, navigable waters, and roadway traffic. A number of these would be beneficial, e.g. air quality improvements. Construction of stations and parking areas would also require review for localized impact and any potential mitigation measures.

5.2 Environmental Review and Permitting

The first step in the review process for permitting a project would be preparation of an Environmental Assessment. Agency review would determine whether this was sufficient or whether additional review was required. It is likely that any rail alternative would require both Draft and Final Environmental Impact Statements.

While an Environmental Impact Statement would cover all categories of impact, a preliminary review has been conducted to identify potential areas of concern. The facilities are often within the 100-year floodplain and occasionally, the wave velocity zone. Construction of the rail infrastructure and bike path would impact small areas of wetlands and coastal resources subject to review. A Phase I Environmental Site Assessment has been performed to identify locations of hazardous materials; in some areas, construction would require a Phase II study. No historical or cultural resource impacts are expected. Noise impacts would be minimal. Air quality would be improved by reductions in roadway congestion

Environmental review would include extensive review by both state and federal agencies including: Rhode Island Department of Transportation (RIDOT), Rhode Island Coastal Resources Management Council (RICRMC), Rhode Island Department of Environmental Management (RIDEM), Rhode Island Historical Preservation and Heritage

Commission (RIHPHC), United States Army Corps of Engineers (USACE), and the United States Environmental Protection Agency (USEPA). In the case of commuter service, the construction of a new railroad bridge across the Sakonnet River would also require approval from the United States Coast Guard (USCG). Extending tracks into Massachusetts to connect to the Fall River station would require concurrent review by Massachusetts's regulatory agencies.

Among the rail alternatives, the Mt. Hope shuttle has the fewest potential environmental impacts. The greater length of the Anthony Road shuttle increases the potentially impacted area. The Fall River commuter shuttle has the greatest impact potential because it is longer and involves building a replacement bridge across the Sakonnet River. The busway alternative was in part dropped because the width of the two lanes required for safe operation generated substantially larger wetland and coastal impacts than the rail options. The bicycle path would be the simplest to permit. While it stays in the rail r.o.w. and other public property for most of its length, its wetland or marsh crossings on boardwalk will require review.

6.0 COMMUNITY INPUT

Public participation and input were an integral element of the project. Introductory meetings were held in February and March 2001 with the Aquidneck Island municipalities, the Town of Tiverton, the Newport County Chamber of Commerce, and the Aquidneck Island Planning Commission (AIPC) at whose joint request these analyses were performed. Public meetings were held in Portsmouth (June 2001) and Newport (October 2001) to present preliminary findings and alternatives for public comment and feedback. Project features were discussed at meetings with the US Navy, Mt. Hope Terminal, and the Portsmouth Abbey School as well as with other potential abutters during field trips. Additional coordination meetings were held with Newport, the US Navy, and others, as requested.

The draft report was reviewed with the Island municipalities, the Town of Tiverton, US Navy, the Newport County Chamber of Commerce, and the AIPC in early June 2002. A public meeting was held on June 25, 2002 in Middletown to present the project's findings. To provide the fullest opportunity for input, RIDOT extended the comment period through August 19, 2002.

In their comments, residents were very receptive to the idea of maintaining the Newport Secondary Corridor plan in transportation use. The bike path in particular was well-received, as it would provide a scenic, educational and enjoyable recreation/commuting path along the waterfront. There was strong support for continuation of the Dinner and Tourist Trains, consistent interest in the on-Island's shuttle's potential for relieving roadway congestion, and divided opinion about commuter train service to Massachusetts.

Comment letters and articles about the draft report offered support for the bicycle path, debated the pros and cons of different kinds of rail service, and suggested the possibility of more recent environmental data about hazardous waste. RIDOT responded to the comment letters and, after review of filed documentation, concluded that the environmental data did not require updating.

7.0 NEXT STEPS

7.1 Project Report

The final report will be published in early summer 2002 after receipt of comments following the public reviews of findings in June 2002. RIDOT will accept comments through July 19, 2002 and issue a final report in mid-August.

7.2 Project Development Process

After communities, elected officials, and interest groups have reviewed the findings of this report, any project would have to go through a number of steps in order to be constructed and provide service:

- Definition of the specific project to be pursued and permitted.

- Evidence of support from individuals, municipalities, elected officials, interest groups and others would have to be presented to RIDOT and the State Planning Council.
- The project would be placed on the state's Transportation Improvement Plan (TIP).
- Conceptual engineering design of the project would be advertised, awarded and prepared (1 - 1.5 years).
- Environmental review would be performed (from 2-5 years, depending on alternative).
- Final engineering design would be completed (1 year).
- Funding would be secured through the TIP.
- Construction would be completed (approximately 2 years, depending on alternative)

Consensus on any construction project would therefore, take anywhere from 6-10 years to become reality.

Table ES-6: Summary Description of Passenger Rail Service Alternatives

Service		Public Transportation Passenger Service Statistics			Forecast Ridership	Forecast Annual Fare Revenue	Without Excursion Service		With Excursion Service	
Structure	Concept	High Service Option	Fall/Spring	Winter	Weekday/Weekend	(Excluding Parking Fees)	Rail Infrastructure Requirements	Costs (Excluding Bike Path)	Rail Infrastructure Requirements	Costs (Excluding Bike Path)
None	Existing Service	NA	NA	NA	NA		NA	NA	Maintain existing track and structures to Class I standard	NA
Mount Hope Shuttle (Year round)	Four stations (Newport, Ranger Road, Melville, Mt. Hope) Trip Time: 17 minutes	First Train: 8:00am Last Train: 10:30 pm 52 Trains/Day	First Train: 8:00am Last Train: 08:30 pm 48 Trains/day	First Train: 8:00am Last Train: 06:30 pm 22 Trains/day	84,300 Annual Boardings 121-481 Boardings/Day	$80,000	10.1 miles of track CTC Signal System Passing siding at Melville Station Maintenance facility for three self-propelled rail cars plus 2 storage tracks Upgrade 21 at-grade crossings	Capital: $27.1M Equipment: $5.4M Annual O&M: $1.9M	Passenger service infrastructure (Class III) plus: • Signal controlled two track Newport Station • Sidings at MP2.0 and MP4.3 • Stub end storage track immediately North of Melville Station	Capital: $28.6M Equipment: $7.5M Annual O&M: $2.1M
High-Season Only On-island Shuttle (Mid-April to mid-October operation)	Four stations (Newport, Ranger Road, Melville, Mt. Hope) Trip Time: 17 minutes	First Train: 8:00am Last Train: 10:30 pm 52 Trains/day	First Train: 8:00am Last Train: 10:30 pm 42-48 Trains/day (Mid-April to mid-October)	No service	47,700 Annual Boardings 264-580 Boardings/Day	$118,000	Same requirements as Mt. Hope Shuttle	Capital: $27.1M Equipment: $5.4M Annual O&M: $990K	Same requirements as Mt. Hope Shuttle	Capital: $28.6M Equipment: $7.5M Annual O&M: $1.0M
Anthony Road Shuttle (Year round)	Four stations (Newport, Ranger Road, Melville, Anthony Road) Trip Time: 20 minutes	First Train: 8:00am Last Train: 10:30 pm 52 Trains/day	First Train: 8:00am Last Train: 08:30 pm 48 Trains/day	First Train: 8:00am Last Train: 06:30 pm 22 Trains/day	84,300 Annual Boardings 121-481 Boardings/Day	$80,000	Mt. Hope Shuttle passenger service infrastructure plus: • 2.5 additional miles of track • Upgrade 5 additional at-grade crossings	Capital: $34.4M Equipment: $5.4M Annual O&M: $2.3M	Same requirements as Mt. Hope Shuttle plus additional passenger service infrastructure	Capital: $35.9M Equipment: $7.5M Annual O&M: $2.4M
Fall River Commuter Shuttle (Year round)	Seven stations (Newport, Ranger Road, Melville, Mt. Hope, Anthony Road, Tiverton, Fall River) Trip Time: 30 minutes	First Train: 5:40 am Last Train: 12:35 am 28 Trains/day	First Train: 5:40 am Last Train: 12:35 am 28 Trains/day	First Train: 5:40 am Last Train: 12:35 am 28 Trains/day	144,000 Annual Boardings 229-715 Boardings/Day 150 daily boardings to and from Boston	$139,000	Anthony Road Shuttle passenger service infrastructure plus: • 5.5 additional miles of track • Additional passing siding at Anthony Road • Upgrade 4 additional at-grade crossings • Signal controlled two track Newport Station • Replace Sakonnet River Railroad Bridge	Capital: $72.1M Equipment: $7.5M Annual O&M: $3.4M	Same requirements as Mt. Hope Shuttle plus additional passenger service infrastructure and: • Signal controlled three track Newport Station	Capital: $73.6 M Equipment: $7.5M Annual O&M: $3.5M
Fall River Commuter Shuttle and Anthony Road Shuttle (Year round)	Seven stations (Newport, Ranger Road, Melville, Mt. Hope, Anthony Road, Tiverton, Fall River) Trip Time: 30 minutes	First Train: 5:40 am Last Train: 12:35 am 50 Trains/day	First Train: 5:40 am Last Train: 12:35 am 50 Trains/day	First Train: 5:40 am Last Train: 12:35 am 50 Trains/day	165,000 Annual Boardings 229-889 Boardings/Day 150 daily boardings to and from Boston	$159,000	Fall River Commuter Shuttle passenger service infrastructure plus: • Signal controlled three track Newport Station	Capital: $72.1M Equipment: $10.0M Annual O&M: $3.6M	Same requirements as Fall River Commuter Shuttle plus additional passenger service infrastructure	Capital: $73.6M Equipment: $10.0M Annual O&M: $3.7M

Table ES-6: Summary Description of Passenger Rail Service Alternatives

Service		Public Transportation Passenger Service Statistics			Forecast Ridership	Forecast Annual Fare Revenue	Without Excursion Service		With Excursion Service	
Structure	**Concept**	**High Service Option**	**Fall/Spring**	**Winter**	**Weekday/Weekend**	**(Excluding Parking Fees)**	**Rail Infrastructure Requirements**	**Costs (Excluding Bike Path)**	**Rail Infrastructure Requirements**	**Costs (Excluding Bike Path)**
None	Existing Service	NA	NA	NA	NA		NA	NA	Maintain existing track and structures to Class I standard	NA
Mount Hope Shuttle (Year round)	Four stations (Newport, Ranger Road, Melville, Mt. Hope) Trip Time: 17 minutes	First Train: 8:00am Last Train: 10:30 pm 52 Trains/Day	First Train: 8:00am Last Train: 08:30 pm 48 Trains/day	First Train: 8:00am Last Train: 06:30 pm 22 Trains/day	84,300 Annual Boardings 121-481 Boardings/Day	$80,000	10.1 miles of track CTC Signal System Passing siding at Melville Station Maintenance facility for three self-propelled rail cars plus 2 storage tracks Upgrade 21 at-grade crossings	Capital: $27.1M Equipment: $5.4M Annual O&M: $1.9M	Passenger service infrastructure (Class III) plus: • Signal controlled <u>two</u> track Newport Station • Sidings at MP2.0 and MP4.3 • Stub end storage track immediately North of Melville Station	Capital: $28.6M Equipment: $7.5M Annual O&M: $2.1M
High-Season Only On-island Shuttle (Mid-April to mid-October operation)	Four stations (Newport, Ranger Road, Melville, Mt. Hope) Trip Time: 17 minutes	First Train: 8:00am Last Train: 10:30 pm 52 Trains/day	First Train: 8:00am Last Train: 10:30 pm 42-48 Trains/day (Mid-April to mid-October)	No service	47,700 Annual Boardings 264-580 Boardings/Day	$118,000	Same requirements as Mt. Hope Shuttle	Capital: $27.1M Equipment: $5.4M Annual O&M: $990K	Same requirements as Mt. Hope Shuttle	Capital: $28.6M Equipment: $7.5M Annual O&M: $1.0M
Anthony Road Shuttle (Year round)	Four stations (Newport, Ranger Road, Melville, Anthony Road) Trip Time: 20 minutes	First Train: 8:00am Last Train: 10:30 pm 52 Trains/day	First Train: 8:00am Last Train: 08:30 pm 48 Trains/day	First Train: 8:00am Last Train: 06:30 pm 22 Trains/day	84,300 Annual Boardings 121-481 Boardings/Day	$80,000	Mt. Hope Shuttle passenger service infrastructure plus: • 2.5 additional miles of track • Upgrade 5 additional at-grade crossings	Capital: $34.4M Equipment: $5.4M Annual O&M: $2.3M	Same requirements as Mt. Hope Shuttle plus additional passenger service infrastructure	Capital: $35.9M Equipment: $7.5M Annual O&M: $2.4M
Fall River Commuter Shuttle (Year round)	Seven stations (Newport, Ranger Road, Melville, Mt. Hope, Anthony Road, Tiverton, Fall River) Trip Time: 30 minutes	First Train: 5:40 am Last Train: 12:35 am 28 Trains/day	First Train: 5:40 am Last Train: 12:35 am 28 Trains/day	First Train: 5:40 am Last Train: 12:35 am 28 Trains/day	144,000 Annual Boardings 229-715 Boardings/Day 150 daily boardings to and from Boston	$139,000	Anthony Road Shuttle passenger service infrastructure plus: • 5.5 additional miles of track • Additional passing siding at Anthony Road • Upgrade 4 additional at-grade crossings • Signal controlled <u>two</u> track Newport Station • Replace Sakonnet River Railroad Bridge	Capital: $72.1M Equipment: $7.5M Annual O&M: $3.4M	Same requirements as Mt. Hope Shuttle plus additional passenger service infrastructure and: • Signal controlled <u>three</u> track Newport Station	Capital: $73.6 M Equipment: $7.5M Annual O&M: $3.5M
Fall River Commuter Shuttle and Anthony Road Shuttle (Year round)	Seven stations (Newport, Ranger Road, Melville, Mt. Hope, Anthony Road, Tiverton, Fall River) Trip Time: 30 minutes	First Train: 5:40 am Last Train: 12:35 am 50 Trains/day	First Train: 5:40 am Last Train: 12:35 am 50 Trains/day	First Train: 5:40 am Last Train: 12:35 am 50 Trains/day	165,000 Annual Boardings 229-889 Boardings/Day 150 daily boardings to and from Boston	$159,000	Fall River Commuter Shuttle passenger service infrastructure plus: • Signal controlled <u>three</u> track Newport Station	Capital: $72.1M Equipment: $10.0M Annual O&M: $3.6M	Same requirements as Fall River Commuter Shuttle plus additional passenger service infrastructure	Capital: $73.6M Equipment: $10.0M Annual O&M: $3.7M