

**Maryland – Virginia
Ferry Feasibility Study**

Step Two-A Report

February 2005

Prepared for

Somerset County

City of Crisfield

Northumberland County

Northern Neck Planning

District Commission

By

PB Consult, Inc.

PBQ&D, Inc.

100 South Charles Street

Suite 100

Baltimore, MD 21201

FXM Associates

Mattapoisett, MA

Table of Contents

Introduction	1
Ferry Route Costs, Patronage and Revenues	2
Terminal Costs	2
Refined vessel characteristics and costs.....	3
Business, tourism and real estate market interviews	5
Revised traffic, revenue and operating cost forecasts.....	12
Implementation Issues	14
Governance issues	14
Operator interest	14
Public-Private Partnership potential	15
Finance issues	19
Where We Are Now and the Next Steps	20
The “Roberts Model” illustration	20
Organizational requirements	21
Multi-use pier alternative	22
Specific next steps	24
Appendix A. Procurement of a private operator for the ferry route	25
Appendix B. Outline of vessel procurement process	26

List of Figures

Figure 1. Conceptual ferry terminal layout.....	3
Figure 2. The “Roberts Model” of Project Management Success	20

List of Tables

Table 1. Summary of terminal development costs	4
Table 2. General characteristics of desired 20-knot ferry vessel.....	4
Table 3. Annual ferry vehicle demand and revenues.....	13
Table 4. Summary of annual vessel operating costs	13
Table 5. Vessel capital costs.....	13
Table 6. Summary of all capital costs.....	13
Table 7. Summary of annual operating revenues and costs.....	14

INTRODUCTION

This report summarizes the results of Step Two A of the Maryland-Virginia Ferry Feasibility Study. The three major purposes of this step were:

- Reconfirm and update previous information about potential terminal sites in Crisfield and Reedville; vessel and terminal construction costs, patronage and revenue estimates; and annual operating costs;
- Test operator interest in the proposed route; and
- Identify potential funding sources and organizational structures for actually operating the proposed ferry route.

As a reminder to the Committee members, the specific tasks in Step Two A are listed below:

1. Refine ferry route costs, patronage, revenues and operating schemes

a. Refine terminal costs

Identify one or more potentially suitable sites at both Crisfield and Reedville. Investigate ownerships, usage restrictions and purchase price range (including consultations with local realtors on land costs). Refine terminal/infrastructure concepts and refine terminal layouts. Investigate landside and waterside conditions including an on-site investigation of water depths to refine the scope and costs of dredging requirements at Crisfield.

b. Refine vessel characteristics and costs

Interview potential boat builders and identify potential high speed vessels. Research vessel capital and operating costs; update operating cost model.

c. Refine patronage and revenue estimates

Tourist travel demand: Conduct interviews with non-profit and private owners/operators of tourist attractions, including cultural and historic attractions; other destinations whose attendance/ participation may be affected by the proposed ferry service.

Freight shipper demand update: Conduct and summarize additional freight shipper interviews including 5 or more additional trucking firms, 5 – 10 shippers/receivers and 5 – 10 local businesses, and update truck travel demand and acceptable fare ranges. Expand upon the number of interviews conducted in Step One with major employers as well as smaller businesses whose sales and employment may be affected by the movement of goods via the proposed ferry.

Miscellaneous demand sources: Interview Eastern Shore real estate sales agents and developers to discuss the potential impacts of the ferry on marketing of vacation homes to Virginia residents.

Revised traffic and revenue forecasts: Update traffic forecasts and revenue models and estimates.

2. Implementation and Finance Issues

- a. Financing options: Research applicable federal, state and local public financing sources, document limitations and matching requirements, and summarize in tabular format
- b. Public-Private Partnership Potential: Research state PPP legislation and requirements.
- c. Governance issues: Research potential governance issues regarding establishment and regulation of the proposed inter-state ferry route including the ability to accept and manage public and private funds invested in the project under current state and federal laws.
- d. Operator interest: Contact potential private operators to identify level of interest in providing the service, what commitments by state/local governments would be needed and their specific information needs for bidding on the service. Research potential “quick-start” options with private operators using existing vessels and minimal land-side facilities as a demonstration project should permanent funding commitments be delayed. Ascertain from current ferry operators (based on Tasks 1 and 2 data) the number of operators and their level of interest in bidding on Crisfield to Reedville ferry service operations.

The results of each of these tasks are discussed below.

FERRY ROUTE COSTS, PATRONAGE AND REVENUES

The purpose of this task was to provide updated estimates of revenues and costs for the proposed ferry route based on additional field investigations, interviews and discussions with knowledgeable persons in their respective fields. Information on potential operating schemes is discussed under “Implementation.” In short summary, none of the new information significantly changes the findings and conclusions from Step One.

Terminal costs

The PB Consult Team was able to identify three potential terminal sites at both the Reedville and Crisfield ends of the proposed route. At Crisfield, one site would involve use of an existing public dock located at the end of Dock Street, but all other sites are currently privately owned. Even the public dock site would require acquisition of a private parcel for potential over-flow parking for ferry patrons. Based on advice from the Somerset County Attorney’s Office, we have not specifically identified any of the privately-owned sites in this report. Information about these sites was transmitted to Daniel Kuennen, Director, UMES Rural Development Center who served as Project Manager for this Step IIA study in a separate confidential memorandum. All questions regarding this process are referred to Mr. Kuennen or the Somerset County Attorney.

A prototypical terminal layout is illustrated in Figure 1. Schematic terminal layouts were prepared for each of the six sites, based on the needs and concepts established in previous studies for cross-Chesapeake Bay ferry routes. Specific cost estimates were then developed for each site based on these layouts which were tailored to the characteristics of each site. The costs included estimates of dredging needed to provide adequate water-side access.

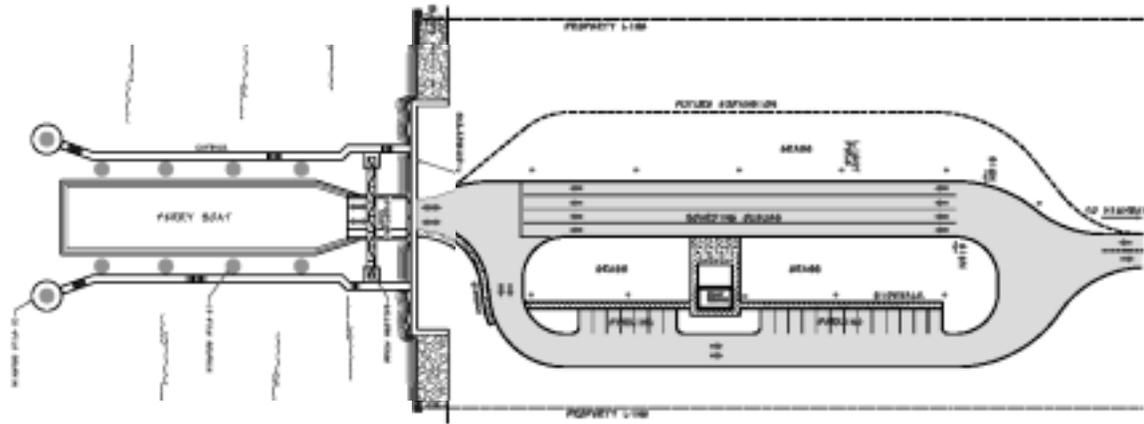


Figure 1. Conceptual ferry terminal layout

Each of the Reedville sites were deemed to have adequate water depths based on published hydrological maps, but the Crisfield dredging requirements were based on a field investigation of water depths due to the prevalence of shallow water outside the marked channels in the harbor.

Land costs were based on average land values per square foot from historical sales data and from conversations with knowledgeable realtors in each locality. Of all cost elements, the potential land costs are the most highly variable because land prices have increased significantly in both Crisfield and Reedville in recent years. For this public document, specific parcel land costs were not identified, again on the advice of the County Prosecutor. However, we will note that except for one site, the estimated land values for each of the other sites were approximately the same in each community, and they should be considered relatively equal for budgeting purposes. A “typical” land cost was used at each of the Crisfield and Reedville site.

As shown in Table 1, the costs for land acquisition and terminal development range from \$5.7 million to \$6.7 million in Crisfield and \$5.1 million to \$6.4 million in Reedville. For program budgeting purposes, we recommend using a rounded figure of \$4.0 million for terminal construction costs and land costs of \$1 million in Reedville and \$2 million in Crisfield. Please note that these costs reflect terminal needs as described in the summary report for Step One for full operation of a 20 knot ferry carrying about 220,000 cars, trucks and recreational vehicles annually. A start-up operation could be implemented with a lesser level of improvements, but the specific costs would depend upon the vessel technology and the site chosen.

Refined vessel characteristics and costs

The PB Consult Team conducted telephone interviews with four shipbuilders about their ability to build, and the estimated costs of, a moderate speed ferry vessel for this route. The desired vessel specifications are listed in Table 2. The builders interviewed were:

- Austal USA (A division of Austal, Inc.), Mobile, Alabama
- Dakota Creek Industries, Anacortes, Washington
- Direcktor Shipyards, Bridgeport, Connecticut
- Gladding-Hearn Shipbuilding, Somerset, Massachusetts

Table 1. Summary of terminal development costs

Item	Site R-1	Site R-2	Site R-3	Site C-1	Site C-2	Site C-3
Demolition	\$20,000	\$20,000	\$100,000	\$100,000	\$0	\$180,000
Paving	\$330,000	\$390,000	\$350,000	\$180,000	\$620,000	\$210,000
Buildings	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$240,000
Utilities	\$110,000	\$110,000	\$90,000	\$60,000	\$110,000	\$100,000
Marine Structures	\$2,170,000	\$3,010,000	\$2,100,000	\$1,580,000	\$2,540,000	\$2,030,000
Shore Protection	\$30,000	\$30,000	\$30,000	\$0	\$0	\$0
Dredging	\$0	\$0	\$0	\$670,000	\$0	\$0
Signage & Pavement Markings	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
Landscaping	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$0
Subtotal	\$2,860,000	\$3,760,000	\$2,870,000	\$2,790,000	\$3,470,000	\$2,790,000
Contingency	\$710,000	\$940,000	\$700,000	\$690,000	\$870,000	\$690,000
Subtotal	\$3,570,000	\$4,700,000	\$3,570,000	\$3,480,000	\$4,340,000	\$3,480,000
Design, Permits & Const. Mgmt.	\$530,000	\$700,000	\$530,000	\$520,000	\$660,000	\$520,000
Total Site Improvements	\$4,100,000	\$5,400,000	\$4,100,000	\$4,000,000	\$5,000,000	\$4,000,000
Estimated Land Cost	\$1,000,000	\$1,000,000	\$1,000,000	\$1,700,000¹	\$1,700,000	\$1,700,000
Total Terminal Cost	\$5,100,000	\$6,400,000	\$5,100,000	\$5,700,000	\$6,700,000	\$5,700,000

¹ Does not include cost of an operating business on this site.

Table 2. General characteristics of desired 20-knot ferry vessel

Category	Specification
Overall length	200 feet maximum
Overall width	60 feet maximum
Hull depth	7.5 feet maximum
Auto capacity	45 to 55 cars
Truck capacity	8 truck/semi-trailer combinations plus 10 to 20 autos
Passenger capacity	150 to 250 persons
Operating speed	20 knots or greater
Route	30 to 35 kt miles
Amenity package	similar to Lake Express

Although the specific discussions with the interviewees are not included in this report for confidentiality reasons, the results were remarkably consistent:

- **Capability:** Each shipyard interviewed had full capabilities to build the desired boats and most had construction experience with similar vessels. Each had licensing agreements with foreign ferry boat designers who have many years of experience in the field.
- **High speed ferry potential:** Consensus was that high speed ferries (30 knots or greater) would not make sense due to their significantly higher costs for truck-carrying capability.
- **Vessel cost:** \$16 to \$18 million, up to 10 percent more depending upon specific powering requirements. More detailed design information needed to be more specific.
- **Vessel delivery:** Average 16 months for first boat, second boat 4 months thereafter.
- **Operating costs:** Shipyards did not have much information on “typical” operating costs because it varies greatly from route to route.
- **Preferred acquisition process:** Use a design-build process managed by an Owner’s Representative experienced in ship building (see additional discussion under Implementation Process) and with cooperation of selected ferry service operator. Boat building decisions come near the end of the ferry route implementation process, not at the beginning.

Business, tourism and real estate market interviews

The estimates of patronage and revenue presented in Step One report were based largely on secondary source data and interviews that had been conducted with local businesses for prior studies. For Step Two A, FXM Associates conducted additional interviews with tourism, real estate, manufacturing and distribution businesses, and selected public and private sector officials in the Northern Neck of Virginia (focusing on the Reedville area and Northumberland County) and the Eastern Shore of Maryland (focusing on the Crisfield area and Somerset County). Approximately 40 interviews were completed¹.

Potential interviewees were drawn from lists supplied by the client group and expanded based on suggestions made during the interviews. The sample is not statistically representative of all businesses and public agencies in Northumberland or Somerset County, but does include a substantial coverage of those public and private sector officials that the client group suggested would be most affected by the proposed ferry service or would be most likely to have information or opinions bearing on the subject.

In order to properly interpret the interview responses, it is important to first understand the effective “hinterland” for the proposed ferry service – that is, the geographic area it will serve. As discussed in the Step One report, a ferry between Crisfield and Reedville will lower travel times between selected geographic origins and destinations, and, if properly priced, is therefore likely to draw both automobile and truck trips from established routings and possibly induce new trips not now made. For trips *destined to the Northern Neck of Virginia* and points west of the Northern Neck (roughly Charlottesville to just south of Richmond, and due west), the ferry

¹ Almost all completed interviews required several contact attempts and many involved more than one telephone conversation – interest among respondents was very high and most contributed generously of their time and insights.

will offer a shorter route for auto travelers and freight originating from the upper eastern shore of Virginia to points north along the Delmarva Peninsula in Maryland, Delaware, and New Jersey, and including eastern Pennsylvania, New York, and New England. For trips *destined to the Crisfield/Somerset County area* and points north along the Delmarva (including Maryland, Delaware, New Jersey, eastern Pennsylvania, New York, and New England), the ferry will offer a shorter route for trips originating in the Northern Neck of Virginia and southwest of the Northern Neck (roughly Richmond). Trips from or to the Baltimore-Washington DC area, and south of the Richmond area, are unlikely to be greatly affected by a Reedville to Crisfield ferry crossing on a travel-time basis alone.

Within this geographic context, the interviews sought to identify and confirm (from the Step One estimates of auto and truck diversions) whether current customers of Northern Neck and Crisfield area businesses and tourist attractions would be affected by the ferry. Anecdotal information from the interviews helps confirm the diversion potential – in other words, the businesses and tourist attractions interviewed now draw customers and visitors from the geographic areas that would benefit from the proposed ferry. It follows, therefore, that with improved travel times the number of visitors from these geographic areas would likely increase.

Two over-arching perceptions

The interviews revealed two important perceptions among some of the local business, non-profit organizations, and public officials interviewed. The first is that those interviewees knowledgeable of the real estate market in the area thought that the ferry plans had already had an effect on the market for second homes by “putting the area on the map.” One realtor mentioned a *Washington Post* article on Crisfield that had excited considerable interest among residents of the Washington-Baltimore area, even though she recognized that the proposed ferry service would not affect travel times or trip patterns from that area. Similarly, others interviewed stated that the recent upsurge in demand was likely the result of the publicity about the area, not a potential reduction in travel times. No one interviewed thought that the ferry service itself would affect demand in any more than an indirect way: by increasing recreation options and thereby making the location of a second home in either the Reedville or Crisfield area more desirable.

A second perception of several of those interviewed was that the ferry service would “inundate” local roadways with tourist and truck traffic. This perception is incorrect, assuming the currently planned distribution of proposed vessel departures and arrivals and the numbers of vehicles projected to use the ferry. This misperception could be addressed with a comparison of expected ferry traffic (by type, autos and trucks) with typical hourly and daily volumes (again by type) on the affected roadways for winter and summer seasons.

Summary of Northern Neck interviews

FXM Associates interviewed 19 Reedville area business owners or operators of establishments related to the tourism industry, residential real estate sales and development, and manufacturing companies, as well as a select number of public officials responsible for tourism or economic development. The summary information below has been edited to preserve the confidentiality of the interviewees.

There is a general sense among those interviewed that the past several years of public discussion and media coverage about proposed ferry service have had tremendous impact on the visibility of both Crisfield and Reedville. The significant increase in real estate activity in the Reedville area, particularly sales of retirement and vacation homes to buyers from the

Washington, DC metropolitan area, is attributed to extensive media coverage of the proposed ferry and subsequent targeted marketing by local developers and realtors. Local perceptions of potential effects associated with ferry service seem to vary considerably by type of business and business location, and there is consensus that expected ferry service across Chesapeake Bay has put this area 'on the map' as an attractive, affordable, and accessible waterfront destination.

Tourism–related businesses. Tourism representatives are the most enthusiastic about proposed ferry service between Reedville and Crisfield that would expand opportunities to market numerous local, Northern Neck, and other nearby (1- to 2-hour drive) Virginia vacation attractions. The Northern Neck has a historic association with Maryland. Until 1927 there was steamer service to Baltimore, Norfolk, and Washington, DC, and area tourism officials consider the ferry to be a major improvement for north-south travelers trying to avoid metropolitan area traffic. Tourist destinations in the Northern Neck are described as recreational or historic, including fishing and water sports, hunting and wildlife refuges, and state parks.

Generally, visitors to the Northern Neck are from the Washington, DC area and the east coast, especially New Jersey, Pennsylvania, and New York; from the Raleigh, NC area, as well as day-trippers from Newport News and Norfolk, Virginia, and many Northern Neck visitors are en route to or from sites in Williamsburg and Fredericksburg. According to records of the Westmoreland County State Park, all visitors to the state parks arrive by vehicle, and most are from Northern Virginia, the DC metro area, and Maryland. The areas also host agricultural tourism - wineries, a new Northern Neck Agricultural Center in Burgess, and farm tours that attract 500 to 1,000 people at a time. The Regional Office of Tourism reported an average 240,000 visitors annually for ten major tourist sites, with 2,000 to 3,000 visitors at special events such as the Seafood Festival.

Virginia tourism representatives expressed two consistent concerns related to proposed ferry service from Crisfield to Reedville: (1) that the existing Northern Neck physical and hospitality infrastructure (roads, hotels/motels, parking, restaurants) is inadequate to handle a significant influx of ferry-related tourism business; and, (2) that a \$20 to \$25 round trip would likely be the maximum fare the majority of tourists would be willing to pay. Additionally, the specific location of the ferry terminal may influence the amount of increased visitation to local tourist attractions; a terminal location in Fleeton is seen as facilitating more stops in Reedville by travelers heading to Route 360 than one in Fairport.

Reedville area hospitality business owners (restaurants, lodging, specialty gifts) are less certain about potential beneficial impact from visitors arriving by ferry. Although a few businesses are open year-round, almost all depend on seasonal business from April through October and most guests at local motels or bed & breakfast establishments come to visit local tourist sites, family/friends, or for weekend 'getaways.' Some proprietors attribute the steadily increasing number of visitors to their advertisements in Washington, DC travel and leisure publications, and acknowledge that recent media coverage about ferry service has generally increased awareness of the Northern Neck area.

Restaurant owners in Reedville have different opinions about the potential impact ferry service might have on business, although they agree that anything bringing more people to town is generally good for business. Tommy's Restaurant on Main Street is the only restaurant on the peninsula open year-round. The Crazy Crab restaurant is located on the end of the peninsula and is open seasonally, April through November. The owners report that business has been growing during the past few years due to the Northern Neck's residential building boom. Most

customers are weekenders from northern Virginia, diners just passing through town and local trade, and ferry service from Crisfield would increase business. A number of local business owners mentioned that many visitors regularly arrive in cars looking for the ferry to Crisfield and some surmise the confusion is due to mistaking the Maryland/Virginia state line on road maps for a ferry route. At one eatery, more than 150 people came in to ask about car ferry service to Maryland during the 2004 tourist season; however, the proprietor doesn't expect the ferry to boost business noticeably.

The Bay Motel, located on Route 360, is the only motor inn in Reedville and is open year-round. There are now two bed & breakfast accommodations in the Reedville area; two others, Coral Grove and Elizabeth House, recently closed. For these lodging places, April through October is the busiest season and the winter season demand is very low. Most patrons come from Richmond, Washington, DC, and Baltimore areas. Owners' opinions are very divided on the potential impact that a ferry would have on their businesses.

Real Estate and Developer Interests. According to local real estate agents and developers, the Northern Neck is one of the most active residential real estate markets in the country, driven by new construction of second homes and vacation property for baby-boomers from the Washington, Baltimore, New Jersey, New York, Delaware, and Philadelphia areas. The primary connection between the ferry and local real estate activity has been the exposure gained from media coverage. As one broker observed, "No one ever heard of Reedville before the newspaper articles about the ferry; previously, our real estate market catered to buyers from Richmond and northern Virginia."

Most real estate professionals agree that ferry service is not likely to have any effect on real estate sales due to the existing and projected scarcity of property, but ferry service to Crisfield may become another marketing feature beneficial for these new second home/vacation home owners who frequently travel north. One prominent Reedville realtor commented that it is generally believed that the ferry will provide an important transportation connection to Maryland, making Reedville and the Northern Neck accessible from northern Maryland and places like Ocean City. Some pointed out that Reedville is centrally located between Baltimore, Virginia Beach, and Richmond, about 22 miles from Crisfield but 5 hours' driving time, and ferry service could also be attractive to seasonal commuters from New England to Florida.

The Northern Neck's waterfront location, inexpensive property relative to the DC metro area real estate prices, low crime rate, low taxes, and rural ambience are the factors cited as driving this building boom. Additionally, many of these new residents might use the ferry to get to beaches on the Maryland shore which are more expansive than beaches in the Northern Neck. One of the larger real estate companies in Reedville handles one-half to one-third of residential sales in the area, as well as commercial sales. Its agents observed that while local waterfront property sold for \$200,000 to \$250,000 two years ago, now there is little waterfront property available for less than \$400,000; off-water property (farms, rural homes) is selling for \$150,000 to \$250,000 but comprises less than 25% of all listings. From January through mid-October 2004, this company's nine agents had sold 202 properties in the area (Reedville, Kilmarnock, Whiteside) with total sales of slightly more than \$30 million. Sale prices range from \$250,000 to \$1,000,000, and homes usually stay on the market for less than 30 days. Although some homes have boat slips (open pile timber piers in 5-foot deep water for 2 to 3 boats), full-service marinas are difficult to permit in Virginia even as most buyers are seeking water views.

Other Northern Neck Businesses. One of the largest Northern Neck industries expects that 40% to 50% of the trucks that service their plant would use ferry service to Crisfield to avoid

the long trip by tunnel or bridge. This diversion would generate approximately 80 to 100 daily ferry trips (Monday through Friday) by 18-wheel tractor trailers carrying finished wood products to Delaware, Pennsylvania, New Jersey, New York, Rhode Island, Massachusetts, and other northern destinations. Contract workers comprise most of the company's trucking fleet; the 250 employees are local and would not use the ferry for commuting to work. In addition to affording more efficient and economic operations, the ferry would enlarge the trade area and allow for business expansion. An additional 40 to 50 tractor trailers per day (Monday through Friday) would use the ferry to and from another Northern Neck company, if the service saves time or reduces cost. Company officials expect the independent truck owner/operators servicing their facility would be able to reduce regular 200-mile trips to 40-mile trips, thereby saving approximately \$150 each way via the ferry route. In addition to reducing mileage and time required for current routes (interviewees estimated 4 to 5 hours on both northern and southern routes), the ferry would eliminate the costs of tolls both ways (again quoting interviewees), would reduce fuel costs, and would open access to timber land on the Northern neck to industrialization.

The Northern Neck poultry industries expect fewer benefits from ferry service. Due to recent changes in shipping functions, the ferry will have little consequence for trucks that service this plant. Company representatives acknowledged the ferry would provide a more direct link between Richmond and the Eastern Shore, and could be an alternative for the mostly independent truckers if the schedule and fare are competitive with the current tunnel route for southern destinations. One plant ships product to Pennsylvania, DC, Baltimore, and New York, and receives 5 to 10 truckloads per week of prepared chicken parts from an affiliated plant north of Richmond that would probably use the ferry. Local employees at these companies would not use the ferry for commuting to work.

Summary of Crisfield Area Interview Information

Interviews were conducted by telephone in April and October 2004. A total of 18 businesses were interviewed in the Crisfield area.

Tourism–related businesses. Somerset County (population 24,000), where Crisfield is located, attracts a modest number of tourists: the two visitors' centers in Crisfield and Princess Anne serve about 155,000 travelers annually. The Crisfield Historical Museum attracts an average of 14,500 visitors per year, and the nearby Somers Cove Marina serves over 20,000 boaters a year.² In addition, yearly events attract approximately 40,000 people to Crisfield. The area offers 20 hotels, motels, bed & breakfasts, and country inns with a total of approximately 230 rooms. Over half of these establishments are in Crisfield or Smith Island.

The group interviewed included owners and operators of lodging places and restaurants as well as operators of tourist attractions and local tourism officials. With only a few exceptions they thought that a ferry would have a positive impact on tourism in the Crisfield area. In general, they believe that ferry service as proposed would generate more traffic and customers for them. The operators of tourist attractions tended to think that a ferry would serve people already traveling to the area and would increase the amount of pass-through travel, thereby benefiting local merchants and tourism businesses. Owners of seasonal businesses cited the opportunity for increasing occupancy rates.

² Information provided by Julie M. Widdowson, Director, Somerset County tourism, April 24, 2004.

Two people interviewed who are very knowledgeable of the tourist business there both said that tourists often come to the area looking for, or expecting to find, ferry service to get to the Northern Neck in order to avoid the Bay Bridge Tunnel crossing. Both sides of the bay have a number of tourist destinations. The main attraction is the water, but once tourists are in the area, they visit several sites and patronize local businesses. The Director of the Crisfield Heritage Foundation said that the majority of their visitors are regional, and their numbers are increasing. In 2003, there were 15,000 visitors to Foundation sites.

Currently tourists come from the DC/Northern Virginia/Maryland area, New York, New Jersey, Pennsylvania, and also from southern areas: Raleigh, NC, and Norfolk and Richmond, VA. As noted above, many area tourists (40% by one estimate) are also on their way to other destinations within the region, such as Ocean City and Rehoboth Beach, both on the Atlantic side of the eastern shore. From one Somerset County tourism official's perspective, the most likely users would be people traveling to Virginia, parts of North Carolina, and points west. Another tourism professional noted that visitors from Philadelphia (3.5 hours away) and Baltimore (2.5 hours away) often inquire about a car ferry, suggesting that these travelers would be likely users. Local residents, according to a tourism official, would use the ferry to get to theme parks (Busch Gardens and King's Dominion) in Virginia. According to the Somerset County Director of Tourism, there are an estimated 10,000 inquiries about automobile ferry service from Maryland's Eastern Shore to Virginia each year. The reasons for preferring a ferry are avoiding the Bay Bridge Tunnel crossing, looking for a shortcut, or just the attraction of a ferry ride.

Real Estate and Developer Interests. In contrast to the tourism professionals interviewed, most of the realtors and developers interviewed were less sure that the ferry service would have much effect on their activities. They believe that early publicity about the ferry may have given a temporary boost to the area, but that the ferry is no longer a significant factor in demand. Rather, demand is being driven by the relatively low prices compared to other parts of the Eastern Shore, coupled with an increasing demand for investment/vacation/retirement homes from buyers in the northeastern states, particularly from the DC area, who are being priced out of the closer-in parts of the Eastern Shore. Aggressive marketing by brokers has targeted these prospective buyers. Buyers are buying new condos and older single family homes "with character" as investment and vacation or retirement homes. Despite the relatively lower prices in the Crisfield area, however, realtors are observing increases, particularly in lower priced properties, some of which have doubled in value. Some examples:

- Harbor Lights development is still under construction, with prices ranging from \$289,000 to \$389,000 for the first phase. The next phase will start at around \$329,000.
- The Captain's Quarters downtown consists of 14 condos priced from \$350,000 to \$390,000. A new townhouse development near the hospital is selling units for \$350,000 and up.
- Existing housing, such as a ranch built in the '80s, nothing fancy but on the waterfront, is priced at \$429,000, up from \$225,000 to \$250,000 only two years ago. Newer and more upscale single family homes are selling for close to \$500,000.

Higher priced properties have seen less dramatic increases. Tellingly, there is a shortage of building lots, and prices for those have doubled, according to a realtor who is also an appraiser. Raw land is at a premium; there are numerous environmental restrictions, and extensions of water and sewer would be needed to accommodate significant population increases. Indeed, one realtor believes that Crisfield would have to annex land in order to grow. The current

interest in Crisfield, according to local officials, is a trend that will continue, with or without the ferry.

A concern generally shared by those interviewed is the location of the terminal and the ability of existing infrastructure, particularly roads, to support ferry-related traffic. Trucks pose a special concern. One of the area's features as a destination is its rural ambience, which might be at risk if traffic and development increased. Conversely, two persons interviewed noted that there wasn't much to do in Crisfield: a lack of shops, some tourist sites that needed investment, and a downtown that needs "spiffing up." They also cited the need for professional planning and a longer term vision and strategy for the waterfront.

Other Crisfield Area Businesses. FXM Associates also spoke with businesses who could be commercial users of the proposed ferry service. Two seafood companies interviewed both said they would use the ferry to ship product because of the time savings the ferry would offer. In one case, a Crisfield seafood shipper now needs 4 to 5 hours to reach customers across the bay; the ferry would save considerable time and enable them to reach the Richmond area much more quickly. This business would likely send 1 to 2 trucks a day by ferry, and the owner estimates a resulting expansion of the retail trade by two or three times. Another seafood company who ships with 2 to 3 trucks makes 3 to 4 trips per week. The ferry would enable them to have daily runs and would boost the business by an estimated 30% to 40%. A third business, with no customers across the bay, would not be likely to use the service.

The implication for ridership potential derived in Step One is that the number of potential ferry riders is likely to be greater than previously estimated – it will include net new travelers to both areas as well as diversions from current routings. Most interviewees saw this potential and regarded it as a benefit to their business or non-profit attraction.

Summary of potential effects on tourist ridership

Not only is an increase in net number of total visitors likely, but the diversion of current trips from established routings will bring more potential customers and visitors to both areas. In other words, the diversions of trips to the Northern Neck through the Crisfield area as a consequence of the ferry will bring more potential customers to Crisfield area businesses and more visitors to Crisfield area attractions. Similarly, the diversion of trips to the Crisfield area through the Northern Neck will bring more potential customers and visitors to the Northern Neck. Businesses for whom leisure travelers are important, such as B&Bs, motels, gas stations, and restaurants, and organizations managing historic and other attractions in both the Northern Neck and Crisfield area, saw the ferry as a way to bring more customers and businesses to their establishments. The objective assessment confirms this belief.

Summary of potential effects on freight shipper demand

The freight shipper interviews confirmed previous estimates of potential demand of 120 to 150 round trips every weekday for tractor-semi-trailer combination trucks by local (Northern Neck and Crisfield area) businesses. In addition, there would be a market for another 40 to 80 round trips each weekday by various smaller commercial trucks and vans operated by local businesses. Thus, it appears that local freight shippers could use virtually all of the daily vessel capacity for large trucks with a two-boat ferry operation.

Summary of potential effects on real estate development

The perceptions of real estate professionals in the Northern Neck and Crisfield areas on potential effects of the ferry on the volume of residential sales are also fairly consistent –

demand is now sufficiently strong for waterfront property in both areas that even if the ferry made it easier for people to get to their second homes (none see any effect on year-round residences), it would have only a marginal, if any effect, on current demand. They reported this perception even though some had assumed that the ferry would affect market potential from the Baltimore-Washington DC area, which it will not, at least not directly.

The real estate professionals' perception that improved ferry service will not spur significant new demand for addition second home purchases or new construction in either the Northern Neck or Crisfield is supported by objective measure of the current and prospective hinterland for the ferry. Demand for second homes in the Crisfield area is coming from the Baltimore-Washington area and points north, which will not be affected by ferry service. Likewise, demand for second homes in the Northern Neck is coming from the Richmond area north to Baltimore and Washington DC. Trips to the Northern Neck from these markets will not be affected by the ferry. The likelihood that the ferry will induce persons now headed to the Crisfield area for second home opportunities to include the Northern Neck among possible locations (and vice versa going from the Northern Neck to Crisfield) is also extremely slim. Prices for waterfront properties are comparable in both areas, and, more importantly, a seasonal ferry service imposes limitations and risks in reaching second homes both in and out of season.

The ferry service will, however, make it possible for vacationers and second home owners in both areas to reach a broader number and type of leisure destinations. This could affect property values as the "utility" (potential opportunities) attached to residences in either area is improved. The same argument applies to hotels, motels, and B&Bs in both areas – they will benefit from being able to offer a wider range of opportunities to enjoy vacation time in either the Northern Neck or the Crisfield area.

Revised traffic, revenue and operating cost forecasts

Using the information from the various interviews the traffic and revenue forecasts were updated. First, an error in the previous calculation was corrected which reduced previous estimates of traffic and revenue by about 2 percent—still well within the overall accuracy of the analysis. Second, auto and truck travel costs were adjusted to reflect increased fuel prices; on the operations side, the fuel price for the ferries was also increased to current conditions. Third, since the previous model did not account for increased tourist potential in the Northern Neck and Lower Eastern Shore areas, the model was tweaked to show a slightly higher attraction rate for recreation trips to tourist and recreation areas based on the above interviews.

The revised forecasts of annual patronage and revenues are shown in Table 3. The results are higher due largely to added tourist and recreation traffic, and these patrons are willing to pay higher fares than patrons on work and other related trips. The increased cost of vehicle fuel is also a factor, accounting for about a 3 to 5 percent increase in overall volumes. Values are not shown in these and other tables in this report because the high speed ferry (30+ knots) is simply not a viable option due to its very much higher capital and operating costs, and the physical constraints of the route.

Table 4 summarizes annual vessel operating costs. The increases from the previous report are due to the increased price of vessel fuel.

Table 5 shows the updated estimates of vessel capital costs for the 16.5 knot and 20 knot vessels. They are not any different from the previous estimates. Table 6 summarizes all of the anticipated capital costs for the ferry route: vessels, terminals and land costs. The table shows

the significant difference between the 16.5 knot vessel and the 20 knot vessel options; the slightly higher speed boat would cost more than double that of a converted off-shore service vessel simply because there are no 20 knot vessels currently available for refurbishment, and it would have to be built anew.

Table 3. Annual ferry vehicle demand and revenues

Vessel speed	Auto fare winter/summer	Annual vehicle demand and revenues	
		Unconstrained	Capacity constrained
16.5 knots	\$32.50/\$40.00	240,000 \$10.2 million	206,000 \$8.7 million
20 knots	\$32.50/\$47.50	250,000 \$11.1 million	220,000 \$10.2 million

Table 4. Summary of annual vessel operating costs

Vessel type	Hourly operating cost	Annual operating hours*	Annual operating cost
16.5 kt converted service vessel	\$525 per vessel hour	11,600	\$6.1 million
20 kt Kangaroo Island catamaran	\$800 per vessel hour	10,800	\$8.6 million

Table 5. Vessel capital costs

Vessel type	Base price	Conversion cost	Total capital cost per vessel
16.5 kt converted service vessel	\$500,000 to \$1.0 million	\$1.5 million to \$2.0 million	\$2.5 to \$3.0 million
20 kt Kangaroo Island-type catamaran	\$16 to \$18 million	n/a	\$16 to \$18 million

Table 6. Summary of all capital costs (rounded values)

Vessel type	Cost of 2 Vessels	Cost of 2 Terminals	Land costs	Vessel maintenance facility	Total capital cost
16.5 kt converted service vessel	\$6 million	\$8 million	\$3 million	\$2 million	\$19 million
20 kt Kangaroo Island catamaran	\$34 million	\$8 million	\$3 million	\$2 million	\$47 million

Table 7. Summary of annual operating revenues and costs (rounded values)

Vessel type	Capacity constrained demand	Operating revenues	Operating cost	Difference
16.5 kt converted service vessel	206,000 vehicles	\$8.7 million	\$7.1 million	\$1.6 million
20 kt Kangaroo Island catamaran	220,000 vehicles	\$10.2 million	\$9.6 million	\$0.6 million

Table 7 above summarizes the comparison of operating costs and revenues for the 16.5 knot and 20 knot vessels.

IMPLEMENTATION ISSUES

This section describes the finance and governance issues in Step IIA beginning with a discussion of Public-Private Partnerships in Maryland and Virginia.

Governance issues

Extensive research about interstate regulations related to ferry services has yielded no new information. At one time the Interstate Commerce Commission (ICC) regulated interstate transportation, requiring transportation companies to obtain a “Certificate of Public Convenience and Necessity,” but the ICC was disbanded in 1996 by Congressional action. Even then, ferry transport operations were specifically exempt from ICC oversight.

There are, however, many examples of interstate transportation operations including private bus lines, AMTRAK and commuter rail roads. The Virginia Railway Express (VRE) operates a variety of commuter trains between Northern Virginia suburbs to Alexandria, Crystal City and downtown Washington, D.C. VRE is a formal joint venture of the Northern Virginia Transportation Commission (NVTC) and the Potomac and Rappahannock Transportation Commission (PRTC), and it operates under the direction of a Board of Directors composed of members from the two agencies and the Director of the Virginia Department of Rail and Public Transportation (VDRPT).

Using the VRE as a model, it appears that a similar independent ferry authority could be established through a joint venture agreement between Northumberland County, Virginia, and Somerset County, Maryland. Each of the counties could then serve as a recipient of transportation funding dollars in their respective states and funnel that money to the ferry authority through their normal budgeting processes.

Operator interest

Telephone interviews were conducted with potential ferry operators to ascertain whether and under what circumstances ferry operators would be interested in serving the proposed route. Responses ranged from enthusiastic to not interested. Given the highly competitive nature of the ferry business, none were willing to share specific operating cost information or provide specific requirements for service interest. There were many common points, however, and these are summarized below.

Of the eight operators contacted, about half had no interest whatsoever because they operated passenger-only vessels and were not interested in expanding their services, and the remainder were very interested if they could make money on the service. Some common responses were:

1. All of the operators, interested or not, expressed concern about the stated lack of public subsidies largely because the routes they operate are currently subsidized to some extent. None thought it likely that they or any other private operator would assume full financial responsibility for the proposed route. The more knowledgeable operators were aware of public-private partnerships and would be willing to participate based on a reasonable return on their investment. (See below.)
2. A related concern is that the operators did not think that there had been adequate information developed on the total start-up costs of the ferry operation. They would need to see a detailed business plan showing all costs and revenues for the first few years of operation.
3. None of the operators have existing vessels that would be suitable for the proposed operation, nor would they envision funding the construction of a new vessel on their own. Again, several pointed out federal vessel construction programs that are available for such purposes. The prohibitions of the Jones Act against using foreign-built ships to carry passengers or cargo between US ports make it unlikely that any private operator could afford to build a 20 knot car and truck-carrying ferry for the Crisfield-Reedville route.
4. Regarding a “quick-start” ferry operation, two operators who had been following the cross-Bay ferry proposals for several years suggested that they would prefer using refurbished off-shore service vessels (OSVs) to test the market. These 15 to 16 knot vessels are readily available, and could be purchased, refurbished and placed in service within a short time (12 to 15 months) and at low costs relative to constructing new vessels (\$2 to \$3 million). And the financial risks associated with such vessels would be low due to their low initial cost, an active world-wide market for such vessels and their flexibility in serving a wide variety of needs.

Public-Private Partnership Potential

Among the implementation strategies that could be considered for the Crisfield-Reedville ferry service is the establishment of a public-private partnership (PPP). PPPs offer the opportunity for tapping new financing sources and methods for needed services. Further, as observed by US Transportation Secretary Norman Y. Mineta:

“It is important to recognize that partnerships offer much more than simply a revenue source to pay for new projects. Encouraging greater partnership opportunities with the private sector offers one of the best ways to introduce fresh and innovative approaches into the way that we build and maintain transportation projects in the United States.”³

Both Virginia and Maryland have existing legislation that authorizes PPPs for transportation projects, as described further below.

³ Norman Y. Mineta, Remarks at 16th Annual American Road and Transportation Builders Association Conference on Private Ventures in Transportation, Washington DC, December 8, 2004.

Commonwealth of Virginia Public-Private Transportation Act (PPTA)

Virginia operates one of the nation's most aggressive public-private partnership programs for transportation. The program was initially authorized by the Public-Private Transportation Act of 1995 and is principally administered by the Virginia Department of Transportation (VDOT). It has become a very significant component of Virginia's overall approach to transportation, as demonstrated by the large number of major projects in various stages of implementation:

- Pocahontas Parkway – 8.8 mile parkway connecting I-95 and I-295 near Richmond. \$314 million, financed by tolls. (completed)
- Route 28 interchanges – six interchanges in Northern Virginia under construction with scheduled completion of 2006. \$200 million financed by special tax districts and \$70 million VDOT contribution. (active)
- Route 288 – construction of new highway linking I-64 to Route 76. Initial segment open to traffic. (active)
- Coalsfield Expressway - 6.5-mile highway from Bull Gap to Harmon Junction in Buchanan County. \$31 million preliminary engineering contract now underway. (active)
- Jamestown 2007 – improvement to five road segments in anticipation of 400th anniversary of Jamestown settlement. \$32 million. (active)
- Interstate Maintenance – ongoing project since 1996 to provide all highway maintenance services for 1,250 lane miles of the Interstate System. Approximately \$25 million/year. (active)
- Capital Beltway - widening with four High Occupancy Toll (HOT) lanes. Concept approved by VDOT. \$630 million, financed by tolls. (proposed)
- Dulles Rail - 23-mile extension of Metrorail system to Dulles Airport. Concept approved by VDOT, now in preliminary engineering. \$1.5 billion, to be financed 50% federal, 25% Dulles Toll Road tolls, 25% local tax district. (proposed)
- I-81 – widening of entire length of I-81 in Virginia (325 miles) to provide truck lanes. \$7 billion, to be financed by state and federal funds and truck toll revenues. (proposed)
- I-95 - widening with High Occupancy Toll (HOT) lanes. \$400 million, to be financed by tolls. (proposed)
- Third Hampton Roads Crossing – 28-mile project. \$4 billion, financing subject to further review. (proposed)

Clearly, most of these projects are far larger than anything contemplated for the Crisfield-Reedville ferry but they are noted in this report to illustrate the wide range of financing alternatives that are permissible under the PPTA program. As a further indication of Virginia's strong support of the PPTA program, on December 9, 2004 Governor Warner's office announced a \$140 million program to promote public-private partnerships:

This initiative establishes a revolving loan fund to encourage private firms to invest their resources in PPTA projects. This Private Partnership Fund will support no-interest loans of up to \$30 million, provided the terms are part of a comprehensive agreement under the PPTA and are no more than seven years in duration.

"This proposal will encourage more public-private partnerships to build projects quicker and with less public funding," Governor Warner said. "These venture loans will reduce carrying costs on expensive, front end items, or allow a tax district or toll facility revenue stream more time to mature."

PPTA proposals may be either solicited (i.e., VDOT may issue a Request-for-Proposals from private entities to address an identified transportation need) or unsolicited. Unsolicited

proposals have been the dominant method used for the program. The initial submission is termed a conceptual proposal. If it is deemed by VDOT to meet the requirements of the program, VDOT then publishes a notice accepting the proposal for initial review and inviting competing proposals from any interested party within 45 days. VDOT then engages in an extended review process of the initial proposal and the competing proposals (if any). Proposals deemed to satisfy the goals of the PPTA legislation are selected and a detailed proposal is prepared. If accepted, it is then subject to negotiation of a comprehensive implementation agreement.

In order to be eligible to be considered in this evaluation and selection process, unsolicited proposals must meet three principal criteria:

1. Must seek approval for a private entity to acquire, construct, improve, maintain, finance and/or operate specified transportation facilities.
2. The transportation facilities so specified must be one or a combination of the following: a road, bridge, tunnel, overpass, *ferry*, airport, mass transit facility, vehicle parking facility, port facility, or similar commercial facility used for the transportation of persons or goods. (emphasis supplied)
3. The proposal must be submitted to the public entity that currently has or may assert the power itself to perform the functions the proposer seeks to perform.

Regarding the third criterion, VDOT currently operates a number of ferry facilities in the Commonwealth, including the Jamestown-Scotland ferry, the Sunnybank cable ferry in Northumberland County, the Merry Point cable ferry in Lancaster County, and the Hatton poled ferry near Scottsville on the James River. The last three listed are minor services, but the Jamestown-Scotland ferry is a major operation with four vessels carrying automobiles and pedestrians on a frequent schedule year round. However, VDOT's authority to provide transportation facilities and services is limited to within the boundaries of the Commonwealth of Virginia. Although this point is not specifically addressed in the guidelines, it seems safe to assume that a PPTA project could address only the segment of the Crisfield-Reedville ferry located in Virginia.

It seems clear that if an interested private entity were identified as a proposer, the Virginia segment of the Crisfield-Reedville ferry would be eligible for review and evaluation by VDOT as a PPTA project. That presumably would include the Reedville terminal and a proportionate share of the vessels.

For projects where construction cost is estimated to be \$50 million or less, the proposer is required to submit a fee of \$5,000 with the initial conceptual proposal and a \$20,000 fee with the detailed proposal. These fees are intended to offset VDOT's processing and reviewing expenses.

The conceptual proposal must include a financial plan in enough detail to reveal whether the proposed project financing is feasible. Proposers may be required to make an oral presentation. Additional information on the proposal selection and evaluation process is contained in the attached guidelines.

State of Maryland Transportation Public-Private Partnership (TP³)

The State of Maryland also has enabling legislation for public-private partnerships in the provision of transportation facilities. Unlike Virginia, however, the Maryland program has been generally inactive and has produced only one project to date – a transit project in Baltimore City. Interestingly, a marine terminal for cruise passengers at the Port of Baltimore has been

proposed as a TP³ project, but at this point it appears unlikely that it will proceed. Despite the lack of major activity, an administrative structure is in place to consider PPP proposals that is very similar to that of Virginia.

Within the Maryland Department of Transportation (MDOT), the responsibility for the TP³ program has been assigned to the Maryland Transportation Authority (MdTA) pursuant to Sections 4-205 and 4-312 of the Transportation Article. MdTA is the entity that owns and operates Maryland's toll facilities. MdTA recently solicited expressions of interest in public-private partnerships for highway, design, construction and operations. It is currently evaluating the responses and a report is expected to be issued shortly that may lead to a more active PPP program in the future.

The current procedural requirements for the TP³ program are quite similar to those for the Virginia PPTA:

- Proposals may be either solicited or unsolicited.
- Initial submission of a conceptual proposal, followed by detailed proposal.
- Acceptance of unsolicited proposal for initial review triggers public notice and invitation for competing proposals within 60 days.
- Final approval contingent upon successful negotiation and execution of a Transportation Public-Private Partnership Agreement.
- Eligibility is for "...private entities to acquire, finance, construct and/or operate a new transportation facilities project or the major rehabilitation/expansion of an existing transportation facility..." Transportation facilities are defined as "Airport facilities, Port facilities, Railroad facilities and Transit facilities..."⁴ In turn, Port facilities definition includes "Every kind of terminal or storage structure or facility useful or designed for use in handling, storing, loading, or unloading freight or passengers at marine terminals" and "Every kind of transportation facility useful or designed for use in connection with any of these."
- As with Virginia, the Maryland guidelines do not explicitly limit facilities to within the State of Maryland, but that is a safe working assumption in light of MDOT's general powers to provide transportation facilities.
- Review fees are \$5,000 for conceptual proposals and \$25,000 for detailed proposals.
- The conceptual proposal must include a project financing plan.

Summary

Both Virginia and Maryland have statutory authority and administrative mechanisms in place to support consideration of a Crisfield-Reedville ferry. Virginia operates its program actively and aggressively and is considered a national leader. To date Maryland has been cautious in exercising its statutory authority, but there are indications that this may be changing.

Both programs appear to be limited to transportation facilities within their respective state boundary so a comprehensive PPP approach to the Crisfield-Reedville ferry would require the involvement of both states. The two programs are largely compatible in structure so a coordinated program would appear to be a theoretical possibility. One can readily imagine, however, that in practice such coordination will present challenges.

⁴ Interestingly, Highway facility projects are not eligible for unsolicited PPP proposals in Maryland; MDOT prefers to take the lead in determining which highway projects may be considered for PPP treatment, rather than reacting to private initiatives.

Finance Issues

Congresswoman Jo Ann Davis (1st District, Virginia) successfully had inserted in the FY 2005 Omnibus Appropriations Act (Public Law 108-447) a designated award of \$250,000 under the Ferry Boat Discretionary (FBD) Program to the Virginia Department of Transportation for funding of activities within the State of Virginia for the Mid-Chesapeake Bay Ferry. It survived the first round of reviews to make it to the final list. VDOT has submitted the required application to the Federal Highway Administration (FHWA) for the FBD award.

However, according to a directive from the FBD Program Office, FBD funding for FY 2005 is currently authorized in the Surface Transportation Extension Act of 2004, Part V (STEPA Part V) at 8/12ths of the FY 2003 amount. The total amount of designated funding in the appropriations act conference report is based on a full year's funding at FY 2003 levels. Because FHWA does not anticipate enactment of the reauthorization of TEA-21 until STEPA Part V expires at the end of May 2005, it is likely that FHWA will be awarding these funds in two phases as they did last year.

On the Crisfield side, the USDA Rural Development Program has announced its willingness to provide up to \$25 million in loan guarantees for the project. However, this is a guarantee not a grant and would depend on finding both a willing lender and a cash flow source to repay the loan. USDA has shown a strong willingness to support the project, and it may be possible to secure grant funding for portions of the project beyond the loan guarantee in the current Congress.

House Bill HR 3, "The Transportation Equity Act: A legacy for Users (TEA LU)" was introduced before the House Transportation and Infrastructure Committee on February 9, 2005 by Reps. Don Young ((R-Alaska), James L. Oberstar (D-MN), Tom Petri (R-WI) and Peter DeFazio (D-OR) The bill contains reauthorization of transportation programs at \$283.9 billion for the FY 2004-2009 period. Although this bill contains some specific earmarks of ferry funds totaling \$20 million for Alaska, Washington, New Jersey and Hawaii, it nearly doubles the annual amount of monies available for construction of ferry boats and ferry terminal facilities from \$38 million per year in FY 1999-2003, to \$70 million in FY 2005 and \$75 million each in FY 2006, 2007, 2008 and 2009. This funding level is very encouraging for new ferry routes like the one proposed for the mid-Chesapeake Bay because the total amount required for this route is relatively small compared with the cumulative total of \$370 million for ferry boats and terminals authorized in the bill.

As with previous ferry programs, the funds would be provided on a 80 percent federal and 20 percent local matching basis. However, as in previous years, most, if not all of the FBD funds, will be specifically earmarked on a project-by-project basis by Congress through either the reauthorization bill conference committee negotiations and the annual appropriations legislation as Rep. Davis did for Reedville as described above.

All of the above means that the time to forward the request for funding to your Congressional delegations is **NOW**. An updated version of the presentation the PB Team prepared for the Committee to show federal elected officials last year accompanies this report. However, the Committee members should be contacting their federal legislators to remind them of the project and get it on the Congressional agenda this year.

WHERE WE ARE NOW AND THE NEXT STEPS

The “Roberts Model” Illustration

To illustrate the status of the overall project, we have adopted something called the “Roberts Model” from an article by Mr. Tom Larson in the current edition of TR News (see “The Roberts Management and Leadership Model,” TR News 235, November-December 2004, Transportation Research Board.) The model consists of three overlapping circles: Vision, Authorizing Environment and Organizational Capacity. “Vision” and “Organizational Capacity” are relatively straightforward terms, but “Authorizing Environment” needs a little clarification: it simply means the group of stakeholders who enable the enterprise (i.e., a specific project, business, etc.) to progress and succeed.

As Figure 2 shows, the “Vision” for a ferry between Crisfield and Reedville is fairly clear. We have performed several studies that have consistently produced similar estimates of requirements, costs and revenues. From a technical standpoint, there is not much more that can be done to describe the project until we have strengthened both the “Authorizing Environment” and “Organizational Capacity” elements in the Roberts Model.

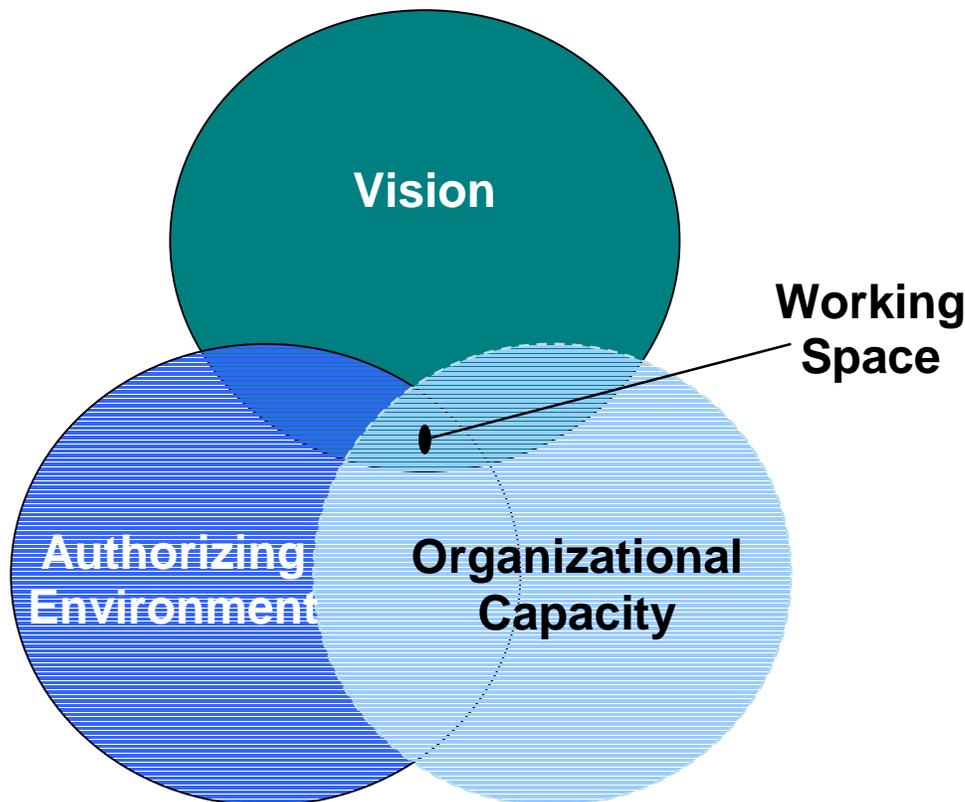


Figure 2. “Roberts Model” of Project Management Success

“Authorizing Environment” for the ferry includes not only the regulatory agencies and jurisdictions (i.e., the Federal Government, the States of Maryland and Virginia; Northumberland

and Somerset Counties; US, Maryland and Virginia DOTs; Maryland Transportation Commission, etc.) but also the potential patrons of the ferry and the residents of the affected business and residential communities. Ferry patrons are part of the “authorizing environment” because if no one pays money to take the ferry, then it will fail. Similarly, benefits to the communities served by the ferry must outweigh the impacts upon them, or they will not allow the ferry to happen.

The major element lacking in this last area is quantification of the economic benefits of implementing the route. In our opinion, such information will be necessary to influence certain stakeholders to invest in the project, like economic development agencies and even transportation funding agencies (return-on-investment is important in federal agencies’ decision-making). In addition, it will be necessary to gain the necessary political support from elected officials serving the affected communities to overcome objections to the project. Obviously, some residents will have greatly inflated fears of their community being overwhelmed by thousands of trucks and cars roaring down their highways, and many will continue to voice their objections no matter how many traffic engineers tell them it won’t be that way. Thus, the elected officials must have some economic benefits to base their opinions and votes upon, or the ferry route is doomed.

Another element that needs strengthening at this step in the ferry route development process is the “Organizational Capacity.” The Committee was formed to guide the current round of studies, but clearly what’s needed is a single agency to carry the project forward. This could be an agency within one of the two counties (Somerset or Northumberland) with an inter-local agreement between the two, or a newly created independent authority. The agency must be headed by a “champion” with the requisite qualifications and experience to push the project forward and manage the various negotiations and contracts necessary to implement the ferry. Again we point to the Virginia Railway as a successful model for the Committee to explore.

Organizational Requirements

The organization must also have some of the legal authorities of a municipal government to:

- Receive and manage public funds from state and federal agencies
- Hire and oversee staff
- Negotiate purchases of land, equipment, etc.
- If necessary, oversee design, construction and operator of terminals, maintenance facilities and ferry boats
- Contract with a potential operator
- Set fares and operating requirements
- Collect revenues and pay bills associated with the ferry operation (may be contracted with the operator)

Some detailed steps in the procurement process for a private operator and for the vessels are presented in Appendices A and B, respectively. A similar set of steps should be developed for the terminal construction (see below).

At this point we do not recommend pursuit of a formal Public-Private Partnership (PPP) under the PPP programs of either Virginia or Maryland. The time, effort and expense of these highly regulated programs through the respective state DOTs is simply too much for this relatively small project. Although \$50 million is a lot of money, it is too little to afford the “overhead”

associated with a formal PPP initiative. However, there is no reason not to use the PPP vision as a guide for how to approach and implement the ferry operation.

Multi-use Pier Alternative

It is unlikely that an operator or vessel funding source (whether it be a public grant, private financing or some combination) will commit to the Maryland – Virginia Ferry Route until the respective jurisdictions in both Crisfield, MD and Reedville, VA secure funding for a ferry terminal in their respective communities. The costs of constructing such a pier will not be borne by private vessel operators for the limited service and revenue potential of a Crisfield to Reedville route, though they will pay fees for pier use -- dockage, loading and offloading, utilities, normal maintenance, security -- that can be used to offset all or part of normal pier operating and maintenance costs. Although Crisfield apparently has loan guarantee support from USDA Rural Development Program and Reedville has \$250,000 earmarked from the Ferry Boat Discretionary Program, neither is, by itself, sufficient to guarantee construction of a landing spot for the ferry.

There does appear to be significant potential for publicly owned and operated multi-use piers in both Crisfield and Reedville that would serve a variety of users including the ferry. For a two vessel operation with two-and-a-half-hour headways (including turnaround times of about fifteen to twenty minutes), and even less frequent service during off-season months, the piers in Crisfield and Reedville will not be used for ferry operations for most hours of each day. This is one reason to consider other potential uses for the pier. Two other reasons to broaden the base of prospective pier users are to enhance potential economic benefits to the surrounding communities and region, and to broaden prospective funding sources. A fourth reason to consider development of a multi-use public pier would be to enhance the base of revenues to support pier operations and maintenance. A fifth reason is to hedge the risk of public investment in new pier facilities should the ferry service, for whatever reasons, either not materialize or fail in its initial operations.

Reasons for Considering a Multi-use Public Pier

- Pier is not needed for ferry operations most hours of the day
- Additional water-dependent users increase potential economic benefits to communities
- Broadens prospective public and private funding sources
- Enhances revenues to support pier operations and maintenance
- Hedges the risk of public investment in pier and supporting infrastructure

Among the prospective users of a multi-use public pier are commercial fishing vessels, recreational fishing charter vessels, excursion vessels (sightseeing, dinner cruises, live band cruises, weddings, business meetings, eco-tourism, and so forth), seasonal or transient private yachts, and small cruise ships. Each of these uses have potential market support in Crisfield, where nearby restaurants and retail shops will benefit from the spending of visitors drawn primarily to the attractions at the pier. Similar markets could be developed for use of a multi-use public pier in Reedville. In Reedville, the absence of comparable or competitive facilities in the area enhances prospects for possible joint public/private development of a full service marina, as well as providing for infrastructure to support ferry operations. Multi-use public piers

are also used to stage community events, such as seafood festivals, holiday celebrations, and so forth; and vendor licenses for food and souvenirs pushcarts can be a further source of revenue to support pier operations.

Next steps toward development of a multi-use public pier include a market study to determine potential users, revenues and costs of operation, and space and services required to accommodate prospective users; an assessment of the economic impacts of prospective users and the visitors they attract within the surrounding communities and region; an engineering design and feasibility assessment (building on work already accomplished in this and preceding studies) to determine physical requirements and options (based on the market study), on-site and off-site infrastructure needed to support pier operations, and development and operating costs; and an organizational and management study to determine how the pier will be funded and operated. Since pier characteristics and demand differ in Crisfield and Reedville, feasibility assessments for each area will be required. A process that engages potential stakeholders (users and directly affected businesses and residents) and the affected communities overall is essential to gain perspectives and insights on requirements of a multi-use public pier, and to ensure acceptance of the final development plan.

Next Steps for Multi-use Piers in Crisfield and Reedville

- Assess market to determine prospective users, potential revenues and costs of operation, space and services required to support uses
- Assess economic benefits (jobs, income, business sales, taxes) to surrounding communities and region
- Assess engineering design options to support prospective users, construction and maintenance costs, on- and off-site infrastructure required
- Assess organizational and management options
- Engage stakeholders and public in assessment process

MacMillan Pier, Provincetown, MA

There are numerous examples of multi-use public piers in large and small communities throughout the United States. One of the best documented examples of the development process and ongoing operations of a complex and diverse multi-use public pier is the redevelopment and expansion of MacMillan Pier in Provincetown, Massachusetts. The town's website (http://www.provincetowngov.org/pier_corp/PPPC.htm) contains links to documents reporting the development of the business plan, funding, re-construction and ongoing organizational and management considerations. MacMillan Pier hosts commercial fishing vessels, ferries, commercial fishing charters, whale watch and other excursion vessels, seasonal and transient private recreational vessels, and a small museum.

As part of a town and state agency and public review process an economic impact, market, and management study of existing pier operations was conducted early in the process (FXM Associates) that determined the pier generated more than \$26 million in the local and regional economies. In addition, the study showed that the visitors to and uses at the pier accounted for 35% of retail and restaurant spending and 60% of hotel occupancies in the Town of Provincetown (less than 10,000 person year-round population; 25,000-plus seasonal

population). The initial study also determined that the pier could be operated on a break-even basis, which was a critical consideration for subsequent public funding of capital facilities. Further studies refined a business plan for operation of the pier as well as final design of the facility. MacMillan Pier has been successfully reconstructed with a mix of local, state, and federal funds (\$18 million) and is operated by a public pier corporation.

Specific Next Steps

The Committee and other interested stakeholders must do three things in the next several weeks and months if the Crisfield – Reedville ferry route is to be successful in the foreseeable future:

1. **Congressional Lobbying.** Immediately contact their Congressional delegations and lobby for appropriations in the next Transportation Reauthorization Bill for ferry vessel construction.
2. **Economic Benefits Study.** Authorize the PB Team to proceed with an Economic Benefits Study to quantify the effects of the ferry route and terminals on local economic development. This study could focus just on the benefits of the ferry route or could be expanded to include the benefits of multi-use public piers in both communities.
3. **State Legislation.** Work with their County Attorneys and State Legislators to draft and implement legislative authority to form a partnership or joint venture between Northumberland County, VA and Somerset County, MD to oversee all aspects of the ferry route. The Virginia Railway Express appears to be a good model to follow. Although this goes beyond the franchise authority granted to each county by their respective states, we find no evidence of any viable operators willing to go “at risk” for the entire ferry route package of access improvements, terminals and vessels, in addition to the operation of the ferry.

Although there are a number of specific tasks to be accomplished after the above steps, it does not make sense to proceed with them until the above are either accomplished or well underway.

Appendix A. Procurement of a private operator for the ferry route

Step

- 1 Establish minimum operating requirements (schedule, headway, reliability, services)
- 2 Establish operating constraints
- 3 Estimate operating budget and prepare schedule
- 4 Establish commercial terms & conditions for RFP, including revenue handling and apportionment, insurance and bonding requirements
- 5 Project manager and FSM identify qualified firms for consideration
- 6 Project manager develops RFP for private ferry service operator (FSO) in collaboration with Client and FSM
- 7 Client publishes RFP for private FSO
- 8 Project manager team conducts a pre-proposal meeting for FSO firms (FSM, Client and vessel builder and terminal designer participate)
- 9 Client receives proposals from FSO firms
- 10 Client, FSM and project manager evaluate proposals received and conduct interview/presentation with proposers
- 11 Client selects best proposal and awards contract to FSO
- 12 Client and FSM negotiate final agreement with FSO, with support from project manager
- 13 Client issues NTP
- 14 FSO prepares plans for operating, marketing, and maintenance for approval by Client
- 15 FSO prepares start-up schedule in conjunction with FSM and project manager
- 16 FSO commences hiring and training of staff
- 17 FSO takes possession of ferry vessels and terminals from Client
- 18 FSO completes training and obtains USCG certification to begin service
- 19 FSO implements marketing plan
- 20 Ferry service commences operation

Appendix B. Outline of vessel procurement process

Step

- 1 Client prepares and advertises RFP to select project manager that includes a naval architect on the team for technical support
- 2 Select project manager for ferry procurement process and related support requirements
- 3 Negotiate agreement with project manager and issue NTP
- 4 Establish vessel operating requirements (terminal geometry, route constraints, crewing, maintenance)
- 5 Establish vessel operating conditions (schedule, terminal and ambient)
- 6 Establish vessel physical design parameters including appearance (theme) requirements and amenities
- 7 Establish vessel performance design parameters
- 8 Prepare project budget and schedule
- 9 Establish commercial terms & conditions for RFP, including payment terms, insurance and bonding requirements
- 10 Identify potential design-build (D-B) shipyards to receive ferry RFP
- 11 Prepare Draft ferry RFP and review with one or more ferry operators for 'reality check'
- 12 Revise Draft ferry RFP as necessary
- 13 Advertise ferry RFP to qualified D-B shipyards
- 14 Project manager team conducts a pre-proposal meeting for D-B shipyards
- 15 Client receives proposals from D-B shipyards
- 16 Project manager team evaluates proposals, checks references and determines technical issues associated with each bid; advises Client
- 17 Client and project manager team conduct interview/presentation with responsive proposers
- 18 Client selects best proposal and awards contract with support from project manager team
- 19 Client negotiates contract with successful bidder with support from project manager team; at this time raise technical issues about proposed vessel for resolution
- 20 Selected shipyard prepares and presents its preliminary design
- 21 Client negotiates final design approval with shipyard with support from project manager team and authorizes work to begin
- 22 Shipyard completes final design and orders long lead parts
- 23 Shipyard commences construction
- 24 Client authorizes project manager to provide inspection of vessel during construction
- 25 Project manager provides periodic inspections and certifies shipyard progress payments
- 26 Project manager assists Client in selecting and hiring an experienced ferry service manager (FSM) to provide oversight private operator and represent Client's interests
- 27 Upon completion of vessel, shipyard conducts sea trials with participation of Client, FSM and project manager team
- 28 Shipyard completes adjustments, fit-out and commissioning, and delivers vessel for final inspection
- 29 Project manager team in collaboration with FSM, recommend that Client make final acceptance of vessel
- 30 Client accepts vessel delivery
- 31 Final payment made to shipyard for first vessel
- 32 Second vessel follows similar process to completion and acceptance, approximately 3 months behind first vessel

Note that there are parallel series of actions necessary to: 1) identify, select, engage the private ferry service operator; and 2) plan, permit, design, bid, construct and commission landside terminals and integrate them into this larger picture. That information IS NOT presented here.