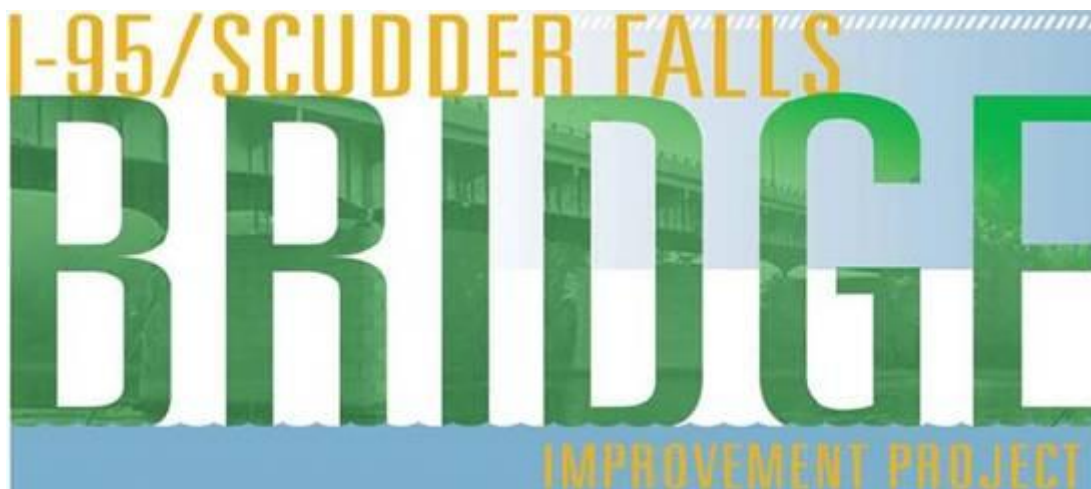
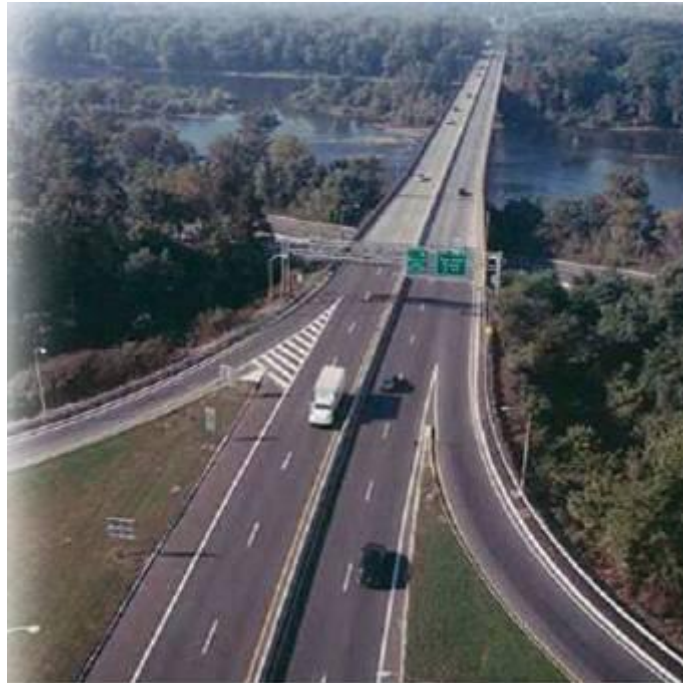




Delaware River Joint Toll Bridge Commission



Final Section 4(f) Evaluation  
February 2012







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## FINAL SECTION 4(f) EVALUATION

### I. INTRODUCTION

The Delaware River Joint Toll Bridge Commission (DRJTBC), in cooperation with the Federal Highway Administration (FHWA), Pennsylvania Department of Transportation (PennDOT), and the New Jersey Department of Transportation (NJDOT), proposes improvements to the I-95/ Scudder Falls Bridge over the Delaware River and 4 miles of the I-95 mainline to alleviate traffic congestion and improve operational and safety conditions. The I-95/Scudder Falls Bridge, which was constructed in 1959, carries I-95 across the Delaware River between Lower Makefield Township, Bucks County, Pennsylvania and Ewing Township, a suburb of Trenton, in Mercer County, New Jersey (Figures 1 and 2). The project study limits approximately extend between PA 332 (Newtown-Yardley Road) in Lower Makefield Township and Bear Tavern Road in Ewing Township.

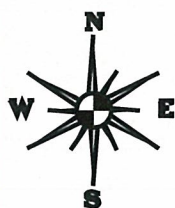
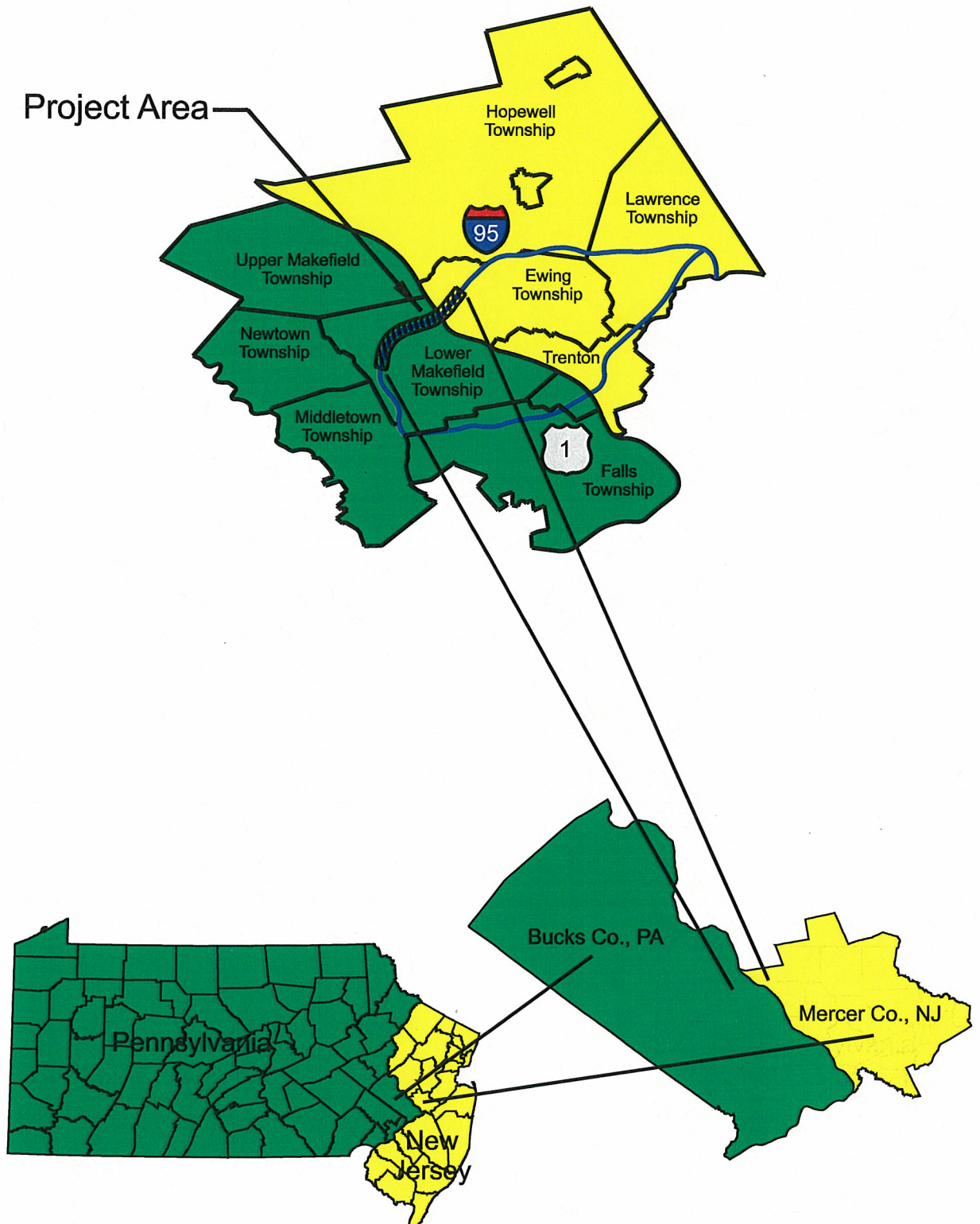
The DRJTBC owns and operates 20 bridges. The inventory consists of 7 toll bridges and 13 non-toll bridges. The existing I-95/Scudder Falls Bridge is a non-tolled bridge. The planned replacement I-95/Scudder Falls Bridge will be tolled. On the I-95/Scudder Falls Bridge, an all electronic cashless tolling system will be implemented in the southbound direction only. This one-direction toll collection is consistent with all other tolled DRJTBC bridges crossing from New Jersey to Pennsylvania.

Based on Section 6009(a) of SAFETEA-LU, 49 U.S.C. 303, and 23 CFR 774, the Secretary of Transportation may approve a transportation program or project requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge or land from a historic site of national, state, or local significance as determined by the federal, state or local officials having jurisdiction over the park, recreation area, refuge, or site only if:

- There is no feasible and prudent alternative to the use of such land; and
- The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use; or
- The use, including any measures to minimize harm will have a de minimis impact on the property.

This evaluation was prepared to comply with Section 4(f) and Section 2002 of PA 120, 71 P.S. §512(a) (15). This Section 4(f) Evaluation includes a summary of the project purpose and needs, description of Section 4(f) resources, alternatives analysis, assessment of least harm, mitigation, and coordination.

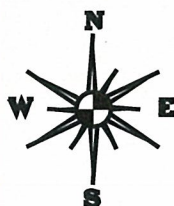
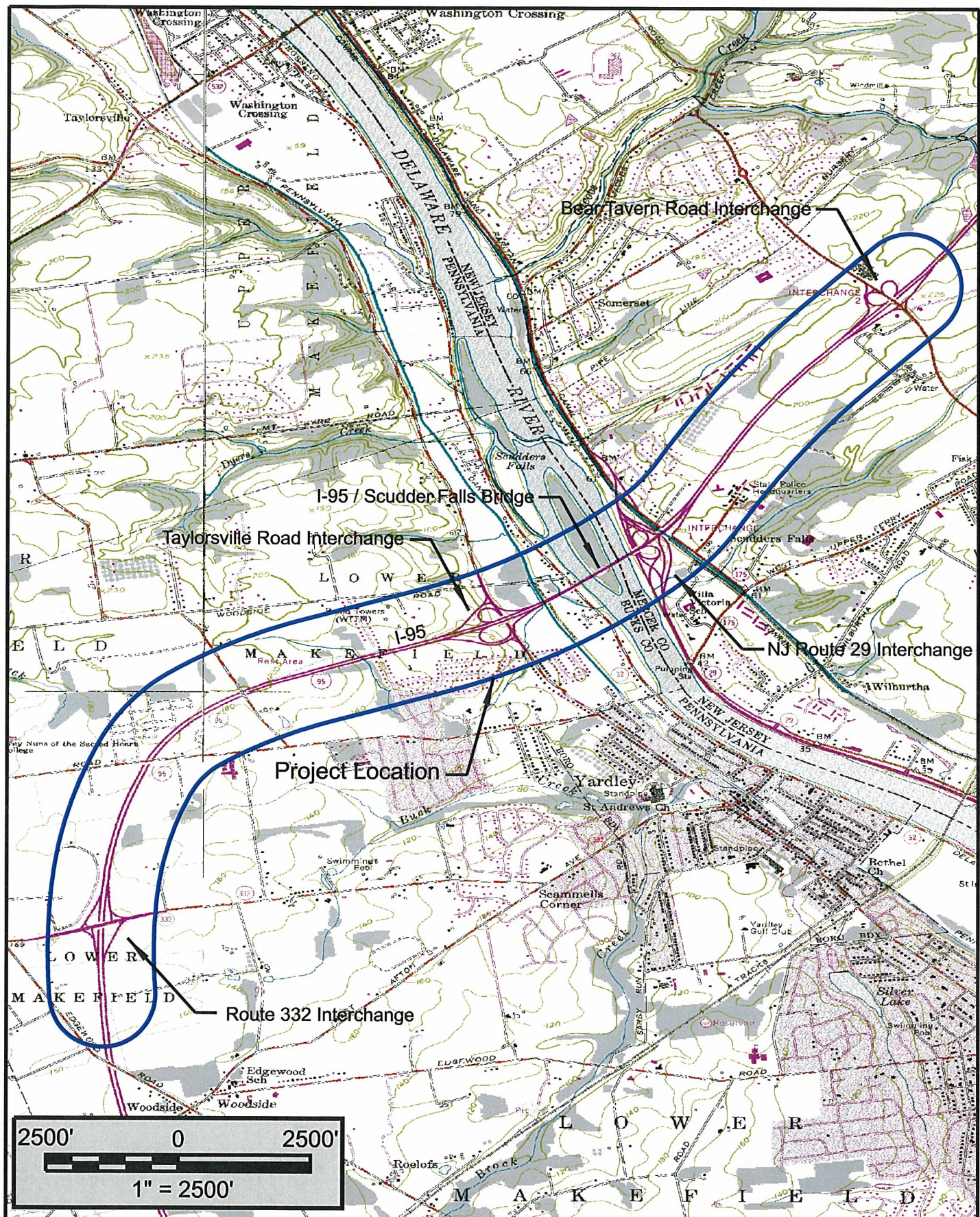




*I-95 / Scudder Falls Bridge Improvement Project*

Figure I-1  
Regional Location Map





*I-95 / Scudder Falls Bridge Improvement Project*

Figure I-2  
Project Location Map



## II. PROJECT PURPOSE AND NEEDS SUMMARY

The I-95 Scudder Falls Bridge Improvement Project will involve replacement of the existing bridge over the Delaware River and reconstruction of sections of I-95 in both Pennsylvania and New Jersey. The project will address a variety of different needs that are required for the transportation facilities at this location.

### A. Project Purpose

The purpose of the project is to relieve current and future traffic congestion and improve safety and traffic operational conditions on the I-95/Scudder Falls Bridge and the segment of I-95 extending from Bear Tavern Road (County Route 579) Interchange to PA Route 332 (Newtown-Yardley Road) Interchange. Initial project studies included extensive traffic data collection and analyses to determine existing and projected future traffic conditions. A *Needs Report (Technical Memorandum No. 11)* was prepared to document existing transportation conditions, future transportation demand and projections. The project includes consideration of improvements at two interchanges along I-95, Taylorsville Road and NJ Route 29 to meet current design criteria.

A major project objective is to alleviate current and future traffic congestion on the I-95/Scudder Falls Bridge and the I-95 project area between PA Route 332 and the Bear Tavern Road Interchange. The I-95/Scudder Falls Bridge and adjoining highway segments, which consist of two lanes in each direction between PA Route 332 and NJ Route 29 and three lanes in each direction east to Bear Tavern Road, are projected to be operating over capacity in 2030. The goal for the improvements in this segment of I-95 would be to achieve traffic Level of Service (LOS) D, generally considered to represent an acceptable traffic operating level in an urban environment.

The DRJTBC's operations and capital program are financed by the revenues it collects from its seven current toll bridges. The cost of the I-95/Scudder Falls Bridge Improvement Project necessitates the DRJTBC employ tolling at the facility to assure the financial integrity of its capital programs, of which the Scudder Falls project is the single largest initiative. The DRJTBC considered a funding scenario where tolls would be raised on the existing toll bridges to fund the proposed I-95/Scudder Fall Bridge Improvement Project; however, the DRJTBC determined it would be unfair for motorists at the existing toll bridges to incur costs of the Scudder Falls replacement bridge project.

### B. Project Needs Summary

#### **System Connectivity and Mobility**

The existing I-95/Scudder Falls Bridge and I-95 project area, extending over a total distance of 4.4 miles, are a vital link to the Interstate Highway System. Traffic congestion conditions along this highway segment adversely affect critical mobility for through traffic, inhibiting the movement of people and goods between Pennsylvania and New Jersey. I-95 is the easternmost Interstate Highway, extending roughly 1,900 miles from Florida to Maine. The I-95/Scudder Falls Bridge is heavily used for regional travel, providing access to the nearby Trenton-Mercer Airport and serving as a truck route for interstate commerce.

The I-95 corridor in the project area is a major commuter route for employment destinations in and near the study area, as well as for commuters residing in communities along the route. Interstate 95 in the project area accommodates an estimated 54,000 to 63,000 vehicles on an average weekday, with up to 6,500 vehicles in the peak hour. During the morning and evening peak hours, I-95 experiences frequent backups and delays related to commuter traffic. Peak travel directions on I-95 (northbound in A.M. peak and southbound in the P.M. peak) reflect the fact that 13% of Bucks County residents work in Mercer County, compared to 4% of Mercer County residents that work in Bucks County. Overall, Bucks County is forecasted to experience population and employment growth to 24% by 2025, compared to the 14% - 15% growth in Mercer County from 2000 to 2015. The populations of Buck and Mercer Counties are forecasted to grow by over 140,000 persons and 50,000 persons, respectively. An influx of 66,500 and 33,300 new jobs are expected in Bucks and Mercer Counties, respectively, over this time period. With this future growth in the regional employment and population, delays on the I-95/Scudder Falls Bridge will worsen.

### **Transportation Deficiencies**

As listed below, there are areas within the project corridor that do not meet current design criteria, including the shoulder areas or lack of shoulders, horizontal geometry, inadequate deceleration and acceleration lanes, and inadequate capacity.

- The existing I-95/Scudder Falls Bridge consists of two lanes in each direction, separated by a concrete median barrier. There are no inside and outside shoulders on the bridge. The bridge does not meet current geometric design criteria. This current configuration does not provide adequate areas to provide refuge for drivers in the event of a breakdown, emergency, crash, or other incidents.
- Congestion at the I-95/Scudder Falls Bridge is exacerbated not only by the narrow bridge, but also by the proximity of the adjoining interchanges, with ramps merging onto the I-95 mainline close to the bridge.
- The load ratings for the I-95/Scudder Falls Bridge superstructure do not meet current AASHTO (American Association of State Highway and Transportation Officials), PennDOT, and NJDOT design criteria. For the AASHTO HS20 (36 ton) vehicle, the existing load factor design (LFD) inventory rating is 30 tons, controlled by the main girders. The bridge is not currently posted for loads, because the operating rating is greater than 36 tons; however, permit loads currently require operational restriction limiting concurrent heavy vehicle traffic on the bridge.
- The existing bridge superstructure (the two main beams under the concrete deck) is of a non-redundant type. A non-redundant bridge generally has only two primary load-carrying members (beams), where the failure of one of these members results in catastrophic collapse of the bridge. The design of non-redundant structures is no longer permitted nationwide by the FHWA and state DOTs. Leakage from rain and de-icing salt through the deck joints has caused considerable deterioration to the structural steel and deck, resulting in vertical movement of the concrete deck under traffic. The movements of the deck are due to the severe corrosion and wear in the deck and steel framing.
- The two main beams and pinned hangers (four large steel pins supporting each suspended portion of the bridge) are fracture critical members, whose failure would result in collapse of the bridge. The two existing main beams of the bridge consist of steel plates and steel angles that are riveted together to make up the I-beam

shape. This method (called riveted built-up) was used for large beams before advanced welding technology was developed after the 1960's. Riveted built-up construction offers limited opportunities to upgrade the beams to meet the current internal redundancy requirements. The DRJTBC installed redundancy hangers at all of the pinned hangers many years ago to prevent catastrophic collapse of the bridge from a pin failure.

- The deceleration and acceleration lanes of the adjacent interchanges do not meet current design criteria. There is inadequate spacing of the ramp merges.
- The interchanges do not meet current design criteria for geometry, lane and shoulder widths, and ramp configurations.

### ***Traffic Congestion***

The heavy traffic demand, combined with the roadway and bridge geometric deficiencies, result in substantial delays during peak period. The bridge and adjoining sections of I-95 experience severe congestion during peak hours and are currently operating at levels well over available highway capacity. On the I-95/Scudder Falls Bridge, traffic currently operates at LOS E or F during the morning and afternoon peak periods. Traffic during peak hours is expected to grow by 14% to 19% by year 2030 in peak flow directions. This lack of available bridge capacity results in lengthening of the peak hours and adds to delays on the I-95 mainline including the adjoining interchanges.

### ***Project Needs Statement***

The following transportation needs were identified for the project:

- Provide a safe and reliable river crossing, as the existing bridge is approximately 50 years old, has experienced structural deterioration, and does not meet current design criteria
- Provide adequate shoulders to enhance safety and traffic flow. Provide adequate outside shoulders (breakdown lanes) on the I-95/Scudder Falls Bridge to provide pullover areas for vehicles in the event of a breakdown, crash, emergency, or other incidents.
- Provide adequate acceleration and deceleration lanes at adjoining interchanges, and adequate spacing of ramp merges, to improve traffic flow and enhance safety for merging of traffic from adjoining NJ Route 29 and Taylorsville Road.
- Provide adequate roadway capacity to provide acceptable traffic operations during peak travel periods (generally defined as Level of Service D in urban areas)
- Improve interchange configurations that do not currently meet design criteria for geometry, lane and shoulder widths, and ramp configurations.

## **III. DESCRIPTION OF PROJECT SCOPE**

The proposed project involves improvements to I-95 and the I-95 Scudder Falls Bridge in Lower Makefield Township, Bucks County, Pennsylvania and Ewing Township, Mercer County, New Jersey. The proposed project would involve improvements to the I-95/Scudder Falls Bridge, I-95 mainline in Pennsylvania and New Jersey between PA Route 332 and Bear Tavern Road, and the I-95 interchanges at Taylorsville Road and NJ Route 29. The scope of the



improvements were determined based on meeting the project purpose and needs, consideration of environmental resource impacts, and community input.

#### IV. IDENTIFICATION AND DESCRIPTION OF SECTION 4(f) RESOURCES

**Approach** - A two-step screening process was conducted to identify Section 4(f) resources and potential Section 4(f) use by the alternatives of the project. Step 1 involved the identification of Section 4(f) resources within 300 feet of the centerline of the highway which might be impacted by the alternatives of the project. The identification step included review of both primary and secondary sources. Primary sources included field views, coordination with the officials having jurisdiction over the Section 4(f) resources, and previous studies and records.

Coordination was conducted with the officials having jurisdiction of the Section 4(f) resources along with other environmental resources agencies. The officials having jurisdiction over the Section 4(f) resources include the State Historic Preservation Officers for Pennsylvania and New Jersey, Pennsylvania Department of Conservation and Natural Resources, Delaware and Raritan Canal Commission, Pennsylvania and New Jersey Departments of Environmental Protection, Pennsylvania Fish and Boat Commission, Pennsbury School District, and Lower Makefield and Ewing Townships. Other local, state and federal agencies were also contacted to identify existing and planned public parks and recreational facilities within the project study area. Coordination was conducted with local school districts and private property owners to help identify potential multi-use properties, such as schools and community centers that may be protected by Section 4(f).

Step 2 was undertaken to determine if there was a potential Section 4(f) use on a Section 4(f) site due to the alternatives considered for the project. Each site was reviewed against the alternatives to determine if right-of-way acquisition would be required within the Section 4(f) resource boundary. Once this step was completed, a list of Section 4(f) resources potentially used by the alternatives was compiled and further evaluated. The following paragraphs provide a summary of results for Step 1.

**Identification of Section 4(f) Resources in the Project Area** - As a result of the identification step, 9 Section 4(f) resources were identified within the project study area. As shown in Table 1, 5 properties are either determined to be on or eligible for listing on the National Register of Historic Places, 3 are multi-use properties with a portion of the property used for public recreation purposes, and 1 property is a public recreation water trail. The Section 4(f) Resources are shown on Figures IV-1A-C. There are no wildlife or waterfowl refuges located in the project area.

**Table 1**  
**Section 4(f) Resources in the Project Area**

Section 4(f) Property	Section 4(f) Applicability
Delaware Canal, PA	National Historic Landmark/Parkland
Elm Lowne House, PA	Eligible Historic Resource
Delaware and Raritan Canal, NJ	National Register/Parkland
NJ State Police Headquarters, NJ	Eligible Historic Resource
Charles S. Maddock House, NJ	Eligible Historic Resource
Afton Elementary School, PA	Public school with recreation land open to public
Quarry Hill Elementary School, PA	Public school with recreation land open to public
Snipes Tract – Athletic Fields, PA	Public multi-use property with recreation land open to public
Delaware River Water Trail, PA/NJ	Public recreation water trail



# I-95, Scudder Falls Bridge Improvement Project

## Legend





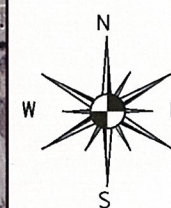
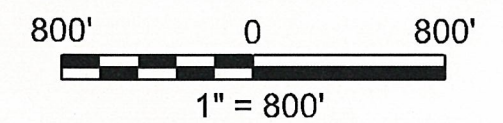
-  Eligible or listed on the National Register of Historic Places
-  Public multi-use properties with public recreation
-  Public Recreation Water Trail
-  Project Area (Limit of Disturbance)

Figure IV-1A  
Section 4(f) Resources



- 1 Elm Lowne
- 2 Snipes Tract
- 3 Afton Elementary School Ballfields
- 4 Quarry Hill Elementary School Ballfields
- 5 Delaware Canal
- 6 Delaware River Water Trail

4  
Quarry Hill  
Elementary School  
Ballfields

3  
Afton Elementary School  
Ballfields



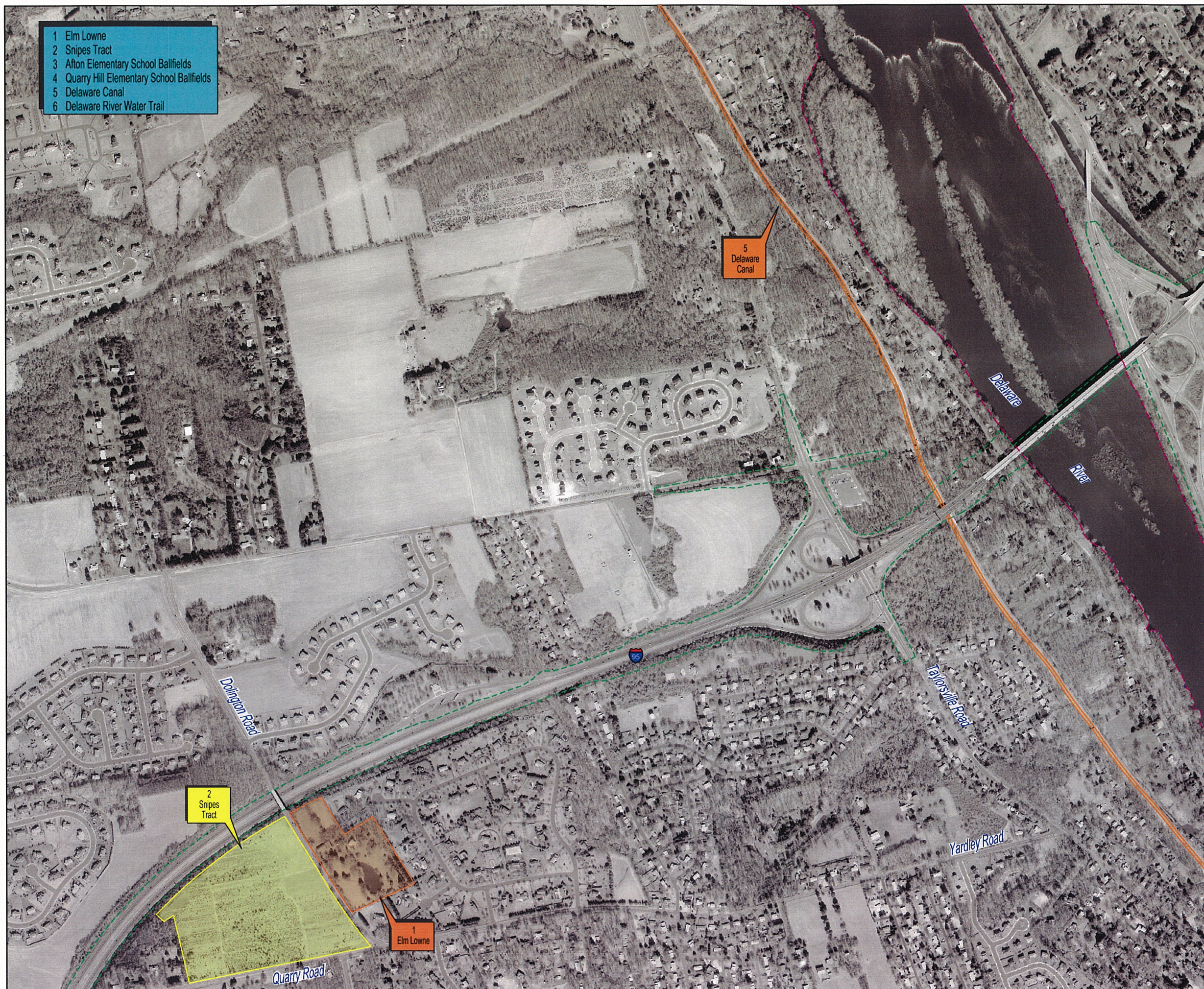
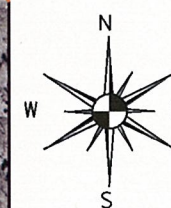
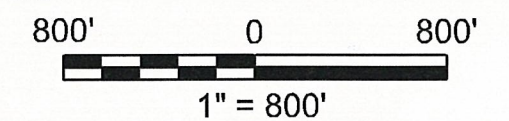


*I-95, Scudder Falls  
Bridge Improvement Project*

**Legend**

- Eligible or listed on the National Register of Historic Places
- Public multi-use properties with public recreation
- Public Recreation Water Trail
- Project Area (Limit of Disturbance)

Figure IV-1B  
Section 4(f) Resources



- 1 Elm Lowne
- 2 Snipes Tract
- 3 Afton Elementary School Ballfields
- 4 Quarry Hill Elementary School Ballfields
- 5 Delaware Canal
- 6 Delaware River Water Trail

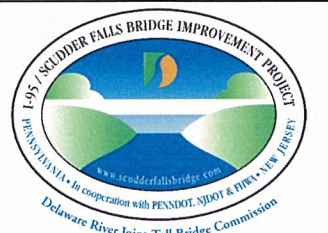
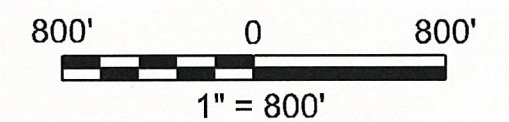


*I-95, Scudder Falls  
Bridge Improvement Project*

**Legend**

- Eligible or listed on the National Register of Historic Places
- Public multi-use properties with public recreation
- Public Recreation Water Trail
- Project Area (Limit of Disturbance)

Figure IV-1C  
Section 4(f) Resources





## A. Historic Resources

Historic resources were identified in the project study area during the historic structures survey conducted for the project. The Section 4(f) Resources summary descriptions are contained below.

### 1. *Delaware Canal (also known as the Delaware Division of the Pennsylvania Canal)*

The Delaware Canal, constructed in the late 1820s, extends 60 miles in Pennsylvania from a point near Easton, Lehigh County to Bristol Borough in Bucks County. The Delaware Canal links with the Lehigh Navigation Canal at Easton. In the project area the I-95/Scudder Falls Bridge crosses over the Delaware Canal. The Delaware Canal is part of the Delaware Canal State Park and is owned by the Commonwealth of Pennsylvania and maintained by the Pennsylvania Department of Conservation and Natural Resources (PADCNR).

The alignment of the Delaware Canal generally follows the path of the Delaware River. The typical section of the Delaware Canal is approximately 69 feet in width; this width consists of the channel prism; berms along both sides, including a towpath on one of the berms; and at some locations locks and other structures associated with the Canal. The Delaware Canal consists of approximately 550 acres.



Delaware Canal looking west. I-95 Bridge over Delaware Canal. Delaware Canal Towpath in the foreground.

Throughout the nineteenth century, the Delaware Canal became an important transportation linkage in bringing coal, lumber, cement and other goods from northeastern Pennsylvania to Philadelphia, New York and other markets along the east coast. The Delaware Canal remained in operation as an important route to transport anthracite coal for over a century. The Delaware Canal continued in operation until 1931, becoming the longest-lived canal in the United States.

During the late 1930's the Pennsylvania Legislature approved a bill that authorized the Secretary of the Department of Forests and Parks to acquire, by donation, the canal property for use as a public park. In October 1940, the Commonwealth of Pennsylvania became the owners of the Delaware Canal and designated it a State Park. Within the study area, the Canal property consists of the canal, towpath, and a stone retaining wall. This resource is used for canoeing, biking, hiking, fishing and other forms of active and passive recreation. The Delaware Canal is adjacent to public roadway throughout the system. Access to the Delaware Canal is available at numerous locations including off of the public roadways.

On October 29, 1974, the Department of the Interior, National Park Service, listed the Delaware Canal in the National Register of Historic Places under Criterion A (historical significance) and C (architectural significance). In 1976 the Delaware

Canal was declared a National Historic Landmark, and in 1988 Congress officially recognized the Canal's importance and established the Delaware and Lehigh National Heritage Corridor. The Delaware Canal has been designated as a National Historic Landmark.

The historic boundary of the Delaware Canal in the project area is 72 feet in width with the exception of the area of the stone retaining wall where the width is approximately 90 feet encompassing the stone retaining wall. The historic boundary of the Delaware Canal also represents the park boundary. It was determined by PennDOT that the I-95 legal right-of-way extends through the area of the canal crossing.

Project coordination with officials with jurisdiction over the canal has included discussions with the National Park Service and the Delaware and Lehigh National Heritage Corridor Commission. A field walkover on October 20, 2005 was attended by the Delaware Canal State Park manager, the PA DCNR, the PHMC, FHWA, PennDOT, and DRJTBC. Features of the Delaware Canal identified in the project area include a stone retaining wall that was constructed on the north (back) side of the towpath embankment. Reconstruction using stone originally excavated during canal construction was common after the initial canal construction to reinforce the towpath embankments that were subject to washouts during flood events.

### 2. *Elm Lowne*

The Elm Lowne property is located on Dolington Road and is adjacent to I-95 in Lower Makefield Township, Bucks County, Pennsylvania. The property includes a late eighteenth/early nineteenth century farmhouse with a number of early nineteenth century outbuildings, including a bank barn, carriage house, springhouse and corncrib. The farmhouse building consists of a stone Georgian structure built around 1750 with some additions. The Elm Lowne property was determined eligible for the NRHP under Criterion C (architectural significance). The property is historically significant for its association with the early colonial settlement of Bucks County. The property was part of an original William Penn land grant. The property is approximately 10 acres. The historic boundary is defined as the property line.



Delaware and Raritan Canal looking east.  
I-95 Bridge over Delaware and Raritan Canal.  
Delaware and Raritan Canal in foreground.

### 3. *Delaware and Raritan Canal*

The Delaware and Raritan Canal is located in New Jersey and consists of two components. The Feeder Canal runs along the Delaware River between Bulls Island and the City of Trenton. The Main Canal extends northeast and connects Trenton to New Brunswick. The Delaware and Raritan Canal was built as a transportation facility to provide safe and efficient movement of goods between New York and Philadelphia. Much of the original Delaware and Raritan Canal still remains intact

with 36 miles of the Main Canal and 22 miles of the Feeder Canal. The I-95/Scudder Falls Bridge crosses over the Delaware and Raritan Feeder Canal.

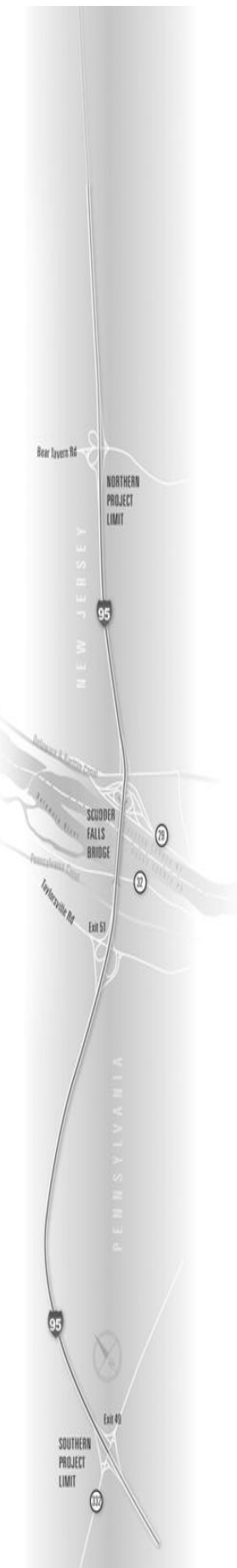
The Delaware and Raritan Canal in the project area is approximately 100 feet in width encompassing the channel prism, embankment on both sides of the channel, and the towpath on one side. The Delaware and Raritan Canal is approximately 450 acres.

Construction of the Delaware and Raritan Canal started in 1830, and the canal was completed in 1834 under a joint venture of the Canal and Railroad Companies. The primary purpose of the Delaware and Raritan Canal was to haul coal from northeastern Pennsylvania to New York. In 1840, a cableway was constructed across the Delaware River between New Hope, Pennsylvania and Lambertville, New Jersey to allow for passage of barges from the Delaware Canal and the Delaware and Raritan Canal. Each canal included outlet locks to permit barges access to the waterways. This connection allowed for increased shipment of coal from northeastern Pennsylvania to New York. The Delaware and Raritan Canal was one of the factors for economic and population growth for eastern New Jersey and Pennsylvania. The Delaware and Raritan Canal also provided waterpower for New Brunswick's textile, paper mills, and rubber factories.

In 1871 the Pennsylvania and Reading Railroad Company acquired the 999-year lease on the Delaware and Raritan Canal. However, the canals in the United States were competing with the more profitable railroad system. In the mid-1800s, the Belvedere-Delaware Railroad constructed a rail line on the towpath to supplement the transport of coal. The rail line has since been decommissioned and the rail bed and tracks were removed. The Belvedere-Delaware rail line is a contributing element to the Delaware and Raritan Canal. The Delaware and Raritan Canal goods transport operations ceased by the mid-1930s. The Belvedere-Delaware (B&D) Railroad was constructed around 1854 next to the canal. The B&D was determined to not be individually eligible for the National Register, but is a contributing element to the Delaware and Raritan Canal Historic District under Criterion A. There are no features of the B&D railroad line present in the project area.

In 1937, the State of New Jersey officially took over ownership of the Delaware and Raritan Canal. The State used the Canal for water supply at the time it was acquired. In 1975, New Jersey also acquired the adjacent Railroad Right-of-Way that is considered part of the Delaware and Raritan Canal Property. In 1973, the Delaware and Raritan Canal District was listed on the NRHP under Criterion A and C for historical significance associated with commerce, engineering, and transportation. The historic boundary of the Canal includes an area 300 feet wide from the centerline of the Canal, thereby creating a 600-foot corridor.

In 1974, 60 miles of the Delaware and Raritan Canal was designated as a State Park. This Canal corridor is used for canoeing, biking, hiking, fishing, bird watching and other passive and active recreational uses. The Scudder Falls Recreation Area is located to the north of I-95 and adjacent to the Canal and provides parking and access to both the Delaware and Raritan Canal and the Delaware River. The Scudder Falls Recreation Area is also located within the Delaware and Raritan Canal boundary. This resource is used for a variety of other recreational purposes including fishing, bird watching and other forms of passive recreation.





The Delaware and Raritan Canal Commission was formed when the Park was established to review actions by the State in the Park, undertake planning for Park development, and administrate the land use regulatory program to protect the Park. The Delaware and Raritan Canal Commission also has oversight of the Scudder Falls Recreation Area. The New Jersey State Park Service within the New Jersey Water Supply Authority operates and maintains the Delaware and Raritan Canal as a water supply. In 1992, the Canal towpath on the former railroad embankment was designated a National Recreation Trail.

Coordination with state officials included a site walkover on May 24, 2005 that was attended by the NJHPO, the New Jersey Division of Parks and Forestry, the Delaware and Raritan Canal Commission, the NJWSA, and NJDOT.

#### **4. NJ State Police Headquarters**

The NJ State Police Headquarters historic property is located in Ewing Township, Mercer County, New Jersey just north of the NJ Route 29/I-95 interchange. The historic area contains 13 buildings, constructed at various times between 1924 and 1958. Eight of these buildings are located along a courtyard, seven of which were constructed sometime in the 1920's. There is a log dormitory on this property constructed in the Adirondack Style around 1934 as part of a Civilian Works Administration project. This property was determined eligible for listing on the NHRP under Criterion A, B, and C for its association with early development of the New Jersey State Police, involvement of a historic notable person, H. Norman Schwarzkopf, and architecture. The historic boundary of this resource encompasses the area of land that contains a concentration of buildings from the period of significance 1924-1955 and is approximately 12 acres.

#### **5. Charles S. Maddock House**

The Charles S. Maddock House property is located on River Road in Ewing Township, Mercer County, New Jersey. The property consists of a two-story, wood-frame clapboard structure that was originally constructed in the early nineteenth century. During the late nineteenth and early twentieth centuries the structure was renovated in a subtype of the Queen Anne style. The Maddock family was known for the development of the pottery industry in New Jersey that produced fine dinnerware and crockery. This property was determined eligible for listing on the NRHP under Criterion C for architecture. The property is approximately 2 acres, and the historic boundary is defined as the property line.

### **B. Archaeological Resources**

A Phase I Archaeology investigation was performed in PA and NJ. The investigations were undertaken in two stages. The Phase IA investigation included background research and review of prior regional studies for the purposes of identifying high and low sensitive areas. The Phase IA also included geoarchaeological investigations to characterize landforms in the study area, which focused on the landforms and terraces adjoining the Delaware River.

Several landforms in the study area were identified, and a Phase IB Archaeological investigation was conducted. The Phase IB Archaeological investigation consisted of field tests. These included areas near the Delaware River (historic Delaware River Terraces), and the NJ 29 and the Taylorsville Road interchanges. The results of the Phase IB Archaeological investigation noted that site-36Bu379 (near the Scudder Falls Bridge) is eligible for inclusion in the National Register of Historic Places. A Phase III data recovery will be conducted at this site along with site-28Me360West.

Further archaeological investigations include NJ 29 Interchange infield area and possibly Park Island due to a proposed causeway needed during construction. The Archaeological Report was reviewed and concurred by the Pennsylvania Historical and Museum Commission and the New Jersey Department of Environmental Protection Historic Preservation Office. The archaeological resources in the project area do not constitute a Section 4(f) use involvement because the resources are unlikely to yield information that would warrant preservation in place.

## C. Multi-Use Properties

There are 3 multi-use, publicly-owned properties in the project study area that have a portion of the lands designated for significant recreation purposes and are open for public use. All 3 are located in Lower Makefield, Pennsylvania, and they include Afton Elementary School, the Quarry Hill Elementary School, and the Snipes Tract - Lower Makefield Athletic Fields.

The Afton Elementary School Property is located adjacent to the I-95 right-of-way while Quarry Hill Elementary School is adjacent to the Afton Elementary School along Quarry Road. Principal access to both schools is provided from Quarry Road. The Afton Elementary School is comprised of approximately 11 acres and is primarily used for education purposes. The site includes education building facilities, parking lots, and a playground. The Section 4(f) resource portion of the site includes a ball field and playground of approximately 2 acres located at the back of the school property adjacent to The Ridings residential development and an open space area that are open to the public.

The Quarry Hill Elementary School is comprised of approximately 16 acres and is primarily used for education purposes. The site includes education building facilities, parking lots, and a playground. The Section 4(f) resource portion of the site includes a ball field, playground, and soccer field of approximately 3 acres located at the back of the school property adjacent to Creamy Road and an open space area that are open to the public.

The 34-acre Snipes Tract is located at the intersection of Quarry and Dolington Roads. The Snipes Tract property is owned by Lower Makefield Township. The Snipes Tract property will have multiple land uses. Ten acres of the site will be devoted to a new fire station. There are plans to construct athletic fields on part of the site that are open to the public. This is the area of the Snipes Tract that is designated as a Section 4(f) resource.



## D. Public Recreation Water Trail

The Delaware River from Hancock, New York to Trenton, New Jersey was designated a public recreation water trail in 2007. A water trail is a public recreational boat route suitable for canoes, kayaks, and other small motorized watercraft. Similar to conventional land trails, water trails are recreation corridors between specific points. The Delaware River is owned by the Commonwealth of Pennsylvania and the State of New Jersey. The geographic centerline of the Delaware River is the state boundary. The Delaware River is jointly managed by the Pennsylvania Fish and Boat Commission and the New Jersey Department of Environmental Protection. The National Park Service, the Delaware River Basin Commission, the Pennsylvania Department of Conservation and Natural Resources, and the Delaware and Raritan Canal Commission are also involved with various planning, programs, and regulatory aspects for the Delaware River. The Delaware River Greenway Partnership comprised of private and public entities was formed to sponsor development and implement programs and projects for the recreation corridor.

The Delaware River Water Trail corridor is divided in 3 parts, Upper, Middle, and Lower Delaware. The I-95 Scudder Bridge Improvement Project is located in the Lower Delaware River section. This section of the water trail runs approximately 76 miles just south of the Delaware Water Gap area to Trenton, New Jersey and Morrisville, Pennsylvania. The Delaware River Water Trail within the project area is generally bounded by the top of the river bank and is approximately 1,300 feet in width. In the project area the Delaware River is a freshwater, non-tidal waterway that does not accommodate deep draft vessels due to its shallow depths.

The majority of the land abutting this section of the Delaware River is privately owned including Park Island which is partially located in the project area. The land abutting the Delaware River in the project area is publicly owned.

Recreational uses on the lower Delaware River Water Trail include tubing, kayaks, canoes, personal watercrafts, and fishing. Recreational activity is heavy during the summer months.

Project coordination with officials having jurisdiction over the Delaware River Water Trail includes the Pennsylvania Fish and Boat Commission and New Jersey Department of Environmental Protection. Agency coordination also included the National Park Service, the Delaware and Lehigh National Heritage Corridor Commission, Delaware and Raritan Canal Commission. Special agency coordination meetings and field views were also conducted. A detailed description of project agency coordination and public involvement is included in the Environmental Assessment.

## V. IDENTIFICATION OF SECTION 4(F) RESOURCES WHICH ARE POTENTIALLY USED BY THE ALTERNATIVES OF THE PROJECT

Step 2 was undertaken to determine which of the Section 4(f) resources would potentially be used by the alternatives of the project through right-of-way acquisition or another actual use. Each site was reviewed against the alternatives to determine if right-of-way acquisition would be required within the Section 4(f) resource boundary. The results indicate that of the 9 Section 4(f) resources identified, the project alternatives would have potential use on two Section 4(f) resources, the Delaware and Raritan Canal and the Delaware River Water Trail. As

noted in Table 2, right-of-way acquisition within the historic boundary of the Delaware and Raritan Canal is proposed and the temporary occupancy of the Delaware River Water Trail during construction will result in a use.

**Table 2**  
**Section 4(f) Resources Potentially Used by the Alternatives**

Section 4(f) Property	Section 4(f) Applicability	Potential Section 4(f) Use
Delaware Canal, PA	National Historic Landmark/ Parkland	None
Elm Lowne House, PA	Eligible Historic Resource	None
Delaware and Raritan Canal, NJ	National Register/Parkland	Potential Right-of-Way acquisition within historic boundary (approx. 0.10 ac)
NJ State Police Headquarters, NJ	Eligible Historic Resource	None
Charles S. Maddock, NJ	Eligible Historic Resource	None
Afton Elementary School, PA	Public school with recreation land open to public	None
Quarry Hill Element. School, PA	Public school with recreation land open to public	None
Snipes Tract – Athletic Fields, PA	Public multi-use property with recreation land open to public	None
Delaware River Water Trail	Public Recreation	Potential temporary occupancy during construction

The Section 4(f) resources were assessed for proximity impacts under constructive use. The project will not result in proximity impacts on the Section 4(f) resources (Appendix A Proximity Impacts Assessment Summary).

## VI. ALTERNATIVES ANALYSIS

### A. Avoidance Alternatives

#### *Approach*

An Alternatives Analysis with respect to Section 4(f) was conducted to identify and evaluate alternatives to avoid a Section 4(f) use. Alternatives identified and assessed are described and shown in figures in the Environmental Assessment. The avoidance alternatives included the No-Build Alternative and two Build Alternatives. Each avoidance alternative was evaluated for feasibility and prudence. This was accomplished considering the following factors: engineering, safety, traffic operations, and impacts to other environmental resources.

The I-95 Scudder Falls Bridge Improvement Project will require right-of-way acquisition within the historic boundary of the Delaware and Raritan Canal. The project will require temporary occupancy of the Delaware Canal and Delaware and Raritan Canal during various stages of construction and are described in Section VI.C. The temporary occupancy of the Delaware River Trail during construction will constitute a Section 4(f)

use since the duration of occupancy of the Delaware River Trail will occur during the entire 4 year construction time frame. This temporary occupancy meets the requirements under the de minimis use as described in Section VI.D of this document.

Avoidance alternatives included the following:

1. No-Build
2. I-95 Realignment
3. Reconstruct I-95/Scudder Falls Bridge and Taylorsville Road Interchange

### 1. No-Build Alternative

Under the No-Build Alternative, no reconstruction or major rehabilitation would occur on the I-95/Scudder Falls Bridge, I-95 mainline, and the interchanges at Taylorsville Road and NJ Route 29. The Delaware River Joint Toll Bridge Commission would continue routine maintenance on I-95/Scudder Falls Bridge. Also, PennDOT and NJDOT would continue maintenance functions on I-95 and the interchanges under their respective jurisdictions.

The No-Build Alternative would not result in a Section 4(f) use. The purpose of the project is to alleviate current and future (2030) year traffic congestion and to improve safety, as well as upgrade traffic operational conditions on I-95/Scudder Falls Bridge and the adjoining segments of I-95. However, the No-Build Alternative does not meet the project purpose and needs. The No-Build Alternative does not address the need to:

- Provide an inside and outside shoulder width on the I-95/Scudder Falls Bridge that meets current design criteria. This would also allow for adequate emergency pull over areas.
- Improve load ratings for the I-95/Scudder Falls Bridge.
- Improve overall condition of the I-95/Scudder Falls Bridge, such as the replacement of deteriorated structural elements and the concrete deck.
- Improve roadway capacity to alleviate traffic congestion and provide acceptable existing and future traffic operations during peak travel periods.
- Provide for acceleration and deceleration lane lengths that meet current design criteria at the interchanges.
- Provide adequate spacing of ramp merges to improve traffic flow and safety for merging of traffic from NJ Route 29 and Taylorsville Road onto I-95.
- Improve interchange ramp configurations that would meet current design criteria for lane and shoulder widths and sight distances.

The No-Build Alternative does not meet the project purpose and needs and is therefore not a prudent and feasible alternative.

### 2. I-95 Realignment Alternative

The Delaware and Raritan Canal is a linear Section 4(f) resource that is approximately 58 miles in length. This Canal covers a geographic area from Trenton



to New Brunswick, New Jersey. The Delaware Canal is also a linear resource which is approximately 60 miles in length and runs adjacent to the Delaware River covering a geographic area from Bristol to Easton, Pennsylvania. Any realignment of I-95, whether in the general project area or vicinity, would require the crossing of the Delaware Canal and Delaware and Raritan Canal. A new river crossing would require right-of-way acquisition within the historic boundaries of the Delaware and Raritan Canal due to the 600 feet width of the historic boundary and limited legal right-of-way associated with the public roadway system. In addition, the project area of Bucks County, Pennsylvania and Mercer County, New Jersey includes numerous historical properties in the vicinity of the Canals. There is not a feasible and prudent highway realignment that could be designed to avoid all Section 4(f) resources and meet the project purpose and needs.

## 3. I-95/Scudder Falls Bridge and Taylorsville Road Interchange Reconstruction Alternative

This alternative would involve the replacement of the I-95/Scudder Falls Bridge and the reconstruction of I-95 mainline in Pennsylvania and the Taylorsville Road Interchange. The NJ Route 29 interchange would not be reconstructed but would be rehabilitated. In New Jersey, I-95 mainline would be rehabilitated. The I-95/Scudder Falls Bridge would be replaced and widened about the centerline. The Bridge would have five 12-foot travel lanes northbound and four 12-foot travel lanes southbound with inside and outside shoulders. Interstate 95 in Pennsylvania would be widened to accommodate three 12-foot travel lanes in each direction with inside and outside shoulders. The Taylorsville Road Interchange would be re-configured to meet design criteria and capacity needs. The single span replacement bridge over the Delaware Canal would be designed with the abutments outside the historic boundaries of the Delaware Canal. The NJ Route 29 Interchange existing configuration would not change. The NJ Route 29 Interchange ramps would tie into I-95 within the Legal Right-of-Way at existing location. The NJ Route 29 Interchange and I-95 mainline improvements would include pavement reconstruction, drainage improvements, and rehabilitation and/or replacement of the ramps in the existing location. Interstate 95 mainline in New Jersey would be rehabilitated.

The I-95/Scudder Falls Bridge and Taylorsville Road Interchange Reconstruction Alternative would not result in a Section 4(f) use on the Delaware and Raritan Canal. The existing structure over the Delaware and Raritan Canal would be replaced on its existing location. The piers would be placed at the existing location and within the Legal Right-of-Way.

The purpose of the project is to alleviate traffic congestion and improve safety and traffic operational conditions on I-95/Scudder Falls Bridge and on the segment of I-95 between PA route 332 and Bear Tavern Road. However, the I-95/Scudder Falls Bridge and Taylorsville Road Interchange Reconstruction Alternative does not fully address the project purpose and needs. This Alternative does not address the needs associated with one of the major components of the project – the NJ Route 29 Interchange. The following project needs would not be addressed with this Alternative:

- The need to provide an acceleration lane at the on-ramp from NJ Route 29 to I-95 southbound would not be addressed. The lack of an acceleration lane



requires vehicles to come to a complete stop at a stop sign at the end of the ramp, before merging directly into I-95 mainline traffic. This situation creates traffic operation and safety issues on I-95 mainline and the NJ Route 29 Interchange.

- The need to improve the existing configuration of the NJ Route 29 Interchange to minimize merges, intersections, and the scissors ramps layout. The current interchange includes about 19 ramp merges and 7 at-grade intersections. Although the scissors ramps configuration was intended to provide access and egress from I-95 and NJ Route 29 with as many free-flow conditions as possible, without signalized intersection, this current condition is a cause for driver confusion and safety concerns.
- The need to reconfigure the NJ Route 29 Interchange to improve horizontal sight distance, ramp lane and shoulder widths, and ramp radii that would meet current design criteria.

The I-95/Scudder Falls Bridge and Taylorsville Road Interchange Reconstruction Alternative does not address the project purpose and needs and is therefore not a prudent and feasible alternative.

### **B. Alternatives that Use Section 4(f) Properties that were Studied in Detail**

The I-95/Scudder Falls Bridge Improvement Project was initiated to alleviate traffic congestion and improve traffic operations and safety on the I-95/Scudder Falls Bridge and on the segment of I-95 between PA Route 332 and Bear Tavern Road including the Taylorsville Road and NJ Route 29 Interchanges. This reconstruction and rehabilitation project would occur on the existing transportation facility. All improvements would occur on the existing roadway alignment. The vast majority of the improvements would occur within the existing Legal Right-of-Way.

Alternatives identified and assessed are described and shown in figures in the Environmental Assessment. Alternatives were identified and analyzed based on addressing the project purpose and needs and other parameters such as community resources, cultural resources, Section 4(f) properties, and natural resources. An *Alternatives Screening Report (Technical Memorandum No. 26)* was prepared for the project. The purpose of the Alternatives Screening Report was to document in detail the alternatives analysis and screening process for the range of Build Alternatives and Design Options that were evaluated to address existing traffic safety, operational, and geometric deficiencies within the I-95 project area and to accommodate the forecasted traffic growth. The Alternatives Screening Report also contains detailed figures depicting each alternative and design option.

The following sections summarize the alternatives considered for the project including Transportation Systems Management/Transportation Demand Management and build alternatives with design options.

## 1. Transportation Systems Management/Transportation Demand Management

The alternatives considered for the project included Transportation Systems Management/Transportation Demand Management (TSM/TDM). These include:

- Intelligent Transportation Systems/Incident Management. (The Conceptual ITS Study includes recommendations for ITS implementation and an Incident Management Plan, which will both require coordination with PennDOT and NJDOT which own the majority of highway right-of-way.)
- Incorporation of 14-foot inside shoulders for possible future use as bus lanes by the Route 1 Bus Rapid Transit (which have been incorporated into proposed concept designs).
- Pedestrian/bicycle facility is a component of the I-95/Scudder Falls Bridge Improvement Alternative.
- Continued coordination with the Bucks and Mercer County Transportation Management Associations and large local employers.

The results of the evaluation indicated that the TSM/TDM Alternatives would not meet the project purpose and needs as a stand alone proposed actions. This alternative would not provide for adequate acceleration and deceleration lanes at the adjoining interchanges and adequate spacing of ramp merges, to improve traffic flow and enhance safety for merging of traffic from NJ Route 29 and Taylorsville Road. The TSM/TDM would not provide for adequate roadway capacity to allow for acceptable levels of service. Also, this alternative would not improve the interchange configurations that do not meet current design criteria. Further planning and evaluation of appropriate TSM/TDM measures will continue during the final design phase of the project.

## 2. Build Alternatives

A range of Build Alternatives and Design Options were considered for the project area. The 4.4-mile project area is divided into four project segments for the purpose of identifying and evaluating Design Options for each project segment. These project segments, from west to east, are:

- a. Pennsylvania I-95 Mainline Segment from the PA 332 Interchange to the Taylorsville Road Interchange
  - Outside Widening
  - Inside Widening
- b. Taylorsville Road Interchange
  - Design Options 1, 2, 3, and 4
- c. I-95/Scudder Falls Bridge and Approaches, including I-95 mainline in New Jersey to the Bear Tavern Road Interchange
  - Bridge Rehabilitation with Widening

- Double-deck Bridge
  - Contra-flow Lane
  - Collector/Distributor Roadway
  - New Bridge (Bridge Replacement) on Centerline Alignment, Upstream Alignment, and Downstream Alignment
- d. NJ 29 Interchange
- Design Options 1a, 1b, 1c (modified), and 2
- e. Pedestrian/Bicycle Facility
- f. I-95 Scudder Falls Bridge Improvement Alternative

For each project segment, several Design Options were developed to meet the project goal of providing a Level of Service D, which is considered to be acceptable LOS for urban areas. The design options were also developed to improve safety and highway geometrics to meet applicable AASHTO, PennDOT, and NJDOT design criteria. Design Options for each project segment were then combined to formulate Build Alternatives for the entire 4.4-mile project area. Overall the Design Options addressed the project purpose and needs; however, the analysis revealed that some Design Options provide better solutions and/or advantages in engineering and minimization and avoidance of impacts on the environment. In total, 19 Design Options and three Build Alternatives were considered. These proposed design options and evaluation results are summarized below.

### 2.a. Pennsylvania I-95 Mainline Segment Design Options

Two Design Options for the I-95 mainline project segment in Pennsylvania were considered (See Environmental Assessment Figures III-7 and 13). Both would provide for a third travel lane in each direction along with improvements to existing shoulders to meet current design criteria. The two design options considered for this segment of I-95 are:

- Outside Widening (i.e., on the right side of each travel direction)
- Inside Widening (i.e., on the left (median) side of each travel direction)

Travel lane additions, both to the inside and outside of the Pennsylvania I-95 mainline, were considered. The Pennsylvania I-95 widening would accommodate the need for additional 12-foot travel lanes and inside and outside shoulder widths that would meet current design criteria. Thereby, I-95 in this segment would have 3 travel lanes in each direction. The difference between these design options lies in the location of the lane additions. Under the inside widening option, the lane additions would be accommodated within the existing median, i.e., on the left side of the existing travel lanes. Under the outside widening option, lane additions would extend to the right side of the existing travel lanes. The Outside Widening option will not require right-of-way acquisition. In both cases, widening would occur equally about the existing highway centerline.

The results of the analysis indicated that from a traffic operational standpoint, both design options would provide acceptable LOS C operation. The outside widening

option provides the desirable (per AASHTO design criteria) 60-foot median between the northbound and southbound I-95 travel lanes in the wide median areas. This compares to an acceptable (per AASHTO design criteria) 36-foot median, with concrete barrier, between the northbound and southbound travel lanes in wide median areas under the inside widening option.

Minor right-of-way acquisition would be required for the outside widening, but none would be required for the inside widening. The outside widening option would involve additional clearing of wooded roadside buffer within the highway right-of-way.

No Section 4(f) use would occur as a result of the design options. Environmental impacts assessed included the differences in noise impacts to adjoining properties. In the future Build conditions, noise levels are anticipated to increase by 2 to 4 dBA over existing levels and would be 1 to 3 dBA over the No Build Alternative. Differences in noise levels between the inside and outside widening options would be approximately 0 to 1 dBA and would not be perceptible. No historical or archaeological resources would be affected under either the inside or outside widening options.

The outside widening option would involve slightly greater impacts on natural resources. The outside widening would involve an additional impact to a wetland and stream. The outside widening would affect 0.07 acre of wetland at an unnamed tributary to Buck Creek south of I-95, and 20 linear feet and 600 square feet of an unnamed tributary stream to the Delaware Canal, whereas the inside widening option would not affect these resources.

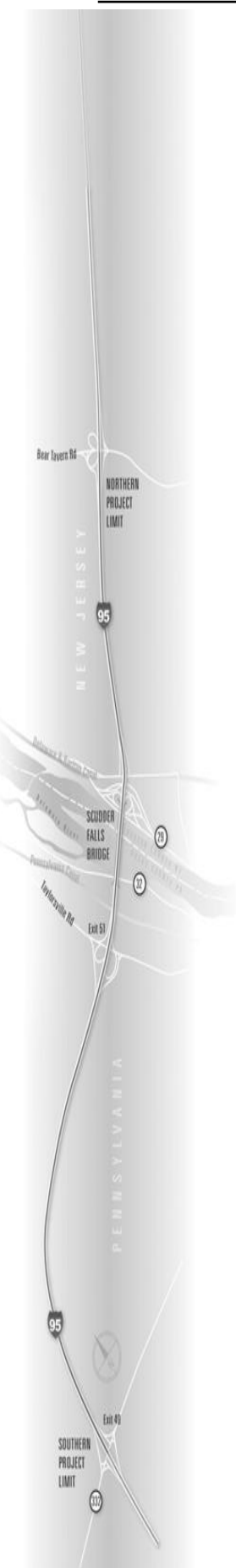
While both the inside and outside widening options meet the project purpose and needs, the inside widening design option results in less environmental resources impacts. The inside widening option was the recommended improvement.

### 2.b. Taylorsville Road Interchange Design Options

The four Design Options (See Environmental Assessment Figures III-8 and 15) considered for the Taylorsville Road Interchange are:

- Design Option 1 - Retains all ramps (two southbound off-ramps and two northbound on-ramps) similar to the existing configuration
- Design Option 2 - Eliminates eastern southbound off-ramp and combines it with the western southbound off-ramp; retains two northbound on-ramps
- Design Option 3 - Eliminates eastern northbound on-ramp and combines it with the western northbound on-ramp; retains two southbound off-ramps
- Design Option 4 - Eliminates both the eastern southbound off-ramp and eastern northbound on-ramp and combines each with the respective western southbound off-ramp and northbound on-ramp; retains one southbound off-ramp and one northbound on-ramp.

Each of the Design Options addresses overall the project purpose and needs. Under Design Options 2 and 4, elimination of the eastern I-95 southbound off-ramp would remove the undesirable traffic weave that currently exists between this ramp and Woodside Road. Design Options 1 and 2 each retain the two existing northbound on-ramps onto I-95. These interchange design options would ease northbound



Taylorsville Road traffic congestion by reducing queuing lengths at I-95 ramp approaches.

Under Design Options 3 and 4, the existing single northbound lane on Taylorsville Road would require widening over a longer section of Taylorsville Road to the south to accommodate greater queuing northbound. On Taylorsville Road southbound, an undesirable weave between the I-95 southbound off-ramp and the I-95 northbound on-ramp would result. In addition, an undesirable two-lane right-turn from Taylorsville Road southbound onto the I-95 northbound on-ramp would result.

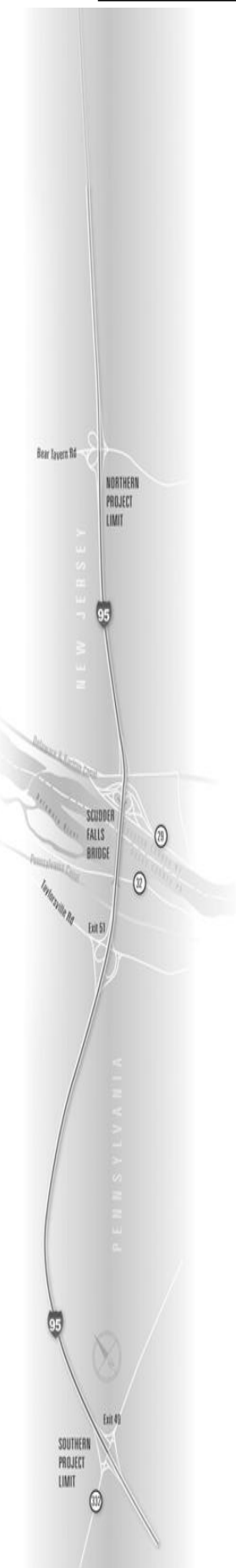
Design Options 1 and 3 would introduce one new traffic signal at the northbound on-/off-ramp, and Design Options 2 and 4 would each introduce two new traffic signals at the southbound on-/off-ramp and northbound on-/off-ramp.

None of the Design Options resulted in use of Section 4(f) resources. The I-95 bridge over the Delaware Canal will not involve a Section 4(f) use. The bridge abutments will be located outside the historic boundary of the canal. No historic properties would be affected under these Design Options. With Design Options 1 and 2, portions of two residential properties on Woodside Road and a portion of one residential property on Taylorsville Road would be affected; however no residences would be displaced. With Design Options 3 and 4, two residences on Taylorsville Road would be displaced, and portions of two other residential properties on Woodside Road would be affected. In addition, a portion of one undeveloped parcel on Woodside Road would be affected by all design options.

Under all of the interchange design options, improvements are proposed at the Taylorsville Road intersection with Woodside Road. These improvements would involve minor roadway widening that would affect preserved farmland northwest of the interchange. Each design option would require right-of-way acquisition and disturb approximately 1.39 acres of a property known as Clearview Farm, which is owned by the Lower Makefield Farmland Preservation Corporation. Design Option 2 would avoid two residential displacements, which would be necessary under Design Options 3 and 4.

Design Options 1 and 2 would involve greater impacts to an unnamed tributary to the Delaware Canal, with 400 more linear feet of impact and 2,800 square feet of additional impact compared to Design Options 3 and 4.

The results of this analysis determined that Design Option 2 provides the overall best solution for the Taylorsville Road Interchange from a traffic operational and safety standpoint. Design Option 2 is the preferred option for several reasons: 1) it would relocate the southbound I-95 off-ramp and thus would eliminate the undesirable weave between this ramp and Woodside Road; 2) it would provide two northbound ramps, easing northbound Taylorsville Road congestion; 3) it would avoid the need for an undesirable two-lane right turn movement from Taylorsville Road southbound onto the I-95 northbound on-ramp; and, 4) it would avoid creation of an undesirable weaving section southbound along Taylorsville Road between I-95 ramps. Design Option 2 would provide better traffic operations and enhancement to traffic safety, would have lesser property impacts, and would generally have comparable or lesser impact to natural resources. Therefore, Design Option 2 was recommended as the proposed improvement as part of the project-wide alternatives.

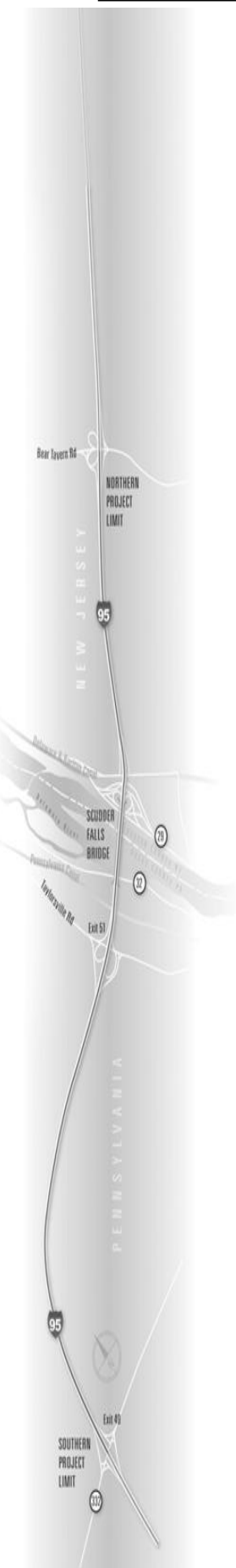


## 2.c. I-95/Scudder Falls Bridge and Approaches Design Option

Design options for the I-95/Scudder Falls Bridge and approaches that were evaluated are described in this section. The I-95/Scudder Falls Bridge will be tolled in the southbound direction only and will utilize an "all electronic tolling (AET)" system. With an AET, tolls will be collected electronically through the E-Z Pass system and therefore, no toll plaza would be constructed. The electronic toll equipment will be mounted on an overhead gantry structure that is integral to the new Bridge and the cabinets for the electronic equipment will be located on the Bridge or below the Bridge within the existing right-of-way. However, the bridge design options will require the temporary occupation of the Delaware Water Trail during construction will result in a de minimis use for all of the design options. (See Section VI.D - Assessment of Least Harm.)

The following is a description of the design options considered for the I-95/Scudder Falls Bridge:

- **Bridge Rehabilitation with Widening** – Both full and partial rehabilitation options would involve widening of the structure to meet the project purpose and needs. However, a full or partial bridge rehabilitation to meet current design criteria would result in costs that approach or exceed those for bridge replacement. Under the PennDOT policies and guidelines, if service life costs including life cycle costs for rehabilitation are within 30% of the service life costs for bridge replacement, bridge replacement is recommended. Moreover, although the bridge can be strengthened, rehabilitation does not eliminate concerns associated with the age and structural loading limitations of the bridge and its non-redundant configuration; therefore, the recommendation was to consider bridge replacement options.
- **Double-deck Bridge** – A two-level bridge was considered that would carry local traffic from the adjoining interchanges on the lower level and I-95 through traffic on the upper level. Each level would carry three lanes of traffic (See Environmental Assessment Figure III-2). The approach structures would extend approximately 800 feet beyond the existing bridge abutments, requiring acquisition of the adjacent properties and environmental resources impacts. This option would result in having a Section 4(f) use on the Delaware and Raritan Canal. Typically a two-level structure will be more costly than a conventional single deck structure. The two-level bridge would be more visually intrusive in the setting than a single level bridge. The Double-deck option was not recommended for further evaluation.
- **Contra-flow Lane** – The contra-flow lane replacement bridge option would consist of an eight lanes wide structure instead of a nine lane (project needs identified nine lanes to accommodate traffic) structure. A moveable barrier would be used to provide five lanes in the peak direction and three lanes in the non-peak direction (See Environmental Assessment Figure III-3). The moveable barrier system would extend over the length of the bridge and about 1,500 feet on each of the approaches to the bridge. A moveable barrier system would require barrier machines and housing, operators, lane delineation system, maintenance, and operational costs. The contra-flow operations cost would be more than a typical conventional nine lane bridge service life costs. The contra-



flow replacement bridge option would result in a Section 4(f) use on the Delaware and Raritan Canal. There are safety concerns that the length of the transition areas into and out of the contra-flow lane is inadequate and the end treatments pose safety concerns. The contra-flow lane bridge replacement option was not recommended for further evaluation.

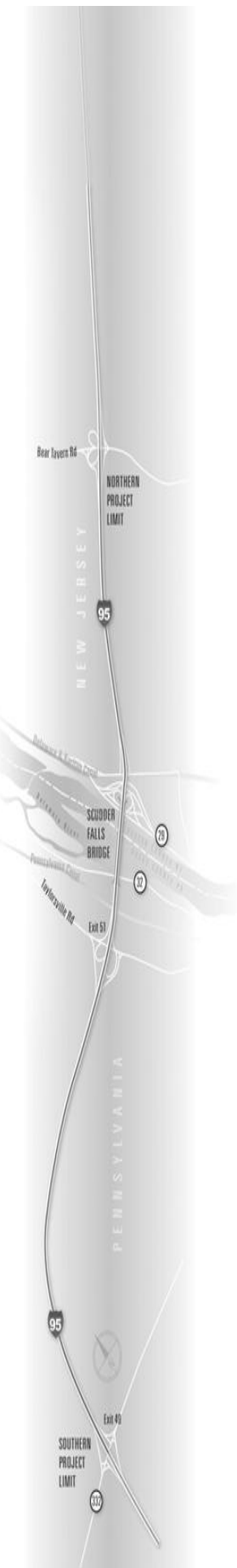
- **Collector/Distributor Roadway** – A collector/distributor roadway on the replacement bridge would be provided in the northbound direction over a length of about 2.4 miles and would segregate northbound mainline traffic from the traffic entering and exiting at Taylorsville Road and NJ Route 29. The cross-section of this option would be 20 to 28 feet wider than a typical traffic lane configuration (See Environmental Assessment Figure III-4). The northbound CD roadway ramp would begin, on its western end, approximately 0.8 miles west of Taylorsville Road and would merge back into the I-95 mainline approximately 1.5 miles east of NJ Route 29. The physical changes to I-95 with the CD roadway would extend considerable distances along I-95 beyond its present footprint resulting in more costs and property impacts than a typical traffic lane configuration. The CD roadway option bridge replacement was not recommended for further evaluation.
- **Three alternatives for Bridge Replacement** - Centerline Alignment, Upstream Alignment, and Downstream Alignment. In these three alternatives the I-95 /Scudder Falls Bridge would be a single bridge structure with the standard lane additions.

The basic lane configuration of the bridge would be the same under all options (i.e., five lanes northbound and four lanes southbound on the I-95 Scudder Falls Bridge), but the bridge alignment over the Delaware River and the mainline approaches would be shifted, with the new bridge overlapping the footprint of the existing bridge. The bridge widening upstream or downstream would be from the existing outside bridge fascia beam. Therefore, the alignments are shifts from the present location and not re-alignments from the bridge's present location.

Under the Centerline Design Option the new, wider bridge would be centered on the centerline of the existing bridge. Under the Upstream Alignment Design Option, the new, wider bridge would be constructed upstream of, or north of, the existing bridge, with the new bridge extending north from the southern edge of the existing bridge. Under the Downstream Alignment Design Option, the new, wider bridge would be constructed downstream of, or south of, the existing bridge, with the new bridge extending south from the northern edge of the existing bridge.

For an equitable comparison of the three different alignment design options, each incorporates the same design options for other project segments. These are the Standard Lane Additions for the I-95/Scudder Falls Bridge, Design Option 2 for Taylorsville Road Interchange, Design Option 1a for the NJ Route 29 Interchange, and Inside Widening for the PA I-95 Mainline.

Each of the Design Options addresses the project purpose and needs. From a constructability standpoint, the Upstream and Downstream Alignment options





would provide more travel lanes during the various phases of construction (a minimum of two lanes would be provided at all times during construction).

The Centerline Alignment Design Option would require displacement of two residences, one on the north side and one on the south side of the existing bridge. The Upstream and Downstream Alignments would each require displacement of one residence, one on the north side or one on the south side of the existing bridge, respectively.

The Upstream Alignment Design Option would involve overall lesser impacts to public and private properties than the Centerline or Downstream Alignment options. With the Upstream Alignment Design Option, 2.22 acres of public land would be affected, compared to 2.61 and 2.96 acres of public land affected by the Centerline and Downstream Alignments, respectively. The public land is former farmland property owned by Lower Makefield Township. The property is not a Section 4(f) resource. Excluding residential displacement, the Upstream Alignment would affect 0.81 acres of private property, compared to 1.0 acre and 1.6 acres affected by the Centerline and Downstream Alignments.

All three alignment options would have the same Section 4(f) use on the Delaware and Raritan Canal due to NJ Route 29 new ramp piers and an abutment. No Section 4(f) use would occur on the Delaware Canal. No right-of-way acquisition would be needed from the Delaware Canal. Under the three alignment options the I-95 Bridge would span the Delaware Canal.

Impacts to natural resources are comparable for all three alignment options. However, the Downstream Alignment would involve the greatest impacts on streams by approximately 0.30 acres, whereas the Upstream and the Centerline alignments would result in approximately 0.20 acres of impact each. These streams are not located within the historic boundaries of the canals. The Downstream Alignment would have the greatest impact on the USACOE flood overflow structure at the Delaware Canal south of I-95. The USACOE concrete flood overflow structure is not a contributing feature of the Delaware Canal (Appendix B, Agency Coordination). The Downstream Alignment would have fewer wetland impacts. For floodplains, the Centerline Alignment would have the greatest impacts (0.77 acre more than the Upstream Alignment and 0.47 acre more than the Downstream Alignment).

All three alignment options would have the same Section 4(f) use on the Delaware and Raritan Canal. The Downstream and the Centerline Alignments both result in greater environmental resources impacts. The Upstream Alignment Design Option was advanced for further consideration based on engineering and constructability considerations.

### 2.d NJ 29 Interchange Design Options

The four Design Options considered for the NJ 29 Interchange are:

- Design Option 1a – Folded diamond interchange that realigns NJ Route 29 to the southbound NJ 29 travel lanes (west side) with signalized intersections and eliminates the existing bypass around the interchange.

- Design Option 1b – Folded diamond interchange that realigns NJ Route 29 to the southbound NJ Route 29 travel lanes (west side) with signalized intersections and retains the bypass around the interchange (east side) for northbound traffic.
- Design Option 1c – Folded diamond interchange with two roundabouts for traffic traveling between NJ 29 and I-95, and bypasses for NJ 29 through traffic. Design Option 1c was proposed by NJDOT for consideration. It is a variation of Design Option 1b replacing signalized intersections with roundabouts at the I-95 ramp termini. As the design for this option was further developed and evaluated in consultation with NJDOT, refinements were made and the resultant option is called Design Option 1c Modified.
- Design Option 2 – Folded diamond interchange that realigns the southbound NJ Route 29 travel lanes to the northbound NJ Route 29 travel lanes (east side) with one signalized intersection and one unsignalized intersection.

All of the design options eliminate the existing northbound on-ramp from NJ Route 175 (Upper River Road). This movement would be accommodated within the NJ Route 29 interchange. The discontinued northbound on-ramp currently provides direct access to I-95 northbound from the adjoining NJ State Police facility. State Police emergency access would be retained via an exclusive-use ramp along the same alignment as the existing northbound on-ramp from NJ Route 175. Approvals for NJ State Police access will be considered during final design.

The Level of Service analysis shows that all key locations within the interchange options would operate at LOS C or better under all design options. Design Option 1c Modified would accommodate free-flow on the roundabouts north and south of the interchange. Under Design Option 1c Modified, there would be no stops for I-95 ramp traffic passing through the interchange. Design Option 1c Modified would also provide a one-lane bypass around the interchange area in each direction for NJ Route 29 traffic. Design Option 1c Modified is viewed as the superior option from a safety perspective at the roundabout intersections.

Design Option 1a would provide a conventional folded diamond interchange with signalized “T” intersections at the ramp termini. It would eliminate the existing bypasses around the interchange for NJ Route 29 through traffic. Design Option 1b would be similar to Design Option 1a in all respects except that it would retain the existing northbound bypass for NJ Route 29 traffic. Under Design Options 1a and 1b, there would be two new signalized ramp intersections, which would operate at LOS A (to the north) and LOS B (to the south) for both design options. Under Design Option 2, there would be one signalized intersection (operating at LOS C) to the north and one unsignalized intersection (operating at LOS A) to the south.

All Design Options would result in a Section 4(f) use on the Delaware and Raritan Canal. The wider spans over the canal would require longer abutments and the piers for the ramps. The foundations for the abutments and piers would be partially located outside the legal right-of-way. This would be the legal right-of-way area of I-95 as it crosses over the canal. The Section 4(f) use would apply to the pier and the abutment foundations located outside the legal right-of-way but within the historic boundary. Section 4(f) does not apply to the areas spanned by these structures. Design Options 1a, 1b, and 1c have a Section 4(f) use on the Delaware and Raritan Canal due to pier foundations located outside the legal right-of-way. Interstate 95

southbound and northbound ramps to NJ Route 29 under Design Options 1a, 1b, and 1c have similar layout over the canal resulting in the Section 4(f) use being similar. Design Options 1a, 1b, and 1c would each have Section 4(f) use area of approximately 0.10 acres. Under Design Option 2, I-95 mainline structure and the ramps have a smaller area configuration that would require additional right-of-way to account for foundations being partially outside the legal right-of-way. Therefore under Design Option 2 the Section 4(f) use would be approximately 0.05 acres.

An assessment of overall least harm was conducted for the four Design Options considered for NJ 29 Interchange. Section D Assessment of Least Harm provides detailed description of factors considered such as engineering, environmental resource impacts, and views from the officials having jurisdiction along with the results of the evaluation.

### 2.e Pedestrian /Bicycle Facility

Subsequent to the EA/Draft Section 4(f) comment process, the Delaware Joint Toll Bridge Commission approved the inclusion of the pedestrian/bicycle facility as part of the proposed action. The preferred alternative for the pedestrian/bicycle facility is shown on pages 59 and 60 of the Environmental Assessment.

Opportunities to provide a connection across the Delaware River between the towpaths within the Delaware Canal State Park and Delaware and Raritan Canal State Park were evaluated as part of the project. A pedestrian/bicycle facility would be provided on the north side of the new I-95 Scudder Falls Bridge over the Delaware River. Landings at each end of the bridge would be constructed to provide access down to the towpaths. The pedestrian/bicycle facility would not result in a Section 4(f) use on the Delaware Canal and Delaware and Raritan Canal. Two design options for the landing areas were evaluated. On the Pennsylvania side, the preferred design would provide a landing extending through property owned by the Delaware River Joint Toll Bridge Commission and follow a path along Woodside Road. No adverse effect would occur on the Delaware Canal. The pedestrian/bicycle path would need to tie into the towpath; therefore, minor grading would be needed. No right-of-way acquisition would be required; the work would be completed under agreement with PA-DCNR. On the New Jersey side, the pedestrian/bicycle path landing area would connect to Delaware and Raritan Canal towpath. Minor grading would be required for this tie in along with the construction of a retaining wall. No right-of-way acquisition would be required; the work is expected to be performed under an agreement with the Delaware and Raritan Canal Commission.

### 2.f I-95 Scudder Falls Bridge Improvement Alternative

The I-95 Scudder Falls Bridge Improvement alternative was identified based on the analysis and screening of the Alternatives and Design Options. This alternative addresses the project purpose and needs. The following elements comprise the I-95 Scudder Falls Bridge Improvement alternative (Figure VI-1A-E):

- Standard Lane Additions – 5 lanes northbound/4 lanes southbound on the I-95 Scudder Falls Bridge
- Replace I-95 Scudder Falls Bridge on Upstream Alignment
- I-95 PA Mainline Inside Widening

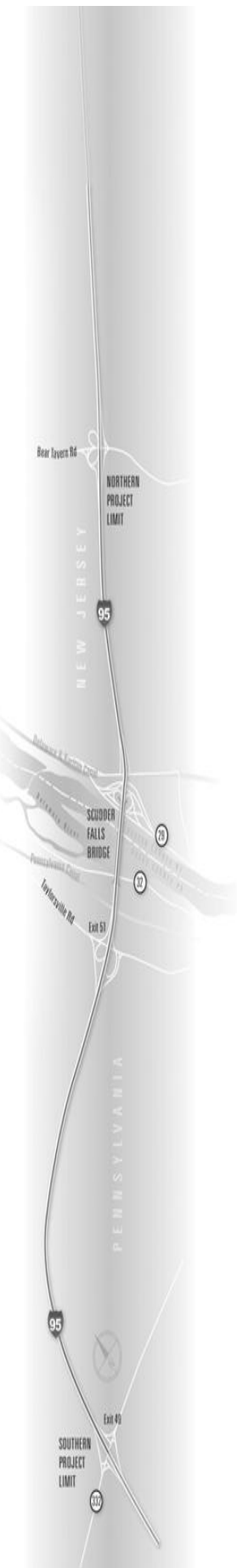
- Taylorsville Road Interchange Option 2
- NJ Route 29 Interchange Option 1c (modified)
- Pedestrian/Bicycle Facility
- Transportation Systems Management/Transportation Demand Management

The I-95 Scudder Falls Bridge Improvement Alternative was identified as the Proposed Action. This Alternative will result in having a Section 4(f) use on the Delaware and Raritan Canal. Pier foundation areas for the Interstate 95 mainline north abutment for the southbound off-ramp and northbound on-ramp will be located outside the legal right-of-way but within the historic boundary of the Delaware and Raritan Canal.

The Section 4(f) use is applicable since a portion of the piers and the abutment foundations would be located outside the legal right-of-way but within the historic boundary of the Delaware and Raritan Canal. Section 4(f) does not apply to the areas of the Section 4(f) resource spanned by the structures. Interstate 95 southbound off-ramp and northbound on-ramp consists of a single 12-foot lane with 4-foot inside shoulder and 8-foot outside shoulder. The area (Figure VI-2) required for these structural elements including portions of the foundations would be approximately 4,600 square feet (0.10 acres). The project will not involve the placement of piers and abutments within the canal prism and towpath. The two existing piers located within the canal prism will be removed. Land acquisition from the Delaware and Raritan Canal would require NJDEP Green Acres approval. NJDEP Green Acres approval is obtained under the NJDEP Green Acres permitting application process that will be initiated during final design. In addition, as described in the Programmatic Agreement (Appendix B) the DRJTBC shall provide monetary compensation for land acquisition prior to the start of construction within the Delaware and Raritan Canal historic boundary and is subject to the approval of the NJ State House Commission.

The abutment and ramps are located along north embankment areas. These areas would be temporarily disturbed during construction to build the foundations, abutment, and piers. Temporary encroachment onto areas of the towpath may be necessary for pouring and curing of the foundations prior to backfilling for a period of up to approximately 30 days. During this type of construction activity, the towpaths are proposed to remain accessible for Canal users under maintenance and protection of pedestrian traffic. Also, there will be temporary closure of the towpath for safety while structural girders for I-95 are placed, this activity is expected to occur at night. However, in event that construction activity may require short-term temporary (less than 30 days) closures, a Canal towpath user detour plan will be implemented. The detour plan will be submitted to PADCNR, PA Bureau of State Parks, NJDEP and the Delaware and Raritan Commission for review and coordination. Otherwise, full use of the towpaths will be maintained during construction.

The existing traffic noise levels at the Delaware and Raritan Canal is 66 dBA and is expected to increase 1 dBA as a result of the project. Since this increase is not substantial, no noise barriers are proposed. The project will not result in access changes to the Delaware and Raritan Canal.





Since the project will introduce new features within the historic boundary of the Delaware and Raritan Canal, the undertaken will have an Adverse Effect on the Delaware and Raritan Canal. Coordination was conducted with the Delaware and Raritan Canal Commission, NJ Historic Preservation Office, NJDEP Green Acres, and canal special interests groups. This coordination activity will continue during final design and construction.

### C. Temporary Construction Easements

Construction work activity will be required in the areas of the Delaware Canal and the Delaware and Raritan Canal. Temporary construction easements will be required within the Section 4(f) boundary of the Delaware Canal and the Delaware and Raritan Canal. Construction activities in the areas of the canals will be temporary and are described as following:

**Delaware Canal** - the existing I-95 bridge over the canal will be replaced. This structure will carry I-95 mainline and the northbound acceleration ramp over the canal. This replacement structure will span over the Section 4(f) boundary of the canal. The abutments will be located outside the Section 4(f) boundary of the canal. Temporary occupation of the canal towpath area may be necessary for the pouring and curing of the concrete foundations for the abutment walls prior to backfilling for a period of up to 30 days. However, during these construction activities, the towpath will remain open for the Canal users under maintenance and protection of pedestrian traffic.

For safety reasons during construction, there will be the need to temporarily close the towpaths during the placement of the I-95 bridge girders. These will be short duration closures for which night closures will be considered. A Canal towpath user detour plan for any temporary closures will be developed and implemented in cooperation with the PADCNr, PA Bureau of State Parks, and NJDEP.

The project will involve coordination with the PA Department of Conservation and Natural Resources (PA DCNR), PA Bureau of State Parks, and the Delaware Canal Park Management office during final design and construction to review any proposed detours, maintenance and protection of Canal user traffic, signage, and notifications. Notifications will be provided at a minimum of 90 days to the extent possible to alert users in advance. Alternate routes and detours will not involve site clearing.

Coordination will also include the PA Bureau of State Parks for any construction activity within the state parkland property. Written approval will be obtained from the Bureau of State Parks.

Temporary crossings over the Delaware Canal will be coordinated with the PA DCNR. The crossing, if any, will be installed in a manner not to impede water flow and be able to withstand flood water flows. All temporary crossings will be removed when construction is complete and the disturbed areas restored.

Disturbed Delaware Canal property will be restored to the original condition. The planting plan will consist of native plant materials. Plant materials will be certified weed free. Restoration plans will be submitted to the PA DCNR for review and approval. A tree removal plan within the Delaware Canal property will be submitted to the PA DCNR for review and approval.

The proposed pedestrian/bicycle facility across the Delaware River will connect to the canal towpath. This transition area will require minor grading adjustments. The design of the transition area will be reviewed and coordinated with PA DCNR and PA Bureau of State Parks. This construction activity will be minor. The towpath will remain accessible during this activity.

**Delaware and Raritan Canal** – activity in the area of the canal will consist of: the construction of the I-95 mainline bridge over the canal; building the northbound and southbound I-95 ramp structures over the canal; and improvements to the existing NJ Route 29 bypass. These structures will span over the canal towpath and channel. The piers and abutments will not be located on the canal towpath nor in the channel. Temporary occupation of the canal towpath area may be necessary for the pouring and curing of the concrete foundations for the piers prior to backfilling for a period of up to 30 days along with construction activity required for improving the existing NJ Route 29 bypass. However, during these activities, the towpath will be open and available for Canal users under maintenance of protection of pedestrian traffic.

For safety reasons during construction, there will be the need to temporarily close the towpaths during the placement of the bridge girders. These will be short duration closures, which could be scheduled at night, when towpath usage is minimal. In event that the temporary short-term closures cannot occur during the night, a Canal towpath user detour plan will be implemented.

Temporary crossings over the Delaware and Raritan Canal will be coordinated with the Delaware and Raritan Canal Commission. The crossing, if any, will be installed in a manner not to impede water flow and be able to withstand flood water flows. All temporary crossings will be removed when construction is complete and the disturbed areas restored.

Disturbed Delaware and Raritan Canal property will be restored to the original condition. The planting plan will consist of native plant materials. Plant materials will be certified weed free. Restoration plans will be submitted to the Delaware and Raritan Canal Commission for review and approval.

The proposed pedestrian/bicycle facility across the Delaware River will connect to the canal towpath. This transition area will require minor grading adjustments and will include the construction of a retaining wall. The design for the transition area will be reviewed and coordinated with the Delaware and Raritan Canal Commission. The towpath will remain open during this activity.

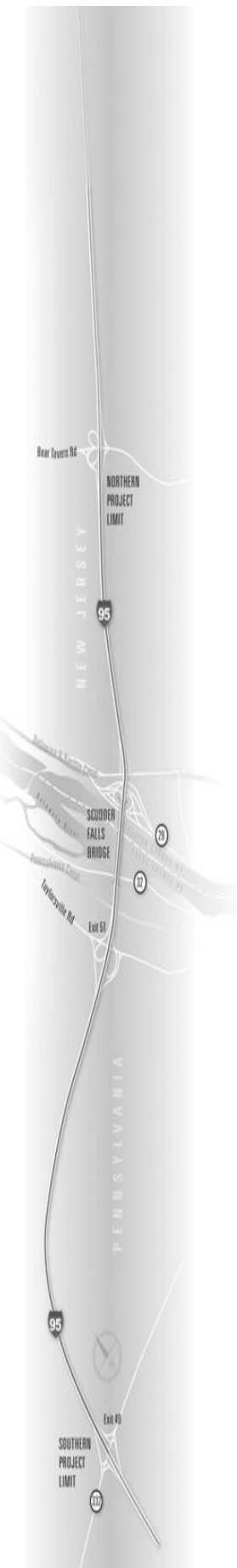
See Section E Measures to Minimize Harm to the Section 4(f) Resources for detail descriptions on minimization and mitigation measures.

### Temporary Occupancy of Land Finding

The Temporary Construction Easements for the Delaware Canal and the Delaware and Raritan Canal areas do not constitute a “use” under Section 4(f) because:

- The temporary occupation of the canal areas will be less than the overall project construction duration. The project construction duration will be approximately 4 years. The construction work in the area of the canals will be less than 4 years.

- The project will not result in change of ownership of the Delaware Canal.
- The project will not result in changes to the features of the canals. As compared to the magnitude and the scope of the project, the placement of the structural girders, piers, and abutments in canal areas but, outside the Section 4(f) boundary are not considered significant construction activity.
- There are no permanent, adverse physical impacts anticipated as a result of the project. There will be no permanent interference with the activities, features, or attributes of the Delaware Canal and the Delaware and Raritan Canal. For safety reasons during construction, there will be the need to temporarily close the towpaths during the placement of the I-95 bridge girders. These will be short duration closures for which night closures will be considered. A Canal towpath user detour plan for any temporary closures will be developed and implemented in cooperation with the PADCNR, PA Bureau of State Parks, and NJDEP.
- All areas of the canals that are occupied for temporary construction activity will be restored to a condition equal to or better than that which existed prior to the project.
- Coordination was conducted with officials having jurisdiction over the Delaware Canal and the Delaware and Raritan Canal (See Appendix C). Coordination was conducted with the Pennsylvania Historical and Museum Commission, the Pennsylvania Department of Conservation and Natural Resources, the NJ State Historic Preservation Office, and the Delaware and Raritan Canal Commission. The Pennsylvania Historical and Museum Commission concurred that the project will result in No Adverse Effect on the Delaware Canal. The NJ State Historic Preservation Office concurred with the Adverse Effect finding for the Delaware and Raritan Canal due to the construction of a new replacement bridge that is wider than the existing and the 2 new structures for the I-95 northbound and southbound ramps. Mitigations measures described in Section VI. D of this document will be implemented as part of the project. Coordination with the officials having jurisdiction will continue during final design and construction.





I-95, Scudder Falls  
Bridge Improvement Project

**Legend**

Standard Lane Additions  
on Upstream Alignment  
Improvements

Section 4(f) Resources

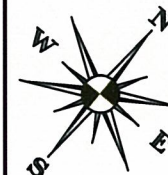
Afton Elementary School  
Ballfields

PA Route 332 Interchange

Limit of Work

Figure VI-1A  
Standard Lane Additions  
on Upstream Alignment

400' 0 400'  
1" = 400'





*I-95, Scudder Falls  
Bridge Improvement Project*

**Legend**

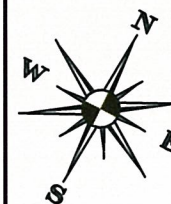
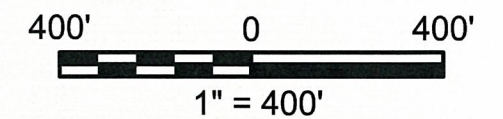
Standard Lane Additions  
on Upstream Alignment  
Improvements



Section 4(f) Resources



**Figure VI-1B**  
Standard Lane Additions  
on Upstream Alignment





*I-95, Scudder Falls  
Bridge Improvement Project*

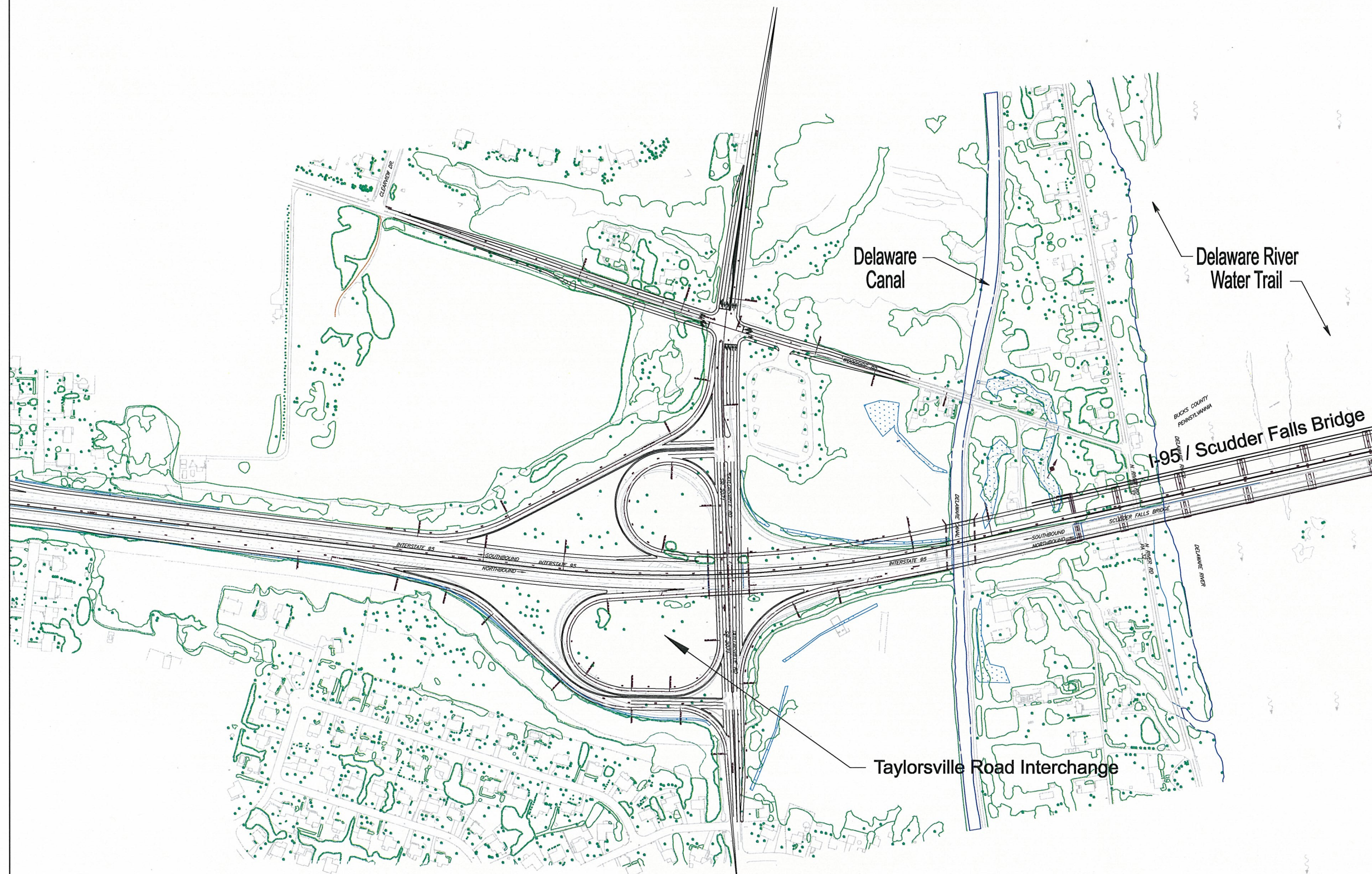
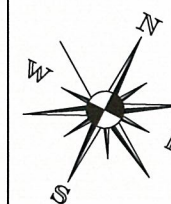
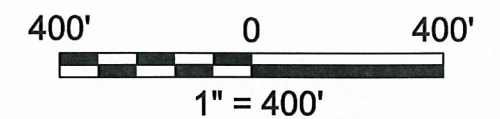
**Legend**

Standard Lane Additions  
on Upstream Alignment  
Improvements



Section 4(f) Resources

**Figure VI-1C**  
Standard Lane Additions  
on Upstream Alignment





I-95, Scudder Falls  
Bridge Improvement Project

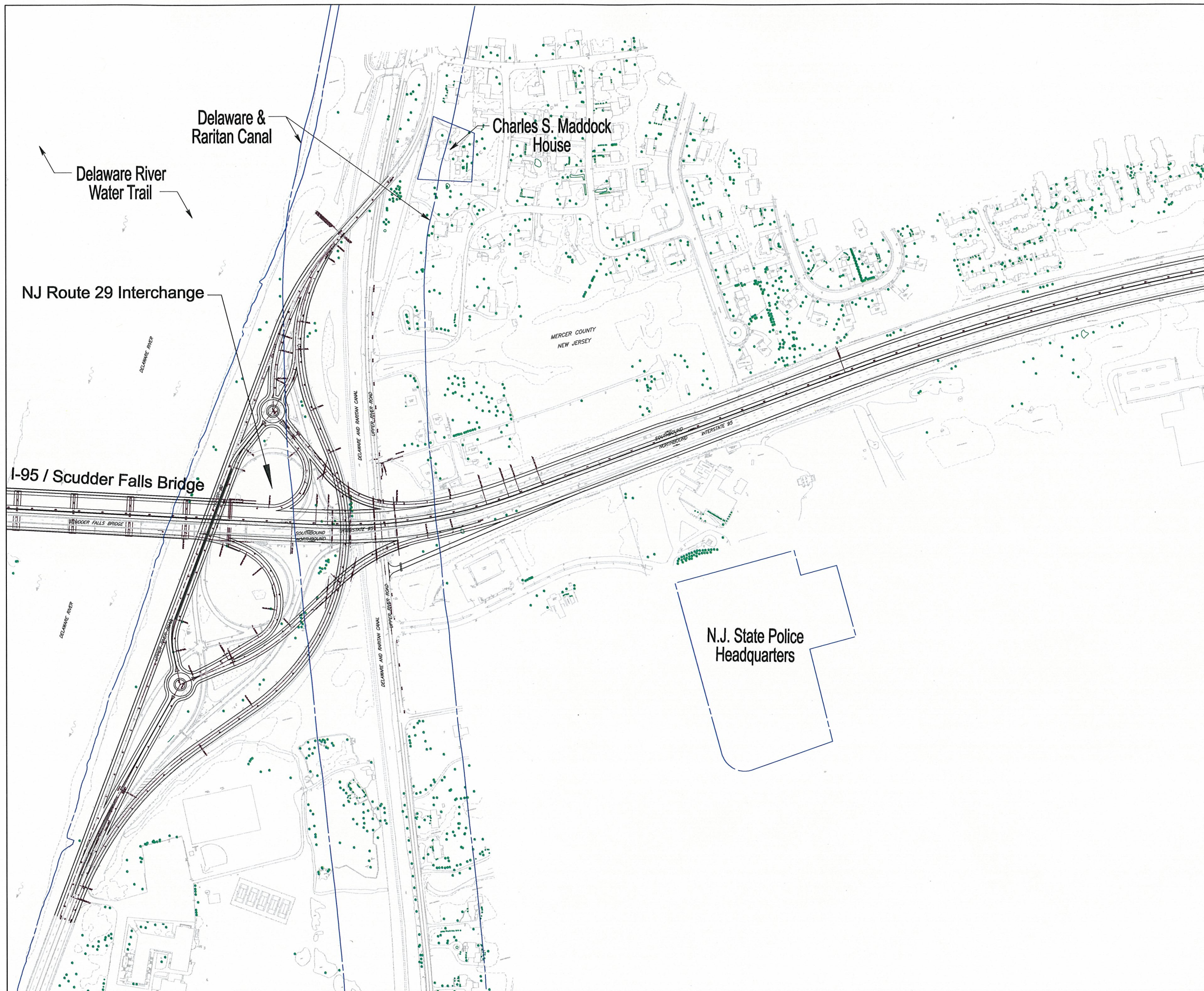
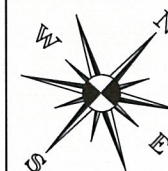
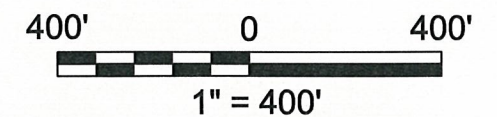
**Legend**

Standard Lane Additions  
on Upstream Alignment  
Improvements



Section 4(f) Resources

**Figure VI-1D**  
Standard Lane Additions  
on Upstream Alignment





Legend

Standard Lane Additions  
on Upstream Alignment  
Improvements

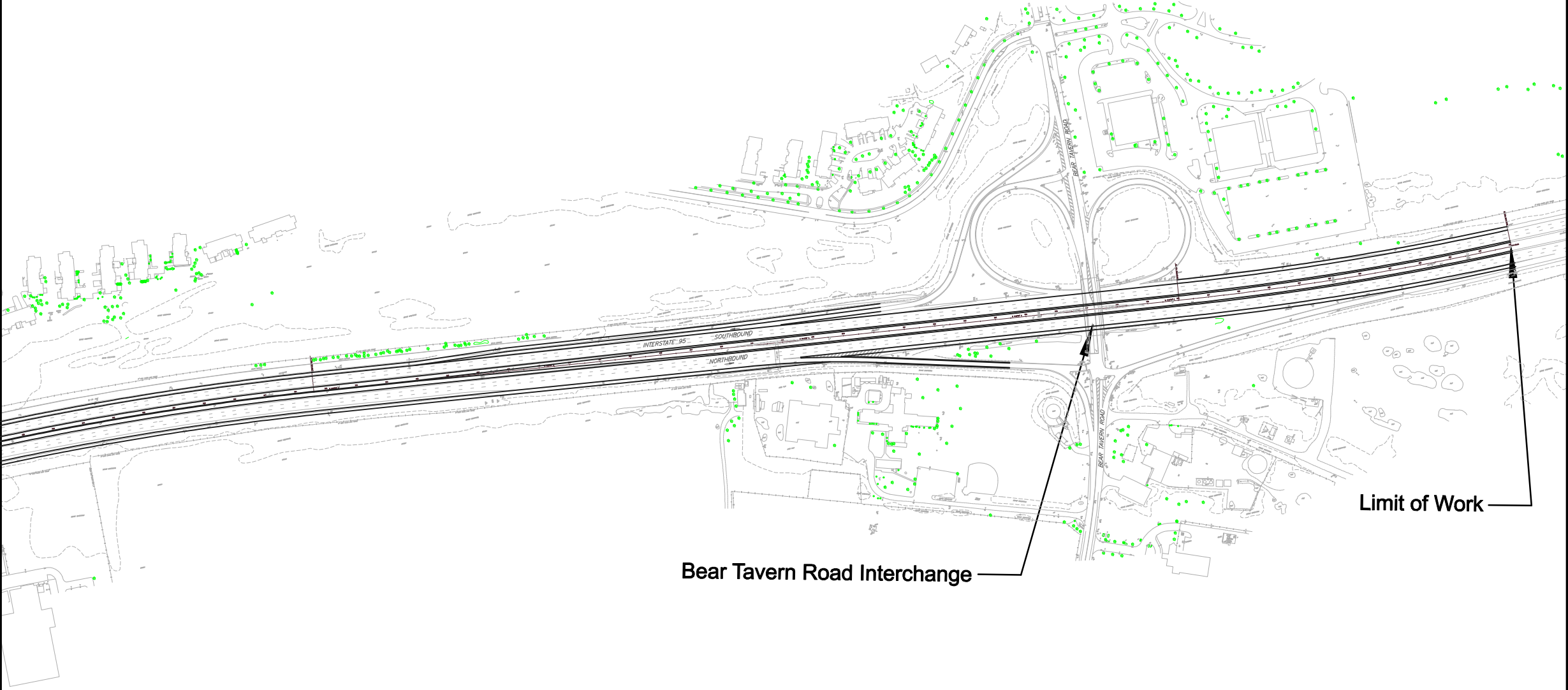
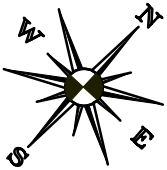
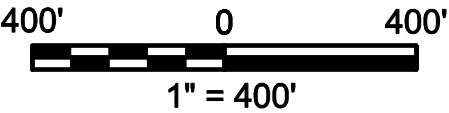


Figure VI-1E  
Standard Lane Additions  
on Upstream Alignment

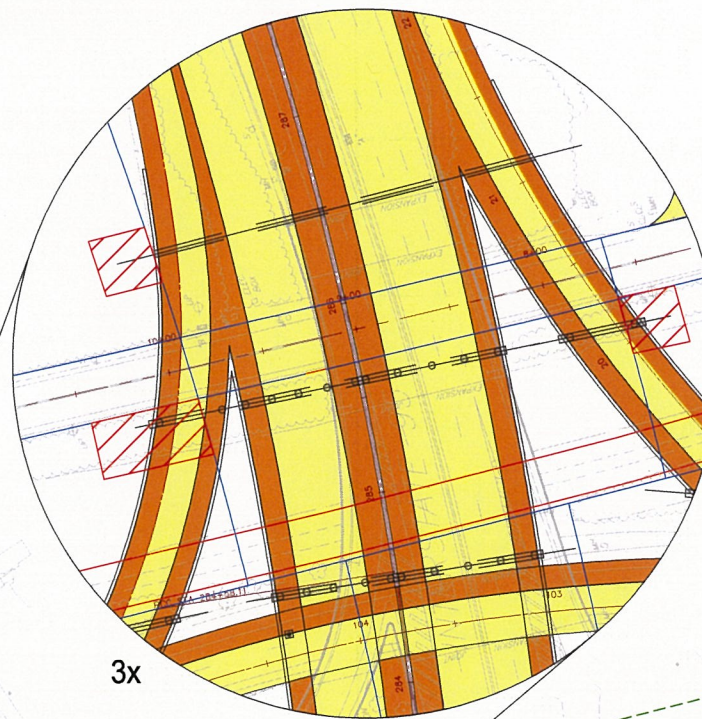




# I-95, Scudder Falls Bridge Improvement Project

## Legend

- Roadway
- Shoulder
- Pier (I-95 Southbound Off-Ramp)
- Delaware & Raritan Canal Historic (Section 4(f)) Boundary
- Section 4(f) Use
- Legal Right-of-Way



3x

Delaware & Raritan Canal Historic Boundary

Upper River

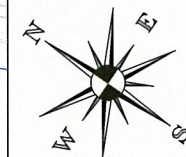
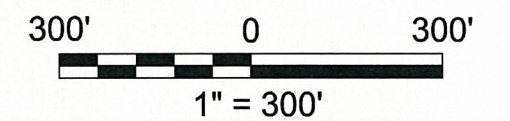
Road

Existing Piers  
To Be Removed

Delaware

River

Figure VI-2  
Delaware & Raritan Canal  
Potential Section 4(f) Use





## D. Assessment of Least Harm

The four Design Options considered for the NJ 29 Interchange all result in a similar Section 4(f) use on the Delaware and Raritan Canal. The NJ 29 Interchange Design Options 1a, 1b, and 1c would each result in Section 4(f) use of approximately 0.10 acres. Under Design Option 2 the Section 4(f) use would be approximately 0.05 acres. The assessment of least harm was evaluated for the Section 4(f) use on the Delaware and Raritan Canal as a result of the NJ 29 Interchange improvements.

In addition, this section describes the de minimis use on Delaware River Water Trail as a result of the temporary occupancy during construction.

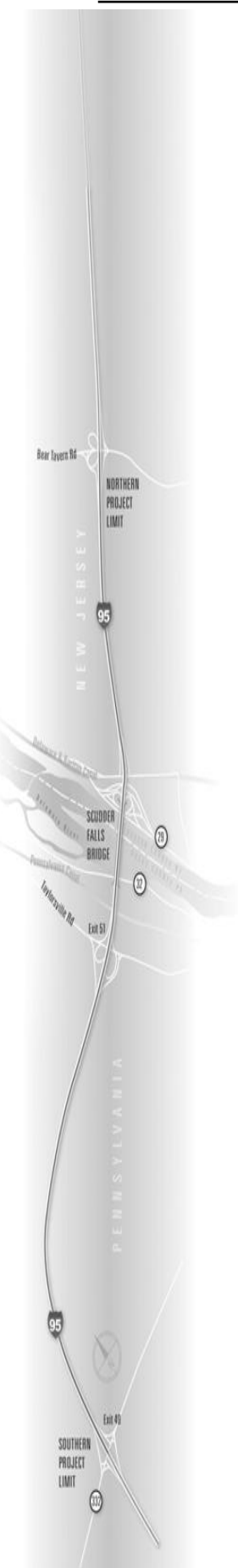
### *Delaware and Raritan Canal*

The four Design Options considered for the NJ 29 Interchange are:

- Design Option 1a – Folded diamond interchange that realigns NJ Route 29 to the southbound NJ 29 travel lanes (west side) with signalized intersections and eliminates the existing bypass around the interchange.
- Design Option 1b – Folded diamond interchange that realigns NJ Route 29 to the southbound NJ Route 29 travel lanes (west side) with signalized intersections and retains the bypass around the interchange (east side) for northbound traffic.
- Design Option 1c – Folded diamond interchange with two roundabouts for traffic traveling between NJ 29 and I-95, and bypasses for NJ 29 through traffic. Design Option 1c was proposed by NJDOT for consideration. It is a variation of Design Option 1b replacing signalized intersections with roundabouts at the I-95 ramp termini. As the design for this option was further developed and evaluated in consultation with NJDOT, refinements were made and the resultant option is called Design Option 1c Modified.
- Design Option 2 – Folded diamond interchange that realigns the southbound NJ Route 29 travel lanes to the northbound NJ Route 29 travel lanes (east side) with one signalized intersection and one unsignalized intersection.

All four Design Options would result in a Section 4(f) use on the Delaware and Raritan Canal. The wider spans over the canal would require longer abutments and the piers for the ramps. The foundations for the abutments and piers would be partially located outside the legal right-of-way. This would be the legal right-of-way area of I-95 as it crosses over the Canal. The Section 4(f) use would apply to the pier and the abutment foundations located outside the legal right-of-way but within the historic boundary. The Section 4(f) use would not result in an impairment of activities, features, and attributes of the Delaware and Raritan Canal.

Option 2 results in less Section 4(f) use than the other Options due to having the ramps crossing the Delaware and Raritan Canal more consolidated with I-95 mainline, spanning less area of the Canal, whereas Options 1a, 1b, and 1c configuration require the southbound and northbound ramps on separate structures from the mainline.



The assessment of least overall harm considered factors such as engineering, natural resource and property impacts, views of the officials having jurisdiction, and mitigation measures.

**Engineering Considerations** – Where practicable and feasible, a desirable interchange configuration would allow for free traffic flow with no to minimum traffic control devices. This condition would reduce traffic stops from an overall traffic operational and safety perspective. Options 1a, 1b, and 2 would require traffic signals, which were viewed as undesirable by NJDOT from traffic operations and safety perspectives when compared to Option 1c which requires no traffic control devices. In addition, NJDOT preference is to implement roundabout intersections where appropriate and feasible.

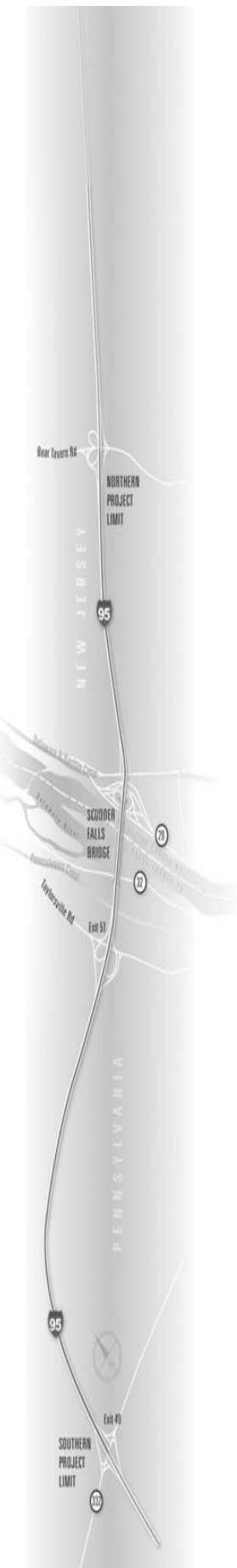
**Environmental Considerations** - Design Option 2 would involve greater property and environmental impacts than Design Options 1a, 1b, and 1c. Impacts to natural resources and property associated with Design Options 1a, 1b, and 1c are generally comparable. None of the design options would result in property displacements. Design Option 2 would involve the greatest impact at the edges of the Villa Victoria Academy property, a private school, with the limit of disturbance affecting 0.75 acres adjacent to a recreation field (Villa Victoria Academy private recreation field).

Design Option 2 would also involve greater impacts to natural resources, affecting 0.90 acres at six wetland areas. Design Options 1a, 1b, and 1c each would affect a total area of between 0.77 and 0.78 acre in size at five wetland areas. Design Option 2 would also affect approximately 340 linear feet and 3,400 square feet of Reeder's Creek and would involve the largest alteration of 100-year floodplain. Design Option 2 would affect a total of 8.53 acres of 100-year floodplain, compared to 7.78 acres alteration under Design Option 1a and 7.19 acres of alteration under both Design Options 1b and 1c.

**Views from the Officials Having Jurisdiction** - The retention of the northbound bypass road or widening of this bypass road to accommodate one or both directions of NJ Route 29 traffic is viewed by the environmental resource and regulatory agencies as an unfavorable feature of Design Options 1b, 1c, and 2, due to its adjacency to the Delaware and Raritan Canal. Under Option 2 all NJ Route 29 the existing NJ Route 29 roadway would be removed and the bypass would become NJ Route 29 mainline and would be widened to 4 lanes (2 lanes each direction) adjacent to the Delaware and Raritan Canal. Option 2 places all of the NJ Route 29 through traffic next to the Delaware and Raritan Canal which from the view of the officials having jurisdiction is not a preferred option. Whereas Options 1b and 1c would retain the 2 lane bypass but retain the NJ Route 29 mainline. In a comparison of the four Interchange configurations, Option 2 would be less favorable with having all NJ Route 29 traffic adjacent to the Canal. (Appendix C Agency Coordination, Delaware and Raritan Canal Agency field view May 24, 2005).

In addition, comments were received to consider the importance of natural lighting since long spans may have the potential to obstruct natural lighting. Under Option 2 there would be less spacing between the ramps and the mainline, which has the potential to create greater obstruction of light on the Canal and towpath below.

Based on the assessment NJ Route 29 interchange configurations, Option 1c has the least overall harm.



Further review was conducted under the assessment of overall least harm for NJ Route 29 Option 1c to determine if design modifications are feasible to reduce the Section 4(f) use.

Design modifications that would result in minimizing the Section 4(f) use on the Delaware and Raritan Canal are extremely limited due to the type of the existing facility, location, and the proposed improvement. The area of the proposed improvement for I-95 southbound and northbound access to NJ Route 29 is currently on structure and crosses over the Delaware and Raritan Canal, primarily due to the elevation differences of I-95 and the Delaware River. The proposed action includes keeping the I-95 southbound access to NJ Route 29 on structure. As shown on previous figures, the Delaware and Raritan Canal has linear historical/park boundaries for which any location to provide access to NJ Route 29 from I-95 southbound and northbound would require crossing over the Delaware and Raritan Canal; therefore, there are no options to shift the roadway. The Delaware and Raritan Canal historic and park boundary is 300 feet in width from the centerline of the canal. There is extensive existing legal right-of-way for I-95 and NJ Route 29 interchange. The majority of the project improvements, including I-95 and NJ Route 29 interchange area, would occur within the legal right-of-way.

The following section describes potential Design Options identified and evaluated for an assessment of either avoiding and/or minimizing the Section 4(f) use on the Delaware and Raritan Canal:

### ***Eliminate the Piers and Totally Span the Canal***

This Design Option would involve eliminating the I-95 southbound ramp Pier #1 and the northbound ramp Pier #2 (both are located adjacent to Upper River Road); thereby, the I-95 southbound and northbound ramps would be a single span at their respective locations. This would require spanning over Upper River Road and the Delaware and Raritan Canal. This would result in no piers located outside the legal right-of-way and would be an avoidance of the Section 4(f) use on the Delaware and Raritan Canal. However, this would require curved girder spans of over 200 feet for both the southbound and northbound ramp areas. The girder beam depth would encroach on the required vertical clearance for Upper River Road and possibly NJ Route 29. This Design Option does not meet project purpose and needs with regard to addressing design criteria. Accordingly, an elimination of I-95 southbound ramp Pier #1 and northbound ramp Pier #2 would not be a prudent and feasible alternative.

### ***Reduce Pier Width***

I-95 southbound ramp Pier #1 is approximately 42 feet in length, with about 30 feet of this length located outside the Legal Right-of-Way. The I-95 northbound ramp Pier #2 is approximately 45 feet in length, with about 10 feet located outside the legal right-of-way. Interchange geometry and traffic operations determine the ramp locations along with meeting the required current design criteria. Ramp width is determined by current design criteria and traffic capacity. The typical section for the ramp according to current design requires that the ramp have a 12-foot travel lane with 4-foot inside shoulder and 8-foot outside shoulder. This ramp width and horizontal and vertical geometry establishes the required pier width. This width is required to provide sufficient horizontal sight distance and provide adequate pullover



areas for emergencies. A reduction of the ramp typical section does not meet the project purpose and need to improve traffic operations, capacity, and safety. Accordingly, a reduction in the pier width would not be a prudent and feasible alternative.

### **Delaware River Water Trail**

The I-95 Scudder Falls Bridge Improvement Project will require temporary occupancy of the Delaware River Water Trail during construction. Construction will involve the placement of the new bridge upstream but adjacent to the existing bridge and the demolition of the existing bridge. There are 7 existing piers in the river while the new bridge will have 5 piers located in the river. The construction of the new bridge and the demolition of the existing piers within the Delaware River will occur within cofferdams to allow pier and foundation construction to occur in the dry. The river access will be provided by the use of a trestle causeway.

The project will require two primary phases with a total construction time duration of approximately 4 years. The first construction phase would construct the upstream, or northern, side of the bridge. The second phase of bridge construction would demolish the existing bridge and construct the downstream, or southern side of the bridge. Construction access to the Delaware River will be from publicly owned lands (Non-Section 4(f) property) and roadway right-of-way. No right-of-way acquisition will be required for construction access.

The temporary occupancy of the Delaware River Water Trail during construction will constitute a Section 4(f) use since the duration of the occupancy will involve the entire 4 year construction time frame of the project. The Section 4(f) *De minimis Use* is applicable.

It is anticipated that construction access within the Delaware River will be done in four stages (two stages for each primary construction phase) of the temporary causeways. A trestle type causeway would be used during construction. The causeway limit for each stage will be approximately 400 to 600 feet in length from the river shoreline. Construction of a temporary causeway would involve construction of short spans of approximately 25 feet with pile bents (row of piles connected by pile caps at the top to support a load) and progressive construction from the shoreline. The trestle causeway is, in effect a narrow temporary bridge. The trestle would be constructed in 4 stages. Approximately 22 to 36 pile bents would be required for each causeway stage. Each pile bent would be driven into the river bottom, and would disturb approximately 10 square feet of river bottom. The 22 to 36 pile bents for each causeway stage correspond to approximately 210 to 300 square feet of river bottom disturbance at any one time. Conceptual plan views and elevations of the temporary trestle causeway are shown in the Environmental Assessment Section III. E. Construction.

During the removal of each trestle causeway stage, the bents would be removed to a depth of 3 feet, and the river bottom restored to its pre-construction condition.

Demolition of the existing bridge will be accomplished from the trestle causeway. Shielding and other common methods will be used to protect the workers and prevent debris from falling into the river.

Public use of the Delaware River Water Trail will be maintained during construction with some restrictions. For safety reasons during construction, there will be the need to temporarily close the Delaware River in the project area to river traffic during demolition activity and during the placement of the bridge girders, and deck construction. These activities are anticipated to be short duration closures with some of the work occurring during off-peak hours when public use of the river is minimal. The project will involve further coordination with the PAFBC, NJDEP, and the Delaware River Greenway Partnership on project actions regarding the public recreational activities on the Delaware River Water Trail. In addition to the PADEP Chapter 105 and USACE Section 404 permits, the project will require the PAFBC "Permit to Install Floating Structures and Private Aids to Navigation".

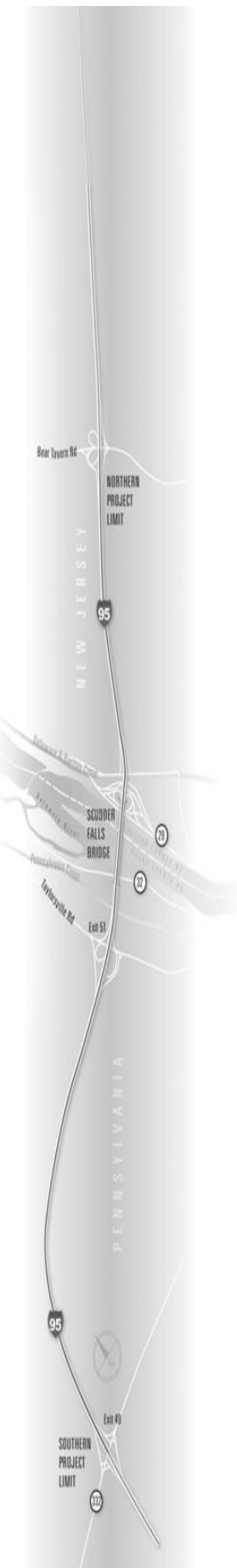
The I-95 Scudder Falls Bridge Improvement project meets the criteria for a de minimis use of the Delaware River Water Trail:

- The temporary occupancy use of the Delaware River Water Trail will not adversely affect river activities, features, and other attributes that qualify the resource for protection under Section 4(f);
- Coordination with the public was conducted during the development of the project and will continue during final design and construction. The public meetings afforded opportunity for public comment. The EA and Draft Section 4(f) Evaluation document was circulated for comment and a public hearing was held; and
- Coordination with the officials with jurisdiction over the Delaware River Water Trail was conducted regarding the use of the Delaware River Water Trail. The officials with jurisdiction received a copy of the EA and Draft Section 4(f) Evaluation document for review and comment.

The project will include measures to minimize harm to the Delaware River Water Trail. The project will require permits from PADEP, NJDEP, USACE, and PAFBC. These permits will specify standard and special conditions during construction to minimize harm to the river.

The PAFBC and the NJDEP are the officials having jurisdiction over the Delaware River Trail. The Draft Section 4(f) Evaluation was circulated to the PAFBC and NJDEP for review and comment. Review comments specific to the Delaware River recreation are provided in letters from the PAFBC and NJDEP, respectively dated February 3, 2010 and February 4, 2010 (Appendix C, Agency Coordination-Officials Having Jurisdiction) include acknowledgment that the construction plan is to affect only half of the Delaware River at one time during construction and that the documents provided includes adequate descriptions that aids to navigation and public notifications will be implemented along with continued coordination during final design and construction.

In accordance with the requirements for the de minimis use impact finding, coordination was conducted with the PAFBC and the NJDEP to obtain input and concurrence that the project would not adversely affect the activities, features, and attributes of the Delaware River Water Trail. The PAFBC and the NJDEP in their response (Appendix C) concurred with de minimis use impact finding.





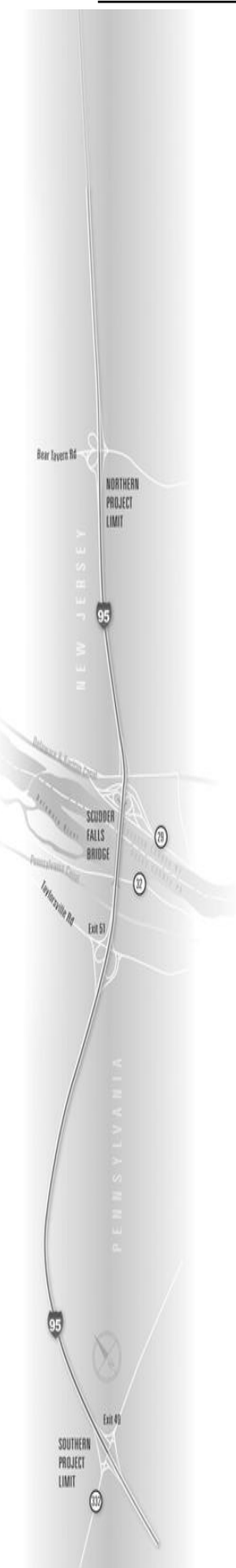
A Programmatic Agreement (Appendix B) was prepared and executed to stipulate the mitigation measures to be undertaken for the Delaware and Raritan Canal and Delaware Canal. The Programmatic Agreement describes the requirements and process to address further archaeological investigations. The following are measures to minimize harm to the Delaware and Raritan Canal, the Delaware Canal, and the Delaware River Water Trail:

- To minimize visual impacts to the Delaware and Raritan Canal, the DRJTBC will design the piers of the I-95/Scudder Falls Bridge and NJ Route 29 interchange bridges to be the smallest size allowed by engineering design. The piers will be treated with an aesthetic finish to be agreed upon in coordination with the NJSHPO and consulting parties during the final design phase of the Project. Test panels will be constructed by the contractor for review and approval by representatives of the NJSHPO, D&RCC, and Delaware and Raritan State Park.
- To preserve openness along the Delaware and Raritan Canal under the bridges, the DRJTBC will use pier configurations that will accommodate concerns of openness and are consistent with FHWA and NJDOT design standards.
- To minimize impacts to the earthen embankment adjacent to the Delaware and Raritan Canal along Upper River Road beneath the proposed I-95/Scudder Falls Bridge, the DRJTBC will design the Project to consider methods to reduce erosion of the embankment.
- To minimize runoff of water into the Delaware and Raritan Canal, the DRJTBC will design the drainage system for the new roadways to divert water flow away from the canal prism to the maximum extent possible.
- To minimize effects on the Delaware and Raritan Canal, the proposed action will eliminate public use of the existing ramp from River Road (NJ Route 175) to I-95 northbound. The ramp will be gated for use by the NJ State Police.
- The project will involve coordination with the NJDEP, PA Department of Conservation and Natural Resources (PA DCNR), PA Bureau of State Parks, and the Delaware Canal Park Management office during final design and construction to review any proposed detours, maintenance and protection of Canal user traffic, signage, and notifications. Notifications will be provided at a minimum of 90 days to the extent possible to alert users in advance. Alternate routes and detours will not involve site clearing.
- To avoid project-related construction damage, the DRJTBC, in consultation with FHWA, the PASHPO, the NJSHPO, the D&RCC, the Delaware Canal State Park and the Delaware and Raritan Canal State Park, will develop a construction protection plan for work along the Delaware Canal in Pennsylvania and the Delaware and Raritan Canal in New Jersey. The plan will set forth specific measures that will protect the canal prisms, towpaths, and any related features during the construction period. The construction protection plan will include measures to protect the dry-laid stone wall along the eastern side of the

Delaware Canal prism and towpath, immediately north of the existing I-95/Scudder Falls Bridge. The protection plan will provide measures for minimizing direct impacts to the canal prisms and towpaths during the removal of the piers of the existing I-95/Scudder Falls Bridge. In addition, to the extent possible, the plan will indicate that construction areas will be located outside the canal prism and towpath features and will be separated for the safety of towpath users.

### **Delaware Canal**

- Consultation relative to the design elements, the DRJTBC will consult with the NJSHPO, PASHPO, D&RCC, Delaware Canal State Park, and the Delaware and Raritan Canal State Park concerning the design of the bridge, noise walls, and pedestrian/bicycle facility along the Delaware Canal and the Delaware and Raritan Canal.
- To avoid project-related construction damage, the DRJTBC, in consultation with FHWA, the PASHPO, the NJSHPO, the D&RCC, the Delaware Canal State Park and the Delaware and Raritan Canal State Park, will develop a construction protection plan for work along the Delaware Canal and the Delaware and Raritan Canal. The plan will set forth specific measures that will protect the canal prisms, towpaths, and any related features during construction. The construction protection plan will include measures to protect the dry-laid stone wall along the eastern side of the Delaware Canal prism and towpath, immediately north of the existing I-95/Scudder Falls Bridge. The protection plan will provide measures for minimizing direct impacts to the canal prisms and towpaths during the removal of the piers of the existing I-95/Scudder Falls Bridge. In addition, to the extent possible, the plan will indicate that construction areas will be located outside the canal prism and towpath features and will be separated for the safety of towpath users.
- The project will involve coordination with the PA Department of Conservation and Natural Resources (PADCNR), PA Bureau of State Parks, the Delaware Canal Park Management office and the NJDEP during final design and construction to review any proposed detours, maintenance and protection of Canal user traffic, signage, and notifications. Notifications will be provided at a minimum of 90 days to the extent possible to alert users in advance. Alternate routes and detours will not involve site clearing.
- Coordination will also include the PA Bureau of State Parks for any construction activity within the state parkland property. Written approval will be obtained from the Bureau of State Parks.
- Temporary crossings over the Delaware Canal will be coordinated with the PA DCNR. The crossing, if any, will be installed in a manner not to impede water flow and be able to withstand flood water flows. All temporary crossings will be removed when construction is complete and the disturbed areas restored. A restoration plan will be submitted for review and approval by PADCNR.
- Disturbed Delaware Canal property will be restored to the original condition. The planting plan will consist of native plant materials. Plant materials will be certified weed free. Restoration plans will be prepared and submitted to the PA



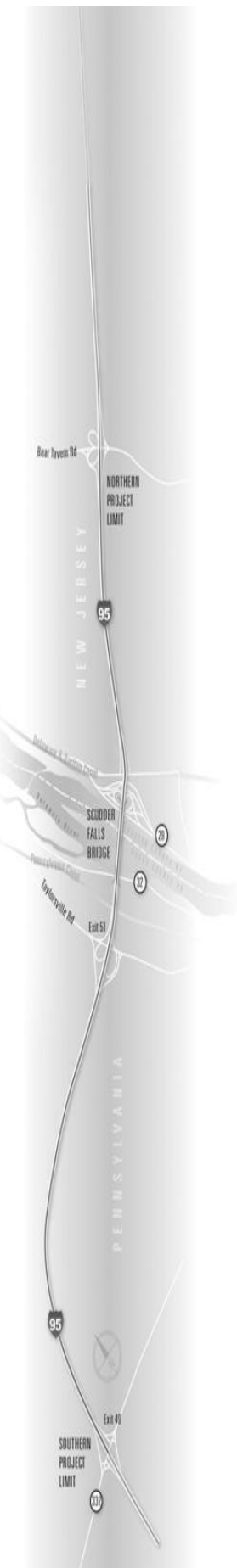


DCNR for review and approval. A tree removal plan within the Delaware Canal property will be submitted to the PADCNR for review and approval.

- The proposed pedestrian/bicycle facility across the Delaware River will connect to the canal towpath. This transition area will require minor grading adjustments. The design of the transition area will be reviewed and coordinated with PA DCNR and PA Bureau of State Parks. This construction activity will be minor. The towpath will remain accessible during this activity.

### ***Delaware River Water Trail***

- The proposed project has been designed to minimize the number of piers in the Delaware River. This will reduce the number of bridge structural features thereby providing more river trail open space.
- Construction staging will be implemented to affect only half the width of the river at any one time to allow for fish passage and boating along with other associated recreation activity.
- Public use of the Delaware River Water Trail will be maintained during construction with some restrictions. For safety reasons during construction, there will be the need to temporarily close the Delaware River in the project area to river traffic during demolition activity and during the placement of the bridge girders, and deck construction. These activities are anticipated to be short duration closures with some of the work occurring during off-peak hours when public use of the river is minimal. The project will involve further coordination with the PAFBC, NJDEP, and the Delaware River Greenway Partnership on project actions, plans, and notifications regarding public recreational activities on the Delaware River Water Trail. In addition to the PADEP and NJDEP Waterway and USACE Section 404 permits, the project will require the PAFBC "Permit to Install Floating Structures and Private Aids to Navigation".
- Erosion and sedimentation plan will be implemented and maintained during construction to avoid and minimize soil erosion and sediment concerns during construction. The National Pollutant Discharge Elimination System Post-Construction Stormwater Management Plan will be prepared during final design and submitted to the PADEP and NJDEP for approvals. Best Management Practices will be developed and implemented during and after construction. In addition, a Spill Prevention Control and Countermeasure Plan will be developed to prevent spills from entering the river during and after construction.
- Major turbidity problems are not expected because the river bed in the project area consists of clean coarse and granular type material. However, construction specifications will include turbidity barriers to mitigate this potential concern. Prior to the placement of the causeway and cofferdams, turbidity screens will be installed to contain siltation. These will be maintained until the causeway and cofferdams are in place, at which time they will be removed.
- Individual pier construction and the removal of the existing piers will be accessed from the trestle causeway, but all dewatering will occur within the localized cofferdams. Groundwater that may seep into the causeways will be



dewatered through pumps and hoses. The hoses will outlet into sediment filter bags and traps before reentering the river environment.

## VII. SECTION 4(f) COORDINATION

Coordination was conducted in compliance with Section 4(f) of the United States Department of Transportation Act of 1966 (49 USC 303) and Section 138 of the Federal-Aid Highway Act of 1968. As part of early agency coordination efforts for this project, numerous agencies with jurisdiction over Section 4(f) resources were contacted to identify resources and areas of concern. Early coordination letters, meetings, and field visits were conducted throughout this phase of the project. Agencies contacted included Pennsylvania and New Jersey SHPO, Pennsylvania and New Jersey Department of Environmental Protection, Pennsylvania Department of Conservation and Natural Resources, Pennsylvania Fish and Boat Commission, Delaware and Raritan Canal Commission, local government agencies, and local school officials.

Coordination regarding archaeological and historical properties began with the development of an inventory including sites listed on the National Register of Historic Places, sites previously found eligible, and sites determined eligible as part of this project. The Historic Resource Survey and Determination of Eligibility investigation was performed and coordinated with the PA and NJ SHPO. Coordination efforts also included confirmation of the historic boundaries of the Delaware Canal and Delaware and Raritan Canal. A field view and meeting was conducted with the officials having jurisdiction to present the project alternatives, discuss potential impacts, and address concerns. Coordination activity with the officials having jurisdiction will continue throughout the design and construction phases of the project. A detailed description of the project agency and public involvement program is included in the Environmental Assessment. Agency correspondence is included in Appendix C.

Meetings were held with the local officials for Lower Makefield and Ewing Townships. The purpose of these meetings was to present the project purpose and needs, alternatives and design options considered, potential impacts, obtain input, community concerns, and to gain a better understanding as to the significance and use of public recreation and park areas. Project plans, cross-sections, aerials, and other exhibit boards were utilized to facilitate the meetings and discussions. General public open meetings were also held to provide project information to the communities along with obtaining input from the residents, and identifying areas of concern. A detailed description of the project agency and public involvement program is included in the Environmental Assessment. Minutes of these meetings and related correspondence are provided in Appendix D.

The Draft Section 4(f) Evaluation was coordinated for review and comment with the officials having jurisdiction over the Section 4(f) resources including the US Department of the Interior, Pennsylvania and New Jersey SHPO, Pennsylvania and New Jersey Department of Environmental Protection, Pennsylvania Department of Conservation and Natural Resources, Pennsylvania Fish and Boat Commission, and the Delaware and Raritan Canal Commission. In addition, the Environmental Assessment/Draft Section 4(f) Evaluation documents dated October 2009 were circulated for public review and comment. On January 19 and 20, 2010, the Delaware River Joint Toll Bridge Commission held a Public Hearing, conducted in two parts: the first part on January 19 in Ewing, New Jersey; and the second part on January 20 in Langhorne, PA.

Subsequent to the distribution of the Draft Section 4(f) Evaluation to the officials having jurisdiction over the Section 4(f) resources, the Delaware River Joint Toll Bridge Commission





by Resolution of December 21, 2009 determined that the replacement I-95/Scudder Falls Bridge will be tolled in order to fund the needed improvements. A letter (Appendix C) was submitted to the officials having jurisdiction notifying them that the Replacement Bridge will be tolled and that there will be no change to the physical footprint of the project as described in the Draft Section 4(f) Evaluation dated October 2009. Therefore, there will be no Section 4(f) use as a result of tolling the Bridge.

The Draft Section 4(f) Evaluation document review comments were received from the officials having jurisdiction including the PA Department of Conservation and Natural Resources, PA Fish and Boat Commission, and the New Jersey Department of Environmental Protection-Historic Preservation Office along with the US Department of the Interior. Copies of their review comments are provided in Appendix C. The following are responses to comments received from the officials having jurisdiction:

### Department of the Interior Letter dated 5/4/2010

#### Review Comment:

The DOI concurs that there is no prudent and feasible alternative to the proposed use of Section 4(f) land. Include executed Programmatic Agreement in Final Section 4(f) document.

#### Response:

*A copy of the executed Programmatic Agreement is provided in Appendix B of this document.*

### PA DCNR Letter dated 1/29/2010

#### Review Comment:

DCNR requires that no permanent structures be built on canal property.

#### Response:

*No permanent structures will be constructed on the Delaware Canal property nor within the National Historic Landmark (NHL) boundary. The improvements will move the abutments associated with the existing overpass outside the NHL Boundary. The proposed bridge abutments will be outside the NHL, and the entire bridge structure will be located within the existing highway legal right-of-way. Aside from the removal of the existing overpass structural girders and abutments, no permanent impacts will occur to the canal prism, towpath, stone retaining wall, or other parts of the resource.*

#### Review Comment:

Temporary crossings and occupation of park land during construction require written approval. All temporary crossings should be installed to withstand flood water flows. All temporary trail closures and detours require coordination with the Delaware Canal officials. All disturbed property shall be restored.

#### Response:

*The project will involve coordination with Delaware Canal Officials during final design and construction to review any proposed detours and notifications. Written approval will be obtained from the Bureau of State Parks. Crossings, if any, will be installed in a manner not to impede water flow and be able to withstand flood water flows. All temporary crossings will be removed when construction is complete and the disturbed areas restored according to a restoration plan approved by PA DCNR.*

### Review Comment:

If the trail is blocked for construction we ask that the contractor provide, and clearly sign, a safe North/South passage for trail users. Should trail blockage occur the management of the Delaware Canal State Park shall be informed. Park Management will be given the opportunity to review any possible blockages, the anticipated duration of these blockages, and alternative route being proposed. Such notification should occur as far in advance as possible but at a minimum of 90 days, so public notification might be undertaken to alert users of these blockages, if appropriate. If the trail is blocked, and the alternate route is still on park property, Park Management must be notified. No clearing is permitted to create alternate routes. Any materials brought site must be native and certified weed free.

### Response:

*For safety reasons during construction, there will be the need to temporarily close the towpath during construction activity such as during the placement of the I-95 bridge girders. These will be short duration closures, which are expected to occur at night when the towpath usage is minimal. However, in event that construction activity may require short-term temporary (less than 30 days) closures, a Canal towpath user detour plan will be implemented. The detour plan will be submitted to PADCNR, PA Bureau of State Parks, and the Delaware Canal Park Management office review and coordination. Otherwise, full use of the towpaths will be maintained during construction.*

*The project will involve coordination with the PA Department of Conservation and Natural Resources (PA DCNR), PA Bureau of State Parks, and the Delaware Canal Park Management office during final design and construction to review any proposed detours, maintenance and protection of Canal user traffic, signage, and notifications. Notifications will be provided at a minimum of 90 days to the extent possible to alert users in advance. Alternate routes and detours will not involve site clearing.*

### Review Comment:

The Bureau of State Parks requires advance knowledge of any activities that could adversely impact current public use. Should any facilities or portion of the canal path be rendered unusable, this notification would allow us to advise the public through a number of avenues, including notification through the DCNR website, Press Release, and on-site signage.

### Response:

*The project will involve coordination with the PA Department of Conservation and Natural Resources (PA DCNR), PA Bureau of State Parks, and the Delaware Canal Park Management office during final design and construction to review any proposed detours, maintenance and protection of Canal user traffic, signage, and notifications. Notifications will be provided at a minimum of 90 days to the extent possible to alert users in advance. Alternate routes and detours will not involve site clearing.*

### Review Comment:

The Bureau requires that any disturbance of canal lands in or out of the watered prism be reclaimed to the original condition. Any reclamation must be completed with approved material and seed mixes. Should tree removal occur we will assess an aesthetic and replacement value on any trees removed or damaged.



**Response:**

*Disturbance of Delaware Canal lands will be restored to original condition. A tree removal plan for the Canal property will be submitted to the DCNR for review and approval. Restoration plans will be submitted to the DCNR for review and approval.*

**Review Comment:** This letter does not constitute approval to perform work outside the existing legal right-of-way. Any such work will require written approval from the Bureau of State Parks.

**Response:**

*Comment acknowledged. Coordination will continue through final design and construction.*

### PA Fish & Boat Commission Letter dated 2/3/2010

**Review Comment:**

The plan to affect only half width of the Delaware River at one time during construction of the causeways, the new piers, the new bridge superstructure, and during removal of the existing bridge superstructure and piers will allow fish passage and boating navigation within the unaffected half of the channel. The document includes an adequate discussion of boating safety precautions including warnings to boaters and methods to prevent debris from falling into the river during bridge construction and demolition. We agree with the document statement that there will need to be additional future coordination with the PAFBC regarding the planning and implementation of appropriate boating Aids to Navigation for the Delaware River.

In addition to the Delaware River, other Pennsylvania surface waters likely to be affected by the proposed project include the Delaware Canal, three unnamed tributaries to the Delaware Canal (one of which appears to also be a tributary to the Delaware River), an unnamed tributary to Buck Creek, and twelve roadside drainage ditches. The portion of the Delaware Canal within the project area has been correctly identified as a trout stocked fishery and a moratorium time frame for in-stream work has been indicated. Although the document indicates that during removal of the abutments for an existing bridge over the Delaware Canal, there are no in-stream activities planned, construction activities adjacent to this canal may impact the nesting habitat for the red-bellied turtle (PA listed Threatened Species). The EA includes appropriate precautions to avoid and minimize impacts to this turtle species within both the Delaware Canal and the Delaware River.

**Response:**

*Acknowledge the PAFBC statement that the EA document (and is referenced throughout the Section 4(f) Evaluation) includes adequate discussion of boating safety precautions and measures to prevent debris from falling into the waterways.*

*The Delaware Canal and Delaware River were determined to provide potential red-bellied turtle habitat. Marginal potentially suitable nesting habitat is provided along the edges of the canal, due to shading. During final design, coordination will be undertaken with the PAFBC to determine potential nesting areas. Habitat areas identified will be protected with the appropriate fencing. Acknowledge the PAFBC statements that the EA includes appropriate precautions to avoid and minimize impacts to the red-bellied turtles within the Delaware Canal and Delaware River.*



### **NJ DEP HPO Letter dated 1/11/2010 and NJ DEP Environmental Review letter dated 2/4/2010**

#### **Both letters included this review comment:**

Include a copy of the executed Programmatic Agreement in the Final Section 4(f) document.

#### **Response:**

*A copy of the executed Programmatic Agreement is included in Appendix B of this document.*

### **NJ DEP letter dated 2/4/2010, Division of Parks and Forestry**

#### **Review Comment:**

The Division of Parks and Forestry did not see a compensation plan in the EA to address the diversion of State Park land due to the increase in the size of the replacement bridge. Additionally a right of entry permit will be required from the Division for temporary access during construction.

#### **Response:**

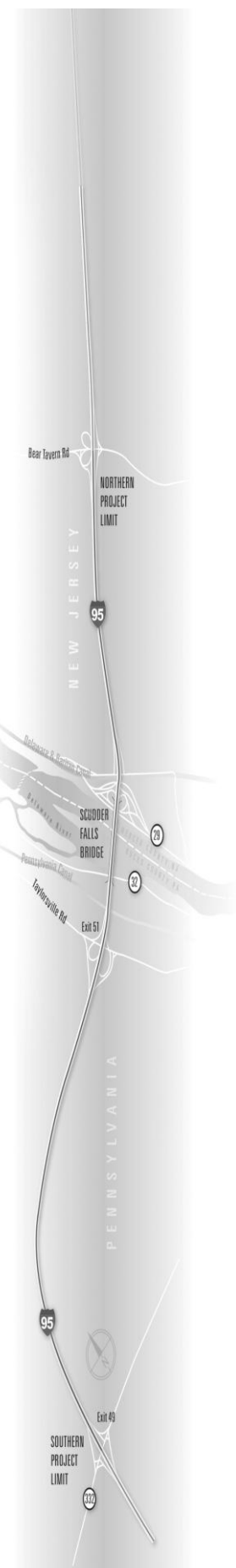
*The project will involve diversion of 0.10 acres of State Park land (Delaware and Raritan Canal) to accommodate portions of the foundations and piers for the I-95 southbound and northbound ramps. As described in the EA and this Section 4(f) document, the project will require the application process and approval from Green Acres and the Delaware and Raritan Canal Commission. The compensation plan is described the EA and provided in the Programmatic Agreement II.A.2 Interpretation and Acquisitions (Appendix B) describes that a \$2 million mitigation fund includes compensation for the acquisition of State Park property and is subject to the approval of the State House Commission.*

## **VIII. CONCLUSION**

Consideration of feasible and prudent avoidance alternatives and coordination with the officials having jurisdiction over the Section 4(f) resources was conducted.

Based on the results of this Section 4(f) Evaluation, there is no feasible and prudent alternative to the use of land from the Delaware and Raritan Canal and the proposed action includes all possible planning to minimize harm to the Section 4(f) property resulting from such use. The proposed action including mitigation represents the feasible and prudent alternative with the least harm on the Section 4(f) property.

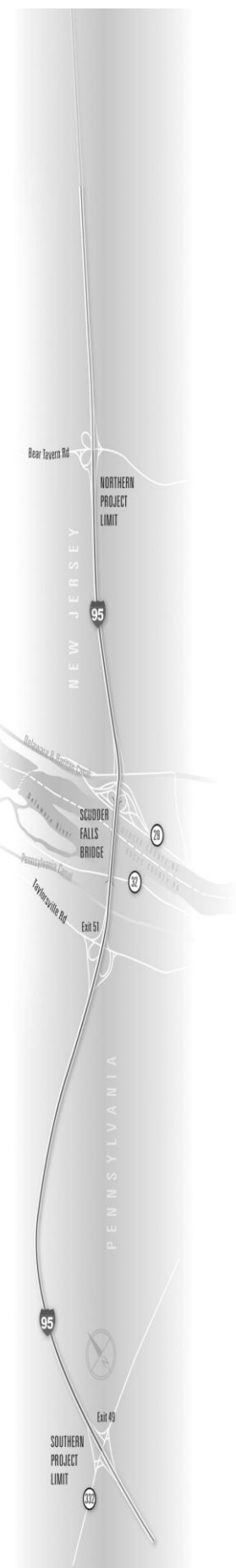
## APPENDICES





## APPENDIX A

### PROXIMITY IMPACT ASSESSMENT SUMMARY



## Proximity Impact Assessment Summary

A constructive use of a Section 4(f) property occurs: when the proximity impacts of a transportation project on a Section 4(f) resource, without acquisition of property from the Section 4(f) resources, are so great that the characteristics which qualify the resources as a Section 4(f) property are substantially impaired. Proximity impacts including traffic noise, resources features, access, drainage, and visual change were considered. For the consideration of traffic noise levels and mitigation, the FHWA, PennDOT, and the NJDOT criteria and guidelines are used. The environmental and engineering studies (i.e., Alternatives Screening Report and Traffic Noise Report) were used to assist with the Proximity Impact Assessment. The following are the results of the proximity impact assessment.

**Delaware Canal** – The project will result in a No Adverse Effect on the Delaware Canal. The visual change in the area would be due to the replacement of the existing bridge over the Delaware Canal being wider than the existing structure. The new I-95 mainline bridge will be approximately 85 to 90 feet wider at the canal crossing. The new bridge abutment walls will be placed outside the historical boundary which includes the towpath and associated retaining wall. The project will not result in right-of-way acquisition from the historical property. The proposed abutment on the east side of the resource will be located approximately 10-30 feet to the east of the historic boundary. The abutment on the west side of the resource will be located approximately 5-10 feet to the west of the historic boundary. Aside from the removal of the existing abutments, no direct impacts will occur to the canal prism, towpath, and retaining wall. The concrete surfaces of the new abutment walls will be treated with form liners to mimic stone texture to better fit the natural setting of the area.

Traffic noise analysis indicates that the existing noise level 66dBA and future noise level 69dBA exceed the Noise Abatement Criteria (NAC). It is also noted that a 3dBA increase in noise level is not perceptible. Noise abatement was considered and found not reasonable. The traffic noise levels will not impact the historic characteristics of the Delaware Canal. The recreational uses (pedestrians and bicyclists) along the Canal would not be impaired. There is an existing rock-lined drainage ditch that is owned and maintained by PennDOT. This drainage ditch outfalls in the Delaware Canal. The drainage ditch exhibits some erosion. The proposed project will include relining the drainage ditch with rocks to eliminate erosion. The proposed project will not increase roadway drainage to this ditch. The proposed project will involve the replacement of the existing bridge structure over the Delaware Canal.

The construction of the new foundations for the bridge abutment walls and the placement of the superstructure beams will require a temporary closure of the Delaware Canal towpath in this area while this activity is occurring. The duration of the activity will be less than the overall construction period for the proposed project. This work will not result in permanent physical impact on the Delaware Canal nor will this work result in changes to the historic and parkland characteristics. The proposed project will not result in permanent changes to access to the Delaware Canal.

The proposed project was coordinated and discussed with DCNR and the PA-SHPO at a field meeting on October 20, 2005 (See Appendix B). Coordination will continue with the DCNR and PA-SHPO through the design and construction phases of the project. The

results of the assessment indicate that the proposed project alternatives will not impair the use of the Delaware Canal.

**Elm Lowne Property** – Traffic noise analysis indicates that there would be no differences between the existing and future noise levels for the area. The noise level 61dBA does not approach the NAC and is not considered a noise impact. This property is adjacent to an area that does exceed the NAC, and consideration of noise abatement was determined to be feasible and reasonable. The Elm Lowne property will receive noise abatement benefit from the noise wall to be constructed along I-95. The proposed project will have No Effect on the Elm Lowne property. The area between this property and I-95 is densely vegetated and provides a visual buffer. The results of the assessment indicate that the proposed project alternatives will not impair the use of the Elm Lowne property.

**NJ State Police Headquarters** – Traffic noise analysis indicates that the area is comprised of commercial properties and reviewed as Land Use Category C, and the NAC is 72dBA, exterior. While the exterior noise levels at this area approach the NAC, there are no frequent exterior activities and the interior noise levels are expected to be below the exterior levels. Based on federal and state guidelines, no traffic noise abatement is warranted. Due to the elevation differences and vegetation, the NJ State Police Headquarters historic site does not have a view of I-95. There are no proposed roadway improvements in the vicinity of the NJ State Police Headquarters historic site. The proposed project will have No Effect on the NJ State Police Headquarters. The results of the assessment indicate that the proposed project alternatives will not impair the use of the NJ State Police Headquarters.

**Charles S. Maddock Property** – Traffic noise analysis indicates that the existing and future noise levels, 66dBA, approach the NAC. This property is located several hundred feet from I-95 along Upper River Road but near the NJ Route 29 interchange. Noise abatement will be provided along I-95 in this area. The visual setting for this area is not expected to change. The proposed project will have No Effect on the Charles S. Maddock Property. The results of the assessment indicate that the proposed project alternatives will not impair the use of the Charles S. Maddock Property.

**Afton Elementary School Ball Fields** – Traffic noise analysis indicates that the existing noise levels are around 57dBA and future is predicted at 58dBA, not warranting consideration of noise abatement. The school property ball fields are located behind a residential community that is adjacent to I-95. Consideration of noise abatement for this community was warranted and noise abatement was determined to be feasible and reasonable. The school ball fields, although not impacted by traffic noise, may receive some benefit. The visual setting will not change. There is no line of sight from the school property to I-95. There are no roadway improvements proposed adjacent to the school property. The results of the assessment indicate that the proposed project alternatives will not impair the use of the Afton Elementary School Ball Fields.

**Quarry Hill Elementary School Ball Fields** – Traffic noise analysis indicates that the existing noise levels are approximately 57dBA and future is predicted at 58dBA, not warranting consideration of noise abatement. The school property ball fields are located behind a residential community that is adjacent to I-95. Consideration of noise abatement for this community was warranted and found to be feasible and reasonable. Since the school ball fields are located approximately 1,000 feet from I-95, benefit from

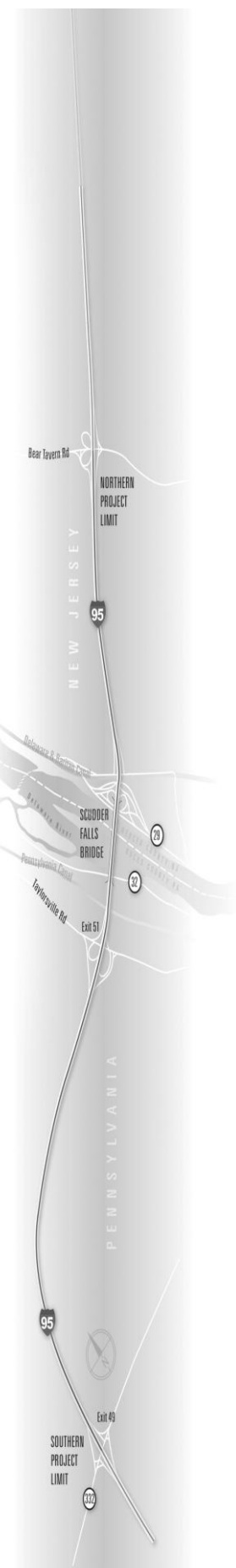


the noise barrier is not expected. The visual setting will not change. There is no line of sight from the school property to I-95. There are no roadway improvements proposed adjacent to the school property. The results of the assessment indicate that the proposed project alternatives will not impair the use of the Quarry Hill Elementary School Ball Fields.

**Snipes Tract Athletic Fields** – Traffic noise analysis indicates that the existing noise levels are approximately 60dBA and predicted levels are expected to be 63dBA. These noise levels do not approach the NAC. Noise barriers will be constructed along I-95 in this area for which the athletic fields will receive noise abatement benefit. The athletic fields are in the planning and conceptual design stage and are approved under the Lower Makefield Township Master Plan. There is a densely wooded area between I-95 and the Snipes Tract. The visual setting is not expected to change. No project improvements would impact and change drainage and access on the property. The results of the assessment indicate that the proposed project alternatives will not impair the use of the Snipes Tract Athletic Fields.

## APPENDIX B

# PROGRAMMATIC AGREEMENT



**PROGRAMMATIC AGREEMENT (PA)  
AMONG THE FEDERAL HIGHWAY ADMINISTRATION (FHWA),  
THE PENNSYLVANIA STATE HISTORIC PRESERVATION OFFICER  
(PASHPO), AND  
THE NEW JERSEY STATE HISTORIC PRESERVATION OFFICER (NJSHPO)  
PURSUANT TO 36 CFR SECTION 800.6(b)(1)  
REGARDING THE  
I-95/SCUDDER FALLS BRIDGE IMPROVEMENT PROJECT  
LOWER MAKEFIELD TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA AND  
EWING TOWNSHIP, MERCER COUNTY, NEW JERSEY**

WHEREAS, the Delaware River Joint Toll Bridge Commission (DRJTBC) is proposing to construct the I-95/Scudder Falls Bridge Improvement Project (Project) in Lower Makefield Township, Bucks County, Pennsylvania and Ewing Township, Mercer County, New Jersey, described as the Proposed Action in Chapter III, Section D of the Environmental Assessment (EA) entitled "I-95/Scudder Falls Bridge Improvement Project Environmental Assessment" and dated October 2009; and

WHEREAS, the DRJTBC is the Project sponsor and the Federal Highway Administration (FHWA) is serving as the Project lead federal agency pursuant to the National Environmental Policy Act (NEPA, codified as 42 USC 4321 *et seq.*), and is the federal agency responsible for compliance with Section 106 of the National Historic Preservation Act (codified at 16 USC § 470f, and herein "Section 106"); and

WHEREAS the FHWA and the DRJTBC have established the Project's area of potential effect (APE), as defined at 36 CFR Part 800.16(d), as shown in Figure II-4 of the EA (Attachment 1); and

WHEREAS, the FHWA and the DRJTBC, pursuant to 36 CFR Part 800.4(c), have determined in consultation with the PASHPO that the following properties in Pennsylvania are eligible for the National Register of Historic Places (NRHP): Elm Lowne, as described in the Determination of Effect Report, dated September 2008, and the archaeological site 36Bu379, as described in the Phase I Archaeology Report, dated January 2008; and

WHEREAS, the FHWA and the DRJTBC, pursuant to 36 CFR Part 800.4(c), have determined in consultation with the PASHPO that the following property in Pennsylvania is a National Historic Landmark (NHL): the Delaware Canal, as described in the Determination of Effect Report, dated September 2008; and

WHEREAS, pursuant to 36 CFR Part 800.5(a) the FHWA and the DRJTBC have determined in consultation with the PASHPO that the Project will have no adverse effect on Elm Lowne and a conditional no adverse effect on the Delaware Canal, contingent on a review of related Project plans, photographs, architectural drawings, and specifications and their conformance with the Secretary of the Interior's Standards for the Treatment of Historic Properties; and



WHEREAS, pursuant to 36 CFR Part 800.5(a), as a result of Phase I studies conducted for the project, the FHWA and the DRJTBC have determined in consultation with the PASHPO that there is an eligible site, 36Bu379, a Phase III data recovery plan will be conducted at Site 36Bu379; and

WHEREAS, pursuant to 36 CFR Part 800.5(a), the FHWA and the DRJTBC in consultation with the PASHPO have determined that archaeological survey will occur in the area of causeway construction across the southern portion of Park Island in the Delaware River to determine the presence of intact cultural resources and the NRHP eligibility of any such resources. If resources are present and are deemed potentially eligible, a Phase III data recovery plan will be implemented at this location if the resources cannot be avoided or preserved in place; and

WHEREAS, the FHWA and the DRJTBC, pursuant to 36 CFR Part 800.4(c), have determined in consultation with the NJSHPO that the following properties in New Jersey are eligible for the NRHP: the Charles S. Maddock House; and the New Jersey State Police Headquarters Historic District (NJSPHQ), as described in the Historic Structures Survey, Determination of Eligibility and Determination of Effect Report, dated September 2008; and

WHEREAS, the FHWA and the DRJTBC, pursuant to 36 CFR Part 800.4(c), have determined in consultation with the NJSHPO that archaeological site 28Me360, as described in the Phase I Archaeology Report, dated January 2008, requires further testing to assess significance of the site; and

WHEREAS, the FHWA and the DRJTBC, pursuant to 36 CFR Part 800.4(c), have determined in consultation with the NJSHPO that the following property in New Jersey was listed in the NRHP on May 11, 1973: the Delaware and Raritan Canal; and

WHEREAS, pursuant to 36 CFR Part 800.5(a) the FHWA and the DRJTBC have determined in consultation with the NJSHPO that the Project will have no adverse effect on the Charles S. Maddock House and the New Jersey State Police Headquarters Historic District (NJSPHQ); and

WHEREAS, pursuant to 36 CFR Part 800.5(a), the FHWA and the DRJTBC have determined in consultation with the NJSHPO that the Project will have an adverse effect on the Delaware and Raritan Canal; and

WHEREAS, pursuant to 36 CFR Part 800.5(a), the FHWA and the DRJTBC in consultation with the NJSHPO have determined that for areas previously inaccessible for archaeological testing that will be affected by the project, including any detention or retention basin(s) is to be located in the southern loop of the NJ Route 29 interchange with I-95, preliminary archaeological investigations will be conducted to determine the presence or absence of intact cultural resources and the NRHP eligibility of any such resources. If resources are present and deemed eligible, a Phase III data recovery plan will be implemented at this location. Further, if piers are placed within or in the immediate vicinity of the Trenton Water Power Channel, preliminary archaeological investigations will be conducted to expose and record construction features including channel profile; and



WHEREAS, pursuant to 36 CFR Part 800.6(a), the FHWA and the DRJTBC have consulted with the NJSHPO to resolve the adverse effect of the Project on historic properties; and

WHEREAS, pursuant to 36 CFR Part 800.6(a), the FHWA and the DRJTBC have determined in consultation with the PASHPO and the NJSHPO that it is necessary to develop protection measures to protect the Delaware Canal and the Delaware and Raritan Canal, respectively during construction activities; and

WHEREAS, pursuant to 36 CFR Part 800.6(a), the FHWA has invited the Advisory Council on Historic Preservation (ACHP) to participate in the Section 106 process for the I-95/Scudder Falls Bridge Improvement Project; and in a response letter dated July 29, 2009, the ACHP has declined to be a signatory to this PA; and

WHEREAS, pursuant to 36 CFR Part 800.6(a), the FHWA has consulted with the PASHPO, NJSHPO, U.S. Army Corps of Engineers (USACE) – Philadelphia District, the Delaware Canal State Park, the Friends of the Delaware Canal, the Elm Lowne Preservation Committee, the Society for Pennsylvania Archaeology, the Lower Makefield Township Board of Supervisors, State Representative Honorable David J. Steil, and the Pennsylvania Archaeological Council in Pennsylvania; and Ewing Township, the Delaware and Raritan Canal Commission (D&RCC), Mercer County, New Jersey Green Acres Program and the Division of Parks and Forestry in New Jersey to resolve the adverse effects of the Project on historic properties; and

WHEREAS, pursuant to 36 CFR Part 800.6(c), the FHWA has also invited the PASHPO, NJSHPO, DRJTBC, the Pennsylvania Department of Transportation (PennDOT), the New Jersey Department of Transportation (NJDOT), and federally recognized Indian Tribes (Tribes) that may attach religious and/or cultural significance to any affected property within the APE pursuant to 36 CFR Part 800.3(f)(2), namely the Absentee-Shawnee Tribe of Oklahoma, the Delaware Nation, and the Shawnee Tribe, to participate in the consultation and to concur in this PA; and

WHEREAS, pursuant to 36 CFR Part 800.6(c), the DRJTBC, PennDOT, and NJDOT have agreed to be concurring parties in this PA; and

WHEREAS, the FHWA has involved, and will continue to involve the public, the Tribes, and historic interest groups, as stipulated under the NEPA of 1969, as amended, and the National Historic Preservation Act (NHPA) as amended [16 U.S.C. § 470], and its implementing regulations (36 CFR Part 800) in a manner consistent with PennDOT's and NJDOT's Public Involvement Procedures and PennDOT's procedures for Native American Coordination and Consultation;

NOW, THEREFORE, the FHWA, the PASHPO, and the NJSHPO agree that upon FHWA's decision to proceed with the Project, FHWA shall ensure that the following stipulations are implemented in order to take into account the adverse effect of the undertaking on historic properties.



## STIPULATIONS

All parties to this PA have reviewed the Project with regard to historic resource mitigation, interpretation and acquisition issues, and as a consequence of the same, the DRJTBC agrees to the following stipulations. The FHWA shall ensure that the following stipulations are implemented by the DRJTBC.

- I. Archaeological Resources
  - A. The DRJTBC will undertake geoarchaeological assessment investigations at the southern loop of the NJ Route 29 interchange with I-95 if a detention or retention basin is placed in this loop. Such investigations will be followed by archaeological investigations and/or data recovery investigations if the geoarchaeological assessment indicates such approaches are warranted.
  - B. The DRJTBC will conduct a geomorphological assessment of the area of the causeway construction across the southern end of Park Island in the Delaware River followed by Phase I archaeological testing if warranted. If archaeological resources are identified in this area, Phase II testing will be conducted to evaluate these resources and determine if they are eligible for listing in the NHRP. If eligible archaeological resources are present and cannot be avoided by construction or preserved in place, Phase III data recovery will be conducted.
  - C. The DRJTBC will implement Phase I archaeological testing in an area of high potential in the T2 Terrace in Pennsylvania that is adjacent to and possibly associated with 36Bu379 (see Stipulation I.G) and has not yet been surveyed because access to the property has been limited. If archaeological resources are identified in this area, Phase II testing will be conducted to evaluate these resources and determine if they are eligible for listing in the NRHP. If these resources are determined to be eligible for the NRHP, a Data Recovery Workplan will be prepared. The workplan will include research, fieldwork, analysis, report preparation, and public outreach. The Data Recovery Workplan will be developed by the FHWA and the DRJTBC in consultation with the PASHPO.
  - D. The DRJTBC will implement a Phase II excavation at 28Me360 with the purpose of assessing the NRHP eligibility of the site. If the site is determined eligible and if the FHWA and the DRJTBC in consultation with the NJSHPO determine that a sufficient portion of the site remains to warrant further excavation, a Data Recovery Workplan will be prepared. The workplan will include research, fieldwork, analysis, report preparation, and public outreach. The Data Recovery Workplan will be developed by the FHWA and the DRJTBC in consultation with the NJSHPO.



- E. If, during final design, the NJDOT, in consultation with the NJHPO, determines that the Trenton Water Power Channel will be impacted by the project, FHWA and the DRJTBC will develop a plan for the archaeological recordation of construction features related to the Trenton Water Power Channel. This plan shall be submitted to the NJHPO for review and approval. Such approval will not be unreasonably withheld.
- F. The DRJTBC will undertake preliminary archaeological investigations to record construction features including the channel profile related to the Trenton Water Power Channel under the Scudder Falls Bridge in New Jersey in accordance with the approved plan for archaeological recordation referenced above, if it is determined by the NJHPO during final design that the proposed bridge pier construction will impact the location of the channel.
- G. The DRJTBC will implement a Data Recovery Workplan for 36Bu379 including research, fieldwork, analysis, report preparation, and public outreach, or an alternative mitigation program. The Data Recovery Workplan or alternative mitigation program will be developed by the FHWA and the DRJTBC in consultation with the PASHPO.
- H. If any human remains and grave-associated artifacts are encountered during the archaeological investigations, FHWA will bring this to the attention of the PASHPO and NJSHPO, as appropriate, and any federally recognized Tribes that may attach religious and/or cultural significance to the affected property within 24 hours of the discovery. No activities that might disturb or damage the remains will be conducted until all parties have determined whether excavation is necessary and or/desirable. All procedures will follow the guidance outlined in the National Park Service Publication *National Register Bulletin 41: Guidelines for Evaluating and Registering Cemeteries and Burial Places*, the Native American Graves Protection and Repatriation Act of 1990 (PL 101-601), as appropriate, and the PASHPO's *Policy for the Treatment of Burials and Human Remains* (1993) and/or NJSHPO's *Archaeology and Ethnology Guidelines* (2005), as appropriate.
- I. The DRJTBC or their consultant will prepare reports on the data recovery excavations for review and comment by the FHWA, the PASHPO, and NJSHPO, as appropriate, and any interested federally recognized Tribes. The report shall meet professional standards set forth by the Department of the Interior's *Format Standards for Final Reports of Data Recovery Program* (42 FR 5377-79) and will be consistent with the Bureau for Historic Preservation/Pennsylvania Historical and Museum Commission's *Cultural Resource Management in Pennsylvania: Guidelines for Archaeological Investigations* (July 1991) for reports prepared for the PASHPO. Reports prepared for the NJSHPO will be consistent with *Guidelines for Phase I Archaeological Investigations: Identification of Archaeological Resources*, *Guidelines for Preparing Cultural Resources Management Archaeological Report Submitted to the Historic Preservation Office*, and the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation*, September 29, 1983. A draft report will be completed within one year of the conclusion of fieldwork. Any comments provided by the PASHPO and NJSHPO, as appropriate, or



other consulting parties will be considered in the preparation of the final report. A final report will be completed and submitted within one year of the close of the comment period.

- J. All records and materials resulting from the archaeological investigations that are not privately owned will be curated in accordance with 36 CFR § 79 and the curation guidelines developed by the PASHPO (June 2003) or NJSHPO's Archaeology and Ethnology Guidelines (2005), as appropriate. If the DRJTBC has not purchased the Right-of-Way at the time of the Data Recovery excavations, the DRJTBC shall request that the property owner sign a gift agreement donating the artifacts to the State Museum of Pennsylvania or the New Jersey State Museum, as appropriate. In Pennsylvania, all records and all artifacts not privately owned will be curated by the DRJTBC at the PASHPO in Harrisburg, or its designee, following the policies of that institution. The DRJTBC will be responsible for the curation fee of three hundred-fifty dollars (\$350) per cubic foot. In New Jersey, if the site is determined by the NJSHPO to have statewide or national significance, the DRJTBC will curate all records and all artifacts not privately owned to the NJ State Museum, or if the site is determined to have local significance, to an undetermined designee selected in consultation with the NJSHPO, following the policies of the selected institution. The DRJTBC will be responsible for any related fees at the selected institution. If the final repository of the artifacts recovered in New Jersey is determined to be the NJ State Museum, then the DRJTBC will be responsible for the curation fee of three hundred-fifty dollars (\$350) per Hollinger storage box.

## II. Historic Structures

### A. The Delaware and Raritan Canal and the Delaware Canal

DRJTBC, in consultation with consulting parties, shall develop an appropriate and compatible design for the replacement structure that is sensitive to historic properties in the immediate vicinity, as per the measures outlined in Stipulations II.A.1, II.B, and II.C.

#### 1. Minimization through Design

- a) To minimize visual impacts to the Delaware and Raritan Canal, the DRJTBC will design the piers of the I-95/Scudder Falls Bridge and NJ Route 29 interchange bridges to be the smallest size allowed by engineering design. The piers will be treated with an aesthetic finish to be agreed upon in consultation with the NJSHPO and consulting parties during the final design phase of the Project. Guidelines for the appearance of the aesthetic finish, including any available photographs and specifications, will be provided to the DRJTBC in advance of the preparation of test panel(s). Test panels will be constructed by the contractor, as many times as are reasonable and necessary, for review and approval by representatives of the NJSHPO, D&RCC, and Delaware and Raritan Canal State Park. Such approval will not be unreasonably withheld.



- b) To preserve openness along the Delaware and Raritan Canal under the bridges, the DRJTBC will use pier configurations that will accommodate concerns of openness and are consistent with FHWA and NJDOT design standards.
- c) To minimize impacts to the earthen embankment adjacent to the Delaware and Raritan Canal along Upper River Road beneath the proposed I-95/Scudder Falls Bridge, the DRJTBC will design the Project to consider methods to reduce erosion of the embankment.
- d) To minimize runoff of water into the Delaware and Raritan Canal, the DRJTBC will design the drainage system for the new roadways to divert water flow away from the canal prism to the maximum extent possible.
- e) To minimize effects on the Delaware and Raritan Canal, the proposed action will eliminate public use of the existing ramp from River Road (NJ Route 175) to I-95 northbound. The ramp will be gated for use by the NJ State Police.

## 2. Interpretation and Acquisitions

To mitigate for adverse effects of the project on the Delaware and Raritan Canal Historic District, including the acquisition of a portion of the National Register listed property, DRJTBC shall deposit \$2 million to a mitigation fund established in the New Jersey Historic Preservation Office to be used to construct an interpretive swing bridge and/or for other interpretation of the Delaware and Raritan Canal. The \$2 million includes the compensation for the acquisition of State Park property, subject to the approval of the State House Commission. The funds shall be deposited prior to the start of construction within the Delaware and Raritan Canal Historic District. The DRJTBC has completed consultation with the NJHPO, the Delaware and Raritan Canal State Park, and Green Acres, and other than as a consequence of unanticipated discoveries as set forth in Section III(B) of the PA, no additional monies shall be required from DRJTBC.

### B. Consultation Relative to Design Elements

The DRJTBC will consult with the NJSHPO, PASHPO, D&RCC, Delaware Canal State Park, and the Delaware and Raritan Canal State Park, as applicable, concerning the design of the bridge, noise walls, and pedestrian/bicycle facility along the Delaware Canal in Pennsylvania and the Delaware and Raritan Canal in New Jersey.



### C. Construction Protection Plan

To avoid project-related construction damage, the DRJTBC, in consultation with FHWA, the PASHPO, the NJSHPO, the D&RCC, the Delaware Canal State Park and the Delaware and Raritan Canal State Park, will develop for the approval of the PASHPO, NJSHPO, the D&RCC, and the Delaware Canal State Park a construction protection plan for work along the Delaware Canal in Pennsylvania and the Delaware and Raritan Canal in New Jersey prior to any destructive construction activity in the immediate vicinity of the canals. The plan will set forth specific measures that will protect the canal prisms, towpaths, and any related features during the construction period. The construction protection plan will include measures to protect the dry-laid stone wall along the eastern side of the Delaware Canal prism and towpath, immediately north of the existing I-95/Scudder Falls Bridge. The protection plan will provide measures for minimizing direct impacts to the canal prisms and towpaths during the removal of the piers of the existing I-95/Scudder Falls Bridge. In addition, to the extent possible, the plan will indicate that construction areas will be located outside the canal prism and towpath features and will be separated for the safety of towpath users. All areas of known archaeological sensitivity shall be marked on/or referenced in the plans and specifications.

## III. Administrative Stipulations

### A. Personnel Qualifications

All archaeological work carried out pursuant to this agreement will be by or under the direct supervision of a person or persons meeting at a minimum the *Secretary of the Interior's Professional Qualification Standards for Archaeology* and Historic Preservation and all historic preservation work carried out pursuant to this agreement will be by or under the direct supervision of a person or persons meeting at a minimum the *Secretary of the Interior's Professional Qualification Standards* (61 CFR Appendix A).. All work shall conform with the *Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation*, and the New Jersey Historic Preservation Office Guidelines and Pennsylvania guidelines.

### B. Late Discoveries

If any unanticipated discoveries of archaeological sites or historic properties are encountered during the implementation of this undertaking, DRJTBC shall suspend work in the area of the discovery, and FHWA shall comply with 36 CFR Part 800.13 by consulting with the PASHPO or NJSHPO, as appropriate, and, if applicable, federally recognized Tribes that attach religious and/or cultural significance to the affected property. The FHWA will notify the PASHPO or NJSHPO, as appropriate, and, if applicable, any such federally recognized Tribes within one working day of the



discovery. The FHWA, DRJTBC, the PASHPO or NJSHPO, as appropriate, and, if applicable, any such federally recognized Tribes will meet at the location of the discovery within seventy-two (72) hours of the initial notification to determine appropriate treatment of the discovery prior to the resumption of construction activities within the area of discovery.

C. Review Periods

The review period for all submissions will be thirty (30) calendar days from receipt of submission for review. The review of test panels will be accomplished within an immediate and reasonable response time, not to exceed seven (7) days from the date of notification for review.

D. Amendments

Any party to this PA may propose to FHWA that this agreement be amended, whereupon FHWA shall consult with the other parties to this PA to consider such an amendment. 36 CFR Part 800.6(c)(7) shall govern the execution of any such amendment.

E. Resolving Objections

1. Should any party to this PA object in writing to FHWA regarding any action carried out or proposed with respect to the Project or implementation of this PA, FHWA shall consult with the objecting party to resolve the objection. If after initiating such consultation FHWA determines that the objection cannot be resolved through consultation, FHWA shall forward all documentation relevant to the objection to the ACHP, including FHWA's proposed response to the objection. Within thirty (30) days after receipt of all pertinent documentation, the ACHP shall exercise one of the following options:
  - a) Advise FHWA that the ACHP concurs in FHWA's proposed response to the objection, whereupon FHWA shall respond to the objection accordingly;
  - b) Provide FHWA with recommendations, which FHWA shall take into account in reaching a final decision regarding its response to the objection; or
  - c) Notify FHWA that the objection will be referred to comment pursuant to 36 CFR Part 800.7, and proceed to refer the objection and comment. The resulting comment shall be taken into account by FHWA in accordance with 36 CFR Part 800.7(c) (4) and Part 110(1) of NHPA.
2. Should the ACHP not exercise one of the above options within thirty (30) days after receipt of all pertinent documentation, FHWA may assume the ACHP's concurrence in its proposed response to the objection.



3. FHWA shall take into account any ACHP recommendation or comment provided in accordance with this stipulation with reference only to the subject of the objection; FHWA's responsibility to carry out all actions under this PA that are not the subjects of the objection shall remain unchanged.

F. Objection Resolution Provision

If the DRJTBC, NJSHPO, and PASHPO or any invited signatory to this PA should object in writing to any measures or their manner of implementation, then FHWA shall notify the parties of this PA and take the objection into account, consulting with the objector and, should the objector so request, with any of the parties to this PA to resolve the objection.

G. Review of Implementation

If the stipulations have not been initiated within five (5) years after the execution of this PA, the parties to this agreement shall review the PA to determine whether revisions are needed. If revisions are needed, the parties to this PA shall consult in accordance with 36 CFR Part 800 to make such revisions.

H. Sunsetting Duration

If the terms of this PA have not been implemented by ten (10) years from the date of the signed PA, this PA shall be considered null and void. In such event, FHWA shall notify the parties to this PA, and if FHWA chooses to continue with the Project, shall re-initiate review of the Project in accordance with 36 CFR Part 800.

I. Termination

1. If FHWA determines that it cannot implement the terms of this PA, or the PASHPO or NJSHPO, as appropriate, or the ACHP determines that the PA is not being properly implemented, FHWA or the PASHPO or NJSHPO, as appropriate, or the ACHP may propose to the other parties to this PA that it be terminated.
2. The party proposing to terminate this PA shall so notify all parties to this PA, explaining the reasons for termination and affording them at least thirty (30) days to consult and seek alternatives to termination. The parties shall then consult.
3. Should such consultation fail, FHWA or the ACHP, or the PASHPO or NJSHPO, as appropriate, may terminate the PA by so notifying all parties in writing.
4. Should this PA be terminated, FHWA shall either:
  - a) Consult in accordance with 36 CFR Part 800.6(a)(1) to develop a new PA; or



- b) Request the comments of the ACHP pursuant to 36 CFR Part 800.7(a)(1). The ACHP shall have forty-five (45) days to respond with comments.
5. FHWA and the ACHP may conclude the Section 106 process with a PA between them if either the PASHPO or NJSHPO, as appropriate, terminates consultation in accordance with 36 CFR Part 800.7(a)(2).

J. Entire Agreement

This PA represents the entire agreement between the signatories and concurring parties to this PA. Other than the occurrence of unanticipated discoveries as referenced in section III(B) of this PA, all known obligations of the DRJTBC and other signatories and concurring parties concerning historic preservation, mitigation, interpretation and acquisition are set forth in this PA.

Execution of this PA by FHWA, the PASHPO and the NJSHPO, and the implementation of its terms, will be evidence that FHWA has taken into account the effects of the Project on historic properties.

By:   
FEDERAL HIGHWAY ADMINISTRATION

Date: 12-30-10

By: \_\_\_\_\_ Date: \_\_\_\_\_  
PENNSYLVANIA STATE HISTORIC PRESERVATION OFFICER

By: \_\_\_\_\_ Date: \_\_\_\_\_  
NEW JERSEY STATE HISTORIC PRESERVATION OFFICER

- b) Request the comments of the ACHP pursuant to 36 CFR Part 800.7(a)(1). The ACHP shall have forty-five (45) days to respond with comments.
- 5. FHWA and the ACHP may conclude the Section 106 process with a PA between them if either the PASHPO or NJSHPO, as appropriate, terminates consultation in accordance with 36 CFR Part 800.7(a)(2).

J. Entire Agreement

This PA represents the entire agreement between the signatories and concurring parties to this PA. Other than the occurrence of unanticipated discoveries as referenced in section III(B) of this PA, all known obligations of the DRJTBC and other signatories and concurring parties concerning historic preservation, mitigation, interpretation and acquisition are set forth in this PA.

Execution of this PA by FHWA, the PASHPO and the NJSHPO, and the implementation of its terms, will be evidence that FHWA has taken into account the effects of the Project on historic properties.

By: \_\_\_\_\_  
FEDERAL HIGHWAY ADMINISTRATION

Date:

By:  \_\_\_\_\_  
PENNSYLVANIA STATE HISTORIC PRESERVATION OFFICER

Date: 10/18/2010

By: \_\_\_\_\_  
NEW JERSEY STATE HISTORIC PRESERVATION OFFICER

Date:



- b) Request the comments of the ACHP pursuant to 36 CFR Part 800.7(a)(1). The ACHP shall have forty-five (45) days to respond with comments.
5. FHWA and the ACHP may conclude the Section 106 process with a PA between them if either the PASHPO or NJSHPO, as appropriate, terminates consultation in accordance with 36 CFR Part 800.7(a)(2).

J. Entire Agreement

This PA represents the entire agreement between the signatories and concurring parties to this PA. Other than the occurrence of unanticipated discoveries as referenced in section III(B) of this PA, all known obligations of the DRJTBC and other signatories and concurring parties concerning historic preservation, mitigation, interpretation and acquisition are set forth in this PA.

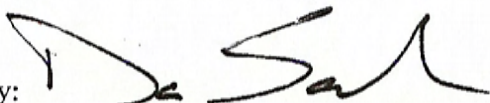
Execution of this PA by FHWA, the PASHPO and the NJSHPO, and the implementation of its terms, will be evidence that FHWA has taken into account the effects of the Project on historic properties.

By: \_\_\_\_\_  
FEDERAL HIGHWAY ADMINISTRATION

Date:

By: \_\_\_\_\_  
PENNSYLVANIA STATE HISTORIC PRESERVATION OFFICER

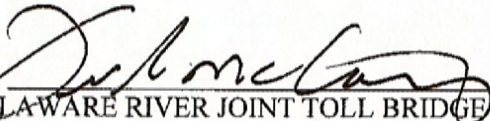
Date:

By:  \_\_\_\_\_  
NEW JERSEY STATE HISTORIC PRESERVATION OFFICER (DEPUTY)

Date:

10/5/10

CONCUR:

By:  Date: 11-4-10  
DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

By: \_\_\_\_\_ Date: \_\_\_\_\_  
NEW JERSEY DEPARTMENT OF TRANSPORTATION

By: \_\_\_\_\_ Date: \_\_\_\_\_  
PENNSYLVANIA DEPARTMENT OF TRANSPORTATION



CONCUR:

By: \_\_\_\_\_ Date: \_\_\_\_\_  
DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

By:  Date: 10-15-10  
NEW JERSEY DEPARTMENT OF TRANSPORTATION

By: \_\_\_\_\_ Date: \_\_\_\_\_  
PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

CONCUR:




By: \_\_\_\_\_ Date: \_\_\_\_\_  
DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

By: \_\_\_\_\_ Date: \_\_\_\_\_  
NEW JERSEY DEPARTMENT OF TRANSPORTATION

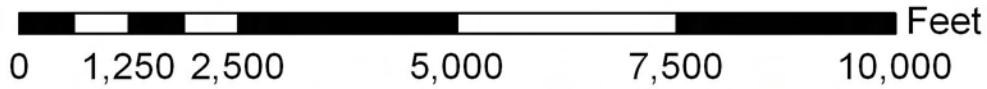
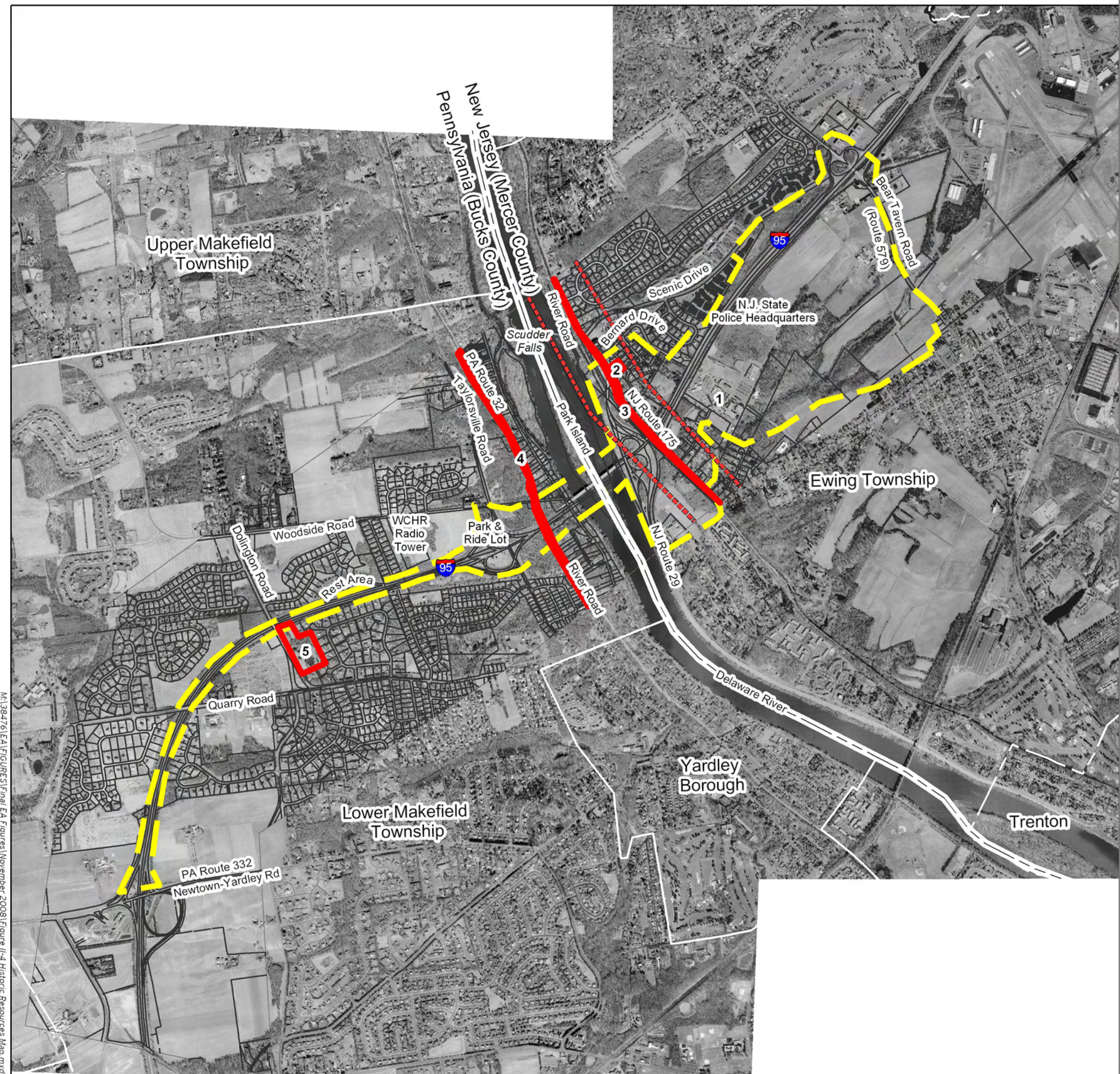
By:  Date: 10/10/10  
PENNSYLVANIA DEPARTMENT OF TRANSPORTATION



**Legend**

-  Area of Potential Effect (APE)
-  National Register of Historic Places  
Listed or Eligible Historic Resources
-  Delaware and Raritan Canal District

- 1. N.J. State Police Headquarters
- 2. Charles S. Maddock House
- 3. Delaware and Raritan Canal
- 4. Delaware Canal
- 5. Elm Lowne House



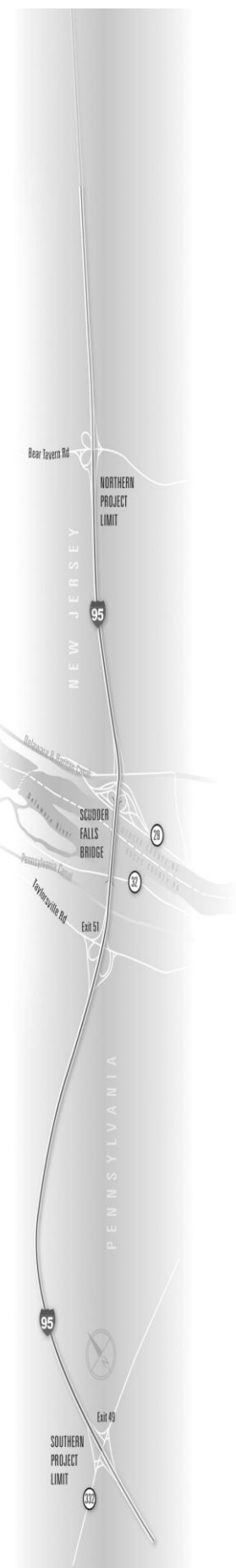
I-95/Scudder Falls  
Bridge Improvement Project  
Environmental Assessment  
Historic Resources Map  
Figure II-4





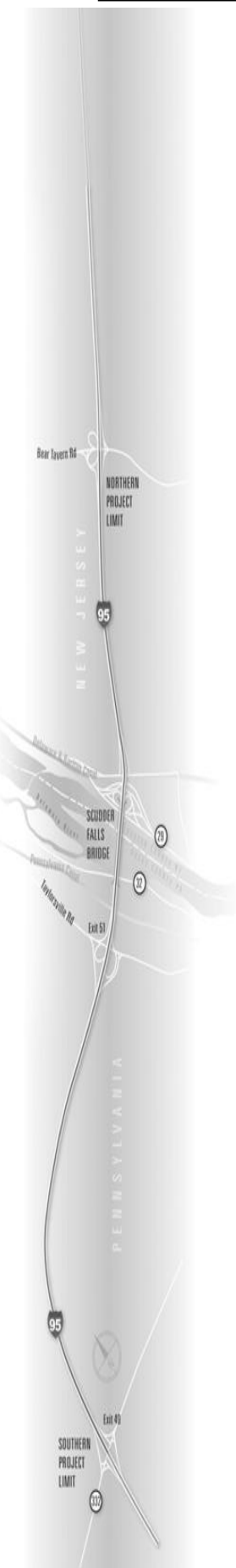
## APPENDIX C

### AGENCY COORDINATION





## **CONCURRENCE ON DEMINIMUS FINDING**



**Space Reserved to  
Insert  
PA F&BC Concurrence Letters  
on DeMinimis Finding  
(Include letter sent and response.)**



Map of the Pennsylvania Turnpike (I-76) showing the project limits and key locations. The map is oriented vertically, with 'NEW JERSEY' at the top and 'PENNSYLVANIA' at the bottom. The turnpike runs north-south. Key locations marked include Bear Tavern Rd, Northern Project Limit, Scudner Falls Bridge, Pennsylvania Canal, Lyndhurst Rd, Exit 53, Exit 46, Southern Project Limit, and Exit 45. Road shields for I-95, I-76, and I-476 are shown. A compass rose is located near the bottom.



U. S. DEPARTMENT  
OF TRANSPORTATION

Pennsylvania Division

228 Walnut Street, Room 508  
Harrisburg, PA 17101-1720

**Federal Highway  
Administration**

SEP 29 2011

In reply refer to:  
HPD-PA

Bucks County, Lower Makefield Township, Pennsylvania  
Mercer County, Ewing Township, New Jersey  
I-95/Scudder Falls Bridge Improvement Project  
Delaware River Joint Toll Bridge Commission  
Notification of Project Modification and Final Section 4(f)  
Evaluation

Mr. Willie R. Taylor, Director  
Office of Environmental Policy and Compliance  
United States Department of the Interior  
1849 C Street, Mail Stop 2462  
Washington, DC 20240

Dear Mr. Taylor:

This letter serves to inform the Department of the Interior (DOI) of a proposed modification to the design presented in the Environmental Assessment/Draft Section 4(f) Evaluation (EA/Draft 4(f)) for the project, dated October 2009. The 2009 Draft Section 4(f) Evaluation documented the Section 4(f) use of a portion of the Delaware and Raritan (D&R) Canal in New Jersey for bridge pier foundation areas, and a de minimis use of the Delaware River water trail. The Section 4(f) use of the D&R Canal would occur because the proposed project would require the transfer of approximately 0.10 acres of land within the historic boundary of the D&R Canal for portions of the I-95 off/on ramp pier foundations, which would be located outside of the existing legal right-of-way. The de minimis use of the Delaware River water trail would result from a temporary occupancy required throughout the entire construction period. No permanent occupancy of the water trail would result from the project.

The proposed design modification is associated with the proposed tolling of the I-95 Scudder Falls Replacement Bridge in the southbound direction only; i.e., entering Pennsylvania, which is consistent with all other tolled DRJTBC bridges crossing from New Jersey to Pennsylvania. Tolling would be "cashless," or "all electronic toll collection" (AETC). Details of the AETC are provided as an enclosure with this letter. Electronic toll equipment would be mounted on an overhead toll equipment support gantry that is on or adjacent to the new bridge on the Pennsylvania side of the bridge. The design of the gantry may be a monotube design (a single pipe forms the horizontal and vertical support for the EZ Pass equipment) or a column-supported space frame (see enclosures for examples). Cabinets for electronic equipment would be located near, on or below the bridge outside of natural or human resource areas or in areas planned to be



disturbed as part of the improvements previously documented in the EA/Draft Section 4(f) Evaluation. Therefore, there will be no change to the physical footprint impact, and thus there will be no additional direct or indirect impacts to natural or human resources due to the AETC facilities.

The proposed change to the design to allow for tolling would not be located in proximity to the D&R Canal, and therefore the Section 4(f) use on the D&R Canal, as described in the Draft Section 4(f) Evaluation dated October 2009, remains unchanged. The proposed toll gantry and equipment would not be located within the historic boundary of the Delaware Canal in Pennsylvania, or the Delaware River water trail, both Section 4(f) resources, nor would it result in a use of these resources or any other Section 4(f) resources in the project area (see enclosed figures excerpted from the Draft Section 4(f) Evaluation showing Section 4(f) resources in the project area). The DOI provided comment on the EA/Draft Section 4(f) Evaluation by letter dated May 4, 2010 and concurred that there is no prudent and feasible alternative to the proposed use of Section 4(f) resources.

In addition, the DRJTBC has determined that the pedestrian/bicycle facility will be funded and constructed as part of the proposed project. This facility was included in the EA/Draft Section 4(f) Evaluation as a potential part of the proposed project, but its funding was not determined at that time.

The Final Section 4(f) Evaluation for the project will include the aforementioned design changes, and a copy will be sent to your agency. Since the proposed design changes do not alter the evaluation and findings of the Draft Section 4(f) document, which your agency had reviewed and commented on, we do not intend to prepare and circulate a revised Draft Section 4(f) Evaluation.

All comments received on the Draft Section 4(f) Evaluation from the officials with jurisdiction and DOI will be addressed in the Final Section 4(f) Evaluation, which will be provided to your office.

If you have any questions or concerns regarding this matter please contact Camille Otto at [Camille.otto@dot.gov](mailto:Camille.otto@dot.gov) or 717-221-2238.

Sincerely,

A handwritten signature in black ink, appearing to read 'K. Lynch', with a stylized flourish at the end.

Keith Lynch  
Director of Program Development

Enclosures: AETC description  
Photographs of Similar AETC Gantries  
Figures IV-1A, B, C from Draft Section 4(f) Evaluation

cc: G. Alexandridis, DRJTBC Chief Engineer  
K. Skeels, DRJTBC  
C. Otto, FHWA-PA Division  
T. Sabidussi, FHWA-NJ Division  
M. Raulerson, PennDOT Consultant Project Management  
J. Campi, NJDOT  
K. Highlands, PennDOT BOPD





## State of New Jersey

DEPARTMENT OF TRANSPORTATION

P.O. Box 600

Trenton, New Jersey 08625-0600

CHRIS CHRISTIE  
*Governor*

JAMES S. SIMPSON  
*Commissioner*

KIM GUADAGNO  
*Lt. Governor*

September 30, 2011

Daniel Saunders  
Administrator and Deputy State Historic Preservation Officer  
New Jersey Department of Environmental Protection, State Historic Preservation Office  
501 Station Plaza  
Building 5 --- 4th floor  
Trenton, New Jersey 08625-0404

Re: Delaware River Joint Toll Bridge Commission  
I-95/Scudder Falls Bridge Improvement Project  
Bucks County, Lower Makefield Township, Pennsylvania  
Mercer County, Ewing Township, New Jersey  
**Notification of Project Modification and Final Section 4(f) Evaluation**

Dear Mr. Saunders:

This letter serves to inform your agency, as an official with jurisdiction over Section 4(f) resources in the project area (as listed on the attached table) of a proposed modification to the design presented in the Environmental Assessment/Draft Section 4(f) Evaluation (EA/Draft 4(f)) for the project, dated October 2009. The 2009 Draft Section 4(f) Evaluation documented the Section 4(f) use of a portion of the Delaware and Raritan (D&R) Canal in New Jersey for bridge pier foundation areas, and a de minimis use of the Delaware River water trail. The Section 4(f) use of the D&R Canal would occur because the proposed project would require the transfer of approximately 0.10 acres of land within the historic boundary of the D&R Canal for portions of the I-95 off/on ramp pier foundations, which would be located outside of the existing legal right-of-way. The de minimis use of the Delaware River water trail would result from a temporary occupancy required throughout the entire construction period. No permanent occupancy of the water trail would result from the project.

The proposed design modification is associated with the proposed tolling of the I-95 Scudder Falls Replacement Bridge in the southbound direction only; i.e. entering

"IMPROVING LIVES BY IMPROVING TRANSPORTATION"

New Jersey Is An Equal Opportunity Employer • Printed on Recycled and Recyclable Paper

Pennsylvania, which is consistent with all other tolled DRJTBC bridges crossing from New Jersey to Pennsylvania. Tolling would be "cashless," or "all electronic toll collection" (AETC). Details of the AETC are provided as an attachment to this letter. Electronic toll equipment would be mounted on an overhead toll equipment support gantry that is on or adjacent to the new bridge on the Pennsylvania side of the bridge. The design of the gantry may be a monotube design (a single pipe forms the horizontal and vertical support for the EZ Pass equipment) or a column-supported space frame (see attachments for examples). Cabinets for electronic equipment would be located near, on or below the bridge outside of natural or human resource areas or in areas planned to be disturbed as part of the improvements previously documented in the EA/Draft 4(f). Therefore, there will be no change to the physical footprint impact, and thus there will be no additional direct or indirect impacts to natural or human resources due to the AETC facilities.

The proposed change to the design to allow for tolling would not be located in proximity to the D&R Canal, and therefore the Section 4(f) use on the D&R Canal, as described in the Draft Section 4(f) Evaluation dated October 2009, remains unchanged. The proposed toll gantry and equipment would not be located within the historic boundary of the Delaware Canal in Pennsylvania, or the Delaware River water trail, both Section 4(f) resources, nor would it result in a use of these resources or any other Section 4(f) resources in the project area (see attached figures excerpted from the Draft Section 4(f) Evaluation showing Section 4(f) resources in the project area).

In addition, the DRJTBC has determined that the pedestrian/bicycle facility will be funded and constructed as part of the proposed project. This facility was included in the EA/Draft Section 4(f) Evaluation as a potential part of the proposed project, but its funding was not determined at that time.

The Final Section 4(f) Evaluation for the project will include the aforementioned design changes, and a copy will be sent to your agency. Since the proposed design changes do not alter the evaluation and findings of the Draft Section 4(f) document, which your agency had reviewed and commented on, we do not intend to prepare and circulate a revised Draft Section 4(f) Evaluation. All comments received on the Draft Section 4(f) Evaluation from the officials with jurisdiction and Department of the Interior will be addressed in the Final Section 4(f) Evaluation, which will be provided to your office.

If you have any questions on this matter, please contact John Campi at the New Jersey Department of Transportation at [John.Campi@dot.state.nj.us](mailto:John.Campi@dot.state.nj.us) or (609) 530-5689.

Sincerely,



Janet A. Fittipaldi

Executive Manager

Bureau of Landscape Architecture and Environmental Solutions  
Capital Program Support  
New Jersey Department of Transportation





**Delaware River  
Joint Toll Bridge  
Commission**

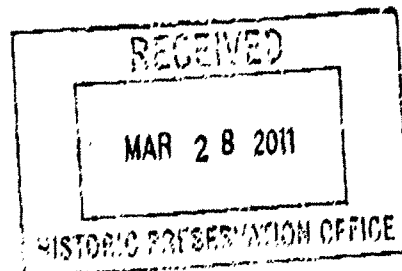
DELAWARE RIVER JOINT  
TOLL BRIDGE COMMISSION  
PLANNING DEPARTMENT

2011 APR 18 PM 1:11

"Preserving Our Past, Enhancing Our Future"

March 23, 2011

Mr. Daniel D. Saunders  
Deputy State Historic Preservation Officer  
New Jersey Historic Preservation Office  
P.O. Box 404  
Trenton, NJ 08625-0404



04-0137-22 MPA.  
HPO-D2011-078

Re: DRJTBC I-95/Scudder Falls Improvement Project  
Lower Makefield Township, Bucks County, PA  
Ewing Township, Mercer County, NJ  
Notification of Project Modification - Request for Concurrence

Dear Mr. Saunders:

This letter serves to inform the New Jersey State Historic Preservation Office (HPO) of a proposed modification to the design presented in the September 2008 Historic Resources Survey, Determination of Eligibility, and Determination of Effect Report as well as the December 2009 Environmental Assessment for the I-95/Scudder Falls Bridge Improvement Project. As outlined in a letter from your office dated, December 10, 2008, the proposed project will have an adverse effect on the Delaware and Raritan Canal Historic District.

The proposed design modification is associated with the proposed tolling of the I-95 Scudder Falls Replacement Bridge. Tolling will be "cashless," or "all electronic tolling (AET)." With AET, tolls will be collected electronically through the E-Z Pass system or video capture and billing. *A conventional toll plaza will not be built.* AET is an electronic toll collection system that allows the motorist to travel at prevailing speeds without having to stop to pay the toll. License plates of motorists passing through the "cashless" toll system who are not E-Z Pass tag holders will be subject to video capture by the electronic equipment mounted on an overhead structure. The DRJTBC will invoice the customer to collect the toll.

On the I-95/Scudder Falls Replacement Bridge, tolling will be in the southbound direction only, i.e. entering Pennsylvania. This one-direction toll collection is consistent with all other tolled DRJTBC bridges crossing from New Jersey to Pennsylvania. Electronic toll equipment will be mounted on an overhead structure that is on or adjacent to the new bridge on the Pennsylvania side of the bridge. The design of the toll equipment support gantry may be a monotube design (a single pipe forms the horizontal and vertical support for the EZ Pass equipment) or a column-supported space frame (see attachments). Cabinets for electronic equipment will be located near, on or below the bridge, in Pennsylvania, outside of natural or human resource areas or in areas planned to be disturbed as part of the improvements documented in previous Section 106 reports and the EA/ Draft Section 4(f) documents. Therefore, there will be no change to the project

110 Wood & Olive Streets  
Morrisville, PA 19067

Phone (215) 295-5061 FAX (215) 295-3337

\\Rochling\Engineering\Contract Folders\502A-502A\Task Order Assignments\502A-2 DM\CTOA C-502A-2C\Correspondence\Letter\2011-03-23 Ltr to NJHPO - Request for Concurrence.doc

04-0137-22

HPO - D2011-078

**CONTINUATION SHEET**

**DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION**

physical footprint impact, and thus there will be no additional direct or indirect impact to natural or human resources due to the AET facilities.

The facilities to be included in the project proposed action, as part of the tolling of the Scudder Falls replacement bridge, will not be located in proximity to any historic properties on the New Jersey side of the river. Therefore, the proposed tolling does not have the potential to affect the Delaware & Raritan Canal Historic District or any other historic properties adjacent to the east end of the bridge.

In addition, the DRJTBC has determined that the pedestrian/bicycle facility will be funded and constructed as part of the proposed project. This facility was included in previous Section 106, NEPA, and Section 4(f) documentation and reports as a potential part of the proposed project, although its funding was not determined at that time. Upon development of project plans and specifications for the pedestrian/bicycle facility, additional consultation with the HPO about the design of this element of the project will occur, as outlined in the Programmatic Agreement for this project.

We request your concurrence that the proposed tolling of the I-95/Scudder Falls Replacement Bridge will not result in a change in the project's impact on historic properties and will not require a modification to the associated Programmatic Agreement. We request your concurrence via letter or email by March 31, 2011. Please contact me or DRJTBC Project Manager Kevin Skeels at 267.790.1048 or [kskeels@drjtbc.org](mailto:kskeels@drjtbc.org) with questions regarding this project.

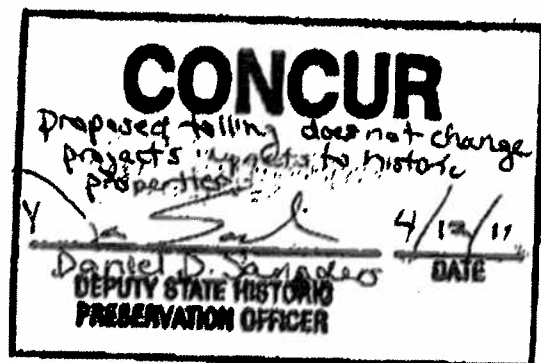
Sincerely,



George G. Alexandridis, P.E.  
Chief Engineer

Enclosures: Photographs of Similar AET Gantries

CC: Frank G. McCartney, Executive Director



110 Wood & Grove Streets  
Montsville, PA 19067  
Phone (215) 295-5061 FAX (215) 295-3337





Commonwealth of Pennsylvania  
Pennsylvania Historical and Museum Commission  
Bureau for Historic Preservation  
Commonwealth Keystone Building, 2<sup>nd</sup> Floor  
400 North Street  
Harrisburg, PA 17120-0093  
[www.phmc.state.pa.us](http://www.phmc.state.pa.us)

March 29, 2011

George G. Alexandridis, P.E.  
Delaware Joint Toll Bridge Commission  
110 Wood & Grove Streets  
Morrisville, PA 19067

RECEIVED  
MAY 1 2011  
HARRISBURG, PA

DELAWARE RIVER JOINT  
TOLL BRIDGE COMMISSION  
ENGINEERING DEPARTMENT  
2011 APR -1 PM 3:42

Re: ER 04-8011-017-Y  
Bucks County, Lower Makefield Township  
S.R. 0095, Section SFB, Scudders Falls Bridge Project  
Change in Scope: Electronic Toll Collection

Dear Mr. Alexandridis:

The Bureau for Historic Preservation (the State Historic Preservation Office) has reviewed the above named project in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended in 1980 and 1992, and the regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation as revised in 1999 and 2004. These regulations require consideration of the project's potential effect upon both historic and archaeological resources.

We concur with the findings of the agency that the proposed use of an all electronic toll collection system (AETC) rather than a conventional toll plaza even though it does add a support gantry will have no adverse effect on the Delaware Division of the Pennsylvania Canal.

If you need further information in this matter please consult Susan Zacher at (717) 783-9920.

Sincerely,

Douglas C. McLearen, Chief  
Division of Archaeology &  
Protection

DCM/smz



October 5, 2011

Jean Cutler, Director  
 Pennsylvania Historical and Museum Commission  
 Bureau for Historic Preservation  
 Commonwealth Keystone Building, Second Floor  
 400 North Street  
 Harrisburg, PA 17120-0093

Re: Delaware River Joint Toll Bridge Commission  
 I-95/Scudder Falls Bridge Improvement Project (MPMS #13573)  
 Bucks County, Lower Makefield Township, Pennsylvania  
 Mercer County, Ewing Township, New Jersey  
**Notification of Project Modification and Final Section 4(f) Evaluation**

Dear Ms. Cutler:

This letter serves to inform your agency, as an official with jurisdiction over Section 4(f) resources in the project area (as listed on the attached table) of a proposed modification to the design presented in the Environmental Assessment/Draft Section 4(f) Evaluation (EA/Draft 4(f)) for the project, dated October 2009. The 2009 Draft Section 4(f) Evaluation documented the Section 4(f) use of a portion of the Delaware and Raritan (D&R) Canal in New Jersey for bridge pier foundation areas, and a de minimis use of the Delaware River water trail. The Section 4(f) use of the D&R Canal would occur because the proposed project would require the transfer of approximately 0.10 acres of land within the historic boundary of the D&R Canal for portions of the I-95 off/on ramp pier foundations, which would be located outside of the existing legal right-of-way. The de minimis use of the Delaware River water trail would result from a temporary occupancy required throughout the entire construction period. No permanent occupancy of the water trail would result from the project.

The proposed design modification is associated with the proposed tolling of the I-95 Scudder Falls Replacement Bridge in the southbound direction only; i.e. entering Pennsylvania, which is consistent with all other tolled DRJTBC bridges crossing from New Jersey to Pennsylvania. Tolling would be "cashless," or "all electronic toll collection" (AETC). Details of the AETC are provided as an attachment to this letter. Electronic toll equipment would be mounted on an overhead toll equipment support gantry that is on or adjacent to the new bridge on the Pennsylvania side of the bridge. The design of the gantry may be a monotube design (a single pipe forms the horizontal and vertical support for the EZ Pass equipment) or a column-supported space frame (see attachments for examples). Cabinets for electronic equipment would be located near, on or below the bridge outside of natural or human resource areas or in areas planned to be disturbed as part of the improvements previously documented in the EA/Draft 4(f). Therefore, there will be no change to the physical footprint impact, and thus there will be no additional direct or indirect impacts to natural or human resources due to the AETC facilities.



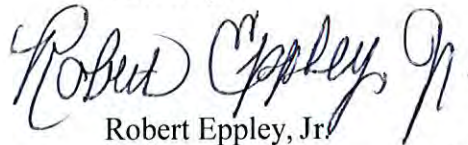
The proposed change to the design to allow for tolling would not be located in proximity to the D&R Canal, and therefore the Section 4(f) use on the D&R Canal, as described in the Draft Section 4(f) Evaluation dated October 2009, remains unchanged. The proposed toll gantry and equipment would not be located within the historic boundary of the Delaware Canal in Pennsylvania, or the Delaware River water trail, both Section 4(f) resources, nor would it result in a use of these resources or any other Section 4(f) resources in the project area (see attached figures excerpted from the Draft Section 4(f) Evaluation showing Section 4(f) resources in the project area).

In addition, the DRJTBC has determined that the pedestrian/bicycle facility will be funded and constructed as part of the proposed project. This facility was included in the EA/Draft Section 4(f) Evaluation as a potential part of the proposed project, but its funding was not determined at that time.

The Final Section 4(f) Evaluation for the project will include the aforementioned design changes, and a copy will be sent to your agency. Since the proposed design changes do not alter the evaluation and findings of the Draft Section 4(f) document, a copy of which was provided to your agency, we do not intend to prepare and circulate a revised Draft Section 4(f) Evaluation. All comments received on the Draft Section 4(f) Evaluation from the officials with jurisdiction and Department of the Interior will be addressed in the Final Section 4(f) Evaluation, which will be provided to your office.

If you have any questions on this matter please contact me at [reppley@pa.gov](mailto:reppley@pa.gov) or 610.205.6713.

Sincerely,



Robert Eppley, Jr.  
District 6-0 Environmental Manager

Attachments: Table of Section 4(f) Resources and Officials with Jurisdiction  
AETC description  
Photographs of Similar AETC Gantries  
Figures IV-1A, B, C from Draft Section 4(f) Evaluation

CC: G. Alexandridis, DRJTBC Chief Engineer, w/encl.  
K. Skeels, DRJTBC, w/encl.  
C. Otto, FHWA-PA Division, w/encl.  
T. Sabidussi, FHWA-NJ Division, w/encl.  
M. Raulerson, PennDOT Consultant Project Management, w/encl.  
C. Davies, PennDOT Assistant District Executive for Design  
J. Campi, NJDOT, w/encl.  
K. Highlands, PennDOT BOPD, w/encl.





October 5, 2011

John W. Norbeck, Director  
Bureau of State Parks  
Pennsylvania Department of Conservation and Natural Resources  
6<sup>th</sup> Floor, Rachel Carson Office Building  
Harrisburg, PA 17105

Re: Delaware River Joint Toll Bridge Commission  
I-95/Scudder Falls Bridge Improvement Project (MPMS #13573)  
Bucks County, Lower Makefield Township, Pennsylvania  
Mercer County, Ewing Township, New Jersey  
**Notification of Project Modification and Final Section 4(f) Evaluation**

Dear Mr. Norbeck:

This letter serves to inform your agency, as an official with jurisdiction over Section 4(f) resources in the project area (as listed on the attached table) of a proposed modification to the design presented in the Environmental Assessment/Draft Section 4(f) Evaluation (EA/Draft 4(f)) for the project, dated October 2009. The 2009 Draft Section 4(f) Evaluation documented the Section 4(f) use of a portion of the Delaware and Raritan (D&R) Canal in New Jersey for bridge pier foundation areas, and a de minimis use of the Delaware River water trail. The Section 4(f) use of the D&R Canal would occur because the proposed project would require the transfer of approximately 0.10 acres of land within the historic boundary of the D&R Canal for portions of the I-95 off/on ramp pier foundations, which would be located outside of the existing legal right-of-way. The de minimis use of the Delaware River water trail would result from a temporary occupancy required throughout the entire construction period. No permanent occupancy of the water trail would result from the project.

The proposed design modification is associated with the proposed tolling of the I-95 Scudder Falls Replacement Bridge in the southbound direction only; i.e. entering Pennsylvania, which is consistent with all other tolled DRJTBC bridges crossing from New Jersey to Pennsylvania. Tolling would be "cashless," or "all electronic toll collection" (AETC). Details of the AETC are provided as an attachment to this letter. Electronic toll equipment would be mounted on an overhead toll equipment support gantry that is on or adjacent to the new bridge on the Pennsylvania side of the bridge. The design of the gantry may be a monotube design (a single pipe forms the horizontal and vertical support for the EZ Pass equipment) or a column-supported space frame (see attachments for examples). Cabinets for electronic equipment would be located near, on or below the bridge outside of natural or human resource areas or in areas planned to be disturbed as part of the improvements previously documented in the EA/Draft 4(f). Therefore, there will be no change to the physical footprint impact, and thus there will be no additional direct or indirect impacts to natural or human resources due to the AETC facilities.



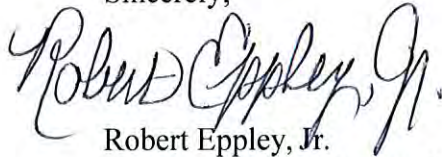
The proposed change to the design to allow for tolling would not be located in proximity to the D&R Canal, and therefore the Section 4(f) use on the D&R Canal, as described in the Draft Section 4(f) Evaluation dated October 2009, remains unchanged. The proposed toll gantry and equipment would not be located within the historic boundary of the Delaware Canal in Pennsylvania, or the Delaware River water trail, both Section 4(f) resources, nor would it result in a use of these resources or any other Section 4(f) resources in the project area (see attached figures excerpted from the Draft Section 4(f) Evaluation showing Section 4(f) resources in the project area).

In addition, the DRJTBC has determined that the pedestrian/bicycle facility will be funded and constructed as part of the proposed project. This facility was included in the EA/Draft Section 4(f) Evaluation as a potential part of the proposed project, but its funding was not determined at that time.

The Final Section 4(f) Evaluation for the project will include the aforementioned design changes, and a copy will be sent to your agency. Since the proposed design changes do not alter the evaluation and findings of the Draft Section 4(f) document, a copy of which was provided to your agency, we do not intend to prepare and circulate a revised Draft Section 4(f) Evaluation. All comments received on the Draft Section 4(f) Evaluation from the officials with jurisdiction and Department of the Interior will be addressed in the Final Section 4(f) Evaluation, which will be provided to your office.

If you have any questions on this matter please contact me at [reppley@pa.gov](mailto:reppley@pa.gov) or 610.205.6713.

Sincerely,



Robert Eppley, Jr.  
District 6-0 Environmental Manager

Attachments: Table of Section 4(f) Resources and Officials with Jurisdiction  
AETC description  
Photographs of Similar AETC Gantries  
Figures IV-1A, B, C from Draft Section 4(f) Evaluation

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C. Davies, PennDOT Assistant District Executive for Design  
J. Campi, NJDOT, w/encl.  
K. Highlands, PennDOT BOPD, w/encl.





October 5, 2011

Terry Fedorchak, Township Manager  
Lower Makefield Township  
1100 Edgewood Road  
Yardley, PA 19067

Re: Delaware River Joint Toll Bridge Commission  
I-95/Scudder Falls Bridge Improvement Project (MPMS #13573)  
Bucks County, Lower Makefield Township, Pennsylvania  
Mercer County, Ewing Township, New Jersey  
**Notification of Project Modification and Final Section 4(f) Evaluation**

Dear Mr. Fedorchak:

This letter serves to inform your agency, as an official with jurisdiction over Section 4(f) resources in the project area (as listed on the attached table) of a proposed modification to the design presented in the Environmental Assessment/Draft Section 4(f) Evaluation (EA/Draft 4(f)) for the project, dated October 2009. The 2009 Draft Section 4(f) Evaluation documented the Section 4(f) use of a portion of the Delaware and Raritan (D&R) Canal in New Jersey for bridge pier foundation areas, and a de minimis use of the Delaware River water trail. The Section 4(f) use of the D&R Canal would occur because the proposed project would require the transfer of approximately 0.10 acres of land within the historic boundary of the D&R Canal for portions of the I-95 off/on ramp pier foundations, which would be located outside of the existing legal right-of-way. The de minimis use of the Delaware River water trail would result from a temporary occupancy required throughout the entire construction period. No permanent occupancy of the water trail would result from the project.

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The proposed change to the design to allow for tolling would not be located in proximity to the D&R Canal, and therefore the Section 4(f) use on the D&R Canal, as described in the Draft Section 4(f)



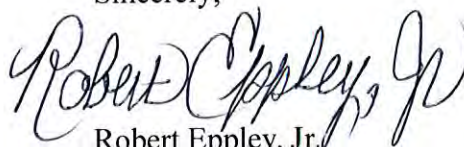
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In addition, the DRJTBC has determined that the pedestrian/bicycle facility will be funded and constructed as part of the proposed project. This facility was included in the EA/Draft Section 4(f) Evaluation as a potential part of the proposed project, but its funding was not determined at that time.

The Final Section 4(f) Evaluation for the project will include the aforementioned design changes, and a copy will be sent to your agency. Since the proposed design changes do not alter the evaluation and findings of the Draft Section 4(f) document, a copy of which was provided to your agency, we do not intend to prepare and circulate a revised Draft Section 4(f) Evaluation. All comments received on the Draft Section 4(f) Evaluation from the officials with jurisdiction and Department of the Interior will be addressed in the Final Section 4(f) Evaluation, which will be provided to your office.

If you have any questions on this matter please contact me at [reppley@pa.gov](mailto:reppley@pa.gov) or 610.205.6713.

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Robert Eppley, Jr.  
District 6-0 Environmental Manager

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J. Campi, NJDOT, w/encl.  
K. Highlands, PennDOT BOPD, w/encl.



**pennsylvania**

DEPARTMENT OF TRANSPORTATION

[www.dot.state.pa.us](http://www.dot.state.pa.us)

October 5, 2011

Mr. Doug Wolfgang, Director  
Bureau of Farmland Preservation  
Pennsylvania Department of Agriculture  
2301 North Cameron Street  
Harrisburg, PA 17110

Re: Delaware River Joint Toll Bridge Commission  
I-95/Scudder Falls Bridge Improvement Project (MPMS #13573)  
Bucks County, Lower Makefield Township, Pennsylvania  
Mercer County, Ewing Township, New Jersey  
**Notification of Project Modification and Final Section 4(f) Evaluation**

Dear Mr. Wolfgang:

This letter serves to inform your agency, as an Act 120 Agency, of a proposed modification to the design presented in the Environmental Assessment/Draft Section 4(f)/Section 2002 Evaluation (EA/Draft 4(f)) for the project, dated October 2009. The 2009 Draft Section 4(f)/Section 2002 Evaluation documented the Section 4(f) use of a portion of the Delaware and Raritan (D&R) Canal in New Jersey for bridge pier foundation areas, and a de minimis use of the Delaware River water trail. The Section 4(f) use of the D&R Canal would occur because the proposed project would require the transfer of approximately 0.10 acres of land within the historic boundary of the D&R Canal for portions of the I-95 off/on ramp pier foundations, which would be located outside of the existing legal right-of-way. The de minimis use of the Delaware River water trail would result from a temporary occupancy required throughout the entire construction period. No permanent occupancy of the water trail would result from the project.

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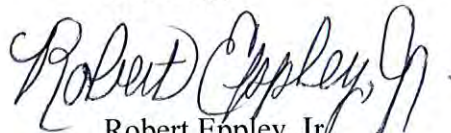
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If you have any questions on this matter please contact me at [reppley@pa.gov](mailto:reppley@pa.gov) or 610.205.6713.

Sincerely,



Robert Eppley, Jr.  
District 6-0 Environmental Manager

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**pennsylvania**

DEPARTMENT OF TRANSPORTATION

www.dot.state.pa.us

October 5, 2011

PA Department of Community and Economic Development  
Regional Director, Southeast Regional Office  
Philadelphia State Office Building, Room 1800  
1400 Spring Garden Street  
Philadelphia, PA 19130

Re: Delaware River Joint Toll Bridge Commission  
I-95/Scudder Falls Bridge Improvement Project (MPMS #13573)  
Bucks County, Lower Makefield Township, Pennsylvania  
Mercer County, Ewing Township, New Jersey  
**Notification of Project Modification and Final Section 4(f) Evaluation**

Dear Regional Director:

This letter serves to inform your agency, as an Act 120 Agency, of a proposed modification to the design presented in the Environmental Assessment/Draft Section 4(f)/Section 2002 Evaluation (EA/Draft 4(f)) for the project, dated October 2009. The 2009 Draft Section 4(f)/Section 2002 Evaluation documented the Section 4(f) use of a portion of the Delaware and Raritan (D&R) Canal in New Jersey for bridge pier foundation areas, and a de minimis use of the Delaware River water trail. The Section 4(f) use of the D&R Canal would occur because the proposed project would require the transfer of approximately 0.10 acres of land within the historic boundary of the D&R Canal for portions of the I-95 off/on ramp pier foundations, which would be located outside of the existing legal right-of-way. The de minimis use of the Delaware River water trail would result from a temporary occupancy required throughout the entire construction period. No permanent occupancy of the water trail would result from the project.

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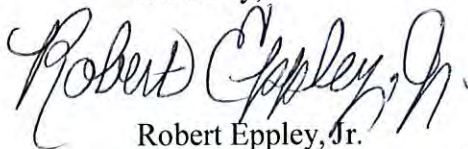
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District 6-0 Environmental Manager

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C. Davies, PennDOT Assistant District Executive for Design  
J. Campi, NJDOT, w/encl.  
K. Highlands, PennDOT BOPD, w/encl.





October 5, 2011

Secretary's Office of Policy  
PA Department of Environmental Protection  
Rachel Carson State Office Building  
P.O. Box 2063  
Harrisburg, PA 17105

Re: Delaware River Joint Toll Bridge Commission  
I-95/Scudder Falls Bridge Improvement Project (MPMS #13573)  
Bucks County, Lower Makefield Township, Pennsylvania  
Mercer County, Ewing Township, New Jersey  
**Notification of Project Modification and Final Section 4(f) Evaluation**

Dear Director:

This letter serves to inform your agency, as an Act 120 Agency, of a proposed modification to the design presented in the Environmental Assessment/Draft Section 4(f)/Section 2002 Evaluation (EA/Draft 4(f)) for the project, dated October 2009. The 2009 Draft Section 4(f)/Section 2002 Evaluation documented the Section 4(f) use of a portion of the Delaware and Raritan (D&R) Canal in New Jersey for bridge pier foundation areas, and a de minimis use of the Delaware River water trail. The Section 4(f) use of the D&R Canal would occur because the proposed project would require the transfer of approximately 0.10 acres of land within the historic boundary of the D&R Canal for portions of the I-95 off/on ramp pier foundations, which would be located outside of the existing legal right-of-way. The de minimis use of the Delaware River water trail would result from a temporary occupancy required throughout the entire construction period. No permanent occupancy of the water trail would result from the project.

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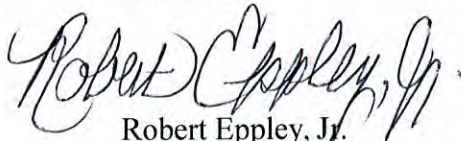
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J. Campi, NJDOT, w/encl.  
K. Highlands, PennDOT BOPD, w/encl.





October 5, 2011

Laurel L. Anders, Director  
 Bureau of Boating Access  
 PA Fish and Boat Commission  
 P.O. Box 67000  
 Harrisburg, PA 17106-7000

Re: Delaware River Joint Toll Bridge Commission  
 I-95/Scudder Falls Bridge Improvement Project (MPMS #13573)  
 Bucks County, Lower Makefield Township, Pennsylvania  
 Mercer County, Ewing Township, New Jersey  
**Notification of Project Modification and Final Section 4(f) Evaluation**

Dear Ms. Anders:

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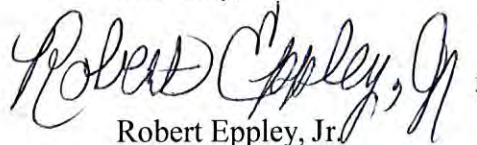
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District 6-0 Environmental Manager

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J. Campi, NJDOT, w/encl.  
K. Highlands, PennDOT BOPD, w/encl.



October 5, 2011

Thomas Shervinskie, Section Chief  
Division of Environmental Services  
PA Fish and Boat Commission  
450 Robinson Lane  
Bellefonte, PA 16823

Re: Delaware River Joint Toll Bridge Commission  
I-95/Scudder Falls Bridge Improvement Project (MPMS #13573)  
Bucks County, Lower Makefield Township, Pennsylvania  
Mercer County, Ewing Township, New Jersey  
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Dear Director:

This letter serves to inform your agency, as an Act 120 Agency, of a proposed modification to the design presented in the Environmental Assessment/Draft Section 4(f)/Section 2002 Evaluation (EA/Draft 4(f)) for the project, dated October 2009. The 2009 Draft Section 4(f)/Section 2002 Evaluation documented the Section 4(f) use of a portion of the Delaware and Raritan (D&R) Canal in New Jersey for bridge pier foundation areas, and a de minimis use of the Delaware River water trail. The Section 4(f) use of the D&R Canal would occur because the proposed project would require the transfer of approximately 0.10 acres of land within the historic boundary of the D&R Canal for portions of the I-95 off/on ramp pier foundations, which would be located outside of the existing legal right-of-way. The de minimis use of the Delaware River water trail would result from a temporary occupancy required throughout the entire construction period. No permanent occupancy of the water trail would result from the project.

The proposed design modification is associated with the proposed tolling of the I-95 Scudder Falls Replacement Bridge in the southbound direction only; i.e. entering Pennsylvania, which is consistent with all other tolled DRJTBC bridges crossing from New Jersey to Pennsylvania. Tolling would be "cashless," or "all electronic toll collection" (AETC). Details of the AETC are provided as an attachment to this letter. Electronic toll equipment would be mounted on an overhead toll equipment support gantry that is on or adjacent to the new bridge on the Pennsylvania side of the bridge. The design of the gantry may be a monotube design (a single pipe forms the horizontal and vertical support for the EZ Pass equipment) or a column-supported space frame (see attachments for examples). Cabinets for electronic equipment would be located near, on or below the bridge outside of natural or human resource areas or in areas planned to be disturbed as part of the improvements previously documented in the EA/Draft 4(f). Therefore, there will be no change to the physical footprint impact, and thus there will be no additional direct or indirect impacts to natural or human resources due to the AETC facilities.



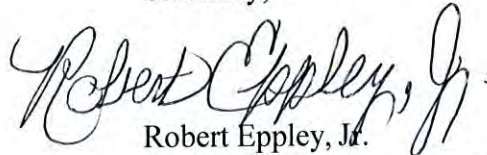
The proposed change to the design to allow for tolling would not be located in proximity to the D&R Canal, and therefore the Section 4(f) use on the D&R Canal, as described in the Draft Section 4(f) Evaluation dated October 2009, remains unchanged. The proposed toll gantry and equipment would not be located within the historic boundary of the Delaware Canal in Pennsylvania, or the Delaware River water trail, both Section 4(f) resources, nor would it result in a use of these resources or any other Section 4(f) resources in the project area (see attached figures excerpted from the Draft Section 4(f) Evaluation showing Section 4(f) resources in the project area).

In addition, the DRJTBC has determined that the pedestrian/bicycle facility will be funded and constructed as part of the proposed project. This facility was included in the EA/Draft Section 4(f) Evaluation as a potential part of the proposed project, but its funding was not determined at that time.

The Final Section 4(f) Evaluation for the project will include the aforementioned design changes, and a copy will be sent to your agency. Since the proposed design changes do not alter the evaluation and findings of the Draft Section 4(f) document, a copy of which was provided to your agency, we do not intend to prepare and circulate a revised Draft Section 4(f) Evaluation. All comments received on the Draft Section 4(f) Evaluation from the officials with jurisdiction and Department of the Interior will be addressed in the Final Section 4(f) Evaluation, which will be provided to your office.

If you have any questions on this matter please contact me at [reppley@pa.gov](mailto:reppley@pa.gov) or 610.205.6713.

Sincerely,



Robert Eppley, Jr.  
District 6-0 Environmental Manager

Attachments: Table of Section 4(f) Resources and Officials with Jurisdiction  
AETC description  
Photographs of Similar AETC Gantries  
Figures IV-1A, B, C from Draft Section 4(f) Evaluation

CC: G. Alexandridis, DRJTBC Chief Engineer, w/encl.  
K. Skeels, DRJTBC, w/encl.  
C. Otto, FHWA-PA Division, w/encl.  
T. Sabidussi, FHWA-NJ Division, w/encl.  
M. Raulerson, PennDOT Consultant Project Management, w/encl.  
C. Davies, PennDOT Assistant District Executive for Design  
J. Campi, NJDOT, w/encl.  
K. Highlands, PennDOT BOPD, w/encl.





October 5, 2011

Governor's Office of Policy and Planning  
 Office of Policy Development  
 506 Finance Building  
 Harrisburg, PA 17120

Re: Delaware River Joint Toll Bridge Commission  
 I-95/Scudder Falls Bridge Improvement Project (MPMS #13573)  
 Bucks County, Lower Makefield Township, Pennsylvania  
 Mercer County, Ewing Township, New Jersey  
**Notification of Project Modification and Final Section 4(f) Evaluation**

Dear Director:

This letter serves to inform your agency, as an Act 120 Agency, of a proposed modification to the design presented in the Environmental Assessment/Draft Section 4(f)/Section 2002 Evaluation (EA/Draft 4(f)) for the project, dated October 2009. The 2009 Draft Section 4(f)/Section 2002 Evaluation documented the Section 4(f) use of a portion of the Delaware and Raritan (D&R) Canal in New Jersey for bridge pier foundation areas, and a de minimis use of the Delaware River water trail. The Section 4(f) use of the D&R Canal would occur because the proposed project would require the transfer of approximately 0.10 acres of land within the historic boundary of the D&R Canal for portions of the I-95 off/on ramp pier foundations, which would be located outside of the existing legal right-of-way. The de minimis use of the Delaware River water trail would result from a temporary occupancy required throughout the entire construction period. No permanent occupancy of the water trail would result from the project.

The proposed design modification is associated with the proposed tolling of the I-95 Scudder Falls Replacement Bridge in the southbound direction only; i.e. entering Pennsylvania, which is consistent with all other tolled DRJTBC bridges crossing from New Jersey to Pennsylvania. Tolling would be "cashless," or "all electronic toll collection" (AETC). Details of the AETC are provided as an attachment to this letter. Electronic toll equipment would be mounted on an overhead toll equipment support gantry that is on or adjacent to the new bridge on the Pennsylvania side of the bridge. The design of the gantry may be a monotube design (a single pipe forms the horizontal and vertical support for the EZ Pass equipment) or a column-supported space frame (see attachments for examples). Cabinets for electronic equipment would be located near, on or below the bridge outside of natural or human resource areas or in areas planned to be disturbed as part of the improvements previously documented in the EA/Draft 4(f). Therefore, there will be no change to the physical footprint impact, and thus there will be no additional direct or indirect impacts to natural or human resources due to the AETC facilities.

The proposed change to the design to allow for tolling would not be located in proximity to the D&R Canal, and therefore the Section 4(f) use on the D&R Canal, as described in the Draft Section 4(f)



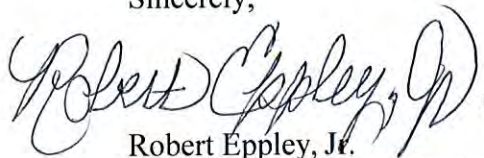
Evaluation dated October 2009, remains unchanged. The proposed toll gantry and equipment would not be located within the historic boundary of the Delaware Canal in Pennsylvania, or the Delaware River water trail, both Section 4(f) resources, nor would it result in a use of these resources or any other Section 4(f) resources in the project area (see attached figures excerpted from the Draft Section 4(f) Evaluation showing Section 4(f) resources in the project area).

In addition, the DRJTBC has determined that the pedestrian/bicycle facility will be funded and constructed as part of the proposed project. This facility was included in the EA/Draft Section 4(f) Evaluation as a potential part of the proposed project, but its funding was not determined at that time.

The Final Section 4(f) Evaluation for the project will include the aforementioned design changes, and a copy will be sent to your agency. Since the proposed design changes do not alter the evaluation and findings of the Draft Section 4(f) document, a copy of which was provided to your agency, we do not intend to prepare and circulate a revised Draft Section 4(f) Evaluation. All comments received on the Draft Section 4(f) Evaluation from the officials with jurisdiction and Department of the Interior will be addressed in the Final Section 4(f) Evaluation, which will be provided to your office.

If you have any questions on this matter please contact me at [reppley@pa.gov](mailto:reppley@pa.gov) or 610.205.6713.

Sincerely,



Robert Eppley, Jr.  
District 6-0 Environmental Manager

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C. Davies, PennDOT Assistant District Executive for Design  
J. Campi, NJDOT, w/encl.  
K. Highlands, PennDOT BOPD, w/encl.

The map illustrates the Pennsylvania Turnpike (I-76) project limits. It shows the turnpike running north-south, with the northern end in New Jersey and the southern end in Pennsylvania. Key locations and features include:

- NEW JERSEY** (top section)
- Bear Tavern Rd**
- NORTHERN PROJECT LIMIT**
- Scudner Falls Bridge**
- PA 202** (Pennsylvania Route 202)
- PA 102** (Pennsylvania Route 102)
- PA 62** (Pennsylvania Route 62)
- PA 30** (Pennsylvania Route 30)
- PA 20** (Pennsylvania Route 20)
- PA 10** (Pennsylvania Route 10)
- PA 1** (Pennsylvania Route 1)
- PA 222** (Pennsylvania Route 222)
- PA 262** (Pennsylvania Route 262)
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## United States Department of the Interior

OFFICE OF THE SECRETARY  
Washington, DC 20240

MAY 4 2010

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PEP/NRM

ER 09/1229

Mr. Kevin M. Skeels, P.E., Project Manager  
Mr. George G. Alexandridis, P.E., Chief Engineer  
Delaware River Joint Toll Bridge Commission  
110 Wood and Grove Streets  
Morrisville, Pennsylvania 19067

Dear Messrs. Skeels and Alexandridis:

This is in response to a request for the Department of the Interior's (Department) review and comment on the Draft Environmental Assessment/Section 4(f) Evaluation for the **I-95 Scudder Falls Bridge Improvement Project, Bucks County, Pennsylvania, and Mercer County, New Jersey**. We offer the following comments on this project for your consideration.

**Section 4(f) Comments**

The Department concurs that there is no prudent and feasible alternative to the proposed use of Section 4(f) lands, which include the Delaware Canal National Historic Landmark, the Elm Lowne, the Charles Maddock House, the New Jersey State Police Headquarters Historic District, the Delaware and Raritan Canal and archaeological sites 36Bu379 and 28Me360. The measures to minimize harm to these historic and archeological resources must be explicitly consistent with the Programmatic Agreement developed with the Pennsylvania Historical and Museum Commission and the New Jersey Historic Preservation Office and concurred with by the Advisory Council on Historic Preservation.

**Summary Comments**

We recommend that a signed copy of the Agreement documenting compliance with Section 106 of the National Historic Preservation Act be included in the final documentation. This reflects the procedures taken by the Pennsylvania and New Jersey State Historic Preservation Officers in protecting the cultural resources involved in this project. Documentation of mitigation actions developed for the park resources in coordination with the local agencies and organizations should also be included in the record.

For further information concerning Section 4(f) resources, please contact Jenifer McConaghie, National Park Service, Philadelphia, PA, telephone: 215-597-5194.

We appreciate the opportunity to provide these comments.

Sincerely,

A handwritten signature in black ink, reading "Willie R. Taylor". The signature is written in a cursive style with a large, looping initial "W".

Willie R. Taylor  
Director, Office of Environmental  
Policy and Compliance



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## State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
ENVIRONMENTAL REGULATION  
Office of Permit Coordination and Environmental Review  
401 East State Street  
P.O. Box 418  
Trenton, New Jersey 08625-0418  
Phone: (609) 292-3600 Fax: (609) 777-1330

CHRIS CHRISTIE  
*Governor*

KIM GUADAGNO  
*Lt. Governor*

BOB MARTIN  
*Acting Commissioner*

February 4, 2010

Kevin M. Skeels, P.E., Senior Program Manager  
Delaware River Joint Toll Bridge Commission  
100 Wood & Grove Streets  
Morrisville, PA 19067

**RE: I-95 Scudder Falls Bridge Improvement Project  
Environmental Assessment (EA)  
Ewing Township, Mercer County**

Dear Mr. Skeels:

The Office of Permit Coordination and Environmental Review of the New Jersey Department of Environmental Protection (NJDEP) has completed its review of the Environmental Assessment (EA) for the proposed I-95 Scudder Falls Bridge Improvement Project in Ewing Township, Mercer County. We offer the following comments for your consideration.

### **Division of Land Use Regulation (DLUR)**

The Division of Land Use Regulation has completed its review of the EA for the proposed I-95 Scudder Falls Bridge Improvement Project and offers following comments.

#### Flood Hazard Area Control Act Rules (N.J.A.C. 7:13)

A. The proposed project will require approval under the Flood Hazard Area Control Act (FHACA) rules, which were last revised in 2007. The Environmental Assessment is incomplete with respect to any discussion that dealt with these rules. Therefore, the Division of Land Use Regulation can not assess compliance with these Rules.

B. The proposed project will be required to satisfy the standards for fill in the flood fringe, floodway, and disturbances to riparian zones as set forth in subchapter 10 of the Flood Hazard Area Control Act Rules.

#### Stormwater Management Rules ((N.J.A.C. 7:8)

C. Similarly, the Environmental Assessment did not address the Stormwater Management Rules at N.J.A.C. 7:8. Therefore, compliance with those Rules could not be determined. An application for a



Flood Hazard Permit will be required to demonstrate compliance with the Stormwater Management Rules.

Freshwater Wetlands Protection Act Rules (N.J.A.C. 7:7A)

D. The New Jersey portion of the project was issued a Letter of Interpretation - Line Verification (LOI) on December 12, 2005, verifying the extent of freshwater wetlands in the project area, and identifying the resource value classification of the wetlands. Intermediate and ordinary resource value wetlands were identified within the project area. The LOI is valid until December 12, 2010. It is recommended that the applicant apply for an LOI Extension, which would extend the expiration date of the LOI to December 12, 2015.

E. The applicant is proposing the permanent disturbance of 0.64 acres of freshwater wetlands and the temporary disturbance of 0.09 acres of freshwater wetlands. Temporary impacts to wetlands transition areas are also proposed, but are not quantified in the EA. These impacts must be quantified as part of an application to NJDEP. The applicant is advised to apply for a Freshwater Wetlands Individual Permit and address all relevant items under N.J.A.C. 7:7A - SUBCHAPTER 7 INDIVIDUAL FRESHWATER WETLANDS AND OPEN WATER FILL PERMITS. Please be advised that issuance of this permit is predicated upon the applicant presenting alternatives that would result in fewer impacts to wetlands, and further demonstrating that the selected alternative has minimized impacts to wetlands to the greatest extent possible.

F. In addition, mitigation must be provided for wetlands impacts per N.J.A.C. 7:7A-15.8. Please be advised that the freshwater wetland rules require 2:1 mitigation for creation or restoration for forested, scrub-shrub, and emergent wetlands, which differs from what is proposed on p. 144 of the EA. If wetlands enhancement is proposed, the Department shall evaluate the wetlands values and functions lost as a result of the disturbance and determine on a case-by-case basis the amount of enhancement required to ensure that the mitigation area results in wetlands of equal functions and values to those lost.

**Division of Fish and Wildlife (DFW)**

This serves to inform you of the Division of Fish and Wildlife's (DFW) comments and concerns about the EA for the I-95/ Scudders Falls Bridge Improvement Project on the Delaware River.

G. The DFW feels that the trestle causeway design along with the mitigation measures found in section, **M. Threatened and Endangered Species - 3**. Mitigation, should minimize / prevent disruption of Shortnose Sturgeon spawning activities and the anadromous species spawning run. The DFW also feels that the "*Reasonable and Prudent Measures*" and "*Terms and Conditions*" provided by NMFS, and attached, should be integrated more fully into this mitigation section.

Fisheries

DFW concurs with the timing restrictions imposed on the Delaware-Raritan Canal.

Endangered and Non-game Species Program (ENSP)

H. Fish and Wildlife's ENSP is still concerned with mussel species (triangle floater, yellow lampmussel and tidewater mucket), although the trestle causeway should reduce impacts to these species.



Endangered and Non-game Species Program (ENSP)

H, Fish and Wildlife's ENSP is still concerned with mussel species (triangle floater, yellow lampmussel and tidewater mucket), although the trestle causeway should reduce impacts to these species.

The EA mentions mussel mitigation options, such as preconstruction surveys, relocation to an upstream reach, collection of additional species survey data, or habitat enhancements, but it does not discuss them. ENSP would like to see greater detail and discussion of these options in order to comment and provide assistance.

**Division of Parks and Forestry (DP&F)**

I, The Division of Parks and Forestry did not see a compensation plan in the EA to address the diversion of State Park land due to the increase in the size of the replacement bridge. Additionally a right of entry permit will be required from the Division for temporary access during construction.

**Historic Preservation Office (HPO)**

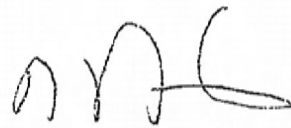
The HPO has been in the Section 106 process for this project. HPO would like to remind the Delaware River Joint Toll Bridge Commission (DRJTBC) that the draft Memorandum of Agreement (MOA) must be executed before the finalization of the 4 (F) document.

**Natural Lands Management (NLM)**

J, The Natural Lands Management program has reviewed the EA and found no mention of rare or endangered plants surveys being completed. The section of the EA addressing on Threatened and Endangered species only focused on rare and endangered animals, fish, and clams.

Thank you for providing the NJDEP the opportunity to comment on the Scudder Falls Bridge Improvement EA.

Sincerely,



Joseph D. Corleto  
Principal Environmental Specialist  
Office of Permit Coordination  
and Environmental Review

C: Kelly Davis, NJDEP  
Michele Hughes, NJDEP  
Bob Cartica, NJDEP  
Nick DeMicco, NJDEP  
Charlie Welch, NJDEP

Attachment : Reasonable and Prudent Measures & Terms and Conditions

Duplicate  
of comment  
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## Pennsylvania Fish & Boat Commission

Division of Environmental Services  
450 Robinson Lane  
Bellefonte, PA 16823

February 3, 2010

Delaware River Joint Toll Bridge Commission  
Attn: Kevin Skeels, P.E. Senior Project Manager  
110 Wood and Grove Streets  
Morrisville, PA 19067

**RE: Agency Comments on Environmental Assessment for the Proposed  
I-95 Scudder Falls Bridge Improvement Project  
Bucks County, Pennsylvania and Mercer County, New Jersey**

Dear Mr. Skeels:

In reference to the subject Environmental Assessment (EA) document, the Pennsylvania Fish and Boat Commission (PFBC) is providing the following review comments.

We appreciate the selection of a trestle causeway instead of an earthen (rock fill) causeway. The trestle causeway will significantly reduce the area of impact affecting the bottom substrate of the Delaware River which provides habitat for Pennsylvania state endangered fish species (i.e., the shortnose sturgeon and the Atlantic sturgeon), for aquatic invertebrates that include rare mussels, and for numerous species of game fish. The document indicates that the cumulative direct impact to the river bottom by the proposed trestle causeways (all four stages) will temporarily impact approximately 0.03 acres. In contrast, the previous earthen causeway alternative was expected to impact 3.5 to 4.25 acres of river bottom, and the potential for restoring the substrate as fish spawning habitat following removal of the causeway was questionable. The choice of the trestle causeway instead of the earthen alternative will substantially reduce the potential for killing fish and mussels under tons of rock, and will also minimize the potential for sedimentation associated with such earthen fill that could also harm these aquatic animals through clogging of gills, suffocation of eggs or larvae from burial, and degradation of fish spawning habitat. The trestle causeway is also expected to improve fish passage and cause significantly less change to the river flow relative to the earthen causeway and will thereby reduce the potential for bottom scour. Overall, the trestle type of causeway is substantially better than the earthen causeway in terms of reduced impact to aquatic species, and we are pleased that it has been chosen as the preferred alternative.

Despite the reduction in the area of direct riverbed footprint due to the use of the trestle causeways instead of the earthen causeways, approximately 0.3 acres of river bottom will be temporarily impacted by the use of cofferdams to construct the five new bridge piers and to remove the seven piers of the existing bridge. When the cofferdam impacts are combined with the causeway impacts, approximately 0.33 acres of river bottom will be temporarily affected during construction. A permanent net loss of 0.3 acres of river bottom is expected from the five new bridge piers. As the EA describes, these impacts are likely to harm fish and mussel species within the direct footprint of the cofferdams, causeways, and new piers.

### Our Mission:

[www.fish.state.pa.us](http://www.fish.state.pa.us)

*To protect, conserve and enhance the Commonwealth's aquatic resources and provide fishing and boating opportunities.*



1-95 Scudder Falls Bridge – EA Comments  
February 3, 2010  
Page 2

We are therefore pleased to see that proposed mitigation as described on pages 156 and 157 of Volume 1 of the EA includes various measures of preventing and offsetting the potential adverse impacts to fish and mussel species associated with work in the Delaware River. The planned prohibition of construction activities within the waters of the Delaware River from March 15 through June 30 in order to avoid the spawning time frame for the shortnose sturgeon (listed as a federally and state endangered species) is an important measure for preventing interference with fish spawning behavior and harm to fish eggs and larvae. Additional fish species will similarly benefit from this in-river construction restriction.

A. The stated mitigation for adverse impacts to mussel species indicates that there will be future development of a Mussel Mitigation Plan in coordination with the New Jersey Division of Fish and Wildlife. The PFBC requests the opportunity to be included in the interagency coordination for developing this mitigation plan since we too have state jurisdictional responsibilities and relevant experience for protecting mussel species.

B. In regard to "Threatened and Endangered Species", Table IV-11 on page 150, Volume 1 of the EA has several omissions and errors regarding the state listing status of some of the species. Although the bog turtle is correctly identified as a federally threatened species, it is listed as an endangered species by both Pennsylvania and New Jersey, but this is not correctly indicated in the Table. Also, the shortnose sturgeon, in addition to being federally listed, is state listed as an endangered species by both Pennsylvania and New Jersey, but this status is omitted from the table and other narrative discussions. Similarly, the Atlantic sturgeon is state listed as an endangered species by Pennsylvania. Most importantly, the proposed species impact mitigation measures are appropriate.

The plan to affect only half the width of the Delaware River at one time during construction of the causeways, the new piers, the new bridge superstructure, and during removal of the existing bridge superstructure and piers will allow fish passage and boating navigation within the unaffected half of the channel. The document includes an adequate discussion of boating safety precautions including warnings to boaters and methods to prevent debris from falling into the river during bridge construction and demolition. We agree with the document statement that there will need to be additional future coordination with the PFBC regarding the planning and implementation of appropriate boating Aids to Navigation for the Delaware River.

In addition to the Delaware River, other Pennsylvania surface waters likely to be affected by the proposed project include the Delaware Canal, three unnamed tributaries to the Delaware Canal (one of which appears to also be a tributary to the Delaware River), an unnamed tributary to Buck Creek, and twelve roadside drainage ditches. The portion of the Delaware Canal within the project area has been correctly identified as a trout stocked fishery and a moratorium time frame for in-stream work has been indicated. Although the document indicates that during removal of the abutments for an existing bridge over the Delaware Canal, there are no in-stream activities planned, construction activities adjacent to this canal may impact nesting habitat for the red-bellied turtle (PA listed as a Threatened Species). The EA includes appropriate precautions to avoid and minimize impacts to this turtle species within both the Delaware Canal and the Delaware River.

C. One area of concern which has not been sufficiently discussed in the EA is the provision for qualified Environmental Monitor(s) to regularly inspect the project site during construction. The aforementioned mitigation measures on page 156 of Volume 1 of the EA include water quality



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I-95 Scudder Falls Bridge - EA Comments  
February 3, 2010  
Page 3

monitoring for turbidity and sedimentation within the Delaware River downstream of the causeways and cofferdams during their construction and removal. Written guidance and competent performance of this monitoring task are especially important for protecting the numerous fish and mussel species inhabiting the river. We recommend that the Environmental Monitor(s) be assigned oversight of this water quality monitoring, as well as for implementation of the Erosion and Sedimentation Pollution Control Plan and the Spill Prevention Control and Countermeasures Plan that will be developed in the future. Although the EA indicates that these environmental protection plans will be developed, we believe that assigning individuals solely with the responsibility to oversee the implementation of these plans through onsite inspection and communication with construction personnel will improve the likelihood that problems will be prevented and that a prompt and appropriate intervention will occur if an environmental problem arises.

Overall, the EA has satisfactorily identified and discussed likely project impacts to aquatic resources and recreational boating which are managed under the purview of the PFBC, and has developed appropriate impact avoidance and minimization measures, and has identified environmental protection measures to be further refined during future development of project final design.

Thank you for the opportunity to review and comment on this document.

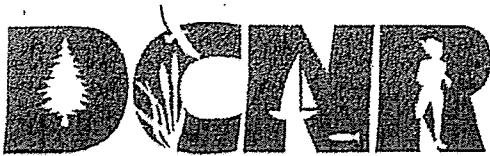
Sincerely,



Jeff Schmid, Fisheries Biologist

c: Robert Eppley, Environmental Manager, PennDOT District 6-0  
Joe Grilli, HNTB





Pennsylvania Department of Conservation and Natural Resources

Rachel Carson State Office Building  
P.O. Box 8551  
Harrisburg, PA 17105-8551  
January 29, 2010

Bureau of State Parks

717-787-6640

Mr. Kevin M. Skeels, P.E., Senior Project Manager  
Delaware River Joint Toll Bridge Commission  
110 Wood & Grove Streets  
Morrisville, PA 19067

Re: DCNR-State Parks comments re: I-95 Scudder Falls Bridge Improvement Project

Dear Mr. Skeels:

In a correspondence dated December 7, 2009, the Pennsylvania Department of Transportation transmitted to our agency the Environmental Assessment materials for the I-95/Scudder Falls Bridge Improvement Project in Bucks County, PA. We thank you for the opportunity to review these materials.

The ROW for the proposed improvement work includes portions of Delaware Canal State Park and given the intensive nature of this work, the Bureau of State Parks wishes to provide the following comments and requests, some of which have been communicated to various agencies involved in this work previously:

- A. • The Bureau requires that no permanent structures (bridge abutments, etc) be built on canal property. The integrity of this National Historic Landmark and its recreational value and use are paramount.
- B. • While temporary crossings could be permitted, they should be designed and installed in such a way that water flow is not impacted and such crossings are able to withstand flood water flows. Any such crossing(s) should be removed when project is completed. This letter alone does not constitute permission for temporary crossings.
- C. • If the trail is blocked for construction we ask that the contractor provide, and clearly sign, a safe North/South passage for trail users. Should trail blockage occur, the management of Delaware Canal State Park shall be informed. Park management will be given the opportunity to review any possible blockages, the anticipated duration of these blockages, and the alternative route being proposed. Such notification should occur as far in advance as possible but at a minimum of 90 days, so public notification might be undertaken to alert users of these blockages, if appropriate. If the trail is blocked, and the alternate route is still on park property, Park management must be notified. No clearing is permitted to create alternate routes. Any materials brought on site must be native and certified weed free.

Stewardship

Partnership

Service

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Mr. Kevin M. Skeels

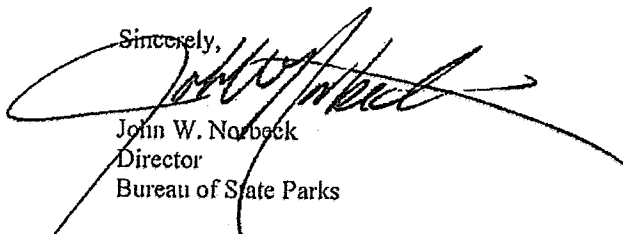
Page Two

January 29, 2010

- D
- The Bureau of State Parks requires advance knowledge of any activities that could adversely impact current public use. Should any facilities or portion of the canal path be rendered unusable, this notification would allow us to advise the public through a number of avenues, including notification through the DCNR website, Press Releases and on-site signage.
- E
- The Bureau requires that any disturbance of canal lands – in or out of the watered prism – be reclaimed to original condition. Any reclamation must be completed with approved materials and seed mixes. Should tree removal occur we will assess an aesthetic and replacement value on any trees removed or damaged.
- F
- This letter does not constitute approval to perform work outside the existing right of way. Any such work will require written approval from the Bureau of State Parks.

Thank you for the opportunity to review these materials and submit comment.

Sincerely,



John W. Norbeck  
Director  
Bureau of State Parks



G3

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HPO-A2010-169  
04-0137-13, 14

2010 JAN 19 AM 10:18

State of New Jersey

JON S. CORZINE  
Governor  
DELAWARE RIVER JOINT  
TOLL BRIDGE COMMISSION  
NHL-HEADQUARTERS

DEPARTMENT OF ENVIRONMENTAL PROTECTION

NATURAL &amp; HISTORIC RESOURCES, HISTORIC PRESERVATION OFFICE

PO Box 404, Trenton, NJ 08625

TEL: (609) 984-0176 FAX: (609) 984-0578

www.state.nj.us/dcp/hpo

MARK N. MAURIELLO  
Acting Commissioner

## MEMORANDUM

TO: Joseph Corleto  
Office of Permit Coordination and Environmental Review

FROM: Daniel D. Saunders, Deputy State Historic Preservation Officer  
Historic Preservation Office

DATE: January 11, 2010

RE: Mercer County, Ewing Township  
I-95/Scudder Falls Bridge Improvement Project

Thank you for submitting the above-mentioned project to the Historic Preservation Office (HPO) for review and comment. The HPO has been in Section 106 consultation for this project.

A. We would like to remind the Delaware River Joint Toll Bridge Commission (DVJTBC) that the draft Memorandum of Agreement (MOA) must be executed before the finalization of the 4(f) document.

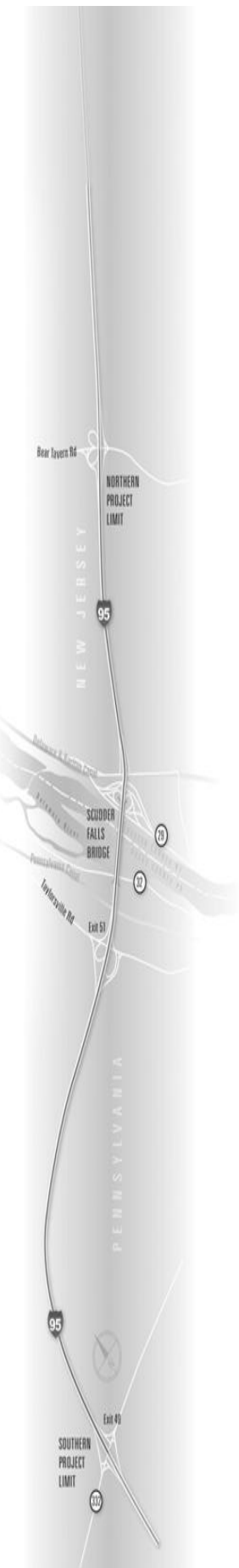
If you have any questions regarding this letter, please contact Michelle Hughes at (609) 984-6018. Thank you.

CC: Kevin Skeels, DRJTBC  
Ernest Hahn, D & R Canal Commission

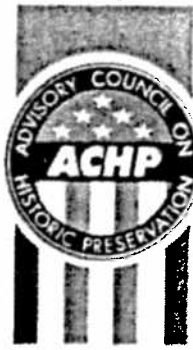
## **PENNSYLVANIA**

### **SECTION 4(f) Coordination**

**(Officials having jurisdiction and Section 106.)**







Preserving America's Heritage

July 29, 2009

Ross A. Mantione  
Environmental Specialist  
FHWA-Pennsylvania Division  
228 Walnut Street, Room 508  
Harrisburg, PA 17101-1720

Ref: *Proposed Scudders Falls Bridge Improvement Project*  
*Bucks County, Pennsylvania and Mercer County, New Jersey*

Dear Mr. Mantione:

On July 21, 2009, the Advisory Council on Historic Preservation (ACHP) received your notification and supporting documentation regarding the adverse effects of the referenced undertaking on a property or properties listed or eligible for listing in the National Register of Historic Places. Based upon the information you provided, we have concluded that Appendix A, *Criteria for Council Involvement in Reviewing Individual Section 106 Cases*, of our regulations, "Protection of Historic Properties" (36 CFR Part 800), does not apply to this undertaking. Accordingly, we do not believe that our participation in the consultation to resolve adverse effects is needed. However, if we receive a request for participation from the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer, affected Indian tribe, a consulting party, or other party, we may reconsider this decision. Additionally, should circumstances change, and you determine that our participation is needed to conclude the consultation process, please notify us.

Pursuant to 36 CFR §800.6(b)(1)(iv), you will need to file the final Programmatic Agreement (PA), developed in consultation with the Pennsylvania and New Jersey State Historic Preservation Offices (SHPO) and any other consulting parties, and related documentation with the ACHP at the conclusion of the consultation process. The filing of the PA and supporting documentation with the ACHP is required in order to complete the requirements of Section 106 of the National Historic Preservation Act.

Thank you for providing us with your notification of adverse effect. If you have any questions or require further assistance, please contact Najah Duvall-Gabriel at 202 606-8585 or via e-mail at [ngabriel@achp.gov](mailto:ngabriel@achp.gov).

Sincerely,

LaShavio Johnson  
Historic Preservation Technician  
Office of Federal Agency Programs

ADVISORY COUNCIL ON HISTORIC PRESERVATION

1100 Pennsylvania Avenue NW, Suite 803 • Washington, DC 20004  
Phone: 202-606-8503 • Fax: 202-606-8647 • [achp@achp.gov](mailto:achp@achp.gov) • [www.achp.gov](http://www.achp.gov)



U. S. DEPARTMENT  
OF TRANSPORTATION

Federal Highway  
Administration

Pennsylvania Division

July 16, 2009

228 Walnut Street, Room 508  
Harrisburg, PA 17101-1720

In reply refer to:  
HEV-PA.3

Bucks County PA and Mercer County, NJ  
S.R. 0095, Section SFB  
Scudders Falls Bridge Improvement  
Project

Mr. Reid J. Nelson  
Office of Federal Agency Programs  
Advisory Council on Historic Preservation  
1100 Pennsylvania Avenue, NW, #809  
Washington, DC 20004

Dear Mr. Nelson:

The Federal Highway Administration (FHWA) as the lead Federal Agency and in cooperation with the Pennsylvania Department of Transportation is inviting the Advisory Council on Historic Preservation (ACHP) to participate in consultation for the above referenced project in Bucks County, Pennsylvania. The project has an adverse effect on archaeology in Pennsylvania (site 36Bu379), and another adverse effect on the Delaware and Raritan Canal in New Jersey. Additional archaeological investigation will be conducted at site 28Me360 to determine whether it is eligible for the National Register.

Please find the enclosed cultural resource documentation and a copy of the DRAFT Programmatic Agreement (PA) to aid in the determination for participation in consultation for the PA.

If you have any questions, please contact me at 717-221-3465.

Sincerely,

Original signed by







Commonwealth of Pennsylvania  
Pennsylvania Historical and Museum Commission  
Bureau for Historic Preservation  
Commonwealth Keystone Building, 2nd Floor  
400 North Street  
Harrisburg, PA 17120-0093  
www.phunc.state.pa.us

October 7, 2008

Brian G. Thompson, P.E., Director  
Bureau of Design, Dept. of Transportation  
P O Box 2966  
Harrisburg, PA 17105

TO EXPEDITE REVIEW USE  
BHP REFERENCE NUMBER

Re: ER 04-8011-017-N  
FHWA: Scudder Falls Bridge Improvements  
S.R. 0095, Section SFB, Lower Makefield Township, Bucks County  
Determination of Effect Report for Historic Structures Only

Dear Mr. Thompson:

The Bureau for Historic Preservation (the State Historic Preservation Office) has reviewed the above named project in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended in 1980 and 1992, and the regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation as revised in 1999 and 2004. These regulations require consideration of the project's potential effect upon both historic and archaeological resources.

The Bureau for Historic Preservation has reviewed the plans and specifications for the above referenced project. We concur with the findings of the agency that the plans for a new bridge and widened will have no adverse effect upon the National Register listed or eligible resource referenced below.

Delaware Division of the Pennsylvania Canal (NHL)

We likewise concur, that the proposed project will have no effect on the National Register eligible resource listed below.

Elm Lowne, Bucks County

Since the report does not address the final design and location of the trail intersection with the Delaware Canal. This portion of project should have no adverse effect upon the canal. However, this finding is conditional upon our review of project plans and specifications and their conformance with the Secretary of Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. Please make

Page 2  
B.G. Thompson  
Oct. 7, 2008

arrangements to forward photographs, specifications, and architectural drawings or work write-ups to the Bureau for Historic Preservation.

The Determination of Effect Report only addresses potential effects to historic buildings and structures. Since an archaeological site is affected by this project necessitating a Phase III Data Recovery a finding for archaeological effects needs to be submitted before we can concur to a final project effect.

If you need further information regarding archaeological resources, please contact Mark Shaffer at (717) 783-9900. If you need further information concerning historic structures, please contact Susan Zacher at (717) 783-9920.

Sincerely,

A handwritten signature in cursive script that reads "Susan Zacher for". The signature is written in dark ink and is positioned above the typed name of Douglas C. McLearen.

Douglas C. McLearen, Chief  
Division of Archaeology &  
Protection

DCM/snz





Commonwealth of Pennsylvania  
Pennsylvania Historical and Museum Commission  
Bureau for Historic Preservation  
Commonwealth Keystone Building, 2nd Floor  
400 North Street  
Harrisburg, PA 17120-0093  
www.phmc.state.pa.us

May 12, 2008

Brian G. Thompson, P.E., Director  
Bureau of Design, Dept. of Transportation  
P O Box 2966  
Harrisburg, PA 17105

TO EXPEDITE REVIEW USE  
BHP REFERENCE NUMBER

Re: ER 04-8011-017-M  
Bucks County, Lower Makefield Township  
S.R. 0095, Section SFB, Scudder Falls Bridge Improvement Project  
Determination of Eligibility

Dear Mr. Thompson:

The Bureau for Historic Preservation (the State Historic Preservation Office) has reviewed the above named project in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended in 1980 and 1992, and the regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation as revised in 1999 and 2004. These regulations require consideration of the project's potential effect upon both historic and archaeological resources.

We concur with the findings of the agency that the following property is eligible for the National Register of Historic Places under Criterion C for its architectural significance. We agree with the boundaries developed for this resource.

Elm Lowne, 1324 Dolington Road, Lower Makefield Twp., Bucks County

If you need further information in this matter please consult Susan Zacher at (717) 783-9920.

Sincerely,

A handwritten signature in cursive script, reading "Andrea MacDonald".

Andrea MacDonald, Chief  
Division of Preservation Services

AM/smz

**PENNDOT Cultural Resources Submission**

DATE: February 20, 2008

SUBJECT:

District: 6-0 County: Bucks MPMS Num: 13573  
Municipality: Lower Makefield TownshipSR: 0095 Section: SFB  
Project Name: Scudder Falls Bridge Improvement ProjectER Number: 04-8011-017 -I Fed-Aid: Yes Fed Permit: Yes  
Contact name: Cathy Spohn Fax: (610) 205-6914TO: Jean H. Cutler, Director  
Bureau for Historic Preservation  
PA Historical and Museum CommissionFROM: Brian G. Thompson, PE  
for Acting Director  
Bureau of Design

Enclosed please find a copy of Technical Memorandum No. 32 Final Archaeology Phase I Report, formerly Technical Memorandum No. 14, prepared by A.D. Marble & Company for the above-referenced project. Technical Memorandum No. 14, the Draft Archaeology Phase I Report, was submitted to your office on July 26, 2006. Two Precontact period sites were identified in Pennsylvania (36BU378 and 36BU379), but no formal recommendations regarding the eligibility of these sites were made in that report. Your office concurred with the findings and recommendations of that report on August 25, 2006.

As the result of a meeting held on September 27, 2007 to discuss the outstanding issues concerning the archaeological field studies and findings of the project, the report has been slightly modified to reflect these discussions. Mr. Mark Shaffer from your office attended this meeting. At the meeting Site 36BU378 was recommended not eligible for the National Register of Historic Places while Site 36BU379 was recommended eligible for the National Register because of its potential to reveal new information on the Woodland and possibly Archaic period in the Delaware River Valley. The meeting participants agreed with these recommendations and that a Memorandum of Agreement (MOA) would be required to address the adverse effect of the project on Site 36BU379. The Abstract, Introduction and Conclusion sections and Table IX-1 of the report have been modified to reflect the results of the September 2007 meeting. A Memorandum of Agreement and Data Recovery Workplan will be prepared for the project.

FEB 21 2008

HISTORIC  
PRESERVATION**Received**

FEB 21 2008

Environmental



Section VIII.D.3 and Table IX-1 of the report have also been slightly modified to reflect comments received from the New Jersey State Historic Preservation Officer. In addition, please note that the Tables and Figures, located in Appendix E of the original Phase I report, have been integrated into the text of the Final Phase I Report.

On behalf of the Federal Highway Administration, we are requesting your concurrence that Site 36BU379 is eligible for the National Register of Historic Places, and that the project will have an adverse effect on this site.

If you have any questions, please contact Cathy Spohn at (610) 205-6711.

Enclosures

4380/CAS/cas

cc: R. Mantione, FHWA, w/enclosure  
C.M. Brown, PE, BOD  
C. Kula, EQAD, w/enclosure  
R. Eppley, Environmental Manager, District 6-0  
C.A. Spohn, Qualified Professional, District 6-0  
M. Raulerson, Consultant Project Manager, District 6-0

Agreement by: Mark Shaffer

Date: 3/20/08

SR 0095, section SFB

File 38476.20  
(mch)

OS-600



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF TRANSPORTATION

## PENNDOT Cultural Resources Submission

DATE: July 12, 2006

SUBJECT:

District: 6-0 County: Bucks MPMS Num: 13573  
Municipality: Lower Makefield Township  
SR: 0095 Section: SFB  
Project Name: Scudder Falls Bridge Improvement Project  
ER Number: 04-8011-017 - H Fed-Aid: Yes Fed Permit: Yes  
Contact Name: Cathy Spohn FAX: (610) 205-6914

TO: Jean H. Cutler, Director  
Bureau for Historic Preservation  
PA Historical and Museum Commission

FROM: R. Scott Christie, PE  
Director  
Bureau of Design

*Cathy Spohn*

**HNTB  
BOSTON**

NOV 29 2007

**RECEIVED**

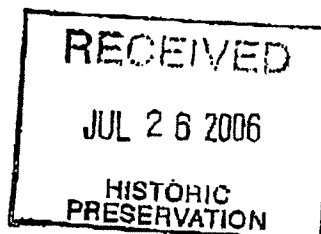
Enclosed please find one (1) copy of the Technical Memorandum No 14 Draft Archaeology Phase I Report prepared by A.D. Marble & Company for the above-referenced project. Phase IA research, which included a geoarchaeological survey of the Area of Potential Effect (APE) in January 2004, evaluated the archaeological potential of the entire APE. Phase IB investigations were conducted in certain portions of the APE. Three Precontact period sites were identified, two in Pennsylvania and the third in the state of New Jersey. Additional archaeological investigations are recommended at one site (36BU379), a Woodland period stratified site on the T-2 Terrace of the Delaware River. Phase I testing is recommended at several locations not yet tested if the project will impact these locations.

On behalf of the Federal Highway Administration, we are requesting your concurrence that with the findings and recommendations of this report.

If you have any questions, please contact Cathy Spohn at (610) 205-6711.

Enclosure

4380/CAS/cas

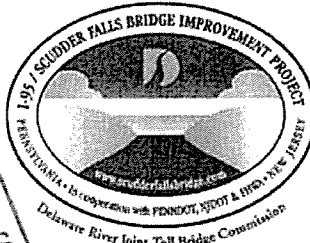
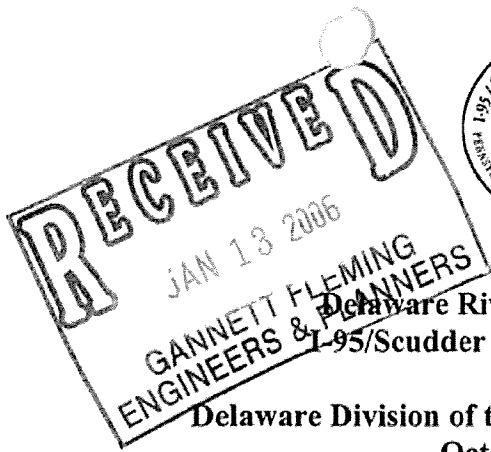




cc: R. Mantione, FHWA  
D. Stewart, BOD  
C. Kula, EQAD, w/enclosure  
R.J. Keller, Environmental Manager, District 6-0  
C.A. Spohn, Qualified Professional, District 6-0  
E. Elbich, Project Manager, District 6-0

Agreement by: Mark Shaffer for  
Doug C. McLearn, Chief  
Archaeology and Compliance Division

Date: 8/25/06



6

**Delaware River Joint Toll Bridge Commission  
I-95/Scudder Falls Bridge Improvement Project**

**Delaware Division of the Pennsylvania Canal Field View Meeting  
October 20, 2005 – 1:00 p.m.**

**Attendees**

Amy Fox, Federal Highway Administration  
Monica Harrower, PennDOT  
Susan Zacher, Pennsylvania Historical and Museum Commission  
Rick Dalton, PA Dept. of Conservation and Natural Resources (PA DCNR)  
Eric Ihlein, PA DCNR  
Roger Sager, Delaware River Joint Toll Bridge Commission  
W. Michael Cane, Delaware River Joint Toll Bridge Commission  
Dick Baublitz, A.D. Marble and Company  
Brooke Blades, A. D. Marble and Company  
Esther McGinnis, Gannett Fleming  
Jihane Fazio, DMJM Harris  
Roger Stanley, DMJM Harris  
Joe Grilli, HNTB

**Meeting Summary**

Joe Grilli made introductions and summarized the meeting agenda as: 1) review of the proposed National Historic Landmark boundary in the project area; 2) evaluation and preliminary acceptance of the boundary by the agencies in the field; 3) presentation of the project alternatives and potential for impact; 4) presentation of options for a potential pedestrian bicycle facility to be considered for the project; and, 5) preliminary discussion of potential temporary construction impacts.

There was discussion clarifying that the lead federal agency is FHWA, not the Corps of Engineers. DRJTBC is following FHWA requirements so that these requirements would be satisfied if federal funding were to be sought for construction. FHWA must approve the Point of Access study and has review authority over improvements to I-95 that are outside of DRJTBC's jurisdiction.

- 1) Review of the proposed National Historic Landmark Boundary &***
- 2) Evaluation and preliminary acceptance of the boundary***

Esther McGinnis located the proposed Section 4(f) boundary (historic/state park boundaries are coincident) and referenced correspondence (attached) of July 28, 2004 and August 27,



2004 between the project team, PHMC, and National Park Service that detailed the proposed boundary in the project area. Plan views and elevations (attached) of the three bridge alignment alternatives including the proposed boundary were distributed. Rick Dalton confirmed the proposed boundary as described is consistent with the typical state park boundary delineation used by DCNR based on past legal cases. It was noted that the project team is considering the stone wall located north of the existing bridge to be within the historic boundary. Susan Zacher noted that the stone wall appears similar to stone walls typically found along the Delaware Canal, and as long as the project was considering the stone wall as a historical feature within the 4(f) boundary, there is no need for further research.

Esther McGinnis noted that the concrete spillway on the south side of the bridge is a modern structure. Susan Zacher agreed this is not a contributing structure. Rick Dalton noted that the Corps of Engineers constructed the structure possibly after the 1955 or 1998 flood. Susan Zacher noted her preliminary agreement with the boundary. Susan Zacher requested that PHMC be sent a revised boundary on a National Register Continuation Form for processing.

### ***3) Presentation of the project alternatives and potential for impact***

Jihane Fazio presented the three bridge alignment alternatives in the vicinity of the Canal. All alternatives would provide five lanes in the northbound direction and four lanes in the southbound direction, all with appropriate inside and outside shoulders. The project team had previously staked-out the approximate limits of the proposed bridge. These limits and potential impacts were discussed:

Centerline Alternative – the new bridge would extend approximately 49 feet further on the south side of the existing bridge, and approximately 34 feet further on the north side. This alternative would impact the stream as well as the concrete spillway structure located immediately downstream of the proposed bridge.

Rick Dalton noted that, compared to some other locations along the Canal, the vertical clearance under the Scudder Falls Bridge is more than adequate.

Downstream Alternative – the new bridge would extend approximately 72 feet further on the south side of the existing bridge, while the northerly limit would extend approximately seven feet further north. This alternative would require rerouting the concrete spillway and stream.

Upstream Alternative – the new bridge would extend approximately 81 feet further on the north side of the existing bridge, but the southerly limit would remain as existing. This alternative would not affect the concrete spillway and stream. It was the general consensus during the meeting that this alternative would minimize impacts. Further, DCNR stated that the desired vertical clearance over the canal is a minimum of 10.5 feet.

**4) Presentation of options for a potential pedestrian/bicycle facility**

Jihane Fazio presented the two options for how a pedestrian/bicycle facility on the bridge, would tie into the existing Canal towpath.

**5) Preliminary discussion of potential temporary construction impacts**

Roger Stanley discussed the construction issues associated with the three alternatives. He noted that the upstream alternative would be more easily constructed and less disruptive to the Canal towpath. Susan Zacher and Rick Dalton expressed concern with any long duration disruption to the towpath. Staging would be important to maintain passage along the towpath. They also asked whether the Canal itself would need to be temporarily diverted. Susan Zacher stated PHMC would be looking at the surface treatment between the towpath and new abutment.

**6) Other**

Susan Zacher noted that PHMC has not signed-off on the Area of Potential Effect (APE). The project team noted that a Historic Resources Survey and Determination of Eligibility Report is being prepared.

Amy Fox and Monica Harrower noted that coordination with PHMC should be done through PennDOT. They should be sent all past correspondence between PHMC and the project team through PennDOT's PM, Madeleine Fausto.

***We believe these minutes accurately reflect what transpired at the meeting. If these minutes are not in accordance with your understanding, please contact the undersigned promptly; otherwise, we will assume that you concur with the accuracy of the above.***

Joe Grilli, Environmental Manager, HNTB Corporation  
Tel: (215) 568-6500, fax: (215) 568-4455, e-mail: [jgrilli@hntb.com](mailto:jgrilli@hntb.com)

cc: All attendees  
George Alexandridis, Delaware River Joint Toll Bridge Commission  
Linda Spalinski, Delaware River Joint Toll Bridge Commission  
Madeleine Fausto, PennDOT District 6-0  
Bob Keller, PennDOT District 6-0  
Bijan Pashanamaei, DMJM Harris  
Tim Gunner, DMJM Harris  
Christine Bishop-Edkins, DMJM Harris

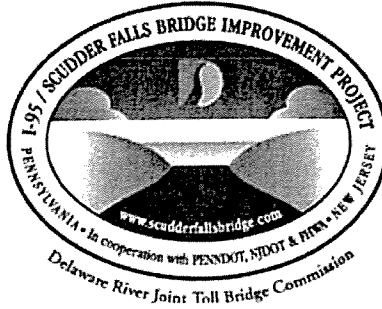


I-95/Scudder Falls Bridge Project  
Delaware Canal Field View

October 20, 2005 1:00 pm

SIGN-IN

NAME	ORGANIZATION	PHONE	EMAIL
JOE GRILLI	HNTB	(215) 568-6500	jgrillie@hntb.com
Rogan SAGER	DRJTBCL	267-790-1004	RSAGER@DRJTBCL
Dick Baublitz	A.D. Marble & Co.	717-731-9588	rbaublitz@admarble.com
Jihane Fazio	DMJH	215-735-0832	jihane.fazio@dmjhharris.com
BROOKE BLADES	AD Marble & Co.	484-533-2515	bblades@admarble.com
Monica Harrower	PennDOT	610-205-6709	mharrower@state.pa.us
Susan Zacher	PA Hist. & Mus. Comm.	717-783-9920	szacher@state.pa.us
RICK DACTON	DCNR	610-982-5560	RDACTON@STATE.PA.US
Amy Fox	FHWA	(215) 568-1054	amy.fox@fhwa.dot.gov
W. MICHAEL CANE	DRJTBCL	(267) 790-1045	wmcaner@drjtbcl.com
ROGER STANLEY	DMJH HARRIS	(215) 735-0832	ROGER.STANLEY@DMJHHARRIS.COM
Eric Ihlein	DCNR	610-982-5560	eihlein@state.pa.us



**Delaware Canal Field View Meeting  
With PA Department of Conservation and Natural Resources**

**April 22, 2005 – 10:00am**

**Minutes of Meeting**

**Attendees:**

Esther McGinnis, Gannett Fleming  
Brooke Blades, A.D. Marble & Company  
Richard Dalton, PA Department of Conservation and Natural Resources

**Meeting Location:**

Delaware Canal where the I-95 bridge crosses over the canal.

**Field View Meeting Purpose:**

The purpose of the field view was to reach a consensus on the Delaware Canal boundary within the I-95/Scudder Falls Bridge Improvement Project area (existing I-95 bridge over the Delaware Canal). Correspondence dated July 28, 2004 was sent to the Pennsylvania Historical and Museum Commission (PHMC) and the National Park Service (NPS) requesting a formal opinion of the Delaware Canal boundary in the area of the I-95/Scudder Falls Bridge Improvement Project. The PHMC concurred that Delaware Canal boundaries in most areas include the canal prism, towpath, and berm as reflected in the PADCNR boundaries for the Delaware Canal State Park. However, site (at Delaware Canal and I-95) conditions in the project area do not specifically reflect the topography and Standard Cross Section (PADCNR) of the Delaware Canal.

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**Meeting Summary:**

1. Esther McGinnis presented a drawing of the site area with existing topographic features and contours ( 1 foot contour ). She provided an overview of the existing conditions. Brooke Blades also presented a copy of a c.1831 map (*Map of the Delaware Division of the Pennsylvania*



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*Canal, by A.W. Kennedy, Bucks County Historical Society)* showing the Canal, towpath, Woodside Road , and unnamed roadway.

2. The group discussed the existing topography and the Delaware Division Canal Standard Cross Section. Everyone agreed that the existing site conditions did not match the Standard Cross Section. Richard Dalton noted that the Standard Cross Section is a typical section that may not reflect actual conditions along the Canal in its entirety.
3. The following site conditions were noted:
  - a. The Canal channel under the I-95 bridge appears to be narrower than the Canal channel upstream and downstream. In this area, the group field measured the top of the channel to the face of the east abutment. This length was measured approximately 20 feet.
  - b. The overflow concrete structure was a modern feature and is not part of the historical features of the Canal
  - c. Brooke Blades indicated that the stone wall located along the back slope of the Canal is part of the historical features of the Canal and should be included in the Canal boundary. The distance between the top edge of the Canal channel to the stone wall is approximately 31 feet.
  - d. The area along the Canal eastside is in cut and therefore the area does not have a defined "berm bank" area as noted on the Standard Cross Section.
4. Mr. Dalton indicated that the dimensions shown on the Standard Cross Section should be used to determine the Canal boundaries within the project area. On the Canal towpath side, the boundary will reflect the dimensions shown on the Standard Cross Section. However, the boundary will include the stonewall. On the Canal westside, the boundary dimensions will follow the Standard Cross Section but the top of the berm will continue for a distance of eight (8) feet above the top of the berm. The group noted in the field that this area appears to be delineated by existing rocks.

#### ACTIONS:

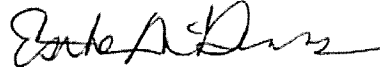
1. Ms. McGinnis indicated that the project team will label the Delaware Canal boundary on the project base mapping. This boundary will be the historic boundary under Section 106 and therefore, will be the Section 4(f) boundary. Also, cross sections of the area will be prepared labeling the boundary.

- 
2. Followup information on the Delaware Canal boundary in the project area will be forwarded to the PHMC, PADCNr, and the NPS.

*We believe these minutes accurately reflect what transpired at the meeting. If these minutes are not in accordance with your understanding, please contact the undersigned with 5 business day; otherwise, we will assume that you concur with the accuracy of the above.*

Sincerely,

**GANNETT FLEMING, INC**



Esther McGinnis  
Vice President  
Environmental Manager

Cc: Attendees  
George Alexandridis, DRJTBC  
Bijan Pashanamaei, DMJM+HARRIS  
Joe Grilli, HNTB



Commonwealth of Pennsylvania  
Pennsylvania Historical and Museum Commission  
Bureau for Historic Preservation  
Post Office Box 1026  
Harrisburg, Pennsylvania 17108-1026

DELAWARE  
TOLL BRIDGE  
COMMISSION

2004 AUG 30 PM 2:52

HNTB  
BOSTON

SEP 3 2004

August 27, 2004

RECEIVED

Joseph G. Grilli, P.E.  
Delaware River Joint Toll Bridge Commission  
110 Wood Street  
Morrisville, PA 19067

TO EXPEDITE REVIEW USE  
BHP REFERENCE NUMBER

Re: ER 04-8011-017-F  
Bucks County, Pennsylvania  
I-95/Scudder Falls Bridge Improvement Project  
Contract No.C-393A, Capital Project No.CP0301A, Acct No.7161-06-012  
Delaware Division of the Pennsylvania Canal Boundary

Dear Mr. Grilli:

The Bureau for Historic Preservation (the State Historic Preservation Office) has reviewed the above named project in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended in 1980 and 1992, and the regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation as revised in 1999. These requirements include consideration of the project's potential effect upon both historic and archaeological resources.

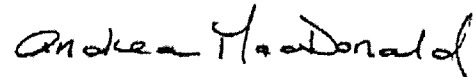
We are in receipt of your letter of July 28, 2004 concerning the boundary of the Delaware Division of the Pennsylvania Canal. We concur with your finding that in most cases the boundary for this resource includes the canal prism, towpath and berm and is reflected correctly in the Pennsylvania Dept. of Conservation and Natural Resources boundaries for the Delaware Canal State Park. The only areas where we would disagree with these boundaries and recognize a larger or different boundary are areas containing these following historic resources associated with the canal: canal basins, dams supplying water to the canal, river walls supporting the canal prism and towpath and adjacent roadways. Areas where these additional historic canal related features are located should be evaluated for boundaries appropriate to include these resources and their physical supports.



Page 2  
J. Grilli, P.E.  
Aug. 28, 2004

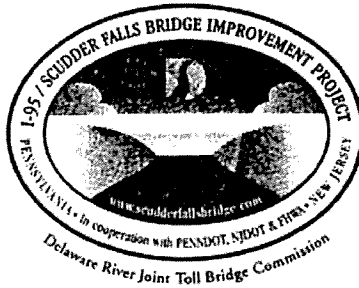
If you need further information in this matter please consult Susan Zacher at (717) 783-9920.

Sincerely,

A handwritten signature in cursive script that reads "Andrea MacDonald".

Andrea MacDonald, Chief  
Division of Preservation Services

cc: FHWA  
D. Schreiber, PDOT, BOD  
P. Andrus, National Register of Historic Places  
Wm. Bolger, National Park Service  
Wm. Mineo, Delaware and Lehigh National Heritage Corridor Commission  
R. Keller, PDOT, Dist. 6-0  
KWC/smz



APK 5/26/04 38476.19  
JBB

July 28, 2004

Jean Cutler, Director  
Pennsylvania Historical and Museum  
Commission  
Commonwealth Keystone Building  
400 North Street  
Harrisburg, PA 17120-0093

Mr. Bill Mineo  
National Park Service  
Delaware and Lehigh National  
Heritage Corridor Commission  
1 South 3rd Street, 8th Floor  
Alpha Building  
Easton, PA 18042

Mr. William Bolger  
National Park Service  
National Landmarks Program  
200 Chestnut Street  
Philadelphia, PA 19106

Re: Delaware River Joint Toll Bridge Commission (DRJTBC)  
Contract C-393A, Capital Project No. CP0301A, Account No. 7161-06-012  
I-95/Scudder Falls Bridge Improvement Project  
Delaware Canal Boundary

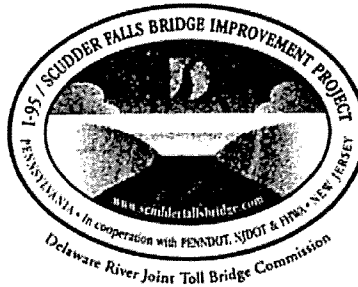
Dear Ms. Cutler and Messrs. Bolger and Mineo:

On behalf of the DRJTBC, we are seeking formal determination (opinion, guidance) of the boundary of that portion of the Delaware Canal in the vicinity of I-95 in Lower Makefield Township, Bucks County. This determination is requested for the I-95/Scudder Falls Bridge Improvement Project, and, more specifically, for the area situated approximately 500 feet north and 500 feet south of the Interstate 95 centerline. This guidance is needed to assist us in preparing Section 106/Section 4(f) Evaluations related to the I-95/Scudder Falls Bridge Improvement Project that is currently being planned by the DRJTBC.

In a meeting held June 23, 2004 with the Delaware Canal State Park manager, Rick Dalton, we were informed that the boundaries of the state park ownership have been established in the Pennsylvania Department of Conservation and Natural Resources (PA DCNR) document entitled "*Legal Aspects of Delaware Canal Ownership*," September 1988 (please see Attachment A). This document cites various legal cases within the Commonwealth that bear upon the question of boundaries for various elements of the Pennsylvania Delaware Canal system. The document (page 4) states, with regards to the Delaware Canal, that court documents "*establish minimum standard dimensions of*



Delaware River Joint Toll Bridge Commission  
110 Wood Street, Morrisville, PA 19067  
215.295.5061 tel • 215.295.3337 fax • www.drjtbc.org



*twelve feet for the towpath and eight feet for the berm, plus whatever outer slopes may have been constructed to elevate the banks of the canal."*

Preliminary discussions undertaken to date with staff at the Pennsylvania Historical and Museum Commission (PHMC) indicate that PHMC's interpretation of the canal boundary for the purposes of Section 106/Section 4(f) Evaluations are consistent with the PA DCNR boundary definition. A telephone conference call occurred on April 28, 2004, involving Zeph Parmenter of the PHMC, Monica Harrower of PennDOT District 6-0, and Travis Beckwith of A.D. Marble & Company (please see Attachment B). Ms. Parmenter stated that PHMC would traditionally define the Delaware Canal boundary as the towpath and the berm along with associated sideslopes and any other properties that were associated with the canal. This definition essentially agrees with that stated in the attached Pennsylvania Department of Conservation and Natural Resources legal document. The DCNR plans of the canal, showing associated structures, are also attached.

We propose that the definition of the Delaware Canal boundary cited above in the Department of Environmental Resources document be considered the formal boundary of the Delaware Canal property adjacent to I-95 for the purposes of the Section 106/Section 4(f) evaluations. There are, to our knowledge, no other properties associated with the canal in the proposed project area (see attached DCNR canal plans). We are requesting formal recognition of this boundary for the purposes of the Section 106/Section 4(f) evaluations from your agency. Thank you for your attention to this request, and we look forward to your response. Please feel free to contact me with any questions at (215) 568-6500. Written correspondence may be sent to my attention at HNTB Corporation, 8 Penn Center, 7<sup>th</sup> Floor, 1628 John F. Kennedy Boulevard, Philadelphia, PA 19103.

Very truly yours,

HNTB Corporation

Joseph G. Grilli, PE  
Deputy Project Manager, Environmental

Attachments A (DCNR document/canal plans) and B (April 2004 conversation record)

cc: George Alexandridis, DRJTBC  
Bijan Pashanamaei, DMJM+HARRIS, Inc.  
Brook Blades, A.D. Marble & Company, Inc.  
Esther McGinnis, Gannett Fleming, Inc.



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DEPARTMENT OF ENVIRONMENTAL RESOURCES  
LEGAL ASPECTS OF DELAWARE CANAL OWNERSHIP  
SEPTEMBER, 1988

The Delaware Canal originally was but one of several divisions of the Pennsylvania Canal. The construction of the Pennsylvania Canal, by the Commonwealth, was authorized by the Act of February 25, 1826, P.L. 55; the Act of April 9, 1827, P.L. 192; and the Act of April 6, 1830, P.L. 218. The pertinent sections of these statutes provided for the payment of damages to landowners whose land was appropriated for the canal works or temporarily occupied during the construction of the canal. The statutes further provided that upon payment of such damages,

the state shall be seized of such lands as of an absolute estate in perpetuity, or with such less quantity and duration of interest or estate in the same, or subject to such partial or temporary appropriation, use or occupation, as shall be required and described as aforesaid, as if conveyed by the owner or owners....

On several occasions over the years, the Supreme Court of Pennsylvania has been called upon to determine the nature of the rights acquired by the Commonwealth when it constructed the various divisions of the Pennsylvania Canal under these statutes. In 1876 in the case of Wyoming Coal and Transportation Co. v. Price, 81 Pa. 156, the Court pointed out that the nature of the rights acquired by the Commonwealth was determined by the above-mentioned statutes and particularly by the Act of 1826. The Court noted that the statutes made a distinction between "perpetual" and "temporary" use. Citing earlier cases dealing with the question,\* the Court concluded that "temporary" use "was designed to apply to the use or possession of that larger portion of land which might be occupied during the construction of the Canal, while perpetual, was restricted to that portion which was permanently occupied by it after its completion." The Court held that such land permanently occupied by the Canal after its completion was acquired by the Commonwealth as an absolute and perpetual estate which would not revert to the original landowner upon the cessation of its use as a canal or upon a subsequent change in the nature of its use and occupancy.

The Court in Wyoming Coal then concluded:

It must, therefore, now be declared as the settled law of this state, that whenever the Commonwealth took land for permanent use under the acts in question, and constructed and operated a canal thereon, she acquired an estate in the lands so taken in perpetuity, and she may dispose of the same in fee.

The determination of the Supreme Court in Wyoming Coal and earlier cases has been uniformly followed by the Pennsylvania courts, in what has been described

\*Commonwealth v. McAllister, 2 Watts 190 (Pa. 1834); Haldeman v. Pennsylvania Railroad Co., 425 (1865). See also Robinson v. West Pennsylvania R.R. Co., 72 Pa. 316 (1873).

as "an unbroken line of cases."\* Parks v. Pennsylvania R.R. Co., 301 Pa. 475 (1930). In particular, in Commonwealth ex rel. Margiotti v. Delaware Division Canal Co., 45 Dauphin 234, aff'd, 332 Pa. 53 (1938), the title originally acquired by the Commonwealth in the Delaware Canal was characterized as "an absolute fee simple title in perpetuity."

By the Act of April 21, 1858, P.L. 414, the Pennsylvania General Assembly authorized the sale of various divisions of the Pennsylvania Canal, including the Delaware Division, to the Sunbury and Erie Railroad Company. This conveyance was accomplished by deed dated May 19, 1858. The Sunbury and Erie Railroad Company, by deed dated July 10, 1858, conveyed the Delaware Division to the Delaware Division Canal Company.

The Act of June 21, 1939, P.L. 622, authorized the Secretary of Forests and Waters to acquire the entire interest of the then owner of the Delaware Canal and to administer the property so acquired of and for State Park purposes.\*\* The Act of June 21, 1939, P.L. 621, further confirmed the authority of the Secretary of Forests and Waters to utilize canal properties for park purposes. Pursuant to these Acts, the Delaware Division Canal Company, by deed dated October 31, 1940, conveyed the Delaware Canal back to the Commonwealth. The deeds referred to above are all on record in the Bucks County Court House in Doylestown, and in the Northampton County Court House in Easton.

Hence, the fee title conveyed by the Commonwealth in 1858 eventually returned to the Commonwealth in 1940.

The holdings of the Pennsylvania Supreme Court came after the construction of the Canal. For the most part, there were no deeds conveying the property to the Commonwealth. Hence, when the Canal was constructed and for some years afterward, there apparently was confusion in the minds of some of the original landowners as to the rights acquired by the Commonwealth. Thus, when original landowners sold off their land to others, the deed descriptions often included the Canal, or, where the Canal was to form a boundary, extended to the center of the Canal or possibly to some other line on the Canal property. Such descriptions passed down through successive deeds to the present day. Therefore, some adjacent landowners may feel that they own land on the Canal property and some point out that they have been paying taxes on this basis. Unfortunately, the error began with their predecessors in title since the deed descriptions, to the extent they include the Canal property, are a nullity---the original landowner

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\*See Strattan v. Richards, 25 Pitt. Legal J. 170 (Pa. 1878); Pennsylvania Canal Co. v. Harris, 101 Pa. 80 (1882); Delosier v. Pennsylvania Canal Co., 11 A. 400 (Pa. 1886); Williamsport v. Pennsylvania R.R. Co., 8 Pa. C.C. 350 (Lycoming Co. 1890); Pennsylvania Canal Co. v. Lewisburg, Milton & Watsonstown Passenger Ry. Co., 10 Pa. Super. 413 (1899), aff'd, 203 Pa. 282 (1902); Rochester Borough v. Kennedy, 229 Pa. 251 (1910); Foust v. Dreutlein, 237 Pa. 108 (1912); Parks v. Pennsylvania R.R. Co., 301 Pa. 475 (1930); Seitz v. Tri-County Boat Club, 76 Dauphin 381 (1961).

\*\*A previous statute authorizing the conveyance of the Canal to the Commonwealth was found to be unconstitutional because of the way in which it was drafted. See Act of June 26, 1931, P.L. 1387; Yardley Mills Co., Inc. v. Bogardus, 321 Pa. 581 (1936).

no longer owned that land because the Commonwealth had lawfully acquired it in fee and paid for it as such.

The Supreme Court, in Commonwealth v. McAllister, supra, stated:

The right of property in the land upon which the canal is made, becomes vested by the operation of the Act of 1826, according to its express terms, in the state, so that the owner loses all his former right to it. The intention of the legislature is very clearly manifested by the acts passed on this subject; and it is, that the state shall pay for every foot of land taken by her from the owner, so far as he has not been compensated for it by the advantages which may reasonably be expected to accrue to him by the canal's enhancing the value of the residue of his land.

In Haldeman v. Pennsylvania Railroad Co., supra, the plaintiff claimed ownership by virtue of a deed descending from the original landowner reciting "to the middle of the canal", whereas the railroad company claimed ownership by purchase of the Canal property from the Commonwealth. The Court held that the railroad company owned the land in dispute outright since it had the same fee title in perpetuity as acquired by the Commonwealth in constructing the Canal under the Act of 1826.

It has been asserted that the Commonwealth initially acquired only a right-of-way for canal purposes and that, when the Canal ceased operation as a commercial canal all rights reverted to the adjacent landowners. In the Haldeman case, the portion of the Canal in dispute had actually been abandoned and filled; nevertheless, the Court held that there could be no reversion to the original landowner or his grantees in view of the absolute fee title in the railroad company. In this connection, the Court, in Wyoming Coal and Transportation Co. v. Price, supra, said that the Commonwealth having acquired "an absolute and perpetual estate in the land occupied by the canal, the estate was neither revocable nor reversionary" upon cessation of its use as a canal.

To the extent that adjacent landowners may claim use or occupation rights in Canal property through long adverse use, such rights cannot be had against the Commonwealth, Hostetter v. Commonwealth, 367 Pa. 603 (1951), or against public corporations, such as canal operating companies, Graham & Co. v. Penna. Turnpike Comm., 347 Pa. 622 (1943).

In Pennsylvania Railroad Co. v. Borough of Freeport, 138 Pa. 91 (1890), a portion of the towpath had been used for more than twenty-one years as a means of access to the homes of adjacent landowners. The Court held that the railroad company, which had bought the Canal property from the Commonwealth, could properly lay tracks on what had been the towpath and exclude the adjacent landowners from further use. Specifically, the Court stated:

This use [by the adjacent landowners] of the towing path was certainly acquiesced in by the canal company, and no difference how long such use has continued or how great



it may have been, no rights of absolute user could have accrued either to the public or to the owners or occupiers of the lots [adjacent the Canal property], the property to the canal and its appurtenances being vested in the Commonwealth.

In the Haldeman case the Court noted that it was sometimes the practice of adjacent landowners to follow up any change in the location of the Canal by retaking possession of the part abandoned, and that "This was seldom if ever prevented by the canal board, who from the constant change of its members rarely knew of the encroachments, or if known, it was thought to be a matter of small moment...." Nevertheless, the Court held that: "[no] neglect of the canal commissioners can give title to an intruder, or destroy that of the Commonwealth."

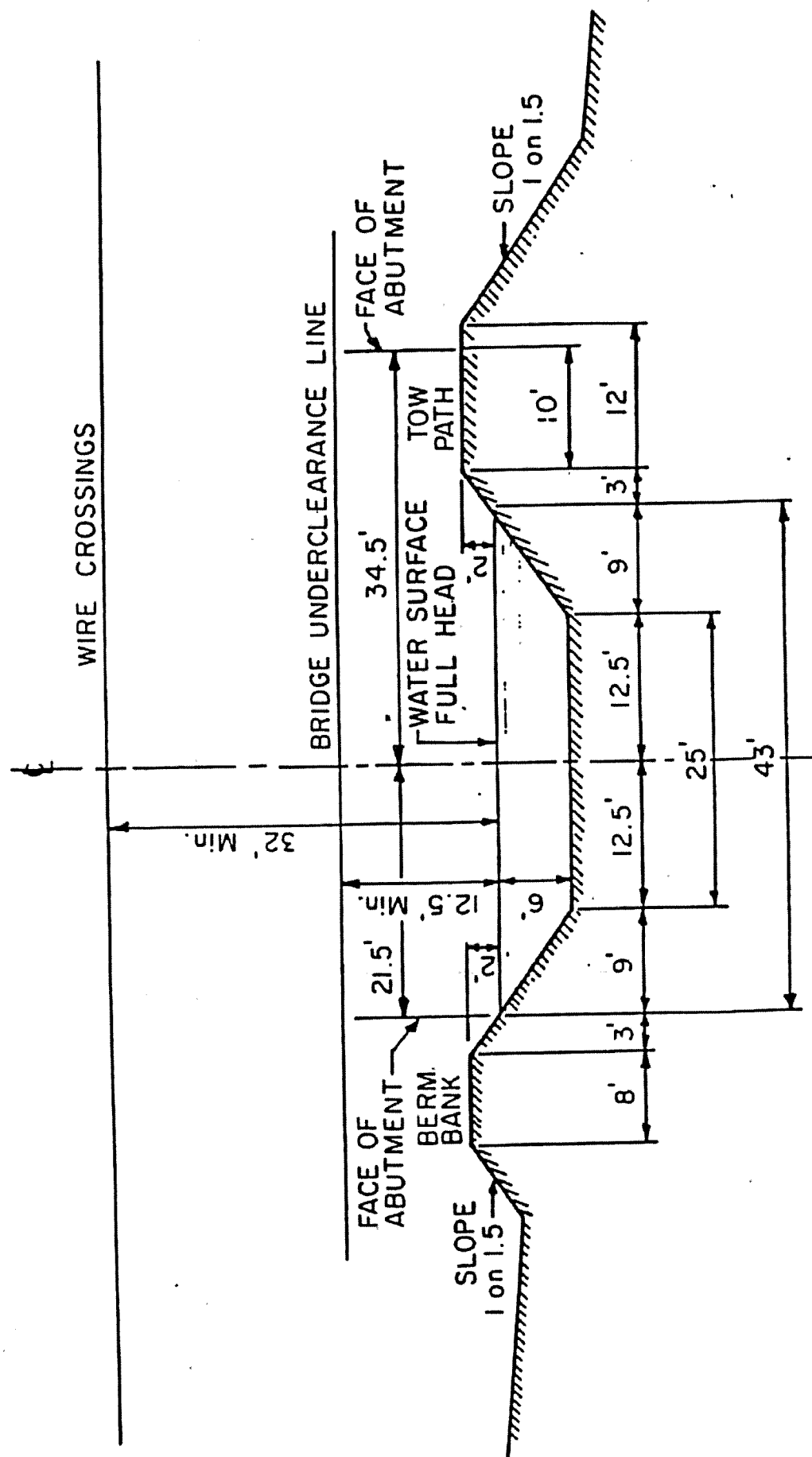
As to the boundaries of the Canal property, no deeds containing descriptions of the land taken by metes and bounds were given by the original landowners to the Commonwealth. No such description was required under Act of April 9, 1827. As stated in Haldeman v. The Pennsylvania Railroad Co., *supra*:

But when by the Act of 1827 it was provided, that valuations and assessments should not be made until after the completion of the work [of constructing the Canal], the reason for requiring a description of that intended for permanent use ceased. The extent of the property thus appropriated was defined on the ground, and the nature of the interests required was plainly indicated.

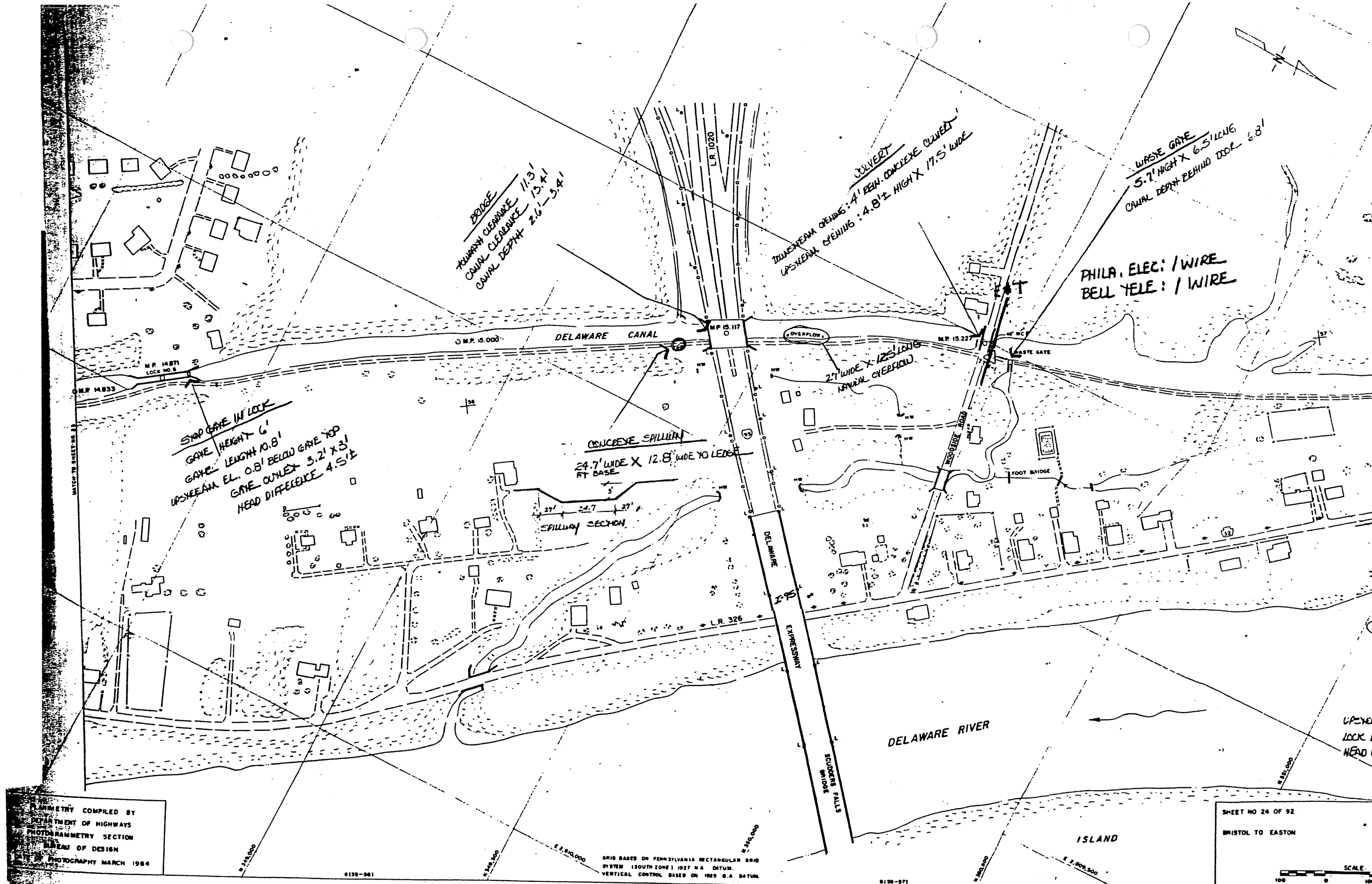
Further, as the Court stated in Pennsylvania Canal Co. v. Harris, 101 Pa. 80 (1882):

In ascertaining the boundaries of the land taken by the Commonwealth [in constructing the Canal], if satisfactory monuments on the ground cannot be found, regard must be had to the purpose for which the land was to be used, as bearing on the quantity probably taken. The purpose for which the canal was designed, and its practical enjoyment, requires not only the ground covered by water, and banks of sufficient strength to confine the water in place, but also a towing path on one side, on which horses may travel, and a berme bank on the other against which boats may rest, and to which they may be tied.

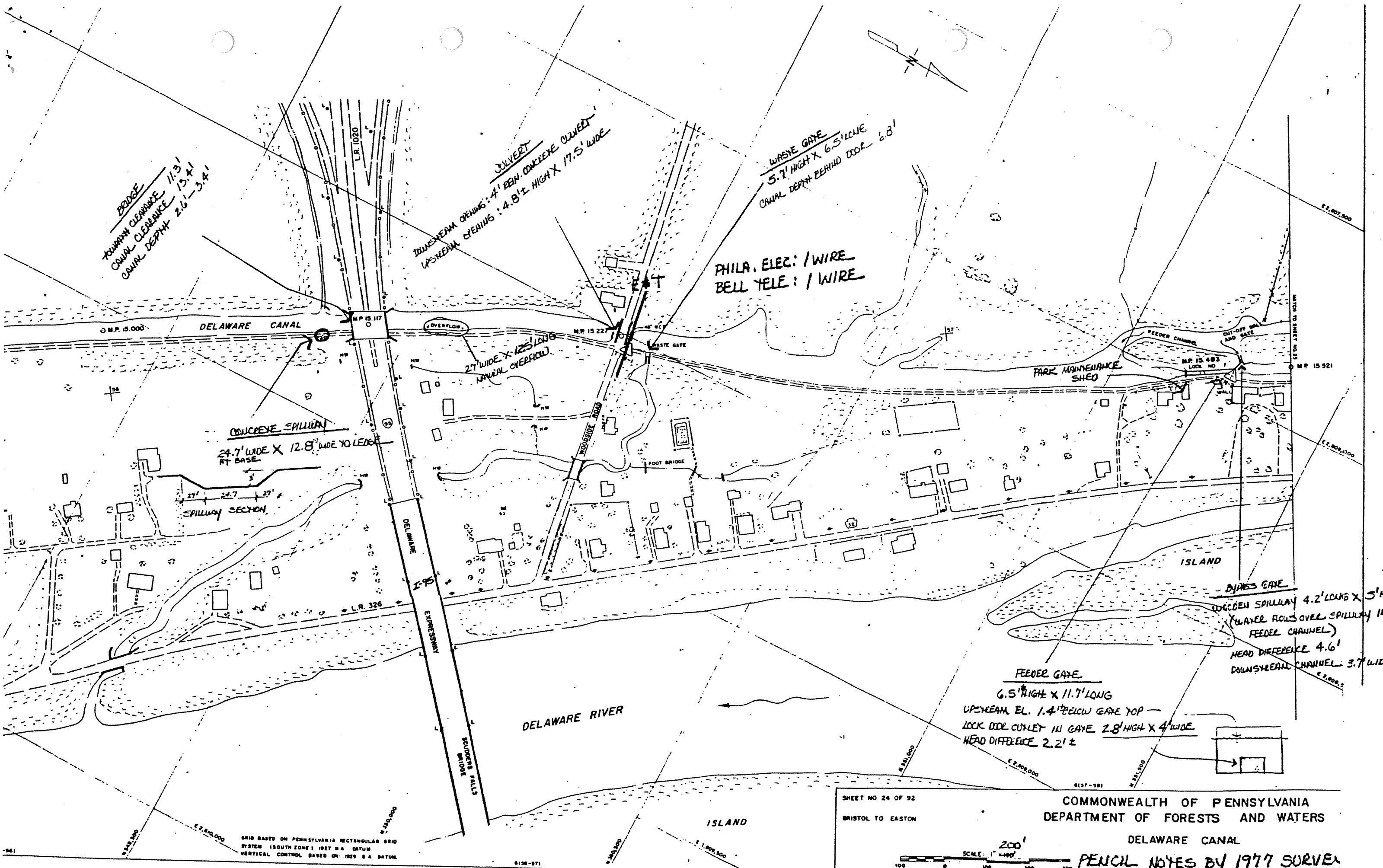
In determining the precise dimensions of the land taken for the canal works, reference may be made to the terms and specifications of the original contracts for the construction of the Canal. Western Pennsylvania R.R. Co. v. Sharp, 4 Walker 257, 26 Pitt. Legal J. 129 (Pa. 1878). In the case of the Delaware Division, these documents establish minimum standard dimensions of twelve feet for the towpath and eight feet for the berm, plus whatever outer slopes may have been constructed to elevate the banks of the canal. In this connection there is attached a diagram of the standard cross section of the Delaware Canal, reproduced from a plan dated December 29, 1911.



STANDARD CROSS SECTION  
DELAWARE DIVISION CANAL  
SCALE: 1" = 20'







BRIDGE  
TOWARD CLEARANCE 11.3'  
CANAL CLEARANCE 15.4'  
CANAL DEPTH 2.6'-3.4'

CUVERT  
DOWNSTREAM OPENING: 4' REIN. CONCRETE CULVERT  
UPSTREAM OPENING: 4.8' ± HIGH X 17.5' WIDE

WASTE GATE  
5.7' HIGH X 6.5' LONG  
CANAL DEPTH BEHIND DOOR 6.8'

PHILA. ELEC: / WIRE  
BELL TELE: / WIRE

CONCRETE SPILLWAY  
24.7' WIDE X 12.8' WIDE TO LEDGE  
AT BASE

SPILLWAY SECTION

27' WIDE X 12.5' LONG  
NATURAL OVERFLOW

PARK MAINTENANCE SHED

ISLAND

DYKES GATE  
WOODEN SPILLWAY 4.2' LONG X 5' H  
(WATER FLOWS OVER SPILLWAY IN  
FEEDER CHANNEL)  
HEAD DIFFERENCE 4.6'  
DOWNSTREAM CHANNEL 3.7' WIDE

FEEDER GATE  
6.5' HIGH X 11.7' LONG  
UPSTREAM EL. 1.4' BELOW GATE TOP  
LOCK DOOR CUTLET IN GATE 2.8' HIGH X 4' WIDE  
HEAD DIFFERENCE 2.2' ±

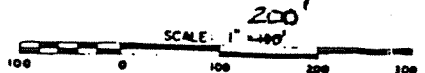
GRID BASED ON PENNSYLVANIA RECTANGULAR GRID  
SYSTEM (SOUTH ZONE) 1927 N.A. DATUM  
VERTICAL CONTROL BASED ON 1929 G.A. DATUM

SHEET NO 24 OF 92  
BRISTOL TO EASTON

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF FORESTS AND WATERS

DELAWARE CANAL

PENCIL NOTES BY 1977 SURVEY



## Record of Telephone Conversation

<b>Project Name: I-95/Scudder Falls Bridge Improvement Project</b>	<b>Project Number: P-717</b>
<b>Recorded by: Travis Beckwith, A.D. Marble</b>	<b>Date: 28 April 04</b>
<b>Conversation with: Monica Harrower/Zeph Parmenter</b>	<b>Telephone: 610-205-6709</b>
<b>Organization: PennDOT District 6.0/Pennsylvania Historical and Museum Commission</b>	<b>Fax:</b>

### Summary of Conversation:

Spoke with Monica Harrower of PennDOT concerning the boundary for the Delaware Canal. She will be calling someone from the National Park Service or PHMC in the near future. The issue at hand is that the initial boundary (determined in 1974) is not very accurate, and in some cases is in the middle of the canal. Monica got Zeph Parmenter of PHMC on a conference call to discuss the proposed boundary. Zeph said traditionally they would define the boundary as the towpath and the berm along with any other properties that were associated with the canal. Zeph does not see the need to use a boundary that is any further than the toe of slope or to provide for a buffer for the canal. Since the NPS will be reviewing this we may need to alter the boundary somewhat in the future, however for now we should use the above as a guide.



Commonwealth of Pennsylvania  
Pennsylvania Historical and Museum Commission  
**Bureau for Historic Preservation**  
Commonwealth Keystone Building, 2nd Floor  
400 North Street  
Harrisburg, PA 17120-0093

DEC 04 2003

December 1, 2003

A.D. Marble & Company, Inc.  
Attn: Brooke Blades  
375 East Elm Street, Suite 200  
Conshohocken, PA 19428

TO EXPEDITE THIS CASE  
BHP REFERENCE NUMBER

RE: ER# 2004-8011-017-B  
FHWA: I-95/Scudder Falls Bridge Improvement  
Project, Proposed Geoarchaeological Investigations  
Upper Makefield Township, Bucks County

Dear Mr. Blades:

The Bureau for Historic Preservation (the State Historic Preservation Office) has reviewed the above named project in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended in 1980 and 1992, and the regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation as revised in 1999. Our comments are as follows:

We concur with the proposal dated November 18, 2003 pertaining to the proposed geoarchaeological investigation for this project. It is our understanding that the geomorphological assessment and the related archaeological testing will conform to our guidelines for archaeological investigations. We look forward to reviewing the results of this investigation in the near future.

If you have any questions or comments concerning our review of this project, please contact Mark Shaffer at (717) 783-9900.

Sincerely,

Kurt W. Carr, Chief  
Division of Archaeology & Protection

cc: PA FHWA  
R. Keller, PDOT, District 6-0

J66 → AYK

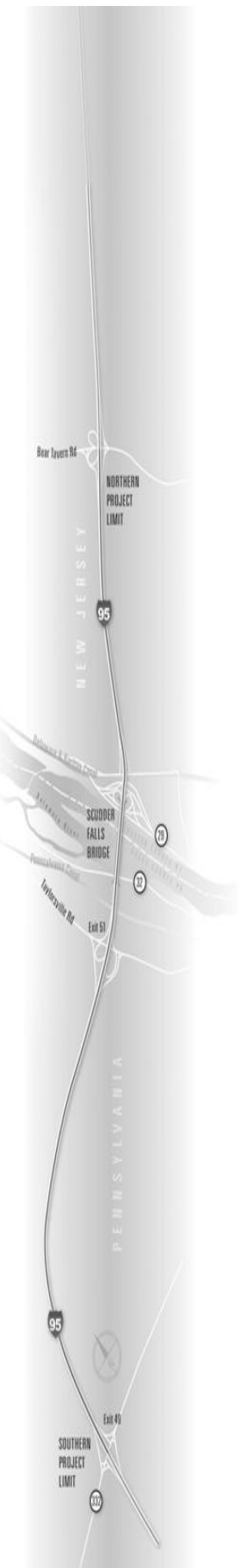
File 38476.20



## **NEW JERSEY**

### **SECTION 4(f) Coordination**

**(Officials having jurisdiction and Section 106.)**



HPO-12008-044 PROD  
04-0137-12**State of New Jersey****DEPARTMENT OF ENVIRONMENTAL PROTECTION**

NATURAL &amp; HISTORIC RESOURCES, HISTORIC PRESERVATION OFFICE

PO Box 404, Trenton, NJ 08625

TEL: (609) 292-2023 FAX: (609) 984-0578

www.state.nj.us/dep/hpo

**JON S. CORZINE**

Governor

**MARK N. MAURIELLO**

Acting Commissioner

December 10, 2008

Kevin M. Skeels, P.E.  
Senior Program Manager - System Enhancements  
Delaware River Joint Toll Bridge Commission  
110 Wood and Grove Streets  
Morrisville, PA 19067

Dear Mr. Skeels:

As Deputy State Historic Preservation Officer for New Jersey, in accordance with 36 CFR Part 800: Protection of Historic Properties, as published in the Federal Register on December 12, 2000 (65 FR 77725-77739) and amended on July 6, 2004 (69 FR 40553-40555), I am providing Consultation Comments on the following proposed undertaking:

*Mercer County, Ewing Township  
I-95 / Scudder Falls Bridge Improvement Project*

These comments were prepared in response to your request for HPO review and comment on the following report:

*I-95 / Scudder Falls Bridge Improvement Project  
Draft Technical Memorandum No. 25  
Historic Resources Survey, Determination of Eligibility, and  
Determination of Effect Report, Volumes I & II, September 2008  
Ewing Township, Mercer County, New Jersey  
Contract C-393A, Capital Project No. CP0301A, Account No. 716-06-012  
Prepared for Delaware River Joint Toll Bridge Commission in cooperation with  
Federal Highway Administration and New Jersey Department of Transportation  
Prepared by A.D. Marble & Company*

**Summary:** The proposed project will have an adverse effect on the previously identified and New Jersey and National Register listed Delaware and Raritan Canal Historic District. Further consultation is required in order to develop mitigation measures appropriate to the nature and magnitude of the adverse effects. New SHPO opinions are being issued for the Charles S. Maddock House and the New Jersey State Police Headquarters Historic District. The Delaware and Raritan Canal Historic District, is being amplified to include previously unidentified contributing resources.

### Project Description

The proposed project involves improvements to I-95 and the Scudder Falls Bridge in Ewing Township, New Jersey and Lower Makefield Township, Pennsylvania. The proposed improvements, as detailed in the report, to the I-95 Scudder Falls Bridge over the Delaware River and adjoining sections of I-95 are being undertaken to alleviate traffic congestion and improve operational and safety conditions. The project will take place along approximately 4.4 miles of the I-95 mainline and includes the construction of a replacement bridge over the Delaware River and ancillary improvements at the four interchanges, two of which are on the New Jersey side of the Delaware River, located at Route 29 and Bear Tavern Road. The current I-95 bridge over the Delaware River is a divided four lane bridge consisting of two lanes in each direction with no shoulders. The preferred project alternative will replace the existing bridge with a new wider structure, consisting of five northbound lanes and four southbound lanes as well as a pedestrian/bike pathway. The bridge will be constructed on the same alignment, but due to width expansion will extend further to the north than the current structure.

### 800.4 Identifying Historic Properties

The above-referenced survey report documented the results of an intensive-level architectural survey of twenty-six properties within the project's Area of Potential Effects (APE).

The HPO concurs with the consultant that the **Charles S. Maddock House (1076 River Road, Block 423.01, Lot 96)** is eligible for listing in the New Jersey and National Registers of Historic Places under Criterion C for architecture as a well preserved example of the Free Classic subtype of the Queen Anne style. The period of significance for the property is circa 1830, the year of the houses construction, to circa 1902, when a major restoration of the house took place. The HPO does not have enough information to provide a finding that the Charles S. Maddock House is eligible under Criterion B. Additional information would be needed to conclude the Criterion B argument. Information placing Charles Maddock in the context of his particular role in the development of pottery and also survey information on those properties associated with him would need to be provided. Since additional information on a Criterion B argument would not change the affects assessment the HPO is not requesting further information at this time.

The HPO concurs with the conclusion of the submitted report that the **New Jersey State Police Headquarters Historic District** is eligible for listing in the New Jersey and National Registers of Historic Places. The headquarters is eligible under Criterion A, B, and C. It is eligible under Criterion A for its association with the development of law enforcement in the State of New Jersey. The property is eligible under Criterion B for its associations with Superintendent H. Norman Schwarzkopf. The New Jersey State Police Headquarters Historic District is eligible under Criterion C as a unique collection of structures that remain in their original orientation and reflects the developing organization, needs, and capabilities of the New Jersey State Police during the second quarter of the twentieth century. The New Jersey State Police Headquarters is located in



HPO-L2008-044 PROD  
04-0137-12

West Trenton, Mercer County, on River Road (NJ Route 175) between Interstate 95 and West Upper Ferry Road. The boundaries of the historic district encompass the area of the central courtyard and its surrounding buildings at the northern end of State Police Drive associated with the training facilities that were erected between 1924-1950. The boundaries include the following buildings which are contributing to the historic district:

- Building 2-NJSP Bureau of Identification,
- Building 3 Dormitory and Classroom,
- Building 4 Alfred E. Driscoll Building,
- Building 5 Garage,
- Building 6 (not named),
- Building 7 (not named),
- Building 8 Mess Hall,
- Building 9 Civilian Quarters,
- Building 10 Officer's Quarters,
- Building 11 Superintendent's Quarters,
- Building 12 Gymnasium,
- Building 14 Recruit Dormitory.

The period of significance of the property is currently 1924-1958. At this time the property does not appear to meet Criteria Consideration G, for exceptional significance at this time. However, the HPO believes that the period of significance for this resource could potentially extend into the 1970's when the training center moved from this location to Sea Girt. Therefore, as the fifty year mark changes so will the period of significance of the property. For example, in 2009, the period of significance for the district will be 1924-1959, in 2015 the period of significance would be 1924-1965, etc.

The HPO concurs that one previously identified historic resource, the Delaware and Raritan Canal Historic District (D & R Canal), which is listed on New Jersey and National Registers of Historic Places, is located within the project's (APE). It is my opinion as Deputy State Historic Preservation Officer that the Belvidere and Delaware Railroad, which is located within the New Jersey and National Register boundaries of the Delaware and Raritan Canal Historic District, is a contributing element to the Canal District. The Bel-Del, as its name was abbreviated, is significant under Criterion A for its association with the D & R Canal and its role in transportation. The Bel-Del obtained its charter in 1836 from the New Jersey Legislature to partially employ the canal tow path as its right-of-way. Since the canal's use was limited to when the water was not frozen over, the Bel-Del supplemented the canal's transportation abilities. The Panic of 1837 delayed the construction of the railroad. In 1849, the railroad's construction began after enough money was raised. Both the D & R Canal and the Bel-Del were owned and operated by the same Joint Companies. The Bel-Del was always intended to supplement the D & R Canal's ability to transport goods. The Bel-Del operated until the late 1960's when it was bought by CONRAIL. The tracks in the project area were removed in the 1970s. The Structures and facilities within the D & R Canal Boundaries that comprise the Belvidere and Delaware Railroad contribute to the district. At this time, since survey of the Bel-Del was limited to the area of the project, a boundary description beyond the APE is not available but is anticipated to be at least the length of the railroad adjacent to the canal. Portions of the Bel-Del that are outside the D & R Canal's listed boundaries

HPO-L2008-044 PROID  
04-0137-12

would require additional evaluation outside the scope of consultation for this project. The period of significance for the Belvidere and Delaware Railroad is 1849, the year of its construction, until 1933, the year the canal stopped functioning.

The submitted report concludes that the Abner Scudder House (376 West Upper Ferry Road) is individually eligible for listing in the New Jersey and National Register of Historic Places under Criterion A. The HPO respectfully disagrees with this assessment. It does not appear from the information provided that Jasper S. Scudder, or any other Scudder living in the house, was integral to the founding of Ewing as a separate municipality from Trenton. The house is also not eligible under criterion B or C.

#### **800.5 Assessment of Adverse Effects**

The project will have an adverse effect on the Delaware and Raritan Canal Historic District. The adverse effect is the result of the construction of a new, significantly wider I-95/Scudder Falls Bridge and the construction of two additional bridges (each 40 feet wide and 120 feet long) for the on and off ramps for the Route 29 interchange, resulting in an increase in the area of overhead structures spanning the Delaware and Raritan Canal Historic District. The construction of a cantilevered pedestrian/bike pathway will also adversely affect the canal due to the additional width over the canal. The construction of a 200 foot retaining wall and the acquisition of a small piece of the historic district's property also contribute the project's adverse effect.

The I-95/Scudder Falls Bridge Improvement project will have no adverse effect to the Charles S. Maddock House and New Jersey State Police Headquarters Historic District.

#### **800.6 Resolution of Adverse Effects**

The HPO looks forward to continuing consultation among all consulting parties in accordance with 800.6 in order to develop mitigation measures appropriate to the nature and magnitude of the adverse effects upon the Delaware and Raritan Canal Historic District.

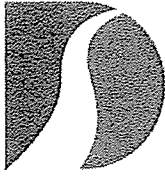
If you have any questions regarding this letter please contact Michelle Hughes at (609) 984-6018. Thank you.

Sincerely,



Daniel D. Saunders  
Deputy State Historic  
Preservation Officer

CC: Barbara Frederick, A.D. Marble & Co.  
Janet Fittipaldi, NJDOT  
Jeanette Mar, FHWA  
Ernest Hahn, Delaware and Raritan Canal Commission



Delaware River  
Joint Toll Bridge  
Commission

October 9, 2008

Mr. Ernest P. Hahn, Executive Director  
Delaware & Raritan Canal Commission  
Route 29, Prallsville Mills  
P.O. Box 539  
Stockton, New Jersey 08559-0539

Re: Contract No. C-393A, Capital Project 0301A  
Preliminary Engineering and Environmental Documentation of the Scudder Falls (I-95)  
Toll Supported Bridge Improvements  
**Delaware & Raritan Canal Commission Coordination**

Dear Mr. Hahn:

Thank you for sharing your ideas with us regarding potential mitigation measures associated with the I-95 / Scudder Falls Bridge Improvement Project. I would like to invite you and representatives of the other agencies referenced in your letter of August 5, 2008 to a meeting. The intent of this meeting is to give the agencies, DRJTBC, FHWA, and NJDOT an opportunity to discuss your suggestions, including the proposed construction of a pedestrian swing bridge over the canal at Moore's Station, in greater detail.

We are planning to hold the meeting at the Commissions Capital Program Management Consultant's office in Trenton, New Jersey on Friday October 24, 2008 at 10 AM. I would appreciate it if you and the other agencies copied on this letter could respond to Kevin Skeels of my staff at 215-266-4894 by Wednesday October 15, 2008 at 4:00 PM to confirm that you will be able to attend on the specified date and time. If you have any questions or need any further information from me regarding this meeting, please feel free to contact me at 267-790-1042.

We look forward to the opportunity to discuss your comments and feedback.

Very truly yours,

GEORGE G. ALEXANDRIDIS, P.E.  
Chief Engineer

110 Wood and Grove Streets  
Morrisville, PA 19067  
Phone (215) 295-5061 FAX (215) 295-4436



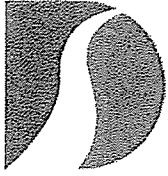
## CONTINUATION SHEET

DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

GGA/kms

cc: Frank G. McCartney, DRJTBC Executive Director  
Andrea Tingey, NJ HPO  
Dan Saunders, NJ HPO  
Kevin Koslosky, NJDEP Green Acres Program  
Judeth Yeaney, NJDEP Green Acres Program  
Bill Bogosian, NJ Water Supply Authority  
Patricia Kallessen, Delaware and Raritan Canal State Park Superintendant  
Al Payne, Division of Parks & Forestry, Office of Resource Development  
Tom Carbone, NJDOT Project Planning and Development- South  
Mark Rollo, NJDOT Program Manager  
Janet Fittipaldi, NJDOT  
Jeanette Mar, FHWA Environmental Coordinator

110 Wood and Grove Streets  
Morrisville, PA 19067  
Phone (215) 295-5061 FAX (215) 295-4436



Delaware River  
Joint Toll Bridge  
Commission

bcc: Frank J. Tolotta, Deputy Executive Director of Operations  
Kevin M. Skeels, P.E., Project Manager  
George G. Alexandridis, P.E. Program Area Manager  
Bijan Pashanamaei, P.E. DMJM Harris Project Manager  
Joseph Grilli, P.E. HNTB Project Manager  
Engineering Project File

110 Wood and Grove Streets  
Morrisville, PA 19067  
Phone (215) 295-5061 FAX (215) 295-4436



DELAWARE  
TOLLS  
STATION  
2008 AUG 11 PM 2:15

August 5, 2008

George Alexandridis  
Delaware River Joint Toll Bridge Commission  
110 Wood Street  
Morrisville, PA 19067

Dear Mr. Alexandridis:

Although a formal application for the above-referenced project has not been submitted to the various regulatory agencies, representatives from those agencies have met on several occasions with Joint Toll Bridge Authority staff and their consultants to be briefed on it. The latest briefing took place on June 26, 2008. The state agencies normally involved with the operation and protection of the Delaware and Raritan Canal State Park meet every quarter to discuss upcoming projects, including maintenance, restoration, capital improvements and acquisitions. At the July 9, 2008 D&R Canal State Park quarterly coordination meeting, the following agencies met and informally discussed the proposed project based on the latest information presented at the June 26<sup>th</sup> meeting:

State Historic Preservation Office  
Green Acres Program  
NJ Water Supply Authority  
Division of Parks and Forestry  
Delaware and Raritan Canal Commission  
Office of Resource Development

The initial discussions between these agencies concluded that the latest design as presented would result in significant adverse impacts to the historic and recreational resources of the D&R Canal State Park. In addition, the proposed construction would require a conveyance of State-owned parkland property within the Canal Park. The group also concluded that the concept of a pedestrian walkway attached to the interstate highway bridge would also result in significant adverse impacts to the Canal Park, due to the structures or fill necessary to bring the walkway back down to the multi-use path's grade.

The following items are offered as preliminary comments on the proposed project and possible conditions of approval to mitigate for the project's potential impacts:

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION  
Jon Corzine, Governor Lisa P. Jackson, Commissioner

PRALLSVILLE MILLS 33 RISLER STREET P.O. BOX 539 STOCKTON, NJ 08559-0539  
609-397-2000 FAX 609-397-1081 www.dandrcanal.com

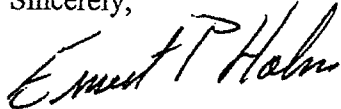


1. While we support the goal of increasing pedestrian access in the vicinity of the Canal Park, because of the impacts associated with the construction of the pedestrian path we do not support its inclusion in the design of the new bridge.
2. The proposed new spans must not result in any added pilings within the Delaware and Raritan Canal.
3. As part of the mitigation for the project, the existing ramp from River Road must be restricted to emergency vehicles only.
4. The new concrete pilings and retaining walls should be faced in stone using a random ashlar pattern with deeply recessed mortar joints (to mimic dry laid wall). The use of a very dark colored mortar joints will also aid this effect. We recommend that test panels be constructed by the contractor for review and approval by representatives of the Historic Preservation Office, Canal Commission, and State Park Service.
5. All runoff from the roadways must be diverted away from the canal.
6. Measures to preserve openness and improve aesthetics under the bridges should be taken.
7. The earthen embankment along Upper River Road and extending into the canal should be treated with stone facing to reduce erosion. The stone facing should be in a random ashlar pattern, laid up with darkly tinted mortar, and deeply recessed joints.
8. As mitigation for the adverse impacts of this project, and as compensation for the conveyance of State property rights for the project, the agencies recommend the construction of a historically accurate, operating swing bridge at the Moore's Station location in Hopewell Twp. The Commission and SHPO staffs have worked for years with NJDOT for this project's construction. Due to a well publicized lack of funding this project has not proceeded beyond a preliminary engineering study, completed by NJDOT's consultant. The construction of the swing bridge would create a powerful and invaluable historic interpretation site and provide additional pedestrian access to the Park. Both of these benefits relate directly to the potential impacts of this project.

Please note that the above comments are intended to guide the Commission as it finalizes its plans for this project, but should not be interpreted as approval of the project by any of the agencies with regulatory jurisdiction. In particular, it will still be necessary to obtain approvals for the project from the DEP Commissioner and the State House Commission for conveyance of property rights under N.J.S.A. 13:1D-51 et seq., from the State Historic Preservation Office under N.J.S.A. 13:1B-15.128 et. seq., the New Jersey Register of Historic Places Act (Regulations are at N.J.A.C. 7:4) and the Statute for the federal Section 106 Review is: 16 U.S.C. 470s, the National Historic Preservation Act (Regulations are at 36 CFR Part 800) and from the Delaware and Raritan Canal Commission under N.J.S.A. 13:13A-1 et seq.

Feel free to call me to discuss these comments further.

Sincerely,

A handwritten signature in cursive script, appearing to read "Ernest P. Hahn".

Ernest P. Hahn  
Executive Director

c: Janet Fittipaldi  
Joe Sweger  
Tom Carbone  
Patricia Kalleser  
Al Payne  
Andrea Tingey  
Kevin Koslosky  
Bill Bogosian  
Judeth Yeane



*File 38476.20*

**State of New Jersey**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**JON S. CORZINE**  
*Governor*

Natural and Historic Resources, Historic Preservation Office  
PO Box 404, Trenton, NJ 08625  
TEL: (609) 292-2023 FAX: (609) 984-0578  
[www.state.nj.us/dep/hpo](http://www.state.nj.us/dep/hpo)

**LISA P. JACKSON**  
*Commissioner*

April 22, 2008

Janet Fittipaldi  
Manager, Bureau of Landscape Architecture and Environmental Solutions  
New Jersey Department of Transportation  
1035 Parkway Avenue  
Post Office Box 600  
Trenton, New Jersey 08625-0600

Dear Ms. Fittipaldi,

As Deputy State Historic Preservation Officer for New Jersey, in accordance with 36 CFR Part 800: Protection of Historic Properties, as published in the Federal Register on December 12, 2000 (65 FR 77725-77739) and amended on July 6, 2004 (69 FR 40553-40555), I am providing Consultation Comments on the following proposed undertaking:

*I-95 / Scudder Falls Bridge Improvement Project  
Ewing Township, Mercer County, New Jersey*

These comments were prepared in response to your request for HPO review and comment on the following report:

*I-95 / Scudder Falls Bridge Improvement Project  
Draft Technical Memorandum No. 25  
Historic Resources Survey, Determination of Eligibility, and  
Determination of Effect Report, Volumes I & II, February 2008  
Ewing Township, Mercer County, New Jersey  
Contract C-393A, Capital Project No. CP0301A, Account No. 716-06-012  
Prepared for Delaware River Joint Toll Bridge Commission in cooperation with  
Federal Highway Administration and New Jersey Department of Transportation  
Prepared by A.D. Marble & Company*

**Summary (New SHPO Opinions) – The HPO requests a revised copy of Technical Memorandum No. 25 (architectural survey) that addresses the comments and concerns enumerated in this letter. Once definitive eligibility conclusions have been reached on the Abner Scudder House, Charles S. Maddock House & Maddock Vacation House, and the New Jersey State Police Headquarters Historic District, the project's potential effects on these resources will be assessed. The proposed project will have an adverse effect on the previously identified and New Jersey and National**



**Register listed Delaware and Raritan Canal Historic District. Further consultation is required in order to develop mitigation measures appropriate to the nature and magnitude of the adverse effects.**

---

### **Project Description**

According to the submitted report, the proposed project involves improvements to I-95 and the Scudder Falls Bridge in Ewing Township, New Jersey and Lower Makefield Township, Pennsylvania. The proposed improvements to the I-95 Scudder Falls Bridge over the Delaware River and adjoining sections of I-95 are being undertaken to alleviate traffic congestion and improve operational and safety conditions. The project will take place along approximately 4.4 miles of the I-95 mainline and includes the construction of a replacement bridge over the Delaware River and ancillary improvements at the four interchanges, two of which are on the New Jersey side of the Delaware River, located at Route 29 and Bear Tavern Road. The current I-95 bridge over the Delaware River is a divided four lane bridge consisting of two lanes in each direction with no shoulders. The preferred project alternative will replace the existing bridge with a new wider structure, consisting of five northbound lanes and four southbound lanes, which will be constructed with the new bridge extending north from the southern edge of the existing bridge.

### **800.4 Identifying Historic Properties**

The above-referenced survey report documented the results of an intensive-level architectural survey of twenty-six properties within the project's Area of Potential Effects. The HPO requests that a revised copy of Technical Memorandum No. 25 be submitted to our office that addresses the following comments and concerns pertaining to the survey of architectural resources:

The HPO concurs that one previously identified historic resource, the **Delaware and Raritan Canal Historic District**, which is listed on New Jersey and National Registers of Historic Places, is located within the project's Area of Potential Effect (APE). The submitted report, however, did not include architectural survey forms for this resource. Even though the Canal is a previously identified and register listed historic resource, the appropriate architectural survey forms documenting the portion of the canal within the APE are still required. Also, the revised report should include a discussion of whether or not the Belvidere and Delaware Railroad, which is located within the New Jersey and National Register boundaries of the Delaware and Raritan Canal Historic District, is a contributing element of the Canal District.

The HPO respectfully disagrees with the eligibility conclusion of the submitted report with regards to the **Peter DeGrave Farmstead**. This property is not eligible for listing in the New Jersey and National Registers of Historic Places under Criterion A. Criterion A requires an association with events that have made a significant contribution to the broad patterns of our history. There is no evidence presented in the submitted report that the Peter DeGrave Farmstead has an important association with one or more

events or trends that are important in the historic context of agriculture in Ewing Township or Mercer County. While some outbuildings still remain, the farmstead does not possess a sufficient level of integrity to relay its early twentieth century function as a dairy farm.

The submitted report concludes that the **Abner Scudder House** (376 West Upper Ferry Road) is eligible for listing in the New Jersey and National Register of Historic Places under Criterion B for its association with the Scudder family. Please note that a finding of eligibility under Criterion B must be for an association with a specific, historically significant individual and cannot be for an association with a family. In order to justify this recommendation of eligibility under Criterion B, the revised report should evaluate how the specific individuals associated with the Abner Scudder House are historically significant to justify New Jersey and National Register eligibility.

The HPO concurs with the conclusion of the submitted report that the **Charles S. Maddock House** is eligible for listing in the New Jersey and National Registers of Historic Places under Criterion C for architecture as a well preserved example of the Free Classic subtype of the Queen Anne style. However, as previously stated, a finding of eligibility under Criterion B must be for an association with a specific, historically significant individual and cannot be for an association with a family. Therefore, the statement of significance must evaluate Charles S. Maddock as a locally significant person, not the Maddock family. If it is determined that the property's association with Charles S. Maddock warrants a conclusion of eligibility under Criterion B, the period of significance for the property may need to be amended to reflect the time period when Charles Maddock was directly linked to the property. Also, the revised report should take into consideration how this period of significance compares with the period of significance under Criterion C. The HPO also has several questions about certain elements of the property. The site map shows an outbuilding to the northeast of the main house, which is not described in the survey forms. The aerial photo delineating the proposed historic resource boundary shows at least two outbuildings and a swimming pool is visible in photo #4. These secondary structures must also be described in the revised architectural survey. While the HPO concurs that the Maddock Vacation House is not individually eligible for listing in the New Jersey and National Registers of Historic Places, it may be eligible as a contributing element of the Charles S. Maddock property. This possibility was not explored in the submitted report. A reevaluation of the Maddock Vacation House as a possible contributing element of the Charles S. Maddock property and an adjustment of the historic resource boundaries should be evaluated in the revised architectural survey report.

The HPO concurs with the conclusion of the submitted report that the **New Jersey State Police Headquarters Historic District** is eligible for listing in the New Jersey and National Registers of Historic Places under Criterion A for its association with the development of law enforcement in the State of New Jersey. However, as a historic district, the New Jersey State Police Headquarters must also be eligible under Criterion C as a unique collection of structures that remains in its original orientation and reflects the developing organization, needs, and capabilities of the New Jersey State Police during the second quarter of the twentieth century. The Historic Preservation Office's *Guidelines for Architectural Survey* define a historic district as "a geographical area which possesses

a significant concentration, linkage, or continuity of sites, buildings, structures, or objects connected historically or aesthetically by plan or physical development. A historic district conveys its importance as a unified entity even though it is often composed of a wide variety of resources." National Register Criterion C refers to historic districts as resources that "represent a significant and distinguishable entity whose components lack individual distinction." Therefore, while the individual structures within the New Jersey State Police Headquarters Historic District may not be individually eligible under Criterion C, they are eligible under Criterion C as a group.

Also, the submitted report states that there are 13 buildings within the proposed boundary that contribute to the historic district, yet Continuation Sheet 1, which contains the site map, lists only twelve contributing buildings. The Eligibility Worksheet for the district states that there are 10 key contributing structures, 3 contributing structures, and 2 non-contributing structures within the boundaries of the district. This is incorrect. Key contributing structures are those that are individually eligible for listing in the New Jersey and National Registers of Historic Places. As none of the structures within the boundaries have been recommended as individually eligible by the consultant, the report should be revised so that the district consists of 12 contributing and 2 non-contributing structures.

#### **800.5 Assessment of Adverse Effects**

The HPO respectfully disagrees with the effects assessment of the submitted report with regards to the Delaware and Raritan Canal Historic District. The proposed project will have an **adverse effect on the Delaware and Raritan Canal Historic District**. The adverse effect is the result of the construction of a new, significantly wider I-95/Scudder Falls Bridge and the construction of two additional bridges (Each 40 feet wide and 120 feet long) for the on and off ramps for the Route 29 interchange, resulting in an increase in the area of overhead structures spanning the historic district. The construction of a 200 foot retaining wall and the acquisition of a small piece of the historic district's property also contribute the project's adverse effect.

The effects of the I-95/Scudder Falls Bridge Improvement project upon the **Abner Scudder House, Charles S. Maddock House/Charles S. Maddock Vacation House, and New Jersey State Police Headquarters Historic District** cannot be adequately assessed at this time. While the HPO anticipates that the proposed project will have no effect upon these potentially eligible historic resources, the HPO cannot make a final effects assessment until a definitive eligibility determination has been made for each property.

#### **800.6 Resolution of Adverse Effects**

The HPO looks forward to continuing consultation among all consulting parties in accordance with 800.6 in order to develop mitigation measures appropriate to the nature and magnitude of the adverse effects upon the Delaware and Raritan Canal Historic District.



**Miscellaneous Report Comments**

The following items should also be addressed in the revised report requested by the HPO:

1. The Building Attachment form for 1026 River Road also lists the property name as the "Joseph S. Scudder Farm". This name should also be added to the Base Form for that resource.
2. The HPO requests that the survey forms for 376 West Upper Ferry Road (Fisk Mansion) be revised to include information on any other components of the original Fisk Estate that may be located on the property, should any exist.

If you have any questions regarding this letter, please contact Jonathan Kinney at (609) 984-0141. Thank you.

Sincerely,



Terry Karschner  
Acting Administrator &  
Deputy State Historic  
Preservation Officer

Cc: See Attached List



JON S. CORZINE  
Governor

**State of New Jersey**  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
Natural and Historic Resources, Historic Preservation Office  
PO Box 404, Trenton, NJ 08625  
TEL: (609) 292-2023 FAX: (609) 984-0578  
www.state.nj.us/dep/hpo

LISA P. JACKSON  
Commissioner

*Brink*  
File 35476.20  
(Arch.)

March 4, 2008  
HPO-C2008-3  
Log #04-0137-7

Ms. Janet Fittipaldi  
The New Jersey Department of Transportation  
P.O. Box 600  
Trenton, NJ 08625

Dear Ms. Fittipaldi:

As Deputy State Historic Preservation Officer for New Jersey, in accordance with 36 CFR Part 800: Protection of Historic Properties, as published in the Federal Register on July 6, 2004 (69 FR 40544-4055), I am providing Consultation Comments for the following proposed undertaking:

**Mercer County, Ewing Township  
Proposed I-95/Scudder Falls Bridge Improvements  
NJDOT #2200168  
Federal Highway Administration**

---

The following comments are in reply to a letter from you received February 7, 2008 accompanied by the following survey report:

A.D. Marble & Company  
January 22, 2008     *I-95/Scudder Falls Bridge Improvement Project, Technical Memorandum No. 32 (Formerly Technical Memorandum No. 14), Final Archaeology Phase I Report. Prepared for the Delaware River Joint Toll Bridge Commission.*

**800.4 Identification of Historic Properties**

As noted in your letter, the above-referenced revised Phase I archaeological survey report has addressed all of the HPO's previous report comments outlined in our

November 29, 2007 letter. A CD containing copies of the digital images used in the report was submitted to the HPO. In addition, a New Jersey State Museum archaeological registration form for the Reeder's Creek site (28-Me-360) was included in the revised report. The report is acceptable, as revised.

#### **Additional Comments**

Thank you for providing the opportunity to review and comment on the revised Phase I archaeological survey report. The HPO looks forward to continuing consultation on this proposed project. Please do not hesitate to contact Kate Marcopul of my staff at (609) 984-5816 with any questions regarding archaeology.

Sincerely,

A handwritten signature in black ink, appearing to read "Terry Karschner", written over the printed name.

Terry Karschner,  
Acting Administrator and  
Deputy State Historic  
Preservation Officer

Km:u:\...\106\NJDOT\0401377\_ScudderFallsBridge.doc

Cc: Bruce Hawkinson – NJDOT, Bureau of Environmental Solutions  
Thomas Carbone – NJDOT, Project Manager, Planning  
Joe Sweger – NJDOT, Bureau of Environmental Solutions  
Brooke Blades – A.D. Marble & Company  
Canal Society of New Jersey



# CANAL SOCIETY OF NEW JERSEY

*P.O. Box 737, Morristown, NJ 07963-0737*

November 29, 2007

Janet A. Fittipaldi  
Supervising Environmental Specialist  
Division of Capital Program Support  
The New Jersey Department of Transportation  
PO Box 600  
Trenton, NJ 08625

RE: I-95/Scudders Falls Bridge  
Draft Phase I Archeological Survey  
Ewing Township  
Mercer County  
NJDOT#2200168

Dear Janet:

The Canal Society of New Jersey is writing this letter to provide our comments on the above-referenced report and its findings relative to the I-95/Scudders Falls Bridge project. We appreciate this opportunity to express our opinions and concerns about the project.

First, it is our position that the Delaware & Raritan Canal is the major cultural resource of significance within the New Jersey portion of the project area. As such it is surprising that it has only a couple of pages devoted to it within the entire report. Not only is the Delaware & Raritan Canal listed on the New Jersey and National Registers of Historic Places, it is the second most visited State Park in New Jersey as a historic and recreational resource. Furthermore, the Canal Society is familiar with many other historic 19<sup>th</sup>-century canals in this country. Based on this knowledge we recognize the D&R as one of the most intact (if not the most intact) 19<sup>th</sup>-century transportation canals in the US. It is a given that the historic construction elements of the D&R – the canal prism, canal bed liner material, the supporting embankments, the towpath (both the original towpath beneath the Belvidere-Delaware Railroad bed and the relocated towpath on the opposite side of the canal), the bridge sites, lock sites, buildings (and their sites) associated with the canal and the other canal-related structures -- are all contributing elements of the canal's historical significance. As such they should be avoided and protected during the course of this project.

We wish to point out that the brief history of the D&R Canal, on page 26 of the report, indicates that there were no locks on the Feeder Canal, although the outlet lock at Lambertville is mentioned. In fact, there were also locks on the Feeder at Raven Rock, Prallsville and Lambertville. In addition, reference is made to canal "barges." Vessels plying the canal were boats, not barges. The canal boats had rudders and could be steered, making them boats. Barges cannot be steered and are guided by being towed.

The cultural landscape associated with the D&R Canal is a very important attribute of the canal historic district and the State Park. This setting has already been compromised by the construction of the existing I-95 bridge, the associated highway and the Route 29 interchange. Much of this construction occurred prior to the historic designation of the D&R Canal and the protective environmental laws of today. It is the Canal Society's position that the new proposed construction should be designed in a more sensitive

manner to restore at least some of the aesthetic attributes of the setting of the Canal. From the cultural resources report it is unclear what alterations are being proposed to the highway and the bridge. If the bridge is to be replaced in its entirety it would be a wonderful opportunity to remove the obtrusive bridge support pier that encroaches on the canal bed. In addition, the existing stark concrete bridge abutment extends very near to the canal and its towpath. Any new abutments should be set back from the canal site and treated in a more aesthetically appropriate manner. Furthermore, careful consideration should be given to ensuring that easily accessible pedestrian and vehicular access is provided to the canal park as part of the highway construction.

In another reference in the report, mention is made of the so called "lower bridge tender's house" and that nothing remains from this structure. We see no clear evidence that the lack of surviving archeological elements of this building or associated cultural deposits was established. We would like to see this issue clarified and perhaps further investigated.

Another statement was made in the report regarding the Belvidere-Delaware Railroad and that its remains were not significant. We would like to point out that the railroad was built on top of the original D&R Canal Feeder's towpath. During the mid-1980s desilting project of the canal there were several opportunities to observe the cross section of this embankment during the installation and removal of temporary invert drains. At that time it was noted that the Belvidere-Delaware Railroad bed consists of about a 2-foot-thick layer of ash and cinder, beneath which is the surface of the original canal towpath and the supporting embankment of the canal beneath that. The overall embankment was widened by about 1/3 to accommodate the rail line. We believe that all of these archeological features are significant and should be protected.

We would also like to state that it is our opinion that the Trenton Waterpower Canal is a feature of great historical significance which made a major contribution to the industrial development of Trenton in the 19<sup>th</sup> century. As such its physical remains are an important resource. The project area is near the entrance of the waterpower canal and its site is publicly owned as part of the State Park. The report indicates that the waterpower canal is covered with fill at the project site and its archeological sensitivity is rated as low to moderate. We do not understand the basis for this evaluation and would question why the canal prism would not be intact beneath the fill layer (other than where disturbed by any supports from the existing bridge). If the prism of the waterpower canal survives archeologically, it is our opinion that it would constitute a significant cultural resource that should be avoided by this project.

Again we thank you for the opportunity to express our thoughts and opinions on the above-referenced report. It is our sincere hope that all of the interested parties can cooperate together to ensure that the proposed project can be completed in a sensitive manner that will ensure the protection of the Delaware & Raritan Canal State Park and its various historic elements.

Sincerely,

Brian H. Morrell  
President

cc. Dorothy Guzzo, NJ State Historic Preservation Office  
Ernest Hahn, Delaware & Raritan Canal Commission



## State of New Jersey

DEPARTMENT OF TRANSPORTATION

P.O.Box 600

Trenton, New Jersey 08625-0600

JON S. CORZINE  
Governor

KRIS KOLLURI, Esq.  
Commissioner

I-95/Scudder Falls Bridge  
***draft Phase I Archeological Survey***  
Ewing Township  
Mercer County  
NJDOT # 2200168  
Federal #

November 2, 2007

Ms. Dorothy Guzzo  
NJ Department of Environmental Protection  
Historic Preservation Office  
PO Box 404  
Trenton, NJ 08625

Attention: Kate Marcopul - Transportation and Planning Group

Dear Ms. Guzzo:

Please find enclosed a copy of the *draft* archeological survey report entitled **I-95/Scudder Falls Bridge Improvement Project, Technical Memorandum No. 14, Draft Archaeology Phase I Report, Contract C-393A, Capital Project No. CPO301A, Account No. 7161-06-012** which was prepared by A.D. Marble & Company (April 6, 2006) for the Delaware River Joint Toll Bridge Commission. The proposed project entails improvements to the I-95 crossing over the Delaware River at Scudder Falls. A portion of the project is under the jurisdiction of the Delaware River Joint Toll Bridge Commission (DRJTBC); however, both Pennsylvania and New Jersey departments of transportation propose work on their respective sides of the Delaware River. The New Jersey Department of Transportation (NJDOT) proposes improvements to I-95 from the Scudder Falls Bridge east to Bear Tavern Road in the Township of Ewing, Mercer County.

Three archeological sites were identified within the project's APE in New Jersey. These sites are within the area that is or will be under the jurisdiction of the DRJTBC; no significant sites were located within the section of NJDOT's proposed improvements. Based on diagnostic artifacts, the sites date from the Woodland Period of occupation; one site may also contain a Late Archaic component. The sites are known as Reeder's Creek West, Reeder's Creek Center, and Reeder's Creek North. They are located on the former course of Reeder's Creek which was shifted and channelized to its present configuration in the 1950s when the Route NJ 29 interchange with I-95 was constructed. Although physically separated by roadway ramps, the sites belong to the same cultural period and, in all probability, represent contemporaneous occupation. The sites are located on the second terrace or T2 of the Delaware River.

Similar cultural materials were found on the Pennsylvania side of the proposed project, once again leading to the opinion that contemporaneous occupation is being reflected in the same geological situation. Further work (Phase II and data recovery) is being proposed for all the sites.

At this time, the in-field area of the current "S Loop" of the Rt. 29 interchange could not be tested due to unknown locations of subsurface utilities; archeological testing of this area, where proposed retention basins will be located, is required and may prove the presence of cultural

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occupation. The latter is based on the loop's location on the T2 and T3 terraces of the Delaware River. A monitoring-during-construction program is being proposed for this area of the project. Project coordination was initiated on April 4, 2004; you approved the Area of Potential Effect (APE) and the list of interested and consulting parties on April 28, 2004 (HPO-D2004-217 Prod; Log # 04-0137-3 AT).

Although a Phase II study has not been undertaken, the Phase I results are leading to a determination of eligibility under Criterion D. Further study of the sites will need to be undertaken, however, if the sites are to be impacted by the construction activities.

All cultural resources work was conducted in compliance with the requirements of Section 106 of the National Historic Preservation Act of 1966 (as amended), implemented by the regulations described in 36CFR800, and in accordance with the provisions of the Programmatic Agreement executed in November 1996.

If you have any questions about the proposed project, please direct your questions to Tom Carbone, Project Manager, at (609) 530-2728. If you have questions regarding the cultural resources of the project, please call me at (609) 530-5462.


**To the parties listed below**, under Section 106 of the Federal Historic Preservation Act, the Federal Agency, in this case the Federal Highway Administration (FHWA), is required to notify consulting parties and parties who may have an interest in regional history of pending transportation projects in which significant cultural resources may be affected. (A summary of the Section 106 process is enclosed; the Advisory Council on Historic Preservation has prepared this summary.)

As a participant as specified under 36CFR800.2, your review of and comment on the enclosed draft archeological survey is requested. **If you disagree with the findings and conclusions within this letter, please respond to the NJDOT with your comments in 30 days.** Comments can be sent to or emailed to me at the following addresses:

*Mail:* Janet A. Fittipaldi  
The New Jersey Department of Transportation  
PO Box 600  
Trenton, NJ 08625

*E-mail:* [janet.fittipaldi@dot.state.nj.us](mailto:janet.fittipaldi@dot.state.nj.us)

Very truly yours,

  
Janet A. Fittipaldi  
Supervising Environmental Specialist  
Division of Capital Program Support

enclosure

c:CRSScudderFalls

cc: Bruce Hawkinson      *Bureau of Environmental Solutions*  
Thomas Carbone      *Project Manager, Planning*  
Joe Sweger      *Bureau of Environmental Solutions*

w/o enclosure

cc with enclosures:

Ernest Hahn  
Delaware and Raritan Canal Commission  
Route 29, Prallsville Mills  
PO Box 539  
Stockton, NJ 08559-0539

Kevin Dougherty  
U.S. Army Corps of Engineers  
Philadelphia District  
Wanamaker Building  
100 Penn Square East  
Philadelphia, Pa 19107-3390

Stephen Elliot, Clerk  
Ewing Township  
2 Jake Garzio Drive  
Ewing, NJ 08628

Linda Osborne  
Mercer County Cultural and Heritage Commission  
640 South Broad Street  
Trenton, NJ 08650

Sister Lillian Harrington  
Villa Victoria Academy  
376 West Upper Ferry Road  
Ewing, NJ 08628

Ewing Township Historical Preservation Society  
27 Federal City Road  
Ewing, NJ 08638

National Railway Historical Society  
West Jersey Chapter  
PO Box 647  
Palmyra, NJ 08065

Hopewell Valley Historical Society  
PO Box 371  
Pennington, NJ 08534

Canal Society of New Jersey  
PO Box 737  
Morristown, NJ 07963-0737

Ed Buss  
New Jersey Water Supply Authority  
1851 Highway 31  
PO Box 5196  
Clinton, NJ 08809-0196

Superintendent Joseph Fuentes  
New Jersey State Police  
Division Headquarters  
PO Box 7068  
West Trenton, NJ 08628-0068  
Attention: Mark Falzini, Archivist

Gregory Romano, Executive Director  
New Jersey Department of Agriculture  
State Agriculture Development Committee Staff  
PO Box 330  
Trenton, NJ 08625

Ben Spinelli, Executive Director  
New Jersey Department of Community Affairs  
Office of Smart Growth  
PO Box 204  
101 South Broad Street, 7<sup>th</sup> Floor  
Trenton, NJ 08625

Bob Warner  
Jones Farm Minimum Security Unit  
Bear Tavern Road  
Ewing, NJ 08628  
Attention: Lt. Dawes

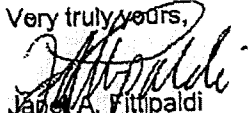
8. Ed Buss  
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2 Jake Garzio Drive  
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27 Federal City Road  
Ewing, NJ 08638
11. Linda Osborne  
Mercer County Cultural and Heritage Commission  
640 South Broad Street  
Trenton, NJ 08650
12. National Railway Historical Society  
West Jersey Chapter  
PO Box 647  
Palmyra, NJ 08065

Public involvement occurs during the life of the project at various stages of project development: per the NJDOT scope-of-work, the consultant is to contact people knowledgeable in the history/prehistory of the area; per Section 106, the consulting parties are invited to review the cultural resources reports and make suggestions on effects and mitigation, if necessary; and per NJDOT Public Involvement Action Plan (PIAP) procedures, the public will be invited to attend a Public Information Center(s).

Our Section 106 public involvement action plan is consistent with the NJDOT's PIAP. The policy promotes an on-going public partnership through early, frequent, and continuous consultation with the public by committing to public notification to the affected parties, citizen input in the identification of the solutions, and dedication on the part of NJDOT to make the public's input meaningful through follow through. Cultural resources are presented to the public and established organizations, such as historical societies, at every opportunity.

The future cultural resources surveys will be conducted within this APE if there is no objection from your Office within 30 days of receipt of this transmittal. If you have any questions, please contact me at 530-5462 or Karen Weber at 530-4946.

Very truly yours,

  
Janet A. Pittipaldi  
Supervising Environmental Specialist  
Bureau of Environmental Services

Enclosures

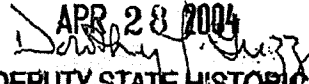
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cc: Elkins Green

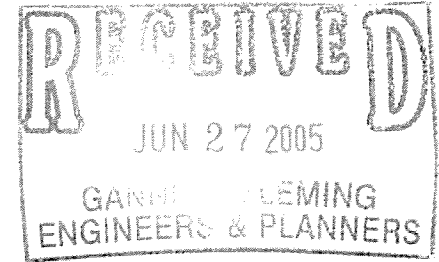
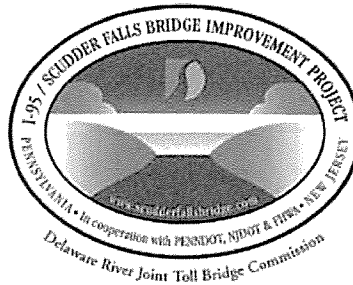
Bureau of Environmental Services

w/o enclosures

**CONCUR**

APR 28 2004  
  
DEPUTY STATE HISTORIC  
PRESERVATION OFFICER





**Delaware River Joint Toll Bridge Commission's  
I-95 / Scudder Falls Bridge Improvement Project**

**NEW JERSEY DELAWARE AND RARITAN CANAL AGENCY FIELD VIEW  
MEETING**

**May 24, 2005—1:30 p.m.  
Delaware and Raritan Canal State Park**

**Attendees**

Ernie Hahn, Executive Director, Delaware and Raritan  
Canal Commission  
Jan Holms, Delaware and Raritan Canal Commission  
Al Payne, New Jersey Division of Parks and Forestry  
Dan Saunders, New Jersey Historic Preservation Office  
Bill Bogosian, New Jersey Water Supply Authority  
Joe Shepherd, New Jersey Water Supply Authority  
Andrew Schneier, New Jersey Division of Parks and Forestry, Delaware and  
Raritan Canal State Park  
Joe Sweger, New Jersey Department of Transportation  
Jihane Fazio, DMJM Harris  
Esther McGinnis, Gannett Fleming, Inc.  
Brooke Blades, A.D. Marble & Company  
Bob Briggs, STV, Inc. (part-time)  
Joe Grilli, HNTB Corporation  
Addie Kim, HNTB Corporation

**Meeting Summary**

A field view meeting to review conditions at the NJ Route 29 Interchange and the Delaware and Raritan Canal and the design options for the I-95/Scudder Falls Bridge Improvement Project was scheduled with Ernie Hahn, Executive Director of the Delaware and Raritan Canal Commission (D&RCC), for May 24, 2005 at 1:30 p.m. This meeting was attended by representatives of the New Jersey Department of Transportation (NJDOT), the New Jersey Water Supply Authority, and the New Jersey Department of Environmental Protection (NJDEP), including the Delaware and Raritan Canal Commission (D&RCC), the New Jersey Division of Parks and Forestry (NJDPF), and the New Jersey Historic Preservation Office (NJHPO).



Delaware River Joint Toll Bridge Commission

110 Wood Street, Morrisville, PA 19067  
215.295.5061 tel • 215.295.3337 fax • [www.drjtbc.org](http://www.drjtbc.org)

### ***Selection of NJ Route 29 Design Options***

The alternative design options were reviewed. Jihane Fazio of DMJM Harris presented design plans for each of the four design options and described the improvements proposed under each option. Option 1a, which consolidates NJ Route 29 northbound and southbound movements, and Option 1c, which incorporates roundabouts at the I-95 ramp termini, are the two remaining design options under consideration. Option 1c would be approximately \$6 million more expensive than Option 1a. Under Option 1a, the existing NJ Route 29 Bridge over the Delaware and Raritan Canal would not be reconstructed or replaced. Replacement of the NJ Route 29 bridge over the Delaware and Raritan Canal, originally proposed under Option 1c, is no longer included to reduce costs. It was discussed that coordination with NJDOT on operation of the roundabouts is ongoing to select a preferred design option.

Comments received on the design options included the following:

- There was a unanimous preference among NJDEP staff for Option 1a, which eliminates the bypass adjoining the canal and towpath. It was discussed that elimination of the bypass, and creation of additional open space along the canal, could be considered as mitigation for impacts on the canal that would occur as a result of increased bridge widths. Ernie Hahn of the D&RCC commented that this land could be donated to the parks department as mitigation.
- The safety and operation of the roundabouts under Option 1c was questioned, due to the heavy truck traffic that navigates NJ Route 29 traveling to or from I-95, and driver behavior.
- Option 2, which would relocate four lanes of traffic adjacent to the canal, was also not favored by NJDEP meeting attendees.
- The elimination of the northbound I-95 on-ramp from NJ Route 175 (Upper River Road) under the design options was viewed favorably as it would reduce local truck traffic on NJ Route 175, presenting a substantial noise benefit at the Delaware and Raritan Canal. Truck traffic on NJ Route 175 was so noisy during the field visit that it was difficult at times to hear the discussions. It was mentioned that the New Jersey State Police does not support elimination of the I-95 northbound on-ramp from NJ Route 175. It was suggested that, if this access is maintained, signage to prohibit truck traffic could be incorporated on NJ Route 175 (Upper River Road).

### ***Design Features for Bridge Crossings Over the Delaware and Raritan Canal***

Joe Grilli noted that the National Register designation for the historic canal district extends over a total width of 600 feet, but inquired about specific resource concerns at the canal crossing. Meeting attendees questioned the increase in the width of the bridge over the canal. The I-95 bridge carrying the I-95 travel lanes would be approximately 1/3 wider, and there would be two additional bridges carrying the interchange ramps across the canal.

The meeting attendees represent the diverse interests of NJDEP in the Delaware and Raritan Canal. It was explained to the project team that the NJDPF owns the state park property, maintains the lands, and would issue a special access permit for proposed work at the canal. The NJWSA maintains the waterway within the canal and operates the canal as a water supply. The D&RCC has regulatory jurisdiction over the entire canal park and extending out to within 1,000 feet of the canal. The D&RCC jurisdiction includes potential visual, wetlands, stormwater, and traffic impacts. The reviews for NJDEP wetland permits would be coordinated with the D&RCC permit reviews. The NJHPO conducts historic reviews within the canal historic district. Ernie Hahn indicated that the review by these agencies is separate from the Green Acres review, which will require an Act of the Legislature. He referred the project team to Judith Yeane at Green Acres.

Addie Kim requested information regarding NJDEP land holdings within the interchange area. Jan Holmes of the D&RCC referred to the quit claim deeds as the only property information that D&RCC has for the area. It was discussed that the quit claim deeds for the property, that were given to the project team last year, do not have information at an appropriate scale to delineate the parklands at the site. Al Payne indicated that he would research his files and forward any relevant information.

There was extensive discussion regarding the design features that NJDEP would like to see incorporated at the I-95 bridge crossing:

- Visual and aesthetic considerations should be taken into account, with an attempt to preserve the openness of the space under the bridges and use aesthetically pleasing treatments of bridge abutments and piers, such as stone facing. An example of an aesthetically pleasing treatment that was pointed out in the field is the stone facing on the bridge over the canal providing access from NJ Route 29/Bernard Drive to the Scudder Falls Recreation Area.
- Ernie Hahn suggested that the bridge abutments on both sides of the canal should be moved further back to reduce fill and create more open area under the bridge. Use of column piers (rather than a closed pier) was also preferred to preserve openness of the area under the I-95 bridge. Shifting piers further from the canal and towpath was also discussed. The appropriateness of the use of a closed pier (as is present at the base of the piers between River Road and the canal) as a potential visual/noise barrier was discussed, but the preference was generally for columns preserving openness.
- Al Payne of the NJDPF mentioned that the earthen embankment along NJ Route 175 (Upper River Road) that extends into the canal is a source of erosion. He suggested that a stone-facing treatment/riprap would both reduce erosion into the canal and could be an aesthetic treatment.
- Dan Saunders of the NJHPO acknowledged that the area is currently urbanized/developed and therefore the project would not introduce an entirely new structure within the resource area. He indicated that measures to preserve openness and improve aesthetics should be undertaken, and he indicated a willingness to work with the project team on this. Measures that were discussed to improve aesthetics included stone treatments of bridges. Dan Saunders transmitted aerial photos of the area before I-95 was



constructed, as well as maps that he had annotated during the dredging of the canal. The mapping included location of a former bridge tenders house on River Road in New Jersey.

- Addie Kim inquired the relative importance of light vs. noise considerations under the bridge. Ernie Hahn indicated that it would be preferable to introduce light under the bridge.
- Bill Bogosian of the NJWSA would like bridge scuppers draining directly into the canal to be eliminated to remove any direct discharges into the canal.

### ***Pedestrian-Bicycle Options***

- Jihane Fazio presented a concept for a pedestrian/bicycle access ramp on the north side of the I-95/Scudder Falls Bridge connecting to the towpath alongside NJ Route 29 (River Road) near the Scudder Falls Recreation Area. This pedestrian/bicycle connection would be compatible with both Option 1a and 1c and would involve a wall where the path would be meeting the grade of the existing towpath. Jihane Fazio indicated that this path ends before what appears to be a natural overflow along the canal. Joe Grilli indicated that the feasibility of providing this type of access for pedestrians and bicyclists is still being investigated.
- Ernie Hahn confirmed that the depression at the end of the path is a natural canal overflow.
- There was a high level of support among NJDEP meeting attendees for providing pedestrian/bicycle access across the river and connecting to the canal path.
- Jihane Fazio explained that another option, under Option 1a, to cross over the interchange ramps and access the canal towpath from the interior of the interchange area is another option that the project team will be investigating. This alternative is being considered to avoid steep slopes on the river side. Potential issues associated with this alternative include avoidance of wetlands within the interchange area and meeting required clearances over ramps as well as ADA requirements.
- Meeting attendees indicated that they favored the current concept developed for a pedestrian/bicycle path along the river over the option for a path cutting through the NJ Route 29 Interchange area. Benefits of this option that were discussed is that it would provide views of the Delaware River for users and would avoid impacts to wetlands interior to the interchange area. However, it would introduce a wall between the existing towpath and proposed pedestrian/bicycle path where the ramp would descent to meet existing grade.
- Design features for the path that were suggested by meeting attendees included aesthetic treatments on the wall between the towpath and the proposed pedestrian/bicycle ramp. Addition of impervious area associated with a new bike path was discussed. Potential mitigation for this that was mentioned by Joe Sweger of NJDOT included use of pervious pavement to allow infiltration.

***We believe these minutes accurately reflect what transpired at the meeting. If these minutes are not in accordance with your understanding, please contact the undersigned promptly; otherwise, we will assume that you concur with the accuracy of the above.***

Addie Kim, Senior Planner, HNTB Corporation  
Tel: 617.523.2326, fax: 617.428.6905, e-mail: [akim@hntb.com](mailto:akim@hntb.com)

cc: All attendees  
George Alexandridis, Delaware River Joint Toll Bridge Commission  
W. Michael Cane, Delaware River Joint Toll Bridge Commission  
Linda Spalinski, Delaware River Joint Toll Bridge Commission  
Tom Carbone, NJDOT  
Bijan Pashanamaei, DMJM Harris  
Tim Gunner, DMJM Harris  
Christine Bishop-Edkins, DMJM Harris  
Harvey Knauer, Gannett Fleming, Inc.  
Brad Bauman, A.D. Marble & Company  
Dick Baublitz, A.D. Marble & Company

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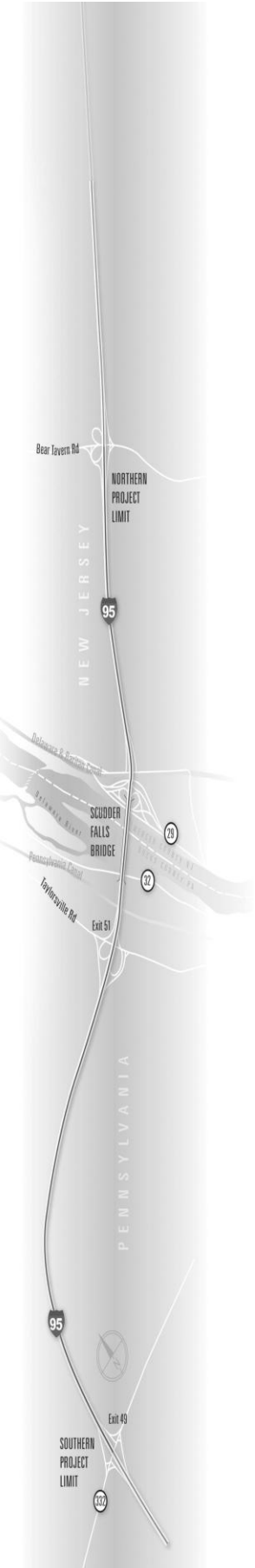
Joe Grilli HNTB 215 568 6500  
 JOE SWEGER DOT 609-530-2985  
 BOB BRIGGS STV 609 530 0300  
 BILL BOGOSIAN NJWSA 908 638 6121  
 ERNIE HAHM DRCC 609 397 2000  
 JAN HOLMS DRCC " "  
 Al Payne Parks & Rec 609 777-0511  
 DAN SAUNDERS HIST. PRESERVATION 609-633-2397  
 JOE SHEPHERD NJWSA 609-530-3999  
 Andrew Schwerer PTIZ 397-2949  
 DTR Canal  
 BROOKE BLADES ADM (project) 414-533-2515  
 Oddie Kern HNTB 617-532-2326  
 Lihane

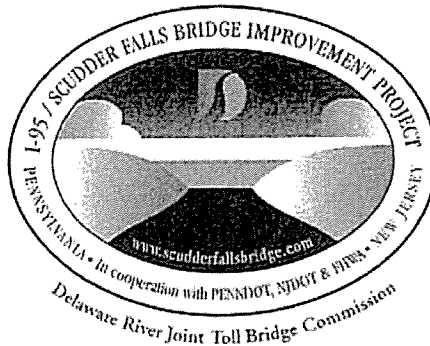




## APPENDIX D

### PUBLIC COORDINATION





## MEETING SUMMARY

**Subject:** Lower Makefield Board of Supervisors Meeting  
Reporting on the Status of the I-95 / Scudder Falls Bridge Improvement Project

**Meeting Date:** Monday, February 7, 2005

**Meeting Place:** Lower Makefield Township Building, Yardley, PA

**Meeting Time:** 7:30 P.M.

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*Note: This summary is meant to highlight the main issues of discussion and not to document the meeting's proceedings verbatim.*

### **I. Welcome and Introductions**

Mr. William Michael Cane of the Delaware River Joint Toll Bridge Commission (DRJTBC) introduced the project team and provided an overview of the I-95/Scudder Falls Bridge Improvement Project to the Lower Makefield Township Board of Supervisors.

### **II. Project Background**

Mr. Cane reviewed the role of the Federal Highway Administration (FHWA), the Pennsylvania Department of Transportation (PennDOT), and the New Jersey Department of Transportation (NJDOT). He also reviewed the funding for the project indicating that the DRJTBC is funding the environmental documentation and preliminary engineering and that the current project cost estimate is \$195 million.

### **III. Status of the I-95/ Scudder Falls Bridge Improvement Project**

Mr. Bijan Pashanamaei, consultant Project Manager from DMJM+HARRIS, showed a PowerPoint presentation that identified project location and project purpose, defined the goals of the NEPA process, and outlined ongoing public involvement activities. The project length extends for 4.4 miles along I-95 and traverses Lower Makefield and Ewing Townships. Currently, the bridge carries approximately 55,000 vehicles per day with a Level of Service (LOS) F. By 2030, the bridge will carry approximately 74,000 vehicles per day and the LOS will remain F.

Mr. Pashanamaei explained that a public participation plan is in place that provides the public with opportunities to provide input into the project. The public can obtain information about the project through local newspapers, the project quarterly newsletter, the project website

[www.scudderfallsbridge.com](http://www.scudderfallsbridge.com), or the project hotline at (800) 879-0849. Informational signs have also been posted on both sides of the Scudder Falls Bridge with the website and hotline information. When the environmental documentation is complete, Public Hearings will be held on both sides of the Delaware River.

Mr. Pashanamaei explained recent activities on the project. Over the past several months, the team has completed the traffic modeling with the Delaware Valley Regional Planning Commission and completed the traffic analysis for the alternatives. The analysis concluded that in order to accommodate traffic in 2030 with a LOS D that the Scudder Falls Bridge must carry 5 northbound lanes and 4 southbound lanes. I-95 in New Jersey must carry 4 northbound lanes and 3 southbound lanes. Three lanes are needed in each direction in Pennsylvania.

In addition, the team has analyzed the feasibility of rehabilitating the existing bridge and replacing it with a new structure. The consultant has recommended that the existing bridge be replaced.

Also, the team developed criteria to evaluate the alternatives. The project team is currently developing various improvement alternatives. So far, the alternatives that have been identified include the No Build alternative, building a new, wider bridge, building a bridge with collector/distribution roads, constructing two new parallel bridges, building a two level bridge, and incorporating contraflow lane(s) into the design. Along I-95, there are currently two lanes running north and south in Pennsylvania and New Jersey and a third lane could be built either along the outside of existing lanes or in the median. The project team is also developing four alternatives for the Taylorsville Road interchange and four alternatives for the NJ 29 interchange with I-95. The team will continue to solicit public participation throughout the project.

The project team is currently completing the development of the alternatives, seeking input on the alternatives through township meetings, and evaluating each alternative and its potential impacts. Open Houses will be held in Spring 2005.

#### **IV. Questions & Answers**

**Question:** Has it been decided which houses will be condemned?

**Answer:** The impact on right-of-way is unknown at the present time. At the Open House this Spring the public will be able to view the various alternatives and the potential impact on right-of-way for each of the alternatives.

**Question:** Will sound barriers be erected?

**Answer:** Whether or not sound barriers will be built depends upon the result of noise studies. Early in the project existing noise levels were documented and future noise levels are being predicted for the project alternatives. If noise levels are predicted to exceed established FHWA criteria, then the consultant team will evaluate the feasibility and effectiveness of noise mitigation. The size, location, and extent of barriers are based on the existing noise levels, predicted noise levels, and the predicted effectiveness of the barrier.

**Question:** Some trees were removed along I-95 and there is more noise now. How will this affect the noise measurements?

**Answer:** We modeled noise after the trees had been removed.



- Question:** What is a collector-distributor road?
- Answer:** A collector-distributor separates through traffic from local traffic much like at Scotch Road in Ewing Township, New Jersey.
- Question:** Are there noise studies being conducted now?
- Answer:** The noise monitoring for existing conditions is complete. We are now modeling future noise levels for the various alternatives.
- Question:** What is LOS D? What is the current LOS?
- Answer:** LOS is Level of Service and it is one way that traffic engineers qualitatively measure congestion and its affect on operating conditions. Engineers rate conditions from A to F with A representing free flow traffic and F representing a breakdown in the flow of traffic. FHWA has decided that D is appropriate for urban locations like the project area. The current LOS during peak hours is F on the Scudder Falls Bridge. It is important to mention that the LOS will be a D by 2030 but the LOS will be better when the new bridge is opened.
- Question:** What is the impact of the new I-95/Pennsylvania Turnpike interchange to this project?
- Answer:** Traffic using the Scudder Falls Bridge will increase slightly over existing levels by the year 2025 as a result of the I-95/PA Turnpike project.
- Question:** Is a bicycle-pedestrian feasibility study being conducted as a part the improvement project? How do you decide if the facility is feasible? What criteria will be used?
- Answer:** A detailed bicycle-pedestrian feasibility study will begin within the next few months. The feasibility of adding a facility will be based on its compatibility with statewide bicycle and pedestrian plans, the ability to create safe access and egress points, and cost.
- Question:** Will traffic be affected during construction?
- Answer:** For any of the alternatives, all lanes of traffic will be maintained while the bridge is under construction. The bridge will be built in stages. However, there will be temporary ramp closings.
- Question:** How is noise measured?
- Answer:** The project team uses stationary instruments to measure noise either in 20-minute intervals or, in some limited locations, 24-hour intervals. The project team has taken 40 to 50 noise measurements in the study area and has simultaneously taken traffic counts for the noise prediction model.
- Question:** Why aren't these improvement plans on the website?
- Answer:** Following this meeting the complete presentation, which includes the alternatives, will be available on the website. The potential impacts of each alternative have not been completely identified. The Open Houses will identify the impacts for the public.

- Question:** Will we know before the Open House if we will be impacted?
- Answer:** At the Open House you will know the potential impacts of each of the alternatives. You will not know for certain if you are impacted until the preferred alternative is chosen. We will hold another Open House in the late Summer to present the preferred alternative. We will contact you before this Open House if you will be impacted by the preferred alternative.
- Question:** Will residents know if their home is being condemned before the next Open House? If a property is condemned, how will the property be appraised?
- Answer:** No. At the next Open House the project team will show several alternatives and the potential impacts of each alternative. This Open House will provide residents with another opportunity to provide the team with comments about which alternatives they prefer. We will hold another Open House in the late Summer to present the preferred alternative. Appraisals will happen at a much later date.
- Question:** What is considered to be a significant impact?
- Answer:** Defining the preferred alternative requires the detailed evaluation of number of criteria one of which is right-of-way. Ultimately, the project team looks to find a balanced solution that minimizes impacts.
- Question:** How much time will residents have to get their affairs in order before their property is condemned?
- Answer:** In May/June 2005 the team will share various alternatives with the public and in July/August 2005 the preferred alternative will be determined. Preliminary and Final engineering will occur and right-of-way acquisition will begin at the earliest in 2008.
- Question:** Who makes the decision to appraise properties? Who hires the appraiser? Which firm does the appraisals?
- Answer:** The Delaware River Joint Toll Bridge Commission will be in charge of the appraisal process. Professional appraisers will be hired by the Commission. The firm that will conduct the appraisals is not yet known.
- Comment:** People want to know the process that will be used to appraise properties.
- Question:** Whose rules are followed for the property condemnation and acquisition process?
- Answer:** Either the NJDOT or PennDOT process is followed depending on the state in which the property is located.
- Question:** What is the Township going to do to protect property values? What is the role of the Board of Supervisors?
- Answer:** The Lower Makefield Township Solicitor indicated that the Township has no legal authority with regard to the proposed improvements to the bridge or I-95. The Board of Supervisors will hold meetings to keep the public informed of any new project

developments. People have the right to appeal the value that is placed on their property if they do not agree with the price that is placed on it by the appraiser.

**Comment:** The value that is placed on your property depends upon nearby sales and comparables not what you think your property is worth.

**Comment:** Board member Steven Santarsiero indicated that the Board of Supervisors will use their position to talk to and work with the Commission. The Board will make the opinions of the public known to the Commission and the Board can indicate their support for choosing an alternative that builds the additional lane in the median of the highway rather than along the outside of the existing lanes. The Board of Supervisors will draft a letter to the Commission indicating that the widening of I-95 should occur in the median in Pennsylvania.

**Question:** How will the improvements to the I-95/Taylorsville Road interchange affect properties in the area?

**Answer:** The footprint of the interchange will be similar to what it is today.

**Question:** How can you widen the bridge and not change the footprint of the interchange?

**Answer:** There is enough room to design a new interchange substantially within the existing footprint.

**Question:** What about using a rubberized roadway surface?

**Answer:** We are required to design a surface based on NJDOT and PennDOT standards which incorporate state-of-the-art parameters.

**Question:** Who has the Commission used in the past to appraise properties?

**Answer:** I do not know. Please call the Commission for this information. *Subsequent to the question and answer period the project team provided the resident with a newsletter with the telephone number and address of George Alexandridis and Bijan Pashanamaei.*

**Question:** How is it determined that there are impacts to widening to the inside and outside?

**Answer:** There is a set of evaluation criteria that is used to determine impacts.

**Question:** Will our easements pushed back if you build a lane to the outside of I-95?

**Answer:** We will be able to show you at the next Open House if there will be an impact to easements from the alternatives.

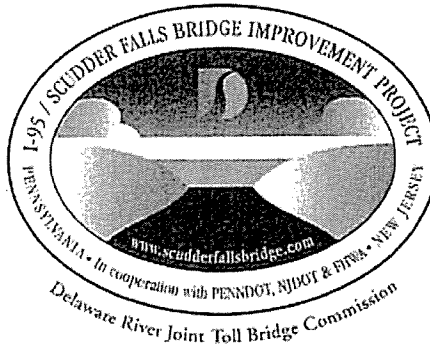
**Question:** If you add a lane to the median won't you need to add a lane to the outside also?

**Answer:** No. Only one additional lane is needed in Pennsylvania.



**Distribution:**

Frank McCartney, DRJTBC  
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William M. Cane, DRJTBC  
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Christine Bishop-Edkins, DMJM+HARRIS  
Joe Grilli, HNTB  
Linda Artlip, Riverfront Associates, Inc.  
Bridget Keegan, Kise Straw & Kolodner



## MEETING SUMMARY

**Subject:** Ewing Township Council  
Agenda Session Meeting  
Report on the Status of the I-95 / Scudder Falls Bridge Improvement Project

**Meeting Date:** Monday, January 10, 2005

**Meeting Place:** Ewing Township Municipal Complex, Ewing, NJ

**Meeting Time:** 6:30 P.M.

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*Note: This summary is meant to highlight the main issues of discussion and not to document the meeting's proceedings verbatim.*

### **I. Welcome and Introductions**

Mr. George Alexandridis, Delaware River Joint Toll Bridge Commission (DRJTBC) Chief Engineer and Project Manager, introduced the project team and provided an overview of the I-95/Scudder Falls Bridge Improvement Project.

### **II. Status of the I-95/ Scudder Falls Bridge Improvement Project**

Mr. Bijan Pashanamaei, consultant Project Manager from DMJM+HARRIS, showed a PowerPoint presentation that illustrated the cooperating agencies, provided an overview of project funding, identified project location and project purpose, defined the goals of the NEPA process, and outlined ongoing public involvement activities. The project extends 4.4 miles along I-95 and traverses Lower Makefield and Ewing Townships. Currently, the bridge carries approximately 55,000 vehicles per day with a Level of Service (LOS) F. By 2030, the bridge will carry approximately 74,000 vehicles per day and the LOS will remain F.

Mr. Pashanamaei explained that a public participation plan is in place that provides the public with opportunities to provide input into the project. The public can obtain information about the project through local newspapers, the project quarterly newsletter, the project website [www.scudderfallsbridge.com](http://www.scudderfallsbridge.com), or the project hotline at (800) 879-0849. Informational signs have also been posted on both sides of the Scudder Falls Bridge with the website and hotline information. When the environmental documentation is complete Public Hearings will be held on both sides of the Delaware River.

Mr. Pashanamei explained recent activities on the project. Over the past several months, the team has completed the traffic modeling with the Delaware Valley Regional Planning Commission and completed the traffic analysis for the alternatives. The result of this analysis is the conclusion that in order to accommodate traffic in 2030 with a LOS D that the Scudder Falls Bridge must carry 5 northbound lanes and 4 southbound lanes. I-95 in New Jersey must carry 4 northbound lanes and 3 southbound lanes. Three lanes are needed in each direction in Pennsylvania.

In addition, the team has analyzed the feasibility of rehabilitating and replacing the existing bridge with a new structure. The consultant has recommended that the existing bridge be replaced.

Also, the team developed criteria to evaluate the alternatives. The project team is currently developing various improvement alternatives. So far, the alternatives that have been identified include the No Build alternative, building a new, wider bridge, building a bridge with collector/distribution roads, constructing two new parallel bridges, building a two level bridge, or incorporating contraflow lane(s) into the design. Along I-95, there are currently two lanes running north and south in Pennsylvania and New Jersey and a third lane could be built either along the outside of existing lanes or in the median. The project team is also considering improvements to the Route 29, and Taylorsville Road interchanges. Currently, the team is exploring four alternatives for the Taylorsville Road interchange and four alternatives for the NJ 29 Interchange. The team will continue to solicit public participation throughout the process.

The project team is currently completing the development of the alternatives, seeking input on the alternatives through township meetings, and evaluating each alternative and its potential impact. Open houses will be held in Spring 2005.

### **III. Questions & Answers**

**Question:** Can you tell us if homes will be razed because of the project?

**Answer:** The impact on right-of-way is unknown at the present time. At the Open House this Spring the public will be able to view the various alternatives and the potential impact on right-of-way for each of the alternatives.

**Question:** Can you put the slides from the presentation on to the website so we can comment on them?

**Answer:** Following this meeting the complete presentation, which includes the alternatives, will be available on the website.

**Question:** I think that the project is an overblown response to a rush hour problem. There is only a problem traveling into New Jersey in the morning. Why are you addressing this bridge and not the other crossings?

**Answer:** There is a need to address severe congestion and safety problems at the Scudder Falls Bridge and along I-95. Traffic is projected to continue increasing through 2030.

**Question:** Why would you build a new bridge rather than rehabilitate the existing one? Would the alignment change if you build a new bridge? Will the new bridge be built north or south of the existing bridge?



- Answer:** It is more expensive to rehabilitate than to replace the existing bridge. Also, a new bridge will have more years of useful life. We are now looking at upstream and downstream options.
- Comment:** George Alexandridis explained that whichever alternative is chosen that four lanes of traffic will be maintained during construction.
- Comment:** Our houses will be greatly affected if a new bridge is built upstream.
- Question:** The current Route 29 interchange is complex to navigate. Wouldn't building roundabouts at this interchange also be complicated?
- Answer:** The roundabouts allow for traffic to keep moving because there is no need for traffic signals. Signing the roundabout so that drivers know how to use the facility is important.
- Comment:** The Council commented that the Route 29 interchange is complicated now and that roundabouts would be a similarly complicated.
- Question:** The Council asked if the roundabouts will be applied to all the alternatives.
- Answer:** Yes. The more typical interchange configuration design options will also be applied to all the alternatives.
- Question:** Why are more lanes needed in the northbound direction than in the southbound direction?
- Answer:** More lanes are needed in the northbound direction to safely accommodate traffic in the morning. In the morning rush hour heading north from Taylorsville Road there is a weaving problem that slows down traffic along the mainline on I-95. In the evening rush hour traffic is more spread out so there is no weaving problem in the southbound direction.
- Question:** Why is this project scoped as an Environmental Assessment (EA) and not as an Environmental Impact Statement (EIS)?
- Answer:** The Commission, in cooperation with the Federal Highway Administration (FHWA), the Pennsylvania Department of Transportation (PENNDOT), and the New Jersey Department of Transportation (NJDOT), through a scoping process and field view, determined that an EA would be appropriate for this project because the significance of potential environmental impacts of the project is not known at this time. If at any time during the EA process it is determined that significant impacts will result from the proposed project, then an EIS must be prepared. The project could also be downgraded to a Categorical Exclusion (CEE) depending on the impacts. The FHWA decides if the project designation will change but the opinions of the resource agencies drive the decision.

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