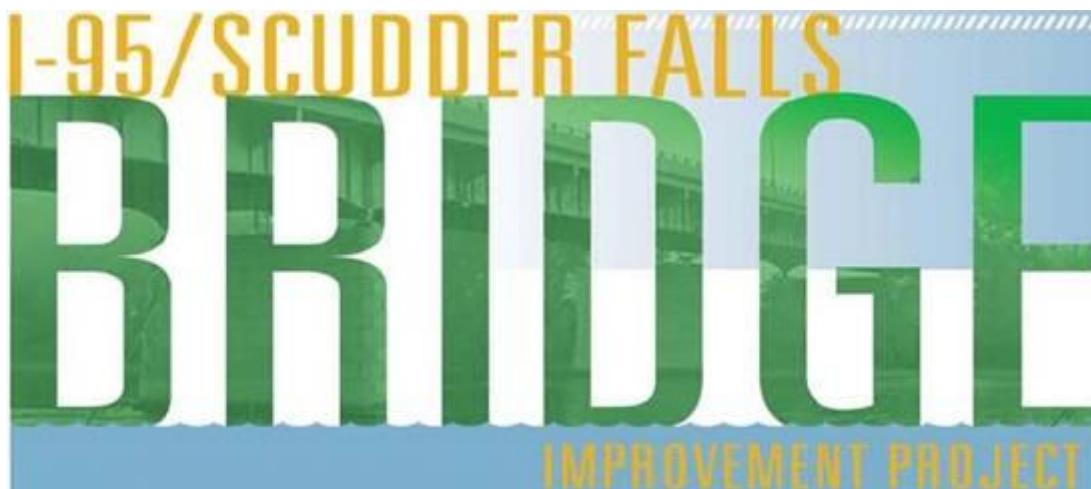




Delaware River Joint Toll Bridge Commission



Environmental Assessment/Draft Section 4(f) Evaluation Volume 2 – Environmental Assessment Attachments A - C

October 2009

Environmental Assessment/Draft Section 4(f) Evaluation

I-95/Scudder Falls Bridge Improvement Project Environmental Assessment

DRJTBC Contract C-393A, Capital Project No. CP0301A



This Environmental Assessment/Draft Section 4(f) Evaluation consists of three volumes:

Volume 1 is the Environmental Assessment (EA) and includes:

- Purpose of and Need for Action (Chapter I),
- Affected Environment (Chapter II),
- Alternatives Considered (Chapter III),
- Environmental Consequences (Chapter IV),
- Comments and Coordination (Chapter V), and
- Lists of References, Distribution List, and List of Preparers.

Volume 2 includes Attachments A through C of the Environmental Assessment:

- Agency Correspondence (Attachment A), including correspondence related to Section 7 of the U.S. Endangered Species Act and Section 106 of the National Historic Preservation Act
- Permitting Checklist/Consistency Determinations (Attachment B), and
- Technical Support Data Index (Attachment C).

Volume 3 is the Draft Section 4(f) Evaluation that documents potential impacts and mitigation measures for impacts on historic resources and public parklands protected under Section 4(f) of the U.S. Department of Transportation Act.





ENVIRONMENTAL ASSESSMENT

VOLUME 2: ATTACHMENTS A-C

INDEX

Index

Attachment A – Agency Correspondence A-1

Memorandum of Agreement between the DRJTBC, PennDOT,
and NJDOT to Alleviate Existing and Future Congestion along the
I-95/Scudder Falls Bridge Corridor

New Jersey DEP Letter of Interpretation/Line Verification

Section 7 Correspondence

Section 106 Correspondence

Programmatic Agreement under Section 106 of the National Historic
Preservation Act

Attachment B – Permits Checklist/Consistency Determination B-1

Attachment C – Technical Support Data Index C-1



Attachment A – Agency Correspondence

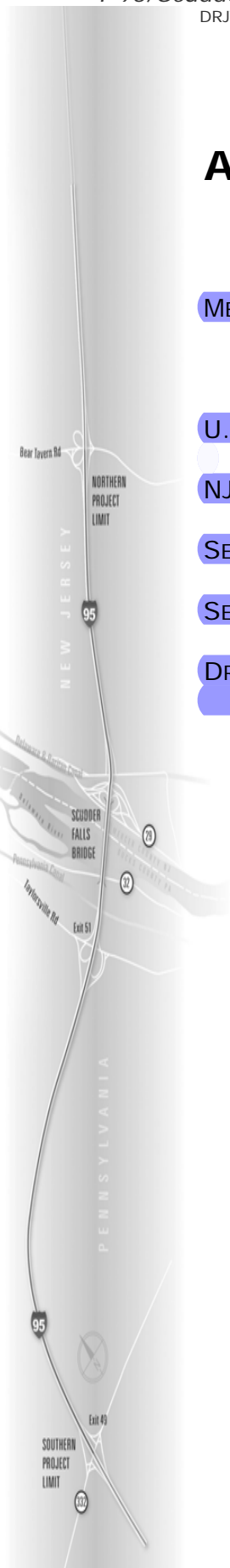
I-95/Scudder Falls Bridge Improvement Project Environmental Assessment

DRJTBC Contract C-393A, Capital Project No. CP0301A



ATTACHMENT A – AGENCY CORRESPONDENCE INDEX

MEMORANDUM OF AGREEMENT BETWEEN THE DRJTBC, PENNDOT, AND NJDOT TO ALLEVIATE EXISTING AND FUTURE CONGESTION ALONG THE I-95/SCUDDER FALLS BRIDGE CORRIDOR	A - 2
U.S. COAST GUARD CORRESPONDENCE	A - 7
NJ DEP LETTER OF INTERPRETATION/LINE VERIFICATION	A - 11
SECTION 7 CORRESPONDENCE	A - 16
SECTION 106 CORRESPONDENCE	A - 104
DRAFT PROGRAMMATIC AGREEMENT UNDER SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT	A - 154



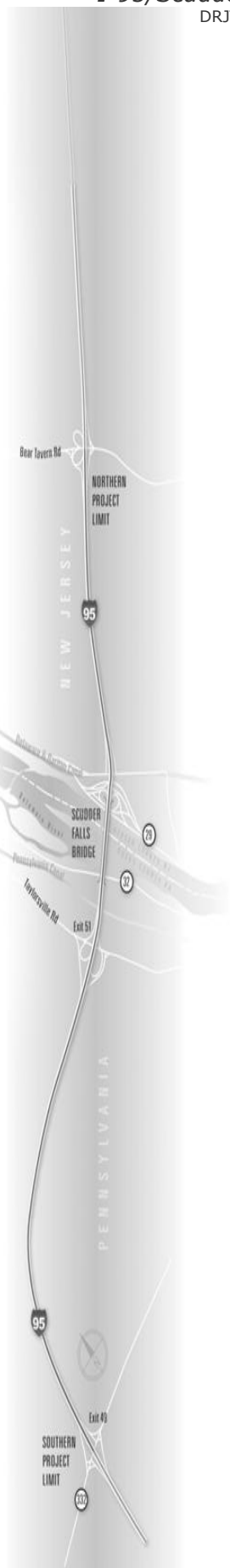


MEMORANDUM OF AGREEMENT

DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

NEW JERSEY DEPARTMENT OF TRANSPORTATION



MEMORANDUM OF AGREEMENT
BETWEEN THE
DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION,
PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
AND THE
NEW JERSEY DEPARTMENT OF TRANSPORTATION
TO
ALLEVIATE EXISTING AND FUTURE CONGESTION ALONG
THE I-95 SCUDDER FALLS BRIDGE CORRIDOR

BACKGROUND: Interstate Route 95 (hereinafter called I-95) serves as a vital link in the Federal interstate highway system with a significant role in meeting both regional and national transportation needs associated with trade, commerce, and defense. The main span of the I-95 Scudder Falls Bridge was constructed in 1959 by the Delaware River Joint Toll Bridge Commission (Commission) while the approaches to the bridge were constructed by the departments of transportation for the respective states, Pennsylvania and New Jersey, using a combination of Federal and state funding program sources. Although the bridge was completed in November 1959, it was not opened to traffic until June 22, 1961 due to incomplete approaches on both sides of the river. The project area consists of the section of I-95 from the PA Route 332 Newtown Interchange located in Lower Makefield Township, Bucks County, PA to the Bear Tavern Road Interchange located in Ewing Township, Mercer County, NJ. This project has been incorporated into the region's Long Range Plan, *Horizons: The Year 2025 Land Use and Transportation Plan for the Delaware Valley*" (June 2002), by the Delaware Valley Regional Planning Commission (DVRPC), the Metropolitan Planning Organization (MPO) for the region. A recently completed Phase I Transportation Needs Study (Southerly Crossings Corridor Study, August, 2002) has determined that there is a need to increase the capacity of the Scudder Falls Bridge from four to six lanes to achieve acceptable traffic flow conditions. The proposed project would involve the widening of I-95 from a four-lane section to a six-lane section between the PA Route 332 Newtown Interchange and the NJ Route 29 Interchange. The existing six-lane section between the NJ Route 29 Interchange and the Bear Tavern Road Interchange would experience some transition engineering and ancillary improvements. Total length of the project is 4.4 miles, including 2.8 miles in PA and 1.6 miles in NJ.

The Delaware River Joint Toll Bridge Commission was established in 1934 by legislation enacted by the Commonwealth of Pennsylvania and the State of New Jersey and operates under a compact that was approved by the United States Congress in August, 1935. The mission of the Delaware River Joint Toll Bridge Commission is to assure safe and efficient river crossings, and in so doing, to facilitate commerce between the States. The Commission's core business is to maintain and improve its inventory of twenty bridges - seven toll bridges and thirteen toll supported bridges (eleven vehicular and two pedestrian). It is also responsible for evaluating the need and feasibility

of additional crossings within its jurisdiction, and to plan and construct new infrastructure. Finally, the Commission has an obligation to foster economic development within its jurisdiction, and is specifically empowered to construct port and terminal facilities in furtherance of that goal.

The Pennsylvania Department of Transportation (PennDOT) is one of the nation's leading public works organizations. It owns and operates the nation's fifth largest state-owned highway system (comparable to the combined state highway systems of New Jersey, New York and all of New England). "Mobility and Access" considerations are cornerstones of PennDOT's overall vision for "Moving Pennsylvania Forward". Utilizing innovative management of the Commonwealth's transportation system to ensure that people and goods can move efficiently is a key strategic focus area of the PennDOT platform. Implementation of congestion management strategies to reduce corridor travel delays is also a critical element in the PennDOT mission statement.

It is the mission of the New Jersey Department of Transportation (NJDOT) to provide reliable, environmentally and socially responsible transportation and motor vehicle networks and services to support and improve the safety and mobility of people and goods in New Jersey. As stewards of transportation infrastructure, the Department and its employees have and will continue to act as responsible stewards of the environment. NJDOT will find ways to improve New Jersey's environment and the quality of life of its citizens, within its funded responsibilities for planning, design, construction, maintenance and operation of its transportation network. In doing so, NJDOT has become one of the leaders in innovative techniques such as Context Sensitive Design (CSD), where a new approach is being taken in the planning and design of transportation projects through the use of active and early partnerships with communities. NJDOT's CSD initiative involves a commitment to a process that encourages transportation officials to collaborate with community stakeholders so the design of its projects reflect the goals of the people who live, work and travel in the area. Such collaboration is envisioned in alleviating and avoiding congestion in the Scudder Falls Bridge Corridor.

PURPOSE: This Memorandum of Agreement (MOA) is established to create a partnership of these state and bi-state transportation agencies, working with DVRPC (MPO) to alleviate current and future traffic congestion along the I-95 corridor at the Scudder Falls Bridge over the Delaware River. This will be done in coordination with identifying and achieving the region's long-term transportation vision to improve access and mobility, and to ensure that people and goods can move safely and efficiently. Further, subsequent phases of this project will demonstrate that they follow the goals and objectives of Pennsylvania's 21st Century Growth Plan and with New Jersey's Smart Growth Initiative.

Goals: The parties to this MOA are committed to working together to achieve the following goals along the I-95/Scudder Falls Bridge Corridor:

1. To achieve mutual understanding of each respective agency's missions and authorities;
2. To jointly progress Environmental Documentation and Preliminary Engineering in a single project to achieve acceptable traffic flow conditions in both the short-term and long-term timeframes. The Preliminary Engineering and Environmental Documentation process will guide and confirm the need for additional capacity for this project;
3. Commission will undertake Environmental Documentation and Preliminary Engineering for the section of I-95 from the PA Route 332 Newtown Interchange in Pennsylvania to the Bear Tavern Road Interchange in New Jersey. Commission will designate and contract with a consulting engineering firm for the performance of this work. The Environmental

Documentation and Preliminary Engineering effort will follow the guidance outlined in the Pennsylvania Department of Transportation's 10-step Project Development Process;

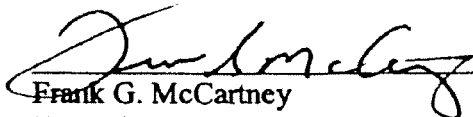
4. Commission will bear sole financial responsibility for funding the Environmental Documentation and Preliminary Engineering costs associated with this phase of the project. The three agencies that are party to this MOA will work together to negotiate future sources of funding for this project; and,
5. Commission may undertake studies to evaluate, and if appropriate, implement interim solutions to address current traffic congestion.

TO ACHIEVE THESE GOALS, the parties to this MOA pledge to communicate regularly, share information, and work together.

THIS MEMORANDUM OF AGREEMENT SHALL TAKE EFFECT on the date of the last signature hereto. This MOA is not intended to, nor does it, create any right, benefit, or trust responsibility, substantive or procedural.


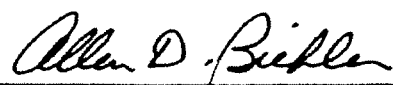
IN WITNESS THEREOF, the signatures of the Key Officials below execute this MOA:

For the DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION


Frank G. McCartney
Executive Director

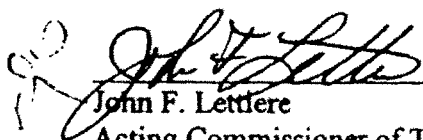
1/10/03
Date

For the PENNSYLVANIA DEPARTMENT OF TRANSPORTATION



~~Bradley L. Mahony~~ Allen D. Biehler
Acting Secretary of Transportation

1/23/03
Date

For the NEW JERSEY DEPARTMENT OF TRANSPORTATION


John F. Lettiere
Acting Commissioner of Transportation

1-21-03
Date

APPROVED AS TO LEGALITY
AND FORM

BY _____
For Chief Counsel DATE

BY _____
Deputy Attorney DATE
General

BY _____
Deputy General DATE
Counsel

PRELIMINARILY APPROVED

BY _____
Assistant Counsel DATE

RECORDED NO. _____
CERTIFIED FUNDS AVAILABLE UNDER
ACTIVITY PROGRAM _____
SYMBOL _____
AMOUNT _____

BY _____
for Comptroller DATE

Attachment A – Agency Correspondence

I-95/Scudder Falls Bridge Improvement Project Environmental Assessment

DRJTBC Contract C-393A, Capital Project No. CP0301A



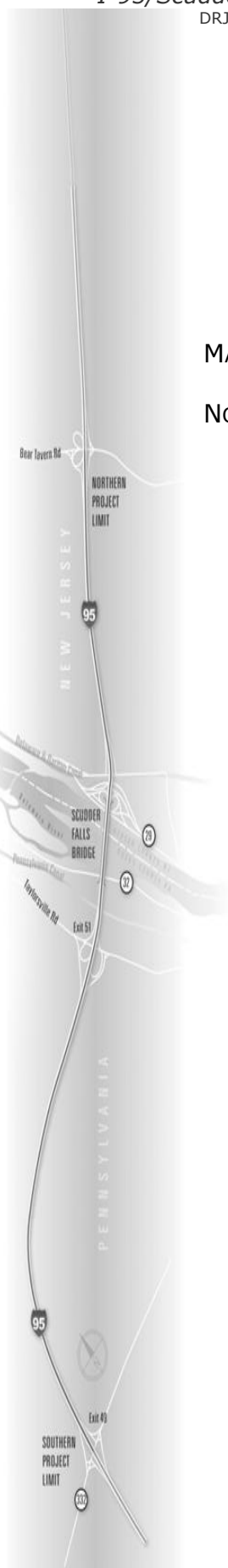
U.S. COAST GUARD CORRESPONDENCE

MARCH 3, 2004

LETTER FROM THE U.S. COAST GUARD TO HNTB

NOVEMBER 14, 2003

LETTER FROM PROJECT (HNTB) TO THE U.S. COAST GUARD



U.S. Department of
Homeland Security

United States
Coast Guard



Commander
United States Coast Guard
Fifth Coast Guard District

431 Crawford Street
Portsmouth, Va. 23704-5004
Staff Symbol: obr
Phone: (757) 398-6587
Fax: (757) 398-6334
Email: tknowles@lantd5.uscg.mil

16593
03 Mar 04

Mr. Joseph G. Grilli, P.E.
HNTB Corporation
8 Penn Center, 7th Floor
1628 John F. Kennedy Blvd.
Philadelphia, PA 19103

Dear Mr. Grilli:

This is in response to your letter requesting Coast Guard approval for the rehabilitation of the Scudder Falls Bridge over the Delaware River in Bucks County, Pennsylvania.

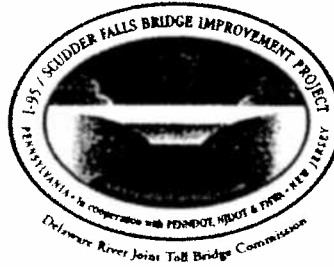
The Coast Guard Authorization Act of 1982 exempts bridge projects from Coast Guard bridge permits when the bridge project crosses non-tidal waters which are not used, susceptible to use in their natural condition, or susceptible to use by reasonable improvement as a means to transport interstate commerce. Therefore, this bridge project in this vicinity is exempt, and will not require a Coast Guard Bridge Permit.

The fact that a Coast Guard permit is not required does not relieve you of the responsibility for compliance with the requirements of any other Federal, State, or local agency who may have jurisdiction over any aspect of the project.

Sincerely,

A handwritten signature in black ink, appearing to read "Waverly W. Gregory, Jr.", written over a horizontal line.

WAVERLY W. GREGORY, JR.
Chief, Bridge Administration Branch
By direction of the Commander
Fifth Coast Guard District



November 14, 2003

Mr. Waverly Gregory
Bridge Administrator
U.S. Coast Guard
Fifth District
431 Crawford Street
Portsmouth, VA 23704-5004

Dear Mr. Gregory:

Re: Delaware River Joint Toll Bridge Commission
Contract C-393A, Capital Project No. CP 0301A, Account No, 7161-06-012
I-95/Scudder Falls Bridge Improvement Project
Environmental Inventory

The Delaware River Joint Toll Bridge Commission (DRJTBC) recently initiated a study of improvements to the I-95/Scudder Falls Bridge. The I-95/Scudder Falls Bridge Improvement Project will address congestion, operational, and safety deficiencies at the I-95/Scudder Falls Bridge and along 4.4 miles of I-95 from PA Route 332 in Bucks County, Pennsylvania to Bear Tavern Road in Mercer County, New Jersey. The corridor extends through Lower Makefield Township in Pennsylvania and Ewing Township in New Jersey. To conduct the study, the DRJTBC has engaged a consultant team of engineers, scientists, and planners led by DMJM+HARRIS of Philadelphia and HNTB of Wayne, New Jersey. The team also includes Gannett Fleming, Inc., STV Inc., and A.D. Marble & Company.

The study, being undertaken in cooperation with the New Jersey Department of Transportation (NJDOT), the Pennsylvania Department of Transportation (PENNDOT), and the Federal Highway Administration (FHWA), involves an alternatives analysis and preparation of an Environmental Assessment under the National Environmental Policy Act. The project will include evaluation of improvements at four interchanges in the study area: PA Route 332 and Taylorsville Road in Pennsylvania and N.J. Route 29 and Bear Tavern Road in New Jersey. The I-95/Scudder Falls Bridge crosses over the Delaware River, the Delaware Canal in Pennsylvania, and the Delaware and Raritan Canal in New Jersey. The study area encompasses portions of four USGS quadrangles: Trenton West, Lambertville, Langhorne, and Pennington. The extent of potential improvements is shown on the attached figures.

We are writing to request information on existing conditions and future plans in the study area. Specifically, we would like to request information that is available in reports, plans, or digital mapping on study area conditions.



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



We are writing to request a formal determination on the presence of navigable waters under Section 9 of the U.S. Rivers and Harbors Act and the extent of the U.S. Coast Guard regulatory jurisdiction with respect to any planned new bridge construction at the I-95/Scudder Falls Bridge. The bridge spans the Delaware River between Lower Makefield Township in Pennsylvania and Ewing, New Jersey, upstream of Trenton, New Jersey.

Should you have information that would be useful to our study, we would greatly appreciate it if you could either forward information to my attention at the address below, or contact me by phone or e-mail to discuss the best way to collect the information.

HNTB Corporation
8 Penn Center, 7th Floor
1628 John F. Kennedy Boulevard
Philadelphia, PA 19103

Thank you for your assistance in this matter. Should you have any questions or comments on this request, please feel free to call Addie Kim, Senior Planner, at (617) 532-2326, akim@hntb.com, or myself at (215) 568-6500 or e-mail me at jgrilli@hntb.com.

Very truly yours,

Joseph G. Grilli, P.E.
Deputy Project Manager, Environmental



Attachment A – Agency Correspondence

I-95/Scudder Falls Bridge Improvement Project Environmental Assessment

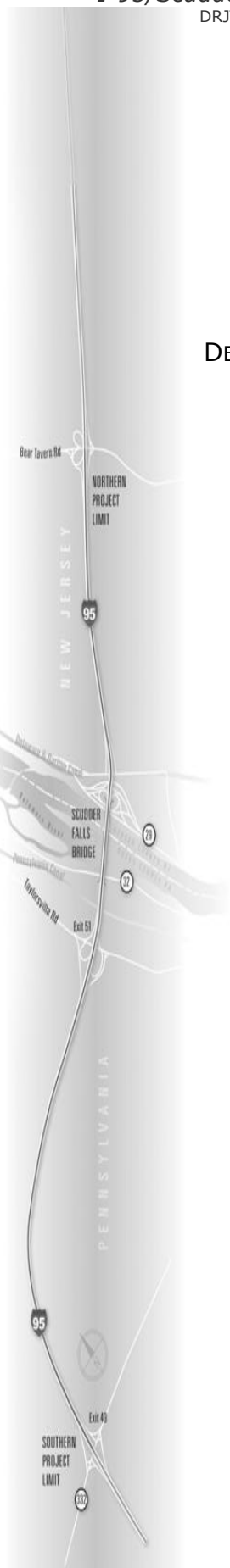
DRJTBC Contract C-393A, Capital Project No. CP0301A



NEW JERSEY DEP LETTER OF INTERPRETATION/LINE VERIFICATION

DECEMBER 12, 2005

LETTER FROM NEW JERSEY DEPARTMENT OF ENVIRONMENTAL
PROTECTION TO STV INCORPORATED





RECEIVED JAN 04 2006

James E. McGreevey
Governor

State of New Jersey
Department of Environmental Protection
Land Use Regulations Program
P.O. Box 439, Trenton NJ 08625-0439
Fax # (609) 777-3656
www.state.nj.us/dep/landuse

Bradley M. Campbell
Commissioner

Robert P. Briggs, II, P.G., REM
STV Incorporated
820 Bear Tavern Road, Suite 200
Trenton, New Jersey 08628

DEC 12 2005

RE: Freshwater Wetlands Letter of Interpretation/Line Verification
File No.: 1102-05-0004.1 (FWW-050001)
Applicant: Delaware River Joint Toll Bridge Commission (DRJTBC)
Block: N/A Lot: N/A
Ewing-Township, Mercer County

Dear Mr. Briggs:

This letter is in response to your request for a Letter of Interpretation to verify the jurisdictional boundary of the freshwater wetlands and waters on the referenced property.

In accordance with agreements between the State of New Jersey Department of Environmental Protection, the U.S. Army Corps of Engineers Philadelphia and New York Districts, and the U.S. Environmental Protection Agency, the NJDEP, Land Use Regulation Program is the lead agency for establishing the extent of State regulated wetlands and waters not assumable under the memorandum of agreement. The U. S. Army Corps of Engineers retains jurisdiction over Federally regulated wetlands and waters. The USEPA and/or USACOE retain the right to reevaluate and modify the jurisdictional determination at any time should the information prove to be incomplete or inaccurate.

Based upon the information submitted, and upon a site inspection conducted on July 26, 2005, the Land Use Regulation Program has determined that the wetlands and waters boundary line(s) as shown on the plan map entitled, "PLANS NJDEP LINE VERIFICATION LOI & I-95/SCUDDER FALLS BRIDGE IMPROVEMENT PROJECT", sheet EP-8/EP-11, dated October 20, 2004, last revised October 10, 2005 and prepared by A-Tech Engineering, Inc., is accurate as shown.

Any activities regulated under the Freshwater Wetlands Protection Act proposed within the wetlands or transition areas or the deposition of any fill material into any water area, will require a permit from this office unless exempted under the Freshwater Wetlands Protection Act, N.J.S.A. 13:9B-1 et seq., and implementing rules, N.J.A.C. 7:7A. A copy of this plan, together with the information upon which this boundary determination is based, has been made part of the Program's public records.

Pursuant to the Freshwater Wetlands Protection Act Rules (N.J.A.C. 7:7A-1 et seq., you are entitled to rely upon this jurisdictional determination for a period of five years from the date of this letter.

The freshwater wetlands and waters boundary line(s), as determined in this letter, must be shown on any future site development plans. The line(s) should be labeled with the above LURP file number and the following note:

"Freshwater Wetlands/Waters Boundary Line as verified by NJDEP."

In addition, the Department has determined that the wetlands on the subject property are of intermediate and ordinary resource values. The standard transition area required adjacent to intermediate resource value wetlands is 50 feet. Wetlands A, C and I have been determined to be of ordinary resource value and no transition area is required adjacent to these wetlands. The Department has also identified State open waters on the property; they are noted on the reference plan. Please note that a buffer is not required adjacent to State open waters under the Freshwater Wetlands Protection Act, but a 25-foot buffer is required under the Flood Hazard Control Act and a 50-foot buffer is required for all trout associated waters. This classification may affect the requirements for an Individual Wetlands Permit (see N.J.A.C. 7:7A-7), the types of Statewide General Permits available for the wetlands portion of this property (see N.J.A.C. 7:7A-5) and the modification available through a transition area waiver (see N.J.A.C. 7:7A-6). Please refer to the Freshwater Wetlands Protection Act (N.J.S.A. 13:9B-1 et seq.) and implementing rules for additional information.

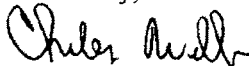
It should be noted that this determination of wetland classification is based on the best information presently available to the Department. The classification is subject to change if this information is no longer accurate, or as additional information is made available to the Department, including, but not limited to, information supplied by the applicant.

This letter in no way legalizes any fill, which may have been placed, or other regulated activities, which may have occurred on-site. Also this determination does not affect your responsibility to obtain any local, State, or Federal permits which may be required.

In accordance with N.J.A.C. 7:7A-1.7, any person who is aggrieved by this decision may request a hearing within 30 days of the decision date by writing to: New Jersey Department of Environmental Protection, Office of Legal Affairs, Attention: Adjudicatory Hearing Requests, PO Box 402, Trenton, NJ 08625-0402. This request must include a completed copy of the Administrative Hearing Request Checklist.

Please contact Judy Burton of our staff at (609) 777-0454 or judith.burton@dep.state.nj.us should you have any questions regarding this letter. Be sure to indicate the Program's file number in all communication.

Sincerely,



Charles Welch, Supervisor
Roadways & Infrastructure Unit

c: Philadelphia District, Army Corps of Engineers
Ewing Township Municipal Clerk
Ewing Township Construction Official

Adjudicatory Hearing Request Checklist and Tracking Form

I. Permit Decision or Other Department Decision Being Appealed:

Issuance Date of Decision Document

Document Number (If any)

II. Please provide Name, Address and Phone No. of:

Person Requesting Hearing

Name of Attorney (If applicable)

Address

Address

Phone No.

Phone No.

III. If you are the applicant or permittee, please include the following information with your hearing request:

- A. The date you received the permit decision or other decision which you are appealing;
- B. A copy of the decision document;
- C. The findings of fact and conclusions of law you are appealing;
- D. A statement as to whether or not you raised each legal and factual issue during the permit application process;
- E. Suggested revised or alternative permit conditions;
- F. An estimate of the time required for the hearing;
- G. A request, if necessary, for a barrier-free hearing location for physically disabled persons;
- H. A clear indication of any willingness to negotiate a settlement with the Department prior to the Department's processing of our hearing request to the Office of Administrative Law; and
- I. This form completed; signed and dated with all of the information listed above, including attachment to:

- 1. New Jersey Department of Environmental Protection Office of Legal Affairs
Attention: Adjudicatory Hearing Requests
401 East State Street
P.O. Box 402
Trenton, NJ 08625-0402:

With a copy to:

- 2. New Jersey Department of Environmental Protection
Land Use Regulation Program
Attention: Director
P.O. Box 439
Trenton, NJ 08625-0439

Signature: _____

Date: _____

IV. If you are a person other than the applicant or permittee, please include the following information with your hearing request:

- A. The date you or your agent received notice of the permit decision, and a copy of the permit decision;
- B. Evidence that a copy of your hearing request has been delivered to the applicant for the permit decision which is the subject of your hearing request (e.g., certified mail return receipt);
- C. A detailed statement of which findings of fact and/or conclusion of law you are challenging;
- D. A description of our participation in any public hearings held in connection with the permit application and copies of any written comments you submitted;
- E. Whether you claim a statutory or constitutional right to a hearing, and, if you claim such a right, a reference to the applicable statute or an explanation of how your interests are affected by the permit decision;
- F. Suggested revised or alternative permit conditions;
- G. An estimate of the time required for the hearing;
- H. A request, if necessary, for a barrier-free hearing location for physically disabled persons;
- I. A clear indication of any willingness to negotiate a settlement with the Department prior to the Department's processing of the hearing request to the Office of Administrative Law; and
- J. This form completed, signed and dated with all the information listed above, including attachments to

- 1. New Jersey Department of Environmental Protection Office of Legal Affairs
Attention: Adjudicatory Hearing Requests
401 East State Street
P.O. Box 402
Trenton, NJ 08625-0402:

With a copy to:

- 2. New Jersey Department of Environmental Protection
Land Use Regulation Program
Attention: Director
P.O. Box 439
Trenton, NJ 08625-0439

Signature: _____

Date: _____



SECTION 7 CORRESPONDENCE

SEPTEMBER 10, 2009	LETTER FROM FEDERAL HIGHWAY ADMINISTRATION (FHWA) TO NATIONAL MARINE FISHERIES SERVICE (NMFS)
DECEMBER 18, 2008	LETTER FROM FHWA TO NMFS
NOVEMBER 18, 2008	LETTER FROM NMFS TO FHWA
SEPTEMBER 30, 2008	LETTER FROM FHWA TO NMFS
SEPTEMBER 2, 2008	MEMORANDUM FROM U.S. ARMY CORPS OF ENGINEERS TO STV
MARCH 26, 2008	MEMORANDUM FROM NMFS TO HNTB
NOVEMBER 15, 2007	LETTER FROM NMFS TO STV INCORPORATED
NOVEMBER 8, 2007	LETTER FROM STV TO NMFS
NOVEMBER 8, 2007	LETTER FROM STV TO U.S. FISH AND WILDLIFE SERVICE (USFWS) (NJ FIELD OFFICE)
NOVEMBER 8, 2007	LETTER FROM STV TO USFWS (PA FIELD OFFICE)
JULY 11, 2005	LETTER FROM USFWS (PA FIELD OFFICE) TO STV
AUGUST 16, 2004	RECORD OF TELEPHONE CALL FROM HNTB TO NMFS
AUGUST 9, 2004	LETTER FROM STV TO NMFS
AUGUST 9, 2004	LETTER FROM STV TO USFWS (PA FIELD OFFICE)
MAY 11, 2004	LETTER FROM USFWS (PA FIELD OFFICE) TO STV
APRIL 29, 2004	RECORD OF TELEPHONE CALL FROM NMFS TO STV
APRIL 6, 2004	LETTER FROM STV TO USFWS (PA FIELD OFFICE)
FEBRUARY 24, 2004	LETTER FROM NMFS TO STV
DECEMBER 30, 2003	LETTER FROM USFWS (PA FIELD OFFICE) TO STV
DECEMBER 18, 2003	RECORD OF TELEPHONE CALL FROM HNTB TO NMFS
DECEMBER 17, 2003	LETTER FROM USFWS (NJ FIELD OFFICE) TO STV

Attachment A – Agency Correspondence

I-95/Scudder Falls Bridge Improvement Project Environmental Assessment

DRJTBC Contract C-393A, Capital Project No. CP0301A



NOVEMBER 14, 2003

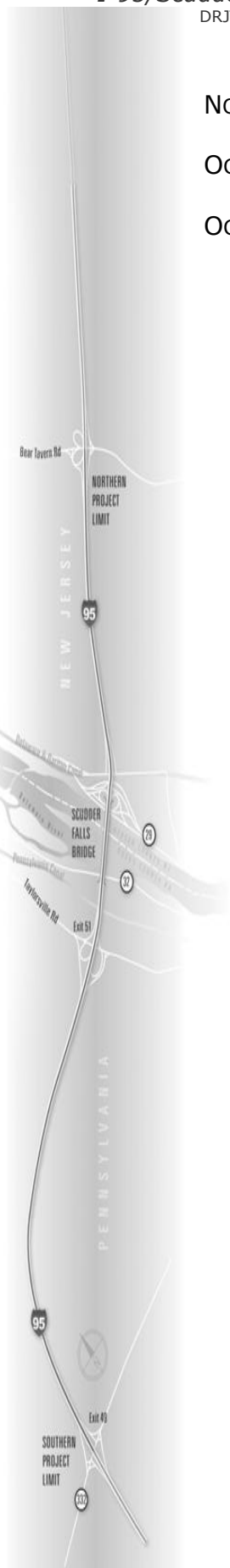
LETTER FROM PROJECT (HNTB) TO NMFS

OCTOBER 29, 2003

LETTER FROM PROJECT (STV) TO USFWS (NJ FIELD OFFICE)

OCTOBER 29, 2003

LETTER FROM PROJECT (STV) TO USFWS (PA FIELD OFFICE)





U. S. DEPARTMENT
OF TRANSPORTATION

Pennsylvania Division

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

Federal Highway
Administration

September 10, 2009

In reply refer to:
HEV-PA.3

Ms. Julie Crocker
Fisheries Biologist, Protected Resources Division
National Marine Fisheries Service
Northeast Regional Office
55 Great Republic Drive
Gloucester, MA 01930

Dear Ms. Crocker:

In response to agency comments and concerns regarding the use of an earthen causeway for the I-95 Scudder Falls Bridge Improvements Project, a change is proposed to the projected action that was presented in the Biological Assessment (BA), dated September 25, 2008. The use of an earthen causeway for construction access is being replaced with a trestle causeway design. Both the earthen and trestle causeways were described in the BA. The selection of the trestle causeway over the earthen causeway will avoid and minimize, to the maximum extent practicable, impacts on the Delaware River. The trestle causeway will maintain river flow with little or no effect on flow and will allow for nearly unimpeded fish passage. The purpose of this letter is to formally present the trestle causeway as the preferred alternative, describe potential impacts associated with the trestle causeway, and present a comparative analysis between the trestle and earthen causeway.

Trestle Causeway Construction Details

As described on page 13 of the BA, construction of a temporary trestle causeway will involve construction of short spans of approximately 25 feet with pile bents (a row of piles connected by pile caps at the top to support a load) and progressive construction from shoreline. Approximately 22 to 36 pile bents would be required for each causeway stage. Upon removal of each



trestle causeway stage, the bents would be removed to a depth of three feet below the river bottom, and the river bottom restored to its pre-construction condition. We anticipate that the natural riverbed sediments will naturally infill this area over time. The construction sequence of the trestle would be as follows:

- Construct the access roadway to reach the river shoreline
- Construct a temporary abutment for the first span of the trestle
- Drive the piles for the first trestle bent and install bent cap
- Erect the beams and construct the deck for the first span
- Move pile driving equipment onto the constructed first span
- Drive the piles for the second trestle bent and install cap
- Erect beams and construct the deck for the second span
- Move pile driving equipment onto the second span and continue as before until the appropriate length of the trestle is completed

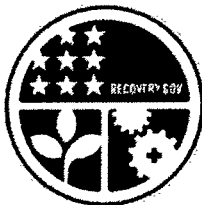
Potential Impacts

Each pile bent would be driven into the river bottom, and would disturb approximately 10 square feet of river bottom. The 22 to 36 bents installed for each causeway stage correspond to approximately 210 to 340 square feet of river bottom disturbance at any one time. A summary of the temporary and permanent effects on the river bottom areas, replacing the table on page 27 of the BA to reflect the proposed trestle causeways, is shown below:

<u>Temporary Effects</u>		
<u>Effect</u>	<u>River Bottom Area (Acres)</u>	<u>Percent of Total River Reach</u>
Trestle Causeways ¹		
Stage I	0.007	0.0008
Stage II	0.005	0.0006
Stage III	0.008	0.0009
Stage IV	0.006	0.0007
Total	0.026	0.003

Cofferdams -new bridge piers

¹ Causeway calculations are for trestle causeways and include causeway fingers



One	0.026	0.003
Five	0.130	0.015
Cofferdams - existing pier demolition		
One	0.024	0.003
Six	0.145	0.017

Permanent Effects

<u>Effect</u>	<u>River Bottom Area (Acres)</u>	<u>Percent of Total River Reach</u>
Replacement of seven existing piers with five proposed piers	0.27	0.032

Each pile bent consists of three (3) hollow pipe piles 24 inches in diameter and connected with a pile cap. Therefore, 66 to 108 piles will be installed and likely will be driven into the river bottom using a hammer with maximum energy of 100,000 foot-pounds.

There is some concern about the effects of sound on fish from pile-driving (Hastings and Popper 2005). These authors indicated that "To date, there are few data for fish on the effects of exposure to sound from pile driving and these only appear in the gray literature."

This concern for sound effects from pile driving on fish was expressed with respect to shortnose sturgeon and other species in the Potomac River at the Woodrow Wilson Bridge construction site (Woodrow Wilson Bridge Project 2002). Some of the piles driven were among the largest driven for a bridge project in the country: 72 inches in diameter, nearly 200 feet in length, and 90 tons in weight. Although no shortnose sturgeon mortality was observed from driving these large piles (possibly because none likely were present), approximately 24-36 dead adult fish (primarily catfish, gizzard shad, carp, and white perch) per driven pile were observed.

In order to reduce this fish mortality, two techniques were employed. The first was to lightly tap each pile with the hammer before heavy driving. This effort seemed to encourage fish to leave the area and mortality was reduced to five or fewer fish per driven pile, most of which were catfish.

The second technique employed was creation of a "bubble curtain" around the pile to be driven by use of compressed air pumped into



a perforated ring of air hose anchored to the river bottom. The air bubbles act to minimize transmission of sound waves through the water. When this technique was instituted, fish mortality nearly ceased. However, the size of the equipment and forces exerted is expected to be considerably smaller for this project than that used for the Woodrow Wilson Bridge. For the I-95/Scudder Falls Improvement Project, a hammer with a maximum energy of 100,000 foot-pounds will be used for pile-driving, compared to the size of the hammer used for the Woodrow Wilson Bridge site (a hydraulic hammer with 385,000 foot-pounds per blow).

Pile driving likely will have no adverse effects on shortnose sturgeon during the Scudder Falls Bridge project because piles will not be driven during the period when shortnose sturgeon adults, eggs, or larvae are expected to be present (e.g., March 15 through June 30). Adverse effects on other fish species that may be near the locations where piles will be driven are expected to be minimal because the piles are much smaller (24 inches in diameter) than the largest (72 inches in diameter) driven to support the Woodrow Wilson Bridge and the hammer used to drive them will be much less powerful. In addition, each pile will be "tapped" before heavy pile driving in order to encourage nearby fish to leave the area. Therefore, fish injury or mortality from pile-driving is expected to be minimal and use of a bubble curtain system is considered unnecessary.

Comparison between Trestle and Earthen Causeways

The advantages to using the trestle causeway versus the earthen causeway are as follows:

- The trestle causeway will reduce impacts to the Delaware River and sturgeon habitat, as compared to the earthen causeway. The footprint area affected by the trestle causeway will be approximately 0.03 acres, as compared to more than 3.5 acres, without spillover and 4.25 acres with spillover, for the earthen causeway.
- The trestle causeway will minimize impacts on substrate that is habitat for the sturgeon and will also present less of an obstruction to fish passage. The percentage of shortnose sturgeon habitat impacted will decrease from 0.45% affected by the earthen causeway to 0.003% affected by the trestle causeway.
- No rock will be placed on the river bottom for the trestle construction. Therefore, sediment will not be introduced.
- The trestle causeway will better accommodate river flows than the earthen causeway. Because the trestle causeway's impact on the hydrology of the river is so minor, the water velocity in and around the trestle causeway should not be



impacted, no backwater areas should be created, and sedimentation should be minimal.

The use of a trestle causeway was selected over an earthen causeway to mitigate potential effects on the Delaware River and the shortnose sturgeon. The trestle causeway will maintain river flows with little or no effect on hydraulic flow. The trestle will be disassembled and removed upon completion of each stage of the construction. The potential impact of the trestle causeway to the shortnose sturgeon is less than that of the earthen causeway. The Conservation Measures included in the September 25, 2008 Biological Assessment are modified as follows to reflect replacement of the earthen causeways with the trestle causeways.

Conservation Measures

The following conservation measures will be incorporated into the project to minimize effects on aquatic resources, including shortnose sturgeon and Atlantic sturgeon, in the Delaware River:

- In-river construction and removal of the four causeways and cofferdams will be scheduled outside the period March 15 through June 30 in order to prevent disruption of shortnose sturgeon spawning and effects on this species' eggs and larvae. A determination will be made during the final design phase of the feasibility of extending this moratorium to July 15 to protect river herring (alewife and blueback herring), which are important as prey for predatory fish species, during the end of their spawning period.
- The steel sheeting that will be used to construct the cofferdams will be vibrated into the river bottom where physical conditions allow. Otherwise, it must be driven.
- Five cofferdams will allow construction of the new bridge piers "in the dry". Similarly, six cofferdams will allow demolition of the existing bridge piers "in the dry". This will prevent any fish, including Atlantic and shortnose sturgeon, and their eggs and larvae from entering river bottom areas where they may be injured or killed.
- Turbidity barriers and other erosion/sedimentation controls will reduce in-river sedimentation.
- Water quality will be monitored downstream of the causeways and cofferdams during their construction and removal to measure sedimentation.
- Some scuppers will be eliminated in construction of the new bridge, with the majority of the stormwater directed to land-based passive treatment. This will be an improvement from the existing bridge drainage system.



- A Spill Prevention, Control and Countermeasure plan (SPCC) will be developed to prevent spills from entering the river during construction. Additionally, an SPCC will be prepared to address spills from vehicles using the bridge when construction is completed.
- The riverbed in the project area will be monitored routinely during construction to ensure timely removal of all construction debris.

Proactive Measures to Promote Recovery of the Species

The project will also incorporate the following measure to proactively promote the recovery of the shortnose sturgeon:

- An acoustic receiver will be provided to researchers for use in the project area to record the possible presence of acoustically-tagged shortnose sturgeon.

Conclusions

The Scudder Falls Bridge Improvement Project will impact the river bottom habitat of shortnose sturgeon and Atlantic sturgeon in the project area, not the fish directly. None of these fish will be killed or injured, including eggs and larval shortnose sturgeon, because they are not expected to be present when piles for the trestle causeway and sheeting for the cofferdams will be driven (July to mid-March), and when present, they will be excluded by cofferdams from areas of the riverbed where construction will take place.

A small amount of river bottom habitat will be temporarily lost to use by shortnose sturgeon and Atlantic sturgeon when temporary causeways and cofferdams are in place during construction. A small amount of river bottom habitat in the footprint of the proposed piers will be permanently lost to use by both species. However, the surface areas that will be temporarily or permanently lost are quite small, compared to the total surface area of river bottom available to these species in the non-tidal Delaware River.

This project may affect, and it is likely to adversely affect, shortnose sturgeon or Atlantic sturgeon because river bottom habitat will be temporarily or permanently lost. However, the effect to both species should be considered insignificant because the losses will be only a very small percentage of the habitat that is available to them.

Based on the project meeting/conference call held on July 17,



2009, we understand that NMFS will issue its Draft Biological Opinion within 30 days of receipt of this information. Please confirm our understanding of your schedule. Should you have any questions, please feel free to contact me at 717-221-3465.

Sincerely,

Original signed by

Ross A. Manton
Environmental Specialist



ec: A. Fox, FHWA - PA
 J. Mar, FHWA - NJ
 K. Dougherty, USACE, Philadelphia District
 K. Greene, NOAA NMFS, Sandy Hook Laboratory
 C. Vlot, PA DEP SERO
 J. Schmid, PFBC
 K. Skeels, DRJTBC
 K. Highlands, PennDOT, HQAD
 A. Zawisa, PennDOT EQAD
 R. Eppley, PennDOT District 6-0
 M. Raulerson, PennDOT District 6-0
 T. Carbone, NJ DOT
 J. Bowers-Altman, NJ DEP Endangered & Non-game Species
 Program
 J. Corleto, NJ DEP Permit Coordination & Environmental
 Review
 K. Davis, NJ DEP, Division of Fish & Wildlife
 J. Grilli, HNTB

REFERENCES

- Woodrow Wilson Bridge Project. 2002. Woodrow Wilson Bridge
 Project Shortnose Sturgeon Biological Assessment Supplement.
 October 2002.
- Hastings, M.C. and A.N. Popper. 2005. Effects of Sound on Fish.
 Subconsultants to Jones & Stokes under California Department
 of Transportation Contract No. 43A0139, Task Order 1.
 January 28, 2005. 73 pp and 2 appendices.

S:\FY2009\Sep\I-95 ScudderFalls NMFS.rs.doc





U. S. DEPARTMENT
OF TRANSPORTATION

Pennsylvania Division

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

Federal Highway
Administration

December 18, 2008

In reply refer to:
HEV-PA.3

Ms. Julie Crocker
Consulting Biologist, Protected Resources Division
National Marine Fisheries Service
Northeast Region
One Blackburn Drive
Gloucester, MA 01930-2298

Dear Ms. Crocker:

This correspondence responds to your letter dated November 18, 2008 concerning the I-95/Scudders Falls Bridge Improvement Project regarding the National Marine Fisheries Service's (NMFS) request for additional information to initiate formal consultation pursuant to Section 7 of the Endangered Species Act (ESA). The questions presented by NMFS have been identified followed by our responses.

NMFS Paragraph 1

"Underwater noise may have adverse affects on aquatic species, including shortnose sturgeon. As such, NMFS requests that FHWA provide information on the underwater noise expected to result from construction activities including installation of the cofferdams and bridge piers and the demolition of the existing bridge. Additionally, FHWA should provide an analysis of the effects of underwater noise on shortnose sturgeon including the potential for underwater noise to disturb spawning shortnose sturgeon."

Response 1

There will be no adverse noise effects to shortnose sturgeon, including no spawning disturbance, from cofferdam construction because cofferdams will not be constructed during the period of the year (March 15 through June 30) when spawning sturgeon, eggs, or larvae are likely to be present in the project area.

MOVING THE
AMERICAN
ECONOMY



Installation of the bridge piers and demolition of the existing bridge piers will occur in the dry within the confines of the cofferdams. Noise from these activities should not adversely affect shortnose sturgeon because it will be reduced in transmission through the steel walls of the cofferdams before it enters river water. Noise from demolition of parts of the existing bridge other than the piers and work conducted on the causeways should not adversely affect shortnose sturgeon because of the distance from the river water surface and the fact that sound from one environment (air or water) is not easily transmitted across the air-water interface (Akamatsu, et. al. 2002, as referenced in Popper 2003).

Although aquatic species other than shortnose sturgeon may be present when the sheet pile cofferdams are constructed, the expected underwater noise will be reduced, compared to impact hammer driving, by vibrating the sheet pile components into the river bottom where conditions allow. This method of installing sheet pile was recommended by the National Marine Fisheries Service in an appendix to the Alaska Essential Fish Habitat Environmental Impact Statement (National Marine Fisheries Service 2005). The document concludes that vibratory installation is less dangerous to fish because it elicits an avoidance response in fish and they move away. In addition, noise from installation of the bridge piers and demolition of the existing bridge within the cofferdams as well as from the causeways should not adversely affect other aquatic species for the same reasons stated in the above paragraph. Therefore, other aquatic species should not be adversely affected by bridge construction and demolition activities, either in cofferdam installation, within the cofferdams, or from the causeways.

NMFS Paragraph 2

"If a cofferdam is overtopped during the spring, fish, including shortnose sturgeon eggs and larvae, could become trapped within the cofferdam and be vulnerable to effects of removal through the pumps. FHWA should include information on the likelihood of cofferdam overtopping as well as procedures for removal of fish should overtopping occur."

Response 2

As reflected in the BA, the causeway will involve four independent stages with no stage overlapping the other. For stages 1 and 3, the causeway will be situated in the relatively low flow west channel of the river. Stage 3 is the worst case

MOVING THE
AMERICAN
ECONOMY



for total water obstruction as it occurs when the existing bridge
PAGE 3

piers are present and the upstream half of all of the new bridge piers have been constructed. In general, the top of the cofferdam will be set to be equal to the top of the causeway - in this case nearly 14 ft above stream bed. In theory, the overtopping would occur with a storm event greater than 1.4 years or exceeding approximately 61,725 cfs. For perspective, the monthly mean high flow for the years 1997 to 2006 (based on nearby USGS gauging station) was ~25,000 cfs or a return period of 0.7 years. During this 10-year period peak annual streamflow exceeded the 1.4 year design flows of 61,725 cfs approximately once per year, and half of these occurrences were outside the March 15 to June 30 period when spawning shortnose sturgeon, eggs and larvae are likely present.

It is unlikely that adult shortnose sturgeon would be trapped within an overtopped cofferdam during high river flow, noting the mean high flows for the years 1997 to 2006 and that adult shortnose sturgeon are benthic feeders, spending their time near the river bottom, and would be expected to attempt to maintain position near the river bottom immediately downstream of large boulders or other cover. Therefore, these fish are unlikely to be near the water surface during high river flow, even if they were swept into the current and transported downstream. Although it is possible that shortnose sturgeon eggs and larvae could be carried downstream by high river flow, it is unlikely that they would be sufficiently near the water surface to become trapped in an overtopped cofferdam. The eggs are sticky and many would be expected to remain attached to coarse river bottom substrate materials. The larvae live interstitially among the coarse river bottom substrate materials and many would be expected to remain safely out of the river flow.

If any cofferdams are overtopped and filled with river water, the water will be pumped out using pumps with sufficient clearance between the moving parts that most eggs and larvae should be able to pass through safely. It should be noted that Taft, *et. al.* (1991) showed that alewife and yellow perch larvae passing through a 4-inch centrifugal pump suffered approximately 10% mortality. Use of cofferdams and pumping water from the enclosed river bottom area within them is not unprecedented in shortnose sturgeon spawning waters in the Delaware River in recent years. In 2003, a small cofferdam was constructed and water was pumped from within it in order to facilitate emergency repairs to the Morrisville Levy, located only five miles downstream of the Scudder Falls Bridge. Use of the cofferdam and a pump with 3-inch clearance between any moving parts was agreed to by the US

MOVING THE
AMERICAN
ECONOMY



Marine Fisheries Service in order to minimize incidental take of shortnose sturgeon eggs and larvae (National Marine Fisheries Service 2004).

It also should be noted that hoses used to discharge water pumped from the cofferdams will not be capped with filters to remove suspended solids. Use of the filters would capture the shortnose sturgeon eggs and larvae and threaten their survival. Any suspended solids discharged to the river from flooded cofferdams would be expected to add little to any downstream sedimentation that would occur as high river flow subsides.

NMFS Paragraph 3

"The BA does not consider the potential of ongoing work within the cofferdam or along the causeway to result in the disturbance of adult shortnose sturgeon attempting to spawn within the action area. The effect of ongoing demolition and construction activity during the time of year when shortnose sturgeon will occur in the action area should be considered and analyzed."

Response 3

The expected impact of this ongoing construction/demolition work within the cofferdam or along the causeway on spawning adult shortnose sturgeon would be through noise transmitted into the river water and no adverse effects are anticipated. This subject is addressed in the response to the letter's paragraph 1.

NMFS Paragraph 4

"More information is needed on the potential for sediment and turbidity to enter the river and affect spawning adults and/or eggs and larvae. While the BA notes the type of erosion control measures that will be employed, there is no estimate of the levels of sediment or turbidity expected in the water column and what affects that will have on shortnose sturgeon. Additionally, there is no information on the turbidity and sediment levels expected to result during the installation or removal of the cofferdams."

Response 4

There will be no adverse effects of sediment and turbidity from the project on shortnose sturgeon, including no spawning disturbance, because the only in-river construction is that which is associated with installation/removal of cofferdams and

MOVING THE
AMERICAN
ECONOMY



causeways, and this construction will not occur during the period
PAGE 5

of the year (March 15 through June 30) when spawning sturgeon, eggs, or larvae are likely to be present in the project area. While some sedimentation and turbidity can be expected during construction/removal of the cofferdams and causeways, it is difficult to estimate the amount expected because of scarcity of literature on the subject. It is noted that the PA Fish and Boat Commission accumulated such data from projects on streams and small rivers for awhile and then discarded them because they were of little use because the sampling methodologies and frequencies were different among the several bridge projects and, therefore, the data could not be assimilated into a comprehensive estimate of project-related turbidity/sedimentation (William Savage, personal communication). Despite the uncertainty, sedimentation from construction/removal of the cofferdams and causeways is expected to be minimal because of the erosion control measures identified in the Biological Assessment.

NMFS Paragraph 5

"The BA should include an analysis of the effects of an alteration in flow and water velocity, resulting from the constriction of the river caused by the rock causeways, on the success of shortnose sturgeon spawning as well as the effect it will have on eggs and larvae. The BA should also include information on the likelihood that shortnose sturgeon will pass through the hydraulic openings in the rock causeways and the potential for the causeways to act as a barrier to further upstream passage."

Response 5

The causeways will alter river flow patterns and water flow velocity, but the changes are expected to be minimal, noting that only one causeway will be in the river at any time and no causeway will extend more than halfway across the river. Furthermore, each Pennsylvania-side causeway (west side) will contain two hydraulic openings, each 50 feet wide, and each New Jersey-side causeway (east side) will contain one hydraulic opening 100 feet wide.

Changes in river flow patterns would result in increased water depth in the causeway hydraulic openings and in the open river adjacent to the causeways as well as immediately upstream of the causeways. Water flow velocity would decrease immediately downstream of the causeway where no hydraulic openings are located, but increase in the hydraulic openings and in the open river adjacent to the causeways.

MOVING THE
AMERICAN
ECONOMY



As reflected in the BA, the causeway will involve four independent stages with no stage overlapping the other. For stages 1 and 3, the causeway will be situated in the relatively low flow west channel of the river. Stage 3 is the worst case for total water obstruction as it occurs when the existing bridge piers are present and the upstream half of all of the new bridge piers have been constructed.

In general, during Stage 3 the eastern channel will remain undisturbed and allow for relatively normal flow conditions. Based on the conceptual H&H studies, the average flow velocities (v) for Stage 3 are as follows:

- For 1-year storm -
 - o Existing bridge only: $v = 4.25$ fps
 - o Stage 3 causeway: $v = 6.20$ fps or an increase of 25%.
- For 2-year storm -
 - o Existing bridge only: $v = 5.79$ fps
 - o Stage 3 causeway: $v = 5.78$ fps or no net change.
- For 100-year storm -
 - o Existing bridge only: $v = 8.67$ fps
 - o Stage 3 causeway: $v = 8.66$ fps or no net change.

As the flows increase, the causeways become less influential on flow behavior as they are a lesser proportion of the affected cross-section.

Increased water depth should not adversely affect spawning adult shortnose sturgeon because the species is adapted to deeper water than is present in the project area. It is expected that spawning adults that encounter reduced water flow velocity downstream of the causeways will swim toward the hydraulic openings or toward the open river adjacent to the causeways in order to move upstream. It also is expected that spawning adults will adjust their elevation in the water column above the river bottom in order to take advantage of a water flow velocity that they can swim through on their way upstream. Adult shortnose sturgeon moving downstream post-spawning should follow the water current through the causeway's hydraulic openings or into the open river adjacent to the causeways. Therefore, the altered river flow patterns and water flow velocity should have no adverse effects on upstream or downstream movements of adult shortnose sturgeon.

Changes in river flow patterns and water flow velocity should not adversely affect shortnose sturgeon eggs and larvae. The eggs



will drift some distance further downstream due to increased water depth and water flow velocity. Nevertheless, the adhesive
PAGE 7

eggs will not be prevented from sticking to coarse river bottom substrate materials and, in fact, may benefit from increased water flow velocity that would act to prevent settlement of fine material and subsequent egg suffocation. The larvae live interstitially among the coarse river bottom substrate materials where increased water flow velocity likely will be slight.

NMFS Paragraph 6

"The BA notes that the rock causeways will be removed following construction of the bridge. To our knowledge, the restoration of disturbed habitat in a shortnose sturgeon spawning area has never been attempted. In order to analyze the effects of the action, NMFS will need information on the proposed restoration methodology as well as the habitat parameters (i.e., water depth, substrate type, flow velocity) that FHWA will be attempting to restore. Additionally, the BA should consider the potential that the habitat will not be able to be successfully restored and that it may be lost as future spawning and nursery habitat."

Response 6

The restoration planned for the areas where causeways will be constructed consists of removal of as much of the causeway material as possible without altering the previously existing riverbed elevation. Because the riverbed will not be excavated before causeway construction, the previously existing river bottom materials will still be present when the bulk of the causeway materials are removed. It is expected that river hydraulics likely will rearrange the once-disturbed river bottom. But, it also is expected that the restored river bottom will be very much like it was before causeway construction, with some causeway material incorporated in it. This restoration approach has been pursued by the Pennsylvania Department of Transportation on bridge replacement projects in the Allegheny River Drainage as a condition of Biological Opinions/Incidental Take Permits issued by the United States Fish and Wildlife Service, Pennsylvania Field Office for the northern riffleshell (*Epioblasma torulosa rangiana*) and the clubshell (*Pleurobema clava*) mussels. Post-construction habitat monitoring of these projects indicates considerable success in restoring habitat to pre-construction condition. During post-construction monitoring, Villella (2005) found 2% of 600 quadrants (100m²) surveyed in the direct impact area of the Kennerdell Bridge Replacement to contain causeway

MOVING THE
AMERICAN
ECONOMY



material. Further, this monitoring effort documented re-colonization of mussels in the direct impact area. Based upon
PAGE 8

the positive restoration efforts realized on this project the USFWS continues to utilize causeway removal and habitat restoration as a condition in Biological Opinions for bridge replacement projects in the Allegheny River.

There are no data available for water flow velocity in the areas where the causeways will be constructed and water depth varies with river discharge, of course. However, it is known that a coarse river bottom substrate that includes gravel, cobble, boulders, and some bedrock is present. Water depth, water flow velocity, and river bottom substrate data will be collected before causeway construction for use in restoration planning and for comparison with similar data collected during restoration. Therefore, it is expected that the habitat will be successfully restored and not lost as future spawning and nursery habitat, to the extent that scientists know such habitat to be.

NMFS Paragraph 7

"In order to fully analyze what effect the causeways will have on shortnose sturgeon, NMFS will need detailed information on the current habitat conditions in the area where the causeways will be placed. This information should at least include water depth, substrate type, cobble/boulder size and flow velocity. This information will also be critical when analyzing the plan to restore the habitat (see above) to pre-construction conditions."

Response 7

There is no detailed habitat information available for the areas where the causeways will be constructed, other than coarse river bottom substrate that includes gravel, cobble, boulders, and some bedrock is present. These substrate conditions and the river water velocity conditions that create them support the conclusion that these areas are suitable for shortnose sturgeon spawning. It should be noted that water depth, water flow velocity, and river bottom substrate data will be collected before causeway construction for use in restoration planning and for comparison with similar data collected during restoration.

NMFS Paragraph 8

"FHWA's analysis of the effects of the causeway on shortnose sturgeon seems to be based on an analysis of the percentage of potential spawning habitat that would

**MOVING THE
AMERICAN
ECONOMY**

be impacted by the causeway. While this may be a reasonable approach, there needs to be more information

PAGE 9

on the habitat available in the stretch of river considered in the analysis. For example, while the BA states that shortnose sturgeon may spawn over a seven mile river reach extending from the head of tide to Scudder Falls, there is little information on the depths, flows and substrate type found in this reach. This information is necessary to determine what percentage of this river reach is actually suitable spawning habitat."

Response 8

There appears to be no comprehensive information available describing habitat in the 7-mile river reach extending from the head of tide to Scudder Falls. However, it is generally known to be dominated by coarse river bottom substrate (gravel, cobble, and boulders with some bedrock) throughout. According to the PA Fish and Boat Commission Area 6 Fisheries Manager (Michael Kaufmann, personal communication) an exception is the area near the Commission's Yardley Boat Ramp, located in the Yardley Pool, approximately 0.5 mile downstream of the Scudder Falls Bridge. Here, the river bottom substrate (silt, sand, and small gravel) is softer, or finer, than in the rest of the reach. One of the Delaware River Basin Commission's Watershed Scientists (Robert L. Limbeck, personal communication) indicated that a depression in the riverbed at the railroad bridge located 1.7 miles downstream of the Scudder Falls Bridge and extending downstream toward Rotary Island contains silt and supports several species of submerged aquatic vegetation. Mr. Limbeck also identified a narrow (perhaps only 10 feet wide) strip along the Pennsylvania and New Jersey shorelines where silt is accumulated. These narrow silt accumulations occur around the perimeter of the islands in this reach, also. Lastly, Mr. Limbeck said that river water flow velocity exceeds approximately 1 foot per second during normal summer low flow in nearly this entire 7-mile river reach. Shortnose sturgeon researcher John C. O'Herron, II (personal communication) said that most, or nearly all, of this river reach should be considered suitable shortnose sturgeon spawning habitat, indicating that the changing variables of water temperature and river water flow velocity in conjunction with river bottom substrate type may make any area within this reach more or less suitable on a daily basis.

Although the several areas in the reach described above contain river bottom substrate conditions that are not optimum for

MOVING THE
AMERICAN
ECONOMY

shortnose sturgeon spawning, their size is unknown and in total may represent only a small fraction of the 7-mile river reach. Based on this observation as well as Mr. O'Herron's comment, it seems reasonable to assume that the entire 7-mile reach, or nearly all of it, is suitable for shortnose sturgeon spawning.

NMFS Paragraph 9

"The proposed bridge will discharge stormwater runoff directly into the river. While NMFS understands that this is also the case with the existing bridge, FHWA should provide information on the volume and makeup of the discharge as well as an analysis of the effects on shortnose sturgeon, especially eggs and larvae which are particularly vulnerable to the effects of pollutants."

Response 9

There will be little or no net change in bridge deck area outletting directly to the Delaware River with the proposed bridge because only the central 1/3 section of the bridge will outlet directly to the river, while stormwater from each outer 1/3 of the bridge will be collected and piped to the bridge abutments and stormwater facilities off the bridge.

- The existing curb to curb deck area:
 - Length of bridge @ 1740 ft x 54 ft (27 ft NB and 27 ft SB) = 93,960 SF
- The proposed curb to curb deck area (central 1/3 of bridge):
 - Length of bridge @ 1780 ft x 158.54 ft (85.27 ft NB and 73.27 ft SB) x 1/3 = 94,067 SF

Please provide notification upon NMFS receipt of this information in order to begin the formal consultation process. Should you have any questions, please feel free to contact me at 717-221-3465.

Sincerely,

Original signed by

Ross A. Mantonie
Environmental Specialist

MOVING THE
AMERICAN
ECONOMY



ec: A. Fox, FHWA - PA
J. Mar, FHWA - NJ
K. Dougherty, USACE, Philadelphia District
K. Greene, NOAA NMFS, Sandy Hook Laboratory
T. Schaible, DEP SERO
J. Schmid, PFBC
K. Skeels, Delaware River Joint Toll Bridge Commission
K. Highlands, PennDOT HQAD
R. Eppley, PennDOT 6-0
M. Raulerson, PennDOT 6-0
A. Zawisa, PennDOT EQAD

S:\FY2009\Dec\ScuddersFalls Added Info NMFS.rs.doc

MOVING THE
AMERICAN
ECONOMY



REFERENCES

- Akamatsu, T., T. Okumura, N. Novarini, and H.Y. Yan. 2002. Empirical refinements applicable to the recording of fish sounds in small tanks. *Journal of the Acoustical Society of America* 112: 3073-3082.
- Kaufmann, Michael. Personal communication with the PA Fish and Boat Commission's Area 6 Fisheries Manager, 448 Haycock Run Road, Bucksville, PA 18953 on December 2, 2008.
- Limbeck, Robert L. Personal communication with the Delaware River Basin Commission's Watershed Scientist, 25 State Police Drive, West Trenton, NJ 08628 on December 2, 2008.
- National Marine Fisheries Service. 2004. Endangered Species Act Biological Opinion for Emergency Repairs to the Morrisville Levy, Morrisville, Pennsylvania. Issued April 19, 2004. Agency: US Army Corps of Engineers - Philadelphia District.
- National Marine Fisheries Service. 2005. Appendix G Non-fishing Impacts to Essential Fish Habitat and Recommended Conservation Measures in Alaska Essential Fish Habitat Environmental Impact Statement.
- O'Herron, II, John C. Personal communication with the shortnose sturgeon researcher, Amitrone O'Herron, Inc. Environmental and Biological Consultants, P.O. Box 126, Cornwall, PA 17016-0126 on December 3, 2008.
- Popper, A.N. 2003. Effects of anthropogenic sound on fishes. *Fisheries* 28(10): 24-31.
- Savage, William. Personal communication with the PA Fish and Boat Commission's Fisheries Biologist, 450 Robinson Lane, Bellefonte, PA on December 8, 2008.
- Taft, E.P., R.H. Berger, J. Larsen, J.G. Holsapple, and L. Eberly. 1981. Laboratory evaluation of larval fish impingement and diversion systems. Presented at Workshop on Advanced Intake Technology. Sheraton-Harbor Island Hotel, San Diego, CA. April 22-24, 1981.
- Villella, R.F. 2005. Survey of Freshwater Mussels within the Direct and Indirect Areas of Impact at the Kennerdell Bridge S.R. 3008, Section B00, Second Post-Construction Monitoring Report. U.S. Geological Survey, Leetown Science Center, Aquatic Ecology Laboratory Report, Kearneysville, WV. 29pp.

MOVING THE
AMERICAN
ECONOMY





UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
55 Great Republic Drive
Gloucester, MA 01930-2276

NOV 18 2008

Ross A. Mantione
US Department of Transportation
Federal Highway Administration
228 Walnut Street, Room 508
Harrisburg, Pennsylvania 17101-1720

RE: I-95/Scudders Falls Bridge Improvement Project

Dear Mr. Mantione:

This correspondence responds to a letter dated September 30, 2008 (received October 6, 2008) regarding the initiation of formal consultation for the I-95/Scudders Falls Bridge Improvement Project pursuant to Section 7 of the Endangered Species Act (ESA) of 1973, as amended. Consultation with NOAA's National Marine Fisheries Service (NMFS) regarding the Scudders Falls Project is appropriate as the action may affect the federally endangered shortnose sturgeon (*Acipenser brevirostrum*). Accompanying your letter was a Biological Assessment (BA) evaluating the impact of the project on the Delaware River population of shortnose sturgeon. NMFS has completed an initial review of the BA and has determined that we have not received all of the information necessary to initiate consultation. To complete the initiation package, we will require the information outlined below.

Underwater noise may have adverse affects on aquatic species, including shortnose sturgeon. As such, NMFS requests that FHWA provide information on the underwater noise expected to result from construction activities including installation of the cofferdams and bridge piers and the demolition of the existing bridge. Additionally, FHWA should provide an analysis of the effects of underwater noise on shortnose sturgeon including the potential for underwater noise to disturb spawning shortnose sturgeon.

If a cofferdam is overtopped during the spring, fish, including shortnose sturgeon eggs and larvae could become trapped within the cofferdam and be vulnerable to effects of removal through the pumps. FHWA should include information on the likelihood of cofferdam overtopping as well as procedures for removal of fish should overtopping occur.

The BA does not consider the potential of ongoing work within the cofferdams or along the causeway to result in the disturbance of adult shortnose sturgeon attempting to spawn within the



action area. The effect of ongoing demolition and construction activity during the time of year when shortnose sturgeon will occur in the action area should be considered and analyzed.

More information is needed on the potential for sediment and turbidity to enter the river and affect spawning adults and/or eggs and larvae. While the BA notes the type of erosion control measures that will be employed there is no estimate of the levels of sediment or turbidity expected in the water column and what affects that will have on shortnose sturgeon. Additionally, there is no information on the turbidity and sediment levels expected to result during the installation or removal of the cofferdams.

The BA should include an analysis of the effects of an alteration in flow and water velocity, resulting from the constriction of the river caused by the rock causeways, on the success of shortnose sturgeon spawning as well as the effect it will have on eggs and larvae. The BA should also include information on the likelihood that shortnose sturgeon will pass through the hydraulic openings in the rock causeways and the potential for the causeways to act as a barrier to further upstream passage.

The BA notes that the rock causeways will be removed following construction of the bridge. To our knowledge, the restoration of disturbed habitat in a shortnose sturgeon spawning area has never been attempted. In order to analyze the effects of the action, NMFS will need information on the proposed restoration methodology as well as the habitat parameters (i.e., water depth, substrate type, flow velocity) that FHWA will be attempting to restore. Additionally, the BA should consider the potential that the habitat will not be able to be successfully restored and that it may be lost as future spawning and nursery habitat.

In order to fully analyze what effect the causeways will have on shortnose sturgeon, NMFS will need detailed information on the current habitat conditions in the area where the causeways will be placed. This information should at least include water depth, substrate type, cobble/boulder size and flow velocity. This information will also be critical when analyzing the plan to restore the habitat (see above) to pre-construction conditions.

FHWA's analysis of the effects of the causeway on shortnose sturgeon seems to be based on an analysis of the percentage of potential spawning habitat that would be impacted by the causeway. While this may be a reasonable approach, there needs to be more information on the habitat available in the stretch of river considered in the analysis. For example, while the BA states that shortnose sturgeon may spawn over a seven mile river reach extending from the head of tide to Scudder Falls, there is little information on the depths, flows and substrate type found in this reach. This information is necessary to determine what percentage of this river reach is actually suitable spawning habitat.

The proposed bridge will discharge stormwater runoff directly into the river. While NMFS understands that this is also the case with the existing bridge, FHWA should provide information on the volume and make up of the discharge as well as an analysis of effects on shortnose sturgeon, especially eggs and larvae which are particularly vulnerable to the effects of pollutants.

As you know, Section 7 consultation is necessary whenever an action funded, approved or carried out by a Federal agency may affect a listed species. It is our understanding that the approval of several Federal agencies, including at least the Army Corps of Engineers and the US Coast Guard, is necessary for the proposed project. As required by the Section 7 regulations (see 50CFR402.07), when a particular action involves more than one Federal agency, the lead Federal agency must notify NMFS of their designation. NMFS requests that this notification include correspondence from the other Federal agencies noting that they agree with the designation and concur with the conclusions reached in FHWA's BA.

The formal consultation process for the proposed project will not begin until we receive all of the requested information, or a statement explaining why that information cannot be made available. We will notify you when we receive this additional information; our notification letter will also outline the dates within which formal consultation should be complete and the biological opinion delivered. I look forward to continuing to work with you and your staff during the consultation process. If you have any questions or concerns about this letter or about the consultation process in general, please contact Julie Crocker at (978) 281-9328 ext. 6530.

Sincerely,



Mary A. Colligan
Assistant Regional Administrator
for Protected Resources

cc: Crocker, F/NER3 (hardcopy)
Damon-Randall, Hartley – F/NER3 (pdf)
Greene – F/NER4 (pdf)
Schmid – PFBC (pdf)



U. S. DEPARTMENT
OF TRANSPORTATION

Pennsylvania Division

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

Federal Highway
Administration

September 30, 2008

In reply refer to:
HEV-PA

Bucks County, PA and
Mercer County, NJ
I-95/Scudders Falls
Bridge Improvement Project

Ms. Julie Crocker
Consulting Biologist, Protected Resources Division
National Marine Fisheries Service
Northeast Region
One Blackburn Drive
Gloucester, MA 01930-2298

Dear Ms. Crocker:

The Federal Highway Administration (FHWA) in accordance with 50 CFR Section 402.14(c) is submitting this notification to initiate formal consultation for the above referenced project which may effect the federally endangered shortnose sturgeon (*Acipenser brevirostrum*). Concurrent with this notification as per 50 CFR 402.12(j) is the submission of the enclosed Biological Assessment (BA), dated September 2008. In addition, this notification stands as a conferencing request related to effects of the above referenced project upon the federal candidate Atlantic sturgeon (*Acipenser oxyrinchus*).

The enclosed BA includes: (1) a description of the action to be considered; (2) a description and quantitative analysis of the area that may be affected by the action; (3) a description of the listed, candidate, and proposed species and associated habitat that may be affected by the action; (4) a description and analysis of the manner in which the action may effect listed species; and, (5) other relevant available information related to the action, the affected listed species and supporting habitat.

In addition to the federal action on the part of FHWA, issuance of a Clean Water Act Section 404 Permit by the Department of the Army, U.S. Army Corps of Engineers (USACE) will be required. To

MOVING THE
AMERICAN
ECONOMY



this end, review of a Draft Biological Assessment was coordinated with the Philadelphia District USACE. Comments and concerns expressed by the Philadelphia District in their correspondence of September 2, 2008 have been addressed in the enclosed BA.

Based on the best scientific and commercial data available, and through informal consultation with the Service, attempts to minimize and offset effects to the species have been integrated into the project. Despite these measures to minimize the effects of the project, the federal action agency, FHWA, has determined that the action may affect, is likely to adversely affect the listed species.

In accordance with 50 CFR 402.12(j), please reply within 30 days stating whether the Service concurs with the findings of the biological assessment. Should the Service disagree with the findings in the BA, the specific time requirements in 50 CFR 402.14 will apply (formal consultation completed within 90 days from receipt of this letter and a Biological Opinion delivered within 45 days following completion of formal consultation).

Please provide any correspondence or direct questions concerning the proposed project to me at 717-221-3465.

Sincerely yours,

Original signed by

Ross A. Mantonione
Environmental Specialist

Enclosure

ec: A. Fox, FHWA - PA
J. Mar, FHWA - NJ
K. Dougherty, USACE, Philadelphia District
K. Skeels, Delaware River Joint Toll Bridge Commission
K. Highlands, PennDOT HQAD
R. Eppley, PennDOT 6-0
M. Raulerson, PennDOT 6-0
A. Zawisa, PennDOT EQAD

cc: K. Greene, NOAA NMFS, Sandy Hook Laboratory
T. Schaible, DEP SERO
J. Schmid, PFBC

MOVING THE
AMERICAN
ECONOMY



S:\FY2008\Sep\I-95 ScuddersFallsNMFS.rs.doc

MOVING THE
AMERICAN
ECONOMY 

I-95/Scudder Falls Bridge Improvement Project

Draft Biological Assessment

Response to USACE Review Comments

CENAP-OP-R-2003-1615

Dated September 2, 2008

1. I am concerned that design features have been incorporated into the draft biological assessment without consulting the state regulatory agencies and this office. In particular, the applicant's advancement of the proposed rock-fill causeway alternative; to the best of my knowledge, this structure has been neither accepted by PADEP and/or NJDEP nor this office. Acceptance of the Biological Assessment by NMFS based upon this design, does not obligate either this office or the state agencies to accept the structure during the permit review.

Response: Understood. The rock causeway was presented at a meeting on July 21, 2008. Both PADEP and NJDEP attended this meeting. The BA has been revised to more thoroughly described hydraulic openings (temporary bridges) being incorporated into the earthen causeway, including bridge type structures, to minimize the amount of fill associated with the earthen causeway, and maintain flow to the extent possible.

2. Section 1.3.2 Bridge Drainage System

a. The use of scuppers to directly discharge storm water from the bridge into the river should be reexamined as this may pose a water quality issue especially during low water period.

Response: The drainage system has been redesigned so that the runoff from the outer thirds of the deck area of the bridge will be captured by scuppers on the bridge and piped back to the abutments where they will be connected to existing stormwater facilities off the bridge. The bridge deck section within the center third of the river will capture runoff and outlet through downspouts to the river below, as is done for the entire existing bridge.

b. If scuppers are used on the bridge, what structures or mechanisms will be utilized by the SPCP to control spills from entering the river.

Response: Based on current practice, and on the preliminary design effort to date, the bridge deck drainage for the middle third of the bridge will free-drop into the river below. Bridge deck drainage from the end thirds of the bridge will be collected as described in the revised BA.

3. Section 1.4.3.1 Size/Type/Materials Used/Installation

a. Details on Figure 7 indicate the causeways to be constructed of R-7 but the text indicates they will be constructed of R-4, please clarify. If the causeways are constructed of R-4, will they be able to sustain expected flows without damage?

Response: R-7 is the correct designation. The BA has been modified to this effect.

b. Figure 7 indicates the causeway side slopes to be 1:1 but the text states that the material will be placed by bulldozer from dumped rock. Please provide an explanation on how the side slopes will be controlled using the proposed construction method.

Response: The BA has been modified to discuss how the causeway side slopes will be shaped using back hoes.

4. Section 1.4.3.2 Effects of the Causeways on Upstream and Downstream Flows

a. Please explain the choice of the 1.4 year storm for the design analysis.

Response: Based on the preliminary H&H studies prepared to date, the 1.4 Year storm was identified as the appropriate storm for design analysis of the causeway. Excerpts from the H&H studies:

The peak flows for various flood events were calculated using the methodology outlined in USGS (1982) and the USGS Computer Program PeakFQ (USGS 2006). This method calculates peak flow using statistical analysis where sufficient stream gaging records exist. Peak discharge data is available from USGS gage #01463500 Delaware River at Trenton, NJ, which is available from 1897 to 2006. Not all of this data was used in this statistical analysis, however, since reservoirs have significantly affected the magnitude of peak discharges.

USGS records indicate that reservoir operations have affected the peak discharge values since 1955. The last reservoir of significant size to be constructed within the Delaware River watershed was completed in the late 1960s. To determine the peak flows for various storm events, the period between 1970 and 2006 was used. It is assumed in this study that reservoir regulation has remained relatively constant since 1970. This time period is of adequate length to apply flood flow frequency analysis as described in USGS (1982) and is after the last reservoir of significant size was constructed upstream of the area of analysis.

The hydraulic analysis was conducted using the US Army Corp of Engineers model HEC-RAS (Hydraulic Engineering Center – Rivers Analysis System) version 3.1.3, which is the current standard in the field. The program uses one-dimensional water surface profile calculations to balance energy between cross-sections. A HEC-2 (the predecessor of HEC-RAS) model was developed for the FEMA (2004). The structure of the I-95 Scudder

Falls Bridge was not included in this study. There were, however, cross-sections placed directly upstream and downstream of where the bridge is located (at river stations 139.08 and 139.05). The HEC-2 model was converted to a HEC-RAS model for this analysis.

Flow Frequency Analysis:

Using the HEC-RAS model and the hydrology data discussed previously, a flow frequency relationship was developed. This relationship can be used to determine the frequency or return period for an event that has a particular flow.

The design flow for each of the causeway options at an elevation of 20 and 25 feet with 1 of foot freeboard was determined from the HEC-RAS model. The flow frequency relationship was then used to determine the return period associated with that flow. PA State Route 32 is located within the 100-year floodplain near the I-95 Scudder Fall Bridge. A frequency analysis was conducted for this location to determine the frequency event that currently causes flooding at PA Route 32 and how that might vary with the different causeway options. This analysis includes the chance that this event may occur during an assumed 2-year construction period. This flooding analysis is based on the elevation of PA Route 32 as indicated in the project plans and modeled at cross-section 139.08.

Based on the analyses performed, we recommend using a design flow that is between the 2-year and the 1.4-year (which produces a flow that provides 1 foot of freeboard for the causeway at an elevation of 25 feet) events. More detailed cross-section survey data and the risk of failure need to be included in an analysis for the recommendation of a flow that would be used for design purposes.

b. Has the design storm and the calculations been reviewed and approved by PADEP and NJDEP?

Response: No, this will be done later during project development when permits are submitted.

c. Given the known mean annual maximum flows over the period 1997-2006, what is the maximum likelihood (Bayesian Prior Probability) of an overtopping of the causeways within any one year and what is the cumulative likelihood of causeway overtopping over the course of the project? Similarly, what is the maximum likelihood of overtopping SR 0032 with backwater from the proposed causeways?

Response: Please note that only preliminary H&H design analysis has been performed to date. In addition to our response to 4a above, the following was concluded as part of these studies and will be advanced during final design :

Design Flows and Frequency for Causeway Options and the Risk of that Event Occurring During a 2-year Construction Period

	Design Flow for Flooding at PA 32	Approximate Frequency	Risk of Occurrence During a 2-yr Construction Period
Existing Bridge	195,350 cfs	21.4 years	9.1%
Proposed Bridge	196,480 cfs	22.0 years	8.9%
25' Earthen Causeway	173,750 cfs	12.0 years	16.0%
25' Trestle Causeway	182,640 cfs	16.7 years	11.6%

5. Section 1.4.3.4 Potential for Causeway Wash-Out

a. Provide a narrative or calculations supporting the assertion that the causeway will be free of washouts during the majority of the construction period.

Response: Please note that only preliminary H&H design analysis has been performed to date. In addition to our response to 4a and 4c above, the scour analysis and causeway details will be advanced during final design

b. If there is an extreme flood event, what is the impact of potential washouts upon the sturgeon?

Response: This is discussed in Section 8.1.2. This section states the following:

"It is unlikely that washout of a causeway would make much difference in survival of larval shortnose sturgeon during a severe storm event. First, it should be noted that the volume of material used to construct one of the causeways probably would represent a tiny fraction of the total bedload that would move during a severe storm event. With or without the causeway in place, shortnose sturgeon larvae would be present interstitially in the river bottom substrate. Some larvae likely would be sufficiently deep in the substrate that they would not be disturbed by bedload movement. Other larvae undoubtedly would be washed away. It is difficult to estimate what percentage might be killed because there is no known data available in the literature on this subject."

6. Section 1.7 Demolition of Existing Bridge

a. What is the potential impact area from construction of the causeway extensions (option 1)?

b. What is the potential impact area from construction of work platforms (option 2)?

Response: Work platforms are no longer being considered as an option. Causeway "fingers" perpendicular to the main causeway will be used. Impacts of these "fingers" are included in the BA

- c. Will the demolition of the concrete cores affect sturgeon in the area?

Response: The demolition of the concrete cores may result in some minor vibrations. The impact of these vibrations to the sturgeon are discussed in Section 8.1.1.

7. Section 2.5 Temporary Access Methodologies Considered

- a. The typical sections in Figure 7 show a water depth averaging around 9 feet but the text indicates the water is too shallow for the use of barges, please clarify?

Response: The typical height of the causeway was previously shown as 9 feet, not the water depth. The depth of water is four to seven feet; the typical causeway height has been changed to 14 feet.

- b. Have the use of pontoon structures been considered?

Response: The depth of water is too shallow to allow the use of a pontoon structure. A pontoon becomes unstable if it touches the river bottom. Given the shallow depth of the river in this location, the use of a pontoon would not be a safe alternative.

- c. Section 2.5.3 states that a trestle structure would limit the contractor's ability to maneuver and would increase the probability of equipment collapse into the river. Please explain how or why a trestle system with the same top-width as an earth-fill causeway would be less stable or inhibit maneuvering more than an earth-fill structure.

Response: Additional discussion of the disadvantages of a trestle causeway has been added to the BA.

8. Section 3 Description of Affected Environment

- a. Has a particle size analysis been completed within the study area? If so, please provide the results.

Response: A particle size analysis has not been completed. DMJM to confirm/modify.

9. Section 4.1 Shortnosed Sturgeon

- a. There is a minor discrepancy between the river mile for the Scudders Falls bridge as cited on page 15, line 2 of the second paragraph (RM 140) and that cited on page 16, paragraph 1, line 5 (RM 139).

Response: These are two different references. One is to the Scudder Falls at RM 140, while the other is to the Scudder Falls Bridge at RM 139).

- b. Please provide copies of the cited progress reports.

Response: Copies were provided on September 26, 2008.

10. Section 7.1.1 Direct Effects

- a. What is the cumulative loss of potential habitat due to use of fill causeways?
- b. What would be the individual and cumulative impacts from the action for:
- i. side-slopes greater than 1:1 (see comment 3 b.)?
 - ii. potential impacts from washouts (see comments 5 a and b)?
 - iii. impacts from causeway extensions or work platforms (see comments 6 a and b)?
- c. Are estimates of disturbance due to vibration and sedimentation available? if so please provide them.

Response: The cumulative loss of potential habitat is included in the revised BA. Sideslopes greater (steeper) than 1:1 are not feasible for the causeway. Impacts from potential causeway washouts are included in the revised BA - see response to Comment 5b. Impacts from causeway extensions (fingers) are included in the revised BA. Work platforms are not proposed. Estimates of disturbance due to vibration and sedimentation are not available.

11. Section 7.1.3 Incidental Take

- a. Although the percentage of the reach affected is small, what is the percentage of the reach that is acceptable spawning habitat?
- b. What percentage of acceptable habitat within the reach would be affected by the proposed work?

Response: There is no information available to indicate what percentage of the reach is acceptable spawning habitat. No detailed survey of habitat conditions was conducted in the project area. However, observations made during the mussel survey identified the small band of silt and sand located along the east shoreline of Park Island. Noting that this substrate grades to include gravel and some cobble under the existing bridge, which are particle sizes preferred for shortnose sturgeon spawning, our analysis of effects assumes that the entire project area is preferred spawning habitat.

12. Section 8 Conservation Measures

- a. What screen size, screen type, and intake velocity been proposed for the cofferdam pumps?

Response: This will be determined by the contractor unless there are certain requirements that must be specified. However, the revised BA clarifies that cofferdams will be water tight except for possible groundwater infiltration, which would have no potential to contain shortnose sturgeon eggs or larvae.



US Army Corps
of Engineers
Philadelphia District

MEMORANDUM
Regulatory Branch
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107-3390

To: Wendy K. Schellhamer

Location: STV Incorporated
205 West Welsh Drive
Douglassville, PA 19518

From: Kevin W. Dougherty
CENAP-OP-R

Date: September 2, 2008

Subject: CENAP-OP-R-2003-1615
Scudders Falls Bridge Project
Review of Draft Biological Assessment

Dear Ms. Schellhamer:

This office has completed a preliminary review on the above cited document that was received on August 26, 2008 and is providing the following comments and requests for information.

1. I am concerned that design features have been incorporated into the draft biological assessment without consulting the state regulatory agencies and this office. In particular, the applicant's advancement of the proposed rock-fill causeway alternative; to the best of my knowledge, this structure has been neither accepted by PADEP and/or NJDEP nor this office. Acceptance of the Biological Assessment by NMFS based upon this design, does not obligate either this office or the state agencies to accept the structure during the permit review.
2. Section 1.3.2 Bridge Drainage System
 - a. The use of scuppers to directly discharge storm water from the bridge into the river should be reexamined as this may pose a water quality issue especially during low water period.
 - b. If scuppers are used on the bridge, what structures or mechanisms will be utilized by the SPCP to control spills from entering the river.
3. Section 1.4.3.1 Size/Type/Materials Used/Installation
 - a. Details on Figure 7 indicate the causeways to be constructed of R-7 but the text indicates they will be constructed of R-4, please clarify. If the causeways are constructed of R-4, will they be able to sustain expected flows without damage?
 - b. Figure 7 indicates the causeway side slopes to be 1:1 but the text states that the material will be placed by bulldozer from dumped rock. Please provide an explanation on how the side slopes will be controlled using the proposed construction method.

4. Section 1.4.3.2 Effects of the Causeways on Upstream and Downstream Flows
 - a. Please explain the choice of the 1.4 year storm for the design analysis.
 - b. Has the design storm and the calculations been reviewed and approved by PADEP and NJDEP?
 - c. Given the known mean annual maximum flows over the period 1997-2006, what is the maximum likelihood (Bayesian Prior Probability) of an overtopping of the causeways within any one year and what is the cumulative likelihood of causeway overtopping over the course of the project? Similarly, what is the maximum likelihood of overtopping SR 0032 with backwater from the proposed causeways?
5. Section 1.4.3.4 Potential for Causeway Wash-Out
 - a. Provide a narrative or calculations supporting the assertion that the causeway will be free of washouts during the majority of the construction period.
 - b. If there is an extreme flood event, what is the impact of potential washouts upon the sturgeon?
6. Section 1.7 Demolition of Existing Bridge
 - a. What is the potential impact area from construction of the causeway extensions (option 1)?
 - b. What is the potential impact area from construction of work platforms (option 2)?
 - c. Will the demolition of the concrete cores affect sturgeon in the area?
7. Section 2.5 Temporary Access Methodologies Considered
 - a. The typical sections in Figure 7 show a water depth averaging around 9 feet but the text indicates the water is too shallow for the use of barges, please clarify?
 - b. Have the use of pontoon structures been considered?
 - c. Section 2.5.3 states that a trestle structure would limit the contractor's ability to maneuver and would increase the probability of equipment collapse into the river. Please explain how or why a trestle system with the same top-width as an earth-fill causeway would be less stable or inhibit maneuvering more than an earth-fill structure.
8. Section 3 Description of Affected Environment
 - a. Has a particle size analysis been completed within the study area? If so, please provide the results.
9. Section 4.1 Shortnosed Sturgeon
 - a. There is a minor discrepancy between the river mile for the Scudders Falls bridge as cited on page 15, line 2 of the second paragraph (RM 140) and that cited on page 16, paragraph 1, line 5 (RM 139).
 - b. Please provide copies of the cited progress reports.
10. Section 7.1.1 Direct Effects
 - a. What is the cumulative loss of potential habitat due to use of fill causeways?
 - b. What would be the individual and cumulative impacts from the action for:
 - i. side-slopes greater than 1:1 (see comment 3 b.)?
 - ii. potential impacts from washouts (see comments 5 a and b)?
 - iii. impacts from causeway extensions or work platforms (see comments 6 a and b)?

c. Are estimates of disturbance due to vibration and sedimentation available? if so please provide them.

11. Section 7.1.3 Incidental Take

a. Although the percentage of the reach affected is small, what is the percentage of the reach that is acceptable spawning habitat?

b. What percentage of acceptable habitat within the reach would be affected by the proposed work?

12. Section 8 Conservation Measures

a. What screen size, screen type, and intake velocity been proposed for the cofferdam pumps?

Please contact me if you have any questions or require further information.

Kevin W. Dougherty

e-mail: Kevin.W.Dougherty@usace.army.mil

voice: 215.656.5733

FAX: 215.656.6729



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
One Blackburn Drive
Gloucester, MA 01930-2298

MEMORANDUM FOR: Joe Grilli, HNTB Corporation

FROM: Julie Crocker *Julie Crocker* 3/26/08
Consulting Biologist, Protected Resources Division

SUBJECT: I-95/Scudder Falls Bridge Improvement Project – Draft EA for Interdisciplinary Review; Initial Comments from NMFS Protected Resources Division

NMFS Protected Resources Division (PRD) is responsible for overseeing programs related to species listed under the Endangered Species Act (ESA) of 1973, as amended. PRD has reviewed the interdisciplinary review draft of the EA for the I-95/Scudders Falls Bridge Project and offers the following initial comments. Following the meeting scheduled for March 27, 2008, we may offer additional comments or refine these comments.

Shortnose sturgeon (*Acipenser brevirostrum*) are an endangered species and known to be seasonally present in the action area. Additionally, the project will take place within known shortnose sturgeon spawning habitat. As such, the project may affect this species and a consultation pursuant to Section 7 of the ESA is required. Please see the attached documents to obtain more information on the biology of this species in the Delaware River.

As a listed species may be affected by the project, the lead Federal agency (presumably the Federal Highway Administration) should initiate consultation with NMFS. In order to initiate consultation, NMFS will need to receive a Biological Assessment (BA; which may be included in NEPA documentation and need not be a stand alone document) and a letter requesting consultation. The BA must include:

- a complete project description of the including any special conditions and proposed mitigation measures (time of year restrictions etc.)
- description of the area that may be affected by the action
- description of all ways (indirect and direct) the project may affect the species, including their habitat.

Initial review of the proposed project suggests that it has the potential to have significant impacts on individual shortnose sturgeon and the species habitat, particularly the habitat used in the spring for spawning and as nursery habitat for eggs and larvae. However, the draft EA does not include sufficient details on construction methodology and in-water work to allow PRD to determine what types of effects are likely. While the draft EA concludes that the project is not likely to have adverse effects on shortnose sturgeon there is not sufficient information provided



to justify this conclusion. In order to assess the likely impacts of the proposed project, NMFS needs a more complete project description including:

- timing of the project (i.e., when will construction begin, how long will it take, any time of year restrictions proposed, number of construction seasons)
- complete description of proposed bridge construction. If the earthen causeways are used how will they be constructed and removed, how will the area be restored once removed, will there be sediment controls in place (i.e., cofferdams or silt curtains), what effect on downstream flows will these causeways have, what effect on suspended sediment levels will they have, is there a potential for washout in the spring floods which would increase suspended sediment levels downstream of the construction site. Additionally, once the causeways are in place, what types of work will be done from them?
- complete description of any proposed pile driving. NMFS will need to know the length and diameter of piles and how they will be driven. We will also need an assessment of expected sound levels in the water and the likely effect of these sound levels on fish.
- description of any other work that will be done that may affect the in-water environment.
- complete description of bridge removal – will blasting be done? If so, need to know expected dB levels in water, any mitigation proposed, how will pieces be removed, etc. what restoration will be done at site of old pilings.

Based on this initial review, in the final NEPA documentation and BA, NMFS would expect to see an analysis of the effects of the project on shortnose sturgeon which included at least an analysis of the following:

- loss of spawning habitat (temporary and/or permanent)
- changes in flow which may impact spawning adults and/or eggs/larvae
- effects of construction, including in water noise associated with any pile driving and/or blasting
- effects of suspended sediment associated with placement, existence and removal of earthen causeway including the potential to bury/smother eggs and larvae.

Additionally, Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) occur in the Delaware River and may occur in the project area. Atlantic sturgeon are considered a Candidate Species as NMFS has initiated a status review for this species to determine if listing as threatened or endangered under the ESA is warranted. A status review report was completed by the status review team in February 2007. NMFS is currently reviewing the report and other available information to determine if listing under the ESA is warranted. A listing determination, and, if listing is warranted, any accompanying proposed rule(s), is expected to be published by NMFS in 2008. If it is determined that listing is warranted, a listing determination and final rule listing the species could be published within a year from the date of publication of the listing determination or proposed rule. The Status Review report is available at: http://www.nero.noaa.gov/prot_res/CandidateSpeciesProgram/AtlSturgeonStatusReviewReport.pdf. As this species is not listed under the ESA, no consultation pursuant to Section 7 of the ESA is necessary. However, as it is a candidate species, NMFS recommends that an analysis of effects to this species be included in any NEPA documentation developed for the proposed project.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
One Blackburn Drive
Gloucester, MA 01930-2298

Robert P. Briggs II
Environmental Operations Manager
STV, Inc.
820 Bear Tavern Rd, Suite 200
Trenton, NJ 08628-1021

NOV 15 2007

Dear Mr. Briggs,

This is in response to your letter dated November 8, 2007 requesting additional information on threatened and endangered species and species of concern in the vicinity of the I-95/Scudder Falls Bridge project on the Delaware River. The following letter provides new information on shortnose sturgeon (*Acipenser brevirostrum*) and Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) not contained in our previous letter from February 24, 2004.

As indicated in our previous letter, a population of federally endangered shortnose sturgeon occurs in the Delaware River from the lower bay upstream to at least Lambertville, New Jersey (river mile 148). Based on mark-recapture data collected between January 1999 and March 2003, Brundage (2006) estimated a population of 12,047 adult shortnose sturgeon in the Delaware River (95% confidence interval: 10,757-13,589). This estimate is likely valid for the entire Delaware River and estuary population, even though the study area only extended from Scudder Falls downstream to the Cherry Island Flats near Wilmington, Delaware. The Brundage (2006) population estimate is very similar to the modified Schnabel population estimate of 12,796 (95% confidence interval: 10,228-16,367) calculated by Hastings et al. (1987) based on shortnose sturgeon captures/recaptures from 1981 to 1984. This suggests that the shortnose sturgeon population in the Delaware River is stable, but has not increased during the intervening decades. The collection in the Brundage (2006) study of 168 shortnose sturgeon tagged as adults by Hastings et al. (1987) suggests that older fish comprise a substantial portion of the shortnose sturgeon in the Delaware River. This is consistent with Bain et al. (1998), who concluded that the Hudson River shortnose sturgeon population was composed largely of similarly-sized old fish.

All other information contained in the February 2004 letter remains the best available information on shortnose sturgeon in the Scudder Falls area. This includes information regarding the area's importance as a spawning ground. In regards to the timing of spawning activities, movement to the spawning grounds occurs in early spring (late March through early May). Movement to spawning areas is triggered in part by water temperature and fish typically arrive at the spawning locations when water temperatures are between 8 and 9°C, with most spawning occurring when water temperatures are between 10 and 15°C. While actual spawning (i.e., fertilized eggs or larvae) has still not

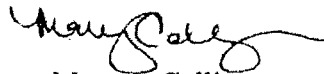


been documented in this area, the concentrated use of the Scudder Falls region in the spring by large numbers of mature male and female shortnose sturgeon indicates that this is the major spawning area (O'Herron et al. 1993). The same area was identified as a likely spawning area based on the collection of two ripe females in the spring of 1965 (Hoff 1965). During the spawning period, males remain on the spawning grounds for approximately a week while females only stay for a few days (O'Herron and Hastings 1985). After spawning, which typically ceases by the time water temperatures reach 15°C (although sturgeon have been reported on the spawning grounds at temperatures as high as 18°C), shortnose sturgeon move rapidly downstream to the Philadelphia area.

Atlantic sturgeon are distributed along the entire East Coast of the U.S. and have been designated as a 'candidate species' by NMFS. By default, candidate species are also listed as species of concern. The best available information indicates that a reproducing population persists in the Delaware River. As a candidate species, Atlantic sturgeon receive no substantive or procedural protection under the ESA; however, NMFS recommends that project proponents consider implementing conservation actions to limit the potential for adverse effects on Atlantic sturgeon from any proposed project. Many populations, including those found in the Delaware River, have undergone drastic declines since the late 1800s. In 2006, NMFS initiated a status review for this species to determine if listing as threatened or endangered under the Endangered Species Act is warranted. The status review report was completed in February 2007 and NMFS is currently reviewing the findings. If it is determined that listing is warranted, a final rule listing the species could be published within a year from the date of publication of a proposed listing. The Status Review report is available at the following address: http://www.nero.noaa.gov/prot_res/CandidateSpeciesProgram/AtlSturgeonStatusReviewReport.pdf.

Should you have any questions about these comments, should you require additional information about shortnose and Atlantic sturgeon in the Delaware River, or should you wish to schedule a meeting to discuss the proposed project and impact analysis, please contact William Barnhill of my staff at (978) 281-9300 ext. 6510 or by email (William.Barnhill@noaa.gov).

Sincerely,



Mary A. Colligan
Assistant Regional Administrator
for Protected Resources

cc: Barnhill, F/NER3
Greene, F/NER4



November 8, 2007

Endangered Species Coordinator
Protected Resource Division
National Marine Fisheries Service, Northeast Region
One Blackburn Drive
Gloucester, MA 01930-2298

Re: Delaware River Joint Toll Bridge Commission
Contract C-393A, Capital Project No. CP 0301A, Account No. 7161-06-012
I-95 / Scudder Falls Bridge Improvement Project
Environmental Inventory

Dear Ms. or Mr.:

Via letter dated November 14, 2003, the Delaware River Joint Toll Bridge Commission (DRJTBC) and HNTB Corporation (HNTB) requested information from the National Marine Fisheries Service (NOAA Fisheries) concerning natural resources, including species of special concern, within the vicinity of the I-95/Scudder Falls Bridge on the Delaware River. Your Division's letter response of February 24, 2004 indicated the study area is within the range of one listed species, the endangered shortnose sturgeon (*Acipenser brevirostrum*). A copy of the February 24, 2004 letter is attached.

Since that time the Scudder Falls Bridge Improvement Project has been addressing fish resources, among many others, and has selected an Initially Preferred Alternative (IPA) that consists of the following:

- Pennsylvania Inside Widening on the Mainline
- Taylorsville Road Alternative 2, which includes a single southbound exit to Taylorsville Road
- Upstream Placement of the New Scudder Falls Bridge
- Route 29 Alternative 1c-modified, which includes round-a-bouts and maintains the existing by-pass

The project is currently evaluating causeway designs that have been proposed for completing in-river work. Your Division has been generally informed of the project progress through the periodic Special Agency Coordination Meetings (SACM), including the SACM of March 20th earlier this year. In order to further progress the project, we are requesting that you provide to us, any additional information concerning natural resources near the I-95/Scudder Falls Bridge that your Division may have developed since your February 24, 2004 response. Your prompt reply to our request for an update to your February 24, 2004 letter will be greatly appreciated.



Endangered Species Coordinator
Page 2

November 8, 2007

We are planning to contact you in the very near future to schedule a meeting to further discuss the project and our impact analysis. We would like that meeting to occur at your very earliest convenience. If you have questions or comments concerning this letter please contact Angela Kisela at (609) 530-1496, angela.kisela@stvinc.com or me at (609) 530-9608, robert.briggs@stvinc.com.

Very truly yours,
STV Incorporated

A handwritten signature in black ink, appearing to read 'Robert Briggs II', with a long horizontal flourish extending to the right.

Robert P. Briggs II, P.G., REM, LEED® AP
Environmental Operations Manager

cc: Ms. Karen Greene, NMFS, Sandy Hook, Highlands, NJ
Mr. J. Grilli, HNTB Corporation

encl: February 24, 2004 NOAA Fisheries letter



November 8, 2007

Mr. Eric Davis
Supervisor
U.S. Fish and Wildlife Service
New Jersey Field Office
927 N. Main Street, Building D
Pleasantville, NJ 08232

Re: Delaware River Joint Toll Bridge Commission
Contract C-393A, Capital Project No. CP 0301A, Account No. 7161-06-012
I-95 / Scudder Falls Bridge Improvement Project
ES-03/NE088
Environmental Inventory

Dear Mr. Davis:

Via letter dated October 29, 2003, the Delaware River Joint Toll Bridge Commission (DRJTBC) and STV Incorporated (STV) requested information from the U.S. Fish and Wildlife Service (USFWS) New Jersey Field Office concerning existing conditions in the project study area, including species of special concern within the vicinity of the project. Your Office's letter response of December 17, 2003 indicated that except for an occasional transient bald eagle, no other federally listed or proposed endangered or threatened flora or fauna under Service jurisdiction are known to occur within the vicinity of the proposed project site.

Since that time the Scudder Falls Bridge Improvement Project has been addressing fish and wildlife issues, among many others, and has selected an Initially Preferred Alternative (IPA) that consists of the following:

- Pennsylvania Inside Widening on the Mainline
- Taylorsville Road Alternative 2, which includes a single southbound exit to Taylorsville Road
- Upstream Placement of the New Scudder Falls Bridge
- Route 29 Alternative 1c-modified, which includes round-a-bouts and maintains the existing by-pass

The project is currently evaluating causeway designs that have been proposed for completing in-river work. In order to further progress the project, we are requesting that you provide to us, any additional information concerning fish and wildlife resources near the I-95/Scudder Falls Bridge that your Office may have developed since your December 17, 2003 response. Your prompt reply to our request for an update to your December 17, 2003 letter will be greatly appreciated.



Mr. Eric Davis
Page 2

November 8, 2007

If you have questions or comments concerning this letter please contact Angela Kisela at (609) 530-1496, angela.kisela@stvinc.com or me at (609) 530-9608, robert.briggs@stvinc.com.

Very truly yours,
STV Incorporated

A handwritten signature in black ink, reading "Robert Briggs" in a cursive script, followed by a long horizontal line.

Robert P. Briggs II, P.G., REM, LEED® AP
Environmental Operations Manager

cc: Mr. J. Grilli, HNTB Corporation

enc: December 17, 2003 USFWS letter



November 8, 2007

Mr. Robert Anderson
U.S. Fish and Wildlife Service
Pennsylvania Field Office
315 South Allen Street, Suite 322
State College, PA 16801-4850

Re: Delaware River Joint Toll Bridge Commission
Contract C-393A, Capital Project No. CP 0301A, Account No. 7161-06-012
I-95 / Scudder Falls Bridge Improvement Project
Environmental Inventory

Dear Mr. Anderson,

Via letter dated October 29, 2003, the Delaware River Joint Toll Bridge Commission (DRJTBC) and STV Incorporated (STV) requested information from the U.S. Fish and Wildlife Service (USFWS) Pennsylvania Field Office concerning existing conditions in the project study area, including species of special concern within the vicinity of the project. Your letter response of December 30, 2003 indicated the study area is within the range of three federally listed species, the threatened bald eagle (*Haliaeetus leucocephalus*), threatened bog turtle (*Clemmys muhlenbergii*), and the endangered shortnose sturgeon (*Acipenser brevirostrum*), and provided guidance should such species be encountered.

Since that time the Scudder Falls Bridge Improvement Project has been addressing fish and wildlife issues, among many others, and has selected an Initially Preferred Alternative (IPA) that consists of the following:

- Pennsylvania Inside Widening on the Mainline
- Taylorsville Road Alternative 2, which includes a single southbound exit to Taylorsville Road
- Upstream Placement of the New Scudder Falls Bridge
- Route 29 Alternative 1c-modified, which includes round-a-bouts and maintains the existing by-pass

The project is currently evaluating causeway designs that have been proposed for completing in-river work. Your Office has been generally informed of the project progress through the periodic Special Agency Coordination Meetings (SACM), including the SACM of March 20th earlier this year. In order to further progress the project, we are requesting that you provide to us, any additional information concerning natural resources near the I-95/Scudder Falls Bridge that your Office may have developed since your December 30, 2003 response. Your prompt reply to our request for an update to your December 30, 2003 letter will be greatly appreciated.

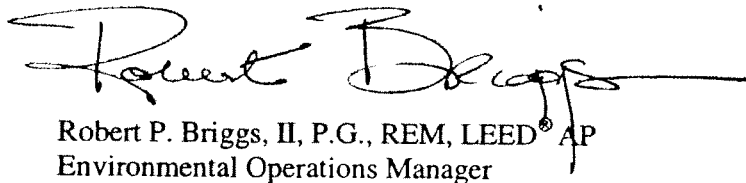


Mr. Robert Anderson
Page 2

November 8, 2007

We are planning to contact you in the very near future to schedule a meeting to further discuss the project and our impact analysis. We would like that meeting to occur at your very earliest convenience. We are also requesting a meeting with the PA Fish and Boat Commission, so perhaps we could schedule a joint meeting with both agencies. If you have questions or comments concerning this letter please contact Angela Kisela at (609) 530-1496, angela.kisela@stvinc.com or me at (609) 530-9608, robert.briggs@stvinc.com.

Very truly yours,
STV Incorporated



Robert P. Briggs, II, P.G., REM, LEED® AP
Environmental Operations Manager

cc: Mr. J. Grilli, HNTB Corporation

enc: December 30, 2003 USFWS letter



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Pennsylvania Field Office
315 South Allen Street, Suite 322
State College, Pennsylvania 16801-4850



July 11, 2005

Angela Kisela
STV, Inc.
820 Bear Tavern Road
Suite 200
Trenton, NJ 08628-1021

Re: I-95/Scudders Falls Bridge Improvement Project
Lower Makefield Township, Bucks County, Pennsylvania

Dear Ms. Kisela:

This is in reference to a site visit by you and Richard McCoy of this office on May 10, 2005, to determine if any of the wetlands within the study area for the subject proposed project contain habitat for the bog turtle (*Clemmys muhlenbergii*), a species that is federally listed as threatened. The following comments are provided pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) to ensure the protection of endangered and threatened species.

The habitat evaluation included wetlands K, L, M-1, N, O, P, and Q, as shown on the maps for the U.S. Army Corps of Engineers jurisdictional determination for the project. Although wetlands N, O, and P had some areas of mucky soils, they were all completely forested and within the flood zone of the Delaware River, making them unsuitable for bog turtles. None of the other four wetlands has the combination of hydrology, soils, and vegetation characteristic of suitable bog turtle habitat. Therefore, based on our site visit, we conclude that implementation of the proposed project will not affect the bog turtle.

This determination is valid for two years from the date of this letter. If the proposed project has not been fully implemented prior to this, an additional review by this office is recommended. Should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered.

If this wetland evaluation did not include all wetlands in all areas that will be directly or indirectly affected by the proposed project and project-associated features (e.g., road, water, sewer, or utility line relocations, stormwater basins, and sedimentation basins), those wetlands outside of the flood zone for the Delaware River will also need to be evaluated. The results of any additional wetland evaluations should be submitted to our office for review so that we can determine whether our original determination is still valid.

This response relates only to endangered and threatened species under our jurisdiction, and does not address potential Service concerns under the Fish and Wildlife Coordination Act or other authorities.

Please contact Richard McCoy of my staff at 814-234-4090 if you have any questions or require further assistance regarding this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "David Densmore", followed by a long horizontal line extending to the right.

David Densmore
Supervisor



RECORD OF
TELEPHONE CALL

Job No: 38476
Date: August 16, 2004

CALL FROM: Addie Kim
CALL TO: Anita Riportella
BY:

OF: HNTB Corporation
OF: National Marine Fisheries Service

SUBJECT DISCUSSED

I had received a phone call from Anita Riportella, National Marine Fisheries Service (732-872-3116). She left a message indicating that she had received correspondence dated November 14th that listed Dan Morris as a contact.

I returned her phone call and explained that we were uncertain, prior to the November 17th ACM meeting, the designated points of contact for the National Marine Fisheries Service, but that we currently have Anita as ACM representative, and STV is coordinating directly with Julie Crocker regarding Protected Species. Anita clarified that she (Anita) should be the point of contact for Habitat Conservation Division and Julie Crocker should be the point of contact for the Protected Resources Division. We discussed the fact that both Anita and Julie are listed as (and should both remain as) points of contact for cooperating agencies. Anita requested that we also add Julie Crocker to the ACM mailing list so that she receives all pertinent project correspondence directly from us.

Anita mentioned that Julie Crocker is expecting (in about 5 months). For another project, she has designated Kristen Koyama as her replacement. For the I-95/Scudder Falls Bridge Improvement Project, Anita indicated that she believes that Julie intends to remain as the designated point of contact (as she has not yet indicated otherwise). However, in the event that we should have problems contacting Julie in the future, we may want to check with Anita or Kristen on her availability.

I indicated that Julie Crocker has been very helpful as far as furnishing studies on the shortnose sturgeon, and we expect that Normandeau will be proceeding with the substrate surveys for mussels and other habitats in the near future. Anita indicated that she appreciated being kept in the loop on status of sturgeon species studies, and she would like to continue to receive relevant correspondence on habitat studies as her purvey includes anadromous species. I indicated that we would continue to cc: her on correspondence to Julie Crocker, and visa versa.

ACTION TO BE TAKEN:

Add Julie Crocker to the ACM mailing list.

Continue to cc: Anita on correspondence with Julie Crocker.

In the event that Julie Crocker cannot be reached in the future, check with either Anita Riportella or Kristen Koyama on her status/availability.

COPY TO: Bob Briggs, STV



STV Incorporated

820 Bear Tavern Road, Suite 200
Trenton, New Jersey 08623-1021
(609) 530-0300 fax (609) 530-0305

August 9, 2004

Ms. Julie Crocker
Fisheries Biologist, Protected Resource Division
National Marine Fisheries Service, Northeast Region
One Blackburn Drive
Gloucester, MA 01930-2298

Re: Delaware River Joint Toll Bridge Commission
Contract C-393A, Capital Project No. CP 0301A, Account No. 7161-06-012
I-95 / Scudder Falls Bridge Improvement Project
Environmental Inventory

Dear Ms. Crocker,

We are writing to provide an update on the plans for ecological assessments for the I-95/Scudder Falls Bridge Improvement Project to comply with the U.S. Endangered Species Act, in response to information on species under your jurisdiction provided in your letter of February 24, 2004. On February 24, 2004 the National Marine Fisheries Service (NMFS) responded to a request by the Delaware River Joint Toll Bridge Commission and STV Incorporated (STV) for information on threatened or endangered species near the I-95/Scudder Falls Bridge on the Delaware River. The February 24th letter indicated that the only listed species under the jurisdiction of the NMFS that occurs in the project area is the shortnose sturgeon (*Acipenser brevirostrum*). The letter also states that the Federal Highway Administration would be responsible for initiating Section 7 consultation, at which time more specific information on the project and an assessment of the project's impacts on the shortnose sturgeon, should be submitted to the NMFS. Although the Section 7 consultation process has not yet been initiated, we thought it proper to inform you of a proposed protocol for developing information concerning the shortnose sturgeon.

The Pennsylvania Office of the U.S. Fish and Wildlife Service, the Pennsylvania Fish and Boat Commission, and the New Jersey Department of Environmental Protection Division of Fish and Wildlife (NJDFW) have also expressed interest in the shortnose sturgeon. We have been requested by the agencies to perform studies to determine the locations of existing spawning habitats and suitable substrates for fish and threatened or endangered species. The details of project impacts, including the footprint of any new or expanding bridge structures within the riverbed and banks, is not currently known. Alternatives development and impact analysis is currently commencing. Project alternatives provide for any new or expanded bridge structures to be located either along the current alignment or only slightly either upstream or downstream. We have, therefore, retained Normandeau Associates to develop the habitat and substrate information requested by the agencies. Substrate information will be developed as part of a mussel survey to be



STV Incorporated

performed this summer in the Delaware River from 100 meters upstream to 200 meters downstream of any proposed disturbances within the river.

We greatly appreciate receipt of, and would like to thank you for, the information provided in your correspondence dated June 16, 2004, in which, the NMFS Fisheries provided to STV information on prior studies and research conducted on the shortnose sturgeon. This will greatly assist our efforts in assessing the potential impacts of the proposed project on this species. This information, as well as data from the NJDFW, knowledgeable individuals, and data obtained during the mussel survey, will be used by Normandeau Associates to develop a "white paper" to address shortnose sturgeon and other fisheries resources within the project study area.

If you have comments concerning the proposed protocol for addressing shortnose sturgeon within the project area, please provide them at your earliest convenience. Your assistance in this matter is greatly appreciated. Should you have any questions concerning this request, please contact Angela Kisela at (609) 530-1496, kiselaa@stvinc.com or me at (609) 530-9608, briggsrp@stvinc.com.

Very truly yours,

A handwritten signature in black ink, appearing to read "Robert Briggs", with a long horizontal flourish extending to the right.

STV Incorporated
Robert P. Briggs, II, P.G., REM
Environmental Scientist

cc: Ms. Anita Ripportella, NMFS
Mr. J. Grilli, HNTB Corporation

enc: February 24, 2004 letter
November 17, 2003 HNTB letter



STV Incorporated

620 Bear Tavern Road, Suite 200
Trenton, New Jersey 08628-1021
(609) 530-0300 fax: (609) 530-0305

August 9, 2004

Mr. Robert Anderson
U.S. Fish and Wildlife Service
Pennsylvania Field Office
315 South Allen Street, Suite 322
State College, PA 16801-4850

Re: Delaware River Joint Toll Bridge Commission
Contract C-393A, Capital Project No. CP 0301A, Account No. 7161-06-012
I-95 / Scudder Falls Bridge Improvement Project
Environmental Inventory

Dear Mr. Anderson,

We are writing to provide an update on the status of ecological assessments proposed for the I-95/Scudder Falls Bridge Improvement Project to comply with the U.S. Endangered Species Act, in response to species information provided in your letter of December 30, 2003. On December 30, 2003 the U.S. Fish and Wildlife Service (USFWS) responded to an October 29, 2003 request by the Delaware River Joint Toll Bridge Commission and STV Incorporated (STV) for information about federally listed or proposed endangered and threatened species near the Scudder Falls Bridge on the Delaware River. The December 30th letter stated that the project study area is within the range of three federally listed species, the threatened bald eagle (*Haliaeetus leucocephalus*), threatened bog turtle (*Clemmys muhlenbergii*), and the endangered shortnose sturgeon (*Acipenser brevirostrum*). The purpose of our letter is to provide you with current information concerning our investigations of these federally listed species.

Bald Eagle

Based upon guidance offered in the December 30th letter, subsequent telephone conversations between the USFWS and STV and upon research STV performed, including with specialists in PA and NJ, STV concluded in its April 6, 2004 letter to the USFWS that there were currently no nesting habitats for the bald eagle within two miles of the I-95/Scudder Falls Bridge. In its letter to STV of May 11, 2004, the USFWS concurred with STV's findings.

The USFWS NJ office and the NJ Department of Environmental Protection, Division of Fish and Wildlife (NJDEP DFW) have also expressed interest in the bald eagle. The November 17, 2003 NJDFW letter also states that a species transient to the area would be the state-endangered / federally threatened bald eagle (*Haliaeetus leucocephalus*), and further states that Landscape Mapping in the project area indicates suitable habitat occurs along the Delaware River. We have researched the Landscape Project database and have



STV Incorporated

determined that there are no bald eagle nesting, foraging or buffer areas within the New Jersey portion of the project study area. We are coordinating with both of those agencies.

Bog Turtle

The December 30th USFWS letter stated that if any wetlands occur within or adjacent to the project area, their potential suitability as bog turtle habitat should be assessed. STV has delineated wetland areas within the project corridor that could be affected by the project, and has assessed those wetland areas within Pennsylvania for bog turtle habitat. The assessment was performed in accordance with "*Bog Turtle Habitat Survey*" (Phase I survey) of the *Guidelines for Bog Turtle Surveys*. Four wetland areas have been assessed as having marginal, albeit potential, bog turtle habitat. The project is about to initiate the alternatives analysis process. During this process, efforts will be made to avoid direct and indirect impacts to these wetlands. If adverse impacts to these four wetlands cannot be avoided, a "*Bog Turtle Survey*" (Phase 2 survey) will be conducted by a qualified biologist. If project activities might adversely affect the bog turtle, or the bald eagle, additional consultation with the USFWS will be undertaken.

Shortnose Sturgeon

The December 30th letter recommended that we contact National Marine Fisheries Service (NMFS), which has been done. NMFS has provided STV with research information concerning shortnose sturgeon movements in the Delaware River and within the project study area. This research information, along with other in river data to be obtained by Normandeau Associates, will be used to develop a "white paper" that will address shortnose sturgeon and other fisheries resources within the project study area.

The Pennsylvania Fish and Boat Commission and the NJDEP DFW have also expressed interest in the shortnose sturgeon. We have been informed by these agencies of a construction moratorium within the river from March thru June, and have been requested to perform studies to determine the locations of existing spawning habitats and suitable substrates for fish and threatened and endangered species. We have retained Normandeau Associates to develop this information. Substrate information will be developed as part of a mussel survey to be performed this summer in the Delaware River from 100 meters upstream to 200 meters downstream of potential disturbances within the river.

August 9, 2004

Page 3



STV Incorporated

If you have comments concerning the status of our efforts or the proposed protocol for addressing bog turtle or shortnose sturgeon habitat within the project area, please provide them at your earliest convenience. Your assistance in this matter is greatly appreciated. Should you have any questions concerning this request, please contact Angela Kisela at (609) 530-1496, kiselaa@stvinc.com or me at (609) 530-9608, briggsrp@stvinc.com.

Very truly yours,

A handwritten signature in black ink, appearing to read "Robert Briggs".

STV Incorporated
Robert P. Briggs, II, P.G., REM
Environmental Scientist

- cc: Mr. John C. Staples, U.S. Fish and Wildlife Service, New Jersey
Mr. Kevin L. Mixon, Pennsylvania Game Commission
Mr. J. Grilli, HNTB Corporation
- enc: STV's correspondence dated October 29, 2003 and April 6, 2004
U.S. Fish and Wildlife Service correspondence dated December 30, 2003 and May 11, 2004



United States Department of the Interior

FISH AND WILDLIFE SERVICE



Pennsylvania Field Office
315 South Allen Street, Suite 322
State College, Pennsylvania 16801-4850

May 11, 2004

Robert P. Briggs
STV Incorporated
820 Bear Tavern Road, Suite 200
Trenton, New Jersey 08628-1021

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

Dear Mr. Briggs:

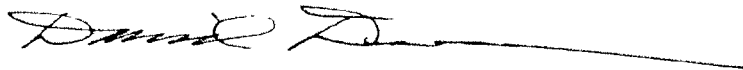
Thank you for your letter of April 6, 2004, which provided the Fish and Wildlife Service with additional information regarding the subject proposed project in Bucks County, Pennsylvania and Mercer County, New Jersey. The proposed project is within the known range of the bald eagle (*Haliaeetus leucocephalus*), a species that is federally listed as threatened. The following comments are provided pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) to ensure the protection of endangered and threatened species. Our comments relate only to that portion of the project located in Pennsylvania. Please submit project information to the Service's New Jersey Field Office, 927 N. Main Street, Building D, Pleasantville, NJ 08232-1454, for a review of that portion of the project occurring in New Jersey.

Instead of the mid-winter aerial survey for bald eagle nests that we recommended in our December 30, 2003, letter, STV staff searched existing sources of information that would likely be informed of bald eagle activity in the project vicinity. This alternative approach was discussed with Bob Anderson of my staff during a February 23, 2004, teleconference. Based on the reports you gathered from knowledgeable professionals, we agree that bald eagles do not appear to be currently nesting near Scudder Falls. As we stated in our December 30 letter, however, this species is continuing to recover and expand its breeding range in Pennsylvania, and new eagle nests may be found in previously undocumented locations.

This response relates only to endangered and threatened species under our jurisdiction, based on an office review of the proposed project's location. No field inspection of the project area has been conducted by this office. Consequently, this letter is not to be construed as addressing potential Service concerns under the Fish and Wildlife Coordination Act or other authorities.

Please contact Robert Anderson at 814-234-4090 if you have any questions or require further assistance regarding this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "David Densmore", followed by a long horizontal line extending to the right.

David Densmore
Supervisor



STV Telephone Conversation Record

Page No. 1 of 1

Date: April 29, 2004

Project: Scudder Falls

Project No.: 23-11536

Time: 10:45 am

Reference: T & E Species

File No.: 25.00

Subject: shortnose sturgeon

Caller: Julie Crocker
978-281-9328 ext. 6530

Respondent(s): Bob Briggs
609-530-9608

Action Required: Notify Normandeau and Associates of content of conversation.

Items of Discussion:

Julie's phone call was a return of mine made earlier this morning. The purpose of my call to Julie earlier this morning was to discuss the NMFS involvement in the study, to determine whether the NMFS needed additional project information from STV, and to inquire whether the NMFS would require new shortnose sturgeon surveys or habitat assessments to be performed for the study. Julie is aware of the study and has previously informed us that the FHWA will initiate the Section 7 process. She told me she had information concerning the shortnose sturgeon in the Delaware River that she will send to STV's Trenton office via regular mail. She also stated that there are several biologists that she believes have conducted habitat characterization studies for the shortnose sturgeon in or close to our study area and that she will obtain their names and e-mail that information. Julie further stated that she would not require any new shortnose sturgeon surveys or habitat assessments for the study. We did discuss construction moratoriums.

I told Julie that the NJDEP was requiring that we sample for invertebrate mussels and that they had offered sampling protocol guidance. I added that we were in the process of retaining the services of Normandeau Associates, who she said she was familiar with and who she said had previously performed shortnose sturgeon work. I told her we were going to submit a sampling work plan to the NJDEP for approval prior to conducting any work and that we would provide her with a copy of the plan upon submission.



STV Incorporated

820 Bear Tavern Road, Suite 200
Trenton, New Jersey 08628-1021
(609) 530-0300 fax: (609) 530-0305

Trenton
Office
copy

April 6, 2004

Mr. Robert Anderson
U.S. Fish and Wildlife Service
Pennsylvania Field Office
315 South Allen Street, Suite 322
State College, PA 16801-4850

Re: Delaware River Joint Toll Bridge Commission
Contract C-393A, Capital Project No. CP 0301A, Account No. 7161-06-012
I-95 / Scudder Falls Bridge Improvement Project
Response for Bald Eagle Habitat

Dear Mr. Anderson,

This letter is in response to Mr. David Densmore's December 30, 2003 letter and to a subsequent teleconference Deborah Descaro and I had with you on February 23, 2004 concerning that letter. Mr. Densmore's letter indicated that our project study area is within the range of three federally listed species: the threatened bald eagle, threatened bog turtle and endangered shortnose sturgeon. Although the project will address all three species, this response addresses only the bald eagle issue.

Mr. Densmore's letter indicated a mid-winter, aerial survey should be conducted to determine whether or not bald eagle nests occur in or near the action area. During our teleconference we stated that the project is expected to take place within or immediately adjacent to its current footprint and that the study portion of the project was not scheduled to be completed until the summer of 2006. Based upon that information you stated that in lieu of an aerial survey, it would be satisfactory to perform literature research or conduct interviews with knowledgeable people to determine whether there are bald eagle nests in the project vicinity.

STV Incorporated (STV) has since conducted interviews with specialists in Pennsylvania and New Jersey. STV interviewed Mr. Dan Brauning, bird specialist for the Pennsylvania Game Commission. See attached March 12, 2004 memorandum. Mr. Brauning was not aware of any bald eagle habitat within two miles of the Scudder Falls Bridge. STV also spoke to Kathy Clark, Endangered and Non-game Species Specialist for the New Jersey Department of Environmental Protection (NJDEP). See attached March 12, 2004 telephone conversation record. Ms. Clark suggested we examine the



STV Incorporated

NJDEP "Landscape Project" GIS system, which we have done. This system contains information indicating nesting and forging habitats for the bald eagle and the appropriate buffers that surround these habitats. The system indicates there are no nesting, forging or buffer areas within two miles of the Scudder Falls Bridge.

In addition, STV reviewed the *Birds of Bucks County* and *The Birds of North America, No. 506*. The *Birds of Bucks County* stated that there were no records of breeding Bald Eagles in Bucks County. Because that book was published in 1998, STV contacted the Bucks County Audubon Society (BCAS) and the National Audubon Society (NAS) to determine whether that status was current. Neither the BCAS nor the NAS were aware of any nesting bald eagles in Bucks County. (See attached telephone records of April 5, 2004.) Buehler states in *The Birds of North America* that the nesting site selection is either deciduous or coniferous, but it must be a super-canopy tree. Super-canopy means the tree is very distinguished from the surrounding canopy. Nests are typically placed in the upper quarter of the tree and lodged against the trunk in a large fork. Trunks range from 20 inches diameter at breast height (dbh) to 76 inches dbh. The average tree diameter is 32 inches. The tree formation must contain large diameter branches and have a clear access route with a nearby perch. During a site reconnaissance, STV field personnel did identify some trees that met the diameter requirements, but these were located in residential neighborhoods and did not have clear approaches.

STV's research concludes there are no nesting habitats for the bald eagle within two miles of the Scudder Falls Bridge in Pennsylvania and New Jersey. STV respectfully requests U.S. Fish and Wildlife Service's concurrence on this finding. If you have any additional questions, please contact either me at (609) 530-9608 or Deborah Descaro, STV's Wildlife Biologist at (610) 385-8357.

Sincerely,

STV Incorporated
Robert P. Briggs, P.G., REM
Environmental Scientist

Enclosures

cc: Mr. J. Grilli, HNTB Corporation



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
One Blackburn Drive
Gloucester, MA 01930-2288

Angela Kisela
STV, Inc.
820 Bear Tavern Road, Suite 105
Trenton, NJ 08628-1021

FEB 24 2004

Re: Species Impact Review: I-95/Scudders Falls Bridge

Dear Ms. Kisela,

This letter is in response to a request for information on any threatened or endangered species in the area of the proposed I-95/Scudders Falls Bridge Improvement Project over the Delaware River in Lower Makefield Township, Bucks County, Pennsylvania. This project is being proposed by the Delaware River Joint Toll Bridge Commission, under the jurisdiction of the US Federal Highway Administration.

The only listed species under the jurisdiction of the National Marine Fisheries Service (NOAA Fisheries) that occurs in the project area is the endangered shortnose sturgeon (*Acipenser brevirostrum*). Shortnose sturgeon were listed as endangered on March 11, 1967 (32 FR 4001), and the species remained on the endangered species list with the enactment of the Endangered Species Act (ESA) in 1973. Shortnose sturgeon are known to occur in the Delaware River from the lower bay upstream to at least Lambertville, New Jersey. Tagging studies by O'Herron et al. (1993) show that the most heavily used portion of the river appears to be between river mile 118 below Burlington Island and the Trenton Rapids at river mile 137. Shortnose sturgeon overwinter in dense sedentary aggregations in the upper tidal reaches of the Delaware River between river mile 118 and river mile 131, with large concentrations around Newbold Island and Duck Island. During the late summer months, shortnose sturgeon are more dispersed and are thought to be more widely distributed throughout the river and estuary than in the winter months. In the Delaware River, it is believed that most spawning occurs in the vicinity of Scudders Falls, which features rapid, moderately turbulent flow, and abundant cobble/boulder substrates. In this river, most shortnose sturgeon spawning occurs over a temperature range of 10-14°C, although a few adults may be present on the spawning grounds at temperatures up to about 20°C. Adult shortnose sturgeon typically remain in the spawning area for a relatively short period of time. After spawning, adult shortnose sturgeon are expected to leave the Scudders Falls area and return to the tidal portion of the River (i.e., below the fall line at Trenton). Fertilized shortnose sturgeon eggs are demersal and adhesive. The eggs hatch in approximately 13 days at water temperatures of 8-12°C. Early larvae remain on the bottom for several days after hatching. Older larvae initiate downstream migration which likely lasts only 2-3 days at a rate of approximately 7.5km/day. In the Delaware River, migration of this duration and rate would result in the movement of larvae spawned at Scudders Falls into the tidal river.



Section 7(a)(2) of the ESA states that each Federal agency shall, in consultation with the Secretary, insure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Because federally endangered shortnose sturgeon are present in the Delaware River, any discretionary federal action that may affect this species must undergo Section 7 consultation. Depending on the nature of any in-water work required for bridge replacement and other associated activities, this action could affect shortnose sturgeon. The federal action agency, in this case the Federal Highway Administration (FHWA), would be responsible for initiating Section 7 consultation, at which time the project details should be submitted to NOAA Fisheries, Northeast Regional Office, One Blackburn Drive, Gloucester, MA 01930. An assessment of the project's impacts on federally endangered shortnose sturgeon should be included with the project details. After reviewing this information, NOAA Fisheries would then be able to conduct a consultation under section 7 of the ESA.

If you have any questions regarding the information provided in this letter or the Section 7 process in general, please contact Julie Crocker at (978)281-9328 x6530.

Sincerely,



Mary A. Colligan
Assistant Regional Administrator
for Protected Resources

Cc: Riportella, F/NER4



United States Department of the Interior

FISH AND WILDLIFE SERVICE Pennsylvania Field Office

315 South Allen Street, Suite 322
State College, Pennsylvania 16801-4850



December 30, 2003

Robert P. Briggs, II
STV Incorporated
820 Bear Tavern Road, Suite 105
Trenton, New Jersey 08628-1021

Dear Mr. Briggs:

This responds to your letter of October 29, 2003, requesting information about federally listed and proposed endangered and threatened species within the study area described for the Scudder Falls Bridge (Interstate 95) over the Delaware River in Bucks County, Pennsylvania. The study area is located within the range of three federally listed species: the threatened bald eagle (*Haliaeetus leucocephalus*), threatened bog turtle (*Clemmys muhlenbergii*), and endangered shortnose sturgeon (*Acipenser brevirostrum*). The following comments are provided pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) to ensure the protection of endangered and threatened species. *These comments relate only to that portion of the project located in Pennsylvania. Please submit project information to the Fish and Wildlife Service's New Jersey Field Office at 927 North Main Street, Bldg. D-1, Pleasantville, NJ 08232, for their review of that portion of the project occurring in New Jersey.*

Bald Eagle

Bald eagles typically occur in the vicinity of aquatic areas; they frequent lakes, reservoirs, large rivers (e.g., Delaware River), and wetland systems. Their nests are usually built in large trees within two miles of these features. Because eagles are vulnerable to human disturbance, particularly during the nesting season, nests are often located in relatively remote forested areas.

The Service proposed to remove the bald eagle from the federal *List of Endangered and Threatened Wildlife* on July 6, 1999 (*Federal Register*, Vol. 64, No. 128), but final action on that proposal has not been taken. The bald eagle, therefore, continues to be listed under the Endangered Species Act. Any changes in the regulatory status of the bald eagle can be monitored by accessing the Service's web site (www.fws.gov).

The bald eagle population in Pennsylvania has increased substantially from the three nest sites found in the State from 1963 through 1980. In 2001, 53 eagle nests were documented. Because bald eagles are continuing to recover and expand their breeding range in Pennsylvania, new eagle nests may be found in previously undocumented locations.

If project activities are proposed in or near potentially suitable bald eagle habitat, adverse effects to the species may occur. Prior to implementing such projects, a mid-winter, aerial survey should be conducted by a qualified biologist to determine whether or not bald eagle nests occur in or near the action area. The search should be focused on areas within two miles of lakes, reservoirs, rivers and large wetlands. Survey results should be submitted to the Service for review and concurrence.

Bog Turtle

Bog turtles inhabit shallow, spring-fed fens, sphagnum bogs, swamps, marshy meadows, and pastures characterized by soft, muddy bottoms; clear, cool, slow-flowing water, often forming a network of rivulets; high humidity; and an open canopy. Bog turtles usually occur in small, discrete populations occupying suitable wetland habitat dispersed along a watershed. The occupied "intermediate successional stage" wetland habitat is usually a mosaic of micro-habitats ranging from dry pockets, to areas that are saturated with water, to areas that are periodically flooded. Some wetlands occupied by bog turtles are located in agricultural areas and are subject to grazing by livestock.

If any wetlands occur within or adjacent to a project area, their potential suitability as bog turtle habitat should be assessed, as described under "*Bog Turtle Habitat Survey*" (Phase 1 survey) of the enclosed *Guidelines for Bog Turtle Surveys*. If any wetlands are identified as potential bog turtle habitat, efforts should be made to avoid any direct or indirect impacts to those wetlands. If adverse effects to these wetlands cannot be avoided, a more detailed and thorough survey would be necessary, as described under "*Bog Turtle Survey*" (Phase 2 survey) of the *Guidelines*. The Phase 2 survey should be conducted by a qualified biologist with bog turtle field survey experience (see enclosed list of qualified surveyors). Survey results should be submitted to the Service for review and concurrence.

If project activities might adversely affect the bald eagle or bog turtle, additional consultation with the Service would be required, pursuant to the Endangered Species Act.

Shortnose Sturgeon

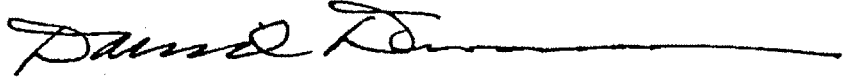
The shortnose sturgeon is under the jurisdiction of the National Marine Fisheries Service. We recommend you contact that agency (Northeast Regional Office, 1 Blackburn Drive, Gloucester, MA 01930) for any comments they may have related to that species.

This response relates only to endangered or threatened species under our jurisdiction, based on an office review of the proposed project's location. No field inspection of the project area has been conducted by this office. Consequently, this letter is not to be construed as addressing potential Service concerns under the Fish and Wildlife Coordination Act or other authorities.

Requests for information regarding State-listed endangered or threatened species should be directed to the Pennsylvania Game Commission (birds and mammals), the Pennsylvania Fish and Boat Commission (fish, reptiles, amphibians and aquatic invertebrates), and the Pennsylvania Department of Conservation and Natural Resources (plants).

Please contact Robert Anderson of my staff at 814-234-4090 if you have any questions or require further assistance.

Sincerely,

A handwritten signature in cursive script, appearing to read "David Densmore", followed by a long horizontal line extending to the right.

David Densmore
Supervisor

Enclosure

GUIDELINES FOR BOG TURTLE SURVEYS¹

(revised May 2001)

RATIONALE

A bog turtle survey (when conducted according to these guidelines) is an attempt to determine presence or probable absence of the species; it does not provide sufficient data to determine population size or structure. Following these guidelines will standardize survey procedures. It will help maximize the potential for detection of bog turtles at previously undocumented sites at a minimum acceptable level of effort. Although the detection of bog turtles confirms their presence, failure to detect them does not absolutely confirm their absence (likewise, bog turtles do not occur in all appropriate habitats and many seemingly suitable sites are devoid of the species). Surveys as extensive as outlined below are usually sufficient to detect bog turtles; however, there have been instances in which additional effort was necessary to detect bog turtles, especially when habitat was less than optimum, survey conditions were less than ideal, or turtle densities were low.

PRIOR TO CONDUCTING ANY SURVEYS

If a project is proposed to occur in a county of known bog turtle occurrence (see attachment 1), contact the U.S. Fish and Wildlife Service (Service) and/or the appropriate State wildlife agency (see attachment 2). They will determine whether or not any known bog turtle sites occur in or near the project area, and will determine the need for surveys.

- ▶ If a wetland in or near the project area is *known* to support bog turtles, measures must be taken to avoid impacts to the species. The Service and State wildlife agency will work with federal, state and local regulatory agencies, permit applicants, and project proponents to ensure that adverse effects to bog turtles are avoided or minimized.
- ▶ If wetlands in or adjacent to the project area are *not* known bog turtle habitat, conduct a bog turtle habitat survey (Phase 1 survey) if:
 1. The wetland(s) have an emergent and/or scrub-shrub wetland component, *and*
 2. Direct and indirect adverse effects to the wetland(s) cannot be avoided.

See *Bog Turtle Conservation Zones*² for guidance regarding activities likely to affect bog turtles and their habitat. In addition, consult with the Fish and Wildlife Service and/or appropriate State wildlife agency to definitively determine whether or not a Phase 1 survey will be necessary.

BOG TURTLE HABITAT SURVEY (= Phase 1 survey)

The purpose of this survey is to determine whether or not the wetland(s) are *potential* bog turtle habitat. These surveys are usually performed by someone who is either: (1) qualified to conduct bog turtle surveys (i.e., Phase 2 surveys), or (2) qualified to identify and delineate wetlands. The following conditions and information apply to habitat surveys.

- ▶ Surveys can be performed any month of the year (except when significant snow cover is present). This flexibility in conducting Phase 1 surveys allows efforts during the Phase 2 survey window to be spent on wetlands most likely to support bog turtles (i.e., those that meet the criteria below).
- ▶ Potential bog turtle habitat is recognized by three criteria (*not all of which may occur in the same portion of a particular wetland*):
 1. **Suitable hydrology.** Bog turtle wetlands are typically spring-fed with shallow surface water or saturated soils present year-round, although in summer the wet area(s) may be restricted to near spring head(s). Typically these wetlands are interspersed with dry and wet pockets. There is often subsurface flow. In addition, shallow rivulets (less than 10 cm deep) or pseudo-rivulets are often present.
 2. **Suitable soils.** Usually - a bottom substrate of soft muck or mucky-like soils (this does not refer to a technical soil type); you will usually sink to your ankles or deeper in muck, although in summers of dry years this may be limited to areas near spring heads. In some portions of the species' range, the soft substrate consists of scattered pockets of peat (6+ inches deep) instead of muck. Suitable soils are the critical criterion.
 3. **Suitable vegetation.** Dominant vegetation of low grasses and sedges (emergent wetland), often with a scrub-shrub wetland component. Common emergent vegetation includes: tussock sedge (*Carex stricta*), soft rush (*Juncus effusus*), rice cut grass (*Leersia oryzoides*), sensitive fern (*Onoclea sensibilis*), tearthumbs (*Polygonum* spp.), jewelweeds (*Impatiens* spp.), arrowheads (*Sagittaria* spp.), skunk cabbage (*Symplocarpus foetidus*), panic grasses (*Panicum* spp.), other sedges (*Carex* spp.), spike rushes (*Eleocharis* spp.), grass-of-Parnassus (*Parnassia glauca*), shrubby cinquefoil (*Potentilla fruticosa*), sweet-flag (*Acorus calamus*), and in disturbed sites, reed canary grass (*Phalaris arundinacea*) or purple loosestrife (*Lythrum salicaria*). Common scrub-shrub species include alder (*Alnus* spp.), red maple (*Acer rubrum*), willow (*Salix* spp.), tamarack (*Larix laricina*), and in disturbed sites, multiflora rose (*Rosa multiflora*).
- ▶ Suitable hydrology, soils and vegetation are necessary to provide the critical wintering sites (soft muck, peat, burrows, root systems of woody vegetation) and nesting habitats (open areas with tussocky or hummocky vegetation) for this species. It is very important to note, however, that one or more of these criteria may be absent from portions of a wetland or wetland complex supporting bog turtles. Absence of one or more criteria does not preclude bog turtle use of these areas to meet important life functions, including foraging, shelter and dispersal.
- ▶ If these criteria (suitable soils, vegetation and hydrology) are present in the *wetland*, then the *wetland* is considered to be potential bog turtle habitat, regardless of whether or not that portion of the wetland occurring within the project boundaries contains all three criteria. If the *wetland* is determined to be potential habitat and the project will directly or indirectly impact *any portion* of the wetland, then either:
 - ▶ Completely avoid all direct and indirect effects to the wetland, in consultation with the Service and appropriate State wildlife agency, OR

- ▶ Conduct a Phase 2 survey to determine the presence of bog turtles.
- ▶ The Service and appropriate State agency (see list) should be sent a copy of survey results for review and comment including: a USGS topographic map indicating location of site; project design map, including location of wetlands and streams; color photographs of the site; surveyor's name; date of visit; opinion on potential/not potential habitat; a description of the hydrology, soils, and vegetation.

BOG TURTLE SURVEY (= Phase 2 survey)

If the wetland(s) are identified as potential bog turtle habitat (see Phase 1 survey), and direct and indirect adverse effects cannot be avoided, conduct a bog turtle survey in accordance with the specifications below. Note that this is *not* a survey to estimate population size or structure; a long-term mark/recapture study would be required for that.

Prior to conducting the survey, contact the appropriate State agency (see attached list) to determine whether or not a scientific collector's permit valid for the location and period of the survey will be required.

1. Surveys should only be performed during the period from April 15-June 15. This coincides with the period of greatest annual turtle activity (spring emergence and breeding) and before vegetation gets too dense to accurately survey. While turtles may be found outside of these dates, a result of no turtles would be considered inconclusive. Surveys beyond June also have a higher likelihood of disruption or destruction of nests or newly hatched young.
2. Air and water temperatures should be a minimum of 55° F.
3. Surveys should be done during the day, at least one hour after sunrise and no later than one hour before sunset.
4. Cloud cover should be <50 percent, and surveys should not be done during or immediately following rain events, unless it clears rapidly and is sunny.
5. One (1) to three (3) people should survey each wetland together. At least one (1) of these must be a recognized qualified bog turtle surveyor¹, and the others should have at least some previous experience conducting bog turtle surveys. To maintain survey effort consistency and increase the probability of encountering turtles, the same surveyors should be used for each wetland.
6. A minimum of four (4) surveys per wetland site are needed to adequately assess the site for presence of bog turtles. At least two of these surveys must be performed in May. From mid-April to mid-May, surveys should be separated by six or more days. From mid-May to mid-June, surveys should be separated by three or more days. The shorter period between surveys during late May and June is needed to ensure that surveys are carried out during the optimum window of time (i.e., before wetland vegetation becomes too thick).

Note that bog turtles are more likely to be encountered by spreading the surveys out over a longer period. For example, erroneous survey results could be obtained if surveys were

conducted on four successive days in late April due to possible late spring emergence, or during periods of extreme weather because turtles may be buried in mud and difficult to find. If bog turtles are found on the first, second or third visit, the site does not need to be revisited. Because this is solely a presence/absence survey, survey efforts at a particular wetland may cease once a bog turtle has been found.

7. Survey time should be three (3) to six (6) person-hours per acre of wetland per visit. Both random opportunistic searching and transect surveys should be used at each wetland.
8. Walk quietly through the wetland. Bog turtles will bask on sedge tussocks and mossy hummocks, or be half-buried in shallow water or rivulets. Walking noisily through the wetland will often cause the turtles to submerge before they can be observed. Be sure to search areas where turtles may not be visible, including shallow pools, underground springs, open mud areas, vole runways and under tussocks. Do not step on the tops of tussocks or hummocks because turtle nests, eggs and nesting microhabitat may be destroyed.
9. Photo-documentation of each bog turtle located will be required; a macro lens is highly recommended. The photos should be in color and of sufficient detail and clarity to identify the bog turtle to species and individual. Therefore, photographs of the carapace, plastron, and face/neck markings should be taken of each individual turtle. Do not harass the turtle in an attempt to get photos of the face/neck markings; if gently placed on the ground, most turtles will slowly extend their necks if not harassed. If shell notching is conducted, do the photo-documentation after the notching is done.
10. The following information should be collected for each bog turtle: sex, carapace length-straight line, carapace width, weight, and details about scars/injuries. Plastron length-straight line information should also be collected to differentiate juveniles from adults (>70 mm; Ernst 1977) as well as to obtain additional information on recruitment, growth, and demography.
11. Each bog turtle should be marked (e.g., notched, PIT tagged) in a manner consistent with the requirements of the appropriate State agency and/or Service. Contact the appropriate State agency prior to conducting the survey to determine what type of marking system, if any, should be used.
12. All bog turtles must be returned to the point of capture as soon as possible on the same day as capture. They should only be held long enough to identify, measure, weigh, and photograph them, during which time their exposure to high temperatures must be avoided. No bog turtles may be removed from the wetland without permission from the Service and appropriate State agency.
13. The Fish and Wildlife Service and appropriate State agency should be sent a copy of survey results for review and concurrence, including the following: dates of site visits; time spent per wetland per visit; names of surveyors; a site map; a description of the wetlands within the project area (e.g., acreage, vegetation, soils, hydrology); an explanation of which wetlands or portions of wetlands were or were not surveyed, and why; survey methodology; weather per visit at beginning and end of survey (air temperature, water temperature, percent cloud cover, wind, and precipitation); presence or absence of bog turtles, including number of turtles found and date, and age/sex of turtles found; and other reptile and amphibian species found and date.

ADDITIONAL SURVEYS / STUDIES

Proper implementation of the Phase 2 survey protocol is usually adequate to determine species presence or probable absence. Additional surveys, however, may be necessary to determine whether or not bog turtles are using a particular wetland, especially if the Phase 2 survey results are negative but the quality and quantity of habitat are good and in a watershed of known occurrence. In this case, additional surveys (Phase 2 and/or trapping surveys), possibly extending into the following field season, may be recommended by the Service or appropriate State agency.

If bog turtles are documented to occur at a site, additional surveys/studies may be necessary to characterize the population (e.g., number, density, population structure, recruitment), identify nesting and hibernating areas, and/or identify and assess adverse impacts to the species and its habitat, particularly if project activities are proposed to occur in, or within 300 feet of, wetlands occupied by the species.

¹ These guidelines are taken from the final "Bog Turtle (*Clemmys muhlenbergii*), Northern Population, Recovery Plan" (dated May 15, 2001). As additional information becomes available regarding survey techniques and effectiveness, these survey guidelines may be updated and revised. Contact the Fish and Wildlife Service or one of the state agencies listed below for the most recent version of these guidelines.

² See Appendix A of the "Bog Turtle (*Clemmys muhlenbergii*), Northern Population, Recovery Plan" (dated May 15, 2001).

³ Searching for bog turtles and recognizing their habitat is a skill that can take many months or years of field work to develop. This level of expertise is necessary when conducting searches in order to ensure that surveys are effective and turtles are not harmed during the survey (e.g., by stepping on nests). Many individuals that have been recognized as qualified to conduct bog turtle surveys obtained their experience through graduate degree research or employment by a state wildlife agency.

CONTACT AGENCIES - BY STATE

(Revised May 2001)

STATE	FISH AND WILDLIFE SERVICE	STATE AGENCY
Connecticut	U.S. Fish and Wildlife Service New England Field Office 22 Bridge Street, Unit #1 Concord, NH 03301	Department of Environmental Protection Env. & Geographic Information Center 79 Elm Street, Store Floor, Hartford, CT 06106 <i>(info about presence of bog turtles in or near a project area)</i> Department of Environmental Protection Wildlife Division, Sixth Floor 79 Elm Street, Store Floor, Hartford, CT 06106 <i>(to get a Scientific Collectors Permit or determine what type of marking system to use)</i>
Delaware	U.S. Fish and Wildlife Service Chesapeake Bay Field Office 177 Admiral Cochrane Drive Annapolis, MD 21401	Nongame & Endangered Species Program Delaware Division of Fish and Wildlife 4876 Hay Point Landing Road Smyrna, DE 19977
Maryland	U.S. Fish and Wildlife Service Chesapeake Bay Field Office 177 Admiral Cochrane Drive Annapolis, MD 21401	Maryland Department of Natural Resources Wildlife & Heritage Division PO Box 68, Main Street Wye Mills, MD 21679
Massachusetts	U.S. Fish and Wildlife Service New England Field Office 22 Bridge Street, Unit #1 Concord, NH 03301	Division of Fisheries and Wildlife Dept. Fisheries, Wildlife and Env Law Enforcement Rt. 135 Westboro, MA 01581
New Jersey	U.S. Fish and Wildlife Service New Jersey Field Office 927 North Main Street, Bldg. D-1 Pleasantville, NJ 08232	Endangered & Nongame Species Program Division of Fish, Game & Wildlife Northern Region Office 26 Route 173W, Hampton, NJ 08827
New York	U.S. Fish and Wildlife Service 3817 Luker Road Cortland, NY 13045	New York Natural Heritage Program Department of Environmental Conservation 700 Troy-Schenectady Road Latham, NY 12110-2400 <i>(info about presence of bog turtles in or near a project area)</i> NY Department of Environmental Conservation Special Licenses Unit 50 Wolf Road, Albany, NY 12233 <i>(for endangered species permit applications)</i>
Pennsylvania	U.S. Fish and Wildlife Service Pennsylvania Field Office 315 South Allen Street, Suite 322 State College, PA 16801	Endangered Species & Herpetology Coordinator Pennsylvania Fish and Boat Commission Bureau of Fisheries and Engineering 450 Robinson Lane Bellefonte, PA 16823

BOG TURTLE COUNTIES OF OCCURRENCE OR LIKELY OCCURRENCE¹
(Revised October 2002)

STATE	COUNTY	
Connecticut	Fairfield	Litchfield
Delaware	New Castle	
Maryland	Baltimore Carroll	Cecil Harford
Massachusetts	Berkshire	
New Jersey	Atlantic Burlington Camden Gloucester Hunterdon Mercer Middlesex Monmouth	Morris Ocean Passaic Salem Somerset Sussex Union Warren
New York	Albany Columbia Dutchess Genesee Orange Oswego Putnam	Seneca Sullivan Ulster Warren Wayne Westchester
Pennsylvania	Adams Berks Bucks Chester Cumberland Delaware Franklin	Lancaster Lebanon Lehigh Monroe Montgomery Northampton Schuylkill York

¹ This list is valid for one year from the date indicated. It may, however, be revised more frequently if new counties of occurrence are documented. Updates to this list are available from the Service upon request.

**U.S. FISH AND WILDLIFE SERVICE
& PENNSYLVANIA FISH AND BOAT COMMISSION
RECOGNIZED QUALIFIED BOG TURTLE SURVEYORS***
(List revised June 26, 2003)

Gabrielle Borin & Deborah Poppel
ENSR
2005 Cabot Blvd. West, Suite 100
Langhorne, PA 19047
(W) 215-757-4900, ext 232
Fax: 215-757-3904
gborin@ensr.com
dpoppel@ensr.com

Teresa McElhenny
Skelly and Loy, Inc.
2601 North Front Street
Harrisburg, PA 17110-1185
717-232-0593 or 800-892-6532
tmcelhenny@skellyloy.com

Andrew Brookens
Skelly and Loy, Inc.
18028 Maugans Ave.
Hagerstown, MD 21740
(W) 301-766-4236
Fax: 301-766-4190
abrookens@skellyloy.com

Gian L. Rocco
322 Amblewood Way
State College, PA 16803
(H) 814-237-2313
(cell) 814-883-8635
gxr124@psu.edu

David S. Lee
1612 Bayleaf Trail
Raleigh, NC 27614
(H) 919-715-2605
torresinc@aol.com

Joseph M. McLaughlin
1300 South Farmview Drive
Apartment H-26
Dover, DE 19904
302-698-4588
clemmys2003@yahoo.com

Thomas P. Wilson

George Mason University
MSN 3E1
Department of Biology
Fairfax, VA 22030-4444
(W) 703-993-1044
Fax: 703-993-1046
twilson3@gmu.edu

Bryon DuBois
Trident Environmental Consultants
1658 Route 9
Toms River, NJ 08755
732-818-8699, fax: 732-797-3223
tec@monmouth.com

Bob Zappalorti, Raymond Farrell,
and Michael Torocco
Herpetological Associates, Inc.
575 Tom's River Road
Jackson, NJ 08527
(W) 732-833-8600
Rzappalort@aol.com

Andrea Teti
31 Boulder Drive, Suite A
Sellersville, PA 18960
215-258-2862
(cell) 609-457-1370
sierra@nothinbut.net

Jessica Morrow
A.D. Marble & Company
10999 Red Run Blvd., Suite 117
Owings Mills, MD 21117
(W) 410-902-1421
Fax: 410-902-8856
jmorrow@admarble.com

B. Scott Fiegel
PO Box 181
Oley, PA 19547
610-987-6585

Scott Angus
Skelly and Loy, Inc.

NJ and Eastern PA Regional Office
1981 Lake Minsi Drive
Bangor, PA 18013
(W) 717-232-0593
(H) 610-588-8062
sangus@skellyloy.com

Janis Seegar
12265 Harford Road
Glen Arm, MD 21057
(H) 410-592-6122
(W) 410-436-4912
(Aberdeen Proving Ground)

Anthony Wisnieski
Reptile House, The Baltimore Zoo
Druid Hill Park
Baltimore, MD 21217
(W) 410-396-0441 or 410-462-4398
bzherps@aol.com

William Smejkal
Amy S. Greene Environmental
Consultants, Inc.
18 Commerce Street Plaza
Flemington, NJ 08822-1743
(W) 908-788-9676
asgreene@worldnet.att.net

David R. Smith
Coastal Resources, Inc.
2988 Solomon's Island Road
Edgewater, MD 21037
410-956-9000
410-956-0566 (fax)
davids@coastal-resources.net

Dr. Rudolf G. Arndt
Richard Stockton College
Jim Leeds Rd., PO Box 195
Pomona, NJ 08240-0195
609-652-4432
Rudolf.Arndt@stockton.edu

Tim Hoen
PO Box 201
Jarrettsville, MD 21084
(H) 410-557-6879
(W) 410-516-8742 (Johns Hopkins Univ.)
hoen@jhu.edu timhoen@smart.net

Matthew Malhame
RD 2 Box 98C
Bushkill, PA 18324
(H) 570-588-7144
mmalhame@hotmail.com

Rick Mellon
Mellon Biological Services
200 Flint Court South
Yardley, PA 19067
215-493-0697
rmellon@mellonbiological.com

* This list includes professional and amateur herpetologists the Fish and Wildlife Service and Pennsylvania Fish and Boat Commission recognize as qualified to identify bog turtle habitat and survey for the presence of bog turtles. Field investigations should be administered by a qualified surveyor, AND the qualified surveyor should also be present in the field AT ALL TIMES when bog turtle surveys or research is being conducted. This list may not include all individuals qualified to survey for this species. Inclusion of names on this list does not constitute endorsement by the Service or any other U.S. Government agency or State agency.

FEDERALLY LISTED AND PROPOSED SPECIES THAT NO LONGER OCCUR IN PENNSYLVANIA

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>	<u>STATUS**</u>	<u>FORMER DISTRIBUTION</u>
<u>MAMMALS</u>			
Canada lynx	<i>Lynx canadensis</i>	PT	north-central PA (Tioga Co.)
Delmarva Peninsula fox squirrel	<i>Sciurus niger cinereus</i>	E	mature forests of southeastern PA (Delaware and Chester Co.)
Eastern cougar	<i>Felis concolor cougar</i>	E	state-wide
Grey wolf	<i>Canis lupus</i>	E	state-wide
<u>MOLLUSKS</u>			
Fanshell*	<i>Cyprogenia stegaria</i>	E	Ohio River drainage
Orange pimpleback*	<i>Plethobasus striatus</i>	E	Ohio River drainage
Pink mucket pearly mussel*	<i>Lampsilis abrupta</i>	E	Ohio River drainage
Ring pink mussel*	<i>Obovaria retusa</i>	E	Ohio River drainage
Rough pigtoe*	<i>Pleurobema plenum</i>	E	Ohio River drainage
<u>INSECTS</u>			
American burying beetle	<i>Nicrophorus americanus</i>	E	state-wide
Karner blue butterfly	<i>Lycaeides melissa samuelis</i>	E	pine barrens, oak savannas (wild lupine habitat) (Wayne Co.)
Northeastern beach tiger beetle	<i>Cicindela dorsalis dorsalis</i>	T	along large rivers in southeastern PA
<u>PLANTS</u>			
Eastern prairie fringed orchid	<i>Platanthera leucophaea</i>	T	wet prairies, bogs (Crawford Co.)
Sensitive joint-vetch	<i>Aeschynomene virginica</i>	T	freshwater tidal marshes of Delaware river (Delaware and Philadelphia Co.)
Virginia spiraea*	<i>Spiraea virginiana</i>	T	along Youghiogheny River (Fayette Co.)
Smooth coneflower	<i>Echinacea laevigata</i>	E	serpentine barrens (Lancaster Co.)

Revised 10/19/00

* It is possible that remnant populations of some of these species (indicated with an *) may still occur in Pennsylvania, however, there have been no confirmed sightings of these species for over 70 years.

** E = Endangered, T = Threatened, PT = Proposed Threatened

The following is a partial list of additional species that no longer occur in Pennsylvania: moose, bison, wolverine, passenger pigeon, Bachman's sparrow, greater prairie-chicken, olive-sided flycatcher, Bewick's wren, eastern tiger salamander, blue pike, butterfly mussel, Diana fritillary butterfly, precious underwing moth, deertoe mussel, marbled underwing moth, cobblestone tiger beetle, mountain clubmoss, crested yellow orchid, red milkweed, American barberry, small white lady's-slipper, etc., etc.

U.S. FISH AND WILDLIFE SERVICE
315 SOUTH ALLEN ST., SUITE 322, STATE COLLEGE, PA 16801

FEDERALLY LISTED, PROPOSED AND CANDIDATE SPECIES (in Pennsylvania)

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u> ¹	<u>Distribution</u> (by County and/or Watershed)
<u>FISHES</u>			
Shortnose sturgeon ²	<i>Acipenser brevirostrum</i>	E	Delaware River & other Atlantic coastal waters
<u>REPTILES</u>			
Bog turtle	<i>Clemmys muhlenbergii</i>	T	Current - Adams, Berks, Bucks, Chester, Cumberland, Delaware, Franklin, Lancaster, Lebanon, Lehigh, Monroe, Montgomery, Northampton, Schuylkill, York. Historic - Crawford, Mercer, Philadelphia Co.
Eastern massasauga rattlesnake	<i>Sistrurus catenatus catenatus</i>	C	Current - Butler, Crawford, Mercer and Venango Co. Historic - Allegheny and Lawrence Co.
<u>BIRDS</u>			
Bald eagle	<i>Haliaeetus leucocephalus</i>	T	Suitable habitats across the state. Recent nesting in Butler, Cameron, Centre, Chester, Crawford, Dauphin, Erie, Forest, Huntingdon, Lancaster, Lebanon, Mercer, Northumberland, Pike, Tioga, Venango, Warren, Wayne and York Co. Wintering concentrations occur near ice-free sections of rivers, lakes and reservoirs, including the Delaware River.
Piping plover	<i>Charadrius melodus</i>	E	Migratory. No nesting in Pennsylvania since 1950s. Designated critical habitat on Presque Isle, Erie Co.
<u>MAMMALS</u>			
Indiana bat	<i>Myotis sodalis</i>	E	Winter hibernacula: Armstrong, Blair, Lawrence, Luzerne, Mifflin and Somerset Co.
<u>MOLLUSKS</u>			
Dwarf wedgemussel	<i>Alasmidonta heterodon</i>	E	Current - Delaware River (Wayne Co.). Historic - Delaware River watershed (Bucks, Carbon, Chester and Philadelphia Co.); Susquehanna River watershed (Lancaster Co.)
Clubshell mussel	<i>Pleurobema clava</i>	E	French Creek and Allegheny River watersheds (Clarion, Crawford, Erie, Forest, Mercer, Venango and Warren Co.); Shenango River (Ohio River watershed; Mercer and Crawford Co.)
Northern riffleshell	<i>Epioblasma torulosa rangiana</i>	E	French Creek and Allegheny River watersheds (Clarion, Crawford, Erie, Forest, Mercer, Venango and Warren Co.)
<u>PLANTS</u>			
Northeastern bulrush	<i>Scirpus ancistrochaetus</i>	E	Current - Adams, Bedford, Blair, Carbon, Centre, Clinton, Cumberland, Dauphin, Franklin, Huntingdon, Lackawanna, Lehigh, Lycoming, Mifflin, Monroe, Perry, Snyder and Union Co. Historic - Northampton Co.
Small-whorled pogonia	<i>Isotria medeoloides</i>	T	Current - Centre, Chester and Venango Co. Historic - Berks, Greene, Monroe, Montgomery and Philadelphia Co.

¹ E = Endangered, T = Threatened, PE = Proposed Endangered, PT = Proposed Threatened, C = Candidate Revised 2/27/03
² Shortnose sturgeon is under the jurisdiction of the National Marine Fisheries Service

**RECORD OF
TELEPHONE CALL****Job No:** 38476**Date:** December 18, 2003**CALL FROM:** Addie Kim**OF:** HNTB Corporation**CALL TO:** Anita Riportella**OF:** National Marine Fisheries Service**BY:****SUBJECT DISCUSSED**

I had received a phone call December 17, 2003 from Anita Riportella, National Marine Fisheries Service (732-872-3116). She left a message indicating that her supervisor had signed the I-95/Scudder Falls Purpose and Need concurrence form, and was looking for contact information on where this document should be sent.

I returned her call and informed her that I believed that FHWA would be sending a formal request letter that National Marine Fisheries Service be a cooperating agency. Anita Riportella indicated that we could expect NMFS would not agree to be a cooperating agency. They have declined participation in the past.

I inquired about the jurisdiction of the habitat conservation division that she is in and the protected resources division. She indicated that habitat group focuses on anadromous fisheries (river herring and American shad) and the Protected Resources Division would cover the endangered shortnose sturgeon. Technically, the sturgeon is amphidromous (partially anadromous) but not anadromous in the Delaware River in that it doesn't go to the ocean after it spawns, it goes to brackish water. The only documented spawning/breeding ground for sturgeon in the Delaware River extends from Scudder Falls to south of the I-95 bridge. She indicated that for a simple project, she might cover ESA issues, but that this may be more complex, requiring involvement by Protected Resources Division. NJDEP has performed some sampling, Bob Cubberly would be the point of contact for information.

I informed her that we'd sent request letter to Gloucester. She suggested that we contact Julie Crocker in Protected Resources Division at 1 Blackburn Drive, Gloucester, MA (978-281-9328) who works for Mary Colligan, the division chief for more exact areas/information on sturgeon (season restrictions and habitat). She indicated they did not have jurisdiction/information on mussels, and referred me to Bob Cubberly for information, but indicated that Carbicula clams would be food for sturgeon and therefore of interest. NMFS would want us to minimize impacts/bridge footprint. I inquired whether they have bathymetry, she referred me to the Corps. She confirmed that bridge site is not Essential Fisheries Habitat under Magnuson-Stevens Act as it is freshwater and above head of tide.

ACTION TO BE TAKEN:

Follow up on data request letter to NMFS Gloucester Office if no response received.

Contact Julie Crocker, Protected Resources Division regarding above and project-related coordination issues. HNTB to schedule meeting with NMFS Gloucester office.

Follow up with NJDEP (Bob Cubberly) for information on aquatic life (STV).

Check with DMJM on river bathymetry and obtain available river bathymetry data from Corps to determine river depths at bridge crossing for construction purposes.

Future design will need to consider means of constructing within contained cofferdam with seasonal restrictions to avoid sensitive spawning times. However, staging of equipment may not be possible from a barge given shallower river depths, need to investigate options to avoid in-water siltation/construction.

COPY TO: Bob Briggs, STV



United States Department of the Interior
FISH AND WILDLIFE SERVICE

New Jersey Field Office
Ecological Service
927 North Main Street, Building D
Pleasantville, New Jersey 08232
Tel: 609-646-9310
Fax: 609-646-8352
<http://njfieldoffice.fws.gov>



IN REPLY REFER TO:
ES-03/NE088

Robert P. Briggs, II, P.G., REM, Environmental Scientist
STV Incorporated
c/o Delaware River Joint Toll Bridge Commission
110 Wood Street
Morrisville, Pennsylvania 19067
Fax Number: (215) 295-3337

Reference: Threatened and endangered species review in the vicinity of the proposed I-95 / Scudder Falls Bridge Improvement Project site located within Ewing Township, Mercer County, New Jersey

The U.S. Fish and Wildlife Service (Service) has reviewed the above-referenced proposed project pursuant to Section 7 of the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) to ensure the protection of federally listed endangered and threatened species. The following comments do not address all Service concerns for fish and wildlife resources and do not preclude separate review and comment by the Service as afforded by other applicable environmental legislation.

Except for an occasional transient bald eagle (*Haliaeetus leucocephalus*), no other federally listed or proposed endangered or threatened flora or fauna under Service jurisdiction are known to occur within the vicinity of the proposed project site. Therefore, no further consultation pursuant to Section 7 of the Endangered Species Act is required by the Service. This determination is based on the best available information. If additional information on federally listed species becomes available, or if project plans change, this determination may be reconsidered. Please be aware that this determination is valid for 90 days; therefore, if the project is not initiated within this time, the Service should be contacted prior to project implementation to verify the accuracy of this information. The Service will review current information to ensure that no federally listed threatened or endangered species will be adversely affected by the proposed project.

Enclosed is current information regarding federally listed and candidate species occurring in New Jersey. The Service encourages federal agencies and other planners to consider candidate species in project planning. The addresses of State agencies that may be contacted for current site-specific information regarding federal candidate and State-listed species are also enclosed.

Authorizing Supervisor: 

Enclosures: Current summaries of federally listed and candidate species in New Jersey
Addresses for additional information on candidate and State-listed species

Sect 7 (cs-NEcot7.fax) 11/24/03



FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN NEW JERSEY



An **ENDANGERED** species is any species that is in danger of extinction throughout all or a significant portion of its range.

A **THREATENED** species is any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

	COMMON NAME	SCIENTIFIC NAME	STATUS
FISHES	Shortnose sturgeon	<i>Acipenser brevirostrum</i>	E
REPTILES	Spiny-tailed lizard	<i>Clammys muhlenbergii</i>	T
	Atlantic ridley turtle	<i>Lepidochelys kempi</i>	E
	Green turtle	<i>Chelonia mydas</i>	T
	Hawksbill turtle	<i>Eretmochelys imbricata</i>	E
	Leatherback turtle	<i>Dermochelys coriacea</i>	E
	Loggerhead turtle	<i>Caretta caretta</i>	T
BIRDS	Bald eagle	<i>Haliaeetus leucocephalus</i>	T
	Piping plover	<i>Charadrius melodus</i>	T
	Roseate spoonbill	<i>Sterna dougallii dougallii</i>	E
MAMMALS	Eastern cougar	<i>Felis concolor cougar</i>	E+
	Indiana bat	<i>Myotis sodalis</i>	E
	Gray wolf	<i>Canis lupus</i>	E+
	Delmarva fox squirrel	<i>Sciurus niger cinereus</i>	E+
	Blue whale	<i>Balaenoptera musculus</i>	E
	Finback whale	<i>Balaenoptera physalus</i>	E
	Humpback whale	<i>Megaptera novaeangliae</i>	E
	Right whale	<i>Balaena glacialis</i>	E
	Sperm whale	<i>Balaenoptera borealis</i>	E
	Sperm whale	<i>Physeter macrocephalus</i>	E

	COMMON NAME	SCIENTIFIC NAME	STATUS
INVERTEBRATES	Dwarf wedgemussel	<i>Alasmidonta heterodon</i>	E
	Northeastern beach tiger beetle	<i>Cicindela dorsalis dorsalis</i>	T
	Mitchell's damselfly	<i>Neonympha m. mitchellii</i>	E+
	American burying beetle	<i>Nicrophorus americanus</i>	E+
PLANTS	Small whorled pogonia	<i>Isotria medeoloides</i>	T
	Swamp pink	<i>Helonias bullata</i>	T
	Kingskorn's beaked rush	<i>Rhynchospora knieskernii</i>	T
	American cliff seed	<i>Schwalbea americana</i>	E
	Sensative leafy water plant	<i>Aeschynomene virginica</i>	T
	Seaside amaranth	<i>Amaranthus pumilus</i>	T

STATUS			
E	endangered species	PE	proposed endangered
T	threatened species	PT	proposed threatened
+	presumed extirpated**		

* Except for sea turtle nesting habitat, principal responsibility for these species is vested with the National Marine Fisheries Service.

** Current records indicate the species does not presently occur in New Jersey, although the species did occur in the State historically.

Note: for a complete listing of Endangered and Threatened Wildlife and Plants, refer to 50 CFR 17.11 and 17.12.

For further information, please contact:

U.S. Fish and Wildlife Service
New Jersey Field Office
927 N. Main Street, Building D
Pleasantville, New Jersey 08232
Phone: (609) 646-9310
Fax: (609) 646-0352

Revised 12/06/00



FEDERAL CANDIDATE SPECIES IN NEW JERSEY

CANDIDATE SPECIES are species that appear to warrant consideration for addition to the federal List of Endangered and Threatened Wildlife and Plants. Although these species receive no substantive or procedural protection under the Endangered Species Act, the U.S. Fish and Wildlife Service encourages federal agencies and other planners to give consideration to these species in the environmental planning process.

SPECIES	SCIENTIFIC NAME
Bog asphodel	<i>Narthecium americanum</i>
Hirst panic grass	<i>Panicum hirstii</i>

Note: For complete listings of taxa under review as candidate species, refer to Federal Register Vol. 64, No. 205, October 25, 1999 (Endangered and Threatened Wildlife and Plants; Review of Plant and Animal Taxa that are Candidates for Listing as Endangered or Threatened Species).

FEDERAL CANDIDATE AND STATE-LISTED SPECIES

Candidate species are species under consideration by the U.S. Fish and Wildlife Service (Service) for possible inclusion on the List of Endangered and Threatened Wildlife and Plants. Although these species receive no substantive or procedural protection under the Endangered Species Act, the Service encourages federal agencies and other planners to consider federal candidate species in project planning.

The New Jersey Natural Heritage Program maintains the most up-to-date information on federal candidate species and State-listed species in New Jersey and may be contacted at the following address:

Coordinator
Natural Heritage Program
Division of Parks and Forestry
P.O. Box 404
Trenton, New Jersey 08625
(609) 984-0097

Additionally, information on New Jersey's State-listed wildlife species may be obtained from the following office:

Dr. Larry Niles
Endangered and Nongame Species Program
Division of Fish and Wildlife
P.O. Box 400
Trenton, New Jersey 08625
(609) 292-9400

If information from either of the aforementioned sources reveals the presence of any federal candidate species within a project area, the Service should be contacted to ensure that these species are not adversely affected by project activities.

Revised 07/03



November 14, 2003

Mr. Daniel Morris
National Marine Fisheries Service
One Blackburn Drive
Gloucester, MA 01930-2298

Dear Mr. Morris:

Re: Delaware River Joint Toll Bridge Commission
Contract C-393A, Capital Project No. CP 0301A, Account No. 7161-06-012
I-95/Scudder Falls Bridge Improvement Project
Environmental Inventory

The Delaware River Joint Toll Bridge Commission (DRJTBC) recently initiated a study of improvements to the I-95/Scudder Falls Bridge. The I-95/Scudder Falls Bridge Improvement Project will address congestion, operational, and safety deficiencies at the I-95/Scudder Falls Bridge and along 4.4 miles of I-95 from PA Route 332 in Bucks County, Pennsylvania to Bear Tavern Road in Mercer County, New Jersey. The corridor extends through Lower Makefield Township in Pennsylvania and Ewing Township in New Jersey. To conduct the study, the DRJTBC has engaged a consultant team of engineers, scientists, and planners led by DMJM+HARRIS of Philadelphia and HNTB of Wayne, New Jersey. The team also includes Gannett Fleming, Inc., STV Inc., and A.D. Marble & Company.

The study, being undertaken in cooperation with the New Jersey Department of Transportation (NJDOT), the Pennsylvania Department of Transportation (PENNDOT), and the Federal Highway Administration (FHWA), involves an alternatives analysis and preparation of an Environmental Assessment under the National Environmental Policy Act. The project will include evaluation of improvements at four interchanges in the study area: PA Route 332 and Taylorsville Road in Pennsylvania and N.J. Route 29 and Bear Tavern Road in New Jersey. The I-95/Scudder Falls Bridge crosses over the Delaware River, the Delaware Canal in Pennsylvania, and the Delaware and Raritan Canal in New Jersey. The study area encompasses portions of four USGS quadrangles: Trenton West, Lambertville, Langhorne, and Pennington. The extent of potential improvements is shown on the attached figures.

We are writing to request information on existing conditions and future plans in the study area. Specifically, we would like to request information that is available in reports, plans, or digital mapping on study area conditions.

We are interested in obtaining information on anadromous or catadromous species of fish and the presence of any migratory, feeding, and spawning habitats in this portion of the Delaware River.



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



The existence of any stocking programs in this portion of the Delaware River or adjoining tributaries or lakes would also be of interest.

Any available information on the presence of habitat for, or documented occurrences of, species that are federally or state-listed as endangered or threatened is also requested, as well as information on essential fisheries under the Magnuson-Stevens Act.

Should you have information that would be useful to our study, we would greatly appreciate it if you could either forward information to my attention at the address below, or contact me by phone or e-mail to discuss the best way to collect the information.

HNTB Corporation
8 Penn Center, 7th Floor
1628 John F. Kennedy Boulevard
Philadelphia, PA 19103

Thank you for your assistance in this matter. Should you have any questions or comments on this request, please feel free to call Addie Kim, Senior Planner, at (617) 532-2326, akim@hntb.com, or myself at (215) 568-6500 or e-mail me at jgrilli@hntb.com.

Very truly yours,

Joseph G. Grilli, P.E.
Deputy Project Manager, Environmental



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



October 29, 2003

Mr. Clifford Grant Day
Supervisor
U.S. Fish and Wildlife Service
New Jersey Field Office
927 N. Main Street, Building D
Pleasantville, NJ 08232

Re: Delaware River Joint Toll Bridge Commission
Contract C-393A, Capital Project No. CP 0301A, Account No. 7161-06-012
I-95/Scudder Falls Bridge Improvement Project
Environmental Inventory

Dear Mr. Day:

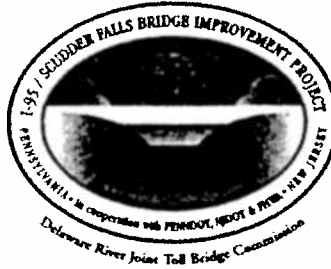
The Delaware River Joint Toll Bridge Commission (DRJTBC) recently initiated a study of improvements to the I-95/Scudder Falls Bridge. The I-95/Scudder Falls Bridge Improvement Project will address congestion, operational, and safety deficiencies at the I-95/Scudder Falls Bridge and along 4.4 miles of I-95 from PA Route 332 in Bucks County, Pennsylvania to Bear Tavern Road in Mercer County, New Jersey. To conduct the study, the DRJTBC has engaged a consultant team of engineers, scientists, and planners led by DMJM+HARRIS of Philadelphia and HNTB of Wayne, New Jersey. The team also includes Gannett Fleming, Inc., STV Inc., and A.D. Marble & Company.

The study, being undertaken in cooperation with the New Jersey Department of Transportation (NJDOT), the Pennsylvania Department of Transportation (PENNDOT), and the Federal Highway Administration (FHWA), involves an alternatives analysis and preparation of an Environmental Assessment under the National Environmental Policy Act. The project will include evaluation of improvements at four interchanges in the study area: PA Route 332 and Taylorsville Road in Pennsylvania and N.J. Route 29 and Bear Tavern Road in New Jersey. The I-95/Scudder Falls Bridge crosses over the Delaware River, the Delaware Canal in Pennsylvania, and the Delaware and Raritan Canal in New Jersey. The study area encompasses portions of four USGS quadrangles: Trenton West, Lambertville, Langhorne, and Pennington. The extent of potential improvements is shown on Figure 1.

We are writing to request information on existing conditions and future plans in the study area. Specifically, we would like to request information that is available in reports, plans, or digital mapping on study area conditions.



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



STV Incorporated requests your review of state listed threatened and endangered species within the vicinity of the project. There are freshwater wetlands within the project area. Please direct us in obtaining this information or other information you feel is pertinent to the project. Any information that you can provide electronically would be greatly appreciated.

Your assistance in this matter is greatly appreciated. Should you have any questions or comments on this request, please feel free to contact Angela Kisela at (609)530-1496, kiselaa@stvinc.com or Bob Briggs at (609)530-9608, briggsrp@stvinc.com.

Very truly yours,

STV Incorporated
Robert P. Briggs, II, P.G., REM
Environmental Scientist

cc: Mr. J. Grilli, HNTB Corporation



Delaware River Joint Toll Bridge Commission

110 Wood Street, Morrisville, PA 19067



October 29, 2003

Mr. David Densmore
Supervisor
U.S. Fish and Wildlife Service
Pennsylvania Field Office
315 South Allen Street, Suite 322
State College, PA 16801

Re: Delaware River Joint Toll Bridge Commission
Contract C-393A, Capital Project No. CP 0301A, Account No, 7161-06-012
I-95/Scudder Falls Bridge Improvement Project
Environmental Inventory

Dear Mr. Densmore:

The Delaware River Joint Toll Bridge Commission (DRJTBC) recently initiated a study of improvements to the I-95/Scudder Falls Bridge. The I-95/Scudder Falls Bridge Improvement Project will address congestion, operational, and safety deficiencies at the I-95/Scudder Falls Bridge and along 4.4 miles of I-95 from PA Route 332 in Bucks County, Pennsylvania to Bear Tavern Road in Mercer County, New Jersey. To conduct the study, the DRJTBC has engaged a consultant team of engineers, scientists, and planners led by DMJM+HARRIS of Philadelphia and HNTB of Wayne, New Jersey. The team also includes Gannett Fleming, Inc., STV Inc., and A.D. Marble & Company.

The study, being undertaken in cooperation with the New Jersey Department of Transportation (NJDOT), the Pennsylvania Department of Transportation (PENNDOT), and the Federal Highway Administration (FHWA), involves an alternatives analysis and preparation of an Environmental Assessment under the National Environmental Policy Act. The project will include evaluation of improvements at four interchanges in the study area: PA Route 332 and Taylorsville Road in Pennsylvania and N.J. Route 29 and Bear Tavern Road in New Jersey. The I-95/Scudder Falls Bridge crosses over the Delaware River, the Delaware Canal in Pennsylvania, and the Delaware and Raritan Canal in New Jersey. The study area encompasses portions of four USGS quadrangles: Trenton West, Lambertville, Langhorne, and Pennington. The extent of potential improvements is shown on Figure 1.

We are writing to request information on existing conditions and future plans in the study area. Specifically, we would like to request information that is available in reports, plans, or digital mapping on study area conditions.



Delaware River Joint Toll Bridge Commission

110 Wood Street, Morrisville, PA 19067



STV Incorporated requests your review of state listed threatened and endangered species within the vicinity of the project. There are freshwater wetlands within the project area. Please direct us in obtaining this information or other information you feel is pertinent to the project. Any information that you can provide electronically would be greatly appreciated.

Your assistance in this matter is greatly appreciated. Should you have any questions or comments on this request, please feel free to contact Angela Kisela at (609)530-1496, kiselaa@stvinc.com or Bob Briggs at (609)530-9608, briggsrp@stvinc.com.

Very truly yours,

STV Incorporated
Robert P. Briggs, II, P.G., REM
Environmental Scientist

cc: Mr. J. Grilli, HNTB Corporation





SECTION 106 CORRESPONDENCE

ADVISORY COUNCIL ON HISTORIC PRESERVATION

JULY 29, 2009 LETTER FROM ADVISORY COUNCIL ON HISTORIC PRESERVATION (ACHP) TO FEDERAL HIGHWAY ADMINISTRATION (FHWA)

JULY 16, 2009 LETTER FROM FHWA TO ACHP

PENNSYLVANIA

JULY 23, 2009 LETTER FROM PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION TO PENNSYLVANIA DEPARTMENT OF TRANSPORTATION (PENNDOT)

OCTOBER 7, 2008 LETTER FROM PA HISTORICAL AND MUSEUM COMMISSION TO PENNDOT

MAY 12, 2008 LETTER FROM PA HISTORICAL AND MUSEUM COMMISSION TO PENNDOT

FEBRUARY 20, 2008 PENNDOT CULTURAL RESOURCES SUBMISSION TO PA HISTORICAL AND MUSEUM COMMISSION

JULY 12, 2006 PENNDOT CULTURAL RESOURCES SUBMISSION TO PA HISTORICAL AND MUSEUM COMMISSION

AUGUST 27, 2004 LETTER FROM PA HISTORICAL AND MUSEUM COMMISSION TO THE PROJECT (HNTB)

JULY 28, 2004 LETTER FROM PROJECT (HNTB) TO PA HISTORICAL AND MUSEUM COMMISSION, DELAWARE AND LEHIGH NATIONAL HERITAGE CORRIDOR COMMISSION AND THE NATIONAL PARK SERVICE

APRIL 4, 2004 RECORD OF TELEPHONE CALL FROM A.D. MARBLE & COMPANY TO PENNDOT

NEW JERSEY

DECEMBER 10 2008 LETTER FROM NJ DEPARTMENT OF ENVIRONMENTAL PROTECTION (NJDEP) TO DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

OCTOBER 9, 2008 LETTER FROM DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION TO DELAWARE & RARITAN CANAL COMMISSION



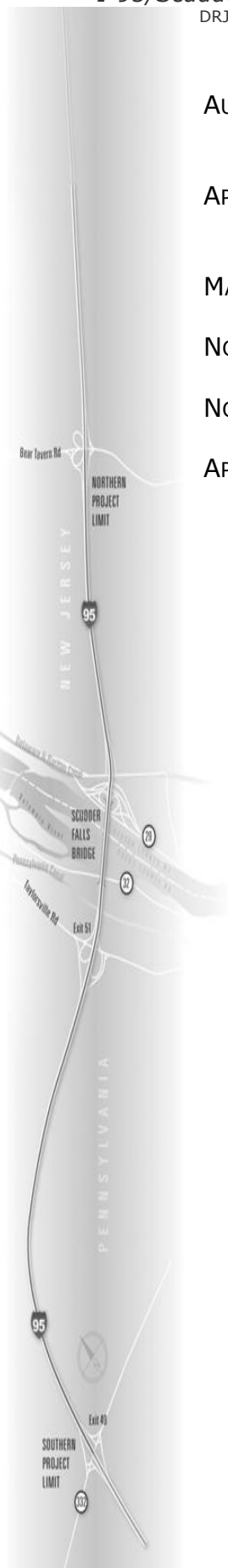
Attachment A – Agency Correspondence

I-95/Scudder Falls Bridge Improvement Project Environmental Assessment

DRJTBC Contract C-393A, Capital Project No. CP0301A



AUGUST 5, 2008	LETTER FROM DELAWARE & RARITAN CANAL COMMISSION TO DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION
APRIL 22, 2008	LETTER FROM NJDEP TO NJ DEPARTMENT OF TRANSPORTATION (NJDOT)
MARCH 4, 2008	LETTER FROM NJDEP TO NJDOT
NOVEMBER 29, 2007	LETTER FROM CANAL SOCIETY OF NEW JERSEY TO NJDOT
NOVEMBER 2, 2007	LETTER FROM NJDOT TO NJDEP
APRIL 12, 2004	LETTER FROM NJDOT TO NJDEP





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.

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 • www.achp.gov



U. S. DEPARTMENT
OF TRANSPORTATION

Pennsylvania Division

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

Federal Highway
Administration

July 16, 2009

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



Ross A. Mantione
Environmental Specialist

Enclosures

ec: C. Brown, PE, PennDOT BOD
M. Harrower, PennDOT District 6-0
C. Spohn, PennDOT District 6-0
C. Kula, PennDOT EQAD

S:\FY2009\Jul\0095-SFB DraftPA ACHP.rs.doc





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

July 23, 2009

Department of Transportation
Attn: Brian G. Thompson, PE, Director
Bureau of Design
P.O. Box 2966
Harrisburg, PA 17105

RE: ER# 04-8011-017-P
Draft Programmatic Agreement
SR 0095, Section SFB, Scudder Falls Bridge
Improvement Project, Lower Makefield
Township, Bucks County

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. Our comments are as follows:

Concerning archaeological resources, it is stated in the second paragraph on page 2 of the draft Programmatic Agreement that archaeological survey will occur in the area of causeway construction across the southern portion of Park Island in the Delaware River. However, Stipulation I.B. on page 4 of the draft Programmatic Agreement states that if the PASHPO determines geoarchaeological assessment investigations are necessary due to causeway construction, the DRJTBC will undertake such investigations at the southern end of Park Island. These two statements are not consistent. In our opinion, Stipulation I.B. should be revised to state that the DRJTBC will conduct a geomorphological assessment of the area of causeway construction across the southern portion of Park Island followed by Phase I archaeological testing if warranted, and, if necessary, Phase II archaeological evaluation and Phase III data recovery, if National Register-eligible archaeological resources are present and cannot be avoided by construction impacts and preserved in place.

If you have any questions or comments regarding our review for archaeological resources, please contact Mark Shaffer at (717) 783-9900.

Sincerely,

Mark Shaffer for

Douglas C. McLearn, Chief,
Division of Archaeology and Protection



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.phrnc.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".

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,

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
A-113

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

56 38476.20
(Arch)

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

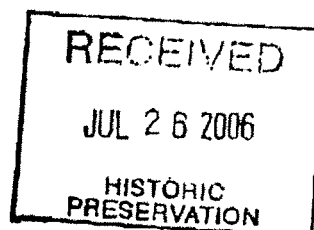
Enclosed please find one (1) copy of the Technical Memorandum No 14 Draft Archaeology Phase I Report prepared by A.D. Marble & Company for the above-referenced project. Phase IA research, which included a geoarchaeological survey of the Area of Potential Effect (APE) in January 2004, evaluated the archaeological 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



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

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:

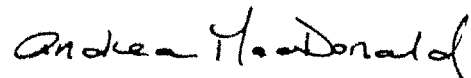
The Bureau for Historic Preservation (the State Historic Preservation Office) has reviewed the above named project in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended in 1980 and 1992, and the regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation 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 black ink that reads "Andrea MacDonald". The signature is written in a cursive, flowing style.

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/snz



AVK -JGG 38476.19
JGG

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, 7th 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.



Delaware River Joint Toll Bridge Commission

110 Wood Street, Morrisville, PA 19067
215.295.5061 tel • 215.295.3337 fax • www.drjtbc.org

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

*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.

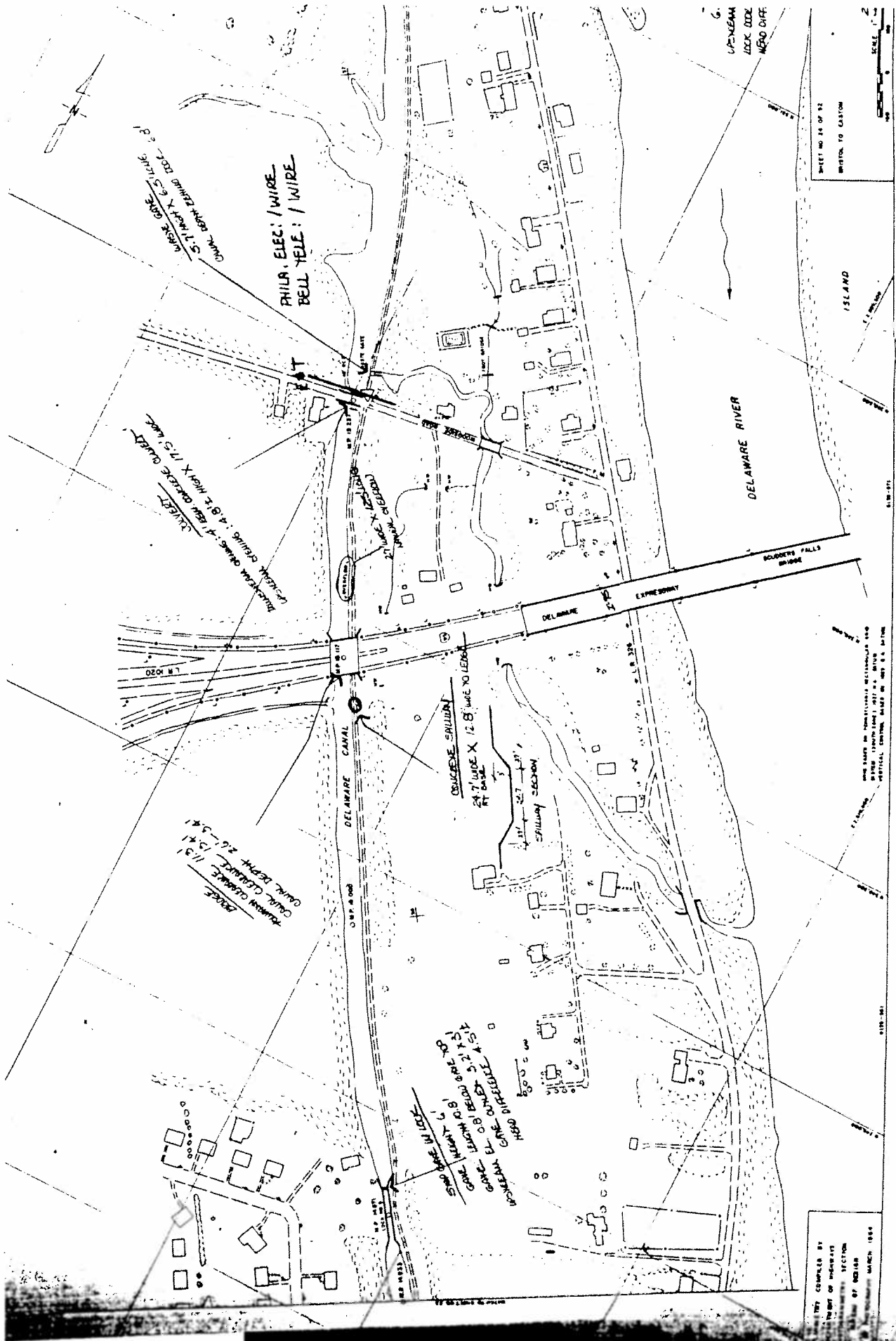
Further, as the Court stated in Pennsylvania Canal Co. v. Harris, 101 Pa. 80 (1882):

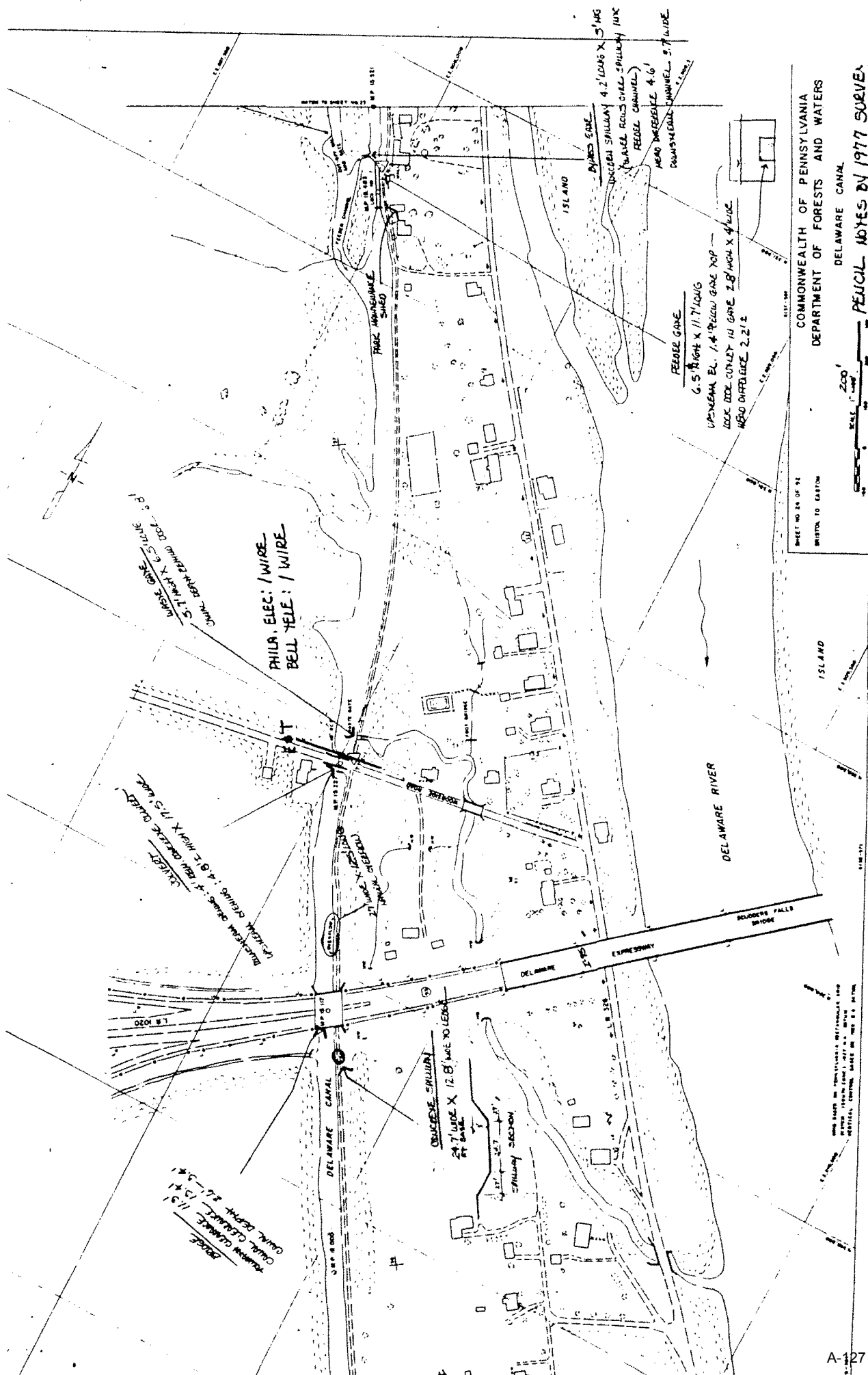
In ascertaining the boundaries of the land taken by the Commonwealth [in constructing the Canal], if satisfactory monuments on the ground cannot be found, regard must be had to the purpose for which the land was to be used, as bearing on the quantity probably taken. The purpose for which the canal was 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.

Attachment







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

HPO-L2008-044 PROD
04-0137-12**State of New Jersey****DEPARTMENT OF ENVIRONMENTAL PROTECTION**

NATURAL & HISTORIC RESOURCES, HISTORIC PRESERVATION OFFICE

JON S. CORZINE*Governor*

PO Box 404, Trenton, NJ 08625

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

www.state.nj.us/dep/hpo

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 PRO/D
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 Yeane, NJDEP Green Acres Program
Bill Bogosian, NJ Water Supply Authority
Patricia Kalleser, 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



2008 AUG 11 01:21

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 26th 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

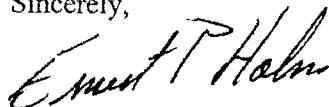
PRALLSVILLE MILLS 33 RISLER STREET P.O. BOX 539 STOCKTON, NJ 08559-0539
609-397-2000 FAX 609-397-1081 www.dandrcanal.com

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 Kallessen
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

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

1

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

3

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.

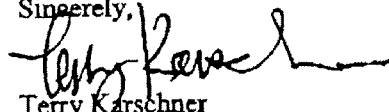
Miscellaneous Report Comments

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



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

JON S. CORZINE
Governor

LISA P. JACKSON
Commissioner

Pinck
File 38-176.20
(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-Mc-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,



Jerry 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 19th-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) 19th-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 19th 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

"IMPROVING LIVES BY IMPROVING TRANSPORTATION"

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

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

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, 7th Floor
Trenton, NJ 08625

Bob Warner
Jones Farm Minimum Security Unit
Bear Tavern Road
Ewing, NJ 08628
Attention: Lt. Dawes

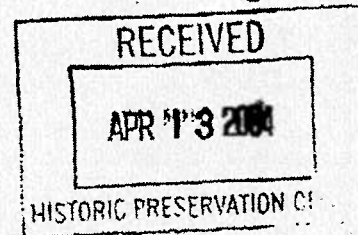


State of New Jersey

DEPARTMENT OF TRANSPORTATION

P.O.Box 600

Trenton, New Jersey 08625-0600



JAMES E. MCGREEVEY
Governor

JACK LETTIERE
Commissioner

HPO-D2004-217
Prod

I-95/Scudder Falls Bridge
CDI/APE/Consulting Parties and
Parties with an Interest/PIAP
Township of Ewing
Mercer County
NJDOT # 2200168

04-0137-3 AT

April 12, 2004

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

Attention: Andrea Tingey-Transportation and Planning Group

Dear Ms. Guzzo,

The New Jersey Department of Transportation (NJDOT) proposes improvements to I-95 from the Scudder Falls Bridge west to Bear Tavern Road in the Township of Ewing, Mercer County. Pursuant to 36CFR800.3 and 36CFR800.4(a), the NJDOT is submitting documentation to initiate the Section 106 process and for the project's Area of Potential Effects (APE) to be studied, and is requesting technical assistance for identification of resources within the APE. Enclosed are a copy of the USGS quadrangle map (project area is highlighted), a copy of the straight-line diagram for the area, and an aerial photograph depicting the architectural APE. The architectural APE was determined with Andrea Tingey of your staff at a field meeting held on February 18, 2004.

Standing Structures: It is understood that in identifying and evaluating historic properties within the proposed Area of Potential Effects, a review of the complete block and lot as delineated on tax parcel maps will be made of each property.

- a. The Delaware and Raritan Canal Historic District is listed on the State and National registers (SR: 11/30/72; NR: 5/11/73).
- b. Route 29 has been identified as a significant roadway during the *Historic Roadway Study*.
- c. Several structures within the proposed project area are over 50 years of age and will need to be evaluated for significance, including:
 1. Jones Farm
 2. The New Jersey State Police Headquarters

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

3. The Belvadere-Delaware Railroad Line
4. Villa Victoria Academy

Archeology: The archeological APE will be the area of ground disturbances.

The following have been identified as consulting parties:

1. FHWA
2. SHPO
3. NJDOT
4. Township of Ewing
5. Mercer County

The following have been identified as those with an interest in history and historic preservation; these groups/people may wish to participate in the Section 106 process:

1. Jim Amon
Delaware and Raritan Canal Commission
Route 29, Prallsville Mills
PO Box 539
Stockton, NJ 08559-0539
2. Sister Lillian Harrington
Villa Victoria Academy
376 West Upper Ferry Road
Ewing, NJ 08628
3. Bob Warner
Jones Farm Minimum Security Unit
Bear Tavern Road
Ewing, NJ 08628
Attention: Lieutenant Dawes
4. Superintendent Joseph Fuentes
New Jersey State Police
Division Headquarters
PO Box 7068
West Trenton, NJ 08628-0068
Attention: Mark Falzini, Archivist
6. Gregory Romano, Executive Director
New Jersey Department of Agriculture
State Agriculture Development Committee Staff
PO Box 330
Trenton, NJ 08625
7. Adam Zellner, Executive Director
New Jersey Department of Community Affairs
Office of Smart Growth
PO Box 204
101 South Broad Street, 7th Floor
Trenton, NJ 08625

8. Ed Buss
New Jersey Water Supply Authority
1851 Highway 31
PO Box 5196
Clinton, NJ 08809-0196
9. Stephen Elliot, Clerk
Ewing Township
2 Jake Garzio Drive
Ewing, NJ 08628
10. Ewing Township Historical Preservation Society
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. Vittpaldi
Supervising Environmental Specialist
Bureau of Environmental Services

Enclosures

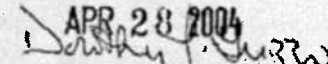
Kew:APEScuddersFalls

cc: Elkins Green

Bureau of Environmental Services

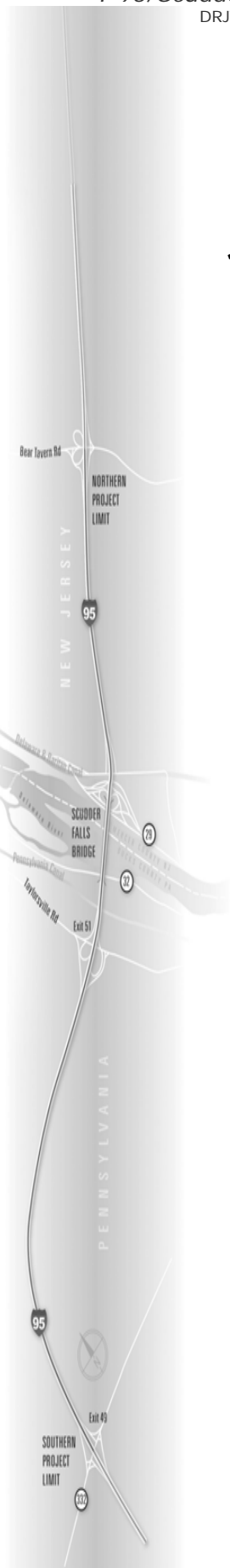
w/o enclosures

CONCUR

APR 28 2004

DEPUTY STATE HISTORIC
PRESERVATION OFFICER



DRAFT PROGRAMMATIC AGREEMENT UNDER SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT



**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, including the acquisition of a portion of the NRHP boundary, and to satisfy New Jersey Green Acres requirements and Section 106 mitigation requirements, prior to commencement of project construction in proximity to the Delaware and Raritan Canal, the DRJTBC shall make a one-time deposit of \$2 million in a fund established to foster and support the interpretation of historic resources along the Delaware and Raritan Canal and to acquire such property as is deemed necessary by the Green Acres Program. The fund will be administered by D&RCC. The DRJTBC has completed consultation with the NJHPO, D&RCC, the Delaware and Raritan Canal State Park, and the Green Acres Program regarding this stipulation and other than as a consequence of unanticipated discoveries as set forth in Section III(B) of this PA, no additional funds 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.

FEDERAL HIGHWAY ADMINISTRATION

By: _____ Date: _____

PENNSYLVANIA STATE HISTORIC PRESERVATION OFFICER

By: _____ Date: _____

NEW JERSEY STATE HISTORIC PRESERVATION OFFICER

By: _____ Date: _____

CONCUR:

DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

By: _____ Date:




NEW JERSEY DEPARTMENT OF TRANSPORTATION

By: _____ Date:

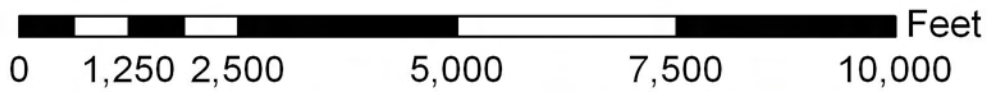
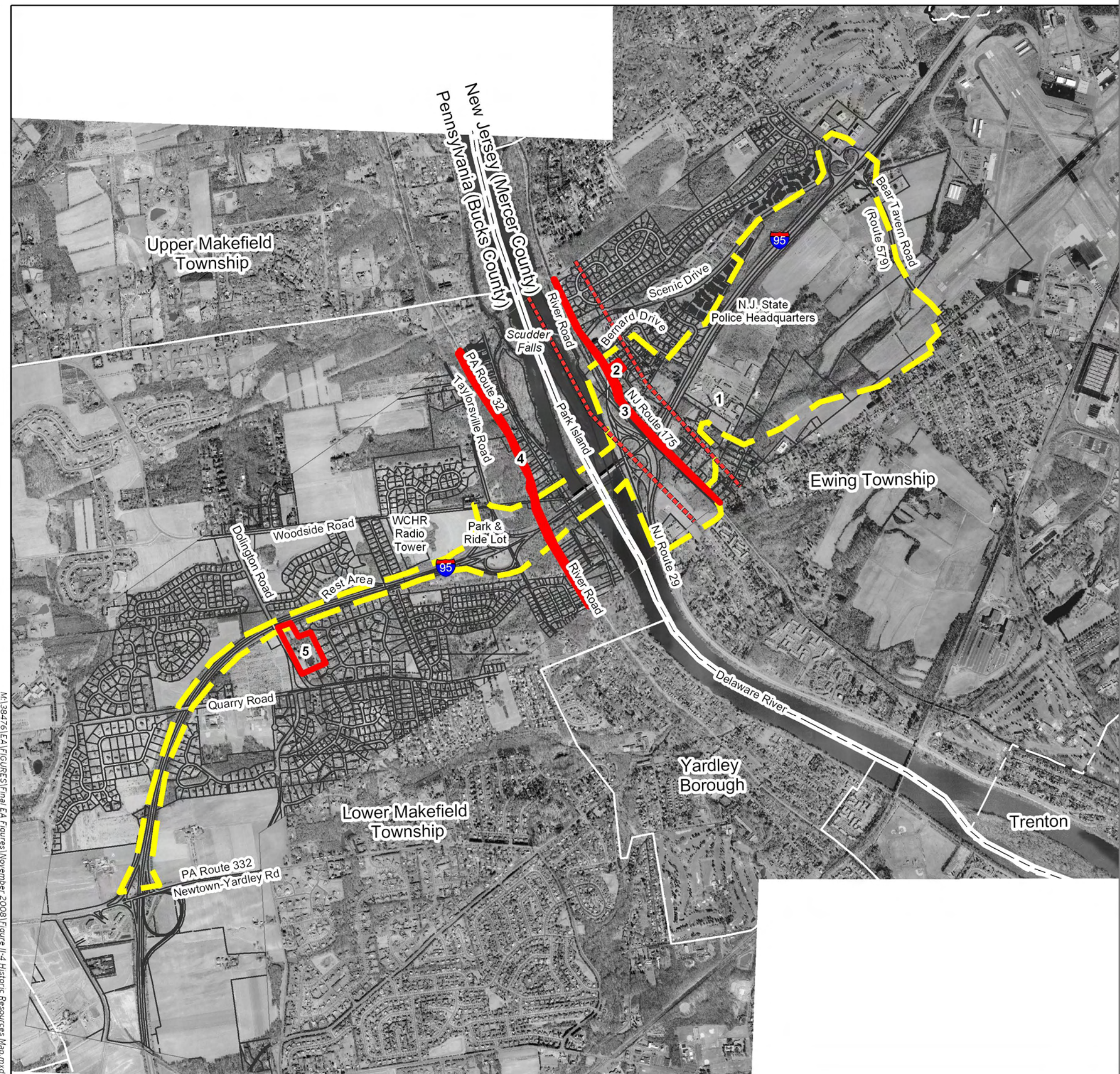
PENNSYLVANIA DEPARTMENT OF TRANSPORTATION



By: _____ Date:

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



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

Approved as to Legality and Form (Pennsylvania)

BY _____
for Chief Counsel Date _____

BY _____
Deputy General Counsel Date _____

BY _____
Deputy Attorney General Date _____

Attachment B – Permit Checklist/Consistency Determinations

I-95/Scudder Falls Bridge Improvement Project Environmental Assessment

Contract C-393A, Capital Project No. CP0301A



ATTACHMENT B – PERMITS CHECKLIST/CONSISTENCY DETERMINATIONS

A. Permits Checklist

☒ Army Corps of Engineers (404) (Joint Individual ACOE/PA DEP Water Encroachment (105) Permit in PA and NJDEP Freshwater Wetlands Individual Permit in NJ):
☒ Individual ☐ Nationwide ☐ Section 10 ☐ PASPGP-1

☒ PA DEP Waterway Encroachment (105) Permit (see above—Joint Permit with ACOE 404)
☒ Individual ☐ Small Project ☐ General

☒ PA DEP and NJDEP 401 Water Quality Certification

☒ Biological Opinion/Incidental Take Permit

☐ Coast Guard Permit

☒ NPDES Permit: ☐ General ☒ Individual ☐ Exempt

☒ Other Permits (Specify):

U.S. EPA Sole Source Aquifer Project Review (if federal funding is received)

Delaware River Basin Commission Project Review

PFBC Application for Permit to Install Floating Structures and Private Aids to Navigation

NJDEP Individual Flood Hazard Permit

NJDEP-Storm Water Management compliance

NJPDES Construction Activity Storm Water General Permit

NJDEP Threatened & Endangered Species Coordination

NJDEP Delaware and Raritan Canal Commission Application

NJDEP Green Acres Program/State House Commission Application for Disposal/Diversion of Parkland

NJ Historic Sites Council Review if applicable to DRJTBC

NJ reforestation Act coordination if applicable to DRJTBC

☐ Not Applicable

Attachment B – Permit Checklist/Consistency Determinations

I-95/Scudder Falls Bridge Improvement Project Environmental Assessment

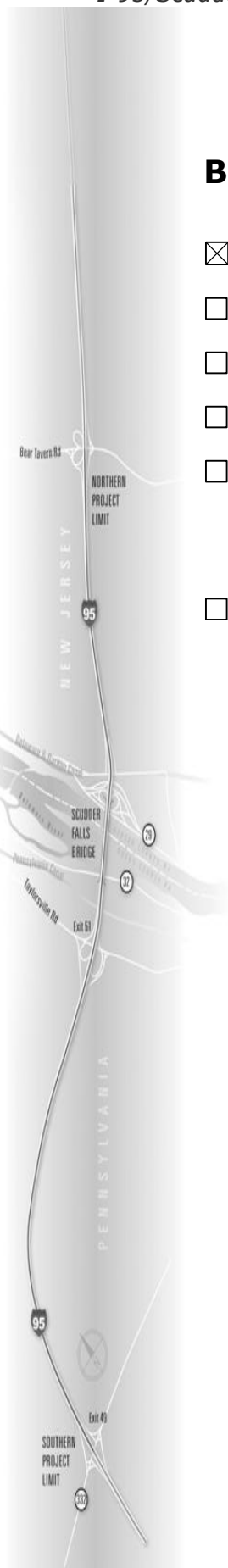
Contract C-393A, Capital Project No. CP0301A



B. Consistency Determinations

- ☒ Air Quality Conformity Statement
- ☐ DEP Coastal Zone Management Plan
- ☐ DCNR/NPS Wild and Scenic River Management Plan
- ☐ FEMA Flood Map Modification
- ☐ Other (Specify):

- ☐ Not Applicable Mitigation Measures





ATTACHMENT C – TECHNICAL SUPPORT DATA INDEX

Comments and Coordination

Agency Coordination

- Plan of Study and Agency responses
- SACM meetings reports
- Special purpose meetings reports
- Field view reports
- Informational letters received from Agencies

Public Involvement

- Intent to Enter Letters
- Public Meeting reports/summaries
- Comment forms/questionnaires handouts from Public Meeting
- All meeting advertisements (newspaper block ads)
- Newsletters
- IAC meeting reports
- Township meeting report
- Stakeholder meeting reports
- Special purpose meeting reports
- Letters received from the public/public officials during project development
- Newspaper articles
- Public Participation Plan: AECOM. December 11, 2003. *I-95/Scudder Falls Bridge Improvement Project, Technical Memorandum No.2: Public Participation Plan*. Prepared for the Delaware River Joint Toll Bridge Commission.

Technical Accuracy of Subject Files

Engineering

- Functional Classification
- Urban/Urbanized Area
- Design Speed
- Type of Terrain
- Project Funding Classification
- Plans
- Profiles
- Typical Sections
- Cross Sections
- Design Criteria: AECOM. September 11, 2003. *I-95/Scudder Falls Bridge Improvement Project, Technical Memorandum No.1: Roadway Design Criteria*. Prepared for the Delaware River Joint Toll Bridge Commission.
- Bridge Design: AECOM. *I-95/Scudder Falls Bridge Improvement Project, Technical Memorandum No.5: Bridge 2030 Estimated Performance*. Prepared for the Delaware River Joint Toll Bridge Commission.

Project Need



Attachment C – Technical Support Data Index

I-95/Scudder Falls Bridge Improvement Project Environmental Assessment

DRJTBC Contract C-393A, Capital Project No. CP0301A



- Existing and Projected (No-Build) Traffic Volume Analysis
 - Raw Count Data
 - Seasonal Adjustment Factors
 - DVRCP 2030 Traffic Projection and Level of Service Methodology
 - DVRPC Annual Average Daily Traffic (AADT) Volumes
 - Intersection Turning Movements (A.M. & P.M. Peak Hours)
 - Levels of Service Worksheets
 - Truck Percentages
- Safety Analysis
- Accident Analysis: AECOM. March 8, 2004. *I-95/Scudder Falls Bridge Improvement Project, Technical Memorandum No.7: 1999-2001 Crash Analysis*. Prepared for the Delaware River Joint Toll Bridge Commission.
- Roadway Deficiencies: AECOM. December 2003. *I-95/Scudder Falls Bridge Improvement Project, Technical Memorandum No.3: Existing Roadway Deficiency Survey*. Prepared for the Delaware River Joint Toll Bridge Commission.
- Bridge Deficiencies: AECOM. *I-95/Scudder Falls Bridge Improvement Project, Technical Memorandum No.12: 2003 Report of Inspection Findings*. Prepared for the Delaware River Joint Toll Bridge Commission.
- Economic Development Data
- Planning and Transportation Context
- Needs Report: HNTB Corporation. June 17, 2004. *I-95/Scudder Falls Bridge Improvement Project, Technical Memorandum No.11: Needs Report*. Prepared for the Delaware River Joint Toll Bridge Commission.
- Pertinent correspondence
- List of reference materials

Traffic and Transportation

- Logical Termini
- Projected (Build Alternatives) Traffic Volume Analysis
 - DVRPC 2030 Traffic Projection and Level of Service Methodology
 - DVRPC Projected AADT Volumes
 - Projected Intersection Turning Movements (morning and afternoon peak hours)
 - Levels of Service Worksheets
- Pertinent correspondence
- List of reference materials
- Levels of Service: AECOM. March 25, 2004. *I-95/Scudder Falls Bridge Improvement Project, Technical Memorandum No.8: 2003 Existing Peak Hours Levels of Service*. Prepared for the Delaware River Joint Toll Bridge Commission.
- AECOM. March 25, 2004. *I-95/Scudder Falls Bridge Improvement Project, Technical Memorandum No.9: 2003 Existing Daytime Levels of Service*. Prepared for the Delaware River Joint Toll Bridge Commission.

Origin-Destination Studies

- Study details (dates, times, locations. etc.)
- Survey Forms
- Trip Tables
- Travel Pattern Analysis
- Pertinent correspondence

Attachment C – Technical Support Data Index

I-95/Scudder Falls Bridge Improvement Project Environmental Assessment

DRJTBC Contract C-393A, Capital Project No. CP0301A



- License Plate Survey: AECOM. February 13, 2004. I-95/Scudder Falls Bridge Improvement Project, Technical Memorandum No.6: 2003 License Plate Matching Survey. Prepared for the Delaware River Joint Toll Bridge Commission.

Alternatives

- All alternatives considered and dismissed/maps and plans
- Alternatives Screening Report: HNTB Corporation. February 22, 2007. *I-95/Scudder Falls Bridge Improvement Project, Technical Memorandum No.26: Alternative Screening Report.* Prepared for the Delaware River Joint Toll Bridge Commission.
- Interchange Alternatives Report: AECOM. February 2008. *I-95/Scudder Falls Bridge Improvement Project, Technical Memorandum No. 28: Point of Access Study.* Prepared for the Delaware River Joint Toll Bridge Commission.
- NJ Route 29 Interchange Alternatives Report: AECOM, in association with Kittelson & Associates, Inc. March 2006. *I-95/Scudder Falls Bridge Improvement Project, Technical Memorandum No. 27: NJ-29 Interchange Roundabout Evaluation Study.* Prepared for the Delaware River Joint Toll Bridge Commission.
- Alternatives studied in detail (concurrence)
- Alternatives studied in detail/maps and plans
- SACM handouts and meeting reports
- Pertinent correspondence
- Bridge alternatives: AECOM. September 20, 2004. *I-95/Scudder Falls Bridge Improvement Project, Technical Memorandum No.13: Bridge Rehabilitation vs. Replacement Evaluation.* Prepared for the Delaware River Joint Toll Bridge Commission.
- Intelligent Transportation System: AECOM. December 2003. *I-95/Scudder Falls Bridge Improvement Project, Technical Memorandum No.4: Draft Conceptual Intelligent Transportation System Study.* Prepared for the Delaware River Joint Toll Bridge Commission.
- Pedestrian/Bicycle Access: AECOM. November 18, 2005. *I-95/Scudder Falls Bridge Improvement Project, Technical Memorandum No.14: Bicycle and Pedestrian Facility Feasibility Study.* Prepared for the Delaware River Joint Toll Bridge Commission.

Natural Resources

Geology and Groundwater Hydrology

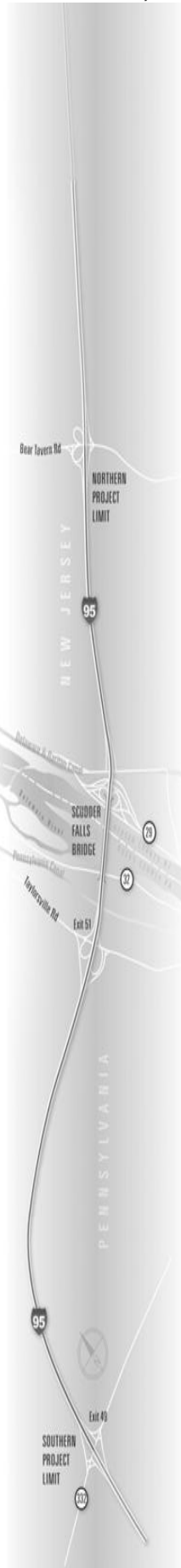
- Geology and groundwater mapping
- Public and private water supplies data
- Sole source aquifers and well head protection areas
- Pertinent correspondence/field view reports
- List of reference materials

Soils and Erosion

- Bucks and Mercer County Soil Surveys
- Soils associations, series, drainage classes and engineering properties
- List of hydric soils and highly erodible soils from NRCS
- Pertinent correspondence/field view reports
- List of reference materials

Surface Water Hydrology and Floodplains

- Waterways mapping



Attachment C – Technical Support Data Index

I-95/Scudder Falls Bridge Improvement Project Environmental Assessment

DRJTBC Contract C-393A, Capital Project No. CP0301A



- FEMA & FIRM mapping
- Hydrologic and hydraulic studies/data/reports: Watershed Concepts, in conjunction with AECOM. October 3, 2007. *I-95/Scudder Falls Bridge Improvement Project, Technical Memorandum No.31: Hydrology and Hydraulics Analysis*. Prepared for the Delaware River Joint Toll Bridge Commission.
- HEC-RAS version 3.13 Model
- USGS PeakFQ Model
- Letters/meeting reports/field view reports
- List of reference materials

Water Quality and Aquatic Biota

- Water Quality Data (STORET, PFBC, NJDEP)
- Aquatic Biota Data
- Protected, designated water uses ((PA Code Title 25-Chapter 93, DRBC, N.J.A.C. 7:9B)
- Stocked Trout streams
- Wild Trout streams
- Wild and scenic rivers data/letter (if applicable)
- Letters/meeting reports/field view reports
- List of reference materials
- Surface Waters Report: STV, Inc. December 2005. *I-95/Scudder Falls Bridge Improvement Project, Draft Technical Memorandum No.16: Surface Water, Existing Conditions*. Prepared for the Delaware River Joint Toll Bridge Commission.
- Groundwater Report: STV, Inc. December 2004. *I-95/Scudder Falls Bridge Improvement Project, Draft Technical Memorandum No.17: Ground Water, Existing Conditions*. Prepared for the Delaware River Joint Toll Bridge Commission.

Wetlands

- NWI/Mapping
- Hydric Soils list (NRCS)
- Infrared aerial photos
- Field data sheets
- Mapping of wetland areas and extent of study area
- Wetland Delineation Report
- Jurisdictional Determination from COE: STV, Inc. June 2005. *I-95/Scudder Falls Bridge Improvement Project Request for Department of the Army Jurisdictional Determination for Pennsylvania wetlands*. Prepared for the Delaware River Joint Toll Bridge Commission.
- NJ DEP Letter of Interpretation: STV, Inc. June 2005. *I-95/Scudder Falls Bridge Improvement Project, Application for NJDEP Freshwater Wetlands Letter of Interpretation/Line Verification*. Prepared for the Delaware River Joint Toll Bridge Commission.
- Impact Calculations
- Wet 2.0 Data
- Letters/meeting reports/field view reports
- List of reference material
- Wetlands report: STV, Inc. November 2004. *I-95/Scudder Falls Bridge Improvement Project, Draft Technical Memorandum No.15: Wetlands, Existing Conditions*. Prepared for the Delaware River Joint Toll Bridge Commission.

Attachment C – Technical Support Data Index

I-95/Scudder Falls Bridge Improvement Project Environmental Assessment

DRJTBC Contract C-393A, Capital Project No. CP0301A



Vegetation and Wildlife

- Land use and cover type maps (aerials)
- Common wildlife species found in the study area (PGC)
- Endangered species - letters from agencies (USFWS, PGC, PFBC, PNDI, NJDFW)
- Field view reports on T/E species and coordination with experts and agencies
- Letters/meeting reports/field view reports
- List of referenced materials
- Aquatic and Terrestrial Habitat Report: STV, Inc. December 2005. *I-95/Scudder Falls Bridge Improvement Project, Draft Technical Memorandum No.18: Terrestrial & Aquatic Habitat, Existing Conditions*. Prepared for the Delaware River Joint Toll Bridge Commission.
- Biological Assessment: Normandeau Associates and STV, Inc. September 25, 2008. *Biological Assessment for I-95/Scudder Falls Bridge Improvement Project, Bucks County, PA and Mercer County, NJ*. Prepared for the Delaware River Joint Toll Bridge Commission.

Hazardous, Residual and Municipal Waste

- Phase I Environmental Site Assessment (ASTM Standard)
- Preliminary Area Reconnaissance Report
- Pertinent correspondence
- Hazardous Materials Report: STV, Inc. December 2005. *I-95/Scudder Falls Bridge Improvement Project, Draft Technical Memorandum No.21: Hazardous Materials*. Prepared for the Delaware River Joint Toll Bridge Commission.

Noise

- Maps of receptor site locations and links used in analysis
- Monitoring data sheets/traffic counts
- Traffic used for analysis
- FHWA Traffic Noise Model Version 2.5 ®, input and output files
- Model check results
- Future Noise Level (FNL) Calculation Adjustments
- Reasonableness analysis sheets, signed
- Noise meter and Calibrator certificates
- List of all assumptions used for analysis
- Pertinent correspondence
- List of reference materials
- Noise Report: Gannett Fleming, Inc. December 2007. *I-95/Scudder Falls Bridge Improvement Project, Draft Technical Memorandum No.29: Preliminary Engineering Noise Analysis*. Prepared for the Delaware River Joint Toll Bridge Commission.

Air Quality

- Maps of receptor site locations and links used in analysis
- Traffic used for analysis
- CALINE 3/CAL3QHC input and output files
- Mobile 6.2
 - Mobile input files and output files
- Background CO concentrations used
- TIP information
- Conformity Statement data

Attachment C – Technical Support Data Index

I-95/Scudder Falls Bridge Improvement Project Environmental Assessment

DRJTBC Contract C-393A, Capital Project No. CP0301A



- List of all assumptions used for analysis
- Pertinent correspondence
- List of reference materials
- Air Quality Report: Gannett Fleming, Inc. December 2007. *I-95/Scudder Falls Bridge Improvement Project, Draft Technical Memorandum No.30: Preliminary Engineering Air Quality Analysis*. Prepared for the Delaware River Joint Toll Bridge Commission.

Socioeconomic Resources

- State, County, and Municipal Comprehensive and Master Plans
- Environmental Justice covered
- Socioeconomic/Land Use, Parklands, and Farmlands Report: HNTB Corporation. October 29, 2004. *I-95/Scudder Falls Bridge Improvement Project, Technical Memorandum No.20: Existing Conditions, Socioeconomic/Land Use, Parklands and Farmlands*. Prepared for the Delaware River Joint Toll Bridge Commission.

Land Use and Zoning

- Land use plans (existing and future)
- Existing and proposed development plans and information
- Recreation plans
- Tax maps
- Zoning maps (existing and future)
- Pertinent correspondence

Population and Housing

- Census Data 1990, 2000, and DVRPC 2025
- Population
- Employment
- Income
- Housing

Economy and Employment

- Census data 1990, 2000 and DVRPC 2025
- List and map of area and local employers
- Map of commercial/industrial centers
- Economic trends/forecasts
- Business displacements
- Pertinent correspondence

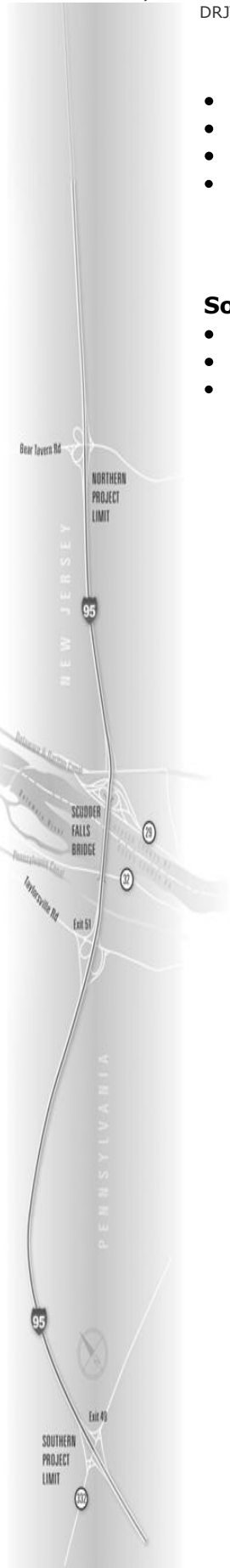
Community Facilities

- List and map of local facilities and services
- Detailed information on each facility/list of contacts for each facility
- Pertinent correspondence

Community Cohesion

- List and map of neighborhoods
- Map of pedestrian crosswalks/walkways
- Residential displacements
- Pertinent correspondence

Municipal Finances



Attachment C – Technical Support Data Index

I-95/Scudder Falls Bridge Improvement Project Environmental Assessment

DRJTBC Contract C-393A, Capital Project No. CP0301A



- Area property values
- Millage rates
- Tax maps
- Pertinent correspondence

Visual

- List/map/photos of sensitive receptors

Farmlands

- Compliance with FPPA
- NRCS list of prime, statewide and locally important farmland soils and maps
- List/map of farms protected by PA Acts 43,319 and 515 and N.J.S.A. 4:1C-11 et seq.
- Information on Private Easements
- Maps of active farmland parcels
- Pertinent correspondence & meeting/field view reports
- List of reference materials

Cultural Resources

Historic Resources

- List and map of National Register eligible or listed properties
- Historic Structures Survey/Determination of Eligibility Report (PA): A.D. Marble & Company. March, 2008. *I-95/Scudder Falls Bridge Improvement Project, Technical Memorandum No.24: Historic Resources Survey and Determination of Eligibility Report for Interstate 95, Section SFB, E.R. # 04-8011-017, Bucks County, Pennsylvania.* Prepared for the Delaware River Joint Toll Bridge Commission.
- Determination of Effects Report (PA): A.D. Marble & Company. September 2008. *I-95/Scudder Falls Bridge Improvement Project, Technical Memorandum No. 34: Determination of Effect Report, E.R. # 04-8011-017, Lower Makefield Township, Bucks County, Pennsylvania.* Prepared for the Delaware River Joint Toll Bridge Commission.
- Historic Structures Survey/Determination of Eligibility Report/Determination of Effects Report (NJ): A.D. Marble & Company. September 2008. *I-95/Scudder Falls Bridge Improvement Project, Technical Memorandum No.25: Historic Resources Survey, Determination of Eligibility, and Determination of Effect Report, Ewing Township, Mercer County.* Prepared for the Delaware River Joint Toll Bridge Commission.
- Correspondence with local historical societies
- Letters from PHMC/NJHPO other correspondence (see Attachment A)
- Programmatic Agreement (see Attachment A)

Archaeological Resources

- Map of probability areas for archaeological sites and/or predictive model
- Interviews with local informants
- Phase IA/IB Report: A.D. Marble & Company. January 2008. *I-95/Scudder Falls Bridge Improvement Project, Technical Memorandum No.32: Final Archaeology Phase I Report, Pennsylvania E.R. # 04-8011-017.* Prepared for the Delaware River Joint Toll Bridge Commission. (Due to the sensitive nature of archaeological resources this document is not available for public review)

Attachment C – Technical Support Data Index

I-95/Scudder Falls Bridge Improvement Project Environmental Assessment

DRJTBC Contract C-393A, Capital Project No. CP0301A



Section 4(f) Evaluation (see Volume 3 of the EA/Draft Section 4(f) Evaluation)

- Section 4(f) document including: list and map of 4(f) properties, descriptions, photos, and avoidance alternatives

Secondary and Cumulative Impacts

- Secondary impacts
- Cumulative impacts
- Mitigation strategies
- Other pertinent correspondence

