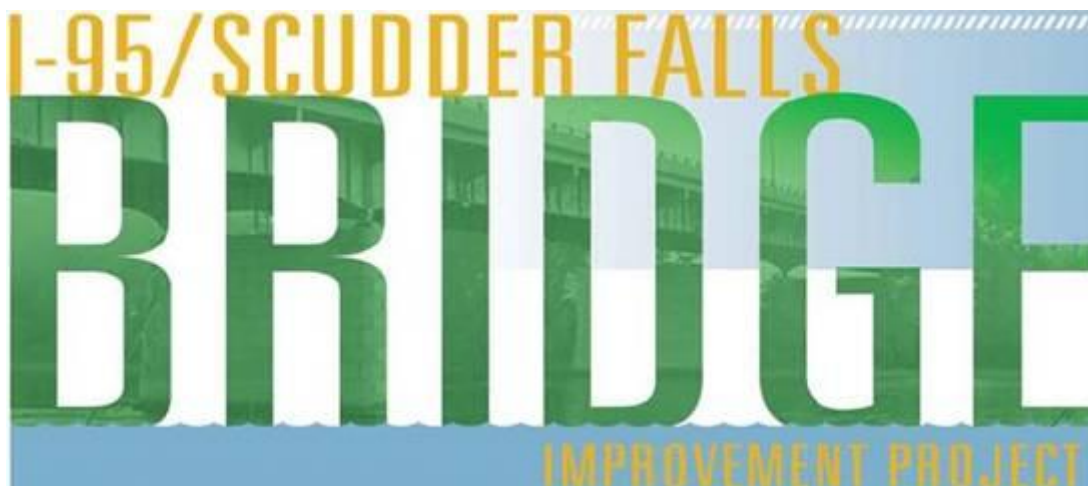




Delaware River Joint Toll Bridge Commission



Addendum to the Environmental Assessment for the I-95/Scudder Falls Bridge Improvement Project

November 2011

I-95/Scudder Falls Bridge Improvement Project Bucks County, Pennsylvania and Mercer County, New Jersey

ADDENDUM TO THE ENVIRONMENTAL ASSESSMENT FOR THE I-95/SCUDDER FALLS BRIDGE IMPROVEMENT PROJECT

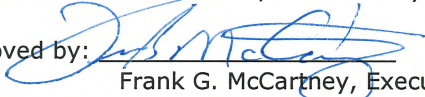
Submitted Pursuant to 42 U.S.C. 4332 (2) (c) and 49 U.S.C. 303
by the

U.S. Department of Transportation, Federal Highway Administration
Pennsylvania Department of Transportation, New Jersey Department of
Transportation and Delaware River Joint Toll Bridge Commission

Cooperating Agencies:

U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, National
Marine Fisheries Service, and Pennsylvania Department of Environmental Protection

Approved by:


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Delaware River Joint Toll Bridge Commission

Date:

11-14-11

Approved by:


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Date:

11/21/2011

Approved by:


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11/21/11

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The DRJTBC proposes all electronic cashless tolling (AECT) using an overhead gantry for the southbound side of the proposed I-95/Scudder Falls Replacement Bridge over the Delaware River. Tolls would be collected using the E-ZPASS system or video capture and billing. The project, as originally proposed in the EA, includes improvements to 4.4 miles of adjoining sections of I-95 from PA Route 332 to Bear Tavern Road, improvements to the Taylorsville Road Interchange, and improvements to the NJ Route 29 Interchange. The proposed action now includes the pedestrian/bicycle facility that was evaluated in the EA. This addendum to the EA evaluates the traffic diversions and impacts associated with all electronic cashless tolling including aesthetics, air quality, noise, environmental justice, and cultural resources.

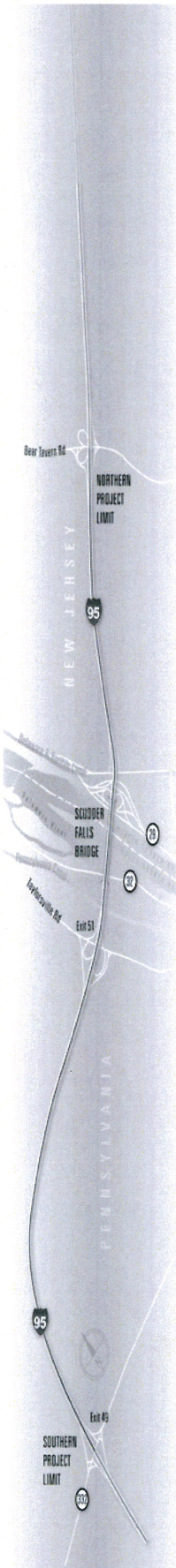




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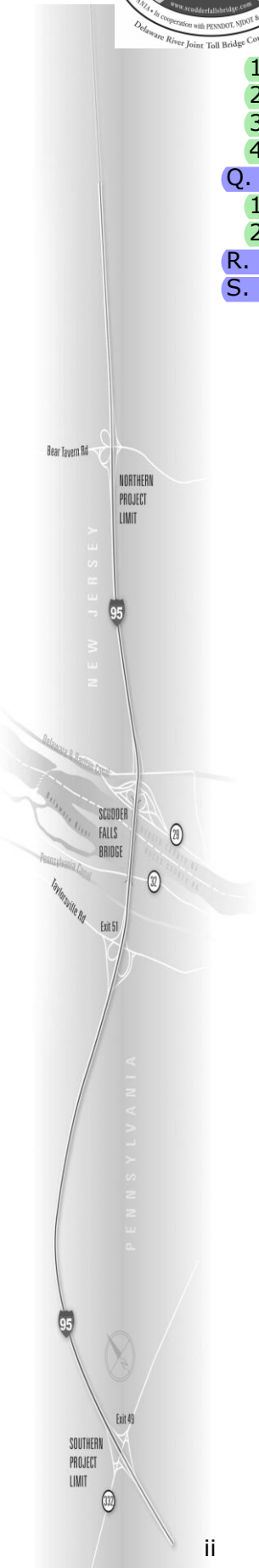


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I-95/Scudder Falls Bridge Improvement Project

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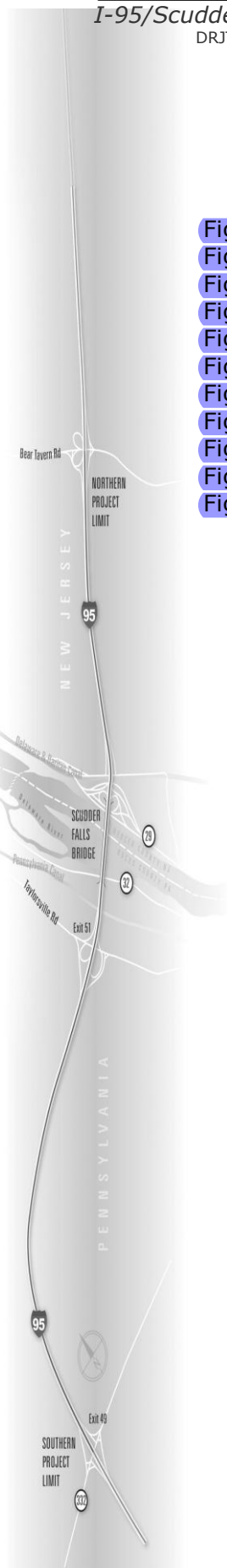
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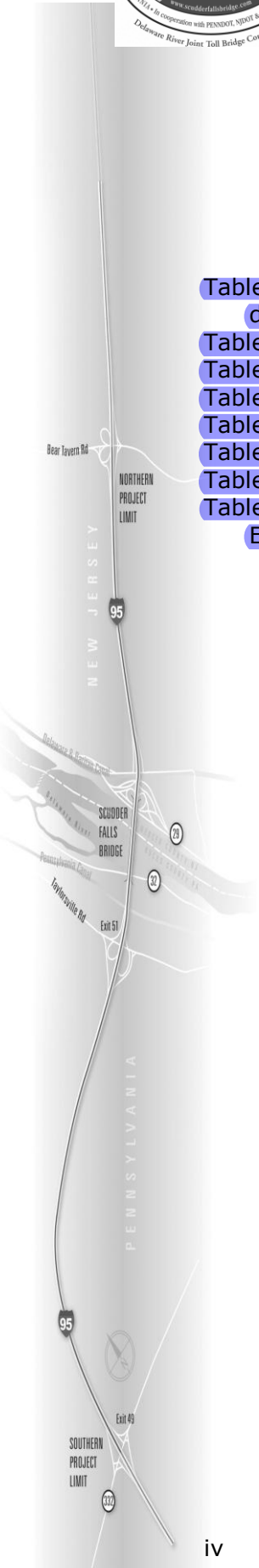
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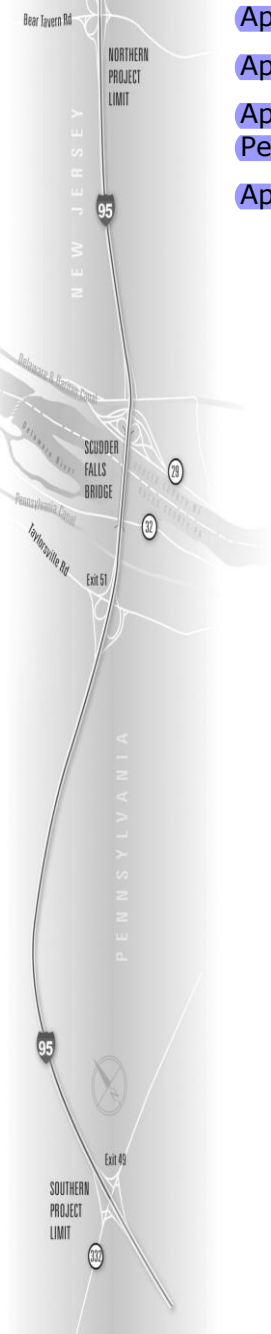
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ERRATA TO THE 2009 ENVIRONMENTAL ASSESSMENT/DRAFT SECTION 4(F) EVALUATION

Page xii, Summary, A. Introduction, last sentence of second paragraph – Change “The project is included in DVRPC Long Range Transportation Improvement Program (TIP) and the New Jersey 2-Year TIP” to “The project is included in DVRPC’s Long Range Plan (Year 2035) and Transportation Improvement Program (TIP).”

Page 4, last sentence of first paragraph – Change “The project is included in DVRPC Long Range Transportation Improvement Program (TIP) and the New Jersey 2-Year TIP” to “The project is included in DVRPC’s Long Range Plan (Year 2035) and Transportation Improvement Program (TIP).”

Page 150, Table IV-11 – Federally and State-Listed Species,

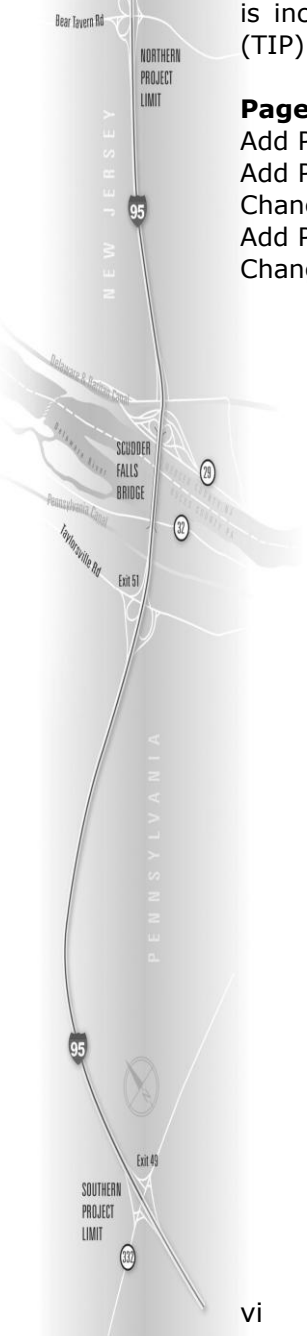
Add PA-E, NJ-E to Listing Status for Shortnose sturgeon

Add PA-E to listing Status for Atlantic sturgeon

Change Scientific Name for Peregrine falcon from *Haliaeetus leucocephalus* to *Falco peregrines*

Add PA-T and NJ-E to Listing Status for Bald Eagle

Change Listing Status for Bog turtle from PA-T and NJ-T to PA-E and NJ-E





SUMMARY

The Environmental Assessment (EA)/Draft Section 4(f) Evaluation (EA/Draft 4(f)) for the I-95/Scudder Falls Bridge Improvement Project was circulated for public comment by the Federal Highway Administration (FHWA), Delaware River Joint Toll Bridge Commission (DRJTBC), Pennsylvania Department of Transportation (PennDOT), and New Jersey Department of Transportation (NJ DOT) in December 2009. Tolling of the I-95/Scudder Falls Replacement Bridge, as part of the project, was decided by the DRJTBC during the public comment period for the EA. The EA/Draft 4(f) circulated in December 2009 did not consider the possibility of tolling the I-95/Scudder Falls Replacement Bridge. Therefore, this Addendum to the Environmental Assessment has been prepared to evaluate the traffic diversions and environmental consequences of tolling the bridge as part of the Proposed Action.

The EA/Draft 4(f) circulated in December 2009 disclosed the effects of the proposed action, both with and without a pedestrian/bicycle facility on the bridge that would connect the Delaware Canal and Delaware and Raritan Canal in Pennsylvania and New Jersey, respectively. Alternative configurations for the pedestrian/bicycle facility were considered and a preferred design was selected. However, largely due to cost, the DRJTBC determined that a decision whether to implement the pedestrian/bicycle facility would be deferred to a later time. Following the public comment period, the DRJTBC determined that the pedestrian/bicycle facility would be part of the proposed action. This Addendum to the Environmental Assessment discloses this change to the proposed action. However, because the EA/Draft 4(f) documented the environmental consequences of the pedestrian/bicycle component of the proposed action, no additional information on the pedestrian/bicycle facility is included in this Addendum. The pedestrian/bicycle facility itself would not be tolled. Construction and maintenance costs would be funded from DRJTBC toll revenue.

Traffic

To gain an understanding of the potential impacts of the traffic diversions on the local roadways and adjacent river crossings, the DRJTBC commissioned a study to forecast the volume of traffic that would divert from the Scudder Falls Replacement Bridge to alternate locations once tolls are implemented. This report, entitled *Scudder Falls Bridge Traffic Diversion Study*, dated May 11, 2011, was prepared by Jacobs Engineering Group, Inc. under contract with AECOM to conduct this analysis. The adjacent river crossings evaluated as part of this study included Washington Crossing Toll-supported Bridge to the north; and Calhoun Street Toll-supported Bridge, Lower Trenton Toll-supported Bridge and Trenton-Morrisville (Route 1) Toll Bridge to the south.

The estimated traffic diversion was developed for the interim year (2015) and future year 2030, assuming both a low toll scenario (\$1.00 for passenger vehicles) and a high toll scenario (\$3.00 for passenger vehicles) for the Scudder Falls Bridge. The truck toll for both scenarios was assumed to be \$4 per axle for each truck. The diverted volumes for these scenarios were compared to traffic volumes projected to occur on the existing Scudder Falls Bridge without a toll.

The results of the analysis show that, during the peak hour, the volume of traffic using the newly completed I-95/Scudder Falls Replacement Bridge will not be appreciably different than the volume of traffic that would use the existing bridge without a toll. In fact, the new Scudder Falls Bridge is expected to see a slight increase in traffic during the peak hour while the adjacent river crossings will each see a slight decrease in volume during the peak hour for the \$1.00 and \$3.00 toll scenarios in the year 2030. A similar result is obtained for the peak hour in the year 2015 under



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the \$1.00 toll scenario, but under the \$3.00 toll scenario, traffic on the I-95/Scudder Falls Replacement Bridge will decrease slightly while traffic on the other four DRJTBC bridges will increase slightly.

The reasons for these results may not be obvious at first glance. However, upon further examination, including observations of traffic conditions at alternative crossings, it is apparent that additional traffic will be attracted to using the newly completed Scudder Falls Bridge due to the combined improvements (additional travel lanes, safer ramp entrance and exit conditions) and the unacceptable travel delays associated with utilizing the alternative crossings. In essence the study reveals that motorists, who are already experiencing delays at these alternates, will be willing to pay a relatively modest toll in exchange for the reduced travel times and increased safety which will be provided by the new Scudder Falls Bridge.

The DRJTBC has conducted an analysis of the traffic diversions anticipated as a result of the tolling of the I-95/Scudder Falls Replacement Bridge. The DRJTBC agrees to conduct pre-construction and post-construction traffic study and analysis as outlined in an Interagency Agreement currently being negotiated and to be entered into between and among the DRJTBC, PennDOT and NJDOT. The DRJTBC agrees to take reasonable measures to mitigate for traffic diversion impacts on Pennsylvania and New Jersey state roads in the event the traffic study and analysis identifies traffic issues, not identified in this Addendum, which are attributed to the tolling of the I-95/Scudder Falls Replacement Bridge. Details regarding those mitigation commitments will be found in the Interagency Agreement.

The analysis of tolling the I-95/Scudder Falls Replacement Bridge reveals that the environmental consequences disclosed in the EA/Draft 4(f) remain valid with the proposed tolling. Tolling will have little or no additional effects on natural and human resources in the project area.

Additional Information

This Addendum includes as Appendices additional documents that were prepared or completed following public circulation of the Environmental Assessment. These include written responses to comments received on the 2009 Environmental Assessment received from elected officials, government agencies, and the general public.

The DRJTBC has coordinated with appropriate federal and state resource and regulatory agencies throughout the preparation of the Environmental Assessment and this Addendum. The DRJTBC will continue coordination with the agencies with jurisdictional authority or advisory capacity during subsequent phases of project development including permitting, final design and construction phases including the U.S. Coast Guard, U.S. Army Corps of Engineers, National Marine Fisheries Service, Pennsylvania Department of Environmental Protection, New Jersey Department of Environmental Protection and others.



I. INTRODUCTION

A. Purpose of this Document

This Addendum to the Environmental Assessment (EA) for the I-95/Scudder Falls Bridge Improvement Project has been prepared to document modifications to the proposed action and the associated changes to the environmental consequences of the proposed action, which were the subject of the project's Environmental Assessment/Draft Section 4(f) Evaluation (EA/Draft 4(f)), dated October 2009. The modifications to the proposed action are also documented in the Final Section 4(f) Evaluation, under separate cover.

The Delaware River Joint Toll Bridge Commission (DRJTBC) operates and maintains twenty bridges over the Delaware River between Pennsylvania and New Jersey. Of these DRJTBC bridges, seven are tolled; and the remaining thirteen bridges, including the I-95/Scudder Falls Bridge, are toll-supported. Two of the thirteen toll-supported bridges are pedestrian bridges. Tolls are not collected on the toll-supported bridges. The revenues from the seven tolled bridges are the sole source of funding for the inspection, repairs, and maintenance of the DRJTBC bridge system, with no tax revenues contributed by New Jersey, Pennsylvania, or the Federal Government.

B. Recent Project History

The Environmental Assessment/Draft Section 4(f) Evaluation (EA/Draft 4(f)), October 2009, for the I-95/Scudder Falls Bridge Improvement Project was circulated for public comment by the Federal Highway Administration, Delaware River Joint Toll Bridge Commission, Pennsylvania Department of Transportation, and New Jersey Department of Transportation in December 2009. The Delaware River Joint Toll Bridge Commission (DRJTBC) decided to toll the I-95/Scudder Falls Replacement Bridge during the circulation and comment period for the EA/Draft 4(f). Comments received during the public comment period for the 2009 EA/Draft 4(f) requested that the effects of tolling the I-95/Scudder Falls Replacement Bridge, including traffic diversions, air quality, noise, and effects on disadvantaged populations, be further evaluated.

When tolls are introduced to a facility for the first time, it is expected that some drivers will divert to alternate locations to avoid paying the toll. It is also expected that the I-95/Scudder Falls Bridge Improvement Project, which includes a new, widened Scudder Falls Bridge, will attract additional traffic from the other river crossings, mitigating some of the effects of diversions due to tolling.

To gain an understanding of the potential impacts of the traffic diversions on the local roadways and adjacent river crossings, the DRJTBC commissioned a study to forecast the volume of traffic that would divert from the Scudder Falls Replacement Bridge to alternate locations once tolls are implemented. This report, entitled *Scudder Falls Bridge Traffic Diversion Study*, dated May 11, 2011, was prepared by Jacobs Engineering Group, Inc. under contract with AECOM to conduct this analysis. The adjacent river crossings evaluated as part of this study included Washington Crossing Toll-supported Bridge to the north; and Calhoun Street Toll-supported Bridge, Lower Trenton Toll-supported Bridge and Trenton-Morrisville (Route 1) Toll Bridge to the south.



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C. Proposed Action

The 2009 EA/Draft 4(f) for the proposed I-95/Scudder Falls Bridge Improvement Project addressed proposed improvements to 4.4 miles of I-95 between PA Route 332 in Lower Makefield Township, PA and Bear Tavern Road in Ewing Township, NJ (Figure 1). The purpose of the project is to alleviate congestion and provide acceptable traffic operating conditions along this critical thoroughfare between Bucks County, Pennsylvania and Mercer County, New Jersey. From west to east, I-95 in the project area consists of two lanes in each direction between PA Route 332 and NJ Route 29 and three lanes in each direction east of NJ Route 29 to Bear Tavern Road. Heavy traffic congestion occurs during peak traffic hours that primarily affects the peak travel directions (northbound in the A.M. peak and southbound in the P.M. peak). This reflects predominant commuting patterns of Bucks County/Pennsylvania residents traveling to work destinations in Mercer County/New Jersey.

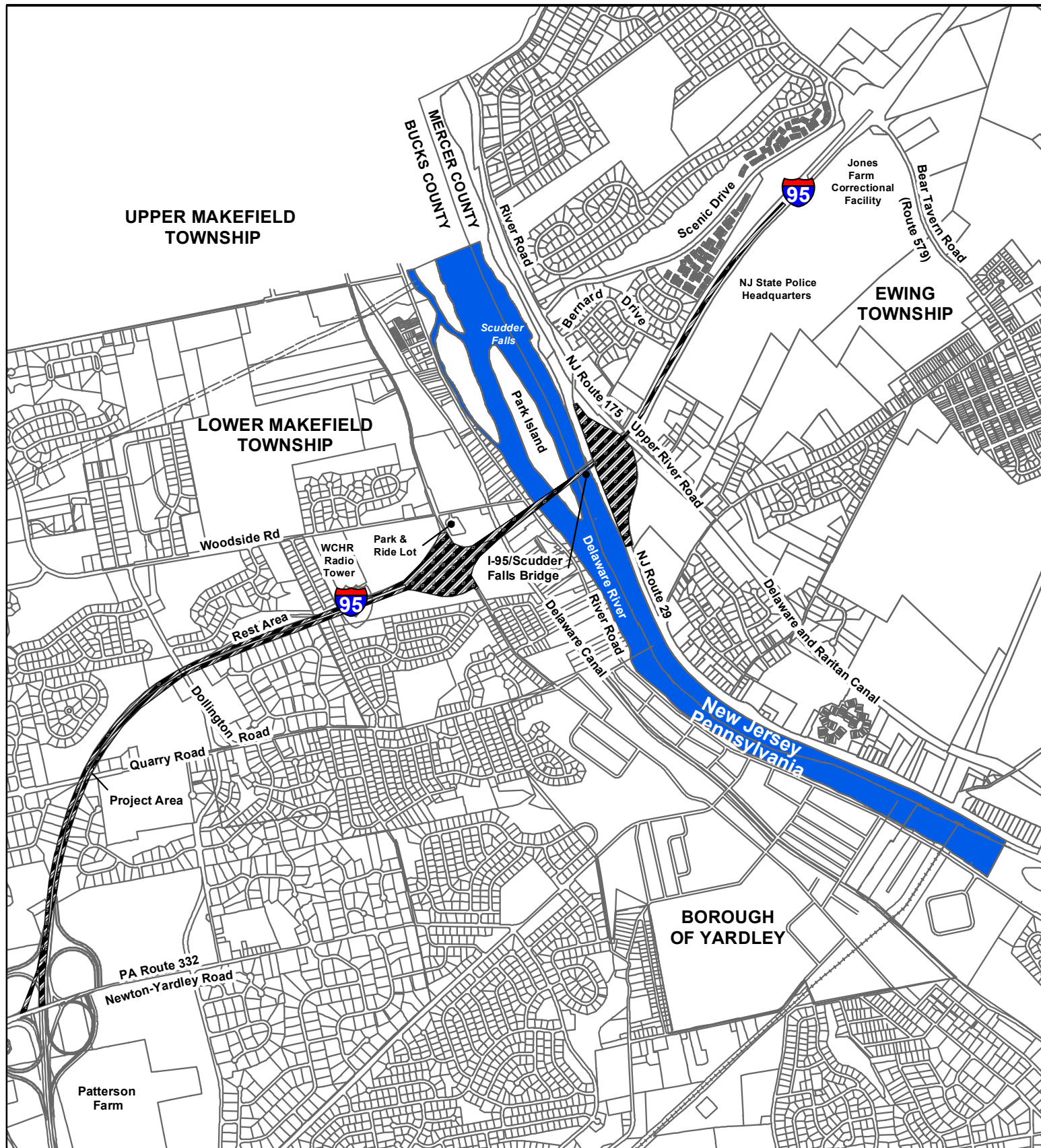
The proposed action, as documented in the EA/Draft 4(f), includes adding a travel lane and adequate outside and inside shoulders in each direction on I-95 with auxiliary lanes to accommodate entry and exit from adjoining interchanges on the I-95/Scudder Falls Replacement Bridge. In addition, the proposed action includes improvements to the Taylorsville Road interchange in PA and to the NJ Route 29 interchange in NJ, as well as highway improvements necessary to transition to the existing six-lane section of I-95 extending approximately 1.5 miles east from NJ Route 29 to the Bear Tavern Road (County Route 579) Interchange.

The environmental consequences of adding a pedestrian/bicycle facility on the southbound (north) side of the I-95/Scudder Falls Replacement Bridge were addressed in the EA/Draft 4(f), although it was stated that a final decision on whether this would be part of the project would be made in final design. The DRJTBC has decided to include the pedestrian/bicycle facility in the proposed action.

In summary, the proposed action, as modified, now consists of the following:

- Improvements to the I-95 corridor from PA Route 332 in Pennsylvania to Bear Tavern Road in New Jersey, as described in Section III.D of the EA/Draft 4(f). No changes are proposed to the physical roadway improvements and bridge replacement previously proposed in the EA/Draft 4(f);
- A pedestrian/bicycle facility across the Delaware River, as described in Section III.D of the EA/Draft 4(f), will be implemented as part of the proposed action. The EA/Draft 4(f) had deferred a final decision on this element of the project to final design;
- Implementation of tolling on the I-95/Scudder Falls Replacement Bridge through all electronic cashless tolling. The EA/Draft 4(f) did not consider tolling the bridge.

The DRJTBC has coordinated with appropriate federal and state resource and regulatory agencies throughout the preparation of the Environmental Assessment and this Addendum. The DRJTBC will continue coordination with the agencies with jurisdictional authority or advisory capacity during subsequent phases of project development including permitting, final design and construction phases including the U.S. Coast Guard, U.S. Army Corps of Engineers, National Marine Fisheries Service, Pennsylvania Department of Environmental Protection, New Jersey Department of Environmental Protection and others.



Project Area

Not to Scale



Addendum to the Environmental Assessment for the I-95/Scudder Falls Bridge

**Vicinity Map
Figure 1**





D. Need for Tolling

The DRJTBC's operations and capital program are financed solely by the revenues it collects from its seven current toll bridges. In the absence of federal and state transportation funding, the cost of the I-95/Scudder Falls Bridge Improvement Project necessitates that the DRJTBC employ tolling at the facility to assure the financial integrity of its capital programs, of which the I-95/Scudder Falls Bridge Improvement project is the single, largest initiative.

II. DESCRIPTION OF PROPOSED TOLLING

A. Introduction

The DRJTBC is proposing to toll the I-95/Scudder Falls Replacement Bridge as part of the I-95/Scudder Falls Bridge Improvement Project in the southbound direction only. By Resolution on December 21, 2009, the Delaware River Joint Toll Bridge Commission determined that the I-95/Scudder Falls Replacement Bridge will be tolled in order to fund the needed improvements. Tolling will be "cashless," or "all electronic cashless tolling (AECT)." With AECT, tolls will be collected electronically through the E-ZPass system or video capture and billing. A conventional toll plaza will not be built. AECT is an electronic toll collection system that allows the motorist to travel at prevailing speeds without having to stop to pay the toll. License plates of motorists passing through the "cashless" toll system who are not E-ZPass tag holders will be subject to video capture by the electronic equipment mounted in the overhead gantry. The DRJTBC will send a bill to the customer to collect the toll.

On the I-95/Scudder Falls Replacement Bridge, tolling will be in the southbound direction only; i.e. entering Pennsylvania. This one-direction toll collection is consistent with all other tolled DRJTBC bridges crossing from New Jersey to Pennsylvania. Electronic toll equipment will be mounted on an overhead gantry structure that is on or adjacent to the new bridge on the Pennsylvania side of the bridge. Cabinets for electronic equipment will be located on or below the bridge outside of natural or human resource areas or in areas planned to be disturbed as part of the improvements documented in the EA/Draft 4(f). Therefore, there will be no change to the physical footprint impact, and thus there will be no additional direct or indirect impact to natural or human resources due to the AECT facilities.

The DRJTBC currently uses the E-ZPass system to collect tolls on seven of its twenty bridges including Trenton-Morrisville, New Hope-Lambertville, Interstate 78, Easton-Phillipsburg, Portland-Columbia, Interstate 80 (Delaware Water Gap) and Milford-Montague. The remaining DRJTBC bridges, including the I-95/Scudder Falls Bridge, are toll-supported bridges. Tolls are not collected on toll-supported bridges, but their operation, maintenance, and improvements are funded by toll revenues.

The design for the toll gantry may be a monotube design, where a single pipe forms the horizontal and vertical support for the gantry (Figure 2) or a column-supported space frame (Figure 3).

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Figure 2—Example Overhead Toll Gantry, Monotube Design, Illinois Tollway



Figure 3—Example Overhead Toll Gantry (Space Frame) on I-78 in PA



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B. Pricing

The tolls that are being evaluated for the I-95/Scudder Falls Replacement Bridge are Low Toll (\$1.00) and High Toll (\$3.00) for passenger vehicles. The DRJTBC desires to have relative parity with the toll rates being charged now to use adjacent facilities, and have the Scudder Falls Replacement Bridge users contribute to the regional share of the capital program expenditures. The \$1.00 low-toll rate will provide internal parity with the DRJTBC's other toll bridges, whereas the \$3.00 high-toll rate will provide external parity with outside agency toll bridges. The truck toll for both scenarios was \$4.00 per axle for each truck.

The DRJTBC has not established the toll rates and tolling policies that will be in place for the Scudder Falls Replacement Bridge. A final decision on the toll amount will be made as part of a separate Investment Grade Traffic and Revenue Study to be initiated by the DRJTBC at a later date. The DRJTBC is committed to conducting public outreach efforts to inform motorists of the toll rates, toll policies and to provide guidance on how motorists can register for E-Z Pass or obtain additional information in advance of tolls being implemented in the southbound direction of the I-95/Scudder Falls Replacement Bridge. The northbound direction (from PA to NJ) will remain toll-free, consistent with the DRJTBC's toll policy at other DRJTBC owned toll facilities.

The pedestrian/bicycle facility itself would not be tolled. Construction and maintenance costs would be funded from DRJTBC toll revenue.

C. Payment Options

Two payment options are available to motorists: the DRJTBC E-ZPass Program and Electronic Video Capture.

1. DRJTBC E-ZPass Program

The E-ZPass system is an electronic toll collection system that offers the motorist the opportunity to pay the toll electronically. The E-ZPass system is used to collect revenue on seven of the twenty bridges operated by the DRJTBC including Trenton-Morrisville, New Hope-Lambertville, Interstate 78, Easton-Phillipsburg, Portland-Columbia, I-80/Delaware River Gap and Milford-Montague Toll Bridges. The remaining bridges are toll-supported crossings. The E-ZPass system also allows the users to reduce commuting time, save on fuel and pay their toll while traveling at prevailing highway speed where AECT is available or on E-ZPass Express Lanes (I-78 and I-80). In addition, the E-ZPass is available on the New Jersey Turnpike, Pennsylvania Turnpike and through 24 other E-ZPass agencies in 14 states. Several plans are currently offered by DRJTBC to the motorist for use of an E-ZPass depending on frequency of usage.

a) Standard Plan

The Standard Plan currently requires a minimum pre-paid amount of \$25.00 that is tied to a credit or debit card which allows the customer to have up to two transponders or tags. Customers that pre-pay \$50.00 may have up to four tags. Alternatively, customers may also sign up for direct payment to a pre-authorized automatic debit from a checking account (ACH payment). In addition to the \$25.00 minimum balance, the E-ZPass program institutes a \$1.00 administrative monthly fee. This works out to be an initial cost for the first year of \$37.00, and a yearly total of \$12.00 for every year after that, plus tolls. The \$25.00 initial deposit is drawn upon to pay tolls and is replenished as needed through the customer's credit or debit card or ACH payment.



b) Discount Plan

For the commuter and more frequent user of their river crossings, the DRJTBC currently offers a Discount Plan of 40%, if the user completes 20 trips within a 35-day period. The discount is applied on the E-ZPass account ten days after the final trip has been made. An E-ZPass customer of another agency may also participate in the DRJTBC's discount program by establishing a Companion Account. The DRJTBC offers E-ZPass QuickStart sign-up sessions at various locations throughout the year with customer service representatives to help customers complete a simple application form. Customers are required to pay \$25 by major credit card or personal check so they may drive away with an active tag and pre-paid toll credit. Vehicle registration and license number also are required. The DRJTBC issues press releases of these sessions and also posts the information on its website. The DRJTBC can offer similar sign-up sessions in the greater Trenton and Lower Makefield area prior to implementation of tolling on the project.

2. Electronic Video Capture

Toll collection for all non-E-ZPass holders passing through the AECT toll system will be by video license plate capture. License plates will be identified on video, and the DRJTBC will send out a bill to the customer to collect the toll. There are two options available under the Electronic Video Capture method: **Registered Video** and **Non-Registered Video**.

a) Registered Video

For non E-ZPass tag holders who have registered their license plate with the DRJTBC, tolls will be collected by video capture of their license plate. They will then be invoiced by mail. This will require the customer to establish a video toll account with the DRJTBC.

b) Non-Registered Video

For non E-ZPass tag holders who have not registered their license plate with the DRJTBC, tolls will be collected by video capture of their license plate. License plates not registered with the DRJTBC will require the DRJTBC to identify the customer from an outside vehicle registration database, after which they will be invoiced by mail.

c) Administrative Fees

There will be an administrative fee, additional to the toll base rate, associated with the additional efforts required to process tolls for Registered and Non-Registered Video customers. The implementation of this administrative processing fee was taken into consideration when forecasting the number of motorists who are likely to divert from the I-95/Scudder Falls Replacement Bridge to avoid the total cost of the toll plus the administrative fee. For purposes of estimating the number of motorists who are likely to divert from the I-95/Scudder Falls Replacement Bridge once the tolls and applicable administrative fees (where needed) are implemented, an assumed administrative fee of \$1.75 per trip for Registered Video customers, and \$3.50 per trip for Non-Registered Video customers was applied per trip in the southbound, or tolled, direction. These fees were developed by an operating cost estimate analysis by Jacobs Engineering Group, Inc. in their 2009 Report, *Long Term Traffic & Revenue Report*, which took into account factors such as percentages of respective trips across the bridge by E-ZPass, Registered Video, and Non-Registered Video customers; and tolling transaction and account costs. This 2009 report concluded that up to 84% of customers would be E-ZPass users. Of the 16% non-E-ZPass customers, the majority (90%) would not likely register their license plate. These administrative fees were used solely for the basis of estimating potential traffic diversion volumes. The amounts of the administrative fees cited in the examples noted above should not be construed as exact amounts that will be charged when the



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tolls and fees are implemented on the I-95/Scudder Falls Replacement Bridge, since the DRJTBC has not yet established these rates. The administrative fees are a close approximation of what can be expected when tolling is implemented.

D. Study Area/Methodology for Impact Assessments

The effects on traffic of tolling the I-95/Scudder Falls Replacement Bridge were evaluated as part of the *Jacobs' Scudder Falls Bridge Traffic Diversion Study*, including the geographic extent and magnitude of traffic diversions. The study area (Figure 4) for this impact assessment covers the area in which traffic diversions occur on roadways in the vicinity of the project. The study area extends beyond the I-95 project area municipalities of Lower Makefield Township and Ewing Township to include Hopewell Township, Lawrence Township, the City of Trenton in New Jersey and Morrisville Borough, Yardley Borough, Middletown, and Upper Makefield Township in Pennsylvania. The study area has been expanded to extend north to include Washington Crossing in Pennsylvania; east to include the intersection of U.S. Route 1 with I-95 in New Jersey; and, west to include the intersection of U.S. Route 1 with I-95 in Pennsylvania.

The study area includes four adjacent DRJTBC bridge crossings over the Delaware River. To the north, the study area includes the Washington Crossing Toll-supported Bridge. To the south, the study area includes the Calhoun Street Toll-supported Bridge, the Lower Trenton Toll-supported Bridge, and the Trenton-Morrisville/U.S. Route 1 Toll Bridge.

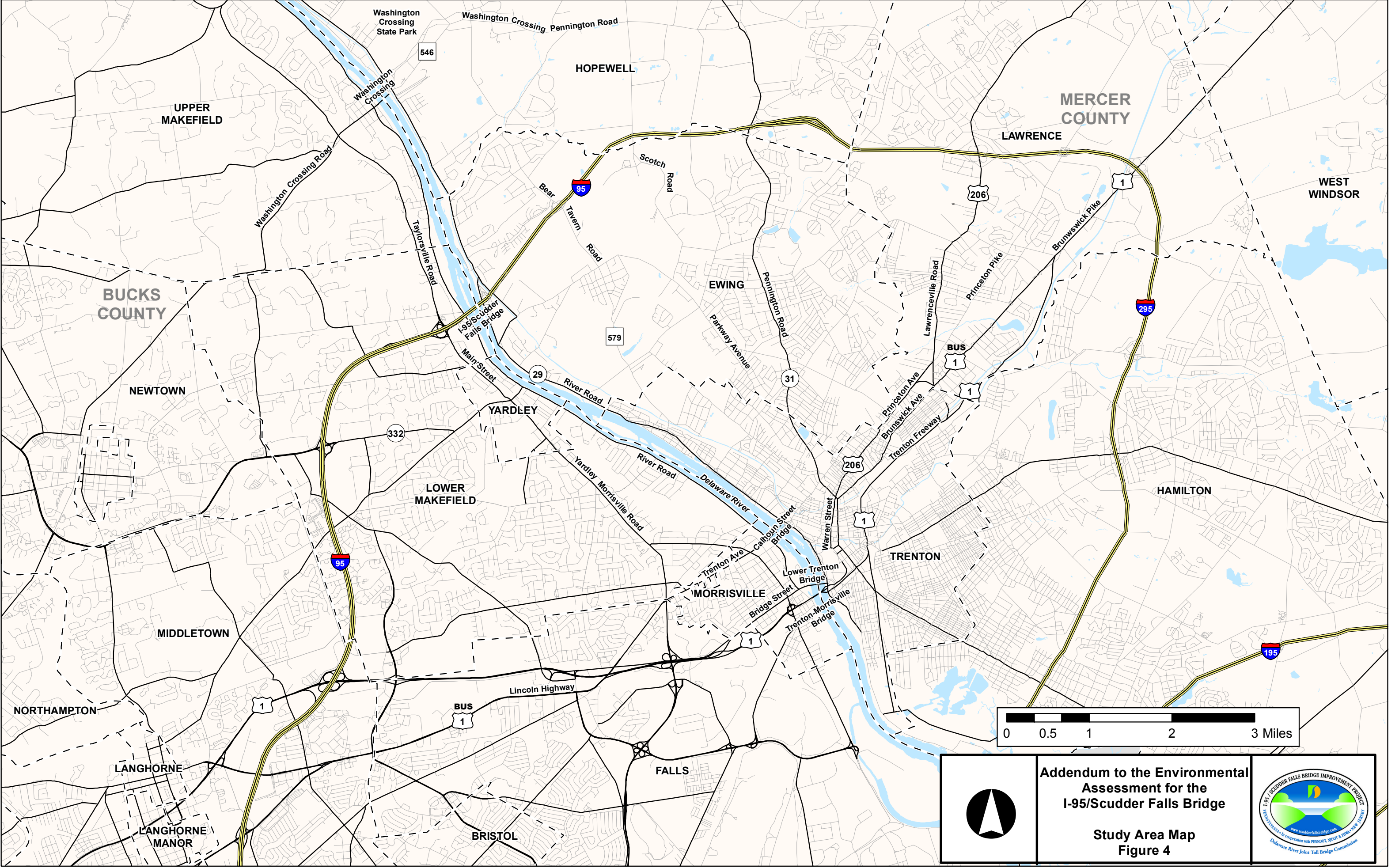
The Washington Crossing Toll-supported Bridge is located 2.8 miles north of the I-95/Scudder Falls Bridge. This bridge connects Washington Crossing Road (PA Route 532) in Upper Makefield Township, Pennsylvania and Washington Crossing Pennington Road (Mercer County Route 546) in Hopewell Township, New Jersey. The bridge has a 15-foot wide steel grid deck, a posted speed limit of 15 miles per hour (mph), and a posted weight limit of 3 tons.

The Calhoun Street Toll-supported Bridge, 4.6 miles south of the I-95/Scudder Falls Bridge, connects Trenton Avenue in Morrisville, Pennsylvania with Calhoun Street in Trenton, New Jersey. The Calhoun Street Toll-supported Bridge is the second oldest vehicular bridge in continuous operation across the Delaware River. The bridge was recently rehabilitated and has a posted speed limit of 15 mph, and a weight limit of 3 tons.

The Lower Trenton Toll-Supported Bridge, also known as the "Trenton Makes the World Takes Bridge" (or Lower "Trenton Makes" Bridge), is located 0.9 mile south of the Calhoun Street Toll-supported Bridge. The original Lower Trenton Bridge was the first bridge to span the Delaware River and portions of the substructure date back to the original construction (1804). The Lower Trenton Toll-supported Bridge connects East Bridge Street in Morrisville, Pennsylvania with Warren Street in Trenton, New Jersey. The bridge roadway consists of two lanes: one lane in each direction separated by the center truss. The curb-to-curb width of each roadway is 21 feet. The bridge is currently posted for a five-ton weight limit and a 25 mph speed limit.

The Trenton-Morrisville/U.S. Route 1 Toll Bridge is located 0.1 mile south of the Lower Trenton Toll-supported Bridge and 5.6 miles south of the I-95/Scudder Falls Bridge. The bridge carries U.S. Route 1 over the Delaware River and is six lanes wide (three lanes in each direction). The toll plaza is located on the Pennsylvania side of the bridge, along the southbound (entering PA) lanes which widen to five lanes at the toll plaza.

Estimates were made of the amount of traffic projected to divert to other bridges (toll-diverted traffic) and also of the amount of traffic projected to divert to the I-95/Scudder Falls Replacement Bridge due to improved service and safety on this bridge (attracted traffic). Traffic volumes were



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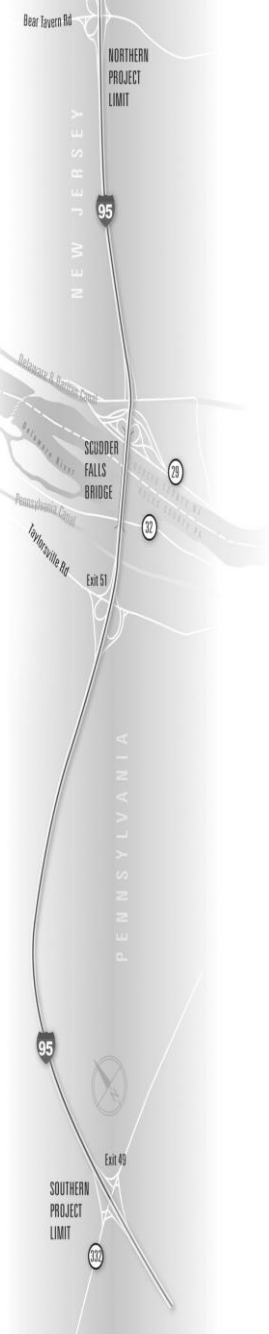
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compared to the capacity of the existing roadway network in the region surrounding the I-95/Scudder Falls Bridge in order to evaluate the ability of these roadways to handle potential increases in traffic volume due to toll-diverted traffic.

Projected traffic diversions were developed in the Jacobs' *Scudder Falls Bridge Traffic Diversion Study* for the design year, 2030, and for an interim year, 2015, for both a low toll (\$1.00 for passenger vehicles) and a high toll (\$3.00 for passenger vehicles) scenario for the I-95/Scudder Falls Replacement Bridge (Build/Toll condition). The truck toll used for both scenarios was \$4.00 per axle for each truck. The diverted volumes for these scenarios were compared to traffic volumes projected to occur on the existing Scudder Falls Bridge without improvements and without a toll (No Build/No Toll condition).

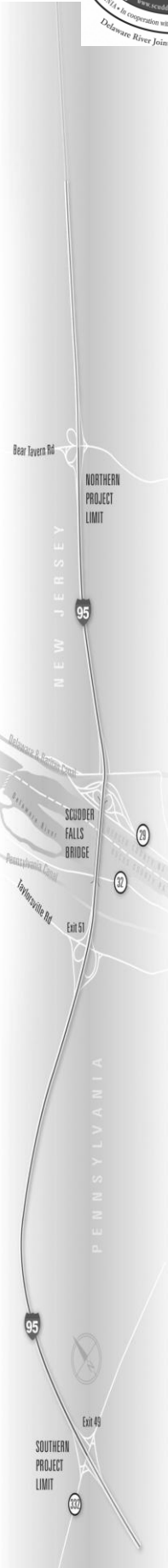




III. TOLLING ALTERNATIVES CONSIDERED

The DRJTBC considered a funding scenario where tolls would be raised on the existing toll bridges to fund the proposed I-95/Scudder Falls Bridge Improvement Project, with no tolls charged on the I-95/Scudder Falls Replacement Bridge itself. The DRJTBC determined it would be unfair for motorists at the other existing toll bridges to completely shoulder the costs of the I-95/Scudder Falls Replacement Bridge and the associated I-95 roadway and interchange improvements. The DRJTBC estimated that tolls would have to be increased approximately 72.5% for trucks and passenger cars in order to support the additional debt service and maintain acceptable coverage ratios. Consequently, implementing tolls on the I-95/Scudder Falls Replacement Bridge was considered.

A conventional toll plaza was considered as an alternative to all electronic cashless tolling (AECT) on the I-95/Scudder Falls Replacement Bridge. Under projected year 2030 peak hour traffic volumes for the Build/High Toll scenario, which generates the lowest volume of traffic on the I-95/Scudder Falls Bridge, a minimum of nine toll lanes would be required for a conventional toll plaza with a mix of cash and E-ZPass lanes. This number of toll lanes would require a toll plaza of at least 120 feet in width, which would add at least 40 feet to the width of the proposed bridge at the toll plaza itself in addition to roadway tapers entering and exiting the toll plaza. There would be insufficient space available to site this size conventional toll plaza between the proposed interchange ramps at Taylorsville Road in Pennsylvania and NJ Route 29 in New Jersey, or to safely and efficiently accommodate the entering and exiting traffic at the interchanges in combination with the lane changes and stopping and starting maneuvers of traffic entering or exiting at the toll plaza itself. A conventional toll plaza would result in substantial added cost of the bridge and additional environmental impacts to terrestrial and aquatic habitats, floodplains, wetlands and potentially to historic and archaeological resources, aesthetics and visual quality, air quality and noise. For these reasons, a conventional toll plaza on the I-95/Scudder Falls Replacement Bridge was dismissed from further consideration, and AECT was determined to be the most feasible tolling option to fund the project.





IV. ENVIRONMENTAL CONSEQUENCES

This chapter presents an assessment of the environmental consequences of the modified proposed action on traffic and transportation, land use, community and economic conditions, air quality, noise, and natural and cultural resources. **The modified proposed action includes the roadway improvements identified in Section III.D of the EA/Draft 4(f) and the preferred pedestrian/bicycle facility identified in Section III.D of the EA/Draft 4(f).** The environmental consequences of these elements of the proposed action were documented in the EA/Draft 4(f), and they remain valid. **The modified proposed action also includes the introduction of tolling on the I-95/Scudder Falls Replacement Bridge, as described in this Addendum to the Environmental Assessment.** The proposed action as documented in the EA/Draft 4(f) did not include tolling of the I-95/Scudder Falls Replacement Bridge. This Addendum to the Environmental Assessment documents the environmental consequences of tolling the I-95/Scudder Falls Replacement Bridge in conjunction with the roadway improvements planned as part of the proposed action (sometimes referred to as Build/Toll). The No Build Alternative is described in the EA/Draft 4(f). Neither the planned roadway improvements nor tolling would be implemented under the No Build Alternative (sometimes referred to as No Build/No Toll).

As described in Chapter II, two tolling scenarios have been evaluated, the low toll scenario (toll of \$1.00 for passenger vehicles) and the high toll scenario (\$3.00 toll for passenger vehicles). The truck toll for both scenarios was \$4.00 per axle for each truck. These two tolling scenarios are sometimes referred to as "Build/Low Toll" and "Build/High Toll." Impacts associated with projected future traffic diversions and associated air quality and noise conditions are assessed for the future year 2030 along with all the major categories of resources/impacts that were evaluated in the Environmental Assessment.

A. Traffic

A Traffic Diversion Study, or TDS, (*Scudder Falls Bridge Traffic Diversion Study*, dated May 11, 2011, Jacobs Engineering Group, Inc.) was prepared for the Delaware River Joint Toll Bridge Commission to identify projected traffic diversion based on the introduction of tolls on the I-95/Scudder Falls Replacement Bridge. The TDS and this EA Addendum compare the Build/Toll scenarios to the No Build/No Toll scenario because this comparison represents the change in conditions that the motorist will experience when the project is constructed; i.e. a comparison of future conditions with and without the proposed action. Information is also presented for a Build/No Toll scenario to allow comparison of traffic volumes for this scenario to both the Build/Toll Scenarios and the No Build/No Toll scenario. However, as stated in Chapter III, a No Toll scenario is not financially equitable or feasible. The DRJTBC has not established the final toll rates at this time, so two potential toll fares (Low and High) have been evaluated. The DRJTBC has conducted an analysis of the traffic diversions anticipated as a result of the tolling of the I-95/Scudder Falls Replacement Bridge. The DRJTBC agrees to conduct pre-construction and post-construction traffic study and analysis as outlined in an Interagency Agreement currently being negotiated and to be entered into between and among the DRJTBC, PennDOT and NJDOT. The DRJTBC agrees to take reasonable measures to mitigate for traffic diversion impacts on Pennsylvania and New Jersey state roads in the event the traffic study and analysis identifies traffic issues, not identified in this Addendum, which are attributed to the tolling of the I-95/Scudder Falls Replacement Bridge. Details regarding those mitigation commitments will be found in the Interagency Agreement.

1. Traffic Diversion Analysis

The TDS accounts for two potential traffic diversions that are projected to occur with the proposed action: 1) rerouting of traffic that will be attracted to the I-95/Scudder Falls Replacement Bridge



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from other DRJTBC bridges as a result of improved roadway capacity and safety on the I-95/Scudder Falls Replacement Bridge, its adjacent interchanges, and approaching sections of I-95 (attracted trips); and, 2) rerouting of traffic away from the I-95/Scudder Falls Replacement Bridge due to the toll imposed (toll diverted trips). The TDS considered both average annual daily traffic (AADT) and peak hour (PM peak) traffic for the project design year 2030, and an interim year, 2015, which approximates the planned year of completion of the proposed action. The design year 2030, presents the long-term traffic implications of the proposed action. The evening (PM) Peak hour was used because it is the peak hour of travel in the tolled (southbound) direction. The net traffic changes in the southbound (tolled) direction on the I-95/Scudder Falls Replacement Bridge due to both attracted trips and toll diverted trips, when comparing the Build/Toll conditions to the No Build/No Toll and Build/No Toll conditions, are shown in Table 1.

Table 1—Net Traffic Changes on the I-95/Scudder Falls Replacement Bridge (southbound direction)

| Build Scenario | Daily | Peak Hour |
|----------------|-------|-----------|
| 2015 No Toll | 12% | 12% |
| 2015 Low Toll | -7% | 1% |
| 2015 High Toll | -19% | -6% |
| 2030 No Toll | 11% | 11% |
| 2030 Low Toll | -6% | 5% |
| 2030 High Toll | -16% | 1% |

Notes: Net traffic changes due to both tolling (where applicable) and the improvements to the bridge, interchanges, and I-95 as compared to the No Build/No Toll condition. Some numbers may be rounded.

The results show that approximately 7% of the AADT in the tolled direction (southbound) will divert away from the I-95/Scudder Falls Bridge with the Low Toll (\$1.00) scenario, and approximately 19% of the southbound AADT will divert away from the new bridge with the High Toll (\$3.00) scenario in the year 2015 as compared to the No Build/No Toll condition. This result indicates that the higher the toll rate, the more likely it is that traffic will divert away from the I-95/Scudder Falls Replacement Bridge. Similarly, the results for year 2030 indicate that approximately 6% of the southbound AADT will divert away from the bridge with the Low Toll scenario, and approximately 16% of the southbound AADT will divert with the High Toll scenario. These results indicate that as traffic increases from 2015 to 2030, some traffic that had been diverting away from the I-95/Scudder Falls Replacement Bridge will go back to using it as nearby river crossings become more congested.

The results for the PM peak hour indicate that the I-95/Scudder Falls Replacement Bridge will actually gain a small amount of traffic during the evening peak hour in the southbound direction for some of the scenarios analyzed. This gain results from the additional capacity provided by the improvements, the heavy congestion that is currently experienced on the adjacent river crossings, and the fact that diverting to the adjacent river crossings (Washington Crossing Toll-Supported Bridge and the Calhoun Street Toll-Supported Bridge in particular) would greatly increase motorists' trip time. During the PM peak hour there will be approximately a 1% increase in

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southbound traffic on the I-95/Scudder Falls Replacement Bridge under the Low Toll scenario in the year 2015 and about a 6% reduction in southbound traffic under the High Toll scenario in 2015, as compared to the No Build/No Toll condition. About a 5% increase in southbound PM peak hour traffic is expected on the I-95/Scudder Falls Replacement Bridge under the Low Toll scenario in the year 2030, and approximately a 1% increase is estimated under the High Toll scenario for that same year. As was the case for the daily traffic diversions, as traffic increases from 2015 to 2030, peak hour drivers who once diverted from the I-95/Scudder Falls Replacement Bridge are more likely to return to the bridge because it will provide increased travel time savings over nearby river crossings.

The TDS indicates that, under scenarios where traffic **decreases** on the I-95/Scudder Falls Replacement Bridge, the majority (56%) of diverted traffic will divert **to** the Trenton-Morrisville Toll Bridge. Under scenarios where traffic **increases** on the I-95/Scudder Falls Replacement Bridge, the majority (56%) of diverted traffic diverts **from** the Trenton-Morrisville Toll Bridge.

During both daily and peak hour time periods, in both years 2015 and 2030, traffic volumes on the I-95/Scudder Falls Replacement Bridge (Build/No Toll condition) would be between 11 and 12 percent higher than the No Build/No Toll condition. This indicates that the trip attraction to the improved bridge is greater with the proposed improvements than without the proposed improvements. It further indicates that trip attractions to the bridge would be greater if the bridge were not tolled.

a) AADT: High Toll and Low Toll

Whereas the preceding analysis discussed traffic changes in only one direction, the tolled (southbound) direction, the following analysis discusses forecasted changes in two-way traffic.

The net changes in traffic volumes when comparing the Build/Low Toll and Build/High Toll scenarios to the No Build/No Toll scenario are illustrated on Figure 5 as a percent change in year 2030 two-way daily traffic volumes (AADT). Each of the five DRJTBC bridges from Washington Crossing to Trenton-Morrisville, including the I-95/Scudder Falls Replacement Bridge, will be affected to some degree by tolling and the proposed roadway improvements, although the magnitude of these effects is small. When comparing the 2030 Build/High Toll condition to the 2030 No Build/No Toll condition, "toll-diverted trips" will slightly outweigh the "attracted trips," therefore AADT on the I-95/Scudder Falls Replacement Bridge is projected to drop by approximately 3%, as a small amount of traffic will divert to other DRJTBC bridges. The Washington Crossing Toll-supported Bridge and the Calhoun Street Toll-supported Bridge are the two closest bridges to the I-95/Scudder Falls Bridge. Both of these bridges provide one reduced-width lane in each direction. Two-way average annual daily traffic (AADT) on the Washington Crossing Toll-supported Bridge is estimated to increase by approximately 5% in the year 2030, while AADT on the Calhoun Street Toll-supported Bridge is estimated to increase by approximately 1%. It is projected that most of the diverted traffic from the I-95/Scudder Falls Replacement Bridge will divert to the Trenton-Morrisville (U.S. Route 1) Toll Bridge, yet this toll bridge will experience an increase in traffic of less than 2%. AADT on the Lower Trenton Toll-supported Bridge will increase by less than 1%.

Under the low toll scenario (Build/Low Toll), the "attracted trips" will outweigh the "toll diverted trips." A net increase in traffic is projected for the I-95/Scudder Falls Replacement Bridge, while a net decrease in traffic is projected for the other nearby DRJTBC bridges. These changes are projected to be small for all five bridge crossings, ranging from about a 2% increase on the I-95/Scudder Falls Replacement Bridge, to roughly a 4% reduction in traffic volume on the Washington Crossing Toll-supported Bridge.



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Year 2030 forecasted daily traffic volumes for the five study area river crossings are shown in Table 2 for the No Build/No Toll scenario, the two Build/Toll scenarios, and a Build/No Toll scenario. Although the Build/No Toll scenario is not a financially feasible or equitable option, a comparison of the Build scenarios with and without tolling indicates that traffic volumes on an improved I-95/Scudder Falls Replacement Bridge would be approximately 8% to 13% higher if the bridge were not tolled. Traffic volumes on the other four DRJTBC bridges would be lower by as little as a fraction of one percent on the Lower Trenton Toll-supported Bridge to as much as 27% on the Washington Crossing Toll-supported Bridge, if the I-95/Scudder Falls Replacement Bridge were not tolled.

Table 2—Average Annual Daily Traffic Volumes, DRJTBC Bridge Crossings

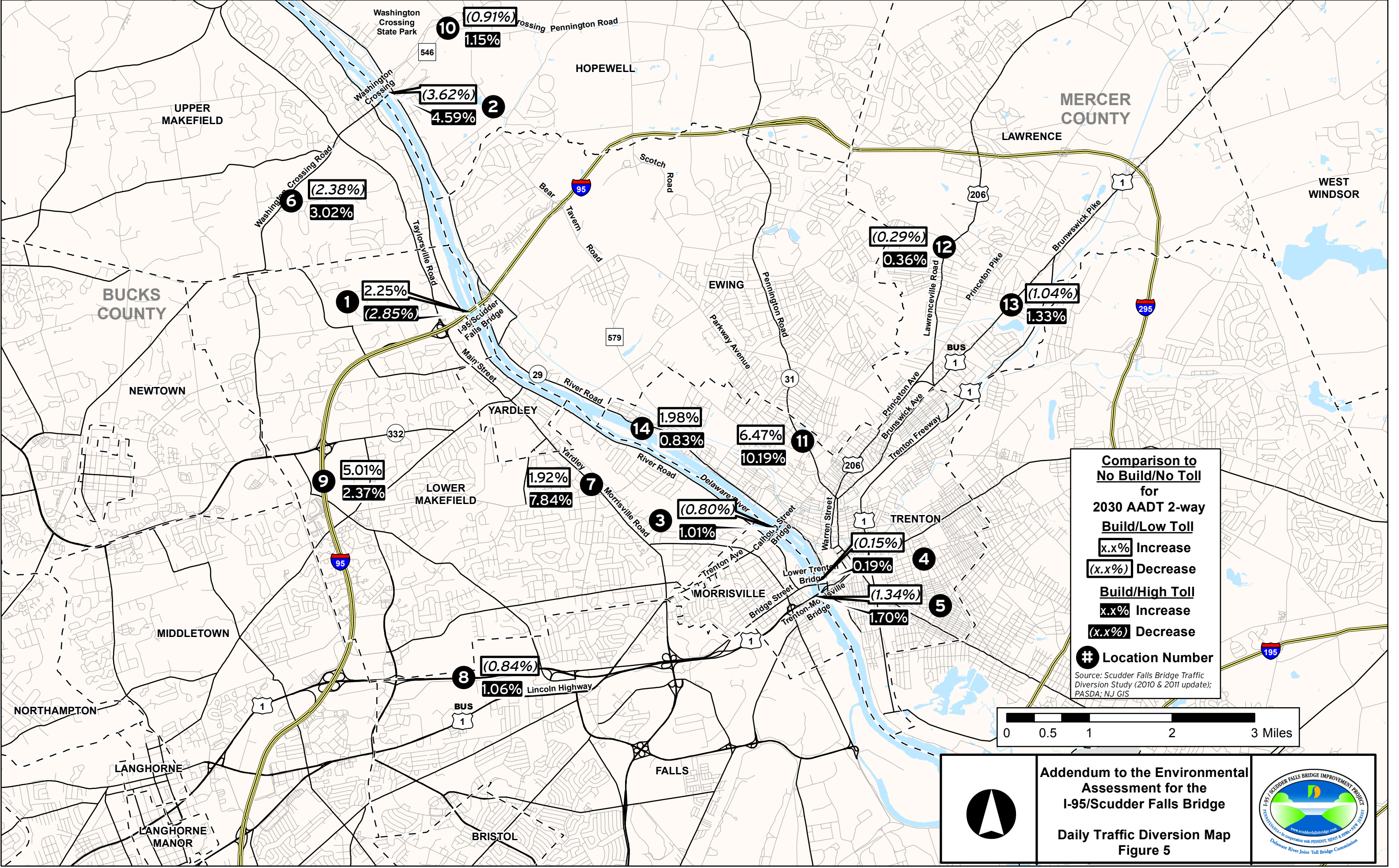
| Location No. (refer to Fig. 5) | Bridge Crossing | 2 - Way AADT | | | |
|--------------------------------|--|-----------------------|---------------------|----------------------|--------------------|
| | | 2030 No Build/No Toll | 2030 Build/Low Toll | 2030 Build/High Toll | 2030 Build/No Toll |
| 2 | Washington Crossing Toll-supported Bridge | 8,426 | 8,121 | 8,813 | 6,921 |
| 1 | I-95/Scudder Falls Replacement Toll Bridge | 70,800 | 72,400 | 68,800 | 78,700 |
| 3 | Calhoun Street Toll-supported Bridge | 22,681 | 22,501 | 22,910 | 21,790 |
| 4 | Lower Trenton Toll-supported Bridge | 21,915 | 21,882 | 21,956 | 21,752 |
| 5 | Trenton-Morrisville (U.S. Route 1) Toll Bridge | 66,111 | 65,225 | 67,235 | 61,735 |

Note: Traffic information for the entire study area is contained in Appendix A. Some numbers may be rounded. Total traffic volumes among the scenarios may differ because some traffic may leave the study area roadway network or chose not to make a trip.

In addition to the Delaware River crossings, other key roadways in the study area will experience changes in traffic volume due to tolling of the I-95/Scudder Falls Replacement Bridge and the proposed roadway improvements. These changes are small, ranging from less than 1% to roughly 10% (see Figure 5) and will result in minimal traffic impacts, either positive or negative, since the magnitude of the changes will be small (see Section 2.d).

The same AADT trends that are forecasted for the design year 2030 conditions are forecasted for the interim year 2015 conditions.

Table 3 compares the average annual daily traffic (AADT) volumes under the future 2030 Build/High Toll and Build/Low Toll conditions with base year 2003, 2030 No Build/No Toll, and 2030 Build/No Toll conditions on I-95 in the project area. Under the 2030 Build/Low Toll condition, AADT is estimated to be of similar magnitude to the 2030 No Build/No Toll AADT, generally being about 2% to 5% higher than the No Build/No Toll AADT. Under the 2030 Build/High Toll condition, AADT along I-95 in the project area is estimated to be between 1% and 3% lower on the northerly segments of I-95 within the project area, as compare to the No Build/No Toll AADT. However, AADT is estimated to be up to approximately 2% higher on the southern segments of I-95. The overall increase in AADT on this segment reflects a decrease in southbound traffic due to those avoiding the toll and an increase in northbound traffic due to those avoiding the tolls but returning to the corridor with destinations along PA Route 332.



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Table 3—I-95 Mainline Traffic Volumes: 2003 and 2030 Average Annual Daily Traffic

| I-95 Mainline | Limits | Average Annual Daily Traffic (vehicles per day) | | | | |
|----------------------------|---|--|-----------------------|---------------------|----------------------|--------------------|
| | | Base 2003 | 2030 No Build/No Toll | 2030 Build/Low Toll | 2030 Build/High Toll | 2030 Build/No Toll |
| I-95 | US 1 (Exit 46) to PA 332 (Exit 49) | 63,300 | 71,700 | 75,300 | 73,380 | 78,500 |
| I-95 | PA 332 (Exit 49) to Taylorsville Road (Exit 51) | 53,900 | 62,400 | 65,200 | 62,680 | 69,600 |
| I-95/ Scudder Falls Bridge | Taylorsville Road (Exit 51) to NJ 29 (Exit 1) | 59,500 | 70,800 | 72,400 | 68,800 | 78,700 |
| I-95 | NJ 29 (Exit 1) to Bear Tavern Road (Exit 2) | 57,100 | 70,300 | 71,960 | 69,140 | 77,100 |
| I-95 | Bear Tavern Road (Exit 2) to Scotch Road (Exit 3) | 57,500 | 71,200 | 72,730 | 70,070 | 77,500 |

Note: Traffic information for the entire study area is contained in Appendix A. Some numbers may be rounded.

These comparisons indicate that, based on daily traffic volumes (AADT), the lower toll will tend to attract more trips to the I-95 corridor in the study area, while the higher toll will tend to divert trips from the corridor. The magnitude of these changes is small and the overall effect on travel would be minor under both low toll and high toll scenarios.

Although the Build/No Toll scenario is not a financially feasible or equitable option, a comparison of the Build scenarios with and without tolling indicates that daily traffic volumes on I-95 in the project corridor would be approximately 4% to 14% higher if the bridge were not tolled.

b) PM Peak Hour: High Toll and Low Toll

During peak hours, one-directional traffic volumes are of interest because traffic operations parameters, such as level of service and volume-to-capacity (v/c) ratio (see Section IV.A.2), are generally based upon one direction of traffic flow. In the case of the I-95/Scudder Falls Replacement Bridge and proposed tolling, the southbound direction is the direction of interest because the southbound direction (entering Pennsylvania) would be the tolled direction. Peak hour traffic volumes in the southbound direction occur during the evening peak hour (PM peak hour). Traffic volumes on the I-95/Scudder Falls Replacement Bridge and on the other four bridge crossings are shown in Table 4.



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Table 4—Peak Hour Traffic Volumes, DRJTBC Bridge Crossings

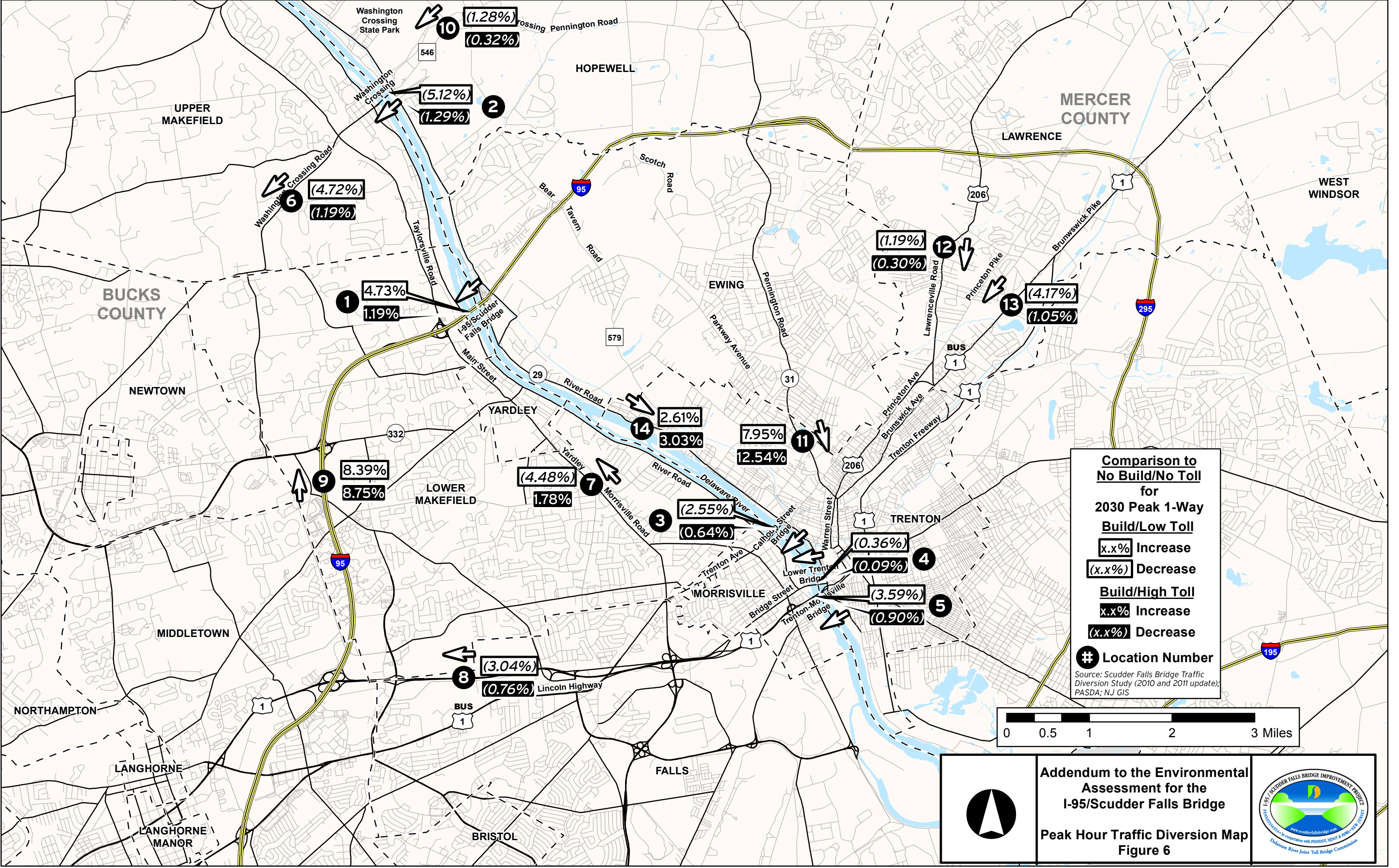
| Location No. (refer to Fig. 6) | Bridge Crossing | PM Peak Hour, 1-way (Entering PA) Traffic Volumes | | | |
|--------------------------------|--|---|---------------------|----------------------|--------------------|
| | | 2030 No Build/No Toll | 2030 Build/Low Toll | 2030 Build/High Toll | 2030 Build/No Toll |
| 2 | Washington Crossing Toll-supported Bridge | 864 | 819 | 853 | 762 |
| 1 | I-95/Scudder Falls Replacement Toll Bridge | 4,895 | 5,126 | 4,953 | 5,427 |
| 3 | Calhoun Street Toll-supported Bridge | 1,028 | 1,002 | 1,021 | 968 |
| 4 | Lower Trenton Toll-supported Bridge | 1,323 | 1,319 | 1,322 | 1,312 |
| 5 | Trenton-Morrisville (U.S. Route 1) Toll Bridge | 3,581 | 3,452 | 3,548 | 3,285 |

Note: Traffic information for the entire study area is contained in Appendix A

Total traffic volumes among the scenarios may differ because some traffic may leave the study area roadway network or chose not to make a trip.

The net changes in traffic volumes when comparing the Build/Low Toll and Build/High Toll scenarios to the No Build/No Toll scenario are illustrated in Figure 6 as a percent change in year 2030 one-way peak hour traffic volumes. Each of the five DRJTBC bridges from Washington Crossing to Trenton-Morrisville, including the I-95/Scudder Falls Bridge, will be affected to some degree by tolling and the proposed roadway improvements, although the magnitude of these effects is small. When comparing the 2030 Build/High Toll condition to the 2030 No Build/No Toll condition, "attracted trips" will slightly outweigh the "toll-diverted trips," due to the improvements on the bridge. Therefore PM peak hour traffic on the I-95/Scudder Falls Replacement Bridge is projected to increase by approximately 1%, as traffic will divert from other DRJTBC bridges, which will experience small decreases in traffic.

Under the low toll scenario (Build/Low Toll), the "attracted trips" will outweigh the "toll diverted trips" to a greater degree than under the High Toll scenario. A net increase in traffic of approximately 5% is projected for the I-95/Scudder Falls Replacement Bridge, while net decreases in traffic ranging from less than 1% to 5% are projected for the other nearby DRJTBC bridges.



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Although the Build/No Toll scenario is not a financially feasible or equitable option, a comparison of the Build scenarios with and without tolling indicates that peak hour traffic volumes on the I-95/Scudder Falls Replacement Bridge would be approximately 5% to 9% higher if the bridge were not tolled. Similarly, PM peak hour traffic volumes on the other four bridge crossings would be from approximately 1% to 12% lower if the I-95/Scudder Falls Bridge were not tolled.

A similar occurrence is anticipated under interim year, 2015, traffic conditions, for the Build/Low Toll condition. Traffic volumes on the I-95/Scudder Falls Replacement Bridge will rise slightly as compared to the No Build/No Toll condition indicating the "attracted trips" will outweigh the "toll-diverted trips." Small reductions in traffic volume are forecast for the four other DRJTBC bridges. However, under the Build/High Toll condition, traffic volumes in 2015 will be approximately 6% percent lower on the I-95/Scudder Falls Replacement Bridge than under the No Build/No Toll condition, and traffic volumes on the four other DRJTBC bridges will be greater than under the No Build/No Toll condition. The \$3.00 toll under the High Toll condition will tend to divert more traffic away from the I-95/Scudder Falls Replacement Bridge than are attracted to the bridge and its capacity and safety improvements because general roadway congestion on the other bridges is not severe enough for "attracted trips" to outweigh "toll-diverted trips" until after the year 2015 horizon.

In addition to the Delaware River crossings, other key roadways in the study area are forecasted to experience changes in traffic volumes due to tolling of the I-95/Scudder Falls Replacement Bridge and the proposed roadway improvements. Peak hour traffic volumes will generally decrease on the study area roadways. Greater reductions in traffic volume generally will occur under the Build/Low Toll scenario than under the Build/High Toll scenario (see Table 5 for two-way peak hour traffic). Changes in one-way peak hour traffic are similar, although increases and decreases relative to the No Build/No Toll condition reflect the direction of tolling on the bridge in a more pronounced manner (see Figure 6). These changes will have minimal traffic impacts, either positive or negative, since the magnitude of the changes will be small (see Section 2.d).

Table 5—Peak Hour Traffic Volumes, Selected Study Area Roadways

| Location No. (refer to Fig. 6) | Roadway | PM Peak Hour, 2- way Traffic Volumes | | | |
|-----------------------------------|---|--------------------------------------|---------------------|----------------------|--------------------|
| | | 2030 No Build/No Toll | 2030 Build/Low Toll | 2030 Build/High Toll | 2030 Build/No Toll |
| 6 | Washington Crossing Rd./Rt. 532/ s/o Wrightsville Rd. | 484 | 442 | 455 | 419 |
| 7 | Yardley –Morrisville Rd. n/o Calhoun St. | 356 | 334 | 347 | 310 |
| 8 | U.S. Rt. 1 w/of Stoneyhill Rd. | 5,151 | 4,960 | 5,020 | 4,855 |
| 9 | I-95 Northbound n/o U.S. Route 1 | 6,918 | 7,365 | 7,273 | 7,527 |
| 10 | CR546/Washington Crossing Rd./ w/o Bear Tavern Rd. | 1,236 | 1,203 | 1,213 | 1,185 |
| 11 | Pennington Rd./Rt. 31 n/o Calhoun St. | 827 | 857 | 875 | 827 |
| 12 | U.S. 206/Lawrenceville Rd./ s/o of Eggert | 1,558 | 1,539 | 1,545 | 1,528 |



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| | Crossing Rd | | | | |
|----|---|-------|-------|-------|-------|
| 13 | Brunswick Pike/U.S. 1 Southbound / s/o I-95 | 4,872 | 4,644 | 4,716 | 4,519 |
| 14 | Route 29 (Southbound) s/o Lower Ferry Road | 2,041 | 2,098 | 2,086 | 2,119 |

Note: Traffic information for the entire study area is contained in Appendix A

2. Proposed Traffic Operations

a) I-95 Mainline

The proposed improvements have been designed to meet the project purpose of relieving chronic peak period traffic congestion and improving mobility in the I-95 project area. This improvement is reflected in levels of service (LOS), shown in Table 6. Existing traffic delays and future projected increases in congestion without the proposed improvements were described in Section I.D.1 of the 2009 EA/Draft 4(f) and the levels of service are repeated here in Table 6.

The proposed action would result in operational improvements on I-95 within the project area during peak travel periods. Levels of Service within the areas of proposed improvements will be within acceptable LOS A-D range for the high toll scenario and for the low toll scenario, as shown in Table 6. The roadway segment to the west of PA Route 332, which is beyond the limits of the proposed improvements, will experience a slight degradation in LOS (from LOS D to LOS E) in the northbound direction (non-tolled), compared to the No Build/No Toll condition, due to the higher traffic forecasted with the improvements provided with the proposed action. The proposed travel lanes, auxiliary lanes, and acceleration/deceleration lanes across the I-95/Scudder Falls Bridge will improve traffic flow to LOS A to C, compared to the No Build condition traffic flow of LOS C to F.

A comparison of the two Build/Toll scenarios to the Build/No Toll scenario indicates that levels of service along I-95 in the project area between Exit 49 in Pennsylvania (PA Route 332) and Exit 2 in New Jersey (Bear Tavern Road), will be similar for all Build scenarios, with or without tolling and these levels of service are all within acceptable levels of A-D. The only appreciable difference in level of service would occur in the section of I-95 south of Exit 49. In this section, the high toll is projected to reduce traffic volumes in the southbound direction and thus improve levels of service from LOS D to LOS C in the AM peak hour and from LOS F to LOS E in the PM peak hour.

Table 6—I-95 Mainline Levels of Service: 2030 Peak Hours

| NB/ SB | Location | 2030 No Build/No Toll | | 2030 Build /Low Toll | | 2030 Build /High Toll | | 2030 Build/No Toll | |
|-----------|--|-----------------------------|------------|-------------------------|------------|--------------------------|------------|--------------------------|----------------|
| | | AM Peak | PM Peak | AM Peak | PM Peak | AM Peak | PM Peak | AM Peak | PM Peak |
| NB | Between Exit 46 (Route 1) & Exit 49 (PA Route 332) | D | D | E ¹ | D | E ¹ | D | E ¹ | D |
| SB | | D | E | D | E | C | E | D | F ¹ |
| NB | Between Exit 49 & Exit 51 (Taylorsville Road) | D | C | C | B | C | B | C | B |
| SB | | C | E | B | C | B | C | B | C |

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| | | | | | | | | | |
|----|--|---|---|---|---|---|---|---|----------------|
| NB | Between Exit 51 & Exit 1 (NJ Route 29)— I-95/Scudder Falls Bridge | F | C | C | A | C | A | C | A |
| SB | | C | F | A | C | A | C | B | C |
| NB | Between Exit 1 & Exit 2 (Bear Tavern Road) | D | B | C | B | C | B | C | B |
| SB | | B | D | B | D | B | D | B | D |
| NB | Between Exit 2 & Exit 3 (Scotch Road) | D | B | D | B | D | B | D | B |
| SB | | B | C | B | C | B | C | B | D ¹ |

| | |
|---|---|
| | = Acceptable LOS, A-D |
| | = Undesirable LOS, E, F |
| 1 | = No change to I-95 mainline geometry, but increased volume causes LOS to deteriorate. These segments of I-95 are outside the project limits. |

The proposed improvements for the mainline I-95 include three through travel lanes plus auxiliary lanes to facilitate the smooth flow of traffic onto and off of I-95 at the Taylorsville Road and NJ Route 29 Interchanges. Heading southbound, the auxiliary lane that will begin as an on-ramp from NJ Route 29 will become the off-ramp to Taylorsville Road on the west side of the bridge. The auxiliary lane length is designed to be approximately 3,400 feet. Traffic flow in this section will operate at an acceptable LOS C in the higher volume P.M. peak hour.

Heading northbound, there will be two northbound on-ramps from Taylorsville Road. The on-ramp (loop ramp) from eastbound Taylorsville Road will be an add lane followed by an auxiliary lane for the westbound Taylorsville Road on-ramp. This auxiliary lane will become the off-ramp to NJ Route 29 on the east side of the bridge. This will create a five-lane section northbound across the I-95/Scudder Falls Bridge. The auxiliary lane length is designed to be approximately 2,530 feet. Traffic flow in this section will operate at an acceptable LOS C in the higher volume A.M. peak hour.

The fourth lane will merge into the mainline I-95 prior to the NJ Route 29 northbound on-ramp auxiliary lane. The NJ Route 29 northbound on-ramp auxiliary lane will become the off-ramp to Bear Tavern Road. The auxiliary lane length is designed to be approximately 5,750 feet.

Levels of Service on the PA Route 332 Interchange ramps, which are adjacent to, but outside of the limits of work under the proposed action, will operate at LOS D to E in the design year, with or without the proposed improvements and under both the high toll and low toll scenarios.

At the Bear Tavern Road Interchange, all ramps will operate at LOS B to D under the proposed action with either high toll or low toll scenarios. LOS on these ramps under the No Build Alternative would also be in the LOS B to D range.



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b) Taylorsville Road Interchange

Year 2030 Levels of Service on the proposed ramps at the Taylorsville Road Interchange will all operate at LOS B to C under the proposed action with either the high toll or low toll scenarios. These LOS reflect the capacity and safety improvements of the proposed action and compare to LOS B to F under the No Build/No Toll condition.

The proposed action will add two signalized intersections, for a total of three signalized intersections along Taylorsville Road. This includes the two on/off ramp T-intersections and the four-leg Woodside Road intersection. All three intersections will operate at acceptable LOS C or better during both the A.M. and P.M. peak hours under the proposed action. The existing traffic signal at the intersection of Woodside Road and Taylorsville Road currently operates at LOS B during both the AM and PM peak traffic periods.

c) NJ Route 29 Interchange

Year 2030 Levels of Service on the proposed ramps at the NJ Route 29 Interchange will all operate at LOS A under the proposed action with either the high toll or low toll scenarios. These LOS reflect the capacity and safety improvements of the proposed action and compare to LOS B to F under the No Build/No Toll condition.

The proposed action at the NJ Route 29 Interchange includes two roundabouts—one for the northbound on/off ramps and one for the southbound on/off ramps. Both of these roundabouts will operate at acceptable LOS A during both the A.M. and P.M. peak hours.

The proposed action will provide for all movements to and from I-95 northbound and southbound, and to and from NJ Route 29. The I-95 northbound on-ramp from NJ Route 175 (Upper River Road) will be eliminated in the proposed action because the design criteria for distance between two successive on-ramps would not be met. The traffic from this on-ramp will be redistributed to the I-95 northbound on-ramp from NJ Route 29. The NJ Route 29 Interchange will operate at acceptable LOS D or better during both the A.M. and P.M. peak hours.

The NJ Route 175 (Upper River Road) northbound I-95 ramp is adjacent to the access for the New Jersey State Police facility. This facility operates the State's emergency and Homeland Security operations from the new Emergency Operations Center. Access to I-95 for immediate response to emergency and/or Homeland Security operations is critical. Coordination with the New Jersey State Police has been performed in developing the proposed interchange design, and provisions will be made for an emergency gated access to I-95 northbound for use only under emergency response.

d) Other Study Area Roadways

The study area roadways, other than I-95 and its interchanges, were evaluated using a parameter known as volume-to capacity (v/c) ratio. The v/c ratio presents the volume (v) of traffic on a roadway compared to the capacity (c) of that roadway. It can be considered the percent to which the roadway capacity is filled by traffic. Industry guidelines suggest that v/c ratios less than 0.80 (or 80%) indicate that a roadway is not congested. Table 7 summarizes v/c ratios under the various scenarios. The analysis indicates that all the v/c ratios are below 0.80 and that the v/c ratios change by only small amounts, if at all, from one scenario to another.

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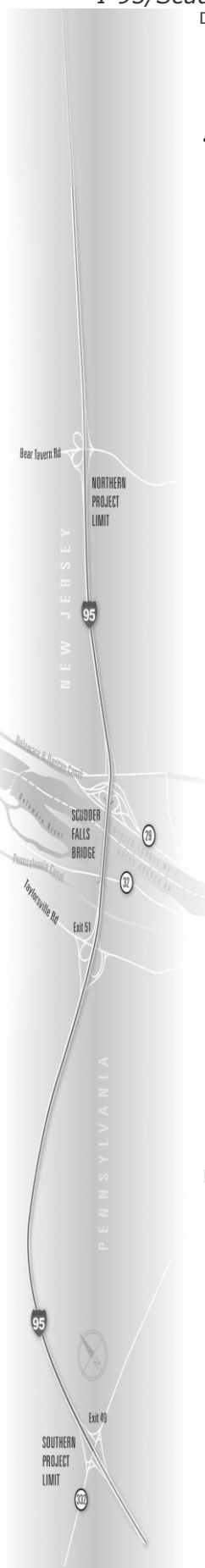
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Table 7—Peak Hour Volume-to-Capacity (v/c) Ratios, Selected Study Area Roadways

| Location No. (refer to Fig. 6) | Roadway | V/C Ratios | | | |
|-----------------------------------|---|-----------------------|---------------------|----------------------|--------------------|
| | | 2030 No Build/No Toll | 2030 Build/Low Toll | 2030 Build/High Toll | 2030 Build/No Toll |
| 2 | Washington Crossing Rd./Rt. 532/ s/o Wrightsville Rd. | 0.20 | 0.19 | 0.19 | 0.18 |
| 7 | Yardley – Morrisville Rd. n/o Calhoun St. | 0.12 | 0.11 | 0.11 | 0.09 |
| 8 | U.S. Rt. 1 w/of Stoneyhill Rd. | 0.60 | 0.59 | 0.60 | 0.56 |
| 9 | I-95 Northbound n/o U.S. Route 1 | 0.60 | 0.59 | 0.60 | 0.59 |
| 10 | CR546/Washington Crossing Rd./ w/o Bear Tavern Rd. | 0.57 | 0.56 | 0.56 | 0.55 |
| 11 | Pennington Rd./Rt. 31 n/o Calhoun St. | 0.21 | 0.20 | 0.21 | 0.18 |
| 12 | U.S. 206/Lawrenceville Rd./ s/o of Eggert Crossing Rd | 0.36 | 0.35 | 0.36 | 0.35 |
| 13 | Brunswick Pike/U.S. 1 Southbound / s/o I-95 | 0.41 | 0.39 | 0.40 | 0.37 |
| 14 | Route 29 (Southbound) s/o Lower Ferry Road | 0.21 | 0.21 | 0.21 | 0.21 |

Note: V/C information for the entire study area is contained in Appendix B





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3. Safety

The proposed action is designed to improve traffic operational conditions and safety conditions on the I-95 mainline and adjoining ramps. Provision of auxiliary lanes and adequate acceleration and deceleration lanes on the I-95/Scudder Falls Bridge will contribute to safe entry and exit from adjoining interchanges. The proposed addition of full width inside and outside shoulders on the bridge, which currently lacks adequate breakdown lanes, will allow adequate pullover areas for motorists in the event of an accident, breakdown, or other incident. The interchange operations at the Taylorsville Road and NJ Route 29 Interchanges will be safer with improved interchange and ramp geometrics that have been designed to meet applicable American Association of State Highway Transportation Officials (AASHTO), PennDOT, and NJDOT design criteria.

Tolling of the I-95/Scudder Falls Replacement Bridge will not adversely affect the safety benefits provided by the proposed roadway improvements because tolling will be all electronic, and a conventional toll plaza will not be built.

4. Alternative Transportation Modes

The project has been designed to incorporate alternative transportation modes. The project will incorporate a 14-foot inside shoulder to accommodate potential future Route 1 Bus Rapid Transit. The wider shoulders could be used as bus lanes, to allow buses to bypass congestion. The DRJTBC currently has a toll structure in place for buses using DRJTBC tolled bridges. Changes to this structure as a result of the proposed tolling of the I-95/Scudder Falls Replacement Bridge are not planned. Construction and maintenance costs for the additional width of inside shoulder needed to provide for the bus movements will be funded through general toll revenue.

The project also will include a new pedestrian/bicycle facility across the Delaware River. The pedestrian/ bicycle facility will provide an additional safe crossing of the Delaware River for pedestrian/bicycle access and another regional connection between the Delaware Canal State Park in Pennsylvania and the Delaware and Raritan Canal State Park in New Jersey. This would be the only pedestrian/bicycle crossing within the 12-mile section of the Delaware River between the New Hope-Lambertville Bridge, 8 miles to the north, and the Calhoun Street Bridge, 4 miles to the south in Trenton. This facility could be used by New Jersey commuters for access to the park and ride lot in Pennsylvania, SEPTA stations, and by Pennsylvania commuters to access employment destinations and NJ TRANSIT stations in New Jersey.

Although these measures will provide an alternative means of transportation for commuters, they will not result in traffic relief sufficient to obviate the need for the project. These improvements alone will not meet the project purpose of providing acceptable level of service (LOS D) on I-95 and the need for the proposed improvements will remain even with their implementation.

5. Temporary Construction Impacts

The construction of the project is expected to be completed in approximately 3 to 4 years. The construction will be staged to maintain the number of travel lanes currently provided during peak hours, with two lanes of traffic maintained on the I-95/Scudder Falls Bridge and in Pennsylvania and two to three lanes in each direction in New Jersey.

Tolling of the I-95/Scudder Falls Replacement Bridge will not alter the planned construction sequencing nor alter the temporary construction impacts previously identified in the EA/Draft 4(f).



B. Transit

This section of the EA Addendum presents an expanded discussion of transit options in the expanded study area to account for potential effects on transit ridership due to tolling of the I-95/Scudder Falls Replacement Bridge.

1. Existing Transit Options

Transit service, including commuter and light rail, bus transportation, and connections to local and regional airports is available within proximity of the project area. The major transit service providers include New Jersey Transit (NJ Transit) and the Southeastern Pennsylvania Transportation Authority (SEPTA), which provide both bus and rail services. The service area stations and applicable routes are noted on Figure 7, Existing Transit Map.

a) New Jersey Transit (NJ TRANSIT)

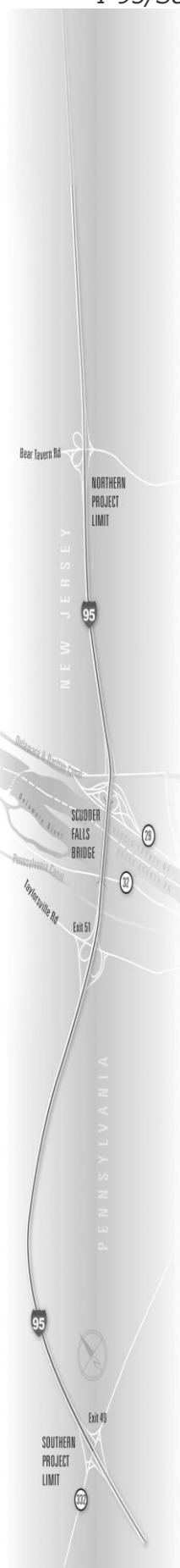
NJ TRANSIT is the nation's third largest provider of bus, rail and light rail transit, linking major points in New Jersey, New York and Philadelphia. From the Trenton and Hamilton Stations, connections can be made to AMTRAK's Northeast Corridor service into New York City and SEPTA's R7 Line to Philadelphia and Camden.

The West Trenton Station is the northern end of the SEPTA R3 (West Trenton Line). NJ TRANSIT is planning for the proposed restoration of passenger service on 27 miles of the West Trenton Line continuing north to the I-95 Station in Hopewell Township (just north of I-95), the Hopewell Station in Hopewell Borough to the Bound Brook Station on the Raritan Valley Line in northeastern New Jersey, where connections can be made to Newark and New York City's Penn Station via the Raritan Valley Line. A Draft Environmental Assessment on the West Trenton Line restoration was published in November 2007.

b) Southeastern Pennsylvania Transportation Authority (SEPTA)

SEPTA provides a variety of mass transit services within the greater Philadelphia metropolitan area as well as nearby counties located on the outskirts of the city. The transit services that are operated and managed by SEPTA include buses, subways, trolleys, high-speed rail and commuter rail. The 30th Street Station is the major rail station for Philadelphia which offers connections to AMTRAK, NJ TRANSIT rail service and SEPTA regional rail lines. Several private bus companies, including BoltBus and Megabus are close by, within one block of the station.

From the Trenton Station, the R7 Line provides service into Philadelphia and the River Line provides service to Camden, New Jersey. From the West Trenton Station in Ewing Township and the Yardley Station in Lower Makefield Township, service into Philadelphia is provided by the SEPTA R3 (West Trenton) Line.





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c) Additional Bus Services

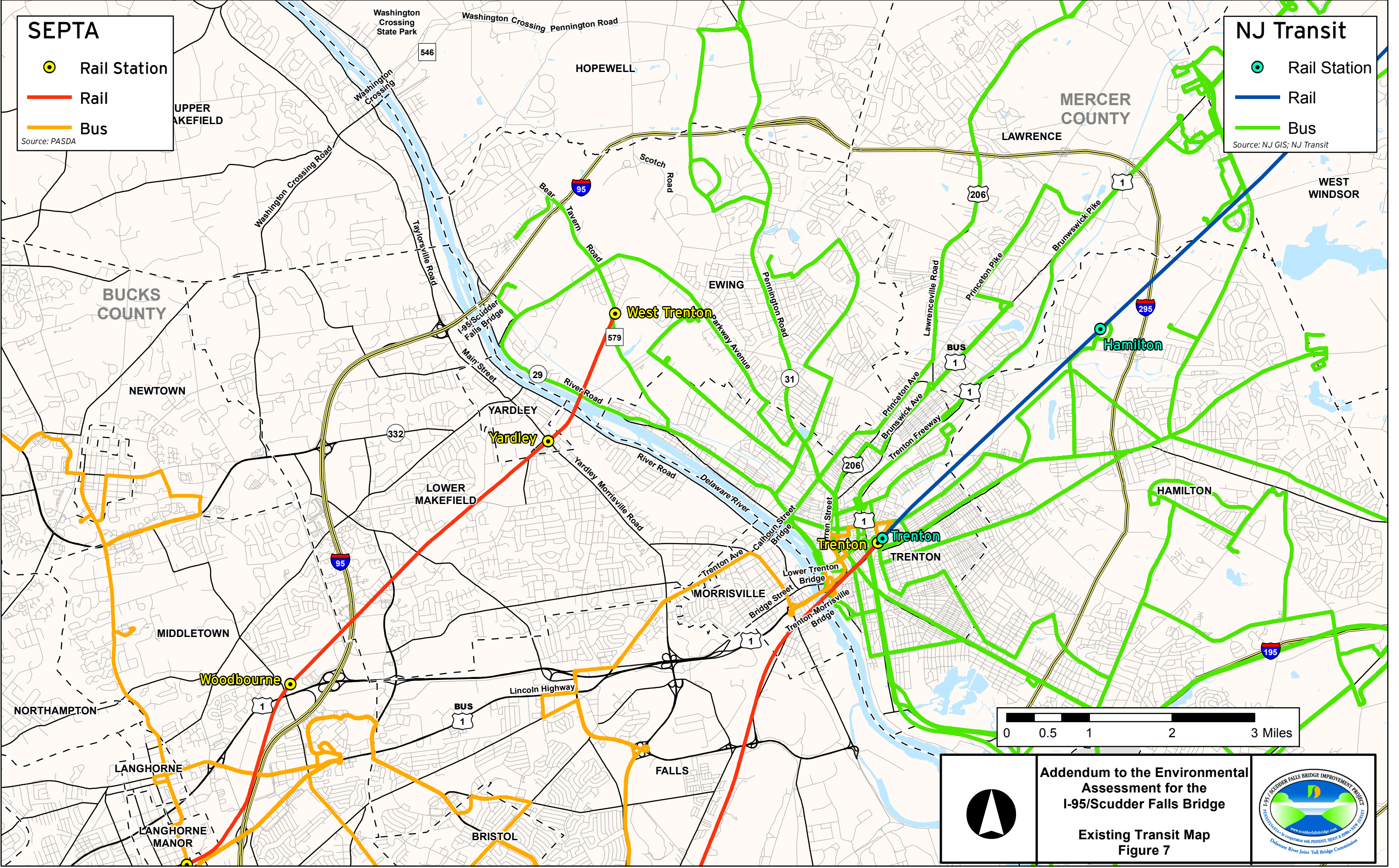
The NJ TRANSIT is studying the development of a Bus Rapid Transit system along the Route 1 Corridor. This Route 1 Bus Rapid Transit service is expected to handle 21,000 passengers a day with 50% during the peak hours. In 2006, NJ TRANSIT completed alternatives analysis studies that estimated that a bus rapid transit system in the corridor could reduce weekday auto person trips by 11,000 to 12,000 reducing vehicles on a congested road system. Buses would ride within a dedicated guideway so as not to be subject to traffic delays and congestion. This system would be able to stop at strategic locations near shopping areas and employments centers in addition to major transportation centers. One of the park-ride locations under study for a feeder bus service was at the Taylorsville Road park and ride lot off of, and north of, I-95. A New Jersey I-95 park and ride lot was also identified at Route 31. The inside shoulders of the proposed I-95/Scudder Falls Bridge Improvement Project were sized to accommodate proposed Route 1 Bus Rapid Transit Services through the project corridor.


The RUSH Bus is a fixed-route, peak-hour service provided by TMA Bucks that is designed to connect workers from existing transportation stations to nearby employers. The Rush Bus connects at the Woodbourne and Trevoise SEPTA Stations on the West Trenton Line, at the Bristol SEPTA Station on the Trenton Line as well as at the Doylestown and Warminster Stations.

2. Transit Impacts

The I-95 corridor is a major commuter route for area residents travelling to and from employment destinations located in Bucks County in Pennsylvania or Mercer County in New Jersey. Placing a toll on the I-95/Scudder Falls Replacement Bridge may result in an increase in ridership on the primary transit services as the added cost (toll) for driving to employment may cause a change in commuting patterns. However, based on the modest changes in traffic volumes forecast under the Build/Toll conditions compared to the No Build/No Toll condition, any increase in transit ridership due to tolling the I-95/Scudder Falls Replacement Bridge is expected to be minimal.







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Existing Transit Map

Figure 7



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C. Community and Economic Conditions

1. Land Uses

The proposed tolling will not involve direct land use impacts, as the overhead toll gantry will be mounted on or adjacent to the I-95/Scudder Falls Bridge. The land uses along the potential diversion routes with tolling are primarily commercial, agricultural, undeveloped (state parks), and residential near the Washington Crossing Bridge and are primarily commercial, industrialized, and more urbanized along the U.S. Route 1 corridor and other Trenton diversion routes. The Land Cover Map is shown as Figure 8.

The additional traffic associated with toll diversions will not have a substantial land use impact, although additional drive-by traffic would be expected to benefit commercial businesses, such as retail stores and gas stations. Destinations such as the Oxford Valley Mall, situated between I-95, U.S. Route 1, and Business Route 1 in Pennsylvania, can be expected to benefit from increased diverted traffic onto Route 1. The prospective diversion routes all include service-oriented businesses and retail uses, which can be expected to benefit with traffic diverting off of I-95.

2. Environmental Justice

a) Regulatory Background

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations", and the U.S. Department of Transportation Order on Environmental Justice (DOT Order 5610.2) set forth policies to ensure that federal actions do not disproportionately affect minority or low-income populations in the U.S. Research was performed to determine if the two states had developed policies and criteria for defining Environmental Justice communities in their states.

In Pennsylvania, Environmental Justice has been addressed through formation of an Office of Environmental Advocate, Environmental Justice Advisory Board, and an Environmental Justice Working Group (EJWG) under the PA DEP. Based on the 2001 Final Report of the EJWG, PA DEP has developed a definition for an Environmental Justice (EJ) Community and has developed a policy of incorporating enhanced public involvement in EJ communities during the permitting process. This definition is based: "upon a minimum of 30 percent for a minority community designation and a minimum of 20 percent for a low-income community. Thus, a minority community is any U.S. Census tract with a 30 percent or greater minority population and a low-income community is any census tract with 20 percent or more of its population at or below the poverty level, as defined by the U.S. Census Bureau. In addition, any minority or low-income group within a tract, whose interest is not protected by the majority population of the community, can upon appropriate showing be considered a minority community."

In New Jersey, Executive Order 131 (February 5, 2009) directs that state agencies that are "involved in decisions that affect environmental quality and public health shall provide appropriate opportunities for all persons, regardless of race, ethnicity, color, religion, income, or education level to participate in decision-making. Programs to promote and protect human health and the environment shall be reviewed periodically to ensure that they: (a) meet the needs of persons living in low-income communities and communities of color; and (b) address disproportionate exposure to environmental hazards." The Executive Order also established an EJ Advisory Council within New Jersey Department of Environmental Protection (NJDEP) to review issues related to Environmental Justice. A prior New Jersey Executive Order (EO Order 96, dated 2004) also established a petition process for designating EJ communities. None of the municipalities within



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the study area have been designated as an EJ Community.

b) Environmental Justice Populations in the Study Area

The federal and state definitions of environmental justice populations revolve around low-income and minority populations, and the U.S. Census data from 2000 was used to identify these EJ populations in the study area. Figure 9 shows the census tracts and block groups in the study area, and Figure 10 shows the distribution of non-whites in the study area.

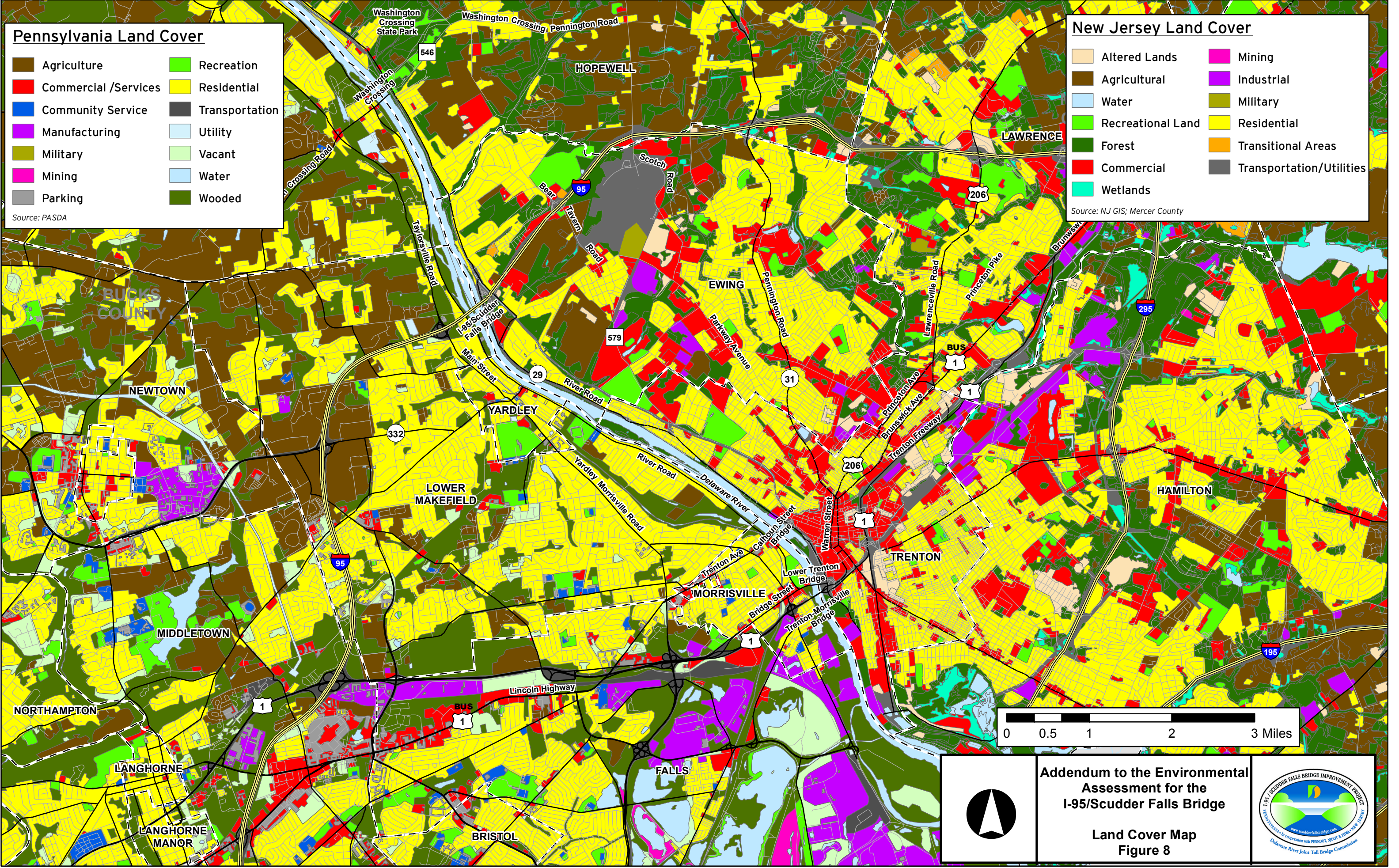
Pennsylvania. As shown on the map, the percentage of minority populations in most of the Pennsylvania portion of the study area are below the percentages for the state (14.6%) and Bucks County (8.0%) as a whole and are well below the state definition of EJ community (30% for minorities). The only minority populations above or approaching these levels are located in Morrisville Borough and Falls Township.

Of the traffic that would divert from the tolled I-95/Scudder Falls Replacement Bridge, 56% would divert to the Trenton-Morrisville U.S. Route 1 Toll Bridge. U.S. Route 1 passes into Morrisville Borough through Census Tract 1058.01, Block Group 1, which has a population of non-whites of 50%. This compares to a minority population of 23.6% for Morrisville Borough as a whole. However, the areas adjoining U.S. Route 1 in this area consist predominantly of commercial, industrial, or vacant/undeveloped lands, and residential areas are not located in close proximity to this potential diversion route. Therefore, the tolling, and associated traffic diversion, is not anticipated to affect this EJ population.

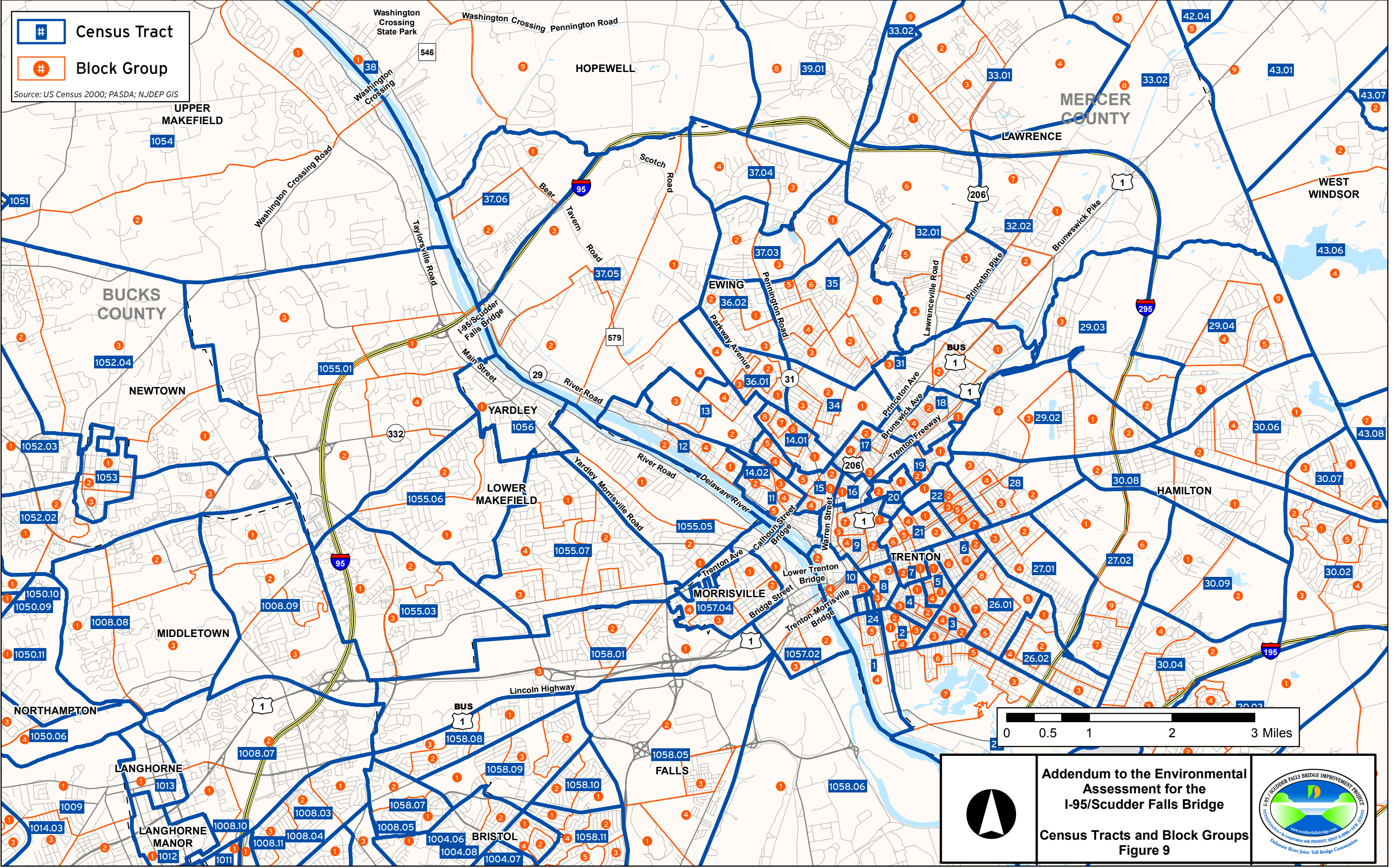
The majority of the Pennsylvania portion of the study area does not have low-income populations (defined as persons below the poverty level) above statewide or countywide levels. In the majority of the Pennsylvania portion of the study area, the percentages of persons below the poverty level are below that for the state (11%) and Bucks County (4%) as a whole. The only two census block groups that exceed these levels are in Morrisville Borough. The U.S. Route 1 diversion route passes through one of these (Census Tract 1057.02, Block Group 1). This block group has 15% of the population below the poverty level, compared to 10% that are below the poverty line in Morrisville Borough. Most of this area along U.S. Route 1 is bordered by commercial, industrial, or transportation (toll plaza, building, and adjoining roadways). Residential areas along U.S. Route 1 in this area are generally below the grade of the elevated U.S. Route 1. Traffic volume changes and associated changes in traffic noise have been determined to be low (see Sections IV.A and IV.Q), therefore this rerouting will not involve a substantial effect on this EJ population.

New Jersey. In New Jersey, the minority population statewide is 27.5%, compared to 34.6% for Mercer County, 31.6% for Ewing Township, 20.8% in Lawrence Township, and 34.4% for the City of Trenton. Figure 10 shows the distribution of minority populations in the study area, and most of the census block groups along potential diversion routes are below statewide and county percentages, except for the areas in and around the City of Trenton, including portions of Ewing Township and Lawrence Township. The statewide percentage of persons below the poverty level in New Jersey is 8.5%, compared to 8.1% in Mercer County, 5.5% in Ewing Township, 4.9% in Lawrence Township, and 21.1% in Trenton. Low-income populations are concentrated in the area in and around Trenton, including portions of Ewing Township and Lawrence Township (Figure 11).

The low-income and minority populations are concentrated within the highly developed and urban area in and around Trenton, which includes the Central Business District and government center within the state capitol. Due to the largely commercial and urbanized nature of the area, and because traffic volume changes and associated changes in traffic noise have been determined to be low (see Sections IV.A and IV.Q), the additional traffic diverting to avoid a toll is not expected to have a substantial impact on these EJ populations.



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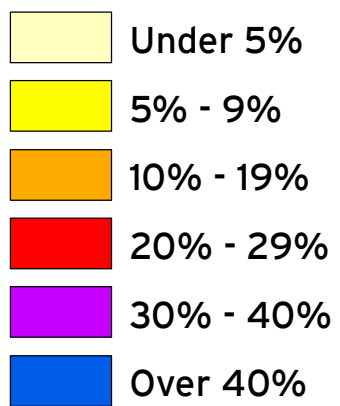


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Census Tracts and Block Groups
Figure 9



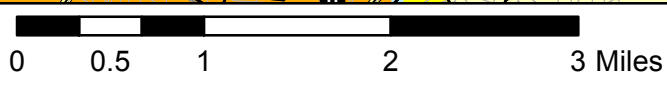
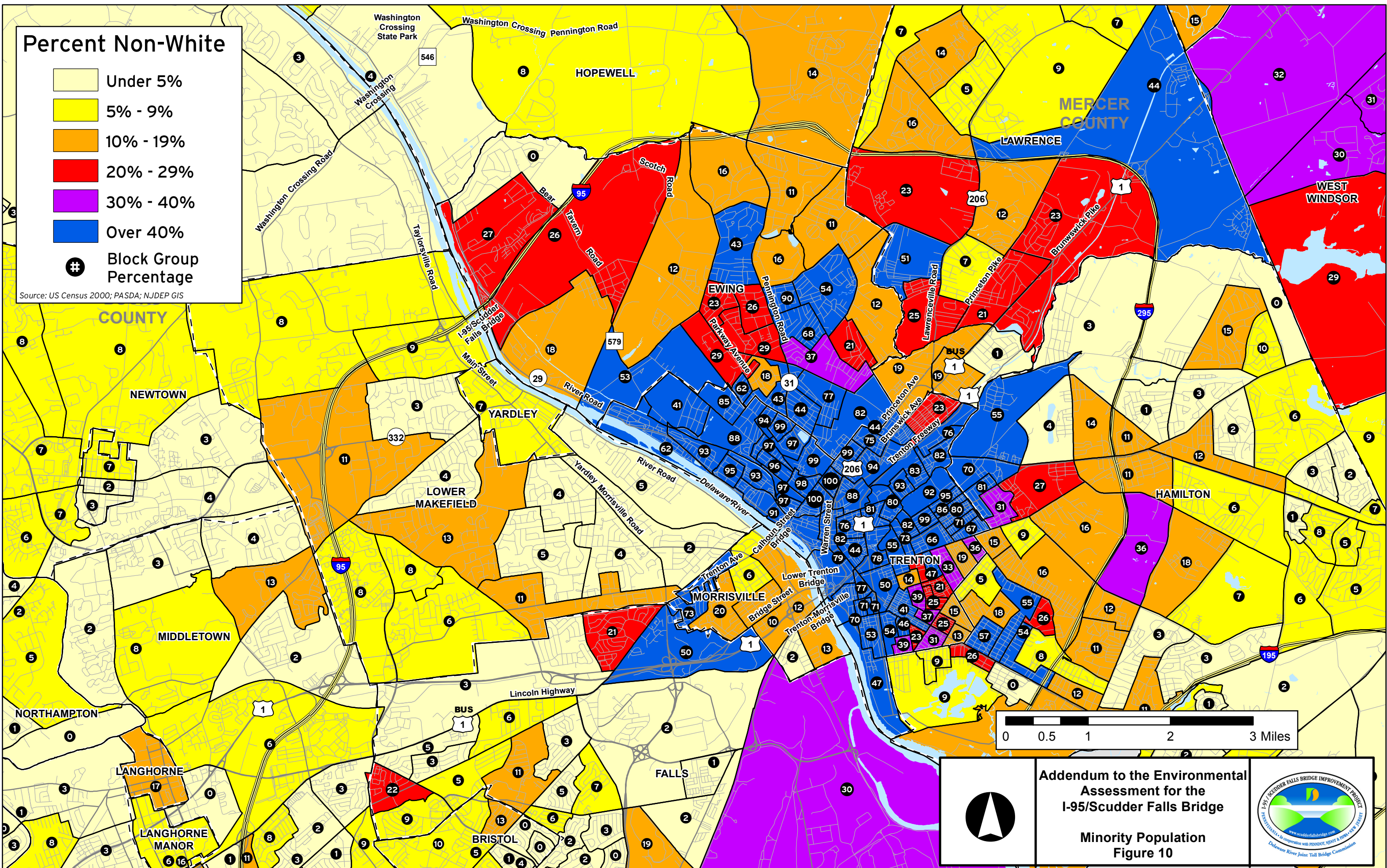
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Percent Non-White



Block Group Percentage

Source: US Census 2000; PASDA; NJDEP GIS

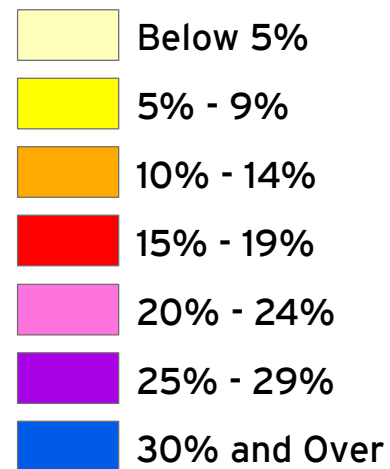


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Minority Population Figure 10

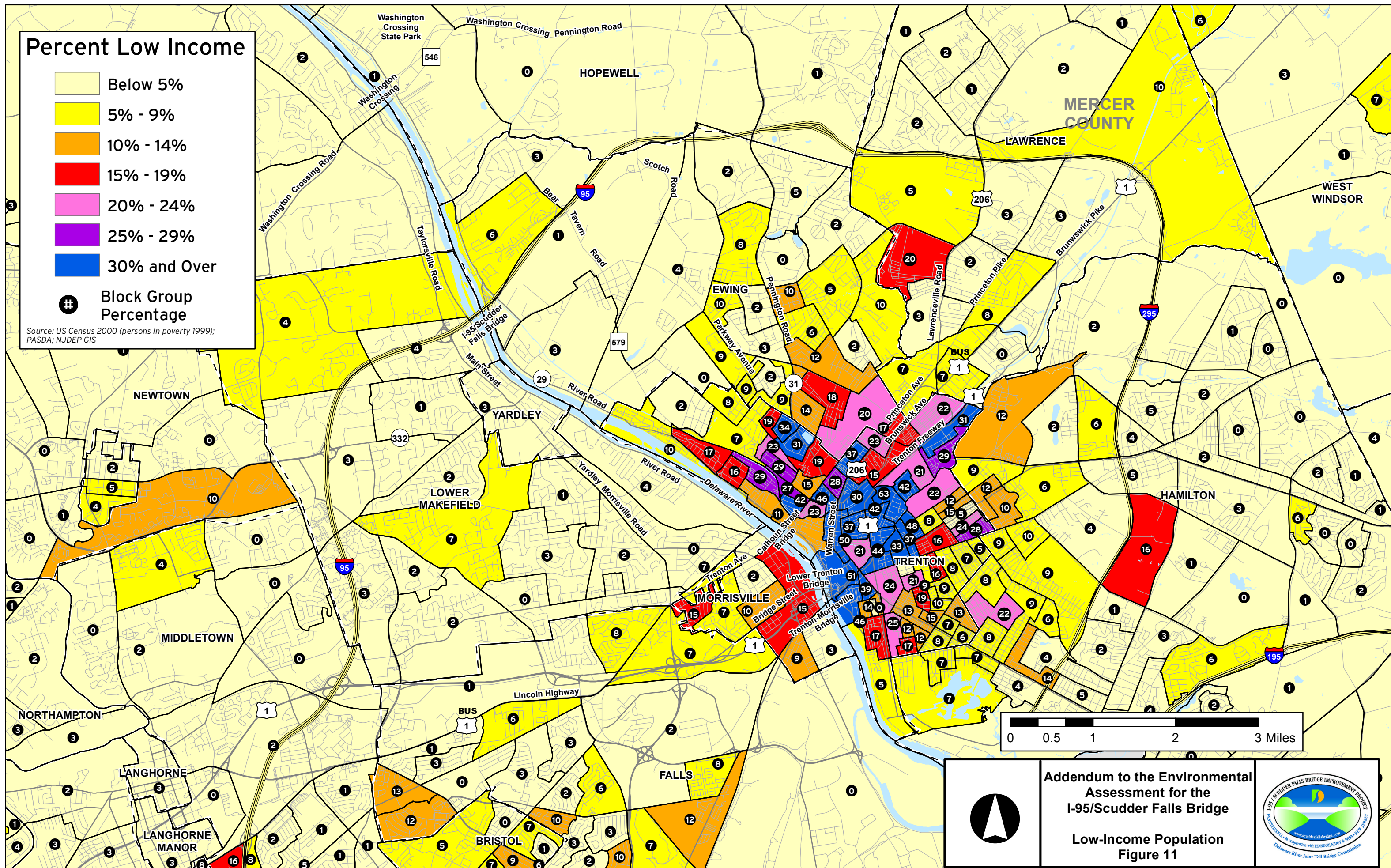
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Percent Low Income



Block Group Percentage

Source: US Census 2000 (persons in poverty 1999); PASDA; NJDEP GIS



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Low-Income Population Figure 11

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The environmental justice populations are concentrated in urban areas of Trenton, New Jersey and Morrisville, Pennsylvania. Due to the closer proximity of these areas to the three bridge crossings in Trenton, it is not as likely that tolling the I-95/Scudder Falls Replacement Bridge would have a substantial direct effect on driving travel patterns of these EJ populations, as these other bridges, two of which are not tolled, are closer than the I-95/Scudder Falls Bridge. An origin-destination study conducted of I-95/Scudder Falls Bridge customers conducted by Jacobs Engineering Group, Inc. in 2009, found that there are very few trip ends in Trenton and Morrisville, because travelers to and from these two locations are not I-95/Scudder Falls Bridge customers; instead they use the Calhoun Street Toll-supported Bridge, the Trenton-Morrisville (Route 1) Toll Bridge, or the Lower Trenton Toll-supported Bridge.

c) EJ Impact on Drivers

The traffic section analyzes the traffic diversions created by both a low toll and high toll scenario in the year 2030. The origin-destination study indicated very few trip ends in Trenton and Morrisville, which have the highest EJ populations. Information on population characteristics of drivers that would divert and whether a higher proportion of these drivers are disadvantaged populations is not available. The majority of low-income populations in the study are identified in census block in close proximity to the Calhoun Street Toll-supported Bridge, the Lower Trenton toll-supported Bridge and the Trenton-Morrisville (U.S. Route 1) Toll Bridge. Therefore, readily accessible options exist for low-income populations.

However, the financial effect of tolling on low-income drivers can be estimated by estimating daily weekday tolls as a percentage of the poverty threshold. The poverty threshold that was used to estimate low-income populations in 1999 by the U.S. Census is roughly \$8,500 (which is a weighted average for one individual). Poverty thresholds are developed based on family size and age, so this is a rough approximation. Assuming that there are 22 working days (or weekdays) in a month, a \$1 toll would represent \$265 over a calendar year or roughly 3.1% of the annual low-income for an individual (using the poverty threshold as weighted average for an individual). Under the high toll scenario, tolling could total \$792 over a calendar year, representing 9.3% of the annual income of a low-income individual (using the poverty threshold as weighted average for an individual). The tolling, particularly the \$3 high toll, would represent a substantially greater financial burden for low-income populations than for higher-income drivers. The administrative fee (see Section II.C.2) for non E-ZPass users would present an additional financial burden for low-income drivers. However, the origin-destination studies suggest that very few users of the I-95/Scudder Falls Bridge have trip ends in Trenton or Morrisville because these customers are more likely to be using the three bridges in closer to their homes: the Calhoun Street Toll-supported Bridge, the Trenton-Morrisville (Route 1) Toll Bridge, or the Lower Trenton Toll-supported Bridge. The Trenton Morrisville Toll Bridge provides cash lanes.

The other consideration is the burden that the billing and electronic toll collection would represent for a low-income individual or family. A Transportation Research Board Study (Parknay, 2004)¹ found that the electronic tolling can represent burdens for low-income populations. As many as 27% of U.S. households do not have a credit card, and only 28.5% of households with incomes less than \$10,000 have a credit card. Only 56.1% of households between \$10,000 and \$24,999 have a credit card. One in ten adults does not have a bank account to be used to write checks or replenish transponder accounts, and startup costs for minimum account balances or transponder costs can be prohibitively expensive for some households. Other issues related to hurdles for

¹ Parknay, Emily. 2004. Environmental Justice Issues Related to Transponder Ownership and Road Pricing. Transportation Research Board 2005 Annual Meeting CD-ROM.



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disadvantaged populations for transponder use and billing is access to a computer to administer an E-ZPass account or even mailing address for billing purposes for those who may have access to a vehicle but may not have a permanent residence. However, although studies have raised a concern on the potential impact of tolling on low-income drivers, a single instance of impacts necessitating financial mitigation requirements has not been found in the literature review conducted.

Estimates by Jacobs Engineering (2009) show that up to 84% of I-95/Scudder Falls Bridge customers who would use E-ZPass. The origin-destination studies of users of the I-95/Scudder Falls Bridge showed that very few users had trip ends in Trenton or Morrisville.

Based on this assessment, the tolling, in addition to the overall bridge project, would not result in a disproportionately high and adverse impact on environmental justice communities.

d) Mitigation Measures

Typical mitigation measures for environmental justice populations include outreach/education and use of other transportation options, such as transit. In this case, other transportation options include use of the Calhoun Street and Lower Trenton Bridges, neither of which is tolled. Available transit options include nearby rail stations in Trenton and West Trenton providing access to New York City (via NJ TRANSIT) and Philadelphia (SEPTA). The SEPTA system includes station access in West Trenton and Yardley providing access to Philadelphia. Transit improvements being planned in the area include NJ TRANSIT Route 1 Bus Rapid Transit with planned park and ride locations within the study area (and the incorporation of wider shoulder for a potential bus lane on I-95) and the West Trenton Line restoration of rail to northern New Jersey, with service connections to Newark and New York City.

In order to minimize the impacts on disadvantaged populations, additional outreach will be undertaken. Specifically, outreach to disadvantaged populations, particularly in Trenton and Morrisville and for drivers, to educate them on the proposed tolling, methods of payment, and alternative commuting options (bridges and transit options). The DRJTBC has an extensive public outreach program that it employs as part of its E-ZPass tolling system. Through its E-ZPass Quick Start Program, customer service representatives are made available to the public at various locations throughout the year to help and assist with the E-ZPass application process. This program will be expanded to assist the disadvantaged populations as the All Electronic Cashless Tolling (AECT) system is introduced to the public.

D. Utilities and Infrastructure

The effects on utilities and infrastructure of the proposed action are as documented in the EA/Draft 4(f). The proposed tolling of the I-95/Scudder Falls Replacement Bridge will result in no greater or lesser effects on utilities and infrastructure, since the overhead gantry will be constructed on or adjacent to the bridge itself, in areas already planned to be disturbed as part of the improvements documented in the EA/Draft 4(f). No additional right-of-way is required.

E. Parklands and Recreation Facilities

The effects on parklands and recreation facilities of the proposed action are as documented in the EA/Draft 4(f). The proposed tolling of the I-95/Scudder Falls Replacement Bridge will result in no greater or lesser effects on parklands and recreation facilities, since the overhead gantry will be



constructed on or adjacent to the bridge itself, in areas already planned to be disturbed as part of the improvements documented in the EA/Draft 4(f). No additional right-of-way is required.

F. Farmlands

The effects on farmlands of the proposed action are as documented in the EA/Draft 4(f). The proposed tolling of the I-95/Scudder Falls Replacement Bridge will result in no greater or lesser effects on farmlands, since the overhead gantry will be constructed on or adjacent to the bridge itself, in areas already planned to be disturbed as part of the improvements documented in the EA/Draft 4(f). No additional right-of-way is required.

G. Aesthetic and Visual Characteristics

The overhead gantry for the tolling on the bridge is similar to standard highway sign supports and will not have an effect on aesthetics.

H. Surface Waters

The effects on surface waters of the proposed action are as documented in the EA/Draft 4(f). The proposed tolling of the I-95/Scudder Falls Replacement Bridge will result in no greater or lesser effects on surface waters, since the overhead gantry will be constructed on or adjacent to the bridge itself, in areas already planned to be disturbed as part of the improvements documented in the EA/Draft 4(f). No additional right-of-way is required.

The DRJTBC plans on having a qualified Environmental Monitor on site to regularly inspect/monitor the water quality mitigation measures that are employed throughout construction. The Environmental Monitor will also inspect/monitor the implementation of the Erosion and Sedimentation Pollution Control Plan and the Spill Prevention and Countermeasures Plan that will be developed for the projects.

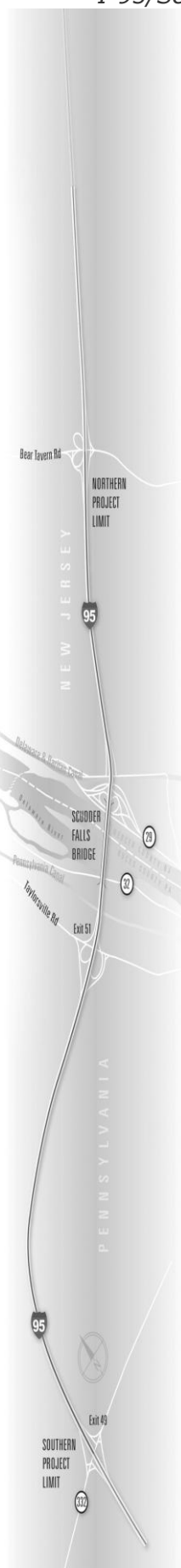
I. Groundwater

The effects on groundwater of the proposed action are as documented in the EA/Draft 4(f). The proposed tolling of the I-95/Scudder Falls Replacement Bridge will result in no greater or lesser effects on groundwater, since the overhead gantry will be constructed on or adjacent to the bridge itself, in areas already planned to be disturbed as part of the improvements documented in the EA/Draft 4(f). No additional right-of-way is required.

The DRJTBC plans on having a qualified Environmental Monitor on site to regularly inspect/monitor the water quality mitigation measures that are employed throughout construction. The Environmental Monitor will also inspect/monitor the implementation of the Erosion and Sedimentation Pollution Control Plan and the Spill Prevention and Countermeasures Plan that will be developed for the projects.

J. Geology and Soils

The effects on geology and soils of the proposed action are as documented in the EA/Draft 4(f). The proposed tolling of the I-95/Scudder Falls Replacement Bridge will result in no greater or lesser





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effects on geology and soils, since the overhead gantry will be constructed on or adjacent to the bridge itself, in areas already planned to be disturbed as part of the improvements documented in the EA/Draft 4(f). No additional right-of-way is required. An updated Pennsylvania Natural Diversity Inventory (PNDI) response is attached as Appendix C. Additional PNDI updates will be requested as required.

K. Floodplains

The effects on floodplains of the proposed action are as documented in the EA/Draft 4(f). The proposed tolling of the I-95/Scudder Falls Replacement Bridge will result in no greater or lesser effects on floodplains, since the overhead gantry will be constructed on or adjacent to the bridge itself, in areas already planned to be disturbed as part of the improvements documented in the EA/Draft 4(f). No additional right-of-way is required.

L. Wetlands

The effects on wetlands of the proposed action, including the proposed noise barriers, are as documented in the EA/Draft 4(f). The proposed tolling of the I-95/Scudder Falls Replacement Bridge will result in no greater or lesser effects on wetlands, since the overhead gantry will be constructed on or adjacent to the bridge itself, in areas already planned to be disturbed as part of the improvements documented in the EA/Draft 4(f). No additional right-of-way is required. In February 2011, NJ DEP re-issued their Letter of Interpretation – Line Verification extending it to December 12, 2015. A copy of this letter is attached as Appendix D.

M. Terrestrial and Aquatic Habitats

The effects on terrestrial and aquatic habitats of the proposed action are as documented in the EA/Draft 4(f). The proposed tolling of the I-95/Scudder Falls Replacement Bridge will result in no greater or lesser effects on terrestrial and aquatic habitats, since the overhead gantry will be constructed on or adjacent to the bridge itself, in areas already planned to be disturbed as part of the improvements documented in the EA/Draft 4(f). No additional right-of-way is required. An updated Pennsylvania Natural Diversity Inventory (PNDI) response is attached as Appendix C. Additional PNDI updates will be requested as required.

N. Threatened and Endangered Species

The effects on threatened and endangered species of the proposed action are as documented in the EA/Draft 4(f). The Biological Opinion (June 2010) issued by the National Marine Fisheries Service is attached as Appendix E. The DRJTBC, in cooperation with FHWA, PennDOT and NJDOT will comply with the reasonable and prudent measures and terms and conditions for avoidance, minimization and mitigation as outlined in the Biological Opinion. The proposed tolling of the I-95/Scudder Falls Replacement Bridge will result in no greater or lesser effects on threatened and endangered species, since the overhead gantry will be constructed on or adjacent to the bridge itself, in areas already planned to be disturbed as part of the improvements documented in the EA/Draft 4(f). No additional right-of-way is required.

It is noted that there were several inaccuracies with respect to the listing status of several species in Table IV-11 of the 2009 Environmental Assessment. Table 8 is a corrected version of that table.

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Table 8—Corrected Table IV-11 – Federal and State Listed Species (from the 2009 Environmental Assessment)

| Species (English/ Scientific name) | Listing Status* | Habitat Areas | Impact | Mitigation |
|---|--------------------|---|--|--|
| Shortnose sturgeon (<i>Acipenser brevirostrum</i>) | FE, PA-E, NJ-E | Delaware River spawning and passage | Construction of causeway and cofferdams over 4 years, with four phases | Timing restrictions (see Mitigation section) |
| Atlantic sturgeon (<i>Acipenser oxyrinchus</i>) | FC, PA-E | Delaware River passage | Construction of causeway and cofferdams over 4 years with four phases | Timing restrictions (see Mitigation section) |
| Peregrine falcon (<i>Falco peregrines</i>) | PA-E, NJ-E | Observed nesting on I-95/ Scudder Falls Bridge | Bridge demolition | Consultation with PA Game Commission on appropriate protective measures |
| Bald eagle (<i>Haliaeetus leucocephalus</i>) | PA-T, NJ-E | No nesting habitats for the bald eagle have been identified within two miles of the bridge. | No impact on nesting areas | Not required |
| Bog turtle (<i>Clemmys mulhenderii</i>) | FT, PA-E, NJ-E | PA habitat evaluations indicated four wetlands (L, N, O, and P) contained potential habitat that was only marginal and unlikely to support bog turtles, | USFWS concluded that the project will not affect the bog turtle. | Not required |
| Red-bellied turtle (<i>Pseudemys rubriventris</i>) | PA-T | Field survey indicated only the Delaware River and the Delaware Canal were determined to provide potential red-bellied turtle habitat. | Causeway construction | Consultation with the PFBC on appropriate protective measures |
| Yellow lampmussel (<i>Lampsilis cariosa</i>) | FSC, NJ-T, PA R | Delaware River survey indicated 64 in all search areas | Causeway and cofferdam construction | Mitigation plan to be developed (see Mitigation for options) |
| Tidewater mucket (<i>Leptodea ochracea</i>) | NJ-T | Delaware River survey indicated no live or spent shells | Causeway and cofferdam construction | Mitigation plan to be developed (see Mitigation for options) |
| Triangle floater (<i>Alasmidonta undulata</i>) | NJ-T | Delaware River survey identified one live individual and one spent shell | Causeway and cofferdam construction | Mitigation plan to be developed (see Mitigation for options) |

* / F=Federally, PA=Pennsylvania, NJ=New Jersey, E=Endangered, T=Threatened, C=Candidate, SC=Special Concern, R=Rare



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The DRJTBC plans on having a qualified Environmental Monitor on site to regularly inspect/monitor the water quality mitigation measures that are employed throughout construction. The Environmental Monitor will also inspect/monitor the implementation of the Erosion and Sedimentation Pollution Control Plan and the Spill Prevention and Countermeasures Plan that will be developed for the projects.

O. Cultural Resources

The December 2009 Environmental Assessment included cultural resources surveys of the Area of Potential Effects (APE) for the proposed project to determine if historic or archaeological resources listed or eligible for listing in the National Register of Historic Places (NRHP) would be affected. In accordance with Section 106 of the National Historic Preservation Act, a Programmatic Agreement (PA) was executed December 2010, and is attached as Appendix F. Subsequent to execution of the PA, the effects of tolling and the PA were reviewed by both the Pennsylvania and New Jersey State Historic Preservation Officers (SHPO). Their concurrence letters are attached as Appendix G.

All potential effects of the proposed tolling will be confined to the APE for historic structures and archaeology delineated in the previous Environmental Assessment. The proposed tolling does not have the potential to change the impacts presented in the previous report. The proposed tolling of the I-95/Scudder Falls Replacement Bridge will result in no change to the footprint of the roadway and no additional right-of-way is required, as the tolling equipment will be largely limited to electronic devices mounted on the overhead gantry (see Figures 2 and 3) and to equipment cabinets mounted on the bridge or below the bridge. The placement of the detection equipment on the bridge structure is preferable to a site located east or west of the bridge as this minimizes below ground impacts. All ground disturbance associated with the proposed electrical equipment and supply associated with the tolling equipment will be confined entirely to the existing right-of-way in areas previously disturbed by highway construction.

Tolling equipment on or adjacent to the bridge will include overhead signs on the bridge, overhead vehicle detection devices support structure (tolling gantry) at the western end of the bridge for the southbound direction of travel, and overhead equipment to read in-vehicle transponders. The tolling gantry will be located above the west bank of the Delaware River in order to allow access to control pads and cabinets from PA Route 32. The height of the overhead equipment will be 18 feet above the lane. The height of the gantry from the lane to the one-foot wide mast arm will be approximately 21 feet and three inches.

The introduction of the tolling equipment will result in minimal design changes to the bridge. However, these changes do have the potential to adversely affect adjacent historic properties, and therefore the effects of tolling were assessed. The proposed overhead gantry will be located in proximity to one of the resources identified within the APE: the Delaware Canal. The Delaware Canal is located along the west side of the Delaware River. The approximately 500-foot long portion of the canal within the APE includes a water-filled prism, towpath, and stone retaining wall along the east bank of the canal, north of the I-95 overpass. While the construction of the signage, gantry and overhead equipment will introduce additional modern features within proximity of the canal, they will not be of sufficient size and scale to detract from the setting of the resource. Therefore, the proposed tolling of the I-95/Scudder Falls Replacement Bridge does not have the potential to change the finding of No Adverse Effect to the Delaware Canal.

P. Air Quality

1. Methodology

An Air Quality screening was conducted for four diversion routes. These four diversion routes are:

- 1) Washington Crossing Toll-supported Bridge
- 2) Calhoun Street Toll-supported Bridge
- 3) Lower Trenton Toll-supported Bridge
- 4) Trenton-Morrisville Toll Bridge

This screening included a review of the traffic diversion analysis to determine if an Air Quality analysis is required for baseline conditions. The air quality analysis focused on qualitative assessment of carbon monoxide (CO), particulate matter (PM_{2.5}) and Mobile Source Air Toxics (MSAT) to determine compliance with NAAQS.

The air quality screening was performed on the traffic volumes based on the toll diversion analysis for four scenarios:

- 2030 No Build/No Toll
- 2030 Build/No Toll
- 2030 Build/Low Toll
- 2030 Build/High Toll

For each scenario, the AADT volumes from the Traffic Diversion Study were divided into the I-95/Scudder Falls mainline and four diversion routes.

The highest AADT volumes for the I-95/Scudder Falls Bridge and the Pennsylvania diversion routes are:

- 1) I-95/Scudder Falls Bridge Mainline (72,400 and 68,800 for Low and High Toll respectively)
- 2) Trenton-Morrisville Bridge (65,225 and 67,235 for Low and High Toll respectively)
- 3) Taylorsville Road (13,302 and 13,002 for Low and High Toll respectively)
- 4) Trenton Avenue (19,657 and 19,759 for Low and High Toll respectively)
- 5) U.S. Route 1 (85,791 and 86,476 for Low and High Toll respectively)

Traffic volumes for New Jersey diversion routes show that the highest AADT volumes are:

- 1) NJ Route 29 northbound (19,401 and 19,713 for Low and High Toll respectively)
- 2) NJ Route 29 southbound (49,663 and 49,666 for Low and High Toll respectively)
- 3) Brunswick Pike/U.S. Route 1 (62,961 and 64,469 for Low and High Toll respectively)

2. Project Level CO Analysis

There are several thresholds that are used to determine if projects require a detailed quantitative air quality analysis. The analysis consists of answering questions in the process scoping flow chart. Each question evaluates project-specific information to determine if the next level of screening is required, or if the project is required to perform quantitative analysis.



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The traffic diversions show that the I-95/Scudder Falls Replacement Bridge traffic volume will increase slightly (2.05%) with the Low Toll option, while the other diversion corridors would observe a slight decrease that ranges between 0.14% and 3.3% with the Low Toll option. With the High Toll option, the I-95/Scudder Falls Replacement Bridge traffic volume will decrease slightly (3.05%), while the other diversion corridors would observe a slight increase that ranges between 0.20% and 4.9% with the High Toll option.

As noted in Section IV.A.2, industry guidelines suggest that v/c ratios less than 0.80 (or 80%) indicate that a roadway is not congested. Table 7 summarized v/c ratios under the various scenarios. The analysis indicates that all the v/c ratios are below 0.80 and that the v/c ratios change by only small amounts, if at all, from one scenario to another.

Therefore, the project does not require quantitative analysis because the project is forecasted to experience minimal traffic congestion at all intersections within this project and the project does not include any roadways for which the 20-year forecasted daily volume will exceed 87,500 vehicles per day. It can therefore be concluded that the project will have no significant adverse impact on air quality as a result of CO emissions for the diversion routes.

3. PM_{2.5} Hot Spot Screening Analysis

An assessment of impacts from fine particulate matter (less than 2.5 microns in size) is performed by a progressive (Levels 1-3) screening. Each level evaluates project-specific information to determine if the next level of screening is required, or if the project qualifies or is disqualified from Hot-Spot Analysis. The project was disqualified from a Hot-Spot Analysis in Level 2 of the screening process since the maximum predicted total Build condition traffic volume for either the mainline crossing or the diversion routes is less than 87,500 AADT. In addition, the truck volume is less than 7,000 heavy trucks per day in the project vicinity. Hence it was determined that this project is not of air quality concern. Based on this determination, the project meets the U.S. Clean Air Act's requirements without further PM Hot-Spot Analysis.

4. Mobile Sources Air Toxics (MSAT) Analysis

Mobile source air toxics are compounds emitted from highway vehicles and non-road equipment which are known or suspected to cause cancer or other serious health and environmental effects. The proposed future tolling will not result in changes to I-95 or diversion corridors physical foot print areas. In addition, the traffic diversions show that the I-95/Scudder Falls Replacement Bridge traffic volume will increase slightly (2.05%) with the Low Toll option, while the other diversion corridors would observe a slight decrease that ranges between 0.14% and 3.3% with the Low Toll option. With the High Toll option, the I-95/Scudder Falls Replacement Bridge traffic volume will decrease slightly (3.05%), while the other diversion corridors would observe a slight increase that ranges between 0.20% and 4.9% with the Low Toll option.

This project will not result in any significant changes in traffic volumes, vehicle mix, or any other factor that would cause an increase in emissions impacts relative to the No Build alternative. As such, FHWA has determined that this project will generate minimal air quality impacts for U.S. Clean Air Act criteria pollutants and has not been linked with any special MSAT concerns.

Moreover, U.S. EPA regulations for vehicle engines and fuels will cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an analysis of national trends with EPA's MOBILE6.2 model forecasts a combined reduction of 72 percent in the

total annual emission rate for the priority MSAT from 1999 to 2050 while vehicle-miles of travel are projected to increase by 145 percent. This will both reduce the background level of MSAT as well as the possibility of even minor MSAT emissions from this project.

Q. Noise

1. Methodology

A noise analysis screening was conducted for four diversion routes. These four diversion routes are:

- 1) Washington Crossing Toll-supported Bridge
- 2) Calhoun Street Toll-supported Bridge
- 3) Lower Trenton Toll-supported Bridge
- 4) Trenton-Morrisville Toll Bridge

This screening included a review of the traffic toll diversion analysis to determine if a detailed noise analysis is required for the project. The noise analysis focused on a qualitative assessment of percent change between the Low Toll or High Toll condition (Build/Low Toll or Build/High Toll) and the build option with no toll (Build/No Toll), which was evaluated in the EA/Draft 4(f).

The noise screening was performed on the traffic volumes based on the toll diversion analysis for four scenarios:

- 2030 No Build/No Toll
- 2030 Build/No Toll
- 2030 Build/Low Toll
- 2030 Build/High Toll

For each scenario, the AADT volumes were divided into the I-95/Scudder Falls mainline and four diversion routes. The worst case (highest increase in percent change) was highlighted for each off-route corridor.

Based on traffic volumes for I-95/Scudder Falls Bridge mainline and the Pennsylvania diversion routes, the highest percent changes between Build/No Toll and Build/Toll are:

- 1) I-95/Scudder Falls Bridge Mainline (-8% and -12.6% for Low and High Toll respectively)
- 2) Washington Crossing (17.3% and 27.3% for Low and High Toll respectively)
- 3) Rte 532 (10.6% and 16.7% for Low and High Toll respectively)
- 4) US-13 (14.4% and 22.6% for Low and High Toll respectively)
- 5) US-1 (4.7% and 7.4% for Low and High Toll respectively)

Based on traffic volumes for the New Jersey diversion routes, the highest percent change between Build/No Toll and Build/Toll are:

- 1) CR546 (7% and 11% for Low and High Toll respectively)
- 2) Pennington Road (7% and 11% for Low and High Toll respectively)



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- 3) Trenton Fwy /US-1 (6% and 9.6% for Low and High Toll respectively)

2. Results of Noise Analysis

An increase in sound levels of 1 to 2 dBA is not perceptible by the human ear, while 3 to 5 dBA is barely perceptible. In order for humans to begin to perceive of a change in sound level, a 3 dBA increase in sound levels would be necessary. The traffic volume would need to double (100% increase) in order for a 3 dBA increase in sound levels to occur. The maximum increase in AADT volume is 27%, which is substantially less than a 100% increase. This increase in traffic volume would correspond to an increase in sound level of approximately 1 dBA, which is not perceived by the human ear. It is therefore concluded that the project will have no significant noise impact as a result of the additional traffic on the toll diversion routes. Therefore the project does not require quantitative analysis.

The proposed noise mitigation, as well as related impacts to resources such as wetlands, remains as documented in the 2009 Environmental Assessment and is summarized in the following list. Tolling would not affect the proposed noise mitigation. NSA refers to the Noise Study Areas shown in the 2009 EA. The DRJTBC is fully funding the proposed noise mitigation. No Federal or state funds will be used for the proposed noise mitigation.

- **NSA 3—Ridings Subdivision and western part of NSA 6—Quarry Road - Areas South of I-95, west of and along Quarry Road:** The combined barrier system will be approximately 3039 feet long with an average height of 11.1 feet.
- **NSA 4—Devonshire Subdivision - Areas North of I-95 and west of Quarry Road:** The proposed wall is approximately 1,535 feet long with an average height of 12.8 feet.
- **Eastern portion of NSA 6—Makefield Chase, LMT Recreational Fields, and Elm Lowne and NSA 8—Hillwood Terrace - Areas South of I-95 between Dolington Road and Taylorsville Road:** The proposed wall is approximately 5,225 feet long with an average height of 15.3 feet. It extends from Dolington Road to Taylorsville Road.
- **NSA 7—Longshore Estates - Areas North of I-95, between Dolington and Upper Hilltop Roads:** Two noise barriers are proposed on either side of the rest area. These would have a combined length of approximately 2,469 feet long, with an average height of 10.5 feet.
- **NSA 9—Woodside Road, Clearview Farm, Taylorsville Road, Delaware Canal, and PA Route 32 - Areas North of I-95 surrounding Taylorsville Road, west of the Delaware River:** This wall would be approximately 1,086 feet long, with an average height of 14 feet, and would extend 200 to 300 feet along the north side of the I-95/Scudder Falls Bridge.
- **NSA 10—Maplevalle subdivision, Delaware Canal, and PA Route 32 - Areas South of I-95 between Taylorsville Road and Delaware River.** A barrier was determined to be feasible that is approximately 800 feet long, with an average height of 10 feet.
- **NSA 12—Upper River Road and Delaware and Raritan Canal - Areas North of I-95 between NJ Route 29 and Bernard Drive:** A barrier was determined to be feasible, with a total length of approximately 1,124 feet, and an average height of 11.5 feet.
- **NSA 14—Planned Retirement Community - Areas North of I-95 and West of Bear Tavern Road:** This barrier would be approximately 1,543 feet long, with an average height of 18 feet.

During the final design phase, a detailed optimization of barrier lengths, heights, costs and locations will be conducted in conjunction with the final design engineering process to insure compatibility and the most cost-effective and efficient barrier design. This process may result in barrier heights, lengths, and locations changing from those discussed in this document.



DRJTBC is committed to offer construction of the feasible and reasonable noise abatement measures discussed above contingent upon the following conditions:

- Detailed noise analyses during the final design process
- Analysis and determination of the feasibility and reasonableness of noise abatement measures, methodology, and criteria;
- Community input regarding desires, types, heights, and locations, as well as aesthetic considerations;
- Preferences regarding compatibility with adjacent land uses, particularly as addressed by officials having jurisdiction over such land use;
- Safety and engineering aspects as related to the roadway user and the adjacent property owner

R. Hazardous Waste

The proposed tolling of the I-95/Scudder Falls Replacement Bridge will not result in work affecting hazardous waste, since the overhead gantry will be constructed on or adjacent to the bridge itself, in areas already planned to be disturbed as part of the improvements documented in the EA/Draft 4(f). Therefore, the proposed tolling will not result in additional contamination or impact hazardous waste sites.

S. Secondary Development and Cumulative Impacts

The proposed tolling of the I-95/Scudder Falls Replacement Bridge will not result in additional development or changes in development patterns associated with the traffic diversions. Therefore, the proposed tolling will not result in additional secondary development or cumulative impacts beyond those addressed in the EA.

