Finding of No Significant Impact

I-95, North of MD43 to North of MD22

INTERSTATE 95

SECTION 200

Maryland Transportation Authority

December 2010

Section 200: I-95, From North of MD 43 to North of MD 22
Baltimore and Harford Counties, Maryland

Finding of No Significant Impact

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In cooperation
with:

U.S. Environmental Protection Agency
and the U.S. Army Corps of Engineers

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Federal Highway Administration
DelMar Division

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and
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The Federal Highway Administration (FHWA) has determined that the Maryland Transportation Authority's Preferred Alternative – Express Toll Lanes Alternative – will have no significant impact on the human, natural or cultural environment. The ETL Alternative involves extending four general purpose lanes (GPLs) and two express toll lanes (ETLs) in each direction along I-95 Section 200, just north of the MD 43 Interchange to the MD 24 Interchange. From MD 24 to MD 543, three GPLs would be retained and two ETLs would be added in each direction. The ETLs would terminate at MD 543 providing four GPLs to the project limits north of MD 22.

The ETL Alternative will require 52.6 acres of right-of-way, and also result in the following impacts: 9,931 linear feet of streams, 1.19 acres of wetlands, 9.5 acres of 100-year floodplain, and 127 acres of woodland.

This Finding of No Significant Impact (FONSI) is based on the Environmental Assessment (EA) that identified and assessed the need and environmental impacts associated with the Section 200 project, as well as appropriate mitigation measures. The EA, as well as the information presented in this FONSI, provide sufficient evidence and analysis for determining that the environmental impacts of the ETL Alternative are not considered significant and an Environmental Impact Statement (EIS) is not required. Furthermore, the project will not establish a precedent for future actions involving significant effects, there are no highly uncertain effects or unique or unknown risks, there are no significant indirect or cumulative effects, and there will be no violation of environmental laws. Therefore, consistent with 40 CFR 1508.27(a), the project will not result in significant impacts. The FHWA and MDTA take full responsibility for the accuracy, scope, and content of the EA and this FONSI.

William A. Wade 1/28/2011
FEDERAL HIGHWAY ADMINISTRATION Date
Nelson Castellanos, Division Administrator, Maryland Division

Harold M. Bartlett 12/17/10
MARYLAND TRANSPORTATION AUTHORITY Date
Harold Bartlett, Acting Executive Secretary

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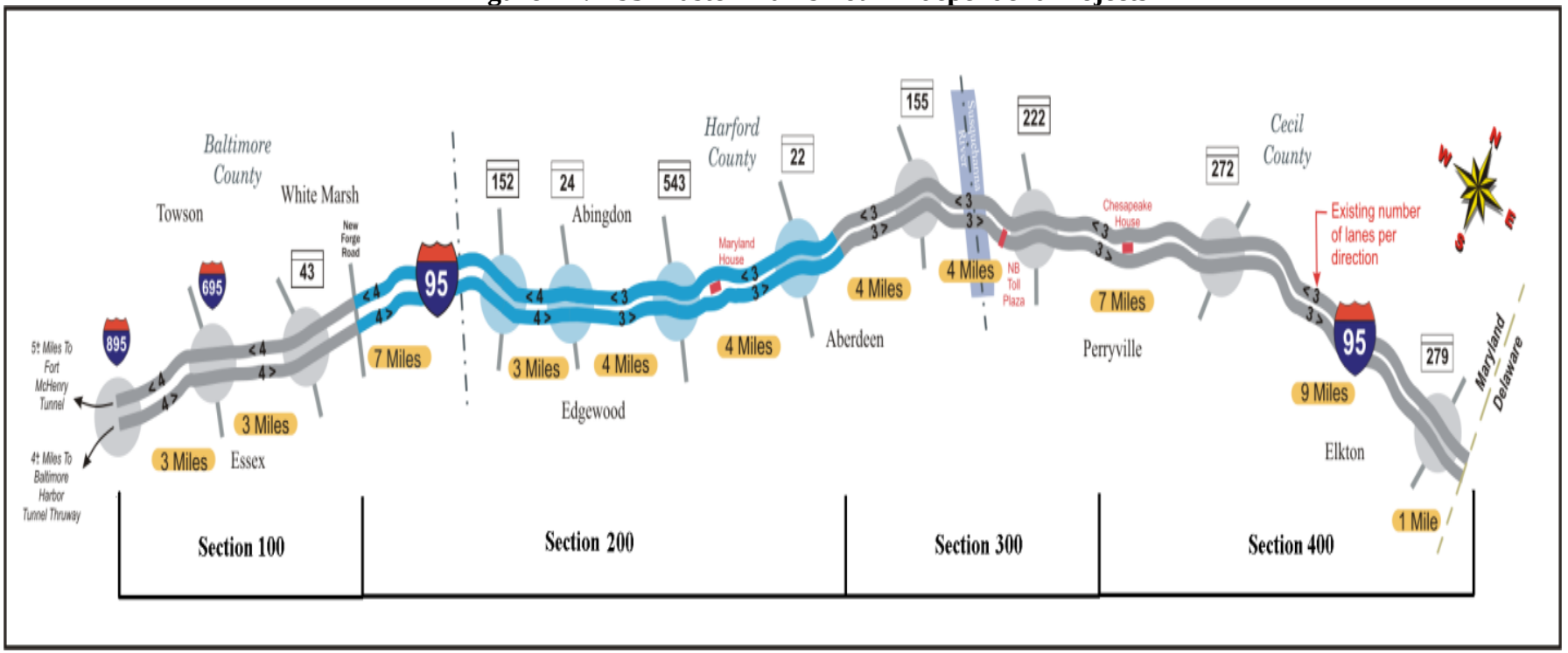
I. INTRODUCTION

The Section 200: I-95 project, from north of MD 43 to north of MD 22 (hereinafter referred to as Section 200), is one of four independent projects identified in the *I-95 Master Plan, I-895 Split (N) to the Delaware State Line* (hereinafter referred to as the I-95 Master Plan), which was adopted by the Maryland Transportation Authority (MDTA) in April 2003 (**Figure I-1**). The approximately 17 mile long Section 200 Study Area is located in Baltimore and Harford Counties, Maryland, and extends north along I-95 from north of the MD 43 interchange to north of the MD 22 interchange.

On November 30, 2007, the Federal Highway Administration (FHWA) and MDTA released the Environmental Assessment (EA) document for Section 200. On December 13, 2007, a public hearing was held to present the findings of the study documented in the EA and to receive public comment. Public comments were received and addressed by MDTA (**Appendices G and H**). On November 16, 2008, MDTA selected the Express Toll Lanes Alternative as its Preferred Alternative.

This Finding of No Significant Impact (FONSI) has been prepared in accordance with the National Environmental Policy Act (NEPA) to document and support FHWA's determination that the Preferred Alternative would not have a significant effect on the human, natural and cultural environment. Based upon this determination, an Environmental Impact Statement (EIS) is not required for this project. In addition, the FONSI describes the process that FHWA and MDTA undertook to select Express Toll Lanes Alternative as the Preferred Alternative. This FONSI is based on the detailed analysis of environmental impacts documented in the EA, as well as technical reports and studies, agency correspondence, and public input that were prepared or received during the NEPA study.

Figure I-1. I-95 Master Plan's Four Independent Projects



II. SUMMARY OF ACTIONS AND RECOMMENDATIONS

A. Project Location

This study includes improvements to I-95, from north of MD 43 to north of MD 22, in Baltimore and Harford Counties, Maryland for a length of approximately 17 miles (**Figure II-1**). The Section 200 Study Area includes four grade-separated interchanges located at MD 152, MD 24, MD 543, and MD 22. Additionally, the Maryland House Travel Plaza is located in the median of I-95 between MD 543 and MD 22 (**Figure II-2**).

B. Purpose and Need

1. Identification in Master Plan

I-95 in Maryland extends 110 miles from the Woodrow Wilson Bridge at the Virginia State line to the Delaware State line. It provides continuity for regional traffic from Florida to Maine and operates as an important backbone for commuter traffic within Maryland. As the "East Coast's Main Street," I-95 serves high volumes of regional commercial/business and recreational traffic. MDTA owns, operates, and maintains a 50-mile portion of I-95 in Maryland, beginning north of Baltimore City and extending to the Delaware State line, known as the John F. Kennedy (JFK) Memorial Highway.

MDTA, in cooperation with the FHWA and the Maryland Department of Transportation (MDOT), developed the I-95 Master Plan study approach to comprehensively identify long-range transportation needs that establish clear goals for system maintenance, preservation and enhancement, and ensure the development of environmentally sensitive and intermodal-friendly solutions for the JFK Memorial Highway.

MDTA adopted the I-95 Master Plan in April 2003. The I-95 Master Plan identified four independent projects (**Figure I-1**), including:

Section 100: I-95, I-895 (N) Split to North of MD 43
Section 200: North of MD 43 to North of MD 22
Section 300: North of MD 22 to North of MD 222
Section 400: North of MD 222 to the Delaware State Line

Throughout the I-95 Master Plan process, MDTA coordinated with local, state, and federal regulatory and resource agencies. This coordination resulted in agency concurrence on the need for four independent projects and their termini and the concepts to be carried forward for each. This was outlined within the description for Logical Termini dated July, 2001. Concurring agencies included the FHWA, U.S. Environmental Protection Agency (EPA), United States Army Corps of Engineers (USACE), National Oceanic and Atmospheric Administration – National Marine Fisheries Service (NOAA-Fisheries), Maryland Department of the Environment (MDE), and the Maryland Department of Natural Resources (DNR).

I-95 Section 200
Location/Regional Map
Baltimore and Harford Counties, Maryland

Figure II-1

Source: ESRI

Figure II-2: Study Area

In July 2003, the I-95 Express Toll Lanes (ETL) Project Planning Study (formally known as Section 100) was initiated. This was the first independent project identified in the I-95 Master Plan to be taken into the project planning phase. The study limits extended from the I-95/ I-895(N) split to just north of MD 43. During the planning phase, several alternatives were developed and analyzed in an effort to address capacity and safety concerns within the I-95 ETL project study limits. On July 20, 2005, the planning phase concluded when FHWA concurred with the FONSI for the Selected Alternative (the ETL Alternative) for the I-95 ETLs Project. Design began in 2005, and construction ongoing. The I-95 ETLs Project involves the addition of two barrier-separated lanes in each direction along I-95 that will be managed as ETLs and interchange modifications at I-895, I-695 and MD 43. Section 200 is the second independent project identified in the I-95 Master Plan to be initiated. The southern limit of the Section 200 project will connect to the northern limit of the I-95 ETLs Project.

2. Purpose of the Project

The purpose of the proposed action is to address capacity and safety needs on Section 200 and thereby improve access, mobility, and safety for local, regional, and inter-regional traffic, including passenger, freight, and transit vehicles.

3. Need for the Project

The proposed action is intended to address the following capacity and safety needs on Section 200:

a. Capacity

The I-95 ETLs Project includes four General Purpose Lanes (GPLs) and two ETLs in each direction to north of MD 43. The roadway transitions back to four GPLs north of MD 43. The existing typical section along I-95 through the transition area between the I-95 ETLs Project and Section 200 contains four-lanes in each direction up to the MD 24 interchange. The I-95 mainline loses one travel lane at the MD 24 interchange and continues as three GPLs from MD 24 through the remainder of the Study Area. Currently the southbound lanes between MD 43 and MD 24 operate at a Level of Service (LOS) D to E during the AM peak hours and the northbound lanes operate at a LOS E during PM peak hours. Traffic operates today at slightly below free flow operations except during the Friday and weekend peak periods on the north end of the project which operates at capacity. Future growth by the year 2030 will mean that the number of hours for congestion will grow from less than 10 to over 30 or greater than a 300% increase for the entire week. Also, congestion would increase the level of diversion to alternative routes, such as the community-oriented arterials US 40, US 1, and MD 7. By 2030, weekend peak hours for the Section 200 Study Area are projected to operate at a LOS F.

Table II-1 shows the expected increases in average daily traffic (ADT) from 1990 to 2030 along I-95 within the Section 200 Study Area.

Table II-1. Average Daily Traffic

Average Daily Traffic (Prior to BRAC Allocation)												
	1990 Total	**1990 Autos**	**1990 Trucks**	**2000**	**2000 Autos**	**2000 Trucks**	**2005**	**2005 Autos**	**2005 Trucks**	**2030 Total**	**2030 Autos**	**2030 Trucks**
MD 43 to MD 152	**120,000**	104,500	15,500	**160,000**	139,000	21,000	**165,000**	143,500	21,500	**230,000**	200,000	30,000
MD 152 to MD 24	**N/A**	N/A	N/A	**145,000**	126,000	19,000	**151,000**	131,500	19,500	**215,000**	187,000	28,000
MD 24 to MD 543	**72,000**	61,500	10,500	**114,000**	97,000	17,000	**120,000**	102,000	18,000	**180,000**	153,000	27,000
MD 543 to MD 22	**N/A**	N/A	N/A	**96,000**	81,500	14,500	**101,000**	86,000	15,000	**148,000**	126,000	22,000
MD 22 to Maxa Road	**62,000**	53,000	9,000	**83,000**	70,500	12,500	**89,000**	75,500	13,500	**131,000**	111,000	20,000

The forecasted growth rates of the ADT for portions of I-95 in the Study Area are expected to increase between 40 to 50 percent (**Table II-2**).

Table II-2. Forecasted ADT Growth

Forecasted ADT Growth from 2005 to 2030 (Prior to BRAC Allocation)	
Section of I-95	**Percentage Change/Increase**
MD 43 to MD 152	40%
MD 152 to MD 24	42%
MD 24 to MD 543	50%
MD 543 to MD 22	47%
MD 22 to Maxa Road	47%

While the Section 200 study was underway, the State of Maryland and Department of Defense (DOD) announced the Base Realignment and Consolidation (BRAC) program. It was announced that the Aberdeen Proving Ground will have an increase in personnel. MDTA performed a BRAC sensitivity analysis on the traffic model used to generate the traffic analysis for the Section 200 study. The sensitivity analysis included the number of jobs and new households that are expected in the Baltimore/Harford/Cecil Region as a result of BRAC. The results of the sensitivity analysis indicated that while BRAC has a significant influence on the Baltimore/Harford/Cecil Region, the impact will be far greater on the local highways and roadways and less on I-95. The sensitivity analysis indicates that the traffic analysis performed on 2030 forecasted traffic volumes will not significantly change with additional traffic estimated from the BRAC relocations.

b. Safety

The crash rate for Section 200 is approximately 12 percent higher than similar state maintained highways. Crashes normally identified as congestion-related (side-swipe and rear-end), account for 50 percent of the crashes reported between 2002 and 2004. Section 200 has been identified with 34 Candidate Safety Improvement Locations (CSILs) by the Maryland State Highway Administration (SHA). If the anticipated congestion levels in Section 200 are not addressed, an increase in the number and severity of congestion-related crashes would likely occur.

The Purpose and Need section in the EA provides additional information about the capacity and safety issues related to Section 200.

C. Alternatives Retained for Detailed Study (ARDS)

The public was given the opportunity to provide feedback on the Section 200 preliminary alternatives, including interchange options, during several focus group meetings and a Public Workshop held on June 22, 2006. Based upon public feedback, engineering traffic analysis, right-of-way impacts, and environmental impacts, the viability of the alternatives and interchange options was evaluated and it was determined which alternatives and interchange

options would be carried forward and which would be dropped. The following are descriptions of the alternatives that were carried forward for detailed study:

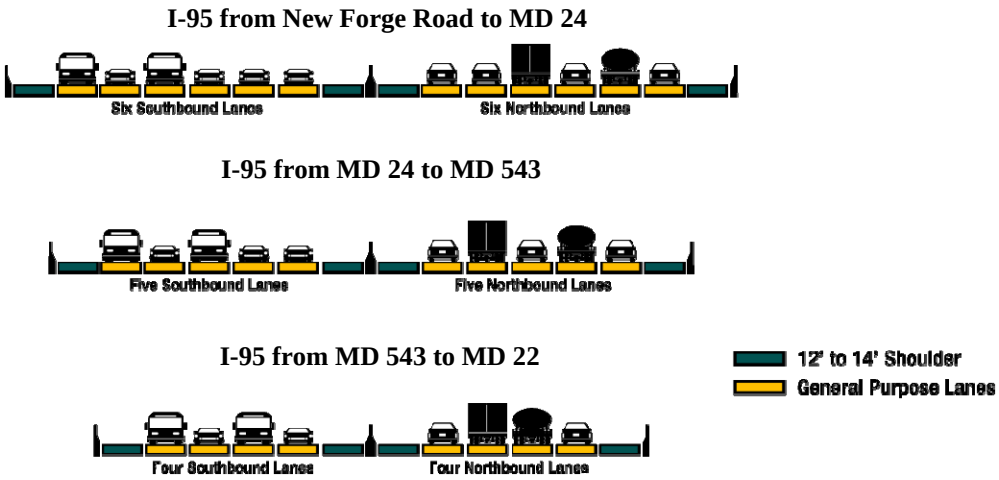
1. No-Build Alternative

The No-Build Alternative would retain the existing I-95 highway within the study limits, and allow for maintenance improvements and safety upgrades. Some of the improvements and upgrades associated with the No-Build Alternative include the replacement of bridge decks, resurfacing of pavement, and replacement and upgrades of traffic barriers, signs and lights. There would be no increase in roadway capacity and an increase in congestion and accidents would likely occur. The No-Build alternative has been retained for further study as a baseline for comparison.

2. General Purpose Lanes Alternative

This alternative would include additional GPLs to accommodate the projected traffic demand. Improvements would be proposed along the mainline of I-95 from north of MD 43 to north of MD 22, and at the MD 152, MD 24, MD 543 and MD 22 interchanges.

Figure II-3. General Purpose Lanes Alternative - Typical Roadway Section



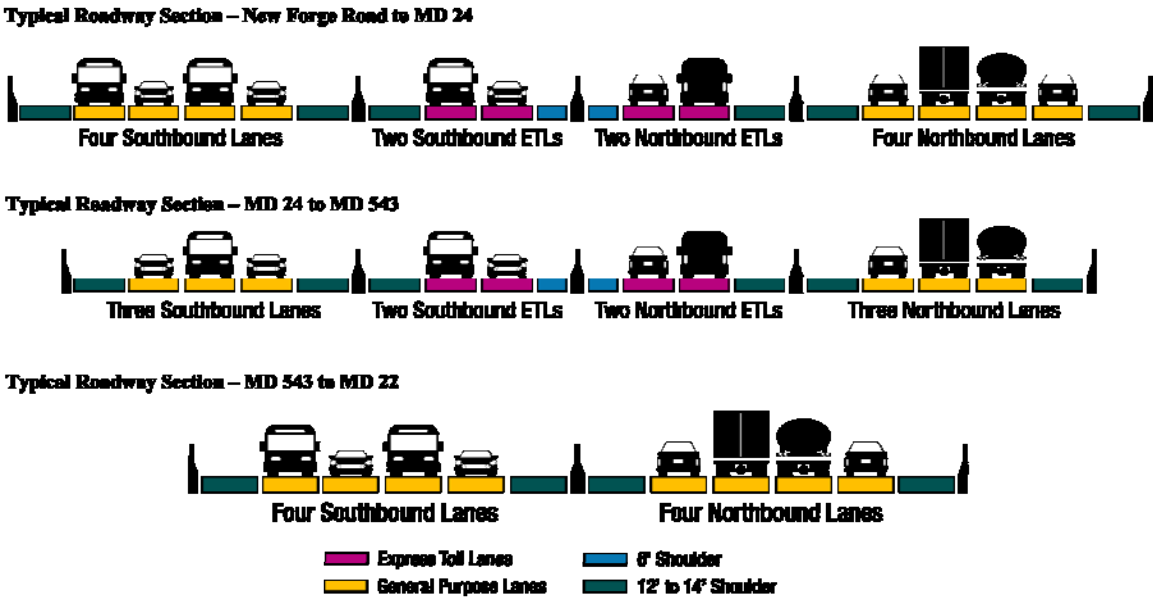
This alternative would tie four GPLs and two ETLs in each direction from the I-95 ETLs Project, into six GPLs in each direction from the northern limit of the I-95 ETLs Project to the MD 24 interchange. From the MD 24 interchange to the MD 543 interchange, there would be five GPLs in each direction and from the MD 543 interchange to north of MD 22, there would be four GPLs in each direction. At the northern limit of Section 200, the four GPLs would merge to tie into the existing three GPLs in each direction.

In addition to improvements to the mainline, the alternative would improve the configuration of the four existing interchanges. The Alternates Considered section of the EA discusses the configurations considered for the MD 152, MD 24, MD 543 and MD 22 interchanges.

3. Express Toll Lanes Alternative

This alternative would include adding ETLs to the existing roadway to accommodate the projected traffic demand. Under this alternative, I-95 would have four GPLs and two ETLs in each direction, extending the typical section of the I-95 ETLs Project from just north of the MD 43 interchange to the MD 24 interchange. From MD 24 to MD 543, three existing GPLs would be retained and two ETLs in each direction would be added. The ETLs would terminate at MD 543 providing four GPLs to the project limits north of MD 22. At the northern limit of Section 200, the four GPLs will merge to tie into the existing three GPLs in each direction. Improvements would be proposed at the MD 152, MD 24, MD 543 and MD 22 interchanges.

Figure II-4. Express Toll Lanes Alternative - Typical Roadway Section



MDTA conducted the I-95 Express Toll Lanes Northern Termini Study to determine the most logical terminus for the ETLs. The results of the study indicated that the terminus of ETLs at MD 543 was most practical based on traveler demand and capital cost associated with ETLs. A copy of the Express Toll Lanes Northern Termini Study is available upon request.

In addition to improvements to the mainline, this alternative would improve the configuration of four interchanges: MD 152, MD 24, MD 543 and MD 22.

D. Preferred Alternative

The FHWA and MDTA carried the No-Build Alternative, the GPLs Alternative, and the ETLs Alternative forward for detailed study. After performing detailed engineering and environmental analysis, and considering public and agency input, MDTA selected the following:

1. The Express Toll Lanes Alternative as the Preferred Alternative

2. Four Preferred Interchange Options:

   a. I-95/MD 152 Option 1A (Figure II-5)

This option would consist of a diamond interchange. The interchange includes median ETL ramp access to MD 152. Two full traffic signals would serve I-95 GPL ramp traffic and one full traffic signal would serve I-95 ETL ramp traffic. This option incorporates cul-de-sacs to eliminate direct access from Old Mountain Road into the interchange ramp area. The Old Mountain Road Bridge over I-95 would be removed and would not be replaced.

The Joppa - Magnolia Volunteer Fire Company is located on Old Mountain Road adjacent to the interchange. The Fire Company currently uses the direct access from Old Mountain Road to the interchange area to respond to emergencies along the I-95 southbound lanes. To mitigate the elimination of this direct connection, another connection from the Fire Company to MD 152 including an emergency traffic signal is proposed with this option.

For this option the I-95 northbound approach would consist of four GPLs and two ETLs through the interchange. A one-lane diagonal GPL ramp would lead to MD 152 northbound and southbound. Access to the I-95 GPL northbound lanes from MD 152 would be provided via a one lane diagonal ramp. A one-lane, left-side median ETL ramp would connect I-95 northbound ETLs to MD 152 northbound and southbound. A one-lane, left-side median ETL ramp would lead to the I-95 northbound ETLs.

The I-95 southbound approach would consist of four GPLs and two ETLs through the interchange. A one-lane diagonal GPL ramp would lead to MD 152 northbound and southbound. Access to the I-95 GPL southbound lanes from MD 152 would be provided via a two lane diagonal ramp. One-lane, left-side median ETL ramps would connect I-95 southbound ETLs to MD 152 northbound and southbound. A one-lane, left-side median ETL ramp would lead to the I-95 southbound ETLs.

Two through lanes in each direction would generally be provided on MD 152, with additional turn lanes at the interchange ramps.

   b. I-95/MD 24 Option 2 (Figure II-6)

This preferred option would be a combination partial cloverleaf/directional configuration, with a single loop in the southwest quadrant, and a flyover ramp. One half traffic signal along MD 24 northbound would provide access to the I-95 northbound GPL lanes. One full traffic signal along MD 24 would provide access for the I-95 northbound and southbound ETL median access ramps. One half traffic signal along MD 24 southbound would provide access for the I-95 southbound GPL on- and off-ramps.

The I-95 northbound GPL approach would consist of four lanes. A two-lane flyover ramp would lead to MD 24/MD 924/Tollgate Road. This ramp would split before reaching MD 24, with one lane to MD 24 southbound, and two lanes crossing I-95 leading to MD 24 northbound and MD 924/Tollgate Road. After crossing over I-95, the ramp would then split again, with one lane leading to MD 24 northbound and one lane leading to MD 924/Tollgate Road. Three I-95 northbound GPLs would continue north to MD 543. The I-95 northbound ETL approach would consist of two lanes. A one-lane, left-side median ETL ramp would lead to MD 24 and a one-lane, left-side median ETL ramp would lead to the two I-95 northbound ETLs. The two I-95 northbound ETLs would continue north to MD 543.

The I-95 southbound GPL approach would consist of three lanes. The I-95 southbound approach would add a one-lane distributor roadway. A one-lane outer connection ramp would lead from I-95 southbound to MD 924/Tollgate Road. The one-lane far side loop ramp would then lead from southbound I-95 to MD 24. An outer connection ramp from MD 24/MD 924/Tollgate Road to I-95 southbound would add a lane to I-95 southbound and four GPLs would continue south to MD 152. The I-95 southbound ETL approach would consist of two lanes. A one-lane, left-side median ETL ramp would lead to MD 24 and a one-lane, left-side median ETL ramp would lead to the two I-95 southbound ETLs. The two I-95 southbound ETLs would continue south to MD 152.

Three through lanes in each direction would generally be provided on MD 24, with additional turn lanes at the interchange ramps. A braided ramp system would be constructed along MD 24 northbound and southbound between I-95 and the MD 924/Tollgate Road interchange.

The proposed improvements associated with this interchange option would tie-in and are consistent with the improvements currently under construction at the MD 24/MD 924 Intersection (independent project).

c. I-95/MD 543 Option 7 (Figure II-7)

This preferred option would include a diamond interchange with the addition of a single loop ramp from northbound MD 543 to southbound I-95. Two full traffic signals on either side of the interchange would provide access for I-95 GPL ramps. One full traffic signal along MD 543 would serve I-95 ETL median access ramps.

The I-95 northbound GPL approach would consist of three lanes. A two-lane diagonal ramp would lead to MD 543. A one-lane diagonal ramp from MD 543 would merge onto I-95 northbound. The I-95 northbound ETL approach would consist of two lanes. The left-hand ETL would drop at the one-lane median access ramp to MD 543. One I-95 northbound ETL would join three GPLs to carry four GPLs north to MD 22.

The I-95 southbound GPL approach would consist of four lanes. The left GPL would drop into the I-95 southbound ETLs and three GPLs would continue south to MD 24. A one-lane outer connection ramp would lead to MD 543. The loop ramp in the northwest quadrant would serve traffic from MD 543 northbound to I-95 southbound. A one-lane diagonal ramp from MD 543

southbound would merge on to I-95 southbound. A one-lane, left-side median ETL ramp would lead to the I-95 southbound ETLs. Two I-95 southbound ETLs would continue south to MD 24.

Two through lanes in each direction would generally be provided on MD 543, with additional turn lanes at the interchange ramps.

d. I-95/MD 22 Option 1 (Figure II-8)

This preferred option would maintain the existing partial cloverleaf configuration with no modifications. The existing interchange contains loops in the northwest and southeast quadrants. One full traffic signal along MD 22 provides access for the I-95 northbound off-ramp. One full traffic signal along MD 22 provides access for the I-95 southbound off-ramp. I-95 through the interchange would consist of four GPLs in each direction.

The existing I-95 northbound approach adds a one-lane C-D roadway. A one-lane ramp then leads to MD 22. The existing I-95 southbound approach adds a one-lane C-D roadway. A one-lane ramp then leads to MD 22.

Two through lanes in each direction are generally provided on the existing MD 22, with additional turn lanes at the interchange ramps.

3. Park and Ride Facilities

a. MD 152 Park and Ride Site

The existing MD 152 Park and Ride facility will be impacted by the mainline improvements. Site A Revised was selected at the preferred location for the new MD 152 Park and Ride. This site is located near the northwestern quadrant of the I-95/MD 152 interchange (**Figure II-9**). It provides good visibility from both the I-95 and MD 152 corridors. The proposed park and ride facility would occupy approximately seven acres of the 15 acre parcel. Site improvements, in addition to the proposed park and ride, would include a new signal at the intersection of MD 152 and Jaycee Drive, a right turn lane along northbound MD 152 and left turn lanes for both northbound and southbound MD 152. Existing Jaycee Drive would be relocated to provide a direct connection from MD 152 to Brocks Road. Brocks Road is currently a private roadway. MDTA would acquire Brocks Road and transfer it over to Baltimore County to maintain. The proposed park and ride would consist of approximately 385 spaces, with space available to expand the site to up to 500 spaces in the future.

b. MD24/MD 924 Site

An existing Park and Ride facility is located along MD 24 south on the interchange. This facility would remain. The need for an additional facility north of the interchange was identified north of the interchange. The MD 24/MD 924 site was selected as the preferred location for the additional MD 24 Park and Ride. This site is located near the southeast quadrant of the MD 24 and MD 924 intersection, and is located adjacent to the existing I-95/MD 24 interchange (**Figure II-10**). The

proposed park and ride facility would utilize approximately 3.5 acres of the existing 7.5 acre parcel, as well as existing state owned property. The proposed park and ride would consist of approximately 200 spaces, with space available to expand the site to up to 450 spaces in the future.

4. I-95/MD 24/MD 924 Pedestrian / Bicycle Access

The Woodsdale Road option was selected as the preferred I-95/MD 24/MD 924 Pedestrian Bicycle option. This option is on the east side of MD 24 (**Figure II-11**). This option would provide the most direct shared-use path around the interchange. This option would begin south of the interchange at the intersection of MD 24 and Edgewood Road. A 10-foot shared-use path would connect the intersection with Waldon Road. Currently, Waldon Road is closed to vehicular traffic between commercial properties to the southwest and residential properties on the northeast end. The shared-use path would intersect Waldon Road with bollards to allow pedestrians and bicyclists to continue while keeping the road closed to vehicular traffic. Improvements along Waldon Road would be limited to signing and marking. Pedestrians and bicyclists would follow Waldon Road north to a shared-use bridge that would span I-95 just north of the interchange. The path over the bridge would be 14-foot wide, and would be constructed to allow an emergency or maintenance vehicle to cross. On the west side of I-95, the path would descend along a retained fill section adjacent to the Woodsdale Senior Housing Community Center Building. Pedestrians and bicyclists would then continue north along Woodsdale Road to the intersection at MD 924. Currently, shoulders along Woodsdale Road are 8-foot wide on both sides to support pedestrian and bicycle travel. There is also a section of sidewalk from Box Hill Center Corporate Drive and MD 924 along Woodsdale Road that supports pedestrian traffic in that area. Improvements along Woodsdale Road and at the intersection of MD 924 and Woodsdale Road would be limited to signing and marking.

The 2010 estimated construction and right-of-way cost for this option is $6.52 Million. This consists of $6.0 Million for the shared-use bridge over I-95, $414,000 for the remainder of the project, and $104,000 for right-of-way. Pedestrians and bicyclists following this path would traverse an extra 1500’ compared to their path if they traveled along MD 24 directly.

With the implementation of this option, the I-95/MD 24 interchange area would be signed to prohibit pedestrian and bicyclists.


ETL Alternative
I-95 / MD 152 Interchange
Option 1A
CLAYTON ROAD
CONSERVATION AREA
FRANKLINVILLE ROAD
HILLTOP DRIVE
TRINITY CHURCH
MARYLAND 7
FABER ROAD
STANS ROAD DRIVE
FARRS LANE
ROAD
Legend
GENERAL PURPOSE LANES
EXPRESS TOLL LANES
PROPOSED BRIDGE / OVERPASS
TRAFFIC FLOW
TRAFFIC SIGNALS
APPROXIMATE RIGHT-OF-WAY LINE
FIREHOUSE
CHURCH

Figure II-5


ETL Alternative
I-95 / MD 24 Interchange
Option 2
MARYLAND 924
MARYLAND 24
MARYLAND 24
INTERSTATE 95
WINTERS RUN
FASHION WAY
FRIENDSHIP
ARUNDEL COURT
CONSTANT
HAVEN AVENUE
MARPAT DRIVE
WALDON ROAD
TOREY LANE
WOODSDALE ROAD
PENNY LANE
MEMORY LANE
LAKESIDE BUSINESS PARK
EMMORTON
EMMORTON BUSINESS PARK
COLUMBIA PARK ROAD
LAKESIDE BLVD
WALTON ROAD
RED MAPLE DRIVE
RUBBER ROAD
Legend
GENERAL PURPOSE LANES
EXPRESS TOLL LANES
PROPOSED BRIDGE / OVERPASS
TRAFFIC FLOW
TRAFFIC SIGNALS
APPROXIMATE RIGHT-OF-WAY LINE

Figure II-6


ETL Alternative
I-95 / MD 543 Interchange
Option 7
N
W
E
S
JAMES RUN
MARYLAND
543
INTERSTATE
95
CRESWELL
ROAD
CABBINS RUN ROAD
HENLEY
DRIVE
BELLCAMP
ROAD
BUSH DECLARATION
NATURAL RESOURCES
MANAGEMENT AREA
MARYLAND
7
HANDLER DRIVE
EXISTING
ARK & RIDE
OLD
PHILADELPHIA
ROAD
BELLCAMP
VILLAGE OF
CHURCH CREEK
GOLDEN ROD COURT
PRIMROSE
PLACE
DRIVE
DALMATION
DRIVE
MARIGOLD LANE
BAWE
BERRY
DRIVE
POLICY
SANFORD COURT
BRISTOL
FOREST
Legend
GENERAL PURPOSE LANES
EXPRESS TOLL LANES
PROPOSED BRIDGE /
OVERPASS
TRAFFIC FLOW
TRAFFIC SIGNALS
APPROXIMATE
RIGHT-OF-WAY LINE
CHURCH

Figure II-7


ETL Alternative
I-95 / MD 22 Interchange
Option 1
MARYLAND
22
INTERSTATE
95
RIPKEN
YOUTH BASEBALL
ACADEMY
RIPKEN
STADIUM
GILBERT
ROAD
TECHNOLOGY
DRIVE
WARWICK
ROAD
AGREEMENT
LANE
NORTHEAST
ROAD
AVENUE
Legend
GENERAL PURPOSE LANES
EXPRESS TOLL LANES
PROPOSED BRIDGE / OVERPASS
TRAFFIC FLOW
TRAFFIC SIGNALS
APPROXIMATE RIGHT-OF-WAY LINE

Figure II-8

Site A Revised

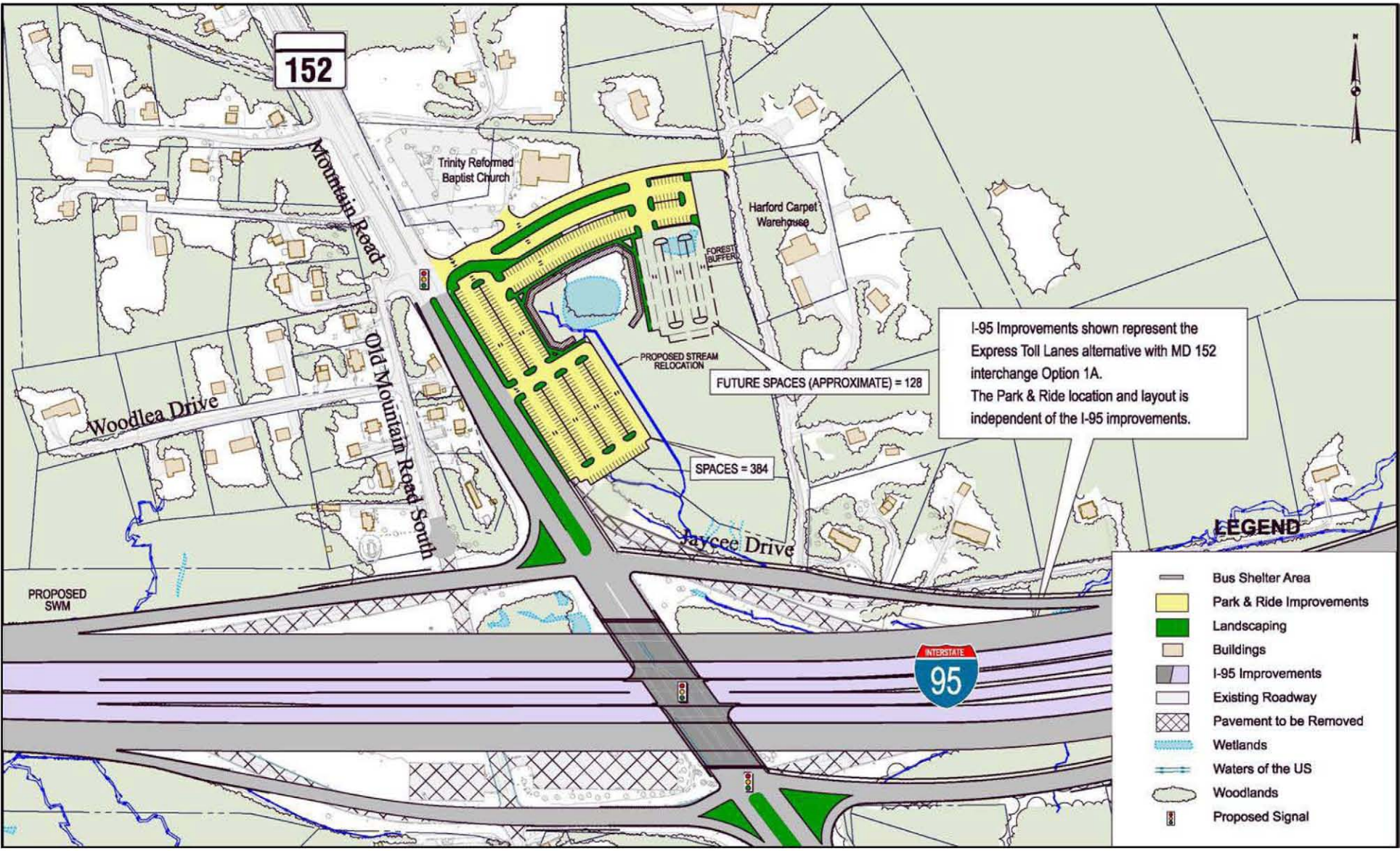


Figure II-9: MD 152 Park and Ride Facility

MD 24/MD 924 Site

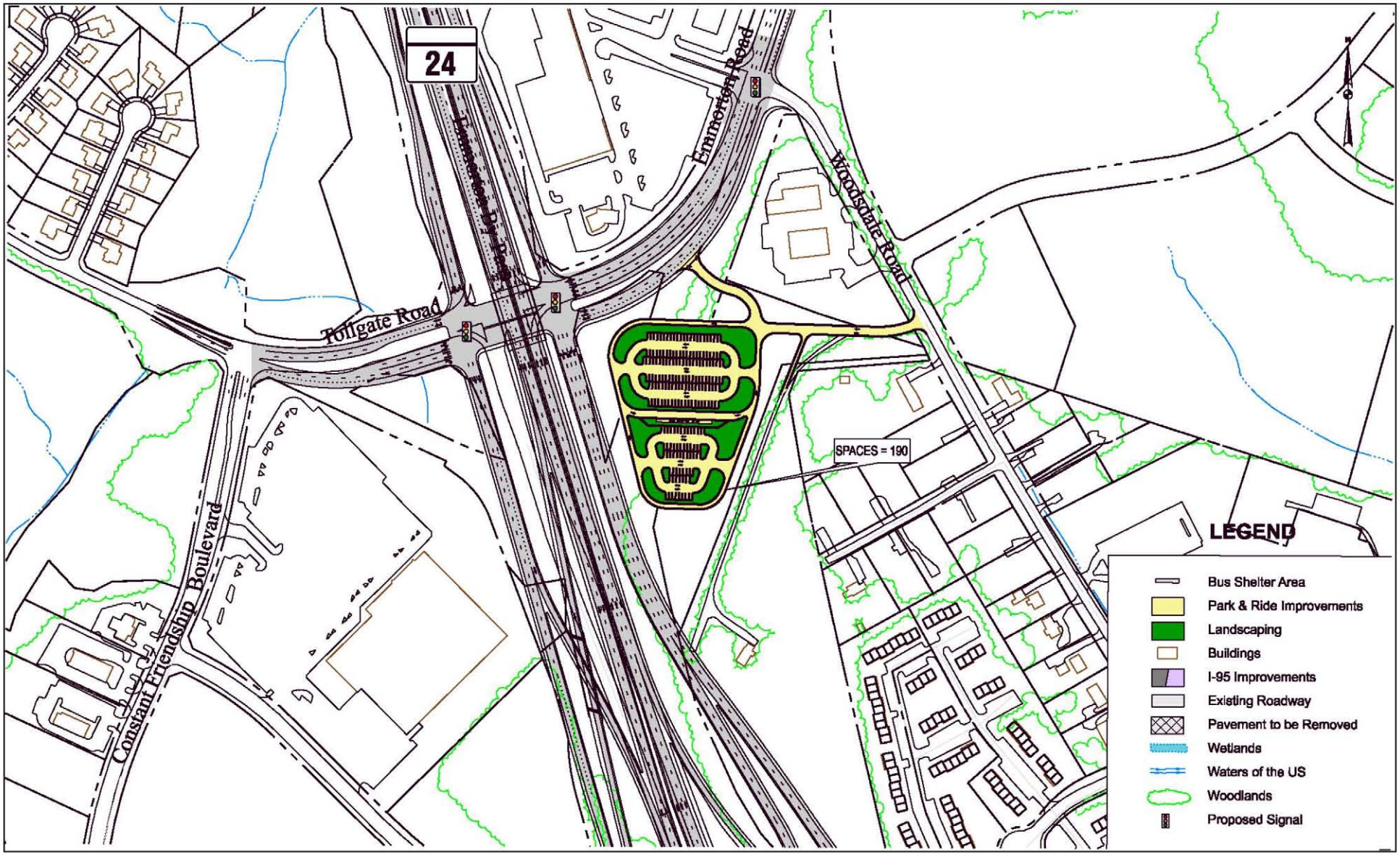


Figure II-10: MD 24 Park and Ride Facility

Woodsdale Road Option

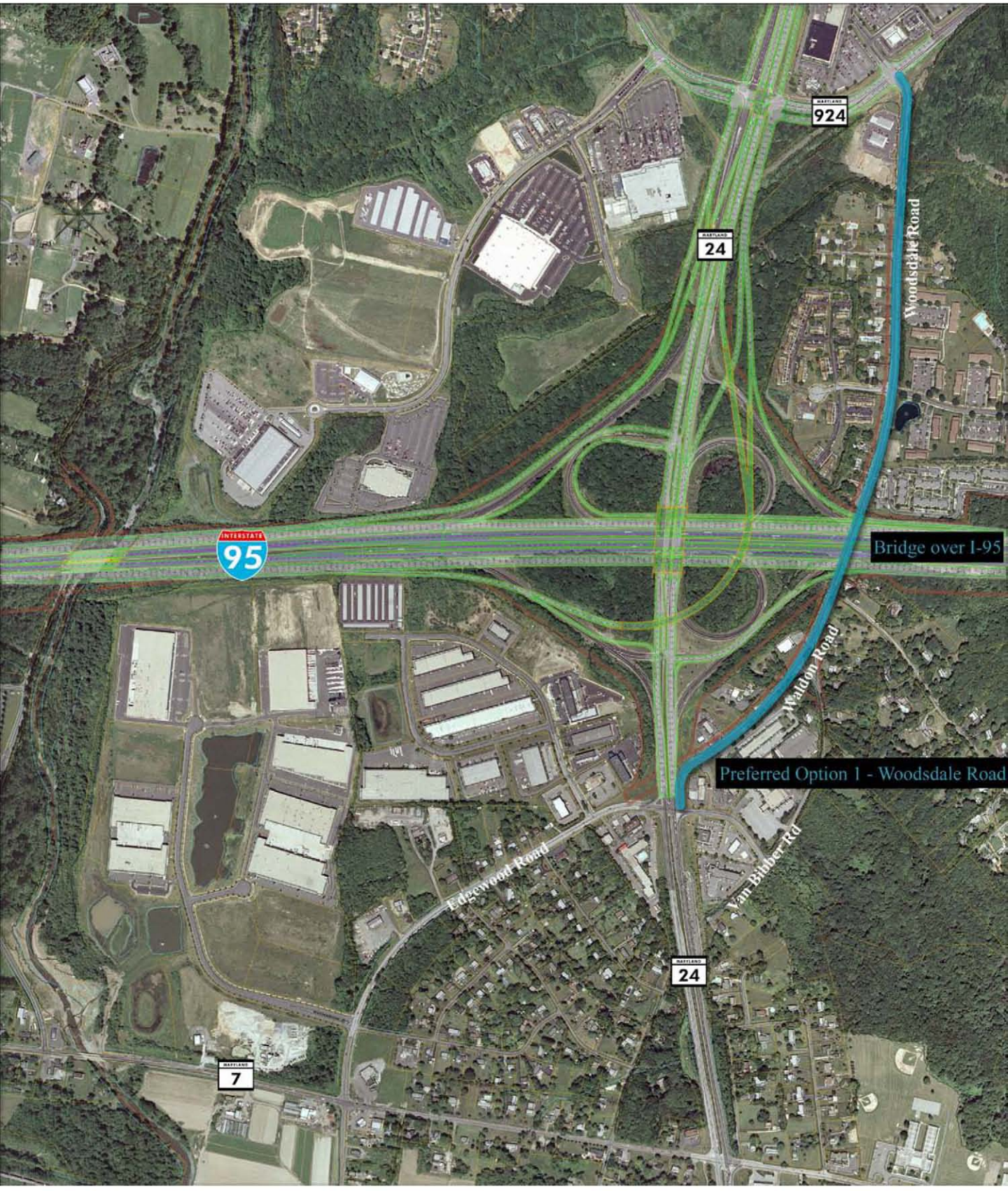


Figure II-11: I-95 / MD 24 / MD 924 Pedestrian / Bicycle Option

E. Selection Process of the Preferred Alternative

The No-Build Alternative was not selected because it does not satisfy the purpose and need of the project. Minor improvements for normal traffic maintenance and safety operations proposed under this alternative would not improve the safety or capacity along Section 200.

1. The Express Toll Lanes Alternative and Interchange Options

Having eliminated the No-Build Alternative, MDTA compared the General Purpose Lanes Alternative and the Express Toll Lanes Alternative based upon the following evaluation criteria (**Table II-3**):

- Ability to meet Purpose and Need
- Environmental impacts
- Operational efficiency
- Fiscal responsibility
- Consistency with the State Transportation Policy
- Public comments
- State and local agencies input

The overall results of this comparison demonstrate that the Express Toll Lanes Alternative would more effectively meet these criteria, as explained below.

a. Ability to Meet Purpose and Need

i. Congestion

Both Alternatives would provide congestion relief compared to the No-Build condition, because both of the build alternatives would provide substantial new capacity. However, the Express Toll Lanes Alternative would provide one important congestion relief benefit that is not available under the General Purpose Lanes Alternative: the ability to provide congestion management through a consistently congestion-free travel option, which would continue to be available even as traffic volumes increase over time.

The General Purpose Lanes Alternative would add one to two additional GPLs in each direction. This would improve traffic operations over the no build condition. Traffic is anticipated to operate at Level of Service (LOS) D or better on the weekday and LOS E or better on the weekends (**Table II-4**). Although this alternative would provide good overall traffic operations for both weekday and weekend peak periods the number of accessible travel lanes would make it difficult to implement a travel demand management program. Over time, the General Purpose Lanes Alternative would experience increasing congestion levels on all lanes of travel since there would be limited opportunities for travel demand management programs. Additionally, there would be limited incentive for transit or carpooling.

Table II-3. Comparison of Evaluation Criteria

Evaluation Criteria	General Purpose Lanes Alternative	Express Toll Lanes Alternative
Ability to meet Purpose and Need		
Congestion	Limited opportunities for travel demand and limited incentive for transit and carpooling.	ETLs offer superior LOS (A-C) and dependable travel times. Predictable travel times promote transit use.
Safety	Drivers may need to weave 5 to 6 lanes to exit highway. Disabled vehicles may have difficulty accessing the shoulder.	GPL drivers maximum weave is four lanes and ETL drivers is one lane. Disabled vehicles can access the shoulder easier than the GPL Alternative. The ETL Alternative provides four full shoulders compared to two full shoulders for the GPL Alternative.
Environmental Impacts		
Natural and Human Environment	Slightly less impacts due to smaller footprint.	Slightly more impacts compared to GPL Alternative due to larger footprint.
Land Use Impacts	Minor land use impacts	Minor land use impacts
Air and Noise Impacts	No air impacts and requires noise abatement for six NSAs	No air impacts and requires noise abatement for seven NSAs
Operational Efficiency		
Incident Management	Two full (12’ to 14’) shoulders allow for improvement incident management.	Four full (12’ to 14’) shoulders allow for improvement incident management. Grade separated GPLs and ETLs allow for emergency services detours, quicker response times, and improved traffic management.
Facility Maintenance	Maintenance work conducted during off-peak hours, usually at night only. More difficult in protecting work zones due to contiguous lanes.	Maintenance work conducted during off-peak hours, usually at night. Minimal effort and materials required to redirect the traffic during maintenance work due to barrier separated GPLs and ETLs.
Enforcement	Improved shoulders for enforcement vehicles.	Additional shoulders for ETLs would facilitate additional enforcement.
Intermodal Access	Reduced bus transit travel times.	Use of ETLs allows for substantial improvement and dependability to bus transit travel times.
Costs	$1.48 Billion	$1.92 Billion
Consistency with State Transportation Policy	Is not consistent with State Transportation Policy	Is consistent with State Transportation Policy

The Express Toll Lanes Alternative would provide superior service for motorists that use the ETLs (separated from the GPLs). The ETLs are anticipated to operate at a superior LOS compared to the LOS of the GPLs in both the Express Toll Lanes and General Purpose Lanes Alternatives. The volume for the ETLs would vary depending on the time of day with the greater ETL volumes occurring when more congestion is present in the GPLs.

One of the potential benefits of ETLs is the ability to provide for predictable and dependable travel times and speeds. Predictable travel times promote transit by providing reliable service.

Table II-4. Projected Weekday 2030 LOS Summary

Alternative	Roadway Section		AM Peak Hour		PM Peak Hour		Weekend Peak Hour	
			NB	SB	NB	SB	NB	SB
No-Build	New Forge Road to MD 152		D	F	F	D	F	F
	MD 152 to 24		C	F	F	D	F	F
	MD 24 to MD 543		D	F	F	E	F	F
	MD 543 to MD 22		C	C	D	D	F	F
General Purpose Lanes	New Forge Road to MD 152		B	D	D	C	D	C
	MD 152 to MD 24		B	C	D	C	C	C
	MD 24 to MD 543		B	C	C	C	D	D
	MD 543 to MD 22		B	C	C	C	E	D
Express Toll Lanes	New Forge Road to MD 152	ETL	A	C	C	A	B	B
		GPL	C	E	E	D	E	D
	MD 152 to MD 24	ETL	A	C	B	A	B	B
		GPL	C	D	D	D	D	D
	MD 24 to MD 543	ETL	A	A	B	A	B	B
		GPL	D	D	E	E	E	E
	MD 543 to MD 22	GPL	B	C	C	C	E	D

ii. Safety

The safety of any roadway is based on many factors. These include geometrics, roadside obstructions, congestion, and traffic control devices. The potential for rear-end and sideswipe crashes is greater with congested conditions which would exist for the no-build condition. On a roadway with four lanes in each direction, there are 16 conflict points where sideswipe crashes could occur. When the roadway increases to six lanes in one direction, the number of conflict points increases to 46 opportunities for crashes to occur. With the General Purpose Lanes Alternative, motorists need to weave across six contiguous lanes in each direction from New Forge Road to MD 24 and five lanes in each direction from MD 24 to MD 543. Due to the number of contiguous lanes associated with the General Purpose Lanes Alternative, motorists would be at a greater safety risk due to the number of lanes they must weave across to exit the highway or allow disabled vehicles to access the shoulder.

The Express Toll Lanes Alternative would consist of two contiguous ETLs and four contiguous GPLs in each direction from New Forge Road to MD 24, separated by a median barrier. From MD 24 to MD 543, three existing GPLs would be retained and two ETLs in each direction would be added. The ETLs would terminate at MD 543 providing four GPLs to the project limits north of MD 22. At the northern limit of Section 200, the four GPLs will merge to tie into the existing three GPLs in each direction. Vehicles in the ETL lanes would have dedicated ramps at each of the existing interchanges. The ETLs are expected to be operated at LOS D or better, thereby allowing for gaps in traffic where vehicles can switch lanes to pass other drivers. By separating the GPLs and ETLs and providing a maximum of four contiguous lanes, safety would be enhanced through a reduction of lanes to be traversed when entering or exiting, and allowing disabled vehicles to more easily access the shoulder.

The provision of ETLs will reduce congestion, improve emergency response times, and/or reduce the number of conflict points between vehicles, thereby providing opportunities for improved public safety. In addition, the Express Toll Lanes Alternative could improve work zone safety by allowing for off-peak closures of the managed or general purpose lanes thus reducing conflict points between motorists and maintenance or construction activities.

b. Environmental Impacts

i. Natural and Human Environment

The General Purpose Lanes Alternative has a slightly smaller footprint than the Express Toll Lanes Alternative, and thus would have a proportionally smaller direct impact on the natural and human environment. Notwithstanding this slight difference in footprint, the Express Toll Lanes Alternative could provide environmental benefits that would not be provided by the General Purpose Lanes Alternative. A long-term benefit of the Express Toll Lanes Alternative is that appropriate variable toll management of the ETLs could cause motorists to modify travel behavior. An example of modified travel behavior through peak spreading of variable tolls occurs in Lee County, Florida. Approximately 38 percent of drivers eligible for toll discounts for off-peak hours use them, which results in the reduction of peak hour volume. For Section 200, this type of management strategy could reduce the need for future highway widening and its associated environmental impacts. The Express Toll Lanes Alternative would cause short-term environmental benefits as well, such as reducing vehicle emissions by creating a transportation facility that maintains stable travel speeds.

ii. Land Use Impacts

The General Purpose Lanes and Express Toll Lanes Alternatives would result in the conversion of minor amounts of residential, commercial, forested, and undeveloped land to transportation use. These minor land use impacts would be located throughout the I-95 corridor, adjacent to the existing highway. However, the overall land use in the Study Area would not be substantially affected because all changes in land use that would result from these alternatives would occur within an already existing transportation corridor. In addition, the build alternatives would not indirectly affect local development patterns because they would not result in new access within the corridor. I-95 within the Study Area is currently, and would remain a fully access-controlled

highway. The build alternatives would support planned growth and redevelopment within the corridor, by accommodating projected traffic volume increases and providing additional parking for the growing number of commuters utilizing the park and ride lots.

The Section 200 Study Area is considered to be located entirely within a State-certified Priority Funding Area (PFA) because it connects two distinct PFAs, and is therefore consistent with the Smart Growth initiatives. The extent, pace, and location of development growth along I-95, including Section 200, would be influenced and controlled by State and County land development policies and plans. Section 200 would accommodate future planned growth within the Study Area; however, future growth is not dependent on proposed improvements to Section 200.

iii. Air and Noise Impacts

The General Purpose Lanes and Express Toll Lanes Alternatives would not result in any CO concentrations in violation of the NAAQS under either the existing or design year (2030) for any of the receptors for each alternative. Based on review and analysis as discussed above, it is determined that the Section 200 project will not lead to a significant increase in diesel vehicles and does not meet any other criteria in 40 CFR 93.123(b) for a project of air quality concern. In addition, the project meets the Clean Air Act (CAA) and 40 CFR 93.109 requirements for particulate matter without a project-level hot-spot analysis, since the project has **not been found to be a project of air quality of concern** as defined under 40 CFR 93.123(b)(1). Since the project meets the Clean Air Act and 40 CFR 93.109 requirements, the project will not cause or contribute to a new violation of the $PM_{2.5}$ NAAQS, or increase the frequency or severity of a violation. The Express Toll Lanes Alternative would not have an increased impact on air quality because the project has not been found to be a project of air quality concern.

Based on the noise analysis, the General Purpose Lanes Alternative would require noise abatement for six Noise Sensitive Areas (NSA) for a total cost of $12.4 million and the Express Toll Lanes Alternative would require noise abatement for seven NSAs for a total cost of $14.6 million. Although there are slightly more noise impacts anticipated with the Express Toll Lanes Alternative, the noise impacts would be mitigated for through the use of noise abatement techniques.

c. Operational Efficiency

i. Incident Management

It is essential that police, fire, rescue, and maintenance personnel be able to respond quickly to an incident by accessing the site, assessing the nature of the incident, and taking appropriate measures. To that end, both of the build alternatives have been designed with 12 to 14-foot wide shoulders. This would not only provide additional clearance for emergency vehicles using the shoulders, but would also give the emergency responders additional room to establish their work perimeter and the necessary traffic control measures.

Of the two build alternatives, the Express Toll Lanes Alternative would offer the most benefit for incident management. First, physical separation of the GPLs and ETLs would provide adjacent detour routing and/or access for emergency services during traffic related and other incidents. In addition, the ETLs would provide emergency responders with unimpeded access throughout Section 200, since the ETLs would operate at LOS D or better. Furthermore, by having a maximum of four contiguous lanes (GPLs) and additional shoulders associated with the ETLs, additional areas would be available for crews to work and safely access the site.

ii. Facility Maintenance

Heavily traveled Interstate facilities require substantial levels of routine maintenance such as the replacement of pavement markings and overhead lights, cleaning of drainage systems, replacement/repair of guardrail and energy absorption systems, repaving/resurfacing, and upkeep of stormwater management (SWM) facilities. High traffic volumes make almost any maintenance activity a major undertaking. As a result, most maintenance is performed off-peak, often at night.

Of the two build alternatives, the Express Toll Lanes Alternative would offer the least obstacles to facility maintenance. Most work could be done off-peak by diverting traffic to either the ETL or GPL roadway. There would be minimal effort and materials required to redirect the traffic, and worker safety would be enhanced by the concrete barrier that would separate them from the traffic. Maintenance activities performed for the General Purpose Lanes Alternative would also be performed during off-peak hours, but would involve lane closures, crash trucks (i.e. safety maintenance vehicles) and police escort.

iii. Enforcement

The No-Build Alternative would provide decreasing opportunities for enforcement activities, since when congestion increases, the ability of police units to pull motorists over to the highway shoulder decreases. The General Purpose Lanes Alternative will reduce congestion, thereby increasing opportunities for safer roadside activities. The Express Toll Lanes Alternative, with a maximum separation of two lanes from an available shoulder, would facilitate roadside patrols and enforcements.

iv. Intermodal Access

Section 200 provides indirect access to the Port of Baltimore, BWI and Martin State Airports, Amtrak rail service, and the local transit system. In order to provide dependable intermodal connectivity, it is important that highway travel times remain fairly consistent, and that those times be perceived as reasonable by users.

The General Purpose Lanes Alternative would have a moderate effect on bus transit in the Section 200 corridor. Although the capacity of I-95 would increase for the short term, all travelers including transit services would experience decreasing benefits as traffic volumes grow over time. As the traffic volume increases over time, the increased capacity becomes more congested. The congestion leads to increasing transit service travel times along the Section 200 corridor.

The Express Toll Lanes Alternative would allow buses to benefit from the improved LOS during peak periods. By providing reliable and predictable transit service times, the Express Toll Lanes Alternative could improve the attractiveness of transit services. Access to and from the ETLs at interchanges, where transit services are planned, would be considered in the design of the Express Toll Lanes Alternative and the proposed park and rides.

The success of ETLs hinges on a user's ability to consistently experience a predictable travel time and a facility operator's ability to consistently manage traffic volumes to provide the expected travel speed and travel time with a high degree of certainty. Predictable travel times create advantages for transport fleets with schedules to meet such as those engaged in transit services or commercial express freight delivery services. **Table II-5** provides estimated travel times and speeds for 2030 for ETLs and GPLs.

Based on the information in **Table II-5**, in 2030, the use of the Express Toll Lanes Alternative over the General Purpose Lanes Alternative during peak periods can reduce the travel time up to 11 minutes and increase travels speeds as much as 25 miles per hour (MPH). Based on this assessment, the Express Toll Lanes Alternative would best provide for intermodal access, because it is anticipated that the ETLs would operate at LOS D or better, and provide faster, more consistent travel conditions as compared to the General Purpose Lanes Alternative.

Table II-5. Estimated Travel Speeds and Times for 2030

		From MD 543 to the I-95/I-895 (N) Split (18 miles) in the Peak Direction		
		Travel Time	**Travel Speed**	**Level of Service Range**
Existing		24 Min	60 MPH	C to E
2030 No Build		57 Min	15 MPH	F
2030 General Purpose Lanes Alternative	**Section 100 and 200 GPLs**	29 Min	40 MPH	C to E
	Section 100 ETL and Section 200 GPLs	21 Min	55 MPH	
2030 Express Toll Lanes Alternative	**Section 100 and 200 GPLs**	33 Min	35 MPH	C to E
	Section 100 and 200 ETLs	18 Min	65 MPH	A to C

d. Costs

The term No-Build means that no funds would be expended to increase the capacity of the roadway. There would still remain costs associated with maintaining the facility. This would include activities such as roadway resurfacing, bridge replacement, signing, lighting, pavement markings, etc.

The preliminary cost estimated for the No-Build Alternative is approximately $0.21 Billion. It does not include any additional work beyond the normal maintenance activities mentioned above. The General Purpose Lanes Alternative preliminary cost estimate is approximately $1.48 Billion, while the Express Toll Lanes Alternative preliminary cost estimate is approximately $1.92 Billion. All costs are indicated in 2010 dollars.

Under the Express Toll Lanes Alternative, the revenues collected by the ETLs would help offset the cost to construct, operate, and maintain the facility.

e. Consistency with State Transportation Policy

On May 4, 2004, the Maryland Secretary of Transportation announced an Express Toll Lanes initiative. Under this initiative, the Secretary has directed MDOT and MDTA to consider implementing ETLs on several existing facilities in Maryland, including I-95. The ETL concept, as outlined in this initiative, involves the construction of new tolled lanes adjacent to existing free lanes. Tolls would be collected electronically, without the use of toll booths, and would vary by time of day and demand.

The General Purpose Lanes Alternative would not allow for tolling and thus is not compatible with the Secretary's initiative.

2. Park and Ride Facilities

a. MD 152 Park and Ride Facility

Site A Revised was identified as the preferred location for the proposed park and ride improvements at the MD 152 interchange. The critical factors in the selection of this location included convenient access for the majority of the existing park and ride users, preferred location for bus operations because it is located along existing MTA routes, good visibility from both I-95 and MD 152, increased forest buffer to residences along Jaycee Drive, and minimal environmental impacts.

b. MD 24 Park and Ride Facility

The site located at the intersection of MD 24 and MD 924/Tollgate Road was identified as the preferred location for the proposed park and ride improvements. Critical factors associated with the selection of this site as the preferred location at the MD 24 interchange included close proximity to the I-95/MD 24 interchange, convenient access for transit operations because it is located along existing transit routes, a portion of the proposed site is state-owned, and environmental impacts are limited.

3. I-95/MD 24/MD 924 Pedestrian / Bicycle Access

The Woodsdale Road option was chosen because it provides the most direct access for pedestrian and bicyclists around the I-95/MD 24 Interchange. Other critical factors associated with the

selection of this option include: significant pedestrian/bicycle safety because majority of route is closed to vehicular traffic, minimal environmental impacts, and a majority of the trail will be on state-owned ROW.

III. ENVIRONMENTAL CONSEQUENCES OF THE PREFERRED ALTERNATIVE

A detailed analysis of the Preferred Alternative was conducted to determine potential effects to socioeconomic, cultural and natural environmental resources (**Table III-1**). This analysis is based upon the Preferred Alternative as it is now defined and which FHWA is approving with this FONSI. Further, this document reflects changes in wetland determinations and limits of disturbance of floodplains and woodlands that have occurred since the EA.

The following is a summary of effects associated with the Preferred Alternative.

Table III-1. Summary of Impacts

RESOURCE CATEGORY	Express Toll Lanes Alternative (Preferred Alternative)	
	EA Impacts	FONSI Impacts
TOTAL ROW (acres)	52.6	52.6
Properties Affected (number)	85	96
Residential Displacements (number)	0	0
Commercial Property Structural Displacements (number)	1	1
Wetlands (acres)	1.3	1.19[1, 2, 3]
Stream Impacts (linear feet)/(square feet)	16,000/N/A	9,931/61,113[1, 2, 3]
Floodplain (acres)	7.7	9.5[4]
Woodland (acres)	122	127
Threatened/Endangered Species (species)	0	0
NR/NRE Historic Sites (number)	0	0
NR/NRE Archaeological Sites (number)	0	0
Noise Sensitive Areas (number)	7 NSAs	7 NSAs
Air Quality Sites Exceeding CO S/NAAQS (number)	0	0
Section 4(f) Resources (number)	0	0

[1]Since the EA, a Jurisdictional Determination was completed by the USACE and MDE. Some of the wetland and streams impacts presented in the EA have been determined non-jurisdictional. [2]Minimization and avoidance measures have been added to the design of the Preferred Alternative since the EA was issued. [3]Impacts have been separated into permanent and temporary impacts (see Appendix E). [4]Based on updated data since the EA, the 100-Year floodplain boundaries have been revised.

A. Socioeconomic Resources

1. Land Use

Existing land use within the Section 200 Study Area is dominated by forested, residential, and agricultural land uses, with large concentrated areas of commercial development near many of the interchanges.

The Preferred Alternative would result in the direct conversion of only minor amounts of residential, commercial, and open space land to transportation use. These minor land use impacts would be located throughout the Section 200 corridor, adjacent to the existing highway. As previously stated, the purpose of Section 200 is to address capacity and safety needs on Section 200 and thereby improve access, mobility, and safety for local, regional and inter-regional

traffic, including passenger, freight, and transit vehicles. Although the project needs include capacity and safety, the State and County land development policies will determine the extent, pace, and location of development growth along I-95. Section 200 would accommodate future planned growth within the Study Area; however, future growth is not dependent on proposed improvements to Section 200. Section 200 is currently, and would remain, a fully access-controlled highway under the Express Toll Lanes Alternative.

2. Right-of-Way and Displacements

The majority of improvements associated with the Preferred Alternative would be located within MDTA's existing ROW; however, approximately 52.6 acres of new ROW would be required. One commercial property, the Izaak Walton League of America Sportsman Club, located in the northwest quadrant of the I-95/MD 24 interchange, would be displaced. No residential displacements would be required with the Preferred Alternative.

In accordance with the provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, all families, individuals, and businesses displaced by the project would be treated fairly, consistently, and equitably so that they will not suffer disproportionate impacts as a result of the project (**Appendix B**). MDTA will provide relocation assistance and advisory services to eligible persons who are displaced by this project.

The Preferred Alternative would require the closure and removal of the existing bridge carrying Old Mountain Road over I-95. This will result in minor community cohesion impacts, by changing local traffic patterns in the community where this portion of the I-95/MD 152 interchange is located. Local residents would no longer have direct access across I-95, and would be required to access MD 152 via MD 7 on the east side of I-95 and Old Mountain Road on the west side of I-95 to make that movement. While this may inconvenience residents who currently utilize this road, it could also benefit the community by eliminating cut-through traffic and improving safety.

The Preferred Alternative would also require the relocation of the existing park and ride lot currently located within the I-95/MD 152 interchange ramp area, in the southeast quadrant of the interchange. The new park and ride lot will have more available parking spaces and be transit accessible, which would allow for more residents of the surrounding communities to use the new park and rides for rideshare and/or transit opportunities.

Numerous other ROW impacts were avoided by designing retaining walls along sections of I-95 that would have required extensive cut or fill slope areas. The retaining walls reduced the footprint of disturbance required in these areas, avoiding the ROW impacts.

3. Local Businesses

The Preferred Alternative would result in the displacement of one commercial property located near the I-95/MD 24 interchange (the Izaak Walton League of America Sportsman Club). Since this alternative involves the widening of an existing access-controlled highway corridor and

would not add or remove any interchanges, access to local businesses would not be substantially altered. Also, by reducing traffic congestion by improving traffic operation along I-95 through this corridor, access to local businesses would be improved.

4. Environmental Justice

It is the policy of MDTA to ensure compliance with the provisions of Title VI of the Civil Rights Act of 1964, and related civil rights laws and regulations which prohibit discrimination on the grounds of race, color, sex, national origin, age, religion, or physical or mental handicap in all projects that involve action by the FHWA. MDTA will not discriminate in project planning, design, construction, ROW acquisitions, or provision of relocation advisory assistance. This policy has been incorporated in all levels of the planning process in order that proper consideration may be given to the social, economic, and environmental effects of all transportation projects. Alleged discriminatory actions should be addressed for investigation to the Equal Employment Opportunity and Diversity Programs, to the attention of Mr. Louis Jones, Chief, Equal Employment Opportunity and Diversity Programs, Maryland Transportation Authority, 2310 Broening Highway, Suite 150, Baltimore, MD 21224.

Furthermore, Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority and Low-Income Populations" requires that each Federal agency identify, and address, any disproportionately high and adverse impact on minority and/or low-income populations resulting from alternatives under consideration and to provide opportunity for participation in the public involvement process.

An analysis of affected persons in the Study Area indicates that no disproportionate high or adverse effects would occur to minority or low-income populations as a result of the Express Toll Lanes Alternative.

5. Transit

Existing bus transit within the study area (express bus service from White Marsh to Harford County and circulation bus service in the Aberdeen area) would benefit from the implementation of ETLs under the Preferred Alternative. Improved traffic flow provided by the ETLs and increased park and ride capacity provided by the proposed park and ride lots would make bus transit a more attractive option to travelers. Bus utilization of the ETLs would also provide a cost effective and reliable means of transportation for transit riders.

6. Aesthetics

The Preferred Alternative would affect visual quality by introducing additional pavement and structural elements along the Section 200 corridor. This would include expanded travel lanes, reduced median width, and the addition of new structures such as retaining walls, sound barriers and bridges. The added width of the Preferred Alternative would also reduce existing green space in the median and extend into the roadsides in some locations. Some existing trees and

roadside landscaping would be removed, which would reduce wooded buffers between the highway and adjacent homes.

New highway structures at the MD 24 interchange would be visible along the corridor. Other visual impacts would occur from the proposed park and ride lots along MD 24 and MD 152. It is expected that landscaping of the new lots to reduce visual effects would be incorporated into the final design of the lots. It is unknown at this time the extent of impacts from the lighting fixtures that will be included with the lot designs; however, it is not expected to be significantly more intense than the existing light at the lot, roadway, highway, and interchange ramps. Efforts will be taken to reduce light impacts to communities.

Other structures along the corridor would include sound barriers and retaining walls along roadsides where cut and fill slopes would need to be minimized. Other possible locations for new structures may include bridge abutments. When located in visible areas, these retaining walls and sound barriers could receive aesthetic treatments such as patterning and staining to create a more context-sensitive finish. Additionally, plantings could be added near barriers and retaining walls to help soften their appearance. The finish will be coordinated throughout the corridor and with other structural elements to maintain visual continuity.

7. Community Facilities and Services

The Preferred Alternative would result in very minor impacts to community facilities and services. One community facility, the Trinity Baptist Church property, located near the I-95/MD 152 interchange, would be impacted by the Preferred Alternative. This alternative would not displace the church; however, it will require a portion of its property for placement of the relocated park and ride lot.

By providing safer and more efficient travel times throughout the study area, it is expected that the Preferred Alternative would have a positive effect on community services such as emergency services and transit, and improve access to other community services throughout the project area.

B. Cultural Resources

The Maryland State Historic Preservation Officer (SHPO), which is the Maryland Historic Trust (MHT), has determined that two Register of Historic Places (NRHP) eligible sites are located within the Area of Potential Effect (APE). One site is the Onion-Rawl House located at 11314 Reynolds Road in Baltimore County. The other is the St. Francis de Sales Church located at 1450 Abingdon Road in Harford County. On January 28, 2010, the MD SHPO determined St. Francis de Sales Church and Onion-Rawls House would not be adversely affected by the Preferred Alternative, and no further consultation is required (see **Appendix C**).

Studies were performed to identify archaeological resources and the potential effects of the Preferred Alternative on these resources. Results of the Phase IA Assessment indicated that 83 previously identified archeological sites are present within the APE. Due to the likelihood that additional archeological resources are present within the Section 200 corridor and through

coordination with MHT on June 13, 2007, a Phase IB Archeological Assessment was conducted. Results from the Phase IB study indicated that all of the 83 sites, except for one (HaHa Branch Quartz Quarry site), were found to have no resources. A Supplemental Phase I Archeological Survey was performed on the HaHa Branch Quartz Quarry site (18HA17). Based on the results of the Supplemental Phase I Archeological Survey, the MD SHPO determined no archeological sites will be impacted by the Preferred Alternative, and no additional coordination is required.

C. Natural Environment

1. Farmlands

The Preferred Alternative would impact both Prime Farmland Soils and Soils of Statewide Importance due to the proposed widening and interchange improvements. A total of 78.5 acres of Prime Farmland Soils and 120 acres of Soils of Statewide Importance would be impacted.

The Farmland Protection Policy Act (FPPA) of 1984 states that "farmland does not include land already in or committed to urban development or water storage". The entire Study Area is developed and is located within a PFA as designated by the Maryland Department of Planning. Therefore, Prime Farmland Soils and Soils of Statewide Importance located/mapped within the Study Area are exempt from FPPA coordination.

2. Soils

The Preferred Alternative would expose soils during the construction phase, thereby potentially resulting in soil erosion and subsequent sedimentation. Erosion and sedimentation would primarily be caused by removal of existing vegetation and placement of fill, leading to increased exposure of soils to weather and runoff potential. Eroded soils could be washed into nearby streams and wetlands, resulting in sedimentation. This is especially notable within the I-95/ MD 152, I-95/MD 24, and I-95/MD 543 interchanges.

The amount of impervious area would increase by 75 percent throughout the Study Area, from 300 acres to 525 acres. The amount of erosion and sedimentation would also increase in areas exposed temporarily during construction due to the increase in stormwater runoff from the impervious surfaces.

Several methods will be used during construction to decrease erosion effects, including structural, vegetative, and operational methods. Grading and Erosion and Sedimentation (E&S) Plans will provide control measures to minimize potential impacts during pre-construction and post-construction activities in accordance with Maryland Department of the Environment (MDE) regulations.

3. Floodplains

The Preferred Alternative would impact approximately 9.5 acres of 100-year floodplains in the Study Area (**Table III-2**). The majority of floodplain impacts are due to fill encroachments or

placement of structures within floodplain areas. Avoidance and minimization efforts would include reducing encroachments by increasing the steepness of fill slopes and/or incorporating retaining walls, and lengthening of bridge spans to reduce or eliminate pier placement within floodplain areas.

Table III-2. Express Toll Lanes Alternative Impacts to 100-Year Floodplains

Floodplain	Express Toll Lanes Alternative (acres)
Little Gunpowder Falls	5.4
Gunpowder Falls	
Winters Run	2.5
HaHa Branch	0.2
Bynum Run	1.2
James Run	
Carsins Run	0.2
Total	**9.5**

4. Forests

The Preferred Alternative would impact 127 acres of forest. The majority of forest impacts would occur from improvements to the interchanges within the Study Area. To maintain traffic during construction and provide onsite staging areas and/or temporary roadways during different phases of construction, all of the woodlands within the immediate vicinity of the interchanges were assumed to have permanent impacts. Pending further study and/or final engineering design, impacts to some of these forested areas may be minimized. The majority of the affected forest stands are fragmented.

The Preferred Alternative will comply with the Maryland Reforestation Act, which requires the minimization of cutting or clearing trees, replacement of wooded areas affected and/or contributions to a reforestation fund for highway construction projects. Mitigation for forest impacts will be provided at a one-to-one ratio.

5. Large and Significant Trees

The Preferred Alternative would impact 47 large and significant trees. Of these 47 large and significant trees, 25 would be removed under the Preferred Alternative. As the project progresses into the design and construction phase, impacts to large and significant trees may change. Some trees may be avoided completely, while others may no longer remain suitable for retention due to effects from soil compaction, root injury, limb or trunk injury, or altered hydrology.

6. Forest Interior Dwelling Species (FIDS)

The Preferred Alternative would impact approximately 14.7 acres of Forest Interior Dwelling Species (FIDS) habitat within the Study Area due to the placement of SWM facilities and

roadway widening. The SWM facilities and road widening would result in a shift of the forest edge towards the interior of the forest, minimizing the interior habitat available.
MDTA will make every possible effort to avoid/minimize project impacts to FIDS habitat and other native forest plants and wildlife. Minimization measures could include the following:

- Avoiding placement of new roads or related construction in the forest interior. If unavoidable, restrict construction of roads to the perimeter of the forest.
- Avoiding removal or disturbance of forest habitat from May through August, which is the breeding season for most FIDS.
- Maintain forest habitat as close as possible to the road, and
- Maintain grass height of at least ten inches during the breeding season (May-August).

7. Threatened and Endangered Species

The U.S. Fish and Wildlife Service (USFWS) indicated that "except for occasional transient individuals, no federally proposed or listed endangered or threatened species are known to exist within the Study Area." On April 13, 2006, the DNR indicated the possible occurrence of the state rare Ostrich Fern (*Matteuccia struthiopteris*) within the vicinity of the Study Area. MDTA conducted a survey in September 2006 for the Ostrich Fern, which did not identify any occurrence of Ostrich Fern within the Study Area. On May 22, 2007, the DNR concurred with the findings and agree that there is no presence of Ostrich Fern in the Study Area (**Appendix C**).

8. Noise

There were 29 Noise Sensitive Areas (NSAs) identified in the Study Area. Within these NSAs, individual noise receptor locations were selected to represent each of the communities potentially affected by project improvements. A total of 228 receptors were identified within the 29 NSAs to represent the overall noise environment and to determine locations where residences may be impacted by traffic noise. Of the 29 NSAs, it was determined that the Preferred Alternative would impact seven NSAs.

Sound barriers were evaluated and found feasible and reasonable for all seven of the impacted NSAs within the Study Area: 1, 5/6, 13, 16, 17, 23, and 28 (**Table III-3**). Thus, to mitigate noise impacts, MDTA will construct sound barriers. The locations of the sound barriers are displayed on the Preferred Alternative Plates in **Appendix A**.

The noise analysis findings and recommendations will be reevaluated in the future for consistency with the Final Rule 23 CFR 772 published by FHWA on July 13, 2010.

Table III-3. Preliminary Noise Barrier Cost Analysis Summary

NSA	Length (ft)	Height (ft)	Cost of Sound Barrier	Benefited Residences	Cost/Benefited Residence	Location of Sound Barrier (plate #)
1	3,368	15-32	$1,913,251	26	$73,587	1,2
5/6	5,568	28	$3,012,984	101	$29,832	6,7,8
13	3,100	32	$1,906,647	61	$31,256	14,17
16	5,243	32	$3,225,118	58	$55,605	19,20
17	4,233	30	$2,447,462	26	$94,133	19,20,21
23	2,983	28	$1,614,397	160	$10,090	30,31
28	910	22	$543,373	18	$29,687	9,10

9. Air

The Section 200 Study Area is located in Baltimore and Harford counties, within the Metropolitan Baltimore Intrastate Air Quality Control Region. This region is not designated as a non-attainment area for the following pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), and particulate matter (PM_{10}). It is however designated as a non-attainment area for ozone (O_3) and fine particulate matter ($PM_{2.5}$). Because of this non-attainment designation for ozone, the region is subject to the implementation of reasonably available control measures, such as the Vehicle Emissions Inspection Program (VEIP), and also is subject to air quality conformity requirements under Section 176 of the Clean Air Act, which require that the region's long range transportation plan conform to the limits on pollutant emissions in Maryland's State Implementation Plan.

Additionally, since the project is located in a non-attainment area for $PM_{2.5}$, conformity to the State Implementation Plan (SIP) is determined through a regional air quality analysis performed on the Transportation Improvement Plan (TIP) and transportation plan. This project conforms to the SIP as it originates from a conforming TIP and transportation plan.

For $PM_{2.5}$, project level conformity also requires an assessment of localized emissions impacts for certain projects that meet the requirements of projects of air quality concern as described in 40 CFR 93.123(b)(1). On March 10, 2006, EPA issued amendments to the Transportation Conformity Rule to address localized impacts of particulate matter: *$PM_{2.5}$ and PM_{10} Hot-Spot Analyses in Project-level Transportation Conformity Determinations for the New $PM_{2.5}$ and Existing PM_{10} National Ambient Air Quality Standards* (71 FR 12468). These rule amendments require the assessment of localized air quality impacts of federally-funded or approved transportation projects in PM_{10} and $PM_{2.5}$ nonattainment and maintenance areas deemed to be *projects of air quality concern.* Since the Environmental Assessment (EA) was approved in

2007, the $PM_{2.5}$ analysis has been reevaluated (see analysis results below) to include current air quality information and guidance.[1, 2, 3,4]

a. CO Analysis

As described in the EA, a detailed microscale air quality analysis for CO was performed to determine the air quality impact of the proposed project. The State and National Ambient Air Quality Standards (S/NAAQS) for a 1-hour average is 35.0 ppm. The S/NAAQS for an 8-hour average is 9.0 ppm. Since there have been no significant changes to the project scope since approval of the *Air Quality Technical Report* (July 2007), air quality modeling results for CO are assumed to remain the same and do not require reevaluation at this time.

[1] **73FR4420 Transportation Conformity Rule Amendments To Implement Provisions Contained in the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA–LU); Final Rule.** On January 24, 2008 EPA issued an action in which "*EPA is amending the transportation conformity rule to finalize provisions that were proposed on May 2, 2007*". In this final rule "*EPA is changing § 93.104(b)(3) to require that the MPO and DOT determine conformity of a transportation plan at least every four years, and § 93.104(c)(3) to require that the MPO and DOT determine conformity of a transportation improvement program (TIP) at least every four years. The pre-existing regulations required these determinations to be made at least every three years.*"

[2] **Final PM Qualitative Guidance Clarification; June 12, 2009**: "*On March 29, 2006, the Environmental Protection Agency (EPA) and the Federal Highway Administration (FHWA) issued joint guidance on how to perform qualitative hot-spot analyses in $PM_{2.5}$ and PM_{10} nonattainment and maintenance areas titled, "Transportation Conformity Guidance for Qualitative Hot-spot Analysis in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas" (March 2006 guidance). The guidance provides information for State and local agencies to meet the $PM_{2.5}$ and PM_{10} hot-spot analysis requirements established in the March 10, 2006, final transportation conformity rule (71 FR 12468)"*

"Since issuing the March 2006 guidance, a lawsuit was filed challenging a project's conformity determination, including the project's $PM_{2.5}$ hot-spot analysis that relied on method A (comparison to another location with similar characteristics). Method A is described in question 4.1 of the March 2006 guidance. As part of a settlement agreement on that lawsuit (Environmental Defense, et al. v. USDOT, et al., No. 08-1107 (4th Cir., dismissed Nov. 17. 2008)), FHWA agreed to issue a clarification on a specific schedule, in coordination with EPA, to the March 2006 guidance. This clarification does not supersede the March 2006 guidance or the March 10, 2006 final transportation conformity rule; it only further explains how to implement the existing guidance and the hot-spot analysis requirements in the final rule. The clarification also does not create any new requirements and does not serve as guidance for $PM_{2.5}$ and PM_{10} quantitative hot-spot analyses."

[3] **75 FR 14260** Transportation Conformity Rule $PM_{2.5}$ and PM_{10} Amendments; Final Rule (March 24, 2010): "*In this action, EPA is amending the transportation conformity rule to finalize provisions that were proposed on May 15, 2009. These amendments primarily affect conformity's implementation in PM2.5 and PM10 nonattainment and maintenance areas. EPA is updating the transportation conformity regulation in light of an October 17, 2006 final rule that strengthened the 24-hour PM2.5 national ambient air quality standard (NAAQS) and revoked the annual PM10 NAAQS. In addition, EPA is clarifying the regulations concerning hot-spot analyses to address a December 2007 remand from the Court of Appeals for the District of Columbia Circuit. This portion of the final rule applies to PM2.5 and PM10 nonattainment and maintenance areas as well as carbon monoxide nonattainment and maintenance areas."*

[4] **EPA-420-P-10-001 Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas (May 2010): "***This guidance describes how to complete quantitative hot-spot analyses for certain highway and transit projects in PM2.5 and PM10 nonattainment and maintenance areas. This guidance describes conformity requirements for hot-spot analyses, and provides technical guidance on estimating project emissions with the Environmental Protection Agency's (EPA's) MOVES2010 model, California's EMFAC2007 model, and other methods. It also outlines how to apply air quality models for PM hot-spot analyses and includes additional references and examples. However, the guidance does not change the specific transportation conformity rule requirements for quantitative PM hot-spot analyses, such as what projects require these analyses……..EPA plans to establish a two-year grace period before MOVES is required in quantitative PM and CO hot-spot analyses."*

Modeling was conducted for the Study Area using the EPA's MOBILE 6.2 emissions model and CAL3QHC dispersion model to determine whether the project would cause any carbon monoxide (CO) "hotspots." The models predicted CO vehicular emissions at each receptor location in the existing year as well as the design year (2030) for the Express Toll Lanes Alternative and all associated interchange options. Background CO concentrations were added to the modeled 1-hour and 8-hour average CO concentrations for comparison to the State and National Ambient Air Quality Standards (NAAQS). No CO concentrations were predicted to be in violation of the NAAQS under either of the study years for any of the receptor locations for the preferred alternative.

b. $PM_{2.5}$ Analysis and Conformity Determination

As discussed in the Transportation Conformity Guidance, "*The March 10, 2006 final rule requires a qualitative $PM_{2.5}$ hot-spot analysis to be completed for project-level conformity determinations for projects of air quality concern completed on or after April 5, 2006, when $PM_{2.5}$ conformity requirements apply and the final rule is effective*". On March 29, 2006, the FHWA published Guidance on Qualitative Hot-Spot Analysis for $PM_{2.5}$ and PM_{10} in nonattainment areas. A $PM_{2.5}$ conformity determination for the I-95 Section 200 Project was provided in July 2007. As previously referenced, on June 12, 2009 EPA issued a clarification to this guidance. Specifically, EPA clarified "*how to conduct a qualitative $PM_{2.5}$ or PM_{10} hot-spot analysis using method A (comparison to another location with similar characteristics)*".[5]

On March 10, 2010, EPA signed *the Transportation Conformity Rule $PM_{2.5}$ and PM_{10} Amendments; Final Rule.* This rule was published in the Federal Register on March 24, 2010 (75 FR 14260) and became effective on April 23, 2010. This final rule updated the transportation conformity regulation in light of an October 17, 2006 final rule that strengthened the 24-hour $PM_{2.5}$ national ambient air quality standard (NAAQS) and revoked the annual PM_{10} NAAQS.[6]

Federal regulations provide the requirements for determining the frequency of air quality conformity determinations. Specifically, 40CFR93.104(d) requires a redetermination of conformity "*if one of the following occurs: a significant change in the project's design concept and scope; four*[7] *years elapse since the most recent major step to advance the project; or initiation of a supplemental environmental document for air quality purposes. Major steps include NEPA process completion; start of final design; acquisition of a significant portion of the right-of-way; and, construction (including Federal approval of plans, specifications and estimates).*"

The Baltimore, MD $PM_{2.5}$ area was designated as nonattainment for the 1997 $PM_{2.5}$ NAAQS on January 5, 2005 by the US EPA. This designation became effective on April 5, 2005, 90 days after EPA's published action in the Federal Register. Transportation conformity for the 1997 $PM_{2.5}$ standards applied on April 5, 2006, after the one-year grace period provided by the Clean

[5] Final PM Qualitative Guidance Clarification; June 12, 2009
[6] National Ambient Air Quality Standards for Particulate Matter; Final Rule (75 FR 14260)
[7] Amended per Transportation Conformity Rule Amendments To Implement Provisions Contained in the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA–LU); Final Rule [73FR4420]

Air Act. In October 2006 EPA issued a Final Rule revising the $PM_{2.5}$ NAAQS; reducing the level of the 24-hour $PM_{2.5}$ standard to 35 micrograms per cubic meter (µg/m3) and retaining the level of the annual $PM_{2.5}$ standard at 15µg/m3[8]. This Final Rule did not rescind the 1997 PM 2.5 NAAQS. Effective December 14, 2009, the Baltimore, MD $PM_{2.5}$ area was redesignated as attainment for the 2006 24-hour PM 2.5 NAAQS.[9] The area remains as nonattainment for the Annual $PM_{2.5}$ NAAQS. Transportation conformity for $PM_{2.5}$ standards remain the same as those set on April 5, 2006 for the 1997 NAAQS until April 23, 2011; the one-year grace period from the date that the Transportation *Conformity Rule PM2.5 and PM10 Amendments; Final Rule* became effective. As discussed on FHWA's frequently asked questions for "$PM_{2.5}$ Project-Level Conformity and Hot-Spot Analyses," if a project requires a FHWA approval or authorization, a project-level conformity determination is required prior to the first such action on or after April 5, 2006, even if the project has already completed the NEPA process, or for multi-phase projects, even if other phases of the project have already been constructed.

As discussed in the examples to the preamble to the March 10, 2006 *Final Rule for $PM_{2.5}$ and PM_{10} Hot-Spot Analyses in Project-Level Transportation Conformity Determinations* (71FR12491), for projects involving the expansion of an existing highway, 40 CFR 93.123(b)(1) has been interpreted as applying only to projects that would involve a significant increase in the number of diesel transit buses and diesel trucks on the existing facility. This has been further clarified in a final rule amendment which changed 40CFR93 as follows: "*93.123(b)(1)(i) New highway projects that have a significant number of diesel vehicles, and expanded highway projects that have a significant increase in the number of diesel vehicles;*"[9]

The Baltimore Regional Transportation Board approved the 2010-2013 TIP and the Transportation Outlook 2035, as adopted on November 30, 2009, concluded that the region's transportation plan and program are in conformity with the SIP relative to air quality goals. The U.S. Department of Transportation has made a conformity determination on the Transportation Outlook 2035 and 2010-2013 TIP. I-95 Section 200 is listed as a Regionally Significant and Non-Federally Funded Transportation Improvement in the 2010-2013 TIP. Therefore, the I-95 Section 200 Project has been included in a conforming plan and program in accordance with 40 CFR 93.115. The current conformity determination is consistent with the final conformity rule found in 40 CFR Parts 51 and 93.

Based on review and analysis of the proposed I-95 Section 200 Alternatives, it has been determined that the project has not been found to be a project of air quality concern as defined under 40 CFR 93.123(b)(1). This determination is based on the following elements of the proposed project:

- The project's traffic engineering data suggests there will not be a significant increase in the percentage of diesel vehicles utilizing the corridor. The Section 200 project does not have a significant increase in the number of diesel vehicles due to construction of the

[8] National Ambient Air Quality Standards for Particulate Matter; Final Rule (75 FR 14260)
[9] Air Quality Designations for the 2006 24-Hour Fine Particle (PM2.5) National Ambient Air Quality Standards; Final Rule (74FR58688)
[9] National Ambient Air Quality Standards for Particulate Matter; Final Rule (75 FR 14260)

project. As shown in Table III-4, the truck traffic associated with the 2030 "Build" condition versus the "No-Build" condition indicates an increase in overall truck volumes of 200 vehicles.

- Future truck percentages are assumed to be slightly less (0.56%) than the existing truck percentages for the purpose of this analysis. Current and future build and no build traffic data are listed in the table below. Depicted truck percentages represent the amount of light, medium and heavy truck activity along a given roadway segment in accordance with FHWA's 13 vehicle classification guidelines. Existing percentages are derived from 48-hour portable classified count data. Without the addition of significant truck land use generators to the traffic influence area, truck percentages would remain relatively unchanged between the No-Build and Build conditions. Current truck origin-destination patterns will dictate future patterns, unless changes are made in policy or there is a significant influx in truck generators to the traffic influence area – neither of which has been assumed by the approved Regional Transportation model.

- The difference in number of "diesel" trucks between the "build" and "no-build" would be further diminished as diesel trucks represent only a portion of the overall trucks using this facility that is shown in **Table III-4**. Diesel trucks are the primary contributor of transportation-induced $PM_{2.5}$ emissions.

- The implementation of the EPA's "2007 Highway Rule" is projected to remove diesel engine emissions from the equivalent of 90 percent of the total truck fleet, or about 13 million trucks and buses, by the year 2030. EPA's 2007 "Highway Rule" was finalized in January 2001. A variety of approaches have been considered in developing the qualitative assessment for this project relative to $PM_{2.5}$ conformity. Considering the multitude of factors and trends that will affect the particulate emissions of diesel vehicles, the most critical element is the incorporation of the EPA's "2007 Highway Rule", finalized in January 2001.

Table III-4: 2030 Build and No-Build AADT and Truck Volumes

		2005	2030 Build	2030 No build	Change between Build and No Build
AADT	Min Max	89,000 165,000	131,000 231,000	129,000 229,000	2,000 2,000
Truck Percentage*		11.51%	10.95%	10.96%	0.01%
Truck Volume	Min Max	12,000 19,000	17,100 25,300	16,900 25,100	200 200

*Truck percentage is based on maximum AADT volumes

Based on review and analysis as discussed above, it is determined that the Section 200 project will not lead to a significant increase in diesel vehicles and does not meet any other criteria in 40

CFR 93.123(b) for a project of air quality concern. In addition, the project meets the Clean Air Act (CAA) and 40 CFR 93.109 requirements for particulate matter without a project-level hot-spot analysis, since the project has **not been found to be a project of air quality of concern** as defined under 40 CFR 93.123(b)(1). Since the project meets the Clean Air Act and 40 CFR 93.109 requirements, the project will not cause or contribute to a new violation of the $PM_{2.5}$ NAAQS, or increase the frequency or severity of a violation.

By email dated May 14, 2010 the above analysis was approved by MDTA, and was sent to FHWA. By email dated May 26, 2010 the analysis was approved by FHWA and forwarded to EPA, MDE and Baltimore Metropolitan Council (BMC) for Interagency Consultation. On June 9, 2010 approval was received from the Interagency Consultation Group (EPA, MDE and BMC) with some minor comments from BMC, which have been addressed. FHWA, EPA, BMC and MDE agreed with the conclusion that the Section 200 project **is not a project of air quality concern under 40 CFR 93.123(b)(1)**. On June 30, 2010, this $PM_{2.5}$Conformity Determination was placed on MDTA's website, beginning a 15-day pubic review and comment period. No comments were received during the review period.

c. Construction Related Emissions

The Maryland State Highway Administration has established "Specifics for Construction and Materials" as procedures to be followed by contractors involved in construction activities in an effort to minimize impacts to ambient air quality through the generation of fugitive dust. The Maryland Air and Radiation Management Administration (ARMA) was consulted, and determined that these specifications would satisfy the requirements of the *Regulations Governing the Control of Air Pollution in the State of Maryland*. Therefore, during the construction period, all appropriate measures (Code of Maryland regulations 26.11.06.03D) will be incorporated to minimize the impact of the proposed transportation improvements on the air quality of the area. Specifically, the application of water during demolition, land clearing, grading, and construction operations will work to minimize fugitive dust. Also, when in motion, all open body trucks for transporting materials should be covered and excavated material should be removed from the project site promptly.

Construction-related emissions for the project were considered to be temporary since construction-related emissions will last less than five years at any one site, meeting the criterion of section 93.123 (c)(5). Therefore, construction emissions are not required to be included in the CO hotspot analysis. EPA has not approved a $PM_{2.5}$ SIP for Maryland, nor has EPA or the state air agency made any significance findings related to reentrained road dust for the Baltimore, MD $PM_{2.5}$ nonattainment area. Therefore reentrained road dust is not considered in the analysis, per the Conformity Rule. In addition, as there is not an applicable $PM_{2.5}$ SIP, there are no $PM_{2.5}$ control measures and the project is in compliance with 40 CFR 93.117.

d. Mobile Source Air Toxics (MSATs) Analysis Background

In addition to the criteria air pollutants for which there are National Ambient Air Quality Standards (NAAQSs), the EPA also regulates air toxics. Most air toxics originate from human-

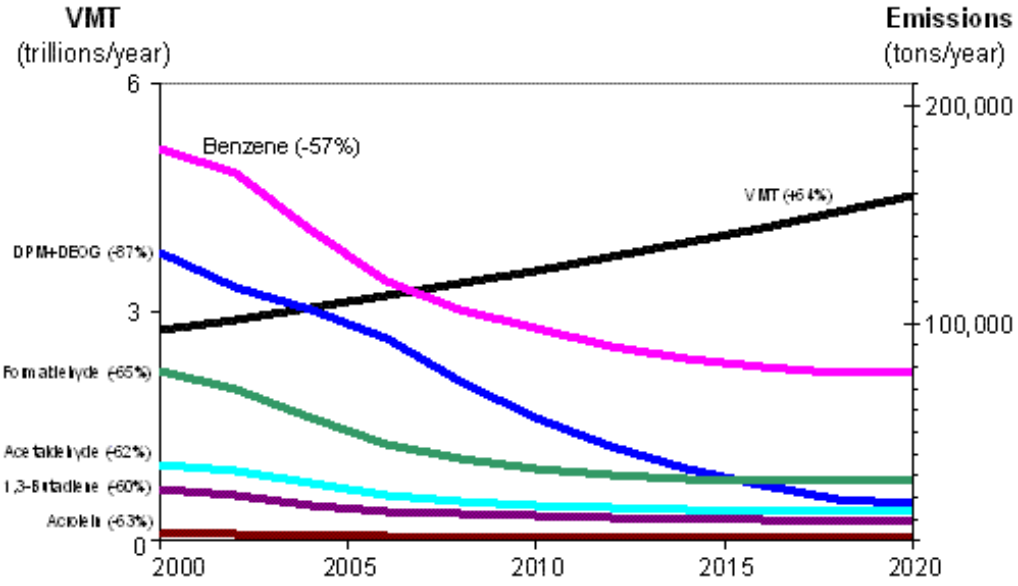
made sources including on-road mobile sources, non-road mobile sources (e.g. airplanes), area sources (e.g., dry cleaners) and stationary sources (e.g., factories or refineries).

Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics defined by the CAA. The MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

The EPA is the lead Federal Agency for administering the CAA and has certain responsibilities regarding the health effects of MSATs. The EPA issued a Final Rule on Controlling Emissions of Hazardous Air Pollutants from Mobile Sources, 66 FR 17229 (March 29, 2001). This rule was issued under the authority in Section 202 of the CAA. In its rule EPA examined the impacts of existing and newly promulgated mobile source control programs, including its reformulated gasoline (RFG) program, its national low emission vehicle (NLEV) standards, its Tier 2 motor vehicle emissions standards and gasoline sulfur control requirements, and its proposed heavy duty engine and vehicle standards and on-highway diesel fuel sulfur control requirements. Between 2000 and 2020, the FHWA has determined that even with a 64 percent increase in VMT (vehicle miles traveled), these programs will reduce on-highway emissions of benzene, formaldehyde, 1,3-butadine, and acetaldehyde by 57 percent to 65 percent, and will reduce on-highway diesel PM emissions by 87 percent, as shown in the following graph:

EPA adopted its second MSAT Rule in February 2007 which regulates emissions further by setting more restrictive engine emission standards for new vehicles. These new standards will cause increased emission reductions in addition to those already forecasted in **Figure III-1**.

Figure III-1. U.S. Annual Vehicle Miles Traveled (VMT) vs. Mobile Source Air Toxics Emissions, 2000-2020



e. MSAT Project Level Assessment

As discussed above, technical shortcomings of emissions and dispersion models and uncertain science with respect to health effects prevent meaningful or reliable estimates of MSAT emissions and effects of this project. The Section 200 project has AADT values greater than 150,000 by the Design Year 2030, and also has the potential to significantly increase the capacity of the mainline roadway due to the addition of travel lanes. Although the volume exceeds FHWA's recommended volume for performing a qualitative analysis, it is believed that a qualitative analysis is warranted for this project. The projected AADT will not exceed the FHWA guidance until 2030. Over the next 20 years, significant additional reductions in vehicle emitted pollutants are anticipated as noted in the **Figure III-1.** These additional reductions will come as a result of technology changes occurring now, such as hybrid vehicles, and through regulations such as EPA's new MSAT2 Rule adopted February 2007. The additional reductions ***are not accounted*** for in **Figure III-1**.

If mitigation were to be considered for this project, there are several strategies that could potentially be employed in an attempt to minimize the long-term MSATs emissions (as outlined in the FHWA's Interim Guidance on Air Toxic Analysis in NEPA Documents, February 2006). Operational strategies that focus on speed limit enforcement or traffic management policies may help reduce MSAT emissions even beyond the benefits of fleet turnover. Well-traveled highways with high proportions of heavy-duty diesel truck activity may benefit from active Intelligent Transportation System programs, such as traffic management centers or incident management systems.

Planners also may want to consider the benefits of establishing buffer zones between new or expanded highway alignments and areas of vulnerable populations. Modifications of local zoning or the development of guidelines that are more protective also may be useful in separating emissions and receptors. The initial decision to pursue MSATs emissions mitigation should be the result of interagency consultation.

In this document, MDTA has been provided with a qualitative analysis of MSATs emissions relative to the various alternatives, and has acknowledged that the project alternatives may result in increased exposure to MSAT emissions in certain locations, although the concentrations and duration of exposures are uncertain. Because of this uncertainty, the health effects from these emissions cannot be estimated.

Unavailable Information for Project Specific MSAT Impact Analysis: This Air Quality Report includes a basic analysis of the likely MSAT emission impacts of this project. However, available technical tools do not enable us to predict the project-specific health impacts of the emission changes associated with the alternatives in this Technical Air Quality Report. Due to these limitations, the following discussion is included in accordance with CEQ regulations (40 CFR 1502.22(b)) regarding incomplete or unavailable information:
Information that is Unavailable or Incomplete: Evaluating the environmental and health impacts from MSATs on a proposed highway project would involve several key elements, including emissions modeling, dispersion modeling in order to estimate human exposure to the

estimated concentrations, and then final determination of health impacts based on the estimated exposure. Each of these steps is encumbered by technical shortcomings or uncertain science that prevents a more complete determination of the MSAT health impacts of this project.

i. Emissions

The EPA tools to estimate MSAT emissions from motor vehicles are not sensitive to key variables determining emissions of MSATs in the context of highway projects. While MOBILE 6.2 is used to predict emissions at a regional level, it has limited applicability at the project level. MOBILE 6.2 is a trip-based model - emission factors are projected based on a typical trip of 7.5 miles, and on average speeds for this typical trip. This means that MOBILE 6.2 does not have the ability to predict emission factors for a specific vehicle operating condition at a specific location at a specific time. Because of this limitation, MOBILE 6.2 can only approximate the operating speeds and levels of congestion likely to be present on the largest-scale projects, and cannot adequately capture emissions effects of smaller projects. For particulate matter, the model results are not sensitive to average trip speed, although the other MSAT emission rates do change with changes in trip speed. Also, the emissions rates used in MOBILE 6.2 for both particulate matter and MSATs are based on a limited number of tests of mostly older-technology vehicles. Lastly, in its discussions of PM under the conformity rule, EPA has identified problems with MOBILE 6.2 as an obstacle to quantitative analysis. These deficiencies compromise the capability of MOBILE 6.2 to estimate MSAT emissions. MOBILE 6.2 is an adequate tool for projecting emissions trends, and performing relative analyses between alternatives for very large projects, but it is not sensitive enough to capture the effects of travel changes tied to smaller projects or to predict emissions near specific roadside locations.

ii. Dispersion

The tools to predict how MSATs disperse are also limited. The EPA's current regulatory models, CALINE3 and CAL3QHC, were developed and validated more than a decade ago for the purpose of predicting episodic concentrations of carbon monoxide to determine compliance with the NAAQS. The performance of dispersion models is more accurate for predicting maximum concentrations that can occur at some time at some location within a geographic area. This limitation makes it difficult to predict accurate exposure patterns at specific times at specific highway project locations across an urban area to assess potential health risk. The NCHRP is conducting research on best practices in applying models and other technical methods in the analysis of MSATs. This work also will focus on identifying appropriate methods of documenting and communicating MSAT impacts in the NEPA process and to the general public. Along with these general limitations of dispersion models, FHWA is also faced with a lack of monitoring data in most areas for use in establishing project-specific MSAT background concentrations.

iii. Exposure Levels and Health Effects

Finally, even if emission levels and concentrations of MSATs could be accurately predicted, shortcomings in current techniques for exposure assessment and risk analysis preclude us from reaching meaningful conclusions about project-specific health impacts. Exposure assessments are difficult because it is difficult to accurately calculate annual concentrations of MSATs near

roadways, and to determine the portion of a year that people are actually exposed to those concentrations at a specific location. These difficulties are magnified for 70-year cancer assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over a 70-year period. There are also considerable uncertainties associated with the existing estimates of toxicity of the various MSATs, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population. Because of these shortcomings, any calculated difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with calculating the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against other project impacts that are better suited for quantitative analysis.

Summary of Existing Credible Scientific Evidence Relevant to Evaluating the Impacts of MSATs: Research into the health impacts of MSATs is ongoing. For different emission types, there are a variety of studies that show that some either are statistically associated with adverse health outcomes through epidemiological studies (frequently based on emissions levels found in occupational settings) or that animals demonstrate adverse health outcomes when exposed to large doses.

Exposure to toxics has been a focus of a number of EPA efforts. Most notably, the agency conducted the National Air Toxics Assessment (NATA) in 1996 to evaluate modeled estimates of human exposure applicable to the county level. While not intended for use as a measure of or benchmark for local exposure, the modeled estimates in the NATA database best illustrate the levels of various toxics when aggregated to a national or State level.

The EPA is in the process of assessing the risks of various kinds of exposures to these pollutants. The EPA Integrated Risk Information System (IRIS) is a database of human health effects that may result from exposure to various substances found in the environment. The IRIS database is located at http://www.epa.gov/iris. The following toxicity information for the six prioritized MSATs was taken from the IRIS database *Weight of Evidence Characterization* summaries. This information is taken verbatim from EPA's IRIS database and represents the Agency's most current evaluations of the potential hazards and toxicology of these chemicals or mixtures.

- **Benzene** is characterized as a known human carcinogen.
- **Formaldehyde** is a probable human carcinogen, based on limited evidence in humans, and sufficient evidence in animals.
- **1,3-butadiene** is characterized as carcinogenic to humans by inhalation.
- **Acetaldehyde** is a probable human carcinogen based on increased incidence of nasal tumors in male and female rats and laryngeal tumors in male and female hamsters after inhalation exposure.
- **Diesel exhaust** (DE) is likely to be carcinogenic to humans by inhalation from environmental exposures. Diesel exhaust as reviewed in this document is the combination of diesel particulate matter and diesel exhaust organic gases.
- **Diesel exhaust** also represents chronic respiratory effects, possibly the primary noncancer hazard from MSATs. Prolonged exposures may impair pulmonary function

and could produce symptoms, such as cough, phlegm, and chronic bronchitis. Exposure relationships have not been developed from these studies.

There have been other studies that address MSAT health impacts in proximity to roadways. The Health Effects Institute, a non-profit organization funded by EPA, FHWA, and industry, has undertaken a major series of studies to research near-roadway MSAT hot spots, the health implications of the entire mix of mobile source pollutants, and other topics. The final summary of the series is not expected for several years.

Some recent studies have reported that proximity to roadways is related to adverse health outcomes -- particularly respiratory problems. Much of this research is not specific to MSATs, instead surveying the full spectrum of both criteria and other pollutants. The FHWA cannot evaluate the validity of these studies, but more importantly, they do not provide information that would be useful to alleviate the uncertainties listed above and enable us to perform a more comprehensive evaluation of the health impacts specific to this project.

Relevance of Unavailable or Incomplete Information to Evaluating Reasonably Foreseeable Significant Adverse Impacts on the Environment, and Evaluation of impacts based upon theoretical approaches or research methods generally accepted in the scientific community: Because of the uncertainties outlined above, a quantitative assessment of the effects of air toxic emissions impacts on human health cannot be made at the project level. While available tools do allow us to reasonably predict relative emissions changes between alternatives for larger projects, the amount of MSAT emissions from each of the project alternatives and MSAT concentrations or exposures created by each of the project alternatives cannot be predicted with enough accuracy to be useful in estimating health impacts. (As noted above, the current emissions model is not capable of serving as a meaningful emissions analysis tool for smaller projects.) Therefore, the relevance of the unavailable or incomplete information is that it is not possible to make a determination of whether any of the alternatives would have "significant adverse impacts on the human environment."

10. Hazardous Materials

A Preliminary Site Assessment (PSA) was conducted for the JFK Maintenance Facility #1, located at 2819 Belcamp Road, near the northwest quadrant of the I-95/MD 543 interchange. Soil sample analysis determined that contaminated soil is present within the maintenance facility property, however the current design of the Preferred Alternative would not impact this site. Should the design change during the detailed design phase, additional studies are recommended to determine the extent of contamination. Furthermore, it is recommended that additional soil sampling and monitoring should occur prior to any ground disturbing work in the vicinity of the JFK Maintenance Facility #1.

11. Streams

MDTA has coordinated with the USACE to ensure all minimization and avoidance efforts for stream and wetland impacts have been considered during the planning phase of Section 200.

MDTA will continue to coordinate with the USACE on all stream and wetland impacts throughout the design and construction phases.

Several stream crossings would be required for the Preferred Alternative resulting in 9,931 linear feet of perennial and intermittent stream impacts and 7,650 linear feet of impacts to ephemeral systems (**Table III-5**). The impacts would include culvert extensions, channel relocations, filling of waters, and piping of waters between existing culverts. Stream impact numbers have been reduced since publication of the Environmental Assessment with the refinement of the jurisdictional status of waters and implementation of additional avoidance and minimization measures.

Table III-5. Stream Impacts from the Express Toll Lanes Alternative

Interchange Option	STREAM IMPACTS			
	Permanent		Temporary	
	Perennial and Intermittent	Ephemeral	Perennial and Intermittent	Ephemeral
Mainline	2,409 l.f. *(9,944 s.f.)*	4,340 l.f. *(12,126 s.f.)*	2,896 l.f. *(15,062 s.f.)*	2,686 l.f. *(9,677 s.f.)*
MD 152				
Option 1A	3,560 l.f. *(18,417 s.f.)*	1,536 l.f. *(5,412 s.f.)*	1,312 l.f. *(9,534 s.f.)*	693 l.f. *(2,237 s.f.)*
MD 24				
Option 2	3,040 l.f.* *(26,607 s.f.)*	297 l.f.* *(2,004 s.f.)*	380 l.f.* *(4,064 s.f.)*	0
MD 543				
Option 7	839 l.f. *(3,411 s.f.)*	825 l.f. *(2,568 s.f.)*	1,086 l.f. *(3,803 s.f.)*	522 l.f. *(1,849 s.f.)*
MD 22				
Option 1	83 l.f. *(2,734 s.f.)*	652 l.f. *(1,700 s.f.)*	130 l.f. *(2,405 s.f.)*	1,792 l.f. *(3,579 s.f.)*
Total	**9,931 l.f.** ***(61,113 s.f.)***	**7,650 l.f.** ***(23,810 s.f.)***	**5,804 l.f.** ***(34,868 s.f.)***	**5,693 l.f.** ***(17,342 s.f.)***

*Impacts calculated for stream impacts at the I-95/MD 24 Interchange Option 2 do not include previously impacted streams by the I-95/MD 24 Interchange Project (Permit # 06-NT-0189/200663654).

The majority of the streams impacted are classified as "Use I waters" and have minimal value for aquatic life. Most of the intermittent and ephemeral streams' primary water source is stormwater runoff from I-95.

Complete avoidance of stream systems by the Preferred Alternative is not feasible because most of the impacted systems lie perpendicular to existing I-95. Minimization efforts for Waters of the United States (WUS) include the use of steeper (2:1) roadway embankments and retaining walls to minimize the footprint. As this project progresses into final design, avoidance and minimization measures will continue to be evaluated. Minimization of additional effects such as shading, loss of riparian vegetation, and potential changes to stream hydrology/hydraulics will be considered during the final design. Many streams in the Study Area currently have floodplain

access; this will be retained wherever possible to preserve benefits such as velocity dissipation, storage, and sedimentation/stabilization. Retaining or adding riparian buffers will also be considered during the project's design phase.

12. Wetlands

The Preferred Alternative would permanently impact 1.19 acres of wetlands and temporarily impact 0.90 acre of wetlands. All temporary impacts were determined using a 25 foot buffer from the proposed limits of disturbance (LOD) for this alternative. Wetland impact numbers have been reduced since publication of the Environmental Assessment because of refinements to the jurisdictional status of wetlands and implementation of additional avoidance and minimization measures. Please refer to **Appendix A** for the locations of the wetlands in association with the Preferred Alternative. Impacts to wetlands are listed in **Table III-6 and Appendix E**.

Avoidance of wetlands located adjacent to existing I-95 is not achievable. Unavoidable impacts to wetlands will be minimized by using steeper cut and fill slopes or constructing retaining walls wherever possible and reasonable. Portions of the roadway were specifically designed to impact the median and minimize impacts to adjacent high quality streams and wetlands.

Table III-6. Express Toll Lanes Alternative – Interchange Options Impacts to Wetlands

Alternative/ Option	Wetland Type	Wetland Impacts		Isolated Wetlands (Waters of the State)	
		Permanent (acres)	Temporary (acres)	Permanent (acres)	Temporary (acres)
ETL Mainline	PFO	0.28	0.37	0.01	0.00
	PSS	0.02	0.00	0.00	0.00
	PEM	0.05	0.03	0.05	0.03
MD 152 Option 1A	PFO	0.28	0.12	0.15	0.04
	PSS	0.08	0.00	0.00	0.00
	PEM	0.11	0.02	0.02	0.01
MD 24 Option 2	PFO	0.26	0.24	0.00	0.00
	PSS	0.00	0.00	0.00	0.00
	PEM	0.00	0.02	0.00	0.00
MD 543 Option 7	PFO	0.00	0.03	0.00	0.00
	PSS	0.00	0.00	0.00	0.00
	PEM	0.09	0.08	0.00	0.00
MD 22 Option 1	PFO	0.00	0.00	0.00	0.00
	PSS	0.00	0.00	0.00	0.00
	PEM	0.00	0.00	0.00	0.00
Subtotals	**PFO**	**0.83**	**0.75**	**0.16**	**0.04**
	PSS	**0.10**	**0.00**	**0.00**	**0.00**
	PEM	**0.26**	**0.15**	**0.07**	**0.04**
TOTALS		**1.19**	**0.90**	**0.23**	**0.08**

*Impacts calculated for wetland impacts at the I-95/MD 24 Interchange Option 2 do not include previously impacted wetlands by the I-95/MD 24 Interchange Project (Permit # 06-NT-0189/200663654).

D. Publicly Owned Parks and Recreation Areas

The Preferred Alternative would not require the use of any publicly owned public parks or recreation areas. Therefore, coordination through the Section 4(f) process is not required. Retaining walls were added to reduce the footprint of disturbance, thereby avoiding impacts to Gunpowder Falls State Park, the Clayton Road Conservation Area, and the Bush Declaration Natural Resources Management Area.

E. Indirect and Cumulative Effects Analysis (ICE) Summary

The ICE used a geographic boundary and temporal limits to evaluate impacts to socio-economic, cultural, and natural environmental resources. The ICE boundary was determined by overlaying a combination of individual socio-economic and natural resource sub-boundaries including census tracts, area of traffic influence (ATI), and sub-watersheds. Although several sub-boundaries were considered, the ICE boundary for this study consists of the census tract sub-boundary only; the ATI boundary was entirely within the census tract boundary, and because of its large size, the sub-watershed boundary was only used to evaluate impacts to natural resources.

A time frame of 60 years was selected for the ICE (1970-2030). This time frame was chosen after reviewing historical events that took place in the project area, changes in population growth, availability of data, and the design year of the project.

Land use is not anticipated to change substantially in the ICE boundary as a result of the Preferred Alternative. Areas most likely to experience additional residential development include undeveloped areas in the vicinity of interchange locations. Typically, these areas are zoned to permit future development. Within the Section 200 corridor, the majority of undeveloped lands are outside of the Baltimore County designated Urban Rural Demarcation Line (URDL), and the Harford County designated Development Envelope. Therefore, large scale developments in these areas are unlikely, unless the boundaries of the designated growth areas identified by the respective Counties are expanded.

The Preferred Alternative will have direct, indirect, and cumulative effects on socio-economic, cultural, and natural environmental resources, including effects to surface water/aquatic habitat, forest/terrestrial habitat, floodplains, wetlands, cultural resources, and communities and businesses. However, any indirect and cumulative impacts to these resources will be regulated by applicable State, Local, and Federal laws protecting individual resources (such as the Clean Water Act, the Maryland Forest Conservation Act, and the National Historic Preservation Act).

Within the Section 200 corridor, I-95 is a limited access interstate highway, connected by only grade-separated interchanges. Although several interchanges may be impacted by the proposed improvements, no new interchanges or road connections will be provided by this project. The Section 200 project will not provide any road linkages that do not presently exist, and therefore will not open additional areas to development opportunities. Because of the land use and zoning restrictions currently in place by Baltimore and Harford Counties, and that fact that

redevelopment and infill opportunities are available on parcels of land that are currently zoned for commercial, industrial, or other uses, it is unlikely that the construction of the Section 200 project will result in significant land use changes.

IV. MITIGATION

Although the Compensatory Mitigation for Losses of Aquatic Resources rule issued by the USACE and Environmental Protection Agency (EPA) on April 10, 2008 indicates the mitigation banking and in-lieu fee are the preferred methods of mitigation, based on direction and coordination with USACE and MDE, MDTA intends to pursue the following approaches for Section 200 mitigation:

- On-site, in-kind and within the same watershed
- Off-site, out-of-kind and within the same watershed

MDTA is willing to pursue mitigation banking and in-lieu fee as additional mitigation approaches during the design phase of this project if it is deemed necessary by the USACE in order to satisfy all permit requirements.

In many circumstances, proposed roadway drainage would replace existing roadway drainages that will be affected by the Preferred Alternative. Also, any concrete channels carrying ephemeral systems impacted by the Preferred Alternative will be replaced in-kind with natural channels. For those systems which cannot be replaced in-kind, a mitigation site search was conducted using GIS information, a review of aerial photography, and field reviews. MDTA coordinated with the USACE, EPA, MDE, National Marine Fisheries Service (NMFS), United States Department of Agriculture (USDA), and the Harford County Department of Planning and Zoning (HCDPZ) for existing opportunities and a field reconnaissance and assessment of all identified sites.

A. On-site Mitigation

There are several intermittent and perennial stream systems in the project area that are contained within concrete channels. In an effort to improve the quality of these systems, all concrete channels containing intermittent and perennial streams will be replaced with natural channels as part of the design for the Preferred Alternative. **Table IV-1** identifies all of the perennial and intermittent concrete lined systems that will be replaced with natural channels during design. Also, the ephemeral channels that will be replaced in-kind are listed in the table.

WUS ID	Hydrologic Regime	Length (Linear Feet)	Area (Square Feet)
WUS 23A	Perennial	79.0	419.8
WUS 25B	Perennial	14.5	27.9
WUS 13E	Perennial	401.8	1976.1
WUS 14E	Perennial	916	8696.6
WUS 7F-ff	Perennial	17.7	144.9
WUS 5F-ka	Perennial	22.4	67.2
WUS 5F-bb	Perennial	144.2	5964.4

Table IV-1. Replacement of Perennial and Intermittent Concrete Lined Channels

As

	Hydrologic Regime	Length (Linear Feet)	Area (Square Feet)
WUS 24B	Perrenial	238.0	512.2
WUS 4D	Perrenial	397.3	2864.4
Total Perrenial		**2,230.9**	**25,560.9**
WUS 39A-a	Intermittent	236.1	610.4
WUS 17D-a	Intermittent	23.3	107.8
WUS 8E	Intermittent	97.8	525.3
WUS 9E	Intermittent	60.4	250.2
WUS 14E-d	Intermittent	20.1	103.6
Total Intermittent		**437.6**	**1,597.4**
WUS 36A	Ephemeral	46.5	150.6
WUS 13C	Ephemeral	105.2	368.7
WUS 1D	Ephemeral	347.8	2293.3
WUS 2D	Ephemeral	175.6	748.0
WUS 2D-a	Ephemeral	124.0	388.5
WUS 2D-b	Ephemeral	4.3	16.1
WUS 20E-1	Ephemeral	117.2	252.4
WUS 20E-2	Ephemeral	106.5	235.5
WUS 11F	Ephemeral	73.0	239.4
Total Ephemeral		**1,100.1**	**4,692.5**
Total		**3,768.7**	**31,850.7**

indicated in **Table IV-1**, MDTA will be able to mitigate for over 2,660 linear feet of perennial and intermittent stream impacts by implementing natural channels in the design of the Preferred Alternative.

1. Carsins Run

The Carsins Run site is located where I-95 crosses Carsins Run just north of the I-95/MD 22 interchange and is located in the Swann Creek watershed (**Figure IV-1**). This perennial system was channelized under I-95 when this portion of I-95 was initially constructed in the 1960's. The existing stream flows through a concrete channel, where the bottom of the channel has been washed out, portions of the concrete bank have failed and the box culvert blocks fish passage.

Approximately 739 feet of stream is targeted for restoration. The improvements will be accommodated by removing the concrete flume and fish blockage and increasing channel sinuosity. Additional restoration of floodplain and wetlands may be feasible depending on further studies and coordination between highway designers and the preliminary mitigation design team. Wetlands restoration or enhancement at this location is considered an additional potential benefit associated with improved floodplain access. Wetland functions and values within this system will be primarily beneficial for water quality conditions versus wildlife habitat.

The total on-site mitigation available is presented in **Table IV-2**.

2. Gray's Run

The Gray's Run site is located on-site where I-95 crosses Gray's Run under Structure H-X832C, a two (2) cell rectangular concrete box culvert located just north of Stepney Road along I-95, and is located in the Gray's Run watershed (**Figure IV-2**). This perennial system was channelized under I-95 when this portion of I-95 was initially constructed in the 1960's. The existing stream's base flow currently runs through both culvert cells. The downstream end of the culvert is moderately disconnected from the stream channel and maintenance crews occasionally must replace the riprap channel protection at the culvert outlet to prevent the development of a vertical drop from the culvert invert to the stream. The current culvert configuration presents a significant blockage to fish passage.

Approximately 1,043 feet of stream is targeted for restoration. The improvements will be accommodated by removing the fish blockage. The improvements should also improve habitat suitability for resident fish species as well as for migratory fish species, such as blueback herring and alewife. Additional restoration of floodplain and wetlands may be feasible depending on further studies and coordination between highway designers and the preliminary mitigation design team. Wetlands restoration or enhancement at this location is considered an additional potential benefit associated with improved floodplain access. Wetland functions and values within this system will be primarily beneficial for water quality conditions versus wildlife habitat.

As previously described, Gray's Run crosses I-95 within a two cell rectangular concrete box culvert. The conceptual restoration approach to Grays Run is to utilize the river-right culvert cell for baseflow and construct a bankfull bench across the left cell since the stream is over-widened in this area. This could be accomplished by raising the invert of the left culvert cell at both the upstream and downstream ends to the elevation of the bankfull stage while also installing a bankfull bench both upstream and downstream of the culvert. A detailed culvert hydrologic and hydraulic study would need to be performed to ensure that the proposed modification to the culvert cell would not adversely impact the frequency of flooding. The bankfull bench would continue the full length of the restored channel and transition into the existing floodplain where possible. The bench would be planted with live stakes and other shade and wet tolerant vegetation. An inner berm feature could be constructed in the baseflow channel to decrease the width to depth ratio and allow for better fish passage in the stream at the low flow stage. A preformed scour hole at the downstream end of the culvert and a series of step pools further downstream may be necessary to not only protect the channel from degradation but also to reconnect the culvert to the stream in a way that allows fish to migrate upstream with less difficulty. A study of the use of concrete baffles installed within the existing culvert to provide cover / resting areas for fish can be performed if determined to be beneficial to the project.

The final restoration design would attempt to utilize reference reach data to determine flow conditions (velocities and depths) that occur in those reaches during the migratory-fish spawning period (March 1-June 15 for river herring). This flow data will then be applied to designing the low-flow (right) cell of the culvert crossing, to ensure passable flow conditions for the migrating fish during this time of year. The goal is to provide a stable channel-form that is able to transport the available water and sediment delivered from its watershed, while improving habitat for flora and fauna and successful passage for migratory fish.

3. Winter's Run

The existing structure carrying I-95 over Winter's Run restricts flow in this area and cuts off an existing equestrian trail (**Figure IV-3**). The existing structure will be replaced with a wider, longer, and elevated span that will span the entire Winter's Run stream and remove all existing piers out of the stream. Also, the design of the new crossing will include removal of the center island in the stream and the existing concrete slope along Winter's Run Road/Fashion Way to widen the available floodplain and restore the natural flow of the stream. A retaining wall would be used to replace the concrete slope. This would allow for additional floodplain enhancement.

Table IV-2. On-site Stream and Wetland Mitigation Quantities

	Replace Concrete Channels*	**Carsins Run**	**Gray's Run**	**Winter's Run**	**Total**
Stream Mitigation					
Intermittent (l.f. / s.f.)	440 / 1,600	0 / 0	0 / 0	0/0	440 / 1,600
Perennial (l.f. / s.f.)	2,230 / 25,600	739 / 10,773	1,043 / 16,358	1,916/110,333	4,012 / 52,731
Total Streams (l.f. / s.f.)	**2,670 / 27,200**	**739 / 10,773**	**1,043 / 16,358**	1,916/110,333	**6,368 / 164,664**
Floodplain Creation/Enhancement					
Floodplain Creation/Enhancement	**0**	**0**	**0**	4.29	**4.29**

*Includes mitigation proposed for WUS 14E

B. Off-site Mitigation Sites

1. Gonzalez Property

The Gonzalez property is located along MacPhail Road in Harford County in the Bynum Run watershed (**Figure IV-4**). Approximately 2,425 linear feet of Bynum Run flows through the property. Based on USACE, NMFS and MDE field visit and comments, MDTA has determined that the entire portion of Bynum Run has potential for stream restoration, floodplain creation and enhancement, and riparian creation and enhancement. An important aspect of the stream restoration includes removal and replacement of the existing driveway crossing which will allow for unimpeded stream flow underneath the driveway crossing.

The low-head culvert driveway crossing of Bynum Run to access the Gonzalez property has failed. The crossing is preventing continual flow of Bynum Run downstream. The failed crossing

has led to siltation and bank erosion upstream and excessive bank erosion and scouring downstream. The site will also require floodplain creation and enhancement and riparian buffer creation and enhancement due to the damage that has occurred from the failed driveway crossing blocking the stream. Construction of a floodplain can utilize the existing sediment that has accumulated upstream. This sediment source should be composed of material that is greater than 70% sand and gravel for floodplain construction or reconstruction. The fine particles from this source should be deposited in an upland area. Additionally, a partially exposed sanitary-sewer crosses the main stem of Bynum Run, located in the most downstream assessment-reach. A conceptual restoration approach to address this issue is to provide cover over the pipe by raising the stream invert in this location, which can be accomplished by providing a grade control structure that will mitigate evacuation of channel material over the sewer line. If practicable, it will be designed for maintaining unimpeded fish passage as well. This concept also applies to the unnamed-tributary upstream of the ford on this property.

2. Pollard Property

The Pollard property is located immediately off of MD 152, opposite Old Mountain Road on the north side of I-95 in Harford County, Maryland. The property is approximately 13 acres. Half of the property consists of an abandoned sand/gravel surface-mine that formed a large circular depression in the middle of the property. The central portion of the abandoned mine area has a significant wetland system composed of open water and non-tidal wetlands (**Figure IV-5**). The crescent shaped wetland is approximately 1.5 acres, with half of it consisting of open water. Much of the wetland is surrounded by common reed grass (*Phragmites australis)*, which extends toward MD 152. Existing hydrology seems strongly surface driven, but the gleying and mottling of the soil at depth indicates an active water table. This is not surprising considering the highly permeable nature of the surrounding soil and its basin topography. The surrounding land on the property is upland with the exception of two large ponds (one on the east side of the property and the other on the west side). The pond to the west may be a relic farm pond, while the east pond may be a relic from past mining operations (based on viewing the soils map aerial photography, circa 1970).

The center portion of the property could provide approximately 6.5 acres of wetland creation and restoration. Wetland functions and values within this system will be primarily beneficial for wildlife habitat.

The total off-site mitigation available is presented in **Table IV-3.**

Table IV-3. Off-Site Stream and Wetland Mitigation Quantities

	Gonzalez	Pollard	Total
Stream Mitigation			
Intermittent (l.f. / s.f.)	0	0	0
Perennial (l.f. / s.f.)	2,425 / 81,150	0	2,425 / 81,150
Total Streams (l.f. / s.f.)	**2,425 / 81,150**	**0**	**2,425 / 81,150**
Floodplain Creation/Enhancement and Riparian Buffer Enhancement/Creation			
Floodplain	0.67	0	0.67
Riparian Buffer	5.46	0	5.46
Total Floodplain and Riparian Buffer (acres)	**6.13**	**0**	**6.13**
Wetland Mitigation			
POW	**0**	**1**	**1**
PEM	**0**	**3**	**3**
PSS	**0**	**0**	**0**
PFO	**0**	**2.5**	**2.5**
Total Wetlands (acres)	**0**	**6.5**	**6.5**

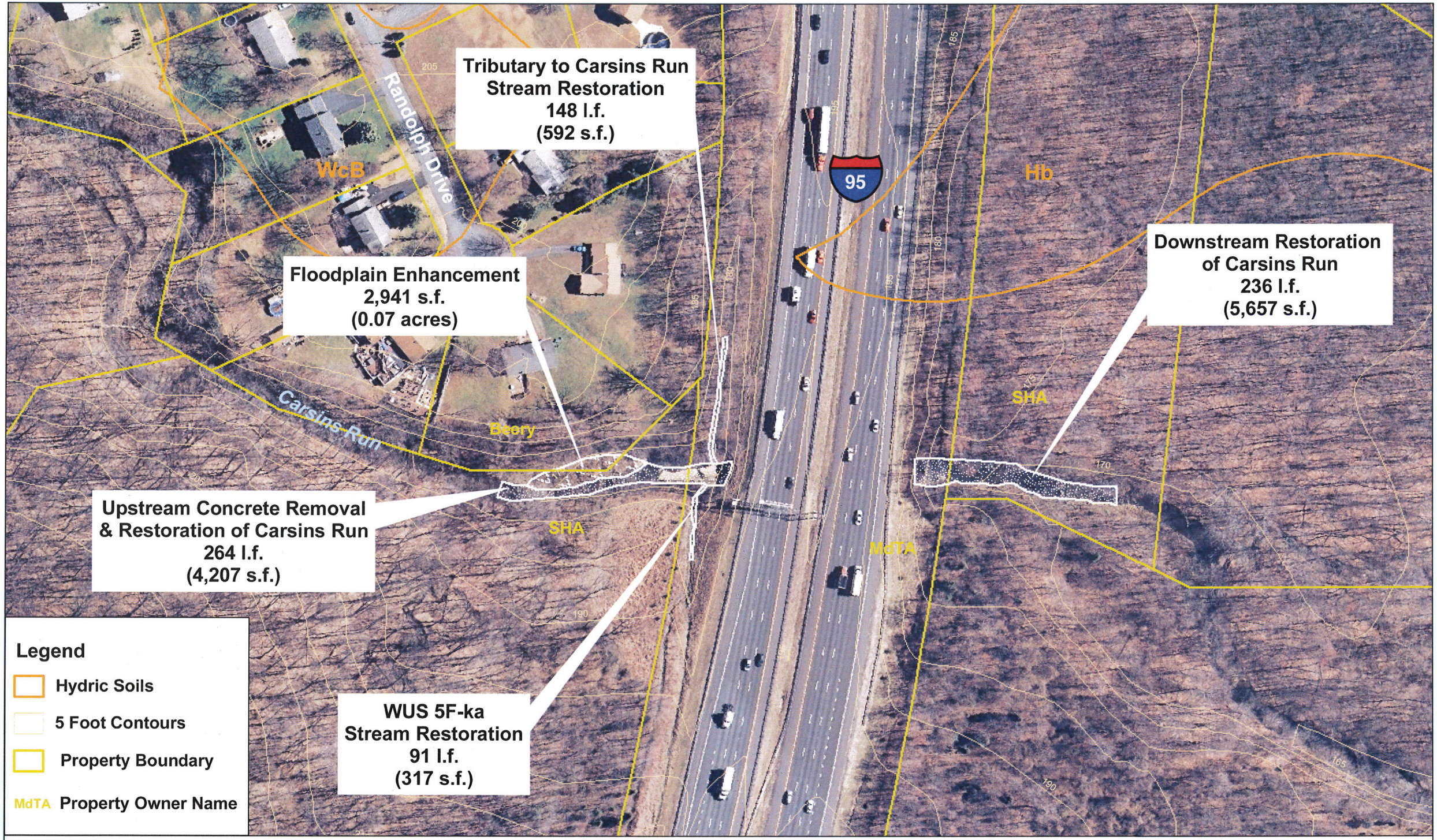


Figure IV-1: Carsins Run Site

Scale
1 inch = 100 feet

Figure IV-2: Gray's Run Site

Scale
1 inch = 200 feet

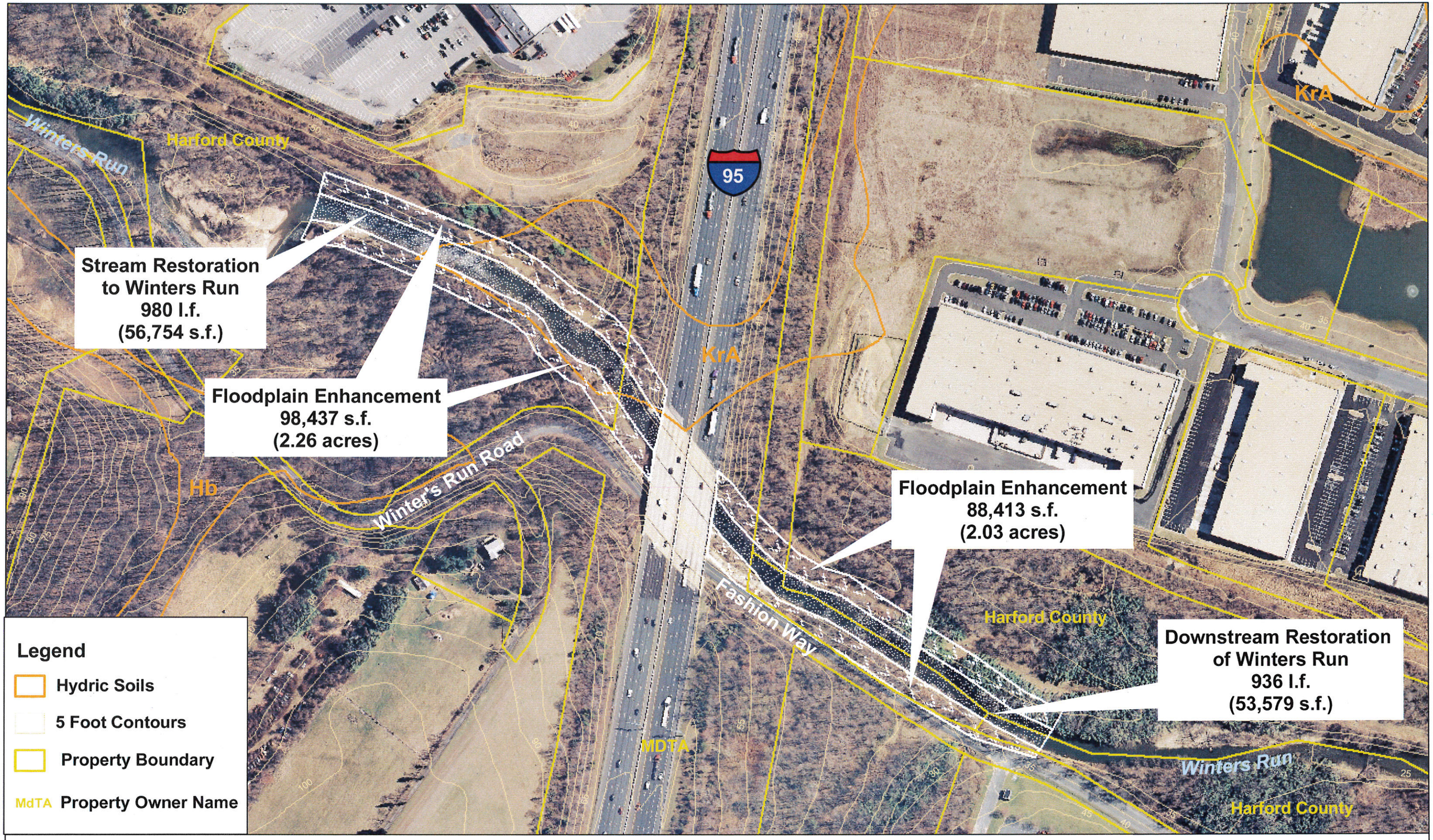


Figure IV-3: Winters Run Site

Scale
1 inch = 200 feet

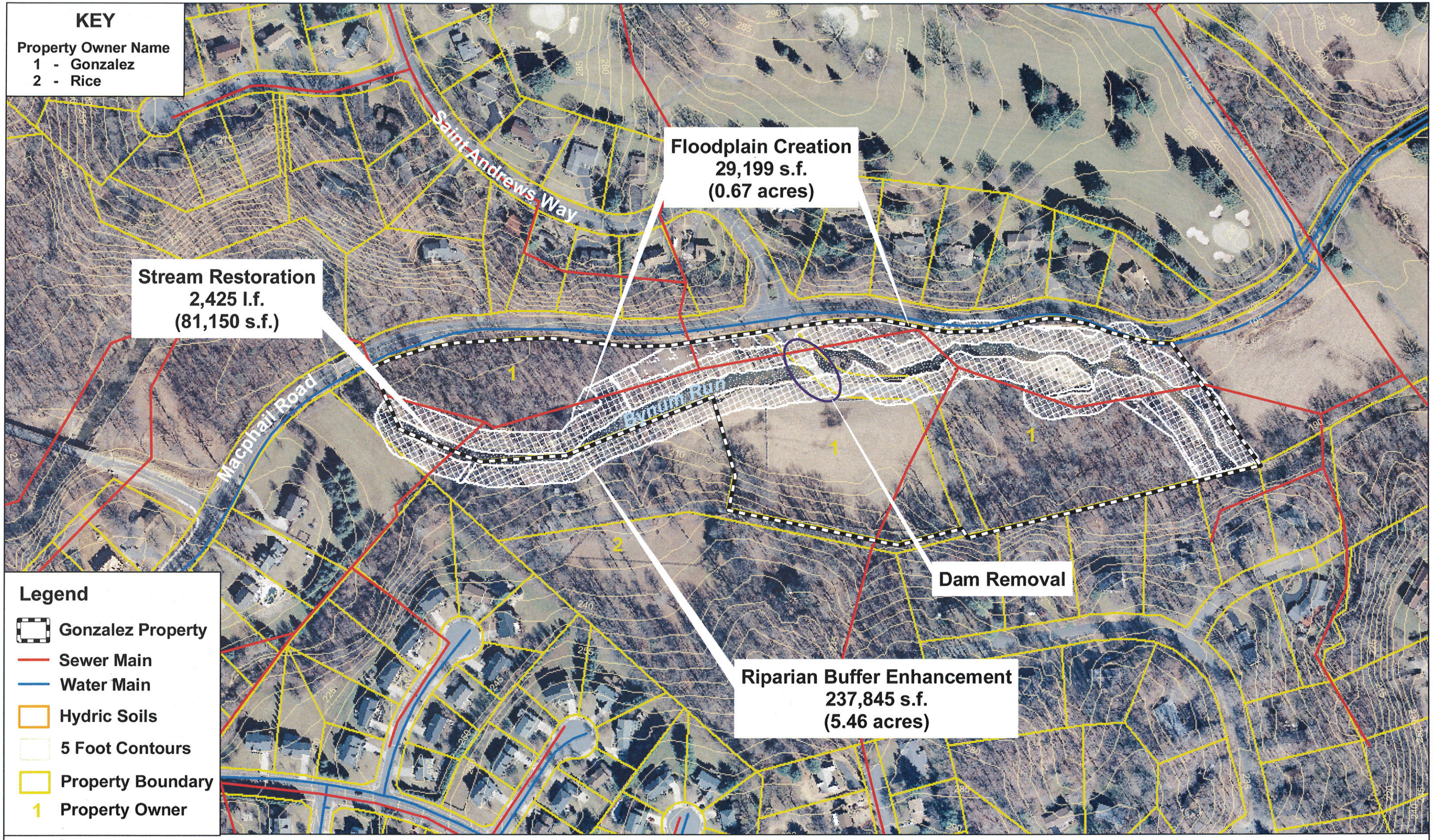


Figure IV-4: Gonzalez Property

Scale
1 inch = 200 feet

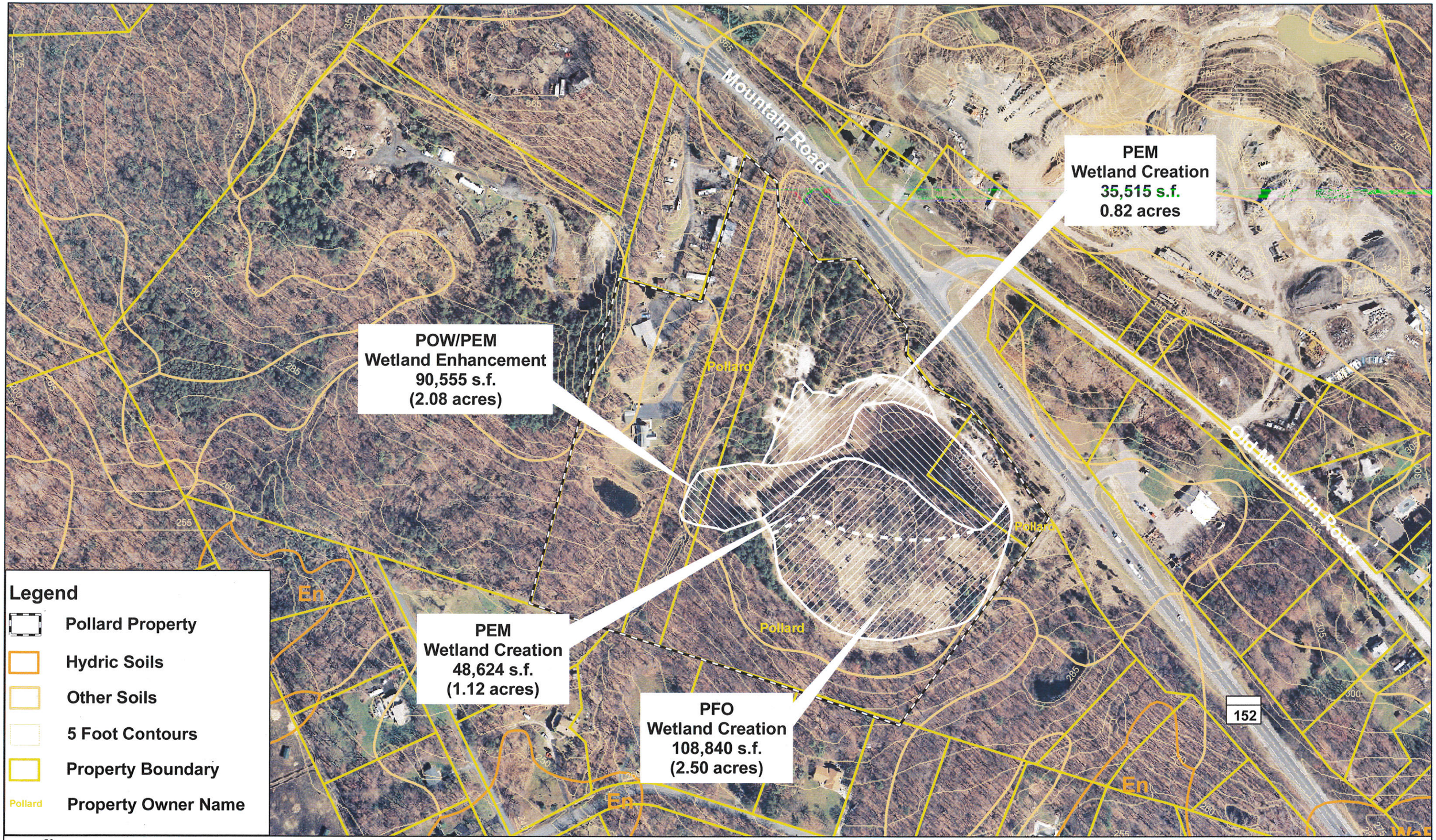


Figure IV-5: Pollard Property

Scale
1 inch = 200 feet

V. STATUS OF COMPLIANCE WITH REGULATORY REQUIREMENTS

A. Section 106 of the Historic Preservation Act

Two historic properties have been determined to be eligible for listing on the NRHP: the St. Frances de Sales Church, and the Onion-Rawls House. On September 23, 2009, the SHPO determined the St. Francis de Sales Church and Onion-Rawls House would not be adversely affected by the Preferred Alternative.

A Phase I Archeological Survey was conducted for the Study Area, which identified one site with archeological potential: the HaHa Branch Quartz Quarry site (18HA17). A Supplemental Phase I Archeological Survey was performed on the HaHa Branch Quartz Quarry site (18HA17). Based on the results of the Supplemental Phase I Archeological Survey, the MD SHPO determined on September 23, 2009 that there would be no archeological sites impacted by the Preferred Alternative (**Appendix C**).

B. Nongame and Endangered Species Conservation Act

Correspondence concerning State-listed threatened or endangered species with the Maryland DNR indicated possible occurrence of the state rare Ostrich Fern (*Matteuccia struthiopteris*) within the vicinity of the Study Area. MDTA conducted a survey in September 2006 for the Ostrich Fern, which did not identify any occurrence of Ostrich Fern within the Study Area. The DNR concurred with the findings and agree that there is no presence of Ostrich Fern in the Study Area. Except for the occasional transient individuals, no federally proposed, listed endangered or threatened species are known to exist within the Study Area.

C. Section 404 of the Clean Water Act

The Preferred Alternative will impact Waters of the United States, including wetlands. Based upon these impacts, Section 404 of the Clean Water Act requires MDTA to obtain a permit from the USACE. The USACE has actively participated in the NEPA and project planning process as a cooperating agency. MDTA will file a preliminary Jurisdictional Determination/Permit Application with the USACE to obtain the required Section 404 permit after the FONSI is approved. It is anticipated that the USACE will comply with NEPA and Section 404 requirements in making its permit decision. As the project moves into design and construction phases, if design modifications do occur, MDTA will coordinate with the USACE to determine environmentally friendly measures to address the modifications.

VI. SUMMARY OF PUBLIC INVOLVEMENT

To gather input from and inform citizens within the project area, MDTA held and participated in a variety of public involvement activities.

A. Public Workshop

MDTA held a Public Workshop on June 22, 2006 at the Old Post Road Elementary School in Abingdon. The purpose of the workshop was to acquaint the public with the need for the project and present the status of the Section 200 Project as of that date. At the workshop, the preliminary alternatives were introduced. These alternatives included the No-Build Alternative, the General Purpose Lanes Alternative, and the Express Toll Lanes Alternative. A preliminary assessment of environmental impacts associated with each of these Alternatives was also presented. Over 100 people attended the workshop.

Prior to the workshop, a newsletter was mailed to individuals on the project mailing list and to property owners within one-quarter mile of either side of Section 200, and one-half mile from the center of interchanges. Approximately 16,000 newsletters were mailed. The newsletter was also available for distribution at the workshop. The newsletter included background information on the project, as well as an explanation of materials that would be available for viewing at the workshop.

In addition to the newsletter, the public was informed of the workshop through display ads in local newspapers. These included: the *Northeast Booster, Aegis, APG News, Daily Record,* and *Afro-American*. The public was invited to fill out comment forms at the workshop and to sign up for the project's mailing list. Thirty-four comments were received. The public input generated as a result of the public workshop was reviewed by the project team and, where appropriate, incorporated into the development of the Alternatives Retained for Detailed Study (ARDS).

A second project newsletter was sent out in January 2007 to approximately 30,000 residents within 0.25 mile on either side of I-95 and a one mile radius at the I-95 interchanges within the Study Area. This newsletter provided a recap of the June 2006 workshop and presented information on environmental and noise studies, as well as an overview of the alternatives being studied.

B. Focus Groups

A twenty-eight member Focus Group was formed in Spring 2006 to provide an opportunity for the public to provide input and comment on a variety of issues including the project purpose and need; existing and future traffic projections; alternatives under consideration and interchange improvements; pedestrian, bicycle, and transit enhancements; and potential environmental impacts, and environmental mitigation strategies. The Section 200 Focus Group is comprised of

community and civic groups, business interests, emergency services, I-95 users, and local government officials.

A total of six Focus Group Meetings were held during development and refinement of Alternatives.

- April 5, 2006 - At this meeting, background information on the I-95 Master Plan was presented, the Section 200 Project Planning Study was introduced, and conceptual alternatives for the project were discussed.
- May 24, 2006 - At this meeting, the project team presented the initial designs for both the General Purpose Lanes and Express Toll Lanes Alternatives. Also discussed at the meeting were BRAC impacts and traffic modeling for the region.
- April 26, 2007 - At this meeting, the project team presented the refined Build Alternatives. These alternatives were refined based on further planning and information gathered at the second Focus Group Meeting and the June 22, 2006 Public Workshop. Mainline alternatives were reviewed and discussed, as well as:
  - A two-phased plan of improvements for I-95/MD 24/MD 924
  - Park and Ride study results for MD 43, MD 152, MD 24, MD 543, and MD 22
  - Police/EMS/Maintenance Access
  - Range of environmental impacts
- May 17, 2007 – This meeting focused on the MD 152, MD 24, MD 543, and MD 22 interchange options for both Build Alternatives. The group reviewed and discussed each option and provided their comments to the project team.
- September 20, 2007 – At this meeting, the project team presented Park and Ride options, emergency service access, maintenance facilities, stormwater management, noise analysis and environmental mitigation.
- October 24, 2007 – At this meeting, the project team presented the results of the additional detailed engineering and environmental studies, and the Focus Group members reviewed and provided input on the materials to be presented at the December 13, 2007 Public Hearing.

C. I-95 Open Houses

Over 250 people attended two I-95 Open Houses on June 26 and 28, 2007. The open houses were held at Old Post Road Elementary School and at the Community College of Baltimore County Essex. Information was provided on all of MDTA projects along the I-95 corridor. These included the I-95 Express Toll Lanes, I-95/MD 24/MD 924 Improvements, Hatem Bridge (US 40) Re-decking, I-95 Section 200 Planning Study including the Park and Ride improvements, and the renovations to I-95 Travel Plazas.

A Project Update newsletter was sent to a defined mailing area (22,500 residents) along the I-95 ETLs Project and Section 200 corridors. In addition, display ads announcing the open houses were placed in: the Northeast Booster, APG News, Times Herald, Aegis, Record, and Afro-American. Posters announcing the I-95 Open Houses were placed at the following locations:

- Chesapeake House
- Maryland House
- Harford County Community College
- Aberdeen HEAT Center
- Aberdeen Shopping Plaza
- Kleins Grocery
- MARC/AMTRAK station in Edgewood
- Harford County Library
- Express Deli Mart
- Royal Farms in White Marsh
- Exxon Station, Joppatown
- ETL Project Office
- WAWA on MD 132 in Aberdeen
- Harford County public libraries (Joppa Branch, Edgewood Branch, Abingdon Branch, Bel Air Branch, and Aberdeen Branch)
- Baltimore County public libraries (Essex Library and Perry Hall Library)

D. Public Hearing

MDTA held a joint Public Hearing with the USACE on December 13, 2007 at the Old Post Road Elementary School. The purpose of the Public Hearing was to allow all interested persons the opportunity to present their views regarding the proposed location and general design of the Section 200 project alternatives, as well as the associated social, economic and natural environmental effects. Approximately 170 people attended, with seven providing public testimony, 13 providing private testimony, which was recorded by a court reporter, and 38 submitting comments after the Public Hearing. The comments received after the hearing included comment cards, letters and emails sent to MDTA, and phone calls made to MDTA. The following are the main issues raised by all of the Public Hearing comments and an overview MDTA's response:

- The majority of the comments received was in opposition to the location of the new MD 152 Park & Ride and would like to see more emphasis on public transit. MDTA's responded by indicating that further studies would be conducted after the Public Hearing to determine the optimal location for the MD 152 park and ride. The study would address the future needs of the commuter and transit services in the study area. The results of the study were presented at the May 20, 2008 Public Update Meeting.
- Citizens were concerned with the location and cost of the noise walls. MDTA responded by indicating that extensive noise studies have been performed to determine whether or not a noise wall is feasible and reasonable for a given location. The noise wall locations and costs presented at the public hearing were determined to be feasible and reasonable for this study.
- Several of the comments were in favor of the bike/pedestrian options. The majority favored the Woodsdale Road Option as a better choice. MDTA indicated that the decision

for the preferred bicycle option will be based on detailed engineering analysis, environmental impacts analysis, and public input.
- Comments received were in support of the Express Toll Lanes Alternative.

Please refer to **Appendix G** for a more detailed chart of all the comments received. The comments received are located in **Appendix H**.

E. Public Outreach

In addition to the Alternatives Public Workshop, the I-95 Open Houses and the Public Hearing, MDTA participated in other public involvement activities. These included meetings with the Friends of Harford County on April 30, 2008 and a meeting with the Gunpowder Homeowners Association in June 2008. Additionally, a Public Update Meeting was held on May 20, 2008 for the Section 200, proposed park and rides. At this meeting seven sites were presented and compared including the preferred location for the new MD 152 park and ride facility and for the MD 24 park and ride facility. The meeting provided information about the process used to determine the optimal location for both MD 24 and MD 152 park and ride facilities. Approximately 92 people attended the workshop.

Website

In an effort to obtain public feedback and keep the public informed throughout the project planning process, MDTA created a Section 200 website to present information to the public and other interested parties. The Section 200 website provides:

- A brief history of I-95 (JFK)
- Background information
- The purpose and need of the study (including traffic and safety data)
- Environmental documents for public review
- Latest news on the progress of Section 200
- Land use and economic development within and adjacent to the Study Area
- The preliminary concepts carried forward from the I-95 Master Plan and alternatives under consideration
- The Section 200 project planning schedule
- A link to I-95 ETLs Project for updates on the adjacent improvements
- Other transportation projects within or adjacent to the project area.

The Section 200 website provides MDTA contact information, the ability to sign up for the mailing list, and an email address for people with questions, comments, and/or requests for information. The Section 200 website can be found at the following web address: http://www.mdta.maryland.gov.

VII. PROJECT COMMITMENTS

During the planning phase of this study, MDTA has coordinated with USACE, MDE, EPA, U.S. Fish and Wildlife Service (USFWS), and NMFS to ensure that the Section 200 project has avoided/minimized impacts to environmental resources and ensured that the appropriate mitigation efforts were being implemented for the impacts from the project. In addition, the project team has been involved in an extensive public outreach process and coordination with local jurisdictions and key stakeholders. The MDTA has also created a list of project commitments, in coordination with Federal, State and local agencies, to ensure all efforts to avoid/minimize impacts to environmental resources; the appropriate mitigation design standards will be implemented; and appropriate design functions are implemented into the Express Lane Tolls Alternative design during the design and construction phases of this project. Please refer to **Table VII-1** for a full list of the commitments for the Section 200 project.

Table VII-1. Project Commitments

Plate #	Resource	Location (Station #)	Environmental Commitment
General	Gonzalez Mitigation Site	N/A	NMFS will receive an estimate of the amount (cubic yardage) and grain-size composition of material upstream of the ford. The estimate will be completed in detail before final design begins. MDTA will continue to coordinate with NMFS, USACE, EPA, and MDE during the final design of this mitigation site.
9 P&R	WET TRN-1 and WUS 25B	2100+00	The design of the MD 152 Park and Ride facility must minimize impacts to any environmental resources consistent with what is document in the FONSI. It must avoid impacts to WET TRN-1 and implement the proposed stream relocation for WUS 25B. The new park and ride must be constructed prior to impacts to the existing park and ride.
9 and 9A	Firehouse	2020+00	Future design must include the proposed access to the firehouse as proposed in the design included in this document. The final design must be coordinated with the fire department.

Plate #	Resource	Location (Station #)	Environmental Commitment
2	Big Gunpowder Falls and Gunpowder Falls State Park	620+00	In this location, a retaining wall will be used to avoid impacts to Gunpowder Falls State Park. The proposed bridge span will be lengthened and widened and all bridge piers will be located outside of the Big Gunpowder Falls. The proposed bridge will ensure that a standard trail can be provided under the bridge.
6	Little Gunpowder Falls and Gunpowder Falls State Park	739+00	A retaining wall will be used at this location, northwest and southeast of I-95, to avoid impacts to Gunpowder Falls State Park. The retaining walls in this location will be constructed using a minimally impactive construction technique to avoid impacts to the adjacent parkland. The proposed bridge span will be lengthened and widened and all bridge piers will be located outside of the Little Gunpowder Falls.
12	Winter's Run	607+00	Retaining wall will be used along southbound I-95, just north of Winter's Run, to avoid impacts to the stream. Please see the description of the Winter's Run Mitigation Site in Section IV for additional commitments.
19	Abingdon Road Water Plant	N/A	MDTA will avoid impacts to the Harford County pumping station at Abingdon Road. MDTA has a MOU with Harford County that allows the County to construct a 115 inch water supply tunnel under I-95 containing multiple water supply lines connecting the Abingdon Water Treatment Plant to the Susquehanna regional water supply line on the east side of I-95. Harford County will be responsible for the design, construction, operation, maintenance and ownership of the new 115 inch water supply tunnel.
21	James Run	11+00	Must ensure that the hydraulics downstream are adequate when the floodplain restrictions are removed when the new span is constructed. The existing concrete slope should be stopped short to connect to a retaining wall and allow the stream to meander below.

Plate #	Resource	Location (Station #)	Environmental Commitment
26	Maryland House Travel Plaza	N/A	Access will be maintained to the Maryland House Travel Plaza during construction.
27	WET 21E and WET 19E	1241+00 and 1255+00	The LOD should be tightened and fill slope be pulled back in the area of a high quality waters/wetland area: WUS 16E-ee, WUS 16E-c, and WET 21E. Also, the LOD should be tightened and fill slopes be pulled back in the area of WUS 14E-aa and WET 19E, and requested no relocation of WUS 15E-bb or WUS 14E-dd. A head wall should be incorporated and associated retaining wall from Stations 1252+00 to 1258+00
N/A	Pedestrians and Bicycles	N/A	The I-95/MD 24/MD 924 interchanges are complex and include several high speed ramps and weaves. To enhance pedestrian and bicycle safety, a separate pedestrian/bicycle bridge north of the interchange connecting Woodsdale Road and Walton Road will be provided. Pedestrians and bicycles will then be prohibited from within the I-95/MD 24 Interchange.
N/A	108" Waterline	N/A	The proposed improvements will impact portions of the 108" waterline located on the east side of I-95. MDTA will continue to coordinate with Baltimore City and Baltimore and Harford Counties.
N/A	Gray's Run Mitigation Site	N/A	MDTA will develop a flow model during design in order to provide necessary passage for migratory fish species. Please refer to the Gray's Run Mitigation Site in Section IV for additional commitments.