SUMMARY

SUMMARY

A. ADMINISTRATIVE ACTION

(X) Final Environmental Impact Statement
( ) Environmental Assessment
( ) Categorical Exclusion
( ) Finding No Significant Impact

B. INFORMATIONAL CONTACTS

Additional information concerning this project may be obtained by contacting:

Ms. Denise W. King
Environmental Specialist
Federal Highway Administration
Delmar Division
City Crescent Building
10 South Howard Street, Suite 2450
Baltimore, Maryland 21201
Hours 7:30 a.m. to 4:00 p.m., Mon.-Fri.
Phone: (410) 779-7145

Mr. Bruce M. Grey
Deputy Director
Office of Planning
and Preliminary Engineering
State Highway Administration
707 North Calvert Street, Mail Stop C-301
Baltimore, Maryland 21202
Hours: 7:30 a.m. to 4:30 p.m., Mon.-Fri.
Phone: (410) 545-8500

C. PURPOSE AND NEED / DESCRIPTION OF PROPOSED ACTION

1. Project Purpose and Need

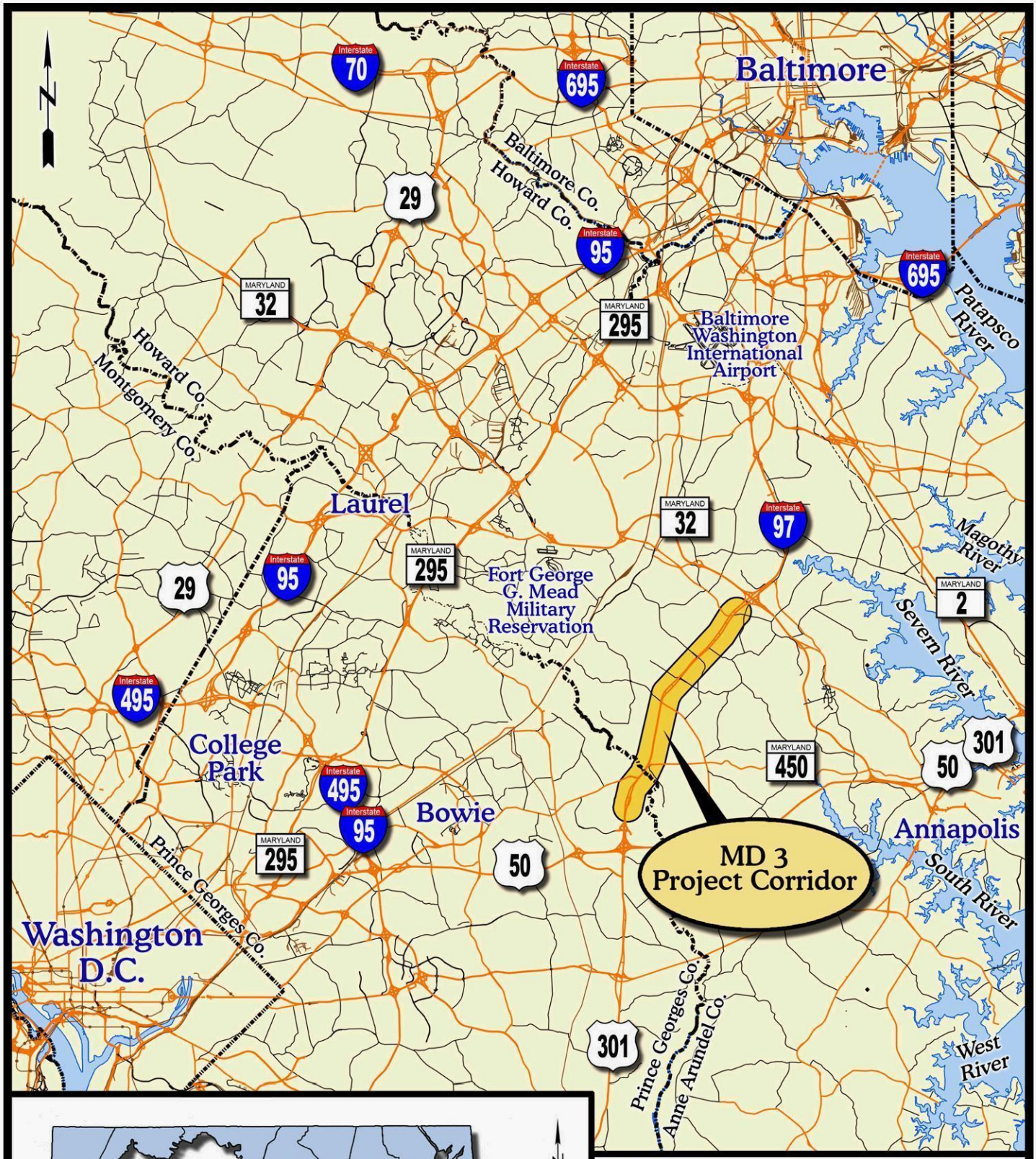
The purpose of this study is to address existing and projected operational and safety issues for local traffic (vehicles and pedestrians) along MD 3 from north of US 50 to south of MD 32 located in Anne Arundel and Prince George's Counties between the Baltimore and Washington D.C. Metro areas (**see Figure S-1**).

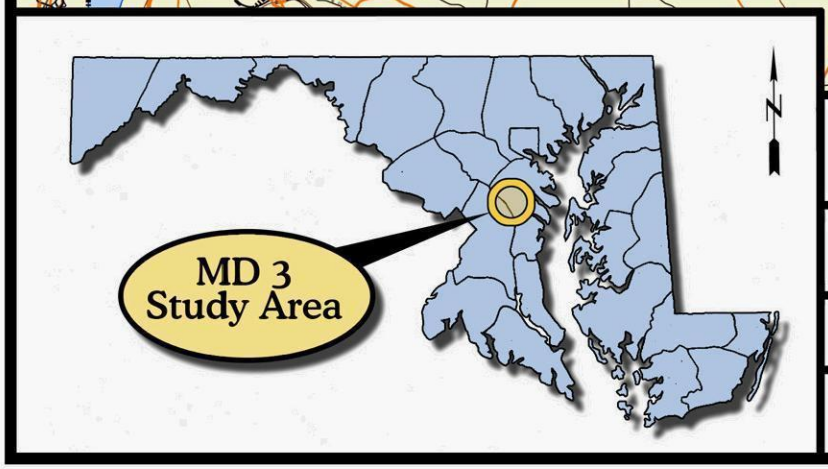
Some changes in traffic congestion and land use are projected to occur as a result of planned and future development in and around the study area. A few sections of roadway within the project limits are currently failing to meet acceptable traffic performance or are experiencing failing conditions during the PM peak hours. By 2025, all the intersections within the project corridor are projected to fail with the exception of the ramps at Belair Drive.

2. Project History since Draft Environmental Impact Statement (DEIS)

a. Agency Coordination – Western Bypass, Right-of-Way Preservation, and Impacts

There have been over a dozen formal meetings and many more informal discussions with the environmental regulatory agencies regarding their concerns about the proposed design of the SHA Selected Alternate. Included in the formal meetings were three conflict resolution meetings (**see V-A-24, V-A-32** and **V-A-67** for January 25 and October 31, 2005, and April 20, 2007





Maryland Department of Transportation
State Highway Administration

MD 3 Project Planning Study

Final Environmental Impact Statement

Regional Study Area Map

Scale		Figure
Not to Scale		S-1

meeting minutes) called by the Federal Highway Administration (FHWA). The focus of these meetings was to discuss the concerns that the U.S. Army Corp Of Engineers (ACOE), U.S. Fish and Wildlife Service (USFWS), Maryland Department of the Environment (MDE) and U.S. Environmental Protection Agency (EPA) had with inadequate level-of-service in 2025 along MD 3 in the Crofton area, the potential need for a future western bypass of MD 3, impacts associated with the proposed interchange at MD 450, and the mitigation and preservation package compiled by the Maryland State Highway Administration (SHA).

SHA has responded to the agencies' concerns through a series of efforts to find a middle ground on the issues at hand. Some agencies asked that designs that provided higher levels of service be considered, to preclude the need for a bypass or future improvements on this alignment. However, feedback from community residents and representatives indicates that an "interstate type" of roadway is unacceptable. SHA maintains that the goal of the project is not to create a high speed fully access controlled highway, but rather to improve operations and safety on MD 3. A western bypass of MD 3 is not being considered. It is envisioned that existing I- 97 will provide an alternative route to MD 3.

The expressed concern was that MD 3 would fail in some sections, yet was to receive improvements that result in a level of service B in the area with the highest-quality resources. To minimize wetland and floodplain impacts at the proposed MD 450 interchange, SHA has agreed to design and implement retaining walls that would decrease the potential grading impacts from an estimated 12.4 acres associated with earlier concepts, down to 9.9 acres under the current SHA Selected Alternate. SHA and the agencies have spent several years trying to find an alternate that meets the operational and safety needs of the project, while minimizing impacts to the pristine wetland and floodplain system associated with the Patuxent River in the area of the proposed MD 3/MD 450 interchange. The SHA Selected Alternate meets the requirements of the Clean Water Act Section 404 (b) 1 guidelines as the Least Environmentally Damaging Practicable Alternative (LEDPA) while maintaining the standards necessary to meet the study's purpose and need.

In response to the agencies' concerns about mitigation and preservation sites, SHA is coordinating with land owners on the purchase of the upland areas along MD 3 southbound near MD 450 as the agencies requested. In addition, SHA has agreed to consider an eel passageway at Rocky Gorge Dam, as mitigation in place of sites not preferred by all of the agency representatives.

A Reevaluation of the 2004 DEIS was conducted in 2008 in accordance with 23 CFR 771.129 and was approved by FHWA in 2009. Through the Reevaluation, FHWA determined that the Draft Environmental Impact Statement (DEIS) remains valid and no supplemental Environmental Document is required.

Additional details regarding the history of the environmental agency coordination efforts can be found in the **Chapter II – Alternates Considered, Section F – Agency Involvement Subsequent to the DEIS and Public Hearing** of this document.

b. Proposed Developer Improvements – Waugh Chapel South

Recently, the owner of the Reliable Contracting property (located adjacent to southbound MD 3 between Evergreen Road/Johns Hopkins Road and Waugh Chapel Road/Reidel Road intersections) has proposed improvements to MD 3 as part of county and state required traffic mitigation for their planned mixed use development. These roadway improvements will be considered existing conditions once completed and were not developed as part of this study. Additional details on the proposed improvements can be found in **Chapter II – Alternates Considered, Section H – Description of the SHA Selected Alternate**.

In order to improve traffic operations as required by the county and state for permit approvals, the developer has proposed improvements to the Waugh Chapel Road/Reidel Road/MD 3 intersection, based upon the "Michigan Left" design. Michigan Lefts are defined as intersections where at least one road is a divided highway, in this case, MD 3. Left turn movements from the side streets (Waugh Chapel Road and Reidel Road) onto the divided highway are prohibited. In place of the left turns, median crossings to the north and south of the intersection are provided for access to the opposite direction of travel.

At the Evergreen Road/Johns Hopkins Road/MD 3 intersection the developer has proposed an offset intersection is intended to split the traffic volumes between two different signalized intersections, allowing additional queuing lengths and increased traffic clearance times. One signalized intersection will remain at the current northbound MD 3/Johns Hopkins Road/Evergreen Road intersection, and the other will be introduced just to the north on southbound MD 3 as part of the main entrance to the proposed shopping center.

The developer is also proposing to provide a dedicated right-turn only lane from southbound MD 3 to westbound Conway Road (MD 424 intersection) in conjunction with an additional MD 3 southbound through lane.

c. SHA - Waugh Chapel Road/Reidel Road – Interchange Option B Modified

This option would provide a grade-separated compressed diamond interchange for MD 3 over the Waugh Chapel Road/Reidel Road intersection. This option would realign northbound and southbound MD 3, utilizing the existing median width to minimize right-of-way and utility impacts. The ramp access with Waugh Chapel Road and Reidel Road would be similar to the location of existing MD 3. The proposed interchange with MD 3 would provide the greatest improvements to operations and safety on MD 3 by eliminating the traffic signal on mainline MD 3. This option was developed in response to community input during the Public Hearing. Additional Details are available in **Chapter II – Alternates Considered, Section G – Alternates Considered Subsequent to the DEIS**.

d. SHA - MD 175/Millersville Road/Charles Hall Road – Option B Modified

Option B at MD 175 proposed with Alternate 3 would consist of at-grade intersection improvements including the widening of MD 3. This option would provide the best level-of-service of all the interchange options developed for MD 175 with Alternate 3 with minimal

changes to the amount of impervious surface in the vicinity of Jabez Branch. As part of the intersection modification, Charles Hall Road would be extended to the proposed county road in the Holiday Park Development, thereby eliminating access directly to MD 3 southbound. See **Chapter II – Alternates Considered, Section G – Alternates Considered Subsequent to the DEIS** for more detail.

e. SHA - Value Engineering (VE) Study – Continuous Flow Intersection (CFI)

A new option identified during the value engineering exercise for MD 3 would introduce a CFI for MD 3 at MD 424. The CFI intersection for MD 3 and MD 424 provides improved operations by decreasing the average delay for the intersection with minimal impacts, although the level-of-service remains an F. Given public comments preferring maintenance of the at-grade intersection at this location, this option provides the best operations and avoids impacts to the Patuxent River Park. Additional details on the CFI design can be found in **Chapter II – Alternates Considered, Section H – Description of the SHA Selected Alternate**.

3. Alternates Considered

a. Mainline Alternates

Alternate 1: No-Build – No major improvements. Minor short-term improvements would occur as part of normal maintenance and safety operations.

Alternate 3: Boulevard Concept with Interchange Options – This alternate provides dualization of northbound MD 3 in Prince George's County, with existing southbound MD 3 converted to a local service road. Three 11-foot lanes would be provided in each direction along the existing alignment throughout the remainder of the corridor, with continuous 16-foot auxiliary lanes and 10-foot shoulders where applicable.

Alternate 5 Modified: Dualization Concept with Interchange Options – This alternate utilizes three 11-foot lanes in each direction along existing MD 3 from US 50 to MD 424, with 16-foot auxiliary lanes and 10-foot shoulders where applicable. Dualization of southbound MD 3 from MD 424 to MD 32 is included, with existing northbound MD 3 converted to a local service road.

Detailed mapping of the Alternates Considered can be found in **Appendix F – SHA Selected Alternate and ARDS Mapping**.

b. Interchange Options

All of the following Interchange Options are compatible with both Alternate 3 and Alternate 5 Modified, except MD 424 Interchange Option A which is only compatible with Alternate 3.

MD 450 Interchange:	- **Option A** (Single Loop Ramp – Separation of MD 3 and MD 450 traffic) - **Option B** (Split Diamond – Separation of MD 3 and MD 450 traffic)

	- **Option C** (Full Trumpet)
Cronson/Crawford Boulevard:	- **Option A** (At-Grade Intersection) - **Option B** (Compressed Diamond Interchange – MD 3 over Cronson/Crawford intersection)
MD 424 Interchange:	- **Option A** (Half Bridge Interchange) – Alternate 3 only - **Option B** (Compressed Diamond - MD 3 over MD 424) - **Option C** (Single Point Urban Interchange with MD 3 under MD 424) - **VE Study Option** (CFI)
Waugh Chapel/Reidel Road Interchange:	- **Option A** (At Grade Intersection) - **Option B** Modified (Compressed Diamond Interchange) - **Option C** (Traditional Diamond w/Roundabouts)
MD 175 Interchange:	- **Alternate 3 – Option A** (At-Grade Intersection widening of MD 175 and Charles Hall Road auxiliary lane) - **Alternate 3 – Option B Modified** (At-Grade Intersection widening of MD 175, Charles Hall Road extended, intersecting with McKnew Road) - **Alternate 5 Modified – Option A** (At-Grade Intersection, realigned to match dualization widening of MD 175 and Charles Hall Road auxiliary lane) - **Alternate 5 Modified – Option B** (Half Diamond Interchange – northbound MD 3 grade separated crossing over MD 175, southbound MD 3 remains at-grade crossing of MD 175. McKnew Road is widened for triple right turn onto southbound MD 3. MD 175 is widened and slip ramps provided for access to northbound MD 3. Charles Hall Road is extended, intersecting with McKnew Road)

c. Summary of SHA Selected Alternate

Based on the information developed for the study and from the feedback received from agency and public comments, the Alternate 3-Boulevard Concept has been selected by the SHA. This SHA Selected Alternate would address existing and projected operational conditions and safety issues while minimizing environmental impacts throughout the study area.

The current alignment of northbound MD 3 from Belair Drive to MD 450 would be dualized and a continuous auxiliary lane provided on the outside from Belair Drive to just north of Forest Drive. The majority of the widening would be in the median area. Existing southbound MD 3 from MD 450 to Forest Drive would be converted to a two-way service road with access provided from MD 450 and a right-in/right-out with MD 3 at Forest Drive. Existing alignments of MD 3 from MD 450 to St. Stephens Church Road would be maintained and a continuous auxiliary lane provided on the outside along with a continuous left auxiliary lane from MD 424

to Johns Hopkins Road. The existing alignments of MD 3 from St. Stephens Church Road to MD 32 would be maintained with the addition of a third through travel lane and a continuous auxiliary lane on the outside. In addition, a continuous left auxiliary lane is provided from just north of St. Stephens Church Road to MD 175.

The dualization of MD 3 south of MD 450 through Prince George's County improves safety by eliminating 14 entrances (driveways and county roads) onto MD 3. With southbound MD 3 converted to a service road, operations and safety are improved by minimizing turning movements onto mainline MD 3. Access to mainline MD 3 is then provided by a more controlled and protected movement. Residents living along this section of MD 3 preferred Alternate 3.

The following are other improvements proposed as part of the SHA Selected Alternate:

- Option A at MD 450 (with a 30 mph loop ramp) in Prince George's County and Option B at MD 450 in Anne Arundel County (retaining wall structures will be implemented to reduce wetland and floodplain impacts in the vicinity of this interchange)
- Right-out added at Clubhouse Gate
- Option A, at-grade, at Cronson/Crawford Blvd. with a double left from northbound MD 3
- Cronson Connection to Conway Road with the connection to Conway "by others"
- Extension of Crofton Blvd to Cronson Blvd with left-turns on MD 3 removed
- Continuous Flow Intersection at MD 424
- Waugh Chapel Road (at-grade SPUI) style of intersection improvements at Johns Hopkins Road
- Left turns from northbound MD 3 into Waugh Chapel Village relocated south and the current right-in entrance to Waugh Chapel Village improved to accommodate the left turn movements. In addition, the median at Brickhead Road and Wellfleet will be closed
- Option B Modified at Waugh Chapel/Reidel Road
- Right-in/right-out at St. Stephens Church Road with U-turns for MD 3 provided (remove existing signal)
- Lane addition (fourth through) to northbound MD 3 at MD 175 under Option B Modified
- Charles Hall Road extended to connect to Holiday Park Road as part of MD 175 Option B Modified

Detailed mapping of the Selected Alternate can be found in **Appendix F – SHA Selected Alternate and ARDS Mapping**.

D. ENVIRONMENTAL IMPACTS

A summary of the impacts associated with the SHA Selected Alternate and the alternates retained for detailed study are presented in this section and in **Tables S-1, S-2, and S-3** located at the end of the summary.

1. Socio-economic Environment

The assessment of Socio-economic and Land Use Effects showed that communities in the MD 3 study area would experience both benefits and adverse impacts resulting from the construction of the SHA Selected Alternate. These effects vary according to location in the study area. The Alternate 1: No-Build Alternate would cause no adverse impacts to the human environment, nor would it provide any improvements.

No adverse impacts to population, community cohesion, land use, or economic conditions are projected to occur under the SHA Selected Alternate. The SHA Selected Alternate would result in 10 residential and 15 business displacements, and would require approximately 140 acres of additional right-of-way.

SHA has received responses from the emergency service providers for the study area and is committed to ensure safe and efficient access for residents that depend on these services. Local police, ambulatory, and fire departments were contacted as part of the project's public outreach efforts and invited to comment on proposed improvements. In addition to the improved traffic capacity to help clear travel lanes of congestion for easier passage, the SHA Selected Alternate would maintain existing strategic median crossings, enhance preemptive traffic signals, provide mountable channelizing islands along auxiliary lanes (auxiliary lanes to be used in place of shoulders), and introduce grade separated intersections that limit intersection dangers.

The residential communities in the MD 3 study area have developed around the existing roadway. Thus this project, which modifies this existing roadway, would not cause a fundamental change in the character of the communities. Some aspects of the SHA Selected Alternate are consistent with specific elements of each county's comprehensive plans. With respect to State concerns, SHA has coordinated with the Maryland Department of Planning (MDP) and determined that this project meets and satisfies the Code of Maryland Regulations (Smart Growth) requirements for Linear Features Regulations and is considered to be consistent with the Priority Funding Areas Act.

The SHA Selected Alternate would impact one publicly owned public park/recreation area - the Patuxent River Park. The Patuxent River Park is located just north of the MD 424/Conway Road intersection west of southbound MD 3. Proposed improvements to southbound MD 3 would require minor reconfiguration of access to the park's parking area. Currently, park visitors access the park directly from MD 3. The reconfigured access would direct park visitors to Conway Road where a new driveway/access road into the park would be provided by Anne Arundel County.

Through coordination with the State Historic Preservation Officer (SHPO), it was determined that the SHA Selected Alternate would have no adverse impacts on the Sacred Heart Roman Catholic Church, the only historic standing structure eligible for the National Register of Historic Places within the study area. The SHA Selected Alternate would have adverse effects on an archeological resource, the Warfield Site, which is eligible for the National Register of Historic Places. A Section 106 Memorandum of Agreement (MOA included in **Appendix E**) between the SHPO, FHWA, and SHA was finalized on June 13, 2007 that addresses the effects of the

SHA Selected Alternate on cultural resources. The MOA outlines the additional coordination required during the final design phase for additional determinations/impact considerations for sites impacted by ancillary activities, the Warfield Site and, if the alignment shifts, the Oak Grove site.

2. Natural Environment

The Alternate 1: No-Build Alternate would have no impacts to the natural environment. Deep wells in unconfined aquifers supply public water to most of the study area. Roadway construction has the potential to impact the unconfined aquifer system. The SHA Selected Alternate would increase impervious surfaces through roadway widening. The proposed stormwater management detention facilities are intended to provide quantity and quality management for these new impervious surfaces. Stormwater runoff from Charles Hall Road would be captured and treated in a new stormwater management facility located within the MD 3 median before flowing into Jabez Branch.

The SHA Selected Alternate would cross eight perennial streams. In accordance with MDE and EPA regulations, a Non-Point National Pollutant Discharge Elimination System (NPDES) stormwater permit for construction activities will be required. In addition, water quality impacts will be mitigated through various avoidance and minimization strategies. Mitigation of surface water quality degradation would be accomplished through a combination of construction, erosion, and sediment control best management practices.

The wetland impacts for the SHA Selected Alternate total 11.1 acres. The majority of the wetland impacts are to palustrine forested wetlands, with minimal impacts to emergent and scrub-shrub wetlands. ACOE and MDE permits will be required for impacts to wetlands and other Waters of the U.S. Following the May 2004 Public Hearing, several engineering revisions were made to the proposed mainline alternates and interchange options in order to minimize potential impacts to wetlands. The details of those modifications are described in the Alternates section of this document. Eight sites have been identified as potentially suitable for wetland mitigation. These sites provide the maximum amount of acreage that is required for the SHA Selected Alternate, based on replacement ratios specified in MDE regulations. Selection of the wetland mitigation sites will be based on input from regulatory and resource management agencies during later phases of study.

Federal Emergency Management Agency (FEMA) mapping for Anne Arundel and Prince George's Counties show 100-year and 50-year floodplains for Towsers Branch, Little Patuxent River, Patuxent River, and a tributary to the Patuxent River within the study area. The floodplain impacts for the SHA Selected Alternate total 50.3 acres. The majority of the floodplain impacts are to the Patuxent River floodplain. The remaining floodplain impacts are to the floodplain of an unnamed tributary to the Little Patuxent River and to the floodplain of an unnamed tributary of Towsers Branch. An MDE permit is required for any land-disturbing activity totaling 5,000 square feet or more within the floodplain district (including associated 25-foot Building Restriction Line) and for temporary or permanent construction involving the placement of a structure, regardless of the size of the disturbed area.

The Patuxent River and two of its tributaries, Little Patuxent River and Towers Branch, are designated Use I waters (protected for fish and aquatic life, and contact recreation) within the study area. MDE regulations prohibit construction within Use I waters between March 1 and June 15. In-stream construction proposed for the SHA Selected Alternate will require a Section 404 permit from the ACOE and an MDE Waterway Construction Permit. Jabez Branch, a tributary of Severn Run, drains the northwestern portion of the study area. Jabez Branch is designated as a Use III stream, having the water quality and habitat to support a naturally reproducing trout population. The time-of-year in-stream construction restriction for Use III streams extends from October 1 through April 30.

Forest impacts and specimen tree impacts resulting from the SHA Selected Alternate total 82.5 acres and 49 trees, respectively. In addition to forested areas, the SHA Selected Alternate is estimated to impact 55.1 acres of impervious surfaces. Additional information on forest impacts and mitigation is presented later in this document in **Chapter IV – Environmental Consequences, Section C – Natural Resources**.

Fish resources within the Patuxent River would be affected by short-term impacts during construction of the SHA Selected Alternate and by long-term impacts during the life of the facility. Fish habitat degradation resulting from the SHA Selected Alternate would relate to the increase of impervious surface. MDE regulations require implementation of stormwater management and sediment and erosion control practices to minimize impacts to fish.

3. Air Quality

No violations of the applicable State and National Ambient Air Quality Standards (S/NAAQS) are expected from this project. The MD 3 project is one of numerous improvements to the Baltimore Metropolitan Region listed in the 2007 Baltimore Regional Transportation Plan (BRTP) "Transportation Outlook 2035." On November 17, 2010 the National Capital Region Transportation Planning Board approved and adopted the 2010 financially constrained long range plan and associated Air Quality Conformity Assessment which was approved by FHWA on February 9, 2011. Thus the Prince George's County portion of the project comes from a confirming plan and program in accordance with 40 CFR 93.115. A determination of conformity of the BRTP and the 2008-2012 Transportation Improvement Programs (TIP) with the Attainment Plan goals for the region was based on analyzing emissions from implementation scenarios associated with projects contained in the BRTP and TIP. These emissions were compared with explicit mobile source emission budgets contained in the State Implementation Plan (SIP). Because the emission levels associated with the projects contained in the 2007 BRTP are well within levels established in the TIP, the BRTP conforms to the SIP. Therefore, the MD 3 project also conforms to the SIP.

4. Noise Analysis

A highway noise analysis was performed in conformance with guidelines set by FHWA 23 CFR, Part 772 and the SHA *Sound Barrier Policy*. Category B (i.e. residences, parks) noise sensitive areas falling within the 66 decibel (dBA) contour are classified as impacted according to State and Federal Noise Abatement Criteria (NAC). In addition, an impact occurs if a substantial

increase of 10 dBA or more is found in predicted noise levels as compared to existing noise levels, regardless of the NAC level.

An impact analysis was performed for each of the Build Alternates. Future design year 2025 ambient noise levels at the monitored and virtual site receptors were modeled. A total of 15 Noise Sensitive Areas (NSA) out of 20 experience noise levels equal to or exceeding the 66 dBA criteria. A substantial increase of 10 dBA or more impact was not identified for any of the NSAs in the corridor.

The changes in noise levels resulting from the proposed improvements are less than 3 dBA for nine of the residential NSAs impacted. Therefore, mitigation is considered not reasonable at these sites. However, one of these nine residential areas, Cedar Grove (NSA 8), which currently experiences noise levels of 72 dBA and is expected to reach 74 or higher dBA under future build conditions is eligible for mitigation at these levels even though it does not experience more than a 3 dBA increase.

Due to the multiple access locations along MD 3, no mitigation measures could be applied to receive a minimum 5 dBA or greater reduction as identified in SHA's Noise Policy for two NSAs (NSAs 4 and 16). In addition, at NSA 11 the noise abatement cost is above the SHA criteria of $50,000 per benefited residence. Therefore, noise abatement is not recommended.

Noise abatement mitigation measures were identified below the SHA criteria of $50,000 per benefited residence for three residential NSAs (NSA 6 Crofton Woods, NSA 8 Cedar Grove, and NSA 15 Canter Farms). Therefore, noise abatement is recommended for the three NSAs only and will be further evaluated during the final design stage.

NSA 10 represents the Patuxent River Park property and the Archery Club within the park property on the west side of MD 3 just north of Conway Road. Mitigation is not warranted based on current use, but will be revisited during final design to determine whether land use has changed. Therefore, additional coordination and evaluation will be required during the final design stage.

5. Hazardous Materials

The SHA Selected Alternate would require acquisition of right-of-way that includes properties documented as containing potentially hazardous substances. At least 13 properties, suspected of containing varying types of hazardous materials, may have the potential to be impacted by the SHA Selected Alternate. These potentially impacted sites have been identified as containing one or more of the following; underground storage tanks (both in use and out of use) containing petroleum products, above ground waste oil tanks, abandoned automobiles, automobile parts, sanitary sewer sludge, and other industrial, municipal, and/or household wastes. Since the designated limits of disturbance are preliminary, the potential exists for additional properties to be impacted by the project and these will be identified in a Preliminary Site Investigation report which will be prepared based on 30 percent design plans during the final design phase. The Preliminary Site Investigation will research and investigate the potential exposure to hazardous materials, locate underground storage tanks used for fuel and waste oil storage, determine the

presence of soil or groundwater contamination, and identify needs and costs of potential clean-up during construction.

E. PERMITS REQUIRED

Construction of the SHA Selected Alternate for this project would require the following permits:

Permit Required	Permitting Agency
Section 404 Department of the Army Permit	ACOE
Section 401 Water Quality Certification	MDE
Coastal Zone Consistency Determination	MDE
Non-tidal Wetland and Waterways Permit	MDE
Stormwater Management Plan Approval	MDE
Sediment and Erosion Control Plan Approval	MDE
NPDES permit for Construction	MDE
Roadside Tree Permit	DNR

F. AREAS OF CONTROVERSY OR SPECIAL CONCERN

During the public involvement process, citizens, elected officials, and environmental agencies expressed concerns about the following issues:

Noise – Many area residents along MD 3 have raised concerns about the existing and future noise levels along MD 3. Residents are concerned that by raising the elevation of MD 3 at several of the intersections with proposed grade separated interchanges, there will be an increase in noise levels within their communities. Citizens also raised concerns about the noise levels associated with trucks using MD 3.

Patuxent River and Associated Floodplain and Wetland Systems – The agencies advised the project team that every effort should be made to minimize impacts to the Patuxent River and its floodplain and wetland systems, particularly in the vicinity of MD 450 and the current MD 3 Patuxent River crossing. During the first agency field meeting, the ACOE and USFWS requested that impacts to this area be located primarily to the east of MD 3 to avoid impacts to the confluence of the Patuxent River and the Little Patuxent River. Agency representatives also expressed concerns about the potential for a future western bypass of MD 3 that would severely impact the wetland and floodplain areas associated with the Patuxent River. The agencies asked SHA to investigate making MD 3 a fully access controlled highway in order to preempt any future need for a western bypass. However, SHA maintains that no future bypass will be considered because I-97 is the access controlled bypass route. Further, full access controls of the MD 3 corridor were never a priority for this project and any discussion to make it so was met with strong community opposition.

Left Fork of Jabez Branch – Jabez Branch has been designated as a Use III stream, having the water quality and habitat to support a naturally reproducing trout population. Jabez Branch is the

only natural trout stream within the Coastal Plain physiographic province of Maryland. DNR documented a decline of the native brook trout population here over the past fifteen years, a trend largely attributed to the flooded borrow pit in the median of MD 3 ("Lake Median") constructed by SHA for I-97 in the late 1980's. The Lake Median has been reconstructed so that there is now no outflow to Jabez Branch. Through restocking efforts, the DNR has re-established the trout population within Jabez Branch. DNR regularly monitors the Jabez Branch to ensure that the trout are reproducing sufficient young of the year to sustain the overall population. The environmental agencies have requested that the stormwater flow into Jabez Branch be limited as much as possible to prevent temperature fluctuations, and they have stressed the importance of sediment and erosion control to limit impacts from acidic soils. Additional efforts will be made to maintain as much of the existing tree canopy to minimize a rise in the water temperature of Jabez Branch.

MD 450 – Loop Ramp Modification – Environmental regulatory agencies, ACOE, DNR, and USFWS requested the study team investigate measures to minimize impacts to the pristine wetland systems within the vicinity of MD 3 at the MD 450 intersection south of the Patuxent River. In addition to wetland impacts, the agencies raised concerns regarding driver expectancy and the safety of the signalized intersection serving the northbound MD 3 exit ramp access to westbound MD 450. Subsequent design modifications to the MD 450 interchange were presented to the agencies, many of which were dropped from further consideration due to excessive costs, impacts, and prohibitive geometric inadequacies. However, on December 3, 2008 the team met with the agency representatives and agreed that SHA would be willing to incorporate retaining walls into the interchange design, at additional costs, in order to lower the wetland impacts from 12.4 acres (design without retaining walls) to 9.9 acres (design with retaining walls) at MD 450 in order to receive agency concurrence on the SHA Selected Alternate and conceptual mitigation. The retaining walls would approximately add an additional $12 million to the construction cost of the interchange.

Conceptual Mitigation – Agency Disagreement on Proposed Sites – Agency representatives have noted their concerns with the proposed wetland and stream mitigation, and preservation sites compiled by SHA. The SHA has responded to the site concerns with updated locations that have been agreed upon, in principle, by ACOE, USFWS, and MDE. In addition, to show a commitment to the preservation sites included in the conceptual mitigation package, SHA is making efforts to purchase upland parcels along the western edge of MD 3 bordering the Patuxent River. The SHA has also agreed to include an eel passageway, a system by which eels can bypass existing dams, to the list of possible mitigation sites.

G. RELATED PROJECTS IN THE STUDY AREA

During the Project Planning Study, the study team considered these ongoing projects in the MD 3 study area:

> *MD 450 from MD 424 to Broad Creek* in Anne Arundel County. This special project involves drainage and geometric improvements for MD 450. Construction for this project was completed and the improvements opened to traffic in 2004.

MD 450 from Stoney Brook Drive to west of MD 3 in Prince George's County. This project planning study was completed in February 1995 for the upgrade and widening of MD 450 to a multi-lane highway. This project is currently in the final design phase, but is currently on hold due to funding issues.
US 301 from north of Mount Oak Road to US 50 in Prince George's County. The widening of US 301 to a multi-lane highway with the potential for an interchange with MD 197 received Location/Design Approval on December 20, 2008. At this time no funds have been allocated for further phases of design, right-of-way acquisition, or construction. The project is on hold until funds become available.

US 301 Waldorf Area Transportation Improvements in Prince George's and Charles Counties. This multi-modal corridor study includes an evaluation of transportation solutions from MD 5 in Prince George's County to the US 301 intersection with Washington Avenue and Turkey Hill Road in Charles County to facilitate the safe and efficient flow of through traffic and commuter traffic. This project is currently in the project planning phase.

H. ENVIRONMENTAL ASSESSMENT FORM

An Environmental Assessment Form (EAF) is a requirement of the Maryland Environmental Policy Act and Maryland Department of Transportation Order 11.01.06.02. Its use complies with the provisions of 1500.4 (k) and 1506.2 and 1506.6 of the Council of Environmental Quality Regulations, effective July 31, 1979, which recommend that duplication of Federal, State and Local procedures be integrated into a single process.

The following checklist identifies specific areas of t1he natural and socioeconomic environment that have been considered while preparing this environmental impact statement. The reviewer can refer to the appropriate section of the document, as indicated in the "Comment" column of the form, for a description of specific characteristics of the resource and the potential impacts, beneficial or adverse, that the action may incur. The "No" column indicates that during the scoping and coordination processes, a specific topic of concern, regarding impacts to the natural or human environment, was not identified to be within the project area and therefore would not be impacted by the proposed action.

	YES	NO	COMMENTS
A. Land Use Considerations			
1. Will the action be within the 100-year floodplain?	X		See Chapter IV.C.4 and C.5
2. Will the action require a permit for construction or alteration within the 50-year floodplain?	X		See Chapter IV.C.4 and C.5
3. Will the action require a permit for dredging, filling, draining, or alteration of a wetland?	X		See Chapter IV.C.4
4. Will the action require a permit for the construction or operation of facilities for solid waste disposal including dredge and excavation spoil?		X	
5. Will the action occur on slopes exceeding 15%?	X		See Chapter IV.C.2
6. Will the action require a grading plan or a sediment control permit?	X		See Chapter IV.C.2
7. Will the action require a mining permit for deep or surface mining?		X	
8. Will the action require a permit for drilling a gas or oil well?		X	
9. Will the action require a permit for airport construction?		X	
10. Will the action require a permit for the crossing of the Potomac River by conduits, cables, or other like devices?		X	
11. Will the action affect the use of a public recreation area, park, forest, wildlife management area, scenic river or wild land?	X		See Chapter IV.A.1, IV.C.4, IV.C.5, and IV.C.8
12. Will the action affect the use of any natural or man-made features that are unique to the county, state, or nation?		X	
13. Will the action affect the use of an archeological or historical site or structure?	X		See Chapter IV.B.1, B.2, and B.3
B. Water Use Considerations			
14. Will the action require a permit for the change of the course, current, or cross-section of a stream or other body of water?	X		See Chapter IV.C.4 and 5

	YES	NO	COMMENTS
15. Will the action require the construction, alteration, or removal of a dam, reservoir, or waterway obstruction?		X	
16. Will the action change the overland flow of stormwater or reduce the absorption capacity of the ground?	X		See Chapter IV.C.5 and 7
17. Will the action require a permit for the drilling of a water well?		X	
18. Will the action require a permit for water appropriation?		X	
19. Will the action require a permit for the construction and operation of facilities for treatment or distribution of water?		X	
20. Will the project require a permit for the construction and operation of facilities for sewage treatment and/or land disposal of liquid waste derivatives?		X	
21. Will the action result in any discharge into surface or sub-surface water?	X		See Chapter IV.C.4 and 5
22. If so, will the discharge affect ambient water quality parameters and/or require a discharge permit?	X		See Chapter IV.C.4 and 5
C. Air Use Considerations			
23. Will the action result in any discharge into the air?	X		See Chapter IV.E
24. If so, will the discharge affect ambient air quality parameters or produce a disagreeable odor?		X	See Chapter IV.E
25. Will the action generate additional noise which differs in character or level from present conditions?	X		See Chapter IV.F
26. Will the action preclude future use of related air space?		X	
27. Will the action generate any radiological, electrical, magnetic, or light influences?		X	
D. Plants and Animals			
28. Will the action cause the disturbance, reduction, or loss of any rare, unique, or valuable plant or animal?		X	See Chapter IV.C.6 and 7

	YES	NO	COMMENTS
29. Will the action result in the significant reduction or loss of any fish or wildlife habitats?		X	See Chapter IV.C.6 and 7
30. Will the action require a permit for use of pesticides, herbicides, or other biological, chemical, or radiological control agents?		X	
E. Socio-Economic			
31. Will the action result in a pre-emption or division of properties or impair their economic use?	X		See Chapter IV.A.2
32. Will the action cause relocation of activities, structures, or result in a change in the population density or distribution?	X		See Chapter IV.A.1
33. Will the action alter land values?	X		See Chapter IV.A.2
34. Will the action affect traffic flow and volume?	X		
35. Will the action affect the production, extraction, harvest, or potential use of a scarce or economically important resource?		X	
36. Will the action require a license to construct a sawmill or other plant for the manufacture of forest products?		X	
37. Is the action in accord with federal, state, regional, and local comprehensive or functional plans – including zoning?	X		See Chapter IV.A.2
38. Will the action affect the employment opportunities for persons in the area?	X		See Chapter IV.A.2
39. Will the action affect the ability of the area to attract new sources of tax revenue?	X		See Chapter IV.A.2
40. Will the action discourage present sources of tax revenue from remaining in the area, or affirmatively encourage them to relocate elsewhere?	X		See Chapter IV.A.2
41. Will the action affect the ability of the area to attract tourism?		X	

	YES	NO	COMMENTS
F. Other Considerations			
42. Could the action endanger the public health, safety, or welfare?		X	
43. Could the action be eliminated without deleterious affects to the public health, safety, welfare, or the natural environment?		X	
44. Will the action be of statewide significance?	X		
45. Are there any other plans or actions (federal, state, county, or private) that, in conjunction with the subject action, could result in a cumulative or synergistic impact on the public healthy, safety, welfare, or environment?	X		See Chapter IV.H
46. Will the action require additional power generation or transmission capacity?		X	
47. This agency will develop a complete environmental effects report on the proposed action.	X		See FEIS

Table S -1: Summary of Environmental Impacts - Selected Alternate*								
SHA Selected Alternate: Alternate 3 – Boulevard with Interchange Options A/B at MD 450; Option A at Cronson/Crawford; CFI at MD 424, Option B at Waugh Chapel, Option B at MD 175, and Charles Hall Road Extended	**a-a**	**b-b**	**c-c**	**d-d**	**e-e**	**f-f**	**g-g**	**Total**
	US 50 to Sylvan Drive	**Sylvan Drive to Patuxent River**	**Patuxent River to South of Clubhouse Gate**	**South of Clubhouse Gate to Carver Road**	**Carver Road to Brickhead/ Wellfleet Road**	**Brickhead/ Wellfleet Road to St.Stephens Church Road**	**St. Stephens Church Road to MD 32**	
Residential Displacements	0	0	0	0	2	0	8	10
Business Displacements	1	3	0	3	0	3	5	15
Total Number of R/W Properties Affected	14	24	10	47	46	21	118	280
Farmland Impacts (acres)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Park Impacts (acres)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Historic Standing Structures (number resources impacted)	0	0	0	0	0	0	0	0
Archeological Resources (number resources impacted)	0	1	0	0	0	0	0	1
Stream Crossings (number)	2	3	1	0	1	0	1	8
Stream Impacts (LF)	1,284	745	1,839	2,355	478	322	1,831	8,854
Stream Impacts (acres)	0.4	0.3	0.6	0.7	0.2	0.1	0.4	2.7
100-Year Floodplains Required (acres)	0.6	39.7	8.6	0.0	1.4	0.0	0.0	50.3
Wetlands Impacted (acres)	0.1	6.1	3.8	0.4	0	0.2	0.5	11.1
Forest Impacts (acres)	8.5	25.8	12.4	3.1	6.7	4.7	21.3	82.5
Noise Sensitive Areas (number resources impacted)	0	0	1	1	0	1	0	3
Hazardous Materials (Number of Properties Affected)	0	3	0	1	1	5	3	13
RTE Species	0	0	0	0	0	0	0	0
Specimen Trees (number of trees)	11	23	0	0	6	0	9	49
Impervious Surfaces (acres)	4.1	16.6	4.8	13.6	1.9	5.4	8.8	55.1
Construction Cost (range in $Millions)	47-49	244-249	78-80	86-88	38-40	85-87	73-76	651-669
Right-of-Way Cost (in $Millions)	24	61	54	37	34	42	58	310

Cost Data last updated in February 2009

Table S-2: Preliminary Environmental Impacts - ALTERNATE 3*								
		Impacts per Segment (Segments as shown on Alternate mapping)						
		a-a	b-b	c-c	d-d	e-e	f-f	g-g
		US 50 to Sylvan Drive	Sylvan Drive to Patuxent River	Patuxent River to South of Clubhouse Gate	South of Clubhouse Gate to Carver Road	Carver Road to Brickhead/ Wellfleet Road	Brickhead/ Wellfleet Road to St.Stephens Church Road	St. Stephens Church Road to MD 32
Alternate 3 Modified with Interchange Options 'A' (Boulevard)	Residential Displacements	0	0	0	1	2	0	8
	Business Displacements	1	3	0	3	0	0	5
	Total No. of R/W Properties Affected	19	22	8	44	54	16	116
	Farmland Impacts (acres)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Park Impacts (acres)	0.0	0.0	0.0	2.1	0.0	0.0	0.0
	Historic Standing Structures (number resources impacted)	0	0	0	0	0	0	0
	Archeological Resources (number resources impacted)	0	1	0	0	0	0	0
	Stream Crossings (number)	2	3	1	0	1	0	1
	Stream Impacts (LF)	1,440	777	1,664	2,433	531	327	2,303
	Stream Impacts (acres)	0.4	0.3	0.5	0.7	0.2	0.1	0.5
	100-Year Floodplains Required (acres)	0.5	40.3	6.3	0.8	1.4	0.0	0.0
	Wetlands Impacted (acres)	0.1	8.3	3.2	0.3	0.0	0.3	0.5
	Forest Impacts (acres)	8.5	26.6	9.6	6.7	6.7	5.4	19.7
	Noise Sensitive Areas (number resources impacted)	0	0	1	1	0	1	0
	Hazardous Materials (Number of Properties Affected)	0	3	0	1	1	5	3
	RTE Species	0	0	0	0	0	0	0
	Specimen Trees (number of trees)	13	23	0	5	6	0	11
	Impervious Surfaces (acres)	4.1	15.3	3.9	12.8	1.9	2.7	5.2
	Construction Cost (range in $Millions)	27-29	132-136	34-36	66-68	22-24	28-30	42-44
	Right-of-Way Cost (in $Millions)	3	20	4	12	5	3	13

Table S-2: Preliminary Environmental Impacts - ALTERNATE 3*								
		Impacts per Segment (Segments as shown on Alternate mapping)						
		a-a	b-b	c-c	d-d	e-e	f-f	g-g
		US 50 to Sylvan Drive	Sylvan Drive to Patuxent River	Patuxent River to South of Clubhouse Gate	South of Clubhouse Gate to Carver Road	Carver Road to Brickhead/ Wellfleet Road	Brickhead/ Wellfleet Road to St.Stephens Church Road	St. Stephens Church Road to MD 32
Alternate 3 Modified with Interchange Options 'B'	Residential Displacements	0	0	0	2	2	0	8
	Business Displacements	1	3	0	6	0	3	5
	Total No. of R/W Properties Affected	15	22	8	48	53	20	114
	Farmland Impacts (acres)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Park Impacts (acres)	0.0	0.0	0.0	2.0	0.0	0.0	0.0
	Historic Standing Structures (number resources impacted)	0	0	0	0	0	0	0
	Archeological Resources (number resources impacted)	0	1	0	0	0	0	0
	Stream Crossings (number)	2	3	1	0	1	0	1
	Stream Impacts (LF)	1,250	779	1,709	2,400	554	327	1,819
	Stream Impacts (acres)	0.4	0.3	0.5	0.7	0.2	0.1	0.4
	100-Year Floodplains Required (acres)	0.5	35.6	8.6	1.0	1.4	0.0	0.0
	Wetlands Impacted (acres)	0.1	5.2	5.3	0.7	0.0	0.3	0.4
	Forest Impacts (acres)	8.9	20.8	12.4	7.0	6.8	4.7	21.9
	Noise Sensitive Areas (number resources impacted)	0	0	1	1	0	1	0
	Hazardous Materials (Number of Properties Affected)	0	3	0	1	1	5	3
	RTE Species	0	0	0	0	0	0	0
	Specimen Trees (number of trees)	13	24	0	3	6	0	20
	Impervious Surfaces (acres)	6.8	13.6	4.8	17.4	2.6	5.4	7.9
	Construction Cost (range in $Millions)	27-29	137-141	53-55	144-148	22-24	62-64	45-47
	Right-of-Way Cost (in $Millions)	3	16	6	11	5	3	13

Table S-2: Preliminary Environmental Impacts - ALTERNATE 3*								
		Impacts per Segment (Segments as shown on Alternate mapping)						
		a-a	b-b	c-c	d-d	e-e	f-f	g-g
		US 50 to Sylvan Drive	Sylvan Drive to Patuxent River	Patuxent River to South of Clubhouse Gate	South of Clubhouse Gate to Carver Road	Carver Road to Brickhead/ Wellfleet Road	Brickhead/ Wellfleet Road to St.Stephens Church Road	St. Stephens Church Road to MD 32
Alternate 3 Modified with Interchange Option 'C' (Modified Boulevard w/ Frontage Road)	Residential Displacements	0	0	0	1	2	0	N/A
	Business Displacements	1	3	2	4	0	3	
	Total No. of R/W Properties Affected	14	22	4	47	54	20	
	Farmland Impacts (acres)	0.0	0.0	0.0	0.0	0.0	0.0	
	Park Impacts (acres)	0.0	0.0	0.0	0.5	0.0	0.0	
	Historic Standing Structures (number resources impacted)	0	0	0	0	0	0	
	Archeological Resources (number resources impacted)	0	1	0	0	0	0	
	Stream Crossings (number)	2	3	1	0	1	0	
	Stream Impacts (LF)	1,204	906	1,672	2,363	541	327	
	Stream Impacts (acres)	0.4	0.3	0.5	0.7	0.2	0.1	
	100-Year Floodplains Required (acres)	0.5	29.2	9.4	1.1	1.4	0.0	
	Wetlands Impacted (acres)	0.1	7.7	8.0	0.6	0.0	0.3	
	Forest Impacts (acres)	8.6	15.8	12.9	8.3	6.3	7.1	
	Noise Sensitive Areas (number resources impacted)	0	0	1	1	0	1	
	Hazardous Materials (Number of Properties Affected)	0	3	0	1	1	5	
	RTE Species	0	0	0	0	0	0	
	Specimen Trees (number of trees)	13	19	1	6	6	0	
	Impervious Surfaces (acres)	4.1	7.2	5.8	14.7	2.6	5.1	
	Construction Cost (range in $Millions)	27-29	87-89	55-57	87-89	22-24	46-48	
	Right-of-Way Cost (in $Millions)	3	17	14	16	5	7	

Cost Data updated December 2006

Table S-3: MD 3 – Preliminary Environmental Impacts - ALTERNATE 5 MODIFIED*								
		Impacts per Segment (Segments as shown on Alternate mapping)						
		a-a	b-b	c-c	d-d	e-e	f-f	g-g
		US 50 to Sylvan Drive	Sylvan Drive to Patuxent River	Patuxent River to South of Clubhouse Gate	South of Clubhouse Gate to Carver Road	Carver Road to Brickhead/ Wellfleet Road	Brickhead/ Wellfleet Road to St.Stephens Church Road	St. Stephens Church Road to MD 32
Alternate 5 Modified with Interchange Options 'A' (Boulevard)	Residential Displacements	0	0	0	1	0	0	2
	Business Displacements	0	3	0	2	1	1	2
	Total No. of R/W Properties Affected	19	25	8	48	34	8	74
	Farmland Impacts (acres)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Park Impacts (acres)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Historic Standing Structures (number resources impacted)	0	0	0	0	0	0	0
	Archeological Resources (number resources impacted)	0	1	0	0	0	0	0
	Stream Crossings (number)	2	3	1	0	1	0	1
	Stream Impacts (LF)	1,337	570	1,441	2,512	442	315	2,575
	Stream Impacts (acres)	0.4	0.2	0.4	0.7	0.2	0.1	0.5
	100-Year Floodplains Required (acres)	0.5	39.2	6.3	1.0	1.1	0.0	0.0
	Wetlands Impacted (acres)	0.1	7.7	3.5	0.7	0.0	0.3	0.6
	Forest Impacts (acres)	4.0	20.7	9.8	7.5	4.7	3.7	21.1
	Noise Sensitive Areas (number resources impacted)	0	0	1	1	0	1	0
	Hazardous Materials (Number of Properties Affected)	0	3	0	1	1	5	3
	RTE Species	0	0	0	0	0	0	0
	Specimen Trees (number of trees)	4	4	0	3	1	0	6
	Impervious Surfaces (acres)	0.8	10.2	3.9	14.5	6.2	6.4	12.9
	Construction Cost (range in $Millions)	25-27	125-129	38-40	132-136*	21-23	30-32	37-39
	Right-of-Way Cost (in $Millions)	2	19	13	25	4	5	9

Table S-3: MD 3 – Preliminary Environmental Impacts - ALTERNATE 5 MODIFIED*								
		Impacts per Segment (Segments as shown on Alternate mapping)						
		a-a	b-b	c-c	d-d	e-e	f-f	g-g
		US 50 to Sylvan Drive	Sylvan Drive to Patuxent River	Patuxent River to South of Clubhouse Gate	South of Clubhouse Gate to Carver Road	Carver Road to Brickhead/ Wellfleet Road	Brickhead/ Wellfleet Road to St.Stephens Church Road	St. Stephens Church Road to MD 32
Alternate 5 Modified with Interchange Options 'B' (Boulevard)	Residential Displacements	0	0	0	2	0	0	3
	Business Displacements	0	3	0	6	1	4	2
	Total No. of R/W Properties Affected	4	18	8	44	31	13	68
	Farmland Impacts (acres)	0.0	0.0	0.0	0.0	0.0	0.0	1.0
	Park Impacts (acres)	0.0	0.0	0.0	2.0	0.0	0.0	0.0
	Historic Standing Structures (number resources impacted)	0	0	0	0	0	0	0
	Archeological Resources (number resources impacted)	0	1	0	0	0	0	0
	Stream Crossings (number)	2	3	1	0	1	0	1
	Stream Impacts (LF)	1,276	622	1,827	2,229	442	279	1,863
	Stream Impacts (acres)	0.4	0.2	0.6	0.5	0.2	0.1	0.5
	100-Year Floodplains Required (acres)	0.5	34.3	8.6	1.0	1.1	0.0	0.0
	Wetlands Impacted (acres)	0.1	4.7	5.3	0.7	0.0	0.3	0.6
	Forest Impacts (acres)	4.8	18.2	10.9	8.5	5.7	3.6	28.7
	Noise Sensitive Areas (number resources impacted)	0	0	1	1	0	1	0
	Hazardous Materials (Number of Properties Affected)	0	3	0	1	1	5	3
	RTE Species	0	0	0	0	0	0	0
	Specimen Trees (number of trees)	4	4	0	3	1	0	19
	Impervious Surfaces (acres)	0.8	10.2	5.6	18.3	5.9	7.2	17.2
	Construction Cost (range in $Millions)	25-27	132-136	55-57	141-145	21-23	56-58	60-62
	Right-of-Way Cost (in $Millions)	2	14	6	12	5	7	10

Table S-3: MD 3 – Preliminary Environmental Impacts - ALTERNATE 5 MODIFIED*								
		Impacts per Segment (Segments as shown on Alternate mapping)						
		a-a	b-b	c-c	d-d	e-e	f-f	g-g
		US 50 to Sylvan Drive	Sylvan Drive to Patuxent River	Patuxent River to South of Clubhouse Gate	South of Clubhouse Gate to Carver Road	Carver Road to Brickhead/ Wellfleet Road	Brickhead/ Wellfleet Road to St.Stephens Church Road	St. Stephens Church Road to MD 32
Alternate 5 Modified with Interchange Options 'C' (Modified Boulevard w/Frontage Rd.)	Residential Displacements	0	0	0	1	0	0	N/A
	Business Displacements	0	3	2	4	1	4	
	Total No. of R/W Properties Affected	19	30	5	46	33	20	
	Farmland Impacts (acres)	0.0	0.0	0.0	0.0	0.0	0.0	
	Park Impacts (acres)	0.0	0.0	0.0	0.6	0.0	0.0	
	Historic Standing Structures (number resources impacted)	0	0	0	0	0	0	
	Archeological Resources (number resources impacted)	0	1	0	0	0	0	
	Stream Crossings (number)	2	3	1	0	1	0	
	Stream Impacts (LF)	1,317	837	1,537	2,476	447	310	
	Stream Impacts (acres)	0.4	0.3	0.4	0.7	0.2	0.1	
	100-Year Floodplains Required (acres)	0.5	34.0	9.4	0.9	1.1	0.0	
	Wetlands Impacted (acres)	0.1	7.3	8.1	0.7	0.0	0.4	
	Forest Impacts (acres)	4.3	15.7	15.5	8.0	5.5	6.0	
	Noise Sensitive Areas (number resources impacted)	0	0	1	1	0	1	
	Hazardous Materials (Number of Properties Affected)	0	3	0	1	1	5	
	RTE Species	0	0	0	0	0	0	
	Specimen Trees (number of trees)	4	5	1	4	1	0	
	Impervious Surfaces (acres)	1.2	7.2	5.7	14.8	6.0	9.0	
	Construction Cost (range in $Millions)	24-26	85-87	56-58	88-90	18-20	47-49	
	Right-of-Way Cost (in $Millions)	2	14	17	13	5	8	

Cost Data updated December 2006